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AN AUTOETHNOGRAPHY EXPLORING THE ENGAGEMENT OF RECORDS MANAGEMENT THROUGH A COMPUTER MEDIATED COMMUNICATION FOCUSED CO-OPERATIVE INQUIRY

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ABSTRACT

This thesis is an autoethnography exploring the engagement of records management (RM) through the vehicle of a computer mediated communication (CMC) focused co-operative inquiry. CMC is defined as, "communication that takes place between human beings via the instrumentality of computers" (Herring, 1996, p.81). The PhD stance was that with the advent of new technologies, such as CMC, the role and place of RM has been challenged. RM practitioners needed to evaluate their principles and practice in order to discover why RM is not uniformly understood and also why it fails to engage many CMC users and information professionals. The majority of today's information is generated as the result of unstructured communications (AIIM, 2005 and 2006) that no longer have a fixed reality but exist across fragmented globalised spaces through the Cloud, Web 2.0 and software virtualisation. Organisational boundaries are permanently perforated and the division between public and private spaces are blurred. Traditional RM has evolved in highly structured organisational information environments. Nevertheless, RM could lie at the heart of the processes required for dealing with this splintered data. RM takes a holistic approach to information management, establishing the legislative requirements, technical requirements and the training and support for individuals to communicate effectively, simultaneously transmitting and processing the communications for maximum current and ongoing organisational benefits. However RM is not uniformly understood or practiced. The focus of the thesis was to understand how RM engagement can and should be achieved.

The research was conducted by establishing a co-operative inquiry consisting of 82 international co-researchers, from a range of disciplines, investigating the question, 'How do organisations maximise the information potential of CMC for organisational benefit, taking into account the impact of the individual?" The PhD established a novel approach to co-operative inquiry by separating, managing and merging three groups of co-researchers (UK Records Managers, UK CMC users, international Records Managers and CMC users). I was embedded as a co-researcher within this wider inquiry personally exploring as an autoethnography the relevance of RM to the wider research question, the ability of RM practitioners to advocate for RM and the co-researchers' responses to the place of RM within this context.

The thesis makes several contributions to the research field. It examines how records managers and RM principles and practice engaged through the inquiry, articulating the reasons why users sometimes failed to engage with RM principles and practice, and what assists users to successfully engage with RM. It was found that national perspectives and drivers were more significant as to whether or not individuals engaged with RM concepts than age, gender or professional experience. In addition, users engaged with RM when it was naturally embedded within processes. In addition, as a result of the inquiry's discussions and actions, the thesis suggests that RM principles and practice need to be refined, for example in regards to the characteristics that define a record. In this respect it concludes that there is rarely likely to be an original archival record surviving through time given the need for migration. The research delivered a novel approach to co-operative inquiry whereby merging groups through time produced new learning at each merger point. The thesis recommends further research to build upon its findings.

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[1] My son was disappointed on first meeting Julie that she did not look like Professor Dumbledore but felt she looked more like Hermione who at the time was modelling for Burberry and had short hair. Julie was oblivious to the compliment until undertaking a Google search!

Declaration

I declare that the work contained in this thesis has not been submitted for any other award and that it is all my own work.

Name:

Editorial Conventions

The citation system used is the author-date referencing style commonly known as Harvard. This system has many versions (as there is no defined authority for overseeing the system). This thesis therefore follows the Harvard style of citation as defined in the publication recommended by Northumbria University Pears, R. and Shields, G. (2008) Cite them right: the essential referencing guide. Newcastle upon Tyne: Pear Tree Books.

The Northumbria text does not contain guidance on citations for legal cases heard in court and therefore for legal cases the University of Lincoln's (2009) *Harvard short referencing guide* has been adopted.

PROLOGUE

This thesis is an autoethnography which explores the engagement of records management (RM) principles and practice through the vehicle of a computer mediated communication (CMC) focused co-operative inquiry. My stance is that of a social constructionist who had at the start of the research worked as a records manager for 14 years. RM is described within the international RM standard as the:

> "field of management responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposition of records, including processes for capturing and maintaining evidence of and information about business activities and transactions in the form of records" (ISO, 2001a, p.3)

Those who are tasked with RM delivery within an organisation are generally described as records managers. Engagement is defined as "the act of engaging or the state of being involved" (see http://www.thefreedictionary.com/engagement). It is associated with concepts of action, binding commitment, connection and participation.

The thesis explores the engagement of RM through the vehicle of a CMC focused co-operative inquiry. Co-operative inquiries are a form of action research in which each participant is also an equal co-researcher. This co-operative inquiry included 82 international co-researchers, encompassing records managers and CMC users from across disciplines. A novel inquiry approach was employed as initially three separate co-operative inquiry groups were established and these groups then merged over time. The three initial groups consisted of:

- UK records managers,
- UK CMC users,
- international records managers and CMC users.

The co-researchers explored their own question: How to maximise the information potential of CMC for organisational benefit, taking into account the impact of the individual?

I conducted this research as an autoethnography embedded as an equal co-researcher. I used this environment as a space to reside, in order to gather the PhD research data (see Figure 1 below). I was able to observe and participate in the co-operative inquiry and reflect as to how

and when RM principles and practices were included or excluded from the research actions and dialogue through time. The thesis presents my own personal lived experience and analysis of the co-operative inquiry focusing on the PhD exploration of the engagement of RM principles and practice.

PhD thesis: An autoethnography exploring the engagement of RM principles and practice within a CMC focused co-operative inquiry

> **Environment for gathering the PhD research data**
>
> *3 separate co-operative inquiry groups (RM UK group, CMC User UK group, and International group) merging over time, each investigating:* How to maximise the information potential of CMC for organisational benefit, taking into account the impact of the individual?

Figure 1: Relationship between the PhD study and the co-operative inquiry

The co-operative inquiry focused on CMC. CMC can be briefly defined as, "communication that takes place between human beings via the instrumentality of computers" (Herring, 1996, p.1). CMC has challenged traditional RM principles and practice, as the boundaries between personal and 'business' spaces have blurred. Information may no longer be created or reside within an organisational space and as such the records manager's ability to exert control over organisational information is potentially altered. In addition, the users' place within the delivery of RM systems may be changed. Solutions to best manage organisational CMC may as much rest with users' engagement with RM as the records manager's ability to deliver RM systems. Having practiced as a records manager, it was my own personal view at the outset, that although traditional RM has evolved in highly structured organisational information environments, it could nevertheless lie at the heart of the processes required for dealing with CMC. RM takes a holistic approach to information management, establishing the legislative requirements, technical requirements and the training and support for individuals to communicate effectively, simultaneously transmitting and processing the communications for maximum current and ongoing organisational benefits. However, I believed that RM was not uniformly understood or practiced. The co-operative inquiry provided an environment in which I could explore RM

understanding and perceived relevance from different co-researchers' perspectives. Table 1 provides an overview of the timeframe for the work as a whole.

Table 1: Overview of PhD timeframe and phases

DATE	PHASES				
Nov 2007-May 2008	**PhD Initiation and Literature Review**				
	Start co-operative inquiry process with three groups merging over time				
Jun. 2008	**UK RM GROUP**	**UK USER GROUP**			
Jul 2008					
Aug 2008					
Sep 2008	June 2008– April 2009	June 2008 – April 2009			
Oct 2008					
Nov 2008					
Dec 2008	4 Action Cycles completed	4 Action Cycles completed			
Jan 2009					
Feb 2009			**INTERNATIONAL GROUP**		
Mar 2009					
Apr 2009	*Two UK groups merged to form one UK group*		**UK GROUP** April 2009-Nov 2009	Feb 2009 – Nov 2009	
May 2009					
Jun 2009				5 Action Cycles completed	
Jul 2009			4 Action Cycles completed		
Aug 2009					
Sep 2009					
Oct 2009					
Nov 2009			*Two UK groups merged to form one Whole group*		**WHOLE GROUP** 3 Action Cycles completed
Dec 2009					
Jan 2010					
Feb 2010					Son in car crash Suspended studies (Feb-Aug 2010)
Mar 2010					
Apr 2010					
May 2010					
Jun 2010					
Jul 2010					
Aug 2010					
Sep 2010					1 more Action Cycle completed
					4 Actions completed in total
Nov 2010	**Finished gathering data to write up PhD**				
Jan 2013	**PhD submitted**				

The thesis presents my research through the journey of my experiences. Section One sets the scene and deals with how I reviewed my own ontology and epistemology to then frame and

established the research. Section Two narrates my journey of living through the co-operative inquiry. Finally, Section Three delivers my findings and conclusions as a result of my analysis of the data collected during that journey. In addition, there is an epilogue which discusses research I have come to more recently in writing up.

SECTION ONE

SETTING THE SCENE

CHAPTER ONE

INTRODUCTION TO THE THESIS AND MYSELF

WHO AM I? WHO ARE WE?

1.1 CHAPTER INTRODUCTION

The standard structure for a thesis is to set the background to the research problem, deliver a literature review of the current research and only then to establish the researcher's perspectives and research choices through the presentation of the research framework. My stance is that of a critical social constructionist. As such, although I accept that the research background and literature review are important components of the thesis, I believe it is a priority to establish from the outset my personal history, ontology and epistemology. These underpin every aspect of the thesis, including the development of the fundamental question it seeks to address. My beliefs set the scene for the research but are also ingrained within its fabric. My research embeds my own socially constructed perspectives and so the thesis is delivered within the first person. This is an accepted genre for those seeking to present the view of the reflexive researcher and is the norm for autoethnographic narrative, which is my chosen research methodology. In accordance with this genre I have stripped away all facade of detachment that the third person automatically implies, in order to present an unveiled and honest account of my research constructed through action and discourse with my supervisory team and all those who walked with me on the research journey (in this instance 82 co-researchers). This is my narrative.

1.2 WHO ARE WE?

"No man is an island entire of itself; every man is a piece of the continent."

John Donne. *Meditation XVII*, 1623.

My own ontology and epistemology sit within the social constructionist paradigm. Within this context there is an epistemological assumption that knowing/knowledge is determined by people rather than objective external factors. Burr (2003, pp. 2-5) outlines the four key attributes associated with a social constructionist paradigm and summarised here as:

1. A critical stance towards taken-for-granted knowledge.

   That we take a critical stance towards our taken for granted ways of understanding the world, including ourselves. It invites us to be critical of the idea that our observations of the world unproblematically yield its nature to us, to challenge the view that conventional knowledge is based upon objective, unbiased observation of the world (Burr, 2003, pp.2-3);

2. Historical and cultural specifity.

   The ways in which we understand the world are historically and culturally specific and relative (Burr, 2003, pp.3-4);

3. Knowledge is sustained by social processes.

   Our knowledge of the world, our common ways of understanding are not derived from the nature of the world as it really is but are constructed and sustained by social processes/people. Within this context, time, culture and situation impact upon truth and understanding (Burr, 2003, pp.4-5);

4. Knowledge and social action go together.

   There is a wide range of social constructions but each construction potentially invites a different kind of action. Burr (2003, p.5) gives the example of the Temperance Movement which saw drunkenness as a personal choice and therefore drunken behaviour thus invited punishment through imprisonment. In contrast, definitions of alcoholism as an addiction invite medical and psychological treatments as a more appropriate course of action. Descriptions or constructions of the world therefore sustain some patterns of social action and exclude others.

Social constructionist perspectives can extend from epistemology into an ontological worldview. My ontology is aligned to my social constructionist stance. Within the field of social construction there are wide spectrums of views. As Crotty (1998, p. 1) highlights in setting out the research process:

> "the terminology is far from consistent in research literature and social science texts. One frequently finds the same term used in a number of different, sometimes even contradictory ways."

There have been attempts to extend the paradigm to assert that there is no reality to the natural world but my stance is aligned to the views of Berger and Luckmann (1971). I believe that there is

a 'natural world', or as Humphrey defines it 'worldstuff', but that humans' construct its meaning and it is through this process that it takes on multiple realities. As Humphrey (1993, p.17) states:

> "Were there not volcanoes and dust storms and starlight long before there was any life on Earth? Did not sun rise in the East and set in the West? ...because no one was there, there was not – at this mindless stage in history – anything that counted as volcano, or a dust storm, and so on. I am not suggesting that the world had no substance to it whatsoever. We might say, perhaps that it consisted of 'worldstuff'. But the properties of worldstuff had yet to be represented by a mind."

Crotty (1998, pp.43-44) highlights this link:

> "We do not create meaning. We construct meaning. We have something to work with...objectivity and subjectivity need to be brought together and held together indissolubly".

The important point embedded within the quotations of Humphrey and Crotty is the place of society within the construction of meaning; it is 'we' not 'I' who construct meaning. I understand that I have my own unique view of reality but know that it has developed through social interactions and will alter based upon these interactions. I believe that social constructions dominate choices and realities. Within this context, I assert that the PhD is my own work but influenced by the social constructions surrounding my being, including in this context the co-researchers partaking within the research.

In analysing the position of 'mankind', I am a critical social constructionist rather than a believer in anti-essentialism. Anti-essentialists, such as Gergen (2009), believe that there is <u>no</u> discoverable nature to people. In line with Berger and Luckmann (1971), I accept that organisms/humans have a biological reality and acknowledge the existence of natural objects. However in accordance with Berger and Luckmann, I believe that what may at first appear to be part of a biological reality are often social constructions. For example, attitudes to disability, sexuality and gender roles have been constructed by society and are not inherently biologically determined (Berger and Luckmann 1971, pp.65-70; DeLameter and Hyde, 1998). In accordance with the precepts of the anti-positivist approach within which social construction sits, I accept that reality is multi-layered and complex (Cohen et al, 2000).

Within a social construction PhD there is an epistemological assumption that knowledge should be based on what people, individually and collectively, are thinking and feeling. The investigator should try to understand and explain why people have different experiences rather than search for external causes and fundamental laws to explain their behaviour (Easterby-Smith, Thorpe and Lowe, 2003, p.30; Roberts, 2007, p.6). Social constructionists accept that in essence any research method is potentially valid. All research methods are social constructions and one can cut across paradigms and embrace a mixed methods approach to research delivery.

1.3 WHO AM I?

"Unless your heart, your soul, and your whole being are behind every decision you make, the words from your mouth will be empty, and each action will be meaningless." Unknown

I would define myself as a 41 year old, Lutonian, Protestant, wife, mother, records manager and archivist. My age, gender, nationality, education, professional experience, health and the influences of my family and friends underpin my outlook on life. Each of these statements could generate its own reflexive PhD. I have chosen to focus on delivering a records management (RM) PhD, as it is within this context that I feel I can make the greatest research contribution. However, I cannot totally separate these other influences from the process of my RM research and therefore I am setting out a summary of some of the key factors that influenced this research and my approach.

The possibility for different ways of living and changing through time engages me, whilst I accept that my own assessments on social structures are themselves a product of my own upbringing and education. I have altered my viewpoints on many issues, multiple times, in response to new experiences, connections and changes around me. These changes have been diverse. For example, within the town of my birth, Luton, there has been a total transformation as new communities have reshaped the town creating new ways of co-existing. Having children I have altered my perspectives on human development; I see how I can influence my children and also how their peers and teachers impact upon them. After my son was born, I was temporarily in a wheelchair and witnessed first hand the prejudices of adult society towards disability. In contrast, my own children attend a school where there are a number of pupils with special needs. My children do not perceive disability but see each child as a unique individual with a range of

abilities and issues. Therefore, I understand that there are different ways to see and socially construct the world. I see that society constantly shifts and that I also adapt and change over the years. I have also been 'taught' about the shifts and changes in society over centuries through studying history as a degree. My first degree has influenced my viewpoint on social interactions[2].

As an undergraduate I majored in medieval and modern history and gained a Bachelor of Arts Honours degree from University College London (UCL). History clearly demonstrates the potential for humans to take different approaches to how they live and interact. The best historians are able to relate to the thinking of different civilisations and see through the surviving evidence within this context. However, assessing the merits and values of different civilisations is complex. Within the context of historiography, authors such as E.H.Carr (1961) have shown how difficult it is for historians to claim objectivity and authority over the subjects of their study as their own societal views are entwined with contemporary contexts and judgements about the past that cannot be easily separated from the present. Even within the context of those who study contemporary societies problems surrounding separation and judgement exist. Anthropologists have developed skills that are aligned to those of historians. However although they have the benefit of being able to live with those they are trying to understand, this in turn creates its own influences and potential blindness. The skills of the historian and anthropologist align to my research methodology, which was conducted as an autoethnography.

I built on my history degree by studying for a Masters level qualification in Archives and Records Management Studies at UCL. I believed that this would provide me with skills for a professional career in archives and RM. Whilst history was an 'academic research' discipline in the 1980s/1990s, archives and RM studies in the early 1990s was seen to be a vocational and practical pursuit. Very little 'theory' was taught on the UCL MA course in 1992/93. The potential for theory to underpin and influence practice started to be debated soon after I qualified (Eastwood, 1994; Roberts, 1994).

After completing my studies, I worked as an archivist and records manager for 14 years. I was subsequently certified as a registered archivist and records manager by the Society of Archivists (now the Archives and Records Association) and became a member of the Records Management

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[2] Were I to live in Germany I would be defined throughout my adult life by my first degree, which would be forever recorded on official paperwork as my profession regardless of whether I had built on my studies within a work context. My brother, who lives in Germany, is regarded as an engineer even though he no longer works within this field. This is recognition of the pervasive influence of education and an understanding of what it means to be professionally qualified to undertake a role.

Society (subsequently renamed the Information and Records Management Society). During this time I moved into management roles and managed projects, budgets and teams. In terms of management, I recognise that whilst I accept the need for structure within organisations I dislike overly bureaucratic hierarchies. I believe that all employees have a valuable role within an organisation and should be both nurtured and empowered. I have tried to nurture and learn from those I have managed.

My working experience has been based entirely within the UK, working for a range of organisations across the public, private and charitable sectors. All of my posts were based within London, although they required UK travel and some European trips.

Over the course of my working life there have been great changes in terms of how organisations are run (globalisation, outsourcing etc) and the technical skills a records manager/archivist needs. The evolution of new technologies and legislation have shaped RM responsibilities. I have had para-professional legal compliance roles holding responsibility for data protection, freedom of information policies and wider information governance delivery (which includes information security and legal compliance delivery) as well as IT responsibilities for information systems delivery. Information is recognised as an asset in its own right but the management processes around information have radically altered. Technology has changed the professional skill set of a records manager. I have a photographic memory. When records were captured in paper this was invaluable. Although during my working life there have always been mechanisms to access paper records (index cards and databases) I was frequently a better finding aid. When colleagues could not find something, they could phone me and I could relate to them where a file was stored (the room and shelf location), its colour and what the sheet of paper looked like on which they would find the answer to their query. My mind cannot store and process a shifting computer screen in this way nor can it compete with a search engine's ability to retrieve specifically defined information; albeit a search engine cannot always answer complicated questions. The demonstration of knowledge and professional expertise has shifted in the age of Google and Wikipedia.

Within a professional context, I can now work from my own home connecting to people and services around the world through the wide scale availability of personal computing, email, the Internet and Web 2.0 technologies. Increasingly, services can be connected or fractured across continents and/or outsourced in new ways. Technology has changed the ways in which society,

business and personal interactions occur. It has altered the potential to share and possibly compromise information. Government and personal perspectives on what the acceptable boundaries are between confidentiality, openness and information ownership have shifted. I believe in respecting the confidentiality of sensitive information but sharing all other information and knowledge. Information should never be hoarded for personal gain. However, expertise should always be acknowledged and cited.

Within my work context, I felt that I did not have answers to all of the challenges being presented and that research linked to practice could provide me with answers. At the end of the 1990s Electronic Document and Record Management Systems (EDRMS) were pushed by The National Archives in the UK as the solution to managing all organisational information online. In the 1990s and early 2000s I felt that these systems were time consuming and cumbersome for users to engage with. As I did not work in an organisation that shared a lot of information across departments there was no incentive to introduce such a system. Within this context getting individuals to engage with RM concepts seemed to hinge on the plausibility of the individual records manager/RM section rather than the RM case alone. However, new technologies, in the form of computer mediated communication (CMC), started to present new challenges to RM and the role of the records manager. CMCs consist of potentially unstructured records that can be created and stored beyond organisational boundaries, e.g. in Web 2.0 technologies. Prior to commencing my PhD I did not fully understand why people wanted to use Web 2.0 technologies within a workplace context and also why people did not more readily engage with RM principles and practice. These questions formed the basis for my PhD.

I came to the PhD with a framework of belief about the role of the records manager and the place of RM within the wider world of information management. At the start of the research, I drew up a list of observations/preconceptions in my field notes which documented my view of the RM context within the UK in 2007 prior to undertaking the research. This list is quoted directly from my field notes:

1. Records management principles and practice have a fundamental importance for the good management and success of organisations and therefore I do not understand why they are not more readily embraced?

2. Organisations will normally employ many more IT professionals than records management professionals.

3. The role of the records manager is not well understood within organisations. For example, job descriptions for posts advertised are not consistent. Unlike a Human Resources Director or Finance Director the expectations for the role of a records manager are not well understood. When an individual takes up the post they must carve out their own unique role and thus the effectiveness of the role is dependent upon the individual's personal skill set.

4. The position of the records manager may be aligned with a wide number of functions including the Marketing Department, Legal Department or IT Department - its position within an organisational structure is unclear.

5. Records managers and the concept of records management are not globally understood concepts and in no country is the records manager recognised as a mandated role within an organisation.

6. Records managers find it hard to embed records management goals into an organisation's cultural behaviours.

7. Records managers rarely obtain Board level positions.

8. Communication systems such as email and Web 2.0 applications (such as Facebook and LinkedIn) have resulted in a mass of uncontrollable data which presents real problems for records managers and records management. Records may be generated and held in software systems in a totally different location from the creator. Creators may create and access personal information at work and business information at home. This should not be allowed. The boundaries between different worlds have blurred.

9. Very little records management research is conducted and it does not seem to have had as big an impact upon practice as perhaps it could and should. Not all practitioners value the place of research within RM although this has changed massively within the last 14 years.

10. Records management has been undermined by its continual alliance and reliance on the principles of archive studies, which form a very small driver and rationale for the application of records management processes. Records management should align itself more closed to information systems management.

I had the benefit of being enlightened and armed with pre-existing knowledge but was also potentially encumbered by biased preconceptions. I knew many records managers within the UK through work and socially. I could not claim neutrality from those under the research lens and acknowledged that some of the participants were likely to remain as contacts after the research.

The central RM community is small and tightly knit. My framework acknowledges and builds on this position. In addition, this added level of connection did ensure that I was very aware of my responsibilities towards this community and ethically rigorous in the delivery of my research. Having spent 14 years within the field of RM it was easier at the start of the PhD process to define myself as a practitioner rather than a researcher.

In regards to my prior assumptions, I made a conscious decision that the most appropriate place to undertake my PhD was Northumbria University. It is the only UK based university with a substantial RM research track record where the RM research is situated within a school of computing, engineering and information sciences. It has no links to archival studies and this was important given that in trying to understand why users engaged with RM there was a requirement to potentially critically evaluate the benefits of RM/archive links. My PhD supervisory team were Professors in RM and information systems respectively.

1.4 WHAT ARE THE CONSTRUCTS UNDER INVESTIGATION?

1.4.1 Introducing the key constructs

The aim of this research was to explore the engagement of RM through the vehicle of a CMC focused co-operative inquiry. The PhD, through the co-operative inquiry, explored the shifting purpose and role of RM across the globe in relationship to CMC, where the boundaries between personal and 'business' spaces have potentially blurred. I conducted the research as an autoethnography embedded within multiple co-operative inquiry groups exploring the place of RM principles and practice within the context of organisational CMC where CMC is briefly defined as, "communication that takes place between human beings via the instrumentality of computers" (Herring, 1996, p.1). It was the premise of the PhD at the outset that in the current world of work RM offered the support and underpinning to ensure that organisations had robust information governance structures delivering transparency, accountability and data protection to citizens across the globe. Data/information is an organisational asset, but it was noted at the start of the work that the majority of today's information is generated as the result of unstructured communications (AIIM, 2005 and 2006) which no longer have a fixed reality but exist across fragmented globalised spaces through the Cloud, Web 2.0 and software virtualisation. Organisational boundaries are permanently perforated and the divisions between public and private spaces are blurred. RM processes have the potential to control this splintered

data. However RM is not uniformly understood or universally implemented. RM programmes put in place frameworks to ensure that an organisation's information is controlled so that it is 'appropriately' available but that its security is not compromised. RM takes a holistic approach to information management, establishing the legislative requirements, technical requirements and the training and support for individuals to communicate effectively, simultaneously transmitting and processing the communications for maximum current and ongoing organisational benefits. This work sought to explore within this context why RM is not better understood nor readily engaged with, as well as how the role of the records manager influences this position.

Records, RM and communication norms are all social constructions without fixed existences. The actors who create records through their communications and those who play a role in the subsequent management of the record components influence the reality of the communication's existence. There is no simplistic linear view of this process. Reality has to be negotiated and agreed to improve world order. As an autoethnography, I am also an actor within the process and therefore provide a narrative view and interpretation of the research, its findings and the PhD process.

1.4.2 What is Records Management?

Records, RM and recordkeeping can be clearly defined as social constructs. Although there is evidence of recordkeeping societies dating back to the Sumerians not all civilisations have sought to generate and keep records[3]. Record creation and recordkeeping serves a purpose within a social context but that purpose, context and understanding are not fixed. It is to be noted that within some languages (e.g. French) the term for a 'record' does not exist. The creation of records is an outcome of the transactions and requirements of society but not all civilisations have created and maintained records, and in the 21st century there are many different approaches to record creation and recordkeeping. Just as Boghossian (2001) states that in respect of money, citizenship and beliefs:

> "none of these things could have existed without society, and each of them could have been constructed differently had we so chosen."

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[3] The earliest evidence of 'written' recordkeeping is found on the Uruk tablets from Sumeria. These clay tablets date back to c.3500 BC. Examples are held within the Metropolitan Museum. New York, See http://www.metmuseum.org/works_of_art/collection_database/ancient_near_eastern_art/administrative_tablet_with_cylinder_seal_impression/objectView.aspx?&OID=30008828&collID=3&vw=0 (Accessed 1 December 2012). The earliest dated tablets constitute an agricultural set of temple accounts listing sacks of grain and heads of cattle. The Vinča Tărtăria clay tablets, which date between 4500 and 4000 BC, do contain evidence of potentially earlier record sources and proto-writing but their full meaning has yet to be agreed, See http://www.prehistory.it/ftp/tartaria_tablets/tartaria_tablets_15.htm (Accessed 1 December 2012). We do not know the extent to which 'oral records' have existed through time and across cultures.

The same can be clearly stated within the context of the creation and maintenance of records. The term and process of 'records management' as it is understood today is credited with being developed in the USA following processes put in place to manage the explosion of administrative paperwork in the wake of the Second World War. Over the 20th century the terms and its understanding evolved.

In 2001, an international standard, *ISO 15489* was published in two parts (ISO, 2001a and 2001b) to provide a documented standard on RM. This represented a consensus of international opinion as to the meaning and purpose of RM and it is therefore central to any debate in regards to RM. This standard (ISO, 2001a, p.3) describes RM as the:

> "field of management responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposition of records, including processes for capturing and maintaining evidence of and information about business activities and transactions in the form of records"

This was the definition in place in 2007 at the start of the PhD. In 2011 an overarching management system for records standard in two parts was introduced; *ISO 30300* (ISO, 2011a) and *ISO 30301 (*ISO, 2011b), which *ISO 15489* still underpins. The management system standards retain the definition of RM as noted above (ISO, 2011a, p.11). However, other definitions are refined. Again this demonstrates that RM processes and understanding are not fixed but may change over time.

1.4.3 What is engagement?

A key concept within the research was the term engagement. The co-operative inquiry acted as a vehicle to explore the engagement of RM. Engagement is defined within dictionaries as "the act of engaging or the state of being involved" (see http://www.thefreedictionary.com/engagement). It is associated with concepts of action, binding commitment, connection and participation. It is as about people and action. Within the research literature, Block aptly describes this as 'the art of bringing people back together' (Block, 2000, p.248). Within the context of building communities of practice, Wenger (1998) describes the role of engagement as a key dimension:

> "engagement is a dimension of a community of practice that involves processes of community building."

I believe that engagement encapsulates the concept of human relationship building across communities and the concept of fostering the interactions of those individuals and communities with particular social constructions. Engagement implies a positive and potentially binding commitment to the people and processes with which one connects. Social constructions, such as RM and records, can have no validity or reality if society disengages or disconnects with those same constructs. Engagement is driven by concepts of meaningfulness, openness, trust, justice and safety. In each of these, it is in part, a value judgement by individuals as to whether or not a concept is relevant. Whereby RM is a social construct, people must relate to it to imbue it with meaningfulness and validity. Engagement for McBain (2007, p16):

> "Provides a way of recognizing the influence of emotions alongside rationality in working life."

Within McBain's (2007, p.19) discussion of engagement he notes that there can e levels of engagement. As such an individual can be committed to their organisation but not engaged with their role and conversely engaged with their role but not committed to the organisation. He (McBain, 2007, p.18) separates out engagement into categories whereby one engages with one or all of the following:

1. Organisational culture, through its values visions and brand
2. Management and leadership, through line manager commitment and communication
3. Working life, through recognition from supportive colleagues, personal development, clarity of expectations, work life balance, involvement in decision making, flexibility and general working conditions.

It was important to note within this research that there can be degrees of engagement.

1.4.4 What is Computer Mediated Communication?

The premise for this research was to explore the engagement of RM. A CMC co-operative inquiry provided the vehicle for my investigation. It is discussed here because of its place within the co-operative inquiry focus. I saw online communications as an area which challenged RM principles

and practice and as such could provide a focus for the co-operative inquiry that would enable exploration of the role, value and relevance of RM. I did not automatically come to the research with the term 'computer mediated communication' but rather found during my initial literature review that this was the term which best described the concept I wished to investigate. Within the context of my RM knowledge and reading in 2007, I was not aware of a unified term to discuss online communications, rather reference was continually made to the various technologies through which communications were generating records inside and outside the organisational boundaries, e.g. blogs, email, Facebook, SharePoint and Twitter.

At the outset of the research, I reviewed the possible terms available for describing communication and collaboration conducted through computers. Within the context of the academic literature a range of terms are used to describe these interactions. I considered the relevance of a number of these terms including:

- Information and Communication Technology/Technologies (ICT(s))
  ICT focuses on the wide range of technologies (hardware and software) used to managed and distribute information and communication. It is the domain of IT specialists and engineers and does not encompass the wider human dimension.
- Human Computer Interaction
  Card, Moran, and Newell (1983) are credited with the development of the term 'human computer interaction'. The term was used as a focus across disciplines to investigate the study of human interactions within computer technologies. Whilst valid, I saw the area of research I was concerned with as smaller than this larger term which encompassed a wider range of human interaction with systems. In fact the term was almost synonymous with the whole Information Systems discipline.
- Computer Supported Cooperative Work (CSCW)
  CSCW is concerned with the cross disciplinary study and theory of how people work together using computers. Grudin (1994) traces back the origins to a workshop organised by Iren Greif of Massachusetts Institute of Technology (MIT), and Paul Cashman of the Digital Corporation Equipment, at which 20 people from different fields started to explore and discuss technology's role in the work environment and coined the term 'computer-supported cooperative work'. CSCW focuses on organisational collaboration and communication. It is technology independent which means technology is not the major driving force behind the discipline. In this context, I decided that the term CSCW

focused too heavily on the concepts of group collaboration for specified processes and potentially did not sufficiently encompass the research focus on communication more generally.

- groupware is often discussed in relation to CSCW; it refers to software applications that facilitate shared work between geographically distributed individuals. It is also referred to as work group computing or collaborative computing. Wallis defines groupware as "technology that communicates and organizes unpredictable information, allowing dynamic groups to interact across time and space" (Wallis, 1996, p. 23).

The literature I reviewed initially from the linguistics field led me to the term computer mediated communication (CMC). CMC has been defined as any communicative transaction that occurs through the use of two or more networked computers (McQuail, 2005, p.49). Thurlow, Lengel, and Tomic (2004, p.14) extend the definition of CMC beyond computers to a wider range of devices with connectivity, e.g. texting via mobile phones. *The handbook of computer mediated communication* (Kelsey and Amant, 2008, p.xxxviii), published since the outset of my research, contains a significantly expanded the definition of CMC*:*

"Broadly defined, computer mediated communication can be described as any form of information humans present or exchange by means of a computer. The information can be imparted to oneself, to another person or group of people, or even to an imaginary audience. Likewise, CMC can be a one-to-many or one-to-one transaction, a synchronous (real time) or asynchronous (time delayed) process and involve modes of interaction as diverse as typed text, spoken discussions of visual/video messages.

The types of software affecting CMC are numerous and increasing every day. E-mail, text messaging, video and audio players, social networking web sites, wikis, syndicated feeds, bulletin boards and blogs are just some of the software enabling people to communicate."

At the time of my initial searches none of the above terms were part of the parlance of UK RM discussions. Since the initiation of my research there has been one published discussion piece which considers the possible relationship between RM and HCI (Bailey and Vidyarthi, 2010). However, beyond this no term has evolved to consider communications and the place of RM. The only overarching terms in general RM use relate to the terms used to group the technologies, for example collaborative working packages and Web 2.0 technologies.

Reviewing these terms computer mediated communication was the most appropriate term for the co-researchers' research. It was highlighted as the term within the co-operative inquiry research aim. However, reflecting on the calls for participants (see Appendices 1.1 and 1.2), this document clearly demonstrates that it did take me time to be confident that this was the correct term and indeed my final view was only solidified through discussions with co-researchers during the diagnosing phase. I do believe that this is the correct term within the context of the PhD and the wider research question for the co-operative inquiry. The term in isolation, without definition, is fairly self explanatory, which is appealing in terms of explaining the research to a wider audience. Other terms require clarification and are potentially either more closely aligned to the world of research rather than practice or one particular discipline, such as IT. The term CMC had a broad appeal which summarised the construct I felt challenged RM and would enable the engagement of RM to be explored.

It is important to state clearly at the outset that whilst I have learnt a considerable amount about CMC as a result of the co-operative inquiry, the presentation of this within the word count limit of the thesis has had to be minimised in order to focus on the central PhD theme of RM engagement through the vehicle of the CMC focused inquiry. It is intended to publish further articles and outputs to deliver on the CMC learning beyond this single PhD.

1.5 THESIS STRUCTURE AND DELIVERY

As an autoethnography the thesis is written in the first person and the chapters are structured into a narrative of the PhD process. Its structure and style is delivered to fully reveal the social construction of the thesis as a whole. It relates the place of the supervisory team, individual co-researchers, groups of co-researchers and the influence of the wider literature. In order to fulfil the PhD requirements it is necessary both to demonstrate the literary context at the outset of the research and then to place one's own contribution and conclusions within this wider literary framework. Thus the thesis is socially constructed through agreed protocols. Given that this thesis focuses on engagement, engaging RM practitioners with research and wider communities with RM, this warrants the language and tone to be as direct as is appropriate within the parameters of the PhD requirements. The thesis can essentially be divided into three parts:

Section one: setting the scene – Chapters 1-4
This section sets out the construction of the research.

Chapter 1: Introduction to the thesis and myself- Who am I? Who are we?
This chapter establishes my own ontology and epistemology, as well as the constructs under investigation.

Chapter 2: The literature review - Establishing the terrain: key concepts and theories
This chapter lays out the RM terrain and my own understanding of the research that has gone before, thus informing my own knowledge and understanding upon which my thesis seeks to build.

Chapter 3 Research methodology
This chapter establishes the methodology for the research delivery and the reasons why certain choices were made.

Chapter 4 Fellow travellers: the co-operative researchers
This chapter builds on the research methodology chapter to explain how the co-operative research groups were formed, who the researchers were and their motivations for participation.

Section two: narrating the journey – Chapters 5-7

This section describes the journey of the co-operative inquiry and the actions which were

undertaken. The journey is broken down into key stages:

Chapter 5 Finding the path and planning the route: initiating the first action research cycles
This chapter covers how the process was initiated and the diagnosing undertaken to start the research process.

Chapter 6 Travelling: the actions of the three separate co-operative inquiry groups
This chapter sets out the actions undertaken by the three separate co-operative research groups whilst separate.

Chapter 7: Joining merging and moving forwards: merging the co-operative inquiry groups
As part of the research process the three separate co-operative groups joined and then moved forwards the research. The chapter narrates the impact of the group merger points and the decisions taken in terms of moving the research actions onwards.

Section three –Reflecting on the journey Chapters 9-10

This section presents the thesis findings, contributions and conclusions. It is broken down into

the key components of the PhD.

Chapter 8: Reflecting on the co-operative inquiry and PhD as a research process
This chapter reflects on the novel value of the research methodology taking into account the PhD context.

Chapter 9: Reflecting on the place of RM within the research journey
The central research questions focused on the engagement of RM through a CMC co-operative inquiry context. This chapter reflects on the RM findings.

Chapter 10: Overarching thesis conclusions
This presents the overarching conclusions from the work as a whole.

Epilogue
The epilogue deals with my later reflections and revision of thinking in regards to CMC and its role as a boundary object enabling RM engagement. I came to this in the writing up phase of the work.

As an autoethnography it has been possible to write in way which enables the strengths and weaknesses of the research and contributions of others to be easily highlighted. It is intended that there should be a transparency within the text and tone. It is also intended to meet the academic requirements a PhD. Therefore Sections 1 and 3 ground the work within the wider academic literary context, albeit written within an autoethnogarphic style rather than with potentially traditional academic distance. Section two is a simple narration of the research which contains the literature only within the context presented by the co-researchers. The actual co-operative research actions have a merit and truth in their presentation which stands alone from my own personal analysis and narration within the PhD context. The PhD value resides in the presentation of a novel research approach, as well as to deliver a greater understanding of the potential role, value and limitations of RM/records managers. The aim and objectives are presented as part of the methodology in Chapter 3.

The complicated structure of the PhD and the merging of the co-operative inquiry groups through time is a novel research methodology which is a contribution of the thesis work as a whole. In addition, this approach enabled me:

1. To provide an autoethnographic account of the research which delivered the research aims and objectives;
2. In respect of the previous point to explore how RM principles and practice can be engaged drawing on the data from the CMC co-operative inquiry.
3. To reflect on the role of records managers and users in RM engagement.
4. To have reflected on the PhD process from a personal perspective.

The final section of the PhD draws out the detailed findings and contributions in respect of each of the above areas. It provides new learning and considerations relating to both the engagement of RM within the co-operative enquiry process and the research process employed. To summarise the work draws out 12 detailed findings (See 10.2), which included the need to redefine a record, the need for international dialogue as national dimensions proved significant and the requirement to naturally embed RM into processes in order to deliver engagement. The study is realistic about these findings and recommends further research to underpin these and develop the research further.

CHAPTER TWO

THE LITERATURE REVIEW

ESTABLISHING THE TERRAIN:

KEY CONCEPTS AND THEORIES

We are like dwarfs on the shoulders of giants, so that we can see more than they, and things at a greater distance, not by virtue of any sharpness of sight on our part, or any physical distinction, but because we are carried high and raised up by their giant size.

Bernard of Chartres (as recorded by John of Salsibury, 1159).

2.1 CHAPTER INTRODUCTION

As is the norm within the PhD context I undertook a literature review at the start of the work. The literature search focused on identifying publications to build my knowledge and understanding of:

➢ RM concepts in practice across a range of professions (e.g. RM, IT, archives) and their value;

➢ What RM and records look like in the light of rapid CMC adoption;

➢ The picture of wider CMC research in as much as it impacts upon RM;

➢ When and why users do engage with RM concepts.

In order to follow through the PhD autoethnographic journey, I have started this chapter with a section detailing the literature review process and what this in itself revealed. It was this process which pre-dated and informed the development of the methodology. I have then drawn on the literature in terms of setting the scene for the PhD's research delivery, which explores the engagement of RM through the vehicle of a CMC co-operative inquiry.

2.2 THE LITERATURE REVIEW PROCESS

I utilised Northumbria University's search engine NORA as the starting point for my searches, which has the capacity to select across a range of databases and to rule in and out of the searches academic versus trade and ephemeral literature (for example the British Humanities

Index and the Library and Information Sciences Abstracts were included databases which were searched). I only reviewed articles written in English because of my own language limitations. Although I could have employed translation software to access articles I limited the search for pragmatic reasons. I recognised that I did not have the time and resource within the scope of the research to develop my search terms across multiple languages and then to translate the articles returned. The search terms were framed to ensure that the literature review encompassed wider information systems and communications literature. In support of my understanding of the co-operative inquiry research aims, terms were developed to identify CMC literature combined with RM issues and behavioural/organisational considerations. The search terms encompassed definitions from the international RM standard ISO 15489 (ISO, 2001a and 2001b). Where terms had various spellings all combinations were employed e.g. with their USA and English spellings, and with or without hyphens as in email/e-mail. The search was conducted using combinations and strings of these search terms (refer to Appendix 1.3 for the list of search terms). In addition, I also systematically searched a number of academic journals from across the domains of archival, communication, information systems, organisational, psychology and RM literature. This encompassed all of the journals for the field of RM. In addition, on the direction of my second supervisor, reference was made to what are termed in the Information System's discipline the 'basket of top journals' which was important for identifying CMC literature[4]. Colleagues in Northumbria University's Psychology Department also referred me to key journals in the field of psychology which would potentially have articles related to CMC use and computer behaviours[5]. Since this time more formalised lists rating Journals have been produced which have confirmed the information systems and psychology selections as 'A' and 'A*' rated Journals (e.g. Australian Research Council, 2010, and http://www.journal-ranking.com/ranking/web/index.html).

Beyond the RM literature the bulk of the available CMC literature which could be classified as empirical research related to email, which has a longer existence than most CMC platforms. Email searches revealed an extensive range of literature with potentially over 250,000 academic articles (as at 1 December 2007) relevant for review. I therefore had to limit the reviews within the email context to those that were within the journals I had identified as requiring systematic search and others which did contain the combined RM and email search terms. This limited the

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[4] In 2007, the Association of Information Systems cited eight journals as the top information systems journals with the first six being the premier journals in which to obtain publication. These Journals were listed as MIS Quarterly, Information Systems Research, Journal of MIS, Information Systems Journal, European Journal of IS, Journal of the AIS, Journal of Strategic Information Systems and Journal of Information Technology.

[5] The psychology journals recommended were the *Journal of Applied Psychology*, *Journal of Personality and Social Psychology* and the *International Journal of Selection and Assessment*.

number of articles reviewed relating to the wider wealth of literature on email behaviours. In contrast in 2007, within the wider rapidly evolving CMC/Web 2.0 environments there was a much more limited pool of research. The majority of the articles available related to the technical capabilities of different CMC presented within trade literature. Research projects and publication timescales in an academic context are lengthy. Since the initiation of the study many more scholarly articles detailing CMC research have been published but none in the field of RM.

In addition, within the context of delivering the PhD it was important to understand the wider picture. Many practitioners will engage and interact through trade literature rather than in recognised journals. In this context valuable ideas and practitioner learning is in the wider literature. Therefore trade literature was also included.

2.3 SETTING THE RM SCENE THROUGH THE LITERATURE

2.3.1 RM and engagement

The purpose of the PhD was to explore the engagement of RM through the vehicle of a CMC co-operative inquiry. Central to this exploration was the process of 'engagement' which Hartnett (2011, p.16) summarises based on the wider academic literature:

> "engagement is a paradigm for change' (Axelrod, 2001, p.191), 'the art of bringing people back together' (Block, 2000, p.248), 'a journey of sensing and learning' (Buckingham, 2005)...in summary, engagement is variously seen in the literature as a paradigm, a journey, a relationship, a philosophy, a process and art".

In addition, within the CMC context, McMaster (2004, pp.165-178) defines engagement as the "process of communication". I believe that engagement encapsulates the concept of human relationship building across communities and fostering the interactions of those individuals and communities with particular social constructions such as RM. Within the context of the RM literature there is no specific discussion of 'engagement' although there are articles relating to its value from differing perspectives.

Given the place of people in respect of engagement I have started this depiction, in the first instance, an examination of the status quo at the outset of the research in terms of the

place/value and role of both RM and records managers before briefly discussing CMC the challenges that CMC presents to RM which were relevant in respect of the co-operative inquiry.

2.3.2 The role and place of the records manager

In exploring the role of RM it is necessary to consider those employed to advocate and drive forward RM within organisations. The position of records managers within organisations is not standardised. The role may be located in a range of departments (archives, IT, legal, library services, marketing etc) and the number and status of the records manager(s) employed will differ within individual organisations. Unlike other organisational functions[6] there is no prescribed formula to determine how many records managers to employ. Even within the RM standards there is no prescribed requirement to employ a records manager/RM professional.

Within the UK there is an accepted level of training for RM qualification[7], two central interlinked societies which publish monthly newsletters and hold events including annual conferences[8], a common set of principles and vocabulary articulated through *ISO 15489*, and a single listserv for shared dialogue (Records-Management-UK Available at https://www.jiscmail.ac.uk/cgi-bin/webadmin?A0=RECORDS-MANAGEMENT-UK Accessed 1 December 2012). The only peer reviewed research practice journal, independent of a professional body, dedicated to RM is the *Records Management Journal* and this is also published from a UK base (see www.emeraldinsight.com/journals.htm?issn=0956-5698). These factors establish the UK RM community as a community of practice as articulated by Wenger (1998). Wenger (1998) defines a community of practice by three dimensions:

> "what it is about - its joint enterprise as understood and continually renegotiated by its members; how it functions - mutual engagement that bind members together into a social entity; [and] what capability it has produced – the shared repertoire of communal resources (routines, sensibilities, artefacts, vocabulary, styles, etc.) that members have developed over time".

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[6] For example, in the context of HR there are benchmarking tools which enable an organisation to map the HR staff requirements, See SHRM Benchmarking Human Capital Measurements toolkit at http://www.shrm.org/TemplatesTools/Toolkits/Pages/default.aspx (Accessed 1 December 2012).
[7] It is to be noted that there is no legal requirement within the UK for individuals appointed to records management posts to have an appropriate qualification and individuals can take up records management posts without any qualifications.
[8] Within the UK there are two main Societies to which records managers sign up: the Archives and Records Association (formerly the Society of Archivists); the Information and Records Management Society (formerly the Records Management Society). A number of records managers join both of these organisations. In order to be certified under these two bodies and obtain professional status an accepted level of education and experience is required.

Within other countries there are similar communities of practice in existence. For example, in Australia and the USA there are accepted levels of RM training, professional associations and listservs to process dialogue. However, within an international context there is no agreed standard of RM education or single point of dialogue. Although the USA centred RM body ARMA does offer international membership, its main membership base is within the USA and it has yet to be fully established as a global entity. It can be argued that within the context of other specific countries there are similar models to the UK, e.g. Australia or New Zealand.

Within the research literature there are a number of texts which chart the evolution of RM from a professional perspective within different countries, for example, Pemberton (1998b) considers the USA context, Hurley (2004) and McKemmish et al (2005) the Australian context, and Shepherd (2006a) the UK context. However, the international RM standards (ISO, 2001a, 2001b, 2011a and 2011b) have no definition for the role of a 'records manager' and the standard only recommends that within an organisation someone has a designated responsibility for RM rather than any training or skills (ISO, 2011b, p.20). The literature reveals that the professional status, and indeed the role of records managers, are in very different stages of development and understanding within different contexts across the world. In some countries there is a community of RM practice as articulated by Wenger (1998), which I discuss in Chapter 1. In these situations there are discussions which pertain to the status of the role both in terms of its value and visibility (e.g. Pemberton,1996; Ismail and Jamaludin, 2011) and also as to whether or not it can be truly regarded as a profession (e.g. Pemberton 1993, 1996, 1998c; Gunnlaugsdottir, 1999; Webster, 1999; Cox, 2000; Loadman, 2001). Within these contexts there are discussions about the education, research, writing and ethics which accompany the delivery of professional status and a research discipline (Pemberton 1993, 1996, 1998a and 1998c; Gunnlaugsdottir, 1999; Webster, 1999; Shepherd, 2006a; McLeod, 2008; Cox, 2009; McLeod and Hare, 2010). Arguments are advanced to assert that records managers do have professional status and that a research 'discipline' has emerged. However, these authors discuss gaps, weaknesses and doubts about the strength and long term future of the RM profession. For example, Pemberton (1998b) highlights the need for professional ethics and Ismail and Jamaludin (2011) doubt that the public even know that such a role as a records manager exists.

In some parts of the world the status of records managers is not yet at a stage where a debate about professional status is in any way relevant, e.g. Stephens (1999) discusses this within the Russian context, Sakuyama (1993) discusses the Japanese context and de Boisdeffre (2006)

discusses the French context. De Boisdeffre also discusses the problems of RM language translating into the French vocabulary. In France there are 'documentalistes' but the role and the term 'document' are not synonymous with records managers and 'record'. De Boisdeffre (2006, p.77) argues that the term record implies decisions around selection, capture, preservation and value which cannot be easily translated into French despite the strong archival traditions in France. He claims that this presents problems in France with the link between archives and RM, and the development of an RM profession.

One strong thread of argument which runs throughout this literature is the link between the RM profession and the archival profession. Recent examples of these discussions include articles by Cunningham (1997), Moss (2005a), Myburgh (2005), Bailey (2007), Duranti (2010) and Scanlan (2011). However, these debates go back many years, e.g. Hammitt (1965), Evans (1967). The central theme of all these discussions is the value of this RM/archival link versus the problems it generates. In essence the debates relate to the division of responsibilities that should exist. Within this context Moss (2005a, p.104) presents the 'two polarised camps' and sees there being very distinct traditions in evidence. He presents the anglophone camps (Australia and USA) where the archival and RM traditions are interwoven, and the European tradition, of France, Germany and indeed the Jenkinson camp in the UK (Jenkinson, 1922), where the archive was a distinct entity from the current context of records administration. Moss places the UK in neither one distinct camp nor the other terming it quasi-European in some contexts (Moss, 2005a, p.111) and anglophone in others (Moss, 2005a, p.104). In essence, these debates extend from discussions surrounding the extent to which the archivist should also be the 'archive maker' (Jenkinson, 1922, p.122). Jenkinson asserted that if the archivist started to influence or tamper with the selection and preservation of records destined for archival custody the final archives would be overly influenced by the hypothetical needs of the historian of the future in contrast to producing an impartial and authentic set of records (Jenkinson, 1922, pp.12-13 and pp.128-131). In contrast, within the American and Australian traditions it was argued that the archivist must play a role in influencing the capture and preservation of records to ensure that the appropriate records were available for selection (e.g. Schellenberg, 1956). The concept of the 'Records Continuum', evolved in Australia, embodies the idea that something could be designated as archival right from the moment of creation (Upward, 2001). In Australia, a new term has emerged which is consistently employed by Australian archivists to describe RM interlinked to archives, 'recordkeeping'. Hurley (2004, p.16) asserts:

> "The school of thought to which I belong holds that you can't be an archivist or a records manager any more. You have to be a recordkeeper, and that comprehends what used to be archives and records management."

I would note that the term 'keeper' is a common title within the domain of the museum profession. In addition, the term 'keeper' has been employed for the head of a number of national archive services. However, despite the consistent use of the term 'recordkeeping' in Australia, I have identified no evidence to suggest that roles of either archivists or records managers are advertised as 'recordkeepers'. In addition, the separate Australian associations for archivists (The Australian Society of Archivists) and records managers (RIM Professionals Australasia) remain.

In recent years the archival/RM debates have turned from a discussion of the value of records managers/RM to the archivist/archives, to questioning the value of archivists/archives to records managers/RM. Many authors conclude that within the archival and RM context, which are relatively small professions and fields of study, there is a requirement to work in collaboration given that competition and fragmentation are counter-productive (Shepherd, 1998; Bailey, 2008; Franklin, 2011). These same authors claim that there is much to be learnt from the archival traditions although it is still recognised by many that other domains have an overlapping role to play in the wider sphere of information management more generally. In recent years the case has developed into discussions as to how RM links into the wider information management and IT domain and thus what impact this has on the RM archival link. Scanlan (2011, p.450) concludes:

> "The archival profession in the United States is older than records management and has a stronger foundation in terms of professional identity and standardized education. But archivists need records managers and records managers do not necessarily need archivists. Or perhaps the need is mutual, but records managers do not always realize it. Maybe records managers have a stronger need for information technologists, who might not perceive a need for records managers. Records managers, after all, strive for systematic records destruction, while information technologists make false promises of perpetual storage and access. Archivists, meanwhile, want to believe that their perspective is essential to the mix, but probably will not be invited to the table unless they figure out some answers, which really cannot happen until they have a place at the table. As archivists and records managers continue to define themselves in the tension of

their overlapping responsibilities, they now do so within the domain of information technology. With information technologists at the head of the electronic records table, both archivists and records managers must prove their relevance to join in the discussion."

Pemberton (1998c, p.9) concludes:

"the theoretical roots of records management, archives, and librarianship lie in information science, cognitive science, systems sciences, and at conceptual intersections with fields cognate with our own".

Both Pemberton (1998c) and Scanlan (2011) highlight the shift that has occurred since records were born digitally. Certainly the way in which technology has driven the process of information creation and management has required the profession to question its theoretical principles. In this context there have been calls for the profession to 'adapt' and 'change' to remain relevant (e.g. Dearstyne, 1999; Bailey, 2008; Vednere, 2010). I myself made the case for widening the RM profession to encompass and take on the role of information governance, which I perceived to have many of the same overlapping concerns as RM, such as accountability and the protection and security of information; during the course of my PhD I was repeatedly asked to talk and write on this subject (Lomas 2008d, 2008e, 2008f, 2009b and 2010a). In the USA the professional association for records managers, ARMA, has now produced an information governance toolkit which makes the same link (ARMA, 2010). In addition, the creation of electronic records has made the case for other disciplines and professionals to also evaluate their own position and relevance in relationship to RM principles. For example, Hughes (2003) discussed the role of RM in relationship to knowledge management and Irons (2006) discusses the value of computer forensics experts within the RM domain. At the same time there have been articles that claim RM as the solution for information management (James, 2010) and alternatively those that see RM as dead, and knowledge and information management as the future (Tombs, 2004 and Ceeney, 2008 and 2009). In addition, there have been discussions as to the extent to which RM can be automated, thus keeping the function but removing the profession (Philipps, 1998 and Bailey, 2010). However, as Philipps (1998, p.67) contends, there will always be a role for records managers:

> "serving as strategic planners, decision makers, and consultants [records managers] will never be automated."

In contrast to this widening and linking of RM to the other information domains is a move to retain RM rooted in the archival domain. For example, Duranti (2010, p.79) takes issue with the widening of RM alignment in the information management domain and responds to Pemberton's statements as cited above (Pemberton, 1998c, p.9) by firmly asserting that RM should be tightly theoretically aligned to the archival discipline:

> "I strongly disagree with this statement and firmly believe that the theoretical roots of RM lie in diplomatics as it has developed over the centuries for archival purposes."

These statements need to be considered within the wider literature concerning the function and delivery of RM and records in electronic domains.

2.3.3 Records management education and research

RM has only recently been accepted as an academic discipline within the UK (Williams, 2007; Shepherd, 2009). It was first included within the Research Assessment Exercise in 2001 (Elkin 1999; Hare and McLeod, 1999). Within the UK it is currently taught within only six Universities[9]. Within four of these universities the courses and research have developed from the field of archive studies and with the other two from the field of information science. These programmes are accredited by the Archives and Records Association. Northumbria University's courses are also accredited by the Chartered Institute of Library and Information Professionals (CILIP).

Within the wider international context, RM university teaching and research is often, although not always, linked to the archival domain, which potentially shapes the research focus for RM. Australia and the USA have been the driving forces of a bulk of RM research. In the Australian context the discipline is strongly linked to archival studies. Within the USA context university level RM and archival research sits within the domain of Library and Information Science, with the education programmes often linked (Walters, 1995 and Scanlan, 2011).

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[9] Records management is taught to postgraduate level programmes at Aberystwyth University, Dundee University, Liverpool University, Northumbria University and UCL. It is taught in undergraduate level at Liverpool University and Northumbria University. Loughborough University also offers a single module in RM for undergraduates.

Within UK RM, academics and practitioners have both identified a need for additional research aligned to practitioner engagement (Ryan and Lomas, 2007; Williams, 2007). This study therefore aspired to foster future links for research of this nature. This PhD was also established in the wake of another Northumbria University project entitled AC+erm, which sought to engage RM practitioners and record stakeholders across disciplines, although AC+erm did not employ action research methods (http://www.northumbria.ac.uk/AC+erm/).

2.3.4 Records management principles and practice

RM concepts can be largely traced back to the early 1940s, when archivists and government administrators started to discuss the requirements for 'records administration' linked to archival requirements. The debate can be followed in the articles within the journal *American Archivist* (e.g. Leahy, 1940, Posner, 1940 and Brook, 1940 and 1943 etc). Over this time the term 'records administration' evolved into the concept of 'records management', implying a controlled and strategic approach to the management of paper records. Emmett Leahy led a number of Commissions, including a RM Task Force to address the requirements for federal RM and the relationship with the nation's archives (Leahy, 1948). As a result of this work, in 1949 the Federal Property and Administrative Services Act was passed which provides for RM in Section 104 (Holmes, 1949)[10]. Following on from the changes in administrative and archival processes within the USA, in 1956 Schellenberg published the volume *Modern Archives*, which became a handbook for 20th century RM. Schellenberg defined a process of managing records from their creation through their lifecycle until they would be either transferred to archival custodianship or destroyed.

Today if one is to consult the RM standards (ISO, 2001a, 2001b, 2011a and 2011b) and the range of RM handbooks that are available (e.g. Emmerson, 1989; Penn et al, 1989; Shepherd and Yeo, 2003; McLeod and Hare, 2006) one can conclude that RM is in essence concerned with the capture and management of records used to support the business operations over the short, medium and longer term with potentially wider accountability to society. Within this context there is a heavy emphasis on the act of capturing transactions as evidential records, the management of these records within classification schemes, and longer term decisions regarding the retention and disposition of these records. It is important to be cognisant, within the context of the literature, of the statements contained within the international RM standard. This

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[10] Refer to Scanlan, 2011, for a fuller discussion of the evolution of RM within the USA.

standard contains the text which is the closest representation across the world of an international consensus in regards to what RM is and should be.

The international RM standards (ISO, 2001a, p.3 and ISO, 2011a, p.11) define RM as the:

> "field of management responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposition of records, including processes for capturing and maintaining evidence of and information about business activities and transactions in the form of records."

However, within the international RM standards (ISO 2001a, 2001b, 2011a and 2011b) there are no definitive processes defined that set out the structure of a RM system. Within the context of the overarching RM standards (ISO 2011b, pp.13-14) there are high level objectives for establishing the system which include:

- Determining what, when and how records shall be created and captured for each business process;

- Determining the content, context and control information (metadata) that shall be included in the records;

- Deciding in what form and structure the records shall be created and captured;

- Determining appropriate technologies for creating and capturing records;

- Determining what control information (metadata) shall be created through the records processes and how it will be linked to the records and managed over time (including registration and classification processes);

- Establishing rules and conditions for use of records over time;

- Maintaining the usability of the records over time;

- Implementing authorized disposition of the records;

- Establishing conditions for administration and maintenance of records systems.

These system components may be achieved through:

- Retention and disposition schedules
- Classification and indexing

- Storage

- Tracking

- Access controls

- Risk management planning

- Business continuity planning

The standards are not prescriptive. In general the benefits and drawbacks of different RM approaches and practices are discussed within the literature rather than being prescribed at a standards level. In both the standards and the wider literature there is recognition that RM systems need to be based upon organisational requirements which will differ and therefore a risk assessment is vital (Egbuji, 1999; Mat-isa, 2006; ARMA, 2009; Ceeney, 2009; Lemieux, 2010; Hay-Gibson, 2011). In addition, authors such as Oliver (2006 and 2011) and Foscarini (2012) have contended that the information culture of an organisation needs to be understood in terms of designing the RM processes to support the organisation. Furthermore systems may need to be adaptable to new challenges and record contexts. The term engagement is not one which is included as a concept for discussion within the RM literature but rather there are discussions in regard to 'selling' and 'valuing' records management. This has evolved over time and there are different national perspectives.

Within the archival and RM context it was recognised in the early 1990s that the creation of electronic records required new ways of thinking about managing records (e.g. Bearman, 1994; Cook, 1994). New ways of framing record creation and archival thinking were constructed (e.g. Records Continuum (see Upward, 2001)). In addition preservation solutions were sought to protect electronic information, contending that this information must be curated to protect organisations against problems of technological obsolescence, to ensure legal accountability and to protect organisational and societal memory (See Digital Curation Centre at http://www.dcc.ac.uk/ and eDavid at http://www.expertisecentrumdavid.be/). The majority of the more evolved research in this context has focused on issues surrounding archival concerns of accountability over time, for example metadata context (See Clever Metadata research project at http://www.infotech.monash.edu.au/research/groups/rcrg/crkm/MCKemmish) and authenticity (See Interpares research project at http://www.interpares.org/). With the creation of electronic records in the 1990s, there was a sense that records were 'out of control' and McDonald (1995, p.70) termed the office 'the wild frontier' which needed to be tamed. From the 1990s, in the context of RM practice, Electronic Document Records Management (EDRM) software, which at

this time was in essence an electronic registry, was hailed as a major solution (e.g. Fresko, 2001; Winton, 2003). This software could comprehensively capture information in record formats. In Australia a step-by-step process for introducing RM within the context of Electronic Document Records Management Systems (EDRMS) was drawn up, known as DIRKS (National Archives of Australia, 2001 and 2007). In addition, in 1999 there were attempts to provide certification standards for systems which guaranteed the RM system capabilities against strict system requirements (e.g. Public Record Office *Functional Requirements*, 1999; National Archives of Norway's *Noark*, 1999; IDA's *MoReq*, 2000).

EDRMS were driven by accountability and legal requirements in the organisational context as well as by the preservation concerns voiced by archivists and historians. However, there has as yet been only a limited number of studies that detail the genuine successes and failures of EDRMS and more research is required (Johnston and Bowen, 2005; Gunnlaugsdottir, 2006). In the last five years the rapid rise of enterprise content management systems (e.g. SharePoint) have provided serious competition to EDRMS, and as such some now claim that EDRMS solutions are dead despite the fact that the alternatives do not deliver RM systems (e.g. Bailey, 2008, Lappin, 2010). Certainly schemes to strictly certify the product delivery of EDRM requirements have been largely abandoned and new requirements models are less prescriptive (e.g. DLM Forum's *MoReq 2010*; National Archives of Norway's *Noark 5*, 2010). At the heart of these system differences is the way in which information is captured, held and controlled. For example, an EDRMS will have pre-defined classification schemes (or file plans) and metadata requirements which clearly structure the information content to the benefit of the organisation and register into the system information as 'records'. In contrast a SharePoint system will normally have user generated document libraries which index, but do not structure, the information in line with traditional file plans.

At the heart of the processes to access and manage information is a requirement to review these systems within the context of user needs, organisational requirements, and search and classification models. The majority of the literature has focused on the comprehensive systems and structures delivered for organisational benefit through classification schemes potentially designed within an EDRMS (e.g. Milne, 2007; Del Olmo, 2006; Henttonen and Kettunen, 2011). The RM research studies that have focused on individual user's search and information seeking behaviours have done so specifically within the EDRMS context (Joseph, 2009 and 2010; Serewicz, 2010). Only Dodgson (2009) has tried to analyse the benefits of classification versus search mechanisms in a wider setting, and concluded that there are benefits in combining these

access approaches. The remaining literature is within the trade literature. This focuses on search in an e-discovery context wherein classification and systems are seen to assist with ensuring all the key information is retrieved as part of legal searches (e.g. Bridges, 2007; Duhon, 2008). E-discovery searches will be undertaken across all systems regardless of whether information has been classified as a record within a particular system such as an EDRMS.

In respect of EDRMS another major driver, file obsolescence, is now under scrutiny. Rushbridge (2006) states that over the years there are many fallacies that have developed in regards to file format preservation. Gollins (2009) backs up these assertions and claims that the case for file obsolescence has been overstated. He asserts that the main file formats will remain accessible for 7-10 years meaning that file obsolescence is unlikely to be a significant issue for the operational and legal retention requirements of most organisations. These views are still in contrast to the majority of authors who assert the serious potential impact from file obsolescence (e.g. Lawrence et al, 2000; Peterson, 2007; Pearson and Webb, 2008).

Within the context of considering RM implementation there is a need to understand the new ways in which people work and the mobile devices that afford greater individual flexibility in terms of information generation and sharing. An additional factor is the new ways in which information is stored by many organisations in distributed networks and the Cloud. Since the start of this PhD, a number of studies have researched the impact of the Cloud in respect of a range of issues including access, control, cost, legal compliance and search (Han, 2011; Ismail, 2011; Lin, Liu and Gritzalis, 2012). More specifically what has been discussed in an RM context (Convery, 2010; James, 2010; Cumming, 2011). Convery (2010) provides a toolkit for organisations to engage with the issues of managing records in the Cloud. James (2010) makes the case that RM is essential in these new storage landscapes and that RM does provide many of the solutions to managing information in the Cloud and titles. His article is entitled 'Records management in the Cloud? Records management IS the Cloud!'

Key to understanding RM are the drivers for its existence. The term engagement was not one which was present in the context of the RM literature. However a number of authors have tried to measure the return on investment which RM provides to organisations (Saffady, 1998; Ashley , 2000; Allen, 2007; Bailey 2011). Within this context the key drivers have been sold as efficiency, storage savings and legal compliance. High profile accountability failures (e.g. the Arthur Andersen trial in respect of auditing Enron as discussed by Hamer, 2004, pp.250-251 and Kahn, 2004) have driven new legislation and regulation impacting on the requirements for the

management of information e.g. Sarbanes-Oxley (SOX) and Markets in Financial Instruments Directive (MIFID) in the financial sector, data protection legislation for the management of personal data in Europe, Payment and Credit Card Standard by the Payment Card Industry Security Standards Council. These new requirements have been used to make a case for RM (e.g. Carlisle, 2005; Swartz, 2007).

However at the heart of the RM case, given that RM is in essence about managing records, there is a need to understand what a 'record' is and why it is deemed to be important above and beyond information and documents.

2.3.5 The importance of records

At the heart of RM processes resides the requirement to capture 'records'. A record is neither information nor a document. Within the context of the international standards (ISO, 2001a, p.7):

> "A record should correctly reflect what was communicated or decided or what action
> was taken. It should be able to support the needs of the business to which it relates and
> be used for accountability purposes."

Records are those things which capture a 'transaction' or 'activity' and as such a sense of something important having passed. In the later standards they are also to be valued as an asset (ISO, 2011a, p.v). ISO 15489 (ISO, 2001a, p.7) goes on to state that 'good' records, which are generated and captured as part of the RM process, are deemed to be those records that have four key qualities:

1. Authenticity

"An authentic record is one that can be proven

a) to be what it purports to be,

b) to have been created or sent by the person purported to have created or sent it, and

c) to have been created or sent at the time purported.

To ensure the authenticity of records, organizations should implement and document policies

and procedures which control the creation, receipt, transmission, maintenance and

disposition of records to ensure that records creators are authorized and identified and that

records are protected against unauthorized addition, deletion, alteration, use and

concealment."

2. Reliability

"A reliable record is one whose contents can be trusted as a full and accurate representation of the transactions, activities or facts to which they attest and can be depended upon in the course of subsequent transactions or activities. Records should be created at the time of the transaction or incident to which they relate, or soon afterwards, by individuals who have direct knowledge of the facts or by instruments routinely used within the business to conduct the transaction."

3. Integrity

"The integrity of a record refers to its being complete and unaltered. It is necessary that a record be protected against unauthorized alteration. Records management policies and procedures should specify what additions or annotations may be made to a record after it is created, under what circumstances additions or annotations may be authorized, and who is authorized to make them. Any authorized annotation, addition or deletion to a record should be explicitly indicated and traceable."

4. Useability

"A useable record is one that can be located, retrieved, presented and interpreted. It should be capable of subsequent presentation as directly connected to the business activity or transaction that produced it. The contextual linkages of records should carry the information needed for an understanding of the transactions that created and used them. It should be possible to identify a record within the context of broader business activities and functions. The links between records that document a sequence of activities should be maintained."

These definitions have been arrived at through a backdrop of discussions which have focused on understanding the nature and existence of records taking into account the shift towards 'born digital' information. In the 1990s, Bearman, through his work at Pittsburgh University (see http://www.archimuse.com/papers/nhprc/BACartic.html#ftnt5), led the call for archival description to deliver metadata to electronic records which would provide it with 'context' and 'recordness' (Bearman, 1994). This context was an important part of the record. For information to be transformed into a record it required both capture (i.e. a physical reality within a carrier) and context (captured in metadata). The ICA Committee on Electronic Records (1997, p.25) affirmed that records comprise, 'content, context and structure sufficient to provide evidence'.

This requirement that records should have 'evidential value' further impacts on aspects of 'recordness'. Bearman (1994) discusses the qualities of evidential records as having integrity, authenticity and reliability in line with the definitions later developed within ISO 15489 (ISO, 2001a and 2001b). Over the next two decades, these terms were discussed in great depth in a series of debates across the archival literature (including key articles from Duranti and MacNeil, 1996; MacNeil, 2000; Lemieux, 2001; Schwartz and Cook, 2002; Trace, 2002; Meijer, 2003; Furner, 2004; Iacovino, 2004; Duranti and Thibodeau 2006; Yeo 2007a, 2007b, 2008 and 2011). Within many of these articles, the debate focused on the evidential qualities of records within a historical and societal context. As such, within the context of records serving as evidence, are ideas of records presenting a 'truth' and being deemed 'trustworthy', 'transparent', and 'representative' in order to deliver 'accountability'.

A number of authors have questioned the extent to which it is possible for records to act as 'truth' (e.g. McKemmish, 1994 and 2005; Hedstrom, 2002; Schwartz and Cook, 2002). McKemmish posits the question 'are records ever actual?' (McKemmish, 1994) and many authors refer to the record as a 'trace' of human activity, implying the imperfect nature of the record (e.g. Hedstrom, 2002, p.29; Furner, 2004, p.240). In this context the record will be interpreted by subsequent humans bound by memory, time, and context (McKemmish, 1994). Trace (2002) argues that even in the contemporary context what is recorded is never simply what happened. In this sense McKemmish (1994, p.197) describes records as forever '*in a process of becoming*', having a new reality within each moment of engagement. More recently Yeo (2007a, p337) has advocated for the continued reality and value of the record defining records as:

> "persistent representations of activities, created by participants or observers of those activities or by their authorized proxies."

Yeo (2008, p.2), accepts that records as representations are 'constrained'. He cites the art critic Mitchell's (1990, p.21) statement that:

> "every representation exacts some cost, in the form of lost immediacy, presence, or truth."

However, Yeo asserts the representation of record as having a durable quality which transports the record across time and space with the potential to act as a 'cultural artefact' (Yeo, 2007a, p.336). In Acland's (1991) characterisation of the record it maintains a 'post-custodial conceptual

reality', which is not a 'relic' and thus aligns to the view that records continue to have new realities.

The majority of these discussions take the stance of the archivist looking over time and with a desire to keep information in evidential formats, i.e. 'recordkeeping'. Where the discussions touch upon the current value of records it is often in the context of the moral requirement for organisations to be accountable within a wider social context (e.g. Palmer, 2000; Wamukoya, 2000; Barata et al 2000; Meijer, 2003). Indeed it is repeatedly argued that an archive and 'good' records are a necessity for a democratic society (e.g. Harris, 2002; Ketelaar, 2002; Toole, 2002; Meijer, 2003; Cox, 2005). In such contexts, examples are presented of failings in recordkeeping that have resulted in poor representation of the 'people', e.g. Moss (2005b) discusses the poor recordkeeping and accountability of the UK government's evidence and decisions in respect of going to War in Iraq and Barata et al (2000) discuss the impact of RM on governments' accountability to the international community.

Whilst there are many discussions regarding the evidential value of records these are limited in terms of their relevance to the organisational and legal contexts. Within the RM academic context, articles are limited to general discussions surrounding legal admissibility. Piasecki (1995) and the International Records Management Trust (IRMT) (1999) both make the case that courts across the world rely upon personal testimony in conjunction with dependable systems. In a legal context, records are normally deemed to be 'hearsay' evidence requiring consideration in the court case context backed up and verified by human statements. Where computers do generate records without human involvement, then the computer record can become 'real evidence' in its own right. Smith (1996, p.98) points to the important paradox that whilst there is a British Standard for the legal admissibility of electronic records (BSI, 2004), records may be 'admissible' in Court which do not meet the British Standard Institute's (BSI) requirements. He states that admissibility is a systematic legal process which does not review all the admissibility requirements of a standard. IRMT (1999) states that normally documents and records are admissible in legal proceedings unless they would be prejudicial. In addition, Smith (1996, p.72) goes on to state that the actual authenticity of a record submitted is rarely questioned. Once admitted as evidence, a record's value will then be weighed in a subjective process within the specific court and case context. The same case could be said for historical evidence; any historian will consider the sources available for study and then decide what to include. Thus the 'black and

white' case for something being a record as it is discussed in the archival literature is potentially misleading.

Within the context of contemporary RM settings Lemieux (2001 and 2002) and Meijer (2003) have both undertaken empirical research to interrogate the authenticity of records within case study settings. Lemieux (2001 and 2002) undertook case studies within Jamaican banks and Meijer (2003) undertook case studies across a number of public sector bodies. In both pieces of research it was concluded that there were problems with the process of actually overseeing the original creation of the record in terms of the information content's reliability. Lemieux (2001 and 2002) highlighted many examples of unreliable information which thus meant that the Jamaican banks were not appropriately accounting for their finances. Meijer (2003) highlighted that the majority of records, although not all, within the public sector were accurate. However this largely relied upon the integrity of individual officials rather than the actual processes in place to secure the creation of authentic, trustworthy and reliable records.

In reviewing these works in the context of records, it is important to note the omissions within the discussions. One fundamental component is noticeable for its absence from the discussions, namely the record characteristic 'useability'. With RM's emphasis on supporting organisation's current administration one would assume that 'useability' would be the prime focus and objective for the RM community, yet discussions around this concept are seemingly lacking.

2.3.6 Computer Mediated Communication

Having set the RM scene it is important to consider the CMC landscape as the CMC focused co-operative inquiry provided the vehicle for the exploration of RM engagement. However it is to be noted that this PhD is not specifically about CMC and therefore I have considered CMC in context of its intersection with RM. As already cited, Herring (1996, p.81) defines CMC as 'communication that takes place between human beings via the instrumentality of computers'. The simplicity of this statement belies its complexity in terms of:

- the numbers involved in the communications;
- the purpose and content of the communication;
- the time span over which a communication exchange occurs;
- the range of CMC functionality (e.g. blogs, email, wikis etc);
- the software employed;

- the server platforms and the computer devices (i.e. laptops, smartphones etc) involved.

CMC impact across a range of interests encompassing information management, information systems, information technology, communication, psychology and social sciences research literature. Within the research literature which reviews information behaviours and the value of communications there is a balance of viewpoints on the positive and negative aspects of CMC. CMC research is largely split into research strands for technological or behavioural studies. Technological studies have sought to address system weaknesses and enhance operational potential through automated processes and increased functionality. The behavioural studies have sought to understand the impact of CMC on human interaction and the impact of this within the social and political context of organisations.

In the context of human behaviour, organisational research literature has often categorised the communication tools available and then systematically evaluated what each tool can achieve and its impact upon social and political communications within the workplace. In the 1980s it was asserted that the absence of certain social clues within the context of email messages impacted upon the effective delivery of communications. Daft and Lengel's media richness theories dominated email research in this context, leading to a number of studies into information richness theory (Daft and Lengel, 1984 and 1986). Daft and Lengel (1986, p.560) defined information richness as:

> "The ability of information to change understanding within a time interval. Communication transactions that can overcome different frames of reference or clarify ambiguous issues to change understanding in a timely manner are considered rich. Communications that require a long time to enable understanding or that cannot overcome different perspectives are lower in richness. In a sense richness pertains to the learning capacity of a communication."

Thus Daft and Lengel contended that the 'effective' manager would choose the right communication channel for each of the messages they had to convey. In this context email was seen as lacking the potential to convey rich messages. Later studies contended that the more experienced users become in any form of CMC then the more effectively they can use it to convey messages because this experience helps code and decode messages (Carlson and Zmud, 1999; Giordano et al, 2007). The concept of Critical Social Theory was applied to email

communications to understand how recipients convey meanings to email messages. It was concluded that recipients will actively interpret messages and construct meanings from the wider organisational context and therefore the message alone cannot be analysed (Ngwenyama and Lee, 1997; Huang, Watson and Wei, 1998; Giordano et al, 2007; Kim et al, 2007). In this context, Culnan and Markus demonstrated that email was capable of conveying rich information (Culnan and Markus, 1987; Markus 1994a and 1994b). Studies into Web 2.0 CMC have also concluded that lack of visual clues does not necessarily impede the effectiveness of communication, but that context and experience are critical to the communication's success (Carlson and Zmud, 1999; Walther, 1996).

CMC has changed previously accepted communication standards. The boundaries between written and spoken communications are blurring as CMC contains information that may be both conversational and formal (Baron, 1998; Mulholland, 1999; Zitzen and Stein, 2004). Communications are enacted with greater speed across an array of CMC tools (Bertacco, 2007; Dickey et al, 2007). Age, gender and culture all play a part in the manner in which communications are conveyed, which in turn impacts upon organisational and societal cohesion or separation. In the context of CMC it is argued that differences of culture, gender and age are accentuated. A number of studies have demonstrated that it is possible to predict culture and gender with reasonable accuracy due to these differences (Talbot, 1996; Hall 1996; Herring 1996; Waldvogel, 2001). These studies play a part in determining whether CMC creates greater equality.

Studies in the 1990s contended that email enhanced organisational democracy and reduced imbalance (Sproull and Kiesler 1986, Bishop and Levine 1999) but these have been called into doubt (Mantovani 1994; Weisband et al 1995; Romm and Pliskin, 1997; Gefen, 1997). The same claims have been made in the context of Web 2.0 collaboration tools (Tapscott and Williams, 2006; Hearn, Foth and Gray, 2009). In the context of Web 2.0, beyond the sphere of internal administration, the traditional business consumer models have in some contexts shifted from business to consumer chains to consumer driven models (Wagner 2006; Wagner and Majchrzak 2006; Tapscott and Williams, 2006; Hearn, Foth and Gray, 2009).

As the usage of emails has grown, it is notable that the majority of the research literature within an information management context focuses on the potentially negative consequences of email in the workplace rather than its potential benefits (Waldvogel, 2001; Weber, 2004). There has

been an increasing focus on email overload (Whittaker and Sidner, 1996; Dabbish and Kraut, 2006), the problems of managing, accessing and systematically deleting semi-structured information (Ruhleder, 1994; Gwizdka, 2004), the waste of resources in terms of legal discovery suits, storage and time (Jackson, Dawson and Wilson, 2001), the strain of information overload and email addiction on the individual (Jackson, Dawson and Wilson, 2001; Dabbish and Kraut, 2006; Carmago, 2008); and cultures of fear amidst personal privacy and organisational confidentiality concerns (Brown, Fuller and Vician, 2004; Gilbert, 2007). Within this context Jackson et al (2006) and Burgess et al (2004) claim that training users is what makes the difference to successfully managing CMC. Jackal, Rovekamp and Wurfel (2006, p.217) do comment on the positive nature of CMC and the fact that 'processes don't work – people do' and hence CMC align to the way in which people naturally work. They translate Levine et al (2000, p.16) who state:

> "Markets are conversations [and] conversations among human beings sound human. They are conducted in a human voice [and] people recognise each other as such from the sound of this voice. The Internet is enabling conversations among human beings that were simply not possible in the era of mass media." (Jackal, Rovekamp and Wurfel, 2006, p.214)

It is undoubtedly true that CMC has changed workplaces. CMC has enabled new ways of sharing and growing knowledge within an organisation (Skovholt and Svennevig, 2006). In addition, different technologies enhance different deliverables and collaborative needs within an organisation (Adams, Toomey and Churchill, 1999; Cho, Trier and Kim, 2005; Bos et al, 2007). CMC has enabled the connectivity of global organisations across time zones resulting in redistributed networks and agile business models (Castells, 1996; Noon and Blyton, 2007). Furthermore the boundaries between personal and public spaces in the CMC sphere are also blurred. There is, as yet, a lot of work to do on redefining public and private spaces in an international context (Greenaway and Chan, 2005; Gilbert, 2007; Wang et al, 2012). Many of the studies raise as many questions as they answer and there is certainly a requirement for more research into CMC (Argawal, 2001; Waldvogel, 2001; Weber, 2004; Shumate and Pike, 2006; Hearn, Foth and Gray, 2009).

Within the context of technological developments there are two strands of development; analysis of systems capabilities and possibilities in terms of engineering and delivering as well as

the further capability to automate and manage the underpinning processes and operation of systems across complex communication environments. Technological tools are blurring in the age of the 'smartphone' (Genova, 2010). Ruhleder (1994, p.208) discusses the problems of applying information systems to complex intellectual tasks, which she states requires the "representation and codification of ambiguous and fragmentary forms of data". In addition further work is being done to understand how communications can be sorted and classified through automated processes (Wang et al, 2012). However, there are increasing numbers of technological solutions that can assist with CMC management, including SPAM filters, deduplification software, enhanced storage technologies, monitoring tools, and sophisticated search engines (Yang and Park, 2002; Duane and Finnegan, 2005; Rowe and Creamer, 2007). The success and impact of these technological advancements and their interaction with human requirements in an RM context would merit evaluation.

In addition the nature and understanding of the storage of information has been transformed through the development of the Cloud and virtualisation, which distributes information beyond the controlled organisational boundaries. The impact of the Cloud on information management is currently being scrutinised across disciplines in terms of the physical, operational and legal impact of the Cloud.

2.3.7 The intersection between RM and CMC

The wide ranging RM challenges within the context of CMC are articulated mainly within the context of email (e.g. Enneking, 1998; Shipman 2002; Flynn and Kahn, 2003; AIMM, 2005 and 2006; Bee Bee Seow, Chennupati and Schubert, 2005; Foster, 2005; Meyer, 2005; Morelli, 2006; Wilkins, 2008; Willemin, 2006). Each of these works sees email as problematic and requiring additional controls (e.g. such as attachment management and retention scheduling) beyond those which automatically exist within email systems, as well as additional proactive personal management to counteract the problems email presents. In respect of Web 2.0 there are currently no academic articles that have emerged in the RM context beyond opinion pieces (e.g. Bailey, 2008, Lappin, 2010).

The response to email concerns in the RM literature has been to review the technological capabilities of systems and also user behaviour from the stance of the organisation. Within the context of technological studies there have there are a small number of RM email case studies (Bee Bee Seow, Chennupati, and Schubert, 2005; Willemin, 2006) which provide examples of

system changes that have enhanced compliance and access requirements. The key problems of email are seen to be its sheer volume which overloads individuals (Meyer, 2005), the fact that it is not structured in a classified manner in accordance with RM principles (Shipman, 2002; Morelli, 1993 and 2006), the fact that it contains personal and business emails of both a trivial and substantive nature (Foster, 2008) and that it can be misused to the detriment of the organisation (Flynn and Kahn, 2003). Foster (2008) highlights the potential for emails to be autoclassified and copies deleted. Wilkins (2008, p.60) highlights the three main mistakes organisations make when seeking to control email:

1. Limiting mailbox sizes. Wilkins highlights that this will often result in people simply deleting large emails rather than managing their inboxes. Allman (2005) highlights that this approach often results in people circumventing the organisational email systems, e.g. creating pst files or forwarding on emails to personal accounts.
2. Deleting emails after 30 days which runs the risk of losing key information.
3. Relying on backup and audit tapes rather than managing the email itself. Reliance on backup tapes runs the risk of not being able to find emails or manage them over time. Bhandari (2012) notes that, in respect of e-discovery, this then becomes a problem for the retention management of backup tapes if legal holds are put on the material. In essence all the backup tapes then need to be retained for the potentially lengthy duration of a court case.

In many of these contexts email is seen as a different type of system which requires specific rules for its management. For example, Stephens and Wallace (2000, p.40) list 14 rules for managing electronic records and have a separate specific rule for email which states : 'Retain e-mail under stringent records management controls'. Enneking (1998, p.30) states:

"The basis of any effective approach to managing e-mail communication is a coherent, consistent records management policy that mandates what employees are to do with electronic records such as email messages."

Enneking (1998, p.30) goes on to recommend five key points summarised as:

1) Incorporate all e-mail records into your records management system.

2) Do not let your server manage you.

3) Do not save every e-mail message.

4) Select your software with care and ensure its ability to handle complex documents.

5) Seize the opportunity.

In many of the studies, it is concluded that EDRMS or ECM provide the solution to email management in conjunction with policies (e.g. Enneking, 1998; Wilkins, 2008) as only through transferring the email into another system can it become a part of an RM system. A reason and benefit of this approach is it then puts in place a mechanism for sifting and classifying those records that are seen as valuable and protecting these emails and the attachments from file obsolescence (e.g. Shipman 2002; Asprey, 2006). It is the range, size and varying nature of the attachments linked to email which is seen as a particular ongoing management problem. Through classification into an EDRM, Asprey (2006, p.7) sees a management process which provides context and maintenance strategies for email and any associated files.

Those RM studies focusing on user behaviour have resulted in the development of email policies and procedures (e.g. Wallace 1998, Loughborough University and JISC Computing Services, 2001a; Ginn, 2000). In the context of these studies, none has as yet revisited the work to evaluate the success of the policy and procedures in place, nor have these RM articles discussed the role of training. There has also been limited evaluation of the implementation and impact of policies across a range of different environments.

In reviewing some of these recommendations it is important to consider the RM perspective on what is a record in the CMC context as this has driven CMC RM requirements.

2.3.8 Where do Computer Mediated Communications and records align?

There are no articles dealing specifically with what constitutes a record from an RM perspective within the context of CMC. Bearman (1994, p.300) does define records as 'communicated transactions' and if one refers back to the international RM standard (ISO, 2001a, p.7) it states that:

> "A record should correctly reflect what was communicated or decided or what action was taken. It should be able to support the needs of the business to which it relates and be used for accountability purposes."

CMCs can be described as records against these two statements. CMCs reflect what is 'communicated' and captured with content and context. CMCs are by their very nature 'transactional records'. Within the context of RM there have been criticisms of their value and hence their 'recordness' because they are potentially unstructured and ephemeral in nature (Shipman, 2002 and Cook, 2005). Cook (2005, p.123) states that they:

> "disappear. Electronic communication, especially in its interactive mode, can become a continuous discourse without trace, as both act and record occur simultaneously with little or no media delay or survival."

However, I would contend that whether or not records survive relates to active decision making in regards to system maintenance regimes and disposition processes. There have been e-discovery cases where the durability and survival of electronic records, in contrast to the paper records, has been commented on as surprising. For example, Hamer (2004, p.250-251) discusses the survival on backup tapes of Anderson emails relating to the auditing of Enron in contrast to the paper records which were shredded and Moss (2005b) discusses the extent to which emails were retrieved in the Hutton Inquiry.

However, this concept that CMC is in some way ephemeral runs through the RM literature, in part because CMCs do capture both minute and substantive exchanges. For this reason Morelli and others have called for CMCs to be sifted, valued and those that record 'important transactions' to be placed into structured systems (Shipman, 2002, Bedford and Morelli, 2006; Morelli, 2009). Such authors contend within the context of emails that they are not automatically records. Shipman (2002, p.98) stated:

> "Meeting the challenge of electronic working is not just about giving your staff e-mail capability, or the setting up of Web-based e-commerce systems. All these systems create electronic documents, some of which need to be classified as records..."

In other words Shipman believed that only through classification would emails become 'records'. However, this undermines the true nature of CMC and records concepts. This is a value ladened

view which can perhaps be traced back to archival concepts whereby key records were defined under legislation as 'Federal Records' or 'Public Records' worthy of permanent archival retention. The concept of archival record values relates to the perceived value of a particular type of information and physical format through time. In the 1990s the USA government did not deem emails to be 'public records' but rather retained paper printouts. In the 1990s, this approach was challenged in the USA case of *Armstrong* v *Executive Office of the President* (1996). Researchers and non-profit organizations tried to block the proposed destruction of Federal emails which were thought to detail exchanges relating to the Iran Contra scandal during the Reagan and Bush administrations. The USA's National Archives and Records Administration (NARA) held that these were 'non-records' and that hardcopy printouts would form the archival record. However, the Court held that substantive email communications constituted 'records' under the Federal Records Act, and that they must be preserved, 'since there are often fundamental and meaningful differences in content between the paper and electronic versions of these documents', thus the electronic versions would not lose their status as records even if paper printouts existed.

Within the context of authenticity legal cases have established, in line with the USA's Federal decision in regards to public records, that CMC in its original digital format is often deemed to be the form of 'best evidence' and paper printouts may be questioned and rejected. For example, in the UK case of *R.* v *Governor of Brixton Prison* (1997), the Court held that printouts of email were inadmissible as evidence because the 'computer printouts were no different from that of a photocopy or forged cheque'. In the USA case of the *State of Connecticut* v *Eleck* (2011) the court rejected Facebook evidence in the form of a simple printout for similar reasons.

Over the last 20 years it has been increasingly accepted, within both criminal and civil litigations across the world, that CMC can create evidential records. As a form of record, email and other CMC formats (e.g. Facebook, Ning, Twitter etc) have all the strengths and weaknesses of other record formats. They record the reality of actions as perceived or obscured by the narrator. The medium of conversational transactions allows for a natural openness and honesty that may be lacking in other more structured contexts. Furthermore the process of ongoing exchange enables clarification and meaning to evolve between multiple parties over time thus presenting the opportunity for clarification. It has often been within the context of conversations, unintentionally transposed into records, that the reality of organisational events has been exposed (see for example Moss (2005b) analysis of the Hutton inquiry evidence). Yet equally CMC records are, as with all records, time and context dependent. However, there is no doubt that

were the bar for CMC's status as records to be set as being admissible as legal evidence then they would fulfil this criteria. A report by Patzakis (2012) concluded that there was a growing trend for CMC to form part of the evidence submitted in both civil and criminal cases. The infographic, at Figure 2, demonstrates the powerful evidential potential of Web 2.0 in respect of family law cases.

Figure 2: Dishon and Block Divorce Lawyers (2012) How family law attorneys use social media evidence in court cases [infographic], 3 April 2012. Available at: http://www.cadivorce.com/news/social-media-evidence/ (Accessed 1 December 2012).

These legal cases have carefully presented the metadata context which CMC can provide in an evidential context. For example, in the case of Ronnie Tienda, Jr., Appellant v. The State of Texas. (2012) the prosecution for the State, successfully admitted key Myspace (http://www.Myspace.com/) evidence over the defendant's objection. Among this key evidence (which was classified as circumstantial but provided a substantial foundation for the conviction) were relevant metadata fields, and other evidence from defendant Tienda's Myspace page, including his username, which was consistent with Tienda's commonly known nick name, his email addresses registered to the account, user ID number, stated location (Dallas), communications with other suspects, and numerous posted photos of Tienda with associated date and time stamps. Patzakis's report (2012) highlights the problems of capturing the authenticity of Web 2.0 applications. The report analyses the strengths and weaknesses of the metadata that is gathered within different Web 2.0 sites and the challenges of authentication and ownership within this context.

Furthermore outside the court arena, electronic records can be used for a range of contractual exchanges. UNICTRAL's *Convention on the use of electronic communications in international*

contracts (UNICTRAL, 2005, p.8) which is a global standard, clearly establishes the validity of digital exchanges in an international context as potentially contractually binding stating:

> "Specifically, given the proliferation of automated message systems, the Convention allows for the enforceability of contracts entered into by such systems"

However, whilst CMC may be deemed to comprise legal records, it is important to note that the law and management requirements surrounding CMC are not always synonymous with paper. Each new technology may be governed by subtle distinctions within the law, which is evolving rapidly in regard to CMC. Sometimes old laws are applied to new technologies and in other instances new laws are enacted (Lloyd, 2011). There are many subtleties in understanding the law and sometimes some seemingly illogical conclusions. For example, email is deemed to be a postal communication for contractual purposes and yet it can be monitored in ways that would be illegal in the context of letters (Ibrahim et al, 2007). There are constant changes in the law in regards to CMC management (e.g. retention requirements, monitoring restrictions, challenges to ownership etc). Some of these changes are set out in statutory legislation, other decisions emerge through case law, and some changes are made through regulation or public pressure.

A major complexity for RM and CMC within both a legal and a management context is where the message content and ownership resides, e.g. for example, in the case of the footballer Ryan Giggs, the international Twitter community defied British publication conventions and a Court superinjunction to tweet details of his personal life (see http://www.telegraph.co.uk/technology/twitter/9050047/Twitter-could-block-super-injunction-tweets.html). Whether or not prosecutions could be made were dependent upon the location of the tweeter. The complexity of where information is held and the ramifications in different circumstances for organisations are borne out in the context of two different decisions relating to employee monitoring of email in the USA. In the first case of *Holmes* v *Petrovich* (2011) an employee was using a company's email channel to send personal emails to his lawyer. He deleted these emails but when he later sued the company they were retrieved from backup tapes and used by the company as evidence in the case. This usage was disputed by the employee but their admission into Court was lawful because of the company's computer usage policy which clearly stated that email was monitored. In another case *Stengart* v *Loving Care Agency* (2010) an employee was accessing an externally hosted email server via the Agency's website. The Agency was taking screen shots of employees' computer screens. In this instance the information was not legally admissible in court, as the

organisation had no documented policy in terms of monitoring email beyond its own internal email exchange. Whilst there are similarities between these cases, this is an important development because the usage of the external host presented a new dynamic. However, were the information to have been transmitted via a social networking site it is possible that the results would have been different again. Increasingly Web 2.0 sites are handing over data in legal cases. However, whether or not data is disclosed will be a case for consideration in relationship to a particular case. In the instance of the two email cases cited above, the information in both instances related to data held in the USA and disputed in a USA court. However, the additional complexity of CMC is that it can reside outside the organisation, potentially across a number of legal jurisdictions around the globe, in spaces with different usage terms and ownership rights, as with the Gigg's case.

The wider problem within the RM context of CMC is whether or not the transactions are captured within an organisation's own internal systems or are in fact held by a third party. This will impact upon the way in which the information can be accessed, used and presented in both an evidential context and as a record through time for the organisation's operations. Even within an email context chains of communication may proliferate and become significant beyond organisational boundaries and control. In a Web 2.0 context the problems of discovery, authentication and access run deeper. Thus whilst CMC are records, there is a bigger question as to whether they can be 'records managed' if they lie beyond the organisational domain. This presents huge challenges for e-discovery. As Makara (2009) highlights 'my dog ate my email' is not a defence within the law for missing information whether or not it resides in CMC, e.g. in 2006 Morgan Stanley was fined $15 million dollars for failure to locate a key email. Marchini (2010, p.8) states in respect of the storage of CMC within the Cloud that:

> "The determination of which country's law applies to a particular cloud situation depends on the issue about which there is concern. For each legal topic (data protection, contract, liability issues, criminal law, and so on), the answer may – unfortunately – be different."

This emphasizes the importance of businesses understanding where their business information is held and being able to manage and present that information if it is required in a legal context. The problems of accounting for the legal admissibility of CMC information hosted by a third party are significant.

2.4 CHAPTER CONCLUSION

My own conclusion on the literature at the outset of the PhD was that there was still much research that needed to be done. There was very little work in terms of what would successfully engage people with RM concepts, although looking at the wider literature did demonstrate that RM concepts were being employed in the wider world of information management. By drawing in literature from beyond traditional RM literature it ensured that, whilst I was fully informed of the RM developments and context, I understood the broad cross-disciplinary concerns for the management and use of CMC. This helped me to question my own preconceived views. In addition, the review identified common themes and gaps within the different disciplines, that assisted with articulating the place of RM within the wider research field. In charting how the concepts of records managers and RM map to other professions and disciplines, it was in the sphere of digital preservation, legal admissibility, privacy/security, storage and overload that in essence what could be termed 'RM concerns' were discussed within the wider literature. In particular, I noted when weighting the literature from the basis of identifying empirical research that there is a real gap in terms of credible RM research. There are pockets of RM research on particular themes which meet the criteria to be classified as empirical research (e.g. metadata and appraisal) but there is not a comprehensive coverage of all the key RM themes. The vast majority of RM articles, even those published in reputable journals, are in essence opinion pieces. This in itself is an important finding. Within the RM research there have been many valuable theoretical discussions which have not been taken forward and tested within a practical research context. In addition there are practitioner case examples which would merit further independent testing and examination. Thus whilst practice has been interlinked to research, the credibility of this in terms of empirical research is weak.

In addition, it is notable that RM research has rarely drawn from sources beyond the archival/RM sphere other than to refer to philosophical discussions. In this context authors such as Giddens (who inspired key concepts in the Records Continuum Model (Upward, 2001)) and Derrida (who has been cited in numerous publications (e.g. Brothman, 1999, Ketelaar, 2001, Hill, 2010) and even spawned conferences (e.g. *Archives Fervour: Archives Fever*, conference presented by the Department of English at the University of Wales at Aberystwyth, 28 July 2008) have been hugely influential. However key information systems/information science concepts and ideas are not included within the RM literature, e.g. media richness theories, information seeking behaviour research, technology acceptance models etc.

From the PhD's narrower perspective there was a need to better understand CMC, how RM principles and practice engage since its adoption across organisations, what the role of RM should look like as newly defined working spaces are created, and to better understand the value of CMC in an RM context. At the end of the literature review I still had many of the same questions:

➢ How are records managers relevant in a CMC world?
➢ Which other professions does RM also align to?
➢ What should RM look like in a CMC world?
➢ Why aren't records managers and RM concepts more widely understood and valued?
➢ When and why do users engage with RM concepts?

CHAPTER THREE
RESEARCH METHODOLOGY

"Follow your heart, but be quiet for a while first. Ask questions, then feel the answer."

Unknown

3.1 CHAPTER INTRODUCTION

This chapter presents the research methodology and underpinning methods employed to deliver the research. It discusses the research aim and objectives and the research choices taken to deliver these in terms of both the autoethnographic approach and the setting for this, the co-operative inquiry.

The research framework is defined by Guba and Lincoln (1994, p.107), as:

> "a set of basic beliefs (or metaphysics) that deals with ultimates or first principles. It represents a worldview that defines for its holder the nature of the 'world', the individual's place in it, and the range of possible relationships to that world and its parts..."

The methodology must be framed to answer the question as posed by Guba and Lincoln (1994, p.108), How can the inquirer (would be knower) go about finding out whatever he or she believes can be known? Guba and Lincoln (1994, p.108) define three equally valuable components of the research framework (Figure 3) with questions posed against each:

1. Ontology - What is the form and nature of reality and, therefore what can be known about it?
2. Epistemology - What is the nature of the relationship between the knower or would-be knower and what can be known?
3. Methodology - How can the inquirer (would be knower) go about finding out whatever he or she believes can be known? (Guba and Lincoln, 1994, p.108). Underpinning the methodology are 'the activities we engage in so as to gather and analyse our data' which are the research methods (Crotty, 1998, p.6).

As such, the methodological design is interlocked with my own ontology and epistemology.

Figure 3: A personal representation of the interlocking components of the research framework as highlighted by Guba and Lincoln (1994, p.108).

In presenting this thesis I have addressed my own ontological (worldview) and epistemological (knowledge derivation) perspectives of knowledge within chapter one. I am a critical social constructionist. Having worked for 14 years as a RM practitioner and archivist, my background and beliefs shaped what I wished to know and how I believed I could go about finding out what could be known.

3.2 RESEARCH AIM AND OBJECTIVES

As noted in many research methods texts, the research question and objectives set the scene for establishing a research methodology (Patton, 1990, p.39; Wildemuth, 1993, p.451). They define what it is that the researcher wants to know and which methodology and methods can ultimately deliver answers. The aim of my research was to explore the engagement of RM through a CMC focused co-operative inquiry. The underpinning objectives were to deliver research that:

1. critically explored the role of the 'Records Manager' as it impacts upon engagement with RM;
2. critically explored the role of the individual, investigating why users sometimes fail to engage with RM principles and practice, and determining what assists users to successfully engage with RM;

3. critically explored RM in the light of CMC developments and identified and examined a range of RM processes that could assist with maximising CMC delivery and management in order to understand how RM could be engaged;

4. critically explored the relationship between RM and other processes that were involved in maximising CMC potential;

5. bridged the gap between RM research and practice and promoted future RM research.

The research question posed was not one on which earlier research had been undertaken. Therefore the decisions for the framework developed were based on the question posed, my beliefs and the RM/CMC context under examination.

With many research questions there is the potential to employ a number of approaches. The study sought to provide answers and data to illuminate complex questions around human behaviours in an organisational setting such as why users fail to engage with RM processes. We are increasingly working in a global workspace and as such I wanted to build into the research the opportunity for international perspectives. It was also an objective to gain a cross section of views from records managers and CMC users working within a wide variety of organisational settings. Thus localised studies would not have achieved this objective. In addition, had I sought to undertake a case study, it would have been difficult to break away from my preconceptions and to conduct the research in a way which, in accordance with social construction concepts, would enable me to take a critical stance towards my 'taken-for-granted knowledge' (Burr, 2003, p.2). A case study seemed like the reality of working life that I had lived. I wanted answers to the questions that I had not been able to discover within organisational situated contexts. My preconceptions, as outlined in Chapter 1 (see 1.3) underpinned my thinking.

Having unpacked the aim, objectives and these additional considerations about my own role and place within the research my solution to developing a framework was to set up a multi-layered methodology. I would establish an action research co-operative inquiry within which I would participate as an equal co-researcher and as such deliver an autoethnography. The co-operative inquiry would investigate a larger research question than the PhD study: How do organisations maximise the information potential of CMC for organisational benefit, taking into account the impact of the individual? The question would enable me to analyse the place of RM within the co-operative research without pre-empting its place. Within the context of my fifth objective, to produce a thesis which bridged the gap between research and practice, the process of

conducting an autoethnography enabled reflection on this aspect of the research and the place of an RM PhD within that context. Furthermore the co-operative inquiry group would comprise three sub-groups (UK records managers, UK non-records managers, international participants including records managers and non-records managers) which would merge in stages. This would enable me to explore the dynamic of records manager and user engagement within the context of the research.

There are other approaches that I could have followed to deliver my research objectives. I was influenced prior to starting my PhD by reading Pickard's 2007 book on research methods which I reviewed for the *Records Management Journal* (Lomas, 2007). Pickard's book is the key research methods book within an information management focused context. I was immediately struck by Pickard's discussions on action research (2007, pp.133-142). Action research seemed to provide the key to aligning research and practice and delivering a research approach which could build on my strength as a practitioner with project management experience. I did consider other qualitative approaches but my second supervisor was experienced in action research and so discussing the possibilities of action research with him further strengthened my views that this was the approach I should follow. It was my decision to undertake participatory action research which he highlighted as a co-operative inquiry approach. In addition, one of the School's PhD students (Wendy Beautyman) led a session on ethnographic studies. When I later decided that I would embed the co-operative inquiry within an ethnographic context, we talked about this option.

I never seriously considered delivering a quantitative approach. I studied the School's research methods module and attended research sessions in my Research group. Within this context all of the discussions, bar one, focused on qualitative research approaches. I therefore did not have any discussions that really enlightened me to the potential of quantitative or mixed methods research. Lunchtime debates between the engineering and information science students did polarise the quantitative (baited as sterile instruments) and qualitative (baited as pointless waffle) stances as each group defended the value of their research. My principal supervisor has a quantitative/maths background. I recognise that she would have supported me down any research path provided there was a sound basis for my route map. However, I wrongly 'assumed' that, as a member of the Information, Knowledge and Systems Research group, I should conduct my PhD as a qualitative approach. Having said this, I do not think I made a mistake with my research choice. I recognise that one PhD can only deliver a particular research approach, which

does need to be defined and limited. Other approaches may have relevance and value but choices do need to be made. The co-operative inquiry was a flexible and fertile framework for study under which the embedded autoethnography lens could view the process of RM engagement.

3.3 EXPLAINING MY AUTOETHNOGRAPHIC PHD STANCE

This thesis is presented as an authothnography which is a derivation of the ethnographic study which aligns with the social constructionist view of research I have taken. Hammersley and Atkinson (1995, p.1) define ethnography in its most characteristic form as involving:

> "the ethnographer participating, overtly or covertly, in people's daily lives for an extended period of time, watching what happens, listening to what is said, asking questions – in fact, collecting whatever data are available to throw light on the issues that are the focus of the research."

Schwandt (2001, p.13) defines autoethnogaphy as follows;

> "Originally defined as the cultural study of one's own people this term now commonly refers to a particular form of writing that seeks to unite ethnographic (looking outward at a world beyond one's own) and autobiographical (gazing inward for a story of one's self) intentions. The aim in composing an autoethnographic account is to keep both the subject (knower) and object (that which is being examined) in simultaneous view".

The claimed strength of ethnography studies is that they align with the ways in which people naturally make sense of the world and delivers a detailed, rich, in depth picture of a group, organization and its members including not just their actions but their beliefs, a factor which other methodologies fail to capture (Hammersley and Atkinson, 1995, p.2; Neyland, 2008, p.2). Furthermore ethnography can be strongly participative. Where the investigator is distanced from the research it creates an artificial position and can change the behaviour of those under 'observation' resulting in false data. With more practical ethnography the production of practical recommendations can be developed with local members, rendering them inclusive, thus enabling, 'research to be an iterative and participative process (rather than an enforced set of top-down management or researcher-led decisions)' (Neyland 2008, p.2).

It is important to note that as the environment for the research was a co-operative inquiry which I had instigated, it was a constructed reality in the first instance. However, it stood as a co-operative inquiry in its own right, directed and progressed by the 82 co-researchers. Once established it had its own reality and purpose and developed over time. As such, the co-operative inquiry dialogue and actions which captured and analysed could be deemed to be 'naturally occurring' in the sense defined by ethnographers (Hammersley and Atkinson, 1995, p.2). It was important that it was also established in the first instance for a minimum of one year. This length of time increased the probability that the data and as such the findings would be trustworthy and credible. In addition my prolonged engagement with the inquiry I was also a 'persistent observer' as defined by Lincoln and Guba (1985, p.304) with the opportunity they explore of being able to 'identify those characteristics and elements in the situation' which were relevant to my own PhD research.

Within the context of the international inquiry group (which had to be held as a virtual inquiry because it was not possible to meet physically) it is important to note that virtual ethnography or netnography, was undertaken and constituted a recognised ethnographic process (Hine, 2000). This method has become increasingly documented and in 2010 Kozinets published the seminal work *Netnography* which discusses the reality of online communities. He argues that our familiarity with online communication has resulted in the online being a key part of the world we now inhabit (Kozinets, 2010, p.10). Garcia et al, 2009, record the very real experience of living and existing within a virtual community. Thus whilst I co-created the co-operative inquiry virtual spaces, which in two of the groups were mixed with face-to-face time, for my own part they became a real and inhabited space.

Guba and Lincoln (1994, p.108) highlight a key research consideration, "what is the nature of the relationship between the knower or would-be knower and what can be known?" In this interpretation my place is a fundamental consideration in defining the research framework. In an autoethnographic context the reflexive engagement in autoethnography can be as much about the ways through which the ethnographer makes sense of themselves and their role in the world as it is about focusing on a particular group, location or organizational form (Marcus, 1994, p.393; Rosen, 1991, p.4). This position enabled me to question my taken for granted viewpoints, and aligned closely to my social constructionist ontology and epistemology. Within the context of ethnographic studies, ethnographers should, "consider and attempt to articulate the

assumptions which they take with them into the field" (Hine, 2000, p.5). These assumptions may set and reinforce problems or they may be rejected wholesale. By setting them out and continuing to reflect on them throughout the research they can be rigorously examined (Hammersley and Atkinson, 1995, p.24; Hine, 2000, p.5). The listed points from within my field notes in Chapter 1 (p.22-23) articulate my views at the start of the research. The purpose of setting them down was to acknowledge their existence and then ensure that they were not predefined expectations that would influence the findings. In establishing the research framework it was important to set my place whereby others could develop or refute these views to try and build new perspectives. The literature review provided new learning and knowledge and therefore assisted with this process, but it was still a solitary sense-making pursuit. So my views were really challenged through the co-operative inquiry. Each participant within the inquiry was an equal co-researcher and as such they were empowered to challenge or develop my views and perspectives. As such they were vital to underpin the credibility of the research through 'member checking'.

Within the PhD journey there were also 'critical moments'. These are defined within the autoethnographic research process, as a key point of understanding and in essence 'awakening to new realities' (Roberts, 2007, p.3). They were moments where a finding or realisation was suddenly and unexpectedly exposed as opposed to confirming a view already held or a position which emerged gradually over time. Confirming positions and understanding through time were no less valid but each had its place within the research journey. Roberts cites Pinn's (2001, p.185) description of critical moments as a `messy, alive, risky and uncertain process' and Byrne-Armstrong et al (2001, p. 4) define critical moments in the research process as:

> "The messy, unspoken, complex, and disturbing moments in the research processes... those times when researchers are impelled to negotiate between the theories of convention about research and their lived experience of it. Critical moments tell us the truth of the research process."

There were 'critical moments' both for myself and the co-researchers. However in respect of the PhD, it is also important to state that although, in accordance with social construction precepts, I have sought to develop my views with others I accept that the thesis ultimately presents the research through my own lens. An alternative member of the group might deliver a different account. My thesis presents an account of my lived experience of the co-operative inquiry

process using it as a vehicle to study how RM principles and practice were engaged in the wider inquiry taking into account the different views of the co-researchers. As the co-operative inquiry was conducted through CMC across time zones it was a lived experience which inhabited every part of my day.

3.4 THE CO-OPERATIVE INQUIRY

3.4.1 The purpose of the co-operative inquiry

I felt it was important to invite individuals to participate in a project with its own research credibility and purpose. I wanted people not just to be assisting my research but to also be gaining something personally and contributing to a wider objective. Those who participated within the research were not simply research subjects but were engaged in delivering their own research. Thus two pieces of research would be delivered and in addition, provided I successfully managed the project, this would help to foster links between research and practice.

A growing number of researchers have suggested action research is a valuable research methodology for information professionals. This is because it aims to contribute to actual concerns and also to wider research goals (e.g. Baskerville and Wood-Harper, 1996; Myers, 1997; Baskerville and Myers, 2004; Evans, 2007). Co-operative inquiry is a derivation of action research; it seeks to bridge the gap between research and practice by calling together a group of co-researchers who have similar interests and concerns to work on an agreed research question (Heron, 1996; Heron and Reason, 2006). The co-researchers within a co-operative inquiry need not be drawn from an academic research context but may be practitioners. Thus it provides the basis for bridging the gap between researchers and practitioners, which was also part of the underpinning PhD study as noted in the fifth research objective (see p.73). Reason and Bradbury (2006, p.1) define action research as:

> "a participatory democratic process concerned with developing practical knowing in the pursuit of worthwhile human purposes, grounded in a participatory worldview."

Co-operative inquiry sits within Reason and Bradbury's definition of second-person research, which can be understood as inquiry focused on interpersonal encounters and collaboration with

others. Within the context of my multi-layered approach the autoethnography would align with Reason and Bradbury's (2006, p.6) perspectives on first person inquiry and reflection.

In order for the PhD to evaluate RM engagement within a CMC context, I needed the co-operative inquiry co-researchers to investigate a question that was aligned to the central focus of my own research but that did not presume RM was part of the research solution. I devised the following question: How to maximise the information potential of CMC for organisational benefit, taking into account the impact of the individual? The focus on organisational concerns was important as a wider question might have resulted in the researchers evaluating CMC in a purely social context outside the domains of traditional RM concerns. The emphasis on individuals was added to try and promote the research to non-RM practitioners by highlighting the research's relevance to every individual who used CMC. At its crux, it also dealt with a personal RM concern as outlined at the outset: RM focuses on organisational benefits and yet it is individuals across an organisation that need to actively embed RM processes into their working practices if RM is to be successfully implemented.

Each co-researcher was also empowered to examine and redefine the co-operative research question and to make comments on the PhD aim and objectives. So whilst the research methodology was predefined there was a structure that enabled the group to have input and flexibility. This flexibility delivered my own requirements that individuals should be treated as valued empowered individuals.

The co-operative inquiry provided a framework for individuals to interact within a group without hierarchy. Thus each participant could equally advocate and voice ideas and concerns. This was important in seeking solutions for the group's own research goal and for the PhD analysis of the group's interactions. Part of the PhD analysis was to observe the interaction and advocacy between the different participants and to establish data on the role and place of RM within a CMC context. As CMC is a relatively new and evolving field I hoped that participants would come to the research with a relatively equal level of knowledge and expertise. It has also been suggested by Hearn, Foth and Gray (2009) that in a rapidly new and evolving world, such as CMC, action research is particularly successful and appropriate as a research model. Within an action research framework the short cycles of action provide a fluid framework without a rigid predefined course. At the end of each cycle new information can be assimilated and a new research direction plotted for the next short cycle. The easy assimilation of new concepts and

changes in research direction can be important within an inquiry that is dealing with rapidly evolving and changing subject matter.

3.4.2 Structuring the co-operative inquiry

The normal structure for the inquiry is to establish one group of co-researchers. In this instance, a novel approach was developed, which was a critical part of the investigation. Three separate groups of co-researchers were established which would join through time: a UK based group of RM practitioners; a UK based group of non records managers termed 'users'; and an International group of participants from a range of backgrounds including RM (Figure 4). This approach enabled a study of not only RM principles and practice within a CMC context but an evaluation of why RM fails to engage other CMC users and information professionals.
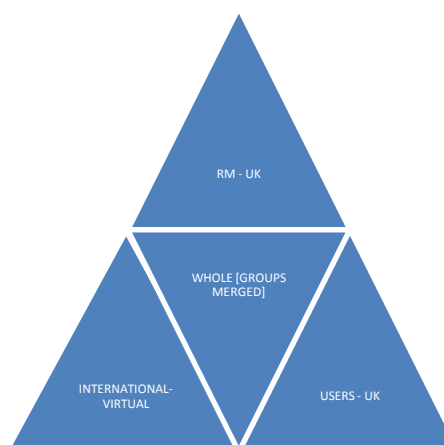
Figure 4: Representation of the groups within the co-operative research inquiry.

The UK RM community may be seen to be a community of practice within the terms articulated by Wenger [11] and this presentation of the UK RM community is discussed within Chapter 1 (refer to 1.4.2). Had a research call been made for one UK group it was likely that this group would have been dominated by RM professionals. By separating the two UK groups, in the first instance, it provided an opportunity for the UK RM community to evaluate RM principles and practice within the CMC context before the point of engagement. In addition, it is possible that the 'user' participants would have been alienated at an early stage of the project if their early discussions

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[11] Wenger defines a community of practice by three dimensions "what it is about - its joint enterprise as understood and continually renegotiated by its members; how it functions - mutual engagement that bind members together into a social entity; [and] what capability it has produced – the shared repertoire of communal resources (routines, sensibilities, artefacts, vocabulary, styles, etc.) that members have developed over time.''. Wenger, E. (1998) 'Communities of Practice: Learning as a Social System'', *Systems Thinker* (June 1998). Available online at: http://www.co-i-l.com/coil/knowledge-garden/cop/lss.shtml. Accessed 1 December 2012. There is an accepted level of training for records management qualification, two central interlinked societies, a common set of principles and vocabulary articulated through **ISO 15489**, and a single listserv for shared dialogue.

had been dominated by records managers and RM concerns. It also provided the opportunity for the User UK group to develop a strong identity in order to provide open and honest feedback to the RM co-researchers once the group merged.

Within the wider international context, records managers cannot be defined as a community of practice (refer to the discussion in 1.4.2). Therefore, from the project's initiation, it was possible to establish an international co-operative of co-researchers with RM and non-RM backgrounds. The RM co-researchers had the opportunity from the outset to advocate for the role of RM principles and practice in supporting and delivering CMC. The International group was also initially separated from the UK group in order to be able to establish its own identity, given that the participants came from diverse backgrounds and were only able to collaborate virtually through the medium of online collaborative technologies. I believed that the establishment of an International group was an important dynamic for the study. Cultural factors can have a significant bearing upon communication choices and also potentially engagement with defined management frameworks, such as those prescribed by RM. The international inquiry group was also established as a virtual inquiry because it was not possible to meet physically. Virtual ethnography has been undertaken and is a recognised ethnographic process (e.g. Hine, 2000). Within the research context, the virtual nature of the co-operative research added to the value of the research in terms of the assessment of the place, role and reality of the CMC context and this was duly analysed by the co-operative inquiry groups.

The co-operative inquiry framework established that over time the three groups would merge, starting with the two UK groups joining to form a group with mixed backgrounds in line with the International group, before all three groups finally coming together (see next page Figure 5). At each merger point the groups shared their research/actions, evaluated the other group's research/actions and then moved forwards as a new community. These merger points provided critical opportunities to evaluate the success of the RM practitioners as advocates for RM, as well as the potential for RM principles and practice to engage non-RM co-researchers.

Within each group I was situated as a co-researcher and therefore in accordance with the principles of the autoethnographic study was part of the process of living and experiencing the study. As Marshall (1999) highlights within her emphasis on the requirement for the reflexive researcher I was literally 'living life as inquiry'. However, at times I was living in two 'communities'. To run so many groups concurrently was an onerous time commitment. In

UK RM UK group

One UK group

User UK group

One group

International Virtual group

Figure 5: Representation of the group mergers within the co-operative research inquiry.

addition, the UK groups needed to go through an additional merger process than the International group and so to deal with these dynamics the two UK groups were established first. The UK co-operative groups were established for a minimum of one year timeframe with the aim of reviewing participation at this stage. Heron and Reason (2006, p.146) define the length of a normal action research project as four to eight cycles. One year was seen as the target time in which the UK groups could move through a minimum of six action cycles and the International group through a minimum of four cycles. Importantly for the purposes of the autoethnography the experience had to be sufficiently prolonged to build trust and gather a rich data picture.

One year was also a realistic timeframe to ask individuals to sign up to the project. If the project had been established as a two year commitment, at the outset, it would have had the potential to deter participation. By the time it came to invite the international participants to join the research it was clear that there was enough commitment within the UK groups to continue their research participation beyond one year. In addition it had taken longer to conduct the first action cycles than anticipated and so the International group was also established for a minimum time of one year.

In determining each group's size it was important to obtain a sample size of co-researchers large enough to diagnose and test the actions around the research aim. The optimum group size was set at 20 co-researchers per group, with a target of retaining no fewer than 12 co-researchers by the end of the research timeframe. There is very little data on what is an optimum size group. Most of the research on qualitative data saturation relates to interviews specifically. Guba and Lincoln (1985, p.235) state that in regards to data saturation:

"it is usual to find that a dozen or so interviews, if properly selected, will exhaust most available information; to include as many as twenty will surely reach well beyond the point of redundancy."[12]

This conclusion is supported by one piece of research. Guest et al (2006) conducted an inquiry into how many interviews were required for data saturation and within the context of the study concluded that at 12 interviews this point was reached. Green and Thorogood (2004, p.120) concluded that in most qualitative studies little else will be discovered after 20 interviews. It is to be noted that this is in respect of a different type of data collection and interviews were not the method of collection in this instance. Clearly the nature of the subject under investigation and the methodology employed will impact on the point at which saturation is reached. As Charmaz (2006, p.114) notes, a study with a very focused remit is likely to reach saturation with fewer participants. She highlights 25 as an optimum number of participants for smaller projects (Charmaz, 2006, p.114).[13] In reality it is not possible to define in advance of a study when data saturation will be reached. Within the context of a co-operative inquiry it is not possible to build up a group over time to ensure that saturation can be reached, as can occur with interviewing techniques. Therefore it is perhaps more important to recognise from the outset that whilst a number of participants will ensure that a good understanding of the research focus is reached, the study may not necessarily be considered exhaustive. In addition, it is to be noted that this was an autoethnography and the concern was to obtain a rich picture.

From a practical perspective within the context of co-operative action research inquiries, 12 people are stated as an effective number for collaboration (Heron and Reason, 2006, p.151). It was necessary to take into account the potential for high drop out rates, particularly within the context of the International group where no face-to-face collaboration would take place. However, too many co-researchers would have prevented each group's potential to collaborate. As a result of these deliberations the maximum number of co-researchers for any one group was set as 30 co-researchers with a minimum of number of 20 participants. These numbers would allow the groups to work effectively and to enable each co-researcher to have an opportunity to contribute. However, the figures also ensured that the group would have a sufficient dynamic

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[12] Lincoln and Guba's reference relating to data saturation was first highlighted to me by Andrew Shenton.
[13] Since the initiation of this research Mason (2010) has produced a more detailed study of qualitative sample sizes and saturation points. Mason's study of participant selection found that from a sample of 28 action research PhD studies, 23 was the median number of participants, with 6 the mode and 17 the median. However, he concluded that many studies are conducted without a rigorous exploration by the supervisors or student as to what should be taken as a sample size for different types of study.

and range of contributions even if some participants did drop out of the research. The figure of 30 was set because there was an expectation that there would be a high drop out rate or lack of participation. This was based on the experience of previous Northumbria University research in the field of RM undertaken by my principal supervisor. A RM based research project run over two years by my supervisor had a 54% drop out rate[14]. I perceived that it was likely that there would be a higher drop out rate from a PhD centred research project than, that of a research project run by a leading academic with research council funding. My goal was to try and ensure that 12 participants remained in the project for at least two years. I knew that if I signed up the maximum number of co-researchers and they all remained engaged with the project then 90 co-researchers would be a difficult, although not impossible, number of co-researchers to successfully manage as a single co-operative research group. 90 researchers was in essence a figure which in some contexts would be deemed to be a potential size for a quantitative research project. However, evaluating the risks the potential to have no one remaining engaged seemed to be the more significant risk.

The call for researchers was made on listservs, Web 2.0 sites and by circulating flyers at conferences and through societies. A sample flyer is attached at Appendix 1.2 together with sample email and Web 2.0 site postings at Appendix 1.1. For the international research attempts were made to advertise the project across the world targeting all five continents. Colleagues within Northumbria University forwarded emails regarding the research to contacts around the world. Emails were sent to listservs around the world and advertisements were posted on a range of Web 2.0 sites, e.g. Facebook and LinkedIn. Participants were signed up in the order in which they responded to the research call. All participants were signed up in a personal capacity which meant that they could remain as co-researchers whether or not their employment circumstances altered. It also gave each person freedom of action within the scope of the research. Two limitations to participation were originally set:

1. No PhD students were signed up to the research. My principal supervisor and I discussed this and concluded that to conduct two pieces of PhD research from within the group might have compromised the element of originality of one of the PhDs. However, by the time I was making a call for international participants I realised that the research design

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[14]In 2005 Prof. McLeod led a project investigating the impact of the international records management standard *ISO 15489*. Part of the process involved a longitudinal study of 50 organisations over a two year period. Individual records managers from within these organisations were required to complete questionnaires. All 50 organisations originally completed the questionnaires but only 23 organisations completed the exit questionnaire (McLeod and Childs, 2005, p.8).

meant that there was not likely to be any research conflict given that the PhD was being presented as an autoethnography and so this stipulation was dropped.

2. As all participants signed up to contribute to the research in a personal capacity this limited the influence of any one organisation and enabled a wider pool of experience to be gathered. Critically it enabled the role of RM and communications to be assessed from across a range of sectors. It also helped to contain the risks for successfully delivering the PhD. If a pool of participants had signed up from one organisation then the project could have been impacted if that organisation changed, e.g. moved location, downsized etc.

Clearly the co-researchers were a critical component of the inquiry and therefore Chapter Four contains further detail on who the co-researchers.

3.5 THE RESEARCH ETHICS UNDERPINNING THE WORK

At the start of the project each co-researcher was provided with a sheet explaining the research and required to sign an ethics consent form (Appendices 1.4 and 1.5). In addition participants were offered the opportunity to discuss the research within the group and also on a one-to-one basis with myself. Each co-researcher agreed that their research activities and data would be analysed and used in support of a RM PhD study. Co-researchers had the option to be:

a) credited for their membership within the group and to have their contributions credited;

b) credited for their membership within the group and to have their contributions anonymised;

c) to participate in an entirely anonymous capacity.

At any time co-researchers could opt out of the research. Appendix 1.6 lists the names of the co-researchers who participated within the co-operative inquiry and wished to be credited for their group membership. As noted some members also wished to have their comments credited. For the sake of clarity within the PhD text, each co-researcher has been allocated a running number. Appendix 1.7 enables those co-researchers who wished to be credited for their specific comments to be looked up and duly referenced. In addition this number has been prefixed with their original group membership as this provides context on their journey through the research process: R indicates a member of the UK RM UK group; U indicates a member of the UK non-RM/User UK group; I indicates a member of the International group of co-researchers. In addition

some people subsequently asked to have sensitive comments anonymised and other comments credited. Therefore some participants have a second number prefixed A and then their group prefix, to deal with this later requirement.

Within the context of CMC there can be issues about the blurring of personal and research space (Taylor, 1999 and Kozinets, p.181). However, it was understood that for the purposes of the research all communications would be captured. In many instances the communications did occur through CMC spaces which were set up especially for the research. In addition the fact that each person participated as themselves and not an avatar was an important part of the trust built up across the co-researchers.

3.6 INITIATING THE RESEARCH

Beyond time, I did not have any resources and therefore each group needed to self organise and fund itself, choosing CMC technologies to assist their research. The International group was set up to co-operate virtually through the exclusive use of CMC. This enabled the three groups and myself to reflect on the use and management of the technologies in action and thus it aligned with the context of the research aim.

I did make a decision prior to the research that the two UK sub-groups should hold physical meetings as well as working virtually. I thought that this would help keep the collaborators engaged and thus minimise the risk of them dropping out. I was confident that there would be support from London records managers and that furthermore there would be the benefit that these people would come to the research from a wide range of organisational types. For this reason the sub-groups were based around London. However, I was not confident that a purely virtual inquiry would sustain itself, although in the context of the International group it was the only plausible way to progress the research in the first place. The mixed approach did enable me to evaluate and analyse the process in a purely virtual context (through the International group) as opposed to a physical and virtual context within the UK setting.

There are criteria around what determines a 'virtual community' and how often it should meet (e.g. Jones, 1997) but I did not prescribe any fixed timetable around how often the group should meet or how much time was required for any one person to input. I saw it as important for the success of the research that I did not try to force my own framework onto the research beyond

the process of managing the requirement that the groups should merge together. If any further framework had been established then the co-operative ethos would have been completely undermined. Therefore, each group determined its own mechanisms for progressing the inquiry actions. I facilitated at the first meeting and then the process of facilitation and moving forward was determined by each group. Whilst the groups were separate my place was complicated as I needed to ensure that I did not share anything across the groups and thus bias the point of the merger process. In order to achieve this I did not contribute any comments to the first phase of diagnosing within each group.

Each group undertook the research through the traditional phases of an action research study following the basic action research cycle described by Susman and Evered (1978): i.e. diagnosing, action planning, action taking, evaluation, and specifying learning (Figure 6). The nature of action research delimits the scope of the research and therefore the direction and length of each cycle cannot be predicted in advance, although the intention is to move forwards the research (Figure 7). It was established at the outset that each group would move through a minimum of two cycles before merging (Figure 8).

Figure 6: Representation of Susman and Evered's action research cycles (Susman and Evered, 1978).

Within the context of an action research approach it is important to ensure that as well as the research actions reflection is undertaken. This is demonstrated in McKay and Marshall's (2001) representations of action research which define the dual action research imperatives of practical problem solving (action) as well as generating new knowledge and insight (research) as indicated in Figure 9. In essence two processes are taking place simultaneously as the reflection is

Cycle 1   Cycle 2   Cycle 3   Cycle 4
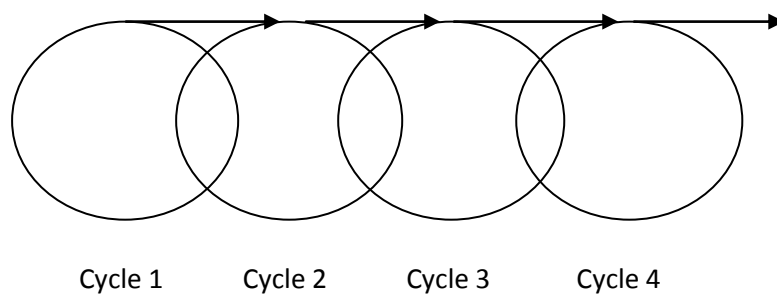
Figure 7: Representation of the linear progression of the action research cycles based upon Susman and Evered, 1978.
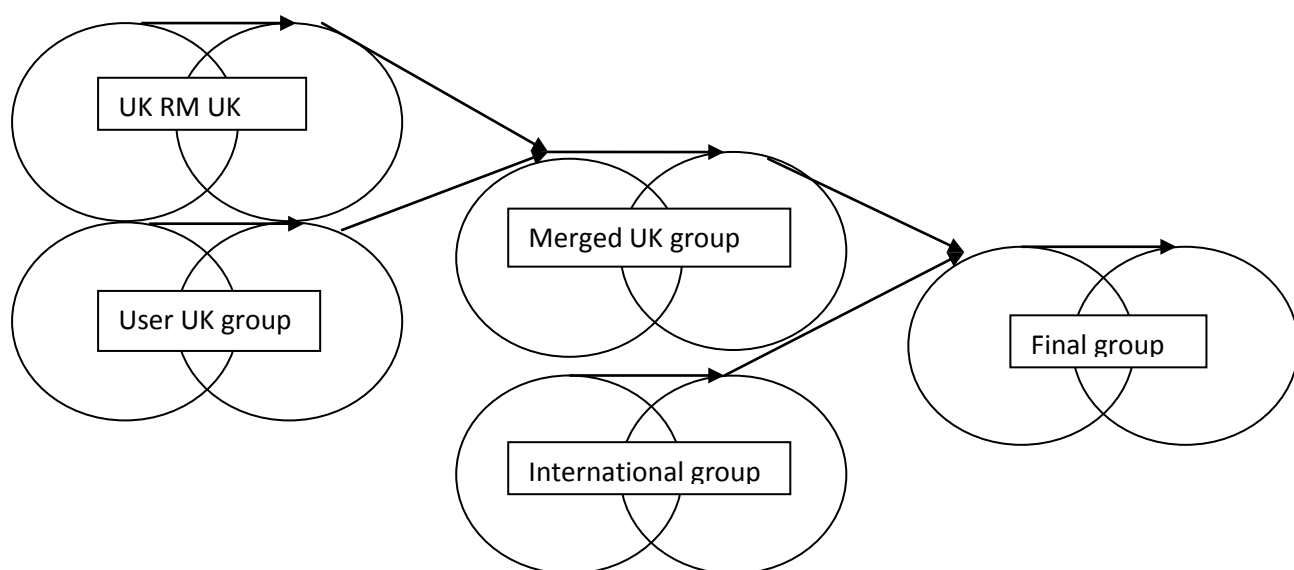
Figure 8: Project action research cycle framework
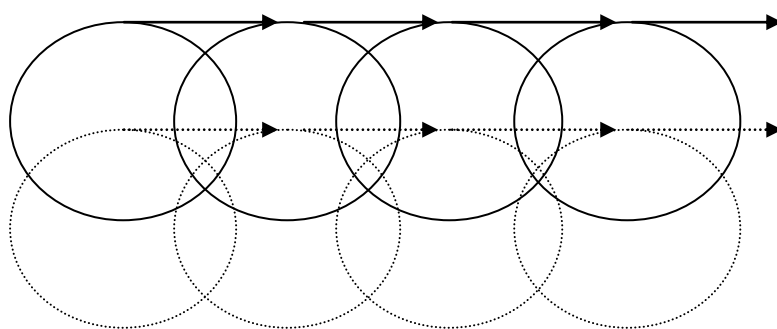
Figure 9: An evolved representation of the dual action of practical problem solving and generating new insights based on McKay and Marshall's work (2001, p. 48).

continual even thought Susman and Evered's (1978) cycles define specific points to stop and evaluate before starting on a new cycle. The nature of action research delimits the scope of the research.

3.7 RESEARCH ANALYSIS

Through the process of living inside a co-operative inquiry a mass of data was automatically generated through the discourse and actions of the group. However, a particular problem noted within the context of action research is the intensive labour requirements it generates and the huge amount of data. Writing up action research is problematic because of the mass of data gathered (Markus and Lee, 1999, and Deluca, Gallivan and Kock, 2008). Deluca, Gallivan and Kock (2008, p.81) highlight that:

> "One reason for the difficulty in publishing AR journal articles is that AR studies tend to amass large amounts of primarily qualitative data, multiplied for each cycle, ushering articles to unwieldy lengths. Studies that need to process intense amounts of qualitative data, regardless of epistemological perspective or research approach, are referred to as "intensive" research". To showcase this valuable and intensive research, special issues of AR have made special provisions for the unusual length of the articles. It is often the case that a full description of an AR study would require a book."

My multi-layered approach to the research further complicated my data collection. Running multiple co-operative inquiries in tandem added to the amount of data generated and the process of analysis. In addition, my PhD was gathering data from the co-operative inquiries and using this to inform my own autoethnographic PhD. This was informed by the group interactions and discussion in addition to the groups' own research and outputs.

The data generated included audio recordings from conference calls and meetings, emails, film, text from online discussions, Google Waves, meeting notes, mindmaps, photographs, questionnaire data, wikis, and a range of items produced as part of the practical outputs from the co-researchers' work (cartoons, hexagon cards, flipcharts etc). Wherever possible I captured conversations as audio records. I had a mass of textual data from the other communication channels through which the co-operative groups conducted their discourse and therefore not to record spoken discourse potentially would have given the textual data an additional significance

that would have created an imbalance within the research evidence. However, within the context of UK group meetings and audio channels used by all groups (telephone, Skype etc) not every minute of discourse was recorded. This was because in a meeting the audio equipment could not always cope with group recording. Sometimes, when people were moving around the room to undertake group activities, sounds and conversations blurred. At times the group asked to have the recorder turned off to have a free and frank discussion before putting their views on record. At key moments the recorder was placed in the centre of the group or handed around. However, this was judged on a case by case basis so that the need for the recording did not undermine each group's actions. I therefore relied on notes from those occasions where recordings were not possible. In addition to the data generated from the co-operative inquiries I kept my own research diary, notes and memos which recorded my observations and the development of my ideas. Memo writing is a natural part of the ethnographic process whereby my research diary with memos was a key data set. Memos are the product of one person writing at a moment in time. They recorded my thoughts, emotions and observations at a particular moment. They set down uncertainties that I could further explore. Some were lengthy and others were brief notes. I did sometimes miss things that later became significant and I needed to ensure that I could retrace my steps through my research trail. As I have noted in section 1.3 my own mind does not remember conversations in the same detail that I can capture a written record. These were also important because they were a personal data trail which assisted with challenging my own preconceptions. As a records manager I had a vested interest in the concerns and conclusions of the research. As such I was at times vexed by situations or potentially partisan and the memos can help face and recognise and deal with these emotions as noted by Atkinson (1992).

As Charmaz and Mitchell (2001, p.161) indicate, a danger of ethnography is 'gathering everything and nothing... Mountains of data grow but they don't say much. What follows? Low level descriptions' and within the context of autoethnography Pawluch (2009, p.324) highlights, 'the possibilities of getting lost in the data'. In order to help me make sense of so much data I undertook qualitative coding as set out by Lewins and Silver (2007, pp.91-100). This was an inductive process. I undertook line by line open coding (termed 'free codes' in AtlasTI) of my data and memos and then raised axial categories of significant codes to develop a hierarchy of codes (termed 'linked codes' in AtlasTI). I then revisited the codes to identify gaps and refine concepts, creating a framework of selective codes (generated into a 'families of codes' in AtlasTI)[15]. Snapshots of the evolving RM codes are included in Appendix 1.8 which provides an insight into

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[15] Lewin and Silver (2007, pp.84-85) define the terms open coding, axial coding and selective coding.

the RM coding at different stages of its development throughout the PhD. Appendix 1.9 contains a high level overview of the coding as a whole. All of the data was coded by reading through the texts in the first instance. At the end of the work some later checks were run through word searching. AtlasTI has the benefit that it is easy to link, build and revise codes. I selected AtlasTI after attending training at CAQDAS which advises on Computer Assisted Qualitative Data AnalysiS (see http://www.surrey.ac.uk/sociology/research/researchcentres/caqdas/about/) and provides guidance on the potential of different software packages. AtlasTI was recommended as being helpful for ethnographic studies. Appendix 1.10 contains screenshots of some of the coding and linking for different types of documents. In particular AtlasTI has the ability to generate and treat memos as separate categories of records. I could attach these memos into particular discussions and code them but then separate out the memos within coding reviews. A sample memo is contained at Appendix 1.10. In addition AtlasTI could deal with a wide range of document types (Lewins and Silver, 2007, p.172). I took photographs of paper records and loaded these onto the system. Where possible I downloaded the online discussions but when I could not do this I took screenshots to upload. I could mark up audio and photograph as seen in Appendix 1.10. This did save a lot of time in regards to transcription. It also meant that I could listen again to the tone of the discussions. In some cases, audio discussions were transcribed and in these instances I noted that it was a duplicate and only coded one version.

Using this coding approach as an analysis method helped me to make sense of my data and in accordance with a social construction stance it enabled be to continually evaluate my findings. It helped me to review my preconceptions and see emerging themes in different ways. I wanted to understand the views that were being strongly presented by multiple voices but also to look at areas of conflict and 'weak signals' that might be important in elucidating future areas for important exploration. It was a strongly inductive approach. The use of AtlasTI helped me to keep my analysis linked to the data context and to maintain the richness of thick description which ethnographic studies deliver. The process of coding was somewhat akin to the familiar act of archival cataloguing, which requires documents to be placed into a context online and hierarchical structures generated. However, all of this work, and the writing, was done in the context of the autoethnograhic journey and the reality of the action outputs.

In the context of an autoethnographic study, it is the norm to immerse oneself within the experience and to analyse these experiences as an iterative process. A rich narrative is developed and delivered by the researcher. Themes can emerge but their context is key to understanding

and relating their meaning. Within the co-operative inquiry analysing the data in terms of emergent themes and the extent to which particular topics were discussed delivers only one part of the picture and context is critical. I can track within my coding how many times a particular theme was coded and in how many separate discussions. However, sometimes a potentially small point (although this can be subjective) was coded many times and a potentially larger or more critical matter could be dealt with as a minimal discussion before agreement was reached. It is therefore important to note that a key part of the data set is the actual action research outputs. In effect these outputs record the key messages which the groups felt were important to convey whilst my additional analysis of the discussions provides underpinning which needs to be seen in the bigger context. I feel very strongly that the action outputs provide a clear reality of the work and therefore I have included many outputs in a separate set of appendices numbering 2.1-2.22. It is possible that the co-researchers might not agree with my additional analysis in the autoethnography but the outputs do have a reality agreed by the co-researchers which needs to be clearly presented.

Who the co-researchers were is an important part of the research. As such Chapter Four has been dedicated to looking at this in detail. I knew key information about people's backgrounds and was able to reflect on this as part of the data analysis process. Each co-researcher was given a code and I tracked each person's input throughout the inquiry. As such I was then able to look at people's backgrounds against their viewpoints. In some instances where anonymised data was collected a point would emerge and then be taken back into the inquiry in an open way to establish whether there were underpinning factors which influenced individual viewpoints, e.g. nationality, profession etc. This was important when for example contradictory statements were made which could be seen to come from different stakeholders, e.g. Australians had different views than Americans on some issues.

3.8 RESEARCH VALIDITY AND TRUSTWORTHINESS

In terms of this research's validity and trustworthiness, whilst I have set this research as a personal narrative within the context of autoethnography it is nevertheless being presented as a PhD thesis. As such it does need to meet certain academic criteria. However, the concept of the research validity and trustworthiness is complex within a social construction paradigm where validity and truth are not fixed 'real' concepts. As Burr (2003, p.6) states:

"Social constructionism denies that our knowledge is a direct perception of reality. In fact it might be said that as a culture or society we construct our own versions of reality between us. Since we have to accept the historical and cultural relativism of all forms of knowledge it follows that the notion of 'truth' becomes problematic. Within social constructionism there can be no such thing as objective truth."

As noted by Frisch (198, p.33), thinking through and writing up events has in itself been seen as a process of reinventing reality. He posits the question, 'What happens to experience on the way to becoming memory?' Gergen (2009, pp.21-27) highlights research is judged in different ways at different times by audiences. However Crotty (1998, p.47) makes the point that although there is no ultimate truth within a constructionist paradigm, 'there are useful interpretations to be sure and these stand over against interpretations that appear to serve no useful purpose'. This is an important point if the research is to be presented as having value. Within the context of my work I have sought to present an honest account and to evaluate my findings with the co-researchers in the co-operative inquiry in order to credit their input and provide an honest account.

In regards to judging this PhD I have studied the work of other social constructionist PhDs. Many give no criteria by which their work should be judged or validated. Roberts (2007, p.19) does provide a detailed perspective on judging social construction research's value over time. She has drawn on the work of Reisemann (2002, p.25) who presents four points for validating research summarised as:

- Persuasiveness and plausibility (the degree to which the interpretation is reasonable and convincing) which is provided through the account and the evidencing of the findings. Within this work detailed description of events, together with an audit trail of the data provide an underpinning of the work.
- Correspondence (taking the work back to those studied). As Reisemann (2002, p.25) and Roberts (2007, p.19) conclude taking the work back to those studied is complex because responses and interpretations are not fixed but shift over time. It is for this reason that I cannot claim to present an account that has satisfied all the co-researchers as it is my PhD and I ultimately bear responsibility for its contents. However, the PhD learning has been taken back to those who have created its substance and discussed over time. The diagnosing cycles within the co-operative inquiry provided natural opportunities for member checking. In addition, discussion was undertaken both publicly and in

anonymised formats throughout the inquiry which enabled additional opportunities for criticism and reflection.

- Coherence at multiple descriptive levels (global, local and thematic). The actions, dialogue and perspectives of 82 international co-researchers enabled data to be gathered and analysed against themes and actions.

- Pragmatic in terms of its potential for future application and development by other researchers/practitioners over time. The actions of the research assisted with pragmatic testing. In part this aligned to my goal to link research and practice.

Within the wider context of qualitative research the framework by which research's trustworthiness is presented is often through four key qualities defined by Guba (1981, pp.75-91) as :

1. Credibility, which relates to how congruent the findings are with reality. The importance of the checks provided by the co-researchers was vital to this process. The analysis of data together with natural opportunities to reflect on this with co-researchers at each stage of an action cycle was vital to the development of a credible picture.

2. Transferability, which relates to the extent to which the findings can be applied in other settings. The development of the work through 82 co-researchers from a wide range of settings has increased the potential for transferability. The account of the work and the actions undertaken have been presented in detail so that others can, as noted by Lincoln and Guba (1985, p.316), revisit the work and 'make a conclusion about whether transfer can be contemplated as a possibility'. Where further research is required this has been clearly stated, and as such the status and context of the findings has been clearly presented.

3. Dependability, which is addressed through the researcher's careful representation and auditing of the research process as a whole. The research analysis has underpinned the work as a whole. Appendix 1.10 contains samples of the coding and the whole of section two of the appendices contained detailed evidence of discussions and outputs from actions. Oversight by through the PhD supervisory process and viva act as an 'audit' of the research as suggested by Lincoln and Guba (Lincoln and Guba, 1985, p.318).

4. Confirmability, which requires steps to ensure that that the research is objective. Confirmability links into the other processes such as dependability. The findings were discussed with the other co-researchers who acted as a process for member checking

and audited by the supervisor team and viva examiners. As such the outcomes were 'negotiated'.

At my PhD mid-point progression I was asked to justify how a co-operative inquiry could be used within a PhD context whereby it is important to demonstrate evidence that the work is clearly the student's own. It is important to stress that the co-operative inquiry and the autoethnography were different layered research processes. My defence was, and continues to be, that the process of a co-operative inquiry is no different than other social science methodologies. Whether data is gathered through a qualitative case study or a quantitative survey one is drawing on the input of others. In each case it is important to be clear where one is citing others or drawing one's own conclusions. With 82 co-researchers it is likely that this work will be subject to much greater scrutiny than other PhD studies and as such it contributes to its veracity. The process of relating an autoethnography demystifies the data collection. I can be clear about the contribution and influences of the co-researchers, my supervisors, literature sources and other people outside the research process. Within research that is written in the third person this clarity is often lacking. Within a social constructionist stance acceptance of all ideas ultimately evolving from others is inevitable. Equally I have been clear from the outset about my own position and premises coming into the research. As noted by Patton (1990, p.59), this research's credibility in large part rests upon my own credibility. However, in research terms presentationally the rigour of the methodology employed and the style of writing should assist with the delivery of persuasiveness, plausibility and credibility. The length of the narration provided by the thesis format enables a much more detailed and as such credible account of the autoethnography to be presented than within a journal article. As such this format helps with the presentation of the research's validity. Furthermore, in addition to the 82 co-researchers, oversight on the research by the supervisory team, together with a Viva process at the end, assisted with checking the delivery and quality of the work.

Whilst the inquiry was constructed, once it had commenced it became its own environment with each co-researcher equally contributing to its reality. Action helped to foster the collaboration and provided a focus for the inquiry which made the work develop its own natural dynamic. The engagement can be stated to be prolonged as defined by Erlandsson et al (993, p.29) and as such provided time for a true picture to emerge over time.

The findings of the research were generated from the actions and dialogue of 82 people from a range of backgrounds and settings, i.e. not just one organisation. The co-researchers were a

random sample. As Preece (1994) notes this helps to negate and challenge any biases I may personally hold. Furthermore, mechanisms were put in place to enable the co-researchers to comment both directly and also anonymously through wikis and questionnaires. This provided the opportunity for honesty. In addition, it was made up of peers in terms of records management practitioners as well as seasoned researchers. As such this provided a framework for checking my findings and also the rigour of my research delivery. These checks aided the delivery of concepts of correspondence, dependability and confirmability.

Each iterative cycle within the action research chain provided an opportunity for reflection and evaluation. Furthermore a key part of the PhD's novelty was the idea of establishing separate co-operative inquiry groups which would merge through time with new learning at each point. This provided a further opportunity across the research piece for checking and clarification.

The number of researchers and the range of experience they represented enabled the research and its wider potential for applicability/transferability in a range of settings to be discussed. Furthermore the inquiry through its own research added an additional extension to the work. The outputs of this research have been extensively incorporated into the appendices. These contain a reality which had been clearly negotiated by the co-researchers and they form an important presentational part of the underpinning of the thesis. However, it is important to note that the research is about engagement with RM within the co-operative inquiry setting. It has already been noted that this is a social construction. In essence therefore it is as much a concept to be created as found. This thesis is therefore concerned with understanding and potentially redefining RM within the inquiry through the co-researchers. Vital to the process are the 82 co-researchers that constructed the reality of the inquiry. Chapter Four has been dedicated to understanding these people.

CHAPTER FOUR

THE CO-OPERATIVE CO-RESEARCHERS

"Many will travel and knowledge will be increased"
Taken from the Biblical Book of Daniel (12:4) and quoted by Francis Bacon in 1620 on the cover
of his research magnus opus *Novum organum*.

4.1 CHAPTER INTRODUCTION

This chapter establishes who engaged in the co-operative research as co-researchers, their recorded influences and motivations for engagement, and my own interpretations surrounding the reasons for engagement. It is essential to the process of co-operative inquiry to investigate who constitute the co-researchers as these were the individuals who shaped the actions and discourse. As Shenton and Dixon (2004, p.6) note:

> "in view of the fact that qualitative inquiry emphasises the importance of researchers acknowledging their prejudices and openly sharing them with report readers, it seems highly inconsistent to allow the biases of another party..."

These individuals have constructed and influenced the research based on their own expertise, knowledge and beliefs, and this should be considered to make sense of the narrative. Within the context of qualitative research, it is the potential for an individual to lead the research that has resulted in the criticism of qualitative research as a biased process that lacks rigour (Guba and Lincoln, 1994; Mahoney, 1996; Myers, 2000). However, within the context of a co-operative inquiry the democracy of the process exposes and records the reasons why decisions are reached. Each co-researcher has the right to advocate for a course of action and thus shape the research's direction. There is no predefined hierarchy that requires individuals to rate one person's views more highly than another. The process of the co-operative inquiry requires and enables open discussion, examination and reflection on the research direction. An individual can dominate or lead the research process, but only in an open and documented situation with the authority of the majority of the co-researchers.

4.2 ESTABLISHING THE CO-OPERATIVE RESEARCH INQUIRY GROUPS

The maximum number of co-researchers per group was set as 30 and the minimum 20. Three co-operative inquiry groups were established:

1. Records Managers UK

It proved very easy to attract researchers to the UK RM UK group and the spaces for the Co-researchers were filled within the first week of advertising the research. In addition to signing up 30 RM practitioners, 20 practitioners were placed on a waiting list and other applicants were then turned away. A waiting list was established in case a high proportion of records managers dropped out early on. In fact only two people who signed up initially did not return their consent forms, although they did contact and inform the PhD student that they would not be taking part. One person who signed up dropped out of the research after only one month due to work pressures, but at this stage it was not felt necessary to introduce someone new to the group.

2. User UK group UK

It was very difficult to find co-researchers for the User UK group. Continual efforts were made to advertise the event and circulate flyers, right up until the week when the co-researchers met and commenced the research project. By June 2008, 22 people had signed up to the User UK group. This met with the minimum criteria of 20 co-researchers. It was anticipated that during the project co-researchers would drop out of the research. Therefore it would not be possible to ensure that the three groups remained the same size and the User UK group was commenced with 22 members. It was hard to make the research appealing to a wide group of people. If the research had been advertised to particular groups with more specific 'hooks' then the group might have been larger but it might have been dominated from one particular sector.

3. International group

It proved easy to sign up international co-researchers. In this instance the co-researchers were being asked to join a research project that had already been operational for a number of months. There was also a much larger potential pool of candidates from which to draw. All of the places within the International Co-researchers were filled within the first three weeks of advertising the project.

The timing of the advertisement for the UK researchers in the Spring of 2008, with meetings first held in June 2008, in hindsight seems fortuitous. In September 2008, Lehman Brothers Bank collapsed sparking an international banking crisis. At this time, eleven of the UK co-researchers indicated that they would have been unlikely to sign up to the research if it had been advertised after this event. As U51 stated, "we are under so much pressure now to perform I would not take on anything else within the current economic climate – I'm too busy hanging onto my job!" It is possible that it would have been harder to find co-researchers to commit to physical meetings after this date. However, the international research group was formed after the collapse. It is difficult to know whether the same people signed up because it was purely a 'virtual' online exercise which required no face-to-face participation or if in fact some people were put off joining the group because of other work pressures. After September 2008 the London based meetings were shifted from the afternoons to evenings because the majority of co-researchers no longer felt able to ask their employers if they could attend meetings in work time. U45 and U49 both noted that this was a disappointment and that this made their participation much more difficult.

At the start of the project each of the co-researchers was required to complete a compulsory ethics consent form in order to participate and to provide key demographic data and their reasons for participating in the research, including what they hoped to gain from being part of the research (see Appendix 1.11). In addition, within the UK groups' first project meetings, time was allocated for the co-researchers to anonymously complete a questionnaire (Appendix 1.12) and the optional personality test. This information could be provided anonymously or shared within the group. The purpose of the questionnaire was to understand why people had come to the research, what they wanted to gain from the research, and what pre-existing knowledge of CMC and RM they brought into the project. In addition the questionnaire provided basic demographic information. The time allocated to complete the questionnaire (20 minutes) was too long for some and too short for others. Some people took the questionnaire home to complete and not everyone returned a copy. It was not possible to chase this as the questionnaires were submitted anonymously. R9, R28 and U36 all commented that they did not like completing questionnaires. Although the responses were shared at the next meeting, generally people in both UK groups did not feel that this questionnaire was helpful. However, they felt they gained a lot from the personality tests. For this reason when the research was initiated with the International group co-researchers were not immediately asked to complete the same questionnaire. They were, however, offered the chance of undertaking a personality

test. 26 people returned the questionnaire from the RM UK group and 20 from the User UK group.

Within the international project in addition to the questionnaire each co-researcher was invited to share a personality profile which included their current and previous experience, where they were based, their nationality, the technologies they were familiar with and why they were taking part within the project. This process also proved helpful in developing the sense of a community within the groups.

4.3 CO-RESEARCHERS' DEMOGRAPHIC DATA

4.3.1 Records management context

Within the research context, which deals with the place of RM, it is important to establish at the outset that 10 of the co-researchers within the International group had a RM background or were current RM practitioners. It was intended to ensure that enough records managers were in the International group to advocate for RM within this community. Five other international participants stated that they had heard of RM.

11 people within the User UK group stated that they had heard of RM and four said that they knew there was an international RM standard. Only three attempted to explain what they thought RM was; two in great depth but one helpfully commented that a "record was round with a hole in the middle!"

4.3.2 Education/Academia

It was striking to me that those involved within the research were clearly intellectually confident and drawn to new experiences within an academic context. The most striking demographic was that all but two of the co-researchers, bar two participants, held a first degree. The two co-researchers who did not hold a degree were very experienced within their field and one was a company director. The majority of the co-researchers were qualified to Masters level or beyond. Two professors signed up to the research (one within the User UK group and one within the International group). One was interested in the research method and the idea of equality within the research design, and the other was interested in the research focus on communications and the use of these technologies to further the group's work. Within the International group, 13 of

those who signed up were researchers within a university context. Within the two UK groups only one person within each group was working within a university research context. Many of those taking part were engaged in studying for academic qualifications whilst working: eight within the UK RM UK group, seven within the User UK group and four within the International group. Three people commenced their own PhD studies during the course of the research. The high level of co-researchers with an academic background is probably reflective of four aspects of the work:

a) This was an academic project advertised as part of a PhD project. The centring of the PhD within the process probably influenced those who joined the process whether consciously or subconsciously. It placed the level of the research at a fairly high starting point.

b) Co-researchers were asked to actively take part as co-researchers rather than as subjects for study. The research design was fairly complex and did not have any community hooks that might have opened up the research to a more representative group. To alter the group the research question could have been changed but it was difficult to do so within the context of finding a RM related question with an organisational focus.

c) Records managers do not need a degree to practise, but to gain professional recognition a postgraduate diploma is required. Therefore many RM practitioners tend to have a university education, although not exclusively in RM.

d) The research was widely advertised on academic listservs. Very few people responded from the Web 2.0 sites where it was advertised.

e) Six of the RM UK group were former RM students from Northumbria University and therefore had an existing relationship with the University.

4.3.3 Gender

Figure 10 below indicates the percentages of male and female participants. Within the course of the research eight of the female co-researchers had babies. Seven of these co-researchers were from within the RM UK group. Two of the UK researchers reported that they were pregnant at the time of joining the research and felt that the research would enable them to engage professionally whilst on their maternity leave. Three other co-researchers, who subsequently had babies, reflected that they had taken part in the research at a time when they wanted a new challenge but did not wish to move jobs. This may have influenced the number of women who signed up to the research within the RM UK group.
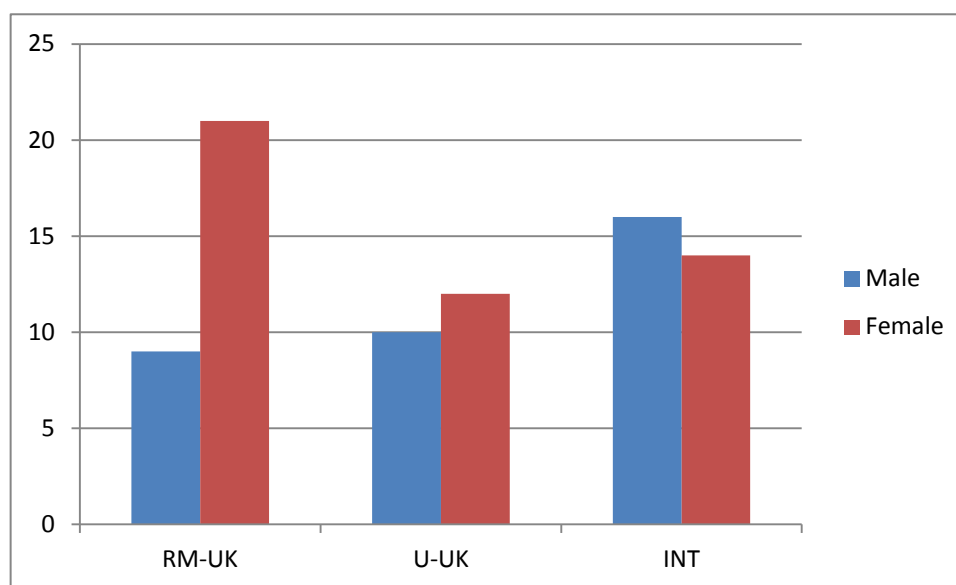
Figure 10: Gender of co-researchers within the different co-operative groups

1.3.4 Age
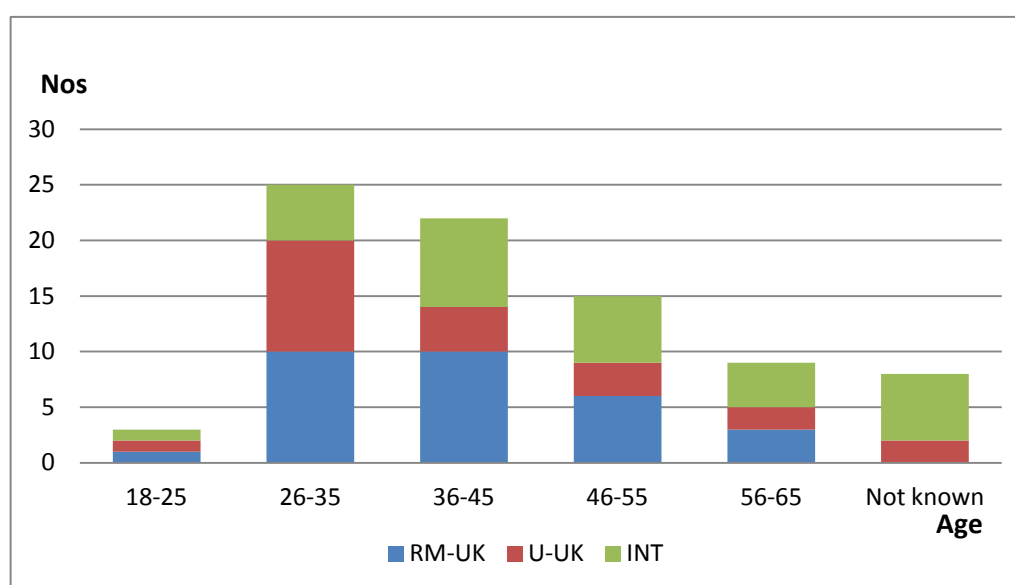
Figure 11: The Age of co-researchers within the different co-operative groups

Over 50% of the co-researchers (57 co-researchers in total) were aged between 26-45, with nearly one third (25 participants) coming from the 26-35 age bracket (Figure 11). As nearly all the co-researchers attracted to the research were already graduates with experience of higher level study it is not surprising in this context that few of the co-researchers were from the younger age bracket 18-25 years old. It perhaps indicates that those within the age range 26-45 had enough experience and confidence to participate as a co-researcher and equally were at a stage in their career where participation might benefit their knowledge and advancement.

4.3.5 Nationality and Residency

Within the context of the UK groups, four of the RM co-researchers and three of the User co-researchers did not reside within their country of birth. Seven of the UK records managers and six of the User UK group had experience of working or studying internationally. The first pie chart below (Figure 12) reflects the nationalities recorded by the International group and the second pie chart (Figure 13) shows where the international co-researchers were resident at the start of the project.
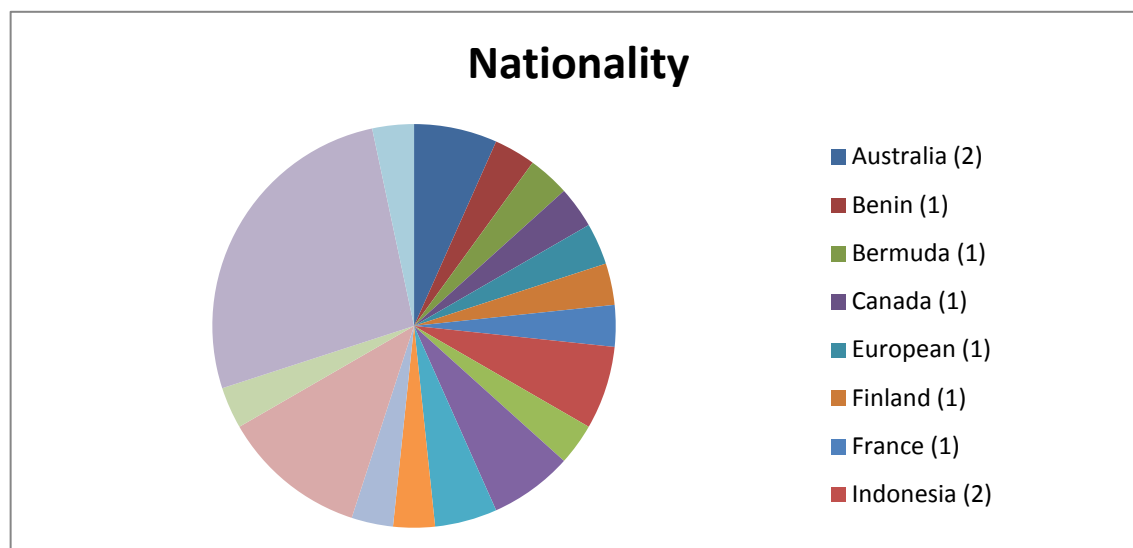
Figure 12: Nationalities of co-researchers within the International group
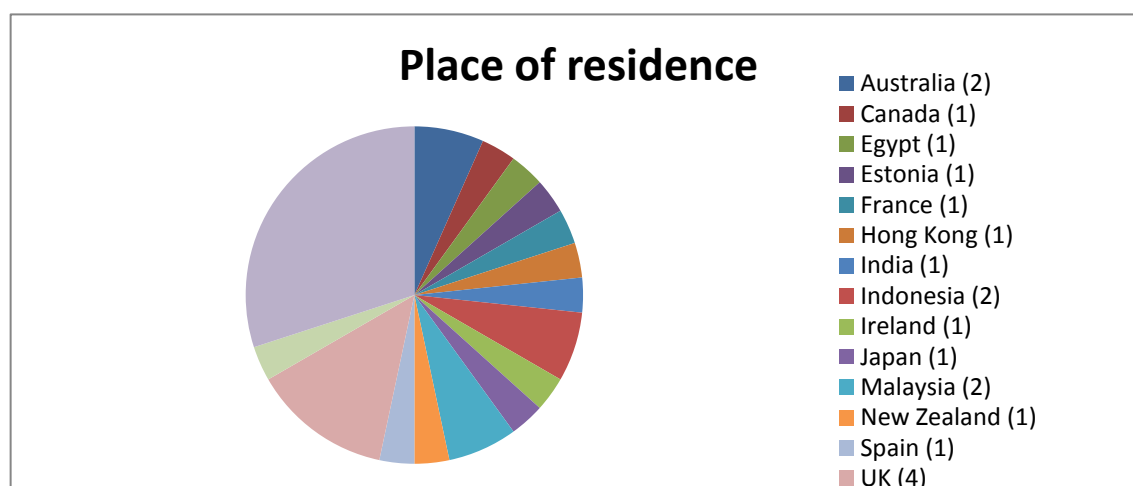
Figure 13: Place of residence of co-researchers within the International group at the start of the co-operative inquiry process

During the course of the project three international co-researchers moved countries. 11 of the international co-researchers did not reside in the country of their nationality; three individuals held dual nationality; 14 people within the group noted that they had experience of working or

studying within different countries; four of these were from the research community, six were from the RM international practitioners and four were from the wider group.

Across all three groups a number of individuals (five people) stated that they found it difficult to pinpoint their cultural identity. This viewpoint emerged during the personality testing which mapped personality traits to norms against ones cultural community. Many of the co-researchers who signed up to the project were in essence internationalised in their outlook. This perhaps also accounts for their willingness to sign up to an international collaboration being run from the UK. Four people specifically stated that they joined the research as a way of meeting/communicating with a group of people whilst in a new country.

Attempts were made to try and advertise the project across five continents and this was achieved. It should be noted that two co-researchers that were sent the information in China said that they did not have anyone with sufficient language skills to participate in a project of this nature. Although RM practitioners and RM researchers from China contribute to the development of technical standards in this instance the research focus on communication was cited as a reason why no one felt able to participate.

4.3.6 Employment
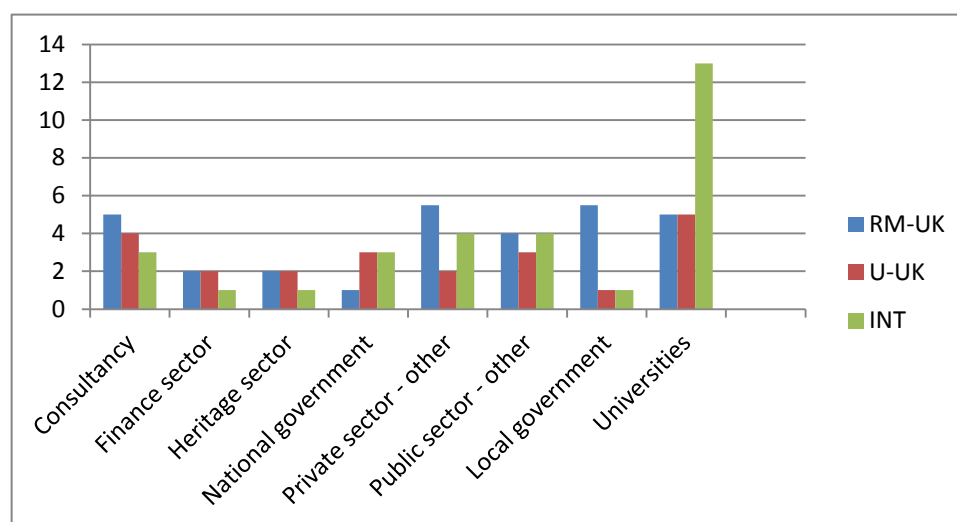
Figure 14: Employment sectors within which the co-researchers worked at the start of the co-operative inquiry

Figure 14 above indicates the sectors within which the co-researchers were employed at the start of the process and figure 15 below indicates their organisational status. During the course of the first two years of the research a number of co-researchers moved jobs either through choice or

redundancy; 13 of the RM UK group moved positions; six of the User UK group moved positions and four of the International group moved positions. In some instances these moves reflected the challenging financial times at the end of the 'naughties'. Three of the moves were cited by the individuals as redundancies. However, more generally individuals reflected that they changed jobs for new challenges and opportunities. 11 of the changes were directly cited as being for promotional reasons. Seven of the promotions cited were within the RM sector: five were from the UK records managers and 2 from the international records managers.

Within a UK context the Chartered Institute of Personnel Development reported in 2010 that the overall employee turnover rate for the UK was 13.5% (CIPD, 2010)[16]. The number of co-researchers changing jobs from the User UK group was therefore in line with this statistic as there was a turnover rate of 13% in 2009. However the RM UK group turnover rate was significantly higher with an annual turnover rate of 22% in 2009. Furthermore, if one excludes those people who could did not change job but had a baby then the annual turnover rate was 28% per annum in 2009.

Within the context of the international co-researchers the job turnover rate was fairly low at 6% in 2009. There are no global statistics that indicate turnover rates as these tend to be compiled at a national level. Within the context of the US (which formed the main country of residence for the international co-researchers) the annual turnover rate (across all industries and regions) for 2000 was recorded as 15.6% (See http://www.nobscot.com/survey/survey.cfm). The same survey data indicated a 17% turnover rate for the education sector, which again formed the biggest employment sector for the sample group. However, US labour surveys recorded the significant impact on turnover caused by the recession in 2008 (see http://www.bls.gov/web/jolts/jlt_labstatgraphs.pdf).

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[16] NB It should be noted that the UK group was based around London. The employee turnover rate for London alone is not available, although it is probable that London has a higher turnover rate than the UK national average.
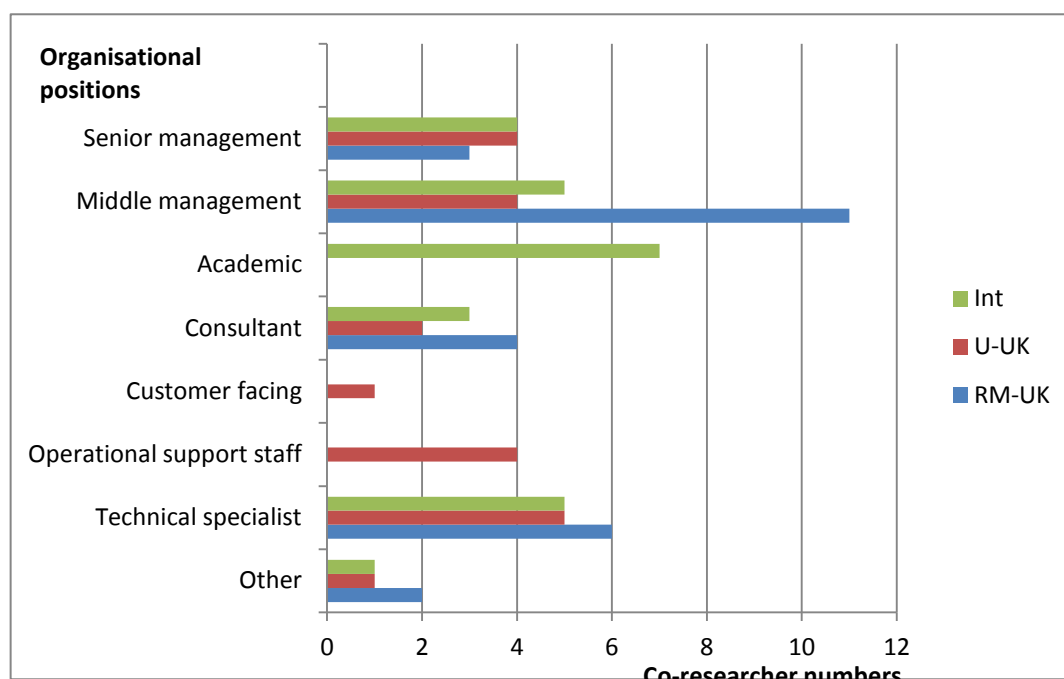
Figure 15: Organisational position of each co-researcher at the co-operative inquiry

This data was revealing in terms of how the records managers perceived their role. Although it was possible to tick more than one option to summarise a position, no one from the RM communities in either the UK or the International group saw their role as customer facing or operational support staff. RM participants seemed keen to stress their management position and also their skills as a technical specialist.

4.4 PERSONALITY TESTS

Within the context of analysing the co-researcher dynamics, I felt that individual tendencies towards introversion or extroversion would be significant. I felt that it was likely that more extrovert individuals would join the research, particularly as it involved studying the context and role of communication. Extroverts, are defined by Costa and McCrae (1995, p.21) as people who enjoy being with other people, whereas introverts lack the exuberance, energy, and activity levels of extroverts. Within a social construction paradigm behaviours of introversion and extroversion would be learnt socially constructed behaviours, but they could influence the group dynamics and discourse. A high number of extroverts might influence the ability of the RM participants to advocate for RM, the engagement of others with RM and each co-researcher's evaluation of communication requirements and CMC tool.

Each action research participant was offered the opportunity to undertake a psychometric test in conjunction with a questionnaire. In selecting and undertaking an appropriate personality test I was advised by staff in Northumbria University's Department of Psychology who supported me with this part of my study. The questionnaire selected for the test was Dr John A. Johnson's available at http://www.personal.psu.edu/j5j/IPIP/ipipneo120.htm. This uses 120 questions to gather and evaluate data in accordance with a personality instrument termed NEO-PI-R. The NEO PI-R is a measure of the five major domains of personality as well as the six facets that define each domain. It is seen by the psychology science communities as the most rigorous of the personality inventory tests available (John and Srivastava, 1999; John, Naumann and Soto, 2008). Personality tests are often viewed as positivist deterministic instruments. However, from a social constructionist perspective they are valid 'constructions' as long as they are understood within this context. The test that was selected determines comparative measures of personality domains and sub-domains against cultural, gender and age defined norms. This aligns to a social constructionist perspective that it is cultural situation and timing that play a critical role in behaviour and social perspectives. It was my view that the test could increase each group's self awareness and open up new discourses. In this context the process of undertaking personality profiling provided another mechanism for reflection and questioning myself and the co-operative inquiry group.

Because of the potentially sensitive nature of undertaking a personality test these were not made compulsory. Only five people within the International group completed the tests and therefore it was not really enough people to make any commentary on this data. 22 people completed the test in the RM UK group and 16 people within the User UK group.

Extroversion

The characteristics of extroversion and introversion were an important factor to take into account within the research context. Introversion and extroversion can play a role in the communication choices that are made and the way in which an individual advocates within a group context. I had assumed, in advance of the research, that more extroverts would be drawn to the research given that extroverts are more likely to seek social interaction. However, the data gathered demonstrated that people were spread across the spectrum from introversion to extroversion (see Figure 16). The majority were measured as average in terms of their openness to experience; albeit there were fewer participants at the lower end of the spectrum. It is
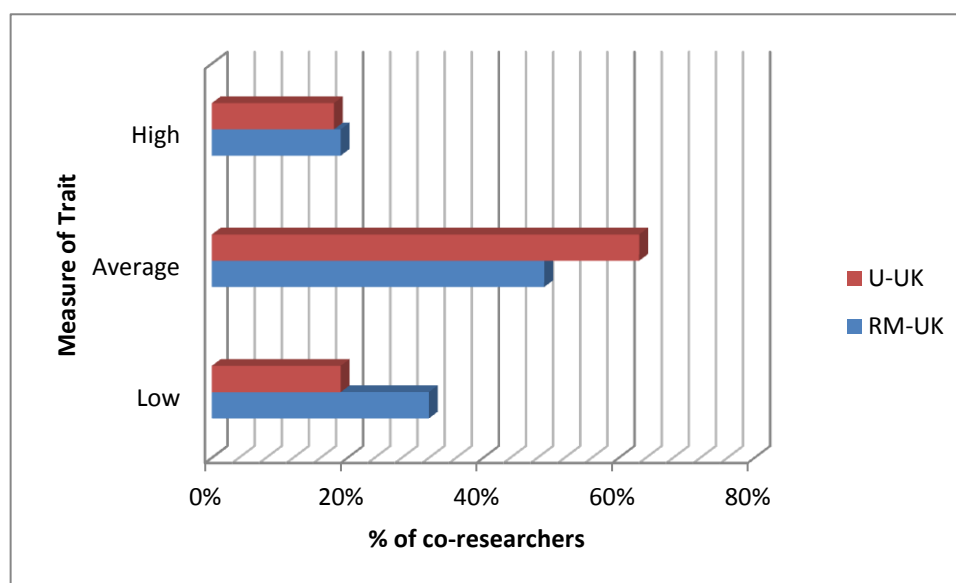
Figure 16: The spectrum of introversion/extroversion across the UK groups with extroversion being a high measure

important to note as highlighted by Schmidt and Buss (2012, p.23-41) that introverts are not shy but rather find small talk tedious and prefer meaningful conversation. This is in essence, what the co-operative inquiry research process could offer. In addition it should be noted that the records managers were towards the higher end of the spectrum.

Orderliness
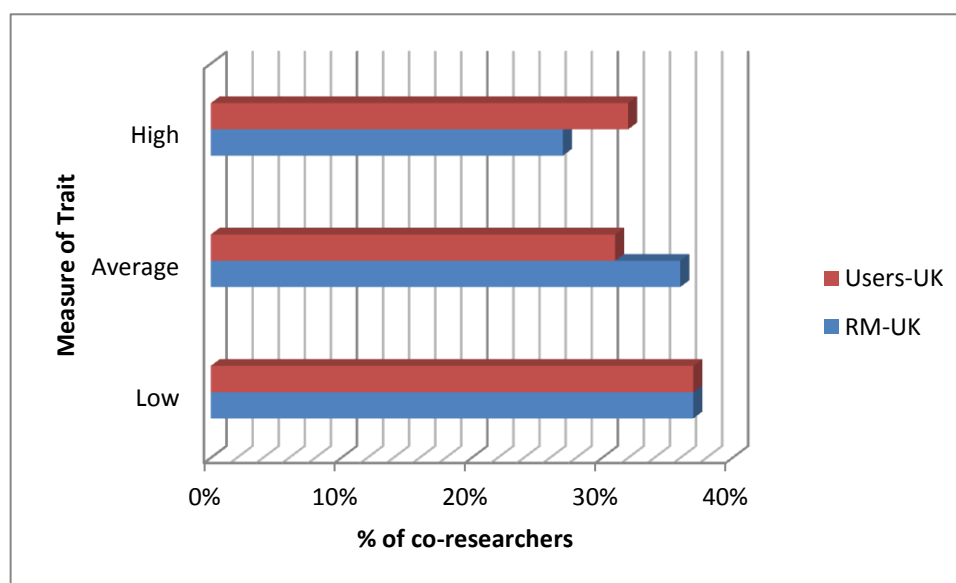
Figure 17: Spectrum of orderliness across the UK groups

Within the personality tests the aspect that caused the most discussion was the scores in regards to orderliness which is a sub-domain trait of conscientiousness (Figure 17). The expectation of the records managers was that they should have scored highly in regards to this personality

characteristic given that, as records managers, they place a high value on orderliness. However 36% of those that completed the personality test scored within the low domain with 55% being below 50%. However, in analysing and discussing this characteristic with psychology advisors I was informed that often those who are naturally less ordered place a greater value on rules, such as those prescribed by RM processes. During the discussion R16 suggested that the records managers possibly marked themselves harshly within this context because of their high standards. However there was no evidence to support this theory as the questions against which the trait of orderliness were scored were masked and therefore it was not automatically obvious to which sub-domain trait they related. Some of those who took the test again received the same scores.

Openness to experience

Openness to experience was the trait in which both groups were overall skewed towards the higher end of the spectrum (Figure 18 below). This is potentially a better indicator for individuals' willingness to sign up to the research group than the scales related to extroversion.
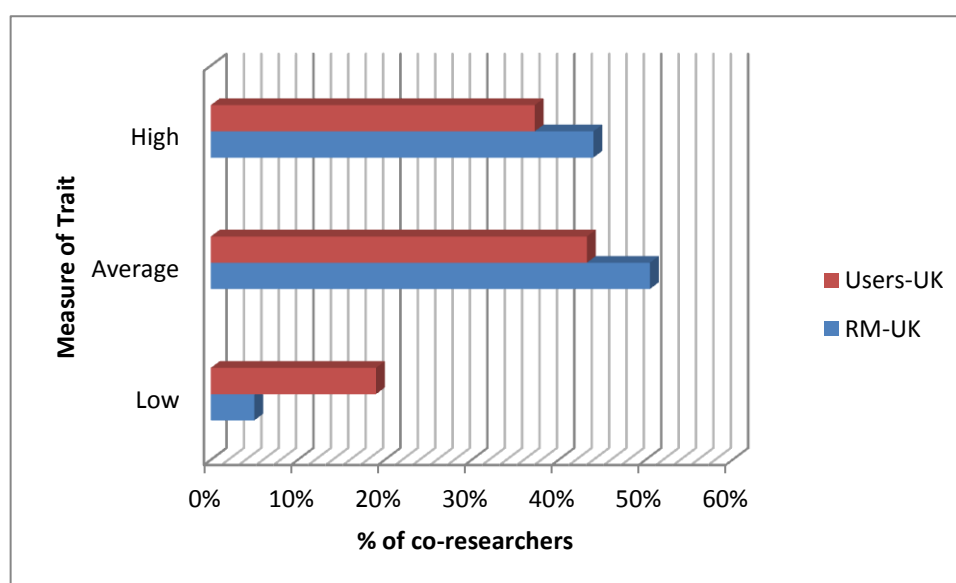
Figure 18: The spectrum of openness to experience across the UK groups

Personality Test

Whilst the personality tests aided discussions and created a dialogue in respect of the orderliness of records managers, hence are valuable to include, the results did not prove any more significant within the work as a whole. The contributions of individuals were looked as part of the data analysis tracking process but no further significance was identified within this study.

4.5 COMPUTER MEDIATED COMMUNICATION USAGE

The questionnaire information supplied by the UK groups provided a picture of their use of a range of communication systems (see Appendix 1.12) [17]. Email was used by all of the co-researchers and was the communication tool for the bulk of the co-researchers communications (RM UK group 88%; User UK group 90%). In the case of both groups it was also the most popular communication channel (RM UK group 54%; User UK group 50%). 83% of the RM UK group said that email was at the heart of all organisations' communication networks. The International group also recorded that they all used email and it was their favoured tool for communication (83%). In the case of the User UK group, telephone and Skype were also very popular communications channels with 20% of them highlighting Skype as their favourite communication channel and 10% of the group highlighting the telephone.

All the groups were making complex choices about which tools to use at home and work. These choices were based on who they were communicating with and the reason for the communication. Many people still favoured face-to-face as a valuable, effective and preferred form of communication.

Table 2: Co-researchers preference for face-to face communication in different contexts from the questionnaire

Face-to-face communication with:	RM UK group	User UK group
Senior Managers	50%	40%
Peers	63%	55%
Subordinates	63%	65%

Table 2 indicates the co-researchers preference for face-to face communication in different contexts. 50% of the User UK group stated that they sent emails to cover themselves and therefore this perhaps explains why so many in this group (also 50%) preferred to communicate with their senior managers as an audit trail of the communications. Table 3 below shows the systems used by UK co-researchers at work and home.

54% of the RM UK group stated that they actively loved to find and use new technologies but 16% said that they did not like grappling with new technologies. Within the User UK group

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[17] Percentages have been rounded to the nearest whole number.

Table 3: Systems used by UK co-researchers at work and home

Communication type	RM UK group		User UK group	
	Work systems	Personal systems	Work systems	Personal systems
Blog(s) (for which you are the creator)	12%	20%	55%	55%
Blog(s) (created by others)	36%	28%	80%	60%
Conference telephone calls	66%	12%	65%	45%
Conference video calls	24%	8%	65%	40%
Elearning platforms forums	8%	16%	20%	
Email	100%	100%	100%	100%
Facebook	4%	52%	30%	70%
Flickr	12%	4%	65%	35%
Friends Reunited		32%		60%
Instant messaging	24%	36%	40%	60%
Letters (postal system)	76%	80%	95%	70%
LinkedIn	12%	80%	50%	40%
Myspace		24%	10%	30%
Ning		4%	10%	10%
Second Life	4%		10%	20%
Skype	16%	24%	30%	70%
Telephone	84%	96%	85%	95%
Text messaging	60%	12%	85%	70%
Twitter		8%	40%	30%
Video blogging			10%	15%
Wickis	28%	28%	40%	60%

engagement with new technologies was much higher; 70% said that they loved to find and use new technologies and the remainder had no view. Within the RM UK group, 77% felt that organisations should control the communication channels people could use whereas only 30% within the User UK group felt that organisations should control communication channels. 96% of the RM UK group felt that all organisations should have a RM policy and 60% of the User UK group also agreed that this was important.

Overall within the UK group context the User UK group had a greater level of knowledge and expertise in terms of using a wide range of communication and collaboration tools. There were individuals within the RM UK group who were skilled in using a wide range of tools and were advocates for the benefits of these but generally the group was more negative towards these tools.

4.6 CO-RESEARCHER MOTIVATIONS FOR PARTICIPATION

At the start of the project each co-researcher was asked why they were taking part in the research and what they hoped to achieve during the project. Each individual came to the research with their own personal motivations for taking part and these were diverse. The statements recorded were coded. The top five reasons for taking part were:

1. To gain a greater understanding of the potential of Web 2.0 software and learn how to use these technologies (45 people);
2. To actively take part in research as a co-researcher (39 people);
3. To network and collaborate with new people (27 people) ;
4. To take part in RM research and learn more about RM (22 people);
5. To learn about action research (10 people).

Across all three groups the most common reason for taking part was in order to gain a greater understanding and practical experience of how new collaborative technologies could be used. 28 RM UK group co-researchers cited this as a reason for participation, 11 User UK group co-researchers and 6 International co-researchers. Within this context, people either participated because they were highly experienced and wanted to further develop their expertise or because they were not confident and wanted to build their skills outside of the workplace. Within the RM UK group the former was more common. A number of the RM co-researchers stated that they had very limited experience of using Web 2.0 tools and were keen to learn how they could use these tools, personally benefit from them and benefit their organisation (3 people). A number were very negative about these new technologies and felt that they needed to understand them to do their job rather than actively wanting to do so (6 people). As R28 stated, "I need to get a handle on all of this for the sake of my organisation". Within the context of Web 2.0 a number of the UK RM co-researchers (12 people) highlighted their concerns about the impact these technologies would have upon RM processes. However, within the context of the User UK group and the International group the co-researchers were split between those who had limited knowledge and wished to learn and those who had extensive knowledge that they wanted to further develop through involvement within the project.

The second overarching theme that emerged from all three groups was a desire to take part in 'research' as an active 'co-researcher' and to develop research skills. 22 UK RM co-researchers cited this as a reason for participation, 10 UK Users and seven international co-researchers. A

number of people were interested that this was an action research project (10 people), with the potential for the production of practical outputs as well as research learning (five people). Nine people wanted to have the opportunity to write articles and/or deliver conference papers.

Across all three groups the opportunity for networking and collaboration was an important factor in terms of why people took part. Across all three groups there was an emphasis on collaboration, networking and professional development. However the UK records managers focused on networking with records managers and only three RM UK people highlighted the cross disciplinary networks that might evolve. Six other UK RM co-researchers stated that they were interested in networking and collaborating specifically with other records managers. Five of the RM UK group also indicated that they were at the start of their RM professional career and saw this as an opportunity to gain new contacts and knowledge. Within the context of the User UK group and the International group there was a higher level of interest about collaborating across disciplines (11 International group and 9 User UK group). Four people specifically stated that they joined the research as a way of meeting/communicating with a group of people whilst in a new country. Within the context of the International group five people highlighted that they were interested in the international nature of the research and four people highlighted that they were interested in the challenge of collaborating virtually.

Developing RM theory and practice for the profession was an overarching theme within the UK RM UK group. 14 co-researchers highlighted this concern and articulated reasons why it was important to plug gaps in current theory, e.g. what does a record look like in the world of Web 2.0 and the Cloud? Three people highlighted that they felt research was, "crucial to the development of the profession". Two people also talked about the benefits they perceived would come out of Northumbria University's AHRC funded AC+erm project and stated that this had made them want to actively take part in their 'own' research. Within the User UK group three people highlighted that they wanted to learn more about RM. Within the International group five people highlighted their interest in the RM aspects of the research.

Seven people within the International group did highlight their interest in research and learning around the communication processes, including how this impacted upon linguistics and cultural interactions. Within the UK groups only one person highlighted any interest in communication processes. When questioned about this later many stated that they had seen this as implicitly embedded within the technical aspects and research learning of the project.

Many people saw participation as an opportunity and a challenge and echoed aspects of the research question that interested them. A number of people highlighted that they came to the research because of its focus on being relevant to organisations but its emphasis on meeting user/individual needs and requirements in terms of tools. People were interested in the potential for exploring complex behaviours and social networks within this context.

Within the context of stating why they wished to be involved within this project every single participant identified at least one personal benefit in terms of their participation. Within the UK context only five people highlighted what they could bring to the work, whereas in the international context this was a key part of people explaining their reasons for participating. 16 people explained what they could bring to the project. The International group's reasons for participating were often very detailed and related to individual work and research expertise, e.g. a particular interest in a CMC technology or use of CMC in a particular context.

4.7 MY OWN IMPACT ON WHO SIGNED UP TO THE RESEARCH

Reflecting on the statistical evidence as to who joined the groups I believe that my own involvement had some impact upon who signed up. My networks and knowledge influenced the placing of the advertisements. I was 37 years old when I commenced the research and my own networks include very few people in the 18-25 year age group or in the 65 year plus age group. Very few people signed up from these age categories. Although I posted the advertisement onto sites that might have included this demographic it is possible that my own networks and knowledge were too limited. Many PhD students are normally younger and the supervisory team provides the counterbalancing maturity or knowledge from a different age bracket, but I was closer in age to my supervisors than the typical student.

In all of the advertisements, I was clearly named as the person formulating the groups and the role of Northumbria University and the PhD supervisory was highlighted. I knew 16 of the UK records managers who signed up to the project prior to the research. Three of the researchers who joined knew me but had lost touch. When they saw the advertisement they recognised my name and looked up further detail to check whether it was the same Elizabeth Lomas. This is not surprising given that RM is defined as a community of practice within the terms established by Wenger (1998). Only six co-researchers were people with whom I had been in touch within the previous year. In addition, I knew eight of the co-researchers in the User UK group prior to the

project, three of whom I had been in contact with during the previous year. From the International group I knew only two of the co-researchers both of whom were records managers who had undertaken work in the UK and Europe; I had seen both within the last year.

I could not seek to separate personal and professional boundaries given the blurring of social and professional links that exist within RM field; I have many RM friends and it is a fairly small profession. It would not have been possible to advertise for co-researchers who did not know me.

In addition I should note that one of my two brothers signed up for the User UK group. He is a company director within the context of web design and Web 2.0. He is a member of several of the groups and networks through which the research was advertised. We had never previously discussed our work and he did not know what was involved in RM but was interested in the role of IT and communications which aligned to his knowledge of Web 2.0. I had not envisaged a member of my family approaching me to join the group and had not considered this within the project design. I discussed this with my Principal Supervisor who felt that within the research context my brother could sign up. I decided to treat my family in the same vein as the criteria relating to organisations and only allow two members to participate (myself and one other). This meant that when another family member volunteered I was able to turn her away.

Two of the co-researchers were pregnant at the start of the project. I knew both of these people and they both knew that I have two children. Both confirmed that they had signed up so that they would be able to engage in a professional project separate to their employment context whilst on maternity leave. Neither asked me whether their condition was an issue as they were both confident that I would be sympathetic to their involvement despite their pregnancy. A number of the other co-researchers (3 people) who were keen to start a family also stated that they felt I would be sympathetic if they were pregnant. One person stated that she had wanted to meet me as another RM colleague had said that I was; "good at advising people on evaluating their work life balance after having children". I mention my children to those I know professionally both in private and public contexts. I do feel that it is important to advocate and promote the role of working parents but had not realised the extent to which I was known for doing so.

It is important to state that although my own role influenced facets of the group I do not believe that these dominated the group dynamic. It was an open call with clear information on the research process and expectations.

4.8 NORTHUMBRIA UNIVERSITY'S IMPACT ON WHO SIGNED UP TO THE RESEARCH

In addition it should be noted that the majority of the UK records managers (24 people) who signed up to the research noted that they had heard of my Principal Supervisor Prof. Julie McLeod. Only one person had heard of my second supervisor and I think that this reflects on the fact that I did not sufficiently involve him in the process of advertising the research. This might have helped with attracting people to the User UK group.

Six of the RM UK group were former RM students from Northumbria University and therefore had an existing relationship with the University. In addition 12 people had heard about the work of Northumbria University's AHRC funded AC+erm project (refer to www.northumbria.ac.uk/AC+erm). This had been initiated for a three year timeframe in January 2007. It was focused on investigating the issues and challenges for electronic records management and thus had a synergy to the research theme under investigation by the co-operative inquiry. Although it was not run as an action research initiative, from 2008 it was run in a collaborative way with some members of the RM research community invited to take part in Delphi studies. The outputs of the research were disseminated via a website and a Blog (www.northumbria.ac.uk/AC+erm) and it was through this Blog that the co-researchers noted that they were aware of this project. Therefore it had already developed networks and opened up the eyes of the RM practitioner community to the concepts and benefits of collaborative research. It therefore provided a basis from which the PhD could be developed.

4.9 DESIGNING THE RESEARCH TO KEEP THE CO-RESEARCHERS ENGAGED

Aspects of the research design were developed to mitigate risk. There is very little published information on engaging co-researchers and the drop out rates for a co-operative inquiry within this field. Therefore the research was designed to mitigate risk based on previous RM research undertaken by my Principal Supervisor and assessments that I made. One of the most significant

choices was that each person would participate in a personal capacity. This was done in order to free individuals from feeling burdened to comment on behalf of their employer and enable free and frank discussion. However, it proved important because so many people did change their employment during the course of the project.

I was very cautious and at times I was so worried about getting successful engagement that this influenced the research design. In order to establish rather than alienate the international co-researchers a questionnaire was not completed at the outset but rather this data was requested further into the project. In addition I did not prescribe any levels of required input or commitment for participation within the project. I could have been more 'bullish' in terms of participation requirements but as already discussed this would have taken the research management away from the co-researchers and undermined the 'spirit' of the work. In fact the impact of the financial crisis in September 2008 changed the nature of people's commitment. Some people had more time to help, and others less. A prescribed commitment would have meant that many people might have left the project at an early stage.

I would have liked to obtain a more equal spread of participants from across the five continents. I could have limited the number of participants who signed up based on their nationality, place of residence and potentially other factors. However, I did not think to do this in advance. As a result a significant number of the participants were based in the US and many people were academics. In hindsight, it was in any case a qualitative project and therefore it could not seek to be truly representative within a global context.

The difficulty of obtaining general UK researchers was perhaps reflective of the vague nature of the research question, which was deliberately designed to try and foster wide collaboration. As the co-researchers in this group would meet physically it was perhaps a reflection on the time commitment required to participate whereas the International group which was only participating virtually were perhaps seemingly less pressurised.

Within the flyer design I provided a banner of 'Continued communication...'. The group adopted this as a name and brand. Additional knowledge of branding and marketing at the outset might have enhanced the advertising and profile of the group's work.

4.10 CHAPTER CONCLUSION

There is a danger of treating each co-researcher as an individual isolated unit that can be subjectively analysed. When individuals interact then there is a dynamic that cannot be definitively dissected based upon each person's background. As Gergen says, "the moment we begin to speak together, we have the potential to create new ways of being" (2009, p. 29). However, aspects of this data did influence the groups' work and interactions. The personality test was useful only in the initial discussions in that it opened up a discussion on orderliness for the records managers. However, it was not found to be more generally beneficial. However, it was possible to use the demographic data, information on CMC usage and motivations for participation in order to later reflect on whether each or any of these aspects influenced the contributions to the research. These were not necessarily constant comparators but when there was a critical moment it was possible to then look at whether there were any additional underlying factors influencing individual attitudes or behaviours. The relevance of this specific information is discussed and developed within the later chapters.

SECTION TWO

NARRATING THE JOURNEY

Section Two presents the research journey and the actions that were taken in moving through the research process. Action research progresses through iterative cycles which move the research forwards. The research is grounded in experiential learning with action linked to research (Reason and Torbert, 2001). Within my research design action and research was initially undertaken within three different groups, each with their own journey (the RM UK group, the User UK group and the International group) but joining and merging at key points. The PhD was/is an autoethnography that was delivered through the mechanism of a co-operative inquiry. As such there are a lot of threads woven within the cycle chain (as represented in Figure 19) which need to be presented. These include:

- the actual action research outputs;
- a sense of the discussions of the groups which delivered the diagnosis, outputs and reflections moving the action cycles forward;
- the delivery of the research methodology itself as a process including the additional requirement to understand the impact of the group merger points;
- the place of RM within the action research. The place of RM within the outputs can be plotted. In addition the discussions have been coded to provide an understanding of the place of RM within the debates and the process by which records managers and users understood its value and role;
- the place and role of CMC within the research.
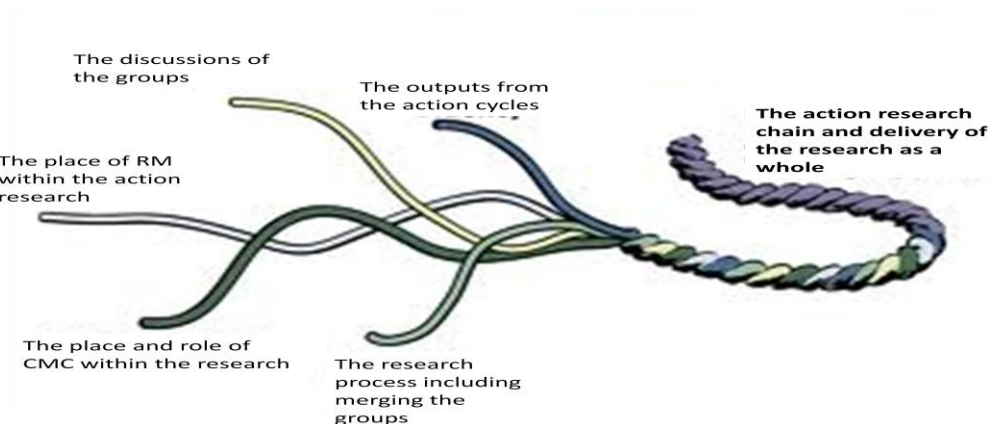
Figure 19: The threads requiring scrutiny within the action research progression

The research was a lived experience. The nature of evolving the action through CMC meant that I could and was contacted on a 24/7 basis. Meetings were held to align to different time zones to maximise attendance. People would contact me through numerous channels (16 channels were used in total, with some tools such as Skype and Google Wave alerting people when I was online – see Appendix 2.1). To make sense of the process the coding was exceptionally valuable. Snapshots of the RM coding as it evolved through the groups are shown in Appendix 1.8. Coding was undertaken beyond RM. In total 763 codes were evolved. These are too lengthy to include within one thesis text. The codes helped me to make sense of the journey, and to review my work. However, it is important when looking at the appendices to understand that this was qualitative coding. It makes sense only when codes and quotes are looked at in context, e.g. a theme which was resolved and agreed quickly might have very few counted references. The narrative within these chapters seeks to represent the discussions. However, I will also state up front that the actions have a valuable and distinct place. I have placed particular emphasis on these as part of the research. Whether or not my analysis of the discussions is as others remembered or would have analysed it (this is an autoethnography), the actions have an indisputable reality for each co-researcher. I have therefore felt it important to give the actions due weight and to include a number within the appendices, given that this text may be all that remains of the PhD work.

It is important to note that whilst some comments in the text can be credited to an individual participant, a number of comments were added as part of anonymised processes, e.g. post-it-note exercises, hexagon exercises, mind mapping, wiki discussions etc. Therefore there are instances within the text where comments are made without a single individual being referenced.

It should also be noted that within the delivery of the PhD as a whole it is necessary to explain the research within the context of the wider picture presented within literature. However, given the complexity of presenting this part of the process, and for transparency, I have only discussed the wider academic literature within this section of the thesis when it was included by the research groups within the process itself. This section seeks to present the co-operative inquiry journey.

CHAPTER FIVE

FINDING THE PATH AND PLANNING THE ROUTE: INITIATING THE FIRST ACTION RESEARCH CYCLES

"Don't be pushed by your problems; be led by your dreams", Unknown.

"The world is a book and those who do not travel read only one page", Feltham (1799)

attributing it to St Augustine

5.1 CHAPTER INTRODUCTION

This chapter discusses how the co-operative inquiry processes were initiated. Within the context of establishing the individual co-operative action research inquiries, there were three key interlinked components required to initiate the action research processes:

1. To ratify the overarching research aim and confirm the research objectives (see 5.2);
2. To diagnose the underpinning issues as part of the first cycle of action research (see 5.3 and 5.4) ;
3. To agree which CMC tool(s) would be used to assist the research (see 5.5).

These factors would then establish the framework at the outset for the action research. In essence, the first research step underpins most qualitative inquiries, as does a process of diagnosing. However, within action research the process is driven forwards by planning single research cycles over short time frames. These cycles are undertaken by moving through the specified components of the action research process as defined by Susman and Evered (1978, p.588) including:

1. Diagnosing – identifying or defining a problem
2. Planning action - considering a range of courses of action for solving the problem
3. Taking action – selecting and undertaking a course of action
4. Evaluating – studying the consequences of an action
5. Specify learning – identifying general findings

Within the context of initiating the first action in this study, the process of diagnosing also need to be undertaken in conjunction with establishing the group dynamics. In this sense it was therefore more complicated as it relied more heavily on my own direction and therefore I have separated out the first part of the cycle to set out this part of the journey. It should be noted that the process of taking action and then re-evaluating throughout provides the research with a different dynamic in as much as unlike many other forms of research the direction is not pre-planned and known. This makes the journey potentially less certain. In this instance, the use of co-operative inquiry, as the action research framework, added to the research complexity as each co-researcher input equally into the research development and planning. Also, the co-operative inquiry was advertised as bringing together RM professionals and end users to discuss the use of innovative CMC technologies and their impact on collaborative global partnership and networking, whilst simultaneously using and testing these same applications. Therefore, a third requirement within the process related to decisions regarding which CMC tools would be selected and used within the action research delivery.

5.2 CONFIRMING THE REASON FOR THE JOURNEY THROUGH RATIFYING THE RESEARCH AIM

Each of the individual co-operative inquiry groups ratified the original research question as: How to maximise the information potential of CMC for organisational benefit, taking into account the impact of the individual? This was the question that people felt that they had come together to answer. Furthermore, each of the three groups reiterated that agreement on the central research focus would assist with the points at which the groups merged with one another. This demonstrated that the co-researchers had understood the PhD research process that would be embedded within their own research. Many within the groups were curious about what would be discovered and learnt through the merging and therefore placed their own personal value on this future requirement. I felt that it was important to ensure that the groups were answering a question which was valuable within its own right and not just a personal vehicle to deliver the PhD. I had some doubts about whether I had framed the question appropriately. Neither one of my supervisors had liked the end focus of the question on the individual. Both felt that this should have been an objective rather than part of an overarching research aim. They had highlighted this in a three way meeting after the initial research call for participants had been made. I had developed the question, in part, to try and obtain co-researchers from a wide range of backgrounds. I felt that the emphasis on the individual helped promote the research's

relevance to a wide range of people as it personalised the question. However, the doubt placed by my supervisors meant that I felt the groups should explore the question's wording and focus.

Within each of the three groups, there was strong support for retaining the original question and thus maintaining the emphasis on the individual. It was felt that this would provide assurance that the work would focus on balancing organisational requirements, with the role and wishes of individuals. Across the three groups, everyone agreed that individuals were key to the process of maximising communication potential. There was general agreement that CMC tools should be designed to meet human requirements in support of the organisation. Thus the place of the 'individual' and the 'organisation' interlinked. Within the RM UK group a number of co-researchers noted that it was records managers' failure to engage with individuals and their focus on organisational requirements, which often led to the failure of RM programmes. R9 and R12 both noted that this had played a role in the failure of a number of EDRM implementations within organisations. Within the User UK group the co-researchers were keen to answer a question with an organisational focus which took into account the central role of individuals. U39 noted that there had been much more research undertaken within the context of the social impact of CMC and that the business/organisational impact had been largely ignored beyond the potential/impact within the marketing domain. The need for further research within an organisational context was also highlighted by a number of the international co-researchers (I66, I69 and I77).

In conclusion, no one within any of the three groups advocated a change in the overarching question. However, the question was purposefully broad and each of the groups had a different perspective on the issues which required further examination. These perspectives were developed as part of the process of diagnosing the underpinning issues.

5.3 DIAGNOSING IN ORDER TO IDENTIFY THE FOCUS FOR THE FIRST ACTION CYCLES

As each group needed to establish a group identity, I had agreed with my supervisory team that I would initiate the first process of diagnosing the issues under investigation. I would then share my own high level literature review after the diagnosis had been undertaken. In addition, within the first phase of diagnosing I would not add to the discussions or advocate for RM goals, as it was important that I did not influence the initial research direction. Part of my PhD delivery

involved observing and analysing how RM was included and advocated for within the CMC research context across the groups. If I had personally advocated from the beginning then the fact that I had orchestrated the research initiation might have made people feel duty bound to follow my lead. In addition, at the start of the project it was important to foster a group dynamic. Once the first action within each group had been agreed, I would cease to be the facilitator and become an equal co-researcher.

I developed a task for diagnosing the issues. I had previously used post-it notes for brainstorming exercises and found them to be a useful tool for capturing ideas across a group and then making sense of an issue. I agreed with the supervisory team that I would initiate the UK based London meetings with post-it note exercises and that I would develop a virtual post-it note exercise for the International group. I established a problem solving process based on Straker's (1997) work with post-it notes and the work of Ackerman, Eden and Brown (2005), who have developed mapping processes to assist with strategic planning. Straker's (1997) models are more simplistic than those of Ackerman, Eden and Brown (2005) and therefore potentially easier to deliver in a shorter timeframe to a newly formed group. However, Ackerman, Eden and Brown's (2005) processes had the potential to try and map the complexity of CMC.

Within the two UK based groups, I utilised Straker's (1997, pp. 16-17) approach to brainstorming and initially organising ideas, which he terms 'chunks classification'. Silently each individual wrote down what he/she perceived as the issues within the context of the research question, writing one issue per post-it note. They then formed into small units of three people and reviewed these notes together and added new notes. These small units then tried to classify their notes into those which were:

a) Facts, defined by Straker (1997, p.16) as "undeniable and are capable of being proven. They are the best form of information but are surprisingly rare."

b) Opinions, defined by Straker (1997, p.17) as "the most common form of information. They are the considered thoughts of people. They may also be the facts that just can't be proven. Opinions have the widest range of possible truth. They can be based on long and practical experience, uncertain rumours, or even outright prejudice." Straker notes that if the opinions are respected then they may be treated as facts, which can create a misleading picture.

c) Guesses, defined by Straker (1997, p.17) as acknowledged uncertain ideas. He notes that during divergent activities like brainstorming, guesses help expand the area of interest. In a research context this opens up new areas for exploration and possible problem solving. However, Straker notes that within a problem solving context most guesses turn out to be untrue and of little value, but an individual guess may provide a significant breakthrough. Thus sometimes guesses can be the most powerful tool within problem solving.

The units then shared their findings. As the RM UK group was bigger the co-researchers did this within two separate sub-groups. The ideas were discussed as they were presented. Straker (1997, p.17) notes that an important part of problem-solving lies not only in differentiating between facts and opinions, but also in exploring opinions and finding out how people have come to their conclusions. I took notes of this contextual data. Within both UK groups the co-researchers enjoyed the process of brainstorming, but not the exercise of classifying fact from opinion which was found to be problematic. The majority of the post-it notes were agreed to represent opinions, which accorded with Straker's view that facts are rare (1997, p.16). There was a considerable consensus on these opinions, and within the RM UK group this consensus created the view in some instances that a factual basis was being presented. Overall it was agreed that there were more opinions generated than facts. This process of classification whilst less enjoyable, was found to be beneficial by the two groups, and in the case of the RM UK group it was particularly helpful to challenge entrenched opinions.

To take the brainstorming phase into a more strategic process, I then used Ackermann, Eden and Brown's (2005, pp.4-5) models on the practice of making strategy. Each group stuck the post-it notes onto sheets of paper. They worked together as a group to organise the notes into themes and add new notes to identify gaps within the issues that were under examination. They then tried to link different themes through discussions of relationships drawn with lines. These included ideas which would influence change. Leading on from this, the next phase was then to develop potential actions from this process that might underpin practical solutions/research findings around the central research question. The process was not completed within one meeting and it was agreed that the groups would keep on developing the process of diagnosing through an agreed CMC tool. Both groups were provided with a discussion and wiki tool.

Within the International group, I developed the same task online using a Moodle wiki and a Moodle discussion forum. I delivered the task through Moodle because I felt that the Moodle wiki would provide the potential to mimic online the post-it note exercise, and that the discussion forum would provide the opportunity for the contextual discussion.

5.4 THE CO-OPERATIVE INQUIRY LITERATURE REVIEWS

After the initial diagnosing process, prior to planning action, I tried to follow through with the traditional research phases by working with the groups to develop literature reviews. To assist the process, I shared my initial literature review on Moodle with each of the three groups.

5.4.1 User UK group literature review

Within the User UK group the co-researchers read my literature review and many of the articles cited in the cases where they were freely available. However, many of these co-researchers did not have access to academic libraries and so could not access all of the information. Individuals within the group approached a number of publishers and a very limited number of these gave permission to share articles amongst the group members. However, most publishers did not countenance this request or could not process a speedy answer. The co-researchers that did have access to academic libraries summarised articles identified as of interest to the group. However the inability to share articles was seen by the group as undermining the key principle that each of the co-researchers was deemed to be equal. Therefore the group decided to continue with a literature review focusing on resources that could be shared. The group set up a tagging system using an online tool called Delicious (www.delicious.com) to highlight and share items that were felt to be significant in terms of progressing the research. In addition, the group started up a book lending system to share their hardcopy resources. This willingness to lend personal resources demonstrated early on in the project a high level of trust and cooperation within the group.

5.4.2 RM UK group literature review

Within the RM UK group I had a tracking facility on Moodle and was able to see that initially no-one from the RM UK group read the literature review. R9 noted that if something was an important issue it would be recorded on the Web and therefore in many ways the academic literature was irrelevant except in the context of where it fed and impacted upon Web debates. In fact, within the group only three people had access to academic libraries and therefore the group found it hard to engage with the concept of a literature review. However, many people

within the group did have access to subscriptions for the *Records Management Journal*, the *Journal of the Society of Archivists* and *Archivaria*. These journals therefore became key literary resources for the group and its discussions, particularly as from the outset the group was keen to focus on RM issues within the CMC context. To broaden the group's horizons beyond RM the group started to highlight freely available articles online through postings on Moodle and emails.

5.4.3   International group literature review

Within the context of the International group, there was a much larger academic audience keen to engage with and develop the literature review. Experts within particular areas added their own literature reviews to try and develop an overall picture. The literature review process was partly fostered by the online discussion from the start which enabled articles to be flagged and discussions woven around the literature. In addition, the actual concept of a systematic literature review was discussed and critiqued. It was felt that the literature review would glean only limited information from peer reviewed journals given that CMC research was evolving quickly and it takes time for peer review journals to publish articles. In addition, it was felt, that for the purposes of moving through the quickly phased action research cycles, whilst a literature review was beneficial it had to be limited in scope. However, in this group is was often certain ideas supported by literature which carried the most weight rather than the overview provided by the searches.

5.4.4. Co-operative Inquiry literature review conclusions

Within each of the groups the literature review quickly moved to what can be termed a constructionist approach (Mellon, 1990) with literature being sourced from both trade and academic publications in support of each new action cycle. For some actions the searches were more thorough than others. It was notable that this part of each action was often seen to be a low level task which ideally I would complete in terms of checks for completeness for each group. The International co-researchers, who had a higher percentage of academics, placed much greater weight in regards to this task. Only the International co-researchers understood the concept of the literature review, whereas for the UK co-researchers the process was focused on literature searches, tagging and reading.

5.5 SELECTING THE MODE(S) OF TRANSPORT OR IDENTIFYING SUPPORTING TOOLS

It was a prerequisite of the work that each group had to decide which online tool(s) would be used to assist the development of the inquiry. More than one tool could be selected and new tools could be introduced to deliver specific actions. An initial online discussion tool was required to progress actions for the UK groups between meetings and in the case of the International group throughout the research. A range of tools was put forward within each group and the groups examined the functionality of each tool against a range of criteria which they developed.

5.5.1 The User UK group CMC Choices

The User UK group's requirements were that the CMC tool(s) needed to be:

- Hosted from a secure site in which discussions could be limited to group members;
- Accessible from home and work;
- Capable of a range of functionality which the group agreed would need to be delivered through no one single communication channel, e.g. the group wanted real time chat, wikis, project management tools and mind mapping.

The group was split between those who wanted to try as many tools as possible and those who wanted everything in one place.

Many of the platforms suggested were blocked from a number of the participants' organisations (e.g. Facebook, Google Docs, Ning and Skype). As the co-researchers felt that it was important to be able to access content from work and home this ruled out the use of a number of tools. U34 highlighted the dangers of Web 2.0 tools to organisational firewalls. He stated that once a site had been 'allowed through the firewalls' it opened up a potential malware channel as access would be granted even if these tools had been infected with a virus.

One other package (Elluminate (http://www.elluminate.com/) was ruled out on the grounds of cost. U38 was very keen to use this software package as she had positive experiences. Elluminate had full conferencing functionality and provided the ability to share desktops. U38 approached the company and a company representative agreed that the group could host two meetings with the software. The group therefore decided that they would take advantage of this offer when there was a part of the project which could really benefit from this functionality.

Twiki was identified as being beneficial for wiki collaboration but as a tool it had limited additional functionality. By process of elimination the group therefore decided to select Moodle (http://moodle.org/), in the first instance, because it seemed to have the most functionality within one single tool and the potential to ensure secure access to the group's content. This was the only one of the tools reviewed which had a wiki in conjunction with other collaborative tools and the potential for real time text chat. In addition, one of the group (U43) volunteered to set up and run the software from a secure server. This meant that the group would keep control of their content and site access. The domain name could be controlled and access allowed to co-researchers from home and work sites. As Moodle is essentially used as open-source teaching software it was not blocked by any of the organisations within which the co-researchers were working. It was worthy of note that all of the group members trusted U43 to manage the process even though he was only known to two co-researchers prior to the start of the project. It was a risk and a burden to place this task upon one individual in preference to a large scale corporation. The User UK group did not intend to use just one communication tool and therefore potentially this minimised the emphasis placed upon the tool. In addition, the co-researchers were risking a set of research data which for the co-researchers would have a minimal personal impact if it was lost or hacked.

From a personal perspective it was less of a risk to me as U43 is my brother. However, his company was a relatively new small start up (only one year old). I did not perceive any risk at the time. I did back up the data as a natural process to manage my PhD data. It felt perfectly logical to trust a group member with this task in preference to a multinational corporation such as Facebook. Across the group we all implicitly trusted one another from very early in the process and I would have equally been willing to assign the task to any other co-researcher.

5.5.2 The RM UK group CMC Choices

Through the initial process of diagnosing the research issues the RM UK group had defined some concerns and opportunities. The group jointly confirmed that the CMC tool(s) selected needed to be:

- Hosted from a secure site in which discussions could be limited to group members and any content would be owned by the group;
- Accessible from home and work;
- Capable of a range of functionality including the ability to enable joint editing of documents, real time meetings and the chance to try out wikis.

The group was evenly split between those who wanted to try as many collaboration tools as possible and those who wanted to chose one tool and use this as the sole CMC channel for the duration of the inquiry, preferably with it linked into their email accounts. The latter group wanted to experience a range of collaborative functionality but ideally wanted one space to log into. The main tool they wanted to understand was a wiki. This was felt to be a tool which challenged RM practice as it had the potential to strip documents of any understanding of authorship or change.

Amongst the RM co-researchers, Facebook was the most well known collaborative platform. However, a number of group members (11 co-researchers) were hostile to the use of Facebook because of the negative press surrounding its security. In 2008, there had been a number of press articles highlighting Facebook's changing usage agreements and a number of security attacks on the organisation (refer to http://news.bbc.co.uk/1/hi/programmes/click_online/7375772.stm). In addition, Facebook was banned by 17 of the co-researchers' organisations. Of the other applications considered, many were also banned by these same co-researchers' organisations. Although a number of the co-researchers were working for universities, which are traditionally seen to be open to the use of new technology, they too were banned from using a number of applications in 2008, e.g. Skype. The university co-researchers did not have blanket bans on their software access and could identify reasons for the bans. However within other organisations the approach was that either Web 2.0 was available or it was totally banned, as noted by R18 'seemingly without explanation'.

One member of the group (R9) was particularly keen to try Secondlife (http://secondlife.com/). This would have required those engaging through this mechanism to purchase a graphic card upgrade and for this reason its usage by the group was ruled out. Only one member of the group had accessed this application within a work context and it was likely that many co-researchers would also have been banned from Secondlife within a work context.

Within the group, R7 advocated for the use of email as the key communication tool. The UK RM community has an active email listserv run by JISC. It was suggested that either a listserv could be established or the group could simply share email addresses and email en masse any discussion items. However, a number of participants were keen to try new technologies and it was agreed that email did not have collaborative functionality (e.g. the ability for collaborative editing). It was agreed that a tool could be selected with the ability to feed email accounts. In the end, the

RM UK group wanted to select Moodle as their tool of choice because it seemed to have the most functionality. No one within this group had a server on which to host the application. However R9 and U35 worked together and U35 explained that this was the software selected by the User UK group and that a hosting solution had been identified (U43 acting as the server host). R9 asked if U43 could host their application too and this was agreed.

5.5.3 UK groups and Moodle Crash!

Initially some Apple Mac co-researchers had problems with accessing Moodle but this problem was fixed. In addition a number of co-researchers seemed to experience problems ensuring that their settings enabled them to receive email alerts when the pages of the site were updated. Six people within the RM UK group complained that they wanted me to act as a facilitator and relay Moodle posted information via email. I was keen for people to remain engaged with the project and so I did agree to this. At the time I rationalised that people needed to gradually adjust to and engage with the range of communication channels and that people should not be alienated from the outset. This was true, but equally it did place a heavy administrative burden on me. In addition, though I did not always facilitate it meant that whilst this process continued I was still very much in a key role rather than stepping back as a co-researcher.

Both UK groups were keen to have real time text chat and Moodle has this software capability. The RM UK group set up the first scheduled real time text chat. Unfortunately the software kept crashing. The co-researchers kept restarting the meeting and then it would crash again. U43 rang me on my mobile and told me that the group kept crashing not only the Moodle chat but his business site and other applications on the same server. Although we could have tested why this occurred we agreed not to host any more real time chat on Moodle because it was not fair to potentially impact on U43's business. U43 did later migrate the Moodle software to a separate server but by then alternative chat sites had been found.

Both groups looked for an alternative text chat service. Ning has a very good real time text chat application and in 2008 this was freely available. However, it was blocked by a number of the co-researchers' employers as it was deemed to be a social media tool. In addition it did not have a wiki or good collaborative editing software. However, it was seen to be the best tool for real time chat and no other tool that was not banned could be sourced. Therefore Moodle was continued as the main portal for the group activities but Ning was introduced for real time chat. Ning

meetings were scheduled at a range of times in order to try and enable people to participate. Ning had the advantage that people could post comments prior to and after the meeting times and thus input. Within an RM context this was the first recorded use of Ning for RM discussion within the UK.

5.5.4 The International group CMC Choices

As the International group needed a tool to initiate their discussions and diagnosing I had set up Moodle. Moodle was then used to discuss other CMC tools that could be used. I used Moodle as the first tool for initiating the discussions as it had the functionality which I felt was required to mimic the UK based post-it note diagnosing process. The International group had many participants from an academic background who were familiar with Moodle as this is the elearning software used by many universities. However, it was a major disadvantage that by the time the International group started we had already established that we could not use the real time chat function on the Moodle site. The International group set out that it required CMC tool(s) that were:

- Capable of a wide range of functionality with the possibility for real time text chat into which text comments could be added after meetings to accommodate those within different time zones.
- Ideally the tool would have the potential for voice chat.

Within this group there was a decision made to use a combination of tools from the outset - email, Ning and Moodle. I66 advocated for the role and place of email and felt that this should be a key part of the collaboration strategy as email was still the main CMC tool and yet there was much to understand and establish surrounding its use. However, whilst others agreed that email should be explored and included there was a real desire to test a range or functionality.

Across the three groups there was very little discrepancy in terms of the major reasons for selecting or ruling out the potential of a tool. In the end the main differences underpinning the choice of a tool selected related to the number of tools which each individual group was prepared to work with, the previous experience of a tool and the co-researchers' perceptions of the functional requirements for the project delivery. Table 4 above summarises each groups decisions relating to CMC adoption.

Table 4: Table indicating the range of CMC tools considered by each group and reasons for and against their initial selection.

√ indicates a tool selected for use and X indicates a tool specifically ruled out.

Technology	RM – UK	User - UK	Inter-national	Factors for use	Factors against
Email	√	X	√	Available to all. Capacity to calendar in meetings across time zones.	Limited collaborative functionality
Delicious	√	√		Openly available tagging device. No sensitivity deemed in tagging online resources.	
Elluminate	X	√	X	Two free sessions available. Enabling shared screeds and audio.	Cost to project prohibitive
Facebook	X		X	Easy to set up group pages and use	Security questioned. Banned from some organisations.
Google Docs	X	√	X	Good for collaborative editing.	Limited functionality. Banned from some organisations.
Gotomeeting	X	X	√	Reliable connectivity. Business tool and therefore available across all organisations.	Small cost to access service.
Moodle	√	√	√	Good range of functionality. Easy to set up. Elearning tool and therefore available across all organisations. Server in own management and therefore possible to control.	Dependent upon server provider to deliver robust service.
Ning	√	√	√	Good real time text chat functionality. Ning was a free service in 2008.	No wiki Banned from some organisations.
SecondLife	X	X	X		High level graphics required on PCs to gain access. Cost to individual co-researchers prohibitive. Banned from some organisations.

SharePoint	X	X	X	Server in own management and therefore possible to control.	Cost prohibitive. Licences and server provider required. More complicated to set up than Moodle.
Skype	√	√	√	Good for small group chats. Free	Limited collaborative functionality. Connectivity poor for large groups. Banned from some organisations.
Twiki	X	X	X	Good wiki functionality	Limited to wiki functionality and therefore no added value compared to Moodle.
Webex			√	Cost to access service. Business tool and therefore available across all organisations.	
Yahoo groups	X	X	X	Easy to use	Limited functionality. Banned from some organisations

As projects and actions evolved the groups did review the tools in use. The International group started to use:

- Doodle – to plan and vote on meeting times across timezones.
- Knowledge Soup for collaborative mapping.

All of the groups subsequently used:

- MindMeister for collaborative mapping
- Google Wave for real time text chats.

Appendix 2.1 shows the list of tools used over the duration of the inquiry and Appendix 2.2 some snapshots of different tools in action.

5.6 REVIEWING THE PROCESS OF DIAGNOSIS

5.6.1 Group Synergies

Appendix 2.3 contains a list of the free codes that were generated as a result of this first phase of diagnosing the issues around the central question. No one group created a comprehensive list of all the potential issues but they did create a picture of themes which, if merged, aligned to my initial literature review. A comparison across the groups' codes revealed a number of common concerns including:

- the problems of maintaining information ownership, security, and privacy;
- the importance of CMC management to enable meaningful access over time;
- the impact of the individual on successful use of CMC within the organisation;
- the potential clash between individual working styles and organisational requirements;
- the need for CMC policies and training;
- the potential barrier of age, culture and language on CMC engagement;
- the range of CMC tools and their impact/functionality on the organisation and the individual;
- the pervasive and continuing influence of email;
- the problem of information overload and rubbish;
- the process of information system design in the light of Web 2.0 and the new potential for user centred designing from the bottom up.

The key themes that emerged as issues across all three groups were that within the context of CMC channels email was still believed to be the dominant communication tool and yet it was thought to create many problems both for the individual and the organisation. There was a sense within the User UK group that communication channels might shift away from email into Web 2.0 based CMC. Within the International group it was felt that email would continue to be used for the foreseeable future and that its full potential had yet to be achieved. Across all three groups, it was perceived that Web 2.0 had shifted some areas of information system design from top down to bottom up led processes. Many people, across all three groups, acknowledged the tension that this creates between organisational requirements and individual wishes; in essence that organisations need to track and manage their communications and yet individuals constantly want new and multiple types of tools.

Across the groups, information was seen as valuable, an asset and a source of power. There was concern, across all three groups, as to who owned information within a CMC context. The tensions between the expectations of individuals, organisations and CMC hosts/providers were discussed. CMC specific policies and training were felt to be lacking from within most organisations. There was unanimous agreement, across the groups, that they had not got to grips with email let alone social/collaborative media. My own feelings on this were out of line with the three groups in this context as I did feel that email was a manageable CMC channel. Yet at the same time as acknowledging the value of information, there was a paradox that all three groups did feel that they were 'burdened' with information much of which was 'rubbish'. All of these issues can be ground back into the available grey and academic literature (refer to Chapter 2).

There were some individual 'guesses' around the impact of Web 2.0 technologies, some of which were ideas that had not been explored in the academic literature at the time of the discussion. U48 noted the potential for sites such as LinkedIn to be used to gather business intelligence about client networks. R11 noted that there are more observers than contributors within the social media sphere and that the reasons for different levels of engagement with CMC required further exploration. R29 noted that academic models for peer referenced journal articles could be applied across other forms of Web 2.0. At the time of this discussion this was a concept being explored by Citizendium (http://en.citizendium.org), which was launched in 2008, as a peer reviewed equivalent of Wikipedia. However, there were some important differences in viewpoints that I perceived I had identified from the outset of the project.

5.6.2 Divergence across the groups

Within the context of CMC, across the three groups, I coded 52 comments as negative towards CMC and only 12 positive comments. My assumption, at this point, was that each of the groups was negative about the role and value of CMC. I myself was cynical at the start of the PhD about the value and role of Web 2.0 applications within a workplace context. I had concerns that important records would be lost beyond organisational walls and these records could be inappropriately accessed and used. After the first action had been decided, I discussed the coding from my own diagnosis of each group's discussions with each group. The RM UK group confirmed that, bar two co-researchers, they were all very negative about the role and value of CMC tools and did feel that these tools had a negative impact upon records and information management within the workplace. Many of the co-researchers within this group had not engaged on a personal level with the tools. The majority of the RM-UK co-researchers were coming to the

research project because they felt that they did need to understand the tools and also that some of the problem the tools had created needed to be solved. Many were genuinely perplexed as to the value of these tools, as one post-it note recorded "what do people get out of putting their thoughts in Blogs?" Many were fearful about the new technologies. However, my coding analysis of the User UK group's attitude towards CMC as negative subsequently was revealed to be flawed.

Within the context of developing the work I took my coding analysis and assumptions back to the group. The majority of the User UK group co-researchers expressed that they were positive towards the potential of CMC tools whilst recognising that old and new CMC did potentially create some problems that required solutions. Those who had limited experience of using CMC tools within this group were keen to engage with and understand the potential of these tools rather than being pessimistic about their impact. Within the context of the process of diagnosing they commented that the research process does focus on dealing with and solving problems. In fact I had referred to the exercise as 'problem solving'. I had not focused on the potential for these new technologies. Therefore, I had predisposed the groups towards discussing negative aspects of CMC. A number of people within the User UK group felt that this was a wider research issue as they perceived that more research was conducted to tackle problems than to generate and instigate the development of new concepts/tools. This was an important perspective for the research process and did influence this group's thinking throughout the action research process. For me personally this was a 'critical moment' which really shook me in terms of being more self aware about my own potential to bias not only the data gathered but in addition the coding. It also confirmed the need for member checking.

By the time of the diagnosing for the International group I was aware of this potential for bias. Although I mirrored the exercise I did not term it 'problem solving' but rather ensured that the focus was on diagnosing problems and also opportunities. The International co-researchers were more neutral in terms of their perceptions of CMC largely reserving judgement on CMC tools' value and impact, although clearly identifying issues and opportunities.

5.6.3 RM UK Group Discussions

There were some concerns that were much more prominent from within different groups. The predominant concerns of the RM UK group related to RM issues. It is important to note the high correlation in codes between the two parts of the RM UK group which worked separately on the

problem. Many of the same issues arose from the two parts of the group. Appendix 2.3 shows the break down and mapping of the free codes generated from these two parts of the group. In addition, the diagnosis process backed up my assertion that RM within the UK had developed as a community of practice with shared viewpoints as articulated by Wenger (1998). This in itself was an important and valuable finding. In addition, the difficulties the RM UK group found in separating opinion from fact demonstrated that the shared 'opinions' across the group underpin and reinforce potentially false realities. There was no direct mention of RM with the User UK group and only one reference within the International group. However, many of the management and information issues discussed were traditional RM concerns, e.g. security, information access and preservation.

Within the RM UK group the key concerns related to the future of RM. There was a strong emphasis on the overarching RM framework and role, rather than a holistic coverage of the full range of RM concerns, e.g. appraisal. The overarching theme that was continually reiterated was in respect of wanting to keep 'control' of organisational information and records. CMC tools were perceived to be a route to 'anarchy'. R24 noted that, "there is too much autonomy and people do not understand the issues of using external tools". Across the group the general consensus was that the co-researchers wanted employees to understand the value of RM and therefore change their behaviours to willingly comply with RM requirements. Within the group there was a lot of blame placed on IT colleagues for not better managing the access and use of online tools from within organisational boundaries. Many saw IT colleagues as pushing forward the agendas of individual employees and simply bowing to user demand. R10 noted "it's the fear factor" and R1 added "roll out or die!" R24 stated "Google won't tell you and IT won't tell you can't do it". IT colleagues were depicted as weak, with no vision, simply eager to roll out any piece of new kit. R16 noted that there was potentially an increasing pressure on IT personnel to justify their positions in the light of so many freely hosted and available CMC resources through Web 2.0. It was understood, across the group, that there was a lot of pressure on IT to provide access to a huge range of CMC tools and that there existed a "systems paranoia", which manifested itself in individuals feeling "oh my God I'm not on it". This could be aligned to fear about their status (e.g. whether they had a Blackberry) or isolation from key colleagues. The RM UK group saw the RM profession as trying to uphold organisational requirements and also to preserve the historical record. However, they were very aware that they were struggling in this task and did need to find a balance to engage with individuals more effectively. R24 stated that there was a requirement to find a way of "balancing personal needs and creativity against rigid organisational requirements".

R9 noted that this was a necessity as "it has never been easier to work at home and to play at work", thus historic controls could no longer be relied upon. It was also noted that there was "too much information to implement controls". Instead the group concluded that what was needed were new ways of delivering RM within a CMC context, which required the RM profession to understand individual requirements and incentivise rather than force individuals to manage their records and information.

5.6.4 User UK Group Discussions

The User UK group created a web of issues trying to organise and implement the tasks I had set. They engaged very effectively with the wiki after the meeting and automatically themed and developed their discussions. This meant that there was not one overarching concern that emerged because they were intent on mapping out the range of issues. The key themes developed at a high level were: information asset value; ownership, power, censorship; user requirements; systems design; communication requirements; access, preservation, discoverability; and ethics. From these themes they developed underpinning issues. For example, under communication requirements were layers commenting on the delivery impact noting that "electronic communication can lose intonation and so be a blunt instrument', and it is hard to 'balance between casual and too formal communications". Although it seemed as if the coverage was comprehensive, when coded the network contained far fewer ideas than the other two groups. Therefore the mapping and display of the information actually seemed to blur over and disguise the data gaps. Having said this, the group recognised, very early on, the weaknesses in their data and the exercise.

The use of the wiki rather than the discussion forum meant that the ideas developed were not attributable to one person but were group comments. Those who had not used a wiki before did engage with the process and felt a "sense of achievement" for managing to input comments within a new media. However, the group felt dissatisfied with the task I had set to analyse the issues. They did not engage with the mapping process as set out by Ackerman, Eden and Brown (2005). Therefore the first actual action was taken to be defining processes to better establish the problems. The group took over the organisation and management within this context.

I had been really worried about getting this group started and it was a relief when others started to suggest ways forward. From a personal perspective I really enjoyed learning about a new research technique.

5.6.5 International Group Discussions

Within the International group the overarching concern was the impact of information overload and 'noise'. I70 initiated the diagnosing on the discussion forum and, because it was not a real time process, this first comment had a significant impact on many of the subsequent postings. I70 noted, "there is much noise in the electronic world, however there are also good search and filtering tools available. Utilizing those effectively is most critical". This posting was developed by many others. It was observed that in the paper and physical world, humans appeared to have developed methods to screen out noise but that noise existed across environments. Several examples of noise within the paper world were described. As I58 noted, "to my mind, we could call noise also the several info boxes that appear in the middle of text book pages. I know that people sometimes find it hard to find the utmost message in the text due to the separate and stand-alone texts that sometimes continue to next pages." I74 observed, "in the paper and physical world I believe we have methods to identify and therefore potentially ignore or get rid of the noise which detracts from or hampers communication. We need to find ways of identifying and eliminating the noise in computer mediated communications." However, in filtering out noise the co-researchers presented a number of pitfalls. I81 observed, "at the same time, serendipitous exposure sometimes takes the dregs and reveals unexpected jewels. That, IMO, is one of the benefits of online, internet communications that may happen less easily in traditional media." I81 did go on to observe that age and experience may play a part in screening noise, "my mother, in her 80s, feels driven to read every spam email, every popup box. My daughter, 23, easily sees through what has no value (at the moment) to that which is of interest. It occurs to me that my mother was raised in a world in which information had to be sought out and sometimes people were "protected" from too much assess to information. It may be expected, then, that accessing, reviewing all and deciding upon value, that is "screening in" would be a natural outcome. My daughter's first computer use was in pre-school French lessons in British Columbia. She was raised in a wired household and the problem is not finding and accessing information, it is finding relief from the barrage of unwanted content. It may be expected, then, that "screening out" would be a natural outcome. In designing communication processes and methods, I think it can be very important to consider the stakeholders in their full and varied contexts." Filtering was perceived by the group as a vital issue in information design. I63 noted that the process was more complex than delivering a well designed tool stating;

"discussion of use of CMC often seems to focus on selecting 'the right' tool or platform, but that doesn't sufficiently take into account personal circumstances, preferred communication style or values and attitudes to information... Having run an electronic discussion list for some years now I've become used to the idea of engagement without evidence of activity. In other words, although there may be relatively few postings to the list, there are many informal or feral networks in flux that are active as people answer queries or discuss one to one, or one to small group. The same I think will be true at organisational level. The factors influencing and shaping these differences are the ones I'm interested in, to quote from the overarching research aim 'taking into account the impact of the individual."

I55 stated, "it's not just more powerful tools to search and filter, but also to create information in ways that facilitate more discerning searching and filtering." I77 noted that within the context of communications there is a potential inequality and conflict where, "the content value of sender's message is not equal to or like the value sought after by the recipient message" thus the sender and receiver will have different interpretations and potentially filtering mechanisms. I66 referred the group to the key literature on information richness and ranking CMC for its ability to deal with complex messages, as first proposed by Lynne Markus (1994a). However, he highlighted that many people filter based not on what they know but who they know, as observed in the works of Nardi, Whittaker and Schwartz (2000) aligned to I77's observations. This point resonated with many of the group and evolved the discussions into concerns around how relationships are managed and knowledge and information shared. I66 went on to highlight Campbell and Davis's (2006) work on rapport management, stating;

"the interesting thing is that rapport management has been limited to face-to-face interactions, where it can refer to non-verbal techniques such as mirroring gestures, smiling, etc. as well as verbal techniques such as offering compliments, or in more recent sociolinguistic (politeness theory) contexts, attending to 'face needs', expressing solidarity, recognising autonomy, using humour, etc. So the term needs to be extended to other media environments, particularly computer-mediated communication which is so pervasive in knowledge management contexts. Work has been done in this area around 'e-mail etiquette' (which is typically rather too generalised to be fully effective); where one would look for more refined ways (interpersonal communication techniques) to increase the chances of e-mail recipients reading their e-mails. These could include such things as more relevant subject headings, use of salutations, keeping messages short, but also more considered use

of multi modal communication (e.g. leaving a phone message to announce an important e-mail message has been sent)."

I81 suggested that measures could be introduced to underpin understanding about delivering successful communications. These ideas were developed into concerns about delivering the message and knowledge sharing. Based on the first phase of Moodle discussions, the group identified 14 key issues for further research consideration. These were:

1. noise in computer mediated communications;
2. filters;
3. the stakeholders in their full and varied contexts/ choice and empowerment;
4. context of the sending vs. circumstances of receipt;
5. information richness and social constructions;
6. impact on our decisions of human perception, impact of life events, motivation (intrinsic and external), and technology;
7. prejudices;
8. the creation, structure and shape information plus information systems and how this impacts on the ability to make relevancy and importance judgements;
9. the impact of the individual;
10. knowledge sharing;
11. rapport management tools;
12. measures of the benefits (positive/negative impact) of the adoption of computer mediated communications (CMC) in business;
13. methods to consciously balance the risk (in compliance, litigation, decision processes, etc.) inherent in the use of CMC and the presumed gains in learning communities of practice;
14. A holistic approach is needed.

In order to further discuss these, and in light of the limitations of Moodle, a real time Chat was arranged on Ning. Within the context of real time exchanges, a number of people did advocate for the role of their profession. Despite that large number of records managers participating within the research no on advocated for the role and value of records managers or RM principles within the context of the research aim. This did surprise me. I54 advocated for the role of knowledge management and I56 for the design of interfaces noting that graphic design can change the message. When people were advocating for their own area of expertise, essentially

across disciplines and languages, if they did not explain their statements in detail there was sometimes misunderstanding. Thus I54 advocated for knowledge management and this was taken by some to be the same as management. On a personal level, this was another 'critical moment'. I had assumed that the negotiation across disciplines would be problematic. However, people did work hard to explain themselves and ensure that their messages were understood. There was a real desire to work together. Early on people were tolerant of each others' areas of knowledge and ignorance. Some very basic questions were asked and I felt that this helped put the group in a comfortable position to work together.

During the Ning chat, I72 noted that the tool can change the message. This resonated with the group and myself. By moving the discussions to a real time text chat the exchange had been transformed. People could not consider their postings in the same way and the directions of the discussion were more unexpected. However, the group found Ning a challenge to engage with. People were posting comments simultaneously and it had the effect of seeming as if we were all shouting about different issues at once. It was both a research strength and a weakness that I was learning about the tools with others but equally this opened us up to some frustrations in terms of engagement with unknown technologies.

During the real time Chat I79 asked people to say a bit about the setting where they were 'chatting' from. This personalised the conversation as people revealed details about their home settings and workplace environments. This addition proved really important in starting to foster rapport and identity across the group. This was another 'critical moment'. I was worried about wasting people's time and also was focusing on the research in hand. However, building up real relationships was an important part of the process. The change within the conversation with I79's personalisation of the discussion proved really valuable and instructive to me. After this point in time people also started to introduce emoticons and humour into the debates.

5.7 CHAPTER CONCLUSION

Although each group ratified the overarching research aim and question, their interpretation of the question differed. I had provided each of the three groups with my own PhD aim and objectives. The RM UK group adopted the objectives as their own objectives. The User UK group and International group both decided on their research priorities as part of the diagnosing process. Within each of these two groups the concerns were more closely aligned to maximising

the potential of CMC without any direct reference to RM processes. The User UK group was concerned to look at the potential of the 'CMC tools' that existed and the balance between organisational and individual requirements. The International group was keen to understand how individuals could work together and establish 'rapport' in a virtual world. They wanted to understand "what good virtual communication looked like". The objectives the groups defined aligned to these concerns.

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CHAPTER SIX

TRAVELLING: THE ACTIONS OF THE THREE SEPARATE

CO-OPERATIVE INQUIRY GROUPS

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"I have been impressed with the urgency of doing. Knowing is not enough; we must apply.

Being willing is not enough; we must do."

Variously attributed to Leonardo da Vinci and Johann Wolfgang von Goethe

6.1 CHAPTER INTRODUCTION

This chapter discusses the actions of the separate co-operative inquiry groups. Although each group ratified the overarching research aim and question, their interpretation of the question differed. I had provided each of the three groups with my own PhD aim and objectives. The RM UK group adopted the objectives as their own objectives. The User UK group and International group both decided on their research priorities as part of the diagnosing process. Within each of these two groups the concerns were more closely aligned to maximising the potential of CMC without any direct reference to RM processes. The User UK group was concerned to look at the potential of the 'CMC tools' that existed and the balance between organisational and individual requirements. The International group was keen to understand how individuals could work together and establish 'rapport' in a virtual world. They wanted to understand "what good virtual communication looked like". The objectives the group defined aligned to these concerns.

Within the context of this Chapter, I have outlined the first actions taken by each group prior to any groups merging. These actions were undertaken by moving through the specified components of the action research process as defined by Susman and Evered (1978, p.588) of diagnosing, planning action, taking action, evaluating and specifying learning. Chapter 5 has presented the process of diagnosing within the first cycle. Drilling down into the cycles, Lau and Hayward (2000, p. 366) present these in terms of the three key 'events' which arise from the five stages:

1. The problems/need (identified through diagnosing)
2. The action (specified and undertaken as a result of stages of planning and action taking). Within this context Lau and Hayward (2000, p. 366) specify that multiple actions may be taken as a planned process of intervention within the context of a

cycle. This proved to present the reality of the action research cycles within my own research.

3. The reflection (encompassing both the evaluation and the next step of identification of general findings). Evaluation involves reaching an understanding as to whether or not the action has had the consequences intended (Susman and Evered, 1978, p. 600). This in turn impacts upon the identification of generalised learning and the next iterative cycle.

These defined events are helpful for presenting diagrammatically an overview of the progression of the action. After each stage defined within the iteration the process was recommenced building on the previous iteration in order to move forward the action research.

6.2 RM UK GROUP ACTIONS

Table 5: The iterations of the RM UK group's actions

Timeframe	Problem(s)/need(s)	Action(s)	Reflection(s)	Communication/ CMC dimension(s)
Action cycle 1: Primary action to design an RM checklist of risks for CMC/Web 2.0 tools				
Jun - Oct 2008	♦ Lack of RM participants Web 2.0 knowledge and skills ♦ Need to understand the potential impact of Web 2.0 technologies on RM ♦ Need to reassess RM principles and practice in the light of Web 2.0, email and all CMC ♦ Need to understand the law in relationship to new technologies and global collaboration ♦ Need to find ways to engage users with RM	➢ To design a checklist of risks for CMC/Web 2.0 tools for Records Managers to use ➢ To work together to learn about Web 2.0 through practical engagement and training	♦ Unclear about the full potential and impact of Web 2.0 ♦ Concern as to whether RM was fit for purpose in the light of Web 2.0 ♦ Concern users not engaging with RM	♦ Email ♦ Face-to-face ♦ Moodle discussion forum ♦ Moodle chat ♦ Moodle wiki
Action cycle 2: Primary action to test and provide sample completed checklists				
Oct - Dec 2008	♦ Need to understand the range of functionality of Web 2.0 available ♦ Need to test the practical application of the checklist tool ♦ Need to reassess RM principles and practice in the light of email, Web 2.0 and CMC generally ♦ Need to find ways to engage users with RM	➢ To test and provide examples on how to use the checklist (from action 1) by populating with sample data ➢ To work together to learn about Web 2.0 through practical engagement and training ➢ To classify Web 2.0/CMC functionality	♦ Reinforced belief that Web 2.0 poses legal problems for RM/organisations ♦ Concern legal comeback on the group from publishing checklists ♦ Concern about applying RM principles and practice to modern organisations ♦ Concern users not engaging with RM	♦ Email ♦ Face-to-face ♦ Google Docs ♦ Ning chat ♦ Delicious tagging

Action cycle 3: Primary action to produce film(s) to engage user community with RM			
Dec 2008- Feb 2009	♦ Need to understand the range of functionality of Web 2.0 available ♦ Need to test the practical application of the checklist tool ♦ Need to reassess RM principles and practice in the light of email, Web 2.0 and CMC generally ♦ Need to find ways to engage users with RM	➢ To engage user community with RM through short film series ➢ group prioritisation of importance of RM to organisations ➢ Development of short film series ➢ Production of one short film ➢ Production of further scripts	♦ Concern as to whether RM needs to change to remain relevant and meet both user and organisational needs ♦ Concern regarding the impact of new technologies on RM (e.g. dynamic applications and Web 2.0) ♦ Value interactive learning potential as opposed to passive learning, e.g. potential game.	♦ Delicious tagging ♦ Email ♦ Face-to-face ♦ Moodle wiki ♦ Ning real time Chat ♦ ReadTheWord text to speech converter ♦ Wikipedia ♦ Xtranormal movie maker
Action cycle 4: Primary action to undertake a wiki book review on the key text that had been written on RM and Web 2.0's impact			
Feb 2009	♦ Need to reassess RM principles and practice in the light of Web 2.0, email and all CMC ♦ Need to constantly keep up with new technologies	➢ Wiki book review on Bailey, 2008 ➢ Discussion of RM and Web 2.0 in the light of Bailey's text	♦ Positive reaction to wiki book review process ♦ Concern that Bailey's book whilst providing opinions did not deliver a way forward for RM in the light of Web 2.0 ♦ Concern that RM does need to alter practices and evolve principles	♦ Face-to-face ♦ Moodle forum ♦ Moodle wiki
Action cycle 5: Primary action to undertake an examination of RM principles and practice			
Feb -Mar 2009	♦ Need to reassess RM principles and practice in the light of Web 2.0, email and all CMC ♦ Need to constantly keep up with new technologies	➢ Discussion of status of RM profession, RM principles and RM practice ➢ Critical examination of ISO 15489 ➢ Paper to UK ISO 15489 Committee to try and input into the redrafting of the Standard ➢ Work on 'big buckets' ➢ Paper to RMS Annual Conference	♦ Concern that RM does need to alter practices and evolve principles ♦ Concern that ISO 15489 Committee works efficiently to maintain relevance ♦ Concern users not engaging with RM ♦ Requirement to understand different organisations RM/communication requirements	♦ Email ♦ Face-to-face ♦ Ning chat ♦ Skype ♦ Telephone

Action cycle 6: Primary action to develop the checklist from actions 1 and 2 into a more sophisticate risk evaluation tool			
Mar – Apr 2009	♦ Requirement to understand different organisations RM/communication requirements ♦ Need to constantly keep up with new technologies ♦ Need to understand Web 2.0 risks including opportunities	➢ Evolve checklist to include more sophisticated risk processes	♦ Concern checklist does not engage with user requirements as well as RM requirements ♦ Need to open up to users	♦ Email ♦ Face-to-face ♦ Moodle wiki ♦ Ning chat ♦ Skype

6.2.1 RM UK Group Action 1: Designing a RM checklist of risks for CMC/Web 2.0 tools

Table 5 above summaries the action cycles taken by the RM UK group. The first action taken was to develop a tool intended to assist the professional RM community with advising users on RM issues within the context of usage of Web 2.0 and Opensource collaborative/communication tools. To this end a template checklist was developed. The checklist encompassed many of the concerns highlighted within the group's initial process of diagnosing. The development of the checklist also provided the co-researchers with the opportunity to try and gain a greater understanding of the role and value of CMC. A sample of the checklist is contained at Appendix 2.4.

6.2.2 RM UK Group Action 2: Testing and completing sample checklists

Having developed the checklist template its value as an empty shell was limited. It needed to be populated with data to test its applicability in practice. An additional specified learning from the first iteration was to understand the different range of functionality that could be delivered through Web 2.0 and Opensource collaborative software. We therefore brainstormed, at a face-to-face meeting, the key functionality that CMC software delivered and linked this to examples of software providers. For example, multimedia sharing functionality was noted as being delivered by Flickr and YouTube. Samples of platforms which had this range of functionality were then selected in order to trial populating the tables with data. The platforms selected were Delicious, Facebook, Flickr, Google Docs, Moodle, Ning, SharePoint and Twitter. R24 and R29 took the lead in populating the checklists with data based on assessments of these platforms.

At the end of this process the checklists were reviewed by everyone in the group as whole in a face-to-face meeting. It was perceived that the checklist was useful but potentially legally flawed as the data content contained a number of inflammatory statements relating to the provision of tools by large scale business enterprises. The tone of the data was negative and potentially biased against the software suppliers. I worked with R16 to edit the tone so that the data was appropriately worded and any negative statements were factually presented. However, there were co-researchers who still perceived that there was a potential for legal conflict with multinational corporations. R1 drafted a letter to send to these corporations to try to offer them the chance to comment on the checklists prior to publication. This letter was sent off to a lawyer to check. It proved difficult to get agreement that the populated checklists could be published

without any legal ramifications. Therefore after a vote is was agreed that only the empty shell could be progressed.

The checklist was developed to inform records managers about the problems and opportunities of using CMC and this inform users. However it was a key reflection across the group that, if the checklist recommendations were to have real value, records managers needed to engage at a more fundamental level with users.

Many in the group did not like the process of reflecting on the actions undertaken but rather kept looking forward once it was felt something was complete. Overall the group dynamic was driven by the concept of action and outputs. I spoke to my Supervisors who suggested that I talk to Alison Pickard, who is a noted expert and lecturer on research methods at Northumbria University. She advised me that I could make the reflection into an action itself. I therefore started to deliver a questionnaire through SurveyMonkey to the co-researchers at the end of each action so that they could capture and specify certain learning points. The group evolved this into a process of putting down the potential next actions and voting on these. In addition they raised points about how the meeting was run and we had several more social meetings in a pub environment. This reflected the fact that the process was a social activity as well as driven by professional interest.

6.2.3 RM UK Group Action 3: Producing a film to engage the user community with RM

As a result of the reflection concerning the checklist and voting through SurveyMonkey, the group undertook an examination as to why RM principles and practice fails to engage colleagues and users. I had flagged the Commoncraft videos in order to demonstrate to the group how to use Web 2.0 tools, and in particular a wiki (www.commoncraft.com). Influenced by the simple Commoncraft Web 2.0 sales approach, the group unanimously decided that a series of short films would assist with engaging users with RM concepts. The value of RM programmes was brainstormed at a face-to-face meeting and through a Ning real time online chat. This produced a list of benefits which RM delivers. We each then voted to prioritise the order in which the drivers were felt to be important in terms of selling RM to users. The key benefits as prioritised were seen to be:

1. Information access (which was unanimously agreed to be the key benefit of RM from the perceived position of users)

2. Information security

3. Information storage management

4. Retention and disposal of information

5. Legal compliance

6. Information preservation

7. Information sharing

The issue of how RM supports information access was then discussed. It was felt that some of the underpinning points such as information sharing and security related to access and could be initially raised within the film. R7 had recently written an MSc dissertation and given a paper on 'search vs. classification'. The co-researchers agreed that a combination of classification (the traditional tool of RM) and search tools (the traditional tool of information scientists/librarians) were equally needed to deliver RM. At this stage in 2008, the equal emphasis on the need for search within RM tools was still a new concept.

Having agreed that information access was the key film message the group had to decide on a storyline to deliver the film. The film title 'Where's my stuff?' was coined by AR1.

The plot for the film was agreed through brainstorming via Ning and in the pub. Sample storylines were developed on paper and through Xtranormal moviemaker. It was agreed that the films should chart the office life of the main character Xenia. Xenia was an attempt at an international name in case the films were translated. Xenia would not be a records manager, in order to stress that everyone needs to undertake RM. The overarching film style would be a cartoon with a simple message told through a story. The film would focus on an individual to make it relevant to anyone watching, but it would deal with points relating to teamwork and organisational goals. The film would weave in some of the additional drivers for development in later films. Appendix 2.5 illustrates part of the storyboard for the film.

The group produced the first film (a general introduction to RM focusing on information access, see Figure 20 below), then drew up a storyboard for a second film (on information security), and drafted the outline story for a third film (R4's idea of a dream sequence with Xenia filing into a magical filing cabinet on a cloud which ultimately results in a nightmare of filing chaos). Drafting

and researching the information security film also highlighted the fact that there were information security games available online but these did not deliver many of the key data handling messages the group wished to cover. However the value of interactive learning was noted at this point.

None of the initial film ideas included a records manager in a formal role. R3 suggested that a competition could be launched for a script about how to introduce the value of the professional role given that we also wanted to 'sell' the concept that everyone should undertake RM but felt that there was still strategic value in a professional role.

Figure 20: Screencut from film, produced by Leanne Bridges (R3) and Jim Parkyn, scripted by Sarah Demb (R6) and Rachel Binnington (R1).

Having produced the first film, with considerable help and resources from R3 and Jim Parkyn, R3 and Jim Parkyn said that to further develop episodes we would need funding. It was decided to evaluate the first film with the User UK group at the merger point and then to seek additional funding sources for further films. Having made this decision the group reflected again on its original 'needs' and decided that prior to the merger point it was essential to discuss RM principles and practice in the light of Web 2.0 software. In addition the discussions highlighted the concern that records managers do not often have technical IT skills and that the problem of their ability to support systems implementations went beyond Web 2.0 and included a need to understand dynamic applications and information systems more widely.

6.2.4 RM UK Group Action 4: to undertake a wiki book review of the key text on RM and Web 2.0

There had been one key text written on RM and Web 2.0, *Managing the crowd: rethinking records management for the Web 2.0 world* (Bailey, 2008). The group had been approached to review this text for the Business Archives Council Journal. In the light of this approach and given that many in the group wanted to read the volume, I suggested that we could ask Steve Bailey (who was known to the group) for multiple copies of his book with the suggestion that the group would then undertake the innovative approach of a wiki book review. The fact that Bailey was known personally by most co-researchers would normally have made it hard for an individual to write objectively regarding his work. However, the anonymity afforded by the wiki enabled a more balanced account of the work to be produced.

Undertaking this process helped the co-researchers to understand the benefit and value of the wiki. This process was evaluated by the group as being very successful. Ironically the Journal did not then publish the review until a year later, i.e. not with the same speed that can be afforded through the Web. However, aside from the delay a benefit of this process was that, unlike many online book reviews, the authorship of the review could be traced back to a known professional group whilst not implicating individuals in personal controversy. The book review as published is available at Appendix 2.6. It has been reproduced within the PhD text with the publisher's permission as the *Business Archives* journal is not currently available through online subscription services.

In regards to the book's actual discussions on Web 2.0, the co-researchers felt that it was an opinion piece rather than a work providing pragmatic guidance for change. It was felt that more work needed to be done on the impact of Web 2.0 on RM principles and practice. The group also concluded that wiki book reviews, and wikis more generally, were particularly valuable as a mechanism for anonymised debate. It was noted that because people knew one another and relied on each other for work and connections over decades it was hard to enter into confrontational debate when it impacted on an individual's work. Therefore it was noted that more use could be made of wikis for professional evolution.

6.2.5 RM UK Group Action 5: undertaking an examination of RM principles and practice

Following on from reading this text, the group discussions on RM principles and practice focused on the professional status of records managers in conjunction with an examination of the RM profession's engagement with other information management professionals, the differences and tensions between interpretations of information and records, the requirements for implementing a RM system and the revisions the group advised for the RM standard ISO 15489 (ISO, 2001).

In respect of the group's analysis of the principles and practice set out in ISO 15489, the group concluded very quickly that the standard did require significant revision. The debate took place over only a month and very quickly the group dismissed definitions which had taken years to evolve. Initially the group discussions wanted radical changes to the standard. A key problem with the standard was seen to be the focus of a definition of 'good' records as having fixed properties which whilst providing records with evidential value limited the ability to easily reuse information. Figure 21 contains a snapshot of my coding of the discussions on a record at this point. When the co-researchers were fairly definitive on a particular aspect then there would sometimes then be less reference to that item and therefore there would be less cross referencing within the codes.
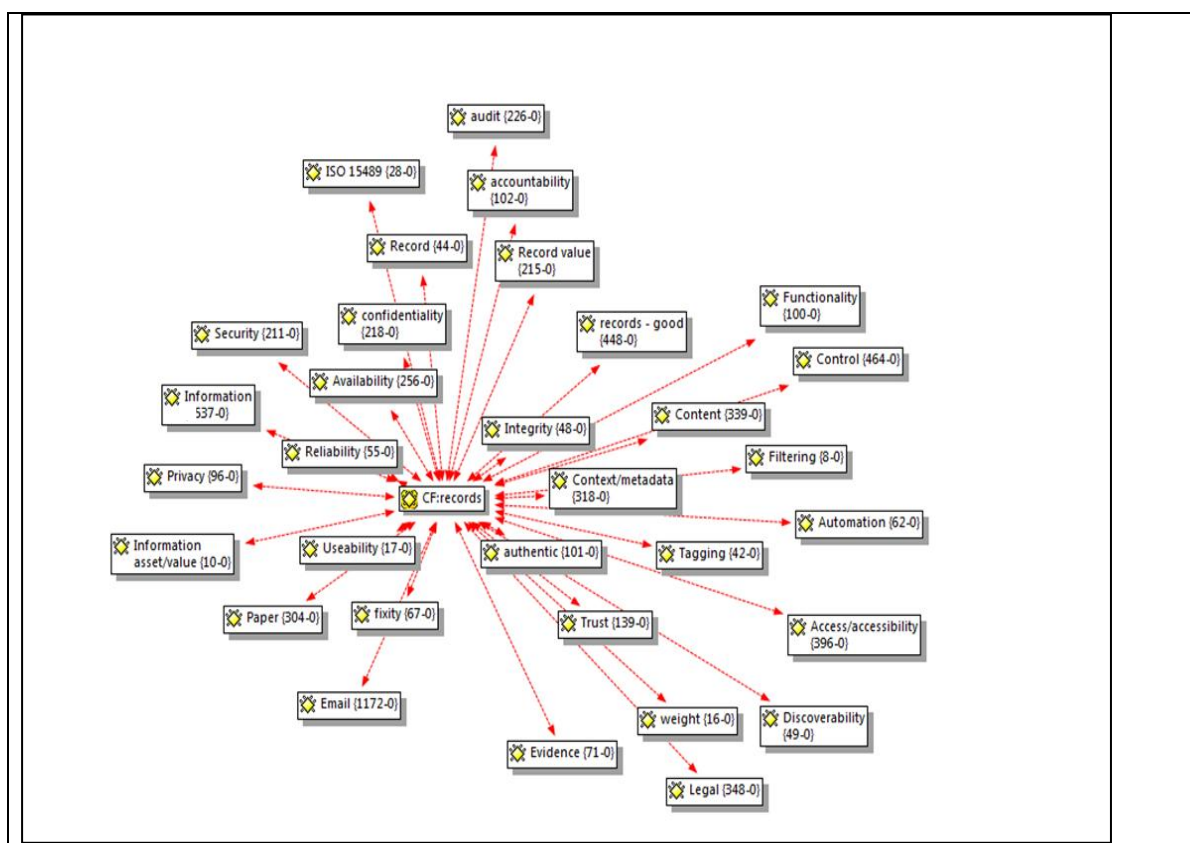
Figure 21: My coding relating to a record within the context of one action cycle

The value of records and information with the requirement for greater definition between the two was discussed in detail. However, in having originally dismissed certain RM concepts, over time through email and face-to-face meetings the value of original RM concepts was also recognised. R17 was instrumental in selling the case for traditional RM principles and R2 and R12 provided balance between new and old concepts. However, R12 did feel that standards were not particular relevant to the realities of practice because the standards were too slow to change and move with the times. In the end a consensus was reached in regards to the changes to the standard which would be beneficial to RM practice as a whole.

A key point that arose from the discussions was the need for RM concepts to relate to information. R7 reported that these discussions also influenced his work and discussions with the Records Management Society which subsequently changed its name to the Information and Records Management Society. It was difficult to know at times where the research influenced the wider RM community or where the wider community was driving the research.

In addition it was felt that the balance between where the role of records managers and archivists divided in regard to appraisal needed to be clearer. It was felt that appraisal needed to be part of the standard and yet was not defined within it. We all discussed the concept of 'big buckets' which I had personally used as a process for managing an organisational email system. This process involves appraising and managing information at a very high level. As a result of the discussion R4 wrote a news piece for the Society of Archivists' newsletter *ARC* (Campbell, 2009). As a result of this piece, I was subsequently approached and asked if the group would provide speakers on this theme at a number of conferences and events. R4 and I developed a presentation and exercise which we delivered (Campbell and Lomas, 2010) and further sessions are planned. This was an example of almost a spin off action which the group as a whole did not progress but that was taken forward in addition to the overall work.

A summarised report on the group's conclusions was submitted to the UK ISO 15489 Committee (see Appendix 2.7). The aim of this was to engage the Committee membership in order to try and influence UK submissions to the International Council on the standard's evolution. I sent a copy of the report to my PhD supervisor, who is a member of the Committee, and one other Committee member. However, prior to the group merger no response was received. The Committee meets in accordance with prescribed timeframes. The group reviewed and discussed the actual standards process and based on discussions with colleagues in the RM and wider

information communities (e.g. British Computer Society representatives) reached the following conclusions:

- The process of influencing standards requires regular attendance at key international meetings and it is difficult for individuals to obtain funding to attend meetings. To really influence change a greater number of active representatives would need to regularly attend meetings.
- The standard ISO 15489 is currently driven from Australia, although the UK representatives have significantly input into the process.
- Change to the standard is slow and reflects the requirement to listen to competing voices.

Based on the lack of response from the UK Committee, the group concluded no further work on this action could be immediately undertaken. Therefore the group moved on to a new action whilst awaiting a response.

In respect of the status of records managers as a profession, the group was keen to explore views of records managers with the wider co-operative groups on the point of merger and also to discuss and evaluate key records management concepts at this stage.

6.2.6 RM UK Group Action 6: Developing the initial checklist into a more sophisticated risk evaluation tool

The group revisited the checklist. Although the checklist template was helpful in assessing individual systems and comparing a small number of options the group decided that it needed to have a more sophisticated risk approach to deliver its full value.

The impact of the 2008 banking crisis meant that a number of co-researchers called into question traditional risk models. The relevance of high, medium and low risk profiles as meaningful measures were queried by group members and a number of risk experts were cited (Gilb 2005; Hubbard, 2009). R16, R19 and R24 agreed to review risk strategies and report back to the group. As a result of this work the group felt that risk appetites could be developed based on Lloyds (2007) risk appetite models together with a UK Police model (City of London Police, 2008) for assessing risks associated with removable media.

Reviewing the template, through the risk analysis, made the group realise that the template focused on negative risks rather than opportunistic risks. In addition, it was in essence akin to a technical specification and as such did not engage with user requirements. At this point the group felt that it would also be helpful to have the input of the User UK group into the template. This was a timely conclusion, as the User UK group was also at a point when it was also ready to merge with the RM UK group .

6.3 USER UK GROUP ACTIONS

Table 6: The iterations of the User UK group 's actions

Timeframe	Problem(s)/need(s)	Action(s)	Reflection(s)	Communication/ CMC dimension(s)
Action cycle 1: Primary action to build a group dynamic and shared research direction				
Jun – Sep 2008	♦ Requirement to build a group dynamic ♦ Need to have a project plan and sense of direction ♦ Requirement to map group expertise and learning needs	➢ To use Cognitive Edge Techniques (Story Circle, 'Future Backwards' and Cynefin Framework) to build a group dynamic and establish the group's project/research requirements ➢ group expertise mapped and ongoing training programme planned including Web 2.0 training, research methods and problem solving techniques.	♦ Unclear about the full potential and impact of Web 2.0 ♦ Concern as to what best practice communication looked like online	♦ Face-to-face ♦ Moodle discussion forum ♦ Moodle wiki ♦ Delicious tagging
Action cycle 2: Primary action to understand the co-researchers' visions of communication heaven and hell				
Sep - Dec 2008	♦ To learn about the group's views on online communication ♦ Need to understand the potential of Web 2.0 technologies ♦ Need for training in using Web 2.0 tools ♦ Requirement to understand how and why different communication tools were being used within different sectors ♦ Requirement to establish communication best practices ♦ Need to learn more about research methods	➢ To undertake the Cognitive Edge 'Future Backwards' technique' to establish a communication timeline and the group's visions of communication future heaven and hell. ➢ To undertake training on a range of Web 2.0/CMC tools ➢ To undertake training in Cognitive Edge techniques	♦ Concern as to what best practice communication looks like within different types of organisations	♦ Face-to-face ♦ Moodle discussion forum ♦ Moodle wiki ♦ Ning chat

Action cycle 3: Primary action to undertake workshops to understand different communities' visions of communication heaven and hell			
Action 3 Dec 2008 - Jan 2009	♦ To understand how different organisations are currently using communication tools ♦ To understand how different organisations would wish to use communication tools ♦ To understand what users in different sectors want from their communications ♦ To develop a best practice communication standard ♦ To undertake wider research	♦ To undertake workshops to build pictures of communication heaven and hell within different communities ♦ To undertake training on a range of Web 2.0 tool ♦ To undertake training in qualitative research	♦ The workshops concluded there were synergies in concerns and benefits of CMC usage ♦ Workshops time consuming for participants and therefore alternative methods gathering data required.	♦ Blog ♦ Face-to-face ♦ Listserv ♦ Twitter
Action cycle 4: Primary action to understand and use different survey techniques to establish a picture of current communication practices. These surveys were planned out together			
Feb -Apr 2009	♦ To establish a true picture of communication ♦ To develop a best practice communication standard ♦ To undertake wider research on how communication tools are used across different organisations/User UK groups ♦ To test CMC tools	➢ To develop a survey to establish a true picture of communication ➢ To continue to work with new tools ➢ To undertake training in quantitative research methods and questionnaire design ➢ To undertake training in coding and data analysis	♦ Concern to get a range of data to produce a clear picture ♦ Concern that the data gathered should be meaningful ♦ Learning that different tools are good for engaging with and spreading information to different types of communities. ♦ Learning that email is still the most prevalent channel for CMC and the most popular CMC	♦ Email ♦ Excel loaded onto Moodle ♦ Face-to-face ♦ Ning chat ♦ SurveyMonkey

		➢ To undertake a short survey to test communication tools and answer a simple	♦ 53 communication purposes were identified which could be grouped into 10 key themes	♦ Email ♦ LinkedIn ♦ Listservs ♦ Ning sites ♦ Twitter
		➢ To develop a qualitative questionnaire to understand the range of purposes for which people communicate	♦ To develop a qualitative survey which would gather data for the quantitative framework	♦ Excel ♦ Face-to-face ♦ Paper
		➢ To develop a quantitative survey on the state of communication across sectors	♦ To develop a larger quantitative survey based on the first set of data ♦ Only draft produced. At this stage further work was required.	♦ Face-to-face ♦ Ning Chat ♦ Skype ♦ SurveyMonkey ♦ Telephone

6.3.1 User UK Group Action 1: to build a group dynamic and shared research direction

Table 6 above summaries the action cycles taken by the User UK group. The User UK group had to work hard to develop a group dynamic and direction because the co-researchers came from differing professional backgrounds and did not know one another. Between the first and the second face-to-face meeting the financial crisis caused by the collapse of Lehman's Bank (see http://news.bbc.co.uk/1/hi/7615974.stm) did impact on a number of the group's jobs and this actually helped foster sympathy for group members and the sense of a group dynamic. This also meant that some people had more time to work on the research and it provided a useful and positive focus when they were not in paid employment.

As the first primary action, in order to develop the post-it note diagnosing exercise and build a group dynamic U36 volunteered to run an 'Anecdote Circle' and a project mapping exercise for the group through a 'Future Backwards' approach. These methods are explained in detail with information on what each process can deliver at http://www.cognitive-edge.com/method. php?mid=10 (Accessed 1 January 2012) and Figure 22 below illustrates the process. The group started the process as an anecdote circle; sitting in a circle and sharing experiences, good and bad, of using communication tools. This started people talking about their personal experiences based in real events of communication in their lives and work. Moving on from this the group then tried to look at the bigger picture of communication through a 'Future Backwards' approach.
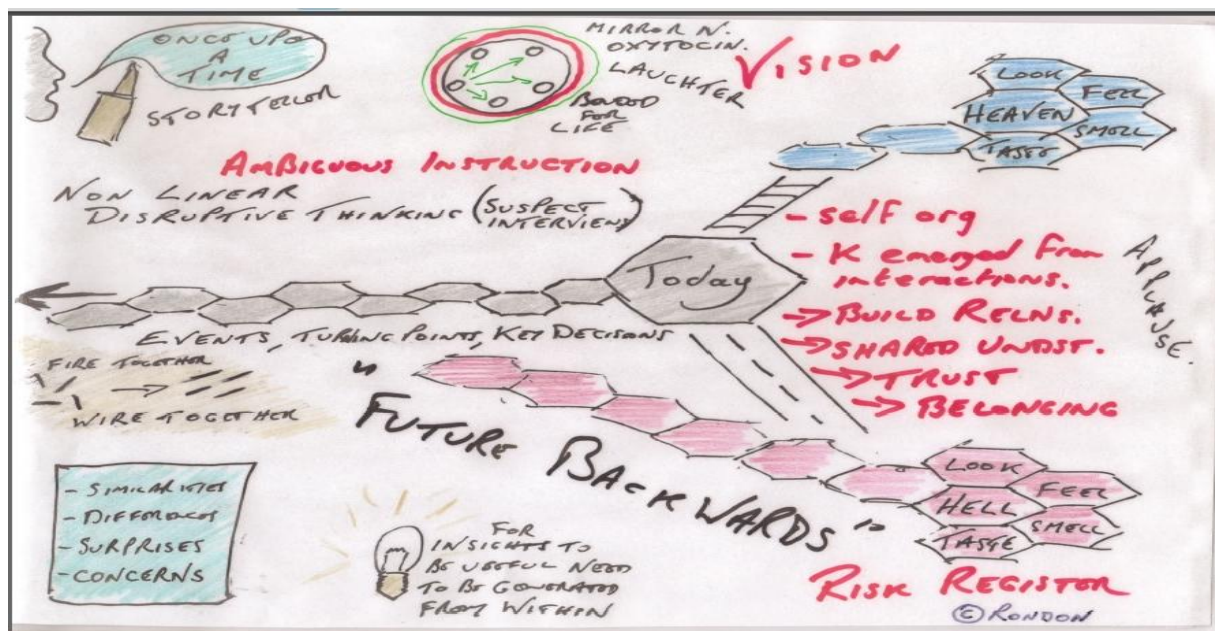
Figure 22: Diagram 'Future Backwards' plan produced by U34 (Ron Donaldson)

Individuals wrote onto hexagons their ideas as to what were the components of communication today. This included statements about technologies and the social, political or economic reality of communication. They then tried to map backwards individual steps that had brought 'communication today' into being. The claim for this process is that it can be used to discover what entrained patterns of past perception in an organisation/group are determining its future. The process of moving backwards breaks linear thinking. Where the hexagons touched it showed the links and sometimes complicated connections. The patterns of links created were termed by U36 termed 'the ecology of knowledge' and these built pictures demonstrating the importance the co-researchers placed on the individual, social and organisational structures, message, and channel/tools, within the context of the communication landscape. Within the User UK group there was a strong emphasis on the development of communication influenced by key societal evolutions with critical technological advancements mapped. The group took its chain of communication evolution right back to the idea that cave drawings were early forms of instruction manuals. From this process, U36 asked the group members where they would like the work of the research journey to evolve in conjunction with the communication objectives (heaven) and a separate view of where they would not like to see the research progressing (hell). The co-researchers then built a chain of potential actions which formed journeys to heaven and hell. These journeys formed a potential risk register with the journey to heaven demonstrating the opportunistic risks and the journey to hell depicting the possible pitfalls.

U34 then took the items from the journey to heaven and asked the group to map them into the Cynefin Framework (explained at http://www.cognitive-edge.com/method.php?mid=10 (Accessed 1 January 2012) and illustrated in Figure 23) as this would help the group understand how to achieve their goals. The framework has five domains: simple, complicated, complex, chaos, disorder:

1. Simple: Where cause and effect are obvious. The approach in this domain is to sense, categorise & respond (S-C-R).
2. Complicated: Where to establish the relationship between cause and effect some analysis and expert knowledge is required. The approach here is sense, analyse & respond (S-A-R).
3. Complex: The relationship between cause and effect here can only be established in hindsight, so the approach is to probe, sense & respond (P-S-R).
4. Chaotic: Here there is no apparent relationship between cause and effect and so the need is to act, sense & respond (A-S-R).

5. Disorder: (unmarked in the centre) This Is the state of not knowing what type of causality exists.

Figure 23: Cynefin framework. Reproduced with permission from Creative Commons License [Retrieved 1 January, 2012 from http://en.wikipedia.org/wiki/Cynefin]

The steps from the 'Future Backwards' chain to heaven were plotted into each of these domains and this then built a framework for action. It is the premise of the framework that 'simple' steps can be enacted and 'complicated' steps are the domain of expertise and planning, while 'complex' steps require further research and trials. 'Chaos' and 'disorder' states require management back into one of the other domains. This helped the group to think about where it could take action.

Having plotted the items from the actions the co-researchers then agreed together whether each action was a priority on a scale of 1-4 (Table 7). This meant that each action, and its potential, was discussed.

A key priority expressed by everyone was to understand how organisations engaged with and used Web 2.0 tools and how this process could be enhanced. In addition, each person highlighted their own aspirations to better understand the range of communication tools and a range of research methods. To deal with this we publicly mapped out our own individual areas of expertise and areas where we each wanted to learn and develop further in relationship to the research. As part of the group action a training programme was planned out, mapping individual requirements for learning to individual skills. The requirements for learning included both the desire to learn about research approaches and also the requirement to understand a range of CMC tools. The learning plan was altered at each evaluation point to shift training opportunities to align with other actions.

Table 7: The User UK group's defined goals mapped into the Cynefin framework and prioritised.

	PRIORITY (4 HIGH)
SIMPLE	
Improved understanding of technologies and how to use them	3
Understanding of research methods	3
COMPLICATED	
Better understanding/knowledge of as many Web 2.0 systems used by organisations as possible. Need to develop existing surveys (e.g. *How businesses are using Web 2.0* http://www.mckinseyquarterly.com/How_businesses_are_using_Web_20_A_McKinsey_Global_Survey_1913; The business impact of social computing http://www.gartner.com/it/products/research/social_computing/social_computing.jsp)	4
Which industries and professions embrace Web 2.0?	4
The reality of the technical usage by organisations	
Delivery of conference papers and research articles	3
A best practice paper/ideas	2
Original data based on real life	3
COMPLICATED/COMPLEX	
Clear themes and project direction	4
Convince senior management there is a better way to KM	
Actual practical outputs (other groups' heaven and hell /issues/engagement)	2
Co-ordinated lines of investigation	
Research areas ID	
COMPLEX [Probe, sense, analyse, respond – domain facilitation]	
Moodle as an active project tool	1
Keeping everyone engaged	2
group remains focused and engaged	3
Ideas to test	2
Active discussion (face-to-face, and online) Research direction. Enthusiasm	
Why people communicate with the different technologies	3
Research learning and positive group/individual experiences	

Taking the data obtained from the 'Future Backwards' process used to diagnose the issues, the User UK group evaluated the overarching research aim and established a new set of objectives seeking:

- To understand what the co-researchers wanted from their communications.
- To understand what different business communities require from their communications.

- To understand what individuals want from their communications and how they make choices about the communication tools that they use.

- To understand why different business communication models are successful

- To develop a communication best practice paper.

In terms of then progressing the action phase of the project, within the group there were a number of co-researchers who were familiar with a range of research methods and advocated that the first actions could be pieces of research that would develop the research. It was suggested by U39 and supported by U32 that research in itself was a way of understanding what businesses and individuals wanted from their communications as well as then potentially informing the production of a best practice paper. This idea was taken up by U34 and U41. U34 was keen to explore qualitative research strategies. U41 was keen on pursuing quantitative methods. He directed me to research whether there were any existing data sets within this subject area that the group could use to inform their study. I could not find any relevant data sets. Given the lack of existing quantitative data, U41 perceived that there was a benefit to exploring qualitative research methods to obtain data that could then potentially inform a quantitative process. The group as a whole had really enjoyed U34's 'Future Backwards' workshop and wanted to follow it through to consider what communication heaven and communication hell would like in different users/business contexts and this therefore established an obvious way to progress forwards.

6.3.2 User UK Group Action 2: to understand the co-researchers' visions of communication heaven and hell

Using Cognitive Edge 'Future Backwards' method we worked with U34 to develop our group vision of communication heaven and hell and the steps that would transport the group to either place. We had already undertaken the process of moving backwards from communication today, to analyse how we had got our current position in regards to communications. We then defined our future visions of communication heaven and hell, working through a three year timeframe. We considered that this was realistic as further forwards could not be predicted or usefully considered for research actions given how quickly the world of communications has been evolving online.

The work was progressed using an online Ning Chat to develop the picture in real time. The text from the Chat was then taken and edited on a Moodle wiki (See Figures 24 and 25).

HEAVEN

Vision of heaven

Information which is:

- Rich (full of different types of data - photographic, video and text);
- Meaningful (i.e. the content is substantive and the style/media does not override the content);
- Reliable;
- Clear, including separation of fact from opinions and personal values;
- Message conveyed as intended (individuals must try and foresee possible misinterpretations and take steps to minimise the potential for misunderstanding – this could be achieved by providing a Word outline for continuous text);
- Tone retained (90% of tone can be lost in text-based communication on the internet)
- Security for information coming in and going out;
- Ownership and privacy rights maintained (including authority to delete, amend and reproduce information, to keep comments in context etc).

The systems must be set up to ensure information is maintained and that system capabilities include:

- Data integrity/authenticity retained (i.e. data preserves its original context, structure, nuances, interconnections and metadata);
- Greater ability for individuals to engage and validate the information's credibility (with paper and pen it seemed easier to assess the credibility of the information than IT enables);
- Comprehensive audit trails;
- Real time communications for meetings!
- Information availability whenever and wherever required (like 'always on', but I can hide from it when I want off-line time);
- Accessibility (easily available independent of the platforms and systems on which it was created and through which it is being viewed and in the wider senses discussed) (access not just in an IT sense but access to all communities, at all times, and over the longer term, i.e. don't lose the information over the longer term);
- Equality of access - provision of equal access to content or functionality for people with disabilities etc;
- Cultural clarity (i.e. global communication and cultural requirements for communicating understood);
- Integrated and accessible at home and work, with organisational acceptance and greater choice to accept the right tool for the right purpose;
- Clarity between personal/professional boundaries;
- Enduring (capable of being handed on despite technological evolution)/Accessibility over the short medium and longer term;
- Archive and tracking capabilities;
- Trusted ids/or clear when using pseudonym (there will be certain occasions when it is important to be clear about the author of a communication and certain instances where this is irrelevant and anonymity enhances creativity);
- Managed identities that enable individuals to separate out their public and private profiles;
- Information flows managed to avoid overload (e.g. pause options);
- Privacy/security managed (including clearer limits on data which can be appropriately searchable/Googleable);
- Search, management to enhance constructive exchange;
- Tools to help skim off the content worth knowing on an individually defined basis, 'gold panning';
- Ethical reuse of information by users, i.e. information origin is credited etc;
- Unlimited bandwidth;
- Ease of use;
- Quick;
- Cheap;
- Transparency as to who owns the systems, how the data is managed, legal implications etc;
- Clear legislation which balances government, user and corporate rights.

Possible steps to heaven

1. A best practice paper to inform user behaviour and to educate organisations
2. Training materials developed in support of the best practice paper
3. Techniques to help users clarify text/requirements before sending/publishing e.g. rather than days where no one sends and email one solution is to leave any message for an hour or more before finally being allowed to press the 'send' button. Another solution is to try ideas (text, graphics, pictures, tables, etc) on someone else before putting them into the public domain
4. A new social site? with only authorised ids, then a mirror site where this is not required and see what this brings?
5. Clearer rules on privacy/search and access
6. Options to filter and manage data more effectively to avoid overload, e.g. to set pause for certain systems etc
7. Users charter setting out ethical issues and clearer guidance on usage, information ownership and deletion
8. New legislation to enhance management in terms of privacy vs. security, user rights
9. Membership to tracking systems to manage different accounts and flag an attempts to use your ID outside of this context
10. Third party storage services with the ability to guarantee the preservation/migration of information over the longer term
11. International measures and continuity planning to protect internet from terrorism, hacking, denial of service etc

Figure 24: Snapshot reproduced from Moodle wiki indicating the User UK group's defined vision of communication heaven with the possible respective steps.

HELL (the flip view of heaven)

Information which is:
- Partial (reliance on one type of data e.g. text only);
- False;
- Meaningless, muddled language or meaning distorted (i.e. lacking in original context, structure, nuances, interconnections and poorly tagged or labelled at the point of creation);
- Unrepresentative pictures, words where numbers would convey the ideas more simply and clearly;
- Inaccessible (splintered knowledge through information being located in or viewed through systems which are device or technology specific and not interoperable);
- Without integrity (no context);
- Unavailable (information/locked out, inaccessible to different audiences);
- Open to misinterpretation;
- Potentially damaging to communication across different sectors/cultures;
- Short-lived (contained in formats or media not capable of being sustained or conserved).

Systems:
- Uncontrolled (content and system)
- Chaotic and fragmented;
- Data loss;
- Overloaded;
- Unmanaged (without migration, preservation strategies and deletion strategies);
- Lack of access, through complicated media, systems failures over diversification of systems;
- No security/privacy settings;
- open to hacking;
- No ethical. controls lack of audit trains;
- No audit trails;
- Miscommunication;
- Too many irrelevant tools;
- Expensive compared to run compared to returns;
- Difficult to use;
- Usefulness of internet is destroyed by marketing practices, data harvesting, 'virals', advertorials; basically data mining and marketing messages mixed in with 'real' content without being labelled as such;
- Confused ids/trust, confusion of personal vs. corporate ids;
- Denial of service' attacks have already been used to attempt to blackmail businesses, or to force down content that some don't agree with;
- Security measures being so stringent that you don't get anything done. Or that you circumvent the systems to get stuff done, and end up being vulnerable to prosecution.

Possible steps to hell –
1. Unbalanced legislation favouring one entity e.g. governments being allowed to keep and monitor all communications
2. Terrorism, attacks etc without business continuity planning
3. As communications move more and more to the Internet social rules breakdown resulting in lack of ethics (i.e. acceptable to steal others ideas without reference) and chaos (many current rules are based upon face-to-face practices)

Figure 25: Snapshot reproduced from Moodle wiki indicating the User UK group's defined vision of communication hell with the possible respective steps.

6.3.3: User UK Group Action 3: to understand a wider range of viewpoints on communication heaven and hell

At this stage, within the research there was another discussion on the value of qualitative versus quantitative research methods. U34 and U41 were both great enthusiasts for promoting research concepts. However U34 advocated for qualitative research methods and U41 for quantitative research methods. U41 helped everyone to engage with the possibilities of quantitative research as there were some who were fearful about their ability to engage with the statistical challenges of quantitative research. U41 was able to make this research route seem relevant and potentially 'fun'. As a result, across the group there was a desire to experience a use of mixed methods. However, U41 conceded that in the first instance obtaining a qualitative picture on communication would then assist with developing and obtaining the value of the quantitative data.

Using Cognitive Edge tools the co-researchers worked with U34 to develop a workshop model, to build communication 'Heaven' and 'Hell' perspectives with different organisational stakeholders, e.g. from different professional roles and also different workplaces. The workshop used the same 'Future Backwards' and 'Cynefin framework' methods already tested by the group. The workshop plan was to ask participants how they would define 'where they were with communication today?', then work backwards to analyse how they got to the current state. They would then define their future visions of communication heaven and hell, working on a three year timeframe. In addition the participants would then plot the steps to heaven into the 'Cynefin framework'.

However, it proved very difficult to find people who were willing to take part in the workshops, either for an evening after work or within work time. Appointments were made with a law firm and also a pharmaceutical company. However, in the end these two contacts and others approached did not feel that they could use staff time to work on the project. Many people felt under pressure in their jobs following the financial impact of 2008. Although they saw benefits to their organisations, and personal benefits, to participation no one wanted to promote this idea in such difficult working circumstances. Many individuals contacted cited the current economic climate as the reason for not signing up. They did not want to be seen to have time to be engaging in non-essential work and were also under pressure to work later thus taking away leisure time availability. Therefore my supervisor helped by agreeing to assist with advertising workshops at Northumbria University. Even within a University focused context it was very difficult to get people to engage and many of those who participated were people I knew despite the wide advertising of the workshop. As a result I held a

single workshop at Northumbria University assisted by U34 (as it was too far for all the co-researchers who were based in London to travel).

The workshop at Northumbria University was split into three groups based on participants' Schools to try and establish if different disciplines had different communication visions:

1. School of Computing, Engineering and Information Studies
2. School of Psychology and School of Built Environment
3. Remainder of participants from across all other Schools

In the journey backwards through the views of communication the first group, which contained many information scientists, used many more index cards to record the journey back in time. The participants from the other groups had much simpler journeys. The second group focused on social changes and shifts whilst the third group focused on technology. Looking forwards, there was less certainty about what would be in heaven and hell. Some participants wanted the same card in both places and some disagreed with the vision. The first group had the most diverse viewpoints. Figures 26, 27 and 28 indicate each group's future vision of communication heaven and hell.

Figure 26: Photographic snapshots of the visions of heaven and hell created by School of Computing, Engineering and Information Studies

Figure 27: Photographic snapshots of the visions of heaven and hell created by School of Psychology and School of Built Environment

Figure 28: Photographic snapshots of the visions of heaven and hell created by the remainder of the participants

Although this data was perceived to be beneficial by the User UK group it was deemed to be a summary snapshot rather than an in-depth picture. In fact the co-researchers reflected that their

own online version of the exercise had created a richer picture. However, the co-researchers did not feel that without a face-to-face explanation people would be able to build the online picture. Nor did they think they would be able to get commitment for a face-to-face training session explaining the process followed by the online creation of the picture. The co-researchers wanted to gather a richer data picture to establish an understanding of communication usage in reality across a range of organisations. By this point in the research, the group had established that the clear end point action would be the delivery of a best practice communication paper. At this stage it was not felt that there was sufficient knowledge and data to adequately deliver such a paper. Therefore we decided as a group that the route forward would be to explore survey methods as a way of gathering additional data from a wide range of users.

6.3.4: User UK Group Action 4: Data gathering through qualitative and quantitative surveys

It was felt that surveys would take up less time per person and therefore were a way to overcome the obstacle of obtaining participants. Different ways of gathering data were discussed and it was agreed that there could be multiple surveys undertaken. The first two parts of the survey phase were launched simultaneously as the co-researchers felt they each achieved discrete objectives.

Survey phase part one

Some of the co-researchers were keen to test different tools' ability to gather data. It was agreed that a survey could be undertaken which would simultaneously test the CMC tools and gather data. U37 led this phase of the research. A technology question, to be circulated via different technologies, was evolved to test both the question and the power of different technologies to elucidate responses and potentially snowball the circulation pool. As Twitter was one of the technologies used, the question length was defined by the number of characters that can be submitted in a tweet. U32 devised the question that the group ultimately selected: *If you could use only one tool to communicate what would it be and why?*

In answering the actual question email was clearly cited as the single most popular tool communication tool. Even in the Twitter context where the question was successfully cascaded email was selected as the favoured tool (17%), although there was more overall diversity in the choices.

In terms of actually eliciting a response, different tools demonstrated different strengths. Twitter, as a channel, demonstrated its potential to cascade across communities of unknown recipients. The group even obtained a response from Stephen Fry. Emails sent to known recipients had the highest guarantee that a response would be received with 94% of respondents replying. 98% of women replied compared to 90% of men targeted. Within the context of listservs which contain communities of experts there were more carefully considered responses. The social media and professional collaboration sites such as LinkedIn received hardly any comments.

The responses confirmed pre-existing views that different tools serve different functions but that email still remains the most common and popular channel for communications. U41 also highlighted an article by Miller (1956) title 'The magical number seven, plus or minus two: some limits on our capacity for processing information', which proposed that people only have a limited capacity for handling information. This article resonated throughout the group and thereafter was often cited. In this context the co-researchers related to it as a number in terms of nine being an absolute maximum number of communication channels they would wish to engage with; whilst many co-researchers in fact only wanted two or three communication channels.

Survey phase part two

As a more in-depth question the co-researchers wanted to further understand the full range of purposes for which people communicate. U41 helped the group to design a two phase survey to collect data. The first part of this was a survey (see Appendix 2.8) to gather the full range of reasons for which people communicate. This was a very difficult questionnaire to complete. It was not felt that people would complete it if they were simply sent a survey link. It was agreed that it needed to be completed by people sitting in a room obliged to finish the task. However, based on the workshop experience we knew that obtaining participants would be tough. Therefore we decided that the best audience would be the RM UK co-researchers. At this stage the user co-researchers were keen to merge with the RM UK group not only in order to help with the completion of the survey but also in order to have a bigger community to write and assist with the production of a best practice paper. Ultimately the co-researchers felt that the International group was a critical component of this process, which was an additional merger away.

6.4 INTERNATIONAL GROUP ACTIONS

Table 8: The iterations of the International group's actions

Timeframe	Problem(s)/need(s)	Action(s)	Reflection(s)	Communication/ CMC dimension(s)
Action cycle 1: Primary action to develop group rapport and research profile				
Feb -Mar 2009	♦ To build a group dynamic ♦ To find an effective communication/ collaboration channel for the group to progress the research ♦ Requirement to understand what 'good' communication looks like online ♦ Requirement to consider how knowledge is successfully shared online within organisations ♦ Requirement to understand how emotions translate online across the world and how rapport is developed ♦ Requirement to understand how people filter 'noise/information' ♦ Requirement to understand organisational requirements ♦ Requirement to consider the impact of the individual on organisational communications ♦ Desire to experience and use new online communication tools	➤ To provide a profile of each group member including a photo, work resume, individual interests and expertise. ➤ To identify tools for progressing the group's research ➤ To agree mechanisms for the action and communication ➤ To develop a literature review/set of references	♦ Concern to agree best channel(s) for group to communication/collaborate ♦ Concern to agree rules to aid the group's own communications/ collaboration for the project ♦ Concern as to what 'good' communication looks like online	♦ Email ♦ Moodle discussion forum ♦ Moodle wiki ♦ Ning chat ♦ Word

Action cycle 2: Primary action to develop rules for chatting within Ning				
Mar – Apr 2009	♦ To develop the group dynamic ♦ Requirement to understand what 'good' communication looks like online ♦ Requirement to consider how knowledge is successfully shared online within organisations ♦ Requirement to understand how emotions translate online across the world and how rapport is developed ♦ Desire to experience and use new online communication tools ♦ Requirement to consider how knowledge is successfully shared online within organisation ♦ Desire to measure what successful online communication	➢ To develop rules for chatting in Ning protocol to assist the group with real time chat ➢ To develop email rules ➢ To understand what good online communication looks like	♦ Concern to develop the basis protocol to deal with a wider range of situations for which Ning real time chat could be used. ♦ Concern to test the protocol within the group	♦ Email ♦ Microsoft meeting invites ♦ Ning chat
Action cycle 3: Primary action to develop a 'Ning Protocol'				
May 2009	♦ Requirement to ensure online understanding across cultures. ♦ Requirement to understand what 'good' communication looks like online ♦ Requirement to consider how knowledge is successfully shared online within organisations ♦ Requirement to understand how emotions translate online across the world and how rapport is developed ♦ Desire to experience and use new online communication tools ♦ Desire to measure successful online communication	➢ To develop a formalised Ning protocol to assist the group with real time chat and the management of their communications over time ➢ To trial a tool that enabled speech	♦ Concern to test the Ning protocol with a wider range of communities ♦ Concern to understand how many platforms users would engage with ♦ Concern to understand the impact of different types of communication tools on participation and understanding	♦ Email ♦ GotoMeeting ♦ Moodle discussion forum ♦ Moodle wiki ♦ Ning chat ♦ PowerPoint ♦ Word
Action cycle 4: Primary action to publish and obtain feedback on the Ning protocol and understand platform usage				

Jun - Aug 2009	♦ Need to test the practical application of the Ning protocol with other communities ♦ Desire to understand the range of channels other users engage with ♦ Desire to be clear about how understanding is ensured ♦ Desire to understand how emotions translate online ♦ Desire to experience and use new online communication tools	➤ To publish the evolved Ning protocol and obtain feedback from Ning communities and social networks ➤ To understand what good online communication looks like ➤ To undertake a survey to understand how many communication channels people are prepared to use	♦ Need for more practical case examples of the use of Ning to develop the protocol ♦ Concern to further understand what good communication online looks like ♦ Concern to understand what good collaboration/knowledge sharing looks like online	♦ Doodle meeting invites ♦ Email ♦ GotoMeeting ♦ Moodle discussion forum ♦ Moodle wiki ♦ Ning chat ♦ PowerPoint ♦ Slideshare ♦ SurveyMonkey ♦ Word
Action cycle 5: Primary action to consider how knowledge is successfully shared online within organisations				
Sept - Nov 2009	♦ Requirement to consider how knowledge is successfully shared online within organisations ♦ Requirement to understand the key players in furthering organisational communication and collaboration online ♦ Requirement to understand what 'good' communication looks like online ♦ Requirement to understand how emotions translate and rapport is established online and internationally ♦ Requirement to measure communication elements ♦ Need to experience and use new online communication tools	➤ To consider how knowledge is successfully shared online within organisations ➤ To understand the impact of emoticons on communication through a survey ➤ To test mapping tools	♦ Desire to measure successful communication ♦ Desire to understand the impact of culture on communication ♦ Need for an interpretative protocol	♦ Doodle ♦ Gotomeeting ♦ Knowledge soup ♦ MindMeister ♦ Ning chat ♦ Skype ♦ SurveyMonkey ♦ Telephone

6.4.1 International Group Action 1: Developing a group rapport and research direction

Table 8 above summaries the action cycles taken by the International group. The International group evaluated the overarching research aim and established a new set of objectives seeking:

- to understand the benefits and limitations of different Web 2.0/CMC collaboration tools.
- to enhance communication and collaboration in Web 2.0/CMC environments.
- to understand the impact of culture in a Web 2.0/CMC environment.

Initially the group had to take more focused action to develop a dynamic. Each member developed and shared a detailed profile. In addition, during real time chats I79 suggested that members should not only focus on the research in hand but also share with the group their location and the situation in which they were undertaking the communication, e.g. in a university office at lunchtime, from home whilst looking after children etc. Thus personal details helped to develop connections across the group.

The International co-researchers also spent time undertaking a literature review in order to build the research profile, sharing links and article references to progress the research. This was interwoven into and influenced the group's language and sharing from the outset of the project. In particular the work of Campbell and Davis (2006) on social linguistics and rapport, highlighted by I66, resonated with the group. In addition, from a practical perspective of working with CMC tools the references supplied by I62 were found to be very helpful, in particular the work of Gilly Salmon on elearning tools (Salmon, 2001). The works highlighted by I54 on knowledge management at the start of the project sparked a contentious debate later on in the discussions. It is to be noted that all three of these participants were formally employed as academics and therefore they had access to a range of literary sources. However, as with other groups the literature was not uniformly available to all the participants. Therefore in this group, participants produced more formal miniature literature reviews for each cycle iteration. In this context the group also noted the problem of being thorough whilst moving through quick cycles based on practical action rather than necessarily strict research.

6.4.2 International Group Action 2: Developing group rules for real time Ning chat

As a starting point for the first action the group initially used Ning chat for synchronous engagement. Asynchronous discussions were progressed through email and Moodle. The Ning tool was unfamiliar to all in the group and there were some engagement issues although overall the group enjoyed working with the tool. In addition, some abbreviations such as LOL were not known to all group members and this was misinterpreted by some as 'lots of love' rather than 'laugh out loud'. There were also some problems with translating humour across groups and the requirement for personal informality to try and build the group dynamic had led to some jokes which were taken as inappropriate by the USA audience.

In order to improve the effectiveness of the collaboration through Ning, the group as a next action developed a list of rules to assist with the communication, collaboration and rapport management within the Ning environment. These were initially very simple:

"1. Say who you really are and put up a photo.

2. Announce your arrival when joining or leaving a discussion.

3. Conduct all discussions in a courteous manner, even when you are disagreeing.

4. Post your comments in small chunks - it is difficulty to read lengthy comments during an online discussion.

5. Where you are going to post additional information following on from you comment, indicate this with 'MC' – more coming.

6. When responding to a preceding comment, quote the person's first name (unless two people share a name and are both present, in which case also post the surname) and identify the topic thread.

7. If the Chair is about to conclude a discussion point and you still have an important comment to make then please indicate this by posting 'CC' – comment to come.

8.. If you are using an acronym for the first time in a discussion quote the acronym and spell out what it is a short form for.

9. When using an emoticon for the first time also explain the emoticon. Current pre-agreed emoticons are: LOL - laughs out loud and :-) for happy/good point and :-(for sad or disagree.

10. If you quote an idea or a publication you should indicate that you are doing so. Within

the Ning context full references cannot be given. However if the information is used this can be followed up at a later date."

I69 also felt that there was a need to develop underpinning rules which would help determine and set a meeting requirement prior to selecting the online tool for progressing the meeting. As a group we used the Moodle discussion forum to agree the pre-meeting requirements. These were set out as:

1. Determine a meeting requirement
2. Determine who needs to be involved
3. Choose a tool taking into account the meeting dynamics and requirements such as:
   a. How many people are involved?
   b. How many locations are involved?
   c. Is there a benefit to talking, seeing one another? E.g. Webcams share expressions, voice shares tone.
   d. How will the meeting be managed?
   e. How will agreement be reached?
4. Set a meeting time
5. Invite participants by sending out Microsoft Office meeting invitations to schedule meetings into diaries and convert times (this was not always successful).
6. Set agenda in advance
7. Determine how the meeting will be managed
8. Determine how agreement will be reached.

I66 made the case for progressing the project through email. I66 argued that this was still the main channel of communication and yet it presented many problems in terms of understanding, effectiveness and management. However, whilst everyone wanted to use it as a tool of convenience for some discussions, overall many participants felt that it was important to engage with a range of CMC technologies. As a result of these discussions some email rules were established, e.g. be clear in the topic thread and be clear about the point to which you are responding.

The majority of the group's reflections happened through email. As a process for deciding how to progress actions the group very quickly decided it wanted to agree possible options and then

vote. Initially for the first actions people emailed me their vote but then for the third action it was decided to vote and also add further reflections through SurveyMonkey. Different people sent me their reflection questionnaires for each phase and I loaded them onto SurveyMonkey, circulating the final outputs each time before we moved forwards.

6.4.3 International Group Action 3: Developing a Ning protocol

We all felt that there was further value to developing these initial rules into a more formal 'protocol' to deal with the use of Ning chat in the first instance although then we would consider tailoring this to other formats. A protocol was developed which dealt with the preparation and planning for meetings, the meeting management and also the process of managing the information generated from the meeting. I66 provided the term 'protocol'. Whilst there was some debate as to the extent to which a protocol was a limited technological concept others accepted the definition as linking linguistics term of protocol as a form of communication etiquette with concepts about software exchange and understanding.

As the Ning Protocol was developed into a complete tool (see Appendix 2.9), which included how meetings should be planned and set up, the records managers at this point added in ideas about also managing the Ning chats over time.

As the group was also keen to trial different technologies, in particular one that enabled real talk, we looked at a range of tools. GotoMeeting, Skype and Webex were considered. It was known that Skype tends to drop people if too many are online at once. Gotomeeting and Webex also had additional functionality and as one of the group could provide the first without charge we also agreed to discuss the protocol via GotoMeeting. This tool has the ability to share computer screens and enable online talking. As with the previous technologies we did not have a protocol at the outset although we agreed there would be a host and Chair for each meeting. The feedback afterwards was that those co-researchers who did not have English as a first language found the tool really problematic as they were trying to understand rapid speech with a range of accents without the benefit of facial cues/lip reading. The Ning chat was seen as more accessible given that they could take longer to read text and any delay in response was therefore less apparent. In speech if you miss a cue it is harder to come back to a point. I also found that the USA co-researchers found my own accent difficult to understand. In addition it was found that many co-researchers were multi-tasking (e.g. working and contributing) and therefore Ning chat allowed this more flexible participation.

In conclusion it was felt that talking was helpful for groups of 2-4 people in order that time could be taken to be aware of all the participants limitations. However, for larger groups video-conferencing was not felt to be workable with non-native English speakers. It was also felt to be beneficial for presentations. It was therefore used in certain circumstance for the research going forwards.

6.4.4 International Group Action 4: Testing the Ning protocol and understanding platform usage

Once we had completed the draft of the Ning protocol (see Appendix 2.9) it was decided we should trial it with other Ning users, many of whom would probably have more experience of Ning (although Ning networks had only been publicly available for a year). At this point in time, Ning was a free tool and there were many online communities with open sites. Across the group, we all identified communities with a potential information or communication interest (17) and shared the protocol with these communities for comment and feedback. A number of sites (nine) did fed back. A SurveyMonkey link was set up for feedback as well as the provision of my email address.

All those that took the time to feed back were positive about the protocol's value. In particular, five comments were received stating that the site owners had not considered the management of communications over time. Very soon after this consultation Ning introduced charges for sites and one comment was received to say how helpful the advice to manage Ning communications over time had proven. In addition, it was fed back that the Ning protocol could be further developed over time with practical examples of its use. There were no changes suggesting amendments to the actual text.

In addition to trialling the Ning protocol we wanted to understand how many platforms users would willingly engage with as this was hotly debated across the group. We therefore developed the following question to circulate across the Ning groups using SurveyMonkey and also more widely amongst our contacts:

1. The maximum number of technologies I would wish to use to support my work/research/ studies would be:

2. Please list in order of preference the top three technologies you would use to support your work/research/studies.

72 responses were received. The most popular response (mode) to the first question (maximum number of technologies you would wish to engage with) was five (Table 9).

Table 9: The number of tools respondents would ideally wish to use in support of their work/research/studies

No of communication tools	3	4	5	6	7	8	10+
Percentage respondents	22%	5%	37%	13%	10%	10%	13%

In respect of Question 2, email was the preferred tool, followed by the telephone. Ning was the eighth tool highlighted, but this was probably the result of those responding through Ning circulations. Amongst those who responded were students to whom the survey had been cascaded by academic co-researchers. As a result podcasts, online elearning portals and online textbooks were all mentioned as invaluable platforms by a high number of participants, albeit seen as mostly one way broadcasting rather than collaborative tools.

In addition the protocol and survey results were presented at a conference (Lomas, 2009d). Although I represented the group at this conference it had been flagged to me and the group by I62 who helped prepare the conference paper bid. The slides and presentation were developed on Moodle in conjunction with the whole group. We would have liked a more collaborative PowerPoint mechanism for developing the slides but could not find one. After the presentation we loaded the slides onto SlideShare.

At this conference, Doodle was flagged to me as a tool for better managing meeting schedules over time zones and the group subsequently found this very helpful as it enabled meeting times to be voted on and translated across time zones.

Based on the feedback received the protocol was finalised and the group voted to make it available with a Creative Commons License applied. The protocol is attached at Appendix 2.9. It was decided that in addition, the group would like to see the development of a Continued Communication web space and that examples of the Ning protocol's usage could then be developed more widely in this sphere. However, the group felt that prior to this there was a concern to further understand what good communication looked like online and how to enhance knowledge sharing.

6.4.5 International Group Action 5: Building a model to understand how knowledge is successfully shared online within organisations.

The fifth action involved the group trying to build on the way in which the Ning protocol was established in order to plot what it is that fosters or inhibits online knowledge sharing. Knowledge sharing was seen as a key dynamic which underpinned the value of CMC. Originally the co-researchers were planning as the next action the development of a model with measures for meaningful knowledge exchange.

Email, a Moodle wiki, and mindmaps in Knowledge Soup and MindMeister were used to progress the discussions. As a result the following high level headings shown in Figure 29 below were plotted as being key to successful knowledge sharing. In addition each group member recorded at least one observation about sharing knowledge from their own experience in order to develop these concepts. As these were on a wiki they were recorded anonymously.

The recorded observations on knowledge sharing covered a wide range of issues. Some points dealt with reasons or examples where information could be beneficially shared. For example:

> "I share knowledge if I feel my fellow collaborators and I have a common purpose or goal – an agreed project. (My general inclination is to assume that this will be the case.)"

Other reasons were for personal gain:

> "as an academic, I am encouraged to share (new) knowledge only when I can claim maximum credit for it. (I like to think I resist this encouragement.)"

In addition, some observations or comments recorded reasons why information would not be shared. Some of these were for beneficial reasons:

> "I withhold (or perhaps simplify) knowledge if I think it won't be understood, or be misinterpreted, or mis-used. This often comes down to trying to balance individual differences among the participants, so that you can 'take everybody with you... it may be better in some situations to delay feeding in knowledge or information so that an enriching exploration of questions or problems can take place."

Determine reasons for sharing knowledge
- product design
- team dynamic
- improvement role or activity
- business continuity
- this list could be endless?

Setting
- organisation
- personal
- community

Space
- Face-to-face vs. online
- Online tool - skype, wiki, Ning (this makes a difference to the elements available to communicate and how I communicate)
- Meeting vs one-to-one
- Internal within and organisation vs. diverse parties - contractors, customers etc
- Time

Role
- Volunteer
- Employee - taking into account organisational hierachies
- Academic
- Student

Culture
- Collectivism vs. individualism
- Organisational
- Occupational - a shared role
- National culture
- Cultural beliefs and norms

Emotions
- Ego
- Altruism
- Anger
- Confidence
- Humour

Personal factors
- gender
- age

Purpose behind the collaboration
- teaching
- research
- selling
- designing a product
- developing a process
- ownership of intangible product(s)
- personal recognition

Figure 29: Snapshot reproduced from Moodle wiki indicating the group's perspectives on knowledge sharing dimensions

This comment sparked the question as to whether particular groups in the research were holding back some ideas in order to bring balance to the research. It was admitted that people were adding initial concepts and then waiting to see if the group wanted further information. This raised the point that in a group of people with the same knowledge base, knowledge may be pushed forward in-depth albeit that the breadth of ideas may be missing. However, it was acknowledged that everyone was working towards common goals and that each person should share the depth of their knowledge without concern.

Comments were taken and discussed via email. Three particular topics were picked up as impacting upon knowledge sharing:

1. Knowledge management
2. Culture
3. Meaning.

A debate was sparked by a controversial comment which was posted stating that knowledge managers were actually inhibiting knowledge sharing because the process undermined their own power base:

> "There is a distinction in general companies where there has been a huge amount of money around KM. These companies have built communities of practice based on the Xerox models. In these companies the Knowledge Manager is significant in the context of knowledge sharing. The Knowledge Manager will be fairly senior – frequently reporting to the CEO. It is not in the interests of these people to devolve their power to self organising groups – or indeed to risk doing so. There are tight levels of controls."

This criticism of knowledge managers was refuted. The discussion on knowledge managers proved a divisive. One person with a knowledge management consultancy role reported that he had felt better able to undertake his role as a consultant on the outside of organisational structures. It was agreed that CMC within organisations had the power to potentially undermine traditional hierarchical structures. At this point the value of RM was raised because it was noted that people were only too keen to devolve, rather than acquire, RM responsibilities because of the fear of legal redress and also because no one wanted this role. In addition the role of risk and risk management was picked up. It was perceived that this role had floundered because it was

difficult for risk managers to report honestly and potentially undermine senior managers' desire for growth.

Differences in culture were felt to have a big impact upon knowledge exchange both within the context of national and organisational cultures. The comment was made:

"National culture: One of the dimensions of national culture that Hofstede identified was collectivism/individualism. The United States is the highest ranking individualist country, closely followed by Australia. Chinese and South East Asian countries are at the other end of the scale, as examples of collectivist cultures. Hofstede has identified specific features which are likely to be found in workplaces that characterise this dimension, and specifically commented on sharing information. He states that in a collective culture sharing information is likely to be seen as an attribute of organisational success, whereas in an individualist culture withholding information is likely to be seen as an attribute of organisational success."

This led on to discussions and comments on differences. In respect of organisational and occupational cultures an article by Drake, Steckler and Koch (2004) was cited and commented:

"Occupational culture. A shared occupation or perhaps orientation to work roles may facilitate information sharing. A recent study of occupational cultures in government agencies (that is scientist, politician and bureaucrat roles) concluded that these sub-cultures are very influential in driving information sharing needs and behaviours, *Drake, D. B., Steckler, N. A., & Koch, M. J. (2004). 'Information sharing in and across government agencies: The role and influence of scientist, politician and bureaucrat subcultures'. Social Science Computer Review, 22, 67-84.*

I think that shared occupation helps provide a common world view and theoretically makes information sharing easier because at least you share the same terminology. If you don't have a common language to communicate with, information sharing is going to be difficult even given positive intentions."

A deeper question about humans and communication was then added. The following two points highlight these discussions:

> "It also seems to go toward a deeper question about humanity, our evolution and survival. But - is "clean" or "pure" knowledge (sharing & creation) desired?"
>
> "Do we try to remove influences of culture, anger, frustration, attitudes, age ... when sharing or creating (managing resources? of) knowledge. This opens up the notion of structure, culture and the participation of individuals --- these are influences of a symbiotic nature. ...is it possible or desirable to remove such attributes?"

The academics placed a heavy emphasis on the literature resources to make up their discussions. These discussions raised the issue of how complicated it was to successfully model what makes knowledge sharing work. It was decided that it was the human dimensions of language and communication which needed to be understood within an organisational and cultural context.

At this stage upon reflecting the group was keen to move forwards with an objective to describe talk and translate it into online behaviours. In addition there was a desire to measure the value of knowledge sharing possibly through looking at it from the range of perspectives of different types of experts. It was suggested by one of the linguists that an 'interpretive protocol' should be developed and this received general support from across the group.

However given the addition of cultural dimensions the group also felt it would be a valuable point at which to get the UK cohort to join the discussions. Furthermore, this would provide a wider pool of expertise. There was a sense that this group had saturated the concepts and a fresh input would be valuable. Thus, as with the other groups, there was a natural point at which the group wished to merge.

In addition a number of co-researchers were keen to understand the role and value of emoticons. Within the group chats these were used online through happy and sad faces to show good or negative responses to ideas. However the group felt that they could have much more value. I70 undertook the miniature literature review for this interest and it was agreed she would draft a survey. The group tested and agreed the survey. As I70 had done the majority of the work for this output it was agreed she should 'own' and write this up as her own article but acknowledging the group. She has done this and it will be published in due course.

6.4.6 The International group reflection on the action research process

Prior to the point of merger this group, given the number of academics, also critiqued the action research process. Overall the comments were that it was:

- an enjoyable process;

- that the process was more flexible than traditional research;

- outputs and learning were unexpected but valuable;

- that there was a split between those who liked the freedom to contribute as they were able and those who wanted a strict time commitment from each participant. This latter group would also have liked me to dictate the terms and actions rather than my being a co-researcher. The majority of these participants were from the USA but not everyone from the USA agreed with this viewpoint. In addition, as we did not try dictating the process it cannot be judged whether they would have preferred this in practice.

6.5 CHAPTER CONCLUSION

Each of the groups naturally reached a decision point at which they wished to merge. The dynamic of knowing that there was a possible point of merger did provide a future goal although there was no point of merger specified. The groups had completed iterative cycles of six (UK RM UK group), four (User UK group) and five cycles (International group) respectively. The complexity and number of outputs from each cycle did vary and there were sometimes multiple pieces of work achieving a larger defined action.

CHAPTER SEVEN
JOINING, GROWING AND MOVING FORWARDS:
MERGING THE CO-OPERATIVE INQUIRY GROUPS

"**The wisdom of the crowds: why the many are smarter than the few**"

Taken from the title of James Surowiecki's (2004) best selling book on social media[18].

7.1 CHAPTER INTRODUCTION

This chapter discusses the process of merging the co-operative inquiry groups. Predefined within the co-operative research process was the requirement for merger points to bring together the three separate co-operative inquiry groups over time. In the first instance, the two UK groups merged, which brought together two groups that were able to meet in person, as well as collaborate online. In addition, this process merged the records managers with users, enabling a point for dialogue between the groups on the value of RM in a CMC context. After this new UK group had undertaken a number of action research cycles it then merged with the International group. This merger point moved the UK co-researchers into an environment where virtual collaboration was essential for engagement with the international co-researchers. This provided the wider global context in which to review the existing outputs and move the research forwards.

In terms of the actual research process of merging, each co-researcher had a voice in determining the point of the merger and the way in which the first meeting would be handled, including where the first meeting would take place and what items should be on the agenda.

7.2 UK GROUP MERGER

7.2.1 The process of merging

Within the two separate groups (RM UK group and User UK group) each had naturally reached a point of wanting to merge at a similar moment in time. In each case there was an action that the

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[18] Surowiecki, J. (2005) *The wisdom of the crowds: why the many are smarter than the view*. New York: Anchor Books.

respective group wanted to progress which the co-researchers felt the other group would helpfully build through a face-to-face meeting[19].

User UK group merger priorities

The User UK group had designed a difficult survey (see Appendix 2.8) which they wanted the RM UK co-researchers to complete. It needed a readymade audience to meet and complete the survey and as there were no resources to pay for candidates this was an ideal way to fulfil the requirements. This survey was intended to act as the basis of the design for a larger quantitative survey which would supplement the data already gathered by the User UK group from the qualitative 'Future Backwards' communication workshops. It was the intention of the User UK group to ask the RM UK group to complete the survey, to undertake a version of the 'Future Backwards' communication workshop (again providing the opportunity to gather more data) and then to present a linear view of its proceeding actions.

RM UK group merger priorities

In the case of the co-researchers from the RM UK group, the co-researchers wanted the User UK group to make the Web 2.0 checklist that they had developed relevant and engaging for users. The RM co-researchers recognised the constraints of the checklist in its original form and their own limitations in extending this tool. In addition the co-researchers were keen to advocate for the development of the 'Where's my stuff?' film series (promoting the place of RM within a CMC context) with the User UK group's involvement.

Furthermore, in addition to progressing the actions, the RM UK co-researchers were keen to merge in order to try and understand what 'hooks' are required for users to engage with RM principles and practice. In order to progress this, the co-researchers decided that Professor Julie McLeod would be invited to give an RM presentation explaining why RM is important to individuals. This would be based on her inaugural lecture which a number of the co-researchers had heard and for which there were slides available online (McLeod, 2008 at http://nrl.northumbria.ac.uk/8298/). The group then agreed to play the 'Where's my stuff film?' also aimed at selling RM concepts to users. At the end of the process the users would all be asked

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[19] The face-to-face merger meeting was held at the British Library on 28th April 2009. Throughout the course of the research the group were largely reliant on the British Library provision of meeting room space. Within this resource it would not have proved possible to hold so many meetings in London given the size of the group.

to complete a short questionnaire evaluating RM and what each had taken from these two pieces of instruction. The questionnaire designed by the group is at Appendix 2.10.

My own merger priorities

From a PhD perspective I was keen to see the impact of the merger process to see how RM was advocated for within the outputs. The RM UK group's design incorporated an opportunity for me to gather data in this respect.

In addition, I also personally designed an online SurveyMonkey questionnaire (see Appendix 2.10) to enable people to reflect on the value of the research process and actions to this point. This included the opportunity to comment on the CMC tools that were deemed to have helped to have fostered the collaboration and progress actions.

7.2.2 The data gathered through merging

A. Communication data

As a result of this process, the User UK group obtained a picture of the reasons for communicating. The coding of this is presented in Appendix 2.11. In addition, data was added to the workshop pictures of communication heaven. A snapshot of the RM co-researchers' perceptions of steps to communication heaven as plotted into a Cynefin framework are presented at Appendix 2.12. This incorporated some of the new thinking the RM UK group had evolved as part of its own research, e.g. the need for 'big buckets' of data as an appraisal process for managing data held within CMC.

B. RM data

In addition, as a result of the completion of the RM questionnaire the User UK group's attitude to RM at the point of merger was captured. The initial survey at the point of signing up had shown a broad spectrum of views within this group. The group was split between:

- those that were keen to have RM training and thus were effectively recognising the importance of RM and engaging with RM as a reason for their participation;
- those that were signed up to the research process because of their interest in CMC but with no interest in understanding RM (one of these people subsequently undertook

Northumbria University's MSc in RM and another joined the Records Management Society);

- those that were ambivalent and open to any new learning.

After the presentation by Professor McLeod and the showing of the "Where's my stuff film?", the completion of the questionnaire demonstrated that all of the users had understood the message of both. Those people who had already demonstrated a prior interest in RM saw the message within Professor McLeod's presentation as containing key points that could be incorporated into their own work. Two people repeated McLeod's RM message of "no business case required" as a valuable mantra when talking to CEOs and CIOs. Within the wider membership the response was mixed. Key points were picked on such as the value of metadata and that "good intentions were not enough". However, the more positive points were related to the film, which was seen to relate more directly on a personal level. It was noted by several members that it was important to "discuss recordkeeping with others" and ensure "shared visions" which did not encompass "over storing". The value of security was also highlighted. However, four people specifically commented that whilst they were happy to discuss RM and agree a shared vision for the most part they wanted to "leave it to the professionals or admin". In this latter context there was a distinction made between "those that set policy" (the records managers) and those that did the "drudgery" (admin). However, these co-researchers were not "excited" by RM; it was "a necessary action rather than a bonus".

C. Research data

The research data indicated that people were enjoying the process of participation. In particular the users had found the process of undertaking training in conjunction with action a helpful stimulation within the process as a whole. As a result of this, additional training was offered throughout the next phase.

In order to progress the actual research learning a number of participants were keen to write papers and undertake presentations. It was also agreed across the group that there would be a benefit to further publicizing the work in order to gain an audience and participants for future actions. Therefore it was agreed that any potential opportunities would be highlighted and that those who wanted to present or write would take it in turns to bid for these chances. In some instances people paired up to work together. In particular, those with less experience partnered with a more experienced presenter/writer.

7.2.3 Agreement on future actions

Although each group listened to the other, there was a natural attachment to developing the actions from the group that the participants had each originated. In reality the records managers slightly outnumbered the users (30:22) and therefore they had higher numbers to vote for their actions. However, as there was more than one potential action to progress from each previous group the votes were divided. When the groups were ranking the value of all the outputs they rated as valuable the contributions of both groups. However, when they were ranking which outputs to progress (i.e. requiring future time commitment) the votes were weighted towards those actions the co-researchers had already worked on.

Table 10: Votes for most useful outputs to develop.

Potential Actions	Votes
Communication policies	10
Best practice communication paper	10
Web 2.0 technical checklists and risk processes	9
Where's my stuff? film series	7
Understanding of the role of RM	6
Pushing to change ISO 15489	5
Communication survey	4

Table 10 above contains those actions with 4 or more votes. The group then also voted for the next step action. This produced a separate order as although some future actions were deemed desirable the group did not feel at a stage where they could be progressed. The top two priorities for next actions were:

- The development of Web 2.0 technical checklists to include user requirements - 22 votes
- Communication survey - 16 votes

Subject to reflection, the top two priorities in the table 10 above would then be evolved over time building on preceding actions. In reality, reflection over time did influence the actions taken.

7.3 UK GROUP ACTIONS

Table 11: The iterations of the UK group's actions

Timeframe	Problem(s)/need(s)	Action(s)	Reflection(s)	Communication/ CMC dimension(s)
Action cycle 1: Primary action to develop the RM Web 2.0 technical requirements checklist to include a user specification				
April -May 2009	♦ Need to understand the potential benefits as well as negative impact of Web 2.0 technologies for a wider user community ♦ Need to understand how RM can engage users ♦ Need to understand which tools are the 'best fit' in practice for the communication dimensions identified within the User UK group's qualitative survey. ♦ Need for a best practice paper on communication ♦ Desire to obtain academic credit/experience and publisize work to-date	➤ To develop the current RM UK group's technical checklist to include a user specification ➤ To work together to learn about Web 2.0 through practical engagement and training ➤ To bid for conference slots	♦ Unclear about the way in which to articulate the CMC risks in terms of the up and downsides as they are not always polar opposites. ♦ Need to be clearer about how and why people are using communication tools. ♦ Need to be clear about the impact of organisation, culture, profession and other factors on communication choices and engagement with communication management. ♦ Need for greater understanding on the place of RM in relationship to CMC ♦ Need to find funding sources to travel to conferences	♦ Face-to-face ♦ Moodle wiki ♦ Ning Chat

Action cycle 2: Primary action to develop a quantitative communication survey

May – July 2009	♦ Need to understand which tools are the 'best fit' in practice for the communication dimensions identified within the User UK group's qualitative survey. ♦ Need to understand the potential benefits as well as negative impact of Web 2.0 technologies for a wider user community ♦ Need to understand how RM can engage users including perceptions and understanding of RM ♦ Need for a best practice paper on communication	➢ To develop a quantitative survey to establish a bigger picture of communication ➢ To undertake training in quantitative research methods and questionnaire design	NB: The survey was in circulation for a number of months prior to analysing the data in full. The interim reflection at this stage was: ♦ Concern about applying RM principles and practice to modern organisations ♦ Concern former User UK group members not engaging with RM ♦ Need to understand communication systems and the place and role of RM ♦ Need to pursue changes to ISO 15489 The longer term reflection from the survey feeds into action 5. The reflection from the survey was: that email was still the dominate communication tool but many other complex CMC choices were made on an individual rather than at an organisational level ♦ Need for organisational CMC lead ♦ Need for CMC understanding between employers and employees	♦ Email ♦ Excel ♦ Face-to-face ♦ Ning chat ♦ SPSS ♦ SurveyMonkey
Action cycle 3: Primary action diagnosing the impact of CMC on organisations taking into account the place of RM				
July – Aug. 2009	♦ Need to understand the range of	➢ To diagnose the benefits	♦ Concern as to whether RM	♦ Email

	functionality of Web 2.0 available ♦ Need to reassess RM principles and practice in the light of email, Web 2.0 and CMC generally ♦ Need to find ways to engage users with RM ♦ Need to have a communication best practice paper	and issues in respect of CMC ➢ To discuss the place of RM within the context of CMC ➢ Need to write conference papers	needs to change to remain relevant and meet both user and organisational needs ♦ Need to understand dynamic systems ♦ Need to understand 'big buckets' ♦ Need to address information security concerns, as a tool for aligning user and organisation concerns	♦ Face-to-face ♦ Moodle wiki ♦ Ning Chat ♦ Conference papers developed using Google Docs
Action cycle 4: Primary action to develop a communication architecture including an information security game proposal				
Sept.-Nov. 2009	♦ Need to assess findings from the quantitative survey ♦ Need to address information security concerns, as a tool for aligning user and organisation concerns ♦ Need to reassess checklist within the context of risk ♦ Need to be able to measure successful communication ♦ Need to have a communication best practice paper ♦ Need for organisational communication policies	➢ Mapping a communication architecture ➢ Developing an information security game proposal ➢ Need to write conference papers	♦ Need to address information security Need to pull together outputs into an architecture for organisational and users. ♦ Need to understand place of RM including role records managers, 'big buckets' and impact of CMC/dynamic systems ♦ Need to understand global impact on communication, RM and CMC ♦ Need for organisational communication policies	♦ Email ♦ Face-to-face ♦ MindMeister ♦ Ning chat ♦ Skype ♦ Telephone ♦ Conference papers developed using Google Wave and Skype

7.3.1 UK Group Action 1: Developing the RM Web 2.0 technical requirements checklist to include a component for users

Table 11 above summaries the action cycles taken by the UK group. It was agreed as a first action that the former 'User' co-researchers would work with the records managers to develop a user component to the technical checklist. A face-to-face meeting was held in the first instance to look at this. The meeting was held very quickly after the merger meeting and the former 'User' co-researchers actively engaged with this process. Having looked at the data gathered from the workshops, which had built pictures of communication heaven and hell; it was felt that this data could be used as the basis for informing the development of the checklist. Given that the data presented 'heaven' and 'hell' contexts it was perceived that this might also offer a source for developing a risk model to attach to the checklist.

In order to progress the work, the checklist data was loaded into the Moodle wiki. The User UK co-researchers were now unanimously comfortable with working in a wiki and very quickly completed the checklist to their satisfaction. They developed the wiki in the first instance with commentary attached to additions and then as each comment was disputed and agreed, erased the commentary to present the final work, which is presented at Appendix 2.13.

In terms of then reviewing the output the group tried to use the pictures of communication heaven and hell to develop a risk component building on the RM UK group's work. However, it was quickly highlighted that visions of heaven and hell were not uniform and that user perspectives were different to organisational requirements. Thus whilst the checklist was a useful tool to understand the impact of engaging with CMC tools/channels it was seen to be difficult to map this into a risk framework. This reflected earlier problems that the RM UK group had experienced with the evolution of the checklist.

It was suggest that CMC policies on usage should be evolved and that these would define overall organisational CMC strategies. R24 provided the example that within a University it was vital to protect the confidentiality of personal data, for example student or research participant's sensitive data. In these instances R24 noted that special approval would be required if a CMC tool external to the University was used for data storage. However, in virtually all other University contexts CMC tools could be freely adopted without specific formal approval. Thus in this wider context only the user component of the checklist would be required in order to understand if a tool could deliver the communication required.

At this point U39 provided the concept that instead of a risk model, it would be possible to look more specifically at mapping what different tools were good at and then reviewing this against the overall risks of that tool. He stated that he could programme and design the tool with help from the group. He termed this an 'affinity model'. However, he and also other participants saw a benefit in progressing the questionnaire in the first instance, in order to gather wider knowledge on how people were using CMC channels prior to developing any such tool.

7.3.2 UK Group Action 2: Delivering a quantitative survey on communication

It was agreed that U41 would undertake further questionnaire training for the RM co-researchers. The User participants who had already undertaken this training now had an appreciation of just how difficult it is to design a questionnaire; U41 had critiqued several draft attempts. It was now felt with the data gathered from the qualitative questionnaire, which had elicited reasons for communication, there was a stronger basis on which to design the quantitative questionnaire. A face-to-face meeting was arranged to progress this action. However, no one turned up from the former RM UK group! This was a very damaging blow. It was the third meeting in quick succession since the merger meeting and the former 'RM' members all presented apologies and reasons why they had not been able to make it. They all agreed that they would fully engage with the process. After this point the records managers were good at attending and contributing to potentially non-RM focused actions within the UK group.

The development of the survey was progressed through face-to-face meetings, Ning chats and tests with SurveyMonkey.

Once the questionnaire was designed the International co-researchers were asked to complete it as a pilot sample, given that it would be circulated around the world. In addition they were asked to assist with the wider global dissemination. It was emailed, posted on Web 2.0 sites and mentioned at events and conferences. Strategically the co-researchers always posted new messages and reminders on Fridays as it was felt that more people would take the time to contribute on a Friday. In order to promote participation the co-researchers clubbed together to buy an Amazon voucher, which was presented to one lucky participant at the end of the process.

As it was felt necessary to have the questionnaire available for completion over a couple of months, this meant that the group had a gap prior to being able to analyse the data and reflect

on its impact it terms of moving forward the CMC actions. It was therefore agreed that time would be spent discussing CMC's impact on organisations in conjunction with the role and place of RM. The highlights of the final survey as presented at a conference are at Appendix 2.14 and these are further discussed within a paper on the inquiry as a whole in Appendix 2.15.

7.3.3 UK Group Action 3: Diagnosing the impact of CMC on organisations taking into account the place of RM

In essence, this action was a chance to undertake the process of diagnosing from scratch the CMC/RM issues, given that it was now one year since the initiation of the research, CMC was rapidly evolving and the two original groups had merged. This was to be done all online in the first instance in order to better equip the group with communicating only virtually, especially given that this would be a requirement for the next merger point. The group would then have a face-to-face meeting at the end point of the action.

This review prompted the reintroduction of the complexity of managing dynamic systems beyond CMC, which had arisen as a discussion in earlier RM UK group debates. The RM UK group co-researchers had highlighted the problems of CMC and dynamic data (such as Geographic Information Software (GIS) systems) as:

- Tracking/Auditing
- Fixity
- File obsolescence

R13 noted that in his local government experience GIS systems could not be rolled back in time to see what data was available when a decision was made at a particular point. R3 said that her view was that:

> "We are much more able to tackle the challenge of formats in the physical environment rather than the digital environment... I try to think of how data would be handled in the physical environment and find myself thinking of the boxes and boxes of 'data' and 'documents'."

However she went on to highlight the benefits of being able to search across data. U39 made the point that the records managers were missing the opportunities systems provided because of their "fixation with fixity". This meant that in U39's view:

> "fixed records are dead objects, artefacts from whom the ability to create new and living information is devoid. How can records managers contribute to current work if they insist on only fulfilling the archive function. Records managers need to have a better understanding of where fixity is relevant".

This comment resonated with the records managers. It was agreed that fixity has a place, as does flexibility. This might mean in some instances two versions but better still would be metadata and tracking. The point was raised that given that data must always be migrated to protect the obsolescence of files no such thing as an original record might ever again exist beyond fairly contemporaneous timeframes. This raised questions as to what was an original record.

R2 noted that instead of fixity the challenge was to structure and add metadata. U44 noted that structure and metadata can introduce bias and subjectivity as this can add structural information above and beyond the content. It was noted that naturally humans on a personal level use narrative (communication, stories etc) but that organisations require structure to cope with multiple narratives and access over time. U32 highlighted the article by Miller (1956) regarding the amount of complexity which humans as opposed to computers can deal with. However, it was noted that now search engines were becoming more able to deal with 'narrative search'.

There was a discussion about the value of data, information and records. R2 referred to further data terms that were new to many 'clobs' and 'blobs'. U37 added the concept that there are often invisible structures to information. R20 noted that XML in a website was seemingly invisible and U48 noted that good design introduces structures that are invisible. In conversation it was noted that there are cues and structure, e.g. raising a voice for a question, which is translated into prose through a question mark. It was agreed that there was a time for templates and structure in terms of managing high value information assets. R2 noted records managers should be working with IT, librarians and other professions to build this structure. U48 noted that he did not want to have anything to do with this and that the value of having these professions was so that he would not need to be 'bothered'. This referred back to the statement in one of McLeod's presentation slides (McLeod, 2008) at the merger point which had asked a rhetorical case as to

why 'bover' with RM. The records managers were keen on the concept that 'everyone should be a records manager' but U48 noted that in an electronic age the whole benefit was that 'only professionals needed to bother' as the information could be filtered behind the scenes. However, it was agreed that there was a need to know where to focus resources. In addition there was a need to grapple with the management of personal devices holding corporate data. R12 noted that this could push everyone to legal responsibility for their own data. One area of agreed concern in this regard was the fear of privacy, hacking and data ownership characterised as information security. It was agreed that individuals and organisations both have information security fears and that this should be looked at.

As a result of this work, the concept of TRIZ (http://www.triz-journal.com/archives/what_is_triz/) was introduced by U36. TRIZ is a matrix based problem tool originally developed by analysing patents to understand the high level processes that influence creativity, and to map the impacts of changing designs as they cross relate, for example if an object needs to be stronger, the materials it is made with can be made denser but in needs to be taken into account that this one improvement may impact on weight. U36 presented the TRIZ matrix and how it might be applied to information management. As a result of this discussion U36 ran training on TRIZ as a tool. It was agreed that although this tool was useful in certain situations it would not be furthered as a tool within the context of the research. Instead it was therefore agreed that U36 and I would work on looking at this tool as the matrix applies to RM for a *Records Management Journal* article.

In addition, it was agreed that appraisal needed to be rethought and that there was value in continuing the 'big buckets' workshops to try and get totally new views on managing information through time. It was agreed R4 would lead on this assisted by me and that we would keep reporting back. Slides from the workshop are in Appendix 2.16. Those with an IT background beyond RM were also interested in seeing this work evolve.

As a result of these discussions, and the data gathered from the survey process in Action 2, it was highlighted that communication was hugely complex to navigate and that what was required was a 'communication architecture' to work through the process. The co-researchers were aware of the existence of information architectures. The Information Architecture Institute (2007, p.1) has defined information architectures as:

"the art and science of organizing and labelling websites, intranets, online communities and software to support usability."

These processes include design and guidance on working across IT systems from user perspectives. The group termed what it wanted as a 'communication architecture' as the co-researchers wished to support face-to-face communication as part of the dimension within the architecture.

7.3.4 UK Group Action 4: A communication architecture and information security game proposal

The group wanted to pull together all their outputs and it was felt an 'architecture' would assist. The group highlighted the following outputs (potential and existing) as part of the architecture:

- Communication policies (not developed)
- Communication checklist, measure and risk models (partly developed)
- Communication affinity model (not developed)
- Communication training, through film series and information security game relating to communication (partly developed)
- Best practice communication paper (not developed)

The films and a potential game were seen to be a key part of the architecture. However, funding was needed for the film and no one had the training to program a game. I knew that students at Northumbria sometimes undertook projects for designing games. I spoke to my supervisor who put me in contact with the course tutor for IT gaming design. He agreed that the group could draft a game proposal and see if any students were interested. This therefore became a focus for the fourth action. The information security game proposal is attached as Appendix 2.17. Unfortunately none of the students engaged within this concept. However, it did help pull together the shape of the architecture and outputs as a whole.

By this point in time, as previously, the Co-researchers were keen to merge. It was felt that the input of the International group would be important in developing and delivering the architecture.

7.3.5 UK Group Conclusions

In conclusion, at the end of this stage the two groups had integrated although it had taken a couple of cycles. The physical meetings helped with the difficulty of discussing problems such as when the Records Managers had not participated in the questionnaire development. In reality many of these same people who had failed to engage with this at the start said that questionnaire development experience had proven to be one of the most useful pieces of training for taking back into their own organisations. Conversely whilst the TRIZ session was seen as one of the most fun sessions (particularly the process of being tied together as a group and then working out how to get free) but not the most relevant or helpful within the context of the research. The physical meetings were also seen as a way of ensuring contributions to all actions given that it was harder to sit as an observer in a physical setting. For example in a wiki or Ning chat no comments might be made by someone who was logged on whereas in a physical setting contributions were more likely. The group noted that they were taking away different learning as opposed to different levels of enjoyment with the process. However in order to sustain the work it was noted that engaging with new CMC tools also helped and that a key was to have interesting components on many levels.

In addition it was noted that there were some actions (e.g. developing a questionnaire or mapping the functionality of CMC) that everyone could undertake and others that it was better to get individuals to work on (e.g. producing a film, programming an 'Affinity Model'). It was also noted that in a traditional inquiry everyone might be working on one linear piece of work or engaged in the same profession which made small iterative cycles an easier process to navigate. The group concluded that they would like to try delivering rapid fire cycles.

During the course of this phase the group had started to bid to present papers at conferences. In total six formal conference bids received acceptances:

- For R6 to present a group poster at the Society of American Archivists' Conference, August 2009. In this instance knowledge of the work from the international co-researchers helped with the acceptance of the poster.
- For R13 and myself to present at the Society of Archivists Conference, September 2009
- For R6, U32 and myself to be speakers at *International conference on managing information in the digital era*, Botswana, October 2009

It was intended that either R6 or U32 should present the paper. However U32 moved jobs and could not attend, although it is possible his previous employer would have supported his attendance. In addition I found it difficult to get funding for R6's travel. As a PhD student I could have obtained personal funding but could not get it for R6; it was difficult to explain the group to potential sponsors and get support given that the potential speaker had an employer. This was one area where having no funds was limiting. However in this instance we were able to advocate that the paper should be presented virtually given the nature of the research and this idea was accepted because of its originality within the context of the conference. In addition the presentation was promoted to being the keynote address because of this alteration.

- A lack of funding for travel prevented U34 from presenting at an Enterprise Content Management Conference in the USA.

- For U39 and AU1 to present at the *Information Online* Conference, December 2009.

- For R1 and myself to present at the *ECA 2010* conference in Switzerland. In this instance R1 had travel funding but became too ill to attend and I also could not leave my son at this date. No one in the group could stand in at such short notice and therefore this slot was cancelled.

In addition, group members were frequently offered slots at Unicom seminars and the Records Management Society Conference, as well as space in key trade publications. Everyone who wished to speak or write had this opportunity. In addition, as a result of the wider contribution to the research from people outside the traditional domain of RM, some were subsequently invited as keynote speakers to RM conferences.

In regards to these submissions it was notable that the group took the PhD outputs and then really stepped up how they presented these in an academic context. The natural dialogue online and face-to-face tended to focus on the outputs rather then the underpinning literature. When the researchers stood back to undertake presentations they gave this more thought (see for example Appendices 2.15 and 2.18). It was then commented that the group could have written more formally to progress each iterative circle. A suggestion was presented that a blog for each iteration would have helped with understanding at a deeper level.

7.4 THE WHOLE GROUP: MERGING ALL GROUPS

7.4.1 The process of merging the whole group

As with the previous merger point there was a requirement to present the previous work of the groups, discuss and move forward together. In this instance there was the added complexity that this all needed to be done virtually across time zones. The International group decided to suggest to the UK group a process for the merger in advance. The suggestion was that presentations of the outputs could be recorded (using PowerPoint and GoToMeeting) and uploaded onto Moodle. These could then be reviewed by the groups in conjunction with all of the outputs uploaded onto Moodle. It was also suggested Moodle could then be used as a process for discussing the outputs. It was suggested that after a week, a collaborative meeting could be held using GoToMeeting so that people could talk together in real time. After this point the direction for the next action could be voted on.

As a result of the experience of the UK group, prior to this merger, the group was happy to accept the suggestion of the International group subject to some amendments. It was suggested that all the former Moodle and Ning sites could be opened up so that everyone could review not only all the outputs but all of the previous recorded dialogue. In addition it was suggested that rather than voting on the outputs for progression a consensus could be reached by online dialogue with a final decision for the next action being reached at the GoToMeeting. The UK group's numbers were now much larger than the newly joining International group (50:30) and therefore it was presented by the UK group as being unfair to vote on the actions until a group dynamic had developed. Clearly the UK group had learnt from the previous merger that a dynamic was essential in order to positively progress the research. The group also suggested that a short survey, which I should deliver via SurveyMonkey, would help with reflection on the process as a whole. In addition the group wanted to try and deliver the iterative cycles much more rapidly to force quick engagement and turn around of smaller outputs. The International group agreed with all of this logic and in fact subsequently advocated for the fact that building a dynamic should be a priority.

The fact that comments and dialogue on the merger process were actually posted and developed over a longer time span rather than through a single face-to-face meeting proved a useful chance for people to reflect. It was also a helpful source of research data. Many key insights evolved out of these discussions and the survey including:

- The fact that there was a strong sense of community within each separate group with a high level of trust and sharing. It was felt that the research had been launched at the right time and there was the possibility that as more people came online, including hoaxers, there might be less trust. However, the fact that the research was a Northumbria University sponsored PhD process had helped promote it as a genuine and safe place for cooperation. In addition as there was no funding attached to the research it was not in anyone's interests to participate for ulterior motives.

- The fact that the research had developed a clear brand under the title 'Continued Communication' which had first been used to advertise the research to participants;

- That there was a sense there was sufficient value in the outputs to further develop them and publicise them not only through papers but also with a branded web presence, blog and possible attached consultancy service. It was noted that the group started to be approached with offers of work and therefore it was starting to build not only an internal but also an external profile.

- The fact that although the Continued Communication research was about CMC, the UK group would really miss face-to-face interaction and did not want to give this up. In addition, those International co-researchers who could attend face-to-face meetings also wanted to meet up. The wider group felt that there might still be benefit to these meetings provided no voting or decisions were taken without wider consent. In addition it was agreed that training could be delivered in this manner and then recorded for wider benefit. It was agreed that trainers were more likely to provide training for a physical audience. In particular the group was interested in training that had been offered by Tom Gilb who was an international expert in measures and risk management with a lot of information systems expertise. Training where it linked to action was felt to be hugely beneficial.

- The academic language and quality of the international discussions were noted by the UK group which had many less academics. Many were keen to 'raise' their own knowledge of the vocabulary and wider literature. No one noted being put off by the potential for challenging learning.

- In terms of RM there was surprise from the international participants on the comments and submission to the UK ISO 15489 Committee. The USA participants felt the international standards were largely redundant and that ARMA was able to produce new relevant outputs much quicker. A standard was not felt to be particularly valid. The wider

RM communities felt the standard was vital but overall it needed little change and could easily adapt to CMC requirements.

- It was raised at this point that rather than single papers a book would be a really valuable output for the group as a whole. This could be structured and include learning and observations that might be lacking from the more practical outputs which had been developed.

- There was a high level of satisfaction with the process and benefits of participation.

- All felt the value of the action research process. It was agree that it did link research to practice. The iterative cycle was found to be helpful in terms of building in points for reflection and direction changes. However it was seen to be problematic in terms of strict compliance with the process as output development might sometimes take time and benefit from the input of single members away from the group. Multiple actions were also felt to hugely beneficial rather than single outputs.

- Overall most people really liked the democracy of the co-operative inquiry process. They felt the fact that CMC was so new that people's knowledge was more equal levelling out the hierarchies. In addition it was felt that my own position as a PhD student rather than a professor was a helpful role given that "I could lead administratively without pushing the research".

- It was felt that the co-operation had worked across disciplines and a range of experience.

- It was acknowledged that there was a heavy burden on me as an administrator: although individuals were happy to lead individual actions, no one wanted to take on any administration. It was suggested that in due course, at the end of my PhD, more members could be signed up to the process on the understanding that they would take on administrative duties.

- There were three people who wanted me to be prescriptive in terms of telling people what to do, but others said they would have opted out of the process if this had been the case.

- R13 noted that it was a really valuable model for CPD development and new professionals. As a newly qualified archivist and records manager he had found it really helpful to be involved. He (Shepherd, 2010) later published an article in the *Records Management Bulletin* discussing his participation in the research and the possibility of similar cells with prescribed research being established by the professional bodies.

- There were some participants who had not enjoyed using the new CMC tools and had only really engaged with either the email discussions or face-to-face discussions. However, for many, using new technologies had been a highlight of the process. In addition it was felt that the varied functionality within different CMC helped the quality of collaboration when working on different types of outputs. Overall Ning was the most popular CMC tool which had been used to date. However, it was noted that advertising models were not raising sufficient revenue and the fact Ning would now charge might be a future trend for CMC.

- At this point in time there had been a lot of publicity in regard to Google Wave and there was a huge desire to experience this tool. It was difficult to get invites but some of the co-researchers had been Beta testers and therefore this was a route through which everyone could get invitations to get online.

7.4.2 Agreement on next actions

As noted in the merger process discussion, the first meeting of everyone was held on GoToMeeting. As with the experience of the former merger process, no one from the original RM UK group logged on despite the heavy input from these co-researchers into Moodle. Again all had valid reasons and as before subsequently contributed heavily.[20] This meant that the members missed out on agreeing the first action, although their contributions online were taken into account.

At the GoToMeeting it was agreed that there was a desire across the group to try Google Wave. It was therefore suggested that this could be used as a channel for building a group dynamic by repeating earlier actions in relation to this forum. The following actions were agreed by the co-researchers:

- To log on to Google Wave and post an introduction
- To develop the Ning Protocol into a Google Wave protocol and have a real time 'Wave'
- To undertake a Google Wave book review
- To develop a proposal for a book encompassing the group's writing on communication

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[20] I still do not understand why these people did not attend the meetings at these two key points. The meetings were being held at similar times to others and although many would have had valid reasons for not joining it seems odd. I have no factual explanation. In addition, people tended to be honest about the reasons why they did and did not participate so it may possibly have been bad luck.

- To try and undertake much shorter cycles to progress the work

It was agreed that I should present the group with a survey at the end of the first cycle and the possibility for voting to move forward the action

7.5 WHOLE GROUP ACTIONS

Table 12: The iterations of the Whole group's actions

Timeframe	Problem(s)/need(s)	Action(s)	Reflection(s)	Communication/ CMC dimension(s)
Action cycle 1: Primary action to build a group dynamic and shared research direction				
Nov-Dec. 2009	♦ Requirement to build a group dynamic ♦ Need to have a shared direction ♦ Desire to engage with Google Wave ♦ To understand what good communication looks like online ♦ Desire to develop key communication outputs into a holistic package ♦ Desire to understand how RM engages with CMC and user communities ♦ Desire to publish on the research	➤ To introduce one another ➤ To test Google Wave ➤ To develop a Google Wave Protocol for real time 'Waves' ➤ To undertake a Google Wave book review ➤ To develop a book proposal	♦ Need to pull together outputs into a holistic package ♦ Unclear about the full potential and impact of Web 2.0 ♦ Concern as to what best practice communication looked like online ♦ Concern to measure the impact of communication ♦ Concern to pull together all of the outputs into a holistic package ♦ Requirement for a web presence to publicize the work more widely	♦ Google Wave ♦ GoToMeeting ♦ Ning Chat
Action cycle 2: Key action to develop an 'Interpretive Protocol' to inform an 'Affinity Model'				
Dec. 2009	♦ Need to understand how communication needs can be mapped to different technologies ♦ Need to understand benefits of different communication technologies ♦ Need to understand how to measure successful communication ♦ Need to understand the impact of 'culture' (in all forms) on communication	➤ To map the communication needs to the functionality of tools for affinity model ➤ To brainstorm regarding the impact of culture on communication	♦ Difficulty mapping the functionality of tools to communication a sliding scale ♦ Concern as to what best practice communication looks like within different types of organisations ♦ Concern for holistic communication management process ♦ Need for a communication toolkit ♦ Concern to measure 'good	♦ Face-to-face ♦ Google Wave ♦ MindMeister ♦ Moodle discussion forum ♦ Moodle wiki ♦ Ning chat ♦ Skype

	♦ Desire to experience new technologies ♦ Need to fulfil commitment to progress the publication with Facet		communication' ♦ Desire to publish on the research ♦ Desire for Web presence including Blog	
Action cycle 3: Key action to understand what drives RM and measures for good communication				
Jan. 2010	♦ Need to understand how communication needs can be mapped to different technologies ♦ Need to understand benefits of different communication technologies ♦ Need to understand how to measure successful communication ♦ Need to understand the impact of 'culture' (in all forms) on communication ♦ Need to understand how international perspectives on RM ♦ Desire to experience new technologies ♦ Desire to publish on the research	♦ To discuss what drives RM, across the group ♦ To undertake training delivered by Tom Gilb ♦ To complete measures template provided by Tom Gilb for communication dimensions ♦ To progress Facet book l	♦ Need for the creation of RM stories ♦ Desire to be clear on what attributes of communication merit measuring ♦ Concern to pull together all the outputs into a holistic package ♦ Concern to align organisational requirements, to user requirements with RM embedded ♦ Need for wider publicity for outputs	♦ Email ♦ Face-to-face ♦ Moodle wiki ♦ Ning Chat ♦ Twitter
Action cycle 4: Key action to develop a communication architecture toolkit focusing on policies in the first instance				
Jan 2010 – September 2010	♦ Need to develop a holistic set of outputs ♦ Need for a group brand ♦ Need for a web space for publicity and dialogue ♦ Need to establish a true picture of communication ♦ Need for organisational communication policies	➢ To develop a communication architecture toolkit plan ➢ To develop policies as a top level output for the toolkit	♦ Desire to deliver Communication Architecture Toolkit ♦ To understand the impact of personality and culture on communication choices ♦ Desire to understand what good communication looks like online.	♦ Email ♦ Face-to-face ♦ Google Wave ♦ Milestone Planner ♦ Ning chat ♦ Face-to-face ♦ Ning Chat ♦ Skype ♦ Telephone ♦ Webex

Action cycle 5: Key action to undertake a storytelling event to promote RM stories				
Oct. 2010	♦ Need to establish a picture of RM and highlight good practice	➢ To deliver a storytelling event	♦ To have grounded stories of good RM ♦ To review RM stereotypes and promote good role models	♦ Face-to-face
Planned Actions for 2013: To deliver a website with a holistic set of outputs on communication				
2013	♦ Need to pull together and deliver on the work as a whole	➢ To deliver a website containing all of the outputs ➢ To polish and deliver on the website the Communication Architecture Toolkit. ➢ To finish the publication of a Facet book. ➢ To find funding to complete the film series.	♦ To deliver tools to better assist with good communication in the workplace taking into account individual ♦ To embed RM into the process to ensure better management and understanding of the value of RM in a CMC context	TBC

7.5.1 Whole Group Action 1: building a group dynamic and shared research direction through the development of a Google Wave protocol

Table 12 above summaries the action cycles taken by the Whole group. The priorities for the first cycle were to:

- Use Google Wave to create a group dynamic based on working in Google Wave and altering the Ning Protocol into a Google Wave protocol
- To undertake a Google Wave book review.
- To develop a proposal for a book encompassing the group's writing on communication.

The process of developing the group dynamic was focused onto the action of developing a Google Wave protocol. The Ning Protocol proved very easy to adapt. In addition the tool was found to work well for collaborative editing and by many was preferred to a wiki, as it was seen to be half way between wiki and email. Although the group started off with the concept of reviewing a book in Google Wave, a text could not be found for which 80 copies could be provided. Therefore in the end a collaborative article on Google Wave was written. Figure 30 below is a snapshot of parts of the article that was initiated in a real time Wave and which highlighted some of Google's strengths and weaknesses. The Wave was seen to have worked really well as a tool for developing the group dynamic.

The following things work well in Google Wave:
- Conversational flow - except the flow is not always explicit if people make additions afterwards
- Multiple conversations on the same screen simultaneously (facilitated by being able to understand where a reply relates to a statement that has been made);
- great collaborative editing tools - It has a real-time spell checker - great!
- copy-paste works well in (after you learn how to do it)
- Watching people comment in real time
- Participant identification
- Seeing who is good at spelling/typing!!!
- allowing people write quickly and briefly
- The menu selection tool bar (bullets, fonts, maps, etc.)
- **The highlight feature and font selections**
- Knowing how people are engaging in real time - which you do not get in Ning
- Good auditability

From our group Wave these are the factors that were posted on what does not work well in the Wave
- it slows down when lots of people type at the same time
- - it shows everyone my instant typos
- - it is so slow that you make your typos several time by accident (when amending the text you don't know if you already typed because the actions come too late)
- - difficult to change from one "comment" to another - remember to choose "edit" or "reply"
- - trying to do something when protocol has not been agreed
- yping over and messing up one another's comments - my apologies I think Michael?!it is easy to 'type over' someone, like in a face to face conversation :) ;)
- - it is quite clunky having to open an action on each posting rather than just start typing into the box
- - it is a shame it does not have inset emoticons options like in Skype that would help with some of the postings? Yes, usually I'd say that choosing emoticons from a palette takes time - it is nicer to just write them ;)
- - just having a chat? YES it lets you have a chat :)
- - the chairperson
- - its not very easy to Chair - that all really needs to be done as preparation with a good agenda and set of points - that seems to be the thing with all online collaboration n does not have the same control as if they were face-to-face - perhaps there should be controls where they can draw everyone's attention to something, e.g. finishing a conversation? - i have split someone's sentence too again sorry!! - I am not sure why that happens as it appeared y
- IS it I think it may be multiple user edit feature?! May be a benefit with maps and drawings? Maybe need to select 'done' to complete edit mode. Maybe something for a new protocol.
- - requires a lot of training before people can use it smoothly - without fear of looking stupid (because everybody can see the typos and tries)
- - in the brave world of web 2.0 do you think people worry about how they look - perhaps we would worry more in a formal setting

Figure 30: Comments downloaded from a single Google Wave collaborative real-time Wave

The proposal for a book was developed by wiki and email. The group publication was seen to be a more static output and less an iterative action cycle rather an ongoing underpinning of the work as a whole. People submitted their chapter ideas and the work as a whole was easily pulled together, submitted to Facet and accepted. Reviewers for each chapter were also agreed through wiki and email debate.

However, ironically the book proposal was the discussion which throughout the inquiry as a whole became the biggest discussion and controversy. Ideas for the book title sparked a hugely entertaining and animated debate with over 100 emails. The final title was an amalgamation of several initial titles: *Information management solutions: communication and collaboration in a Web 2.0 World* (See

http://www.facetpublishing.co.uk/advanced_search.php?search_title=&search_author=lomas&search_description=&search_isbn=&action=dosearch&search.x=0&search.y=0). My own personal favourite title was the suggestion: 'Through the virtual looking glass'. This made it to a short list but Facet advised that it needed a publication where the content was clear from the title.

The controversy in respect of the book was caused by the fact that Facet wanted to sign a contract with myself as editor being the only paid party. This undermined the egalitarian nature of the research. It was suggested by I72 that the money could go to a nominated charity. However a number of the USA participants wanted to be paid and then to make their own decisions about where the money should be spent. There was a heated discussion and a real split on this issue between the USA and the rest of the world. Up until this point all participation was without charge. The USA participants made the point that there was no suggestion they were any less generous, it was more about decision making in the context of where money was being paid. In the end each author agreed whether they wished to be paid or to make a donation to charity and Facet agreed a nominal sum for each author.

These type of disputes were much harder to resolve without face-to-face interaction. Some co-researchers were notable by their online silence at these points and I had to make contact with some people directly in order to smooth things over. This clearly highlighted that emotion can be the hardest type of communication to manage online where text is potentially a much harsher and lasting form of dialogue. This was reflected on by the group and made the case for the next action, the development of an interpretive protocol.

7.5.2 Whole Group Action 2: to develop an 'Interpretive Protocol' to map to an 'Affinity Model'

I66 had previously raised the possibility of the development of an interpretive protocol which would describe different kinds of communication. U39 felt this could be used to engineer communication attributes to an 'Affinity Model' for which he produced a screenshot (See Figure 31). The co-researchers as a whole were keen on the concept of a piece of software which could produce this

mapping. U39 stated that once the model was within a web space it could potentially grow its content and mapping based on user feedback.
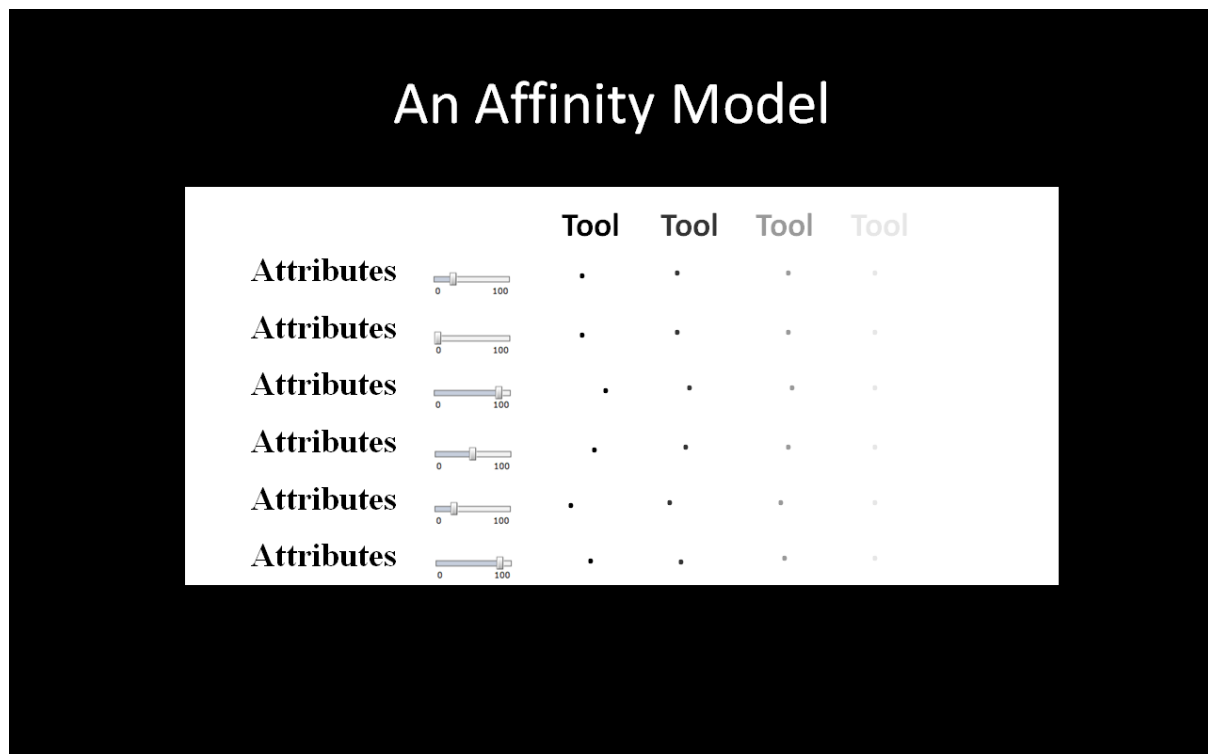
Figure 31: Outline of an 'Affinity Model'

In terms of developing the Interpretive Protocol and mapping it into the tool, the following taxonomy from Styles (1992) was suggested as a basis for classifying interpretive behaviours and seeing how these translated online. This taxonomy had been discovered during the earlier literature reviews of the International group. It was the only taxonomy which had been located. Styles (1992) develops the following categories to describe talk:

A) Question for gathering information

B) Advisement for guiding another's behaviour

C) Silence for providing interpersonal space

D) Interpretation for explaining or classifying another's behaviour

E) Reflections for expressing empathy

F) Disclosure for revealing one's personal condition - disclosure includes perceptions, predictions

G) Acknowledgement conveys receipt

H) Confirmation expresses agreement, disagreement, shared experience or belief

I) Nonlexical sounds - oh, um

Examples were provided against each of these as to how they would translate into particular tools online. It was noted the problems of understanding these different dimensions within different cultural contexts. For example, I72 noted that in Asian culture silences are incredibly meaningful. The group did feel that silence could be conveyed online, e.g. delaying postings. However, it was noted the complexity of understanding emotion. I70 fed in the role and value of emoticons and noted which tools were good at supplying and explaining these. I70 noted that emoticons make emotion underpinning comments explicit and in some respects better understood than in some formal and polite meeting contexts. In addition a number of works on the role and value of humour were discussed (e.g. Holmes and Marra, 2002, 2005, 2006). Getting genuine understanding and agreement was seen as challenging and a possible theme for one of the film series. To move the work on the group then also produced a mind map in MindMeister trying to show how these communication attributes would map to tools online and where culture might influence and play a part. A snapshot of the mapping is shown below in Figure 32.
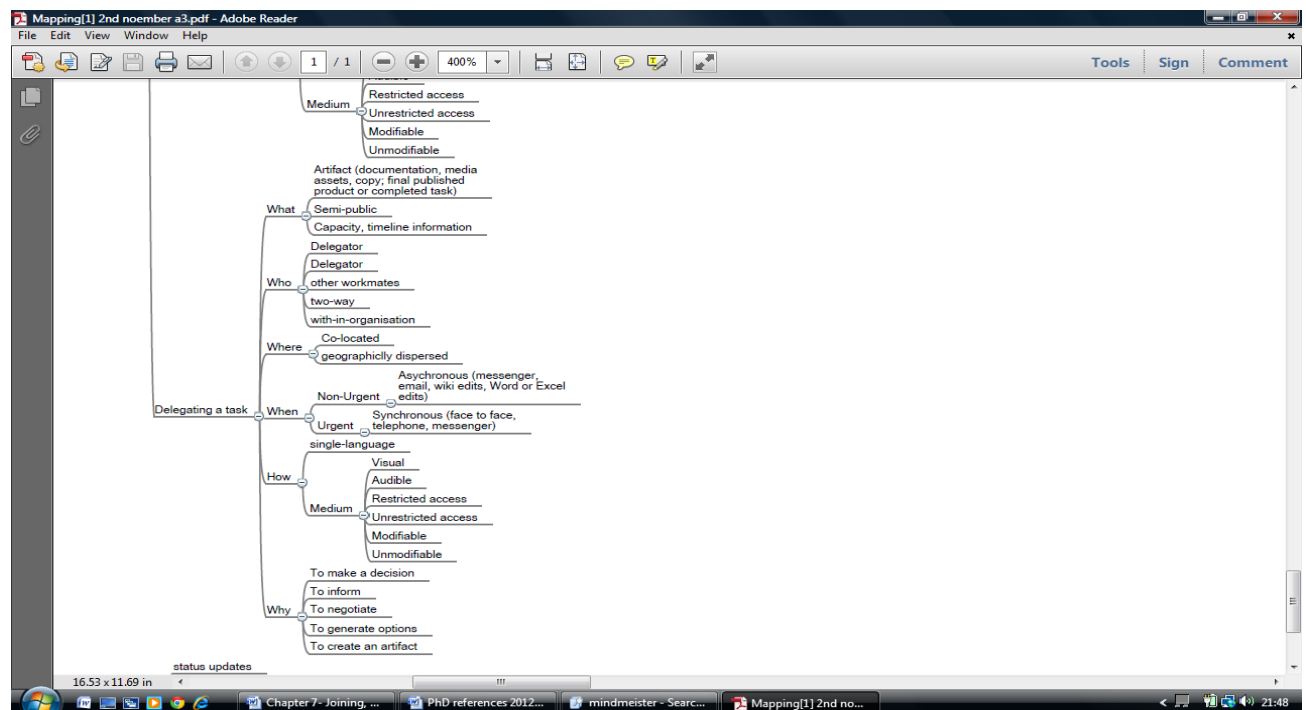
Figure 32: Snapshot of MindMeister mapping depicting communication attributes which would be aligned to tools in the 'Affinity Model'

The group had undertaken this output as a very short iterative cycle with the requirement for quick participation. Across the group everyone found it very hard to map the communication attributed to tools and felt they had reached a dead end. U39 agreed to take the work away and look at with it colleagues. This therefore led to reflection back over the actions. It was agreed that as RM was a key part of my PhD there would be a dialogue on RM drivers. I was hugely grateful that my PhD seemed

to remain in people's consciousness throughout the research. In addition Tom Gilb was in London and able to train the group on communication measures and therefore this action was also taken forwards.

7.5.3 Whole Group Action 3: to understand what drives RM and measures for good communication

RM Drivers

In terms of the RM discussion three key questions were framed for the starting point:

1. What drives and motivates records and information management in different countries, across different communities?
2. Why do the US and Australia have such different RM models (life cycle versus continuum)?
3. Is the concept 'records' rather than 'information' understood across cultures?

A number of articles were cited as points for discussion, e.g. Yeo (2007a). However Yeo's article (2007a) was noted by R6 as perpetuating the failure to address the distinction between records in an archival and RM context. In addition the representations did not sufficiently tackle the context of what is a record within different cultural contexts. Others picked up on this. Within the context of RM, I72 added:

> "A challenge in marketing a knowledge resource in Thailand was that, by and large, people are not raised to read. When one considers that the population (in general) does not read, then everything from the communication of policy to the capture of transactions takes on a different flavour. The record, in cultural terms, is sometimes merely the vehicle for inviting the social exchange. All meaning is in that exchange with the record a less consequential by product. Records may actually be shaped with the creation of points of access to social interaction to the extent that the record itself is not accurate in a pure sense, but serves to establish relationship that can proceed (with suitable acknowledgement of the vagaries of accuracy in records). A top Bangkok HR development firm helped with this view and I saw it in action. This touches on conceptual understanding of corruption, from one angle, and "place" and "face" from another. A record in the western context may present "face" challenges. It is therefore either of little real value or results from extensive social interactions through which agreement is finally achieved with a record which is valued more

as evidence of the achievement than as a knowledge or accountability tool. As I review this, I note that language is also critical. I was advised that there is no Gondunghua (Cantonese) direct equivalent for what we mean by records management. Languages that rely on context for meaning present additional challenges in promoting the adoption of records management."

In respect of culture, I63 who specialised in information management culture in her academic research provided lots of good examples of different contexts across the world, for example:

"Last year I spent 3 months in Estonia, and one of the first things I was told was that records management didn't need to be justified or promoted in organisations there, it was accepted as a good and necessary thing. That's in complete contrast to the situation in New Zealand and it was particularly interesting because of parallels in terms of changes to the working environment. In New Zealand in the 1980s the public sector underwent massive reform. This was similar to the situation in other western countries, including the UK and Australia, but in NZ the literature indicates we went a lot further in terms of the extent of change. One of the first casualties was records management services, which were seen as largely unnecessary and an area where substantial costs could be saved. This was ironic as one of the main drivers for change was a need for increased accountability, but the prime source of accountability seemed to be perceived as only existing in accounting data, not records in the broader sense. In the current recession, I think records services would again have been targeted but in government our archival legislation (Public Records Act 2005) has acted as an inhibitor to drastic cuts.

Contrast that situation with Estonia, where there were massive bureaucratic changes after the breakdown of the Soviet Union and the country regained independence. Records services continued to be viewed as essential and important, and were not cast off or discontinued. The current recession has had a severe impact on Estonia, but talking to records managers there last year they were quite astonished at the idea that records management could be under threat as a result of financial constraints."

In terms of looking at attitudes it was noted that business and historical roots played their part in RM. In the USA the private sector and e-discovery were seen as the driving force for RM. The USA records managers did not feel a need to justify their position as they were confident of their value

and felt they had a role which was well understood within an organisational context. In Australia, it was perceived that RM was driven from the public sector and clearly linked to the archives profession. Most of the international RM co-researchers had not felt as strongly as the UK records managers in regards to ensuring RM was part of the research process; this dynamic was included more because it was understood to support my PhD. It was felt that RM would be naturally built into CMC processes at the right moment. This seemed to relate to the international records managers underpinning confidence in their professional role. In addition, it was noted that there was a stronger understanding of RM within cultures that had inherited an RM British registry system. However despite this there were still seen to be problems with RM across Asia in countries with and without historical registry systems. In particular it was highlighted that although India is very technologically advanced the value of RM is not understood and there is no formal training. Despite the British Empire having provided a strong basis for RM in some parts of the world, the UK records managers were the least confident of their position within their organisations and also in the wider public context. Two international participants who had worked in the UK described British people as 'anarchists'. In contrast those with experience of working with Australians described them as 'rule compliant'. This observation had been raised in earlier parts of the project and others agreed. It was said that in the UK people tell you they are doing something when they are doing their own thing. In the USA if people won't do something they will at least tell you and explain why. R9 related an amusing story about a farmer he had met who had said to his son 'What does your dad do?' The farmer felt sorry for any child with a records manager as a father. This led to the idea that RM stories could be used to further understand the role, value and problems of the place of RM. Thus U36 agreed to lead a storytelling event.

Across the world it was felt that regulation was the main driver for the RM process. It was felt from the UK that Freedom of Information legislation had driven democratic accountability and that archival access was about a different kind of social accountability. However, Freedom of Information legislation was not an internal organisational driver and was seen to have mixed outcomes.

In respect of the actual RM models it was noted that there were vested interests from professional associations perpetuating these models and that 'turf' wars at a cultural and professional level existed. This was seen to have impacted upon the development and changes to the records management standard ISO 15489. For example, it was stated anonymously that appraisal was not included within the standard because in Sweden records managers were not seen as sufficiently trained to deliver this task.

In regards to the models of management it was suggested that the Continuum was too artificial and complex and the Lifecycle too simplistic. A new model was felt to be needed and the non-records managers stated this needed to be immediately understandable. It was suggested that the model should take into account points for fixity or flexibility in information/records and that time spans needed to relate to legal admissibility and organisational contexts in contrast to archival contexts. Some of the archivists did try and justify earlier involvement to ensure the survival of records; in contrast it was argued that this needed to be a separated documented process. In other words the organisational retention schedule and the archival schedule would be two different documents. One person proffered the concept that the archives could have random "samples".

In regards to engaging everyone to be a records manager I72 noted:

> "The fear of administrative burden, i.e. hard work, may be a factor that implicitly drives resistance to adequate recordkeeping and the adoption of good daily practice(s)."

This was echoed by many of the non-RM co-researchers who wanted automation or professionals putting in place RM. However, equally they recognised that they would undertake minimal RM if it enabled them to engage with their own personal devices. Therefore it needed to be clear why they were required to engage with RM. It was also perceived to be ironic that records managers represented the voice of control and authority and yet in many contexts senior management did not understand or support the RM message.

Measures

Tom Gilb took the group through the process of describing measures and risk processes for seemingly intangible communication dimensions or attributes. He stated that you need to be clear about what is worth measuring, what communication success, acceptable communication and failure look like. He provided the group with measures templates which the group duly took away and completed. A sample template is attached at Appendix 2.19.

The reflection on this part of the process was that the measures were valuable and built on other outputs. The group felt its work as a whole was really valuable but that it needed to be pulled into a holistic and branded output. The concept of a communication architecture was revisited. It was felt that there was a real need for a 'Communication Architecture Toolkit' to pull the whole research together. The group also felt that the brand and website were part of this work as a whole.

7.5.4 Whole Group Action 4: to develop a Communication Architecture Toolkit

As a result of the desire for a brand, web space and toolkit the group reviewed all its outputs. It then stepped back and mapped into a Moodle Wiki what the Architecture Toolkit should include and what it had already. The final toolkit plan with the high level content is included in Appendix 2.20. Using a collaborative action planning tool (MileStone Planner) the group then took the plan and mapped in deadlines and action leaders.

The starting action was to develop policies and communication dimensions (See Appendices 2.21 and 2.22). R24 led on the policies as R24 had previously given thought to these. U32 led on the communication dimensions as U32 had been thinking about these in writing a keynote paper for the research (Brown, Demb and Lomas, 2009). The initial work from these two outputs respectively is contained in Appendices 2.22 and 2.18.

In addition, U39 fed back that it was proving difficult to develop the Affinity model as CMC were simply too complicated. The one component that U39 noted was easier to be clear about was the ability of different CMC tools to leave 'traces' or 'artefacts' and the potential to make choices about the collection and maintenance of these. Thus there was scope to develop this from an RM perspective but the wider communication dimensions were much more complicated.

However, it was agreed that the toolkit as a whole had real value which the group could launch through a website. The records managers recognised that when they had worked on a product where RM concepts were naturally embedded this had helped with their overall delivery, user understanding and RM compliance. However, in delivering RM as an embedded part of a bigger project, R12 noted and others agreed that records managers did want recognition for their place and role as experts, i.e. their input was not to be undervalued or hidden.

U43 and I56 agreed to lead the website development but as a starting point it was agreed to develop the 'Continued Communication Brand'. R1 had a brand management contact and therefore led this exercise. Appendix 2.23 contains a list of questions and answers which the group developed in a Moodle wiki in order to define their purpose and brand profile.

At this stage the idea of a best practice paper was dropped. During the course of the research the problem of engaging with the records management standard revisions as a process made the group

evaluate the concept of best practice in favour of seemingly more flexible tools. Thus at this point the priorities were:

- To develop a Brand
- To design a website
- To build and release over time a Communication Architecture Toolkit
- To understand the role or personality on communication, in addition to culture
- To build the film series and locate funding as a key training tool within the Communication Architecture toolkit.
- To maintain interest in this through a Blog
- To undertake an RM storytelling event and build RM stories within the web space. These would need to be positive stories.
- To finish the Facet book
- To open up the group to new participants at a future point in time and for myself to hand over the administration in order that I could complete my PhD

In February 2010 my son was run over and this abruptly impacted upon the group dynamic

7.5.5 Crashing and Recovering

In February 2010 I went for a short break to stay with my brother in Germany, taking my two children. On the day we were due to leave my children were playing in the snow with their cousins. My nephew saw a pile of snow on the opposite side of the road and went across to get some. He was followed by my six year old son William. William was run over by a car. He went right under the middle of the car, thus avoiding going under the wheels. He fell backwards and as he did so he turned his head and just escaped being hit by the bumper and killed.

In research and life there are critical moments/seconds in which everything can change. Within this moment my life changed forever; I live with the emotional impact of the aftermath. I looked into a chasm but I am blessed that my son survived and even more blessed that thanks to the skills of the doctors at Mannheim Hospital and Great Ormond Street Hospital my son has made a great recovery.

Where did this leave my research? What happened next? I took six months as a total break from work and the PhD. In hindsight I should have taken longer as the road to his full recovery was longer. It then took me time to really get myself back into research and work. It was an issue that my

contract did not cover payment for time off for sickness or family circumstances; this is an issue for most PhD students if something unforeseen occurs. It would be beneficial to put PhD students onto the same terms and conditions as employees. I then fell into the PhD trap many students face of working on other projects whilst trying to complete.

I received a huge amount of support from fellow co-researchers (and I hasten to add my supervisors). Many by now had become personal friends; I include within that the many co-researchers whom I have still never met face-to-face. I received emails, cards and presents.

The week after the accident we were due to be running a storytelling event. The group decided to cancel and rerun the event on my return. None of us knew just how long that would take. One of the group members tried to move forward on another action on my behalf. However, many group members felt that they should wait for my return: although I had reassured people to carry on they felt it was important for my PhD that I should be part of the process. Many discussions happened not across the group, but from one individual to another rather than as an active decision making process. Thus the process languished, although I received lots of follow up emails asking when it would restart.

7.5.6 Whole Group Action 5: to develop stories of positive RM role models

Although I had sufficient data for the PhD, I had been keen to try and conclude the inquiry to fulfil my commitment to the group. As soon as I was able I therefore ran the storytelling event which had been disbanded. This was facilitated by U36. In addition, Peter Heywood (a records manager with story telling experience) from outside the group also assisted. 23 people attended.

The event was initiated with a 'Anecdote Circle'. This method is explained in detail at http://www.cognitive-edge.com/method.php?mid=10 (Accessed 1 January 2012). Individuals in the group raised their hands and shared stories. These were valuable depictions of RM in their own right. Two people captured the themes referred to in the stories on cards. The cards were then mixed up on tables and the groups worked to arrange them into themes. Grouped themes were then taken away and pictures drawn to show the stereotypes that exist within RM. The stereotypes presented both positive role models 'e-thinker' and negative perspectives on RM, such as 'Mrs Inma Day', 'i.e. in my day'. The group started the process as an anecdote circle; sitting in a circle and sharing experiences, good and bad, of using communication tools. This started people talking about their personal experiences based in real events of communication in their lives and work. Moving on

from this the group then tried to look at the bigger picture of communication through a 'Future Backwards' approach.

7.5.7 Projecting ahead

Although I managed this one event and we discussed as a group how to proceed. I could not commit to the time required to keep running the inquiry and no one else wanted to administer the process. Rather than failing to properly run the inquiry I made a decision to write my thesis, evaluate and then fulfil my commitment to the group. I communicated this decision and it did help. The group will now meet again and finalise its work from January 2013 onwards. This did demonstrate the benefit of a co-operative inquiry having an administrator. It also placed into perspective the reality of continuing the group over the longer term: this may still happen beyond my own administration of the process and dependent upon new members.

As with many theses I have written up at the end. Up until that point, I felt so immersed in the research process that I did not have time. I fell into a common academic trap of letting 'doing' take priority. Thus, teaching and action within the context of the co-operative inquiry took priority. The enforced break made me evaluate. I now would pose myself the question as to whether I should have written 'the autoethnographic PhD' throughout the process (as occurs in the research notes and diary) and then not edit the text. The reality is that the research methodology was so time consuming this would not have been possible.

It is to be acknowledged writing at the end of the process does impact on the narrative. It can make one assess the development almost as an inevitable linear progress. Historians can suffer from this form of bias delivering 'Whig' histories that show man triumphantly progressing. What was the true order of events within this inquiry? In thinking about this I have tried to apply the 'Future Backwards' method, which was used by the co-researchers, to my own text. The 'Future, Backwards' method (refer to http://www.cognitive-edge.com/method.php?mid=10) starts a process by defining it in its current context and then mapping each step backwards that had brought this state into being. This process can be used to discover what entrained patterns of past perception. This helped me assess the 'truthful' representation of my text. The break made me wonder about why certain questions were not asked and alternative directions pursued.

Writing the PhD has been a cathartic process which has helped ease me back into the inquiry mindset. I am now setting up meetings to reengage with the group and I hope that by the time of

the viva I will have delivered on some of the group's outputs. The break gave me a perspective on the work which has in some ways benefitted the PhD.

The break has also demonstrated certain truths about the group dynamic. Individuals have gone on corresponding and progressing parts of the work but no one person has led the group onwards. The group needed someone to undertake the underpinning administration which delivered certain actions. I think that in any group there are probably individuals that fulfil this role. Each co-researcher, whilst equal, does not necessarily undertake the same role. Without people willing to undertake some low level administration (organising meeting dates and meeting locations etc) a group dynamic can flounder. I am saddened that the group did not achieve what I would have wished as quickly as I would have liked but my family life is my priority.

The group is now due to reconvene in January 2013 with the priorities:

- To deliver a website that is clearly branded and pulls together the entire group's work.
- To complete and deliver the Communication Architecture Toolkit. It is to be noted that there is still a gap and need for this tool. Reflecting on this tool the group concluded that RM had been most successfully adopted when it was incorporated into a bigger process where its place and benefits were an integrated part of the whole.
- To publish a book for Facet. The text is currently being edited. Again Facet is still keen for this despite the time lag as there has been nothing else to fill the gap.
- To find funding to deliver the film series.

SECTION THREE

REFLECTING ON THE JOURNEY

CHAPTER EIGHT

REFLECTING ON THE RESEARCH PROCESS

"there is no magic formula, but there are many paths to partial truths." **Ruth Bunzel, 1952**

8.1 CHAPTER INTRODUCTION: WHAT'S IN A PHD?

This chapter provides the discussions and findings concerning the research approach. My research was multi-layered and complex. As a PhD student and co-researcher in initially three co-operative inquiries, I felt the pull of my 'multiple selves' but this in turn provided opportunity for introspection, reflexion and the revealing of knowledge across the domains. This process of narration and reflexion has sometimes been referred to as 'constructed knowing' (e.g. Quinlan, 1996, Chapter 13, p.4.). Mellor (2010) discussing the construction of knowledge in the ethnographic context sees reflexivity as the underpinning:

"Reflexivity is self consciousness in the research. Knowledge is revealed."

Therefore, in the context of my research I will reflect on both the PhD and the co-operative inquiry processes, learning and lived experience. The delivery of the PhD as an autoethnography provides the opportunity to share one's findings on multiple levels personally, professionally and as an aspiring academic. My PhD has been a personal journey of learning and exploration. However, the process of delivering a co-operative inquiry with the PhD embedded has also been a shared experience. As such, this has built upon a specified objective at the outset, namely to bridge the gap between RM research and practice and promote future RM research. Part of bridging the research/practice gap is to encourage and defend the value of a PhD within the context of RM. The value of RM research per se has been increasingly recognised (see Elkin 1999; Hare and McLeod, 1999, Williams 2007) but this does not necessarily translate into individual RM PhDs. There are only a small number of RM PhD's delivered annually[21]. In part this is because RM education does not educate people through the traditionally trajectory of other research disciplines from undergraduate level through to a PhD. However, in order for RM education and research to be valued within university settings, it is important to have a pool of RM PhD candidates (RM capacity) available for employment. Furthermore, I believe that the workplace will be strengthened by having RM practitioners with sound research experience to critically deliver RM within certain kinds of projects.

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[21] In the UK a search on the British Library's electronic repository for PhD submissions revealed 12 PhDs linked directly to records management dating from 1996-2012 .

Since taking part in the co-operative inquiry, four of the co-researchers have embarked upon a PhD, two in the RM domain, one in archival science and the fourth in web design and audience participation. Three others are currently considering undertaking PhDs. It is to be noted that these people in part joined the research because of their interest in the PhD process but it is still important to note that their participation did not deter them from their own studies and two noted that their participation in this research aided their final decision to commit to a PhD.

I have noted in the first chapter my personal reasons for embarking on the PhD process. A PhD is challenging, including in my case:

- grappling with a range of research methodologies and methods;
- managing and working with diverse groups of people from around the world;
- getting to grips with research software packages and Web 2.0 packages;
- rigorously analysing a wider range of data (although that was akin to my experience as an archive cataloguer);
- challenging prior assumptions and learning afresh the value of RM;
- keeping going over time despite conflicting obligations and personal calamities;
- writing up, particularly in an autoethnographic rather than an impersonal style.

The PhD has been a process of learning and discovery, a bumpy journey with highs and lows. In addition, as Karp (2009, p.37) comments, it is an opportunity for change and evolution:

> "one of the great joys of sociology is the freedom it provides to periodically reinvent oneself."

As such, in addition, to the challenges articulated above, I also learnt that:

1. A PhD is a new learning opportunity and need not be an isolating experience. It is possible to construct the right PhD for the kind of person you are. A PhD will have its own value in filling in a part of the socially constructed picture of the world in which we live.

2. Prior research experience is not essential for a PhD student. A PhD student can receive a different kind of support than a paid seasoned professional. Fostered by my collaborative research methodology, my PhD opened up new learning from beyond RM and Northumbria University's walls in both academia and practice; people helped me, tutored me and offered me a range of support because I was a student with all that this implied. For 11 of the co-

researchers, it was my lack of experience and the fact I was at a PhD level which made many participants willing to help. Five others commented that it was actually my honest lack of knowledge in regards to CMC and research which meant people felt able from a very low level of CMC and research knowledge to step in and help.

3. People will join a project because they are genuinely interested rather than because they know you or your supervisors, although it helps to have the credibility of university backing. My prior experience and RM networks gave me an inner confidence that I could deliver a co-operative inquiry. However, in reality, across all three inquiry groups, the people who gave the most time throughout were those that were genuinely interested in the central research question.

4. A PhD can achieve a lot with limited resources. In this particular instance a huge strength of the co-operative nature of the process was that it meant that so much was resourced by the individuals from their time and skills[22], through to pen, paper and hexagons[23], software[24], meeting rooms[25], and film making[26]. As the requirements for action research cannot be pre-determined given that they emerge through time, this was an important strength delivered by the numbers participating. It was the people who came to the co-operative inquiry who made it work and alas my own personal family circumstances which have slowed the work as a whole. One issue with the approach was to obtain equality in terms of resources (e.g. not everyone had access to the academic literature) and in this sense the approaches taken needed to be pragmatic. Looking more widely, PhDs will increasingly be able to draw on crowdsourcing models (which were less well known at the start of this work) to deliver on resources, provided the benefits of a PhD can be sold to the wider public.

5. A PhD can be a model for flexible working which wraps around family life. I have worked no less hard whilst delivering my PhD but have found it easier to support my children at nursery and school. My PhD was a lived experience which, due to the use of CMC across time zones, was lived 24/7. As such my children have felt the shadow and light of my PhD and periodically typed up their own reflections[27]. However, equally there is a need to consider

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[22] Each and every participant gave hugely to the project and I have acknowledged them all at the start (although words don't do justice to my gratitude). The examples are a sample snapshot of some of the material assistance which would normally be costed to a research project.

[23] Ron Donaldson was hugely generous running many workshops with his own equipment supplied.

[24] Tom Salmon hosted and maintained the Moodle site and has undertaken work on a website.

[25] In particular I must thank Lynn Young British Library which provided a basis for the London meetings. Although James Lappin and Martin Sanderson kick started things at TFPL.

[26] Jim Parkyn and Leanne Bridges are to be thanked for the work they input into making a film.

[27] "I would like to be a Professor like Julie", Milly Lomas Aged 9

treating PhD students as employees with sickness pay and support. In addition, it would be beneficial if some flexible post-doctoral research and lecturing posts were actively offered beyond the PhD process to maintain employment opportunities through time for a range of candidates.

8.2 THE RELATIONSHIP BETWEEN THE PHD AND THE CO-OPERATIVE INQUIRY

I felt it was important to structure the research to be true to the spirit of a co-operative inquiry. As such the main aim of the co-operative inquiry was different to the PhD aim. There was a question as to the extent to which my PhD should remain prominent within the research process after the initial process of explanation and consent was completed. Patton (1990, p.39) contends that "unobtrusive methods" are integral to the process of qualitative research. Yet as Shenton and Dixon observe (2004, pp.5-6) this is often problematic in gathering qualitative data when one wishes to be able to ask questions based on observations. However, in fact the decision regarding the relationship between the PhD and the inquiries was made for me; across all three groups my PhD was placed into the continued consciousness of the groups, albeit in different ways. For example, the RM UK group adopted my PhD research objectives as their own, for the first phases of their research, and in the User UK group an explicit objective was stated that I should obtain my PhD. Throughout the process (and up until submission) the co-researchers asked me about the progress of the PhD. Embedding the PhD into the co-operative inquiry enabled me to discuss my findings, thinking and conclusions; and at times to totally rewrite them. There were times when my PhD brain took over. As Richardson (2009, p.312) discusses.

"I am wilfully, now, taking notes about our conversations not for emotional relief but for some other reasons that I haven't yet formulated and it has moved me into a deceptive stance much as happens in ethnographic research- the ethnographer, deciding to withhold

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"Although time consuming for Mum I still think it is worth it for Mum. I am not really sure if I want to write a P.H.D. although I still think it would be a very interesting experience. I have also learnt that my brother, William, is not really keen on writing a P.H.D. although if he did he said he would do a history P.H.D." Milly Lomas Aged 11.

"The PhD is boring. Its all about the PhD and not about me!" William Lomas Aged 8 Years [one month]
"Today I learnt new things about interacting on the computer" William Lomas Aged 8 Years Old [two months after trying to build a MindMap]

information so that the host will speak more freely; so the ethnographer can get a "truer" picture."

However, the process of working with, and knowing, people through time gave me an additional awareness of responsibility to be truthful to the data and the co-researchers. Furthermore the co-researchers reflected throughout the journey on the research process, actions and journey from group and personal perspectives. The autoethnography involved in this narration which provides the additional opportunity to comment on the evolution of the co-operative inquiry in a way which has perhaps been lacking in more traditional co-operative inquiry papers. Thus, at each stage, the data collection and analysis interlocked and fostered the 'building of knowledge'.

8.3 THE UNPREDICATABLE NATURE OF RESEARCH

8.3.1 The PhD Research

Whilst I continually reflected personally and with others (my PhD supervisors and co-researchers) the construction of my learning, like the research process itself, was not a neat linear building of knowledge. There were 'critical moments' which suddenly enlightened, transformed or upended my learning. As a social constructionist, I accept the limitations of my own perspectives. I was however surprised by the extent to which my own views were so quickly challenged and biases exposed throughout the process. I identified with Roberts (2007, p.3) approach to the autoethnographic research process, whereby there are 'critical moments' which define a key point of understanding and in essence awakening to new realities. Critical moments were personal (and sometimes group) realisations that something was significant, had potential or that my preconceptions had been disproved. A 'critical moment' was within the first phase of diagnosing (see Chapter 5) when I took back my coded data to the group and realised that the assumptions I had made in regards to the User UK group's attitudes to CMC were totally unfounded. The need to keep re-evaluating my findings and question them was a critical learning but in addition it highlighted the need to further evaluate my methods. The fact that the co-operative inquiry provided the chance to keep re-examining the methods and the data analysis with the co-researchers strengthened its value.

I became quickly aware of the powerful effect of ethnography. I defined myself at the start of the process as a professional records manager. In initiating the UK RM co-researcher group I felt initially

comfortable with all of the issues raised because this was my natural professional home. However, very quickly engagement with the User UK group changed my own interaction within the UK RM UK group. I started to engage with the users' positive attitudes towards CMC and was excited about the new learning opportunities from within the group. Positivity and new experiences can be infectious. I started to 'go native' within the User UK group. I quickly became a CMC convert. In all aspects of my life I had opened up the potential for new ways of thinking and interacting with people. This position was enhanced by the fact that I had stepped away from working as a records manager into the freedom of PhD research. It was refreshing to be emancipated from the shackles of RM order and responsibility. I questioned why I had previously undervalued the potential benefits of CMC and potentially overstated the risks. I had a personal sense of frustration that, as information professionals, some of the RM UK co-researchers were averse to being expert in new information technologies. This alteration in behaviour is a common experience within the ethnographic process (e.g. Fuller, 1999). However, through time and the process of the groups merging I reengaged with the value of RM principles and practice but hopefully from new perspectives and with new learning. In addition, the RM UK co-researchers also shifted perspectives through time. In order to fund myself through the final stages of the process I also stepped back into the realm of practice as an RM consultant. As such I was reminded of the realities of the workplace. However, I did so with new learning and hopefully vision. Schneiderman and Plaisant (2006, p.3) highlight that in the case of ethnography there are potential pitfalls:

> "Unfortunately, there are many ways in which ethnographic observation can go wrong: it is easy to misinterpret observations, to disrupt normal practice, and to overlook important events."

Again the requirement to check data and findings for my PhD with the co-researchers throughout kept me on track. Therefore I would contend that the interlocking nature of the PhD and the co-operative inquiry strengthened the work and findings of my PhD. It was often through this process that 'critical moments' within my research journey were revealed which provided important research development. Table 13 on the next page lists my personal 'critical moments' in the order they occurred.

Table 13: Table listing critical moments in the order they occurred.

NO.	CRITICAL MOMENTS IN DATE ORDER
1.	➢ The realisation of how easily unintentional bias can be introduced into research. In the very first phase of initiating the diagnosing process for the two UK Groups, I introduced the process as a 'problem solving' exercise and thus biased the answers towards looking at the negative aspects of CMC. Member checking by those within the CMC made me cognisant of this issue.
2.	➢ Going native! And the chance to see new perspectives!! Working with the Users UK co-researches highlighted to me the real value of CMC within an organisational context. To my own surprise I found their enthusiasm infectious and to some extent temporarily discarded my allegiance to the records managers. Whilst through time I reconnected with the more traditional value of RM this enlightened me to a wider range of perspectives.
3.	➢ The value of personalising the setting I had assumed it was important to be professional throughout the research. However making human connections is a vital part of success in any environment. The same is true online with CMC. The international co-researchers deliberately made decisions to share personal as well as professional information. The impact and value of this decision, in terms of building trust and knowledge sharing, was demonstrated in the very first Ning.
4.	➢ How readily the UK records managers discarded key RM thinking Although the UK records managers were committed to RM they proved very quickly within the discussions that they were ready to rethink its principles and practice.
5.	➢ The impact of nationality Within the co-operative inquiries differences in viewpoints were more marked by nationality than other factors such as gender, age, discipline or organisational setting. e.g. it was a moment of learning to discover that people from Australia are more rule compliant and thus this influenced their attitudes to RM which together with the USA takes a lead in RM theory and practice. In contrast UK users were described as 'anarchists'.

6.	➢ The value of text over speech
	The ability to communicate within text through email and Ning proved very significant. It was during a single Ning chat that this was revealed as the Ning gave people time to translate and respond in slightly slower all be it real time whilst avoiding issues of accent. As a result Ning was identified as the favoured tool for the international co-researchers.
7.	➢ The problem of resolving conflict online aggravated by national perspectives
	There are no agreed protocols for resolving online conflict and in such instances I fell back on speaking to people.
8.	➢ The value of the linguists to the project
	I had thought that the linguists would be valuable because the focus of the inquiry was CMC. However, it was surprising how influential these co-researchers proved to the research as a whole in terms of establishing the research dynamic, progressing action and resolving conflicts. Rather than being an academic discipline their skills and knowledge proved invaluable within a project whereby the participants were previously unknown to one another. There value came particularly to the fore in a moment of tension across the co-researchers.

8.3.2 The Co-operative Inquiry Research

McCardle (2002, p.280) comments on the lack of discussion as to how research comes into being, stating in respect of the co-operative inquiry:

> "I feel this 'beginning' stage is not (well) documented. I acutely felt the 'gap' this left in my understanding of how inquiries of this nature emerge and the shape they take, when setting out to inquire in this way for the first time."

As Sackett and Larson (1990, p. 419) observe:

> "Design choices about instrumentation, data analysis and construct validation, and more, may affect the types of conclusions that are drawn".

However, by the time most research is written up all 'unknowns' in terms of methodology and methods may have evaporated. By narrating the evolution of my journey through stages in this work, I hope to have some extent filled in these gaps. Key components which impacted upon the research have been discussed in Chapter 3 and Chapter 4, including:

- The number of people involved in the research
- The people who signed up to the research
- The fact the inquiry was entwined with a PhD
- The timing of the project

All research is time and context dependent. Following the collapse of the banking industry in 2008, the world shifted in terms of

- people's time and perspectives as to how the research would be beneficial. This impacted in terms of how individual co-researchers contributed. In some instances people had less work, more time and an increased desire to learn new skills.
- organisational support for the research, as organisations were less willing to allow people to take part in research projects in work time or to provide meeting rooms.
- The availability of free online tools. Over the duration of the project a number of the online communication tools which were initially free started to be available to paying subscribers only as advertising revenues dropped.

Decisions that proved critical were:

1. The CMC tools selected for collaboration and the decision that there should be a range of communication tools. Certain tools were found to foster collaboration in different ways for different actions. Overall Ning was the tool which proved most popular for the purposes of collaboration within the co-operative inquiry. This was because participants could add comments as they were able, regardless of their language ability. For simply delivering information then email was the most popular just because it was a regularly checked channel. In both contexts the text tools were preferred. Even across English speaking nationalities there were problems understanding accents e.g. some USA participants struggled to understand my southern English accent. However, speech became critical when there were group conflicts, e.g. in the case of disagreements in regards to knowledge management which became personalised in the International group's first cycle or discussions about payments for the Facet book which caused disagreements across the whole group in the fourth action cycle. Thus, a range of tools can be important to enable successful engagement.

2. It proved critical that people had signed up in a personal rather than an organisational capacity following the pressure on jobs created by the 2008 banking collapse.

3. It was important that there was a choice for participants to be credited or anonymised. In many research studies the participants are anonymised. However, I was working with co-researchers, albeit they were participants within the PhD context. At times the process of options did make it hugely complex in terms of documenting and presenting the research. In addition, some CMC tools did not enable this more complicated from of attribution and therefore I had to highlight this within the evolving process, e.g. the mindmaps and wikis in most instances were developed in an anonymised capacity.

In terms of the relevance and value of research it was important to those participating that the actions engaged deliver value in reality and practice. The actions had an agreed reality. MacMurray (1956, p.86) discusses the "concrete nature of action which employs the body and mind". The reality of this part of the production of data in a co-operative inquiry context is an important feature of the strength of co-operative inquiry. Some of the discussions and thus additional data analysis picked up the possibility of ideas and issues which could not be formed easily into more 'concrete actions'. Nevertheless every part of the work was in some sense an action. This point was observed and used as part of the reflection process (after advice given in the first action phases from Dr Alison Pickard). In detailing the process of moving through action research cycles I would contend that the Action Research approach is not necessarily the neat linear cycle set by Susman and Evered (1978) as illustrated in Figure 33.
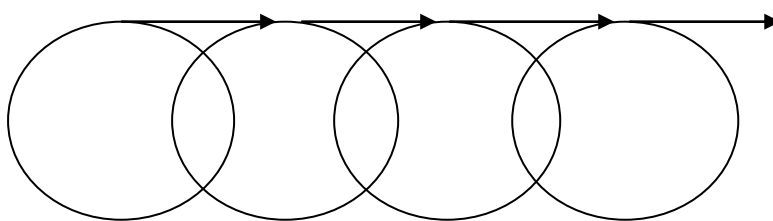
Figure 33: Diagram representing the linear movement of Susman and Evered's (1978) action research cycles

In reality the process was much more complicated. Pawluch (2009, p.329) highlights the experience of many researchers in writing up that it can sometimes present a false neatness:

"I am not sure that my account captures the true messiness of the process of making one's analytical way through a study while one is in the midst of it."

Within the context of the co-operative inquiry the iterative phases were followed but sometimes it was problematic completing an action within the context of a single cycle. Sometimes a cycle was put to one side and picked up later. At other times individuals continued to progress an action because the group as a whole could not contribute further at a particular stage. Therefore often the movement of the action would be better perceived as layers building up a picture which took the research forward in a diagonal rather than horizontal direction. With multiple co-researchers it was possible for individual participants to progress parts of the research work whilst the group took forward other actions. In addition, there were times when actions were awaiting external feedback, e.g. in the RM UK fifth action where comments on the RM ISO Standard were awaiting a response from the UK RM Standards Committee. It was difficult to ensure that individual actions were completed in a neat and timely way. Furthermore, where actions were part of the bigger picture each action adds to and overlays the whole, developing a bigger spiral representation as in Figure 34.
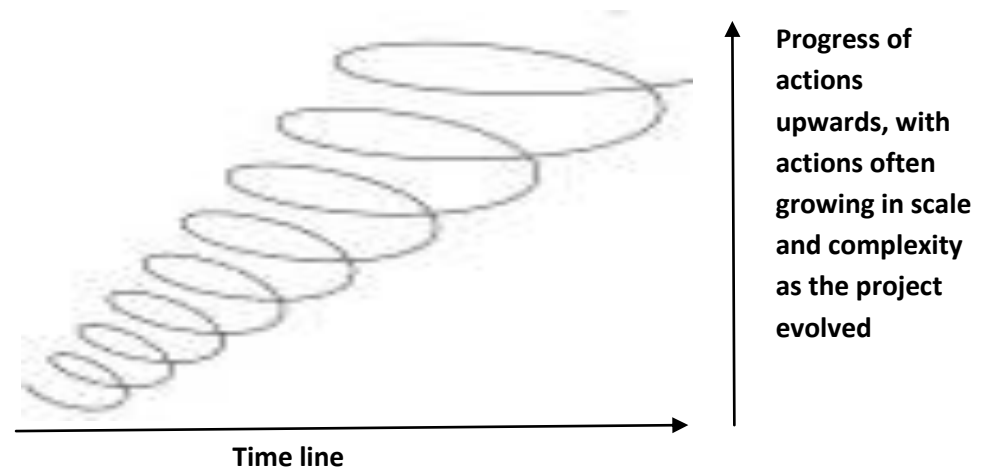
Figure 34: An action research spiral

In addition, the biggest challenge in terms of progression was successfully dealing with emotional debate. In hindsight it would have been helpful to have further strategies for dealing with conflict. If the research had carried on longer then it would have been beneficial to have a discussion on knowledge management within a structured framework to try and depersonalise the debates.

8.4 THE STRENGTH OF MERGING CO-OPERATIVE INQUIRY GROUPS

A novel feature within the context of the research was the process of merging different co-operative inquiries through time. The approach had a number of benefits that provide this approach with the potential for value in research more widely:

- Within the context of my PhD the divisions enabled me to understand how records managers advocated for and influenced the inclusion of RM within the actions;

- The grouping of people of similar disciplines, in this instance RM, enabled those people to focus and explore personal concerns before moving on as part of a bigger initiative;

- The grouping of people with the same constraints (e.g. the International group could not meet) enabled a group dynamic to develop prior to merging with others;

- The development of groups with different perspectives or experience enabled them to work on the same objectives thus exploring a range of perspectives through time before merging for a larger collaboration. Thus, this approach enables additional complexities to be built into the research, including academics to work effectively across disciplines, with practitioners and also with a wider cross segment of society. Within the CMC focused co-operative inquiry there were academics, practitioners, CMC users and interested novices;

- The merger points provided a focus in an otherwise unstructured approach to research. The point of the merger injected new enthusiasm and ideas into shared goals. It was also a time for critical reflection. Thus, the merger processes assisted with sustaining the work over a longer time frame providing a new lease of life into the research.

- The approach enabled a larger number of people to be involved than is traditional within co-operative inquiries. This approach has the potential to be further exploited for the purposes of channelling a wider range of people to work on bigger shared initiatives. The issue of achieving authentic collaboration is discussed in many of the CI accounts (e.g. Marshall and McLean, 1988; Traylen, 1994; Treleaven, 1994). Yet it is difficult to engage large numbers of people to work together and the division of labour in this manner could be hugely beneficial.

A particular problem noted within the context of action research is the intensive labour requirements it generates. In moving through the cycles of the research a huge amount of data is generated. It is noted that writing up action research is problematic because of the large amounts of data gathered (Markus and Lee, 1999, and Deluca, Gallivan and Kock, 2008). Deluca, Gallivan and Kock (2008, p.81) highlight that:

"One reason for the difficulty in publishing AR journal articles is that AR studies tend to amass large amounts of primarily qualitative data, multiplied for each cycle, ushering articles to unwieldy lengths."

Pawluch (2009, p.324) highlights, "the possibilities of getting lost in the data". Running multiple inquiries in tandem further complicates the amount of data generation and the process of analysis. I would contend that data management and analysis is an area in which a dedicated researcher within the inquiry should take a lead role. However, as Kuhn (2012, p.139) highlights, "no data is innocent" and therefore some input and oversight by the co-researchers is one of the strengths provided by the co-operative inquiry process.

In my own design, I acted as an administrator and link between the groups. Within the PhD context this was important. However, in other studies it would be possible and beneficial to have separate inquiries each with their own assigned administrator. Within my own research a huge amount of the basic parts of the project administration fell to me. This has proven the biggest reason why the co-operative inquiry work has temporarily halted whilst I completed the writing of my PhD. Whilst co-operative inquiries should be democratic this does not necessarily negate the potential for different input and roles at different times within a project.

8.5 EXPLORING ENGAGEMENT

The title of this PhD is "an autoethnography exploring the engagement of RM through a CMC focused co-operative inquiry". The co-operative inquiry provided a space in which it was possible for me to consider the value and understanding of RM principles and practice from a range of stakeholder perspectives and thus their engagement with RM.

As such I was able to see how RM concepts were embedded into the actions, how the RM co-researchers engaged with and advocated for RM concepts and how the user co-researchers engaged with and responded to RM principles and practice. Central to this exploration was the process of 'engagement' which Hartnett (2011, p.16) summarises based on the wider academic literature:

"engagement is a paradigm for change' (Axelrod, 2001, p.191), 'the art of bringing people back together' (Block, 2000, p.248), 'a journey of sensing and learning' (Buckingham,

2005)...in summary, engagement is variously seen in the literature as a paradigm, a journey, a relationship, a philosophy, a process and art".

Within the context of building communities of practice, Wenger (1998) describes the role of engagement as a key dimension:

"engagement is a dimension of a community of practice that involves processes of community building."

In addition, within the CMC context, McMaster (2004, pp.165-178) defines engagement as the "process of communication". I believe that engagement encapsulates the concept of human relationship building across communities and fostering the interactions of those individuals and communities with particular social constructions. Engagement implies a positive and potentially binding commitment to the people and processes with which one connects. In contrast, social constructions, such as RM and records, can have no validity or reality if society disengages or disconnects with those same constructs.

Within the context of the co-operative inquiry, I would contend that the inquiry provided a process for multiple stakeholders to engage with one another's concerns through focusing on CMC. CMC had a reality for each of the co-researchers, which was sometimes overlapping, aligning or at times conflicting. However, the inquiry acted as a mechanism for dialogue and action, building understanding and evolving thinking through time. The complexity of CMC provided a space for records managers to discuss RM concerns and issues. Within this context, records managers (from practice and academia) delivered RM principles and practice into the design of CMC actions, working with others to influence and engage RM into the process as a whole. The process proved that RM is valid and valued by others as part of bigger agendas. Through working together on CMC actions with records managers as co-researchers RM processes were naturally embedded into the CMC actions and outputs as appropriate. For example,

i. Within the RM UK group's third action they designed a film where RM was an integrated process within working life.
ii. The User UK group's communication timelines incorporated recordkeeping/RM values in respect of the evolution of communication.

iii. Within the UK group's first action the creation of a checklist of opportunities and risks for CMC engagement had embedded RM components and also user perspectives to thus make the tool valuable and relevant to organisations and users (see Appendix 2.13). It should be noted that when the users in the UK context worked alone then RM was not an incorporated part of the group's solution. Equally when the records managers within the UK group worked alone they failed to sufficiently take into account user requirements in the outputs they developed. In this context the RM UK group's earlier iteration of the checklist in its first and sixth actions were noted as less productive as an output because only the negative aspects of CMC were successfully captured (see Appendix 2.4).

iv. Within the International group, the development of a Ning Protocol incorporated aspects of RM to ensure that Ning information was retained/recorded and managed through time (see Appendix 2.9). The natural incorporation of RM within the protocol on using Ning proved to be productive in engaging wider Ning users with RM concepts as this was one of the parts of the protocol which was highlighted as being the most helpful.

v. The Communication Architecture Toolkit, which in part is still in production but formed the Whole group Actions as at Action 1, 4 and looking forwards, capitalised on earlier learning and incorporated RM within the bigger holistic picture (see Appendix 2.20).

Overall RM was successfully engaged and the message of records managers heeded when they worked together with CMC as a mediating artefact. Sapsed and Salter (2004,p.1200) assert,

> "mediating artefacts have interpretive flexibility and can be an important means of achieving collaboration, promoting the sharing of knowledge between diverse groups."

In contrast, when the records managers raised RM in isolation, e.g. to understand what drives RM as a theoretical debate (see the Whole group Action 3), then the non-records managers were less willing to engage with the concepts but rather wanted to defer RM to 'expert records managers' and not to engage in any sense with the process. It is important to note that there was valuable learning when the records managers discussed RM concepts in detail and therefore there does need to also be space for expert discussion as well as cross-disciplinary debate. In addition, for records managers to be involved in disseminating RM into the bigger information picture, the value of records managers needs to be understood in order for them to be invited to the table in the first place. It was also important to note that in the context of fostering the conditions for engagement and

discussion it was the linguists that provided a powerful dynamic, although they might not normally be considered within the context valuable contributors to IS projects.

8.6 CHAPTER CONCLUSION ON THE RESEARCH PROCESS

The impact of the co-operative inquiry was in some areas anecdotal (potentially offering areas that required further exploration) but in other areas the impact was more concrete and immediate resulting in more definitive research data, conference papers and the production of practical outputs.

Each co-operative inquirer recorded the research benefits they felt the research had delivered throughout the process as a whole. The benefits of the inquiry from personal perspectives were wide ranging including:

- New learning in CMC use;
- Learning about research per se, new methodologies and methods. In particular an appreciation was built in regards to the value of quantitative and qualitative methods, assisted by the contrasting perspectives of the co-researchers.
- Learning about RM with some co-researchers extending their learning beyond the research;
- Learning across disciplines and practice;
- Learning on an international level;
- Building new networks. Some of the co-researchers subsequently collaborated together on other projects (in 6 cases). In addition one of the concepts (the Cynefin Framework) used in the co-operative inquiry were then used for the AC+erm project (see *www.northumbria.ac.uk/AC+erm)*.

91% of the co-researchers recorded that the project had exceeded their expectations. Within a co-operative inquiry the reality is that the project is driven by those involved who thus shape and determine whether their own expectations are met. In this way it is more likely that the experience of research will be positive than for subjects of research projects. In addition, the flexible nature of the project makes it unpredictable but equally capable of fostering complex collaboration which can exceed individual expectations.

Some of the outputs and impact of the co-operative inquiry research have yet to be fully delivered and are still progressing, (e.g. website delivery, a completed Communication Architecture toolkit, a book contract with Facet). However, although the work has been delayed by my own problems the findings in regard to CMC remain relevant and have not yet been published by others.

In short, I would defend the value of the interwoven delivery of the autoethnographic PhD in conjunction with the co-operative inquiry framework. I would stress the spiralling nature of a co-operative inquiry and its ability to be flexible, incorporating mixed methods and practice, and to act as a framework for building engagement and collaboration across communities. Within this context, CMC acted as a mechanism to ensure that the records managers cooperated with users taking into account their requirements and conversely the users did embed RM processes as required into the practical outputs, culminating in the Communication Architecture Toolkit (see Appendix 2.20).

CHAPTER NINE

REFLECTING ON THE ENGAGEMENT OF RM WITHIN THE INQUIRY

"I recently went to a new doctor and noticed he was located in the Professional Building. I felt better right away" George Carlin, Undated.

"In theory, theory and practice are the same. In practice, they are not." Albert Einstein, Undated.

9.1 INTRODUCTION

The central theme of this thesis is how RM can be engaged exploring this through the vehicle of a CMC focused co-operative inquiry. Within this context I have set out how CMC was able to act as a mediating artefact which enabled records managers to engage with others and deliver RM processes and learning into actions. This chapter looks in detail at the way in which RM was delivered and the particular RM learning that emerged for the RM community. Central to the reality of RM constructions are the people who create RM from a range of perspectives and roles; as such people also sat at the heart of the co-operative inquiry which the PhD research was analysing. Therefore, in the first instance, I have set out my findings in respect of the human RM journey before drilling down into the findings in regards to RM principles and practice.

9.2 RM: THE HUMAN FACTOR

This section considers my exploration, observations and findings in regards to the records managers responsible for the delivery of RM and the wider user communities required to engage with RM. It considers how individuals within this context are bound together or divided.

9.2.1 UK Records Managers: an isolated community of practice?

The initial co-operative inquiry processes confirmed my prior assumption that records managers within the UK form a community of practice. The RM UK co-researchers who came to the research demonstrated that they held cohesive RM viewpoints and conformed to the three dimensions of a community of practice as articulated by Wenger (1998):

1. "what it is about - its joint enterprise as understood and continually renegotiated by its members";

2. "How it functions - mutual engagement that bind members together into a social entity";

3. "What capability it has produced – the shared repertoire of communal resources (routines, sensibilities, artefacts, vocabulary, styles, etc.) that members have developed over time".

The initial questionnaires completed on signing up to the research (see Appendices 1.10 and 1.11), together with the first phases of the action research diagnosing process, confirmed that there was a shared view of a joint RM enterprise, shared RM vocabulary (shaped initially from the fairly standard training/educational routes which each co-researcher had taken into RM as a practice) and a shared social dynamic (the co-researchers were part of the same listservs and associations) (refer to Chapter 5, pp.115-124). In addition, within the diagnosing process for the first actions, the co-researchers demonstrated that they had shared perspectives on the aims and place of RM in the world and the problems and challenges which CMC was seen to present to the smooth delivery of RM within the organisational context (see Appendix 2.3 for coding of this phase). Furthermore, whilst the co-operative inquiry did not automatically have RM as a prescribed part of the research focus, the members unanimously agreed to ensure RM was embedded as the primary focus of each action. The co-researchers were keen to align to the PhD process in terms of understanding what engages users with RM. On an individual level they each related to my own prior concerns, which demonstrated that I was also a part of this UK community.

Whilst RM was a shared and binding focus for the co-researchers, it is important that at a deep level there were subtly different but important RM viewpoints. Within the diagnosing process embedded in the first action cycle, the RM UK co-researchers seemed to quickly reach a data saturation point. However, through in-depth discussion over time individuals articulated, developed and shifted to alternative and sometimes divergent viewpoints. Wenger (1998) makes the point that perspectives within a community of practice need not be static but should be "continually renegotiated". The shifts in viewpoints in the research happened and emerged through time. For example, in the third cycle when developing a film to engage users the priority for RM was agreed to be information access and sharing, which was a shift from the initial position that RM was about capturing and classifying information for legal accountability. It resulted in rethinking the design of earlier outputs. In the fifth action cycle, where the co-researchers really focused on the symbolism of a record and

the machinery of RM, at one point the definition and value of a record were rejected by many within the group. However, through the insistence of one co-researcher (R17) prolonging the discussions, further thinking meant that it was re-adopted and then redefined.

In considering the record as 'the sacred symbol' of RM it is important to reflect on how readily the RM co-researchers were to almost reject this key concept entirely but then to engage with ideas to reshape its definition and significance. Gallivan and Srite (2005, p.298) argue that individuals have cultural layers which will shift through time and alter dependent upon how deeply certain cultural beliefs are held. I was surprised with how readily each co-researcher was willing to shift his/her view on what at first appeared to be fundamental and deep rooted RM tenets. Those people within the co-operative inquiry who were archivists as well as records managers were slower to shift their viewpoints away from the traditional ideas of a record. This may reflect that the underpinning concepts of a record have been generated from decades of largely archival rather than RM discussion (e.g. the archival literature on the nature and concept of a record includes articles from Bearman, 1994; Cook, 1994; Duranti and MacNeil, 1996; MacNeil, 2000; Lemieux, 2001; Yeo, 2007a, 2007b, 2008 and 2011). As someone who has trained as both an archivist and records manager, I was also steeped in archival theory. However, the concept of a record as defined by the international RM standard (ISO, 2001a) is a very recent innovation dating back to only 2001 and therefore it has been negotiated.

The co-researchers there was not a divisive separation between records managers and archivists; in this instance all of the archivists taking part were also to some extent records managers. The 'pure' records managers were potentially more focused on objectives disconnected to archival concerns but equally did not dismiss the role of archivists and archives in certain contexts. However, across the co-researchers, the majority view was that there would be more occasions when pure RM concerns, unlinked to any archival considerations, would be the driver for RM generally within organisations. Within the literature the link between RM and the archival domain has to some extent been presented as an 'either or' scenario, in other words either records managers must engage with archival concerns (Duranti, 2010) or entirely disengage (Pemberton, 1998c). In reality the sense was that the relationship was far more complicated and that the links between the two domains would overlap or link in potentially new ways, given the concept of new roles such as 'digital archivists' but that increasingly records managers, it was hoped, would gain a more comparable status to that of archivists both in terms of the link between the two domains and within the perception of the wider public.

In addition, it is important to note that the RM UK co-researchers were keen to understand what engages users with RM theory and practice. However, at the merger points in both instances when merging with the User UK co-researchers and then the international co-researchers, no one turned up in person or online for the meetings. Whilst many individuals presented valid reasons this did not demonstrate a willingness to conversely engage with the concerns of others; although it must be noted that latterly the RM UK co-researchers did work well and engage across the group. However, I would reflect on the tenth headline finding by McLeod, Childs and Hardiman (2011) in a large scale international records management research project that:

"records professionals may be part of the problem as well as part of the solution".

In this context McLeod, Childs and Hardiman (2011) describe the problems for RM if records managers are isolated. Within the wider UK storytelling event (Whole group Action 5), whereby the participants mapped out the strengths and weaknesses of the characteristics of records managers, there was an acceptance that a records manager could be a facilitator (characterised as 'Rodin e-thinker') or a block for progress (characterised as 'Mrs Inma Day' i.e. 'in my day'). It was also a finding that those engaged in the RM UK profession scored fairly lowly on the Neo-PI test (as defined by John, 1999) within the personality trait for orderliness. The psychology advisors informed me that often those who are naturally less ordered place a greater value on rules, such as those prescribed by records management processes. If the only driver for RM is perceived to be the requirement for orderliness then this might have implications for others engaging with the RM process.

Within the diagnosing and discussions points within the research cycles it was noticeable that a significant percentage of the UK RM co-researchers were initially very action based and slow to engage with the more theoretical discussions. These aspects of the inquiry were initially seen by some of the UK RM co-researchers as "more navel gazing than star gazing", wanting to "get on with the action". Over time this did change, particularly as through reflecting, the flaws within outputs were highlighted and key findings were slowly revealed.

9.2.2 Global perspectives on records managers and RM

A critical personal moment in my journey was the realisation as to just how different the UK based RM experience was from records managers across the globe. Whilst I recognised from the literature that different stages of RM professional development are articulated relating to different countries (e.g. Pemberton 1993, 1996, 1998a and 1998c; Sakuyama, 1993; Stephens, 1999; de Boisdeffre, 2006) my expectation was that within those countries which had the identified components required

to establish communities of practice (e.g. Australia, New Zealand and the USA) there would be similar perceptions and experience of RM implementation to the UK context. Only Moss (2005a) articulates and draws a line in regard to key divisions in global RM theory and practice and separates out those countries defined as anglophone (incorporating the USA and Australia). In contrast to Moss's article, my own research shows that the USA and Australian co-researchers had markedly different perspectives on theory, e.g. divisions between the adoption of the continuum theory over the lifecycle model. However, in working together on the practical outputs this did not cause a division in terms of the application of RM practice. In addition, throughout the process it emerged that there was also a marked contrast between the way in which the UK based records managers viewed the status of records managers and the viewpoints of other global contributors.

I was initially perplexed that in the International group's first action research cycle no one advocated for the role of RM. I took this to mean that the international RM co-researchers were not confident to advocate but, in reality, after discussion the reverse transpired to be the case. When I asked why no one had advocated more strongly for the centrality of RM within the defined action goals it was clear that the international RM co-researchers were eminently confident that RM would be part of the research process as and when appropriate. Thus, within the actions undertaken, RM functions were developed and embedded. For example, within the context of the Ning protocol the co-researchers recognised the important process of managing the site and its content through time. This was achieved with no conflict and little dialogue in regards to the text which was required.

In the USA, the records managers noted that they were confident in the recognition of the need for their role largely because of e-discovery but also because, within the public sector, principles regarding information openness were seen as central to democratic processes. In addition, the strength of ARMA, as a professional body advocating for records managers, was noted. It was noted that in the USA there was a growing need for the expertise of 'digital archivists' which were seen as a strand of professional expertise which straddled the archive and RM domains. Within Australian context there was also a professional confidence based largely upon the successful implementation of RM into public sector practice. However, within the UK the same professional confidence was distinctly lacking.

Throughout the UK based discussions and within the wider records management story telling event, whereby other records managers shared their stories, there was a personal pride and a unanimous commitment to the role of a records manager as a professional. Each person had a humble pride in

their position and yet there was a repeated concern that the role of the records manager was not understood, or recognised, which made the delivery of RM goals more problematic.

However those records managers who had worked overseas but now were employed in the UK had become a part of the UK community of practice burdened with the insecurities that seemed to dog the community about the respect for the records manager's role. As Goleman (1997, p.6) states:

"To belong to a group of any sort, the tacit price of membership is to agree not to notice one's own feelings of uneasiness and misgivings, and certainly not to question anything that challenges the group's way of doing things"

When individual émigrés were specifically asked about this, the points that arose were that there was little opportunity to talk about alternative experiences but more significantly perhaps that it was the 'user' based attitude to RM implementation and practice which presented the challenge rather than a problem from within the profession. It was said that in character, UK workers are 'anarchists'. Thus, someone within the UK will tell you they are doing what they are told, when in reality they are implementing their own systems. In contrast, people within continental Europe and in Australia were seen as rule compliant. Within the co-researchers working in those contexts, it was reported that there was adherence to organisational policies on a range of information management matters, e.g. whether USB sticks could be used or Web 2.0 access through work portals. In the USA, it was noted that whilst people were not always rule compliant they would be up front about any areas of dispute and thus these would be known and open to negotiation without the requirement to monitor an information management system. This potential learning was discussed and agreed by those with experience of working within more than one country, although there was no firm empirical evidence for the assertion. In addition the wider co-researchers accepted this view of their own attitudes to compliance. I63's work has focused on national and organisation cultures and she was influential in aiding the discussions and highlighting relevant studies in this arena, including Hofstede's influential work (see www.geert-hofstede.com/).

If one reviews Hofstede's cultural dimensions (available at www.geert-hofstede.com/) for the three countries under closest scrutiny (Australia, UK and USA) then many of the measured dimensions at a high level appear broadly comparable (see Table 14). However, in comparing these dimensions it is the 'uncertainty avoidance' dimension that appears to deliver the greatest differential in regard to national characteristics.

Table 14: National dimensions measured by Hofstede(2010) for Australia, UK and USA. Available at: http://geert-hofstede.com/countries.html

DIMENSIONS MEASURED Scale 1-120 with 1 being a low score	Australia	UK	USA
Power Distance	36	35	40
Individualism	90	89	91
Masculinity/Femininity	61	66	62
Uncertainty avoidance	51	35	46
Long-term orientation	31	25	29

If one then drills down into Hofstede's explanations for the avoidance of uncertainty in regards to the British character Hofstede (2010) comments are revealing:

"Critical to understanding the British is being able to ''read between the lines'' What is said is not always what is meant...At 35 the UK has a low score on uncertainty avoidance (UAI) which means that as a nation they are quite happy to wake up not knowing what the day brings and they are happy to 'make it up as they go along' changing plans as new information comes to light. As a low UAI country the British are comfortable in ambiguous situations - the term 'muddling through' is a very British way of expressing this. There are generally not too many rules in British society, but those that are there are adhered to (the most famous of which of course the British love of queuing which has also to do with the values of fair play)."

This latter statement implies that the British really need to understand the value of the rules to which they are required to adhere to in order to comply. In addition, it is perhaps wise to be selective as to where there is a value in applying rules and not prescriptively assign rules unnecessarily across all information. In addition, it was noted by the UK co-researchers that the reasons for not using certain Web 2.0 technologies were often not explained and the 'thou shalt not' or 'stick' approach was unhelpful. In this context it is to be noted that the 'stick' is not a tool of engagement. If RM processes were scoped and embedded within organisational processes as appropriate then compliance with these rules would be likely to be better understood and implemented. In addition, this would mean that rather than records managers having separate

policies and procedures they would be working and collaborating with other colleagues, thus widening support and understanding.

Organizational and national culture can significantly influence how people view expertise and information (Leidner and Kayworth, 2006). In Hofstede's dimensions, Australia scores 51 on the Uncertainty Avoidance dimension and Hofstede (2010) notes that Australia:

> "is a fairly pragmatic culture in terms of uncertainty avoidance. This means that both generalists and experts are needed. There is focus on planning."

As RM is a planned process which is delivered through experts and generalists in different contexts this might partly underpin explanations as to why Australians are willing to implement RM in practice.

In drawing on Hofstede's dimensions, it should be noticed that his work has been criticized for being too broad brush, failing to address the complexities of culture and for its construction being based upon a limited pool of participants largely drawn from IBM employees (e.g. see the criticisms of McSweeney, 2002). Hofstede (2002) has vigorously defended himself against these criticisms, however, it is worth considering some attributes of other cultural models.

Straub, Lock and Hill (2001) have developed a model of culture which demonstrates that individuals have cultural layers like an onion (or Shrek the ogre if one is a movie fan!). Gallivan and Srite (2005, p.302) note the impact of different cultures such as organisational cultures, professional cultures and national cultures stating that culture;

> "operates at the individual level to reflect the multiple, complex forces that shape individuals' beliefs and behavior. In this manner, the model [referring to Straub et al, 2001] reflects that culture is a complex set of practices, which are not fixed or monolithic across groups of individuals, but which may be ''contested, temporal, and emergent [citing Kahn, 1989, p.13]."

In looking at potential influences it is important to note that I did not discern any differences between the ways in which people engaged with RM dependent upon their organisational culture; even in the context of the public sector or private enterprise split. The influence of organisational

culture the number of jobs an individual has held and their range of experience are likely to play a factor. It was noted that many of the participants had held a wide range of roles. [28] The fact that there was no discernible influence from within the organisation may itself point to certain issues for the records managers in terms of how they successfully delivered RM. However, in terms of rolling out RM in practice it was unanimously recognised that each organisation would need a bespoke roll out, e.g. the Communication Architecture Toolkit (see Appendix 2.19) specifically mapped out the manner in which organisational requirements would be catered for. However, the strongest influences on individual viewpoints within the context of the research seemed to be in respect of their professional roles (which provided a lot of the knowledge base for each person to come to the research) and national culture, the different national attitudes being revealed over time.

9.2.3 Records Management as a professional role

The UK Records Managers were concerned to discuss the status of RM in as far as it can be deemed to be a profession. In those countries which exhibited greater RM confidence (in particular the USA) there was less concern that this was necessary. Nevertheless the discussion was had. The UK Records Managers therefore discussed this under their group's Actions 2 and 5, then the discussions were widened to the users at the merger point and under Action 3, and then in the whole group under Action 3. There is no one definition of what it means to be a professional, although there are jobs which across the globe are recognised as professional occupations (e.g. doctors or lawyers). In the first instance Webster's (1999) article on RM as a profession was flagged in the RM UK group but it was decided to step back and look at the wider literature on what creates professional cultures before considering Webster's article and perspectives. A range of professional definitions were identified within the literature and discussed including those set out by Blackler, Reed and Whitaker (1993), Blackler (1995) Scarborough (1996 and 1999), Korczynski et al (2000), and Noon and Blyton (2007). In particular, the co-researchers discussed Noon and Blyton's (2007) distinctions between 'liberal independent professionals' and 'organisational professionals' as paraphrased below:

A. Liberal independent professionals, for example doctors, architects and lawyers characterised by having:
   1. an occupational/knowledge/skill base
   2. a reliance on embrained and encoded knowledge

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[28] Within this context the UK records managers who had participated had double the turnover of the national statistics, the UK user co-researchers had a turnover which conformed to national statistics and the wider international co-researchers had a turnover of half that of the UK user co-researchers (see Chapter 4, p.84). Within the international context there were many more people working in academia and if these people are excluded then the statistic is more comparable.

3. traditionally operating autonomously from organisations by controlling the access to the education and training required to qualify and practice. By enacting occupational closure (through the social closure processes) they have been able to establish a monopoly position over their work and have gained public recognition of their expertise

B. Organisational professionals – for example managers, administrators and technicians characterised by having:
1. An organisational specific (localised knowledge) base;
2. A reliance on embedded and encultured knowledge;
3. At best partial occupational closure through establishing educational and bureaucratic credentials within the organisation. This produces organisational recognition and gives them powerful positions within technical and status hierarchies.

As noted in the previous section, it was recognised by the records managers that it was critical to understand the organisation in which they were working, but it was not seen as the main influence for their knowledge and skills. As such, definition B was in the end rejected. The discussions surrounding the definition of 'technical expertise' brought in concepts of 'knowledge workers'. The records manager co-researchers saw their role as at a higher level than that of a 'knowledge worker' without professional status as identified by Blackler (1995) and Frenkel at al (1999). This may in part have been due to the fact that there was a desire for the recognition that 'professional status' might convey. In discussing these categorisations, it was felt that the key skills and knowledge held by records managers fell into 'categorisation A' but there was no monopoly on the service nor autonomous public recognition. Hurley (2004) and Bailey (2007b) have both highlighted, as Bailey eloquently summarises, "you don't have to be qualified to be a records manager". However, whilst this is true, this issue does not create a clear cut distinction between a professional and non-professional. For example, within the context of HR, an HR Director does not legally need a qualification to practice but it is likely that, in for example a UK context, large employers will only recruit someone with a recognised membership and qualifications from the Chartered Institute of Personnel Development (CIPD) who describe their members as 'professionals'. In respect of SMEs, there are many organisations which offer a professional outsourced HR SME service. Thus HR might be deemed to be a professional service although there is no strict monopoly on the supply chain. Within the context of archivists, whilst organisations may employ anyone as an archivist, particularly in the public sector a postgraduate archival qualification has become a de facto standard. You do not need to be formally qualified to gain employment as a records manager but it is critical to understand the extent to which employers will only hire qualified records managers. In this context a common position for many of the co-researchers was that they had gained their qualifications only after being given a records management position. In the USA context, it was noted that there would

be strict job descriptions that would require evidence that an individual was qualified to deliver the role required. However, the extent to which RM training and qualifications are recognised by organisations is a key issue in regards to the status of records managers.

A further issue for records managers is the extent to which an RM service can or should be separated from other areas of information service delivery. The co-researchers recognised that it was problematic to draw strict lines around RM activity and service delivered by the records manager, related colleagues and the customer/information creator or user. It was noted by the co-researchers that it would be, "meaningless to separate RM off from the broader information context" and that "RM has to influence widely and create allies". This was particularly the case because users are part of the solution and therefore do need to be engaged. However, it was felt that there were strategic components of RM which should be delivered by a professional records manager, with aligned professionals also delivering defined parts of the strategic service (e.g. IT colleagues).

Webster's (1999) article on records managers was then reviewed. This did not change the perspectives but it was noted that Webster closely ties the professional requirements to the need for a research discipline. A number of co-researchers felt that if there was more RM research with a greater number of projects with practical outputs, including software engineering, in addition to qualitative research, the status of RM might be significantly enhanced. In addition, there was support from some co-researchers for the concept of the practitioner based doctorates which might foster this link and make the point within organisations that RM operates at a significant theoretical as well as practical level.

The professional definition the UK records managers most closely aligned to was Noon and Blyton's (2007, p.221). This was the definition that was taken to the users and then further discussed with the International group. At this stage, it was noted that all the items in Noon and Blyton's definition were required. In addition there were other requirements and these are noted in square brackets below together with Noon and Blyton's criteria (2007, p.221):

1. High proportion of theoretical knowledge [to which I would add the requirement for research]

2. Lengthy period of education and training

3. Peer evaluation or competence

4. Professional association

5. Increased international dialogue

6. Agreed codes of conduct

7. [Recognition by those who employ records managers that there is a need to hire a person with a professional qualification].

In the last three areas it was felt that records managers still have some work to do in order to develop their status. In addition, in talking across the co-researchers it was not agreed as to where the divisions lay between archivists, knowledge managers and records managers in particular. It was also acknowledged that there was a huge amount to learn about more widely from IS theorists, IT, librarians, psychologists and linguists. It would have been valuable to have this discussion with the other professions but the knowledge managers were not keen to be put in the spotlight as there had been a lot of tension in regards to wider users engaging with knowledge management concerns.

9.2.4 Engaging Users with RM

It was understood by the co-researchers that my PhD was focused on RM engagement with the co-operative inquiry as a vehicle. In reality, as so many participants were records managers, RM was embedded into the inquiry's knowledge base and furthermore the RM UK co-researchers made it an explicit part of their own research objectives. Thus RM became integrated into the process. However, as a focused discussion point, one user co-researcher accurately summed up the feeling of many about RM:

> "necessary evil to be courteously considered rather than one which I enthusiastically embrace. I understand its importance and place but I am more than happy to let the experts deal with this".

This therefore had a bearing in respect of also discussing the wider professions. In respect of the fact that CMCs are captured conversations which would have once been carried by individuals, there would have potentially been more to learn from the knowledge managers within the research. However, there had been a divisive discussion early on which had indicated that knowledge managers try and take knowledge from individuals and control that knowledge. For this reason the knowledge managers did not want the spotlight turned on them. This view of records managers did not seem to exist as the records were seen as organisational assets. However, as work and home boundaries become blurred it is possible that there will be animosity in the future. In addition, it

would have been helpful to consider how the information systems discipline straddles a range of roles in practice and how it might align to RM.

The user co-researchers' understanding of the importance of RM emerged (particularly at the merger points) throughout the process. However, for the most part the users were content to leave the RM process to the records managers as the experts. After discussions it was agreed that in this context records managers were expected to, and indeed must, consult in regards to their decisions and the requirements that decisions might impose upon users. The users were more willing to shoulder some of the process burden if they could see tangible returns, e.g. being allowed to use Smartphones or Web 2.0 sites. This relates to concepts of adoption theory, in which adopters rationally evaluate innovations in terms of usefulness and effort (Davis, Bagozzi, and Warshaw, 1989). It was felt that the records managers had been too focused on what could not be done in order to meet legislative requirements rather than on what could be done to better enable the business enterprise. This may tie in with the fact that at the start of the inquiry none of the records managers had seen their role as a 'service' or customer led enterprise. As Bradley (2006, p.23) notes there is a:

> "relationship continuum, at the one end of which lies coercion and compliance and at the other, collaboration and true engagement."

Taking the PhD title it was expressed by the co-researchers that RM should be a process of true 'engagement' and that actually the benefits of "better working" which would engage users had been largely ignored in favour of legislative compliance and business efficiencies which were perhaps more niche top level management concerns. These relates to McBain's (2007) drivers for engagement. McBain (2007, p.18-19) whereby engagement must be in the 'vision and brand' if one is to deliver on organisational concerns and directives instead simply a commitment to a team or role. In part therefore the delivery of RM for the organisation then relates to a buy in to the overall vision as well as the value of RM on a lower more personal level.

Engagement is driven by concepts of meaningfulness, openness, trust, justice and safety. Understanding in terms of emotional concepts were really developed and delivered within the context of the co-operative inquiry by the involvement of psychologists and linguists. It was noted by a number of the co-researchers how much they had learned from the input of the linguists within the process, who had a deep level of understanding in terms of how engagement can be developed.

The linguists brought to the attention of the co-researchers ideas surrounding 'management rapport'. Within the context of building concepts of what good communication looked like online. 'Management rapport' was one area which was considered in depth. Campbell and Davis (2006, p.43) note:

> "Rapport has two important facets: enjoyable interactions and personal connection. Increasing levels of rapport builds a deeper sense of loyalty in customers and inspires a greater amount of information disclosure."

Many RM concepts have developed from archival concerns which have focused on the relationship between the archivists and the historian. As such the archivist has delivered records with authenticity and integrity which the historian can trust which, conversely, builds the historians' trust in the role and value of the archivist. In an RM context the records managers have perhaps focused too heavily on the requirements of the 'organisation' as an entity rather than individual requirements. Records managers need to turn to the needs of their user communities and manage rapport, building engagement through understanding and mutually shared goals. In actually building this understanding the co-operative inquiry process proved very effective, as RM was an embedded part of the outputs discussed in context. Through actions focused on CMC as outputs were produced which embedded RM processes culminating within the Communication Architecture Toolkit (see Appendix 2.20).

9.3 RM PRINCIPLES AND PRACTICE

9.3.1 Non-negotiable concepts?

This PhD had been exploring the engagement of RM through a CMC focused co-operative inquiry. As such I was able to consider how RM engages with users and how it was understood. Geertz (1973, p.362) defined the study of cultures as the process of understanding the 'sacred symbols':

> "the machinery, the individual and groups of individuals, employ to orientate themselves in worlds otherwise opaque".

For Geertz (1957, 1969, 1973 and 1983) at the heart of this process was the identification and understanding of 'sacred symbols' which generate an 'ethos' and 'reality' as to appropriate behaviours for a particular cultural group. At the start of this PhD process my own view was that for

records managers, the 'record' could be defined as the sacred symbol and goal of professional order and good practice. 'Good records' sit at the heart of the international RM standards (ISO, 2001a, p.7) and all the processes within this set of standards (ISO 2001a, 2001b, 2011a and 2011b) are aimed at the creation, capture and management of 'good records'. However, this symbol (the record) and the machinery (RM processes) are social constructions which are the product of perceived human needs and subsequent human engineering.

Taking a social constructionist approach and following Geertz (1957, 1969, 1973 and 1983), my own view at the start was that for records managers, the 'record' may be defined as the sacred symbol and goal of professional order and good practice. However, I recognised through the process that records managers were not necessarily wedded to the record concept and that it was from the archival domain (which I too hailed from) that the concept was writ large. Nevertheless in terms of RM standards and practice, the record is the only really prescriptive requirement.

'Good records' sit at the heart of the international RM standards (ISO, 2001a, p.7) and all the processes within this set of standards (ISO 2001a, 2001b, 2011a and 2011b) are aimed at the creation, capture and management of 'good records'. A record, as defined by the international RM standard, must have content, a medium/carrier and context (ISO 2001a, p.6). Context transforms information objects, such as documents, into records. However the record is further transformed into a 'good record' by the four essential and, within the terms of the RM international standard, non-negotiable characteristics of 'authenticity', 'reliability', 'integrity' and 'useability' (ISO, 2001a, p.7). The systems underpinning the delivery of the record whilst listed are not prescriptively described.

Within the context of the international RM standard, the 'symbolism' of a record is developed from a process of shared cultural understanding and subsequent evolution through further interaction with the 'sacred symbol'. Crotty (1998, p.72) citing Blumer (1969, p.5) defines three assumptions regarding the influences underpinning the development and interactions of humans to symbols:

1. " that human beings act toward things on the basis of the meanings that these things have for them";
2. "that the meaning of such things is derived from, and arises out of, the social interaction that one has with one's fellows";

3. "that these meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things he encounters".

The meanings attributed to 'good records', as opposed to records per se, have been derived from discussions not across society but rather as the dialogue of professional pockets within the RM and archival domain who have developed theories and meanings surrounding the makeup of a record which can be traced largely through the archival literature (e.g. Bearman, 1994; Cook, 1994; Duranti and MacNeil, 1996; MacNeil, 2000; Lemieux, 2001). The culmination of these articles for records managers is the agreed requirements set out in the international RM standard (ISO 2001a, 2001b, 2011a and 2011b). As Geertz (1973) notes, the characteristics and reality of symbols are dependent upon the participants that construct their reality. Therefore, the symbol of the 'record' and 'good record' can only have wider validity if employees within organisations, and members of society more widely, are convinced by the validity of the record construct and engage with the requirements prescribed to engineer a 'good record'.

At the time of the release of the first parts of the international RM standards (ISO, 2001a and 2001b), Cox and Harris, within the archival literature, both argued that the concept of a record was understood by wider society. Cox (2001, p.1) stated that "most people have a sense about what makes something a record" and Harris (2001a, p. 39) observed that the "concept of a 'record' has a self-evident meaning". However, there is no evidence or research into the wider public's view of what constitutes a 'record' or a 'good record'. In his writings on a record, Yeo (2010, p.8) takes issue specifically with Cox's and Harris's statements. Beyond the archival/RM literature the only other arena in which the concept of an evidential record is tested and discussed is within a legal setting. In this context, as discussed in Chapter 2 (pp.50-51), the bar for an evidential record is often much lower than that defined by the international RM standard as a 'good record' (ISO, 2001a).

At the outset of the co-operative inquiry process, most of the wider users had not given the concept of a record much, if any, consideration. The data collected from the original questionnaires (see Appendix 1.11 and 1.12), which initiated participation in the co-operative inquiry, demonstrated an understanding of a record which varied widely. In the later records management storytelling event, which had records management representatives from outside the co-operative inquiry, the experience of all present was that colleagues at all levels within their particular organisation often had no understanding of what was deemed to constitute a record (refer to Whole group Action 5). Within the context of discussions surrounding the four characteristics which ensured the delivery of

a 'good record', these were not automatically understood by the user co-researchers and even some of the RM co-researchers could not easily explain the meanings of the four key record characteristics. In considering the record as 'the sacred symbol' of RM, the RM co-researchers were willing and eager to engage with the concept of reshaping the definition of a record. As noted in the previous sections, Gallivan and Srite (2005, pp.298) argue that individuals have cultural layers which will shift through time and alter dependent upon how deeply certain cultural beliefs are held. This may therefore reflect that the underpinning concepts of a record have been generated from decades of archival rather than RM discussion. To some extent it may also be as a result of the recognition that even since the international RM standards' inception in 2001, technology has altered the nature of a record further away from a paper paradigm. Prior to digital records, information was fixed in some form and if it needed to be used again it would be fixed again in a new record form. The information and record components were potentially less distinguishable and concepts of fixity were an important part of discussions in RM UK group's Action 5 and then in the discussions for the UK group Actions 1 and 3, and the Whole group Action 2 (where the concept of a communication affinity model provoked discussions on living and dead information). A significant conclusion within the research discussions by both the records manager and user co-researchers was that information must be respected as important potentially over and above records. This is not a new viewpoint. As far back as 1984 Penn (p.10) makes the point when discussing the USA Government's administrative processes which were driven by the National Archives and Records Administration's desire for the creation of archival records over and above the production of information with quality, is a classic case of the tail wagging the dog and losing perspective on priorities:

> "an appalling unawareness of the fact that it is the information in the records that is important, and not the medium in which the information is contained...The entire arrangement was a textbook case of functional misalignment. The tail was wagging the dog."
> (Penn, 1984, p.10)

This concept of the 'tail wagging the dog' was used by the RM UK group in the third action cycle when discussing RM priorities for the film series. The failure to acknowledge the value of information over and above records was perceived by the RM UK co-researchers to be key to the failure of so many UK EDRM system projects. In addition, it was noted that records managers and archivists had imposed their views rather than collaborating on system requirements. The central point that was derived from all these discussions was that it was information that was the asset in the first instance but that in some instances there would be a need to consider the requirement for

ensuring processes to deliver record characteristics. Thus it was suggested, in the RM UK group Action 5, that the term RM would be better defined as 'information and records management'. However equally, it was noted that 'records management' as a term does align to a unique community of practice and set of training, which is important given that there will be others within a wider information management melting pot[29]. Perhaps more importantly than the semantics of names was the concept that information is the central focus for management, but equally, in line with the wider co-researchers, that there was/is a need to think about the process by which information is 'recorded' and what this means or ought to mean. There was an acceptance by the co-researchers that there was a value in the concept of a record's characteristics, albeit that the definition and interpretation, as stated within the international RM standard, required some amendments (See RM UK group Actions 3 and 5, UK group Actions 1 and 3, and Whole group Actions 2, 3, 4 and 5). A key part of the development of the requirements for a record emerged from the discussions relating to CMC in relationship to RM, and considerations of communication and RM through time more widely.

9.3.2 Understanding communication and records through time

As a social constructionist and history graduate I feel it is important to look at the ways in which societies have created and used records through time given that they are a social construction which can be reconstructed in new ways. If the way in which information is naturally created shifts, such as in the instance of CMC, then this may impact upon concepts as to how a record should be constructed. This view of history was also a part of one of the co-operative inquiry process actions; the User UK group developed workshops which required different participants to work back through time in order to try and understand how and why communication had evolved to its current state (refer to User UK Actions 2 and 3, pp. 153-158). The co-researchers developed timelines which indicated the interlinked role between communication and record creation/keeping through time within different societal contexts and dependent upon the tools available to particular societies. In reviewing the evolution of a record in this way it was clear that there is a basic requirement for humans to exchange information and learning and to be able to have shared narratives, stories and memories. 'Talk' was seen as the natural form of information exchange and structured information the result of a technical solution needed to access information over time. CMC and search engines

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[29] During the course of the research the UK Records Management Society changed its name to the Information and Records Management Society. A number of the co-researchers were involved in the discussions concerning the name change and indicated that the Continued Communication research discussions had proved useful. In addition it should be noted that Northumbria University also changed the name of its RM MSc qualification to also incorporate information within the title. I was involved in these discussions and two additional co-researchers also input. We were all influenced by our discussions within the co-operative inquiry, although ultimately the decision was made from outside the inquiry process.

had bridged the gap between access needs through time and the human desire to exchange information more naturally. However, this would not necessarily remove the need for 'records' or for 'records and information management'.
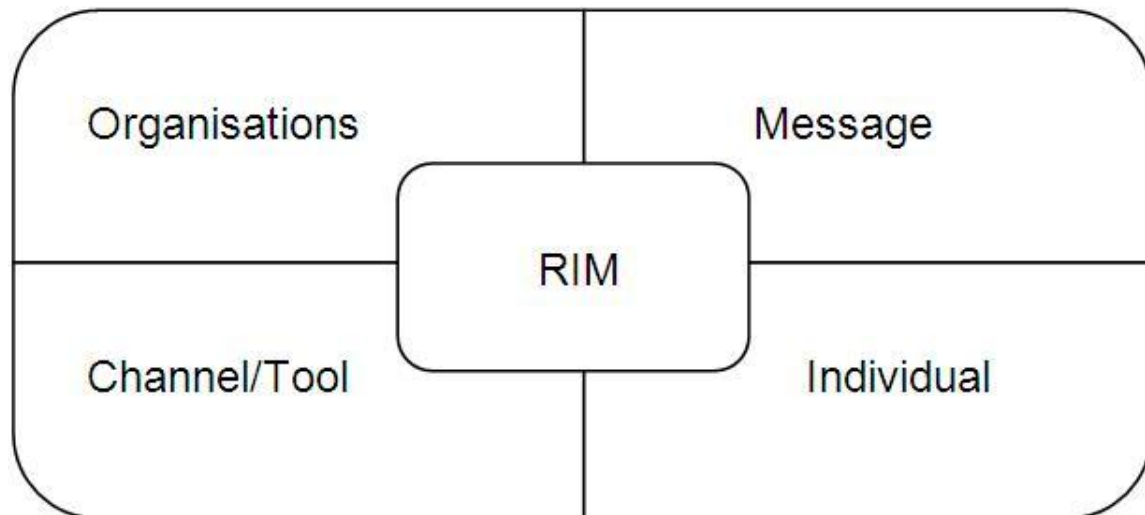
Figure 35: Representation of the components of computer mediated communication across which RIM must engage Reproduced from Brown, Demb and Lomas, 2009.

Within the CMC context above, a record and records and information management were seen to have an overlay across the communication components denoted in figure 35 above.

To strip back the definition of a record into its simplest potential form a record could be defined as 'captured information'[30]. Across a range of dictionaries it is agreed that the origins of a record stem from Old French and date back to the role of a 'recorder' who assisted in the capture of oral information. Thus, the 'recorder' ensured that information could be 'called to mind'.[31] The French system of a 'recorder' came into existence to put down in writing agreed oral testimonies given under oath. In Latin 'recordari' means 'to remember'. Oral records were created and held by communities through agreeing and thus capturing shared narratives passed on through time, as discussed by Wareham (2002) in her account of the Pacific Island's oral recordkeeping. The alternative to this form of handing down agreed oral accounts was to produce and maintain a record within a fixed physical format, e.g. wooden tally sticks or paper sales ledgers. In the case of physical

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[30] The dictionary definition of a record is not consistent across dictionaries. The simplest form is set out as "an account, as of information or facts, set down especially in writing as a means of preserving knowledge" (see Farlax online dictionary, 2012, available at: http://www.thefreedictionary.com/record).

[31] Ironically in French no word for 'record' exists. The closest equivalent term is a document. In the archival literature it is contended that 'documents' may not always have the context to ensure their transformation into an accepted record.

records, systems were often put in place for retaining the record with a given authority (e.g. the Roman aerarium), albeit that multiple copies might be retained. Wareham (2002) argues that written systems of recordkeeping have been a process of capturing information for the benefit of enforcing hierarchical power structures. Thus in the case of the 'recorder' often it was property ownership which was being captured and agreed. In the case of the Pacific Islands, Wareham (2002) notes that the written records of the Colonialists overshadowed the native oral records and indeed were forced on the indigenous population, thus creating distrust in written systems of recordkeeping. This conflict between communities' oral records and authorities' records of power was part of the discussions of the Whole group in Action 3. Co-researchers who had experience of working with a range of Asian cultures whereby there was distrust of recorded information. For example, I81 noted that in Thailand, email has a poor adoption rate as there is a general fear and suspicion in regards to how CMC might be used against an individual. By creating oral records in this context knowledge was captured but responsibility for maintaining this record shared as a community. R17 noted that this principle exists in the UK Cabinet whereby there is a concept that all decisions are recorded as a collective responsibility. In a Western context there have been power shifts through time in regards to the balance of power relating to the capture and sharing of information. Certainly the Domesday book, created by the agents of William the Conqueror, was seen as a symbol of power which would hold individuals in England to account to the King. However, over time the archival literature presents that it is through recordkeeping that public authorities have been held to account and democracy delivered (e.g. Harris, 2002; Ketelaar, 2002; Toole, 2002; Meijer, 2003 and Cox, 2005). As the former UK Information Commissioner noted the balance of power over information is critical if we are not to "sleepwalk into a Big Brother Society" (Thomas, 2006).

In considering CMC within the context of records, it was noted by the co-researchers (in International group, Action 5) that CMC was a tool which has the capacity to straddle oral and physical domains as it has the potential to mimic oral records and provide the benefits of physical capture. CMC by its nature is captured information. That information has a reality similar to an oral record in that it can set out narratives captured as conversations through time (either as recorded dialogue or in written text) and thus agreed through exchanges. These exchanges can be anonymised, for example through a wiki, or traced to individuals or positions. However, human exchange can require agreement and misunderstandings are potentially possible. This was part of the problem of having meaningful knowledge sharing as noted within the International group's Action 5. Oral records overcome this by being agreed community narratives. Equally within a CMC

context there is a value in confirming meaning within the exchanges and this can be more complex across global communities. Simple discussions across the co-researchers revealed very basic misunderstandings (such as the different understanding in terms of what half past the hour meant in real time, or locations such as first floor) as well as potentially more serious moments of tension (such as differences in humour or a sense of respect for differing viewpoints). Shared meaning is a central part of underpinning the reliability and meaning of the information content within the CMC. The transference of oral communication to CMC is an evolving process which has yet to be uniformly agreed on a global level. In legal contexts, such as when an exchange is transformed into a binding contract, these areas are being negotiated through the law courts. In those communities with oral record traditions, reaching agreed community viewpoints on actions was seen as part of the process for validating oral records. Within the context of CMC there may be future value in understanding these mechanisms; a continual quest throughout the co-operative inquiry was to understand what good online communication looks like, and ultimately communication and exchange to keep information and knowledge alive was seen as the most valuable process in which records would be naturally created and intuitively managed. It should be noted that the concept of reliable intuitive management was not accepted by the records managers although the value of communications as a natural record format was agreed.

In addition, in the context of considering an archival record, there has always been a desire to retain the original record. For a historian to hold in his or her hands the actual letter which King Henry VIII, Emperor Napoleon or President Washington wrote, is to connect with the past in a unique way. It provides the opportunity to see and understand the letter, as much as is possible, in the context of the writer and to confirm its authenticity. This was discussed in RM UK group Action 5. It was raised that CMC, or indeed any digital record, will never be able to be viewed in this way again beyond very limited time spans (i.e. the generation of a single information system which may be in line with short term legal accountability purposes, e.g. 7-10 years in accordance with many countries' limitation laws). In this sense it was noted that the problems for preserving records in standard business timeframes has been exaggerated. However, I agreed with the standpoint that the original archival digital record cannot exist (which was not unanimous). Whilst it will be possible to present views that align to the original version, the created record must be managed through time. With every opening there is a potential for the record to subtly shift and unless software and hardware are maintained the record must be migrated to new systems.

Furthermore, CMC has a potentially dynamic and fluid reality, which also enables it to be something with greater potential functionality and value than a static record. The flexibility of captured information within a CMC is a new record consideration which impacts on its existence, storage and use through time. McLeod (2008) describes digital records as liquid. This suggests that the components of the record are interlinked, albeit that a liquid has a vulnerable stability. Alternatively the negative interpretation is that digital records may be splintered with original components dispersed. Thus, the dynamic nature of CMC can be a benefit and a danger in terms of survival through time. Over time the concept of a record has taken on ideas surrounding its permanence, evidential value through time and maintenance or storage by an agreed authority or community. These requirements have delivered the concept of a record with the characteristics of 'authenticity', 'reliability', 'integrity' and 'useability' as denoted by the international RM standard (ISO, 2001a, p.7). In the light of the dynamic nature of CMC these requirements have become more complicated to deliver. After long discussions in RM UK group Action 5 whilst there were criticisms of some aspects of the definitions there were also grounds for asserting that the users did find value in the consideration of the record characteristics but believed that they need to be considered as individual and negotiable characteristics.

Within the user co-researchers' discussions of a 'good record', as defined and explained by the international RM standards, a record was 'dead information', an 'artefact for a curator to manage' rather than an organisational asset for someone working with the business. In the users' view the record characteristics had been created by the archivist, who was in essence a curator of objects, who was failing to engage with organisational values and requirements (see merger discussions, UK group Actions 3 and 4, and the Whole group Action 2). The implications of the process as defined by the current standards (ISO 2001a, 2001b, 20011a, and 2011b) was that within a RM regime all four record characteristics would be derived through 'fixity', although fixity is not explicitly a part of the standard. The user co-researchers evidenced areas where fixity and standardised formats were potentially valuable, e.g. the PDF format has allowed easy data exchanges through a range of platforms. However, this concept of 'fixity' to preserve the 'original' record through time was seen as flawed in a CMC context and the remnant of 'paper thinking'.

Within the international RM standard (ISO 2001a, p.7) the four characteristics of a record are not listed alphabetically but are ordered as 'authenticity' 'reliability', 'integrity' and 'useability'. In such a carefully constructed standard this therefore automatically conveys an assumption that the order signifies the priority attributed to each characteristic. A characteristic is a 'distinguishing trait, quality

or property'. This suggests that a characteristic should be an intrinsic part of the object or person to whom it is attributed. However, characteristics, whilst part of the object or person, are not necessarily immutable but can change and shift, e.g. in a human their personal characteristics can alter through time. The characteristics of any given record can potentially shift through time and as authors, such as McKemmish (1994) have noted, the process of accessing and using a record is time dependent and relies on its use by given people who may shape later interpretations of the record. As with Plato's allegory of a cave and concepts of truth and reality in the *Republic* (Book 5, 14a), a record is only a shadow of past events and the information within it only totally exists in the moment in which it is created.

Useability was defined as the last and thus, within the context of the international RM standard, the least important consideration. However, in the view of the co-researchers, reliability and useability were the essential and primary characteristics required to create a 'good' record. It was the view of the co-researchers that the characteristics of a record needed to be reprioritised from the current order (authenticity, reliability, integrity and useability) to either an alphabetical neutralised order or to a prioritised order with accompanying explanations. No final agreement was reached on this latter order. Below are my own recommendations on the characteristics based on my own construction from the underpinning co-operative inquiry discussions.

9.3.3 My definition of a record constructed through my discussion with co-researchers

I would contend that there is a benefit in having a simple definition of a record, namely 'captured information'. This would mean disbanding with notions that a document is not a record and the complexities this presents within countries whose languages do not accommodate the term 'record'. In addition I would refrain from commenting as to whether there is such a thing as a 'good' record but rather discuss the value of information and records in different contexts. A potential failing of RM has been the desire to transform all information into a defined 'good record' rather than in considering the value of the process in a range of contexts. All information needs to be managed and that management requires sophisticated processes which have much more subtle distinctions in terms of the characteristics assigned to the information captured. For example, it might therefore be that requirements would be specified for particular 'evidential record' where there was a strong need for information reliability, authenticity and integrity. Alternatively there might be a different need for an 'operational record' reused through time.

At the level which information is captured as a record, I believe it is the characteristics underpinning the information that need to be defined. Information may be carried beyond the lifetime of the original record carrier. Therefore I would take and redefine the information characteristics with the creation of a record, with all its limitations, recognised in key contexts.

1. Reliability

   Central to the creation and value of any information as defined by the co-researchers must be the actual reliability of the information. For Duranti (1995), Lemieux (2001 and 2002) and Meijer (2003) 'process' sits at the heart of trying to ensure the reliability of the information which is recorded. However, within the context of Lemieux's (2001 and 2002) case studies relating to the Jamaican banking sector and Meijer's (2003) case studies relating to police administration, both noted the problems of ensuring that information content was reliable despite the fact that prescriptive mechanisms for recording information were in place within these case study contexts.

   The processes required to ensure the reliability of content might be seen as dependent upon the nature and value of the information that it is being created and its future use given that process adds cost to record creation. In reality this is why separation of duties, audit trails, double data entry and third party audits exist within many financial systems. Within these contexts there is an understanding that the reliability of the information merits significant financial resource and checks and the law across the globe defines the financial recordkeeping requirements of many different sectors. Financial transactions may be represented as having the potential to be captured in structured formats. Alternatively CMC captures human exchanges that may be imperfect in nature. However, it is to be noted that CMC has enabled actions to be captured and documented much more reliably than previously when a greater reliance was placed on individual memory. These communication exchanges are validated, explained and contextualised through the transactional exchange process which is immediate and embedded within the exchange. Thus CMC have increasingly become part of the pattern of evidence as presented in western courts (refer to discussions in Chapter 2, pp.58-62).

   2. and 3. Reuseability and availability.
   The final characteristic of a good record, in the international RM standard is 'useability'. This is in essence the quality that makes information accessible through time. The co-researchers

concluded that this characteristic had a more critical value than its status as the final characteristic implies. If information is to be valuable immediately and through time then it needs to be available to be used and reused as required. This means that the requirements which will sometimes deliver information for legal or archival purposes may be counter to the requirement to reuse information. In particular 'fixity' may not always be desirable. Therefore the ongoing requirements for using information (e.g. how and why is information being retained) need to be considered. Sometimes there might be a value in the same information being held within different records to fulfil different functions. Unfortunately, within the RM literature there is no evidence of the discussion of this characteristic and what it means.

Where records are fixed then it becomes simply synonymous with the term 'availability' within the international information security standard, *ISO 27000* (ISO, 2009) which simply seeks to ensure that information can be accessed by appropriate parties as required. Availability in the ISO 27000 standard (ISO, 2009, p.2) is defined as:

> "The property of being accessible and useable upon demand by an authorised entity."

Useability (ISO, 2001a, p.7) is defined as:

> "A useable record is one that can be located, retrieved, presented and interpreted."

It was the view of the users that the wider term 'useability' was valuable in contrast to the term 'available' but it needed to be considered in the wider context of how information may be used and reused in a dynamic world (e.g. mashups, linked data etc). I would contend that there is a clear distinction between viewing and referring to information in its original form and considering alternative reuse. As such it might be desirable to consider splitting this definition into 'availability' which in effect related to the current term, and 'reusability' which extends the further potential of the information.

In object orientated programming reusability is a clear underlying attribute to the process of programming. This requires that the coding data is clearly structured to ensure that either the whole code or parts of the code are in essence reusable. In this context 'flexibility' is

defined as a required attribute. In the wider context of information, there is an increasing emphasis on the supply of information as 'data sets' with reusable requirements. Reusability requires flexibility in the original information/record attributes. Once the information is reused it may then have a combination of new and inherited attributes. As such reuseability needs to have 'flexibility' as an integral component. The recent UK legislation to open up datasets through the Freedom of Protections Act, 2012, has indicated a desire to have available flexible information.

Furthermore these two new characteristics would assist with delivering efficiency and effectiveness as requirement by the international RM standard (ISO, 2001a, p.7) but often lacking from wider discussions.

4. and 5. Authenticity and Integrity.
Authenticity means in essence the record is what it claims to be. Integrity is in essence the requirement that the information is complete and unaltered (ISO, 2001a, p.7). These definitions are problematic given my earlier comments about the potential to maintain an original record through time and also in regards to the existence of identical versions within the context of CMC chains, which have been traditionally deemed to be copies.

In reality, a vast percentage of information will only be retained for the time span in which it is within the system which has originally generated it; it will not be required beyond the lifetime of the system. Authenticity and integrity become considerations for the initial system requirements. In designing a system there is a requirement to consider what is proportionate to ensure 'authenticity' and 'integrity' within the context of the information value and risks associated with that information. Some systems will require processes to ensure a range of underpinning components delivering ongoing authenticity and integrity, e.g. organisational email systems or SAP software systems are likely to have policies and procedures associated with their use, user permissions, system checks and maintenance regimes and to capture every exchange on a continually backed up basis. Many other systems may have lower level processes and maintenance checks.

However, as information is managed beyond the lifetime of the system then the definitions may need to take this into account. The information may be original but the record is

unlikely to be. Therefore what is important is that the information is authentic and complete.

6. Provenance and Ownership.

    Central to the viewpoint of records for historical use has been the reality of the provenance of the item which confirms the creation, or as Gladney prefers (2004, p.418) production and context of that production. However, the information value also resides in the ongoing reality of ownership. This is no longer a simple question in terms of who created it and in what capacity. In addition there are questions surrounding the potential for joint ownership by multiple parties involved in the exchange, in addition to the rights of companies whose platforms are used for CMC exchanges. Thus a key characteristic of captured information is knowledge relating to ownership, which is a complex process when communications are created across a range of boundaries. This is an aspect of context which is not necessarily delivered through concepts of authenticity and integrity.

9.3.4 The machinery of RM: Models and Processes

The international RM standards (ISO, 2001a, p.3 and ISO, 2011a, p.11) define RM as the:

> "field of management responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposition of records, including processes for capturing and maintaining evidence of and information about business activities and transactions in the form of records."

This definition is further underpinned by wider concepts concerning information as an asset and the requirement to manage information assets for wider organisational benefit. There was no issue taken with this definition in itself. The international RM standard there is no bespoke machinery or management system which roll out an RM programme, although there are key components. Within the co-operative research there was a strong emphasis on the overarching records management framework and records managers' roles, rather than a holistic coverage of the full range of RM concerns. Noted below are the central discussions concerning process.

Retention, disposition and archival appraisal

Central to RM are the management processes which ensure organisations create 'good records' and know how long to retain these records, i.e. retention and disposition. The process of retention and disposition was identified by all the RM co-researchers in the UK and worldwide as key to the

machinery of RM. Many also saw appraisal as a key part of this process, which in essence is the process of identifying archival records.

The debate as to whether appraisal should be undertaken from within an organisation's administrative or RM unit, or alternatively by an archivist, dates back to early 20th century theoretical discussions, for example Jenkinson's views (1922) versus Schellenberg's views (1956).Whilst the terms retention and disposition (ISO, 2011a, p.10) are defined as concepts within the international RM standard and discussed throughout the standards the term 'appraisal' is not mentioned. One of the co-researchers anonymously related that this was because the Swedish Standards Committee would not allow the term appraisal in the RM standard as this would undermine the archival profession and its role and status within Sweden. Interestingly in Sweden records managers were also noted to have a high organisational status and to be employed at much higher levels per capita head than in other countries.

It is sometimes difficult for an international standard to be negotiated and agreed to the satisfaction of all parties across the globe. However, within the view of the UK Records Managers, as noted in Action 5, discussions this omission does not present the reality of the work being undertaken by records managers. Therefore it was felt that the relationship does need further clarification dependent upon a range of circumstances. In the USA the majority of the RM co-researchers taking part in the research were driven by corporate e-discovery and disposition rather than archival concerns, although they were equally aware of the strong RM component in archival appraisal within the USA government administration. In Australia the link to archival appraisal was seen as central to RM. It was agreed that appraisal and the process of disposition needed rethinking.

It should be said that for some of the co-researchers standards were perceived to be entirely irrelevant. The issue of whether archival appraisal will be part of a records manager's role will be dependent upon the nature of their employment. There has also been a contention that two versions of records are needed in two archive repositories (see LOCKSS *www.lockss.org*) which prevents those in control, or the state, subverting the recordkeeping process. Aside from the fact that in a time of austerity this is a wasted resource, it was noted by I78 that if we really cannot trust the regimes creating information, how can we trust the information delivered to the archive? At the point when the archive cannot to any extent be trusted then society has much more serious concerns than historical research.

Another major issue that arose from reflecting on actions, was the requirement to rethink how information and records are reviewed for disposition. Many of the records managers engaged with the concepts of 'big buckets' or 'flexible scheduling' as identified by NARA (2004). A number of RM UK co-researchers (eight people), when reflecting on the value of the stages of the process, found that the discussions and workshops on 'big buckets' had been one of the most valuable contributions to their recent professional learning. This work had shown that the process of records managers reviewing information had been too bound up by time considerations (i.e. how old a record was) rather than components based on information value. All of the workshops with RM participants had focused on the production of buckets with time frames. A summary of the most common of these were labels of requirements to keep data for '1 year', '3 years',' 7 years', '10 years' and 'permanently'. When pushed, alternative suggestions arose e.g. 'administration', 'policy', 'procedures' and 'transactions'. A workshop with non-records managers produced alternative labels, 'personal data', 'commercial data' and 'ephemeral data'. It was noted that the workshop in its current form was potentially flawed as by cutting up an existing retention schedule to place into buckets there was potentially a pre-existing structure which influenced the creation of bucket labels. It would be valuable to undertake more workshops with a new exercise, in order to open up the possibility to the process of managing information through time in new ways.

RM Models

Within the context of managing records through time there are two key models in existence; the lifecycle model and the continuum model. Within the lifecycle model, records may be viewed in the context of a biological lifecycle whereby records are born, active, and then potentially less active before succumbing to death or being reborn into a new life. The records pass through a series of linked but separate phases (see Atherton, 1985, pp.44-45). In the continuum, records are created which may have multiple realities and thus a record may have archival status from the moment of creation (see Atherton, 1985 and Upward, 2001).

Across the RM co-researchers, the USA participants were more familiar with and advocated for the relevance of the lifecycle model whilst in Australia, New Zealand and the UK the argument was made for the continuum model. Other representatives across the globe did not present a view. It was noted that whilst there are individual articles presenting and discussing the continuum model (e.g. Upward, 2001 and Flynn, 2001) there have been few cases studies of its use in practice. No one person could produce an example of an RM policy which embedded the continuum model, whilst there were many examples which contained the lifecycle model, even from those countries

advocating the use of the continuum model. I would note that my own literature search could not find articles where there had been a genuine global dialogue tackling why the USA and Australia have continued on divergent paths without a focused discussion on the reason for the employment of different models.

Taking and discussing these models with the wider group of co-researchers, the continuum was largely dismissed as complicated and artificial. It was felt that some of the concepts it contained could be listed out as considerations for systems specifications but that some points had perhaps been added into the model for aesthetic reasons to complete the axis, e.g. the addition of the concept of an archival document. The lifecycle was perceived to be more valuable, albeit limited in its depiction of the management of information and records through a chain of linear activities rather than coexisting components. In summary, it was concluded that these two models were redundant. New models were discussed and sketched. However, overall it was felt that the approach of the Communication Architecture Toolkit (see Appendix 2.20) was a better way of understanding and delivering RM requirements. In the Toolkit RM processes were embedded naturally within a bigger communication and information architecture. The testing of the Ning protocol, where RM was equally naturally embedded, had produced positive feedback that this approach enables users to successfully engage with the process of RM. Placing RM in context enables it to be valued and the Ning users had fed this back clearly. In addition the co-researchers felt that there was value in having RM system requirements as part of bigger IS development considerations. The RM models had served their purpose whilst records managers were developing their professional identity but this need for separate models was unhelpful and dead.

Classification versus search

A key tool of RM was seen to be classification. Through structuring information/records it is possible to see at a glance the range of holdings at different levels. However, it was recognised that increasingly information is accessed by search (in RM UK Action 2), the traditional tool of information scientists/librarians. R7 had undertaken specific research in this field and the RM UK co-researchers agreed with his conclusions that both tools were needed. As Rowley and Hartley (2008, pp. 224-225) state:

> "technologies are evolving and the next step is likely to be "on the Fly" records management where taxonomy tools will carry the information necessary to be able to group and review content stored in a flat non-hierarchical database, managed according to discovery not storage. Should the latter gain pace, as is expected, then the role of the Records Manager

faces fundamental review. Those who fail to take account of the new discovery engines, do so at their own risk."

RM programmes

During the discussion the way in which RM processes should be delivered was discussed, in particular looking at the place of risk to deliver scoped programmes. McLeod (2012) describes the need for RM to be "proportionate" and that in certain circumstances "the 80/20" rule for RM is sufficient. However overall analysing the discussions there were views across the groups was that RM should be 'targeted', 'flexible' and 'sophisticated'. Information is an asset which needs to be valued. As such there is a value in having programmes which are targeted to deliver objectives above and beyond the basic evidential requirements. These programmes can be delivered in part by engaging in the process of system design, which means that key aspects can be automated, taking the burden away from individuals and getting the requirements sorted from the start.

9.4 CONCLUSIONS ON THE RM LEARNING

A critical learning for me personally was the need to keep evolving and re-evaluating one's professional principles and practice. As highlighted by Pawluch (1996, p.8), "all occupations and professions need to be on a continual journey of transition to remain relevant". I knew that continual professional development was required but not the extent of the ongoing review that was really needed. In addition I learnt that technologies can impact on principles as well as practice. For example, it was an important assertion coming from some co-researchers that there was a need to rethink digital records and that whilst there can be digital records there can no longer be an archival record maintained over the longer term only archival information. In addition, records managers need to engage globally and confront national differences within RM communities of practice, whereas I have been operating at a UK based level. It was important to note that a key RM learning from within the study was that overall national rather than organisational categorisations shaped records managers' viewpoints on RM, in part influenced by national user characteristics. There is a need to undertake work to understand and develop this finding in order to consider how national characteristics impact upon RM. In addition, whilst records managers need to have their own space for discussion, RM proved to be most successfully engaged when it was embedded naturally as part of bigger processes and agendas. Records managers do need to collaborate in research and practice on cross-disciplinary projects. However, overall an important finding was that RM principles and practice were valued by a range of stakeholders.

CHAPTER TEN
OVERARCHING CONCLUSIONS

"It is good to have an end to journey towards, but it is the journey that matters in the end"

Variously attributed to Ernest Hemmingway and Ursula K. LeGuin

10.1 CHAPTER INTRODUCTION: DRAWING TOGETHER THE THREADS IN THE JOURNEY

This is the chapter in which I try and draw together the complex threads within the work and look to the future. After so many years working towards this end, it is a hard task to draw my writing to a conclusion and let go. In the context of a work of this nature, it is also sometimes hard to define a single definitive earth shattering conclusion from the research data which delivers the PhD's novelty. The RM conclusions, whilst important in building a picture and refining some parts of the RM process, have not obliterated the RM landscape. This is in itself an important finding not to be dismissed, as the value of RM has been reinforced albeit with some potential for subtle shifts. However, over time my perspectives, and those of some of my co-researchers have been altered, in some instances much more quickly and significantly than anticipated, e.g. in the context of the record its defining features were quickly deconstructed and reconstructed in an amended format. I have myself been through a journey in which I have questioned the value of RM, disregarded and then readopted key RM principles and practice. I have had the opportunity, within the context of Web 2.0 usage, to be a user before a records manager. However, I end the process convinced of the ever increasing value of RM, albeit linked to information management as 'information and records management'.

Chapter 8 has dealt with the extent to which the research succeeded in engaging users and promoting RM research and practice more widely. It has also dealt with the value of the research methodology both in terms of the autoethnographic PhD and the format of delivering co-operative inquiries merging over time. Chapter 9 has looked at the RM learning specifically. However, if you are a reader pulling this text off a dusty library shelf or downloading it from the Internet and dipping into the conclusions, you would want to know what were the aims and objectives and were they achieved, as well as where the PhD's novelty resided.

10.2 OVERARCHING FINDINGS

My aim was to critically explore the engagement of RM through the vehicle of a CMC focused co-operative inquiry. The underpinning objectives were:

1. To critically explore the role of the 'Records Manager' as it impacts on engagement with RM;

2. To critically explore the role of the individual, investigating why users sometimes fail to engage with RM principles and practice, and determine what assists users to successfully engage with RM;

3. To critically explore RM in the light of CMC developments and identify and examine a range of RM processes that could assist with maximising CMC delivery and management;

4. To critically explore the relationship between RM and other processes that were involved in maximising CMC potential in order to understand how RM could be engaged;

5. To bridge the gap between RM research and practice and promote future RM research.

Through the process of focusing on how to maximise the potential of CMC for organisations, RM principles and practice were embedded and understood, within the context of a range of organisational CMC activities and processes and by multiple stakeholders. RM is a social construction and all the high level coding traces back concerns which are human constructions (see Appendix 1.9). As such <u>human</u> engagement and understanding is critical for RM success. Establishing single co-operative inquiries which merged through points in time, enabled me to pinpoint different reactions and responses to the role of RM (including those of the records managers) with relevance across all five objectives.

Through working together on CMC actions, with records managers and users as co-researchers, RM processes were naturally embedded into the CMC actions and outputs as appropriate in a range of actions (e.g. RM UK group's Third Action (film production), User UK group's Second Action (communication timelines), UK group's First Action (CMC checklist for users and organisations), the International group Third Action (Ning Protocol development) and ultimately the final action of the Whole group, the development of a Communication Architecture Toolkit (see Appendix 2.20). When the records managers worked with others and naturally embedded RM into CMC actions then others

engaged with RM; in these instances the role and place of RM was understood and valued. When the records managers sought to sell the benefits of RM in isolation (e.g. at the inquiry merger points) its value was often rejected or alternatively described as the domain of RM experts specifically. CMC proved a complicated focus which thus enabled discussions across multiple stakeholders. However all of the challenges it presented were not resolved within a single study. Nevertheless there were a number of RM specific findings from the research which require reflection. The highlights of these produced from analysing actions and discussions across the inquiry groups are summarised below:

1. Information is the primary concern within organisations but records also have value, both requiring prescribed management. Records management should be defined as records and information management, as indeed has increasingly been the case within the time taken for me to reach the conclusion of the PhD process.

2. Records managers need to redefine the requirements of information and records to ensure that the information created and maintained meets the needs of organisations, users and the technology in which it resides. This should take into account the nature of CMC and its potential to straddle formal and informal information networks. The desirable characteristics for retaining 'records' are potentially shifting. As such a record should not be valued as 'good' or 'bad' through immutable characteristics but there should be defined characteristics open to application dependent upon a range of circumstances. This ensures that information and records have a living value. Evidential value may increasingly be delivered through audit trails rather than fixity in order to capitalise on reuse through time. In addition, in a world with dispersed networks, the ownership of information over time, is a critical part of the reality of its existence.

3. Communication is the natural process by which humans do business and build societies. CMC has provided a technological tool which has enabled communication/information to be naturally captured. New intelligent search systems have enabled information to be accessed over time with less overt structure. Therefore CMC is likely to increasingly become the medium for transactions and the focus for the majority of any required information and RM processes. It is important for records managers to accept the value of CMC and engage with its ongoing management. Where RM is naturally embedded into CMC processes it is accepted (see point 11).

4. Given the need to migrate CMC/digital information through time there may never be such a thing as an 'original archival record' within the digital world only 'original archival information'.

5. In an age where information is now dispersed across geographic boundaries national laws are not always fit for purpose. There is an increasing need for dialogue regarding international legislation in respect of information rights law.

6. More research should be done on rethinking retention and appraisal techniques. The co-operative inquiries' work on 'big buckets' has generated a lot of interest from the RM community, with six invitations to speak at conferences. However, the findings from this work were that records managers struggled to move away from traditional concepts about retention frameworks and that by working with users there would be the potential to develop totally new appraisal processes. We are still at a cross roads in terms of what can be automated. New computer capabilities will enable the granular management of information dependent upon sophisticated rules. Conversely a 'big buckets' approach may be seen to provide a transparency for retention and disposal of information which is also a better fit for potentially less structured information. Now is the time to seize this agenda in advance of the potential for deletion to be automated. This work has the potential to be considered and delivered through a multi-disciplinary research project as there is a need to involve others beyond the sphere of RM.

7. In defining the support required for users it is notable that as with IS and IT, RM is both the preserve of experts and users. The delineation between roles is not limited and there has been no case for professional closure. The distinctions between other areas of information practice in relation to RM (e.g. librarians, knowledge managers or IT) are not clear cut in the workplace. It is my contention that records managers must align more closely (not merge) with other information professionals to survive. As highlighted by Pawluch (1996, p.8), "all occupations and professions need to be on a continual journey of transition to remain relevant". One thing which was noted to be lacking was a global ethical code of practice for RM as a profession but equally it was felt this needed to be framed in a wider IS context. Furthermore it was noted that codes of Ethics can provide the basis for dialogue in respect of bigger legislative change.

8. Records managers need to draw on research theory and practice beyond the RM and archival domain. This should include engagement with other information communities of practice (e.g. information scientists, knowledge managers, IT etc) but also wider communities. There are many perspectives from a range of stakeholders that can improve information processes. In addition, there may be those who do not normally have a role in a business context but by bringing them into the picture through linking research and practice they can influence and shape change. Within the co-operative inquiry the linguists were able

to bring new thinking into the process which proved relevant not just in the communication dimensions within the CMC but also in respect of wider management issues and building engagement through understanding. Thus the potential stakeholders and influencers may be a wider network than traditionally envisaged.

9. Records managers need to engage globally and confront national differences within RM communities of practice. A key RM learning from within the study was that overall national rather than organisational categorisations shaped records managers' viewpoints on RM. Within a number of countries (e.g. Australia, Canada, New Zealand, Sweden, UK and USA) RM communities of practice exist as articulated by Wenger (1998) however critically there was no global RM community of practice. Legislation, which is often framed at a national level, was seen as being the key driver which influences the practice of records managers. There is a need to document and open up debate regarding different national practices in relation to the international records management standard ISO 15489.

10. There is a need to understand why there may be a different level of RM adoption nationally based on national cultures. The evidence within this inquiry was sufficiently strong to contend that the UK user attitudes presented particular cultural challenges to RM adoption (e.g. in the UK people will tell you they are following rules when they were working around them) but it would benefit from further testing and also additional analysis across other nationalities. It is an important point to note that the users within the inquiry were motivated, across the globe, by an agenda to access information over time rather than any organisational drivers, e.g. legal accountability.

11. Records managers need to deliver sophisticated RM programmes which are shaped to information and organisational requirements often through embedding requirements into information systems specifications but also as part of organisational strategies.

12. Records managers need to deliver quantitative and qualitative research programmes to better ground RM research and also to provide records managers with hard and soft skills.

Beyond RM, the knowledge managers could have delivered more into the research but were set back by the conflicts the concepts of knowledge management provoked within the group. It was problematic dealing with conflicts in a short space of time and within virtual spaces. Dealing with conflict is one of the hardest aspects of working and changing social constructions. An area that merits further future consideration within the context of CMC is research into how to conduct successful online negotiations including how to resolve areas of dispute and minimise potential unpleasantness.

10.3 SHINING A LIGHT INTO THE FUTURE

Most research only gets us a small way ahead and even in that short distance the end may be uncertain. The motivational speaker Jack Canfield (2011) describes his understanding of journey as:

> "A car driving through the night, the headlights only reach 100 – 200 feet in front of the car. But you could make it all the way from California to New York whilst driving in the dark, because all you have to see is the next 200 feet. And that's how life tends to unfold before us".

Travelling on this particular journey many stones were lifted, a light briefly shone underneath and then they were put back down for the present moment in time. My work has been a tiny part of a picture and I am still delivering on the co-operative inquiry beyond the PhD. I would have liked to have achieved more had it not been for the personal situations which have hit my family and for which I am sorry to the co-researchers for the delay and loss of momentum. In 2013 the Communication Architecture Toolkit will be completed and delivered. However, I believe that there have already been some really valuable findings. In terms of the final objective in regards to bridging gaps, my PhD has not been a lone experience. It has relied upon the support of my supervisory team, co-researchers, RM practitioners, and a range of people who provided advice and ideas to the inquiry. In addition to bridging the gap between research and practice, the PhD research has fostered learning from across individuals at different stages in their career development. R13 highlighted the potential for it to become a model for CPD and also a means of achieving the goals of society in conjunction with professional bodes (see Shepherd, 2010). This was taken up as relevant not only by those who were new in their career but others who were in a position where there were no current opportunities for career development, e.g. those who had been made redundant and those who had children during the research. Furthermore, the co-operative inquiry has provided a vehicle for obtaining a PhD but it has also impacted more widely creating new relationships across communities outside my own influence. Within the immediate UK RM community it has injected new ideas and non-RM practitioners who helped in the co-operative inquiry are now also taking part in other RM related initiatives. In this sense the value of the PhD is also bigger than this one document and lives beyond my own work. This also makes the case for the co-operative inquiry process. I hope that I have also managed to convince some others, on my own journey, of the value of a PhD and the need for RM research linked to practice.

The RM findings are largely qualitative and would merit further study potentially through quantitative methods. For example, the revelation in terms of the fundamental differences in

records manager and user attitudes towards RM principles and practice based upon national boundaries, could be further explored through a survey gathering data on the current state of global RM, taking into account new technologies, and the impact of culture. This work could also provide the opportunity for greater consideration of the ethics that should accompany the management of information within organisations. In addition, it is suggested that the differences between national attitudes to RM could be clearly recorded, discussed and where possible explained.

Reflecting back, the greatest impact of the co-operative inquiry to date has probably been in the UK where the largest number of co-researchers resided. However, nevertheless the work has been disseminated through the work of co-researchers overseas (e.g. conference papers in USA, mainland Europe and Africa). The future planned outputs of the co-researchers (a website, book and communication architecture toolkit delivered online) should further assist with the reach and impact of the project. Writing up the CMC specific learning cannot be encapsulated within this one PhD but the co-operative inquiry outputs and future publications will help disseminate this work. In addition, I hope to write further articles to cover this work.

In addition, I would like to see further research and practical collaboration which engages RM within wider information systems initiatives. I would see three key projects highlighted from this work as areas where cross-disciplinary research could be undertaken:

1. Working on new retention/disposal theories and discussing their practical application across disciplines.
2. Agreeing a global information code of ethics through harnessing knowledge across disciplines.
3. Working across disciplines to better understand the process of online communication and negotiation focusing in particular on building rapport and dealing with conflict.

Finally I accept that whilst my PhD was critically exploring RM engagement, it is in fact a term which needs to be reconstructed as information and records management. We are in a world in which knowledge, communications, information, records and information technologies are critical assets for businesses and society more widely. I hope to have a long and challenging career working with others to better improve our governance of information and our communications across the globe.

EPILOGUE

"There is never enough time unless you are serving it"
Attributed to John Ruskin

Writing and reflecting in hindsight on the co-operative inquiry process and the place of CMC, I have started to consider it through the lens of boundary object theory. It is my contention that CMC has the potential to act as a boundary object and that the research work highlighted at the end of Chapter 10 could be taken forward through the mechanisms afforded by boundary object theory. This would have been an ideal lens for the consideration of engagement but the relevance of boundary object theory was highlighted by one of my supervisors only in the very final stages of writing up. The evolution of boundary object theory is narrated by Worrall, who attributes its creation to the work of Susan Star in the field of science and technology in the 1980s (Worrall, 2012, p.2). Star and Griesemer (1989, p.390) believed that boundary object theory provided:

> "an ecological approach to analysis that was necessary to consider all of the possible viewpoints, and thus the indeterminate number of coherent sets of translations caused by the intersections between multiple social worlds."

Star (2010) defined three qualities for the identification of boundary objects, namely artefacts with the qualities of:

- Interpretive flexibility
- Material/organizational structure
- Scale/granularity

One example Star provides of a boundary object is a map (2010, p.602). Star (210, p.602) notes a map may have a different reality to different stakeholders; to some it will provide details about an ecological habit, for others it may pinpoint the location of a good campsite. Therefore it is capable of interpretive flexibility. Furthermore through time maps have been negotiated into agreed formats/structures which provide their material reality, e.g. agreed coordinate systems, colours for sea and land etc. The problems posed by maps as a potential boundary object were not too large, nor too granular, but were capable of being discussed and negotiated. Star notes that the scale and granularity of the object needs to be appropriate to enable mediated discussion. In the context of

the example of maps, she notes how maps have moved on again with GIS and therefore offer new areas for interpretation and discussion (2010, p.614). Boundary objects are complicated and without a fixed reality. Maps might be constructed in a totally different way. Star (2010, p.602) notes that what is important for boundary objects is "how practices, structure and language emerge for doing things together". By working together on actions or discussion involving boundary objects, the boundary object provides a focus for those with different perspectives to reach mutual understanding. Barrett and Oborn (2010, p.1204) note:

> "boundary objects are brought to life through social interaction as diverse actors negotiate collective meaning through and around these objects. Rather than ascribing the boundary object with essentialist properties, we adopt a relational view that highlights that an artefact only becomes a boundary object in use."

Thus, by working on objects with a potential different reality to multiple stakeholders it proves possibilities to enhance the object as well as language, understanding and evolution across groups. These objects had/have the power to build engagement and understanding. This technique has been used in particular in the field of Information Systems where the creation of technical tools may have a benefit to a wide range of stakeholders (for example see Barratt and Oborn, 2010 or Shanahan, 2011). In my own work the process of the co-operative inquiry, built with multiple participants, could be seen to be utilising CMC as the boundary object. CMC has the qualities of

- Interpretive flexibility
- Material/organizational structure
- Scale/granularity

CMC had a reality for each of the co-researchers, which was sometimes overlapping, aligning or at times conflicting. The same communication could be transmitted through a range of channels altering its potential reality and structure. Thus it provided a scaled focus for action and evolution. Within this context, records managers disseminated understanding of RM principles and practice most successfully when they were working on a boundary object in the form of CMC. The process proved that RM is valid and valued by others as part of bigger agendas. Through working together on CMC actions with records managers as co-researchers RM processes were naturally embedded into the CMC actions and outputs as appropriate. From an RM perspective, Sapsed and Salter (2004) comment that boundary object theory still enables participants to retain their unique identity which

was important to the records manager co-researchers who wanted to ensure recognition for their input and expertise. Fox (2011, p.70) notes that boundary objects offer a knowledge transfer mechanism:

" that enhance the capacity of an idea, theory or practice to translate across culturally defined boundaries, for example, between communities of knowledge or practice."

Whilst, as Star notes scale is important (2010, p.612), boundary object theory can be delivered into small and large scale initiatives. Winter and Butler (2011) have held that when there are 'big challenges' in relationship to boundary objects then there is an imperative for relationships to be built across communities:

"The impact of a discipline's research is constrained by its ability to articulate compelling problems. Well-crafted problems are the foundation for mobilizing the effort, resources, and attention essential to scientific progress and broader impact. We argue that Information Systems (IS) scholars, individually and collectively, must develop the practice of articulating and engaging large-scale, broad scope problems – or grand challenges." (Winter and Butler, 2011, p.99)

The word 'challenge' is beneficial in providing a context for initiatives countering problems as well as building new and better systems. In addition, as Barrett and Oborn (2011, p.1203) note, boundary objects may be concrete or conceptual which provides flexibility in applying the process to research, principles and practice. Within the context of concepts of 'grand challenges', the UK Government's 1999 initiative to ensure that the majority of government business was delivered online by 2004 was an articulated 'grand challenge'. In response, EDRM was hailed as an opportunity in the UK for RM to deliver its full potential and records managers seized this challenge. However, a decade on and this initiative was perceived to have failed and damaged records managers credibility in the UK (see Lappin, 2010 and RM UK group Actions 2 and 5). In the co-operative inquiry discussions it was concluded that the role of RM within the challenge was over emphasised as bigger than it possibly was. In addition, records managers took over the process and failed to build systems which took into account and were tested against user needs. In this sense the process was not used to galvanise relationships across communities and was therefore a missed opportunity for boundary object theory.

It should be noted that whilst grand challenges can act as a mechanism to galvanise communities the boundary objects selected need not necessarily be large and the extent of the challenge should not be overemphasized. The shifting purpose and role of RM across the globe in relationship to CMC, where the boundaries between personal and business spaces have potentially blurred, present exactly the kind of environment in which future boundary object theory can evolve. It fosters the conditions for 'engagement' which as Axelrod (2001) describes is 'a paradigm for change'. These conditions cannot automatically be created but do require understanding built through time and shared negotiated and renegotiated purpose. Within my work, this understanding was in part provided with Campbell and Davis's (2006) term 'management rapport' by I66. 'Management rapport' is a linguistic concept that was applied to the CMC work. The concept helped emphasise the role and value of language, which is an important part of the development within boundary object theory. The process of building communities through time broke down and challenged vested personal interests fostering the conditions for boundary object theory. Boundary object theory is a social constructionist tool that works to better construct the ways in which we live.

In conclusion, there is much more work to be done in respect of CMC and RM principles and practice offer an important perspective on CMC management which I hope may be fostered in the future through the lens of boundary object theory. Star (2010, p.615) sees the wider information systems world as requiring urgent analysis through this lens and I would end with her urgency and social comment, which can equally be interpreted within a communication context:

> "So thickly imbricated are these battles now with electronic life and daily offline life that it is no longer a question of choice. If not now, when?"

APPENDICES

APPENDIX 1.1: SAMPLE CALLS INVITING RESEARCH PARTICIPANTS

The calls were tailored to different audiences and also were dependent upon the message platform.

Call for User co-researchers

Subject: Call for research participants: Continued communication....

Continued Communication: Opportunity to participate in a Northumbria University research project

Elizabeth Lomas elizabeth.lomas@unn.ac.uk of Northumbria University, is conducting a research project aimed at exploring the information potential of Computer Mediated Communications (email, Facebook etc) for organisational benefit. The project, is being undertaken by means of-co-operative action research and this call is to invite expressions of interest from anyone who would like to be a co-researcher. The main research question is: How to maximise the information potential of computer mediated communications for organisational benefit, taking into account the impact of the individual?

No prior knowledge is required. As a participant you would become part of a group that critically examines and reflects upon their own use of such systems. This will involve occasional face to face meetings (in London) and networking through online platforms. All participants will have an equal opportunity to direct the research's development and direction. Participants will engage in a personal capacity and therefore corporate permission is not required. All participants will be duly credited for their participation unless total anonymity is requested. All comments will be duly anonymised, as requested.

Participation benefits include:

- the opportunity to network with peers;

- insights into a research project and research programmes generally;

- information on different types of information and communication systems, including Web 2.0 applications such as Facebook;

- copies of key articles and literature, to aid discussions;

- the opportunity for additional training, as identified by the participants.

A separate records management group is also being established, in order to evaluate recordkeeping concerns and establish incentives for user engagement with records management concepts within the context of communication systems. In addition there will be a virtual international group. The three groups will ultimately merge. The benefits or participation will include records management training. **Please pass on this message to any contacts who might be keen to participate in the user group**.

Please note that I will be using the study as a basis for an embedded records management PhD inquiry.

Please email me if you would be willing to participate or if you have any further questions. Attached is a PDF poster with further information.

Elizabeth Lomas

Researcher
School of Computing, Engineering and Information Sciences
Northumbria University
Tel: 01582 762726 or 0794 6614882
E-mail: elizabeth.lomas@northumbria.ac.uk

Call for Records Management co-researchers

Subject: Call for research participants: Continued communication....

Opportunity to participate in a Northumbria University records management research project

Elizabeth Lomas elizabeth.lomas@unn.ac.uk of Northumbria University, is conducting a research project aimed at exploring the relevance and usefulness of records management constructs within Information Communication Systems (email, Facebook etc).

The project, undertaken by means of-co-operative action research, is entitled:
 Continued Communication: confronting the challenges of managing records/data held within information communication systems.

The main research question is: How to maximise the information potential of CMC for organisational benefit, taking into account the impact of the individual?

The proposed underpinning objectives (which will be discussed) of the project are to:

- evaluate the nature of communications within the context of Information Communication Systems;

- determine how records management theory can be developed to influence recordkeeping practice;

- evaluate the relevance of other business tools for optimizing information value (e.g. risk management, performance measurement etc);

- explore methods for enhancing user engagement with relevant records management concepts

I am looking for records management practitioners to volunteer to participate in this research. As a participant you would become part of a group that critically examines and reflects upon their own use of such systems. This will involve occasional face to face meetings (in London) and networking through Google groupware. All participants will have an equal opportunity to direct the research's development and direction. Participants will engage in a personal capacity and

therefore corporate permission is not required. All participants will be duly credited for their participation unless total anonymity is requested. All comments will be duly anonymised, as requested.

Participation benefits include:

- the opportunity to network with peers;

- insights into a research project and research programmes generally;

- information on the role of records management in the context of different types of information and communication systems, including Web 2.0 applications such as Facebook;

- copies of key articles and literature, to aid discussions;

- the opportunity for additional training, as identified by the participants.

A separate users group (consisting of users without records management expertise) is also being established, in order to evaluate user's recordkeeping concerns and establish incentives for user engagement with records management concepts. The benefits or participation will include records management training. **Please pass on this message to any contacts who might be keen to participate in the user group**.

Please note that I will be using the study as a basis for an embedded PhD inquiry.

Please email me if you would be willing to participate or if you have any further questions. Attached is a PDF poster with further information.

Elizabeth Lomas

Researcher
School of Computing, Engineering and Information Sciences
Northumbria University
Tel: 01582 762726 or 0794 6614882
E-mail: elizabeth.lomas@northumbria.ac.uk

Call for international virtual co-researchers: Continued Communication
I am putting out a call for international co-researchers to take part in a co-operative action research inquiry aimed at critically evaluating how to maximise organisation's information potential for communications created through computer mediated technologies (email, Facebook, wikis - any system with dialogue potential), taking into account the impact of the individual. The key research question is:
How to maximise the information potential of computer mediated communications for organisational benefit taking into account the impact of the individual?

The research will commence in February 2009 and will be undertaken through virtual discussions and online collaboration using a closed site set up on the web. Each participant has the power to influence the direction of the research. Participation is in a personal rather than an organisational capacity. Participants can opt to be credited for their participation and comments or alternatively to have their contributions anonymised.

There are currently 50 UK participants including archivists, designers, business systems experts, engineers, information scientists, knowledge managers, psychologists, software developers,

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IT experts, web designers and communication enthusiasts. The UK and international groups will ultimately join up virtually.

If you would like further information then please contact me.

Elizabeth Lomas

Researcher
School of Computing, Engineering and Information Sciences
Northumbria University
Tel: ++44 (0)1582 762726
E-mail: elizabeth.lomas@northumbria.ac.uk

Web 2.0 Sample posting

Call for co-researchers in London: Continued Communication
I am putting out a call for co-researchers to take part in a co-operative action research inquiry aimed at critically evaluating how to maximise organisation's information potential for communications created through computer mediated technologies (email, Facebook, wikis - any system with dialogue potential), taking into account the impact of the individual. The key research question is: **How to maximise the information potential of computer mediated communications for organisational benefit taking into account the impact of the individual?**

The research will be undertaken through meetings in London and online collaboration. Each participant has the power to influence the direction of the research. Participation is in a personal rather than an organisational capacity. Participants can opt to be credited for their participation and comments or alternatively to have their contributions anonymised. No prior research knowledge or expertise is required.

There benefits of participation are learning about online platforms and research. If you would like further information then please contact me.

Elizabeth Lomas

elizabeth.lomas@unn.ac.uk

APPENDIX 1.2: FLYER CALLING FOR RESEARCH PARTICIPANTS

APPENDIX 1.3: MATRIX OF LITERATURE SEARCH TERMS

RM Terms		CMC/Technology Terms	Additional terms
Terms taken from the RM Standard ISO 15489 terms and definitions	Governance	Bebo	**Demographics**
Access	Information	Blackboard	Age
Accountability	Information management	Blog	Behaviour
Archival Authority	Knowledge	Computer mediated communication	Culture
Classification	Law/legislation	Computer supported collaborative work (CSCW) or co-operative work	Gender
	Legal Discovery	EDRM	Occupation
Conversion	Managing	Email/e-mail	Personality
Destruction/destroy	Mark	Facebook	**Setting**
Disposition	Memory	Friends Reunited	Business/organisation
Document	Movement	ICT	Public
Indexing	Overload	Instant messaging	Private
Metadata	Ownership	LinkedIn	Social
Migration	Privacy	Moodle	
Preservation	Process	Myspace	
Records/record	Protect	PBWiki	
Records management	Records management	Second Life	
Records system	Retention	SharePoint	
Registration	Records Manager Risk	Skype	
Tracking	Search	Social Media	
Transfer	Security	Telephone	
	Standard/standards	Telephone conference/conferencing	
Additional RM and IM related terms	Storage	Twiki	
Appraisal	Taxonomy	Twitter	
Archive	Time	Video Conferencing	
Audit	Workflow	Web 2.0	
Authority		Wiki	
Automation			
Capture		**Online Communication**	
Creation/create		Chat	
Compliance		Collaborative editing	
Custody		Communication	
Deletion/delete		Forum	
Find		Message	
		Tagging	
		CMC	
		CSCW	

APPENDIX 1.4: RESEARCH INFORMATION SHEET

Northumbria University
Research Ethics Information Sheet for International Participants
(Issued in conjunction with a participation consent form)

Project title: *CONTINUED COMMUNICATION…confronting the challenges of maximising information potential for computer mediated communications*

Project Researcher: *Elizabeth Lomas*
(Abbreviations: Computer mediated communications – CMC; Records management – RM.)

1.0 Project overview:

This project is seeking to maximise information potential for records/data held within information communication and technology systems (in this context any IT system with a dialogue potential such as email, Facebook, Myspace, wikis etc). Across organisations computer mediated communications (CMC) are the main method for creating, distributing and saving information. New systems, are continually offering enhanced opportunities for communication, collaboration and information management. However, in all of these systems, despite the fact that the systems do hold such large percentages of key organisational information assets, the information is rarely fully managed nor the information potential maximised. This lack of organisational management contravenes legal requirements (such as data protection), wastes resources (there is an increasing recognition of the impact of the carbon footprint of e-communications on server and power usage from an environmental and economic perspective) and results in the loss of valuable information which could provide operational advantage. In addition individuals fail to identify the best tools for enhancing the value of their communications and collaboration potential.

This research concentrates on confronting the challenges of maximising the potential of information created within CMC to critically evaluate the benefits afforded by RM tools, other business tools and the impact of the individual.

The research will be conducted by establishing three co-operative action research groups: a group of UK based records managers; a group of UK based non-records managers (including designers, engineers, information scientists, psychologists, and communication enthusiasts); a group of international participants from a wide range of backgrounds who will participate using virtual collaboration tools. Ultimately all three groups will join up virtually. Each participant is a co-researcher with an equal right to shape the research's direction.
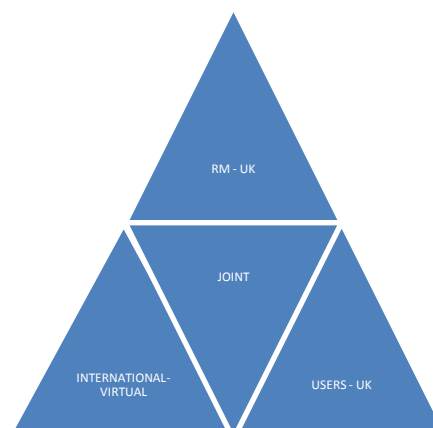
This methodology has the potential to bridge the gap between research and practice in order to produce a key contribution to the management and information maximisation of computer mediated communications.

2.0 Project aims:

This project's overarching aim is to maximise information potential within CMC (email, Facebook, Myspace etc). The project is being developed as co-operative action research inquiry. Each participant is a co-enquirer/researcher. This means that each participant can have a significant impact upon the research and the project's development. The views of all participants will be afforded equal value and weight. The direction and structure of the research will be led by the views and requirements of the participants. The Researcher will act as a facilitator for the project.

The research will be conducted by taking the overarching research aim: **how to maximize the information potential of computer mediated communications for organizational benefit taking into account the impact of the individual.** The Researcher has drafted objectives which will be evaluated by the participants and may be refined or totally rewritten. The drafted project objectives are to:

- critically evaluate the concepts of data, information and records created within computer mediated communications (CMC);
- critically evaluate the impact and potential management/redirection of the individual, assisted by psychometric testing. Each action research participant will be offered the optional opportunity of an anonymised psychometric test linked to a questionnaire – this is optional. In addition the Researcher will conduct a wider survey where questionnaires are linked to a psychometric test using a NEO tool (which is the tool most rigorously tested by scientists within the research field of personality testing);
- identify and examine the full range of information management processes and business tools that could assist with CMC management;
- evaluate current communication systems and design;
- develop RM/CMC theories, strategies, methodologies, systems tools.

The co-researchers will revise and develop these objectives as they see fit in order to critically evaluate the overarching aim of maximizing information potential in CMC. The co-researchers will move through a circular action research process, diagnosing the key issues to deal with the overarching aim, planning action, taking action, evaluating that action, specifying what has been achieved and learnt.
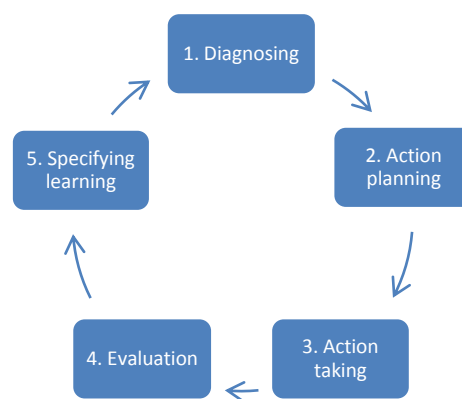
After the first cycle is completed, the group will reflect on the actions taken to date before joining with the UK based group. The process will then start again, reevaluating in the light of the other groups actions and insights developed by the merging of the groups.
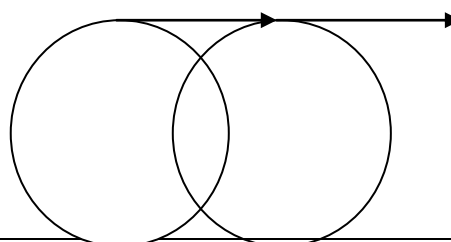
Equal weight will be given to the dual action research imperatives of practical problem solving (action) as well as generating new knowledge and insight (research) (McKay, J. and Marshall, P. The dual imperatives of action research, Information Technology and People, 2001). Further information on co-operative inquiries more generally is available at: http://people.bath.ac.uk/mnspwr/Papers/Heron&Reason%20.htm

3.0 Project commitment and tools:

Project participation is in a personal, rather than an organizational, capacity. The project will commence at the end of February 2009. Group meetings will be arranged and discussions facilitated on-line via Web links to Ning, Moodle and other collaborative tools as nominated by the group. The structure of these arrangements will be dictated by the project participants' requirements, e.g. meeting times will vary in order to accommodate participants logging in to discussions from around the world. Each participant dictates the personal time that they will commit to the project and this need not be predefined.

It is the intention that the project group should be established for a minimum research period of nine months. At this time participants can decide whether to continue or to conclude the group.

The Researcher is using the data for an embedded RM PhD and participation is dependent upon understanding that the PhD will draw upon the project data. The purpose of the PhD is to analyse the place of RM within the research.

The Researcher is committed to continue research in this area until November 2010. Some final outputs, such as final publications and conference papers, will be produced in 2011. The final PhD is due for completion in 2011.

4.0 Information required and outline of any potential risks involved:

The information required will consist of user knowledge and expert opinion about information communication systems. The exact nature of the questions and issues will be guided by the mutual conclusions and discussions of the research participants.

All data must be managed in accordance with confidentiality and data protection requirements. Participants are assured of confidentiality and the security of their contributions. At the request of individual participants data will be anonymised before publication and sensitive information will be checked with respondents. Participants will be alerted to the fact all members are required to maintain group confidentiality.

None of the participants will be identified without prior consent, however, it is the right of each participant to request that their group participation is credited and also that their individual contributions are credited where possible. Data protection/security issues are addressed in the consent forms.

Any 'intellectual property' or commercial outputs developed as the result of group collaboration must be discussed and receive the signed agreement of the Researcher before development or usage outside of the project.

5.0 How the information will be stored and published (if applicable):

All data supplied by individuals or generated as a result of the project's research activities, including records of group meetings, discussions, interviews tapes and responses to questionnaires will be kept securely. Where digital data is collected on a portable device

(such as a laptop, digital audio recorded or flash drive) the files and documents will be password-protected where feasible. The records will be kept by the Researcher until the end of the project. They will then be disposed of in line with Northumbria University's retention policy.

All participants have the right to confidentiality and anonymity for their contributions. All participants also have the right to be duly credited for their contributions where possible. Participants own their personal contributions and can utilise these contributions outside the project. However, ideas generated by the project team and the contributions of the individuals within the group must be afforded confidentiality and disseminated through the signed agreement of the Researcher. Participants are encouraged to write articles and give papers in order to disseminate the work of the group.

This research is being used by the Researcher as part of a PhD submission. The Researcher will be undertaking separate work that will be fed into the project as information. Formal publications will include journal articles, conference papers and a project report. These will be managed through the Researcher but it is the intention that participants should also have the opportunity to collaborate in the outputs, i.e. present conference papers, write articles etc.

6.0 Any other information deemed relevant to the project:

Participation in the project is voluntary and participants are free to withdraw at any time, or to refuse to answer any questions that they feel are too intrusive. We regret that the project is unable to offer any reimbursement for participants' time etc.

FOR ANY FURTHER ENQUIRIES PLEASE CONTACT ELIZABETH LOMAS. :
elizabeth.lomas@unn.ac.uk. Tel: ++44 (0)1582 762726 (09.00-17.00 GMT – please allow for the time difference) .

Contact details for the Continued communication research project		
Researcher:	Supervisory team:	
Elizabeth Lomas Researcher School of Computing, Engineering & Information Sciences c/o 62 Meadway Harpenden Hertfordshire AL5 1JQ UK. Tel: ++44 (0)1582 762726 elizabeth.lomas@unn.ac.uk	Professor Julie McLeod Professor in Records Management School of Computing, Engineering & Information Sciences Pandon Building Camden Street Newcastle upon Tyne NE2 1XE UK Tel: ++44 (0)191 227 3764 julie.mcleod@unn.ac.uk	Dr David Wainwright Head of IKS School of Computing, Engineering & Information Sciences Pandon Building Camden Street Newcastle upon Tyne NE2 1XE UK Tel: ++44 (0)191 243 7634 david.wainwright@unn.ac.uk

APPENDIX 1.5: ETHICS CONSENT FORM

Northumbria University
Research Ethics
CONSENT FORM
(Issued in conjunction with an information sheet)

Project Title: Continued communication...

Name of the Researcher**:** Elizabeth Lomas

PROJECT MANAGEMENT	
Please put a tick against each of the following statements to confirm your understanding of the project's management framework and the terms of participation.	
1.1 I have had the project explained to me by the Researcher and been given **an information sheet**. I have read and understand the purpose of the study.	
1.2 I consent to take part in this project.	
1.3 I understand I can withdraw my consent at any time, without giving a reason and without prejudice.	
1.4 I understand and am happy that the discussions I will be involved in may be audio-taped, retained electronically and notes will be taken.	
1.5 The tapes and any personal information will be kept secure and confidential. They will be kept by the Researcher until the end of the project. They will then be disposed of in line with Northumbria University's retention policy.	

2.0 ANONYMISATION/ACKNOWLEDGEMENT	
It is the right of each participant to request that their name, details and contributions are anonymised within any printed documents. It is also the right of the participants to request participation acknowledgement and/or credit for contributions to the study. *Please put a tick against...*	
Either:	
2.1 I request that my name and details are kept confidential and will not to appear in any printed documents. I understand that anonymised summaries (if required) will be produced from the project discussions, and appear in the project report and in other publications.	
or ONE of the following:	
2.2a I request that my name and details are duly acknowledged as part of the project team in any printed documents and that my contributions in any discussion summaries, project reports and published documents are duly credited.	
2.2b I request that my name and details are duly acknowledged as part of the project team in any printed documents but that my contributions in any discussion summaries, project reports and published documents are duly anonymised.	
Copies of any reports or publications will be available on request to participants.	

) CONFIDENTIALITY	
3.1 It is the right of each participant to request that their name, details and contributions are retained confidentially and anonymised within any printed documents. In order to protect the confidentiality and rights of all participants, each individual participant must confirm that they will not discuss the contributions of any other participant(s) in such a way as to identify those contributions or to undermine their fellow participant(s). *Please tick* to confirm that you will not discuss the contributions of other participants with any person who is not a participant within the project team.	
3.2 It is the right of the Researcher to control all reports, publications and resource/software developments resulting from the group's co-operation. Participants cannot publish on the groups work and findings without the signed approval of the Researcher. Participants cannot utilise the project's work to develop software or other products/resources without the prior discussion and signed agreement of the Researcher. *Please tick* to confirm that you will not publish or utilise the project's work without the signed approval of the Researcher.	

Please return a signed copy of this form to the Researcher (Elizabeth Lomas).

Print name:

Signed: **Date:**

Researcher: I (Elizabeth Lomas) confirm that I have explained the project to the participant by telephone and have given adequate time to answer any questions concerning it.

Contact details for the Continued communication research project		
Researcher:	Supervisory team:	
Elizabeth Lomas Researcher School of Computing, Engineering & Information Sciences c/o 62 Meadway Harpenden Hertfordshire AL5 1JQ UK. Tel: ++44 (0)1582 762726 or 0794 6614882. elizabeth.lomas@unn.ac.uk	Professor Julie McLeod Professor in Records Management School of Computing, Engineering & Information Sciences Pandon Building Camden Street Newcastle upon Tyne NE2 1XE UK Tel: ++44 (0)191 227 3764 julie.mcleod@unn.ac.uk	Dr David Wainwright Head of IKS School of Computing, Engineering & Information Sciences Pandon Building Camden Street Newcastle upon Tyne NE2 1XE UK Tel: ++44 (0)191 243 7634 david.wainwright@unn.ac.uk

APPENDIX 1.6: CO-RESEARCHERS CREDITED FOR PARTICIPATION IN THE RESEARCH

This Appendix sets out the names of the co-researchers who participated within the cooperative inquiry. Participants had the option to be credited for their membership within the group and also to select whether they wished to be credited for their contributions. In addition participants could select to participate in an entirely anonymous capacity.

Records management Co-researchers: Rachel Binnington, David Bowen, Teresa Blackmore, Leanne Bridges, Chris Campbell, Emma Davies, Sarah Demb, Paul Dodgson, Susan Em, Sonja Gabriel, Rachel Hardiman, Emma Jarvie/Johnson, James Lappin, Samantha Mansfield, Christopher Marsden, Suzie Mereweather, Stephenie Nield, Laura Robertson/Cotton, Tim Rodgers, Martin Sanderson, Deidre Sharp, Jon Shepherd, Jeanette Wordsworth, Lynn Young, Jane Zibarras and one anonymised participant.

Non-records management co-researchers/systems users: Caroline Baker, Matthew Brown, Heather Caven, Nick Cooper, Ron Donaldson, Denise Drake, Leigh Driver, Benjamin Ellis, Laurence Mosely, Kat Nower, Morag Reavley, Mia Ridge, Tom Salmon, Katharine Stevenson nee George, Andrew Stewart, Kristy Widdicombe and six additional anonymised participants.

International virtual co-researchers: Alan Andolsen, Dr Nabeel Al-Qirim; Bernard Chester, Galina Datskovsky, Judith Ellis, Joanne Evans, Julie Fairless, Sylwia Frankowska, Magdalena Getler, Rae Lynn Haliday, Dr Raija Halonen, Catherine Hare, Dr. Rugayah Hashim, Michael Levey, Dr Nancy McGovern, Nancy McMahon, Umi Asma' Binti Mokhtar, Jami Morritt, Osemeke Mosindi, Prof. Julian Newman; John James O'Brien, Dr Gillian Oliver, Myriam Raymond,Corinne Rogers, Samiaji Sarosa, Stevanus Wisnu Wijaya, Dr Derek Wallace, Joshua Welsh Credit and two anonymised participants.

APPENDIX 1.7: REFERENCE KEY TO CO-RESEARCHERS AS CITED WITHIN THE TEXT

For the sake of clarity within the PhD text, each participant has been allocated a running number with a group prefix: R indicates a member of the UK records management group; U indicates a member of the UK non-records management/user group; I indicates a member of the international group of co-researchers. The table below enables contributors who wish to be credited for their specific input to be duly referenced.

Some contributors wished to be credited for some comments but for specific comments to be anonymised. Therefore, in addition, another set of numbers (C83-C124) indicates these additional comments.

NO	NAME
Records Managers – UK group	
R1	Rachel Binnington
R2	David Bowen
R3	Leanne Bridges
R4	Chris Campbell
R5	Emma Davies
R6	Sarah Demb
R7	Paul Dodgson
R8	Emma Jarvie/Johnson
R9	James Lappin
R10	Christopher Marsden
R11	Cicely Poulton
R12	Martin Sanderson
R13	Jon Shepherd
R14	Jane Zibarras
R15	Jeannette Wordsworth
R16	Lynn Young
R17-30	Anonymised contributors
AR1	Rachel Hardiman
Users – UK group	
U31	Caroline Baker
U32	Matthew Brown
U33	Heather Caven
U34	Nicholas Cooper
U35	Katy Crosse
U36	Ron Donaldson
U37	Denise Drake
U38	Leigh Driver
U39	Benjamin Ellis
U40	Katherine Stevenson nee George
U41	Laurence Mosely
U42	Morag Reavley

NO	NAME
U43	Tom Salmon
U44	Andrew Stewart
U45	Kristy Widdicombe
U46-U52	Anonymised contributions
AU1	Mia Ridge
International group	
I53	Alan Andolsen
I54	Dr Nabeel Al-Qirim
I55	Joanne Evans
I56	Julie Fairless
I57	Magdalena Getler
I58	Dr Raija Halonen
I59	Dr. Rugayah Hashim
I60	Nancy McMahon
I61	Umi Asma' Binti Mokhtar
I62	Prof. Julian Newman
I63	Dr Gillian Oliver
I64	Myriam Raymond
I65	Corinne Rogers
I66	Dr Derek Wallace
I67	Stevanus Wisnu Wijaya
I68	Joshua Welsh
I69-PI82	Anonymised contributors
Anonymised comments	
AR83-AR98	
AU99-AU108	
AI109-A24	

APPENDIX 1.8: SNAPSHOT OF RM CODING

GROUPS	RM - UK	User - UK	International	UK	Whole
CODES LINKED TO RM					
Access/accessibility	5829	12108	4478	223	8337
Accountability	341	6170	2416	72	2269
Age	2	23	273	15	23
Appraisal	606	3	93	132	275
Archives	237	63	6	23	42
Archivists	33	2	9	8	18
Audit trails	373	9	15	131	43
Auditing	36	60	3	21	29
Authenticity	186	11	12	9	93
Authorship	21	4	63	154	71
Automation	62	25	21	71	601
Availability	344	135	8	21	81
Barriers	29	0	31	49	116
Behaviour	127	46	13	101	93
Bureaucracy	2	0	0	28	13
Capacity	26	65	22	41	123
Censorship	1	49	82	23	7
Change/change management	201	41	32	81	544
Choice	42	93	101	221	809
Classification	92	7	2	43	52
Collaborative working	91	15	18	23	32
Collectivism vs individualism	193	89	171	322	102
Communication	229	70	108	79	429
Communication opportunities	13	0	29	321	401
Communication purpose	12	436	742	1845	1902
Communication technology	245	1448	124	2235	2021
Community	12	0	0	23	54
Confidence	9	40	9	21	29
Confidentiality	266	123	3	84	103
Consistency	85	28	234	35	53
Consumers	0	28	103	6	203
Content	429	171	282	102	961
Content management	219	86	55	501	442
Context - human	0	95	150	223	403
Context/communication	0	160	418	554	871
Context/metadata	409	24	232	73	53
Continuity	2	33	21	75	29
Continuum	11	0	6	21	59
Control	909	21	13	23	92

Control vs anarchy	5	93	31	31	12
Co-operation	7	44	110	254	201
Corruption - data	21	12	24	34	2
Corruption - human	3	9	49	6	4
Cost	141	13	51	73	223
Create	40	51	60	731	431
Creator vs consumer	0	3	454	401	102
Culture	72	54	152	44	341
Data	478	308	37	72	13
Data formats	670	1209	336	49	366
Data Protection	21	0	0	38	12
Database	12	2	91	11	3
Dead/Artefact	0	0	0	12	39
Decisions	231	19	19	32	72
Deletion/Destruction/disposal	264	457	548	184	229
Democratisation	0	12	29	6	9
Digital archivist	5	0	0	0	22
Discrimination	0	0	19	0	9
Disposition/retention schedule	112	0	0	181	91
E-discovery	17	33	4	2	12
EDRM	187	4	5	21	127
Email	1172	658	229	191	257
Ethics - professional	445	109	21	91	223
Ethics - RM	391	0	9	24	79
Evidence	112	22	32	21	15
Expectation management	2	5	41	34	32
Filtering - automated	109	0	741	29	91
Filtering - human	89	0	329	31	23
Fixity	88	42	0	64	24
Flexibility	23	19	21	12	102
Freedom of Information	21	0	0	8	13
Functionality	144	39	30	31	23
Gender	21	0	0	92	13
Governance	23	0	0	12	98
Government	71	26	31	47	31
Hacking	5	39	9	14	21
Human relationships	131	21	182	43	71
Humour	0	0	312	0	32
Individual impact	1	8	56	9	79
Individual/user	15	66	129	703	901
Information	2537	1157	318	452	221
Information and Records Management	44	0	0	24	43
Information asset/value	43	16	179	129	92
Information behaviours	3	39	201	709	176

Information management	4	31	34	77	23
Information overload	26	122	340	102	22
Integrity	72	16	2	17	4
Interfaces	0	32	53	78	32
Internal/external	69	26	34	103	92
International research	10	0	21	0	12
International RM	10	0	0	0	93
Interoperability	1	91	17	244	21
IS customisation	24	6	9	5	91
IS design	72	33	21	221	201
IT	4349	7581	2714	2300	2937
IT Manager	125	10	344	179	86
IT role	105	4	95	29	34
KM	83	120	1007	12	53
Knowledge	362	485	1667	73	146
Knowledge managers	28	9	321	12	18
Knowledge sharing	0	0	211	0	199
Legislation/law	9128	370	1928	322	5962
Librarians	59	21	14	29	4
Life cycle	35	0	0	8	21
Linked data	121	0	0	391	23
Loss	12	63	29	31	9
Malware	0	21	0	71	38
Management	31	9	21	52	81
Mashups	4	3	12	32	8
Measure	21	41	252	239	367
Migration	39	4	11	22	34
Motivation - external	3	0	21	93	121
Motivation - intrinsic	401	5	9	123	221
Mulitple channels	32	26	17	320	156
Noise	0	0	1047	0	23
Operational benefit	19	5	0	91	23
Opportunities	593	0	84	223	431
Organisation - external	92	131	195	402	332
Organisation - internal	3	95	433	502	443
Organisation vs. individual	204	174	145	129	74
Organisational	184	253	113	87	117
Organisational culture	13	29	45	120	234
Ownership	116	58	10	43	59
Paper	349	192	123	9	19
Policies	233	43	44	907	1106
Power	6	58	11	88	65
Preservation/longevity/future proof	54	63	112	310	201
Privacy	1169	802	321	96	167
Product design	54	117	55	401	42

Profession	3180	84	21	239	321
Protection/Bans	140	198	339	83	230
Rapport management	0	0	23	0	79
Recordkeeping	93	0	21	102	92
Records (amalgamated codes)	6735	76	920	1022	901
Records manager	3821	122	156	98	221
Registry Systems (British)	3	0	21	0	21
Reliability	90	24	6	102	29
RM Research	92	11	12	52	131
Retention	356	26	92	276	304
Risk	6201	172	1056	1766	6259
RM	16250	228	1840	9064	8059
RM - African	3	0	9	5	28
RM - Asian	21	0	14	11	32
RM - Australian	115	2	16	29	159
RM - Botswana	1	0	0	45	12
RM - Canadian	9	0	5	3	9
RM - China	23	0	3	4	14
RM - European	47	0	2	9	39
RM - Eustonia	0	0	4	0	12
RM - Finland	3	0	0	0	9
RM - France	29	0	0	0	8
RM - Hong Kong	0	0	12	0	23
RM - Ireland	13	0	0	0	17
RM Job	74	6	52	32	83
RM - New Zealand	2	0	11	4	21
RM - Nigeria	0	0	3	0	5
RM - Saudi Arabia	0	0	9	0	2
RM - Sweden	21	0	0	0	9
RM - Tanzania	0	0	0	0	3
RM - Thailand	0	0	0	0	29
RM - UK	146	4	42	110	52
RM - USA	29	0	43	13	189
RM incentives	169	3	21	106	69
RM Job	81	0	0	14	23
RM Models	23	0	0	131	156
RM practice	53	8	21	191	132
RM principles	89	10	42	81	149
RM profession	230	0	8	15	92
RM research	18	0	31	21	43
RM understanding	143	7	15	203	332
RM value	398	19	49	271	99
RM/IM incentives	223	0	109	291	320
Roles	374	27	459	92	289
Search/findeability	184	889	330	95	331

Security	1598	1553	256	908	123
Sharing	205	178	532	202	456
Social dynamics of information	0	111	159	1	76
Stakeholders	111	39	12	75	255
Standards	164	18	8	121	93
Standards - ISO 15489 RM Standard	1908	7	3	21	195
Standards - ISO 27001 Info Sec	103	11	0	19	4
Storage	189	95	299	43	275
Structure	231	93	85	19	23
Symantic web	14	53	44	0	0
Tagging	134	36	52	109	45
Technological illiteracy	9	0	0	29	52
Tools	405	43	21	560	499
Training	654	33	203	261	299
Transparency	88	27	119	162	9
Trust	53	64	49	8	7
RM Understanding	36	35	22	92	55
Users	597	215	908	302	449
Web 2.0	239	347	899	201	337

APPENDIX 1.9: OVERVIEW OF CODING

High level coding diagram
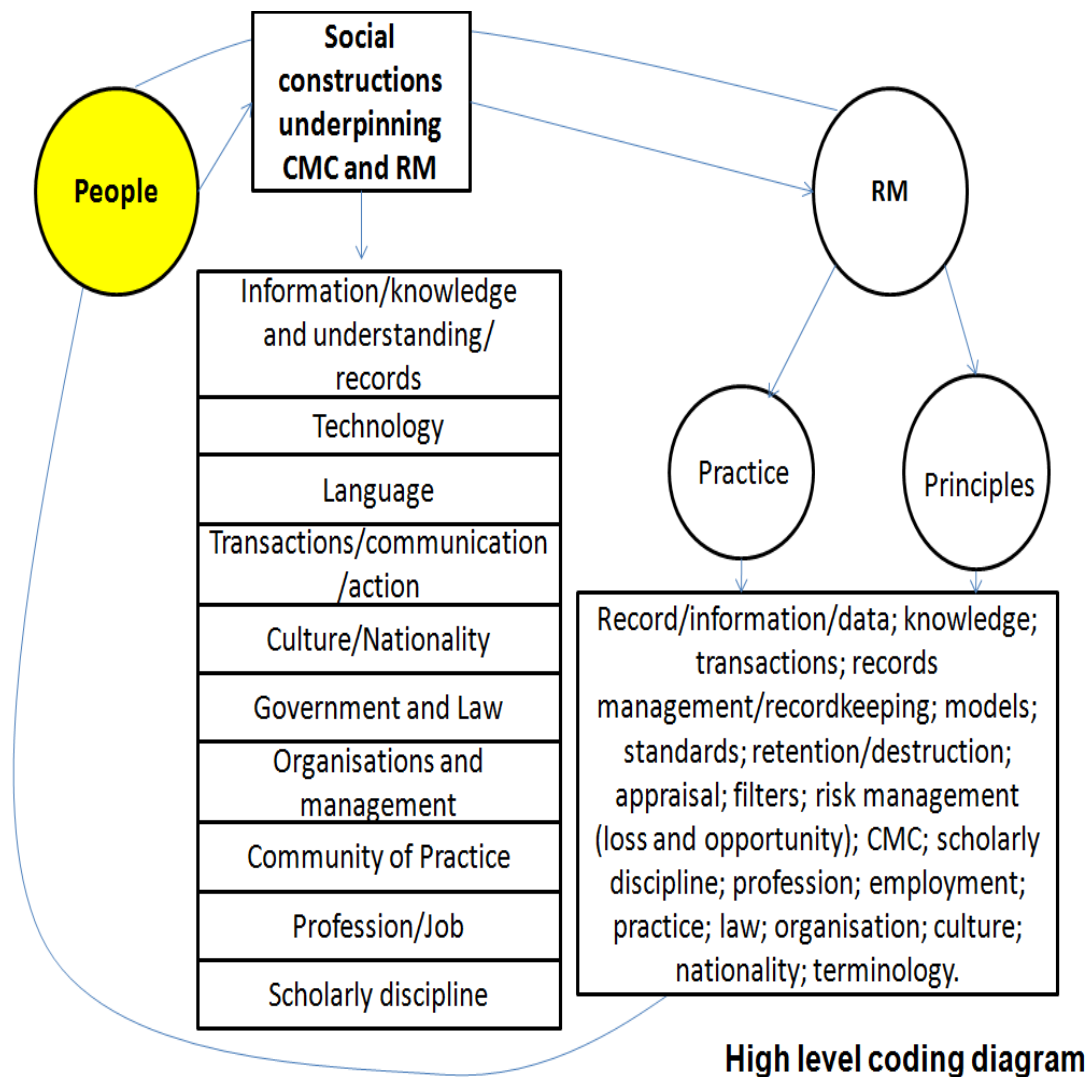
APPENDIX 1.10 – SAMPLE OF CODING FROM ATLASTI

Sample 1: AtlasTI screenshot of email text marked up with initial free coding

Sample 2: Screenshot of photograph text marked up with initial free coding

Sample 3: AtlasTI screenshot of audio marked up with search for "access" issues as coded and marked
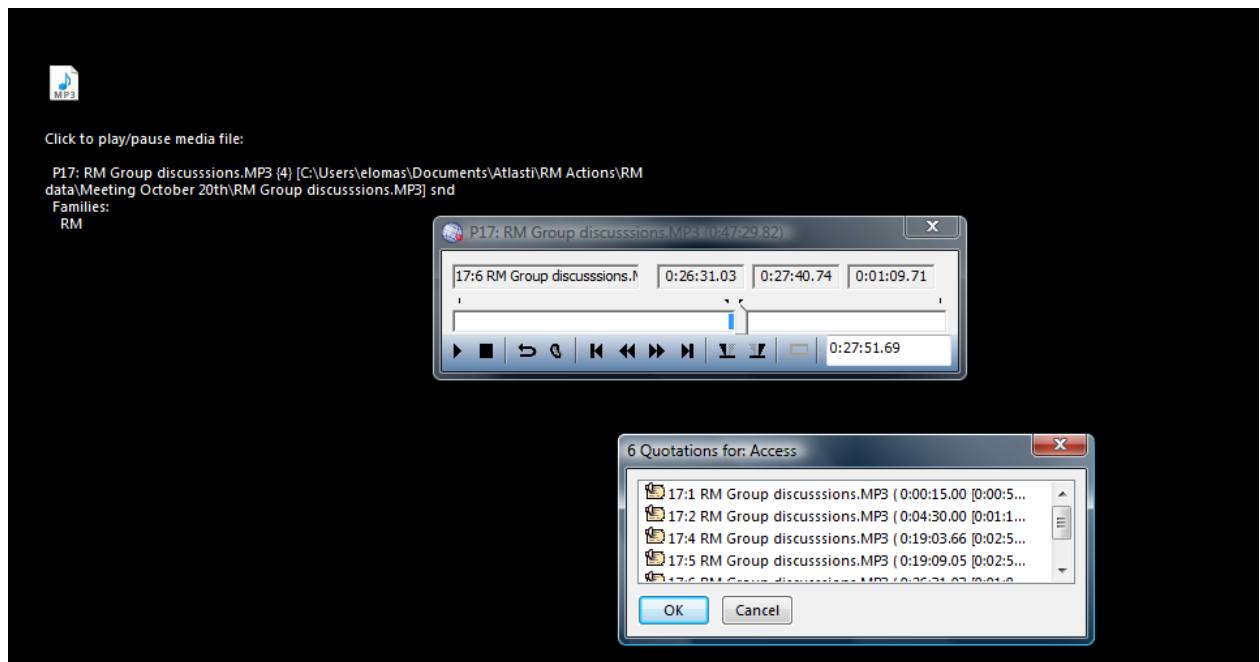
Sample 3: AtlasTI memo snapshot

Memos were my own captured snapshots and thoughts which varied in length and detail.
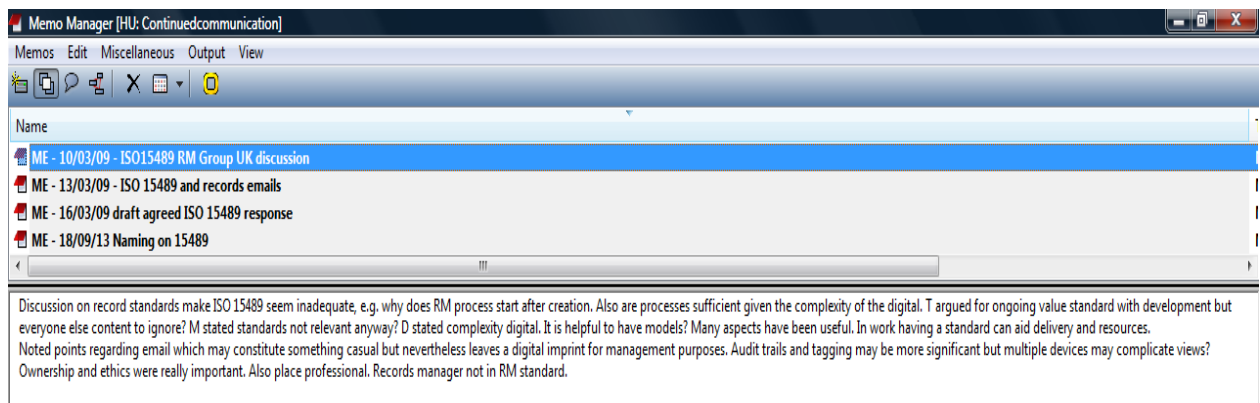
Sample 4: AtlasTI output of free codes across all documents linked into a family code "records"
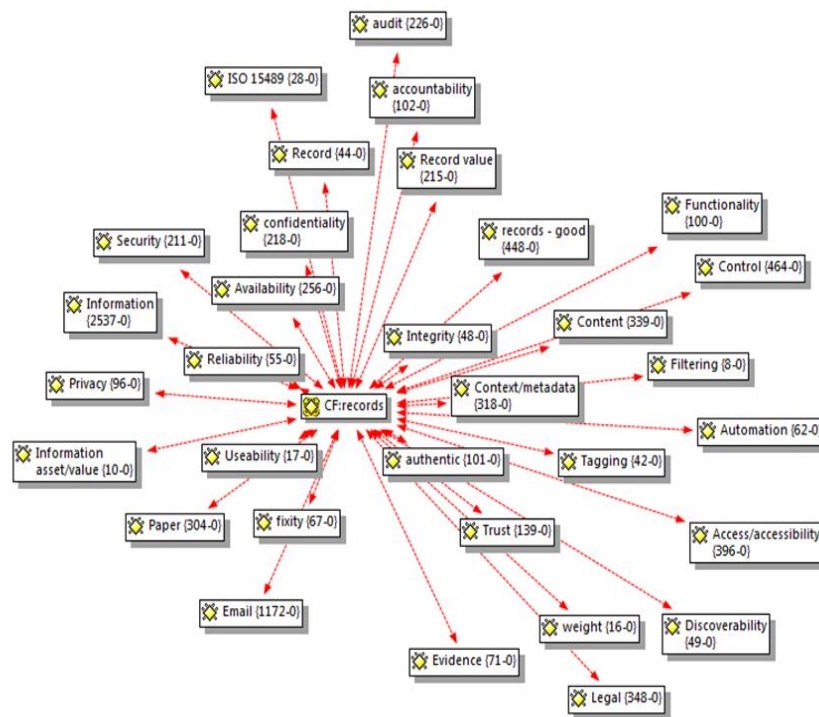
APPENDIX 1.11: CO-RESEARCHERS' QUESTIONNAIRE – PARTICIPATION BENEFITS

PARTICIPATION BENEFITS

Name ....

What do you hope to get out of your participation in this research project?
e.g. research skills, technical information, business training, records management training

....

....

....

....

....

....

....

....

....

....

APPENDIX 1.12: CO-RESEARCHERS QUESTIONNAIRE

A. DEMOGRAPHICS: Personal Data

A.1 Gender *Please tick only one option*

Male ☐   Female ☐

A.2 Age *Please tick only one option*

18-25 ☐   46-55 ☐

26-35 ☐   56-65 ☐

36-45 ☐   66 plus ☐

A.3 Country *When selecting your country, please indicate the country to which you feel you belong the most, whether by virtue of citizenship, length of residence, or acculturation, e.g. UK*

....

A.4 Education *Please tick the qualifications that you hold. Please tick all those that apply.*

- GCSEs or equivalent   ☐
- A' Levels or equivalent   ☐
- BA/BSc/LLB or equivalent   ☐
- MA/MSc/LLM or equivalent   ☐
- Dr of Medicine   ☐
- Dr of Philosophy   ☐

Please list any significant qualifications that you hold which have an information sciences component (e.g. archive studies, IT, librarianship, records management etc)

....
....
....
....
....

B. DEMOGRAPHICS: Organisational Data

B.1 Job Title *Please specify, including retired, student, unemployed or voluntary worker.*

……

Where you are retired or unemployed please proceed to Section C

B.2 Role How would you best categorise your role from the options below?
Please tick only one option

- Senior management ☐
- Middle management ☐
- Customer facing staff ☐
- Operational/support staff ☐
- Technician/specialist ☐
- Consultant ☐
- Self-employed ☐
- Student ☐

- Other *(please specify)* _____

B.3 Organisation

Sector classification Identify your organisation's/employer's business sector (including voluntary work or educational establishment) (e.g. banking, charity, local government, manufacturing, national government, retail, school, university etc)

………

Distribution

Is your organisation spread across split sites?   YES ☐   NO ☐
Please tick only one option

Is your organisation a global entity?   YES ☐   NO ☐
Please tick only one option

Size My organisation has approximately employees/students. *Please tick only one option*

- *0-50* ☐
- *50-250* ☐

- *250-1,000* ☐
- *1,000-10,000* ☐

- *10,000+* ☐

C. COMMUNICATION SYSTEMS

C.1 Systems used

	Personal/ home systems *Tick all you use*	**Organisation/ work systems** *Tick all you use*	**Most used system** *Tick only one*	**Favourite system** *Tick only one*
Communication type				
Bebo				
Blackboard forums				
Blog(s) (for which you are the creator)				
Blog(s) (created by others)				
Conference/video calls				
Email				
Facebook				
Friends Reunited				
Instant messaging				
Letters (postal system)				
LinkedIn				
Myspace				
Second Life				
Skype				
Telephone				
Twiki				
Twitter				
Wickis				
Other key communication tools - please specify below:				

Personal/home *systems* *For the next set of questions please consider* <u>*all*</u> *forms of communication, e.g. e-mail, face-to-face discussions, meetings.*

C.2 What is your preferred method of communication for personal matters (family, friends, household enquiries)?

....

C.3 If you build up relationships with contacts that you have never met face-to-face (e.g. Second Life etc) what is your preferred communication method?

....

Organisation/work systems *For the next set of questions please consider* <u>*all*</u> *forms of communication, e.g. e-mail, face-to-face discussions, meetings*

C.4 Within your **organisation/workplace** what is your overall preferred method of communication?

....

C.5 What is your preferred method of communication with your peers?

....

C.6 What is your preferred method of communication with your senior managers?

....

C.7 If applicable, what is your preferred method of communication with subordinates ?

....

C.8 What is your preferred method of communication with professional contacts outside your organisation?

....

C.9 General questions *Please tick the relevant circle to indicate which answer best reflects*

your view

I love finding new technologies to use	Strongly agree ○	Agree ○	Neither agree nor disagree ○	Disagree ○	Strongly disagree ○
The way in which people communicate within an organisation should be controlled.	Strongly agree ○	Agree ○	Neither agree nor disagree ○	Disagree ○	Strongly disagree ○
I should own any communication that I post onto the Web	Strongly agree ○	Agree ○	Neither agree nor disagree ○	Disagree ○	Strongly disagree ○
Email is at the heart of all organisations' communications	Strongly agree ○	Agree ○	Neither agree nor disagree ○	Disagree ○	Strongly disagree ○
All organisations should keep all online communications	Strongly agree ○	Agree ○	Neither agree nor disagree ○	Disagree ○	Strongly disagree ○
I am an active contributor to Web 2.0 debates	Strongly agree ○	Agree ○	Neither agree nor disagree ○	Disagree ○	Strongly disagree ○
Information should be managed	Strongly agree ○	Agree ○	Neither agree nor disagree ○	Disagree ○	Strongly disagree ○
I prefer to use the same systems at home as work	Strongly agree ○	Agree ○	Neither agree nor disagree ○	Disagree ○	Strongly disagree ○
Server space is cheap	Strongly agree ○	Agree ○	Neither agree nor disagree ○	Disagree ○	Strongly disagree ○
Knowledge management policies are vital for organisational survival	Strongly agree ○	Agree ○	Neither agree nor disagree ○	Disagree ○	Strongly disagree ○
All organisations should have a records management policy	Strongly agree ○	Agree ○	Neither agree nor disagree ○	Disagree ○	Strongly disagree ○
I find the volume of email I receive stressful	Strongly agree ○	Agree ○	Neither agree nor disagree ○	Disagree ○	Strongly disagree ○
It is too expensive to implement information management policies	Strongly agree ○	Agree ○	Neither agree nor disagree ○	Disagree ○	Strongly disagree ○
I could not survive at work without email	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree

	○		○		○		○		○
I consume the information posted online listservs and Blogs but do not contribute	Strongly agree ○		Agree ○		Neither agree nor disagree ○		Disagree ○		Strongly disagree ○
All organisations should keep all information for seven years for accountability purposes	Strongly agree ○		Agree ○		Neither agree nor disagree ○		Disagree ○		Strongly disagree ○
Email distracts me from my work	Strongly agree ○		Agree ○		Neither agree nor disagree ○		Disagree ○		Strongly disagree ○
Facebook is a vital link to my family and friends	Strongly agree ○		Agree ○		Neither agree nor disagree ○		Disagree ○		Strongly disagree ○
I do own all of the communications that I post on Web 2.0 technologies	Strongly agree ○		Agree ○		Neither agree nor disagree ○		Disagree ○		Strongly disagree ○
My organisation values the information within its communication systems	Strongly agree ○		Agree ○		Neither agree nor disagree ○		Disagree ○		Strongly disagree ○
I send emails so that no one can accuse me of not having done something	Strongly agree ○		Agree ○		Neither agree nor disagree ○		Disagree ○		Strongly disagree ○

C.10 The key to maximising information potential is …
Please tick only one option.

- Financial support ▢

- Management processes ▢

- People/the individual ▢

- Technology ▢

C.11 Information retrieval How do you most commonly find your old communications?
*Please break down your answer as **percentages** of your accessing methods (e.g. 65%
communications by browsing through a directory structure of email folders and 35% by
searching across all information with potentially relevant word search)*

Search method	On personal home systems	On organisation/work systems
Search by browsing through a directory structure of folder(s) where you have filed your communications, (e.g. email folders)		
Search in a structured system using pre-defined thesauri search terms (e.g. searchable structured email fields such as 'date' sent or 'sender')		
Search across all information held with words you think are relevant (e.g. Google style search)		

C.12 Keeping information How long do you keep your communications? *Please put a
percentage of the communications total in each box (e.g. 10% deleted without reading, 80%
kept 3 months, 10% kept 1 year).*

	On personal home systems	On organisational/work systems
Delete without reading		
Delete immediately upon reading		
3 months		
1 year		
3 years		
7 years		
Longer than 7 years		

C.13 What is the most important reason for retaining your communications?

....

....

....

....

C.14 Ownership Who do you believe owns your communications? *Classify as a percentage the ownership of your communications*

A) The percentage of information sent/received on my <u>personal home systems</u> that is

owned by my organisation/employer is what percentage of the total?

....

B) The percentage of information sent/received on my <u>organisation/work systems</u> that is

owned by my organisation /employer is what percentage of the total?

....

C) The percentage of my communications I post on Facebook that are owned by the site

host are what percentage of the total posted?

....

C.15 Management tools, standards and guidelines. Please tick if the answer is yes.

	I have heard of this	I have used	My organisation uses	I have found this useful
Tools, standards/guidelines				
Balanced scorecard				
Business continuity (BS 25999)				
Information security (ISO 27001)				
ITIL				
Knowledge management (e.g. PAS 2001, PD 7504, PD 7506, CWA 14924)				
Metadata standards (e.g. ISO 23081)				
MoReq				
Prince 2				
Quality management systems (ISO 9000)				
Records management standard (ISO 15489)				
Risk management standard				
Six Sigma				

Please list any other information management tools, standards and guidelines which you believe would assist with maximising information potential within information communication systems

C.16 Tools, standards relevance The standards/tools and guidelines listed in **C.13** do not provide any assistance for enhancing information communication. Do you agree? *Please tick only one option*

YES ☐   NO ☐

Records and information

C.17 How would you personally define information*? Please specify*

....

....

....

C.18 How would you personally define a record? *Please specify*

....

....

....

C.19 Which do you think is more important? *Please tick only one option*

- A record   ☐

- Information   ☐

C.20 Have you heard of the practice of records management?

YES ☐

NO ☐

If yes how would you define, in a short statement, record management?

....

....

....

....

Do you wish to add any other comments about how to achieve the overarching aim of this research project? *Research aim: maximising information potential within information communication systems*

....

....

....

....

....

....

....

....

If you wish to be credited for any comments supplied on this questionnaire

please enter your name

here...

APPENDIX 2.1: TOOLS AND COMMUNICATION MECHANISMS USED ACROSS GROUPS

COMMUNICATION CHANNELS	EXCHANGE CONTEXT	RM UK GROUP	USER UK GROUP	INTER-NATIONAL GROUP	UK GROUP	WHOLE GROUP
Audio recorder	Synchronous: Used for recording presentations, group meetings and individual comments	YES	YES	YES	YES	YES
Doodle	Asynchronous: Used to vote on meeting times across global timezones	NO	NO	YES	NO	YES
Delicious tagging	Asynchronous and Synchronous	YES	YES	YES	YES	YES
Dragon sound text conversion	Aid to communication	NO	YES	NO	YES	NO
Email	Asynchronous	YES	YES	YES	YES	YES
Face-to-face meetings	Synchronous	YES	YES	NO	YES	YES
Flickr	Asynchronous and Synchronous:	NO	YES	YES	YES	YES
Flipchart	Synchronous	YES	YES	NO	YES	YES
Google Docs	Asynchronous	YES				
Google Wave	Asynchronous and Synchronous:	NO	NO	NO	YES	YES
GoToMeeting	Asynchronous and Synchronous:	NO	NO	YES	NO	YES
Hexagon mapping cards	Synchronous	NO	YES	NO	YES	YES
Knowledge Soup	Asychronous	NO	NO	YES	NO	NO
Microsoft Office for Word, Excel, PowerPoints, Publisher	Used for collaborative writing and research development	YES	YES	YES	YES	YES

	in a range of contexts Asynchronous					
MindMeister	Asynchronous and Synchronous	NO	NO	YES	YES	YES
Moodle	Asynchronous and Synchronous (although technically difficult in the group server context)	YES	YES	YES	YES	YES
Ning	Asynchronous and Synchronous	YES	YES	YES	YES	YES
Paper and pen	Asynchronous and Synchronous	YES	YES	YES	YES	YES
Post	Asynchronous and Synchronous	YES	YES	YES	YES	YES
ReadTheWord	Aid to communication	NO	YES	NO	YES	NO
Skype	Asynchronous and Synchronous	YES	YES	YES	YES	YES
SPSS/PAW 19	Data analysis tool	NO	NO	NO	YES	YES
SurveyMonkey	Asynchronous	YES	YES	YES	YES	YES
Instant Messaging/Phone Texts	Asynchronous and Synchronous	YES	YES	YES	YES	YES
Telephone	Synchronous	YES	YES	YES	YES	YES
Twitter	Asynchronous and Synchronous	YES	YES	YES	YES	YES
YouSendIt	Asynchronous	YES	YES	YES	YES	YES
YouTube	Asynchronous and Synchronous					
Webex	Synchronous	NO	NO	YES	NO	NO
Wikipedia	Asynchronous	YES	YES	YES	YES	YES
Xtranormal movie maker	Asynchronous	YES	NO	NO	YES	YES

APPENDIX 2.2: SAMPLE CMC SCREENSHOTS

1. GOOGLE WAVE
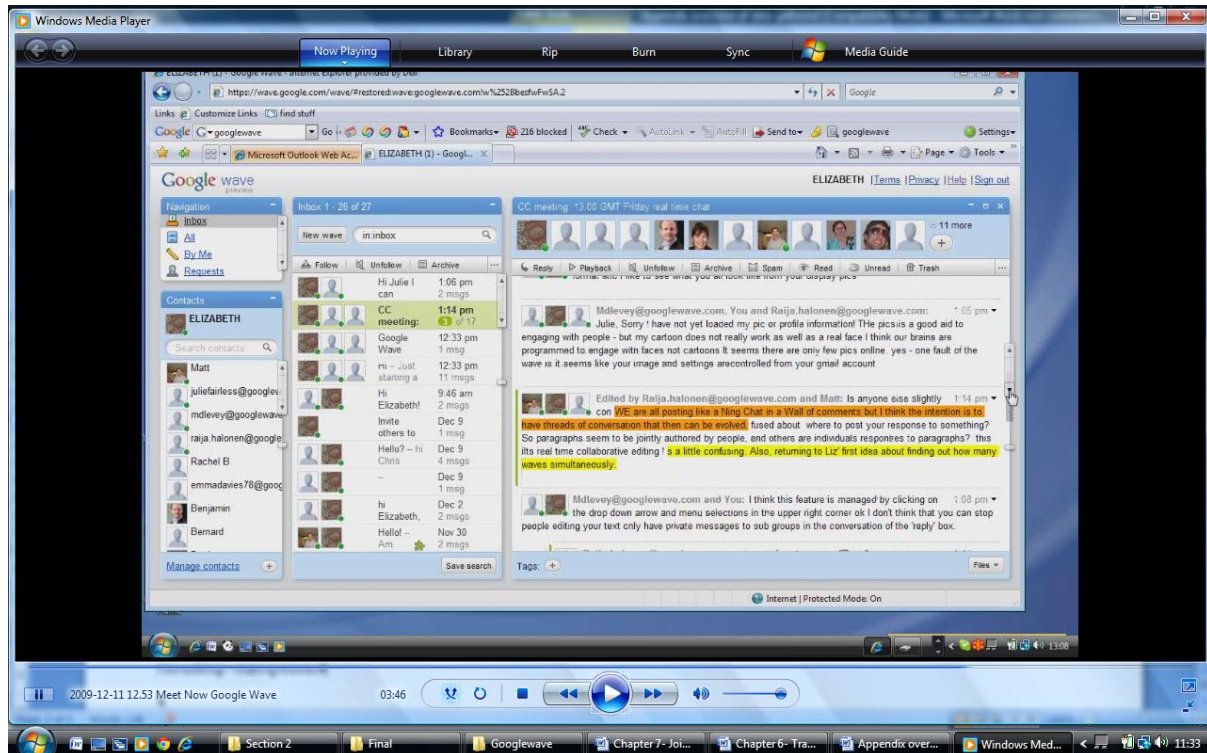
2. MINDMEISTER
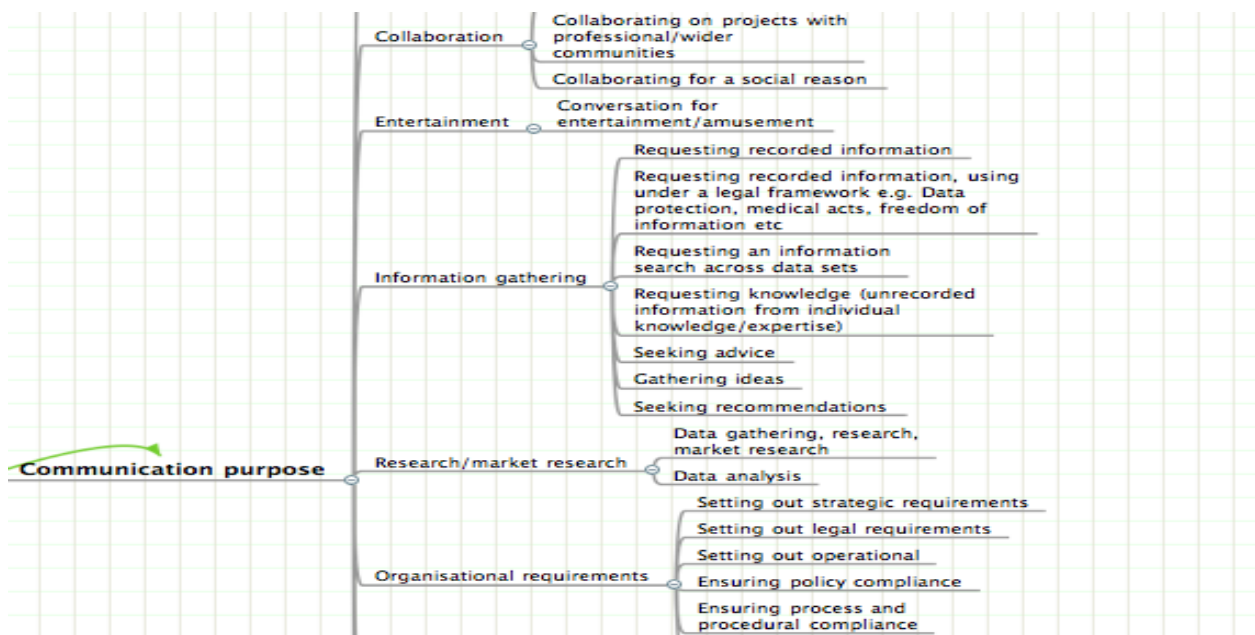
3. MOODLE
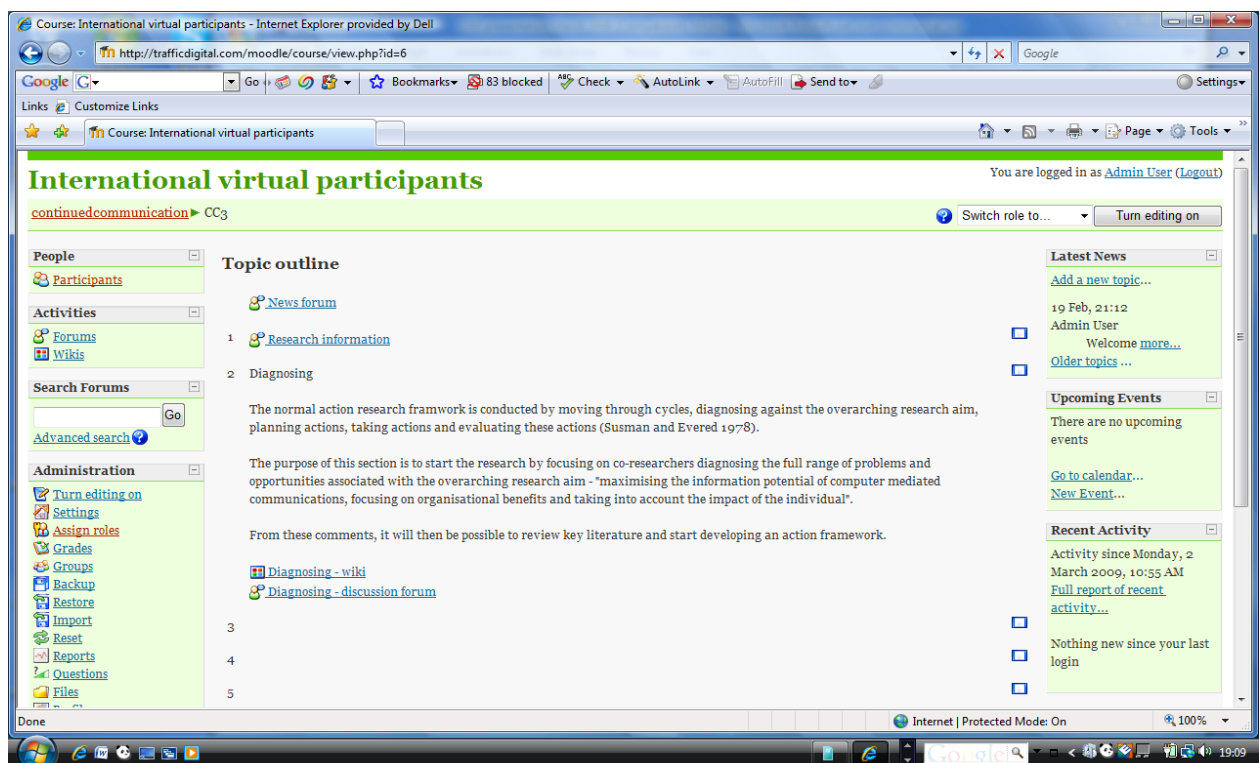
4. NING
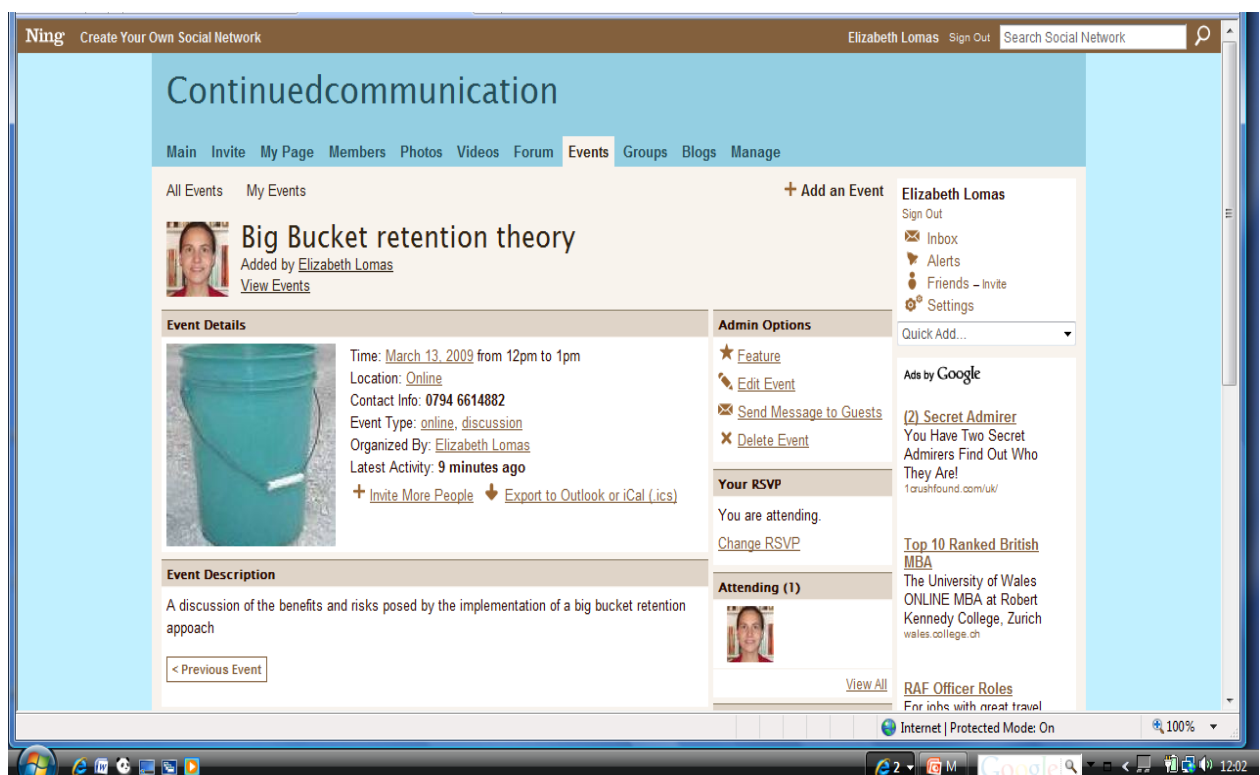
APPENDIX 2.3: FREE CODES DEVELOPED FROM FIRST DIAGNOSING PROCESS ACROSS GROUPS

NB The UK Records Managers diagnosed in two sections and therefore the coding for each section is in brackets

Free Codes	*RM – UK Totals	Users - UK	International
Access/accessibility	2 (1/1)	9	2
Activity	1 (1/0)	0	0
Age	0	0	4
Age discrimination	0	1	1
Archives	2 (1/1)	7	0
Asynchronous/Continuous communication	1 (1/0)	1	1
Auditing	0	1	0
Automation	0	1	1
Barriers	1 (0/1)	0	2
Behaviour	8 (5/3)	2	1
Capacity	0	1	1
Censorship	0	1	0
Change/change management	1 (1/0)	0	0
Choice	0	1	2
Classification/structure/consistency	3 (1/2)	1	0
CMC – negative comments	27	13	12
CMC – positive comments	4	2	6
Collaboration	0	1	1
Communication	4 (1/3)	5	3
Communication measures	0	0	1
Communication opportunities	1 (1/0)	1	1
Community	0	2	0
Consumers	0	2	0
Content	2 (1/1)	1	2
Context - human	0	0	3
Context/communication	4 (1/3)	1	5
Context/metadata	3 (1/2)	6	1
Continuity	1	0	0
Control	9(4/5)	6	0
Control vs. anarchy	2(1/1)	0	0
Create	2 (1/1)	1	2
Creator vs. consumer	0	1	0
Cross disciplinary opportunities	0	1	1
Culture	2(2/0)	3	2

Data	1(0/1)	0	0
Data formats	0	1	0
Decisions	0	0	2
Discoverability	2(1/1)	3	1
Discrimination/prejudice	0	0	2
Effective	0	0	1
Email	3(1/2)	2	2
Ethics	0	3	1
Evidence	2(1/1)	0	0
Expectation management	0	1	0
Face-to-face	0	1	1
Facilitation	1(1/0)	0	0
Fear	5(2/3)	0	0
Filtering	0	1	16
Filtering - automated	0	0	2
Filtering - human	0	0	6
Finance/funding	0	0	1
Functionality	1(0/1)	1	2
Future/next generation	1(1/0)	0	1
Governance	0	2	0
Granularity	0	0	1
Holistic solutions	0	0	2
Home	1(1/0)	1	0
human relationships	0	0	3
Humour	0	0	2
Individual impact	3(2/1)	1	3
Individual/user	3(2/1)	6	0
Influencing place of work	1(1/0)	0	0
Information asset/value	5(2/3)	4	5
Information overload/noise	3(2/1)	0	14
Information richness	0	0	1
Information rubbish	2(0/2)	1	5
Information systems	3(2/1)	1	1
Interfaces	0	2	0
Internal/external	1(1/0)	3	0
Interoperability	0	0	1
IS customisation	4 (1/3)	2	0
Information System design	10(3/7)	5	2
Information System product knowledge	1(0/1)	2	0
Isolation	2(1/1)	0	1
IT role	6(4/2)	0	0

Knowledge Management		0	0	2
Knowledge sharing	0	0	3
Language	0	0	1
Language/meaning	3 (2/1)	2	1
Legal	4(3/1)	2	0
Manage	0	1	0
Management - bottom up vs. top down	2(1/1)	0	0
Management rapport	1(1/0)	1	1
Marketing	0	2	0
Mashups	1(1/0)	0	0
Migration	1(1/0)	0	0
Motivation - external	0	0	2
Motivation - intrinsic	0	0	2
Multiple channels	5(2/3)	1	4
Networking	0	1	1
New vs. old	1(1/0)	0	0
Online communication	0	0	1
Opportunities	0	1	1
Organisation	0	4	0
Organisation vs. individual	8(3/5)	6	2
Organisational culture	2(1/1)	1	2
Organisational requirements	3(1/2)	1	0
Organisational responsibilities	2(1/1)	0	0
Ownership	3(2/1)	3	0
Paper	1(0/1)	0	3
Personal	1(0/1)	3	0
Personal judgements	0	0	1
Personal perceptions	0	0	2
Physical world	0	0	2
Policies	4(2/2)	1	1
Politics	0	1	0
Power	1(0/1)	5	1
Preservation/longevity/future proof	5(3/2)	6	0
Privacy	1(1/0)	3	0
Private practice	0	1	0
Protection/Bans	2(2/0)	0	1
Quantitative evidence	0	2	0
Rapport management	0	0	1
Record systems	1(1/0)	1	0
Record/capture	2(1/1)	0	0
Records management	11(6/5)	0	1

Records management incentives	3(2/1)	0	0
Records management principles and practice	1(1/0)	0	0
Records management research	2(1/1)	0	0
Relationships	0	1	0
Relevance	0	0	2
Reliability	2(1/1)	0	1
Retention and disposal	2(1/1)	1	0
Risk	2(1/1)	2	1
Search/findability	2(1/1)	5	2
Security	1(1/0)	3	3
Sharing	1(0/1)	3	4
Social dynamics of information	0	1	0
Stakeholders	1(0/1)	0	2
Standards	2(1/1)	0	0
Storage	0	6	0
Structure	0	0	1
Support	1(1/0)	0	0
Semantic web	1(1/0)	0	0
Tagging	2(2/0)	2	0
Technological illiteracy	0	0	1
Technology	1(1/0)	3	4
Templates/processes	3(1/2)	0	0
Time	0	1	1
Tone	0	1	1
Tools	5(2/3)	4	3
Training	5(2/3)	1	1
Trends	1(1/0)	0	0
Trust	2(1/0)	0	0
Understanding	0	1	0
Understanding information behaviours	0	0	0
Usability	1(1/0)	1	0
User centred design	3(2/1)	1	1
Users requirements	1(1/0)	0	1
Verbal communication flaws	0	1	0
Virtual communication/collaboration	0	2	1
Web 2.0	3(2/1)	4	0
Web 2.0 - negative	4(3/1)	1	0
Web 2.0 - positive	1(1/0)	0	0

APPENDIX 2.4: RM UK GROUP FIRST ACTION RESEARCH CYCLE: CHECKLIST FOR ENGAGING WITH CMC - SAMPLE EMPTY CHECKLIST SHELL

	DRAFT **WEB 2.0 SYSTEMS' CHECKLIST**	**Continued communication**

System checked:

Author of content:

Date checklist completed:

No	Checklist criteria	*Notes*	Checklist data	Impact analysis?
1.0	**System:** What is the name of the system under review?			
2.0	**Ownership:** Who is the present system owner?	This may impact upon its relationship with other systems		
3.0	**No of users**	This may impact upon its survival over the longer term		
4.0	**Location:** Where are the headquarters of the business registered?	*The headquarters will impact upon the legal framework*		
5.0	**Site policies:** Are there document sets which establish the site framework/management/code of conduct?			
6.0	**Access:** Is the system accessible/available worldwide?	*Is the system blocked in any countries*		

7.0	**Offline capabilities:** Can the system software be uploaded onto local servers without impacting on functionality?	*Can the system operate offline and is there any performance impact/only operate online*		
		Offline Requirements		
		Helpdesk		
8.0	**Cost:** Are there costs for usage/software ?			
9.0	**System functionality:** Please specify the functionality offered by this system?	*Main services*		
		Customisation		
		Usability		
		Additional services		
		Project management		
		Social collaboration		
		Tagging		
		RSS		
		Mobile services		
10.0	**Eligibility/membership**			
11.0	**Membership data:** what information must you provide in order to sign up to the service?			
12.0	**Data ownership:** do you have complete ownership and control of your data?	*Do you own your own data*		
13.0	**Data termination:** Can you choose to delete information?			
14.0	**Advertising:** Can you place your own advertisements onto the site and can you control who advertises on your pages?			
15.0	**Site security:** What are the site security capabilities and policies?	*Security capabilities set at system level*		
		Security capabilities available to user		
		Security limitations		

16.0	**Legal compliance:** What are the legal compliance requirements?	Copyright, trademark, privacy, publicity or other personal or proprietary rights; or contain libellous, defamatory or otherwise unlawful material		
17.0	**Preservation/migration:** What are the processes available to migrate/preserve the data?			
18.0	**Business continuity:** Are there any business continuity guarantees, e.g. escrow agreements?			
19.0	**Additional conditions of usage**			

Site Security incidents

These reports are based upon press information and therefore the group cannot bear responsibility for any errors in reporting. The group will review and amend any details as appropriate. [The alternative to providing this kind of data – which is difficult to keep up-to-date – is to provide a generic statement about the risks of all online systems. This would have less potential for any legal controversy?]

Incident date	Incident details

This checklist is the work of the Records management group of the Continued communication project.

APPENDIX 2.5: RM UK GROUP THIRD ACTION RESEARCH CYCLE: STORYBOARD
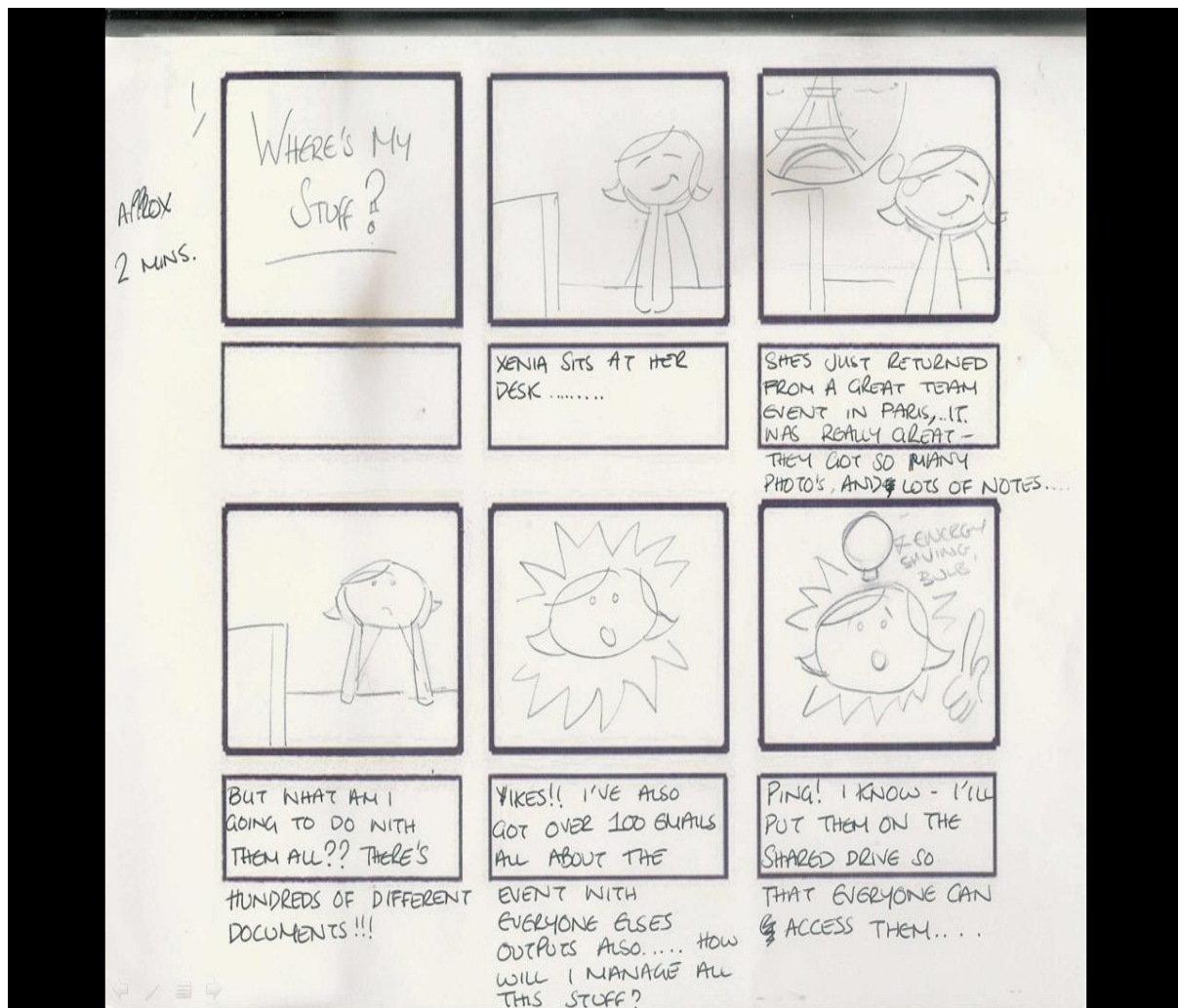
APPENDIX 2.6: RM UK GROUP FOURTH ACTION RESEARCH CYCLE: WIKI BOOK REVIEW

Managing the crowd: rethinking records management for the Web 2.0 World. By Steve Bailey, Facet Publishing Jun 2008; 192pp; hardback; ISBN-13:978-1-85604-641-1; £39.95.

This book review was written collaboratively on a Wiki site and through email discussions by the records management group of the Continued Communication research project: the project is analyzing how to maximise the potential business benefits of information created within computer mediated communications, taking into account the impact of the individual. The views represented within this review cannot be taken to be representative of any one individual within the group as the comments were evolved over time and in the case of the Wiki entered anonymously. The records management members of the group are: Rachel Binnington, Teresa Blackmore, Leanne Bridges, Chris Campbell, Emma Davies, Sarah Demb, Paul Dodgson, Susan Em, Rachel Hardiman, Emma Jarvie/Johnson, James Lappin, Elizabeth Lomas, Samantha Mansfield, Christopher Marsden, Suzie Mereweather, Laura Robertson, Martin Sanderson, Jon Shepherd, Jeanette Wordsworth, Lynn Young, Jane Zibarras and eight additional anonymised participants. This text has been edited by Sarah Demb and Elizabeth Lomas.

Steve Bailey is the senior advisor on records management issues for JISC infoNet, an advisory service for managers within the HE and FE sectors. As many Web 2.0 technologies were developed from within academic communities, and their take-up across this sector has been high, he is well placed to pen a book on how records management principles align to Web 2.0 technologies. However, as a former employee of the pharmaceutical company Pfizer, Steve Bailey has also written for a much wider audience and this book is of relevance to records and information managers across all sectors, including the business community.

This is an important text, as it is the first records management publication focusing on the Web 2.0 world. It is written in the style of a lengthy opinion piece rather than a definitive academic tomb. It is also light on references compared to other popular texts in this field such as Andrew Keen's *The cult of the amateur* and Don Tapscott and Anthony Williams' *Wikinomics: how mass collaboration changes everything*. However it is an easy, quick, enjoyable and thought provoking read. (It was reported from within the group that it took on average three hours to read the volume.) Its style and content has also produced a text that is

already being used outside of the normal records management sphere and this is to its great credit.

The book is a cogent response to the widening gulf between traditional records management principles/processes and the issues surrounding Web 2.0 - and other electronic records or digital environments. It is a proactive and thought provoking work meant to challenge assumptions and raise questions rather than provide definitive solutions. Bailey is deliberately provocative setting the scene by imagining, 'a records management future where the user community collectively describes the value and properties of a record using the wisdom of the crowd; where records retention, description and purpose are determined by their users, within general boundaries defined by the records managers'. The text poses many challenging questions. These are questions that have been raised by communities addressing the first phases of managing information on the World Wide Web and electronic records more generally, but which Bailey reinforces and develops in the Web 2.0 context.

The book is split into three parts. In part one Bailey defines the nature of the changes in IT, digital records and Web 2.0, posits an 'Office 2.0' environment to underline his concerns, and asks if records management is fit for purpose. The latter question is addressed in part two, in which Bailey also addresses our definitions of records, the role of centralised control of records, appraisal and retention and Web 2.0 issues. Finally in part three he reviews the defining principles of current records management and posits the 10 principles of 'records management 2.0'. The latter includes the following requirements; scalability, comprehensiveness, hardware/software/location independence, extensibility, universal applicability, flexibility, benefits-led experience, marketability, willingness to embrace change and driven by records management community and practitioners.

Bailey argues that Web 2.0 content no longer represents just the tools, but also the filing cabinet, 'the combined outputs from our domestic and work life'. This allusion struck a chord with the group about the decreasing distance between 'work' and 'personal' records. It was noted by those in the archive and heritage sector, professionals often mixed both types of information in one document, thus providing a richer archival record for researchers a century later. In the contemporary context this can present a legal mine field, but to the historian it is a gold mine.

Bailey also addresses the tension between the idea that FoI negates the concept of 'records' as it applies to all information; and S46 Code of Practice that recognises the utility of traditional records management processes and tools such as retention schedules.

The review group was intrigued by Bailey's statement that 'in the pre-Office 2.0 world, the act of content creation has been distinct from the act of storage'. It can be argued that in the pre-Windows environment, the application and content were stored on separate floppy disks - leaving us with a different, although not necessarily more difficult, set of access, retrieval, storage and preservation issues. Whilst Bailey is justifiably concerned that we may not have the tools to keep a Web 2.0 world; he doesn't overtly state that we aren't even keeping the Web 1.0 world; many organisations are only just starting to think about addressing Web 1.0.

Bailey reviews and rejects a variety of traditional approaches as the means to address appraisal of Web 2.0 information and then suggests using Web 2.0 to automate and increase user capacity to deal with its consequences - the role of the user is to take advantage of perceived increased interest in managing e.g. 'tagging' information in that environment. This is a radical concept that goes beyond the often pro-forma consultation with users that records managers are used to and which bears serious consideration as we start to address managing Web 2.0 in active and archival contexts. By most commentators, although not all within the review group, it was felt to be totally unworkable. However one commentator took the view that 'any kind of taxonomy or classification that requires human intervention is doomed'.

There was some disappointment that Bailey's book fails to provide answers. Bailey's short history of the 'r/evolutions' in IT and technology are useful, although some short technical explanations pertaining directly to the preservation concerns of records management might have clarified some of the issues raised. It would have been helpful to   have seen a small outline of the technical specifications for a sample Web 2.0 application to better understand how the information is kept, for example CSS, HTML, databases etc. For archivists there is limited information on preservation issues, as this was clearly too large a subject for Bailey to sensibly cover within the scope of this work. From within the review group those fully engaged with Web 2.0 technologies in the workplace would have like to see a more detailed analysis of how businesses preserve provenance and manage access and usage when deploying these technologies. It was recognised that the potential and risks were both huge and that test environments for the technologies were critical. One person commentated that

the key was not flooding the world with information poorly designed and more difficult to extract than was currently the case.

Those looking for definitive answers to the questions posed will be disappointed, as there is more work to be done. However there was generally group agreement that Bailey's book asked the right questions and that there was a critical need for RM to shift its perspectives from twentieth century paper based system to address the exponential creation of electronically born information. This is a timely text and Steve Bailey has done the records management community a great service in putting together this publication. It is recommended reading for records managers and the wider information sector. Now records management research and practitioner communities must continue to work together to address the challenges posed and present answers.

APPENDIX 2.7: RM UK GROUP FIFTH ACTION RESEARCH CYCLE: RESPONSE TO ISO 15489 2001 UK STANDARDS COMMITTEE

ISO 15489

Response to ISO 15489 2001 by the Records Management Section of the Continued communication project

Continued communication records management co-researchers include: *Rachel Binnington, Teresa Blackmore, David Bowen, Leanne Bridges, Chris Campbell, Emma Davies, Sarah Demb, Paul Dodgson, Susan Em, Rachel Hardiman, Emma Jarvie/Johnson, James Lappin, Elizabeth Lomas, Fiona Maccoll, Samantha Mansfield, Christopher Marsden, Suzie Mereweather, Cicely Poulton, Laura Robertson, Martin Sanderson, Deidre Sharp, Jon Shepherd, Jeanette Wordsworth, Lynn Young, Jane Zibarras and five additional anonymised participants.* The response has been developed by the group as a whole and therefore the document cannot be taken to represent any one individual's viewpoint(s).

1.0 Background

Continued communication is a records management research project based within Northumbria University. The project was established by Elizabeth Lomas (a records management practitioner) who evolved the research framework for a PhD under the supervision of Professor Julie McLeod and Dr David Wainwright.

The project is focused on how organisations can maximise the information potential of computer mediated communications, including evaluating the impact of the application of records management principles and processes. The research is being developed by 80 co-researchers split into 3 project groups; a UK based records management group, a UK based group from a cross section of professions and an international group from a cross section of professions.

As part of this process, the UK Records Management group within the project (a group of 30 records managers) has discussed the role of the records manager and the principles and tools set out within the international records management standard ISO 15489-1 (2001) *Information and documentation – records management* (referred to throughout as *ISO 15489).* As the Standard is currently under review the project RM group team is duly submitting its high level comments to the ISO 15489 UK Committee. As the team is well aware that the Standard is being substantially revised more detailed comments have not been submitted. However, the team would be keen to have the opportunity to comment on the revised drafts of the Standard in detail. The group is happy to provide further information as required.

Records management is referred to as RM throughout, although it is contended that records and information management (RIM) would be a beneficial evolutionary title change at this juncture.

2.0 Overarching standard frameworks

2.1 Terminology

In order to represent global best practice it is recommended that the glossaries of all standards are centrally maintained and managed in order to ensure their consistent application across standards generally. Whilst there may, on specific occasions, be justifications for deviation from set terminology within different fields, ideally glossaries should be consistent.

> *Example: it is unhelpful that the term 'integrity' within ISO 15489 does not directly map to the term 'integrity' which is contained within several other related standards, e.g. ISO 27001 the international standard on information security. In the related standard BS10008, the British standard on evidential weight and legal admissibility of information, the term integrity is used but not referenced. If a glossary were centrally retained definitions could be developed centrally and then applied locally noting when local changes were applicable and why.*

Equally, there are terms across related standards that have in essence the same meaning and could be revised within the terminology.

> *Example: The term 'useability' in ISO 15489 has great synergy with the term 'availability' in ISO 27001. These terms could be usefully merged into one preferred term. In essence they both relate to the term 'access'.*

Furthermore, some terms are unclear and have been the subject of detailed debate.

> *Example: The central definitions that define the characteristics of good records management are debated in terms of their meaning and application. Refer to Section 4.*

Many terms are lacking from the glossary within ISO 15489, e.g. appraisal, audit trail, confidentiality, data, information, search etc. In certain instances these highlight key omissions from the *ISO 15489*'s overall framework.

More detailed comments on definitions can be developed if an updated draft of *ISO 15489* is provided.

2.2 Certification, cross referencing and alignment

The standard would benefit from restructuring to provide a certification framework. The possibility of records management certification would give *ISO 15489* added value. Just as *ISO 27001* is the recommended information security standard for UK information security compliance in the context of data protection, *ISO 15489* could be utilised as a similar benchmark within other areas, such as FOI where it would underpin the RM Codes of practice developed under the terms of Scottish and UK Freedom of Information legislation. On an international level *ISO 27001* has enabled organisations to evaluate and outsource only to third parties certified to the appropriate level of information security assurance.

In line with *ISO 27001* it is recommended that the certification should include the potential to be achieved against a scope, such as a business function deemed to be higher risk, e.g. HR. It may not always be appropriate or realistic for an organisation to seek full scale compliance at a certification level even if ultimately this is the 'best practice'. The practical implementation of the standard should be considered.

However, organisations should be required to be more explicit about their certification compliance and state clearly which parts of the organisation have achieved certification status; whether it is the whole organisation (including international bases) that are certified or

a more limited function. This is a weakness of the whole certification structure as it currently stands in respect of other standards.

Standards should have linked frameworks such that certification against one standard can link into another.

> *Example, certification against ISO 9001, the quality standard, should have links to ISO 15489 in respect of the quality standards' documentation requirements.*

This would enable organisations to build up their compliance frameworks in a co-ordinated manner.

It is critical that *ISO 15489* is clearly aligned with other relevant standards, in particular in the areas of ICT, archival management, evidential management and information security. Tighter links would create better frameworks and tools for implementing records management systems. Records management is not an isolated discipline but requires systems implementation from top management throughout an organisation, with responsibilities mapped to a wide range of functions. Partnerships and links need to be articulated, as they assist with the strategic positioning and promotion of the records management function.

In particular, as most records are now created and indeed maintained electronically, the Standard must link more widely to IT standards. Records management processes must be part of IT systems design and management. Key records management processes must be built into other standards, guidelines and system frameworks, e.g. ITIL etc.

There are complexities linking international and local standards. Localised lists by national bodies could be helpfully developed. UK *BS10008,* the standard on legal admissibility for electronic records, could be helpfully referenced within a UK context.

The standard would be enhanced by adopting the Deming cycle (plan, do, check, and act) in line with other allied standards, e.g. *ISO 9001* and *ISO 27001.* This would help to implement a process of continual improvement within an organisation. As information creation processes evolve so rapidly this is particularly important within the context of records management in order for it to retain its relevance.

3.0 The standard's focus and the information context

The title of the standard is 'Information and documentation – records management' but within the standard there is a lack of focus on information. It is information that is recognised as an asset. The rebranding of IT into ICT has been a helpful evolution for this professional sector. It is contended that records management should be rebranded 'records and information management'. Records management programmes provide frameworks to deliver added value to information. The group is keen to ensure the preservation of the professional principles associated with records management and therefore retain the key concept of records management. However the group considers that whilst these unique records management attributes require retention, the clear alliance with information management must be articulated to enhance the strategic positioning of records management. Furthermore, the standard must address the international problems in the local contexts where there is no appropriate translation for the term 'record'. There are certain instances where the Standard's application would be enhanced by replacing the term records with information.

> *Example: ISO BS 15489-1 page 1, para 1:*

> *"ISO 15489 provides guidance on managing records" replace 'records' with 'proprietary information'.*

> *Example*: ISO BS 15489-1 page 5, final para:
>
> *"Implementation of records systems" replace 'records' with information.*

Records management systems have been too much about control and regulation, focusing too heavily on a requirement to build systems with onerous evidential requirements for legal and historical purposes beyond what was reasonably required by the business. These requirements must not be neglected but there must be a focus back onto a holistic view of business need with incentives for engaging in better information management.

Regulatory focus has also dominated the development of retention schedules. As a result retention schedules have often been too granular in areas where legislation impinges but sometimes lacking in the most significant operational areas of business. A stronger emphasis on information asset registers, with added retention schedules and risk frameworks would potentially redress this balance.

The concept of information asset registers must be included within the redrafted standard. Records management has often failed to be involved within the process of capture. Evaluating information as the initial process takes the records managers back into the capture phase. From evaluating the information it is possible to review the requirements for recording/capturing information. Not all information may require fixity (refer to section 4). Furthermore information may often be utilised for multiple purposes as suggested by the records continuum and information asset registers have the potential to align more closely to these multiple realities. Retention scheduling then flows out of this process.

The current standard is inadvertently flawed in that the management has been imposed after creation despite the desire to capture information.

> *Example*: ISO 15489-1 page 12, final para: *"establish a relationship between the records, the creator and the business context that originated it".* Originate is after the process of capture.

Records management requirements need to be built into information systems design at the stage of user requirements development. The current frameworks for data/information capture are inadequate.

4.0 Processes and tools

4.1 'Good records'

Overall the group supported the current definitions of the key record characteristics, authenticity, integrity, useability and reliability. However, it was clear from the discussions that more work needs to be done on developing and articulating these definitions.

In addition, within this context, the main challenge of the current definitions of 'good' records is actually delivering these characteristics within the electronic record environment. There was a lot of discussion around fixity in the electronic era and how this relates to 'good' records. See section 4.2.

4.2 Dynamic systems, fixity and preservation

ISO 15489 does not currently take sufficient account of the challenges of managing electronic records, particularly those with dynamic contexts, e.g. databases, geospatial systems or ECM systems. The group articulated in depth opinions on how, and indeed if, fixity has relevance within this context, as well as areas within the standard that are lacking in order to capture dynamic information as records. Dynamic records and fixity is an area that the group noted is worthy of considerably more discussion and research.

Fixity was not optional with paper, although paper records can/could be equally challenged in respect of their authenticity and integrity, as well as the reliability of the content. Therefore, fixity is not an automatic solution for ensuring authenticity and integrity but it has often been seen to provide a level of assurance as to make it an important part of the picture for evidential purposes.

Each media has management challenges and in fact it is sometimes possible to interrogate an electronic record in greater depth, to ensure its authenticity and integrity. However, the dynamic and flexible nature of electronic information when unfixed provides it with wider operational potential than paper or some fixed electronic formats such as a PDF. The requirements of managing and using electronic information are now much more complex. Records management frameworks need to deliver information for a range of information purposes, which include current and operational requirements, albeit legal compliance is part of this picture. This wider vision should be contained within ISO 15489. Business requires flexible thinking and sometimes flexible receptacles as the business conduit. Projects to implement EDRM system solutions have demonstrated the challenges of meeting and balancing business recordkeeping requirements to ensure a broad focus on operational needs.

Sometimes it will be appropriate to capture a record and then reuse this information to create a new record. Information re-usage is an important business consideration. In these instances the characteristics might be focused upon information reliability. What is desirable, again in certain circumstances, are records management frameworks that create the capacity to enable record links and metadata.

One of the keys to potential success within this area is focusing on diplomatic process. There is a requirement to understand the operational and programming of dynamic systems, the metadata, audit trails, time stamps and changes in software.

Records management links to archival theory have assisted with its early development but sometimes potentially not helped it focus forwards. Within some aspect of archival theory there has been an emphasis on record 'fixity', which is often required for evidential purposes, but which is not always desirable within the wider context. Archival thinking has tended to treat records as objects. Archivists are the long term curators of the records but in reality only a small percentage of records require permanent retention. This link should not be severed but needs to be articulated and framed more clearly within the Standard.

There is also a difference between the requirements for preserving content as opposed to content and appearance, which relates to the discussion on what archivists and records managers require and where the differences need to be understood. It is possible to preserve content (with context and suitable metadata); content and appearance (defined at some selected instant from its live use); or content and behaviour. Each could be a valid option, but it requires agreement on whether the behaviour or the appearance is fixed.

4.3 The business boundaries

Increasingly information may reside outside the corporate boundaries. Within some organisations records management regimes have minimised opportunities to directly control the information at the capture phase or the disposal stage. Therefore consideration over effectively outsourced information management also needs to be addressed within *ISO 15489*.

In addition the re-use of information has blurred the boundaries of proprietary versus secondary information. Again this must be addressed. Information asset registers would assist with this concern and also would ensure that information accessed from systems beyond organisational boundaries and outside the potential impact of a retention schedule was still incorporated into the larger management vision.

In addition to information/records moving outside of the organisational boundary, the group discussed the very real possibility that the Records Management profession may become a skill set that also sits outside the organisational boundary, possibly within an Information Guild. Organisations change shape rapidly and information may be managed and owned by more than one organisation, changing hands or being spread and interconnected across boundaries. For example a records audit trail may belong to a third party. This is why the standard must shift the focus of control and establish tool sets with real validity for the future.

4.4 Classification and taxonomy

Information access can be achieved in part through classification and the group recognises the significant value of classification but it must also be recognised that now records/information are borne digitally taxonomy must become part of the records managers' toolkit.

> *Example (supplied by P. Dodgson): An MSc study by Dodgson (2008) discovered that Records Managers do not see search as an essential tool. Dodgson's study observed that records managers appear not to have fully awoken to the opportunity, or threat, posed by emerging taxonomy reliant discovery solutions. His key findings included a need for academic institutions to gear up with regard to the use of controlled taxonomies such as the IPSV and others managed by the ESD Toolkit. He noted that Rowley and Hartley (2008) make brief reference to the use of the IPSV (page 224-225) but did not connect this to discovery solutions such as Cintra searchLight or Concept Searching etc. Furthermore these technologies are evolving and the next step is likely to be "on the Fly" records management where taxonomy tools will carry the information necessary to be able to group and review content stored in a flat non-hierarchical database, managed according to discovery not storage. Should the latter gain pace, as is expected, then the role of the Records Manager faces fundamental review. Those who fail to take account of the new discovery engines, do so at their own risk.*

The group supports the conclusions of this study and would urge the Committee to consider incorporating taxonomy into the Standard's toolkit.

4.5 Data quality management

The strategies for ensuring information reliability and data quality are lacking from the Standard. This could, in part, be addressed through links to additional standards.

4.6 Additional discussion of tools

I.   Information capture and quality must be addressed through involvement in the development of user requirements for IT systems.

II.   There are a number of tools that are listed within the current ISO 15489 as optional within a records management framework. It is suggested that these are reviewed in the context of mandatory certification requirements. In particular risk management is an essential part of the RM toolkit that should be linked into the information asset register/retention schedule. It is to be emphasised that a good risk register will incorporate RM opportunity as well as negative risk impacts. This is critical in order to develop the appropriate interlinking between RM and ICT and ensure effective RM. It should be noted that risk management process models are developing and diversifying within different business sectors. Additional attention must be paid to ensuring that risk is included within the Standard in such a way as to allow for these fast moving developments.

III.   A requirement for a 'Statement of applicability' needs to be added, linked into risk management frameworks and defined controls. Within *ISO 27001*, there is a list of 133 controls and a requirement to sign off those that are not selected for implementation. Listing controls that are part of a framework would significantly enhance an understanding of records management and the partnerships required to deliver records management programmes across the organisation. The Statement of applicability within *ISO 27001* requires formal acknowledgement of strategic partnerships, e.g. HR sign off on RM training, IT sign off on User requirements etc. The 133 controls within *ISO 27001* includes critical controls that would apply within the records management frameworks such as business continuity planning, ongoing programme monitoring and change management. This list of controls could be reviewed and developed within the context of RM. Again this would assist with integrating ISO 15489 into organisational frameworks and certification programmes. This will ultimately enhance effective business management and perhaps bring RM concepts into the mainstream of business understanding.

IV.   Training programmes need to receive greater emphasis, particularly as part of a certification framework. There needs to be a differentiation and explanation of the requirements surrounding awareness, training and competence.

V.   Records management capacity assessment/maturity models require consideration. In particular it would seem appropriate to review the applicability of reviewing the relevance of the work of the International Records Management Trust from 2002 to 2004, in partnership with the World Bank, which developed a Records Management Capacity Assessment System (RMCAS). Available at http://www.irmt.org/assessmentTools.html. This contains a RM capacity assessment and a maturity model. The group would suggest that the Committee could also undertake and further review maturity models more generally, such as the models developed by the OGC, available at http://www.ogc.gov.uk/tools__techniques__maturity_models.asp.

VI.   The standard would benefit from a fuller discussion of the incentives for implementing records management programmes from both the user and the business perspective. This is one of the main research focuses of the Continued communication project and the group would be happy to consider this aspect in greater detail for the Committee.

5.0 Conclusion

Records management is a management approach to information delivery, its concepts must translate more appropriately into organisational frameworks, the Web 2.0 world and the changing and challenging world of employment and information ownership.

The group would welcome the opportunity to comment on the revised drafts of the *IS0 15489* standard, focusing on any key areas as directed by the Committee.

Submitted by Elizabeth Lomas on behalf of the Continued communication RM group, March 2009

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A Continued communication project website is currently being developed and future project outputs will be placed upon this site at http://www.continuedcommunication.org.uk.

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APPENDIX 2.8: USER UK GROUP FOURTH ACTION RESEARCH CYCLE: QUALITATIVE SURVEY ON THE REASONS UNDERPINNING COMMUNICATIONS

CONTINUED COMMUNICATION

Continued communication is a Northumbria University led research project developing knowledge about communication practices. We are investigating:

- What has to be communicated?
- What media might be useful for that communication?

The results of this survey will be used to inform a second survey and then ultimately a communication best practice paper. The survey should take no longer than 15 minutes to complete.

The information you provide within this survey will be retained securely and anonymously and will be subsequently disposed of on the completion of the research project.

We are very grateful for your time and happy to provide you with copies of the survey results at the end of the two survey phases.

If you do have any queries regarding the survey then please contact the project facilitator:

Elizabeth Lomas Tel: ++44 (0)1582 762726 eizabeth.lomas@unn.ac.uk
Thank you for your help.

Question 1 - COMMUNICATION CHOICES

Within all organizations much of the activity is driven by communication (orally face-to-face, by telephone, by letter, by text, by email, in meetings, on Facebook, etc) Some of these are very simple communications (fixing a meeting/appointment date, getting a postcode for your SatNav, finding people's phone numbers etc) others are more complex (discussing and publicizing ideas points via a Blog, persuading people on the virtues of particular policies etc).

We would be very grateful if you would try to give as exhaustive a list as you are able on the sort of things about which you **INITIATE** communication. On the next question we will be asking you about the communications you receive.

Write them below and beside each one, write in one of the following codes to indicate how often you initiate communications about such issues, no matter what communication medium you use for it. When we get the answers back, we shall amalgamate them and produce a single unified list of all the matters which were mentioned. There are no right or wrong answers. We want to get as exhaustive a list as possible so feel free to use your memory and imagination. In the second survey phase we will ask you to help us sort out which ones are important, and which communication media matter for each of them.

Codes:
After each of your free-text entries please write in one of the codes below to indicate how often you initiate communication about such matters:

1. Several times per day (more than 3 times per day)
2. At least once, but less than 4 times per day
3. At least once per week, but less than once per day.
4. At least once per month, but less than once per week
5. At least once per year, but less than once per month
6. Less than once per year
7. Other - If there are other time periods not in that list, feel free to write in how often you need to communicate about a given topic e.g. whenever there is an inspection, or when there has been a formal complaint etc.

Example:
Appointments 4; sales call 1; etc

We reiterate, our purpose is to get an exhaustive list. We can always later throw things away. If we have not noted them in the first place, we can neither throw them away nor ask you about them in a subsequent round.

Question 2 - COMMUNICATIONS RECEIVED

We would now be very grateful if you would try to give as exhaustive a list as you are able on the sort of things about which you **RECEIVE** a communication. Type them below and beside each one, write in one of the following codes to indicate how often you receive communications about such issues, no matter what communication medium is used for it.

As before when we get the answers back, we shall amalgamate them and produce a single unified list of all the matters which were mentioned. There are no right or wrong answers. We want to get as exhaustive a list as possible so feel free to use your memory and imagination. In the second survey phase we will ask you to help us sort out which ones are important, and which communication media matter for each of them

After each of your free-text entries please write in one of the codes below to indicate how often you initiate communication about such matters.

Codes:
1. Several times per day (more than 3 times per day)
2. At least once, but less than 4 times per day
3. At least once per week, but less than once per day.
4. At least once per month, but less than once per week
5. At least once per year, but less than once per month
6. Less than once per year
7. Other If there are other time periods not in that list, feel free to write in how often you need to communicate about a given topic e.g. whenever there is an inspection, or when there has been a formal complaint etc.

Example:
Appointments 4; sales call 1; etc

We reiterate, our purpose is to get an exhaustive list. We can always later throw things away. If we have not noted them in the first place, we can neither throw them away nor ask you about them in a subsequent round.

Question 3 - What are the things that you can do (in a work context) with other people only when you are all in the same room?

DEMOGRAPHICS

Question 4. What is your gender? *Please tick one option*

Male

Female

Question 5. Cultural affiliation, please indicate the country to which you feel you belong the most, whether by virtue of citizenship, length of residence, or acculturation. *Please state one country but please clarify your choice if necessary.*

....

....

....

6. Specify your age in years?

....

7. What is your current occupational status? *You may choose to tick more than one option.*

- Full-time employee

- Part-time employee

- Self employed

- Unemployed

- Student

- Volunteer

- Retired

- Other (please specify)

8. With which organisational sector are you most connected? *Please tick one only option but please clarify your choice if necessary.*

Accounting	Gambling and casinos	Oil and energy
Airlines/Aviation	Glass, ceramics and concrete	Online media
Alternative dispute resolution	Government administration	Outsourcing/offshore
Alternative medicine	Government relations	Package/freight delivery
Animation	Graphic design	Packaging and containers
Apparel and fashion	Health, wellness and fitness	Paper and forest products
Architecture and planning	Higher education	Performing arts
Archive services	Hospital and health care	Pharmaceuticals
Arts and crafts	Hospitality	Philanthropy
Automotive	Human resources	Photography
Banking	Import and export	Plastics
Biotechnology	Individual and family services	Political organization
Broadcast media	Industrial automation	Primary/secondary education
Building materials	Information services	Printing
Business supplies and equipment	Information technology and services	Professional training and coaching
Capital markets	Insurance	Program development
Charities	International affairs	Public policy
Chemicals	International trade and development	Public relations and communications
Civic and social organization	Internet	Public safety
Civil engineering	Investment banking	Publishing
Commercial real estate	Investment management	Railroad manufacture
Computer and network security	Judiciary	Real Estate
Computer games	Law enforcement	Recreational facilities and services
Computer hardware	Law Practice	Religious institutions
Computer networking	Legal services	Renewables and environment
Computer software	Legislative office	Research
Construction	Leisure, travel and tourism	Restaurants
Consumer electronics	Libraries	Retail
Consumer goods	Logistics and supply chain	Security and investigations
Consumer services	Luxury goods and jewellery	Semiconductors
Cosmetics	Machinery	Shipbuilding
Dairy	Management consulting	Sporting goods
Defence and Space	Maritime	Sports
Design	Marketing and advertising	Staffing and recruitment
Education management	Market research	Supermarkets
E-Learning	Mechanical or industrial engineering	Telecommunications
Electrical/electronic manufacturing	Media production	Textiles
Entertainment	Medical devices	Think tanks
Environmental services	Medical practice	Tobacco
Events services	Mental health care	Translation and localization
Executive office	Military	Transportation/trucking/railroad
Facilities services	Mining and metals	Utilities
Farming	Motion pictures and film	Venture capital and private equity
Financial services	Museums and heritage institutions	Veterinary
Fine art	Music	Warehousing
Fishery	Nanotechnology	Wholesale
Food and beverages		Wine and sports
		Wireless

Food production Fund-raising Furniture	Newspapers Non-profit organization management	Writing and editing

Clarify question 8 if desired

....

....

....

9. If employed, which best describes your job function? *You may choose to tick more than one option.*

- Accountant

- Administrator

- Archivist

- Clinician

☐
- HR

- Information manager

- IT expert

- Lawyer

- Management consultant

- Marketing manager

- Records manager

- Web designer

- Managing Director

- Manager

- Consultant

- Project manager

- Professional expert

Other (please specify)

....

☐

10. What is your job title?

....

12. Is your organisation split across more than one site? *Please tick one option.*

Yes

No

13. Is your organisation a global entity? *Please tick one option.*

Yes

No

14. Approximately how many employees are there in your organization? *Please tick only one option.*

- 0-5-

- 50-250

- 250-1,000

- 1,000-10,000

- 10,000+

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS SURVEY

APPENDIX 2.9: INTERNATIONAL GROUP THIRD ACTION RESEARCH CYCLE:

NING CHAT PROTOCOL

CHATTING IN NING –A PROTOCOL FOR SUCCESSFUL ENGAGEMENT

This protocol was written collaboratively through Ning chats and email discussions by the international group of the Continued Communication research project: the project is analyzing how to maximize the organizational benefits of information created within computer mediated communications, taking into account the impact of the individual.

The views contained within this document cannot be taken to be representative of any one individual within the group. The international members of the group are: Dr Nabeel Al-Qirim; Bernard Chester; Galina Datskovsky; Julie Fairless; Sylwia Frankowska; Dr Raija Halonen; Catherine Hare; Graham Horrell; Michael Levey; Elizabeth Lomas; Dr Nancy McGovern; Nancy McMahon; Jami Morritt; Osemeke Mosindi; Prof. Julian Newman; John James O'Brien; Dr Gillian Oliver; Myriam Raymond; Dr Derek Wallace and eleven anonymised participants.

*The group welcome comments on this document from Ning and wider Chat users. **Please send comments to Elizabeth Lomas, Northumbria University: elizabeth.lomas@unn.ac.uk.***

For further information on Ning refer to www.ning.com.

Document definitions

Protocol: a document that establishes an accepted code of behavior in any group, organization, or situation, in this instance communicating through Ning Chat. [NB in this context not a computer software/hardware protocol].
Chat: online chat can refer to any kind of internet communication but in this context it is used to mean a text based group chat sometimes referred to as synchronous conferencing.
Ning: Ning is an online platform that enables people to create their own social networks without charge (www.ning.com).

Communication choice
Choosing the right tools for your communications and knowing how to use those tools effectively will make a difference as to whether you are able to engage successfully with new contacts, build group rapport and mutual understanding, exchange meaningful information and deliver your goals to the highest possible standards. Communication today is about selecting and using complementary tools that maximise communication potential. In this context 'Chat' is a great tool for establishing real time dialogue across a group. It can be used to discuss and agree actions, brainstorm, build a group's identity, make new connections and/or bring together people who would not otherwise meet.

Chatting and engaging
Chat tools work by agreeing a time for people to log on to a platform into an established online Chat space where they can post comments into a shared window. The dynamics of a Chat are determined by the numbers in the group and the objectives of the Chat.

In this context Ning has been selected as the basis for the protocol because it is a popular social collaboration tool that is freely available via a basic Web connection without uploading any additional software. Its simplicity makes it an appealing tool to connect to a wide range of users without any training.

Many of the comments in this document are equally applicable to other Chat platforms (*see Endnote*).

Site design

In order to focus and engage with Chat participants it is important to think about the design of your Ning space, including the navigation, layout, typography, structure and language. These components combine to direct the users around the space and focus on the Chat. The visual organisation goes largely unnoticed by an average user until the system becomes difficult to use. It is the unseen intersection where form and function combine to create usability. So create simple layouts and test your Ning community's site design and usage.

Think about whether to pay the premium and upgrade your Ning account so that distracting or inappropriate adverts don't appear on the screen.

Publicity and privacy

Set the public/private settings on your Ning community site and on your meetings to ensure that your Chats reach the right audience. Also remember that even if you do set your community to be private, you are still Chatting in a third party space - which is not the context for highly confidential discussions. Remember, as well, that it is difficult to guarantee to delete information in Web spaces.

Chat planning

1. Meeting invites

   Book a time for the Chat and send everyone a meeting invite from Ning. Ning Chat invites are prone to expiring if sent too far in advance of a meeting. If the same participants are taking part repeatedly in discussions on a Ning site it is worthwhile sending out membership invites to the site so that participants can always sign in. This also enables those who could not make a Chat to log in and review the discussions at a later date.

   Consider sending out email invites too so that meetings are logged in online calendars. Email invites can convert the times to zones around the World (although this functionality does sometimes fail!).

   Consider appointing a Secretary to manage the meeting records before and after the Chat.

2. Identity and rapport

   Occasionally there may be Chats where anonymity enables people to say and contribute helpful comments. However, in most situations people like to know with whom they are talking, so it is advised that you say who you really are and put up a photograph. Mental pictures and links help build team dynamics.

3. Participation

   In a physical meeting you can sit and be a part of a group without speaking. In a Ning Chat, unless you at least announce your arrival and departure, then there is no record of your Chat attendance. (Other Chat packages update who enters and leaves a discussion and indicate who is typing.) Consideration needs to be given as to how to manage and encourage participation. Building rapport can help with Chat dynamics e.g. encouraging people to say at the start of a meeting, who they are, where they are etc. This may add to a group's identity.

Also remember to allow for different languages and different concepts surrounding acceptable protocols for communicating across cultures and communities (age, culture, ethnicity, gender and other factors influence communication styles and requirements).

4. <u>Conversational flow</u>
When people post comments into a Chat conversation often the comments and dialogue do flow out of order. If the conversation is dealing with an emotional or legal subject then it may be necessary to conduct the Chat in smaller groups and/or take turns so that no misunderstandings occur.

5. <u>Managing the meetings</u>
The meeting dynamics will be determined by the number of participants and the aim of the Chat.

If you do need to agree on particular objectives then:

- appoint a Chair.

- issue an agenda to focus discussions.

- call for votes on key issues at strategic points in the Chat.

FREEDOM – If you really want a free flowing Chat then read this Protocol as background information but then log on and let the Chat flow without rules. Only introduce guidance if it helps people feel comfortable to contribute and/or assists with delivering your end aims.

Chat dynamics – Top 10 tips

1. Post a photograph and say who you are.
2. Announce your arrival when joining or leaving a discussion.
3. Conduct all discussions in a courteous manner, even when you are disagreeing.
4. Post your comments in small chunks - it is difficult to read lengthy comments during an online discussion.
5. When responding to a preceding comment, quote the person's first name (unless two people share a name and are both present, in which case also post the surname initial, e.g. Rachel B.) and identify the topic thread. This helps everyone follow the conversation flow and interact.
6. Where you are going to post additional information following on from your comment, indicate this with 'MC' – more coming.
7. If you don't understand a comment ask for an explanation. It is important that everyone does understand the conversation, so don't be embarrassed to seek clarification.
8. If you are using an acronym for the first time in a discussion quote the acronym and spell out what it is a short form for.
9. Use emoticons. These can replace the cues that are present in face-to-face meetings. When using an emoticon for the first time also explain the emoticon. Examples of emoticons that can help Chat rapport are: LOL - laughs out loud, :-) for happy/good point and
   :-(for sad or disagree.
10. If you quote an idea or a publication you should indicate that you are doing so. Within the Ning context full references cannot be given. However if the information is used this can be followed up at a later date.

Managed meetings
For chaired meetings it may be helpful:
- If the Chair is about to conclude a discussion point and you still have an important comment indicate this by posting 'CC' – comment to come.

Ning tips
- Refresh
  Keep pressing the refresh button on the toolbar on the top of your screen (which normally looks like two arrows pointing in opposite directions) or the function key F5 - in Ning if you don't keep refreshing the screen you don't see comments posted by other participants. This is one of the clumsiest features of Ning.
- Posting
  Refreshing the screen loses any text that you have typed in your personal comment box but not yet posted. However, you may want to check the relevance of your typed comment in the chain of dialogue before posting (conversations can move on whilst you are typing). So save text by selecting the text and copying (Control and C), refresh the screen and if you still want to post your comment paste (Control and V) and then send the comment into the dialogue chain.

Using your Chat over the longer term – keeping the conversation flowing

Responsibility

You may benefit from assigning responsibility for managing Chats before the Chat, during the Chat and afterwards, to make the most of the conversations over the short, medium and longer terms. Involve those who can help you make the most of the discussions, e.g. IT, knowledge managers, and records managers.

Link the conversation to other forums
Make the most of carrying the conversation forward by linking Chats into other communication tools and discussion forums.

Making the information accessible and usable
Consider how to make best use of your actual written Ning Chat.

Ning enables you to effectively record every detail of your meeting – your full conversational text is there typed out. This can be indexed and linked in to other systems for future reference or wider group access.

There can be lots of 'white noise' in a Ning Chat and the comments are out of order, so for future usability it may be worth summarising the Ning Chat.

Keep a record
Ning is effectively hosted by a third party and therefore you cannot guarantee future access to your Ning conversations. If it is important to you that you can review and retain your Chats then you must take actions to keep your own record of your conversations.

If you want to keep a full meeting record, wait till the next day and then copy and paste the Chat into a Word document. Ning does not record the exact time and date of the comments until the next day. Whilst the conversation is in progress it simply states how many minutes since a comment was posted.

As a full copy of a Chat will contain repeated photographs of each participant pasted against each of their comments a Chat record can takes up a sizeable amount of storage space. However reading comments with a photograph can bring the conversation to life for those who couldn't take part at the time.

If you need a legal record think about converting the record to a PDF (Refer to the **PDF/A ISO Standard**) or register the document into an Electronic Document Records Management System.

Sometimes your Ning Chat may be interlinked to using other tools on the Ning site, e.g. discussions etc. In this case you may need to consider how best to capture and retain over time the whole Ning data set.

Deleting Ning Chats
Remember that it is difficult (if not impossible) to guarantee that Chats in a third party web space have been totally deleted.

Continued Communication
June 2009
Contact: Elizabeth Lomas, elizabeth.lomas@unn.ac.uk

Endnote: Many of the points raised in this protocol can be translated and used with other Chat platforms. As this protocol goes to press we wait to see new Chat developments currently being launched. Google have just announced Google Wave. This has the potential to instant message comments into a dialogue positioning the comments in the Chat chain. This feature will be very useful in developing conversations over time and also real time one to one discussions. However the process of positioning comments may be problematic for real time engagement within larger groups. In this context many people will still find it easier to read comments that flow in conventional chains, albeit sometimes out of order, rather than comments posted in multiple locations. In order to make sense of the discussions this protocol's recommendations will continue to have relevance.

The Continued Communication project welcomes feedback. Send comments to elizabeth.lomas@unn.ac.uk

APPENDIX 2.10: RM UK GROUP: QUESTIONNAIRE FOR USER UK GROUP AT MERGER POINT

CONTINUED COMMUNICATION

Which group are you in?(please tick one option):

RM group

User group (Also see below)

If you have ticked the User group option, then please tick whether you do have any prior knowledge of records management principles or practice:

No prior knowledge   Some prior knowledge   Extensive knowledge

---

1. What three things do you take from this presentation or film as being helpful to you in your **WORK** life? (*Listing the most beneficial thing first*.)

2. What three things do you take from this presentation or film as being helpful to you in your **HOME** life? (*Listing the most beneficial thing first*.)

3. Which one thing did you find irrelevant?

4. Should an individual/individuals within an organisation have responsibility for this approach?

5. Do you have an example of when good records management would have saved you from failing?

6. **From the outputs that the RM group have demonstrated please rate the extent to which you felt that they were a helpful tool for maximising the information potential of communications.**

	Very helpful and worthy of further development	Helpful	No value	Unhelpful	No t sure
Where's my stuff? film					
Checklist					
Risk process attached to the checklist					

7. **Do you have any comments on the value of the tools that you have been shown, any amendments that would make to improve them, why they were not relevant to the research etc?**

7.A Where's my stuff? film

7B Checklist

7C Risk process related to the checklist

8. **Do you wish to make any other comments?**

APPENDIX 2.11: USER UK GROUP ANLAYSIS OF DATA GATHERED FROM QUESTIONNAIRE (AT APPENDIX 2.8) FROM RM GROUP AT MERGER: REASONS FOR COMMUNICATING - HIGH LEVEL CODING

Communications inititated: Reasons for communication	
Status updates	Status updates (where you are, what you are doing) - internal business
	Status updates (where you are and what you are doing) - external contacts (clients, professional networks etc)
Status updates and contacts	Status updates (where you are, what you are doing) - to advertise services, getting new contacts
	Status updates (where you are and what you are doing) - personal
	Catching up - personal
	Catching up - business
	Booking appointments - personal
	Booking appointments - business
	Booking group meetings
Collaboration	Collaborating on projects within business
	Collaborating on projects with professional/wider communities
	Collaborating for a social reason
Entertainment	Conversation for entertainment/amusement
Information gathering	Requesting recorded information
	Requesting recorded information, using under a legal framework e.g. Data protection, medical acts, freedom of information etc
	Requesting an information search across data sets
	Requesting knowledge (unrecorded information from individual knowledge/expertise)
	Seeking advice
	Gathering ideas
Research/market analysis	Data gathering/research/market research
	Data analysis
Information sharing	Briefing contacts on shared work
	Briefing senior managers on shared work to reassure about progress or to get action from manager
	Briefing teams on shared work, to set goals etc
	Status updates on work to teams
	Status updates on work to senior managers
	Status updates on work to line manager
	Circulating news and information
	Spreading (broadcasting/disseminating) knowledge
	Recording knowledge
	Providing feedback/information
	Providing expert advices
Organisational requirements	Setting out legal requirements
	Setting business requirements
	Setting operational requirments

	Setting strategic requirements
	Ensuring policy policy compliance
	Ensuring process and procedure compliance
	Providing information
Action	Action request
	Action reminder
	Action follow up
Commodities	Buying/Ordering
	Booking facilities
	Selling
	Teaching
	Expert advice
	Broadcasting
	Project bids
	Financial reports
	Product design
	Manufacturing process

APPENDIX 2.12: RM AND USER UK GROUP MERGER: RM GROUP'S VISION OF COMMUNICATION HEAVEN PLOTTED INTO CYNEFIN FRAMEWORK
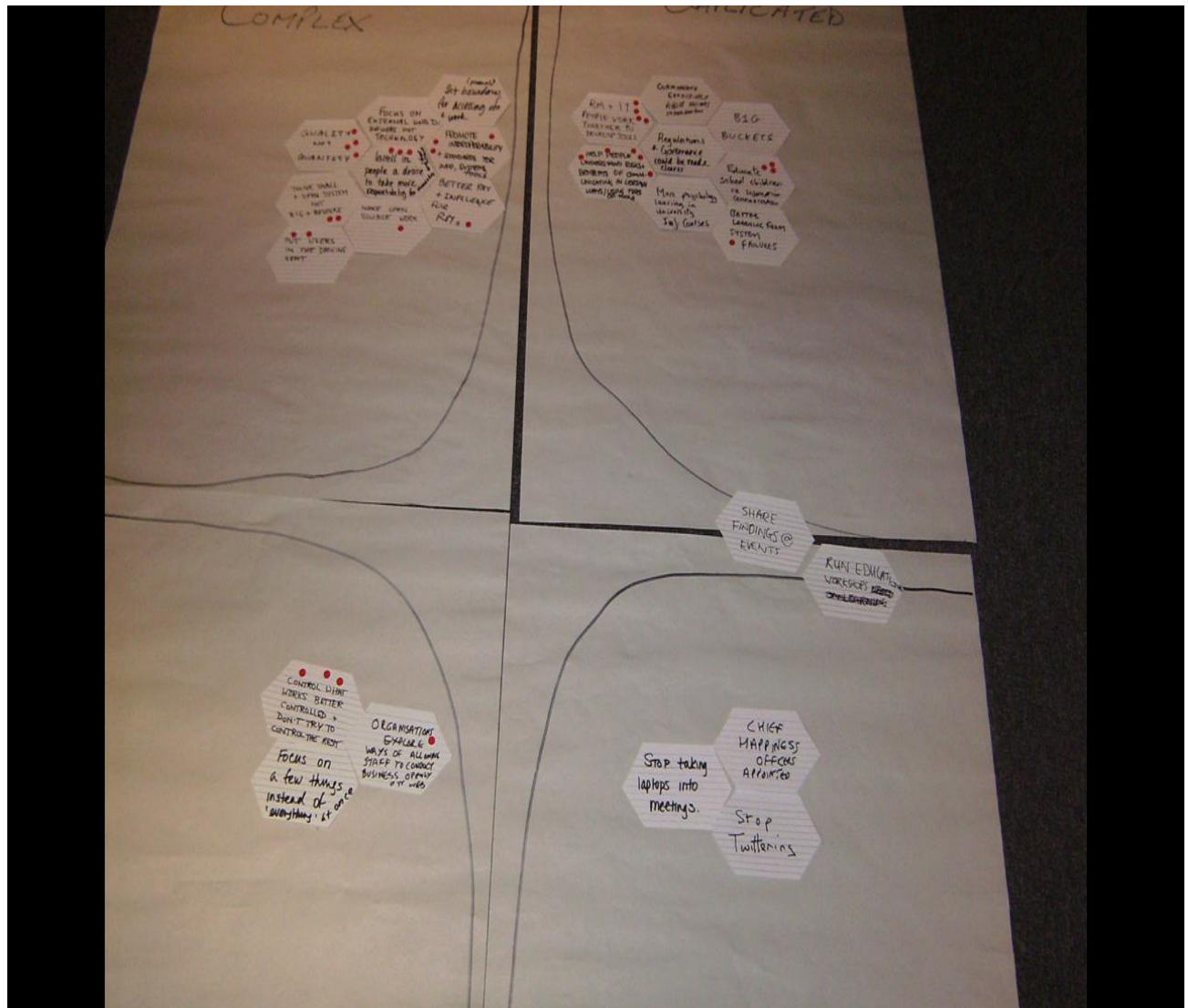
APPENDIX 2.13: UK GROUP FIRST ACTION RESEARCH CYCLE: WEB 2.0

CHECKLIST WITH ADDITION SECTIONS FOR USERS

DRAFT WEB 2.0 SYSTEMS' CHECKLIST

Continued communication

NO	CRITERIA	NOTES	
1.0 The first set of requirements are delivered both by the technology but also the supporting guidance and practice relating to individual usage.			
1.1	Content rich	Meaningful (i.e. the content is substantive and the style/media does not override the content)	
1.2	Reliable		
1.3	Clear	Including separation of fact from opinions and personal values	
1.4	Message conveyed as intended	Individuals must try and foresee possible misinterpretations and take steps to minimise the potential for misunderstanding – this could be achieved by providing a Word outline for continuous text	
1.5	Tone retained	90% of tone can be lost in text-based communication on the internet (do we have a reference for this statement?) So use of emoticons can assist – in Skype some emoticons can be selected and inserted with ease	
2.0 Technology			
2.1	Media rich	Capable of supporting different information formats, film, photographs, audio etc	
2.2	Ownership rights maintained	Including authority to delete, amend and reproduce information, to keep comments in context etc	
2.3	Privacy rights maintained		

2.4	Security for information coming in and going out		
2.5	Data integrity/authenticity retained	i.e. data preserves its original context, structure, nuances, interconnections and metadata	
2.6	Scrutible	Greater ability for individuals to engage and validate the information's credibility - with paper and pen it seemed easier to assess the credibility of the information than IT enables	
2.7	Comprehensive audit trails		
2.8	Real time communications for meetings!		
2.9	Information availability whenever and wherever required	'Always on', but I can hide from it when I want off-line time	
2.10	Accessibility	Easily available independent of the platforms and systems on which it was created and through which it is being viewed and in the wider senses discussed) (access not just in an IT sense but access to all communities, at all times, and over the longer term, i.e. don't lose the information over the longer term	
2.11	Equality of access - provision of equal access to content or functionality for people with disabilities etc		
2.12	Cultural clarity	(i.e. global communication and cultural requirements for communicating understood)	
2.13	Integrated and accessible at home and work, with organisational acceptance and greater choice to accept the right tool for the right purpose		
2.14	Clarity between personal/professional boundaries		
2.15	Enduring /Accessibility over the short medium and longer term	Capable of being handed on despite technological evolution	
2.16	Archive and tracking capabilities		
2.17	Trusted ids/or clear when using pseudonym	There will be certain occasions when it is important to be clear about the author of a communication and certain instances where this is irrelevant and anonymity enhances creativity	
2.18	Managed identities that enable individuals to separate out their public and private profiles		
2.18	Information flows managed	(e.g. pause options)	

	to avoid overload		
2.19	Privacy/security managed	(including clearer limits on data which can be appropriately searchable/Googleable)	
2.20	Search, management to enhance constructive exchange		
2.21	Tools to help skim off the content worth knowing on an individually defined basis, 'gold panning'		
2.22	Ethical reuse of information by users, i.e. information origin is credited etc		
2.23	unlimited bandwidth		
2.24	ease of use		
2.25	Quick		
2.26	Cheap		
2.27	Transparency as to who owns the systems, how the data is managed, legal implications etc		
2.28	Clear legislation which balances government, user and corporate rights		

2.0 TECHNICAL REQUIREMENTS

Date checklist completed: 27 February 2009

No	Checklist criteria	Notes
20.0	**System:** What is the name of the system under review?	
21.0	**Ownership:** Who is the present system owner?	*This may impact upon its relationship with other systems*
22.0	**No of users**	*This may impact upon its survival over the longer term*
23.0	**Location:** Where are the headquarters of the business registered? Is there a European base.	*The headquarters will impact upon the legal framework* *If there is a European Office then the company must apply EU law*
24.0	**Site policies:** Are there document sets which establish the site framework/management/code of conduct?	
25.0	**Access:** Is the system accessible/available worldwide?	*Is the system blocked in any countries*
26.0	**Offline capabilities:** Can the system software be uploaded onto local servers without impacting on functionality?	*Can the system operate offline and is there any performance impact/only operate online* *Offline Requirements* *Helpdesk*
27.0	**Cost:** Are there costs for usage/software ?	
28.0	**System functionality:** Please specify the functionality offered by this system? Please refer to additional information on functionality [It has been suggested that we developed explanations of Wikis, blogs in the context of explaining key RM issues etc]	*Main services* *Customisation* *Usability* *Additional services* *Project management* *Social collaboration* *Tagging* *RSS* *Mobile services*
29.0	**Eligibility/membership**	
30.0	**Membership data:** what information must you provide in order to sign up to the service?	
31.0	**Data ownership:** do you have complete ownership and control of your data?	*Do you own your own data*
32.0	**Data termination:** Can you choose to delete information?	
33.0	**Advertising:** Can you place your own advertisements onto the site	

	and can you control who advertises on your pages?	
34.0	**Site security:** What are the site security capabilities and policies?	*Security capabilities set at system level*
		Security capabilities available to user
		Security limitations
35.0	**Legal compliance:** What are the legal compliance requirements?	*Copyright, trademark, privacy, publicity or other personal or proprietary rights; or contain libellous, defamatory or otherwise unlawful material*
36.0	**Preservation/migration:** What are the processes available to migrate/preserve the data?	
37.0	**Business continuity:** Are there any business continuity guarantees, e.g. escrow agreements?	
38.0	**Additional conditions of usage**	

This checklist is the work of the Records management group of the Continued communication project. [Do people want their names added?]

APPENDIX 2.14: UK GROUP: QUANTITATIVE COMMUNICATION SURVEY HIGHLIGHT OVERVIEW
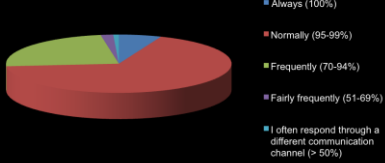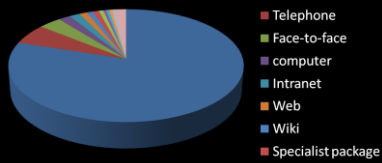
Do people make strategic tool choices?

Approximately how frequently do you answer a communication you receive using the same communication tool? (e.g. email with an email)

- Always (100%)
- Normally (95-99%)
- Frequently (70-94%)
- Fairly frequently (51-69%)
- I often respond through a different communication channel (> 50%)

Preferred single technology choice

If you had to use only one technology for all your communications within your organisation, what would that be and why?

- Email
- Telephone
- Face-to-face
- computer
- Intranet
- Web
- Wiki
- Specialist package
- Paper

Email pros

asynchronous

recordkeeping – audit trail, retains metadata

versatile

familiar

non-intrusive, doesn't interrupt

available with minimal technology

respond in own time

ability to compose in own time

Email cons

Overload/too many emails!

Poorly composed

Not as effective as face-to-face

Policies and training

60% have a satisfactory policy

21% provide helpful training on the policy

14% advise on which tools best fit a task

Key Communication Attributes

1. **Privatised/Published**
2. **Synchronous/Asynchronous**
3. **1-to-1 1-to-Many Many-to-Many**
4. **The nature of the artefact**
5. **Published vs. Sharable**

APPENDIX 2.15: UK GROUP: CONFERENCE PAPER AS SUBMITTED TO THE PROCEEDINGS OF *ONLINE INFORMATION*, LONDON, 1-3 DECEMBER 2009.

CONTINUED COMMUNICATION: MAXIMISING COMMUNICATIONS IN A WEB 2.0 WORLD

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Abstract
This paper is concerned with Continued Communication, a Northumbria University led co-operative inquiry, critically evaluating a central research question: how can organisations maximise the potential of their communications, taking into account the impact of the individual. This paper provides a high level discussion of the research and outputs of the Continued Communication's UK group. It discusses the complex dimensions of communication; organisational requirements, individual agendas, and communication channels/tools.

Members of the Continued Communication UK group are: *Rachel Binnington, Teresa Blackmore, Leanne Bridges, Matthew Brown, Chris Campbell, Heather Caven, Nick Cooper, Emma Davies, Sarah R Demb, Paul Dodgson, Ron Donaldson, Denise Drake, Benjamin Ellis, Susan Em, Rachel Hardiman, Emma Jarvie/Johnson, James Lappin, Elizabeth Lomas, Samantha Mansfield, Christopher Marsden, Suzie Mereweather, Mia Ridge, Laura Robertson, Tom Salmon, Martin Sanderson, Jon Shepherd, Katherine Stevenson, Andrew Stewart, Jeanette Wordsworth, Lynn Young, Jane Zibarras and 20 additional anonymised participants.*

1.0 INTRODUCTION

New technologies have radically changed business and organisational models and the ways in which key transactions are negotiated and delivered on a daily basis. Across organisations, computer mediated communications (in particular, email along with Web 2.0[32] social networking applications), are now the main tools for creating, distributing and saving information within an organisational context[33]. However, despite the fact that computer mediated communications are central to business processes, organisations often fail to deliver informed guidance or direction on engaging with and managing the range of communication applications currently available. When people make decisions about where and how they communicate, they face an array of choices: for example, should they communicate in person (face-to-face), by email, through a blog, internally within their organisation or in a wider collaborative environment? The consequences of these choices, positive or negative, are rarely considered and risk assessed. Furthermore, within many organisations, blind fear has resulted in a complete lockdown on Web 2.0 collaborative services. It is the premise of this paper that by delivering tailored guidance and building communication architectures that engage with users, technologies and management strategies, communication opportunities will be successfully leveraged.

2.0 METHODOLOGY

Continued Communication is a Northumbria University led co-operative inquiry. Co-operative inquiry is a derivation of action research: 'it seeks to bridge the gap between research and practice by calling on a group of co-researchers who have similar interests and concerns to work toward solutions to an agreed research question' (Heron and Reason 2006). 80 international co-researchers (including archivists, designers, engineers, information scientists, knowledge managers, linguists, psychologists and records managers), with cross-disciplinary expertise from the public and private sectors are critically evaluating the central research question:

 ➢ How can organisations maximise the potential of their communications, taking into account the impact of the individual?

The project brings together information professionals and end users to discuss the use of innovative Web 2.0 technologies for (and impact on) collaborative global partnership and networking, whilst simultaneously using and testing these same applications.

Within the co-operative inquiry framework a range of research techniques are employed to evaluate the overarching research question. This paper focuses on the work of the UK group, which employs a mixed-method framework to explore the complex dimensions of communication (the intersection of organisations, the individual, the message and the message channel/technology tool or platform), with particular focus on the Web 2.0 environment, and the role of records and information management (RIM) [34] as a maximising business agent across these domains.

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[32] Web 2.0 is defined, in the context of this paper, as information sharing, interoperability, user-centred design and collaboration through the World Wide Web. It focuses on the World Wide Web's ability to facilitate engagement and collaboration in contrast to broadcasting.

[33] The growth of email as the main format for generating and communication business information has been well documented AIIM (2005, 2006). However, in February 2009, statistical web sites highlighted the fact that for the first time the traffic on social networking sites overtook email as the predominant channel for communications, although not necessarily in a business context. Refer to Nielsen 2009.

[34] Records management is defined, by the international standard on records management (*ISO 15489*), as "the field of management responsible for the efficient and systematic control of the creation, receipt, maintenance, use and disposition of records, including processes for capturing and maintaining evidence and information of business activities and transactions in the form of records."
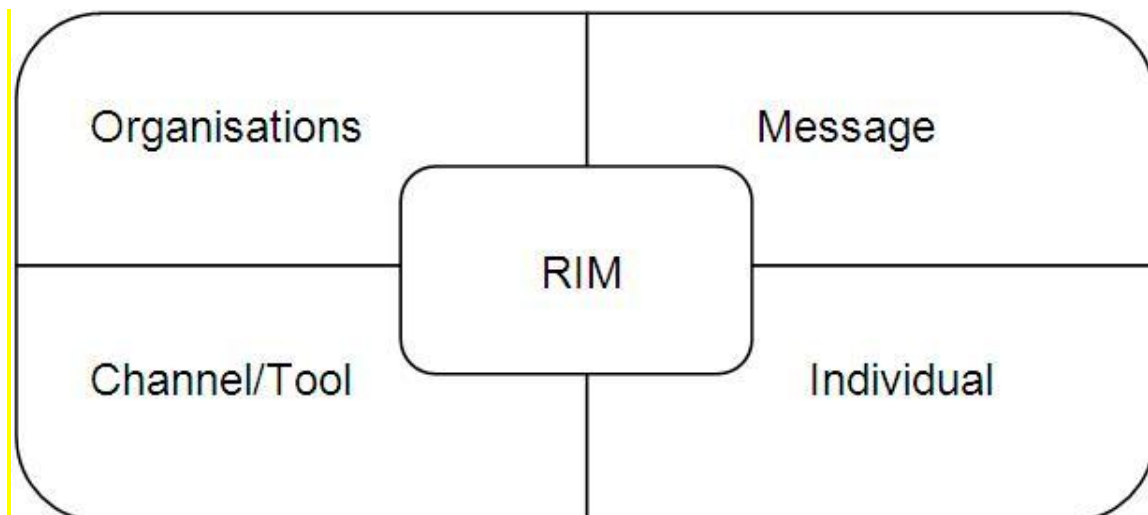

Figure 1: Representation of the dimensions of communication across which 'records and information management' (RIM) must engage[35]

This paper highlights some of the research findings and introduces one of the group's practical outputs, a communication architecture toolkit.

3.0 RESEARCH ACTIONS

3.1 Research Action One: Cognitive Edge workshops mapping communication complexity
The first piece of research conducted mapped different user groups' perceptions of communication and its complex components. The research was led by Ron Donaldson, and supported by Elizabeth Lomas, employing a range of Cognitive Edge[36] techniques. To date, Donaldson and Lomas have worked with eight workshop groups comprising of participants from a range of backgrounds, grouped by professional background for each workshop.

The starting point for the workshops was a method entitled the 'Future, Backwards'. This method was developed as an alternative to scenario planning and is designed to increase the number of perspectives that a group can take both on an understanding of their past, and of the range of possible futures. [37]

In this instance, the participants defined their perceptions of communication 'today', then worked backwards to analyse how they got to the current state. Working backwards breaks linear thinking.

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[35] This table was first published in: *Brown, M., Demb, S. R. and Lomas, E. (2009)* 'Continued communication – maximising the potential of communications: the research and outputs of a co-operative inquiry', *Proceedings of the Managing Information in the Digital Era Conference,* Botswana October 2009. The paper contains a more detailed discussion of how records and information management processes may support the complex communication domains.

[36] Cognitive Edge is a company focused on rejuvenating management practices to better equip organisations when addressing intractable problems or seizing new opportunities in uncertain and complex situations. Where traditional approaches have failed to deliver success, Cognitive Edge techniques enable the emergence of fresh and insightful solutions seen from multiple perspectives. http://www.cognitive-edge.com/whatwedo.php Accessed 1 September 2009.

[37] The 'Future, Backwards' method is explained in detail at http://www.cognitive-edge.com/method.php?mid=10 Accessed 1 September 2009. It can be used to discover what entrained patterns of past perception in an organisation/group are determining its future and compares and contrasts different aspirations as to the present and the future'

The next step was to define the groups' future visions of communication 'heaven' and 'hell', working on a three year time frame. The perspectives of 'heaven' and 'hell' are then linked to the communication state of 'today' by developing the chain of possible steps that would lead to each position. When the exercise is undertaken within an organisational context the steps to 'hell' can be used to define actions to avoid in the context of a risk register.
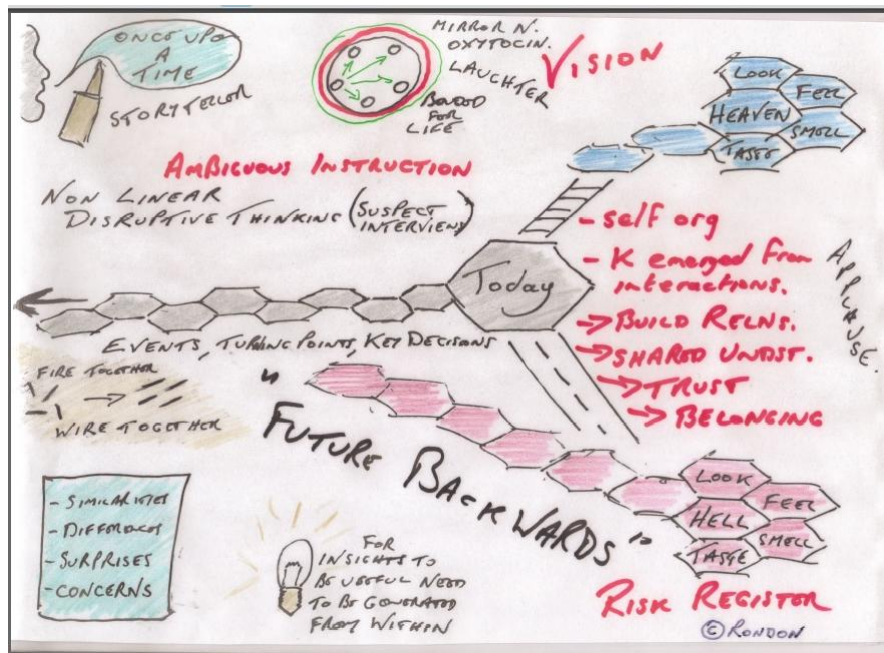
Figure 2: 'Future Backwards' plan by Ron Donaldson

Through this process the groups built up pictures of their perceptions of communication's evolution, reality and possible futures. They created patterns of links that Donaldson terms 'the ecology of knowledge'. These pictures demonstrated the importance the participants placed on the individual, social and organisational structures, message, and channel/tools, within the context of the communication landscape.

In all of the workshops there was a rich pattern of communication that evolved with an increasing emphasis on technology, rather than society, as the timeline progressed. In each of the groups there was a high level of agreement in terms of the future requirements desired from communications delivered through a technological tool. The high level requirements for communications are summarised within *Table 1* below.

Table 1: Communication requirements

Characteristic	Explanation
Reach	The physical distance through space that a tool can send a message and the audience potential
Size	The amount of data/information/representations that can be transmitted
Capacity of channel	How much data/information/representations can be transmitted per unit time through the infrastructure
Resource	The cost of transmitting, e.g. the energy expended in transmitting the message

Speed of creation	How quickly the message can be composed
Infrastructure/ equipment requirements	Pertains to the physical structures that need to be in place in order to transmit the message, including any specialist equipment needed
Interoperability	The ability for a message to be accessed across different devices and platforms
Complexity	How easy it is to learn and then use the tool to communicate the message
Control structure/style	How well you are able to form the message as you would like – will it retain tone, clarity etc?
Comprehension	How easy the message is conveyed and understood across the communication channel
Authenticity/ integrity	Capable of ensuring that the message's context and contents will be protected.
Data ownership	The ability to retain rights over the message, to ensure that it is not used for other purposes and can be effectively deleted as required
Privacy	The ability to ensure that the message is viewed only by intended recipients
Security	Pertains to protection against hackers, malware etc

A key attribute of the 'today' pictures of the communication landscape, for all groups, was the central place of Web 2.0 tools. However, those participants with greater familiarity of the Web 2.0 landscape saw the future possibilities of the Web and its positioning as central to the future vision of 'heaven', whereas those participants with less experience often placed its attributes in the landscape of 'hell'.

Also mapped into the pattern of communication were the different roles and relationship contexts in which communications were undertaken on an individual level:

- colleagues in a wide range of combinations from teams/departments/committees etc
- external contacts, contractors, customers etc
- professional bodies to which the individual belongs
- personal links to family/friends
- wider social/societal groups.

The patterns that emerged emphasised the blurring of professional and personal lives given rise to by the connectivity now available between these environments and further emphasized through the Web 2.0 world. As Lappin states 'it has never been easier to work at home and to play at work'.[38] These worlds have as yet to evolve a natural balance to enable an easy co-existence and all the workshop groups highlighted the clear tensions between personal goals and business requirements. In response to the blurring of boundaries many organisations have blocked communication channels to social networking sites, unsure of the benefits they may afford.

In developing the steps to 'heaven' a range of possible actions were highlighted including:

- ➤ sophisticated communication policies;
- ➤ greater understanding of Web 2.0 capabilities;
- ➤ international legislation to regulate data ownerships and privacy rights on a global scale.

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[38] James Lappin is one of the UK group's co-researchers.

These workshops proved extremely productive in eliciting information to move forwards the development of a communication architecture toolkit. In order to deliver a full toolkit further information was required on current tools' capabilities and the alignment of these tools to a range of business processes.

3.2 Research Action Two: Surveys determining the alignment of business communication processes to tools fit for purpose

Survey 1

To determine the set of organisational business processes supported by communication, the research group designed a survey to collect free text data on the business reasons people communicate. The survey was completed by a small data set of 35 people, purposefully selected to try and ensure that they were representative of a wide range of profession roles and employment sectors. The following high-level communication purposes were revealed through analysis of the original survey data:

> ➢ circulating news and information;
> ➢ collaborating on projects;
> ➢ data gathering or analysis;
> ➢ defining and implementing business, legal or operational requirements;
> ➢ defining and implementing strategic requirements;
> ➢ designing a product;
> ➢ ensuring policy or procedural compliance;
> ➢ providing feedback or expert advice;
> ➢ requesting or recording knowledge[39];
> ➢ requesting or recording information;
> ➢ sales and marketing
> ➢ undertaking HR management.

A hierarchy of business processes was established and this list is being used as part of the communication architecture toolkit.

In this qualitative context the group also tried to understand perceptions of the benefits of face-to-face communication versus online communication. Seven percent of respondents believed that there were no forms of communication that could not be conveyed through virtual channels. A majority of respondents (86%), listed a number of activities that they felt could only be achieved in a face-to-face setting, including humour. 43% of respondents also stated that body language was important for effective communication and many felt that this was a key factor in determining whether someone was telling the truth. These perceptions tie in with early thinking about online communication that were influential in 1980s information systems and communication research led by Daft and Lengel (1984 and 1986), through which richness theory was evolved. Daft and Lengel portrayed communications mediated through channels where voice, body language and eye contact were not present as less effective, e.g. email. However, later studies demonstrated that individuals adapt and become selective in the tools they use and the ways that they subsequently interpret mediated messages Culnan and Markus (1987). However, the survey's findings highlight the potential importance of comfort and familiarity with a communication tool for ensuring effective communication exchanges .

Survey 2

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[39] Knowledge is unrecorded information from individuals/experts.

A wider survey (which obtained over 500 responses) was also conducted to further understand communications within the business context. The survey was made available online and in hardcopy. Over 90% of the responses came from the online questionnaire, which needs to be factored into the analysis of the responses obtained. The survey was also linked to a personality test to understand the impact personality plays on communication choices. Demographic and contextual data was also collected to provide understanding on the impact on communication choices of business context, age, gender, nationality, and culture. These factors clearly shape our communication contexts and networks.

The full survey and answers will be made available on the Continued Communication website. A sample of some of the questions and answers from the online respondents are provided below.

Table 2: Sample of answers from an online communication survey 2009

Most frequently used communication tool
Most frequently used communication tool in a business context?
  ➢ email, which was used 3 or more times a day, by 97% of respondents.
  ➢ face-to-face was used 3 or more times a day, by only 81% of respondents.

Banned tools
Most frequently banned tools and whether or not respondents agreed with the ban:
  ➢ social networking sites banned in 29% organisations, 18% agreed the ban
  ➢ personal blogs banned in 23% organisations, 18% agreed the ban.
  ➢ collaborative editing packages banned in 13% organisations, >1% agreed the ban.

Communication choice
How frequently do you answer a communication you receive using the same communication tool?
  ➢ 6% (always)
  ➢ 68% (95-99% of the time)

NB: When it came to answering how different business processes were communicated then all the participants engaged with a wide range of communication tools, blending the use of tools to maximise efficiency and effectiveness.

Policies and training
Does your organisation have an IT policy and acceptable usage policies that encompass communication requirements?
  ➢ Yes and it is satisfactory - 63%

Does your organisation provide training to help you comply with the policy?
  ➢ Yes and it is helpful - 21%

Does your organisation have guidance that helps you identify which tools to use for which functions?
  ➢ Yes - 15%

In this survey, the future perspectives of respondents replicated those revealed in the workshops with a mixture of negative and positive potential communication futures.

3.3 Research action 3: Testing the tools

A number of tests are being conducted to evaluate different Web 2.0 tool strengths, taking into account their potential ability to evolve to fit new requirements. The 80 co-researchers involved in the project have been testing and evaluating a wide range of communication tools from social networking sites to video conferencing to Google Wave.

One simple exercise carried out involved testing the ability of different technologies to disseminate information and obtain responses to a single simple technology question circulated via different communication channels. The question was limited by the 140 characters allowed in a tweet. It was evolved to provide informative data about people's communication preferences and to test the power of different technologies to circulate the question (which was devised by Matthew Brown):

Continued communication research - If you could only use one technology to communicate what would it be and why? Answer and pass it on!

The question was then sent by email to direct contacts and to groups of contacts, as well as being posted on email listservs, social networking sites related to social media and information management, and via Twitter accounts.

The highest number of responses to the question were received from professional email listservs run by the academic communities based in the UK.[40] The direct emails to known contacts were always answered when clearly sent as an individually targeted message but there was a much lower level of responses when the email was clearly copied to a whole group of email contacts. No responses were received from any of the social networking sites, except where the direct messaging features were used. The question was also posted on Tweetbrain (a spin off tool from Twitter developed specifically for answering questions) but it obtained only one response.

The academic listservs demonstrated their power to obtain responses from targeted professional groups but did not cascade the message widely beyond these boundaries, although two people on the listservs did pass on the question by posting it onto two other listservs. The most powerful tool for cascading the message was Twitter, which demonstrated its ability to reach across communities to a range of recipients thus creating complex network of answers akin to research snowballing techniques[41].

This limited exercise served to demonstrate the importance of choosing the right tools for a task. Online communities within the enterprise usually fail if the right tools for a particular purpose are not properly scoped and selected. E.g. A message may be posted onto a social networking site with many members but it may not engage the audience unless couched in appropriate language or posted by a well known contributor to the site. A tool such as Twitterbrain may have been specifically scoped for a task but this does not mean it will engage with an audience; there are many speculative developments put into the marketplace by software developers.

In response to the actual question in every forum, where answers were received, email was overwhelmingly nominated as the favoured tool, were only one communication channel available. A range of reasons were cited including its ability:

- to reach most audiences;
- to convey complex and simple messages;

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[40] Jiscmail is the UK's National Academic Mailing list Service, available at http://www.jiscmail.ac.uk/ (Accessed 1 September 2009).
[41] Snowballing is a technique for gathering a research sample. Small samples of study subjects are approached, and in turn these subjects provide networks to other study subjects. Thus the sample group grows.

- to evolve communications over time at each participant's convenience;
- to manage a whole range of daily actions including scheduling appointments.

This exercise served to demonstrate that different communication channels serve different purposes and that communication strategies and architectures need to be developed in order to effectively engage with a range of networks.

4.0 RESEARCH LEARNING

We can characterise a number of dimensions within the complex communication space including: the message as a concept in its own right; culturally recognised combinations and reasons for communicating; individuals and the place of the individual within communication; organisational communication and its component parts of culture, groups, society, government and business; and finally communication channels/tools and their component characteristics of nature, type, impact upon human behaviour.

The Internet has transformed the ways in which we communicate. Web 2.0 tools have changed the ways in which information may be generated, shared worldwide and located over time. In the business context this has changed the way in which many organisations deliver their services. Brown (2009) notes its impact on businesses, in terms of:

- 'the way in which physical goods provided (supply on consumer rather than vendor demand, without warehousing of materials)
- the 'services' available to be delivered (estimate 10 million mobile phone applications by 2020) (Shiels, 2009)
- the size of the organisations in relation to access to the global marketplace (e.g. smaller organisations are able to service a wider customer base estimated to be 1.8 billion by 2012) (Jupiter, 2008)
- content translation applications are increasingly available or embedded in user interfaces
- a larger variety of multi-dimensional communication tools are available via Web 2.0.

The combinations inherent in the above factors impact on the communication between individuals. From a business perspective, we must take into account the millions of products and services that are being traded, and the billions of people who will have access to the Internet over the next few years.'[42] It becomes increasingly important for businesses to understand these complicated communication contexts as business markets are increasingly driven and leveraged by these dimensions. As O'Reilly notes all organisations must enable an architecture of participation.[43]

It is important to understand that:

1. Online communities within the enterprise usually fail if the right tools for a particular purpose are not properly scoped and selected. The different possibilities and pitfalls of collaborative tools are not always well understood. It is important to know the capabilities and limitations of the tools you select and their potential impact in your organisational

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[42] Matthew Brown is a member of the Continued Communication Research group and has written up parts of the project. Refer to *Brown, M., Demb, S. R. and Lomas, E. (2009) Continued communication – maximising the potential of communications: the research and outputs of a co-operative inquiry,* Proceedings of the Managing Information in the Digital Era Conference, *Botswana October 2009.*

[43] Reilly, T. (2004) 'Architecture of Participation', *O'Reilly.* Available: http://www.oreillynet.com/pub/a/oreilly/tim/articles/architecture_of_participation.html [Accessed 1 September 2009]

environment. How will you manage your collaborations to empower individuals or maintain management structures or engender change?[44]

2. Successful projects are those that set the expectations of the user group realistically and provide the right policy, guidance and support frameworks. Collaboration is about providing the right structure and support to obtain a comfortable environment for working and communicating. You must provide training and support, ensuring that key participants are not disengaged. Organisational commitment to the project must be consistent and adequately resourced.

3. We live in a rapidly changing world and those organisations that survive and thrive are the ones that are open to and nurture innovation and opportunities. So set concrete objectives that the group can achieve as milestones but in addition expect the unexpected and foster innovation.

5.0 PRACTICAL OUTPUTS: A COMMUNICATION ARCHICTURE TOOLKIT

Many organisations have failed to understand the subtle but substantive differences that will be achieved if a range of communication channels are used by a business. Organisational decisions on which tools to use have tended to be taken and implemented *en masse* at a corporate level rather than individually modelling complex business cases. It is clear that access to Web 2.0 technologies can have an adverse business impact, for example information may be generated and held beyond manageable business boundaries exposing organisations to legal risk, use of social networking sites can provide a conduit for malware etc. However, Web 2.0 tools can provide a cheap and essential source for creative collaboration and customer information. Therefore, just as the implementation of an in-house IT system is justified and rolled out in a considered programme, access to a range of communication tools should be risk assessed and implemented based upon strategic business cases. At the heart of the strategy lies the business context and risk profile. An example of such an approach in a specific business context is articulated by Ridge (2009) who draws up a framework for engaging with social media in a heritage specific context.

Communication channels must also be mapped to job roles and profiles through an understanding of communication/information values. Furthermore, communication chains and information must be seen as a corporate assets rather than merely a by-product of the business.

By prioritising information management policies, strategies and action plans; by making informed decisions using communications criteria; and by conducting workflow analyses of communication tools before implementing them, a business can maximise the potential of organisational communications.

It is also important to understand that certain tools, designed in Web 2.0 environments, may be installed and maintained on internal business servers, e.g. Moodle's discussion forums and wikis. However other Web 2.0 applications have no life outside of the Web environment, e.g. Wikipedia. Some applications can exist off the Web but are devalued when they lose the collaborative networks and shared data that an online presence provides. Thus sometimes a tool may be selected but the functional requirements for the tool also need to be clear and able to be implemented.

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[44] Frameworks such as 'activity theory' and 'social informatics' can used to help understand the impact of technology in the workplace.

Prior knowledge of the tool plays an important role. People who have experienced participatory web applications in other contexts, such as social or professional networks, may bring their skills and experience or assumptions about the openness and purpose of Web 2.0 tools into the workplace. In contrast, the 'barrier to entry' to a tool is worth considering – especially as tools change so rapidly today, people may feel less inclined to learn how to use one, perceiving that another will just come along just as quickly.

Communication Architecture Toolkit
In line with the analytical criteria discussed earlier in this paper, and taking account of the communications characteristics outlined, the research group has been designing a communication architecture toolkit. The kit includes:

- Communication best practice paper
  Overarching advice on building communication best practice into a range of organisational environments

- Communication policies
  Sample policies based on a range of organisational settings, and developed to allow tailored approaches appropriate for individual organisations.

- Online tool with checklists to align business and user requirements to tools
  Online tool with checklists to enable matching processes to tools in accordance with organisations settings through risk analysis.

At the heart of the architecture lie the risks assessment checklists for Web 2.0 tools. These enable organisations to evaluate usage issues before or after adopting a variety of Web 2.0 systems, with a view to a more strategic approach to implementation. The checklists encourage engagement with the possibilities that Web 2.0 provides, as well as establishing a clear picture of the potential risks beyond traditional business boundaries.

The checklists are accompanied by a risk framework explaining the merits of each tool (eg Wiki, blog, social network etc) independent of suppliers (Facebook, LinkedIn, Moodle, etc) or vendors. In turn, the risk analyses inform targeted communications policies that can easily be understood and implemented. In addition the toolkit has cues to consider the records and information management factors that individuals with immediate business goals may forget but which have a critical business impact, such as legal requirements and the ability to access information over the longer term[45].

The toolkit provides a holistic system to ensure effective delivery and relevance to wider communities. The framework takes into account the communications spaces and interactions being researched by the group: people, processes, systems, external events and reputation; and will rate the relevant opportunities and risks. The toolkit will be demonstrated at *Online information*.

6.0 CONCLUSION
Computer mediated communications have transformed the business landscape and made new ways of working and collaborating through internationalised and localised communication networks. They have diverted recorded information formerly held in structured systems into narrative channels that

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[45] These questions are covered in *Brown, M., Demb, S. R. and Lomas, E. (2009) Continued communication – maximising the potential of communications: the research and outputs of a co-operative inquiry,* Proceedings of the Managing Information in the Digital Era Conference, *Botswana October 2009.*

may flow in and beyond the business boundaries into a Web 2.0 world. New ways of managing information, leveraging collaborative network advantage and assessing risk are required to navigate through the new business information context. It is hoped that the toolkit developed by the Continued Communication team and demonstrated at *Online Information* will assist with positive engagement and success in this shifting landscape.

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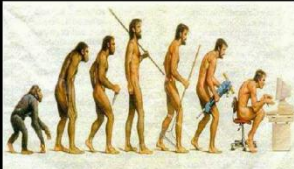
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APPENDIX 2.16: UK GROUP THIRD ACTION RESEARCH CYCLE:

UNDERSTANDING DYNAMIC SYSTEMS AND BUCKETS

Different approach to retention scheduling

Fewer but wider record 'series'

Risk based

Cross functional

Pragmatic

Less effort/simpler

Government Accounting Office (US)

3 Primary Buckets:

◦ Policy, Publications and Special Collections – permanent retention

◦ Mission – 5 year retention

◦ Administrative – 7 year retention

11/23/09

NARA

3 Buckets:

Program Direction	Administrative	Program Operation

11/23/09

Group Exercise

Establish your bucket categories

Fill your buckets – place each extract into the appropriate bucket

Feedback the pros and cons of your approach

11/23/09

Continued Communication

➤ Website including a Blog www.continuedcommunication.org

➤ Communication Architecture Toolkit

➤ Book: Information management solutions: communication and collaboration in a changing world, Facet Publishing 2011

APPENDIX 2.17: USERS UK GROUP FOURTH ACTION RESEARCH CYCLE: INFORMATION SECURITY OUTLINE GAME PROPOSAL

1.0 Project background

This proposal, for an information security game, has been developed by the UK section of the Continued Communication group. This is a Northumbria University led research group of 50 cross disciplinary co-researchers in the UK investigating communications in the 21st century. (There is a wider international group.) The group is producing practical outputs and research papers. Key outputs are:

- A short film series – Where's my stuff? (Series of 6 – pilot film trialled in March 2009 and due for formal release October 2009).
- A communication architecture toolkit being launched at *Online Information*, London, December 2009.
- A communication best practice paper being launched March 2010.

The project will be launching its website with outputs in December 2009. The group also has a book in production for September 2009 with Facet publishing. It is aimed to launch the book in conjunction with a dedicated Continued Communication conference at the British Library in September 2010.

2.0 group/student relationship

The group would propose to work with the student on the game's evolution and write storylines/game scenarios as directed, dependent upon the gaming format selected by the student. It is understood that the student must undertake this work in support of Northumbria University's dissertation requirements. However, in addition to obtaining an academic qualification and practical expertise, the benefit of working with the Continued Communication group would be:

- the opportunity to work with a third party to benefit from collaboration and to gain additional negotiating/project management skills relevant to future job applications;
- branding and wider publicity for the game through the Continued Communication networks. The Continued Communication group are currently evolving their brand and would work with the student to build a marketing strategy for the completed game;
- the game will be used and it is hoped that it may be developed further. The marketing for the game and its future development will to some extent be dependent upon the game focus developed by the student. For example developing a game that meets the Cabinet Office's data handling requirements means that the Game will have a clear target audience. However a game with broader appeal can have a wider marketing strategy. This will need to be discussed.

3.0 Game proposal

3.1 Game overarching aim

To place individuals within a non-specific organisational context with a task/tasks designed to develop wider awareness of the information security considerations that should be reviewed when delivering operational objectives. The game should demonstrate that sometimes these considerations may impact upon resources and speed of delivery. It is proposed to set a number of tasks within a general organisational context using a range of tools to achieve the task. No prior knowledge on the part of the game players should be

assumed. In some cases there may not be right or wrong answers but feedback may be given or impact measured, e.g. costs, time, reputation or operational effectiveness.

Some initial gaming concepts are briefly considered in Section 4.0 below. The Continued Communication group will work with the student on evolving the tasks dependent upon student's choices regarding the game format and style.

3.2 Desirable learning outcomes from playing the game
➢ The importance of protecting personal information
➢ The importance of protecting corporate information assets
➢ An overview of some common information security risks, e.g. lost laptops, memory sticks, post; failure to dispose of information properly (information recovered from sold hard drives, found in skip etc); network failures and importance internal protections (e.g. encryption, firewalls, passwords) and the potential for protections against other engagements, e.g. the breaches via social networking sites such as phishing or malware, or breaches from information being given away through targeted phone calls.
➢ The importance of communicating with the right targeted audience(s) for a task
➢ The importance of achieving operational goals swiftly and efficiently balanced against information security requirements

4.0 Potential game concepts
The group will work with the student on the game storyline, scenarios and tasks, dependent upon the final game format selected by the student. It is understood that the student will lead on the project in order to meet Northumbria University's dissertation requirements.

4.1 Game concept 1
Making sure you are working in a secure environment. Plan/image of an office with various risks. The game player must click on all the risks they can see. E.g. post-it-note with computer password attached to monitor screen; Open window next to unlocked filing cabinet; papers left on a desk; papers left on and near a printer; confidential papers in a waste basket.

4.2 Game concept 2
The player must organise a conference and match tools to tasks.

Sample tasks
      A. Working with external contractors on the event programme while keeping it secret from competitors
      B. Marketing the event
      C. Dealing with individuals personal requirements relating to an event e.g. sensitive personal information relating to medical conditions or religion etc.
      D. Making and receiving payments

Sample tools and sample benefits/issues with their usage
      A. Phone.
         Reaches a target person with certainty and good for resolving complex issues.
         Does not provide a tracked record for reference or legal purposes.
      B. Email to direct mailing lists
         Tracks conversation
         Under data protection laws you need permission to email someone
      C. Blog

> Publicizes an event to a wider audience and can get back comments before and after.
>
> Information is in the wider public domain. Negative comments may be publicly available.
>
> D. Google Docs
>   Good for collaborating with outside contractors, e.g. on programme etc.
>
>   Is in a third party domain.

A possible evolution idea was to gradually build up more available tools dependent upon success, and then to progress the complexity of the tasks. The tasks could involve deliberate traps, e.g. get them to shred something etc. Another concept was to get the player to configure their security profile at the outset and then deal with the consequences of working within this profile.

The group has referred to this article on scenario based games: http://www.gamestudies.org/0501/ermi_mayra/

4. 3 Game Concept 3

The player must achieve tasks and will receive feedback on how these tasks impact upon the balance between:

- Resources
- Time taken to achieve task/effectiveness with which task achieved
- Goodwill inside and outside the organisation e.g. banning a tool/Web 2.0 application may prove unpopular
- Security level/legal compliance

The group has referred to a similar concept based in this health game: : www.pms.ac.uk/infographics/evaluation

5.0 Supporting references

5.1 Information security

Additional information will be supplied but the following is helpful for immediate background information for the proposals information security requirements.

- A list of US government information security breaches: http://www.identitytheft.info/breaches09.aspx

- Details of the Cabinet Office data handling requirements, in response to a number of high profile security lapses, http://www.cabinetoffice.gov.uk/reports/data_handling.aspx.

5.2 Information security games

The group has identified other related information security games, although none that delivers the group's own requirements. For information the following related games are:

http://www.stop-idfraud.co.uk

http://www.onguardonline.gov/

The following publications are also informative on information security games:
http://www.net-security.org/article.php?id=1089

http://www.andrew.cmu.edu/user/nicolasc/publications/GCC-WWW08.pdf

http://ieeexplore.ieee.org/Xplore/login.jsp?url=http%3A%2F%2Fieeexplore.ieee.org%2Fiel5%2F10731%2F33854%2F01612218.pdf%3Farnumber%3D1612218&authDecision=-203

Continued Communication, 28th September 2009

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APPENDIX 2.18: UK GROUP KEYNOTE PAPER AS SUBMITTED TO THE *INTERNATIONAL CONFERENCE ON MANAGING INFORMATION IN THE DIGITAL ERA*, BOTSWANA, 14-16 OCTOBER 2009.

Continued Communication – Maximising the Potential of Organisational Communications: the Research and Outputs of a Co-operative Inquiry

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Abstract

This paper is concerned with Continued Communication, a Northumbria University led co-operative inquiry, critically evaluating a central research question: how can organisations maximise the potential of their communications, taking into account the impact of the individual? This paper discusses the complex dimensions of communication (organisational requirements, individual agendas, message, and the communication channel) and the role of records and information management within this domain. The paper provides a high level discussion of the research and outputs of the Continued Communication's UK group.

Keywords: Action research, Communication, Co-operative inquiry, Information management, Records management, Web 2.0

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Introduction

New technologies have changed the way in which key organisational data is managed. Across organisations, computer-mediated communications (in particular, email along with 'Web 2.0" social networking applications, such as Facebook, LinkedIn and wikis), are now the main tools for creating, distributing and saving information (AIIM 2006). Key business messages and transactions are delivered via online collaboration. However, despite the fact that these applications and systems hold a relatively large proportion of organisations' information assets, they are rarely managed effectively (AIIM 2005). This gap often contravenes legal requirements (such as data protection), wastes environmental and economic resources, and results in the loss of valuable information that could provide operational advantages. Furthermore, organisations are failing to adequately address the opportunities and challenges of communicating within a Web 2.0 environment beyond traditionally defined corporate boundaries.

Both businesses and information professionals do not deliver guidance or direction on engaging with and managing the range of communication applications currently available. When people make decisions about where and how they communicate, they face an array of choices: for example, should they communicate in person (face-to-face), by email, through a blog, internally within their organisation or in a wider collaborative environment? Most organisations do not offer their staff strategic communications guidance according to criteria defined by job profiles and roles. It is the premise of this paper that records and information management can provide some of the answers to maximising the potential of our communications over the short, medium and longer terms.

What challenges to this stance are presented by new communication technologies? What methods can we use to provide this guidance?

Methodology

Continued Communication is a Northumbria University-led co-operative inquiry. Co-operative inquiry is a derivation of action research: it seeks to bridge the gap between research and practice by calling on a group of co-researchers who have similar interests and concerns to work toward solutions to an agreed research question (Heron and Reason 2006). 80 international co-researchers (including archivists, designers, engineers, information scientists, knowledge managers, linguists, psychologists and records managers), with cross-disciplinary expertise from the public and private sectors are critically evaluating the central research question: how can organisations maximise the potential of their communications, taking into account the impact of the individual? The project brings together information professionals and end users to discuss the use of innovative Web 2.0 technologies for (and impact on) collaborative global partnership and networking, while simultaneously using and testing these same applications.

There are currently two groups involved in the research: an international group and a UK group; the latter initially split into two teams, one of records managers and a broader group of communication users and experts. Ultimately, these two groups will merge. Both groups are researching the central

question through the traditional phases of an action research study, following the basic cycle described below by Susman and Evered (1978).
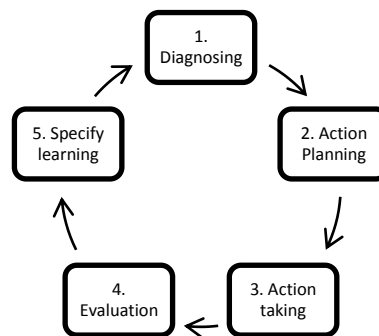
Figure 1: Representation of action research cycles based upon Susman and Evered (1978)

Within the co-operative inquiry framework a range of research techniques are employed to evaluate the overarching research question. This paper focuses on the work of the UK group, which employs a mixed-method framework to explore the complex dimensions of communication (the intersection of organisations, the individual, the message and the message channel/technology platform), with particular focus on the Web 2.0 environment, and the role of records and information management (RIM) as a maximising agent across these domains.
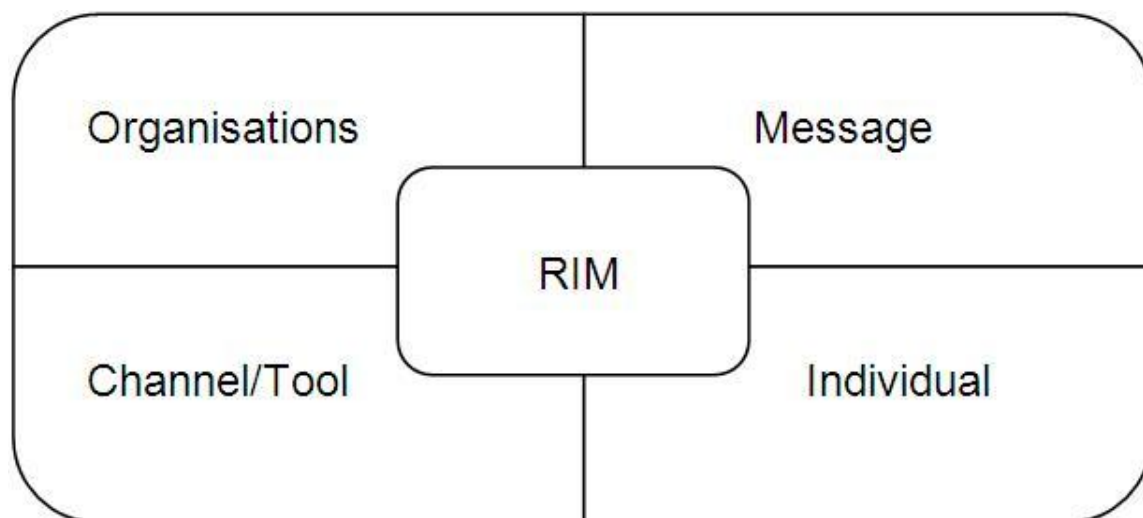
Figure 2: Representation of the dimensions of communication across which RIM must engage

A range of Cognitive Edge (CE) techniques were employed to deconstruct the facets of communication. Cognitive Edge promotes its tools as rejuvenating management practices to better equip organisations when addressing intractable problems or seizing new opportunities in uncertain and complex situations (refer to http://www.cognitive-edge.com/whatwedo.php Accessed 27 July 2009.) In this instance the techniques were used to map different user groups' perceptions of current communication and its possible futures. This phase of work was led by leading expert in CE, Ron Donaldson, with support from Elizabeth Lomas. The groups conducted a number of workshops using the *Future, Backwards* method (See http://www.cognitive-edge.com/method.php?mid=10. Accessed 26 July 2009). This method was developed as an alternative to scenario planning and is designed to increase the number of perspectives that a group can take, both to understand their past and to see the

range of possible futures. The groups were asked to plot their views of communication today and then work backwards (in an effort to break up the tendency towards linear thinking) to plot perceptions of how this point had been reached, marking each critical step that lead to the current state of play. They were then asked to project three years forward and plot visions of communication 'heaven and hell.' Once these visions were agreed, the groups outlined the potential steps that would move communities to these states. The steps were then plotted into the *Cynefin* framework.

Figure 3: Cynefin framework. Reproduced with permission from Creative Commons License [Retrieved September 1, 2009 from http://en.wikipedia.org/wiki/Cynefin]

The framework has five domains: simple, complicated, complex, chaos, disorder:

6. Simple: Where cause and effect are obvious. The approach in this domain is to sense, categorise & respond (S-C-R).
7. Complicated: Where to establish the relationship between cause and effect some analysis and expert knowledge is required. The approach here is sense, analyse & respond (S-A-R).
8. Complex: The relationship between cause and effect here can only be established in hindsight, so the approach is to probe, sense & respond (P-S-R).
9. Chaotic: Here there is no apparent relationship between cause and effect and so the need is to act, sense & respond (A-S-R).
10. Disorder: (in the centre) Is the state of not knowing what type of causality exists.

The framework builds a pattern for action based on which domain the steps are plotted into. 'Simple' steps can be enacted and 'complicated' steps are the domain of expertise and planning, while 'complex' steps require further research and trials. 'Chaos' and 'disorder' states require management back into one of the other domains. Thus, the steps to 'hell' form a risk register. It should be noted that different groups will always produce a variety of perspectives on how communications can and should be managed, and where 'heaven and hell' reside.

In conjunction with this qualitative work, surveys were also undertaken by the group to test premises across a network of organisations and professional sectors. Using Moodle, an open source platform, (www.moodle.org/about/) and Ning (www.ning.com) applications, the group shared their own perceptions of the communication spaces and the ways of managing them. In particular, the groups focused on developing and sharing its understanding of complex communication spaces, and on producing outputs to enhance them.

THE COMMUNICATION DIMENSIONS

Within the complex communication space, we can characterise a number of dimensions, including: communication as a concept in its own right, individuals and the place of the individual within communication; organisational communication and its component parts of culture groups, society, government and business; and finally communication channels and tools and their component characteristics of nature and type, human behavioural factors, culturally recognised combinations and reasons for communicating.

Communication as a Concept in Its Own Right

A recent great thinker on communication theory was Claude Shannon (Refer to http://www.exploraorium.edu/complexity/CompLexicon/Shannon.html) . His relatively simple premise was that a communication channel is made up of a 'sender' (the source of information), a transmission medium (including noise and distortion), and a 'receiver' (whose goal is to reconstruct the sender's message). The communication channel may refer to an observation by a sensor of a phenomenon (eg, person seeing the sun rise) or the transmission of a message from person to person (eg, a telephone conversation), which in this day and age are increasingly mediated through electronic applications. Our ability to communicate both across distance (eg, via satellite) and over time (eg, written communications that do not require the sender to be present during transmission and receipt), means that we are able to develop a greater understanding of our own environment. One benefit of this understanding is that two people with very different experiences and educations can bring their unique and potentially valuable perspectives on our environment that might otherwise not be recognised (for example, a doctor and a physicist coming together to develop x-ray technology).

When we communicate face-to-face, it has been judged that only seven percent of meaning is distilled from words, 55% is interpreted through visual cues such as body language and eye contact, and 38% is conveyed by vocal elements including pitch, speed, volume and tone of voice) as stated by Mehrabian and Wiener, (1967) and Mehrabian and Ferris (1967). The seminal studies of Daft and Lengel (1984 and 1986), in which they evolved richness theory, portrayed communications mediated through channels where voice, body language and eye contact were not present as less effective. However, later studies demonstrated that individuals adapt and become selective in the tools they use and the ways that they subsequently interpret mediated messages (Culnan and Markus 1987). These studies are significant to the Continued Communications project, which found in its survey results that seven percent of respondents believed that there were no forms of communication that could not be conveyed through virtual channels. A majority of respondents (86%), listed a large range of activities that they felt could only be achieved in a face-to-face setting. 43% of respondents also stated that

body language was important for effective communication, e.g., to know whether someone was telling the truth.

Individuals and the Place of the Individual within Communication

Our cognitive abilities (including memory, the capacity to deal with abstract concepts and problem-solve, high-level tool use and the aptitude to develop and communicate through complex symbolism and language) have enabled us to use our environment to our benefit and to model our future. As we extend control over our environment, tasks are accomplished more quickly with less effort (over time, some seemingly impossible tasks have become possible), we record and share conceptual symbolism and representations over time via educational systems and record keeping, and we allow for better understanding of our environment. Communication, tools and our environment are key interlocking elements that continually work to enable the development of each and combined, of people as a wider community.

Organisational Communication

For the purposes of this project, an organisation refers to any group of individuals with common goals or characteristics, or who agree to work together for mutual benefit. Below we define some specific instances of organisational communications.

Cultural groups

Members of cultural groups are wide and diverse and are theoretically brought together by a range of commonalities such as education, surroundings, life philosophies and attitudes, goals, values or practices. A general definition of culture is "the collective programming of the mind which distinguishes the members of one category of people from another" (Hofstede 1984). This means that when two people from within a cultural group communicate, the likelihood is that there is less interference in the channel, ie that there is less scope for misinterpretation.

Whereas once culture groups where limited in their interaction by geography, modern advances in transportation and especially recent developments in information and communications technology (ICT), have meant that cultural groups from opposite sides of the world can communicate without the necessity of physical proximity. Depending on the technologies used to communicate, the benefit of body language from which to distil meaning and interpret messages without the benefit of common cultural ties may be missed out within these communications.

Society

Society is a group of individuals and organisations who behave according to a set of explicit and implicit rules that govern their interaction (Yolles, 2003). The formation of societies aims to encourage maximum benefit to its members, predominantly through the reduction of conflict between

members. One prime example of net benefit to a society's members is education systems, in which less knowledgeable members are taught by more knowledgeable members about all or parts of that society and its perception of the world, in the hope that students will then be able to contribute effectively to that society over their lifetime.

groups within societies often have specific roles that contribute to its overall structure; these groups can determine what the society's rules should be (here a 'group' may actually consist of an authorised individual), those who are charged with upholding the rules (governing bodies, judicial bodies and other state structures) and those, such as civil society groups, who uphold other constructs that comprise society as a whole.

The business element of societies allows for the exchange of goods and services between groups and individuals. Business can facilitate interaction between members of society, assisting individuals with varied skill sets to make each other's lives easier. The far-reaching effects of the complex interplay between government and business among society are a result of the interconnectivity of the communications space and the availability of the communications tools individuals and organisations choose to use. Understanding such a complex network requires very sophisticated analytic skills.

Communication Channels as Tools

The way people leverage their environments for their own ends depends greatly on the tools we have developed and honed over a vast span of time. 'Tools' covers a very broad remit; anything that can be used to accomplish a task, even another person, is a tool. The underlying definition of a tool relates to the net benefit it helps us to achieve; if it saves more effort in the long term, it is worth making or learning how to use a tool. Tools began – and some still are - as simple implements for physical tasks. Over time, some of these tools became more complex, involving more people in their production and maintenance. This is especially true of information and communication tools, which have developed from relatively complex and elegant early language structures to more complex representations of the same (alphabets and written symbols) and then to mediated binary expressions that enable remote communications (telegraph, telephone, computer hardware and software and digital networks).

Information and communication tools enable the exchange of conceptual representations between people across distance and time, and between one-to-one or one-to-many. As we construct increasingly complex- and perhaps less elegant - tools, we are bound only by physical constraints such as the speed of light, in our communications. Across the 'digital divide,' our choice of communications tools has increased exponentially in recent years (even if only from one choice to two in some parts of the world); but while we had millennia to refine the decipherment of face-to-face conversation, we have had only a fraction of that to learn the unique aspects of communicating via the plethora of Web 2.0 tools suddenly (or so it seems) available to us. The decisions that we need to make when deciding which tool/s to use are far from trivial.

Choosing Communication Tools

A variety of elements impact the choice of communication tools. In order to analyse what tools we should use, a number of considerations should be taken into account, including: tool/channel characteristics (nature and type of tool); human behavioural factors such as cultural and societal requirements, roles and relationships, identities, personalities, drivers, tool knowledge and number of actors; culturally recognised combinations; and our reasons for communicating.

Prior knowledge of the tool also plays an important role, as does the number of actors in the potential communication or using the chosen tool. The 'barrier to entry' to a tool is worth considering – especially as tools change so rapidly these days, people may feel less inclined to learn how to use one, as they may feel that another will just come along just as quickly.

Tool characteristics affect the way that the message transits from its originator to the recipient. These characteristics relate to the physical nature of the tools and to the types into which we categorise them. Different physical characteristics of tools are described in detail at Appendix 1 and include: reach, size, channel capacity, resource, creation speed, infrastructure and equipment requirements, complexity and message structure/style requirements. There are also factors which result from a combination of both different factors, for example the speed of arrival of messages, the ability to receive acknowledgement that the message has been received, and the ability to control who the original/subsequent recipients of the message are.

The general tool types are broken into categories at Appendix 2 by medium and sample tool, such as:

- Audio/Telephone
- Audio/Recording
- Audio-visual/Face-to-face
- Audio-visual/Video recording
- Audio-visual/Video conference (/call)
- Written/Letters
- Written/Email
- Written/Fax
- Written/Instant Messenger
- Written/Blog
- Written/SMS
- Written/Message Board

The cultural-societal requirements of the human behavioural factors in choosing communication tools include: clarity, tone, ethics, boundaries, transparency and legislative requirements. Related roles and relationships within organisations often include experts, technicians, general users, project/programme managers and facilitators; individual identities may be assigned or self-ascribed ('doer', recorder or commentator, organisation/policy/incentive). Without organisations, the primary identity might be recognised as society or continuum. Group identities also impact on tool choice and define who is represented in a communication – often a combination of the below:

1. Colleagues (team)
2. Colleagues (department)
3. Colleagues (directorate)
4. Colleagues (organisation)
5. Organisation as an entity
6. Professional bodies to which the chooser belongs
7. Family
8. Friends
9. Role models from other societal groups (eg media, government, educational structure)
10. Society, or at least those elements of society to which you align yourself.

Roles and Relationships

The group also examined what roles are assumed in relation to the reason for communicating. Organisations use hierarchies; society recognises qualifications; cultures traditionally recognise the elderly or those who are good communicators/advocates. If one considers roles across all organisations then it can be argued that each are different, given that if compared minutely, each would be unique.

If we use the Belbin team theory (Belbin, unknown), the total number of roles in any team is nine:

- plant
- resource investigator
- co-ordinator
- shaper
- monitor-evaluator
- team worker
- implementer
- completer-finisher
- specialist.

It is also important to examine relationships – are the two communicating parties known to one another? How much of their identity is known? How much of their ability is known? There is a difference between simply knowing the other person and knowing more than the other person does:

- Expert (more knowledgeable)
- Peer (same knowledge)
- Novice (less knowledgeable).
- Continuum – being 100% more knowledgeable to 100% less knowledgeable)

Drivers

Within a professional, organisational context, the group identified a number of motivating drivers that dictate how we choose to communicate:

- Personal – Career progress
- Personal – To gain respect and social standing
- Task – purely to fulfil a task that is required
- Personality type – for example, Neo-Pi-R indicates five major factors for personality (openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism) with a number of sub-domain traits. These personality considerations can influence communication choices (e.g. extroversion and introversion). The influence of these personality factors has been critically tested by a number of psychologists, although the seminal studies for this model remain those of Costae and McCrae, 1992.

Reasons for Communication

To determine the final set of organisational communication factors, the group designed a survey to collect free text data on the reasons for which people communicate. These data will be further tested by a follow-up survey. The following high-level reasons were revealed through analysis of the original survey data:

- Circulating news and information
- Collaborating on projects
- Data gathering or analysis
- Defining business, legal or operational requirements
- Defining strategic requirements
- Ensuring policy or procedural compliance
- Providing feedback or expert advice
- Requesting or recording knowledge (where knowledge is taken as unrecorded information from individuals/experts)
- Requesting or recording information.

Implications of Web 2.0 communication tools in business today

The Internet has transformed the ways in which we communicate. Web 2.0 tools further increase individual potential to find more information and to share more information (especially as, for better or worse, English has become the *lingua franca* of the Web) but can decrease the instances of face-to-face communication. Web 2.0 has changed the way in which many organisations deliver their services in terms of:

- the way in which physical goods provided (supply on consumer rather than vendor demand, without warehousing of materials)
- the 'services' available to be delivered (estimate 10 million Apps by 2020) (Shiels, 2009)
- the size of the organisations in relation to access to the global marketplace (eg smaller organisations are able to service a wider customer base estimated to be 1.8 billion by 2012) (Jupiter, 2008)
- translation applications are increasingly available or embedded in user interfaces
- a larger variety of multi-dimensional communication tools are available via Web 2.0.

The combinations inherent in the above factors impact on the communication between individuals.

From a business perspective, we must take into account the millions of products and services that are being traded, and the billions of people who will have access to the Internet over the next few years; the numbers and permutations will continue to grow. All of these variables must be taken into account when choosing the most appropriate communication tools in an organisational context. Who is driven - and has the tools - to meet these problems head-on? As we have discussed previously, costs, usability, authenticity, availability and interoperability become key to making these choices, particularly if we use records and information management frameworks to inform our decisions.

RECORDS AND INFORMATION MANAGEMENT ACROSS COMMUNICATION CHANNELS

One of the key questions that the records managers' group brought to the research inquiry was how will organisations maintain their records in a Web 2.0 world? Records managers tend to treat new ICT applications and the data they hold as ephemeral, much like the content of telephone calls (until recently, recorded only in exceptional circumstances), when in fact they are fast becoming the mainstays of business transactions and therefore of decision-making. Thus we need to treat them in contexts similar to traditional records formats and ask the same questions, to wit:

- When is it important to retain a record of the contents of these tools?
- When is there a legal requirement for retention and what is the legally admissible record format?
- Will we be able to comply with legal retention requirements over time, given the limits of technology, resources and change management?
- What are the implication of decision-making when choosing which applications to use and record?
- How do we best broker management of information held by third-party providers of Web 2.0 applications?
- Can we retain what we need/want to retain and delete what we don't and how will this impact on the loss or growth of corporate heritage?
- Is it even possible to preserve an original record of a Web 2.0 application with all its contextual metadata?
- What are the costs of the information explosion resulting from Web 2.0 applications and their impact on resources?

We may not have the answers to these questions – at least, not yet – but it is critically important to ask raise and discuss them in a way that is useful to our organisations. We know that the sector has a tendency to look first at its uptake of new technologies in order to further its aims, rather than to analyse how they will impact on our core professional business. Hence, such timely publications as Kate M Theimer's *Web 2.0 Tools and Strategies for Archives and Local History Collections*. Forthcoming in December, it addresses the fact that "websites of archives and other historical organisations have not kept pace with overall Web improvements in design, usability and utility" (Theimer 2009). Theimer maintains that "many of the staff of these collections are intimidated by Web 2.0 technology, and have a requirement for a low-tech, concept-based resource that approaches their web presence as an integral part of their business. They need a book written from the point of view of someone managing a historical organisation, targeted specifically at the kind of material that is key to their missions that will focus on giving them the information to make their own decisions about their own sites." (*Ibid*) And this is very true - it is worth noting that until recently Ms Theimer worked for the US National Archives and Records Administration, one of the few organisations in the

sector that can afford to explore high-tech approaches to its web presence, especially in its delivery of content to users.

As records managers and archivists, we should be equally if not more, concerned with documenting our organisations' use of Web 2.0 applications and the information they collect over the short, medium and long terms. Steve Bailey's recent book *Managing the crowd: rethinking records management for the Web 2.0 world* (2008) is a harbinger of this approach. Our research colleague James Lappin has summarised its message as "Web 2.0 will have bigger implications for records management than any previous IT revolution" due to the dynamic nature of the applications and the innovative fluidity and multiple authorship of their content. Bailey's book was also reviewed by the group and is further discussed below.

Are we thinking strategically about Web 2.0 records and information management?

Faced with so many possibilities and potential risks, organisations tend to take uninformed blanket decisions, either allowing total access to Web 2.0 applications, or simply closing their doors to collaborative opportunities by banning access to collaborative portals. This negates considered decision-making about Web 2.0 in RIM. Many records and informational professionals thus choose to ignore the challenges of managing any unstructured data whether or not it is held in internal systems or hosted externally, and miss out on critical opportunities to leverage organisational knowledge.

Like the recent work done by Alice Grant with the UK museum community, which in turn draws on Elizabeth Orna's prescient earlier works, the records management and archives sector must be more proactive in getting its clients to think strategically about records and information management, particularly in the adoption and implementation of Web 2.0 applications into its normal workflows and processes.

This means that information must be seen as a corporate asset rather than merely a by-product of the business and as such, must be managed by assigning specific responsibilities according to the job profiles and roles of the individuals in the organisation rather than leaving the choice and implementation of Web 2.0 applications to chance and *ad hoc* processes. By prioritising information management policies, strategies and action plans; and by making informed decisions using the communications criteria discussed elsewhere in this paper and conducting workflow analyses of communication tools before implementing them, we can maximise the potential of organisational communications.

Are records management standards and processes fit for purpose on the Web 2.0 environment? The group agreed that we need to further develop records management principles, in particular to engage with search technologies in conjunction with classification (Dodgson 2008) and to support dynamic

applications; and that we need to build wider information partnerships by exploring incentives for records management engagement.

The group discussed the role of the records manager and the principles and tools set out within BS/ISO 15489 (BSI 2001). The group concurred that the standard no longer fully meets the requirements of the records and information context in which we operate. To fill this gap, the group wrote a critique of the ISO standard. The essence of the critique is two-fold: a) to re-brand records management ('RM') to records and information management ('RIM'), so as to be comprehensive and also to respond to the fact that the word 'record' does not have a counterpart in many languages; and b) to specify the electronic   format of records in a variety of contexts to ensure that social networking tools (Web 2.0 applications, unstructured data and similar information) are captured. The critique was sent to the UK ISO 15489 working group that contributes to the EU group at a global level, which in turn is reviewing the standard in conjunction with its global partners. Our critique is a bid to obtain the revised standard for more detailed comment along the same lines.

Tools Analysis and User Engagement with Records Management

In line with the analytical criteria discussed earlier in this paper, and taking account of the communications characteristics outlined, the group designed a set of risks assessment checklists for Web 2.0 tools. These enable organisations to evaluate usage issues before or after adopting a variety of Web 2.0 systems, with a view to a more strategic approach to implementation. The checklists encourage engagement with the possibilities that Web 2.0 provides, as well as establishing a clear picture of the potential risks beyond traditional business boundaries. The checklists are designed to outline the criteria and notes on how to interpret the criteria and include some sample data along with the impact analysis.

They are accompanied by a risk framework explaining the merits of each tool (eg Wiki, blog, social network etc) independent of suppliers (Facebook, LinkedIn, Moodle, etc) or vendors. The framework is based on the risk appetites in Lloyd's (2007) risk appetite model, part of its risk toolkit. The relevance of high, medium and low risk profiles as meaningful measures has increasingly been called into question (Gilb 2005 and Hubbard 2009), so the group is developing measures and scenarios based within different sectors (eg academic, corporate etc) to produce impact analyses. In turn, we hope that these analyses will inform targeted communications policies that can easily be understood and implemented.

User requirements are being drafted to support and supplement the technical checklists. These requirements include records and information management components, but will integrate with a more holistic system to ensure their effective delivery and relevance to wider communities. The framework takes into account the communications spaces and interactions being researched by the group: people, processes, systems, external events and reputation; and will rate the relevant opportunities and risks.

Another test-bed application for the group was the Wiki used to compile a book review of Steven Bailey's aforementioned work (Bailey 2008). Principal investigator Elizabeth Lomas edited the final product which was published in July (Lomas et al 2009). Like Lappin, the group felt that overall the book was a cogent response to the widening gulf between traditional records management and the issues surrounding Web 2.0 and other electronic records or digital environments. Those fully engaged with Web 2.0 technologies in the workplace felt the work could have benefited from a more detailed analysis of how businesses preserve provenance and manage access and use when deploying these technologies. However, it was recognised that both the potential and risks are huge and that test environments for the technologies are crucial. Finally, the group felt that Bailey's book asks the same questions reflected in this research project – a response to the critical need for records management to shift its perspective from 20th-century paper-based systems to address the exponential creation of born-digital information and dynamic systems.

To engage individuals outside the research group, we are also developing a series of short animated cartoons to raise awareness of what we all can do to manage our information more effectively. These cartoons will be delivered via the online video-streaming application YouTube on a dedicated channel in order to reach as broad an audience as possible. The 'videos' will simultaneously serve as a test-bed for evaluating the application as a communication tool. The series title for the videos is 'Where's My Stuff?"

RESEARCH LESSONS LEARNED

Web 2.0 has transformed the ways in which organisational information is generated presenting significant new challenges for the records and information management community and businesses more widely. It is still necessary to pick the right tools for the right job but now many more tools will be required as a fit for a purpose. As a result it is vital to rethink records and information management strategies and devolve architectures that provide a framework to navigate through:

- The dimensions of communication
- The organisational context
- The motivations of individuals
- The tools available
- The risks (both positive and negative) for engaging in different ways

It is necessary to rethink traditional RIM toolkits (classification, retention schedules etc) and to map these into the architecture in a more fluid way. The possibilities of Web 2.0 have changed the business motivations and mandate and RIM must focus to a greater extent not only on selling business benefit but personal benefits to individuals.

CONCLUSION

Current communications and business environments are very different to the earliest days of human development and even as recently as fifty years ago. As language barriers break down, society and contracts are developed, and trading relations between nations become more open, and a global

market provides us with increasing opportunities and challenges. These changes are made more complex with the advent of Web 2.0 technologies combined with the increased regulation of business and data; the variety and choice of more usable but more complex communication tools; a blurring of business and social tools/lives; and an industry model in which new versions of tools are brought out regularly, thus complicating interoperability.

To help inform the choices organisations make when using communication tools, the group is producing a number of outputs that we hope will eventually comprise a *communication channels toolkit*, to include communications policies and best practice papers to be disseminated via a website (www.continuedcommunication.org). We hope this toolkit, and future outputs of the project, will assist both individuals and organisations to bridge the gap between each other by maximising the complex dimensions of their communications.

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APPENDIX 1

Tool Dimensions Table (Nature)

Characteristic	Explanation
Reach	the physical distance through space that a tool can send a message
Size	the amount of data/information/representations that can be transmitted
Capacity of channel	How much data/information/representations can be transmitted per unit time through the infrastructure
Resource	the cost of transmitting, e.g. the energy expended in transmitting the message
Speed of creation	how quickly the message can be composed
Infrastructure/ equipment requirements	pertains to the physical structures that need to be in place in order to transmit the message, including any specialist equipment needed
Complexity	How easy it is to learn and then use the tool to communicate the message
Control structure/style	how well you are able to form the message as you would like

APPENDIX 2

Tool Dimensions Table (Types)

Medium	Tool/equipment	Comment
Audio	Telephone	Convert thoughts to model to words: words to model to thoughts; no body language
Audio	Recording	Similar to above, but do not know recipient; unable to have conversation as quickly
Audio-visual	face-to-face	Convert thoughts to model to words: words to model to thoughts; don't think about body language, but is massive factor
Audio-visual	video recording	Can see body language, but again do not know recipient; (are not able to have conversation as quickly
Audio-	video	Similar to face-to-face, but body language much lower

visual	conference/call	
Written	Letters	Convert thoughts to model to words, but can draw pictures and use font formatting instead of volume; cannot have conversation as quickly; usually one-to-one
Written	Email	Convert thoughts to model to words (can include images, web links); use font formatting instead of volume; can have conversation; usually one-to-one, but can be many to many
Written	Fax	Similar to letter but quicker, and can send to multiple places, and becomes hard copy
Written	Instant Messenger	Can have conversation, but need to write words, limited structure, no body language
Written	Blog	One-to-many transmission - often to record something episodic, perhaps something for which a response is not wanted
Written	Social Network System (SNS)	Similar to blog but different structure and possible use
Written	message board	Similar to above two items

BIOGRAPHIES

Matthew Brown is a Research Adviser at The National Archives in the UK, specialising in digital information and government agenda. He is currently involved in the development of professional guidance in the information space. He has had a varied career since graduating from Manchester University with an undergraduate Masters in Physics five years ago. He spent three and a half years in a defence research organisation, where he completed a fast-track scheme in Knowledge and Information Management, before leaving to joining The National Archives. Matthew is a co-researcher within the Continued Communication research project.

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Sarah R Demb has over a decade of experience as a records professional. In her current project post, she is Records Manager and Institutional Archivist for the Museum of London. Previously, she was responsible for the development and implementation of a strategic plan to improve records management across the London Museums Hub (Geffrye Museum, Horniman Museum, Museum of London and the London Transport Museum) which is based at the Museum of London. Prior to this, she was Project Manager at the International Records Management Trust (based in London) for which she made several trips to Africa in order to help advise senior government officials on records management. Sarah has served as Museum Archivist and Records Manager at the Peabody Museum of Archaeology and Ethnology (Harvard University) and the National Museum of the American Indian (Smithsonian Institution). She has a Masters degree in Library and Information Science from the University of Texas at Austin and a BA (Hons) in Anthropology from the University of British Columbia in Canada.

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Elizabeth Lomas is a qualified and UK registered archivist and records manager with over 15 years experience working in both the private and public sectors. Since 2007 she has been a researcher and tutor at Northumbria University, teaching in the field of records management and information rights law. Her research focuses on Web 2.0, pulling together ideas from across disciplines including

communication, psychology, and information management. She is the facilitator for the Continued Communication research project which consists of 80 co-researchers from across the World. In addition Elizabeth chairs the UK's Society of Archivists' Legislation and Standards Committee, and is a member of the UK Government's Works of Art Export Advisory Committee and the international ARMA Risk Committee. She has a BA (Hons) in History and a Masters degree in Archives and Records Management Studies, both from University College London.

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APPENDIX 2.19: WHOLE GROUP THIRD ACTION RESEARCH CYCLE: COMMUNICATION MEASURES SAMPLE

Measures template provided by Tom Gilb

1.	**Name**	Privacy
2.	**Type**	Objective
3.	**Version**	Draft
4.	**Author**	group
5.	**Approval Status**	[The name of the Committee etc approving goal to be added]
6.	**Owner**	Continued Communication Research group
7.	**Ambition Level**	The ability to ensure that all communications are viewed only by intended recipients and that those recipients also handle the information appropriately.
8.	**Scale**	For electronic records 100% of records can be delivered and tracked. For paper records their contents needs to be evaluated in order to determine appropriate transmission processes.
9.	**Past**	No restricted of confidential information falls into the wrong hands. 99% of other communications are delivered through the right channels to the intended recipients but it is understood that control beyond this point cannot be guaranteed.
10.	**Fail**	If restricted, confidential information or organisational information is not received by the intended recipients then the organisation could be severely compromised.
11.	**Goal**	Goal minimum – to set controls around restricted, confidential and organisationally sensitive materials, including personal information
12.	**Rationale**	If information is over controlled it may inhibit communication and therefore the emphasis must be on protecting really key information. When information is placed into a Web 2.0 domain then it should be understood that some of these controls do not exist.

APPENDIX 2.20: WHOLE GROUP FOURTH ACTION RESEARCH CYCLE: COMMUNICATION ARCHITECTURE TOOLKIT OVERVIEW

Communication Architecture Toolkit

Justify — Making the business case
- Communications overview - why a communications architecture
- Business opportunities (tangible & intangible) and risks
- CA change programme – indicative resource requirements
- Vision – high level scenario's /case studies

Plan — Preparation
- Channel mapping
- Business needs profiles and user profiles
- Risk assessment
- Current use (best practice) and benefits
- Enablers and barriers

Action — Governance and implementation
- Policies & guidelines
- Roles & responsibilities
- Aligning tools/channels with business needs and tasks
- Monitoring and measuring benefits

Support — Support
- Change management: training & support
- Links to other sources & tools
- What's new

Making the business case –
- Communications overview - why a communications architecture
- Business opportunities (tangible & intangible) and risks
- CA change programme – indicative resource requirements
- Vision ─ scenario's /case studies

Overview to be written

Case studies – High level will be delivered as part of the business case and the detail for the implementation

Preparation
•Channel mapping
•Business needs profiles and user profiles
•Risk assessment
•Current use (best practice) and benefits
•Enablers and barriers

Channel mapping

Business needs profiles and user profiles – to be developed

Risk assessments – in development b

Current use – building on survey data.

Best practice communication paper – to be developed?? This will be after CAT as next step

Governance and implementation
•Policies & guidelines
•Roles & responsibilities
•Aligning tools/channels with business needs and tasks
•Monitoring and measuring benefits

Policies – one very draft policy produced by the UK Group – it was felt that these needed to carry stronger communication messages – to discuss

Roles and responsibilities – paper drafted – needs to be developed

Communication mapper – tool in development.

Interpretative protocol – in development

Monitoring and measuring benefits – Tom Gilb and will check once we have all completed.

Case studies - All

Support
•Change management: training & support
•Links to other sources & tools
•Whats new

Tool protocols: Ning protocol developed, GoogleWave protocol in development

Film series: Where's my stuff! – first in a planned series of films produced –All to work on Effective communication script. Need to raise funding

Web site and Blog can provide resource to link to other tools

APPENDIX 2.21: WHOLE GROUP FOURTH ACTION
RESEARCH CYCLE: COMMUNICATION DIMENSIONS
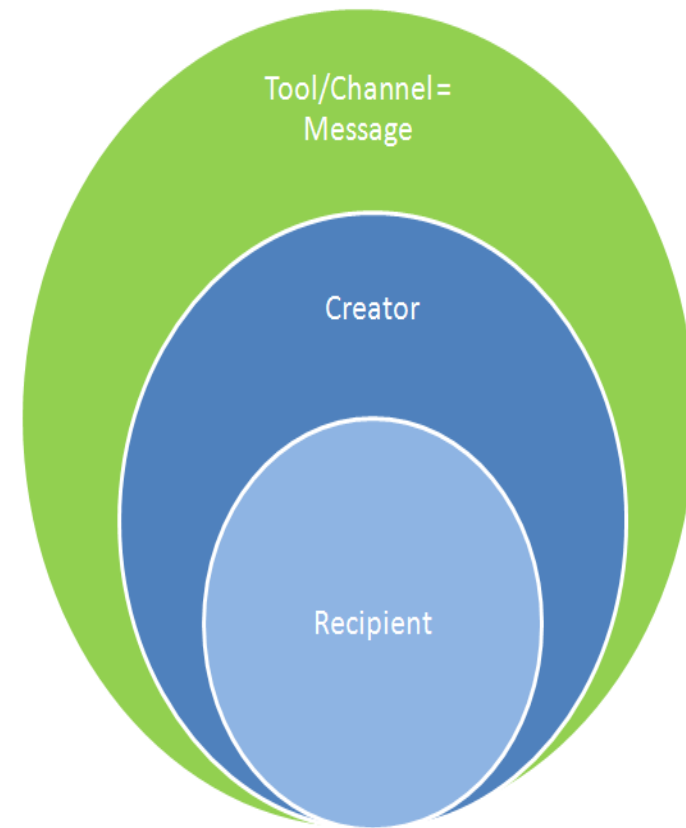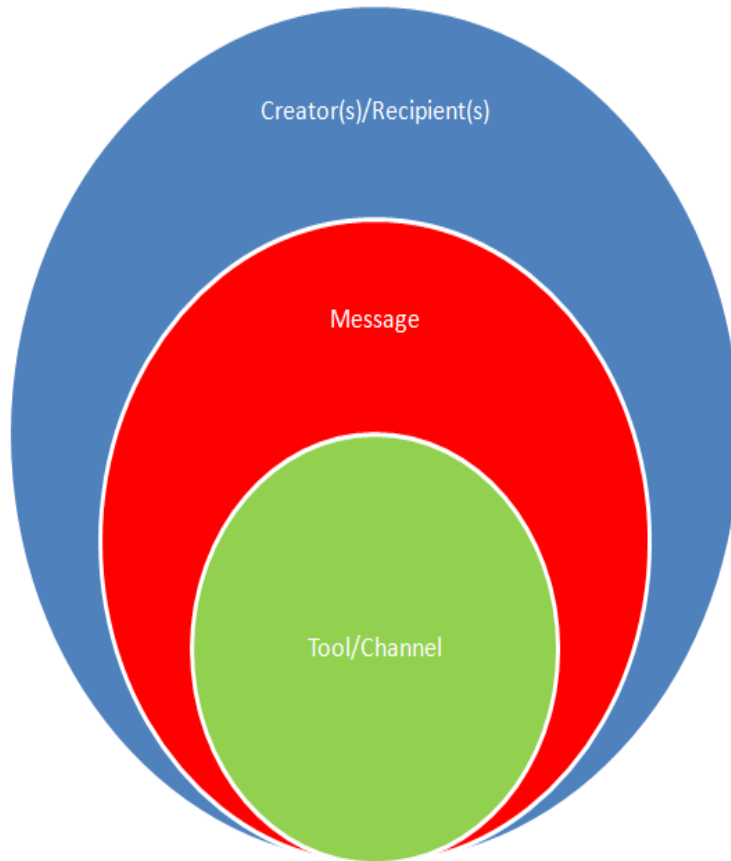
Communication structures

Communication support and management

In a free community the message is driven by the creator(s) and recipient(s) (including customers/public from outside an organisation) requirements with underpinning support from the CEO and CSWS (*computer supported cooperative work)* support staff: Human Resources, Knowledge Management, Records and Information Management, IT, Communication Managers, and specialists supporting the message purpose, e.g. Marketing etc.

Hierarchical Stuctures In a strict hierarchy the structures reverse. This may result in one profession dominating and undermining the support service.
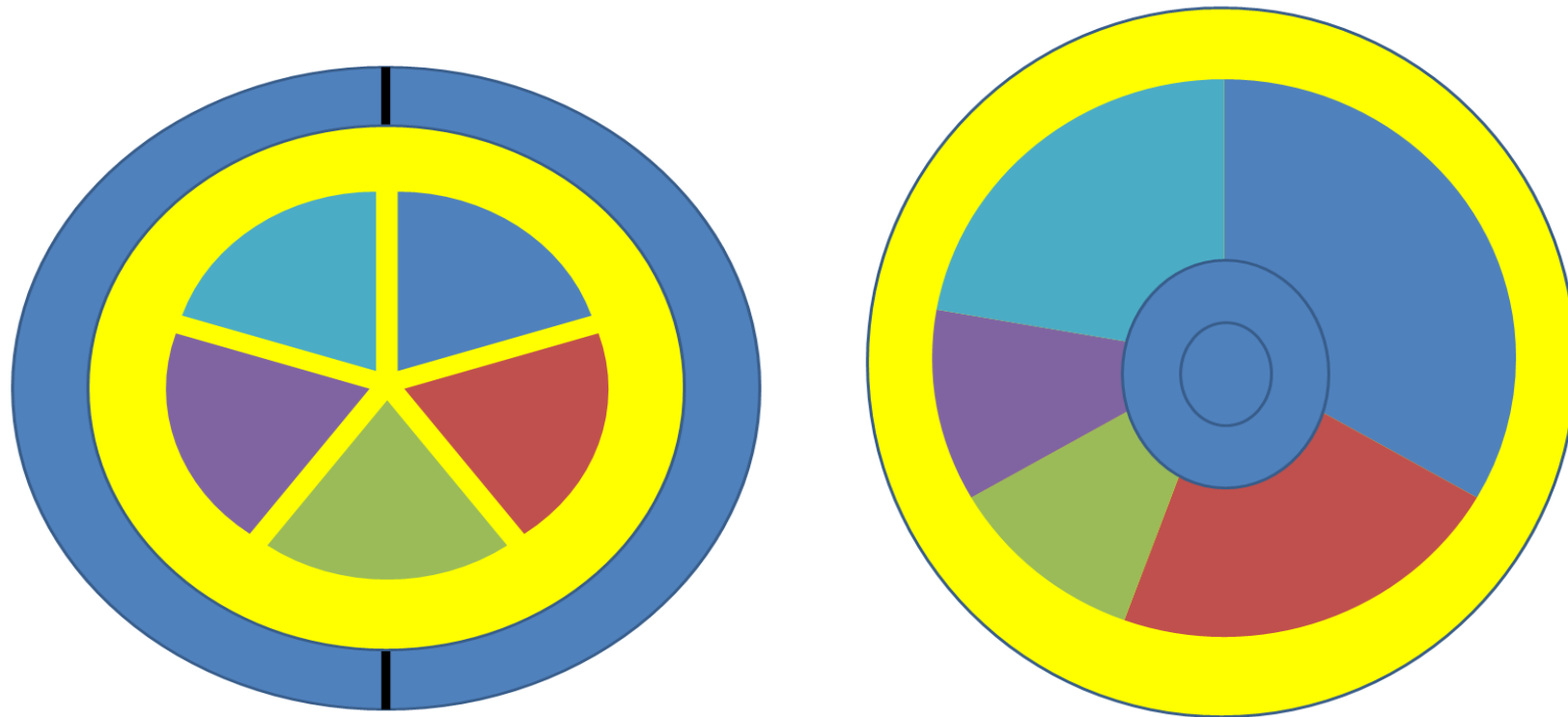
APPENDIX 2.22: WHOLE GROUP FOURTH ACTION RESEARCH CYCLE: COMMUNICATION POLICIES OVERVIEW

Communication policy support/enforcement

As far as possible individuals should be empowered to make the appropriate choice about where and how to communicate in support of organisational objectives.

- HR policies should dictate expectations for acceptable behaviour

- Communication and Information Management policies should clearly establish why there are any technical, operational or legal constraints on using certain communication channels. These should be delivered through risk policies and strategies that enable appropriate assessments based on positive and negative opportunities. For example EU legislation on protecting personal data prohibits certain data transfer to the US etc. However, most information is not personal data and in a World where increasingly engagement occurs in online collaborative tools then there are often very few reasons to ban tools entirely. However IT do need to assess technical risks such as malware dangers and it is to be noted that it may only be certain functions that need to communicate publicly beyond the organisation's walls. For many communications email and instant messaging will still be a primary communication tool.

- Records and Information Managers and Archivists should deliver strategies for longer term information access and preservation as well as deletion strategies.

- Business Continuity requirements must also be built into communication strategies.

- Training on Communication should be ideally delivered by professional communication experts with knowledge of the organisational context and requirements

SMEs

In a smaller organisation where the same support networks do not exist internally it is still important to have a communication policy and acceptable behaviour policies that set out for individuals the basis communication expectations. A small company may be destroyed by an inappropriate Facebook message or the failure to engage and publicize its work through a range of media.

Hierarchies

RASCI models work well in highly defined hierarchies. RASCI model is a methodology for clearly establishing roles and responsibilities, e.g. Governments. Within a UK Government context an example RASCI communication model might be as follows:

1. **Permanent Secretary (equivalent to a CEO):**
   Responsible- that is the person who is a communication owner
2. **Chief Information Officer:**
   Accountable: that is the person to whom "R" is Accountable and is the authority that approves to sign off on work before it is effective
3. **IT Director, HR Director, Records Manager, Senior Risk Officer, Training Director: -**
   Supportive: that is a person who provides resources or plays a supporting role in implementation
4. **Consultants:**
   Consulted: that is a person who provides information and/or expertise necessary to complete the project
5. **All:**
   Informed: that is a person who needs to be notified of results but need not necessarily be consulted

The RASCI model is primarily the cornerstone for devising an ideal communication plan during project implementation. The "Consulted" role signifies the two-way communication typically between "R" and "C". The "Informed" role signifies the one-way communication primarily from "R" to "A".

APPENDIX 2.23: WHOLE GROUP FOURTH ACTION RESEARCH CYCLE: BRANDING QUESTIONS

1. Who are we?

We are a diverse, multiskilled group of individuals assembled to participate in research on 21st Century records, information and communication management.
We are a collaborative of inter-disciplined persons interested in ensuring the continuation of effective communication in this ever-advancing technological world.

A group of cross-discipline, cross-sector individuals, with an interest in utilising our collective knowledge and skills in order to develop a deeper learning of some of the issues that individuals and organisations face in the present day when attempting to use tools in order to communicate. The group aims to develop tools that build on the learning we have undertaken, in order to help people and groups understand and make better decisions within this space.

An international multidisciplinary group of private individuals collaborating on research/actions to further understanding of organisational communications using Web 2.0 and beyond.

2. What do we believe in?

We believe in the freedoms and responsibilities of individuals working together in organisations and communicating for many different purposes in many different styles and media. We believe in the importance of the operational, legal and historical record, and in the flow of information from daily use to filing systems to archives.
Communication that is effective -i.e. it must be suitable for user needs and requirements, it must be compliant with information legislation and best practice.

In breaking down the barriers between disciplines in order to develop deeper understanding. We also believe in sharing our learning with anyone who would like to know, and to help us develop our understanding and our tools further.
Effective and efficient management of records and information (or communications)
Leveraging management and communications theory with records management to provide and explore tools to maximise organisational communication.

3. How are we different?

We are diverse, independent, gathered by one leader for a common purpose, but free to participate more or less and to diverge from the mainstream of the group. Voluntary.
We employ the expertise of a number of professions, with particular focus on the Records Management profession.
Purely voluntary, cross profession and based on action research
We are made up of a set of individuals who have varied knowledge and experience, and who work together purely for the advancement of knowledge and understanding.

Diverse in nationality, ethnicity and professional sectors.

4. How are we changing things?

We are producing thoughtful, peer-reviewed (peer-discussed and peer-revised) pragmatic paradigms for best practice in managing 21st Century communications. We are thinking about the digital world in its practical and historical context.

We are writing a best practice paper on organisations using Web 2.0 tools. We are making people aware of the tools they can use, and their effectiveness for conveying specific types of information.
By developing our understanding, then embedding this in tools, and/or sharing the knowledge with anyone who wants to know.
By showing fresh thinking and seeking solutions to the most important and cutting edge organizational problems
Providing practical tools to real world situations free of charge.

5. Why *should* we change things?

Things are changing anyway, and will continue to do so, faster and faster. We are changing concepts in Records Management, Information Management, and Organisational Communications Management to maintain the concepts of integrity, authenticity, and quality in the 21st Century.
There is no best practice on organisations using Web 2.0; due to this some organisations and individuals may be reluctant to make use of them and therefore not reap their benefits.
Information Security is becoming more important and this needs to tie in with the developments of technology.

Because things are going wrong which could benefit from the findings we discover.

To improve organizational effectiveness and efficiency
To help others take control of what can seem like exponential proliferation of communication options.

6. Where is our place in the world?

Everywhere: relevant to anyone who wishes to communicate, or to know what was communicated in the past (yesterday, …).
We sit at the boundary between individuals, organisations, society, communication, technology and research.
Cutting edge and international, but rooted in sound principles of archival/records management
We should be leading the discussion on how new communication tools are used, highlight their benefits and problems with particular reference to the many professions who might be involved (i.e. RM, IM, KM, ISM etc)

Applied research/science - the boundary between academia and not-for-profit organisations producing tools for global private and public sectors.

A. If you were on a protest march in the street to fight *against* something, what would you write on your banner?

Down with Confusion; Abandon Forgetfulness.

People against chaos and disorder
Effective communication/Protect our information

Organisations, don't just speak to IT when procuring tools, speak to the rest of the organisation, and see what research has been done!

Organisations, understand the implications of introducing new communication tools by observing and listening to your staff!

Down with ad hoc decision-making!

B. And if you were to flip this into a positive and fight *for* something, what would you write?

Clarity, Reality and Honesty. Remember yesterday.

Records management 2.0/we transformed the face (management) of RIM/communications

Strategy is the smart way forward!

C. What is the bigger role your brand can play in everyday life?

Networking, drawing in people from diverse functions and organisaitons and backgrounds.

A hub where anyone can go to use the tools that are produced, to speak to other people that might have similar problems, and to share and help develop knowledge they have gained.

D. What sort of "legacy" would you like to leave behind after 5 years on the brand?

A continuing tradition of action research in information management, and an evolving body of accepted good practice. Intelligible, useful advice.

[Additional comment 'Web 2.0 and beyond' might be a pithy slogan for the web site!]

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