"An organisation gets the intranet it deserves": institutionalisation as a process of interplay between technology and its organisational context of use

João M N de M Baptista
London School of Economics
Department of Management / Information Systems Group
Houghton Street, London WC2A 2AE

2008

Dissertation submitted in fulfilment of the requirements for the award of the degree of Doctor of Philosophy of the University of London

Declaration

I certify that the thesis I have presented for examination for the PhD degree of the University of London is solely my own work other than where I have clearly indicated that it is the work of others (in which case the extent of any work carried out jointly by me and any other person is clearly identified in it).

Abstract

This study contributes to the IS literature with a distinctive explanation of the process of institutionalisation of technology in organizations. The research analyses the role of micro level processes of interplay in embedding an intranet in the formal functioning of an organisation and in the habits and routines of its employees. Findings identify two types of processes of interplay underpinning this process of institutionalisation. The first operates at the level of *constitutive expectations* and refers to mutual changes to the governance, policy and control mechanisms which foster the perception that the intranet is part of the expected formal functioning of the organisation. The second operates at the level of *background expectations* and refers to mutual changes that make the intranet look more familiar, functional and easier to use, fostering its embedding in the routines and habits of the employees.

The study unravels processes of mutual transformation to an intranet and its hosting organisation, a bank in the UK, by following their evolution over a period of five years. It uses the single longitudinal case study research strategy and is informed by Markus (1983) to support the longitudinal reconstruction of the intranet in the bank. Institutional-based trust theory (Zucker 1986) is used to inform the interpretation of data. This theory is enhanced by the work of Schutz (1962) in developing the concept of *background expectations* and Garfinkel (1967) in developing the concept of *constitutive expectations.* The study aims to motivate more research on institutionalisation as a micro level process of ongoing interplay and gradual development of institutionalised behaviour.

Dedication

I dedicate this thesis to my children, Joana and Martim, who keep reminding me about the importance of being open to learn new aspects of what surrounds us – a vital skill for completing (and enjoying) this research.

Acknowledgements

The final version of this thesis could not have been planned. It was shaped through my readings and ongoing conversations with colleagues and friends. I no longer recall all the turning points but I do remember (and want to acknowledge) several key contributions.

A huge thank you to my wife, Ana, who made the whole experience more enjoyable and rewarding.

I am grateful to James Backhouse for believing in my capabilities and showing me important "tricks of the trade". I am also extremely grateful to Leslie Willcocks who accepted to read my thesis on a short notice and offered an important reality check when I most needed it. Chrisanthi Avgerou and Edgar Whitley also read earlier versions of this work and offered very useful feedback. Susan Scott, as PhD tutor, was very supportive and instrumental during some troubled times before completion. I also acknowledge the friendly support of Ian Angell, Steve Smithson and Jonathan Liebenau.

Several colleagues at WBS have also helped me immensely. Joe Nandhakumar read an earlier version of this thesis and made very insightful comments. Sue Newell stepped in at a critical time and helped me find a way forward and improve the standard of this research. Wendy Currie was always very supportive and willing to help. I also acknowledge the benefit of working with colleagues such as Harry Scarbrough, Julia Kotlarsky and Steve Corea.

I cannot thank enough Audrey Philbrooks, Intranet Manager at Alliance and Leicester, for providing access and ongoing support to core research material. Paul Miller, Chairman of the Intranet Benchmarking Forum, was instrumental in taking the project off the ground and has helped establish myself in the intranets space. I am also grateful to Simon Flemington from the Enterprise LSE for introducing me to Paul.

I would also like to acknowledge the financial support given by the Portuguese Fundacao para a Ciencia e Tecnologia and the European Union.

David Lucas greatly improved the readability of this document and I will not forget his willingness to help in very short notice and tight timescales. Thanks also to LSE's departmental staff, namely Sarah Emery and Cheryl Edwards for their continuous support.

I am also grateful to my parents for their life time support, special thanks to my mother who has worked so hard to provide me with a brighter future. Special thanks also to my friends Carol Hsu and Ross Jackson who convinced me that this dream was not beyond my reach. Thanks to my PhD colleagues namely, Jan Kietzmann, Maha Shaik and Riad Fawzi. Thanks also to my colleagues from the Intranet Benchmarking Forum, namely Angela Pohl, Helen Day, Sam Marshal, William Hudson and Louise Fergusson. Thanks to my other friends not named here who make my life more interesting and fun.

Table of contents

List of figures and tables

Chapter 1
Introduction

Numerous organisations rely on intranets to support internal communication and collaboration. Intranets are also becoming the backbone for internal business processes and, in some cases, part of business critical infrastructure and disaster recovery planning. Intranets have also been used to support organisational change, redundancy programmes, mergers and acquisitions, knowledge management and cost reductions, among other important programmes of organisational trasformation. Despite the interest in these topics shown by previous studies, the social processes underpinning the evolution of intranets in organisations are not well understood. More specifically, the processes by which intranets become embedded in work practices and employee routines have hardly been analysed. The aim of this study is to investigate these longitudinal processes of interplay and how they contribute to the institutionalisation of technology in organisations.

This first chapter explains the motivation and justifies this research. It also provides a brief overview of the whole study. It starts by defining the nature of intranets and their impact on the functioning of the organisation. It then discusses the social nature of intranets and their longitudinal interplay with the social fabric of the hosting organisation. The chapter then reviews the whole thesis, briefly describing the approach, structure and key contributions.

1.1. Nature of intranets in organisations

The importance and impact of Information and Communication Technologies (ICT) in business has been well researched, for example with regards to reducing transaction costs and shaping industries (Brynjolfsson and Malone, 1994, Malone *et al.*, 1987). However, the impact of ICT inside organisations is less understood, namely their interplay with organisational culture and their impact on employee perception and behaviour. Some studies indicate that, compared with other types of ICT, intranet technologies may have the greatest impact on the functioning of organisations. Jacko et al. (2002) report on a major study on intranets and organisational learning and conclude that:

> among the various types of information technologies used within organisations, intranets are poised to make the largest impact (Jacko et al., 2002, p. 94).

The importance of intranet technology is undoubtedly related to the growing use of this technology to support business processes and as the main channel of communication inside organisations. Intranets use web technology to disseminate information instantly across the organisation (Holtz, 2000) enabling *"the delivery of the right information to the right people at the right time"* (Curry and Stancich, 2000, p. 263). Indeed, intranets are often conceived as the use of internet technology inside an organisation, as defined by Bansler *et al.* (2000, p. 2):

> We define an intranet in the following way: (1) an intranet is a network based on the Internet Protocol TCP/IP. It is thus capable of running common internet applications (2) it is a private network, owned by the organisation and is only accessible by permission. (3) the primary intended use is for communication and collaboration among organisational members

Using similar technology to the internet, intranets evolve organically inside organisations making it difficult to establish clear boundaries between intranet systems and other types of systems inside and outside the organisation. Intranets may include email (Holtz, 2000), static content, workflow management systems, collaborative groupware tools and databases (Lamb and Davidson, 2005). They may also include today's social computing functionality such as wikis and blogs (Fichter, 2005). However, some authors exclude applications such as email and discussion groups unless they are accessible through the web-based interface of the intranet (Stenmark, 2002). Intranets are also sometimes highly integrated with other transactional systems in the organisation (Dias, 2001, McFarland, 2001, Watson and Fenner, 2000). In such cases, intranets are conceived as "portals" or gateways to organisational resources and personalised information (Dias, 2001). The boundaries of the intranet with external websites and extranets are also difficult to establish because, despite being targeted at a different audience, they are based on the same technology (Jacko *et al.*, 2002).

Intranet technology has not changed considerably since its appearance in organisations in the early 90s. The first intranets were not more than a collection of html[1] sites developed by employees keen to use internet technology inside organisations to share information across organisational functions. Initially intranets served mainly to publish information, replacing internal magazines and paper-based communication. As the use of intranets gained pace in organisations, a related industry developed. Businesses emerged offering out-of-the-box intranet solutions and associated consultancy services. Rapidly, large software firms such as Microsoft, tapped into this new industry and begun extending the functionality and forms of use into new territories. More packaged solutions from software vendors begun to emerge offering integrated solutions, which could more easily be rolled out across various business functions. Packaged systems such as *Content Management Systems* became popular because of their *templated* approach to publishing content and the ability to enforce standards. Recently, this technology has expanded into new areas to combine functions normally performed by other systems such as Document Management Systems and Knowledge Management Systems. Intranets have also moved towards greater integration with transactional systems supporting internal business processes such as those required by the HR and finance functions. Intranets are now more complex than ever, because of the volume of content handled and the technical complexity involved in integrating the intranet with other systems.

However, intranets, according to Newell *et al.* (2000), are much more than just the web technology used to support the publishing of information and

---

[1] Html is a coding language used to programme webpages

business processes (*infrastructure*). They also include the formal rules that regulate its use (*infostructure*) and the values and beliefs underpinning the text, images and other content (*infoculture*). The literature shows, however, a predominant focus on technical aspects of intranets (infrastructure) which, according to some authors, provides a simplistic and myopic view of the whole system. These authors also say that a focus on the technical capabilities of the intranet may be dangerous if it leads to unnecessary automation of organisational processes and subsequent loss of personal interaction (Telleen, 1997a). Other authors also argue that an excessive focus on the technology may create unrealistic expectations about how the technology will be used in practice. For example, it may create false expectations that implementing an intranet will automatically lead to more collaboration and sharing of information across the organisation. This is an unrealistic expectation because this technology is not inherently collaborative and the sharing of information will only occur if the culture of the organisation promotes and supports such behaviour (Ruppel and Harrington, 2001). Intranets should therefore be conceived instead as inherently social and embedded in the social fabric of their hosting organisations (Avgerou, 2000, Avgerou, 2001).

1.2. Impacts and importance of intranets in organisations

Intranets are now ubiquitous in organisations and it is hard to imagine how large corporates would operate without an intranet. It is therefore important to understand how they evolve, interplay and impact on organisations. Bansler *et al.* (2000, p. 5) believe that intranets radically change work practices and management's perception of technology in general. They say that intranets:

> dramatically alter how people in organisations interact and communicate, how managers think about IT, and how organisations design and manage their information systems.

However, these changes in perception and behaviour only become apparent in the long term, as the intranet gradually evolves to become more embedded in the work practices and routines of the employees. Initially, intranets are often implemented to deliver more specific and tangible business objectives such as reducing printing costs (Denton, 2003b), increasing efficiency and effectiveness (Curry and Stancich, 2000, p.256) and improving productivity by unifying islands of information (Scheepers and Damsgaard, 1997). Other goals associated with intranet implementation include: increasing team work (Peter and Denton, 2007), improving organisational performance and innovation (Andersen, 2001), better decision making (Ward, 2002) and accuracy of information (Lai, 2001, Wright, 2001) and enabling better communication and sharing of information (Curry and Stancich, 2000, Leow and Maclennan, 2000, Ward, 2002, Wright, 2001). Jacoby and Luqi (2007) propose a model to measure the more tangible benefits for the organisation.

However, as the intranet becomes more embedded in work practices and more intensively used by employees, other impacts become more visible. For example, the impact on organisational bonding (Lai, 2001), sense of belonging (Denton, 2003a), employee loyalty (Murgolo-Poore *et al.*, 2003), work satisfaction (Duane and Finnegan, 2003) and on fostering a culture of transparency (Murgolo-Poore et al., 2002). Some authors consider the impact of intranets on organisations to be even more fundamental and argue that intranets cause a radically change to the way employees think and interact as a group. Steven Telleen (1997b), who claims to have coined the term "IntraNet" in 1994, argues that intranets trigger a paradigm shift similar to that described by Thomas Kuhn (1996). He describes five fundamental changes to organisations: the *culture* changes from one where hoarding information is seen as power to one where sharing information becomes the new way of gaining power; *management* changes to a more distributed decision making process as opposed to the traditional top-down centralised model; the business *focus* changes from the optimisation of processes to a more flexible coordination of the different organisational units; *coordination* becomes more flexible and distributed; and *communication* shifts from a user-push model, where information is cascaded down the hierarchy, to a user-pull model, where information is made available for users to find and retrieve.

The impacts and changes described above are, however, mostly unpredictable and cannot normally be planned or managed. This is corroborated by studies that report unforeseen problems and consequences with the implementation of intranets. They describe the reality of intranet implementation as being frustrating, messy and full of problems. Some authors say that intranets may actually cause more problems than they solve, for example by amplifying pre-existing organisational differences and creating "electronic fences" (Newell *et al.*, 2001). Swan et al. (1999) also point out that intranets can fuel internal conflict between departments. They argue that *"misused, an intranet can intensify mistrust, increase misinformation and exacerbate turf wars"*. Other problems and unforeseen consequences include the uncontrolled spread of mini-intranets and overflow of information (Curry and Stancich, 2000, Goles and Hirschheim, 1997), because intranets make it all too easy to accumulate information in digital format (Bansler *et al.*, 2000, Chin, 2005). Difficulties in implementing intranets are also reported by Banck and Nystrom (2005) who found that, over time, only one intranet in a group of five had an established group of users; the other four had only very limited functionality and a few regular users.

1.3. Intranets evolve and interplay with organisations

The literature gives several accounts of how intranets change their hosting organisations (planned and unplanned). The pervasive nature of intranets - and their gradual adoption to support additional business functions - impact on employee behaviour and work practices. Thus, intranets are shaped by and shape the organisational context in which they emerge and evolve. Understanding the ongoing mutual changes between the intranet as a technology and its organisational context of use is an important topic for research.

Within the wider context of the IS literature, Lee (1999) describes the mutual transformation between technology and its social context:

> An information system and its organisational context each have transformation effects on the other. They are more like the reagents that react to and change each other's properties in a chemical compound than the inert elements that retain their respective properties in a chemical mixture

From this perspective, the two elements penetrate into and radically transform each other but nevertheless continue to preserve a distinct character and separate identities. Orlikowski, extends Lee's perspective and argues that the interplay forms a new identity where the two elements become more like one - what she calls *sociomateriality* (Orlikowski, 2007). From this perspective, technology is already social when it is first introduced in the organisation because it cannot avoid reflecting pre-existing socio-cultural interests and politically influenced distribution of resources. As argued by Orlikowski:

> technology embodies and hence is an instantiation of some of the rules and resources constituting the structure of an organisation (Orlikowski, 1992, p. 405)

Intranets are social because they evolve to reflect the changing interests of the organisation through the ongoing interplay between the technology and the work practices associated with its use. Intranets emerge and evolve to become what they are, without a strong, preconceived plan of development. Changes are usually improvised small additions, rather than part of a "grand plan" (Ciborra and Hanseth, 1998). This ongoing interplay and transformation in line with organisational needs is also conceived as *drifting* (Ciborra, 2000, Ciborra and Jelassi, 1994) and is enabled by the inherent flexibility of technology to quickly adapt to changes in the environment. The same concept is also often described as *interpretive flexibility* (Bjiker *et al.*, 1987, Orlikowski, 1992).

The drift and ongoing interplay and tension between the technical and the social is important in order for the technology to be absorbed and accepted by the organisation, as suggested by Orlikowski *et al.* (1995, p.424). They say:

> This open-endedness offers benefits of flexibility but also creates the possibility that - without adaptation of the technology to the context and vice versa - the technology

> will not reflect local conditions or communication norms and hence be under-utilized or inappropriately utilized.

Intranets are therefore the result of the unique interplay between the technology and the social fabric of each organisation (Newell *et al.*, 2000). For example, Cecez-Kecmanovic *et al.* (1999, p. 22) explain the different characteristics of each intranet through their unique historic evolution in the organisation. Eventually, this ongoing interplay and constant adaptation between the technical and the social will lead to the embedding and institutionalisation of the intranet in the organisation. Damsgaard and Scheepers (2000, p. 142) say that the intranet at this stage:

> corresponds to Heidegger's term 'ready-at-hand', in which the technology disappears and becomes a natural 'extension' of the users. Users do not think about the technology itself anymore.

Gradually, intranets become so deeply embedded in business processes and work practices, that they almost become "forgotten" or invisible to their organisational stakeholders. As described by Silva and Backhouse (1997, p. 390), information systems at this stage:

> are no longer considered as innovations but as unnoticed and unremarkable tools that people take for granted in doing their work. Institutionalized information systems are noticed only when they break down.

There is, however, a lack of knowledge of the organisational processes which underpin the institutionalisation of intranets in organisations, as stated by Bansler *et al.* (2000, p. 5):

> the nature of these changes, the organisational and managerial challenges involved, and how organisations cope with them in practice, are not yet well understood.

This study addresses this gap in the literature and aims to improve understanding of how the interplay and the ongoing processes of mutual transformation may lead to the institutionalisation of technology in an organisation.

The study adopts a socio-technical stance (Lamb, 1999, Lamb and Kling, 2003) and follows an explorative approach (Ruppel and Harrington, 2001) to study the longitudinal evolution of an intranet in an organisation because *"only longitudinal studies could reveal the effectiveness of a set of chosen tactics in the long term"* (Damsgaard and Scheepers, 1999).

The first three sections above set the scene for this study by showing the significance of intranets to organisations and position the study in terms of the particular aspect of the literature it seeks to address. The next sections review the whole study and summarise this thesis.

1.4. Overview of the thesis

The following section describes the purpose and structure of this study. It also uncovers the research questions and reviews the main contributions.

Purpose statement

The purpose statement below uses a template by Creswell (1998) to summarise the research:

> This study is a single longitudinal case study following the evolution of an intranet in a UK bank over a five-year period in order to understand the process of institutionalisation and embedding of the intranet in business processes and work practices. The study uses sequential exploratory research design (Creswell, 2003) to collect qualitative data from interviews, focus groups and documents, supported by quantitative data from a large employee survey. Zucker's (1986) institutional-based trust theory is used as the main theoretical lens to explain the process of institutionalisation of the intranet in the bank based on two concepts - *background expectations* (embedding of

intranet in routines) and *constitutive expectations* (the intranet is part of the expected functioning of the organisation).

Gap in the literature

The literature reports on the importance of intranets to organisations and explains how they interplay with their contexts of use. The literature also refers that intranets evolve to become embedded and institutionalised in work practices to the point where they are unnoticed and used unreflectively by organisational stakeholders. There is, however, little understanding of the longitudinal processes underpinning the institutionalisation of intranets in organisations.

Research questions

The following research questions are designed to address the gap in the literature determined above.

Main research question

- *How do intranets become institutionalised in organisations?*

Sub-questions:

- *How can the institutionalisation of intranets in organisations be defined?*
- *What processes underpin the institutionalisation of intranets in organisations?*
- *What are the key implications of institutionalisation to organisations?*

Methods

This study follows other interpretive research studies on intranets (Lamb, 2002, Newell *et al.*, 2001, Newell *et al.*, 2000, Newell and Swan, 1999, Newell and Swan, 2000). The study uses a single longitudinal in-depth case study research strategy as described by Yin (1994). The empirical setting chosen is a bank in the UK, Alliance & Leicester.

Data collection and analysis follows Creswell's (2003) sequential exploratory research design, using quantitative data to support interpretation of qualitative findings. The strategy for collecting data and reconstructing the historical evolution of the intranet over the five-year period emulates the seminal study of Markus (1983). In her study, Markus uses organisational documentation and interviews to reconstruct the history of an information system in a large US manufacturing firm. She triangulates data to understand the evolution of feelings among users and other stakeholders during the implementation of this new system and studies the possible reasons for their resistance to change. This research adopts the same technique to examine the historical evolution of the intranet in the bank in the UK from late 1999 to 2005. The study started in June 2004 and the researcher had unrestricted access to data. Analysis of events prior to this date was based on documentation (including management reports, user testing reports, computer logs, intranet backups, etc) and recollection of events through interviews (users and managers). Analysis of events after June 2004 relies on personal observations, interviews, focus groups and a large employee survey conducted in April 2005.

Theoretical approach

This study focuses on institutionalisation at the level of the organisation, unravelling processes of interplay between the technology and the organisation underpinning the formation of patterns of behaviour and the development of deep expectations about the functioning of systems – what Zucker (1987, p. 444) calls processes of *generation*. This focus at the organisational level is distinct from other studies of institutionalisation, which focus more on macro level effects related to the copying and adoption of practices across organisations or industries – what Zucker calls processes of *reproduction*.

Zucker describes institutionalisation as the development of a set of shared expectations (Zucker, 1986, p. 54) and a process by which behaviour or systems become recognised as:

> (a) a rule-like, social fact quality of an organised pattern of action (exterior); and (b) an embedding in formal structures, such as formal aspects of organisation that are not tied to particular actors or situations (nonpersonal/objective). Zucker's (1977, p.728)

From this perspective, the institutionalisation of intranets in organisations is defined as the moment in time when the intranet has become part of the expected formal functioning of the organisation (*constitutive expectations*) and embedded in employee work routines and social behaviour (*background expectations*). These two concepts can be better understood by exploring the work of Schutz (1962), which further develops the concept of *background expectations* and the work of Garfinkel (1967), which extends the concept of *constitutive expectations.*

Main contributions and key findings

The study makes a key contribution to theory by using Zucker's work to explain institutionalisation as a process of *generation* inside organisations. Institutionalisation is seen as a process of gradual habitualisation and familiarisation with the technology, which over time becomes taken for granted (*background expectations*) and part of the expected formal functioning of the organisation (*constitutive expectations*).

The study identifies specific process of interplay and mutual transformation between the technology and the organisation, responsible for the development of constitutive and background expectations. Five key processes of interplay are found to drive the development of *constitutive expectations*: 1) governance, 2) controls, 3) senior sponsorship, 4) sense of purpose and 5) awareness of benefits. In addition, five processes of interplay are found to drive the development of *background expectations*: 1) sense of familiarity; 2) routinisation of work; 3) understanding usefulness; 4) preference; 5) reflecting changes in the organisation.

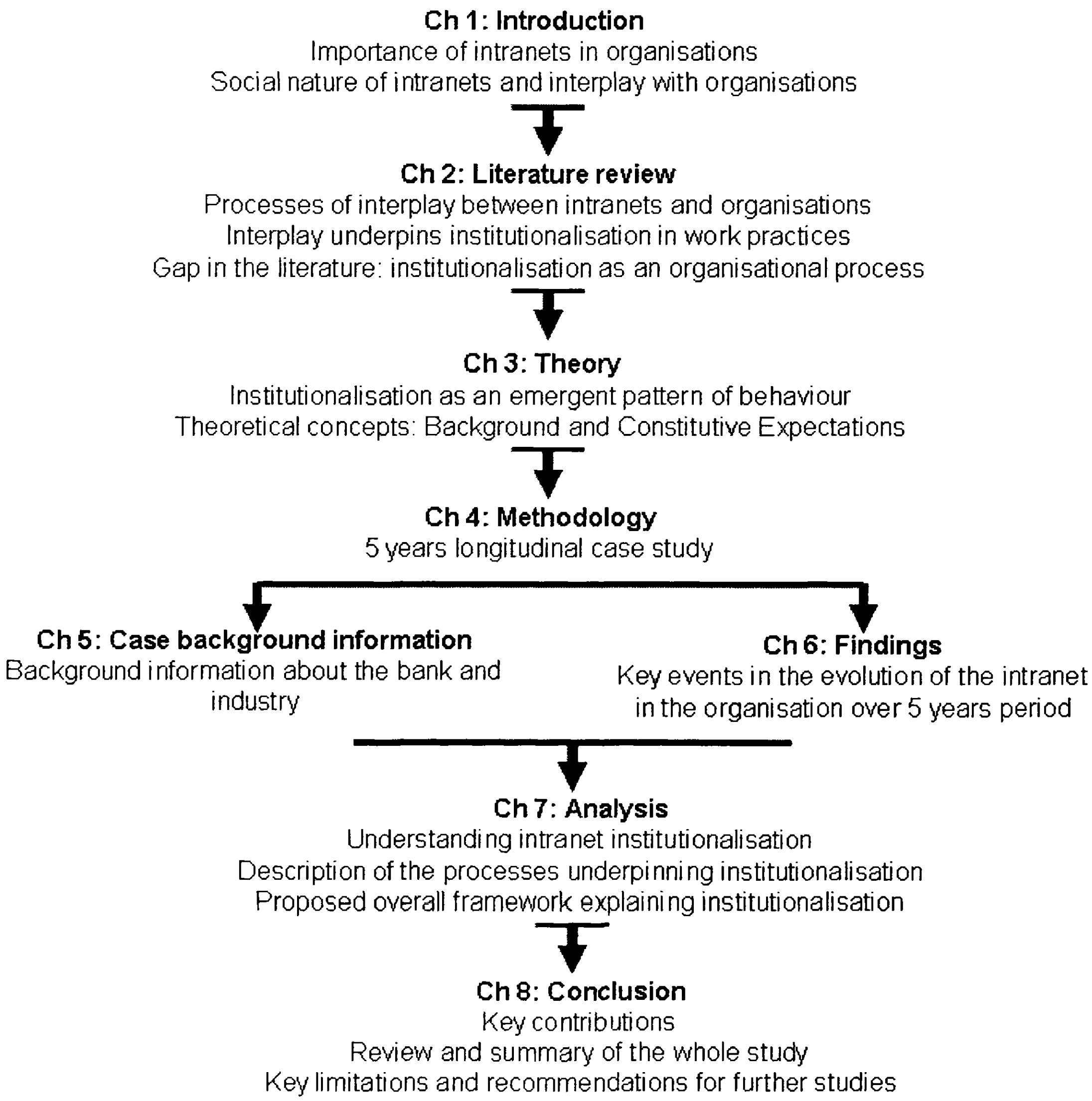
The study finds that institutionalisation is not a uniform process across the organisation and that different social groups follow different patterns in embedding the technology in their routines and work practices. Another interesting finding is the paradoxical effect of institutionalisation on the collective awareness of the strategic significance of the intranet to the business. Data shows that stakeholders became less aware of the significance of the intranet to the organisation as it became more institutionalised, with obvious consequences for risk management.

The study analyses and develops a theoretical framework to explain the processes underpinning the institutionalisation of an intranet in an organisation. This focus on the process of institutionalisation contributes to the literature, which has so far mainly addressed the effects of this process and characteristics of systems that have become institutionalised. This contribution is significant because there is a lack of studies analysing the longitudinal effects of institutionalisation and the organisational processes underpinning this phenomenon. The theoretical framework in this study provides a viable conceptualisation of these processes.

The detailed and specific account of the evolution of the intranet in the bank also contributes to the literature on intranets, which, so far, lacks empirical studies reporting the long term changing nature of intranets in organisations. This longitudinal approach contributes to the literature on research methodologies by using Creswell's (2003, p. 215) Sequential Exploratory Research Design and following the approach of Markus (1983) to reconstruct the historical evolution of the intranet in the bank over a period of five years. The longitudinal approach taken in this study aims to inspire further studies on the ongoing interplay between technology and organisational work practices.

Structure of the thesis

The following diagram and subsequent short paragraphs summarise the structure of this thesis chapter by chapter.



Chapter 1 *justifies and introduces* this research. It describes the nature and growing importance of intranets in organisations and explains the focus of this study on the processes of interplay underpinning the institutionalisation of technology in organisations. The chapter also reviews and summarises the whole study.

Chapter 2 *reviews the literature* on intranets describing their ambivalent and reflexive nature as they evolve in organisations. The chapter then focuses on the processes of mutual transformation between the intranet and the organisational practices associated with its use. Understanding the impact of these processes of interplay in the institutionalisation process is identified as a gap in the literature and the focus of this research. The research questions are then set to address this gap in the literature.

Chapter 3 describes the *theoretical framework* adopted in this study. It reviews alternative theoretical approaches to investigate and answer the research questions defined in chapter 2. It then justifies the use of Zucker's theoretical conceptualisation of institutionalisation as the main lens adopted in this study. The chapter then develops two key theoretical concepts based on Zucker's institutional-based trust theory (Zucker, 1986) to explain the institutionalisation of technology in organisations. The chapter further explores these two concepts by revisiting the work of Schutz (1962) and Garfinkel (1967) as the original authors used by Zucker to develop this theory. The chapter ends by explaining how these theoretical concepts were used during data collection and analysis.

Chapter 4 describes the research *methodology* adopted in this study. It reviews the interpretive tradition and describes the single longitudinal case study research strategy followed in this study. It then describes Creswell's (2003) sequential exploratory research design for collecting and analysing qualitative data from interviews and documents, as well as quantitative data from an employee survey. The chapter also reviews the various stages of the hermeneutic analysis followed in this study.

Chapter 5 presents *background* and contextual information to the UK bank chosen as the empirical setting for this case study. It also describes the market positioning, culture and functioning of the bank's intranet.

Chapter 6 sets out the *findings* of this study by identifying key stages in the evolution of the intranet between 1999 and 2005. Four periods are analysed and key events in these periods described.

Chapter 7 *analyses* the data informed by the chosen theoretical framework to answers the chosen research questions. Findings highlight specific processes of interplay between the technology and the organisation, responsible for the development of constitutive and background expectations. Analysis of the data also shows that the process of institutionalisation is not uniform across social groups in the organisation and that the collective awareness of the technology declines as the intranet becomes more embedded in the organisation.

Chapter 8 *concludes* the study, reviewing all chapters and describing key contributions and limitations of this study. It also proposes areas for future research.

1.5. Summary of chapter

This chapter shows the importance of intranets to organisations and the need to understand how they evolve and interplay with the organisational context that they belong to. The chapter also reviews the whole study and describes the structure of this thesis.

1.5.1. Main topics covered in this chapter

Social nature of intranets: the concept of intranets refers to the use of web technology inside organisations to support communication, collaboration and business processes. This concept includes not just the technology that enables the publishing of information and applications (*infrastructure*), but also the rules that govern the use of those tools and content (*infostructure*) and the values and beliefs underpinning the images, text and other content on the intranet (*infoculture*).

Intranets are important to organisations: intranets are increasingly used to support communication and collaboration in organisations. They impact deeply on employee perception and behaviour and have been associated with important aspects of organisational life, such as quality of decision making, feeling of empowerment, sense of belonging, learning and organisational bonding.

Intranets evolve and interplay with their hosting organisations: intranets interplay with the social environment of the organisations they belong to. Thus, to understand intranets it is important to chart their evolution and impacts over time. A longitudinal approach is required to observe the complex social processes underpinning the mutual transformation of intranets as a technology and the social fabric of their hosting organisation.

Overall approach and logic of this study: the study is a five-year longitudinal qualitative case study aiming to explain processes of institutionalisation of an intranet in a bank in the UK. The study explores processes of interplay between the technology and the organisation in order to explain the development of patterns of behaviour and deep expectations about the functioning of the technology. This distinctive approach to institutionalisation as a process of *generation,* instead of a process of *reproduction*, fills a gap in the literature and contributes to the growing literature on institutionalisation as a process of gradual familiarisation and embedding of technology in the expected formal functioning of the organisation.

1.5.2. Linking with the rest of the thesis

This chapter justifies the research and serves as background for chapter 2. It also summarises all the chapters and key elements of the study.

Chapter 2

Literature review

This chapter discusses the inherent properties of intranet systems fostering the interplay with their organisational context of use. It argues that the ambivalent and adaptive nature of intranets allows the ongoing shaping and reshaping of both the technology and the working practices associated with their use. The chapter also argues that this interplay underpins the embedding of the intranet in the functioning of the organisation and its institutionalisation in the routine working practices of employees. The chapter aims to prepare and develop understanding of the evolving nature of intranets and how they become embedded in the social fabric of organisations - themes later discussed when presenting findings and analysis in chapters 6 and 7.

The literature reviewed in this chapter shows that since the first studies published in the early 1990s, there has been a growing understanding of the role and impact of intranets in organisations. While early literature in this field focused on the expected benefits and functioning of this technology; more recent publications discuss the impacts in the routines and working habits of the employees. This more recent body of literature shows that this technology is highly malleable and that it is able to shape and be shaped by its organisational context of use. Recently, several studies have shown that intranets evolve to become deeply embedded in the functioning of organisation through changes in corporate policies, roles and responsibilities and overall greater integration with business processes. However some studies have also found that intranets can actually reinforce pre-existing cultural traits instead of driving new organisational change, as suggested by earlier studies in the 1990s.

This chapter begins by discussing the ambivalent nature of intranets in organisations and how they become adopted for different purposes depending on the specific needs of each organisation. This theme continues in the second part of the chapter, where the focus is on the development and management of intranets and their flexible and adaptive nature in organisations. The chapter then proceeds to describe two processes of interplay between the technology and the organisation. The first process describes the way in which intranets initially reflect and are shaped by the values and procedures established in the organisation; the second process refers to the modifying effect that intranets then have on organisational processes and employee behaviour. This interplay underpins the institutionalisation and embedding of the intranet in the business processes and social fabric of the organisation. The chapter then identifies a gap in the literature in IS in understanding this type of institutionalisation as a micro level process of generation of institutionalised behaviour rather then the more established view of institutionalisation as a process of contextual reproduction of social structure. The chapter also presents the research questions through which the study will attempt to address this gap. Finally, a summary of the whole chapter is provided.

2.1. The ambivalent nature of intranets in organisations

Despite the widespread adoption of intranet technology and the fact that the basic technology has not changed considerably since its inception, it is still very difficult to define its role in organisations. Intranets are adopted for many different purposes depending on the needs of the various departments and social groups within an organisation. Unlike other types of technologies such as ERP or CRM, intranet technology has no inherent business functionality. Its use only becomes clear when it is adopted and shaped for a specific function in response to an organisational need. Because of this unspecified nature of intranet systems and their high degree of flexibility, it is difficult for stakeholders to clearly define their function inside the organisation.

Clarke and Preece (2005, p. 151) highlight two difficulties in gaining an holistic perspective of the role of the intranet in the organisation: 1) users of particular functions may define the intranet in terms of those functions only; and 2) those involved in the central development of the intranet may see it as embracing too many functions and purposes to have a clearly-defined scope. Clarke and Preece comment:

> the more people we interviewed, the more elusive this technological/organisational configuration became, and the more indeterminate the organisational 'implications' and consequences.

The literature confirms this ambivalent nature of intranets in organisations by characterising them as an open-ended technology which, unlike more traditional intra-organisational technologies (such as ERPs), serves no specific or well-defined business function (Damsgaard and Scheepers, 1999). Intranets are considered open ended because they have the potential to quickly respond and be shaped by the ongoing needs of their community of users (Newell *et al.*, 2001, Newell *et al.*, 2000).

Damsgaard and Scheepers (1999), describe, for example, five different modes of use of intranets in organisations: 1) for *publishing*, the intranet is used to publish information, such as newsletters and corporate statements; 2) for *transacting,* the intranet is used as a vehicle for conducting internal business processes such as HR; 3) for *interacting,* the intranet enables groups and individuals in the organisation to communicate and work with each other; 4) for *searching*, the intranet is used to search for different kinds of information; and 5) for *recording*, the intranet is used to organise and record the collected knowledge in an organisation, such as routines, processes and frequently asked questions.

One widely held view of intranets in the literature is as a system for managing knowledge in organisations. Authors from this strand of literature argue that intranets support knowledge management because they help to codify, store and share knowledge across organisations. Alavi and Leidner (2001, p. 117) argue that intranets stimulate the conversion of explicit knowledge to tacit knowledge in organisations:

> Intranets can support individual learning (conversion of explicit knowledge to personal tacit knowledge) through provision of capabilities such as computer simulation (to support learning-by-doing) and smart software tutors.

Intranets also support knowledge sharing by enabling the distribution of up-to-date information to all employees through various forms: metaphors, analogies, prototypes, discussion threads, debates, video clips and databases (Scott, 1998). Ruppel and Harrington (2001) posit that intranets support the sharing of knowledge by compressing time and space - allowing access to information regardless of location or time of publication.

Knowledge management and information sharing is also often used to justify investment in intranet systems. For example, the UK Government has recently invested £60m in an intranet system to support knowledge sharing and to link 150 government departments. The GSI (Government Secure Intranet) was designed to:

> offer a technical platform for more joined-up government, allowing users to share data with any other organisations in the GSI community via its peer-to-peer infrastructure. (Shifrin, 2005).

However, Damsgaard and Scheepers (2001), point out that there are few documented examples of successful use of intranets to support knowledge management, and that some available research studies report rather discouraging findings. Concomitantly, Swan *et al.* (1999) find that an intranet studied actually *"reinforced existing divisions with electronic fences rather than break down barriers as had been envisaged"*. Gee-Woo et al. (2005) also support this view and question the ability of intranets to support knowledge sharing without strong organisational and social support. Gee-Woo says that:

> effective knowledge sharing cannot be forced or mandated. Firms desiring to institutionalize knowledge-sharing behaviours must foster facilitative work contexts

Another view of intranets in the literature is as *glueware* or *middleware,* with the potential to interconnect different systems and interlink protocols and applications (Lyytinen *et al.*, 1998). Jacko *et al.* (2002) describe intranets as a medium for linking disperse systems in the organisation that would otherwise be incompatible due to different technological platforms. By supporting open standards and cross-platform capability, intranets have a competitive advantage over other intra-organisational proprietary solutions such as Lotus Notes. Clarke and Preece (2005) go further to say that, unlike other IT systems, intranets unify and integrate existing technologies, providing legacy systems with a new graphical interface. Bansler *et al.,* (2000) describe intranets as the "great unifier" and as a multi-purpose environment offering a seamless way to integrate text, graphics, sound and video.

Intranets are also often portrayed in the literature as systems to support fast and reliable access to relevant information, enhance communication and enable collaborative work across geographical boundaries. Goles and Hirschheim (1997), for example, see the intranet as a global communication medium within the corporate environment and Karlsberg *et al* (2003) define the intranet as a

> shared information-space that supports sharing of information throughout the organisation among members of a closed system.

Intranets support communication because they *integrate* information - by collecting it from across the organisation and storing it in a single place . They also *distribute* information - by making it widely available for all users regardless of location, time of access or position within the organisation.

2.2. Reflexivity in developing intranets in organisations

Intranets are typically developed inside organisations and are constantly adapting to reflect the changing needs of the organisation. They normally emerge from a collaboration between employees in IT and champions in business units. According to Karlsberg *et al.* (2003) these "homemade intranets" - developed internally with the support of the users - by far outnumber those that follow alternative development strategies (such as the "tailor-made" intranets developed by outside contractors and the intranets "in-a-box" customised by outside contractors).

However, unlike other types of technologies, the development of intranets does not start with a clear view of what the system "should or should not do" (Bansler et al., 2000). Their development is typically unplanned, unpredictable and improvised (Ciborra and Lanzara, 1994) and is often decided and shaped by ongoing informal negotiations between stakeholders. Thus, it is difficult to predict how intranets will evolve - because they will be shaped by the ongoing changing needs of the organisation and the cognitive frames of reference of the individuals involved (Ciborra and Lanzara, 1994, Orlikowski, 1992).

The development of intranets also changes the way in which other systems are designed and developed (Banck and Nystrom, 2005). Once the intranet is established as a common platform, systems development becomes more like film production, compared with the more structured approach involved in traditional IT development (Lyytinen *et al.*, 1998). Old distinctions between developers and users tend to become blurred as new organisational roles are created and new skills become important (Bansler *et al.*, 2000). The melding of different roles is a recognised phenomenon in intranet development and contrasts with traditional approaches where the various roles are better defined and independent of each other. In contrast, user and the developers are often the same person in the development of intranets (Lamb and Davidson, 2000).

These particular characteristics of intranet development may create conflicts between traditional IS units and key intranet stakeholders and users, as IS may feel they are losing control over the development of a core technical infrastructure. For example, Clarke and Preece (2005, p. 163) found that:

> having played a significant role in [the intranet's] selection and introduction, the central IS department came over time to take a lower profile with respect to Intranet implementation, as pockets of expertise built up around the organisation and [in] the business units.

One key area of contention is the relationship between the central intranet management team and local content authors spread throughout the organisation. Intranet managers encourage local units to publish content that is relevant to them, to improve the relevance of content to users and to ensure the fair representation of all areas of the organisation. This is achieved by allowing local teams to publish their own content. However, common guidelines and standards have to be set by the central intranet team to ensure that the intranet is usable and navigable. This balance of power creates some natural tensions and each organisation finds its own way of managing this complex relationship.

A more centralised approach offers greater control over what is published, whereas a decentralised approach fosters innovation and makes content more adaptable to local interests and needs. Wachter and Gupta (1997) summarise the advantages and disadvantages of three models with different levels of centralised control:

	Advantages	**Disadvantages**
Decentralised model	Minimum bureaucracy Better understanding of information needs Rapid proliferation of sites	Redundant information Overlooks security Display of inappropriate information
Centralised model	Control over content, look and feel Consistency and control of quality Control over security	Lack of responsiveness and timeliness Increased bureaucracy may kill good ideas Additional human resources
Mixed model	Control over content, look and feel Consistency and control over security No additional human resources	Increased bureaucracy Lack of responsiveness and timeliness Resentment of users

Table 1: Wachter and Gupta (1997) centralised vs decentralised management models

The problem with the decentralised management model is that it reduces central control over local publishers. This creates difficulties in enforcing standards and can lead to the proliferation of unofficial content and information overflow. Lack of central control also diminishes the quality of information, for example by dispersing quality checks and permitting local publishers to create new sites instead of keeping existing sites updated. Decentralised systems may also have uncontrolled costs, due to the difficulty of managing the time local publishers spend on developing their websites (Bansler *et al.*, 2000).

Too much central control can also be problematic. In such cases, a perception may develop that the intranet is biased towards the interests of the coordinating team. Excessive central planning can also hinder innovation by suppressing local experimentation and new ideas. Markus (1983, p. 442) discusses how a centralised approach may lead to a resistance to change from local teams. She says:

> When a system centralizes control over data, the individual or subunit who gains the control is likely to accept the system readily, while those units losing control are likely to resist.

Some studies highlight problems with the bureaucracy involved in centralised publishing systems, for example Wachter and Gupta (1997, p. 397) point out that:

> If wide agreement on format and standards is required, the intranet may die while in the administrative process.

Several authors argue in favour of a mixed or hybrid model where certain controls are imposed centrally but local teams are largely free to publish according to their specific organisational needs (Barnfield, 2002, Gupta *et al.*, 2001). This mixed model enables local teams to decide *what* they publish but still ensures that content is consistent and follows common standards. Barnfield suggests a separation between content generation and the management of the infrastructure; more specifically he recommends to *"divorce content generation from the central responsibilities of running an intranet"* (Barnfield, 2002).

Another key area of contention is the level of involvement of senior managers in the development of the intranet. Bansler (2000) studies the impact of two approaches to senior management involvement in the implementation of an intranet in two companies: one organisation followed a top-down approach (intranet enforced by senior management), whereas the other followed a bottom-up approach (intranet develops from the grassroots of the organisation). They find that the top-down approach creates a major problem for intranet adoption, because the intranet is perceived to be the voice of senior management and thus biased towards their interests. They claim that improvisational and bottom-up approaches are far more successful, as the intranet will be perceived as reflecting the interests of users throughout the organisation. Butler (2003, p. 209) corroborates this finding and states that *"top-down development and implementation strategies give rise to more conflict and change management problems than bottom-up approaches"*. He goes on to say that *"'bottom-up' approaches achieve higher levels of user acceptance and satisfaction"* (Butler, 2003, p. 229)

Critics of the bottom-up approach point to problems with creating "intranet islands" and the poor use of resources resulting from different sites adopting independent technology and methods of publishing. Another problem is the inherent lack of synergy between intranet teams, who often go through the same learning curve, thus "reinventing the wheel" (Damsgaard and Scheepers, 2000). Other studies of the implications of these two contrasting models to intranet implementation have reached similar conclusions (Damsgaard and Scheepers, 1997, Lamb, 1999, Lamb, 2001, Wachter and Gupta, 1997).

The level of formality in managing and governing the intranet environment is another aspect of contention in the literature. Different organisations require different procedures to regulate the way in which information is published on the intranet. Standardisation of processes and procedures needs to be communicated through formal and informal mechanisms, such as formal meetings and informal conversations with publishers and authors.

Intranet managers have therefore to decide what level of formalisation is adequate for their organisation. Too few policies may lead to uncontrolled content proliferation and an inconsistent look and feel. Too many policies may cause confusion and constrain innovation. Newell et al. (2000, p. 110) argue that:

> Structuring and formalising the use of intranets (developing the Infostructure) creates rigidities, which contradict the ability of the tools to improve collaborative work and knowledge-sharing (the Infoculture).

Chin (2003) points out that information will flow in organisations regardless of the formal mechanisms put in place to regulate its use. The level of formality/informality must therefore be in tune with the prevailing culture of the organisation. Cultures that value formal mechanisms should adopt a policy-based governance system. However, if the organisational culture stems more from informal/face-to-face communication, a less formalised system would be more appropriate.

2.3. Evolution of intranets in organisations

In early stages of implementing an intranet in an organisation, users instinctively follow old models and routines to make sense of the new system. It is only over time that behaviour and routines start to adjust and adapt to the functioning inherent in the new system. Ruppel and Harrington (2001, p. 39) explain the challenges of this process:

> The existing culture will find a way to preserve old forms of functioning such as face-to-face meetings or hard-copy documents, despite electronic alternatives because the old forms are part of the employee's ingrained habits and are familiar and comforting to organisational members.

Some models have been developed to explain this longitudinal evolution of intranets in organisations. The most widely cited is the four-stage model developed by Damsgaard and Scheepers (2000), illustrated in Figure 1 below.

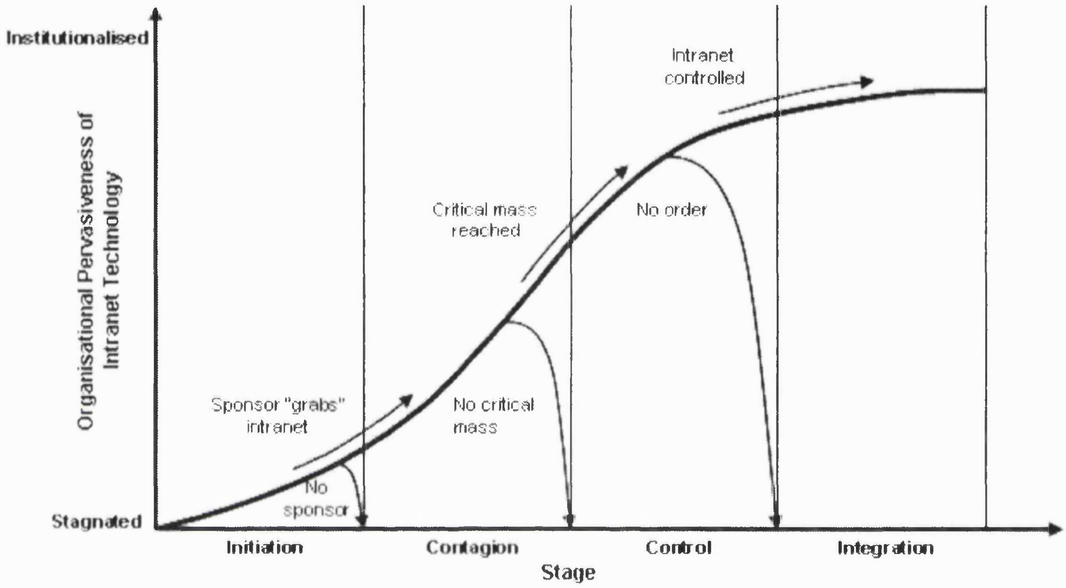


Figure 1: Damsgaard and Scheepers evolutionary model

This model suggests that intranets need to overcome three main challenges as they become more institutionalised in organisations, with each challenge separating a stage in the life cycle (i.e. initiation, contagion, control and integration). The first challenge is to secure senior management support, without which the intranet will struggle to get off the ground. On gaining this support, intranets then have to achieve a critical mass of users. The model suggests that intranets have to appeal to a large majority of users and become recognised as the preferred source of information, replacing alternative media such as paper-based, telephone or face-to-face communications. At this stage, intranet managers face the "double chicken and egg problem". They need to justify greater investment in content without being able to show that the intranet has gained mass support from users. However, mass support requires investment in content which is difficult to obtain without significant investment in content – creating a vicious circle. Content and functionality proliferate in stage two in order to gain adoption. Once a critical mass of users is established, the third challenge has to be faced. This is to curb uncontrolled growth and get to grips with the increased complexity inherent to stage two. Finally, once control has been established through tighter governance, the intranet becomes integrated with business processes and embedded more deeply into the functioning of the organisation – the intranet is then, according to the model, institutionalised.

Other authors have proposed similar models to describe the evolution of intranets in organisations. Table 2 below summarises three more models and the stages they comprise.

Authors	Proposed stages
Goles and Hirschheim (1997)	1) Information publishing applications 2) Informal collaboration applications 3) Transaction-oriented applications 4) Formal collaboration applications
Duane and Finnegan (2003)	1) Introduction-customised growth-collaborative interactions 2) Process and systems integration 3) External value chain integration 4) Institutional absorption
Heal and Karlenzig (2001)	1) Static information 2) Dynamic information 3) Problem solver-collaboration enabler-business process enabler 4) Internal/external business process enabler

Table 2: Alternative intranet life cycle models

Critics of these evolutionary models point out that they fail to reflect the reality of many organisations and that "*it is important to note that these 'stages of growth' models have not been tested empirically*" (Duane and Finnegan, 2003, p. 134). Opponents claim that such models also assume there is a unidirectional evolution towards an ultimate stage of maturity. The process of evolution is considered to be much more complex and no "final" stage is recognised as universal.

The benefit of these life-cycle models is their ability to highlight the ongoing interplay between intranets and their organisational background. They also suggest that over time this ongoing interplay and mutual changes lead to the embedding of the intranet in organisational working practices and employee behaviour – a theme further developed in the next section.

2.4. The interplay between intranets and organisations

As discussed above, intranets interplay dynamically with the culture of their hosting organisation and, through this process, both the technology and the organisation change. Sue Newell et al. illustrate this point and suggest that this interplay leads to unpredictable results:

> the interplay between the innovation process and the pre-existing organisational structures and routines may shape the use of the technology and lead to the rather different outcomes to those intended (Newell et al., 2001, p. 110).

There are two ongoing processes of interplay and mutual transformation. Process 1 refers to the process by which the organisation shapes the intranet; Process 2 refers to the process by which intranets shape the culture of their hosting organisation. Process 1 is more dominant when the intranet is first introduced in the organisation. During this stage, the intranet will absorb the properties of the organisational environment. Over time, the effects of the intranet technology on employee behaviour and perception start to be more visible and Process 2 gradually takes precedence. These two processes play a key role in institutionalisation as they contribute to the familiarisation of the technology and embedding in business processes and organisational practices.

2.4.1. Process 1: organisations shaping intranets

When they first emerge in organisations, intranets are often implemented for a specific business purpose. For example, Bansler *et al.*(2000, p. 10) show how senior management implemented an intranet to use it as a stepping stone for planned organisational change and to promote a culture of transparency:

> Management believed that the intranet would support the new philosophy by breaking down existing information fortresses and promoting openness and sharing of information and ideas.

Thus, the format and shape of the intranet is highly influenced by the interests of the stakeholders initially involved in the project and the political negotiations underpinning its implementation. This includes the way in which stakeholders are selected to participate in developing the infrastructure and the way in which budgets are allocated. This process starts during the development stages as described by Clarke and Preece (2005, p. 153):

> Certain actors and groups may have more opportunities than others to shape the technology (...) Thus, it is important to know who/whom has this opportunity, what their aims are, what sources of influence they have and what means they can and do deploy to shape the configuration.

The organisation continues to shape the technology on an ongoing basis. DeSanctis and Poole (1994) use the term "evolution-in-use" to describe this process of continuous adaptation of the technology to its organisational context, and propose *"Adaptive Structuration Theory"* as a framework for studying this dialectic interplay. The social fabric of the organisation shapes intranets because it constitutes the pre-existing frames of reference through which people make sense of the new technology (Orlikowski, 1993).

In the same vein, Ciborra and Lanzara (1994) say that the *context is formative* because it shapes the way people make sense, perform and get organised in a specific situation. They characterise formative context as:

> the set of institutional arrangements and cognitive imageries that inform the actors' practical and reasoning routines in organisations.

Bansler *et al.*(2000) apply this concept to explain how two very different *formative contexts* led to two very different intranets, as follows:

> PlayCo is a traditional manufacturing company and the type of context that influenced managers and employees of PlayCo can be characterized as hierarchical. PharmaCo, on the other hand, is a research-based, knowledge intensive company with a culture that values experimentation, autonomy, and innovation. This context, which can be described as networking, is characterized by working and bargaining in a network and by intense lateral communication. These differences in formative context explain why the dynamics of intranet implementation in the two companies differ so markedly and why the two intranets evolve in different directions, following radically different trajectories (Bansler et al., 2000, p. 26).

Cecez-Kecmanovic *et al.* (1999) study the implementation of an intranet and an email system and find that their adoption is greatly shaped by the pre-existing organisational cultures and contexts of use. They report that:

> we found that the way various groups and the organisation adopted the OSS was deeply situated in their context and was shaped by their specific culture" (Cecez-Kecmanovic et al., 1999, p. 22).

The power of pre-existing organisational cultures may sometimes be so strong that implementing intranets may have only a limited impact in terms of organisational change. Intranets might actually reinforce pre-existing cultural values. Newell et al. (2001) show that, despite efforts to encourage knowledge sharing on a global scale, conflicting reward structures encouraged localised knowledge hoarding. Wright (2001) also argues that *"without a collaborative culture, an intranet can do little to create one in its place"* and Telleen (1997b) suggests that intranets will have little positive effect where the existing culture does not support the free flow of information and communication. Banck and Nystrom (2005), studying five intranets in Swedenand, show that the most successful were those adopted by organisations with established "pro-sharing" cultures.

2.4.2. Process 2: intranets changing organisations

Intranets are implemented in order to drive organisational change and deliver business benefits. They are, for example, expected to improve performance, sharing of information and decision making. However, the impact of intranets goes much deeper into the social and behavioural dimensions of organisations. For example, intranets influence employee perceptions about the organisation and their role within it. Employees make sense of the organisation through what they read on the intranet. Gradually their interpretive frames (Weick, 1995), used to support decision making, absorb the values implicit in what they read on the intranet. Thus, intranets have the ability to shape and structure the social reality as experienced by employees (Berger and Luckmann, 1967). For example, Cecez-Kecmanovic *et al.* (1999)

demonstrate how the use of the intranet and email changed an individual's perception of organisational reality:

> The new experiences with e-mail and Intranet as the means for university-wide communication and interaction affected the way many individuals perceived, thought and felt in relation to their local and the university problems. We observed the changing patters of social interactions, increasing openness of the process, equalising effects, reduction of informational and emotional distance, that in turn affected the social context" (Cecez-Kecmanovic et al., 1999, p. 25).

Intranets also change the wider socio-political context of organisations. For Keen (1981), power structures are affected when technology such as intranets reorganises information flows in organisations.

> Data are not merely an intellectual commodity but a political resource, whose redistribution through new information systems affects the interests of particular groups" (Keen, 1981, p. 24).

Telleen (1997a, p. 11) argues that intranets shift control over the access to information from its creators to the users of that information. He says that one of the most important characteristic of intranets is:

> its ability to shift control of electronic information management from the technology specialists back to the information creators, and control of information flow from the information creators to the information users.

This shift in control is due to the fact that users now have the ability to easily retrieve much more information, whenever it is required. And since information no longer needs to be sent to them "just-in-case", publishing can be separated from automatic distribution. This represents an important change to the way information is handled and disseminated within organisations.

The balance of power in organisations is also affected by the introduction of intranet systems (Dickey and Ives, 2000). Truch (2001) looks at how intranets change what people know about each other, and how increased transparency influences the way employees manage their personal information inside the organisation. The impact on power and politics can be greater if employees perceive the intranet to be an "electronic panopticon" as portrayed by Michel Foucault in his book "Discipline and Punish" (Foucault, 1977). This concept of the intranet as an electronic panopticon is further developed by authors in the IS field (Sewell and Wilkinson, 1992, Zuboff, 1988). Clarke and Preece's (2005) study show good evidence of this perception in a quote from an employee:

> My director might surf around the structure and ask simple questions, that you think 'Oh God, what's he found, what's he uncovered this time?' (Clarke and Preece, 2005, p. 161)

Zuboff (1988) notes that the "informating" capability of computer technologies such as intranets may threaten traditional sources of managerial authority, which depend in part upon control over the organisation's knowledge base. Faced with losing control, managers will react and seek ways to protect their power base. They will try to structure the use and configuration of the technology in ways that will help defend and reproduce the legitimacy of their managerial authority - *"the hierarchy will use the technology to reproduce itself"*. However, interestingly, employees may also exploit the technology to their advantage, for example when using the intranet to show their superiors that they are "doing something". Hayes and Walsham (2000) report on a study on the use of Lotus Notes in a medical organisation where they suspected that "young careerists" were trying to draw attention to themselves through their use of the technology, whilst the "old stagers" and non-careerists were much less interested in using the system.

The changes to the organisation and to the intranet are mutual: one shapes and reshapes the other on a continuous basis. For example, Cecez-Kecmanovic *et al.*(1999) found that after an initial period where the organisation changed and shaped the intranet more intensely, the reverse effect gradually started to become more predominant (the intranet began to change the culture of the organisation more than it was changed by it). They report that they:

> found many indicators signalling that a real, deep, yet subtle change was slowly occurring. This change is about the control and ownership of the channels for knowledge communication and sharing. It has implications for the ways knowledge is created and accepted as valid organisational knowledge [by top Executive versus knowledgeable participants] (Cecez-Kecmanovic et al., 1999, p. 25).

They also noticed that the intranet changed the way facts emerged and became recognised as the *truth* in the organisation. Whereas before the intranet senior executives were able to establish "factuality" because of their power to manage information flows in the organisation, with the intranet, information travelled freely across the organisation. Knowledge workers were then able to share information directly between each other, radically changing the way information was disseminated in the organisation.

Not all impacts of intranets on organisations are predictable. Many only become visible and noticed in hindsight. For example, Newell *et al.* (2001) note that instead of fostering integration and collaboration between areas of the organisation, intranets can sometimes reinforce pre-existing cultural differences and "*have the ironic effect of further reinforcing geographical and functional barriers to knowledge exchange*". They explain that:

> despite initial aims of knowledge-sharing, our study found that intranet developments encouraged fission, not centrifugal forces operating on the strategic development of the firm. Such effects are explained in term of the decentred logic of intranet development and, in particular, its implementation within highly differentiated knowledge communities (Newell et al., 2001, p. 98).

The discussion above shows how the two processes of interplay - Process 1 and Process 2 - drive mutual ongoing changes to the intranet and its organisational context of use. The next section shows how this interplay underpins the embedding of the intranet in organisational work practices.

2.5. Interplay and institutional theory in IS

The review of literature above suggests that intranets interplay with their hosting organisations in a distinctive way compared with other types of technologies. This finding is reinforced by Chatterjee et al (2002) who say that:

> the assimilation of Web technologies is more challenging in contrast with other information technologies because of differences in the dynamics of their organizational assimilation. (Chatterjee *et al.*, 2002, pag 67)

The literature emphasises the flexible and ambiguous nature of intranets and their constant mutation to accommodate changes in their organisational context of use, changes that could have previously been caused by the introduction of the technology itself. The literature also suggests that this ongoing interplay underpins the embedding of the technology in work practices and drives its institutionalisation in the social fabric of the organisation.

The institutionalisation of technology in organisations is a growing theme in the IS literature. The use of institutional theory has gained significance in the IS literature as a way to explain the embedding of technology in organisations.

A recent study by Teo *et al.* (2003) uses quantitative methods to study the institutional pressures faced by the CEO and CFO to adopt inter-organisational systems. They analyse the role of three isomorphic pressures in a group of companies which adopted a system to support the exchange of financial information between firms (FEDI) and find that:

> all three institutional pressures - mimetic pressures, coercive pressures, and normative pressures - had a significant influence on organisational intention to adopt FEDI.

Liang *et al.* (2007) extend Teo's argument by analysing the role of top management as mediators of these isomorphic pressures (mimetic, coercive and normative) in the institutionalisation of ERP systems in organisations. Within the IS trust literature, the use of institutional theory has gained particular significance (McKnight *et al.*, 2002, Pavlou, 2002, Zaheer *et al.*, 1998).

Currie (2004) adopts a qualitative research approach to explain why ASP technology (Application Service Provisioning) has not been institutionalised in the industry despite strong endogenous pressures from IT vendors and consultancies. In a more recent study, Currie and Guah (2007) identify conflicting institutional logics in the use of technology in the health care industry. They trace historic changes in the normative, regulatory and cultural institutional environments to explain the evolution of technology in this industry in the UK. However, they acknowledge that one limitation of their institutional analysis is the *"absence of agency in the interpretation of our data"* and suggest that:

> further research may seek to explore the perceived or actual role of 'technical champions' or 'change agents' in delivering large-scale IT programmes, to provide a comparative analysis of organisational outcomes. (Currie and Guah, 2007, pag 246)

Their call for more studies in IS looking at institutionalisation as a process of *generation* of institutionalised behaviour (Zucker, 1987) is already gaining significance in the organisational literature, as highlighted by Scott (2001, p. 196)

> recently interesting work has begun to surface that emphasizes the interweaving of top–down and bottom–up processes as they combine to influence institutional phenomena.

Furthermore, the concept of institutional entrepreneurs (Dejean *et al.*, 2004), recently developed in the organisational literature, is a testament to this new emphasis on agency in the development of institutionalised behaviour. However, Scott's (2001) more integrative view of institutionalisation as both a top-down process of contextual *reproduction* (Zucker, 1987) and a bottom-up process of *generation* of institutionalised behaviour, has yet to penetrate the

IS literature. To date, the *reproductive* view has dominated the literature and there is a clear gap in studying the organisational processes underpinning the embedding of technology in the functioning and social fabric of organisations. A very recent study (Hu *et al.*, 2007) has attempted to bridge these two theoretical approaches by investigating the external and internal factors that influence the institutionalisation of security procedures in organisations. However, although their analysis of the data identifies two internal processes of institutionalisation, their theoretical approach mainly covers macro level isomorphic pressures underpinning the reproduction of structure. Furthermore, they do not offer new theoretical concepts for analysing micro-level processes of generation of institutionalised behaviour.

This study contributes to addressing this gap with a phenomenological explanation of institutionalisation as a process centred at the level of employee work practices, habits, routines and perceptions.

Mutual changes to the technology and the organisation are driven, for example, by a growing number of stakeholders, roles and responsibilities, an increasing number of content and applications, changing business needs and the shifting of cultural values and beliefs. These changes in turn affect the way the organisation operates and the way employees use information to function and perceive the organisational environment around them.

These mutual changes underpin the institutionalisation of the intranet in the organisation. Changes to the organisation foster changes to the intranet and vice versa; it is this dynamic interplay that allows the technology to become appropriated by the organisation and the organisation to absorb the inherent properties of the technology. Gradually, the technology becomes more embedded and fused with work practices and routine behaviour of employees. Employees become familiar with the technology and take for granted its availability and functionality. The intranet then becomes "part of the furniture" (Silva and Backhouse, 1997) and perceived as just another feature of normal organisational life.

Damsgaard and Scheepers (2000, p. 142) say that intranets at this stage have become *institutionalised* and "disappear" from the collective perceptual radar of employees, only again becoming apparent when the technology triggers an unfamiliar event and active engagement becomes necessary. They suggest that users at this stage withhold conscious use of the technology and argue that:

> The intranet at this stage corresponds to Heidegger's term 'ready-at-hand', in which the technology disappears and becomes a natural 'extension' of the users. Users do not think about the technology itself anymore (Damsgaard and Scheepers, 2000, p.142)

Silva and Backhouse (1997, p. 390) also conceptualise institutionalised systems as systems that have become invisible and *"part of the furniture"*. They deem systems to be institutionalised when

> they are no longer considered as innovations but as unnoticed and unremarkable tools that people take for granted in doing their work

In a later study, the same authors (Silva and Backhouse, 2003), expand this notion of institutionalisation:

> information systems become institutionalized when they are no longer considered as novelties, but as unnoticed and unremarkable tools that people take for granted in doing their work. An information system is institutionalized when associated practices and procedures have become routines that can be regarded as organizational habits.

As discussed in this chapter, the literature shows that intranets are inherently flexible and adaptive. They mutate in response to the changing needs of their hosting organisation, absorbing the properties of their surrounding social fabric. The literature discusses how intranets reflect organisational culture and how the culture is in turn affected by the intranet. However, the specific processes of interplay that underpin the institutionalisation of technology in organisations are not yet known. Understanding how, over time, intranets become institutionalised in organisations will be the main focus of this research. The next section formulates the research questions which will drive the research in this direction.

2.6. The research question

The main question focuses the research on the organisational processes underpinning the institutionalisation of intranets in organisations. This question directly addresses the gap in the literature identified above – it aims to improve understanding of the specific micro processes of interplay between the technology and its hosting organisation, which over time will foster the embedding of the intranet in the working practices of the organisation.

Main research question
- How do intranets become institutionalised in organisations?

This question will focus the research on the micro level processes of mutual transformation underpinning the interplay between the technology and its hosting organisation. This focus aims to improve knowledge of how technology is both shaped by and shapes its organisational context of use and how this interplay then underpins its institutionalisation in the working practices of the organisation. The longitudinal study of the mutual changes to the technology and the organisation will address the gap in the literature identified in the previous section. Three further sub-questions were formulated in support of this.

Sub research questions
- How can the institutionalisation of intranets in organisations be defined? - What processes underpin the institutionalisation of intranets in organisations? - What are the key implications of institutionalisation to organisations?

The first sub-question aims to clarify the concept of institutionalisation of technology in organisation. This is important because current literature is ambiguous in this respect and lacks empirically-led explanations of this phenomenon. The second sub-question will investigate the longitudinal processes of interplay underpinning the institutionalisation of the technology in the organisation. The third sub-research question will consider wider implications of the institutionalisation process in the organisation to management and organisational behaviour in general.

2.7. Summary of chapter

This chapter arrives at the research questions by first discussing the inherent characteristics of intranet systems and their importance to the functioning of organisations; and second by showing how they interplay with their organisational background leading to the embedding of the technology in business processes and working practices. The research questions set in this chapter address a void in the literature on understanding the organisational processes underpinning the institutionalisation of technology in organisations.

The chapter starts by discussing the ambivalent and reflexive nature of intranets in organisations. These properties, inherent to all intranet systems, allow the technology to shape and be shaped by its context of use on an ongoing basis. The chapter then argues that this dynamic interplay and mutual changes underpin the process of embedding the technology in the functioning of the organisation. Understanding these underlying organisational processes of interplay between the technology and the organisation is identified as an important area of research and one which has not been properly investigated in the literature. Existing IS literature based on institutional theory focuses on macro processes of reproduction of social structure and overlooks micro level processes of generation of institutionalised behaviour through the embedding of technology in work practices and the social fabric of the organisation. The study of intranets constitute a particularly valid empirical setting to study these micro level processes of interplay because the implementation and development of these systems is made up of small incremental changes at the local level rather than driven by a "grand plan" from a central team. Four research questions are set at the end of the chapter aiming to clarify the concept of institutionalisation and develop understanding of the processes underpinning this phenomenon.

2.7.1. Substantive contribution

This study improves understanding of the longitudinal interplay between the intranet as a technology and its organisational context of use. This theme is discussed from a literature point of view in this chapter and from an empirical point of view in chapter 6 ("Findings").

2.7.2. Main themes from this chapter

Intranets play ambivalent roles in organisations: intranets serve different purposes and can be shaped to respond to wide range of organisational needs. They evolve and mutate over time to respond to the changing needs of the organisation. Thus, it is difficult to define the specific role of an intranet in an organisation.

Intranets develop reflexively with their organisational context of use: intranets evolve to shape and be shaped by their organisational context of use. In this sense, each intranet will be different because each will be the result of the specific interplay between the technology and its surrounding organisational context.

Intranets interplay with organisations: two key processes of interplay foster mutual changes to the technology and its context of use. Process 1 refers to the way technology is shaped by aspects of the organisation such as its values, processes and way of working. Process 2 is the reverse effect, where intranets impact and change aspects of the organisation.

Institutional theory in IS: existing literature in IS explores the *reproduction* of institutionalised practices across social groups; however, there is a clear gap in studying processes of *generation* of institutions through the embedding of the technology in work practices and social fabric of the organisation.

Literature gap and research questions: the literature discusses the two processes of interplay (process 1 and process 2) and describes the characteristics of systems that have become institutionalised. There is however little understanding of the organisational processes underpinning this process. Four research questions are defined to investigate specific processes of interplay driving the institutionalisation of technology in organisations.

2.7.3. Linking with the rest of the thesis

This chapter identifies a gap in the literature and develops the research questions used in this study to address that gap. The main themes derived from the literature review on intranets will be used in the findings and analysis chapters (6 and 7).

Chapter 3

Theoretical framework

The study of institutionalisation has taken many forms and several theories have been developed to explain different aspects of this phenomenon. Gidden's (1984) structuration theory and its adaptation to the information systems field by Orlikowski (1992) focus on the interplay between structure and agency in developing institutions in social settings. Clegg's (1989) Circuits of Power theory and its later adaptation to the IS field by Silva and Backhouse (2003) focus on the role of power in creating institutions in organisations. Meyer and Rowen's (1977) theoretical approach, subsequently further developed by DiMaggio and Powell (1983), focuses on the isomorphic mechanisms fostering the reproduction of social structure and the copying of practices across and within industries.

Each of these theories focuses on a different aspect of institutionalisation and was considered as relevant for this study; however the research questions set in chapter 2 required a different focus. The chosen theory would need to focus on processes of interplay at the organisational level and capture the phenomenology inherent to the gradual familiarisation and embedding of technology in work practices. Zucker's work, and the ability of institutional-based trust theory (Zucker, 1986) to explain institutionalisation at this level, led to its adoption as the main theoretical lens in this study.

This chapter starts by presenting alternative approaches to studying institutionalisation of technology in organisations and explains the logic behind the adoption of Zucker's perspective. The chapter then provides some historical context to this theory by describing the roots and evolution of its core theoretical concepts. The chapter then explains Zucker's view of institutionalisation as a process of trust production. The next section describes Zucker's (1986) institutional-based trust theory and its two core theoretical concepts. The following two sections define these two key theoretical concepts in more detail. Finally, the chapter reflects on the use of theory in this study by linking the theory to the chosen research questions and explaining how it will be used for data collection and interpretation.

3.1. Alternatives and chosen theoretical approach

Institutionalisation is an ambiguous concept which has been appropriated by several disciplines to explain different aspects of the embedding of individual behaviour in social systems. Each of these has developed its own alternative theories and frameworks to study the way in which human action interacts with the social context in which it operates.

One such approach is Giddens' *structuration theory* (Giddens, 1976, 1979, 1984). For Giddens, agency (individual behaviour) and structure (established ways of doing things - traditions, institutions, moral codes) are inherently interrelated and it is only through the constant interplay between the two that one can understand human behaviour in social settings. At the core of Giddens' structuration theory is the idea that structure is not decoupled from agency, and that structure needs to be produced, reproduced and "brought to life" through human action (Berger and Luckmann, 1967, p. 75). Orlikowski (1992) uses and adapts Giddens' structuration theory to the IS field. She defines three types of structuring actions which contribute to the emergence of structure and assimilation of technology in organisational settings: *structures of signification* (individuals apply social structure as cognitive guides to understand behaviour); *structures of legitimation* (prevailing institutional structures legitimise behaviour by checking its consistency with established organisational goals and values); *structures of domination* (individuals ensure that their behaviour does not violate institutional rules and organisational regulations).

The use of structuration, while interesting, was not considered a viable theoretical approach to answer this study's research question. This was because its focus on social structure (structures of domination, legitimation and domination) overlooks the micro-level processes of gradual embedding of the technology in work practices and expectations of employees – a key requirement derived from the literature review. As Barley (1986) points out, structuration and institutional theory may share the premise that *"action is largely organised by institutions"* and that *"institutions are created, maintained and changed through action"*, but they focus on different aspects of institutionalisation. Structuration theory studies the relationship between agency and social structure, while institutional theory focuses on the generation and reproduction of institutionalised behaviour through normative, regulatory and cognitive roots (Scott, 2001). Structuration theory was also considered not viable because of its limited ability to capture aspects of space and time in the reproduction of structures in social settings (Toyoki *et al.*, 2006) – and the longitudinal evolution and interplay between the intranet as a technology and the organisation, is an important dimension of this study.

Another theoretical approach considered for this study was Clegg's (1989) Circuits of Power framework. Like Giddens, Clegg is also concerned with the role of social structure in organisational behaviour (Clegg, 1981). He developed the Circuits of Power theoretical framework (Clegg, 1989) to explain the role of power and politics in organisational settings. Silva and Backhouse (Backhouse *et al.*, 2006, Silva and Backhouse, 1997, Silva and Backhouse, 2003) later adapted Clegg's Circuits of Power framework (Clegg, 1989) to study the institutionalisation of technology in organisations. They use this theory to explain how failures in managing political conflicts inhibited the institutionalisation of a critical technology in the London Ambulance Service, a failure which ultimately led to the death of several patients. This framework is useful in understanding power and politics as elements of the institutionalisation process, but it has not been adopted for this study because it overlooks the cognitive factors inherent in the gradual familiarisation with the technology. Clegg's focus on power issues as a key driver for institutionalisation prevents the needed focus on processes that drive habitualisation and familiarisation with the system. Another reason for not adopting this approach is that power and coercive forces are not efficient drivers for institutionalisation. Zucker (1987, p.446) takes this view and says that institutions either emerge naturally within organisations or from the copying of practices from other organisations, but not from:

> power or coercive processes located in the sate or elsewhere. Use of sanctions implies availability of attractive alternatives, and it tends to deinstitutionalise.

Another theoretical approach to studying institutionalisation in organisations, and perhaps the most typical in the literature, is through the institutional thinking developed in the classical papers by Meyer and Rowan (1977) and subsequently by DiMaggio and Powell (1983). They see institutionalisation as an isomorphic process of contextual *reproduction* of established practices across social and organisational domains (Zucker, 1987). They argue that institutionalisation reflects the exposure of organisations to pressures to become more similar (Salmeron and Bueno, 2006). This approach focuses on macro level properties of the environment responsible for transmitting and perpetuating practices across domains and time. It uses concepts such as isomorphism and mimetic forces to explain similarity and gradual convergence of organisational practices within and across industries.

Again, this approach is useful in explaining the role of contextual forces in embedding technology in organisational work practices, but it does not explain the phenomenology of institutionalisation at the micro level – the gradual familiarity and habitualisation with the technology and the embedding of technology in routine work procedures. Zucker (1987) calls these micro level phenomena *processes of generation,* to contrast with Meyer and Rowan's macro level *processes of reproduction*. She develops this micro level conceptualisation of institutionalisation from ethnomethodology (Garfinkel 1967, Schutz 1962) by focusing much closer on individuals and their cognitive abilities. From this perspective both organisational and individual actors are potential creators of new institutional structure (Zucker, 1988).

One of the benefits of Zucker's approach is the much greater conceptual proximity between structure and action. One of the ambiguities in Meyer and Rowan's approach is their implicit definition of institutional structures as those that are subject to be decoupled from behaviour. They say that formal structures are *"only loosely linked to each other and to activities"* (Meyer and Rowan 1977: 342). However, as highlighted by Tolbert and Zucker (1996), this disassociation between structure and behaviour is in slight contradiction to Berger and Luckman's view of institutionalisation (used by Meyer and Rowan to define institutions) as structures that have become taken for granted, thus serving as a source of stabilised pattern of behaviour. It is also in slight contradiction to Gidden's (1979) view that structures that are not translated into action are inherently not social and will eventually die.

This study follows Zucker's approach to studying the institutionalisation of technology in organisations because it better captures the organisational processes underpinning the familiarisation and embedding of the technology in the working practices of the organisation. The study sees the ongoing dynamic interplay between the technology and its context of use as the main driver of the institutionalisation process – thus, institutionalisation is a process of *generation* rather than the mimetic *reproduction* of practices.

The study is generally informed by new institutional thinking and in particular by the work of Zucker on institutionalisation. It specifically uses Zucker's institutional-based trust theory (Zucker 1986) to define its core theoretical concepts. Zucker's theoretical conceptualisation of the process of institutionalisation is further enhanced with ideas from Schutz (1962) and Garfinkel (1963), the authors originally referred to by Zucker in developing this theory.

3.2. Background to the chosen theoretical framework

Scott (2001) reviews the origins of institutional thinking and suggests that there are three sources or routes to sustaining institutionalised features in social life: regulative, normative and cultural-cognitive. In Scott's own words these pillars or processes are *"the building blocks of institutional structures, providing the elastic fibre that resist change"* (p. 49). The regulative pillar emphasises formal and informal rules and the power of surveillance and sanctioning. The normative pillar refers to the inherent stabilising effect of social norms and values (which may be both internalised or imposed). Finally, the cultural-cognitive pillar focuses on the development of shared meanings through which individuals develop frames of reference to interpret the world around them. Following the perspective of this third pillar, Mary Douglas says that institutions prevail because people *"treat cultural categories as the cognitive containers in which social interests are defined and classified, argued, negotiated, and fought out"* (Douglas, 1982, p. 12 in Scott 2001).

This study follows Scott's third pillar as a means of understanding the process of institutionalisation; that is, it emphasises the role of cognitive processes in the development and transmission of institutionalised behaviour. This approach draws heavily on the core ideas of "new institutional" thinking. This approach to explaining human behaviour in society marks a step change from older institutional ideas based on assumptions of rational behaviour by social/economic agents and of economic behaviour as the aggregation of individual choices (lacking belief in the concept of society). As explained by DiMaggio and Powell (1991a, p. 8) new institutionalism marked a:

> turn towards cognitive and cultural explanations, and an interest in properties of supra-individual units of analysis that cannot be reduced aggregations or direct consequences of individuals' attributes or motives.

In new institutional thinking, cognitive and cultural processes become the focus for explaining institutionalised behaviour. Lane and Bachmann (1996) contrast this with previous rational assumptions about human behaviour:

> New Institutionalists see social actors' decisions based on tacit knowledge and implicit assumptions rather than on calculation. Consequently, they view institutions as patterns of actions and complexes of both formal rules and informal cultural understandings which have acquired stability over time and assume a "taken-for-granted" quality for social actors.

Berger and Luckmann's (1967) seminal study marked a shift in thinking towards this idea of institutionalised behaviour as the result of shared knowledge and belief systems. Institutions emerge through culture and shared value systems because these preserve dominant rewards and sanction schemas. This is in contrast to ideas of institutionalisation through the enforcement of rules and norms. According to this perspective, behaviour is determined by the relative stability, legitimacy and power of *"common understandings that are seldom explicitly articulated"* (Zucker, 1983, p. 5). These common understandings are engrained in the culture of the organisations and become the lenses through which actors see themselves as part of that social group - shaping their views of the world by forming socially accepted categories of structure, action and thought (Zucker, 1991).

To new institutionalists, behaviour is shaped not so much by the enforcement of norms and values (a more regulative and normative approach) but by unconscious and unreflected behaviour based on classifications, routines, scripts and schemas in the minds of individuals. From old to new-institutionalism there is a shift from a normative to a cognitive approach to understanding human behaviour, with a new focus on routine behaviour and the logic of rule following. From this perspective, new institutionalism sees organisations as recalcitrant tools of human behaviour which reinforce routine and stable behaviour. This approach contrasts with assumptions in previous institutional thinking, which saw change as necessary for achieving equilibrium in social settings (March and Simon, 1958).

Two main theoretical streams in institutional thinking are identified in the literature (Clegg, 1990, Zucker, 1987). One focuses on macro level phenomena and sees the environment as the main conductor of institutionalised behaviour – the *reproduction* or copying of practices and social facts. Meyer and Rowan's (1977) seminal article uses this approach to study inter-firm behaviour and introduces *isomorphism* as a key process for explaining the diffusion of practices across organisations. Later, DiMaggio and

Powel (1983, 1991) develop this approach and define *isomorphism* as a process that:

> forces one unit in a population to resemble other units that face the same set of environmental conditions (...) organisational characteristics are modified in the direction of increased compatibility with environmental characteristics (DiMaggio and Powell, 1991b, p. 66).

According to this view, institutionalised practices travel across organisations and social groups, fostering the convergence of practices through coercive, mimetic and normative forces (DiMaggio and Powell, 1991b).

The second theoretical stream focuses on the micro level of the organisation and is more concerned with the emergence of shared meanings and patterns of behaviour – this process of *generation* sees the reproduction of institutionalised behaviour as a consequence of institutionalisation, not a cause. In this theoretical approach, institutions or institutionalised-behaviour are the end result of the institutionalisation process and can be defined as the development of:

> social structures that have attained a high degree of resilience (...) by definition connote stability but are subject to change processes both incremental and discontinuous (Scott, 2001, p. 48).

Institutionalised behaviour is initially socially constructed; it is only over time that it becomes embedded in social groups, and the historical social process that led to its emergence is forgotten (Schutz, 1962). For Berger and Luckmann (1967, p. 58) institutions have a more symbolic meaning to individuals because they are:

> experienced as possessing a reality of their own, a reality that confronts the individual as an external and coercive fact.

For Berger and Luckman, institutionalised acts have two key characteristics: they are perceived as being both *objective* and *exterior*. Acts are objective when they can be repeated by other actors with no change in their perceived meaning and interpretation. Acts are exterior when their meaning is intersubjective and seen as independent of any personal interest (Berger and Luckmann, 1967, on reification and objectivation). Objectivity and exteriority are interrelated and to a certain extent correlated; an increase in objectivity may lead to an increase in exteriority (because social acts become better understood, which then disassociates it from any particular entity).

As explained by Zucker (1977, p. 726), institutionalised behaviour perpetuates and reproduces itself (as noted previously, this reproduction is a consequence of institutionalisation, not a cause):

> social knowledge, once institutionalized, exists as a fact, as part of objective reality, and can be transmitted directly on that basis.

Institutions persist across time and space because, to newcomers, they are seen as "the natural way of doing things" in a social group. As observed by Zucker:

> for highly institutionalised acts, it is sufficient for one person simply to tell another that this is how things are done (Zucker, 1991, p. 83).

Institutionalised acts also persist through time because deviations from expected behaviour cannot be understood by others in the same social group (Berger and Luckmann, 1967, Schutz, 1962).

Therefore, institutionalisation is both 1) the social *process* that leads to institutionalised behaviour and 2) a *variable* or behaviour that has become perceived as external and objective by a social group (Zucker, 1991, p. 85).

Berger and Luckmann (1967) explain the process of institutionalisation by defining three main stages of increasing levels of institutional persistence: 1) *externalisation,* the production of shared meanings in social settings; 2) *objectivation*, the process by which facts become independent and perceived as something “out there” and as a reality experienced in common with others; and 3) *internalisation*, the process by which objectified facts become part of routine behaviour, or as explained by the authors, the way in which *“objectivated world is retroprojected into consciousness in the course of socialisation”* (Berger and Luckmann, 1967, p. 60).

However, it was not until later that the seminal ideas of Berger and Luckmann were applied to organisational settings by Zucker (1977). Zucker focused her attention on micro level processes of institutionalisation by studying the role of cognitive beliefs in anchoring organisational behaviour. She defines institutionalisation as behaviour that has attained the following characteristics:

> 1) a rule-like, social fact quality of an organised patter of action (exterior) and 2) an embedding in formal structures, such as formal aspects of organisations that are not tied to particular actors or situations (non-personal/objective) (Zucker, 1987, p. 444).

Along with Tolbert, Zucker later developed a framework to explain the process of institutionalisation in organisational settings (Tolbert and Zucker, 1996). This framework defines three distinctive stages in the process of institutionalisation. The first refers to a process of *habitualisation*, the second to a process of *objectivation* and the third to a process of *sedimentation*. Figure 2 below illustrates these three processes which are then described in more detail.

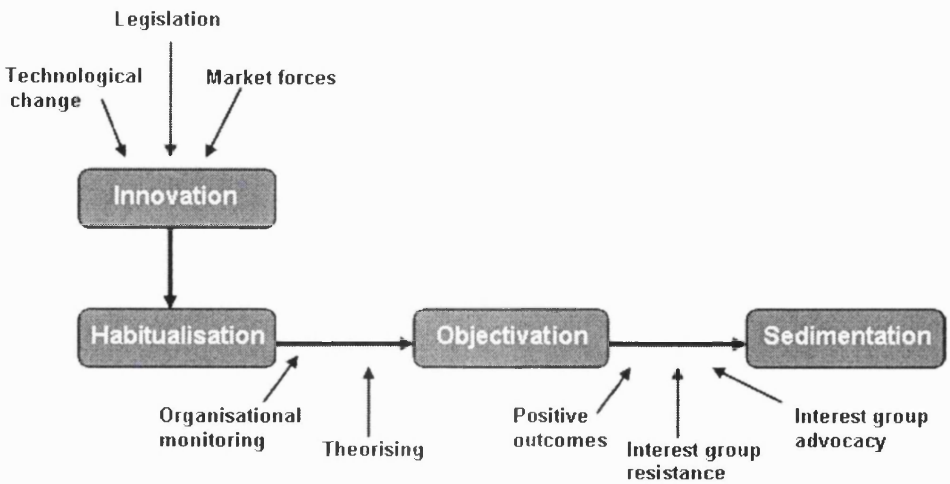


Figure 2: Institutionalisation process as in Tolbert and Zucker, 1996, p. 182

Habitualisation

The first pre-institutionalisation stage, habitualisation, is normally stimulated by some sort of innovative process. New structural arrangements develop in response to specific organisational problems and over time become more formalised and engraved in habits and routines. At this stage there are few adopters of the structure and only minimum knowledge among non-adopters. According to Berger and Luckman (1967, p. 72), habit and organisational routines are central to the process of institutionalisation, as evident in their description of institutions as the *"reciprocal typification of habitualised actions"*. If actions are repeated frequently enough at this stage, they establish a pattern, which can then be reproduced with minimal effort.

Objectivation

At this stage of semi-institutionalisation, social structure becomes more permanent and widespread. Patterns of behaviour become more permanent and engraved as typified acts. Over time, these actions become infused with meaning and gain symbolic significance among members of a social group. As these meanings become more widely shared, they become perceived as objective and independent from any particular actor in the group. As Selznick describes it, *"to institutionalise is to infuse with value beyond the technical requirements of a task at hand"* (Selznick 1957 in Zucker, 1987, p. 452). Furthermore, this stage involves the development of some degree of social consensus among organisational decision-makers about the value of that structure. Such consensus can be achieved through the use of evidence to assess risks involved in adopting the new structure or by monitoring competitors and emulating their practices.

Sedimentation

The third and final stage before full institutionalisation, sedimentation, is based on Berger and Luckmann's concept of exteriority. This refers to the process of transmission of typifications across time (continuity or "depth") and space (organisational members or "width") and the means by which these typifications acquire a "reality of their own". New members confronting these typifications, without knowing their social origins, will treat them as *"social* *givens"* (Berger and Luckmann, 1967). Sedimentation is characterised by the spread of institutionalised behaviour across a group of organisational actors and by the persistence of these behaviours over a prolonged period of time. The intensity of sedimentation is determined by the strength of those actors who are adverse to the structure, and the ability of advocates to constantly demonstrate its positive results. At this stage, full institutionalisation depends on the combined effects of 1) low resistance by opposing groups; 2) continued cultural support and promotion by advocacy groups; and 3) positive association with desired outcomes. Zucker (1977) demonstrates that higher levels of objectivation and sedimentation lead to higher levels of institutionalisation. Thus, transmission (or sedimentation) is both a result of, and an input to, institutionalisation.

3.3. Institutionalisation as a process of trust development

At the core of Zucker's understanding of institutionalisation in organisations is the concept of trust. To her, institutionalisation is a process of trust production because trust is the property that enables the formation of shared expectations by those in a social group (Zucker, 1986, p. 54). She argues that trust is inherent to the functioning of organisations and underpins the process of institutionalisation. She says that trust is *"routinely produced and such production is fundamental to understanding any exchanges in a social system"* (Zucker, 1986, p. 59) because it constitutes the terms of reference that regulate interactions within that social group.

The importance of trust in organisations is highlighted by a growing number of studies. Misztal (1996) argues that increased interest in the concept of trust may be due to the fact that modern, complex societies have caused individuals to lose their symbols and ideologies and to seek trust as a new basis for integration. Giddens (1990) stresses the importance of trust in modern societies as a countermeasure to increased risk and complexity (in the same way that security was a countermeasure to danger in traditional societies). Simmel (1978, p. 178) highlights the importance of trust in social relationships:

> Without the general trust that people have in each other, society itself would disintegrate, for very few relationships are based entirely upon what is known with certainty about another person, and very few relationships would endure if trust were not as strong as, or stronger than, rational proof or personal observation.

The importance of trust in societies and organisations has prompted a rich debate across various disciplines, which in turn has led to a growing number of definitions, approaches and empirical methods used to study this phenomenon (Rousseau *et al.*, 1998). According to Lewis and Weigert (1985a), this diversity has three main causes: firstly, the inherent ambiguity of the term "trust"; secondly, the different academic perspectives used to study this phenomenon; and thirdly, the fact that many definitions are only empirically based. This diversity in approaches has led to various conceptualisations of trust in the literature. For example, trust as a social construct and as a "lubricant" of social order (adopted by sociologists); trust as a trait of human nature (adopted by psychologists); trust as a calculation of risk and benefit (adopted by economists); and trust as a phenomenon emerging from personal, organisational and social interaction (adopted by socio-psychologists).

Each of these interpretations reflects the worldview of their underlying disciplines. From a psychologist's perspective, Rotter (1967, 1971) defines trust as an individual trait and a personal characteristic. Rempel *et al.* (1985), from the socio-psychology field, define trust as a cognitive process based on first impressions and cognitive cues (Lewis and Weigert, 1985b). Williamson (1993), an economist, conceives trust as a rational process in which well informed agents weigh the potential benefits and risks of a certain course of action. On the other hand, sociologists define trust as a property of the social context and a natural outcome of culture and institutionalised behaviour (Luhmann, 1979, Shapiro, 1987, Zucker, 1986). They see trust as a protective mechanism preventing chaos and enabling agents to cope with the complexity of the environment around them by fostering *"the ability to take for granted, to* *take under trust, a vast array of features of the social order"* (Garfinkel, 1967, p. 173).

In order to develop a more integrated view of trust, some authors have proposed holistic models encompassing these various streams and approaches (Mayer *et al.*, 1995, McKnight *et al.*, 2002, Zaheer *et al.*, 1998). Despite efforts to develop a consensus around these various approaches, there is still no clear distinction between trust and other similar concepts such as trustworthiness, control, distrust and confidence.

Although the terms *trust* and *trustworthiness* are often used interchangeably, they have different meanings. Trust is related to the individual behaviour of the trustor (the person who makes a trust decision), whereas trustworthiness is related to the properties associated with the entity that is being trusted (the person, object or institution being trusted). Levi makes the following distinction between trust and trustworthiness: *"only persons can trust or be trusting, but trustworthiness can be attached to either individuals or institutions"* (Levi, 1998, p. 80). By this analysis, trustworthiness is a reflected property attributed by the trustor to the other party, based on the expectations about their motives, intentions or the procedures and controls of an institution. Trust, on the other hand, refers to the trustor's attitudes and intentions for action, which work separately from the level of trustworthiness of the other party. Thus, "trust" refers to the willingness to be vulnerable to others whose actions one does not control and "trustworthiness" relates to the properties inherent to the party being trusted.

The difference between *trust* and *control* is also a source of debate. Some authors claim that the two terms actually represent opposites of the same spectrum and that *"trust and control are incompatible because the core of trust involves freedom"* (Solomon and Flores, 2003, p. 24). Granovetter (1985, p. 489) goes further to say that control is a functional substitute for trust and that control mechanisms do not produce trust. Another stream of research argues that control and trust are actually variations of the same concept. To these authors, control mechanisms such as procedural rules, monitoring and contracts, seek to induce trust by reducing uncertainty but do not replace it. Only extreme control mechanisms that fully reduce uncertainty could be considered substitutes for trust (Shapiro, 1987, p. 636). Zucker (1986) argues that formal institutional mechanisms foster trust because:

> trust is necessary even to write a contract – much is not specified in such a contract, because others trust that normal modes of operation pertain. (Zucker, 1986, p. 59).

Another contentious topic of debate is the distinction between *trust and distrust.* Whereas some authors define distrust as simply the absence of trust, others conceive trust and distrust as two separate constructs. The latter argue that it is possible to have a breach of trust without causing distrust. Distrust only arises when the trustor recognises continued negative intentionality in the behaviour of the trusted party.

> Distrust only emerges when the suspicion arises that the disruption of expectations is one exchange is likely to generalise to other transactions. To distrust, then, implies an attribution of intentionality that continues throughout all interactions or exchanges, at least of a particular type. Hence, trust can be disrupted without producing distrust. (Zucker, 1986, p. 59)

Another common misconception in the literature is the distinction between *trust* and *confidence.* Most authors agree that confidence relates to situations of unreflected action where the trustor is so familiar with a given situation that they act without considering the underlying risks. This behaviour contrasts with situations of trust where the trustor actively assesses threats and risks but opts to pursue a course of action *as if* those negative outcomes were unlikely to happen. The main controversy is between those who see confidence as a separate construct to trust (Luhmann, 1988) and those who see confidence as an extreme condition of trust resulting from long familiarity with the environment (Garfinkel, 1963, Zucker, 1986).

Given the richness and complexity of this topic in the literature, it is important to clarify the approach taken by this study. The study follows the sociological branch of the trust literature, positioning trust as a property of the social environment as described by Lewis and Weigert (1985a, p. 968):

> trust is a property of the collective units (ongoing dyads, groups, and collectivities), not of isolated individuals. Being a collective attribute, trust is applicable to the relations among people rather than to their psychological states taken individually.

This approach contrasts with other views of trust as a personal trait linked to the psychological characteristics of the individual as described by Rousseau et al (Rousseau *et al.*, 1998)

> a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another (Rousseau et al., 1998, p. 395).

The relative importance of both the *individual* and his/her social *context* in producing trust is disputed in the literature. Powell (1996, p. 62) summarises the two competing perspectives as:

> 1) a rational outcome of an iterated chain of contacts in which farsighted parties recognise the potential benefits of their continued interactions and 2) a by-product of the embeddedness of individuals in a web of social relations such that values and expectations are commonly shared.

However, a focus on context should not disregard or underplay the role of the individual in shaping social structures. As argued by Powell, trust should be seen neither as an outcome of an individual's calculated action nor as a value traced to culture. He posits that trust

> is neither chosen nor embedded but is instead learned and reinforced, hence a product of ongoing interaction and discussion (Powell, 1996, p. 63).

Child and Mollering (2003, p. 71) also support this view and say that *"trust is a social construction: not simply given to trustors, but made by them as well"*. They argue that the trustor plays an active role in adopting and adapting expectations, and regard *"trust development as an activity for the trustor* *rather than just a consequence of given factors".* Child and Mollering's ideas are rooted in Luhmann's claim that *"trust has to be achieved within a familiar world"* (Luhmann, 1988, p. 95) and the suggestion that individuals play an active role in this ongoing process of familiarisation and trust production.

In the same vein, Granovetter argues that neither the *oversocialised* conception of trust (based on morality and culture) nor the *undersocialised* (trust based on regulated contracts and other institutional mechanisms) are the main sources of trust production (1985, p. 491). Instead, he argues that trust emerges from social relations and the obligations inherent in them. Building on Granovetter's ideas, Shapiro (1987, p. 626) argues that social context is a sufficient but not necessary condition for trust production. Giddens also supports the view of trust as an integrative phenomenon. Mitsztal says that Giddens combines *"the psychology of trust with a multi-dimensional sociological understanding of the conditions of trust"* (Misztal, 1996, p. 94). Thus, Giddens' approach enables the study of trust at both the micro- and macro-levels, and bridges the gap between proponents of societal change and those of individual agency. Zucker summarises these two approaches:

> one asserts that trust resides in actors' assumptions that others in an exchange will put self-interest aside in favour of "other-orientation" or "collectivity-orientation" (Parsons, 1939, Parsons, 1969) (...) The other major perspective asserts that trust resides in actors' expectations of the "things as usual" with the actor being "able to take for granted, to take under trust, a vast array of features of the social order" (Garfinkel, 1967, p. 173) (in Zucker, 1986, p. 57)

This study is rooted in this second perspective, viewing trust as a property resident in the expectations of the individual about normality and the gradual "taken-for-grantedness" of social order. From this perspective, trust is a set of socially learned and socially reinforced expectations about others, organisations and moral order (Barber, 1983, p. 164). Social and political institutions shape behaviour because they influence our conceptions of duties and our role in social settings, as highlighted by Misztal (1996, p. 96):

> Our conceptions of self and our duties towards others depend upon social and political institutions which both produce and constrain the realisation of social values.

Zucker (1986) developed institutional-based trust theory to explain the role of institutions in the development of trust in social and organisational settings.

3.4. Institutional-based trust theory

According to Zucker (1986) there are three main modes of trust production: process-based trust, characteristic-based trust and institutional-based trust.

Process-based trust uses past performance and historical data as a basis for building trusting behaviour. This mode of trust production is relationship-specific and takes time to develop, requiring investment in relationships, brand names and reputation building. *Characteristic-based trust* is associated with certain traits of the individual, such as ethnicity, gender or family background. This is a free mode of trust, provided the individual has the specific characteristics that define him or her as a member of a group. *Institutional-based trust*, on the other hand, is tied to attributes (such as certification schemes) or the use of credible third parties (such as escrow services).

Zucker (1986) sees institutional-based trust as the main source of trust production in organisational settings. To her, institutional mechanisms are important because social variables are causes rather than consequences of economic exchanges (Zucker 1986). Social structures will supplement or replace inter-personal mechanisms where these fail to promote trust among economic agents. Institutional mechanisms can replace or complement the other two modes of trust production, and not all three modes have to be in place at the same time.

Zucker (1986) uses historical economic data to explain the importance of institutional mechanisms in overcoming a lack of process- and characteristic-based trust. She notes that, during the period between mid-1800s and early 1900s in the United States, high immigration, internal migration and business instability disrupted the production of process-based and characteristic-based trust. There were three main reasons for this: first, the increased social distance between parties involved in exchanges meant that transactions took place between groups with different expectations (for example, between different industrial groups); second, the increased geographical distance between those involved in an exchange (the development of the US national railroad in this period allowed exchanges to take place across new boundaries); and third, the increased complexity in the interconnectedness of transactions and exchanges.

These three events contributed to a reduction of trust in society which had a negative impact on business and the economy. Zucker (1986) describes how, to overcome this problem, the US government developed new institutional artefacts to facilitate interactions and organisational exchanges. According to her, these new institutions fostered trust in society and businesses by increasing rational bureaucracy, implementing professional credentialing, enabling the surge of intermediaries, and imposing regulation and legislation. Another effect was that types of exchanges between organisations became more similar due to the enforcement of common norms and regulations; in this context, variances in standard behaviour are not tolerated because of increased regulation and controls (Zucker 1987).

In her paper "Production of Trust: Institutional Sources of Economic Structure, 1840-1920", Zucker (1986) describes various institutional mechanisms for producing trust. She defines two main groups of institutional mechanisms: those that operate at the level of *background expectations* and those that operate at the level of *constitutive expectations.*

Zucker developed these two key concepts based on the work of two authors, Schutz (1962) and (Garfinkel, 1967). She uses the work of Schutz to develop the concept of *background expectations* and the work of Garfinkel to develop the concept of *constitutive expectations*.

3.5. Background expectations

Zucker developed the concept of *background expectations* based on the work of Alfred Schutz. Schutz's work is concerned with the *"original constitution and meaningful structure of the world of daily life which humans take for granted as part of their natural attitude"* (1962, p. 207-259). Shutz uses phenomenology as an instrument to investigate the reality of common-sense life and the fundamental principles underpinning human behaviour in social settings.

The object of Schutz's study is the taken-for-granted attitude of everyday life. For him, our world - the "everyday world", the "common-sense world" or the "world of daily life" - is essentially intersubjective and we *"simply take for granted that the reciprocity of perspectives holds".* From this perspective, human perception of objects and events is shared and similar for all individuals in the same social setting. Thus, our perception of the world is that of a world that has *"existed before our birth, has its history, and is given to us in an organised fashion"* (Schutz, 1962 p. xxvii). We accept the world as it is presented to us, with all its inherent typifications of behaviour. These typifications are however not formally recognised, instead they are entrenched in our "common sense world" through the gradual embedding in our "natural attitude" of daily life.

Schutz posits that these typifications are the result of a *"sedimented structure of the individual's experience"* and are the lens through which people interpret new events. He says that *"no one has to teach us that the ordinary is the ordinary and that familiar is familiar"*: These typifications are learned through our normal experience which we then use as recipes to understand the world and our new experiences in it. Thus, *"the individual as an actor in the social world defines the reality he encounters".* Throughout their lives, individuals construct a *"stock of knowledge at hand"* made up of typifications derived from their experience of the common-sense world. One key aspect of Schutz's ideas is that *"knowledge is socially rooted, socially distributed and socially* *informed"* and that the typifications or "stock of knowledge" are generated from this social structure.

This natural attitude takes the world and its objects for granted. As long as the established scheme of reference, the "stock of knowledge", appears to be in order - and the actions and operations performed under its guidance yield the desired results - we trust these experiences. He argues that people are not interested in finding out whether these frames of reference are merely a coherent system of consistent appearances. Nor have they reasons to doubt the warranted experiences which, so they believe, give them things as they "really are".

It needs a special motivation, such as the irruption of a strange experience, not subsumable by the stock of knowledge or inconsistent with it, to make us revise our established beliefs. Schutz suggests that we operate unreflectively in the world around us using established frames of reference, only suspending this mode of functioning when a non-normal event becomes apparent.

It is this reality which the individual takes for granted and which forms his or her "natural attitude". Schutz borrows the concept of *epoche* from phenomenology to describe how the suspension of doubts about the reality of the outer world is used as a device to deal with this "natural attitude". We do not suspend belief in the outer world and its objects but, on the contrary, what we put in brackets[2] is the doubt that the world and its objects might be other than what they appear to be.

It is interesting to note that, for Schutz, ultimate reality is founded on the apparent truth of the natural attitude. However, this natural attitude is itself an achievement based on a prior suspension of doubt. In projecting expectations, humans anticipate an act as already accomplished and place themselves imaginatively in the future. However, the possibility for developing this *"as-if"* projection into the future rests on certain essential elements of the present

[2] A concept used in phenomenology meaning putting on hold.

which are predetermined by personal circumstances and the stock of knowledge at hand.

Zucker uses Schutz's ideas to develop *background expectations* as a key concept in institutional-based trust theory. She defines this concept as:

> the common understandings that are taken for granted as part of a world known in common Zucker (1986) (p. 57).

Zucker defines two subcomponents of background expectations: *shared symbols* and *shared interpretative frames.* Shared symbols refer to shared signals and codes in a social group. Shared interpretative frames refer to the reciprocity of perspectives and the idea that everyone in the same social group should see events in the same way *"by making use of pre-established social facts or socially warranted knowledge"* (p. 57).

3.6. Constitutive expectations

Zucker borrows the concept of *constitutive expectations* from the work of Garfinkel (1963, p. 190), including his ethnomethodology programme (Garfinkel, 1967). Like Schutz, Garfinkel was concerned with the mundane reality of daily life, the "natural facts of life in society". However, his phenomenological approach focuses on the role of agreed norms and the specificity of particular contexts, exchanges and interactions. This approach contrasts with Schutz's ideas (used by Zucker to develop background expectations), which are concerned with culturally developed frames of reference and unreflective behaviour.

Garfinkel, studied the existence of preconceived rules of engagement in social interaction which constrain action and enable the prediction of behaviour. In his seminal work "A conception of, and experiments with, "trust" as a condition of stable concerted actions", Garfinkel (1963) conceives trust as the compliance with socially established rules of behaviour. He demonstrates the existence of these socially established rules through an analysis of players' behaviour in social games.

Garfinkel posits that rules in games, like in social settings, serve for each "player" to interpret the adversary's behaviour as well as his own. Rules establish normality because they become accepted and shared by all parties. Garfinkel identified three key properties of rules, later condensed into two rules by Zucker (1986, p. 58). According to Zucker, the first property is *independence from self-interest,* meaning that the set of alternative actions available to an individual is specified *"regardless of his own interests, circumstances, plans or consequences of choice either to himself or to others".* The second is *intersubjectivity of meaning,* where an individual knows what to expect from a situation and is aware that the other individual knows what to expect, and also knows that the other knows that the he knows what to expect. For Garfinkel, these properties are equally applicable to social settings in normal daily life. He says:

> these properties are not particular to games but are found as features of the "assumptions" that Alfred Schutz, in his work on the constitutive phenomenology of situations of everyday life, has called the "attitude of daily life. (Garfinkel, 1963, p. 209)

The above two properties foster the perception of normality in situations, allowing people to carry on acting in the world as normal. Garfinkel characterises normal situations when they present five key characteristics: *typicality*, (the receiver perceives features as instances of a class of events); *likelihood*, (the perception of likelihood of occurrence of an event); *causal texture* (the ability to compare with past or future events); *instrumental efficacy* (position in a means-end situation); and *moral requiredness* (necessity according to natural or moral order). When discrepancies from what is considered "normality" are perceived, a process is triggered of *"perceptual and judgemental work, whereby such discrepancies are normalised"* to restore the values of the characteristics described previously.

Perception of normality is a key concept in Garfinkel's work. He suggests that we constantly create the "taken-for-granted" world which we feel we "know" and can be "at home" with. We perceive our social world through a series of patterns we have created to make sense of and cope with the variety of situations that we encounter everyday. This is necessary to avoid the confusion we would experience if we saw everything in the world as if for the first time.

For Garfinkel, norms and procedural rules are important for establishing cognitive guidance systems which are used reflexively to assure individuals and those around them that their behaviour is acceptable and reasonable. Deviation from these general rules may lead to emotional distress but, according to Garfinkel, sometimes this is necessary in order to make apparent the underlying rules of behaviour. Garfinkel developed *ethnomethodology* as a technique that allows temporal disruption to the world which people take for granted, in order to study patterns and unconscious norms of behaviour. For example, in one of his experiments, Garfinkel asked students to behave as visitors in their own homes, and record the bemused reactions of their parents as they struggled to comprehend the sudden disruption of the informal relationship built up over many years with their children.

Ethnomethodology - literally *"the study of people's methods"*- is an approach to social investigation which aims to understand the development of shared knowledge in social settings. This approach is fully described in Garfinkel's book, "Studies in Ethnomethodology" (Garfinkel, 1967). The objective of this technique is expressed in its name: *ethno* refers to the local, indigenous production of knowledge, while *methodology* refers to the fact that knowledge requires the establishment of rules for it to be become actionable.

According to ethnomethodological principles, reality, while socially constructed, is intersubjective and is shared as a world-known-in-common. Individuals construct reality by externalising and objectifying what for them is real. At the same time, what is external and objective defines what is real for the individuals. Ethnomethodology sees cognition operating beneath the level of consciousness; routines are governed by “rules” and “scripts” and are only recognised and noticed when they are breached.

Zucker (1986) sees the concepts of *background expectations* and *constitutive expectations* as complementary. They coexist and may to some degree be substitutable. Both background and constitutive expectations are necessary for trust development, but trust will vary depending on the relative amount of each component. When the importance of one component increases, the importance of the other tends to decrease. Zucker says:

> abundant background expectations reduce the need for constitutive expectations because some otherwise attractive alternatives are redefined as non-alternatives by the factual quality of the social order

3.7. Operationalisation of theory

As explained earlier in this chapter the decision to adopt Zucker’s institutional-based trust theory reflects the need to answer the main research question set in Chapter 2, i.e. *“how do intranets become institutionalised in organisations?”.* The aim is to use the theory to understand the processes underpinning the embedding of the intranet in organisational work practices and it becoming taken for granted by employees. Previous sections in this chapter have explained the rationale for this decision and reviewed the core concepts in this theory. This section explains how the theory will be used and operationalised for data collection and analysis within the context of intranets in organisations.

Chapter 2 showed that intranets evolve in organisations and dynamically interplay with the cultural context of their hosting organisation. Two processes of interplay were identified. One refers to the organisation shaping the intranet. The second refers to the intranet changing the organisation. These two processes occur concurrently in consecutive loops of interaction, tightening the coupling between the two sides through changes in 1) content and applications to support new administrative and business processes (such as room bookings, travel, pay slips, etc); and 2) layout, structure, design and tone of language to reflect changes in culture, values and beliefs of the employees (due to changes in senior management, mergers and acquisitions, etc). Ultimately, these mutual changes will embed the intranet in the formal functioning of the organisation and in the routine work behaviour of employees. These two effects of the interplay represent the concepts used by Zucker (1987, p. 444) to define institutionalisation:

> (a) rule-like, social fact quality of an organised pattern of action (exterior), and (b) an embedding in formal structures, such as formal aspects of organisations that are not tied to particular actors or situations (non-personal/objective)

As described earlier in this chapter, Zucker (1986) develops two key theoretical concepts to explain the process of institutionalisation: constitutive and background expectations. Zucker argues that these two types of expectations are developed routinely by people through their ongoing interactions with the features of the world around them. In the context of intranets, these expectations about the functioning of the system emerge through the ongoing use of this technology as part of the daily routines and habits of the employees. Gradually, employees expect to find certain information and business processes on the intranet and expect it to resemble and reflect the imagery, style and voice of the wider organisation. Constitutive expectations emerge as employees develop expectations that the intranet has become embedded in what they perceive to be the constitutive functioning of the organisation – in other words, the gradual perception that the intranet is part of the formal environment that anchors their expected behaviour as employees. Background expectations emerge as employees gradually come to see the intranet as a familiar and normal feature of their everyday life – in other words, the intranet becomes unnoticed and part of the background, as it becomes routinely used by employees.

These two theoretical concepts were used to support the collection and analysis of the data. The following sub-section explains how they were operationalised in order to explain the institutionalisation of intranets in organisations.

Constitutive expectations

Constitutive expectations are developed through the gradual embedding of the intranet in the expected formal functioning and way of working of the organisation, by establishing rules and governance that formalise its use inside the organisation.

Constitutive expectations are produced through mutual changes to the intranet and the organisation, such as: 1) newer and clearer roles and responsibilities becoming more formalised; 2) governance of the intranet penetrating the executive structure of the organisation; 3) stronger links with relevant steering committees; 4) clear and shared standards for publishing content; and 5) systems being put in place to monitor compliance to standards and guidelines. These ongoing changes will gradually transform the functioning of the intranet to increasingly reflect the formal functioning of the organisation.

More specifically, mutual changes at five different levels are expected to foster the development of constitutive expectations:

- *Governance, roles and responsibilities*: roles and responsibilities are increasingly formalised and understood by stakeholders.
- *Controls, policy and standards*: policies regulate the publishing of content and the use of the intranet in the organisation
- *Senior support and regulatory enforcement*: senior leaders support the intranet and enforce its use through company regulations
- *Purpose/alignment with the business*: the intranet's role and purpose is understood and there is a strong link with business objectives
- *Importance and benefits*: important business processes on the intranet demonstrate the impact and benefits for the organisation.

Background expectations

Background expectations are developed by the growing collective perception that the intranet is familiar and part of the world known in common. The intranet then becomes part of the routine working procedures of the employees and its use and availability taken for granted by them.

Background expectations are produced through mutual changes to content and design to increase the resemblance between the real organisation and its electronic representation on the intranet. Over time the intranet becomes perceived by employees as a normal feature of organisational life. This mirroring effect is fostered by the use of similar images, colours and logos which make the intranet more familiar to users. As more services and applications are made available on the intranet, employees will use it more frequently, so it becomes part of their everyday routines. Gradually employees learn more about how to use the intranet and over time it has the potential to become their preferred channel for "doing things" in the organisation.

More specifically, mutual changes at five different levels are expected to foster the development of background expectations:

- *Familiarity and normality*: the intranet looks like what employees expect and shows similar features to other parts of the organisation
- *Routine and habitus*: the intranet supports routine working processes and becomes part of the habitual working life of employees
- *Usefulness and ease of use*: the intranet helps employees perform their tasks and is perceived to be easy to use
- *Preference and persistence*: the intranet compares favourably to alternative media and is considered as a given for new employees
- *Reflects reality and fairness*: the intranet is perceived to reflect reality in a fair and balanced way by employees.

3.8. Summary of chapter

This chapter presents the concept of institutionalisation and situates this study within the large body of literature analysing this phenomenon. The chapter first explains the choice of theory by comparing alterative theoretical approaches to deal with the main research question set in chapter 2. It then provides background information about the conceptual constitution of the chosen theoretical framework. The work of Zucker and her institutional-based trust theory (Zucker 1986) is suggested as the central theoretical lens adopted in this study. Institutional-based trust theory is then explained in detail, together with the ideas of Garfinkel and Schutz, from which Zucker developed the two core concepts of her theory: constitutive and background expectations. The distinct focus of this study on organisational practices as a driver of institutionalisation is highlighted as a key contribution to the field. The chapter ends by explaining how the theory will be used during data collection and analysis and its operationalisation in the study of intranets in organisations.

3.8.1. Contributions to theory

This study makes a key contribution to theory by re-centring institutionalisation at the level of the organisation as a process of *generation,* providing a distinct view of this phenomenon compared with the more dominant view of institutionalisation as a process of *reproduction* at the level of the industry.

Another key contribution is the operationalisation and adaptation of Zucker's theoretical concepts to explain the institutionalisation of technology in organisations. The two core theoretical concepts in Zucker's (1986) institutional-based trust theory are operationalised to support the collection and interpretation of data from the case study. The operationalisation of this theory in a qualitative study is another contribution to the literature.

The study also contributes to institutional theory by analysing the role of interplay between technology and its context of use, as a driver for institutionalisation. Ongoing mutual changes to the technology and the organisation are unravelled and analysed to study their role in the embedding of the intranet in the formal functioning of the organisation and the collective perception of the intranet is a normal feature of organisational life.

3.8.2. Main themes

Alternatives and background to chosen theory: three theoretical approaches were considered relevant but not chosen to support this research: Gidden's Structuration Theory, Clegg's Circuits of Power and Meyer and Rowan's institutional thinking. Instead, Zucker's work was deemed the most appropriate for answering the research question posed in chapter 2 because it allowed a focus on organisational processes and study the phenomenology of institutionalisation as a process of interplay between the technology and its context of use.

Institutionalisation and new institutionalism: Institutions are defined as typified patterns of behaviour in social settings. New institutionalism sees these patterns as the result of cognitive and cultural processes fostering the development of shared norms and agreed behaviour. Over time norms and routine behaviour become external to individuals and intersubjective (part of the world known in common).

Institutionalisation as a process of trust development: Institutionalisation is seen as a process by which individuals develop familiarity and a sense of normality with a situation or artefact. Trust is a property of the social environment which is routinely produced and reproduced by humans in a social setting.

Institutional-based trust theory: Zucker published a number of papers explaining institutionalisation as a social and organisational phenomenon. In

1986, she developed the two core theoretical concepts underpinning her institutional-based trust theory (Zucker 1986). The first, *background expectations,* refers to the process by which new features become taken for granted and part of the world-know-in-common. The second, *constitutive expectations,* refers to the embedding of new features in the formal functioning of a system.

Background expectations: Zucker develops this concept based on the work of Schutz (1962, p. 207-259). The concept of *background expectations* describes the way in which humans operate in world by taking for granted a vast array of features of their environment. Humans act in the world unreflectively until an event disrupts what they consider to be an exception to the natural attitude of normal daily life. According to Schutz, normal behaviour operates at the level of the unconscious: as long as a situation is perceived as normal, people will follow instinctive behaviour or a common-sense attitude to operating in what, for them, is the world known in common. Background expectations are developed by the growing collective perception that the intranet is familiar and part of the world known in common. The intranet then becomes part of the routine working procedures of employees and its use and availability taken for granted by them.

Constitutive expectations: Zucker develops this concept based on the work of Garfinkel (1963), including his ethnomethodology programme (Garfinkel, 1967). According to Garfinkel, human behaviour is constrained by socially agreed norms of behaviour. Over time, these norms became independent of self interest and intersubjective in meaning. Constitutive expectations are developed through the gradual embedding of the intranet in the expected formal functioning and way of working of the organisation by establishing rules and governance that formalise its use inside the organisation.

3.8.3. Linking with the rest of the thesis

The theoretical model developed in this chapter will be used to present findings in chapter 6 and to analyse these findings in chapter 7.

Chapter 4
Methodology

This chapter clarifies the philosophical position taken in this study and describes the methodological process used to gather and analyse empirical data. In line with the interpretive research tradition, a single in-depth longitudinal case study research strategy is adopted, with qualitative and quantitative data gathered using Creswell's (2003) sequential exploratory research design. This method privileges qualitative findings but uses quantitative data to reappraise aspects of the qualitative research. Successive cycles of hermeneutic analysis are used to triangulate qualitative and quantitative data (Lee, 1991) and develop a longitudinal understanding of the findings.

The chapter starts by describing the philosophical assumptions behind the study and contrasting these with other possible standpoints. The appropriateness of a single longitudinal case study research strategy is then discussed. The final section describes in detail the various stages of data collection and hermeneutic analysis.

4.1. Philosophical assumptions

All social research is influenced by its author's philosophical assumptions about the nature of knowledge and the methods for its acquisition. This is because researchers always approach phenomena with a preconceived point of view about the nature of reality (ontology), the role of the researcher and the use of tools to study that phenomenon (epistemology). As posited by

Denzin and Lincoln (2000), *"there is no value free science"*[3] and all research reflects a standpoint on ontology and epistemology. It is therefore important to clarify the philosophical stance adopted at the start of the research process.

The literature on social research presents various classifications of standpoints. Burrell and Morgan (1979) suggest that researchers can only adhere to one of four mutually exclusive philosophical paradigms: *functionalist*, *interpretivist*, *radical structuralist* and *radical humanist*. They assert that each paradigm examines social phenomena in a way that contradicts the other three. They also state that arguments between different paradigms are difficult to resolve since proponents are arguing not about facts but about differing perspectives of those facts, where even the words and language used have different meanings.

Guba and Lincoln (1994) offer an alternative set of philosophical positions in conducting social research: *positivism*, *post-positivism*, *critical theory* and *constructivism*. Creswell (2002) proposes four schools of thought along the same lines: *post-positivism*, *constructivism*, *advocacy/participatory* and *pragmatism*. In the information systems field, Orlikowski and Baroudi's (1991) have established a classification system which is perhaps the most cited. They propose three possible positions: *positivist*, *interpretive* and *critical*. They argue that the positivist perspective has dominated research in the IS field and suggest more research is needed using the other two perspectives. Since their study was published in 1991, the interpretive method has gained ground in IS research (Walsham, 1995) and is now considered, alongside positivism, as a major philosophical position in this field (Weber, 2004).

The positivist and interpretive paradigms have distinct understandings of the aims and means of research. These are outlined by Lee and Baskerville (2003, p. 229):

---

[3] This is not intended to mean what the interpretivist might call "value free data" which refers to an epistemological position. Instead, this refers to the fact that all science is conducted and interpreted using a set of assumptions about the nature of knowledge.

At the extreme, positivism would hold that any field of study, in order to qualify as scientific, must be nomothetic and therefore work toward the ideal of discovering universal or general laws; at the same time, interpreativism would hold that the goal of universal laws is inappropriate in the study of human affairs because individuals, groups, and other social units are all unique, and therefore demand idiographic theorizing instead.

Positivist research assumes an *"objective physical and social world that exists independent of humans, and whose nature can be relatively unproblematically apprehended, characterized, and measured"* (Orlikowski and Baroudi, 1991, p. 9). The role of the researcher is to "discover" the facts embedded in that objective reality and develop constructs for assessing the relationships between these facts. In contrast, interpretive research assumes that our knowledge of reality is socially constructed, hence there is no objective reality which can be discovered by researchers and replicated by others (Walsham, 1993, p. 5).

Not all authors see these philosophical perspectives as mutually exclusive (Burrell and Morgan, 1979). Some, have questioned the boundaries between the two positions (Creswell, 2002, Lee, 1991, Mingers, 2001) and proposed more "integrated"[4] approaches (Lee, 1991) to conciliate perspectives. In a recent editorial note for MIS Quarterly, Weber (2004, p. xii), made a plea for unity between the two approaches:

I no longer want to be labelled as a positivist researcher or an interpretive researcher. It is time for us to move beyond labels and to see the underlying unity in what we are trying to achieve via our research methods. The commonalities in my view are compelling and paramount.

This discourse highlights the need to clarify the philosophical position taken by a researcher in order to be transparent in terms of consistency and justification of objectives, methods and findings. Orlikowski and Baroudi argue

[4] "Integrated" is the term used by Lee (1991), other authors have used alternative terms. Creswell (2003) uses the term "mixed" and Mingers (2003, 2001) "multi-method" or "pluralist".

that this choice should reflect the researcher's objectives, and should not blind him or her to other approaches:

> Researchers should ensure that they adopt a perspective that is compatible with their own research interests and predispositions, while remaining open to the possibility of other assumptions and interests. They should understand and acknowledge the extent to which the perspective they adopt will focus their attention on some things and not others, and bias their perception of the phenomena they study (Orlikowski and Baroudi, 1991, p. 24)

This study considers the interpretive paradigm to be both appropriate to the chosen research question and in line with the author's views. The interpretive standpoint is well established in the IS field, particularly in the study of intranets (Lamb, 2002, Newell et al., 2001, Newell et al., 2000, Newell and Swan, 1999, Newell and Swan, 2000). A positivist or fully quantitative approach would not work so well, since such studies *"emphasise the measurement and analysis of causal relationships between variables, not processes"* (Denzin and Lincoln, 2000, p. 8).

In interpretive studies, such as this one, theory is used to support the interpretation of facts and not to develop concepts for subsequent testing, as used in positivist studies. Taking an interpretive stance may be seen as incompatible with the use of theory in social research if the author makes a strong a priori commitment to the constructs and principles of the theory adopted. This was not the case in this study, where the author allowed the data to drive the research and used theory only to support the interpretation of facts. This is in line with the position taken by Klein and Myers (1999), who suggest that the emergence of interpretive research is not compromised by the use of theoretical principles. They argue that researchers may use theoretical principles for judging and interpreting events without adhering too strongly or unquestioningly to such principles. They further argue that the use of principles in interpretive research makes the logic of the research more explicit and provides a mechanism for others to judge the quality of the research undertaken.

It is also important to clarify the role of the researcher in the research process. In line with the interpretive position, the researcher "constructs" his own interpretation of the facts, examining phenomena within their real context and uncovering their inherent complexity. Denzin and Lincoln (2000) characterise this role or position as a "bricoleur", quoting Levi-Strauss's definition: *"a bricoleur is a Jack of all trades or a kind of professional do-it-yourself person"* (Denzin and Lincoln, 2000, p. 4). They go on to explain that a bricoleur produces a "bricolage" which is a *"pieced-together set of representations that are fitted to the specifics of a complex situation".*

"Bricoleurs" use *hermeneutics* to analyse data and withdraw relevant meaning. This method has a long tradition in IS research (Lee, 1994, Myers, 1997) and can be defined as the philosophy of the interpretation of meaning. Originally developed to allow readers and authors from different social and cultural backgrounds to interpret texts, it is also a method by which social scientists interpret actions in a social setting (Boland, 1991). Within the context of this study, hermeneutics is used to analyse the evolving interplay between the intranet as a technology and its hosting organisation. Hermeneutics is well suited for this task, as posited by Boland:

> the output of an information system is an unfamiliar text to be read, interpreted and made meaningful by those who use it in ways that will always surpass any clear representation the system's creators had in mind... studying that process of interpretation is the hermeneutic task for information systems research (Boland, 1985, p. 440).

Another aspect of the philosophical standpoint of this study is its focus on employee perceptions and their attitude towards the intranet as a part of their organisational lives. This objective is inherently phenomenological in that it aims to study the essence of "being" that gives sense to our everyday experiences. A phenomenological study *"describes the meaning of the lived experiences for several individuals about the concepts of the phenomenon"* (Creswell, 1998, p.51). Several authors have called for greater emphasis on studying *"the theories that these individuals carry around inside their heads"*

(Kramer, 1996, p. 238). Thus, this study is also phenomenological and adopts concepts from Schutz and Garfinkel, both of whom were deeply committed and rooted in the phenomenological movement of Hurssel (1859-1938).

Phenomenology is used to explore gradual changes to employee perception and behaviour as technology becomes more embedded in their work practices and organisational life. It is used to identify changes over time; therefore the phenomenological analysis stays at a higher conceptual level compared with other studies where the focus is to go deep into the real meaning or essence of being.

4.2. Research strategy

This study follows the single longitudinal case study research strategy described by Yin (1994). As per Lee and Baskerville's (2003) framework of research methods, it aims to use a detailed and rich description of a unique case with theory. This research strategy was considered the most suitable given the study's objectives and the criteria developed by Benbasat et al's (1987, p. 370) as described in Table 3 below.

Criteria for case studies	Applicability in this study
Phenomenon is examined in a natural setting	The researcher was directly involved with the organisation and personally exposed to the events as they unfolded.
Data are collected by multiple means	Several sources are used including: documents, back ups of intranet, record of logs, interviews with stakeholders and users, focus groups with users and a large employee survey.
One or few entities are examined	Only one organisation is analysed, a bank in the UK.
The complexity of the unit is studied intensively	Full access to all documentation related to the intranet, copies of the intranet, unlimited freedom to interview relevant stakeholders, including users, full support in organising several focus groups and a large employee survey. Data covers five years of intranet use in the organisation.
More suitable for exploration, classification and hypothesis development	Aim of this study is exploratory in nature as it follows the evolution of the intranet over a five-year period and seeks to understand the process by which the intranet became institutionalised in routine behaviour and habits of employees.

No experimental controls or manipulation are involved	No variables are fixed or tested and no experimental settings are developed or used.
No specification of independent and dependent variables in advance	No *a priori* variables are fixed. In line with interpretive research, some concepts are derived from the literature and theory to support data collection and analysis but they are used to give focus and provide guidance for discussion, rather than as constructs or variables to be measured or tested.
The results derived depend heavily on the integrative powers of the investigator	Philosophical position of the researcher clarified in section 4.1. Researcher acknowledges his role as "bricolour" in interpreting events.
Changes in site selection and data collection methods could take place as the investigator develops new hypotheses	The longitudinal nature of the study allows for incorporating learnings from successive cycles of hermeneutical analysis. This is explained in section 4.3.
Useful in "why and "how" questions because they deal operational links traced over time	The main research question is a "how" question aiming to understand how intranets become adopted and institutionalised in organisations.
The focus is on contemporary events	Study covers recent evolution of the intranet in the organisation. Data collected covers the period from 2000 until 2005.

Table 3: Use of case study research strategy as per Benbasat et al. (1987, p. 371)

4.2.1. Longitudinal research

The purpose of this study is to understand how intranets become institutionalised in organisations. Institutionalisation is seen as a long-term process requiring a longitudinal approach to data collection and analysis. Longitudinal studies allow the examination of gradual changes to the technology and the organisational practices (Pettigrew, 1990). Thus, this study follows the historical evolution of an intranet in a bank in the UK over a five-year period (from 1999 until 2005) and aims to capture changes in the technology and the associated work practices over this period of time.

Vitalari (1985) points out the following benefits of longitudinal studies. First is their ability to track changes and monitor responses and behaviour over time. He argues that *"an understanding of a particular social system is dependent upon the monitoring of these accommodative, adaptive and negotiated responses"* (p. 250), adding that longitudinal studies are particularly appropriate for triangulating qualitative and quantitative data and developing rich understanding of events. Second advantage of longitudinal studies is that they allow for an iterative process in which exploratory and target data collection stages can be continually employed. In this way, learning can be incorporated into successive cycles of data collection, thus improving the accuracy of interpretation and analysis. Third, since social settings do not change *"by the minute or hour"*, action and reaction cycles must be observed over longer periods, such as months and years. Fourth, longitudinal studies offer greater opportunity to capture the complexity of events and the inherent relationships between phenomena.

Longitudinal studies must be accompanied by a research strategy that meets their particular requirements. Vitalari (1985) recommends that longitudinal studies *"should be combined with other research methods such as case studies"* (p. 254). This is precisely the approach adopted by this study.

The researcher was aware of the guidelines provided by Pettigrew (1990) for conducting longitudinal research. Some of the limitations of this approach relate to the fact that longitudinal studies are time consuming, costly and require continuous support from the host organisation. The researcher was well aware of these limitations and was able to secure sufficient resources and commitment from the organisation to meet the study's objectives from the outset.

4.2.2. Selection of organisation to conduct study

There were three main challenges involved in finding an organisation to study. First, the organisation had to be willing to offer full access to data and to arrange interviews, focus groups and an employee survey (made harder by the fact that the intranet is distributed across various organisational functions). Second, it would have to commit long term to the study so its intranet's evolution could be analysed over time. Thirdly, the intranet would have to be established and embedded in organisational practices (since the objective is to study the process that led to this institutionalisation).

Preliminary approaches to industry groups led to an invitation to address a gathering of intranet managers on 20th May 2004 organised by the Intranet Benchmarking Forum[5]. Following that session, a number of participants expressed an interest and after some further meetings and exchanges of information Alliance & Leicester (A&L) became the partner organisation for the study.

The choice of A&L was based on the criteria listed above. A&L agreed to provide access to interviewees and to all current and past documentation, to facilitate meetings with key stakeholders across the organisation, and to conduct a large employee survey. Secondly, it showed long term interest in the study and a willingness to cooperate for its entire duration. Thirdly, the intranet had become integral to the way of working at A&L and was perceived as business critical (evidenced by the fact that the intranet is included in the organisation's contingency planning). The terms and conditions for the study were subsequently agreed with A&L's intranet manager and empirical work started in early June 2004.

4.3. Data collection and analysis

In order to study the evolution of A&L's intranet, data was collected to reconstruct its history over a five-year period. The method for data collection and analysis emulates the work of Markus (1983). She uses documentation and interviews to chart the evolution of an accounting information system in a large US manufacturing firm. Using various data sources, Markus was able to develop an understanding of the feelings of users and other stakeholders during the implementation of this system, and to reflect on possible reasons for their resistance to change. This study uses the same technique to cover the history of the A&L intranet from late 1999 until 2005. The researcher was involved in data collection for the period from Jun 2004 until September 2005. To capture events prior to Jun 2004, the researcher relied on secondary data acquired through document analysis and interviews with stakeholders.

[5] More information about this organisation can be found here: http://www.ibforum.co.uk/

4.3.1. Research design

The study uses Creswell's sequential exploratory research design, as illustrated in Figure 3 (below). This relies on qualitative data as a primary source of analysis and interpretation, but also uses quantitative data to reappraise some of the qualitative findings.

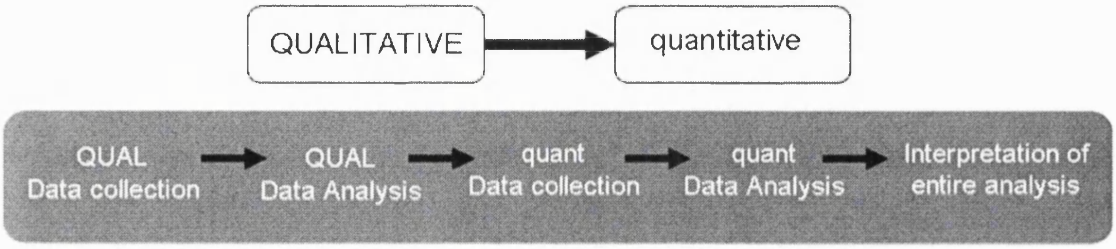


Figure 3: Sequential exploratory research design as per Creswell (2003)

Creswell posits that *"the purpose of this strategy is to use quantitative data and results to assist in the interpretation of qualitative findings"* (Creswell, 2003, p. 215). In particular, a large employee survey was needed at the end of the analysis to canvass views from a wider range of employees and test some of the concepts related to the institutionalisation of the intranet in the organisation.

The research design also supports the interpretative and exploratory nature of the study: as explained by Creswell, *"the primary focus of this model is to explore a phenomenon" (p.215).* Other contexts in which the research design could apply are for testing and generalising new theories emerging from qualitative work (Morgan, 1998) and determining the distribution of a phenomenon in a population (Morse, 1991).

The sequential exploratory research design method has two main stages. In the first stage, qualitative data is collected and analysed. In the second stage, qualitative findings from the first stage are assessed alongside the quantitative data. Within each stage there are several cycles of hermeneutic analysis and interpretation, with regular triangulation of data from various sources as discussed by Lee (1991) and Mingers (2001). Kramer (1996) argues that triangulating data from interviews, observations and document analysis is important, especially in studies that focus on humans and their perceptions within the context of an organisation.

The use of quantitative data in interpretive research is dismissed by some authors as invalid, even if used only to support qualitative findings. However, other reputable authors (Creswell, 2003, Lee, 1991, Mingers, 2001) have refuted this position and justified the use of quantitative data in all philosophical paradigms (Myers, 1997).

Three types of data were analysed in this study: 1) documents, copies of the intranet and other records; 2) interviews, focus groups and observations; and 3) an employee survey. The researcher had unlimited access to all types of data, including management documentation, interviews and back-up copies of the intranet. A full list of the data used in the study is provided in appendix 9.1. The next few sections describe the techniques employed to gather each type of data.

4.3.2. Documents, copies of intranet and other records

Ninety three documents were collected, categorised and analysed. A detailed list of these documents, coded by category, is provided in appendix 9.1. The documents included management reports, policies, user feedback reports, copies of the intranet site and logs of usage of the intranet.

The volume and quality of this data is consistent across the five years covered by the study and allows for the longitudinal reconstruction of the intranet's historical evolution. A graphical representation of the timeline for all data collected is available at the beginning of appendix 9.1. Below is a detailed description of all types of documents and records collected:

Management documents: these included notes for meetings of the IMG (Intranet Management Group) and IOG (Intranet Operations Group) covering the five years of analysis. Other types of documents analysed included management reports to the board (for example, the initial business case for the intranet), consultancy reports (for example, a roadmap prepared by BT) and various internal reports addressing ad hoc management issues. Documents not directly related to the intranet were also analysed, including corporate documentation and media reports.

User feedback documentation: these included year-on-year usability testing reports, user satisfaction surveys and expert reviews, providing a rich pool of data on employee perceptions of the intranet. Reports from employee focus-groups conducted in 2000, 2001, 2002 and 2003 were particularly helpful in identifying changes in user attitudes towards the intranet. The annual employee survey was another useful source of information as it provided quantitative and qualitative feedback on user expectations for every year of the analysis.

Policies: there was unlimited and full access to all the policies, standards, procedures and other formal documentation directly or indirectly related to the intranet. Some important documents reviewed were the "Intranet Standards" document and the "Stakeholder Contract" which effectively regulates the publishing of information across the intranet.

Intranet backup copies: two full back up copies of the intranet site were analysed, the first taken on 16th July 2004 and the second taken on 25th February 2005. These were needed to capture changes in the design and structure of the intranet. In addition, free navigation of the intranet and extraction of screenshots was made possible throughout the study period.

Log files: log files were analysed from 2000 to 2005 and included full information on hits per page and usage of sites across the intranet.

4.3.3. Interviews, focus group and observations

Thirty employees were either interviewed or participated in focus groups. There were also a number of other informal interviews during meetings and social events attended by the researcher. A list of the more formal interviewees and their roles is provided at the beginning of appendix 9.1. The guidelines used for each type of interview are available in appendix 9.2. Participants fell into three categories: the first were employees in the management team, intranet stakeholders and publishers; the second were intranet users at different levels and functions of the organisation (who were interviewed through focus groups); and the third were call centre employees and admin staff who were observed and interviewed at their workplace during normal work activities.

In-depth interviews with managers and publishers: twenty members of the intranet team, including employees from the central management team and stakeholders from other business areas, were interviewed between July 2004 and February 2005. In-depth interviews were conducted with members of the Group Intranet Team (including intranet manager, intranet coordinators and IT strategy manager) and several content publishers (from marketing, HR, legal and compliance, retail network, charities and social news). Some further interviews with the intranet team were conducted during the period February 2005 to September 2005.

All interviews lasted just over one hour and were recorded and transcribed soon afterwards. Interviews with publishers followed a more structured approach designed to identify procedures for publishing content, roles and responsibilities and compliance with policy across the organisation. Interviews with the users were semi-structured and based mainly on the themes from the literature review and theoretical framework. All interviews were driven by topics arising from the literature review and concepts drawn from the theoretical framework. Interviews followed Kvale's (1996) technique of *"posing short questions and getting long answers"*. This allowed respondents to use their own language and convey a personal sense of their individual experiences. It also helped the researcher to get closer to concepts, meanings and relations between the respondents and the research subject.

Focus groups with users: two focus groups were organised, involving a total of eleven intranet users. The first focus group comprised six users from call centres while the second involved five users from across the organisation who had participated in a similar exercise in 2002. A list of interviewees and participants in the two focus groups is provided in appendix 9.1, and the guidelines used in the focus group meetings are contained in appendix 9.2. Both focus groups were held on 24th February 2005.

Interviews with users and observations: interviews with intranet users, mainly admin and call centre staff, produced observations about how the intranet was used for everyday activities. Call centre staff use the intranet to provide customer service and represent a large proportion of the total workforce (5,500 staff out of 8,500 working in frontline roles).These sessions were more informal than the focus groups and not all were recorded. In such instances, notes were taken of employee responses and observations about the use of the intranet.

4.3.4. Employee survey

As a final stage of the research process, a large employee survey was conducted, as described in section 4.3.1. The purpose of the survey was to test some of the qualitative findings from the previous stages of analysis against a much larger sample of employees, and provide a more holistic view of how the intranet is used and its level of institutionalisation.

The survey's purpose was to complement and support qualitative findings, and not to draw new interpretations, as proposed by the sequential exploratory research design described in section 4.3.1. This is because, while surveys can be useful for measuring variables and relationships, they are not capable of capturing new meaning. As described by Kramer (1996) they reveal very little about *"the naturally occurring set of categories, dimensions or variables that individuals would spontaneously find salient or invoke"* (Kramer, 1996, p. 239).

Survey statements are shown below and reproduced as presented to the employees in appendix 9.3.

CONSTITUTIVE EXPECTATIONS

Governance, roles and responsibilities
I am aware of policies and procedures that govern how the Group Intranet works
I am aware of how content gets published on the Group Intranet

Controls, policy and standards
I believe that all content is checked and approved by a recognised expert before going live
The tone and style of written content is consistent across the Group Intranet

Senior Support and regulatory enforcement
Use of the Group Intranet is highly recommended by senior management
I need to use the Group Intranet as it is Alliance & Leicester's policy to do so
I have been told I must use the Group Intranet for my job

Purpose/Alignment with the business
I understand the role and importance of the Group Intranet for A&L

Importance and benefits
Alliance & Leicester could not function without the Group Intranet now
I feel the Group Intranet is necessary for my day to day job

BACKGROUND EXPECTATIONS

Familiarity and normality
Wherever you are on the Group Intranet, it still feels familiar
The Group Intranet uses the same language that I do in my everyday work
The Group Intranet reflects how we do things within Alliance & Leicester

Routine and habitus
I never think about whether I should use the Group Intranet or not, I just use it
The Group Intranet has become part of my day to day routine
I would feel I'm missing something if I didn't use the Group Intranet

Usefulness and ease of use
I would like to use the Group Intranet more but the information I need isn't there (Reverse)
There is so much content - I can't always find my way around the Group Intranet (Reverse)

Preference and persistence
New members of staff should be told to look on the Group Intranet if they need information about Alliance & Leicester
I prefer to use the Group Intranet rather than phoning people to find information
I prefer to use the Group Intranet rather than paper manuals to find information

Reflects reality and fairness
As Alliance & Leicester changes, the Group Intranet reflects that change
The information on the Group Intranet is generated by people from across the business
The information on the Group Intranet is dictated by senior management (Reverse)

Survey statements (see list below) were selected to reflect the concepts of constitutive expectations and background expectations described in section 3.7 and preliminary findings from earlier qualitative research. Participants were asked to rank their agreement with these statements on a 1 to 7 Likert scale (1 for complete agreement, 7 for complete disagreement). A full analysis of the results is presented in appendix 9.4. The validity of these statements was tested beforehand on a small group of ten employees. Only minor adjustments were subsequently made to their wording and presentation.

A sample of 2,196 employees, from a total of 9,500 employees in the bank, was selected to participate in the survey. The sample was chosen to reflect the various areas of the business and levels of seniority. The process for selecting names was as follows. First, a complete list of employees provided by HR was sorted by summary category (a level of organisational structure below "Directorate" representing areas of business) and then by employee surname. Second, the first and fourth name from each category list was chosen, thus ensuring a representative spread from across the bank.

The survey was made available electronically to employees from 1st of April to 15th April 2005. As an incentive, respondents were entered into a cash prize draw, with the winner receiving £100 of Marks & Spencer[6] vouchers. In all 955 responses were received - a response rate of 43%. The profile of respondents was as follows (a more detailed analysis is available in appendix 9.5):

- 37% were male and 63% female.
- 80% said they used the intranet at least once a day.
- 40% worked at head office, 22% in the retail network and 21% in call centres.
- 13% were senior managers, 24% were managers and 63% were team members.
- 42% had worked at A&L for over 10 years, 15% for between 6 and 10 years, 26% for between 2 and 5 years.

[6] A large retailer in the UK.

- 27% were aged 45+, 32% were aged 35-44 and 29% were aged 25-34
- 68% were from the retail bank and 19% from the wholesale bank.

Qualitative comments from the survey were also analysed. A total of 167 respondents – around 18% of the respondents – filled in the 'pop-up' box provided *("If you would like to make any comments about the questionnaire, please fill in the box below").* All comments were coded and analysed to extract common themes. A representative selection of comments for each theme is available in appendix 9.6.

4.3.5. Data analysis and the hermeneutic circle

The interpretation and analysis of data for this study evolved over several stages, following closely the hermeneutic process used by Markus (1994). The use of hermeneutics in IS studies is well established (Lee, 1994, Myers, 1997) and discussed in section 4.1. Figure 4 below illustrates the main cycles of analysis involved.

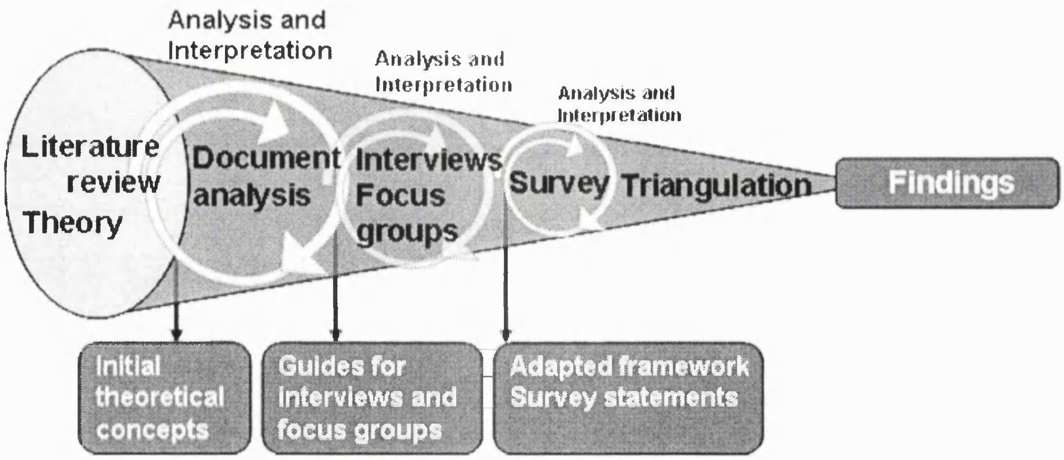


Figure 4: Funnel of hermeneutic analysis

The hermeneutic process adopted by this study was broadly split into three main stages. In the first stage, an understanding of the nature of intranets was developed through a review of the literature. Approximately 300 papers were collected from various library resources and categorised. The 30 papers considered most relevant were then summarised and analysed. Information on the functioning of the intranet at A&L was also collected to gain a clearer picture of the operational environment. A combination of ideas from the literature review and analysis of A&L documentation helped to frame the research questions. At the same time, the theoretical framework for the study – as described in Chapter 3 - was developed.

In the second stage, the focus was on gathering qualitative data from intranet stakeholders and users relating to the ideas and concepts derived from the first stage. The principal objective was to develop an understanding of the historical evolution of the intranet, and to gather evidence of interplay between the technology and the organisation. Data was collected through interviews, focus groups, usability reports and log files, among others. The theoretical framework, which had been adapted to the context of intranets, was then used to guide the last stages of data analysis and the implementation of the employee survey.

In the third stage, the aim was to develop a holistic understanding of the organisation and its intranet by triangulating all data collected. Qualitative and quantitative findings, along with concepts from the literature and theory, were brought together, and the major conclusions of the study were drawn from these.

Progress through these three broad stages of research was accompanied by ongoing smaller loops of analysis, where the researcher would develop understanding of meaning through comparing empirical findings across different sources and themes from the literature. Particular elements of data from various sources were analysed and compared against higher-level themes from the literature in order to develop greater understanding of findings. An example would be when analysing the role of policy in institutionalising the intranet in the organisation. The literature shows that intranet policies develop and adapt on an ongoing basis. Empirical analysis showed that not only the number of policies grew over time, but also the wider company policies changed and adapted to incorporate organisational changes driven by the intranet. This finding seemed highly relevant from a theoretical perspective because it highlights the role of policy in driving the process of institutionalisation (by developing a sense that the intranet is part of the formal functioning of the organisation). This finding was then triangulated with new data gathered from employees about their perception of policy in regulating the intranet environment. These findings were subsequently used to design a large employee survey. Findings from interviews and survey were then analysed in light of the theory in order to develop a more valid understanding of the role of policy in institutionalising the intranet in the organisation.

Furthermore, validity of findings was sought by following Klein and Myers (1999) principles for interpretive field research:

Principle	Examples of steps taken to meet these principles
The fundamental principle of the hermeneutic circle	Particular elements of data from documents and interviews were collected at different points in time to form a higher-level conceptual understanding of findings. The development of these concepts was also informed by key themes from the literature and the theory.
The principle of contextualisation	The study is by nature historical and its longitudinal perspective provides the necessary context to develop a critical reflection of the social background underpinning the development of the intranet in the organisation.
The principle of interaction between the researchers and the subjects	The researcher was well aware of his role in developing and interpreting meaning as he collected data through interviews and observations.
The principle of abstraction and generalisations	The longitudinal nature of this research allowed the idiographic detail regularly collected to be analysed against more general concepts from the literature and theory. Analysis and reflections in one point in time was then used to fine-tune and focus subsequent loops of analysis in order to better assess their connection with higher-level concepts from the literature and theory.
The principle of dialogic reasoning	The researcher used theory to guide the research but allowed contradictive findings to review his theoretical understanding of the events. This attitude allowed him, for example, to see differences in adoption levels between social groups and identify paradoxical findings in terms of awareness of the intranet in the organisation (as discussed towards the end of section 7.1).
The principle of multiple interpretations	Different interpretations of events by interviewees were triangulated against other data sources such as document analysis in order to form a more clear view of facts.
The principle of suspicion	Steps were taken in order to minimise possible systematic bias in the narratives of groups of interviewees. These included careful selection of interviewees from different backgrounds, local observations of employee use of the intranet and a large employee survey was used to complement qualitative findings from interviews in earlier stages of the research.

Table 4: example of measures to improve validity of findings

4.4. Summary of chapter

This chapter serves to clarify the philosophical assumptions made in conducting this study. The chapter also describes all the stages of the research process including reviewing existing literature, developing the research question and theoretical framework and deriving findings from data collection and analysis.

The chapter reviews the various philosophical standpoints in IS research and describes in more detail the *interpretative* position taken by in this study. The chapter then justifies the use of the *longitudinal single case study* research strategy and the process for finding and selecting an organisation to study. The chapter also outlines the *sequential exploratory research design* used for data collection and analysis. It then describes the *types of data* collected and the methods for collecting that data. The following section reflects on the various stages of *hermeneutic* analysis used in the research process.

4.4.1. Contribution to methodology

This study contributes to the methodology literature by using a longitudinal approach to collect data, in order to reconstruct the evolution of a large intranet over a five-year period. It builds on Markus' (1983) study to highlight the value of further longitudinal studies, especially on the interplay between technology and their hosting organisations.

Another major contribution is the use of Creswell's (2003) sequential exploratory research design to complement qualitative findings with quantitative data from a large employee survey. This approach - and the way in which qualitative and quantitative data were combined through the hermeneutic process - also contributes to the body of knowledge in this area.

4.4.2. Main themes

Table 5 summarises the approach and key methodological decisions taken in this study.

Research Strategy	Description of choice
Research questions	Main research question: - How do intranets become institutionalised in organisations? Su-questions: - How can the institutionalisation of intranets in organisations be defined? -What processes underpin the institutionalisation of intranets in organisations? - What are the key implications of institutionalisation to organisations?
Theoretical framework	Zucker's (1986) institutional-based trust theory, complemented with additional interpretation from Schutz (1962) and Garfinkel (1967)
Philosophical assumptions	Follows the interpretative paradigm.
Research methodology	Single in-depth longitudinal case study. Uses qualitative data supported by qualitative findings, as per Creswell's sequential exploratory research design.
Data collection	Document analysis, intranet and logs analysis, semi-structured interviews, focus groups, observations and employee survey. Uses Markus (1983) as main reference model for longitudinal reconstruction of intranet evolution.
Data analysis	Hermeneutic mode of analysis using triangulation of qualitative and quantitative data with three main stages of data collection and interpretation.

Table 5: Summary of research approach

4.4.3. Linking with the rest of the thesis

This chapter describes the process for data collection and analysis and provides contextual background for the ideas presented in the findings chapter (chapter 6).

Chapter 5
Case background

This chapter provides background information on the organisation chosen as the empirical setting of this study, the UK bank Alliance & Leicester (A&L). It includes information about the company, history and culture, together with a description of the functioning of its intranet. The material in this chapter is considered background information and forms a chapter on its own because it does not explain institutionalisation in the way it is conceptualised in this study as a process of gradual familiarisation with the technology and through its embedding in work practices. The purpose of this chapter is, instead, to provide information to help contextualise and situate the process of institutionalisation within the wider environment in which the intranet and the bank operate. All the information conceptually closer to the process of institutionalisation is presented in chapter 6.

5.1. History, market position and culture of A&L

Alliance & Leicester is a 150 year-old financial services organisation based in the UK. A former building society, it was created by the acquisition and merger of a number of smaller societies. During this process it also acquired a number of commercial businesses. One of these, Girobank, was the first bank in Europe to offer telephone banking and the first UK bank to offer free banking to personal customers (Wikipedia, 2006)

The legacy of Girobank is visible today in A&L's market positioning as a *"direct bank with high street presence".* It has also played a role in shaping A&L's organisational culture as a technology-driven bank which aims to be the *"most customer focused financial services provider in the UK - bar none".* This ethos is supported by A&L's commitment to be *"simple and straightforward to deal with"* and *"friendly and approachable"*. These core values are published widely inside and outside the organisation and have become part of A&L's culture and identity.

A&L has two main lines of business: retail banking and commercial banking. *Retail banking* focuses on the provision of residential mortgages, personal loans, current accounts and savings products. *Commercial banking* includes cash handling, commercial lending, business banking, and treasury services. With total assets of £48.4 billion, A&L ranks as the ninth-largest banking group in the UK. It has more than six million retail customers and is present in most regions of the UK through a network of 250 branches. A&L also owns over 2,500 ATM machines and uses 17,000 Post Offices to provide banking services such as managing personal current accounts, small business accounts and bill payments.

Despite the large presence at the local level, the main aspiration and strategy of the bank is to be a major player in the direct market. This strategy reflects the belief of CEO Richard Pym that the behaviour of banking customers is changing:

> "Ten to fifteen years ago, banking customers' buying decisions were dominated by large branch networks. But large branch networks are expensive to run. That expense was traditionally recouped through premium pricing charged to customers. Customers are now recognising the better value they get by using direct channels, and they are also recognising the increased convenience offered."

Therefore, Richard Pym's new business strategy in 1999 was to privilege direct channels such as telephone and the internet and stop the expansion of physical branches; he actually later in 2004 decided to shrink the number of branches by closing near 50 across the UK. As a result of this new focus on direct channels, in the first half of 2004, £3.5 billion of the group's lending was sourced through the internet and a further £1.3 billion via the telephone. This commitment to direct channels was enabled by a strong investment in technology, which in 2004 was claimed to be the largest of any UK bank.

Despite positioning itself as innovative and technology-centred, the bank has a conservative approach to doing business, and considers itself *"a very careful and responsible lender"*. The bank has also made a commitment not to off-shore customer services to countries outside the UK, as described in the official statement below:

> "As a UK-based bank, focused on serving UK customers, we believe our customers prefer to have their calls answered in the UK and will support a bank that is supporting UK call centres. Our staff provides good, friendly service to our customers and we will not put this, or our customer relationships, at risk by outsourcing our core call centres outside the British Isles."

The bank has a large number of front-line staff supporting customers in branches, by phone and internet/correspondence. Staff in the head office are responsible for the administration of accounts and developing new products. A&L has a total of 9,500 staff of which 5,500 are front line, including 1,500 working in call centres.

As a result of its various mergers and acquisitions, the organisation contains a mix of sub-cultures. For example, there is a perceived cultural difference between the retail and the commercial banking businesses. This divide is illustrated by one employee in retail who said that the commercial banking division see retail staff as *"a bunch of retail amateurs who make such a fuss over a bloody mortgage, when they do 'real' banking".*

The culture at A&L also reflects changes brought about by a company-wide programme, called "Strategy 2000", introduced by a new leadership team in 1999. One of the key objectives of this programme was to break with the hierarchical and bureaucratic culture established by previous leaders. This had an impact throughout the organisation in reducing bureaucracy and creating greater transparency. However, some staff were resistant to the new culture and continued to see the bank as "*run by accountants and risk managers*" who had a formal policy for everything, "*including the Christmas decorations*". In addition, the new focus on direct channels created a divide between branches and head-office. Branches, which had previously carried considerable weight at head office, became less powerful and increasingly viewed as a cost centre. Equally, branch employees began to regard head office staff as being, in the words of one interviewee, *"rather superior and ignorant of what goes on at the front-line".*

The A&L intranet emerged in the context of the changes brought about in 1999. The first version was commissioned in 1999 by the new chairman and group chief executive (John Windeler and Richard Pym respectively) to support internal communication of the new business strategy. They were also keen for the intranet to engender a step change in organisational culture towards a more open and transparent style of leadership. The chairman and CEO were great believers in the web and endorsed the intranet as part of their general push to prioritise ebusiness (using web technology inside the organisation) and ecommerce (using web technology to serve customers).

5.2. Functioning of the intranet

The first version of the intranet took six weeks to build and launch. At this time, the underlying technology was simple html code programmed using Dreamweaver software[7]. This simple technical infrastructure would remain the backbone of A&L's intranet for many years. A&L invested significantly in developing standards and templates based on this technology and it had also developed technical interfaces with transactional systems, which stretched the use of this technology outside its typical boundaries. A&L is fairly untypical in this respect because it did not follow industry trends in adopting packaged solutions to manage content, earlier in its historic evolution. It was only in 2005 (after completing the data collection for this research) that A&L started to

[7] Dreamweaver is an software programme to code html websites

realise that they had reached the limit in how much they could stretch the capabilities of this basic infrastructure and decided to implement a new solution based on a packaged Content Management System.

Initially, the first version of the intranet did not extend far beyond reproducing the printed version of *"Strategy 2000"*. However, it evolved to become a critical business tool, as recognised by senior executives in 2005. This evolution is described in chapter 6 when discussing ongoing mutual changes to the intranet and the organisation.

5.2.1. Overview of content and main functions

The intranet's homepage reveals the main areas of content covered and the key functions and processes available through it. The screenshot in Figure 5 shows the design and structure of the homepage in July 2005. At that time, the homepage was organised into four main areas:

- *header area*: main entry point for information and functionality;
- *main content area*: where information is presented;
- *left navigation area*: containing sub menus for easier navigation;
- *footer area*: policy documents, feedback, date and author name.

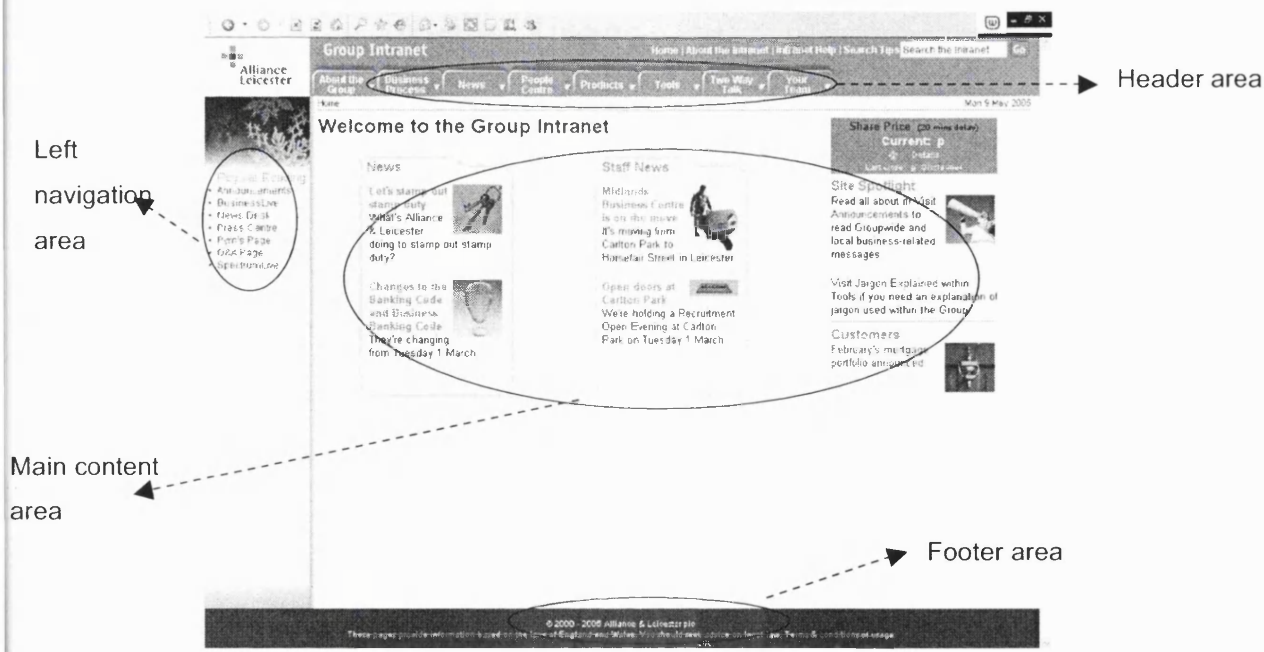


Figure 5: Snapshot of the intranet in July 2005

Understanding the structure of content and information architecture is important as it mirrors organisational priorities. In July 2005 there were eight main content areas on the homepage as described in Table 6.

Content Area	Description
About the group	General information about A&L including a history of the company, a list of directors and board members and company values
Business processes	Information about group wide business processes by function such as IT Solutions, Group Risk, Projects, Regulatory and Legal Services, Supply Chain and Business Continuity
News	Announcements, press centre, costumer views and the popular internal magazines Business*Live* and Spectrum*Live*
People centre	Information about employment (e.g. employee benefits) and business processes (e.g. booking holidays and appraisals). It includes three sub-sites: HR.online (terms and conditions of employment); Pay.online (with information on payments, tax, NI and payment slips); and Training & Development (compulsory and voluntary training courses for all staff)
Products	Includes information on all products and services offered by A&L in retail and wholesale banking
Tools	Offers tools for routine tasks, including a directory list, forms warehouse (forms for internal processes), calculator centre (to calculate loans and savings) and a CARE system (used to manage customer complaints)
Two way talk	Used by middle managers to disseminate information across the organisation. Includes the popular Question & Answers section (where any employee can put a question to senior management and have that question answered and made available to all)
Your team	Where local teams set up their own internal websites, for example Technology and Process Design, Credit Risk Management and the Wholesale Bank

Table 6: Intranet homepage content areas

As these content areas demonstrate, the intranet contains departmental information, supports business processes and is used to share social and cultural content. The director of IT strategy believes that the intranet should be the vehicle to offer *"all business services through the desktop browser to all employees"*. This is evidenced by the number of processes available online. For example, all meetings have to be booked through an application called "Room bookings" which not only finds a room but creates an electronic space for notes and provides a link to individuals' personal calendars. Another important application is "Travel booking", which provides direct access to travel partners for booking business trips. Other applications include a documents warehouse, online pay slips, holiday booking, appraisals and a loan and savings repayment calculator. More detailed information the content on the intranet is in appendix 9.7.

5.2.2. Publishing model

Following the decision to implement the intranet, A&L decided to seek advice from an external consultant on possible approaches and management models. BT was asked to draw up recommendations on how an intranet should function at A&L. Its first report, delivered in 1999, proposed an information management framework with clear roles and responsibilities and a strong governance model as described below:

> BT recommends a clearly defined Information Management framework with roles and responsibilities for content providers, authorisers and publishers. Day to day responsibility for the site should be assigned to an individual responsible to a body that sets direction.

The information management model in BT's report, proposed a decentralised publishing environment, in which local units would be allowed to publish content on the intranet subject to common guidelines and standards set by a central management team. This model was adopted by A&L in 1999 and was still in place in 2005. Figure 6 shows the model as contained in BT's report.

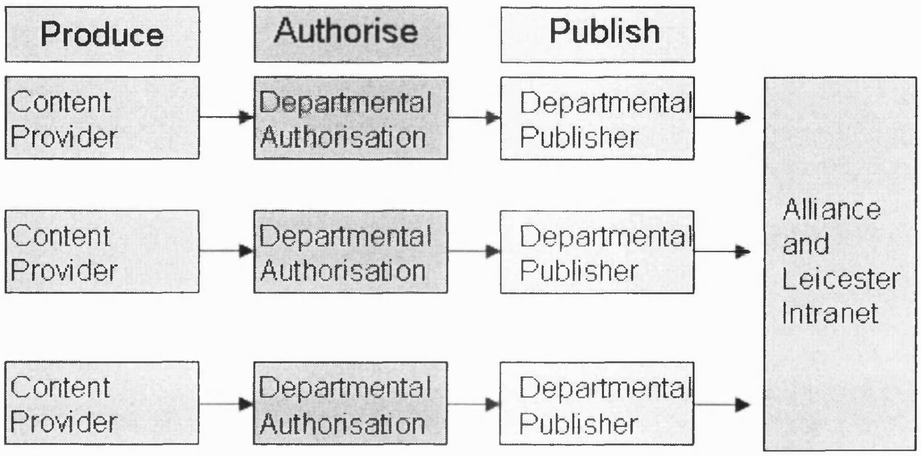


Figure 6: decentralised model as proposed by BT in 1999

The BT report also provided a full description of roles and responsibilities for each function. The role of the central intranet team, in the words of Audrey Philbrooks, A&L's group intranet manager, is to *"regulate the 'how' and not the 'what'"* of intranet publishing. As owner of the standards and guidelines, the team is more concerned with ensuring that the information published meets those standards than prescribing specific types of content. As Audrey comments:

> "No purpose is wrong, as long as that purpose meets with the director's objectives and it fits with group policy; so you couldn't do anything illegal. For example we don't do competitions because of the legal requirements but anything else the business wants to do is fine."

The roles and responsibilities for both the central team and local publishers are clearly visible on the intranet in a section called "About the intranet". This makes clear that the central intranet team is responsible for policy making and local teams are responsible for publishing content according to the policy set by the central team:

> The Group devolves responsibility for the development and publication of intranet content to local publishing teams, who operate within the framework provided by the Group Intranet Publishing Policies and Procedures. Corporate Communications is responsible for the structure and navigation within the Intranet and sets and maintains Intranet Policies.

5.2.3. Organisational structure

Historically, the central intranet team has reported to the corporate communications function. This arrangement is in line with the vision of the intranet as *"the primary communications tool for the group"* as expressed by Audrey Philbrooks. Audrey heads the central intranet team and reports to the director of corporate communications, who is a member of the executive board and reports directly to the chief executive. This close link to the top of the organisation shows the importance and commitment given to the intranet by the executive. It has also, as admitted by Audrey, helped in pushing forward decisions that needed political support from the top of the organisation.

Audrey has two direct reports, Peter Lippiatt and Gordon Cummings. Both have the job title of "intranet coordinator" and assist Audrey in managing the intranet infrastructure and the publishing framework. Audrey, Peter and Gordon coordinate the work of 11 staff from other departments, including the IT department. It is this extended group that is overall responsible for the day-to-day functioning of the intranet infrastructure and constitutes the central intranet team. The following diagram represents the reporting structure of the intranet team within A&L's organisational structure:

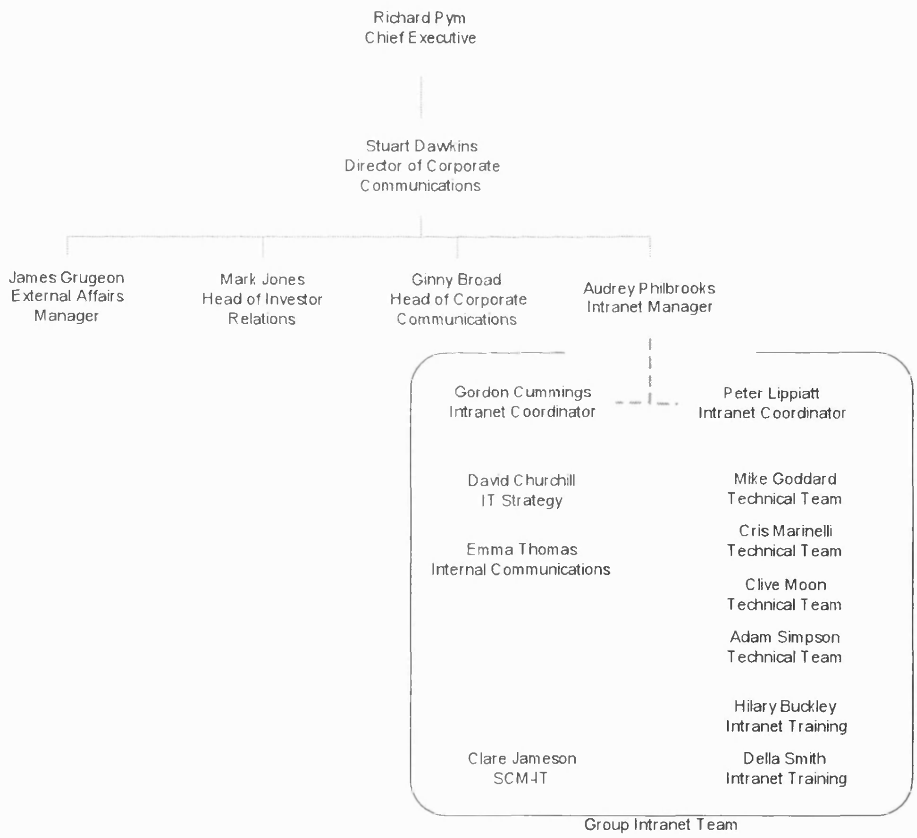


Figure 7: Organisational structure and the intranet team

The central intranet team manages the development of 50 intranet sites. Each site has an independent local publishing team, who together coordinate a community of 80 publishers. The relationship between the central team and the local teams is regulated by a Group Intranet Site Licence. This is effectively a formal permit to publish content on the intranet granted by corporate communications to the department in charge of the local publishing units, as explained in section 5.2.4 below. The licence has to be signed by the heads of both departments and binds each to the common publishing framework defined in the *Group Intranet Policies and Standards*.

The licence requires each local team to establish a team structure including a sponsoring director, licence holder, publishers and authors, site managers and business managers. Figure 8 below illustrates the publishing structure at the local level:

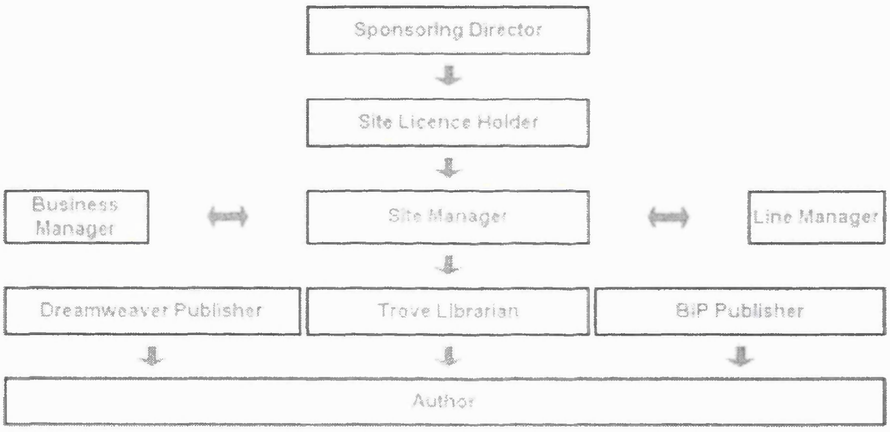


Figure 8: Local publishing team structure

According to this model, *sponsoring directors* should be members of the board, or senior executives that have agreed to support a section of the intranet. *Licence holders* manage the general operation and direction of the site and the relationship between the sponsoring director and the publishing team. *Site managers* manage the development and maintenance of content on the intranet on a day-to-day basis. *Publishers* build web pages in line with group intranet standards, while *authors* produce the content for publication. Where necessary, a site manager may devolve specific responsibilities for content management to a *business manager*. In such cases, the site manager/licence holder retains responsibility for ensuring that a suitable process is in place for checking and approving content, but accountability for the accuracy of content rests with the business manager. Appendix 9.8 lists the roles and responsibilities of all stakeholders in more detail.

The publishing of content on the intranet is highly regulated through a hierarchy of policies. The following statement from the *Web enabled Technologies Code of Practice* illustrates this:

> The generic roles and responsibilities of a publishing team are documented in About the Intranet and the specific responsibilities are documented in each publishing team's site licence document. All materials published on the Group Intranet must adhere to Group Intranet Publishing Standards and Guidelines.

The *Group Publishing Standards and Guidelines* mentioned in the final sentence detail what and how local teams can publish content on the intranet and is the first document they need to consider when proposing new websites. There are several other policies regulating the publishing of content on the intranet, as detailed in the next section.

5.2.4. Policy structure

Proposing a new site requires the completion of several key steps. The following is an extract from the intranet instructions illustrating the rigorousness of this process:

> *First*, complete the **Group Intranet Site Licence** which outlines the objectives and purpose of the site. *Second*, identify list of individuals to fulfil the duties identified in the Intranet Publishing: Roles and Responsibilities. *Third*, complete a **Site Map** which outlines the content that you would like to develop. *Fourth*, complete a **Content Development Plan** which outlines the actions and steps necessary to get the site live. *Fifth*, decide on a site name plus some idea of where you believe the site should sit in the top navigation.

The Group Intranet Site Licence, Site Map and Content Development Plan define common principles, guidelines and standards applicable to A&L websites. Signing and keeping these documents is a key requirement, as stated by company regulation:

> The Group Intranet Site Licence, Site Map, and Roles & Responsibilities are audit requirements and must be held by the Intranet team at all times.

The legal consequences of breaching these regulations are set out in *The Web enabled Technologies Code of Practice* (reproduced in appendix 9.10), which states that:

> You and the Group have legal obligations under the Data Protection Acts to protect personal data, whether such data relates to our customers or to our employees. Any breach of this legislation can expose the Group and you personally, to liability and to enforcement action by the Data Protection authorities.
>
> Publish your intranet pages with the consideration that they may be relied upon in Court.. Breach of this Code could result in Civil and/or Criminal liability both for you and for the Group. If you fail to adhere to this Code, you may be liable to disciplinary action being taken against you under the Group Discipline Policy, including summary dismissal.

At a more operational level, the primary policy that governs the relationship between the central intranet team and the local publishing units is the Group Intranet Site Licence. This constitutes a contract between the central team and the local teams, granting the local teams the right to publish content on the intranet under licence. Audrey Philbrooks explains the purpose of the licence:

> "The Licence sets out what the business objectives are and the need to adhere to all group intranet and group policies. It also sets out the technical service standards, contingency standards and any approved exceptions. It lists their teams, contingency publishers and budgets. It is almost like a contract, in a way."

Once a licence has been granted, local units can begin publishing on the intranet. At this point another set of policies apply. These form part of the *Group Intranet Policies and Standards* and comprise nine separate documents:

- *Basic Intranet Pages Usability Standards*: how to write text for the web
- *Group Intranet Template Design Standards*: covering design of webpages, including the use of colours, logos and all visual appearance of the intranet pages
- *Intranet Update Process*: policy for updates and signing-off procedures
- *HR and legal concerns with Intranet publication*: legal requirements for publishing individual and business information on the intranet
- *File and Folder Standards:* requirements for file location and naming
- *Intranet Focus Group Facilitators Pack*: policy for usability testing
- *Group Intranet Software Policy*: policy for implementing new software
- *HTML Style Standards:* for technical coding of pages
- *Adobe Acrobat Standards:* technical standards for formatting documents.

In order for these standards to become common practice across all local units, publishers and authors have to be trained in their use. This requirement is clearly stated in the instructions for accepting new publishers:

> Attendance on all training courses is compulsory, irrespective of grade, job role and any previous experience. The cost of initial training is covered by Corporate Communications. All training nominations are checked and authorised by both Technology Training Services and Corporate Communications before any training proceeds.

The training programme is structured for different roles, as outlined in Table 7 below.

Roles	Training
Publisher	▪ Introduction to Intranet Publishing ▪ Writing for the Web ▪ Dreamweaver 4 and Fireworks 4 Course
BIP Author/Publisher	▪ Basic Intranet Pages Workshop
Site Manager	▪ Project Management Activity Planning ▪ Introduction to Intranet Publishing
Key author for a site	▪ Writing for the Web ▪ Microsoft Word for Trove.

Table 7: Training requirements for different publishing roles

The degree of regulation described above shows that the intranet is considered important to the business, requiring processes to ensure that content is of good quality and that incorrect information or faulty applications are not disseminated.

5.2.5. Governance at the formal and informal levels

The day-to-day operation of the intranet is managed by the intranet manager, Audrey Philbrooks, and two intranet coordinators, Peter Lippiatt and Gordon Cummings. This team is responsible for overseeing the infrastructure and developing policies. The team also audits and monitors all sites and liaises with publishers on enforcing guidelines.

Strategic planning is formally beyond the remit of this team and has to be approved by special intranet committees. Some decisions will also be escalated to other parts of the organisation, such as the Risk Committee. Table 8 details the role of the committees (includes some comments from Audrey Philbrooks about these groupings).

Committee	Frequency	Purpose
Usability Group	Meets quarterly	Meeting to *"consider the advice of a usability expert, look at current performance and decide next steps".*
Operations Meeting	Meets weekly	Meeting between the intranet team and IT specialists to discuss *"operational incidents, level of service and things like that".*
IT meeting	Meets monthly	Meeting between the intranet manager and IT service manager to look *"at bigger projects that affect the wider infrastructure and aren't specifically about the web service itself".*
Publishers meeting	Meets monthly	Meeting to *"create a kind of social linkage. The primary objective was to bring them together so they could have a buddy system. It is also an opportunity to teach them new things and occasionally beat them when they are all being bad".*

Table 8 List of committees related to the management of the intranet

Part of the responsibility of the intranet team is to manage the community of publishers and keep in regular contact with them. There are 80 publishers across the various intranet websites and Peter Lippiat explains how they are managed:

> "We have around 80 publishers. There are 50 we could perhaps call 'core' and of those probably 30 are really active. So we probably only really deal with 30 people most of the time. What we try to encourage is a cascade of information, so we talk to who we deem to be the main publisher for an area and they would then go back to their publishing teams. We would like to be able to spend time with everybody but we tend to know who our main contacts are... some areas operate a site manager role that manages a team of five or six publishers... so we have an option to talk directly to publishers or to the site manager."

Despite the high level of regulation and tight governance described above, there is a strong emphasis on establishing social connections and a sense of community, both among publishers and between publishers and the central team. Audrey admits that she spends most of her time *"walking the floor"* - talking informally to site owners, publishers, IT people and other intranet stakeholders. She explains the benefits of such informal links:

> "If I see a potential opportunity I go and tell someone it's a great idea, and they will deliver it. and take the glory. I call it the Clint Eastwood approach to management: you just stroll out of town knowing that you've got what you wanted, but you know that someone somewhere is saying 'look at what I've done, isn't it great?"

Developing these informal connections and network with publishers and stakeholders is demanding, requiring effort and commitment from the central intranet team, as described by Peter Lippiatt:

> "We spend a considerable amount of time with the publishers. We don't just send them on a training course and consider the job done. The publisher meetings are devised so that we can get them back in a room at least once a month and reiterate changes in guidelines or processes."

This commitment to establishing relationships with publishers and stakeholders has been recognised at senior management level as critical to the intranet's success. David Churchill, IT director for strategy, comments:

> I think we've done well partly because of people and partly because of personalities. Audrey came on board, went around and shouted at a lot of people. She was the right person in the right place at the right time. One of the things I've noticed in IT is that when things happen from a business perspective it's usually because of personalities, not processes. with the same is true with the intranet.

From the above, it is possible to conclude that the formal and informal elements developed together to create a regulatory environment for content publishing that shaped the intranet's functioning and architecture.

5.3. Summary of this chapter

This chapter describes the history, market position and culture of A&L. It outlines the functioning of the intranet, providing an overview of its content and major functions. Finally, it describes the organisational structure, governance model and policy structure which underpin the management of the intranet.

5.3.1. Main themes

Organisational context: A&L is the ninth largest UK bank according to assets. Its business strategy is to be a "direct bank with high street presence" using technology to transfer customer support from local branches to direct channels such as the telephone and internet. A&L is characterised by a mixture of sub-cultures resulting from various business mergers and a drastic change in the leadership team in 1999. The intranet emerged as part of this new business strategy and an investment in technology to "e-enable" the business.

Intranet's architecture and main functionality: the vision is for the intranet to be a self-service platform and single point of reference for all employees. The objective is to provide information about all organisational functions through key applications and services and social content, such as an online staff magazine.

Publishing model: The organisation has adopted a decentralised publishing model where local teams publish content under licence and observe standards set by a central intranet team. All roles and responsibilities are defined and made clear to stakeholders.

Organisational structure: the central intranet team reports to the head of corporate communications, who is a member of A&L's board and reports to the CEO. The three members of the intranet team manage the work of 11 staff from other departments and coordinate 80 publishers.

Regulatory and policy environment: content publishing is regulated by a number of policies (all published online). A site licence specifies the terms and conditions under which local teams can publish. Other documents explain the roles and responsibilities of everyone involved in creating content, from authors and content owners to senior sponsors. Important decisions are taken at one of a number of pre-established committees.

Formal and informal governance: as well as formal regulation, there is a strong bond between central team and community of publishers and good links between the central team and other stakeholders.

5.3.2. Linking with the rest of the thesis

The material in this chapter is meant to support and contextualise the themes used in the next chapter to explain institutionalisation as a process of gradual familiarisation with the technology and its embedding in the work practices of the organisation. Data in this chapter also supports the answering of the research questions in chapter 7.

Chapter 6

Findings

This chapter presents key findings subsequently used in chapter 7 to answer the research questions. The decision was taken to separate the presentation of data in this chapter from the analysis in the next chapter. This allows the data to be organised chronologically instead of restricting the presentation of the data according to the structure of the research questions. The chapter charts the historic evolution of the intranet from its inception in 1999 to the completion of data collection for this research in September 2005. Management data and user data is presented to characterise four main periods in the intranet's evolution. The focus is on demonstrating the interplay between the intranet and the organisation, and the formal and informal processes underpinning this. The implications of this interplay for the institutionalisation of the intranet within work practices and the social fabric of the organisation are discussed in Chapter 7.

This chapter has four main sections. The first describes key intranet developments in the period 1999-2000, focusing on how a sense of purpose and senior support for the intranet first developed in the organisation. The second section covers the period 2001-2002 and examines how the development of new content and functions increased the intranet's usefulness and made it part of the routine working life of employees. The third section describes key developments in 2003-2004 and how the intranet became more familiar to employees through the digitalisation of communications and services. The fourth section characterises the intranet in 2005, when uncontrolled growth in content and the number of publishers prompted increased emphasis on governance and the formal publishing environment.

This section also presents the results of a large employee survey used to assess the level of institutionalisation among a broader number of employees.

6.1. Intranet developments in 1999 - 2000

The period between 1999 and 2000 was characterised by three key developments. The first was the development of an initial *sense of purpose* for the new intranet, aligned with business needs and the personal objectives of senior executives. The second was the securing of *senior support* for the intranet's development. The third was the definition of *governance* based on a devolved publishing model which allowed local teams to publish content based on agreed standards set by a central management team.

6.1.1. Establishing sense of purpose

The idea of developing a corporate intranet at A&L was first discussed in the IT department in 1999. David Churchill, director of IT strategy and one of the intranet's early advocates, describes how the project began:

> "There were a lot of people trying to get an intranet functioning from an IT perspective. It was another classic IT-led project... the technology is there and we should deploy it because other people have done so and it seems like a good idea."

In order to take the project forward, the IT team was asked to develop a business case. This was presented to senior executives, but turned down due to a lack of a strong business purpose. David Churchill explains:

> "IT people tried to make the business case for the intranet, and people (senior managers) stood up and said 'why do we need a website internally?' At that time the internet was not a commercial entity, it was just a technical thing."

However, later that year, the senior leadership of the bank changed. John Windeler became executive chairman and in June 2001 a new CEO, Richard Pym, was appointed. Together, their leadership brought about considerable change in the direction and culture of the organisation. A new business strategy, "*Strategy 2000*", was launched in 1999 and the first version of A&L's intranet was commissioned to provide employees with regular information on the new strategic direction of the bank and thereby gain their support for the organisational changes required.

6.1.2. Gaining strong senior support

The new business strategy placed great emphasis on "*e-enabling the business*" by investing in technology to make the organisation's business processes and internal communication more efficient. The intranet quickly became part of this organisational agenda, not least when the new chairman and CEO incorporated the e-enabling mission into the personal objectives of all first and second line executives. Initially, the executive team were not sure what this objective meant, but they soon realised how the intranet could play an important role in delivering the senior management's agenda.

6.1.3. Strengthening the governance

The importance of the intranet project led to a request for expert advice from a leading consultancy in the field. BT was selected to provide recommendations on the publishing model, governance and overall management of the new infrastructure. Roy Pinder, the BT consultant, suggested a devolved publishing model with a central team setting standards and local teams publishing content in adherence to those standards. The document, submitted on 8th March 2000, identified content management as the most critical aspect of the intranet environment. This focus on content captured the attention of stakeholders across the organisation, who until then had seen the intranet mainly as another technical infrastructure. Gradually, this new focus on content changed the perception of the intranet from that of a technical tool to a communications tool. Generating and managing good content became the new priority, as described by David Churchill:

> "Although the project was initiated in the IT department, quickly the focus became the generation and presentation of content rather than the technology infrastructure."

This vision of the intranet as a communication tool, and the decision to use the intranet to promote the new *"Strategy 2000"*, also led to a change in the ownership of the intranet from the IT department to the Corporate Communications department.

At this stage, roles and responsibilities were still unclear and there was no dedicated intranet team. It then became evident that the governance model proposed by the BT report had to be implemented in order to support the expected growth in content and functionality.

6.2. Intranet developments in 2001 - 2002

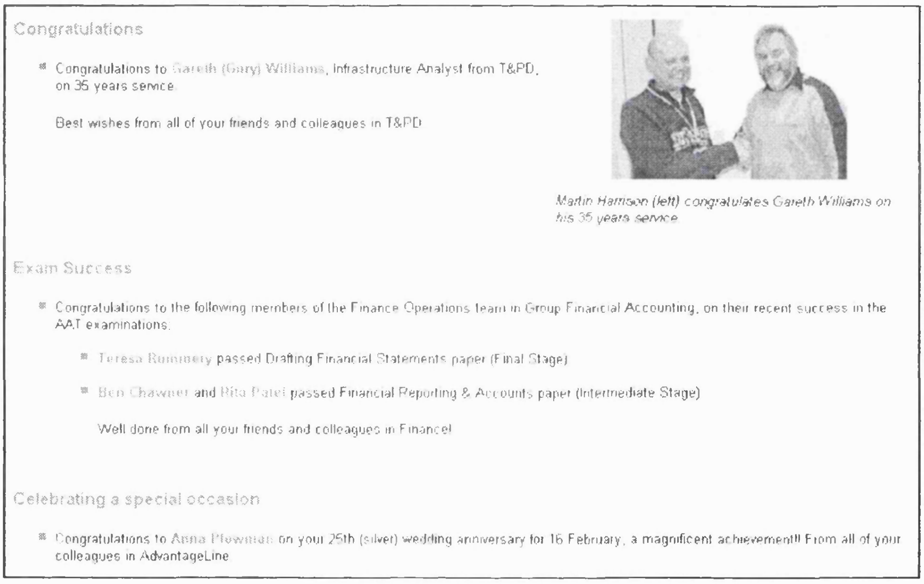
The period from 2001 to 2002 was characterised by a rapid increase in intranet content and services. An employee directory and HR site were launched, which made the site more *useful* to employees. Because these services related to common business processes, they became adopted as part of the *routine* daily work of employees. In addition, the HR site highlighted the potential of the intranet to reduce costs and improve efficiency, thus raising its profile within the business. This period also saw the implementation of the devolved *governance* model proposed by the BT report, along with measures to make the intranet *easier to use* in response to user feedback.

6.2.1. Becoming more useful

Towards the end of 2000, media-savvy departments in A&L, such as marketing and IT, started to establish an online presence, in some cases employing publishers to generate content. A small number of micro sites resulted which added interest to the intranet. Audrey Philbrooks, later to be appointed Group Intranet Manager, was at this time the publisher for the marketing micro site.

But while business content grew rapidly - with lots of information appearing about departments and products - the user adoption rate remained low. The earliest survey in December 2000 reported that only 4.7% employees used the intranet more than once a day, whereas 22% said they never used it. 11% said they had no intranet access and 23% said that they didn't know where their nearest access point was.

It was only with the launch of Spectrum*Live*, the online version of the internal news magazine, in early 2001 that the intranet audience increased significantly. Spectrum*Live*'s mission was to be *"the online newsletter which focuses on the news of our people"*. Content included notifications of staff birthdays, educational achievements and anniversaries of service in the company. Figure 9 shows a screenshot of a Spectrum*Live* news piece celebrating an employee's 35 years with the company.


Congratulations

- Congratulations to Gareth (Gary) Williams, Infrastructure Analyst from T&PD, on 35 years service.

  Best wishes from all of your friends and colleagues in T&PD!

Martin Harrison (left) congratulates Gareth Williams on his 35 years service

Exam Success

- Congratulations to the following members of the Finance Operations team in Group Financial Accounting, on their recent success in the AAT examinations:
  - Teresa Rummery passed Drafting Financial Statements paper (Final Stage)
  - Ben Chawner and Rita Patel passed Financial Reporting & Accounts paper (Intermediate Stage)

  Well done from all your friends and colleagues in Finance!

Celebrating a special occasion

- Congratulations to Anna Plowman on your 25th (silver) wedding anniversary for 16 February, a magnificent achievement!! From all of your colleagues in AdvantageLine

Figure 9: Screenshot of Spectrum*Live*

Spectrum*Live* quickly became the most popular area of the intranet and in early 2001 management decided to discontinue the paper-based version of the magazine. This generated significant savings in printing costs, estimated at the time at £60,000 a year.

The magazine's move online meant that employees had to visit the intranet to keep updated with what was going on in the organisation. Over time, employees also became used to reading news and learning about organisational changes on a much more regular basis. David Churchill explains:

> "Spectrum Magazine became electronic over night rather then a once monthly batch job. So it became much more current and much more up to date. People began to look at publishing as dynamic rather than 12 times a year."

Through Spectrum*Live*, the intranet began to be perceived as useful to employees and a source of business benefits, especially in terms of cost savings. It also alerted senior managers to the wider impact it might have in terms of improved communication and business efficiency.

6.2.2. Becoming more important and part of routine

Gradually new content and services were added and the intranet became perceived as more interesting, which in turn motivated employees to visit sites on a more regular basis as part of their everyday work.

One of the key applications that routinised the use of the intranet was *"Directory Services"*. This application allowed employees to find other employees using search criteria. The directory included contact details for all employees and addresses for all branches and ATMs. The discontinuation of the paper-based version saved printing costs and increased the popularity of the online version. Several employees needed to consult the directory on a daily basis to contact branches or colleagues from other departments. In this way, the intranet increasingly became part of their daily routine.

Another major development in 2001 was the launch of the HR site - the first to be fully designed to support changes in internal processes and procedures. Pam Blackburn, HR processes manager, describes the significance of this:

> "The intranet was pretty much being developed along the route of communications, media stories, that kind of information. No one had looked at it as a means of conveying how do we do things around here, or the rules that govern what you do."

Pam recalls the time when the idea for the new HR site emerged in 2001. After attending a business strategy meeting with the CEO, Richard Pym, she realised that the intranet could become an important component of the new strategy for using technology as a self-service tool, saving costs and improving customer service. She recalls:

> "I went along to a specialist meeting for all senior managers in the business in which Richard Pym set out our vision for the future. We would become the most customer-focused financial services organisation bar none but we were also looking to introduce a strategy that was quite different from other banks and financial institutions, in that we wanted to offer all of our services through all the channels and we wanted to web-enable a lot of what we were doing."

Pam recognised that, just as technology could transform the service offered by the bank to its customers, it could also improve the delivery of HR-related information and services to A&L's employees.

> "I came away from this meeting thinking: if we're going to enable our customers to go through every single channel, then surely we should be doing something for our own people. After all, how could they work effectively if we are telling them that we are providing all this wonderful technology for our customers but we don't provide it for them?

The subsequent launch of the HR*online* site placed the intranet at the core of the relationship between employees and the organisation by making it the principal source of information on A&L's employment practices. It also served a political purpose in supporting a large redundancy programme and the harmonisation of terms and conditions across the business. All information relating to the redundancy programme was published online as part of a commitment to transparency by the executive team. Pam Blackburn describes the impact of this:

> "I produced a manual and was going to have it printed. This would have cost £40K and caused additional problems of producing updates and ensuring they were not sent to the wrong people etc... So I thought it would be great if I could publish our terms of employment on the intranet. Not only would I not have to print them but,

> since everybody either had the intranet or would soon be getting it, I could update the information very easily. No other department had done anything like this before."

The success of the HR site raised the intranet's profile within the organisation significantly. Managers in particular became aware of the value of the intranet for reducing costs and supporting large organisational programmes. Peter Lippiatt, a member of the central intranet team, recalls: "*HR was using their site as a business case to reduce headcount and they were saving a lot of money*". The intranet also became the main medium for finding information about employment or performing tasks such as booking holidays and conducting appraisals (both of which were available through the new HR site). The wide adoption and interest in the HR site is demonstrated by the usage statistics. In its first month of operations (May 2001), *HR.Online* registered 16,233 visits, at a rate of 773 per day. Recognising the benefits of the HR site, the executive board nominated *HR.online* as a role model for other parts of the intranet. *HR.online* continues to be a popular service, attracting an average of 1,000 visits per day in 2005.

During 2001, the intranet continued to grow quickly in terms of content and stakeholders. This made managing the intranet environment and defining roles and responsibilities more complicated. The growth in content also led to usability problems, clearly demonstrated in the feedback from various usability studies conducted at the time. Two major initiatives were launched to address these issues: the first was the establishment of more clear governance and the second was the redesign of the homepage and a redefinition of the information architecture.

6.2.3. Reinforcing governance model

Although the BT report had defined roles and responsibilities, it was not until late 2001 that the governance arrangements for publishing content were clearly defined and implemented. Until that time, staff were contributing to the intranet as an extension to their existing contracts, with no formal recognition of the additional responsibilities. With the exception of sites such as HR*online*, the intranet was also largely driven from the centre.

Based on BT's recommendations, the central team produced a publishing model setting out common standards and guidelines for creating content. They also established a licensing system to formalise the roles and responsibilities of both the central team and local publishers. These roles and responsibilities were published on the intranet and training was provided to ensure that all publishers understood the new guidelines.

At the same time, the roles and responsibilities of the central team became officially recognised. Local teams also started to employ full time publishers and their roles as intranet stakeholders were acknowledged by the organisation, for example by including intranet objectives in their annual personal objectives.

6.2.4. Improving ease of use

The growth in intranet content and services led to usability problems, with several reports showing users found the intranet very difficult to use and information hard to find.

In April 2001 an external consultant conducted the first major usability testing of the intranet. A summary of this report shows that users:

- were not confident that information they need is there
- did not feel they know where to look for information
- found the site useful but boring
- did not find the site engaging, concise or fun
- felt information was available but frustrating to find and, when they did find it, hard to digest.

A particular problem was the difficulty users had in navigating the site in order to find information. Users said the *"nine box* [navigation] *tool does not work"* and the report found that *"all users developed ways to avoid it"*. The problem was made worst by the unclear terminology used on the homepage to structure the content. The report found that *"terms were too vague, or references were not specific enough in links"*. Users found selecting navigation options difficult. One commented: *"I was quite surprised at how difficult it was to think where things would be situated to determine the best route there"*. There were also inconsistencies between the different levels of navigation: *"Some had content with navigation buttons; some had no content with navigation buttons; some had content with navigation buttons and text links; etc."* In many cases, users felt lost within the site, and after a few clicks could not return to the main homepage.

Another problem identified by the consultant's report was that content did not change often enough and that *"too much information is not current"*. One user said: *"I tend to only look at the News page, as I gave up looking for other pages to be updated"*. Users also complained about content presentation, claiming that *"information [is] not presented in easy-to-digest chunks"*. The absence of expected content was a further issue which *"irritated and frustrated many users"*.

In response to this feedback, the homepage was redesigned and the information architecture revamped. The nine box grid was replaced by two navigation bars - a top bar (primary navigation) and side bar (left hand navigation). These bars would be accessible wherever the user was in the intranet environment. The new homepage is illustrated in Figure 10 and marked a considerable change in the intranet's information architecture.

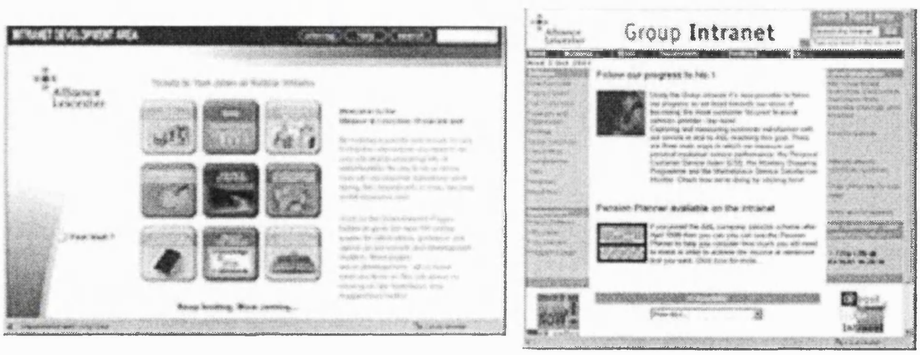


Figure 10: Screenshot of homepage in 2000 (left) and in 2001 (right)

To measure the impact of these changes, usability testing was conducted once more by the same consultant. The findings showed that users in 2002 had a much more positive relationship with the intranet, finding it easier to use and generally less confusing. The following tables compare the scores with those from 2001.

Task and user-related responses ...	2001	2002
How easy is it to find info	4.5	7.0
How complete is site	4.5	5.0
How frustrated do you feel	6.8	6.2
How satisfied are you with the site language	5.8	6.3
How confident do you feel to find relevant info	4.8	4.3
How confused did you feel using site	6.8	4.7
How hard to concentrate on your info search	6.3	3.5
How quickly did it go compared to expectations	5.8	5.2

Average out of 10

The site is ...	2001	2002
Useful	7.0	8.0
Easy to use	5.0	5.7

Average out of 10

6.3. Intranet developments in 2003-2004

The intranet continued to evolve in 2003-2004, providing more content and digital versions of company services and internal communications. New services such as *Classifieds*, *Announcements* and *Questions and Answers* became very popular, and gradually employees became *familiar* with how to use the intranet as part of their work and social normal activities. However, at this stage the intranet was still not perceived to fairly represent and *reflect* all areas of the organisation. Finally, this period saw the implementation of additional controls and feedback systems to monitor the quality of content and ensure consistency.

6.3.1. Becoming familiar and part of normal life

The intranet continued to pervade new areas of the organisation during 2003, with new content and processes becoming more widely recognised as a key resource. An example is the publication on the intranet of the "terms of employment" policy. This document had historically been unavailable to most employees: only directors and managers would access it to deal with staff queries about employment rules. David Churchill recalls the cultural shift that took place once this document was published on the intranet:

> "There was a very different personnel culture, in that if you were a senior manager, and you were lucky, you would have a copy of the "Employee Manual" but you weren't allowed to show it to employees. As a normal employee, you would go to a manager asking about holidays... and he would then put the manual back in the drawer. It was totally confidential; you weren't allowed to show it to anyone. We put that online and that changed the culture."

This seemingly small change in fact had a vast effect on organisational life, altering the relationship between managers and employees. Other areas of the organisation also felt the pervading nature of the intranet during this period. The launch of *Classifieds*, *Announcements* and *Questions and Answers* in 2003, for example, triggered further changes in the organisation and its business processes. As a result, the intranet became more intrinsic to employee daily life and recognised as a normal feature of the organisation.

The three online services mentioned above had significant impact on the organisation because they directly addressed the interests and needs of employees. The *Classifieds* page was used by employees to sell or exchange personal items, the *Announcements* site disseminated important information throughout the retail network, and the *Questions and Answers* site enabled employees to put questions to senior management and see their responses online.

While the *Classifieds* service was removed in 2004 due to misuse, its popularity with employees was substantial, and for over 18 months it was the most-viewed site on the intranet. In the view of some, the relationship between the intranet and the user changed with the *Classifieds* ads. David Churchill comments:

> "The intranet was no longer seen as a business tool, it was very much a social tool that people used in their spare time. We facilitated that with kiosks to drive people there. It is like the drug dealer method... we gave it away free before you started charging, which always works."

Another senior manager observes:

> "One of the main things that drove people to the intranet was the classified ads. The trouble with the intranet is getting people onto the site - and Classified Ads was one of the biggest attractions. That was until people began abusing it by selling 'body parts' and 'professional services'."

The *Announcements* site evolved from what were previously called *Branch Instructions*. These were information bulletins sent regularly from head office to all branches alerting them to rate changes, new regulations and new business objectives. For purposes of regulatory compliance, information often had to be disseminated quickly. Prior to the intranet this was done by fax. Doug White (manager in the branch communications group) explains:

> "the branch communications department used to produce daily *branch instructions* which were faxed out to each branch. People in the branches put this information in a file; and the file would get bigger and bigger..."

The creation of the *Announcement* section on the intranet - and the subsequent migration of the *Branch Instructions* online - radically changed the flow of information between head office and branches. The site became very popular with the branch community, receiving an average of 100,000 hits a month and 3,500 hits per announcement.

The *Questions and Answers* site (Q&A) was also very popular, recording 20,356 visits in May 2003. This made it the third most-viewed site on the intranet after *Classifieds* and *Announcements*, although in terms of organisational culture it arguably had the deepest impact.

The practice of asking questions to senior leaders of the bank existed prior to the intranet through regular meetings with top executives. However, while employees had the freedom to raise anything at these gatherings, top management would "discipline" those who asked irreverent questions. David Churchill recalls:

> "In the old days the group chief executive used to stand up and talk to the senior managers once or twice a year. It was mainly a one-to-many communication with little interaction and no break-out groups. At the end you could put questions to the chief executive. You got the odd employee challenging the CEO. In such cases the chief executive would ask for their name, and the next day they would be transferred and never seen again... People would even get sacked, or end up sacking themselves ... Then the Q&A came along which allowed you to initially ask questions anonymously and it changed the culture overnight."

The Q&A intranet site also had an effect at the business process level. Several internal processes changed as a result of questions and answers on the site, many of which challenged the way things were done. One director comments:

> "Q&A really changed the culture because people could ask embarrassing questions and a lot of business processes got changed because of this. People would say "why do I need five forms to hire a car? Why don't we have one?" and others would go "that's a good idea, let's have one!" It really did start to take away some of the bureaucracy that, because of our civil service background, had been around for years... Many rules went and that allowed the culture to change."

The launch of the Q&A site had the support of the new chief executive, Richard Pym, as part of his drive towards greater transparency and openness. One user refers to this as *"the directors opening up their ivory towers".*

This strategy also saw the CEO establish a visible presence on the intranet. His *Pym's page* gave a personal perspective of the business, delivered in an informal and sometimes humorous tone, as demonstrated by this post from early January 2004:

> As we start another year, many of us will have set ourselves targets, or made resolutions, for the twelve months ahead. Although I am unable to share with you how we have performed against our Group targets before our Annual Results day, I am able to announce that I have reached my personal weight loss target and I'm now exactly one stone lighter than I was at the end of November. Someone suggested renaming this 'Slim's Page' but that would be going too far!

But while these new services and content made the intranet feel familiar and part of the everyday life of employees, there was a growing sense that the intranet was not providing a fair and balanced perspective of all areas of the organisation, and that the design of the site did not fully reflect corporate branding values.

6.3.2. Growth in content and use but lacking representation

The discovery that users did not perceive the intranet as providing a fair and balanced view of all areas of the organisation emerged from focus groups in 2004 involving 28 employees from across the business (head office, regional office in Bootle, wholesale, retail bank, branches and call centres). Participants expressed the view that head office was over-represented on the intranet compared with the branch network. One employee said that *"it does not currently mention the Branches or the Commercial Bank"* and that users *"felt that Carlton Park* [a head office building] *and Supply Chain Management were always appearing on the home page".*

There was also a sense that A&L's regional operations were not receiving due coverage. One user said: *"Leeds is not featured in Spectrum Live and the View Meter talks only about the Carlton Park canteen survey. The content is deemed to be of no use to Bootle, Ashford, or other regional centres".*

The feeling that the influence of the centre – and of departments closest to it - had been mirrored on the intranet is further illustrated by the following comment from the focus group, suggesting that the intranet was too retail-focused:

> "Within the Products section, all products are for personal users - i.e. credit cards, loans, and mortgages. If a user wishes to get details about Wholesale Bank products, they would have to use the external internet website".

That this perception arose in 2004 is partly due to fact that user adoption grew faster than the provision of organisational content (information about departments and projects). By the end of that year, the intranet had been adopted by the vast majority of employees in the organisation. Figures show that in May 2004 over 90% of all staff viewed the intranet, with only 3% viewing it once a day. In April 2005, adoption levels reached 100% and 60% of staff said they used the intranet "many times a day".

Statistics also show a sharp rise in the number of visits per day, the number of pages viewed per visitor and the time spent per visit (see Table 9).

	May 2002	May 2003	May 2004
No of hits:	na	1,282,085	2,439,341
No of visits:	na	172,786	354,361
Single visits only:	722	604	280
Average number of visits per weekday:	5,275	7,287	15,866
Average number of visits per weekend day:	1,605	2,493	4,231
Average page view per unique visitor:	97	126	199
Average time of visit (min:sec):	9.00	9:24	20:15

Table 9: Evolution of entire site usage

The most visited sites in 2002, 2003 and 2004 are listed in Table 2. It shows that social and non-business related content was generally the most popular (note that the Classified page was withdrawn in 2004 due to misuse). The A&L magazines Business*Live* and Spectrum*Live,* appear in the top five for all three years. The most popular business-related sites are HR.online and the Forms Warehouse.

	2002	2003	2004
1	Classifieds	Breaking news	Announcements
2	HR.online	Classifieds	Business*Live*
3	Press Centre	Q & A	Branch MI
4	Spectrum*Live*	Spectrum*Live*	Forms Warehouse
5	Sitemap	Calculator Centre	Q&A

Table 10: Evolution of most popular sites and pages

These figures show a growth in content and adoption levels, as well as in the number of publishers and stakeholders managing the various new sites and functions (Appendix 9.11 describes the evolution of intranet adoption in more detail). However, according to user feedback the intranet was becoming too big and skewed towards certain areas of the organisation. The intranet team decided to address this problem and change the design of the intranet, restructure the information architecture and toughen governance and controls.

6.3.3. Stepping up control and monitoring

As a response to the lack of consistency and the need to align the intranet with corporate values, the intranet team created templates for the design of all intranet pages. A new layout was introduced which closely followed corporate branding guidelines.

Beyond changes in design, the new website also saw structural changes in its information architecture. For example, the new homepage featured three main navigation areas instead of the previous two. In addition, several smaller sites were combined and all large sites were forced to clean up old content. The changes in branding, identity and structure are evident in the 2004 screenshot of the homepage (Figure 11).

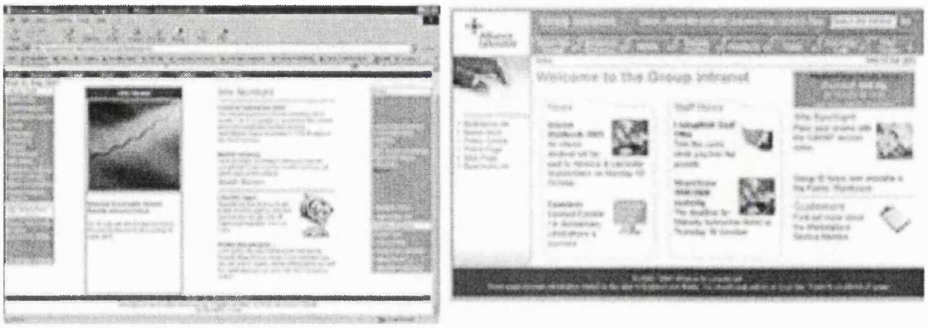


Figure 11: Screenshot of homepage in 2003 (left) and in 2004 (right)

The look and feel of the new site was more in line with internal and external branding guidelines and corporate identity. This was reflected not only in the colours and symbols used but also in the language and style of writing. For example, *straightforwardness* was a corporate value and became part of the guidelines for "writing for the web". The greater alignment between the corporate branding and the intranet's look and feel reinforced the idea that the intranet was in tune with the real organisation and inherent to the way people worked. The intranet was designed to reflect the predominant values and beliefs of the organisation; however, interestingly, it also seemed to then reinforce and amplify these values in the culture of the organisation.

In order to implement these changes and make the intranet easier to use, three control mechanisms were put in place. The first was to provide full contact details of authors on every page, including their names; the second was to give the date on which each page was last updated; and the third was to allow feedback to be sent directly to the owner of each page. Intranet manager, Audrey Philbrooks, explains the impact of these changes:

> "Since we have put the feedback element at the bottom of the page, users can now directly email the owner of the page. So if product rates are wrong, within 30 seconds the marketing team gets an email from all branches in the organisation. Branches hate marketing more then anyone else, so if they can prove marketing wrong... great day!"

Figure 12 shows the three feedback mechanisms introduced in 2004. Every page includes the question “Did you find this page useful?” and a link to the “page owner” and the “date of last update”.

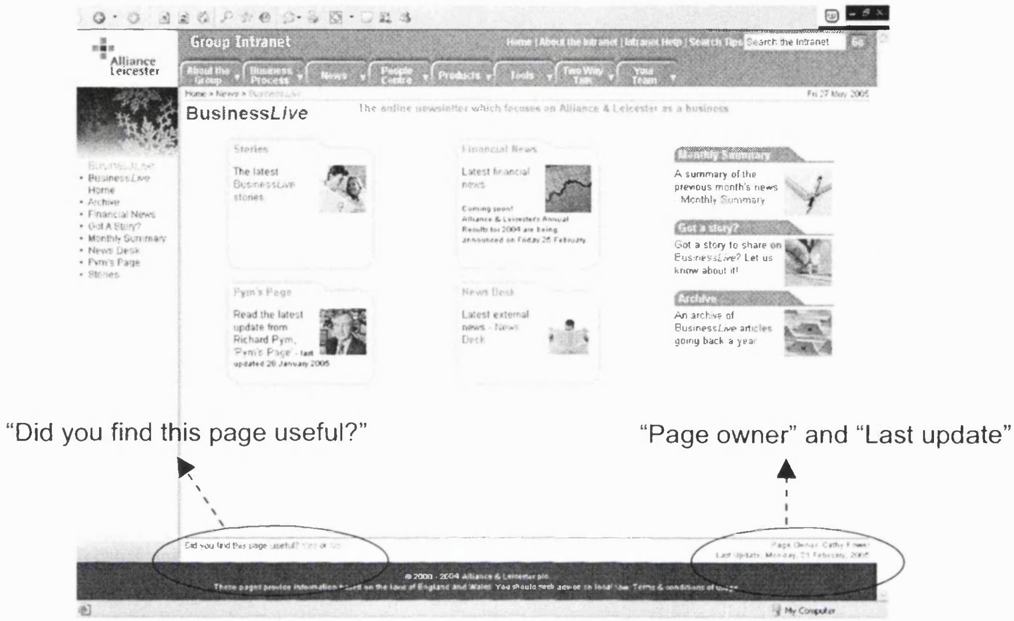


Figure 12: Feedback, page owner and last-update control mechanisms

6.4. Assessing intranet institutionalisation in 2005

The functioning of the intranet in 2005 is described in chapter 5; this section builds on that information to show the level of embeddedness of the intranet in organisational social and work practices in 2005. One source of evidence is the findings from a large employee survey conducted in April 2005, following the methodology described in section 4.3.4.

The survey was designed to test key qualitative findings from interviews on a much larger number of employees. Thus, the survey was used to support the qualitative research and not to draw new findings. This is in accordance with the principles of Sequential Exploratory Research design outlined in section 4.3.1. The survey was based on the theoretical framework described in chapter 3 and the qualitative empirical findings described in this chapter. Figure 13 illustrates the survey design process:

Figure 13: survey design

A full description of the survey design and statements is available in section 4.3.4. Section 3.7 describes the use of theory in the design of the survey.

6.4.1. Employee survey results

The main finding from this survey is the strong support for the earlier qualitative findings suggesting that the intranet in 2005 was highly institutionalised in the organisation. A more detailed analysis of the survey results is available in appendix 9.4. This section summarises key findings for all survey statement and associated constructs.

Survey statements were designed to assess employee perceptions of the concepts of constitutive and background expectations, as outlined in section 4.3.4. Perception of these concepts is assessed through the level of agreement with survey statements. Respondents were asked to rate their level of agreement with each statement based on a Likert scale from 1 to 7, with 1 indicating *high agreement* and 7 *low agreement.* The mean scores for each statement are shown in the analysis of findings below.

Constitutive expectations

This group of questions was designed to assess perception of rules and governance in formalising the use of the intranet and in making it part of the expected formal functioning of the organisation. All statements below assess the development of this type of perception.

<u>Governance/Roles and responsibilities</u>

The perception that there is a governance model for publishing content on the intranet contributes to an overall impression that the intranet is regulated and part of the formal organisational environment.

Survey results show that employees are aware that the publishing of content on the intranet is regulated and believe it follows the procedures set out in a governance model. 55% of respondents said that they were aware of policies and procedures. The mean for the two questions is around 3.6.

Statement	Mean
2b I am aware of policies and procedures that govern how the Group Intranet works	3.6
2a I am aware of how content gets published on the Group Intranet	3.7

Controls, Policy and Standards

The perception that content is monitored and checked also contributes to the overall impression that the rules and policies are enforced in practice and not just formalised.

A high number of respondents (70%) felt that all content was checked and approved by experts before being published. These controls underpin a perception of consistency across the intranet, with 57% strongly feeling that the intranet is consistent across all sites.

Statement	Mean
2d I believe that all content is checked and approved by a recognised expert before going live	2.9
3c The tone and style of written content is consistent across the Group Intranet	2.7

Senior support and regulatory enforcement

The perception that the use of the intranet is encouraged by senior executives and that there are regulations enforcing the use of the intranet for some internal processes, contributes to an overall sense that the intranet is part of the formal organisational environment.

A majority (59%) of the respondents felt that the use of the intranet was supported by senior management, but only 36% believed that A&L policy required them to use the intranet, and only 38% said they had been told to use the intranet for their work activities. These results show that employees adopt the intranet in accord with senior executive guidelines and not because the intranet is enforced through corporate regulations.

Statement	Mean
1g Use of the Group Intranet is highly recommended by senior management	2.6
4h I need to use the Group Intranet as it is Alliance & Leicester's policy to do so	4.1
4c I have been told I must use the Group Intranet for my job	4.0

Purpose and alignment with business

The perception that there is a business purpose for the intranet contributes to the overall impression that the intranet plays a formal role in the functioning of the organisation.

92% of the respondents said they understood the importance of the intranet to A&L's business.

Statement	Mean
1a I understand the role and importance of the Group Intranet for Alliance & Leicester	1.7

Relative importance

The perception that the intranet is a primary communication tool and business critical contributes to the overall impression that it is formally supported and managed by the organisation.

Most employees felt that the intranet played a critical role in the organisation with 63% respondents feeling that the intranet is necessary for their job and 68% agreeing that A&L could not function without the intranet.

Statement	Mean
4d I feel the Group Intranet is necessary for my day to day job	3.3
1d Alliance & Leicester could not function without the Group Intranet now	3.1

Background expectations

This group of questions was designed to assess employees' perception of familiarity with the intranet and the extent to which it had become taken for granted as part of their normal organisational daily life. All statements below assess the development of this type of perception.

Familiarity and normality

The perception that the intranet reflects the way things are done in the organisation, and feels like part of the organisation, contributes to the feeling that the intranet has become part of the "world known in common".

56% of employees perceived the intranet as part of A&L and 60% had a feeling of familiarity across the various sections of the intranet. 86% believed the intranet used a similar language to that of their everyday work.

Statement	Mean
1f The Group Intranet reflects how we do things within Alliance & Leicester	2.6
3b Wherever you are on the Group Intranet, it still feels familiar	2.7
3a The Group Intranet uses the same language that I do in my everyday work	2.5

Routine and habitus

The perception that the intranet is part of the day to day routine and habits of the employees, and that employees sense they are missing something when they don't use it, contributes to the overall feeling that the use of the intranet for organisational activities has become taken for granted.

70% thought that the intranet had become part of their day to day routines and 67% believed the use of the intranet is rooted in routines and is not a conscious effort on their part. 68% felt that they would be missing something if they did not use the intranet.

Statement	Mean
1e: The Group Intranet has become part of my day to day routine	2.3
4i I never think about whether I should use the Group Intranet or not, I just use it	2.4

4j I would feel I'm missing something if I didn't use the Group Intranet	3.0

Usefulness and ease of use

The perception that the intranet is easy to use and includes useful and relevant content contributes to the impression that it is integrated into the business and social fabric of the organisation.

Only 45% said that information they needed was on the intranet, while 73% thought the intranet was complex and that information was not easy to find.

Statement	Mean
4k I would like to use the Group Intranet more but the information I need isn't there	4.2
3d There is so much content - I can't always find my way around the Group Intranet	2.9

Preference and persistence

The perception that the intranet is the preferred medium for doing things at A&L, compared with alternative channels such as telephone and face to face, contributes to the feeling that it had become part of the expected way of working. The belief that new employees should be told about the intranet through training and word of mouth suggests that intranet use should be perpetuated across groups and over time.

The results show that the intranet is by far the most popular method of communication at A&L, with 81% of the respondents saying they preferred the intranet to paper manuals and 60% saying they preferred it to the telephone. 89% of the respondents believed the intranet should be promoted as a good source of information during the induction of new employees.

Statement	Mean
4a I prefer to use the Group Intranet rather than phoning people to find information	3.4
4b I prefer to use the Group Intranet rather than paper manuals to find information	2.5
3i New members of staff should be told to look on the Group Intranet if they need information about Alliance & Leicester	2.2

Reflects reality and fairness

The perception that the intranet reflects changes in the organisation and portrays all areas of the organisation fair and balanced way, contributes to the impression that the intranet is part of the social fabric of the organisation.

Most employees (78%) believed the intranet changes as A&L changes. 90% of the respondents believed that content was generated across the business, and not just by a central team. 47% of the respondents thought that senior management dictated what appeared on the intranet.

Statement	Mean
1b As Alliance & Leicester changes, the Group Intranet reflects that change	2.2
2g The information on the Group Intranet is generated by people from across the business	2.3
2f The information on the Group Intranet is dictated by senior management	3.6

6.5. Summary of this chapter

This chapter provides a longitudinal perspective of the A&L intranet from 1999 until 2005, describing key developments in four major periods of the intranet's evolution. A number of key themes emerge from this longitudinal analysis which characterise the intranet's evolution between 1999 and 2005. These are illustrated in Figure 14 and briefly described below.

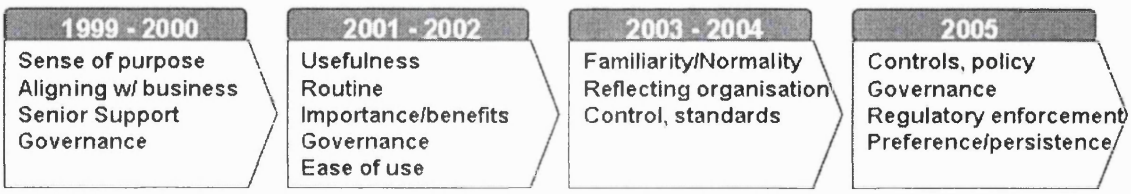


Figure 14: Themes emerging from analysis of events 2000-2005

A large employee survey conducted in 2005 supports the study's qualitative findings, suggesting that the intranet was highly institutionalised in the organisation.

6.5.1. Main themes

1999-2000: The idea of implementing an intranet at A&L is first discussed in the IT department but not taken forward. A new leadership team in the bank develops the first intranet to communicate a new business strategy and support one of its key objectives of "e-enabling" the business. An initial consultancy report defines a devolved publishing model for managing the intranet at A&L.

Key characteristics of this period: intranet develops *sense of purpose* and *aligns with the business*, gains *senior support* and defines initial *governance* model.

2001-2002: Media-aware departments develop their own intranet sites. Adoption rate remains low until the internal company magazine "Spectrum*Live*" moves online. Business processes, such as HR, are migrated to the intranet, making it part of the daily routine of employees. The HR site becomes a role model for achieving saving costs and improving service. However, growth in content and the number of publishers signals the need for more stringent governance and a revised information architecture and homepage.

Key characteristics of this period: intranet becomes more *useful* through new content and functions and part of employee *routine*; it is seen as *important* to the organisation, requiring improvements in design, structure and *governance* to cope with increased complexity and improve *ease of use.*

2003-2004: The growth in content and services means the intranet now provides a digital version of many business processes and internal communications. The wide range of services on the intranet foster a sense of familiarity and make it part of routine working habits of employees. Three intranet services contribute particularly to this: "Classifieds", "Announcements" and "Questions and Answers". Nevertheless, new measures have to be put in place to control the quality of content, such as providing name and contact details of authors on every page, to deal with uncontrolled growth and a lack of consistency and to ensure a more balanced representation of all areas of the organisation.

Key characteristics of this period: increasing *familiarity* with the intranet; intranet grows but does not *reflect all areas* of the organisation; more *controls* are put in place to ensure quality and consistency.

2005: A further increase in content and the number of publishers and stakeholders leads to changes to the governance model, including more robust policies and monitoring controls. A new CMS is proposed to improve content control and consistency of design through the implementation of templates and publishing workflow. The intranet becomes part of the critical infrastructure and is included in business contingency planning.

Key characteristics of this period: increased *controls*, *policy* and *governance*; recognition of the intranet as business critical.

2005 employee survey assessing intranet institutionalisation: A survey was conducted to assess the level of institutionalisation of the intranet in the organisation by testing qualitative findings on a large group of employees. Survey statements were developed based on this study's theoretical framework and qualitative findings. The survey finds strong perceptions of both *constitutive expectations* and *background expectations* which support qualitative findings that the intranet was highly institutionalised in the organisation.

6.5.2. Linking with the rest of the thesis

This chapter presents the data used to analyse the evolution of A&L's intranet from its inception in 1999 until late 2005. It supports the analysis of the research questions in chapter 7.

Chapter 7

Analysis

This chapter answers the research questions set in chapter 2. It uses the theoretical concepts in chapter 3 to discuss findings in the previous chapter. Data presented in this chapter shows that the intranet in 2005 was embedded in the formal functioning of the organisation and perceived by most employees as a normal feature of organisational life which they also took for granted. Two processes underpinned this level of institutionalisation of the intranet in the organisation. First, the intranet became increasingly part of the formal policies and regulations of the bank, thus part of its expected formal functioning – reflecting the theoretical concept of *constitutive expectations*. Second, employees became so familiar with the intranet that they started to use it unreflectively and take for granted its availability and functionality – reflecting the theoretical concept of *background expectations*.

Data collected supports key ideas from the literature review and theory, suggesting that institutionalisation and the development of constitutive and background expectations is driven by ongoing mutual changes in the technology and the organisation. Five types of changes were identified as key drivers for the development of *constitutive expectations*. First, changes in policies and the formalisation of roles and responsibilities for managing the intranet; second, changes in the controls to ensure compliance to standards and guidelines; third, changes in senior management involvement and support; fourth, changes in the communication and perception of the purpose of the intranet to the business; and fifth, changes to the level of awareness of the benefits of the intranet to the organisation. Five types of changes were also identified as key drivers for the development of *background expectations*. First, changes that made the intranet blend in with other features of the organisation and feel more familiar to employees, for example through changes in the design, tone of voice and content; second, changes to online functions and processes, that made intranet use part of the day to day routines of employees; third, changes in the perception of its usefulness to employees and the business; fourth, changes in the relative preference of staff for using the intranet as a medium for doing things in the organisation; and fifth, changes in the perception that the intranet genuinely reflects what goes on the organisation.

Analysis of the data, however, also shows that this process of institutionalisation and embedding was not uniform across social groups in the organisation. Different groups within the bank followed different patterns, and sometimes reversed the process of institutionalisation. Data also shows a decline in the collective perception of the strategic value of the intranet to the business. As the intranet became more embedded and institutionalised in the bank, the collective perception of its value declined, with obvious consequences for risk management.

The first section of this chapter uses data to re-conceptualise institutionalisation of technology in organisations. It presents data showing how the intranet became taken for granted by employees and embedded in the formal structures of the bank. It also highlights differences across social groupings in the process of institutionalisation. The next section describes the interplay between the intranet and the organisation, and shows how these ongoing mutual changes have led to the development of constitutive and background expectations. The last section provides an overall framework summarising the processes underpinning the institutionalisation of intranets in organisations. The chapter ends with a review of key issues in this chapter and a summary of findings.

7.1. Re-conceptualising intranet institutionalisation

One of the initial aims of this study was to assess the level of institutionalisation of the intranet in the working practices of A&L, using the concepts and understandings from the literature review and theoretical framework. It is important to note that, as discussed in chapter 3, the concept of institutionalisation adopted in this study sees institutions as typified patterns of behaviour, which over time have become persistent and loaded with shared social meaning. This view of institutionalisation as a process of *generation* is different from the more published view of institutionalisation as a process of *reproduction* and the copying of practices across social groups and organisations (an issue discussed at length in chapter 3). It is in the context of the earlier body of literature that the discussion in this chapter unfolds.

Following the "generative" line of thinking, Damsgaard and Scheepers (2000, p. 142) provide one of the few definitions of intranet institutionalisation in the literature. The authors say that one of the signs of institutionalisation is the unreflective use of the intranet by employees and its "disappearance" from their perceptual radar. They also suggest that employees at this stage withhold conscious use of the technology:

> The intranet at this stage corresponds to Heidegger's term 'ready-at-hand', in which the technology disappears and becomes a natural 'extension' of the users. Users do not think about the technology itself anymore

This notion of institutionalisation as "invisibility" is in line with Zucker's theoretical conceptualisation of the term (as discussed in chapter 3) and has support in the IS field, for example Silva and Backhouse (1997, p. 390) say that institutionalised systems become taken-for-granted and their use unnoticed by employees:

> The stabilization of an information system is its institutionalisation. We can say that information systems become institutionalised when they are no longer considered as innovations but as unnoticed and unremarkable tools that people take for granted in doing their work. Institutionalised information systems are noticed only when they break down.

Zucker's earlier work provides a more robust theoretical conceptualisation of institutionalisation in organisations. She says that institutionalisation involves the development of two key properties:

> (a) a rule-like, social fact quality of an organised pattern of action (exterior); and (b) an embedding in formal structures, such as formal aspects of organisation that are not tied to particular actors or situations (non-personal/objective). (Zucker, 1977, p. 728)

In 2005 the use of the intranet at A&L exhibited these characteristics. The intranet had become (a) widely recognised as part of the normal functioning of the bank and (b) part of the formal policies governing the operating procedures of the bank. The intranet had evolved from being an application on the desktop in 1999 to become the primary communications channel and a gateway for key business resources in 2005. As a matter of policy, all employees had been given access to the intranet (either through their own computers or through shared computers or kiosks in communal areas). The intranet was considered the main communication channel in the bank and for that reason employees were expected to visit it on a regular basis to keep up to date with company developments (more senior managers were also expected to encourage the use of the intranet in their regular team meetings). The culture of the organisation also encouraged employees to use the intranet as a first resource for finding information, taking precedence over telephone or emails. Data shows that it was a common practice for employees to redirect colleagues to the intranet to find information, avoiding unnecessary meetings or time on the telephone.

Over time, these expectations and agreed conventions became more engraved in employee behaviour. In 2005 it seemed clear that the use of the intranet had become so deeply embedded in the way of working of employees that many used it automatically for routine work without conscious awareness of its use.

As the intranet became more embedded in routine work, employees became more familiar with it, taking its use for granted and as a normal feature of their organisational life. Over time, the intranet became unnoticed by employees and part of their subconscious behaviour. The intranet had become, as described by the authors above, invisible and unnoticed by employees in the organisation. One employee in IT said:

> "The intranet is now like the carpet and we no longer think about it"

This notion of the intranet as an "invisible" feature of organisational life was a recurrent theme in the interviews and focus groups. It became more noticeable when employees were asked to "imagine" working at A&L without the support of the intranet. Some employees felt strongly that they would not be able to be efficient without the intranet, a perception confirmed by the following employee:

> "If I went to another organisation that didn't have all the information I need on the intranet, it would be quite daunting to know where to find it."

For this employee, the use of the intranet had become scripted in her daily routine and habitualised actions, making it difficult to imagine normal work without this tool "ready-at-hand". This perception of the intranet, shared by several employees at A&L, reflects what Schutz (1962) and Garfinkel (1963) refer to as a *"natural fact of everyday life"*. For these employees, the intranet had become just another feature of normal organisational life which was familiar and unnoticed.

During the interviews, it was actually often difficult to unearth employee's conscious perception of how they used the intranet on a daily basis. Techniques based on Garfinkel's ethnomethodology were used to unravel these deep-rooted behaviours and assumptions. Garfinkel suggests that breaching pre-established assumptions and confronting employees with extreme scenarios "forces" them to actively face these assumptions and consider the role they play in their decision making process.

Using this technique to unravel programmed or scripted thinking at senior management level helped to better understand the views of the ultimate owner of the intranet the Head of Corporate Communications. He revealed that running A&L without the intranet was not imaginable at this stage in the historical evolution of the organisation. For him the intranet had become fundamental to the business:

> "I think the intranet has become fundamental to our business. It has grown to become the principle communication channel in the Group. But it is grown beyond that and it now has a number of business critical activities run from it. I couldn't imagine and certainly wouldn't want to be running A&L without the intranet."

At another level, there were more signs that the intranet had become deeply engraved in the functioning of the organisation. The intranet was in 2005 formally rated as "business critical" by the board of the bank and became part of its disaster recovery planning in case of a major emergency. The intranet manager in 2005 said that this rating was a good sign of the importance of the intranet for the organisation. She said:

> "This is a very crude but objective measure of its importance."

This rating as "business critical" is not a minor fact in the highly regulated banking sector. All systems that reach this status are highly monitored, audited and surrounded by security measures to ensure 99.9% availability of service and a recovery rate close to a few minutes only. This high level of resilience is necessary because the intranet is formally expected to support recovery in the case of a disaster or emergency in the organisation. Disaster recovery played a greater role in the bank after the events of 9/11 and the threat of SARS and flu pandemic. It was also acknowledged that the intranet would be crucial in such extreme events by supporting internal communication and allowing employees to work remotely if unable to travel to their offices.

The high level of embeddedness of the intranet in the functioning of the organisation is also demonstrated by several key business applications which operate through the intranet. These include all the HR functions (including pay slips, appraisals, holiday booking, etc), performance indicators for branches, and up-to-date interest rates used in call centres for customer service. The level of institutionalisation of the intranet in the organisation is also demonstrated using Damsgaard and Scheepers' (2000) dimensions of institutionalisation as shown in Table 11 below.

Elements	Description	A&L
Strategy	Continuous optimisation of technology and its use	The technical infrastructure was settled and the main focus was on adding new features and improving performance.
Structure	Dispersed and multidisciplinary. Centralised and decentralised publishing models co-exist	The central intranet team played an important role in the predominantly decentralised publishing model by developing and enforcing standards and guidelines.
Systems	All the technology use modes are exploited. The intranet becomes the "organisational memory" in terms of processes and learning	The intranet was the primary channel of communication for the organisation and it was the first place where employees were expected to go to find information before approaching colleagues by telephone or email.
Staff	Decentralised content and process owners	Governance and responsibility was clearly and formally defined through policies and documents between the central team and site owners.
Style	Commitment	Senior management actively supported the development of the intranet and acknowledged its importance by grading it as business critical in the business continuity planning.
Skills	Knowledge management	Some evidence of sharing of knowledge and effort in using the intranet to support organisational learning but not a major feature in 2005.
Superordinate goals	Institutionalisation of the intranet	Adoption levels were very high with almost all employees using the intranet on a daily basis according to statistical figures.

Table 11: institutionalisation according to Damsgaard and Scheepers (2000), p.144.

By 2005, it was clear that the whole organisation fully supported the use of a single intranet infrastructure to support the business. This is formally expressed in the "Web Technologies Policy" which states the following:

> "The Alliance & Leicester Group supports <u>one</u> intranet infrastructure, which is currently known as the Group Intranet. All web content for internal use must be made available via the Group Intranet."

That the intranet had become critical to the business was clear to the central management team, who recognised that:

> "The business relies on the information that we provide on the intranet. The intranet is the only way in which branches get this information (key performance indicators). If the information was not correct, it would have a direct impact on the business."

However, paradoxically, despite the growing importance of the intranet to the business, the collective awareness of its strategic value had declined (outside the central management team). This paradoxical relationship between the growing embeddedness and collective awareness is conceptually represented in Figure 15 below.

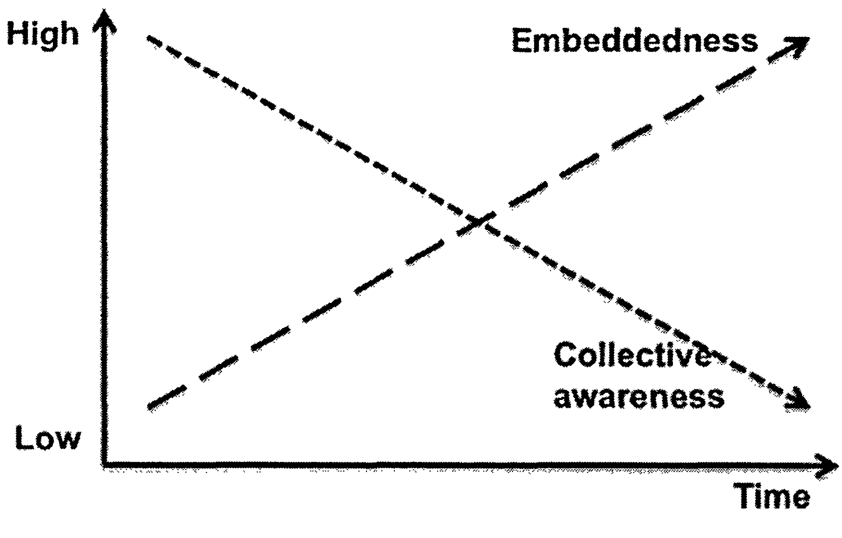


Figure 15: Paradox between institutionalisation and awareness

Findings suggest that as the intranet became more institutionalised in the organisation it also became less "visible" to its owners and stakeholders. Over time, and as the intranet became more mature in the organisation, stakeholders slowly lost the initial strategic awareness of its value to the business. This created some challenges for the intranet team and had a wider impact on the management of risk in the bank. Damsgaard and Scheepers

(2000, p. 143) suggest that at this stage the only way to raise awareness and visibility of institutionalised systems is to explain to stakeholders the impact of switching-off the intranet and show that if *"the intranet is theoretically switched off, most organisational routines come to a halt"*. This paradoxical consequence of institutionalisation is an interesting finding, but was not the focus of this research. Thus, it is highlighted as a good topic for future research.

As part of the research process described in chapter 4, an employee survey was designed and administered to 900 employees in order to test concepts of institutionalisation from qualitative interviews on a much larger population of employees. Results show, for example, that 70% of the respondents thought that the intranet had become part of their daily routines and most employees (78%) believed that the intranet reflected changes in the business. Another striking figure is the 81% of respondents who said that they preferred the intranet to paper manuals, and the 60% who said they preferred it to the telephone for internal communication (more detailed analysis of survey results is provided in section 6.4.1 and appendix 9.4.)

The survey also collected qualitative comments from respondents – a full analysis of which is contained in appendix 9.6. These offered insights into the perception of remote groups of employees that had not been approached before. It became clear that there were employees for whom the intranet had not become as important and embedded in work practices. In fact, it became clear that different groups in the organisation followed different patterns and speeds in the institutionalisation process. For example, the process of institutionalisation was slower for branch and call centre staff. This group felt initially unrepresented on the intranet and felt that there were not enough functions relevant to their needs – this view was different in 2005. The adoption was also lower for these two groups of employees because not all employees had individual PCs for accessing the intranet. Often staff in the branches had to share PCs to check information on the intranet or fulfil a procedure. This created some initial barriers to adoption and distantiated employees from regular use of the technology.

Another group of employees followed a different pattern of institutionalisation. Employees working remotely on a company laptop used the intranet to keep in touch and access all necessary online services. However, data from the survey and subsequent interviews shows that this group felt "left out" because their specific needs had not been considered and there was only limited content and functions available to them. It was only in early 2005 that the needs of this group were considered by the intranet team and a new area of the intranet developed to address these. Up to that point, these workers did not see the intranet as part of the expected functioning of the organisation, nor as part of their normal routines. Figure 16 below illustrates these different patterns in the institutionalisation of technology in organisations.

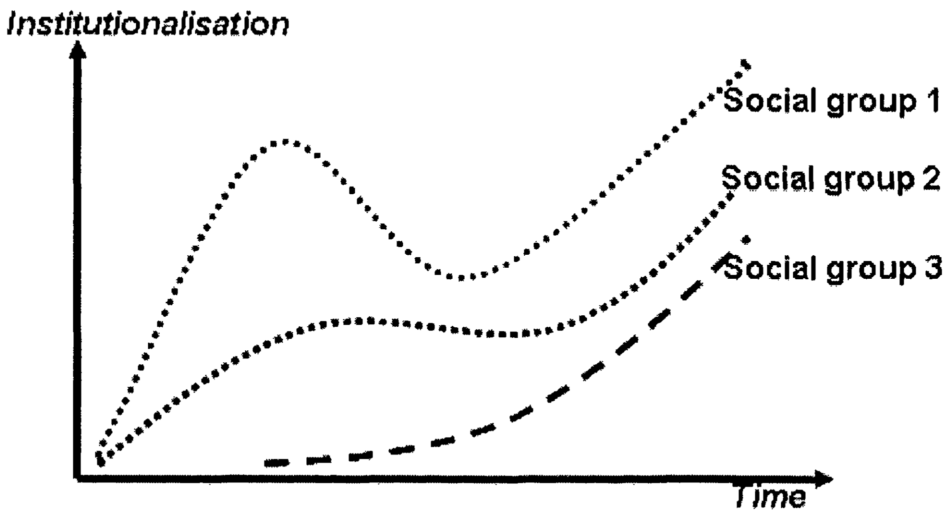


Figure 16: conceptual differences in the speed of institutionalisation across social groups

Underpinning the different patterns of institutionalisation are the different types of interplay between the technology and each social group. This interplay determines the pattern and speed of the process of institutionalisation. When the intranet does not change to accompany changes in the business, or the organisation does not change to adapt at the pace required by the technology, the pattern and speed of institutionalisation reflects this dynamic.

One extreme example is the pattern illustrated by social group 1 in the diagram, which shows a drop in the level of institutionalisation. Although de-institutionalisation was not the focus of this research and no hard evidence is presented here to support this finding, it was clear that this process was inherent to the evolution of the intranet in the organisation. Reverse institutionalisation may occur when, the technology and the organisation react against each other, and the interplay serves to reinforce differences instead of approximating one to the other. For example, when content aimed at particular group of employees is not updated and they have to use alternative mechanisms to fulfil their organisational needs. Over time, these alternative mechanisms become permanent, and the intranet slowly loses its familiarity among these employees.

7.2. Interplay and mutual transformation

After assessing the institutionalisation of the intranet at A&L in 2005 (as discussed in the previous section), the research moved on to understand processes underpinning this phenomenon. As discussed in chapter 3, the notion of institutionalisation adopted in this study focuses on processes of *generation* inside the organisation which make the intranet more familiar to employees and formalise its use in the expected functioning of the organisation – developing constitutive and background expectations.

Ongoing mutual changes to the technology and the organisation are seen as drivers for the development of these constitutive and background expectations, as discussed in chapter 2, section 2.4. Studying the five-year longitudinal evolution of the intranet at A&L made visible the ongoing mutual changes to the technology and the organisation. The process of interplay and mutual changes allowed the intranet to better reflect the needs of the employees and also to adapt existing work practices to the possibilities of the new technology. It was also clear that the intranet increasingly reflected the values and interests of the organisation, which over time also changed through the way in which the intranet was used. This interplay shaped both the intranet and the organisation so that each better reflected each other. Similarities were visible in terms of values, language, tone, content, functions, design, etc. Over time, the two became so closely coupled that it was difficult to distinguish processes inside and outside the intranet environment: both existed as part of the normal functioning of the organisation.

The following two processes of interplay were identified as drivers for the mutual ongoing changes to both the technology and the organisation. These processes are discussed according to the literature in section 2.4. A summary of these two processes is described below and the detailed analysis of the mutual changes is presented in section 7.3.

Process 1: the organisation shaping the intranet

The intranet emerged in 1999 to communicate important changes to the business. The new leadership team saw the intranet as a vehicle to communicate their new vision and changes to the organisation. The intranet was initially designed and structured to respond to this clear need. The governance of content publishing on the intranet followed existing policies and regulations and there were no specific roles formally created for managing this new environment. Chapter 6 describes how the intranet environment was initially shaped by A&L's growing interest in using this new medium to share and disseminate information across the organisation.

The intranet reflected not only organisational needs but also the interests, culture and values of the organisation. For example, the openness and straightforwardness of tone of language visible throughout the intranet (this is discussed in section 6.3.1) was a direct reflection of the changing organisational culture promoted by the new leadership team. This is clearly illustrated by the following quote from a senior manager who had been at A&L for over 20 years and had followed the development of the intranet very closely. He noted how the intranet reflected the changes brought about by the new leadership style:

> "The intranet we have today is deliberately open. In the late 90s we had a CEO who was very controlling and very dictatorial - if you asked the wrong question you would find yourself in an unpleasant part of the business the next day. So when John Windeler, our current Chairman, took the helm, the intranet was one way for him

> to demonstrate a change in communication within the group. One example of this was the "Q&A" where you could ask questions [directly to a senior executive]."

The intranet evolved and grew in response to new organisational needs. This was reflected in the process for requesting the development of new webpages and content. As described in chapter 6, a formal proposal had to be approved before any new sites were allowed on the intranet. This proposal required new site owners to justify the new content based on organisational or business needs.

Process 2: the intranet shaping the organisation

As the intranet grew to support more functions and business needs, certain organisational procedures had to adapt to the inherent characteristics of the technology. One of the intentions of the intranet team was to foster adoption of the intranet by switching off alternative channels for delivering content and processes. One member of the intranet management team recalls their plans for increasing adoption:

> "Our adoption model started with getting people onto the intranet by providing the stuff they wanted to read. The next step was to make the intranet the sole source of information they had to read in order to do something. So if you wanted details of your pay and reward, you could only do it on the intranet - there was no alternative channel. Our hope was that this would lead them into the browser and they would then find the other things."

The rapid and determined implementation of the intranet, with the support from the leadership team, forced changes in employee behaviour and working practices. For example, the company magazine Spectrum.*live* became only available online, forcing employees to change their habits in reading this popular news magazine. Several other examples of changes in work practices brought about by the intranet are discussed in chapter 6, namely the influence of the intranet's Q&A section on widespread changes to the business.

Data also shows that the structure of information on the intranet interplayed with the perception of the users about that information. For example, the intranet manager regularly changed the location of certain departments according to what she perceived to be the general perception of where those services should be located on the intranet. However, it was clear that, in the long term, these changes also affected the general perception of where those services belonged. The following quote illustrates this point:

> "I am actually moving audit, compliance and legal and secretary into one area. They were separate because they saw themselves as separate departments, but they now realise no one is interested in the distinction. We outsiders see them as one area."

This long-term intertwining of technology and the social fabric of the organisation shows the reflexive nature of the intranet technology, an idea properly captured in a quote from the intranet manager:

> "An organisation gets the intranet it deserves."

7.3. Processes underpinning institutionalisation

Having demonstrated the ongoing interplay between the technology and the organisation, the next step is to identify specific processes of interplay that drive the development of constitutive and background expectations. The main research question asks how intranets become institutionalised in organisations - and this section aims to answer that question. As described in section 3.7, the process of institutionalisation is seen to be driven by the development of *constitutive expectations* (the perception that the intranet is part of the expected formal functioning of the organisation) and *background expectations* (the intranet becomes taken for granted by employees and part of the world known in common). As discussed in chapter 2, section 2.4, the development of these expectations is driven by the interplay between the technology and the organisation. It is this interplay and the ongoing mutual changes that allow the intranet to better reflect the organisation, and the organisation to better accommodate the technology.

According to Zucker (1986) there are two main barriers to the development of these expectations which also hinder the institutionalisation of the intranet in the organisation. The first refers to physical and social distance between organisational groups. At A&L, the organic growth through various mergers and acquisitions meant that there were several sub-cultures in the organisation, and growing tensions between these groups. This is illustrated by one employee who said that *"we don't actually like each other"*. Although behind the scenes the various parts of the organisation were becoming more cohesive under the new CEO, Richard Pym, there were still very deep differences between groups, as described by one senior manager in 2005:

> "When Alliance & Leicester and my previous bank merged in the mid-1990s, there was an agreement to keep the businesses separate for a number of years - so the cultures are still quite strong. I can still spot a member of staff from that bank within minutes of meeting them."

The second barrier to the development of these expectations was the level of complexity of the system. The intranet environment in 2005 had become very complex to run due to the growing content, number of publishers and links with other systems. This increased complexity hinders the process of interplay and subsequently the process of institutionalisation.

In this context, Zucker (1986) highlights the importance of institutional mechanisms such as formal policies and standards in order to stabilise the interplay and support the natural evolution of the system in the organisation. She proposes two types of institutional mechanisms: those that operate at the level of *background expectations* and those that operate at the level of *constitutive expectations* – both concepts are described in detail in chapter 3.

Using these two concepts as theoretical lenses to analyse the data offered insights into specific processes of interplay that drove the development of these two types of expectations. More specifically, the research identified processes that increased the familiarity with the technology and the perception that it is a normal feature of organisational life – based on the concept of *background expectations*. The research also identified processes that fostered the perception that the technology had become part of the expected formal functioning of the organisation – the concept of *constitutive expectations*. Data from the A&L case study identified five key processes underpinning the development of background expectations and five main processes underpinning the development of constitutive expectations. These are described in the next two sub-sections.

7.3.1. Becoming taken for granted: background expectations

Analysis of the data highlighted the processes of interplay underpinning the development of background expectations – i.e. increasing familiarity with the technology and its unreflective use by employees. Data collected in 2005 showed that many employees perceived the intranet as having become embedded in routine work and very familiar to them, as illustrated in the following quote:

> "The fact that we don't think about the intranet possibly shows how far it has come, rather than being that new thing."

Five key processes of interplay were found to underpin the development of these background expectations. The first was the development of familiarity with the system; the second was the routinisation of its use; the third was the development of the perception of usefulness; the fourth was the perception of the intranet as the preferred channel of communication; and the fifth was the perception that the intranet genuinely reflected what went on in the organisation. The following table summarises how these five processes operate and foster background expectations.

Background expectations	Intranet becomes taken for granted and part of the world known in common through the features that align the intranet to the culture and values of the organisation	
	Process 1 (organisation > intranet)	**Process 2 (intranet > organisation)**
Familiarity and normality	The intranet reflects the values and beliefs of the organisation through the use of colours, logos, information	The intranet allows new values to emerge and facilitates organisational change. Employees

	structure and branding guidelines.	may use the intranet to express differences through new designs or imagery.
Routine and habitus	Existing way of working is transferred to the intranet without much adaptation.	Employees start to question procedures and routines, seeking change and improvements.
Usefulness and ease of use	Users develop an understanding of how to operate with the intranet by analogy with current ways of working.	Users recognise that the intranet offers new possibilities and gain an understanding of how to operate in this new environment.
Preference and persistence	The intranet is seen as a new channel for communication, replacing face to face meetings and telephone. Users question its value and require training in its use.	The intranet is not perceived as "new" and is just another feature of organisational life. New employees accept the intranet as a given without questioning its use.
Reflects reality and fairness	The intranet reflects the world-view of the group that owns the infrastructure. Not all areas of the organisation are fairly represented.	The intranet allows hidden areas of the organisation to become more widely known, tackling biased perceptions caused by lack of information.

The longitudinal analysis of the mutual changes described in the table above is described in more detail below.

Familiarity and normality

The design and structure of the intranet changed several times between 2000 and 2005. During this period the structure of content on the homepage changed three times, each change aiming to reflect better the needs of the business and the interests of the organisation. As described in chapter 6, the changes on the main homepage covered the use of colours (especially the use of orange as the corporate colour), the use of logos (new logo and use of imagery) and the information architecture (changed from a nine box grid to a navigation bar at the top and side to reflect the various areas of the business). Several other changes took place on an ongoing basis to adapt the intranet to changes in the business, for example by coupling and decoupling sections of the website depending on feedback from users and their ability to find information. The language and tone used on the intranet also changed over time to more closely reflect the language and tone of face-to-face and offline communication.

Simultaneously, through the conveying of standard signs and messages, the intranet amplified their communication and absorption across the organisation.

Images, colours and visual representations became more widely recognised, and employees began to expect certain standards tone and language. These shared values and the consistency of look and feel developed a sense of unity and "closeness", as described by one employee:

> "In a strange way we feel smaller now, because we are closer through the intranet. It sounds strange... before there were many departments we did not recognise, but now we are together in that way."

This sentiment is reflected in the 2005 survey which showed that 86% of respondents felt that the intranet used a similar language to that of their everyday work, and 60% felt it to be very familiar across all areas. The ongoing changes in design and structure towards a more consistent look and feel made the intranet more familiar to employees, and at the same time contributed to the widespread recognition of the same imagery and values across the organisation.

In sum, the intranet was initially designed to represent corporates values; however over time its widespread use shaped perceptions and values in return, increasing the sense of familiarity with the system and the perception of it as a normal feature of organisational life.

Routine and habitus

During the intranet's first two years, many functions and services migrated online, as described in chapter 6, and small applications to support routine activities such as "room bookings" or booking taxis were developed. More critical applications, such as self-service HR functions, were also made available, along with a "Forms Warehouse" where employees could find all the latest forms and documentation. The offering of these services on the intranet strongly influenced its design and functionality, but at the same time the processes themselves changed and adapted to meet the requirements and possibilities of this new medium.

The increasing number of services made the use of the intranet necessary on a daily basis, contributing over time to the development of routines which eventually became unnoticed and part of unreflective behaviour. This unreflective use is illustrated by an employee who, when asked about her use of the intranet, said: *"I don't use the intranet that much"*. However, as she started to think more carefully, he realised that *"actually, now that I think about it, I use the intranet quite a lot more than I thought"*. The following quote shows the various functions she used unreflectively:

> "I use branch details at least three times every day. I check "Competitions" and new products and services, what is happening at A&L. I also use "Credit checks" in Forms Warehouse quite a lot... Actually, now that I think about it, I use the intranet quite a lot more than I thought."

The intranet reflected existing work practices in the organisation but at the same time the routines inherent in the new processes fostered new habits and behaviour, as described by one employee talking about the impact of the intranet on manager-employee communication:

> "There is less reliance now on cascading information through your manager. We read the intranet to keep up to date with what is happening. The intranet reduces the need to have so many updates."

Some employees might disagree with these new routines and habits but feel incapable of impeding these changes:

> "The danger is that it may replace face to face; if it is there, you are pushed down that route."

In the 2005 survey 70% of the respondents said that the intranet had become part of their day-to-day routines and 67% thought that its use was rooted in routines. In sum, the intranet became increasingly used as part of the working life of the employees but at the same time it worked as a catalyst for change, reinforcing new routines and work practices.

In sum, as the intranet responded to the needs of employees with additional services and functionality, its usage increased and it became an integral part of employees' daily work routines and habits.

Usefulness and ease-of-use

The intranet team placed a great deal of attention on collecting feedback from users and made regular changes to the intranet in response to this. Usability testing was performed annually, based on focus groups and card sorting exercises, and expert reviews were conducted on an ongoing basis by an in-house consultant to improve the information architecture. User surveys were also conducted on a regular basis.

This effort to collect and respond to user feedback led to a complete restructuring of the homepage at the end of 2001 and further ongoing changes, as described in chapter 6. New content and services were introduced regularly in response to user demand, making the intranet more useful for a larger number of employees. Initially users would request that existing processes and information be placed online, but over time these requests became more sophisticated and specific to the new medium. For example, employees asked for a webcam to be placed in the staff restaurant to check queues before eating. Another request was for a new cab-sharing service to allow the booking of the same cab for more than one person. As the understanding of the new medium grew, more applications that could only be delivered through the intranet were proposed.

Over time, users also became more aware of how the intranet worked. This is clear from user feedback analysed in detail in chapter 6. Feedback in 2001 was quite negative, suggesting that users were not able to find the information they wanted, and were confused about how to navigate through the information architecture. Feedback in 2005 is much more positive, with users seemingly much more comfortable and confident about using the intranet.

As the intranet became more useful and easy to use, employees started to form new expectations about how to perform certain tasks. Initially, the perception of usefulness and ease of use was based on older ideas and expectations about the way of working in the organisation. Over time, people developed new expectations about how the intranet could be used and a new understanding of how to work with it. The perception that the intranet was useful and easy to use contributed to it becoming part of employees' daily life and used unreflectively.

Preference and persistence

In 2001 employees viewed the intranet as an alternative way of finding information; however by 2005 this perception had changed and many employees saw the intranet as their preferred information source, as described by one employee:

> "As a part timer I find the intranet invaluable as it brings me up to date when I come into work on a Monday. I believe the intranet is a quick and efficient way to obtain information I require for my job."

Preference for using the intranet to communicate staff news or information about products and services developed over time and in the 2005 survey 81% of the respondents said that they preferred the intranet to paper manuals and 60% said they preferred the intranet to the telephone.

To give an example, as described in chapter 6, branch communication was initially done by fax; however as the intranet expanded, the branch team decided to use the intranet to inform branches about their relative performance and disseminate news and updates. This information is critical for branch managers as their salaries are related to these performance figures. The intranet became the preferred method of communication to both branch employees and headquarters staff because it was considered a faster and more reliable system of communication. The new service "BranchMI" quickly became one of the sites with the greatest number of hits. Newcomers and temporary or part-time staff also felt the intranet was their preferred method of catching up with news and information, as described by one employee:

> "I left the company for a year and when came back looked at the intranet and felt updated with the news, gossip...I felt I had caught up with the moving of offices, promotions, things in my own department... very useful."

The above quote also shows that the use of the intranet was propagated and diffused across social groups and through time. The intranet was also part of the training package for new employees which contributed to it being perceived as just another feature of organisational life from the point of view of the new employee.

The perception that the intranet is the preferred channel of communication and the perpetuation of its use across social groups and through time contributes to it becoming taken for granted and perceived as a fact of organisational life. The intranet was initially seen as a new channel for communication; over time, employees started to prefer it for some organisational functions and no longer saw the intranet as "new" but as a normal feature of organisational life.

Reflects reality and fairness

The perception that the intranet provides a balanced and fair view of all areas of the organisation contributes to the development of an overall perception that the intranet is familiar and an established feature of organisational life. The intranet initially reflected the worldview of senior management and the corporate communications team (the group who centrally managed the infrastructure) and not all areas of the organisation felt they were fairly represented. Over time, this changed as more areas became represented and were given the opportunity to use the intranet to reflect and communicate their interests and needs.

As described in chapter 6, in 2004 the intranet was not perceived as representing all areas of the organisation. There was the perception among some employees that content from departments closer to headquarters had greater exposure, and that the influential role of the centre was mirrored by the intranet. This view is reflected in the views from two employees in their response to a survey at the time:

> Although I use the intranet a lot I feel it is more Carlton Park [headquarters] biased and it would be nice to have some more news from outside Leicester!
>
> I feel the intranet does not focus on back offices whose work is an integral part of the business.

However, content and services on the intranet evolved to be more encompassing and the perception in 2005 by one employee was that it *"had the whole of A&L together; it has got everything".* This is reflected in the survey in 2005 with 78% of the respondents feeling that the intranet changes as A&L changes and 90% that content is generated across the business.

7.3.2. Part of the formal functioning: constitutive expectations

Analysis of the data collected also identified the processes of interplay underpinning the development of constitutive expectations – with an increased perception that the intranet was part of the formal functioning of the organisation. In 2005, the intranet was considered by most employees to be a source of reliable and authoritative information, also possessing a high degree of objectivity. One employee actually compared the intranet to a "bible". She said:

> For me, it is like a bible. We direct people to the intranet. They need to check the information there first; I don't have time to go round and repeat everything. People are more self-sufficient and you don't get conflicting messages because you refer to the intranet. It passes on the same message to everyone at the same time.

However, back in 2000, at the time of its launch, the intranet was far from being perceived as the "bible" or recognised as a legitimate source of reliable information. Five processes of interplay explain the change in this perception by developing constitutive expectations.

The development of *constitutive expectations* was fostered first by the formalisation of roles and responsibilities and governance; second by the development of policies and related controls; third by the development of senior support; fourth, by a clear definition of purpose and alignment with the business; and fifth by increasing awareness of benefits of the intranet in the organisation. It was the interplay between the technology and the organisation at these five levels that underpinned the development of constitutive expectations, as described below.

The following table summarised the ongoing changes underpinning the development of constitutive expectations.

Constitutive expectations	The intranet becomes part of the expected functioning and way of working of the organisation through the establishment of rules and governance that formalise the use of the intranet inside the organisation	
	Process 1 (organisation > intranet)	**Process 2 (intranet > organisation)**
Governance, roles and responsibilities	The functioning of the intranet mirrors the functioning of the organisation. Roles and responsibilities for the intranet are created in line with existing organisational structure. Ownership of content reflects the structure of the organisation.	Ongoing use of the intranet imposes new roles and responsibilities to match the reality of this new environment. New job titles appear and existing jobs adapt to accommodate new responsibilities.
Controls, policy and standards	Existing policies and standards from other areas of the business are used to regulate the publishing of content on the intranet (data protection, disability, etc).	New practices and ways of working require new policies, standards and adaptation of existing policies from other business areas.
Senior support and regulatory enforcement	Senior executives support the use of the intranet as another tool or organisational resource.	Intranet becomes business critical and its use enforced through internal regulations and removing alternatives.
Purpose / alignment with business	Intranet developed for specific purpose, responding to – and being shaped by - a particular business need.	The use of the intranet reveals new business purposes and influences business objectives.
Importance and benefits	The value of the intranet is perceived through existing systems of belief which may not reflect its true potential. For example, intangible benefits related to communication and collaboration are not fully perceived and understood.	New benefits specific to the intranet start to be perceived, understood and recognised by the organisation. These benefits and values become accepted by users and management and adopted by other areas of the organisation.

There follows a more detailed analysis of the interplay at the 5 levels described in the table above.

Governance, roles and responsibilities

The intranet initially reflected the governance model of the organisation because it was tightly coupled with the objective to communicate the new business strategy, "Strategy 2000". All content at this stage was published centrally by the communications team. This team contributed content to the intranet as an extension of their normal jobs, but these responsibilities were not formally recognised in their job descriptions. Contributions from employees from other departments were also considered an extension of their exiting roles and not formally recognised.

As the number of contributors grew, a clearer and more specific governance model for the intranet had to be developed. In 2000, the governance model proposed in the 1999 BT report was implemented. That report recommended a decentralised publishing environment with strong enforcement of standards from the centre. This model was implemented and new roles - such as "Site sponsor", "Site owner", "Publisher" and "Author" - became formally accepted and recognised in the organisation. These roles were also included in the job descriptions and annual objectives of employees.

In 2004 and 2005, as the intranet expanded, the roles associated with the management of the intranet started to permeate other areas of the organisation. Some non-intranet related roles, such as supervisors in call centres, had to include the use of the intranet as part of their job descriptions. Senior managers also became responsible for training new staff on how to use the intranet. This emphasis on governance was recognised in the 2005 employee survey, with 55% of respondents saying that they were well aware of the procedures for publishing content on the intranet.

Another effect at the governance level was the regulation of intranet use within the organisation. This initially consisted of high level guidelines contained within the existing IT policy. However, as soon as 2000, a new "Web Policy" had been formalised to regulate the publishing and use of content on the intranet. These intranet-specific policies became linked with wider business policies in 2005. For example the Operational Risk group became aware of the criticality of the intranet for the business and decided to include the intranet in their operational risk framework. The intranet also influenced HR policy on training when it became clear this was an important part of the induction programme for new employees.

In sum, the intranet initially mirrored the governance model of the organisation but, as it grew, new roles and responsibilities had to be created specifically for it. This in turn started to change existing roles within the wider organisation. The development of a strong governance model formalising roles and responsibilities contributed to the overall perception that the intranet had become a formal part of the organisational environment.

Controls, policy and standards

Chapter 5 described how the publishing of content in 2005 had become highly regulated. There were several policies in place to regulate many aspects of the intranet, including the use of imagery and logos, compliance with external regulations such as the Data Protection Act, Writing for the Web and technical requirements, among others. Each of these policies has a history and reflects the long term evolution of the intranet in the organisation. Policy making is one of the main responsibilities of the central intranet team, who develop, maintain and enforce standards on a continuous basis.

Employees expected and were aware that content published on the intranet was controlled: this was the culture of the organisation and the intranet was part of it. 70% of survey respondents in 2005 felt that all content was checked and approved by experts before being published. The following statement from one of the employees, further demonstrates this belief:

> Although we don't think about the mechanics of the intranet, we know that there is red tape. We know someone is writing the brief, their manager is probably checking in, along with legal and compliance if necessary. Although we don't necessarily have to sit down and think about it, we always take it as correct. At A&L we are just stringent with the checks to make sure everything is correct. That is just our culture - everything is checked and double checked and triple checked...

In this statement there is a view that the functioning of the intranet reflects the way of working in the organisation but there is also the view that intranet regulations have become part of the more general organisational regulatory environment. Policies and controls for the intranet become more and more intertwined with wider organisational policies: ultimately the two became one.

To sum up, A&L initially developed specific policies to regulate the intranet, but over time the intranet became subject to wider business policies, which in turn had to change to reflect the intranet's intrinsic role in supporting the business. The existence of standards and policies to regulate content publishing and intranet use contributed to the general perception that the intranet was part of the expected functioning of the organisation.

Senior support/regulatory enforcement

The use of the intranet gained senior support from its inception in 1999. After a failed attempt by the IT department to launch the intranet, a new senior leadership team adopted it as a key mechanism for communicating to employees and, later, as a tool to reduce costs and improve efficiency. Initially the intranet was used as an alternative channel to communicate the new business strategy, "Strategy 2000". But with the successful implementation of the HR site in 2001, the intranet quickly became the main channel for communication. Over time, the removal of alternative channels made the use of the intranet compulsory for many business functions. Employees also felt that senior management supported its use in the organisation (59% of the 2005 survey respondents agreed with this statement).

As senior leaders became more aware of the intranet as a key channel to communicate and manage change in the organisation, many set up their own intranet pages. CEO Richard Pym's blog, "Pym's page", was always in the top five most-seen sites, and employees felt closer to senior management as a result of it. Richard Pym used his blog to convey corporate messages but also to disseminate a new culture that was more open, straightforward and transparent. The intranet reflected the interests of senior leaders and at the same time played a role in changing the perception about them and the culture of the organisation. The informal and straightforward stance of the messages on the intranet was described by one of the employees in relation to the CEO blog:

> "Richard Pym's page is quite interesting; you get to know what goes on. It comes across as very human, quite informal. Even the term 'Pym's page' is quite informal"

The online visibility of senior executives led to deeper changes in employee perceptions of senior leaders, as described by one manager in 2005:

> "The other big change later on with the intranet - and this again reflected the change to a more open, collegial style of management - was that instead of just saying "my door is always open, you can always come in" managers actually meant it. Because the outgoing management were very much old school, A&L needed to show that they were going to deliver a new organisation. The intranet supported this change because it made decisions much more transparent."

In conclusion, the intranet gained strong senior support from early stages of development. It was used as a vehicle to communicate messages from senior leaders and shaped by their needs; however over time its use also influenced leadership behaviour and employee perception of those leaders. The perception of strong senior support for the intranet and enforcement of standards fostered a general sense that the intranet had become part of the way of working in the organisation.

Purpose/Aligning with business

Early in 1999, the initial purpose of the intranet was to promote the new business strategy, "Strategy 2000". The intranet was designed to respond to this particular objective but over time it changed to respond to new business needs and objectives. The intranet became, for example, essential to the HR function by supporting the critical business issue of harmonising terms of employment across various parts of the organisation. The HR department actually used the intranet more extensively and developed it into a full service to enable employees to deal with HR processes themselves through the intranet. The site was very successful and the board saw it as an example of cost savings to be followed by other parts of the business.

As the intranet evolved, other organisational functions adopted the intranet and, in 2002, the intranet became formally part of A&L's business strategy to be a *"Direct bank with high street presence"* as a key driver for building direct channels and to serve customers and employees. The intranet was part of the vision to offer information and services online, moving towards a self-service model. Employees understood the role of the intranet in the business, with 92% of the respondents to the 2005 survey saying that they recognised the importance of the intranet to A&L. In sum, the intranet became not just a catalyst for intended change, but also an integral part of the bank's new strategy.

In sum, A&L's intranet was initially designed to promote a new business strategy, but it later evolved to become an element of the business strategy itself when the bank focused on direct channels to serve customers. Establishing a close link between the purpose of the intranet and business objectives also contributed to the development of an overall perception that the intranet was part of the expected functioning of the organisation.

Importance and benefits

When the intranet was first launched in 2000 its benefits and importance were defined purely in terms of its role as a communication channel. The intranet gained more importance when, in 2001, it played a central role in dealing with a large redundancy programme and the harmonisation of terms of employment (described in detail in chapter 6). Despite its high profile in supporting these two major projects, the intranet only became recognised as a business tool later in 2002 when savings and efficiency gains were demonstrated as a result of the new HR.*online* site. The perception of the intranet as a business tool grew when considerable savings were realised from abandoning the print version of the staff magazine (Spectrum*Live*), providing business forms through the FormsWarehouse, and other online initiatives. At this stage, the main benefits recognised by the management team for approval of budgets were cost savings.

As the intranet evolved, so too did the level of understanding about its potential impact and benefits to the organisation. New applications such as the Announcements page and the Staff Directory highlighted new possibilities and benefits. These benefits were recognised after implementation when the management saw their impact on collaboration and sharing of information. Over time, these more intangible benefits started to be recognised and used to assess the value and importance of the intranet to the organisation.

The importance of the intranet for most employees was demonstrated in the 2005 employee survey, where 68% of the respondents agreed that A&L could not function without the intranet and 63% felt that the intranet was necessary for their job.

To sum up, the perception of the benefits and importance of the intranet evolved to become more appreciative of the specific nature of the new medium. Initially, the importance of the intranet was perceived based on existing interpretive frames, but over time the specific nature and utility of the intranet became understood and recognised in the organisation. Demonstrating the importance and benefits of the intranet to the business fostered the idea that it was core to the functioning of the organisation.

7.4. Summary of findings: explaining institutionalisation as process of generation

Institutionalisation is the process by which intranets become: 1) part of the expected formal functioning of the organisation – through the development of *constitutive expectations*; and 2) part of employee routine and the world known-in-common – through the development of *background expectations.*

The development of these two theoretical concepts in organisations is underpinned by ongoing mutual changes to the intranet and the organisational working practices associated with its use. The following diagram represents the processes of interplay identified in this research that fosters the development of constitutive and background expectations and drives the institutionalisation of the technology in the organisation.

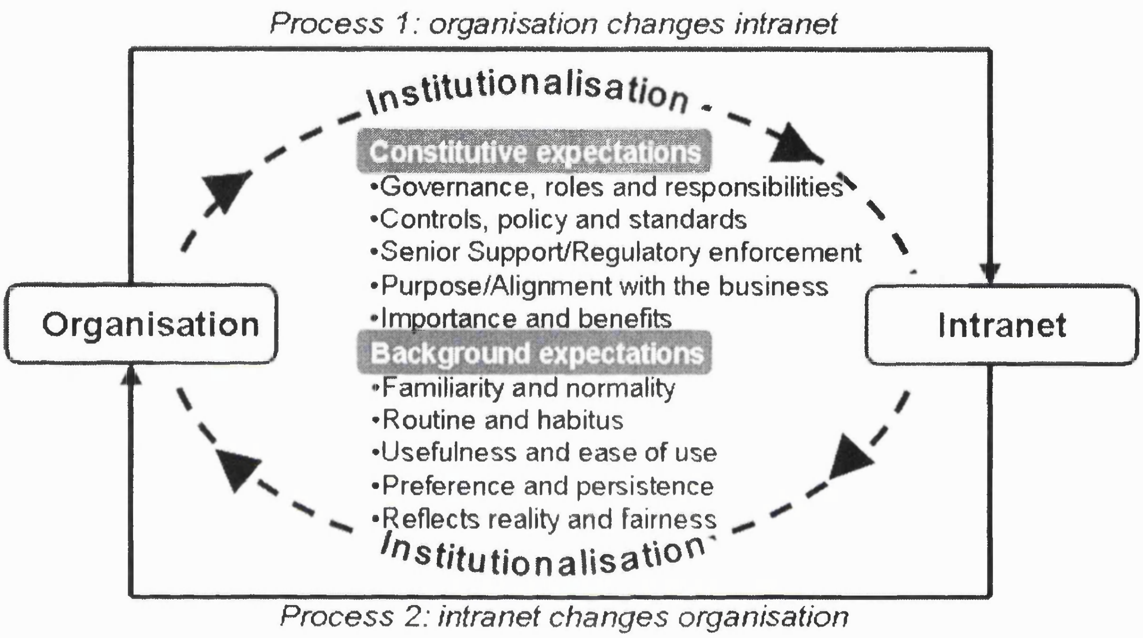


Figure 17: Framework summarising findings

Table 12 below summarises the processes of mutual changes: Process 1 - where the organisation changes the intranet; and Process 2 - where the intranet changes the organisation.

Constitutive expectations	The intranet becomes part of the expected functioning and way of working of the organisation through the establishment of rules and governance that formalise the use of the intranet inside the organisation	
	Process 1 (organisation > intranet)	**Process 2 (intranet > organisation)**
Governance, roles and responsibilities	The functioning of the intranet mirrors the functioning of the organisation. Roles and responsibilities for the intranet are created in line with existing organisational structure. Ownership of content reflects the structure of the organisation.	Ongoing use of the intranet imposes new roles and responsibilities to match the reality of this new environment. New job titles appear and existing jobs adapt to accommodate new responsibilities.
Controls, policy and standards	Existing policies and standards from other areas of the business are used to regulate the publishing of content on the intranet (data protection, disability, etc).	New practices and ways of working require new policies, standards and adaptation of existing policies from other business areas.

Senior support and regulatory enforcement	Senior executives support the use of the intranet as another tool or organisational resource.	Intranet becomes business critical and its use enforced through internal regulations and removing alternatives.
Purpose / alignment with business	Intranet developed for specific purpose, responding to – and being shaped by - a particular business need.	The use of the intranet reveals new business purposes and influences business objectives.
Importance and benefits	The value of the intranet is perceived through existing systems of belief which may not reflect its true potential. For example, intangible benefits related to communication and collaboration are not fully perceived and understood.	New benefits specific to the intranet start to be perceived, understood and recognised by the organisation. These benefits and values become accepted by users and management and adopted by other areas of the organisation.

Background expectations	Intranet becomes taken for granted and part of the world known in common through the features that align the intranet to the culture and values of the organisation	
	Process 1 (organisation > intranet)	**Process 2 (intranet > organisation)**
Familiarity and normality	The intranet reflects the values and beliefs of the organisation through the use of colours, logos, information structure and branding guidelines.	The intranet allows new values to emerge and facilitates organisational change. Employees may use the intranet to express differences through new designs or imagery.
Routine and habitus	Existing way of working is transferred to the intranet without much adaptation.	Employees start to question procedures and routines, seeking change and improvements.
Usefulness and ease of use	Users develop an understanding of how to operate with the intranet by analogy with current ways of working.	Users recognise that the intranet offers new possibilities and gain an understanding of how to operate in this new environment.
Preference and persistence	The intranet is seen as a new channel for communication, replacing face to face meetings and telephone. Users question its value and require training in its use.	The intranet is no longer perceived as "new" and becomes perceived as just another feature of organisational life. New employees accept the intranet as a given without questioning its use.
Reflects reality and fairness	The intranet reflects the world-view of the group that owns the infrastructure. Not all areas of the organisation are fairly represented.	The intranet allows hidden areas of the organisation to become more widely known, tackling biased perceptions caused by lack of information.

Table 12: description of concepts in the framework summarising findings

It is important to note that, as described in chapter 2, organisations and their intranets continuously evolve, producing cyclical and ongoing mutual changes. The intranet continuously adapts to changes in the organisation and the organisation is constantly adapting working practices to changes in the technology. It is therefore important to recognise that institutionalisation is an ongoing process underpinned by the interplay between technology and its context of use.

7.5. Summary of this chapter

This chapter answers the research questions set in chapter 2 by analysing the findings in chapter 6 in light of the theoretical understanding in chapter 3 and themes from the literature reviewed in chapter 2. It explores four main themes driven by the research questions set in chapter 2. The first theme explored is the definition and conceptualisation of intranet institutionalisation; the second is how intranets become institutionalised in organisations; the third relates to the organisational processes underpinning institutionalisation; and the fourth looks at the wider implications of institutionalisation for organisations.

The chapter starts by using data from the case study to define and conceptualise intranet institutionalisation. Data supports Zucker's theoretical understanding of institutionalisation as the familiarisation and embedding of the technology in routine work practices to the point where it is used unreflectively and taken for granted as a normal feature of organisational life. The study's findings, however, suggest that the process of institutionalisation is not uniform across the organisation, with different groups following different patterns at different speeds. Findings also suggest some paradoxical consequences of institutionalisation brought about by the associated decline in the collective awareness of the strategic value of the intranet to the organisation.

The next section uses data to describe the two processes of interplay and mutual changes to the technology and the organisation underpinning institutionalisation. Data shows how the design and governance of the intranet were initially shaped by the prevailing interests and procedures in the organisation. It also shows how, in later stages, the use of the intranet increasingly changed the bank's working procedures. These mutual changes further embedded the intranet in the expected formal functioning of the organisation (constitutive expectations) and fostered familiarity and the perception that the intranet was part of the normal feature of organisational life (background expectations).

Analysis of the data then identifies five specific processes of interplay underpinning the development of constitutive expectations (governance, roles and responsibilities; controls, policy and standards; senior support/regulatory enforcement; purpose/aligning with business; importance and benefits) and five other processes of interplay underpinning the development of background expectations (familiarity and normality; routine and habitus; usefulness and ease-of-use; preference and persistence; reflecting reality and fairness).

The chapter ends by consolidating and summarising findings by presenting a new overall framework explaining the process of intranet institutionalisation.

7.5.1. Contribution to theory

This chapter builds on the theoretical ideas of Zucker (described in chapter 3) to present a distinct conceptualisation of institutionalisation as a process of *generation* inside organisations. It adds to the literature on institutional thinking in IS by recentring this phenomenon at the organisational level, as a process responsible for the development of patterns of behaviour which gradually gain shared social meaning. This approach differs from the more published and mainstream conceptualisation of this phenomenon as a process of *reproduction,* responsible for the copying of practices across industries and between organisations. The study is informed by Zucker's institutional thinking presented in some of her key papers. It relies more heavily on two concepts developed by her as part of her institutional-based trust theory (Zucker 1986). This study adds to the growing literature on the processes of institutionalisation of technology in organisations. The use of Zucker's work provides a strong theoretical justification for existing studies in IS which acknowledge the embedding of systems in organisations, without providing sufficient theoretical grounding. From this point of view the study makes a contribution to theory by building a solid theoretical basis for existing studies in IS looking at the institutionalisation and embedding of technology in organisational routines and work practices.

This chapter makes another contribution to theory by operationalising the two key theoretical concepts from Zucker's institutional-based trust theory to explain the embedding of an intranet in a bank. A new framework is developed to explain how these two concepts operate in organisations - driving the institutionalisation of technology in work practices and the routines of employees.

7.5.2. Contribution to literature on intranets

This chapter contributes to the literature on intranets by describing the processes of interplay and mutual changes between the intranet as a technology and the working practices associated with its use. It also provides, along with chapter 6, a unique account of the longitudinal evolution of the intranet in the bank over a five-year period. The detailed study of the interplay between the technology and the organisation illustrates the mutual changes that occurred during the evolution of the intranet in the organisation.

7.5.3. Main themes

Conceptualising intranet institutionalisation: intranet institutionalisation is conceived as the process by which the intranet becomes seen as part of the expected formal functioning of the organisation and employees take it for granted and as part of their normal everyday organisational life.

Paradoxical effects of institutionalisation: a paradoxical relationship was found between institutionalisation and the collective awareness of the strategic importance of the system to the organisation. Data suggests that, over time, the system becomes less "visible" to stakeholders, with obvious consequences for risk management.

Different patterns and speeds across social groups: findings also suggest that the process of institutionalisation was not uniform across the organisation and that different social groups followed different patterns and speeds in embedding the technology in their specific work practices. Evidence of reverse institutionalisation or de-institutionalisation was also found.

Interplay and ongoing mutual changes: data shows how the intranet interplays with its organisational context through ongoing mutual changes to the technology and the working practices associated with its use.

Interplay underpins institutionalisation: the ongoing mutual changes foster the familiarity of employees with the system (background expectations) and make it more embedded in the expected formal functioning of the organisation (constitutive expectations).

Constitutive expectations: the intranet becomes part of the expected functioning of the organisation through ongoing changes at five different levels: 1) governance, roles and responsibilities; 2) controls, policy and standards; 3) senior support/regulatory enforcement; 4) purpose/aligning with business; 5) importance and benefits

Background expectations: the intranet becomes taken for granted and perceived as familiar and part of normal everyday life of employees through ongoing changes at five different levels: 1) familiarity and normality; 2) routine and habitus; 3) usefulness and ease-of-use; 4) preference and persistence; 5) reflecting reality and fairness

Theoretical framework: a new framework is proposed, based on the analysis of the data and informed by Zucker, to explain the processes underpinning the institutionalisation of technology in organisations through the development of constitutive and background expectations.

7.5.4. Linking with the rest of the thesis

This chapter aims to answer the research questions in chapter 2 using theoretical concepts in chapter 3 to analyse findings in the previous chapter.

Chapter 8

Conclusion

This chapter reviews the contents of this thesis and discusses its key contributions and limitations. It also provides suggestions for further research in the field.

This thesis makes a contribution to the IS literature by identifying specific processes of generation of institutionalised behaviour underpinning the institutionalisation of technology in organisations. Specific processes of mutual change to the technology and associated work practices are identified as responsible for the gradual embedding of the technology in routines, habits and the social fabric of the organisation. Findings identify two types of organisational processes underpinning the institutionalisation of the technology in the organisation. The first type operates at the level of *constitutive expectations* and refers to mutual changes which embed the intranet in the expected formal functioning of the organisation. The second type operates at the level of *background expectations* and refers to mutual changes which routinise the use of the intranet as part of the normal everyday life of employees, to the point where it becomes taken for granted. Specific processes of interplay which operate at these two levels are identified and a new framework representing processes and outcomes of institutionalisation is developed.

The first chapter justifies this research and highlights the importance and nature of intranets to organisations. It also reviews the whole thesis explaining the logic and structure of the main argument and key components. The second chapter reviews relevant literature in IS and describes the ambivalent and reflexive nature of intranets in organisations. The chapter also discusses the ongoing interplay and mutual changes to the intranet and its organisational context of use showing how this interplay underpins the embedding of the intranet in work practices and social fabric of the organisation. The literature on IS institutionalisation is then reviewed and a gap is identified in studying the specific processes of interplay which contribute to the institutionalisation of the intranet in the organisation. Four research questions are then set to address this gap and drive this research. Chapter three explains the choice to use Zucker (1986) as the main theoretical framework for this study by reviewing three alternative theoretical models: Gidden's Structuration Theory, Clegg's Circuits of Power and Meyer and Rowan's institutional thinking. Chapter three then traces the historic background of Zucker's (1986) institutional-based trust theory and its two key theoretical concepts further expanded by revisiting the work of Schutz to develop *background expectations* and Garfikel to develop *constitutive expectations*. Chapter 4 describes the methodology underpinning this study explaining the philosophical stance taken, the research strategy and the approach to data collection and analysis. Chapter five provides some contextual information about the organisation used as an empirical setting for this study: a bank in the UK, Alliance and Leicester. It describes the evolution, market positioning and internal functioning of the bank and its intranet environment. Chapter six shows key findings and presents data collected by tracing the historic evolution of the bank's intranet since its early inception in 1999 until the end of this study in 2005. Chapter seven then analyses data to answer the research questions posed in chapter 2. It shows two types of changes and their impact on institutionalisation. First, it shows how changes in the formal functioning of the intranet (for example in policy, roles and responsibilities) gradually embed its use in the working procedures of the organisation. Second, it shows how changes in content and design embed the intranet in employee routines and habits to the point where it becomes taken for granted. Findings also suggest that the process of institutionalisation is not uniform across social groups and that the collective awareness of the strategic importance of the intranet declines as it becomes more institutionalised in the organisation. Chapter eight then concludes and reviews key aspects of this thesis.

8.1. Overview

CHAPTER 1

The first chapter justifies this research and provides an overview of the structure of this thesis. It highlights the importance of intranets to the functioning of organisations. Organisations increasingly rely on intranets as gateways for the information and internal services required by employees on a daily basis. Intranets are used as the main channel for communication and collaboration, playing an important role in organisational decision-making and employee perception and behaviour. In many organisations, intranets have become part of the business-critical infrastructure and included in business continuity planning.

The chapter describes intranets as a combination of the technical infrastructure that enables the publishing of information (infrastructure), the rules that govern the use of that content (infostructure) and the values and beliefs expressed by the images, text and other content on the intranet (infoculture). Intranets are described as inherently social, because of their ongoing interplay with their organisational context of use. They continuously adapt to the ongoing needs of the organisation, which also change through the gradual appropriation of the technology. The chapter also stresses the importance of taking a longitudinal approach to observing the social and organisational processes that underpin this mutual co-evolution of intranets and their hosting organisations.

The chapter finishes with an overview of the entire study and approach. It describes the study as a five-year longitudinal qualitative case study analysing the process of institutionalisation of an intranet in a UK bank. The study explains institutionalisation as a process of mutual transformation of the intranet and its context of use through the gradual embedding of the technology in the working procedures of the organisation. It uses Zucker (1986) to develop two theoretical concepts which help identify the specific processes of interplay between the technology and the organisation.

CHAPTER 2

Chapter 2 arrives at the research questions which will drive this study by reviewing the literature on intranets and institutional theory in IS. This chapter discusses the inherent properties of intranets which permit the interplay and embedding in their organisational context of use. It argues that the ambivalent and adaptive nature of intranet systems allow the ongoing shaping and reshaping of both the technology and the working practices associated with its use. The chapter also argues that this interplay underpins the embedding of the intranet in the functioning of the organisation and its institutionalisation in the routine working practices of employees.

The chapter first characterises intranets as ambivalent and highly reflexive within their organisational context of use. The literature on intranets shows how organisations adopt this technology for many different purposes and functions. For example, they can be used as a communication channel, or as middleware to connect different applications, or as systems for sharing knowledge and enabling employee collaboration. They are also seen as reflexive in relation to their organisational context of use, because they flexibly adapt in response to the changing needs of the organisation. For example, their governance reflects the functioning of the organisation (the level of centralisation and formalisation will be shaped by the dominant culture of the organisation).

This interplay underpins the institutionalisation and embedding of the intranet in the formal functioning and social fabric of the organisation. The interplay is characterised by two concurrent processes of ongoing mutual changes: *Process 1* refers to the process by which organisations shape their intranet; and *Process 2* to the way in which the intranet changes organisations. Institutionalisation is seen as the outcome of this ongoing interplay and the gradual embedding of the intranet in the working practices of the organisation.

The chapter then identifies a gap in the IS literature, with little being written about institutionalisation as a micro level process of generation of institutionalised behaviour, as opposed to a process of contextual reproduction of social structure.

In order to develop further understanding of the organisational processes underpinning the institutionalisation of technology in organisations a research question was set ("how do intranets become institutionalised in organisations?"), along with three supporting sub-questions ("How can the institutionalisation of intranets in organisations be defined?", "what processes underpin the institutionalisation of intranets in organisations?", and "what are the key implications of institutionalisation to organisations?").

CHAPTER 3

Chapter 3 describes the theoretical underpinning of this study and develops two key theoretical concepts based on Zucker (1986) which are later used to support data collection and analysis.

The chapter starts by reviewing relevant theoretical models to answer the research questions set in the previous chapter. Gidden's Structuration Theory, adapted to IS by Orlikowski (1992), is reviewed but considered unsuitable: its focus on social structure (structures of domination, legitimation and domination) overlooks the micro-level processes of gradual embedding of the technology in work practices and expectations of employees – a key requirement derived from the literature review. Clegg's (1989) Circuits of Power theory and later adaptation to IS by Silva and Backhouse (2003) was also rejected due to its focus on power and political issues in creating institutionalised behaviour in organisations. Meyer and Rowen's (1977) theoretical approach, subsequently developed by DiMaggio and Powell (1983), was not pursued because of its focus on isomorphic mechanisms of reproduction of social structure, rather than on explaining institutionalisation as a process of gradual development of behaviour through the embedding of technology in work practices.

The chapter then proposes using the work of Zucker as the main theoretical lens to answer the research questions and drive the research process. Zucker sees institutions as socially developed patterns of behaviour which have acquired independent meaning to a social group. These patterns emerge through cognitive and cultural processes and shared norms and agreed behaviour which, over time, become perceived as external to specific individuals and develop an intersubjective status (part of the "world known in common"). The chapter reviews Zucker's (1986) institutional-based trust theory and develops its two key theoretical concepts by revisiting the authors who influenced these. Garfinkel's ideas on ethnomethodology are used to develop the concept of *constitutive expectations* and Schutz's phenomenological ideas are used to further the concept of *background expectations*.

C*onstitutive expectations* are described as socially agreed norms of behaviour which over time became embedded in routines and part of world known in common. In the context of intranets, the development of constitutive expectations is described as the process by which intranets become part of the expected formal functioning and way of working of the organisation. The concept of *background expectations* describes the way in which humans operate in the world by taking for granted a vast array of features of their environment. Humans act in the world unreflectively until an exception breaches what they perceive to be the natural attitude of normal daily life. In the context of intranets, the development of background expectations is described as the process by which an intranet becomes familiar and taken for granted through the features that bring it closer to the culture of the organisation.

CHAPTER 4

Chapter 4 describes the philosophical assumptions underpinning this study and the methodology employed for data collection and analysis. The chapter reflects upon the research process as a whole and describes its various stages. It explains the use of literature to identify an area of research which then drives the research questions. It then describes the process of choosing an appropriate theoretical framework and the hermeneutic process of collecting and analysing data leading to the key findings of this study.

The chapter justifies the interpretative stance taken and the use of a longitudinal case study research strategy. It describes the approach taken for data collection and analysis, which is based on Creswell's (2003) sequential exploratory research design, and how this allows findings derived from qualitative methods to be later supported by quantitative research. The various types of data collected are described, and Markus' (1983) study is used to inform the longitudinal reconstruction of the intranet's evolution in the organisation from 1999 to 2005. Finally, the design of a large employee survey is described, along with the hermeneutic process used to analyse its findings.

CHAPTER 5

Chapter 5 provides contextual information on the organisation and intranet which form the empirical setting for this study. The chapter describes the history, market position and culture of A&L. It outlines A&L's goal to become a "direct bank with high street presence" and its reliance on technology to drive customer service from branches to direct channels. A&L is characterised as having a mixture of cultures resulting from the merger of various companies and changes to the leadership team in 1999. The chapter also explains how the intranet emerged as part of a new business strategy and served as a catalyst for organisational change.

The chapter then describes how, in 2005, the intranet moved towards becoming a self-service system and single point of reference for employees. It details its key functions and information architecture and the governance model and policy structure underpinning the management of content. The publishing model is described as decentralised or federated where local teams publish content according to standards set by a central team. The chapter describes the roles and responsibilities of intranet stakeholders and the various policies which bind publishers and local teams to agreed standards. Finally, it highlights the importance of the informal networks of relationships between central team and local units in complementing the formal regulatory environment.

CHAPTER 6

Chapter 6 describes the longitudinal evolution of the intranet from 1999 until 2005 by describing significant landmarks in four major periods of its development.

Three key events in the period between 1999 and 2000 are discussed: the development of a sense of purpose for the intranet and its alignment with business objectives; the securing of senior management support; and the definition of an initial governance model. The chapter discusses how the intranet was first proposed by the IT department, but only taken forward when a new leadership team decided to use it to communicate a new business strategy and "e-enable" the business. An initial governance model is described, based on a devolved publishing model suggested by an external consultancy.

Major developments in the period between 2001 and 2002 are then described. The first is the growth in services and content available on the intranet, increasing its usefulness to employees. The second is the embedding of the intranet in work practices and its growing importance as part of the organisation. The third is an improvement in design, structure and governance to cope with the intranet's increased complexity. The intranet is described in this period as showing a growth in content led by media-aware departments but with low adoption rates. This starts to change when "SpectrumLive", the company magazine, is made available on the intranet, and gains further momentum with the development of an HR site (which becomes an internal case study for saving costs and improving service). The chapter explains how this growth required a more stringent governance model and a revised information architecture and homepage interface.

It goes on to describe important events between 2003 and 2004. During this period, the intranet becomes increasingly familiar to employees, but is perceived not to fully represent all areas of the business. At the same time, there is a move to step up controls to ensure better quality and consistency.

The chapter describes how the migration of additional internal processes helped to make the intranet part of the routine functioning of the organisation, but failed to provide a balanced or consistent view of the business. It also outlines new measures introduced at this time to enforce editorial standards and facilitate feedback from users.

The chapter then focuses on key developments in 2005 - the final period of analysis. At this point, the intranet becomes more complex, with further growth in content and a rise in the number of publishers and stakeholders. This leads to a greater focus on governance, more stringent policies and the implementation of a new technological platform based on a content management system. During 2005 the intranet also becomes part of the business-critical infrastructure and included in business continuity planning.

Chapter 6 concludes by presenting a summary of results from a large employee survey conducted in April 2005. This survey was designed to gauge perceptions of institutionalisation among a broad sample of employees, using the concepts derived from the theoretical framework and earlier qualitative findings.

CHAPTER 7

This chapter answers the research questions set in chapter 2. It uses the theoretical concepts in chapter 3 to discuss findings in chapter 6.

The chapter shows that the intranet in 2005 was highly embedded in the formal functioning of the organisation and taken for granted by most employees. Two processes were found to underpin this high level of institutionalisation. The first process made the intranet part of the formal policies and regulations of the bank – and part of its expected formal functioning – reflecting the theoretical concept of *constitutive expectations*. The second made the intranet more familiar to employees, to the point where they started to use it unreflectively and take for granted its availability and functionality – reflecting the theoretical concept of *background expectations*.

The chapter starts by re-conceptualising the institutionalisation of technology in organisations as a process of gradual embedding of the technology in work practices and employee habits and routines. Data shows how the intranet gradually became more embedded in business processes, eventually becoming part of the bank's business continuity planning and discussed at the highest level of the organisation. It also shows that employees took for granted the availability and use of the intranet as part of their daily routines. For example, for some interviewees, the bank would not be able to operate without the intranet being available to support their work activities. Data also shows that the intranet was highly embedded in the social fabric of the organisation through its important role in sharing news and supporting the interests of the different social groups within the bank. However, findings also suggest that the process of institutionalisation was not uniform across social groups; indeed, the collective awareness of the strategic importance declined as the intranet became more institutionalised in the organisation. The chapter then uses data to explain the two processes of interplay underpinning the institutionalisation of the intranet in the organisation. Data shows how the design and governance of the intranet were initially shaped by the prevailing interests and procedures in the organisation. It also shows how, in later stages, the use of the intranet increasingly changed the working procedures in the bank. These mutual changes gradually embedded the intranet in the expected formal functioning of the organisation (constitutive expectations) and fostered familiarity and the perception that the intranet was a normal feature of organisational life (background expectations).

Analysis of the data identifies five specific processes of interplay underpinning the development of constitutive expectations: 1) governance, roles and responsibilities; 2) controls, policy and standards; 3) senior support / regulatory enforcement; 4) purpose/alignment with the business; and 5) importance and benefits. Another five processes of interplay underpinned the development of background expectations: 1) familiarity and normality; 2) routine and habitus; 3) usefulness and ease-of-use; 4) preference and persistence; and 5) reflecting reality and fairness.

CHAPTER 8

Chapter 8 reviews the thesis and highlights key contributions, research limitations and areas for future research.

8.2. Contributions

This study fills a gap in the literature, which at present tends to conceptualise the institutionalisation of technology as a process of isomorphic *reproduction* of practices across industries and organisations. Instead, this study conceptualises institutionalisation as a process of *generation* and the gradual embedding of the technology in working practices, routines and habits of employees in an organisation. The study also contributes to the IS literature with its longitudinal account of the interplay and ongoing mutual changes to the technology and its organisational context of use. This longitudinal approach also adds to the literature on research method by using Sequential Exploratory Research Design to reconstruct the historical evolution of an intranet in a bank in the UK.

The study expands existing institutional theory to explain the phenomenon of institutionalisation at the micro level of the organisation. The study contributes to theory in IS by operationalising this expanded version of the theory and by identifying specific processes of interplay underpinning the embedding of technology in the working practices of an organisation. A new framework is developed based on these findings to explain institutionalisation and provide guidance for future research in this topic.

The following three sections explain the contributions at the following three levels: theoretical, practical and methodological.

8.2.1. Theoretical contributions

This study adds to the growing literature in IS looking at processes of institutionalisation of technology in organisations. This chapter builds on the theoretical ideas of Zucker (described in chapter 3) to present a distinct conceptualisation of institutionalisation as a process of *generation* inside organisations. Zucker uses the work of Schutz (1962) and Garfinkel (1963) to explain institutionalisation as the gradual development of patterns of behaviour which over time gain independent significance within a social group and become taken for granted and embedded in their routines and habits. This view is distinct from that portrayed by Meyer and Rowan (1977) and DiMaggio and Powell (1983), who explain institutionalisation as a process of isomorphic *reproduction* of practices. For them, institutionalisation is the process by which organisations come under external pressures to become more similar and to adopt common practices.

So far, the literature in IS has mainly followed the *reproductive* view of institutionalisation and has not yet developed enough understanding of *generative* processes that may institutionalise technology in organisations.

This study develops two key theoretical concepts based on Zucker (1986) to explain the embedding of technology in the formal functioning of the organisation and in the routines and habits of the employees. Findings suggest that this process of gradual embedding of the intranet in the organisation is underpinned by the ongoing interplay and mutual changes to the intranet and the organisation. Data presented in chapter 7 shows how mutual changes to governance, policy and controls have contributed to the gradual embedding of the intranet in the formal functioning of the organisation. Data in chapter 7 also shows how changes in the content, services and design of the intranet have contributed to the growing level of perceived familiarity and routinisation of the intranet in the normal everyday life of the employees.

Based on the analysis of the findings, and informed by the theoretical ideas of Zucker, a new model is developed to explain institutionalisation as a process of gradual embedding of the technology in the formal expected functioning of the organisation and in its social fabric. This model identifies specific processes of interplay between the intranet and its organisational context of use, which became visible through the longitudinal analysis of the data.

In sum, this thesis makes important theoretical contributions to the literature by conceptualising institutionalisation as process of *generation* inside organisations, and by developing a theoretical model describing the processes of interplay between technology and its organisational context of use which underpin this phenomenon.

8.2.2. Contributions to practice

The study's longitudinal account of the evolution of an intranet over a five-year period contributes to the field and practice of intranet management. The discussion in chapter 6 shows key turning points in the management and development of this technology in organisations. Chapter 7 then highlights the importance of flexibility and ambiguity as inherent characteristics of this technology in shaping and reshaping its role according to the changing needs of the organisation. The study of these properties, and their role in embedding technology in organisations, expands our understanding of how intranets may be managed more effectively.

The discussion in chapter 7, and more specifically the framework proposed in section 7.4, are especially relevant for managers dealing operationally and strategically with the challenges posed by the distinctive properties of this technology. The framework provides a set of tools and concepts which may help managers to set up appropriate governance, policy, training and controls at different stages in the evolution of the technology. The study shows that the technology and the working practices associated with its use change over time; and that appropriate levels of controls and flexibility need to be set up to allow the technology to evolve and reflect the ongoing needs of the organisation.

One of the study's main contributions to practice is the greater understanding it provides of the role of formal (policy and governance) and informal (meetings and training) mechanisms in standardising practices while simultaneously maintaining the interpretive flexibility of the technology. As discussed in chapter 7, allowing technology to interplay with the surrounding organisational context is very important in embedding it in the working practices and social fabric of the organisation – it is this interplay that underpins the institutionalisation of the technology in the organisation.

The study contributes to the IS literature with its longitudinal analysis of the interplay between technology and its hosting organisation. Data in chapters 6 and 7 shows how the technology changed to reflect the interests of the organisation and how, conversely, the working practices associated with its use also changed to accommodate the inherent properties of the technology. One example of this interplay is the impact of corporate policy on intranet policy, which later led to changes in corporate policy. Another example is the impact of senior management involvement in shaping content on the intranet and the reverse effect this had on managers' perception of the intranet's purpose and role in the business. Other processes of mutual change are identified and analysed according to their impact in institutionalising the intranet in the organisation, as described in section 7.3.

The study therefore contributes to the IS literature with this distinctive account of the interplay between technology and the social fabric of its hosting organisation. Furthermore, the study contributes to the literature on intranets with its discussion of the processes that shape both the technology and the working practices associated with its use. This interplay is discussed through existing literature in chapter 2 and from an empirical viewpoint in chapter 6.

The finding that the collective awareness of the strategic value of the intranet declines as it become more embedded and institutionalised is another key contribution to the field and the literature. Data showed that, as part of the institutionalisation process, the intranet became gradually more "invisible" and used unreflectively by employees and senior managers. Paradoxically, at the same time, the intranet became increasingly critical to the business, with more important business processes being processed through the intranet. Another important finding, forming an important contribution to the field, was that the process of institutionalisation was not uniformly followed by all social groups across the organisation. Different groups followed different patterns and speeds in embedding the intranet in their work practices and normal everyday routines.

8.2.3. Methodological contributions

The longitudinal approach of this study, collecting data to chart the evolution of the intranet at A&L over a five-year period, is informed by Markus (1983) and expands the applicability of this research method. This method allowed the identification of important ongoing mutual changes to the intranet and the organisation. The analysis of these changes supported the development of a new theoretical model explaining the longitudinal processes of interplay by which the intranet became institutionalised in the organisation.

Another contribution of this study is testing Creswell's research methodology, Sequential Exploratory Research Design, as a positive way to complement qualitative findings with quantitative analysis at the end of the research process. The use of an employee survey in this study enabled the views and perceptions on a much wider range of employees to be captured. This was very important to identifying the pattern of institutionalisation across the organisation as a whole, instead of relying solely on the accounts from interviews and focus groups.

8.3. Limitations

This study uses a single longitudinal case study research strategy to explain the process of institutionalisation of an intranet in a UK bank. Findings from the analysis of this specific case may be applicable to other types of organisations (in other industries, markets and companies of different sizes) and types of technologies (other systems that support collaboration and communication, transactional systems, etc) but further evidence of this would be required.

The researcher had unrestricted access to all the information available and required for the research. The longitudinal analysis of the evolution of the intranet in the organisation was made possible by the extensive collection of reports compiled by A&L since the intranet's launch in 1999, and their willingness to organise interviews, focus groups and an employee survey to support this research. This supply of information was considered reliable enough to analyse the ongoing mutual changes to the intranet and the organisation; however the researcher acknowledges that part of the analysis relies on secondary data based on documents and interviewee's account of past events. Chapter 4 explains the measures taken to minimise this limitation, following the process outlined in similar studies such as Markus (1983).

The study of institutionalisation as a process of gradual embedding of the technology in the habits and work practices of employees also posed a challenge, as the technology in question had become "taken for granted" and almost "invisible". One measure taken to overcome this problem was to use Garfinkel's (1967) ethnomethodology techniques to investigate these ingrained routines and habits. These techniques introduce unexpected features to a situation in order to disrupt expectations and identify deeply-rooted expectations about that situation. For example, during data collection interviewees were often asked to imagine how they would perform a particular task or everyday routine without the intranet. This technique supported the study of institutionalisation but is limited in terms of its scalability to larger employee samples. The employee survey incorporated these findings and techniques but its effectiveness is limited compared with face to face interviews. This was not considered a major limitation because the focus of the study is on the longitudinal processes of mutual change rather than on a deep analysis of institutionalisation at any given point in time.

The study is also limited by the inherent characteristics of the theory adopted. Institutional theory has been criticised for using concepts that are vague and amorphous (Hasselbladh and Kallinikos, 2000) and the use of Zucker's approach also limits the analysis to the level of the organisation, overlooking macro level processes related to changes in the industry or regulatory environment.

8.4. Further research

This study hopes to motivate further research analysing the institutionalisation of technology in organisations, and in particular studies adopting the generative approach. There is a growing interest in using institutional theory in IS, but so far most studies have adopted the reproductive view of institutionalisation, analysing isomorphic pressures between organisations. More studies are needed to expand and establish the view of institutionalisation as a process of gradual embedding of the technology in the working practices and the habits of employees, to the point where it is taken for granted.

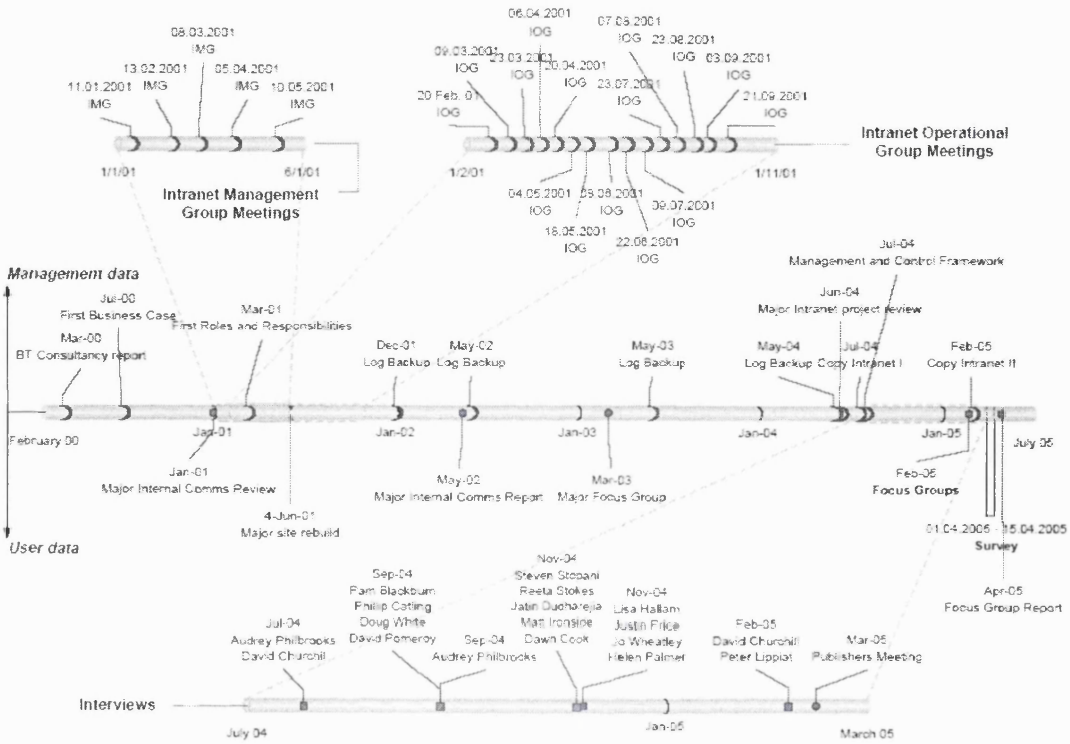
Another recommended avenue for further research would be to further investigate two key findings of this study. It was found that the collective awareness of the strategic value of the intranet declined as it became more embedded in the organisation. Further research could analyse this paradoxical relationship in more detail. It was also found that the process of institutionalisation was not followed uniformly across social groups inside the organisation; further research could explore in more detail the underlying reasons for the differences in the patterns and speeds of institutionalisation.

Future studies could also compare the type of longitudinal interplay described in this intranet research with that involving other types of technology. The framework developed at the end of chapter 7 could be used for this purpose. The framework could also be used in other studies of intranet institutionalisation for further verification of its theoretical concepts.

Appendices

9.1. Appendix 9.1: record of data collected and analysed

Graphical representation below:



Full details of all records.

Record of interviews

Name	Position	Role intranet	Dates	Rec?	Transc?
Audrey Philbrooks	Intranet manager	Management	26 Jul 04 24 Sep 04	Yes. No	Yes Yes
David Churchil	IT Director	Management	26 Jul 04 24 Fev 05		Yes
Pam Blackburn	HR processes manager	Publisher	24 Sep 04	Yes.	Yes
Phillip Catling	IS Security	User	24 Sep	Yes	No
Vanessa Rice	Market research	----	24 Sep	No	No
Doug White	Branches communications	Publisher	24 Sep	Yes	Yes
David Pomeroy	External usability consultant	Management	24 Sep	No	No
Steven Stopani	Solicitor in Group Legal	Publisher	23 Nov	Yes	No
Reeta Stokes	Group Legal secretary	Publisher	23 Nov	Yes	No
Jatin Dudharejia	Marketing, Brand Manager	Publisher	23 Nov	Yes	No

Matt Ironside	Internal Auditor	Publisher	23 Nov	Yes	No
Dawn Cook	Knowledge manager in Current Accounts	Publisher	23 Nov	Yes	No
Kiran Varsani	Branch Manager (Holborn)	User	24 Nov	Yes	No
Lisa Hallam	Charities	Publisher	26 Nov	Yes	No
Justin Price	Financial advisors support	Publisher	26 Nov	Yes	No
Jo Wheatley	Secretarial Services	User	26 Nov	Yes	No
Helen Palmer	Marketing Manager	Publisher	26 Nov	Yes	No
Paul Hewitt	Branch Manager (Piccadilly)	User	3 Dec	Yes	No
Peter Lippiat	Intranet team	Management	24 Fev 05	Yes	No

Record of Focus Groups

Focus group 1 (with users that participated in 2002 FG) - Thursday 24 February

Name	Position
Mary-Jane Daniels	Property Services
Sarah Hardwick	
Bina Chotai	HR Team
Rachel E. Ford	Finance
Matthew Pallatt	Help Desk for Call Centre

Focus group 2 (with Call Centre people) - Thursday 24 February

Name	Position
Gaynor Lakin	Call Centre
Karni Starczewski	Call Centre
Kelly Penn	Call Centre
Bernadette Moore	Call Centre
Kelly Edwards	Call Centre
Louise Randon	Mortgages Call Centre

Publishers meeting

Attended several meetings with publishers throughout the study.

Record of documents examined

Steering group meeting notes

Name of doc	Content
IMG group	7 meeting notes mainly from 2001/02 with initial discussion and decisions made for structure, adoption and other strategic issues
IOG group	26 meeting notes and agendas for this strategic steering group
CPD group	12 presentations and meeting notes for this publisher's forum

Generic documents

Name of doc	Content
Intranet Website (in a DVD)	- Complete content of the intranet as of Sep 2004 - Complete content of the intranet as of Mar 2005
Terms and conditions of use (in intranet DVD)	Key document describing institutional environment of intranet
Intranet work request form (paper doc only)	Form used by Marketing to formalise requests of changes in content

Policy documents

Name of doc	Content
Adobepolicy6.doc	Sets out policy for using Adobe Acrobat as document management application
FileFolderMgt_Jan04V3.doc	Policy for managing file names
htmlstyleguideforallianceandleicester2002final.doc	Policy for WebPages templates
Intranet Development guidelines v1.2.2.doc	Guidance for in-house and external development of forms and application
Intranet HR_Comm_Legal issues V2	Guidelines from HR on publishing personal information
Intranetupdateprocess (4).doc	Sign off procedures to be followed by all site teams
Software policy.doc	Policy for using publishing software

Publishing documents

Name of doc	Content
Roles&responsibilitiesfinalmay04.doc	New text describing roles and responsibilities in publishing
Org structure.doc	Organisational structure of Corporate Communications
ControlsMgtDocumentationAugust2004.doc	Document describing control mechanisms for publishing content
Contacts.doc	Contacts of main intranet management team members
Content development plan	Guidance for publishing content
Roles and responsibilities	Description of roles and responsibilities of the main stakeholders involved in publishing content
Publishing procedures	Procedures for creating and managing sites
Site application form	Application for new sites

Intranet documents

Name of doc	Content
Top level as of: 2Aug.ppt 27Jul.ppt 28Jul.ppt	Various .ppt files with high level structures of the intranet
Map and snapshots.doc	Structure and snapshots
sitedescriptions (4).doc	Description of "About the Group" area
Pym's speeches: - Economist on Governance - Merrill Lynch on complexity - UBS on growth	Various speeches by CE Richard Pym setting out company strategy
Standard and Poor's 2004 report	City rating agency report
Moody's 2003 report	City rating agency report
Corporate responsibility report 2003	CSR report
2004 interim results and strategy	Company profile and results
AL profile	General information about AL on performance and strategy

Usability and log of documents

Name of doc	Content
A&L intranet Trove usability teste.doc	Form for usability testing of Trove application
Alliance and Leicester interim results.doc	Thorough usability report of the intranet as of Sep 2004
Focus group output 7 March 2003.doc	Report of focus groups on usability from March 2003
Intranet dashboard_May2002.doc Intranet dashboard_May2003.doc Intranet dashboard_May2004.doc	Usage reports since 2002
Usage reports (in various CD ROMs)	Usage report 2001-02 Usage report 2003 Usage report Jan-Jul 04

Documents for users

Name of doc	Content
Web code.doc webcodeamendment.doc	Sets out rules and regulations on the use of the intranet and e-mail systems Same as above but including important suggestions for changes.
TTS intranet support material	All materials and manuals for the intranet training includes manuals for branch and users guide
focusgroupoutput7march2003	Interviews with users with perceptions of the intranet. David Pomeroy's feedback (2003)
A&L intranet Trove usability test.doc Alliance and Leicester interim results.doc	Feedback for the year - this is largely based on usability testing. Includes a staff discussion forum (2004)
Intranet help.doc	Content of help navigate on the intranet
TD Training contractV2.doc	Intranet training contract indicating objectives and resources in detail
wanttousetoolbarnotbranch.do	Instructions about how to use the browser

9.2. Appendix 9.2: interview guides

In this appendix we present the interview guide for users, the interview guide for publishers and interview guide for management. We start by showing a common introduction used to describe the project and establish initial rapport.

Common introduction

Objectives:

1. To explore the current level of trust on the intranet as an information source for decision making;
2. To advise on possible changes in the intranet institutional design to increase the level of trust in the information available on the intranet;
3. To study the effects of the intranet on business effectiveness, sharing of information and collaboration.

Establish rapport and introductory guidelines

1. Establish good rapport with interviewee. Introduce LSE.
2. Nature of the study
3. Purpose of the interview
4. Confidentially: confidentiality agreement in place
5. Recording: request permission for recording. No security questions.
6. Describe structure of the interview and set time for the meeting.

Note: these questions are indicative and they are used for guidance only. The interviews follow a semi-structured approach where the interview takes the form of a dialogue steered by the interviewer based on an agreed agenda.

Questions for users

---

1. Identification
    a. What is your background, position and role at Alliance and Leicester?
    b. What specific functions/processes are you responsible for?

2. General intranet use
    a. How did you start using the intranet? How do you use the intranet?
    b. What specific objectives does the intranet fulfil for you?
    c. Describe your experience as a user? What do you use the intranet for? Do you use it to read business information, interact with others and collaborate, as a business tool?
    d. What decisions do you make based on the information on the intranet?

3. Customer service context of use
    a. How do you use the intranet to provide customer service?
    b. What specific functions do you carry out with the support of the intranet?
    c. Please give me an example of a typical use of the intranet to provide customer service? Where on the intranet do you get that information from? What other information/parts of the intranet do you use as a basis for customer service?
    d. Do you most of the times have to interpret and put the information you read in context of the specific customer's situation, or should you follow the instructions available strictly? For example: interest rates, procedures for opening accounts...
    e. Would you describe the intranet as a comprehensive manual where you have access to all information required? Or as a basis to gather partial information that needs then to be tailored to the customer's specific situation?
    f. Do you ever question the reliability of the information you are providing? Are you aware of any situations of inaccurate information?
    g. Do you sometimes check the validity of information? Or do you just assume that the information has to be true?
    h. Why do you assume that? What gives you that confidence?
    i. Has the level of that confidence varied through time? Has the increased functionality and information on the intranet also increased or decreased your level of confidence?
    j. What are the consequences of providing wrong information?

4. Internal business context of use
    a. How do you use the intranet to fulfil internal organisational obligations?
    b. Could you give some examples of specific internal processes you conduct through the intranet?
    c. Do you fear things will not get done after you press the "submit" button? How do you think the system works behind the front end?
    d. What are the possible risks when the intranet doesn't work as expected? For example when a transaction or process doesn't proceed as normal?

5. "Learn what is going on" context of use
    a. How do you use the intranet to know what is going on in the organisation? How regularly do you check the "news"?
    b. What areas of the intranet do you use for the latest information?
    c. Do you feel the information is up to date? Do you think it is biased or spin according to a specific agenda?
    d. What are the risks of inaccurate information in this context?

6. Perception of how it works
    a. How do you think that content gets published on the intranet? Do you know the authors of the information on the intranet?
    b. In your view, what is the purpose of the intranet for the organisation?
    c. Are you aware of the policies that set out what and how content is published on the intranet?
    d. Do you believe most authors/publishers follow the same guidelines as to what should be published on the intranet?
    e. Order the following sources of information according to the level of trustworthiness they inspire in you: an internal expert; the printed manuals; talk to your boss; or the using the intranet. Why?
    f. Do you believe that there is a strong organisational culture at AL? Do you think that because of this organisational culture, most employees interpret events and signs in the same way?
    g. Do you believe that the meaning of signs is shared by most employees?
    h. Do you believe the rules are inter-subjective: you know that the other knows that you know the rules?
    i. Do you believe that the rules are independent from self interest?

7. Sources of trust
    a. When you use the information on the intranet for important decisions, do you have the feeling that:
        - The information has been checked by an expert?
        - The information is regularly updated and monitored?
        - The author has been trained and has reasonable expertise in the subject?
        - If the information is wrong there is a way of tracing responsibility and ensure correct accountability?
        - The intranet team imposes strong rules and regulations upon authors and publishers?
        - There are standards in place to assure quality?

- There are third parties monitoring quality?

b. What signs help you to perceive the above? What on the intranet shows you that the above mechanisms are in place?
c. Have you read the policies that regulate the publishing of content?
d. Do you check when the pages were last updated before making important decisions? Do you check the name of the page owner?
e. Do you have a feeling that the intranet is highly regulated? How much of that regulation is internal and how much is external to the organisation?
f. What gives you the reassurance that information on the intranet is reliable? What guarantees does it offer?
g. What mechanisms do you think there are in place to assure that the information on the intranet stays updated and reliable?
h. If you saw information on the intranet stating "Current accounts with interest rates of 6%" what would you do? What if it was "10%"?

8. Changes of intranet
    a. What is the impact of the intranet in the organisation? Do you think the intranet has changed the organisational culture at Alliance and Leicester?
    b. Do you have the feeling that the intranet has empowered you in your job by improving your access to information?
    c. Do you feel more confident that information you give is more up to date and reliable?
    d. Do you feel more aware of what is going on in the organisation?
    e. Do you often use alternative means to check accuracy of information?
    f. Does the internet provide an environment where users can publish and share departmental and personal information?
    g. Do find collaboration easier using the intranet?
    h. When you need information, do you use the intranet as the primary source of information?
    i. Do you feel more aware of what is going on in the organisation because of the intranet?
    j. Do you read the "Pym's page" regularly? How has this page changed the perception of leadership in the organisation?

Thank the interviewee, request permission for future contact for possible need for clarification and promise feedback on the results.

Questions for publishers

---

1. Personal background and type of intranet use
    a. What is your background, position and role at Alliance and Leicester (AL)?
    b. What type of specific functions/processes are you responsible for?

2. Use of the intranet
    a. How have you started using the intranet?
    b. What specific objectives does the intranet fulfil for you?
    c. Describe your experience as a publisher and as a user?
    d. As a user, what decisions do you make based on the information on the intranet?
    e. What is the impact of the intranet on the organisation? How do you think the intranet has changed AL's culture?
    f. As a publisher, to what extent have you migrated organisational processes to the intranet?

3. Governance
    a. What is the purpose of the intranet?
    b. How do you select content for the intranet?
    c. Describe the process you need to follow to migrated processes/initiate new functionality on the intranet?
    d. Who reads the proposals for new features? How do they get approved? Please describe the formal and informal procedures.

4. Monitoring
    a. Is there a system to control quality of content?
    b. How is the content checked for compliance with internal and external policies?

5. Accreditation
    a. Describe the type of training you had to undertake prior to publish on the intranet
    b. What is the role of training in assuring quality content?
    c. Has the content on your website been checked by any other entity?

6. Policy
    a. What policies (internal and external) do you have to comply with for publishing content on the intranet?
    b. How to you implement changes in policies? Do you know if you are compliant?

7. Informal
    a. What circumstances/events do you meet other publishers/authors? What do you discuss and how do you develop new ideas?
    b. Do you believe that you share the same understanding of what constitutes good style and quality with the other publishers?
    c. How did this common understanding of what is and what is not good quality become institutionalised in the group of publishers?

8. Intranet and trust
    a. Bearing in mind the short history of the intranet, how do you expect it to evolve in the near future?
    b. Do you think the intranet is business critical? Why?
    c. Why should users trust the intranet? What safeguards are in place to assure that the information is compliant, accurate and update?
    d. How should the governance system change to cope with the increased complexity?
    e. Is there a need to increase formalisation of current informal procedures?

Thank the interviewee, request permission for future contact for possible need for clarification and promise feedback on the results.

Questions for management

- *Purpose and business criticality*: rationale for investing in the intranet and how doe sit support the greater A&L's business strategy
- *Management support*: level of support and commitment from senior management to the intranet
- *Governance*: mode of decision making. How and where decisions are taken
- *Policy*: existing policies stating roles and responsibilities
- *Accreditation*: training and other certification mechanisms
- *Monitoring*: type of control over what is being published
- *Culture*: common understanding of the underlying philosophy of what and how information should be published on the intranet.

9.3. Appendix 9.3: survey as presented to respondents

Intranet Survey 2005

The Group Intranet at Alliance & Leicester

Please tell us how strongly you agree or disagree with the following statements:

	Agree strongly	**Agree**	**Agree slightly**	Neither agree nor disagree	**Disagree slightly**	**Disagree**	**Disagree strongly**
	1	**2**	**3**	**4**	**5**	**6**	**7**
1a I understand the role and importance of the Group Intranet for Alliance & Leicester	❑	❑	❑	❑	❑	❑	❑
1b As Alliance & Leicester changes, the Group Intranet reflects that change	❑	❑	❑	❑	❑	❑	❑
1c The Group Intranet fosters a culture of transparency and straightforwardness within Alliance & Leicester	❑	❑	❑	❑	❑	❑	❑
1d Alliance & Leicester could not function without the Group Intranet now	❑	❑	❑	❑	❑	❑	❑
1e The Group Intranet has become part of my day to day routine	❑	❑	❑	❑	❑	❑	❑
1f The Group Intranet reflects how we do things within Alliance & Leicester	❑	❑	❑	❑	❑	❑	❑
1g Use of the Group Intranet is highly recommended by senior management	❑	❑	❑	❑	❑	❑	❑
1h I feel closer to the senior management team and other areas of the business as a result of what I read on the Group Intranet	❑	❑	❑	❑	❑	❑	❑

What do you know about the Alliance & Leicester Group Intranet?

Please tell us how strongly you agree or disagree with the following statements:

	Agree strongly	**Agree**	**Agree slightly**	Neither agree nor disagree	**Disagree slightly**	**Disagree**	**Disagree strongly**
2a I am aware of how content gets published on the Group Intranet	❑	❑	❑	❑	❑	❑	❑

2b I am aware of policies and procedures that govern how the Group Intranet works	❑	❑	❑	❑	❑	❑	❑
2c I am aware of the roles of authors and publishers in writing information for the Group Intranet	❑	❑	❑	❑	❑	❑	❑
2d I believe that all content is checked and approved by a recognised expert before going live	❑	❑	❑	❑	❑	❑	❑
2e I believe that the publishers of information are highly professional	❑	❑	❑	❑	❑	❑	❑
2f The information on the Group Intranet is dictated by senior management	❑	❑	❑	❑	❑	❑	❑
2g The information on the Group Intranet is generated by people from across the business	❑	❑	❑	❑	❑	❑	❑

What do you think of the information on the Alliance & Leicester Group Intranet?

Please tell us how strongly you agree or disagree with the following statements:

	Agree strongly	**Agree**	**Agree slightly**	Neither agree nor disagree	**Disagree slightly**	**Disagree**	**Disagree strongly**
3a The Group Intranet uses the same language that I do in my everyday work	❑	❑	❑	❑	❑	❑	❑
3b Wherever you are on the Group Intranet, it still feels familiar	❑	❑	❑	❑	❑	❑	❑
3c The tone and style of written content is consistent across the Group Intranet	❑	❑	❑	❑	❑	❑	❑
3d There is so much content - I can't always find my way around the Group Intranet	❑	❑	❑	❑	❑	❑	❑
3e It is the social content, rather than the business information, that attracts me to the Group Intranet	❑	❑	❑	❑	❑	❑	❑
3f Information on the Group Intranet is based on facts	❑	❑	❑	❑	❑	❑	❑
3g If something is on the Group Intranet it must be true	❑	❑	❑	❑	❑	❑	❑
3h The information on the Group Intranet is honest, fair and unbiased	❑	❑	❑	❑	❑	❑	❑
3i New members of staff should be told to look on the Group Intranet if they need information about Alliance & Leicester	❑	❑	❑	❑	❑	❑	❑
3j I trust the Group Intranet as a reliable source of information and I have confidence in using it	❑	❑	❑	❑	❑	❑	❑

Why do you use the Group Intranet?

Please tell us how strongly you agree or disagree with the following statements:

	Agree strongly	Agree	Agree slightly	Neither agree nor disagree	Disagree slightly	Disagree	Disagree strongly
4a I prefer to use the Group Intranet rather than phoning people to find information	❑	❑	❑	❑	❑	❑	❑
4b I prefer to use the Group Intranet rather than paper manuals to find information	❑	❑	❑	❑	❑	❑	❑
4j I would feel I'm missing something if I didn't use the Group Intranet	❑	❑	❑	❑	❑	❑	❑
4c I have been told I must use the Group Intranet for my job	❑	❑	❑	❑	❑	❑	❑
4d I feel the Group Intranet is necessary for my day to day job	❑	❑	❑	❑	❑	❑	❑
4e I actively use the Group Intranet to make key decisions which helps me to do a better job	❑	❑	❑	❑	❑	❑	❑
4g If I follow guidance on the Group Intranet, I feel confident that I am doing the right thing	❑	❑	❑	❑	❑	❑	❑
4h I need to use the Group Intranet as it is Alliance & Leicester's policy to do so	❑	❑	❑	❑	❑	❑	❑
4i I never think about whether I should use the Group Intranet or not, I just use it	❑	❑	❑	❑	❑	❑	❑
4k I would like to use the Group Intranet more but the information I need isn't there	❑	❑	❑	❑	❑	❑	❑

The benefits of the Group Intranet

Please tell us how strongly you agree or disagree with the following statements:

	Agree strongly	Agree	Agree slightly	Neither agree nor disagree	Disagree slightly	Disagree	Disagree strongly
5a The Group Intranet is a way of learning new things relevant to my job	❑	❑	❑	❑	❑	❑	❑

5b Reading and using the Group Intranet makes me feel more part of Alliance & Leicester	❑	❑	❑	❑	❑	❑	❑
5c The Group Intranet improves my understanding of how Alliance & Leicester works and what to expect in the future	❑	❑	❑	❑	❑	❑	❑
5d The Group Intranet gives me a better understanding of where my work fits into Alliance & Leicester's overall strategy	❑	❑	❑	❑	❑	❑	❑
5e The Group Intranet enables me to make a positive difference to Alliance & Leicester	❑	❑	❑	❑	❑	❑	❑
5f The Group Intranet gives management an overview of what is going on (ie. social news as well as business news)	❑	❑	❑	❑	❑	❑	❑
5g The Group Intranet improves communication between myself and senior management	❑	❑	❑	❑	❑	❑	❑
5h The Group Intranet helps to encourage different parts of the business to work together	❑	❑	❑	❑	❑	❑	❑

Frequency of using the Group Intranet

6 How often do you generally use the Group Intranet?

1 ❑ Many times a day
2 ❑ Once a day
3 ❑ Several times a week
4 ❑ Once a week
5 ❑ Several times a month
6 ❑ Once a month or less often
7 ❑ Never

In this section please tell us which area you work in.

7 Please indicate in which Directorate you work:

1 ❑ Retail Bank
2 ❑ Wholesale Bank
3 ❑ Human Resources
4 ❑ Corporate Communications
5 ❑ Finance
6 ❑ Regulatory & Legal Services
7 ❑ Board Office

8 Do you work in...

1 ❑ The Retail Network (Branches)
2 ❑ A Call Centre
3 ❑ A Regional / Head Office
4 ❑ Other - please specify below:

Finally, please tell us a little about yourself.

9 Type of job:

1 ❑ Senior Manager (Band E and above)
2 ❑ Manager or Supervisor of staff
3 ❑ Team Member

10 Your Age:

1 ❑ Under 25
2 ❑ 25-34
3 ❑ 35-44
4 ❑ 45+

11 Gender:

1 ❑ Male
2 ❑ Female

12 Length of Service:

1 ❑ Up to 2 years
2 ❑ 2-5 years
3 ❑ 6-10 years
4 ❑ Over 10 years

13 How did you hear about this survey?

1 ❑ I was invited to participate by letter or email
2 ❑ I heard about it
3 ❑ I found it while browsing on the Intranet

Press the submit button below to share your views.

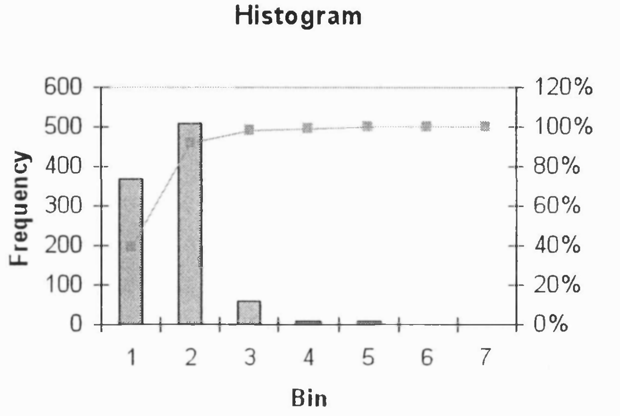
Please be patient as this process may take a few minutes to complete.

9.4. Appendix 9.4: analysis of survey responses

1a I understand the role and importance of the Group Intranet for Alliance & Leicester

Mean	1.7
Median	2.0
Mode	2.0
Standard Deviation	0.7

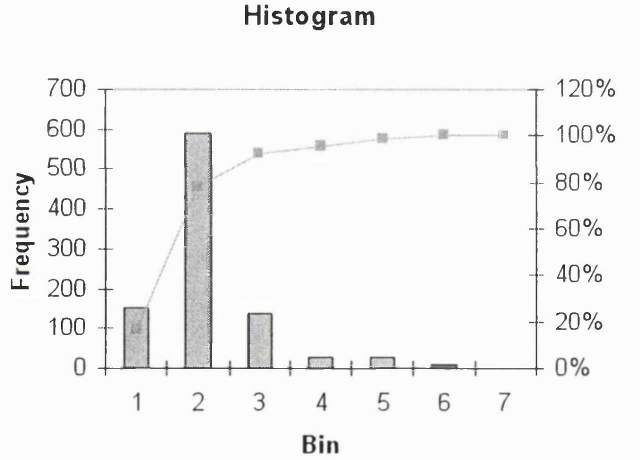
<u>Analysis:</u>
Large majority (**92%**) understands well the importance of the intranet for A&L.



1b As Alliance & Leicester changes, the Group Intranet reflects that change

Mean	2.2
Median	2.0
Mode	2.0
Standard Deviation	0.9

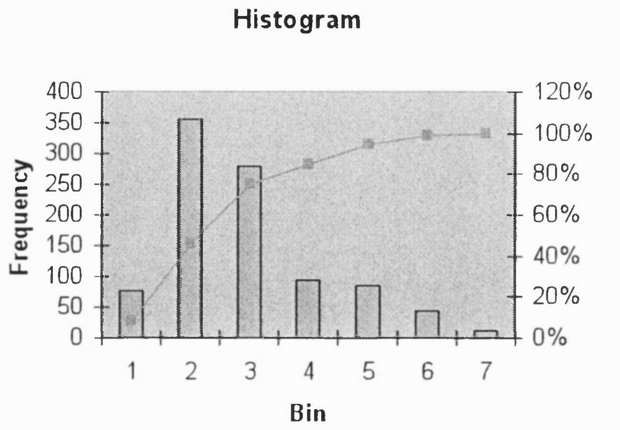
<u>Analysis:</u>
Most people (**78%**) seem to see the intranet evolving with A&L and as a dynamic reflection of it. But only (**16%**) said they agreed strongly.



1c The Group Intranet fosters a culture of transparency and straightforwardness within Alliance & Leicester

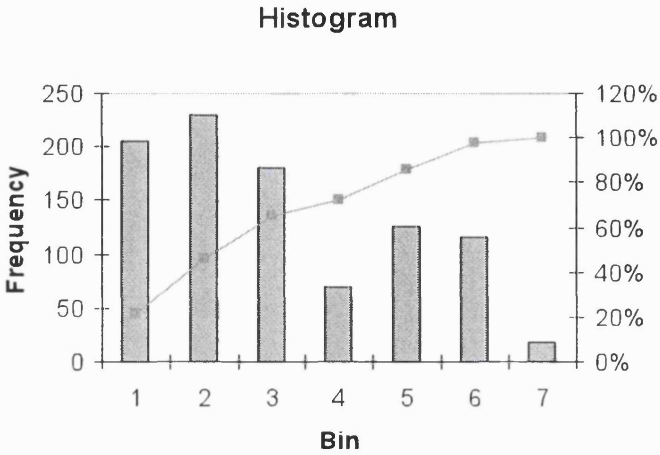
Mean	2.9
Median	3.0
Mode	2.0
Standard Deviation	1.3

<u>Analysis:</u>
Most people (**53%**) strongly believe that the intranet fosters transparency but a large number of "agree slightly" (**30%**) and clear "disagree" (**15%**) indicates this is not true for all.



1d Alliance & Leicester could not function without the Group Intranet now

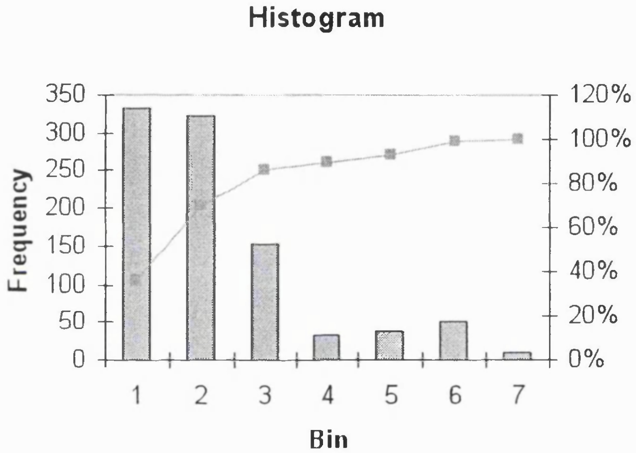
Mean	3.1
Median	3.0
Mode	2.0
Standard Deviation	1.8



Analysis:
Perceptions on the criticality of the Group Intranet for the business is not uniform. Most tend to see it as critical (**68%**) but (**28%**) say the opposite. They might see it as a good alternative and interesting but still not business critical.

1e The Group Intranet has become part of my day to day routine

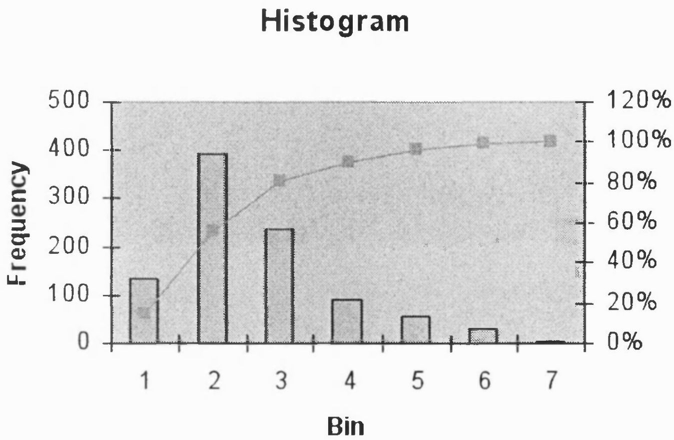
Mean	2.3
Median	2.0
Mode	1.0
Standard Deviation	1.5



Analysis:
The Group Intranet seems to be well established as part of the routine work of most employees (**70%**).

1f The Group Intranet reflects how we do things within Alliance & Leicester

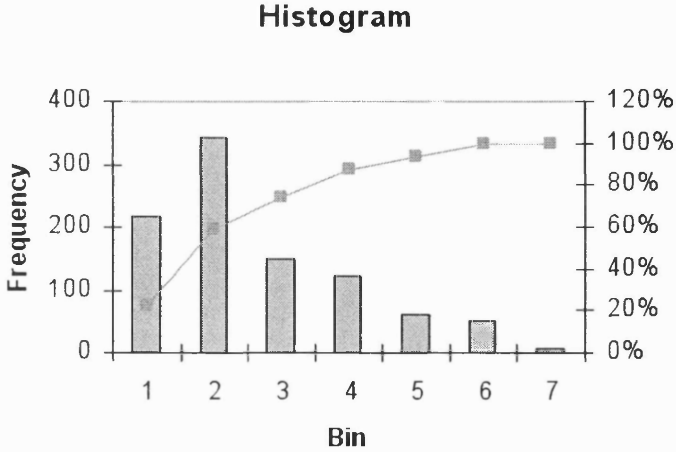
Mean	2.6
Median	2.0
Mode	2.0
Standard Deviation	1.2



Analysis:
(**56%**) perceive the intranet as very familiar and in line with the rest of A&L. Information and functionality on the intranet is perceived as similar to how things are outside the intranet.

1g Use of the Group Intranet is highly recommended by senior management

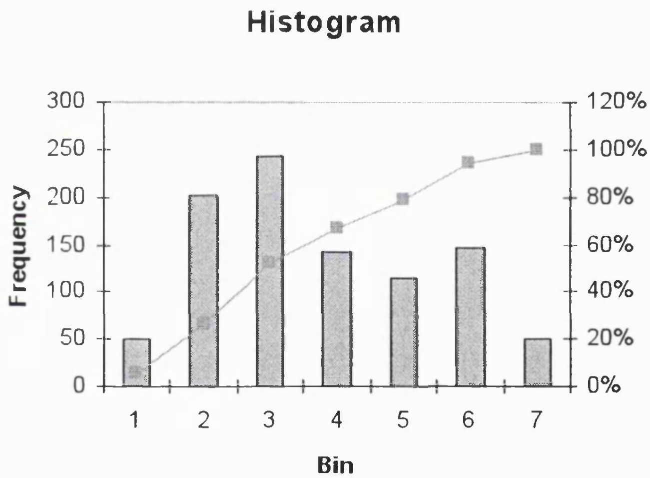
Mean	2.6
Median	2.0
Mode	2.0
Standard Deviation	1.5



Analysis:
Large majority (**59%**) clearly feel that Senior Management supports the use of the intranet whereas (**13%**) feel the opposite.

1h I feel closer to the senior management team and other areas of the business as a result of what I read on the Group Intranet

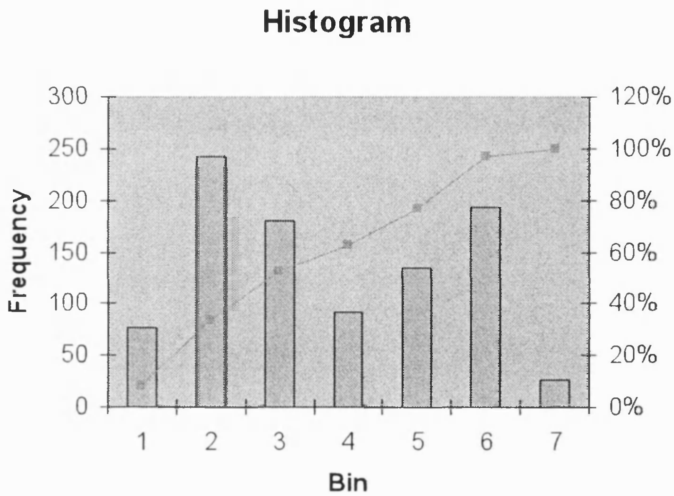
Mean	3.8
Median	3.0
Mode	3.0
Standard Deviation	1.7



Analysis:
Despite the (**27%**) that say that they clearly feel closer to SM and other areas of the business because of the intranet, (**21%**) clearly disagree and the rest (**52%**) do not give clear signs of their perception of closeness.

2a I am aware of how content gets published on the Group Intranet

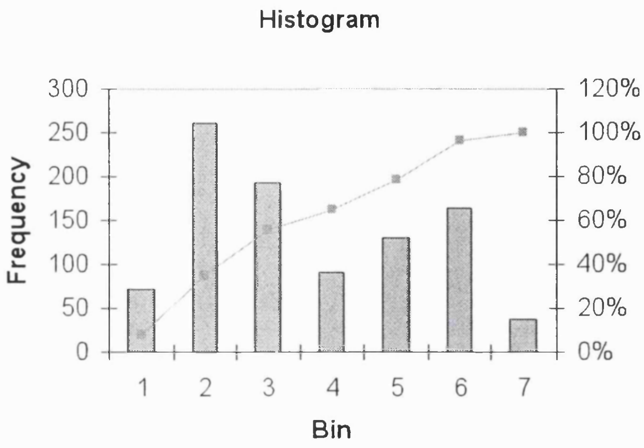
Mean	3.7
Median	3.0
Mode	2.0
Standard Deviation	1.8



Analysis:
(**47%**) don't know how content is published whereas (**53%**) believe they know.

2b I am aware of policies and procedures that govern how the Group Intranet works

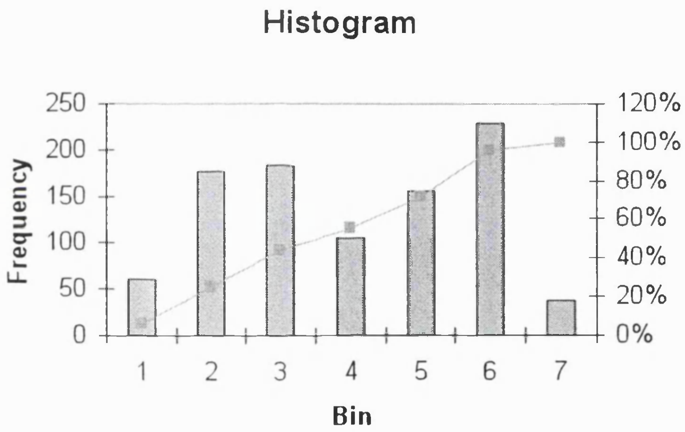
Mean	3.6
Median	3.0
Mode	2.0
Standard Deviation	1.7



Analysis:
Another question proving that many people are not aware of the Governance of the intranet. (**45%**) don't know and (**55%**) seem to be aware of policies and procedures.

2c I am aware of the roles of authors and publishers in writing information for the Group Intranet

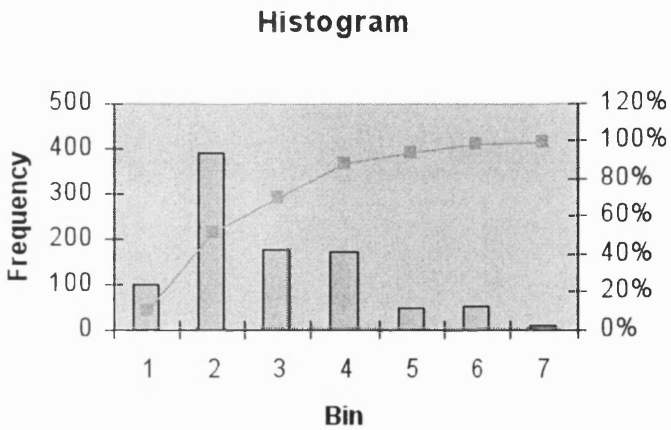
Mean	4.0
Median	4.0
Mode	6.0
Standard Deviation	1.7



Analysis:
(**56%**) are not aware of the role of authors and publishers. Only (**25%**) clearly believed that knew about this.

2d I believe that all content is checked and approved by a recognised expert before going live

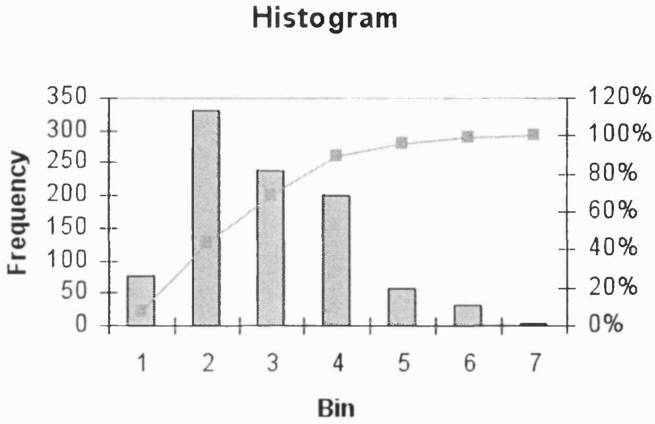
Mean	2.9
Median	2.0
Mode	2.0
Standard Deviation	1.4



Analysis:
Vast majority (**70%**) believe that content is checked by experts before going live.

2e I believe that the publishers of information are highly professional

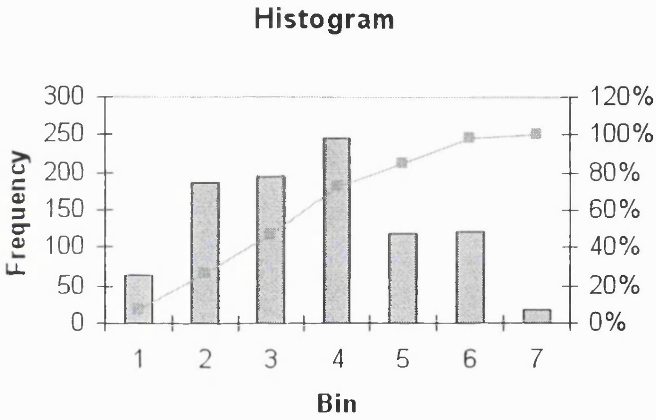
Mean	2.9
Median	3.0
Mode	2.0
Standard Deviation	1.2



Analysis:
Strong sense that the publishers are very professional (**43%**). Only (**10%**) disagreed.

2f The information on the Group Intranet is dictated by senior management

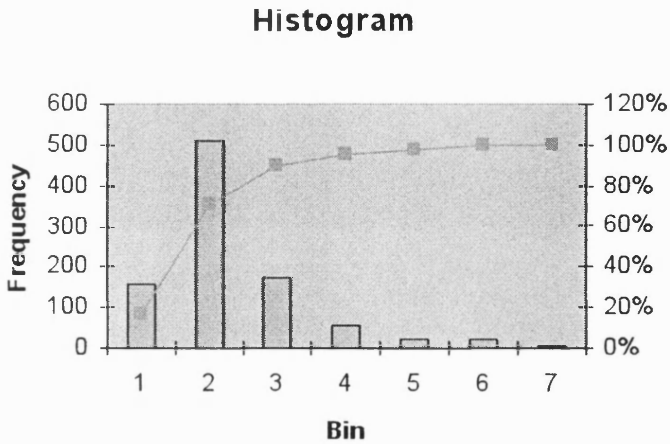
Mean	3.6
Median	4.0
Mode	4.0
Standard Deviation	1.5



Analysis:
(**47%**) stated they think SM dictates information on the intranet. (**26%**) answered "neither nor", (**27%**) do not feel that the SM dictates content.

2g The information on the Group Intranet is generated by people from across the business

Mean	2.3
Median	2.0
Mode	2.0
Standard Deviation	1.1

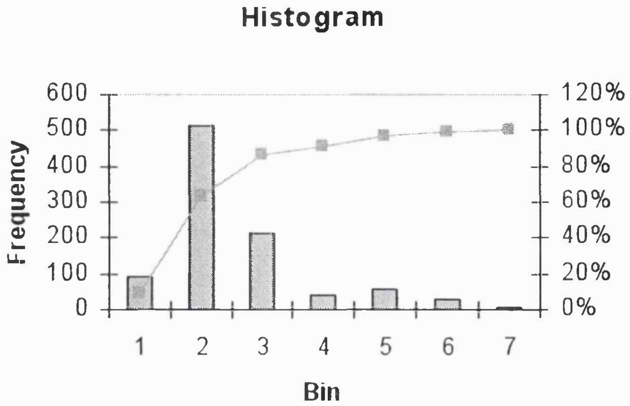


Analysis:
(90%) believe that content is generated across the business and not centrally.

3a The Group Intranet uses the same language that I do in my everyday work

Mean	2.5
Median	2.0
Mode	2.0
Standard Deviation	1.2

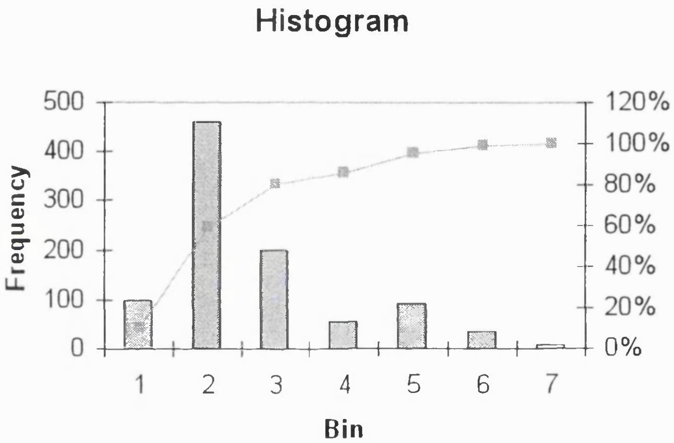
Analysis:
(**86%**) feels the intranet uses a similar language to their everyday work.



3b Wherever you are on the Group Intranet, it still feels familiar

Mean	2.7
Median	2.0
Mode	2.0
Standard Deviation	1.3

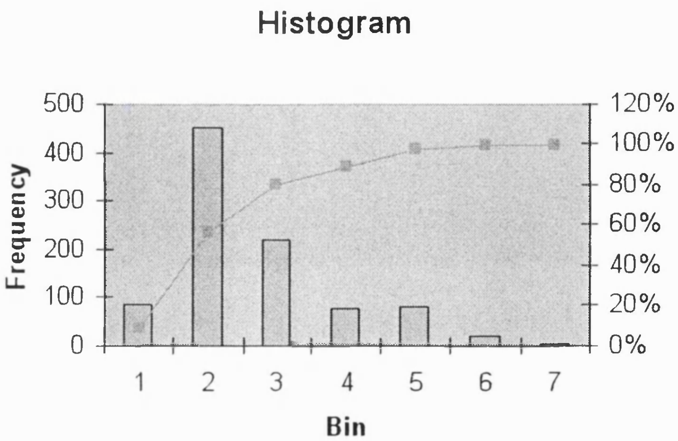
Analysis:
(**60%**) clearly perceive a feeling of familiarity across the various sections of the intranet. The intranet seems to be consistent for the large majority of the users.



3c The tone and style of written content is consistent across the Group Intranet

Mean	2.7
Median	2.0
Mode	2.0
Standard Deviation	1.2

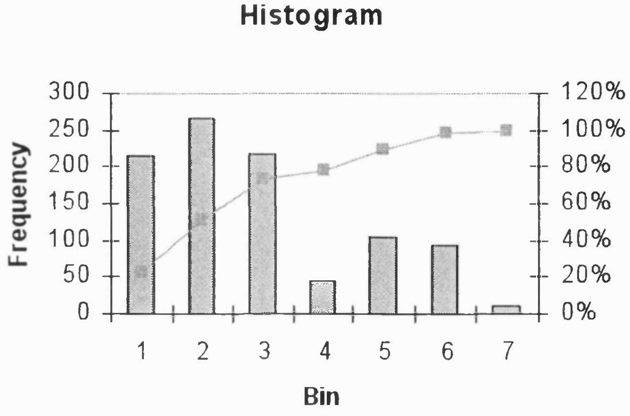
Analysis:
(**57%**) clearly say they see consistency across the various sections. Only (**12%**) disagree.



3d There is so much content - I can't always find my way around the Group Intranet

Mean	2.9
Median	2.0
Mode	2.0
Standard Deviation	1.6

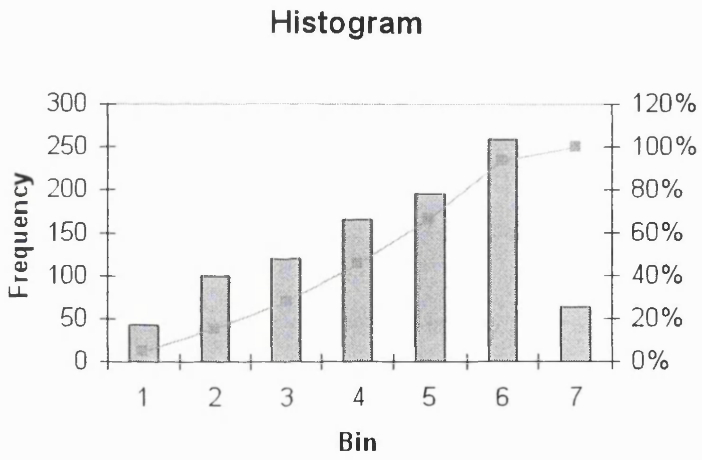
<u>Analysis:</u>
The majority of the people (**73%**) seem to struggle to find information.



3e It is the social content, rather than the business information, that attracts me to the Group Intranet

Mean	4.5
Median	5.0
Mode	6.0
Standard Deviation	1.6

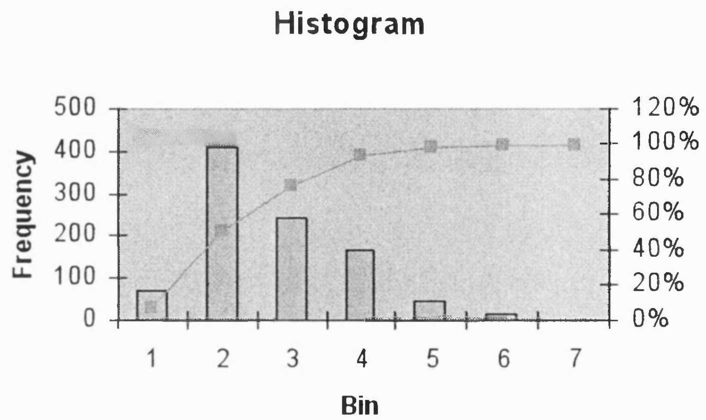
<u>Analysis:</u>
(**28%**) agrees that social content is the number one reason to go on the intranet. (**55%**) say it is not and that business content is the main reason.



3f Information on the Group Intranet is based on facts

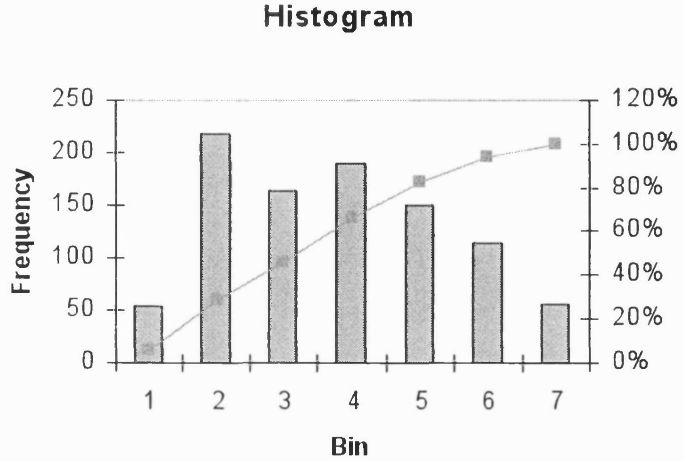
Mean	2.7
Median	2.0
Mode	2.0
Standard Deviation	1.1

<u>Analysis:</u>
(**75%**) agree that information on the intranet is based on facts.



3g If something is on the Group Intranet it must be true

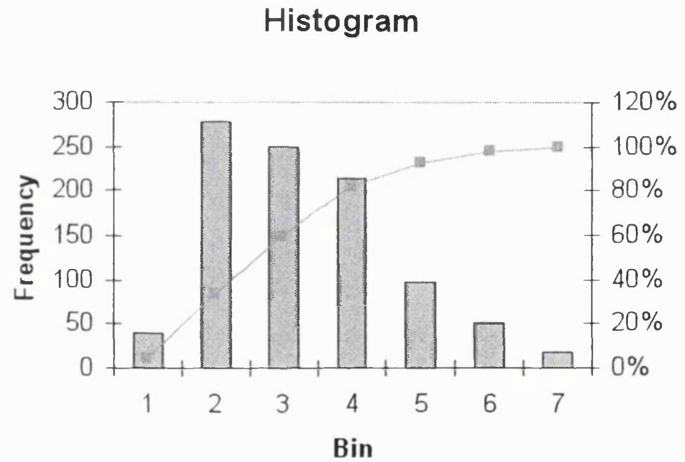
Mean	3.8
Median	4.0
Mode	2.0
Standard Deviation	1.7



Analysis:
Trustworthiness of the intranet is relatively high (**46%**) but there is still (**34%**) which disagree that just because something is on the intranet than it must be true.

3h The information on the Group Intranet is honest, fair and unbiased

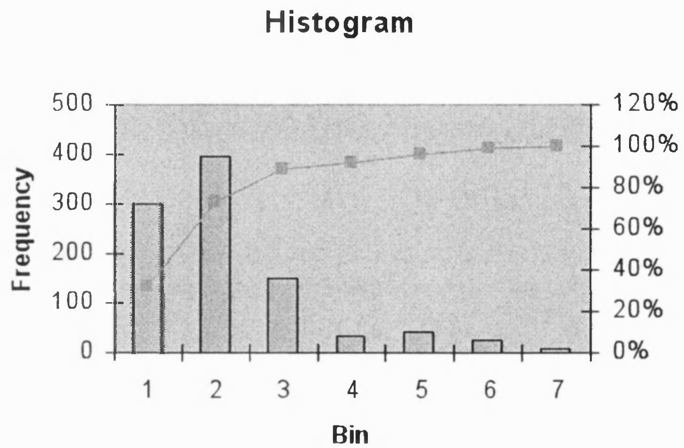
Mean	3.3
Median	3.0
Mode	2.0
Standard Deviation	1.3



Analysis:
The majority believe that information on the intranet is honest and fair (**60%**) whereas (**18%**) thinks it is not. (**22%**) "neither agree nor disagree".

3i New members of staff should be told to look on the Group Intranet if they need information about Alliance & Leicester

Mean	2.2
Median	2.0
Mode	2.0
Standard Deviation	1.3

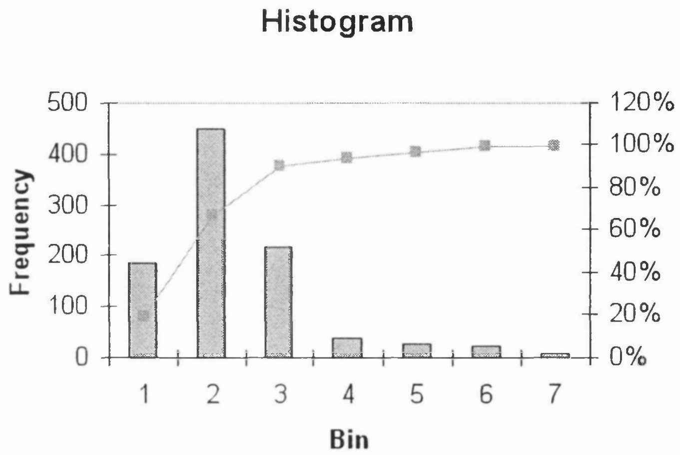


Analysis:
89% believe that the intranet should be used during the induction of new employees as a good source of information.

3j I trust the Group Intranet as a reliable source of information and I have confidence in using it

Mean	2.3
Median	2.0
Mode	2.0
Standard Deviation	1.2

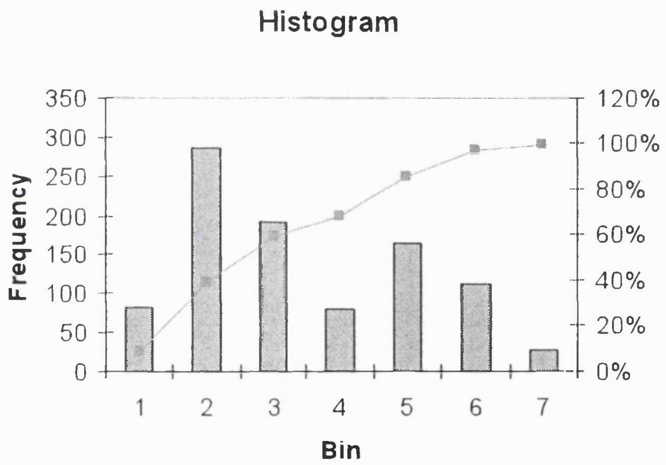
Analysis:
(**90%**) trust the intranet and have confidence in using it. Only (**6%**) disagree.



4a I prefer to use the Group Intranet rather than phoning people to find information

Mean	3.4
Median	3.0
Mode	2.0
Standard Deviation	1.7

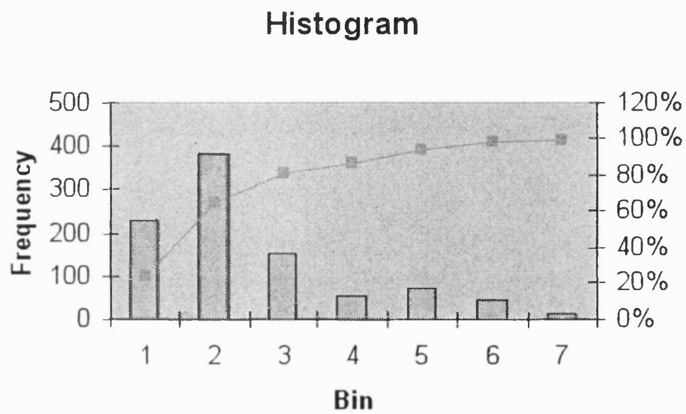
Analysis:
(**60%**) prefer to use the intranet to telephone but (**32%**) do not.



4b I prefer to use the Group Intranet rather than paper manuals to find information

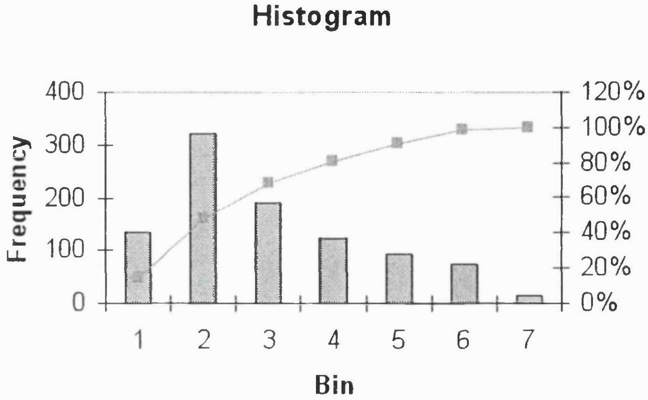
Mean	2.5
Median	2.0
Mode	2.0
Standard Deviation	1.5

Analysis:
81% prefer the intranet to paper manuals.



4j I would feel I'm missing something if I didn't use the Group Intranet

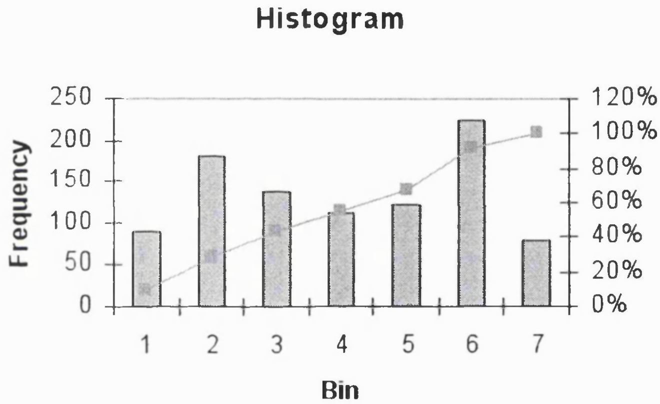
Mean	3.0
Median	3.0
Mode	2.0
Standard Deviation	1.5



Analysis:
The majority (**68%**) feels the intranet is important to keep them updated with what is going-on in the organisation and say that they fear to be missing something if they did not use it.

4c I have been told I must use the Group Intranet for my job

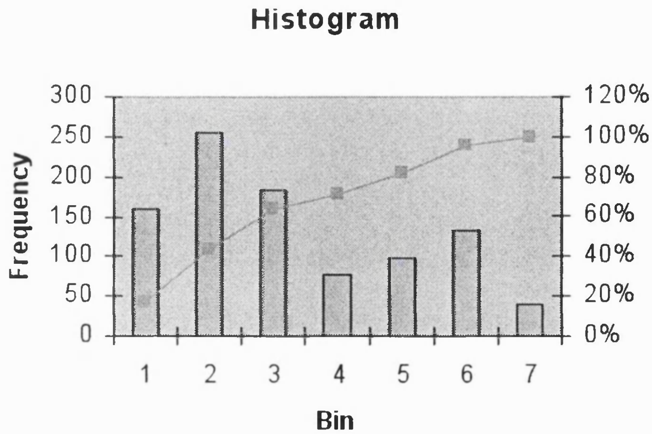
Mean	4.0
Median	4.0
Mode	6.0
Standard Deviation	1.9



Analysis:
(**38%**) say that they have been told they must use the intranet. (**45%**) have not been told about this.

4d I feel the Group Intranet is necessary for my day to day job

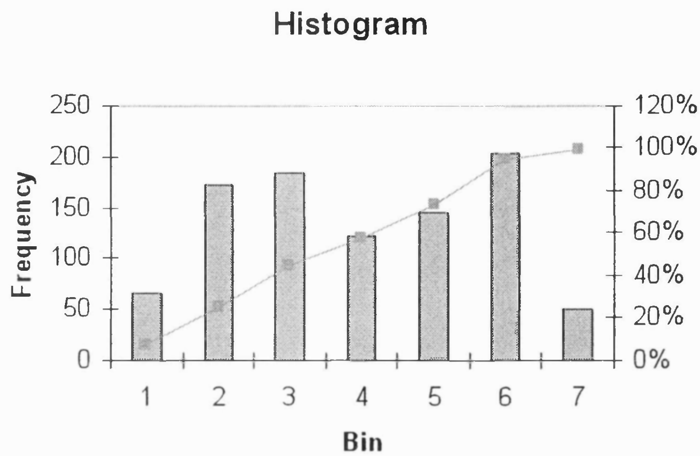
Mean	3.3
Median	3.0
Mode	2.0
Standard Deviation	1.8



Analysis:
(**63%**) feel the intranet is necessary for their job. (**29%**) disagree.

4e I actively use the Group Intranet to make key decisions which helps me to do a better job

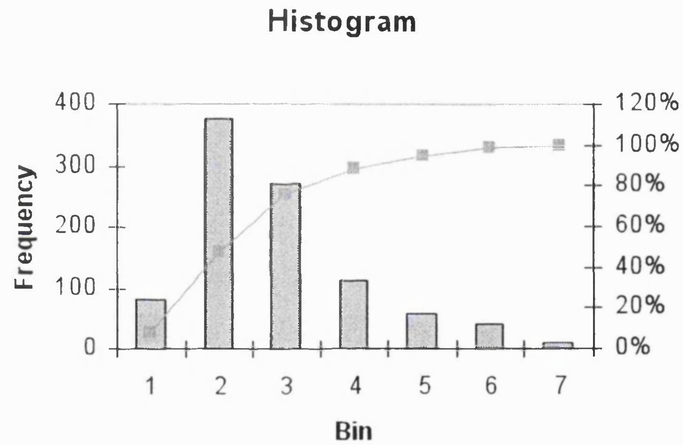
Mean	4.0
Median	4.0
Mode	6.0
Standard Deviation	1.7



Analysis:
25% say clearly that they actively use the intranet to support decision making. **27%** clearly disagree with this position. Most frequent answer is **6**.

4g If I follow guidance on the Group Intranet, I feel confident that I am doing the right thing

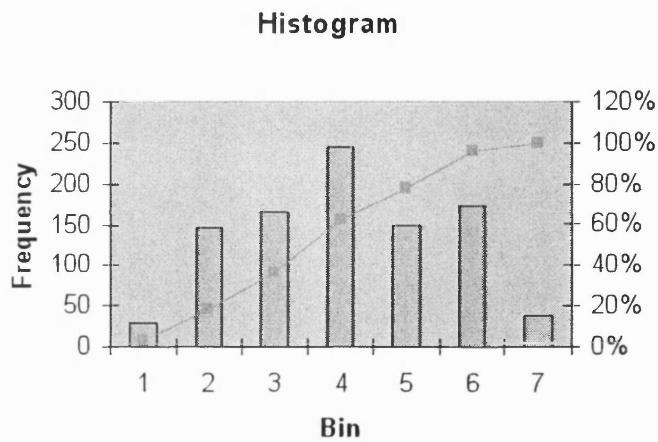
Mean	2.8
Median	3.0
Mode	2.0
Standard Deviation	1.3



Analysis:
Most (**77%**) feel that they will be doing the right thing if they follow the guidance on the intranet. Only (**11%**) disagree.

4h I need to use the Group Intranet as it is Alliance & Leicester's policy to do so

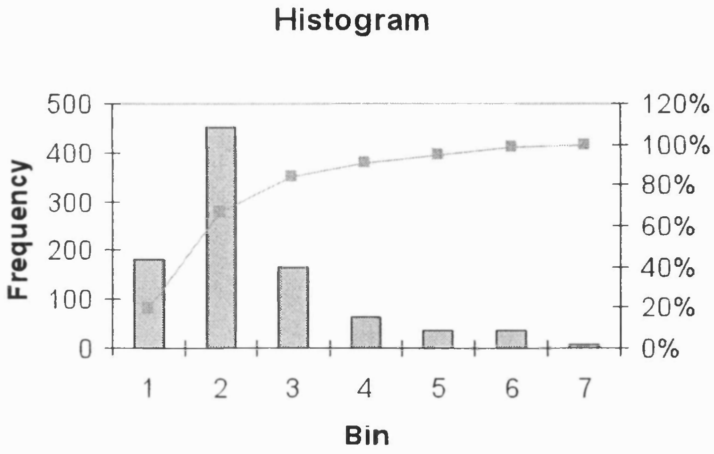
Mean	4.1
Median	4.0
Mode	4.0
Standard Deviation	1.5



Analysis:
(**36%**) thinks they must use the intranet because it is A&L's policy to do so.

4i I never think about whether I should use the Group Intranet or not, I just use it

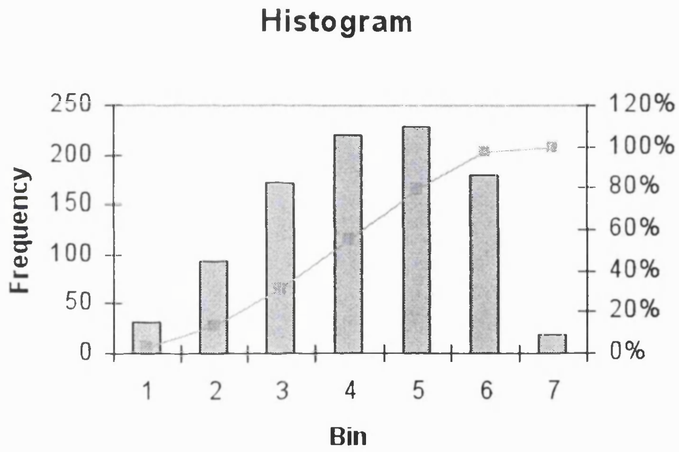
Mean	2.4
Median	2.0
Mode	2.0
Standard Deviation	1.3



Analysis:
67% clearly states that they just use the intranet without explicit consciousness of its use. It is deeply routed in their routines. Only (9%) disagreed with this statement. (17%) "Agreed slightly" and (7%) "neither/nor"

4k I would like to use the Group Intranet more but the information I need isn't there

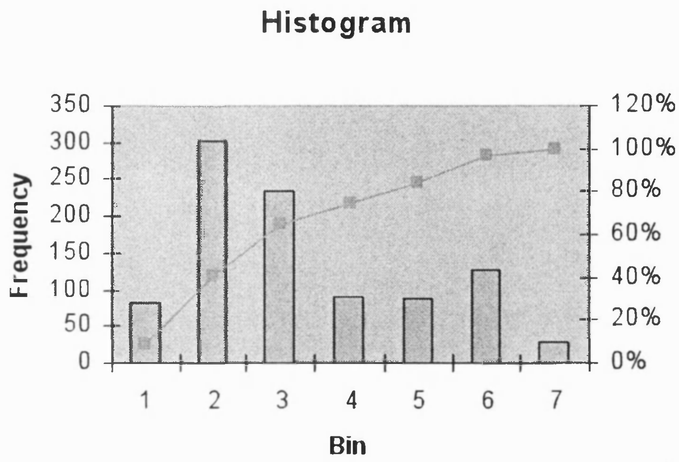
Mean	4.2
Median	4.0
Mode	5.0
Standard Deviation	1.4



Analysis:
(**45%**) think that the information they need is on the intranet. Only (**13%**) clearly said the opposite.

5a The Group Intranet is a way of learning new things relevant to my job

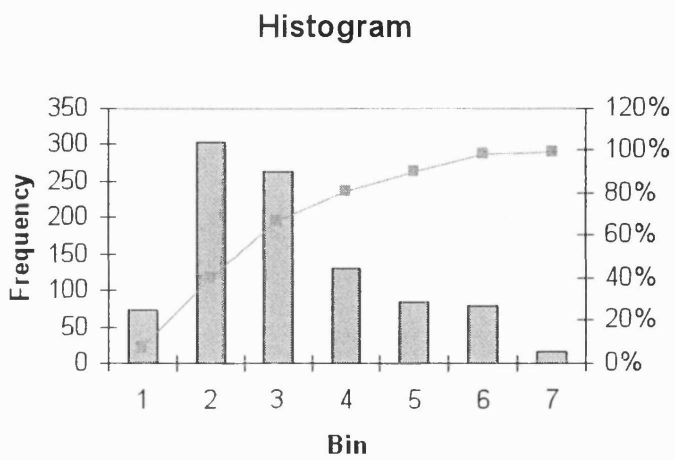
Mean	3.3
Median	3.0
Mode	2.0
Standard Deviation	1.6



Analysis:
(**65%**) think they learn new and useful things from the intranet.

5b Reading and using the Group Intranet makes me feel more part of Alliance & Leicester

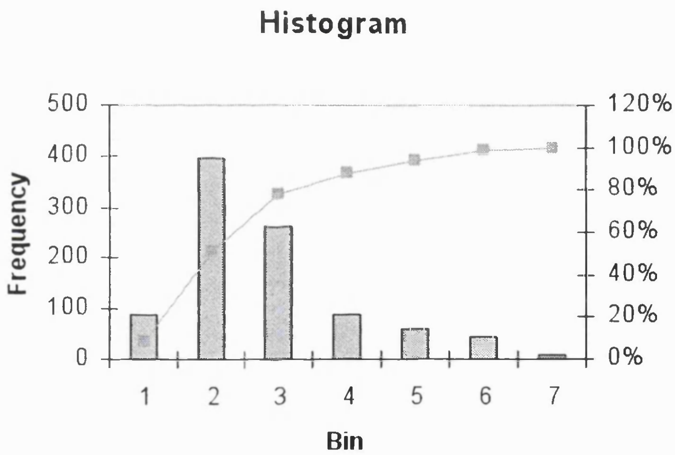
Mean	3.2
Median	3.0
Mode	2.0
Standard Deviation	1.5



Analysis:
The majority (**67%**) say the intranet improves their sense of belonging makes them feel more part of the organisation.

5c The Group Intranet improves my understanding of how Alliance & Leicester works and what to expect in the future

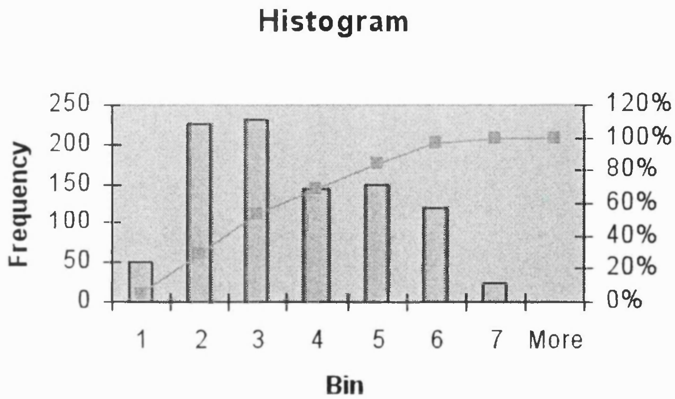
Mean	2.8
Median	2.0
Mode	2.0
Standard Deviation	1.3



Analysis:
The vast majority (**79%**) say the intranet improves their understanding of how things work at A&L. Only (**12%**) disagreed.

5d The Group Intranet gives me a better understanding of where my work fits into Alliance & Leicester's overall strategy

Mean	3.6
Median	3.0
Mode	3.0
Standard Deviation	1.6

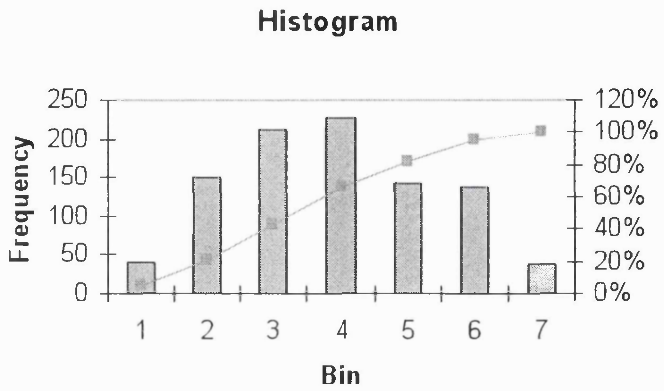


Analysis:
(**54%**) agreed that the intranet gives them a better understanding of their role within A&L's strategy whereas (**31%**) disagreed with this position.

5e The Group Intranet enables me to make a positive difference to Alliance & Leicester

Mean	3.9
Median	4.0
Mode	4.0
Standard Deviation	1.5

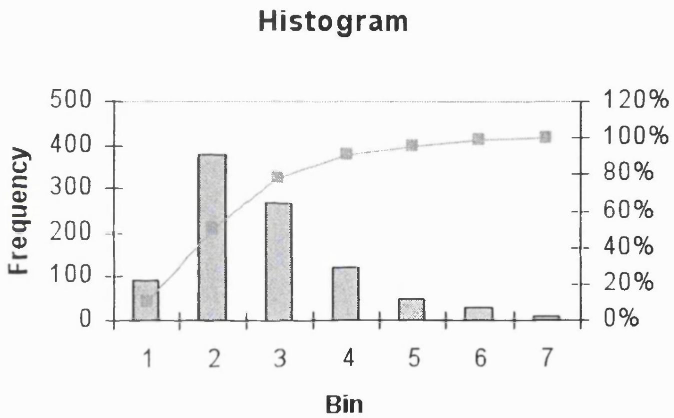
Analysis:
(**43%**) agreed that the intranet enabled them to make a difference to A&L (**34%**) disagreed with this position. (**23%**) said "neither/nor"



5f The Group Intranet gives management an overview of what is going on (ie. social news as well as business news)

Mean	2.8
Median	2.0
Mode	2.0
Standard Deviation	1.2

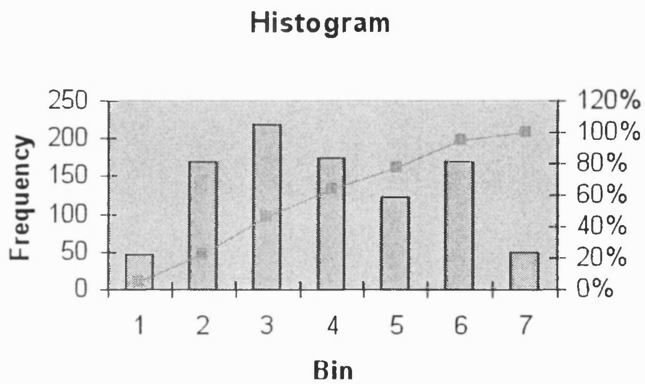
Analysis:
(**78%**) said the intranet gives Management and overview of the whole organisation.



5g The Group Intranet improves communication between myself and senior management

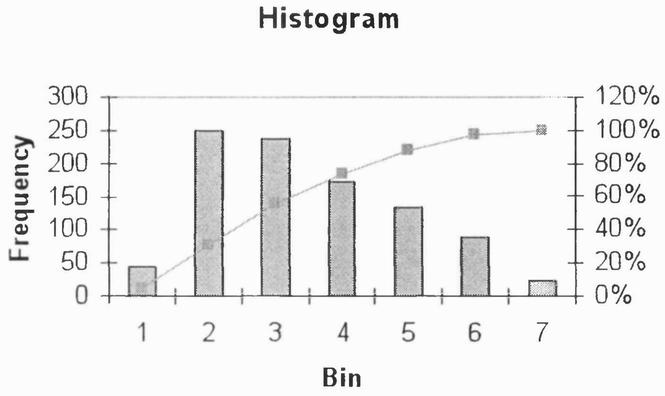
Mean	3.9
Median	4.0
Mode	3.0
Standard Deviation	1.6

Analysis:
(**46%**) said that the intranet improves communication between the various organisational levels (**36%**) disagreed with this position. (**18%**) said "neither/nor"



5h The Group Intranet helps to encourage different parts of the business to work together

Mean	3.5
Median	3.0
Mode	2.0
Standard Deviation	1.5



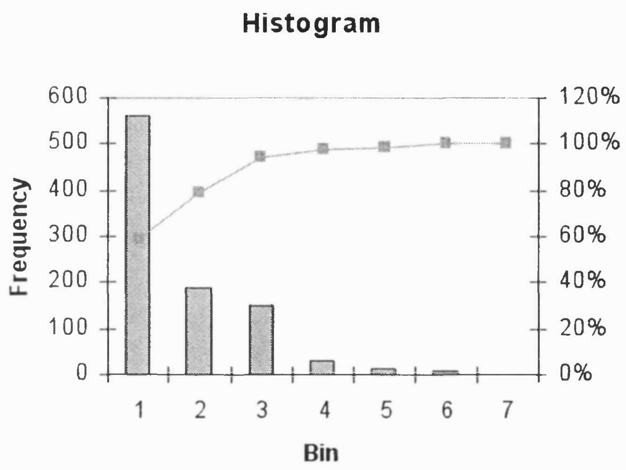
Analysis:
(**56%**) agreed that the intranet encouraged collaboration. (**26%**) disagreed with this position. (**18%**) said "neither/nor"

9.5. Appendix 9.5: profile of survey respondents

6. How often do you generally use the Group Intranet?

1 Many times a day	560	59%
2 Once a day	187	20%
3 Several times a week	148	16%
4 Once a week	30	3%
5 Several times a month	15	2%
6 Once a month or less	10	1%
7 Never	0	0%

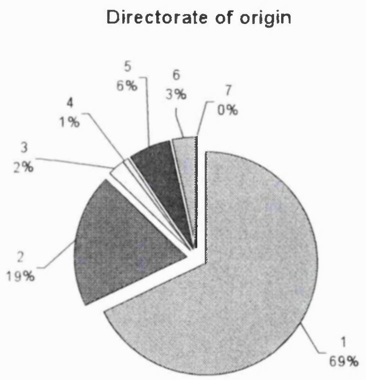
Mean	2.7
Median	1.0
Mode	1.0
Standard Deviation	30.8



Analysis:
80% uses the intranet at least once a day.

7. Please indicate in which Directorate you work:

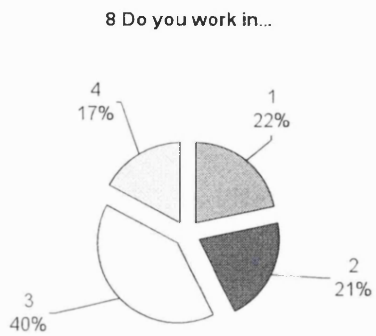
1 Retail Bank	626	68%
2 Wholesale Bank	179	19%
3 Human Resources	22	2%
4 Corp. Comms	9	1%
5 Finance	55	6%
6 Reg & Legal Serv.	31	3%
7 Board Office	0	0%



Analysis:
68% from Retail Bank, **19%** from Wholesale and **13%** from other areas.

8 Do you work in...

1 Retail Network (Branches)	195	22%
2 A Call Centre	190	21%
3 A Regional / Head Office	360	40%
4 Other please specify below:	156	17%

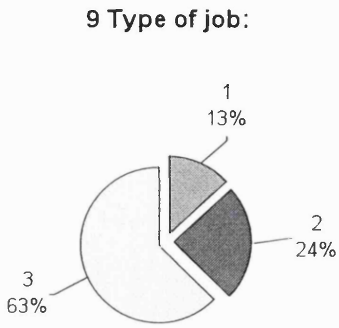


Analysis:
Retail Network **22%**, Call Centre **21%** and **40%** Head Office. **156** did not fit in any of the above (29 T&PD, 16 Mortgages, Home worker, Credit & Risk, etc...)

9 Type of job:

1 Senior Manager (Band E and above)	124	13%
2 Manager or Supervisor of staff	228	24%
3 Team Member	597	63%

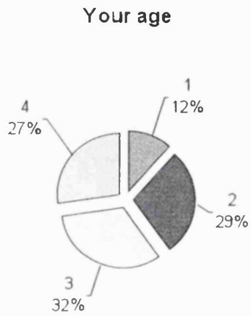
Analysis:
Majority of team members **63%, 24%** of Managers and **13%** Senior Managers.



10 Your Age:

1 Under 25	111	12%
2 25-34	273	29%
3 35-44	308	32%
4 45+	259	27%

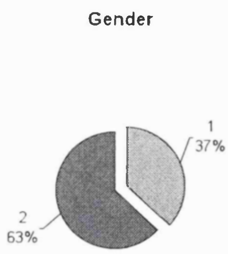
Analysis:
As per table above.



11 Gender:

1 Male	350	37%
2 Female	595	63%

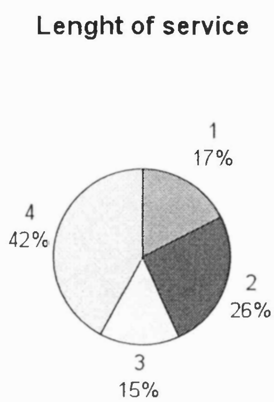
Analysis:
As per table above.



12 Length of Service:

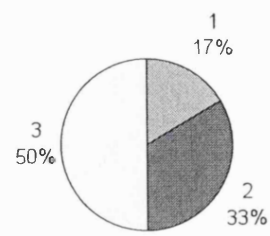
1 Up to 2 years	166	17%
2 2-5 years	243	26%
3 6-10 years	140	15%
4 Over 10 years	402	42%

Analysis:
Large majority **42%** have been working for A&L for over 10 years.



13 How did you hear about this survey?

1 I was invited to participate by letter or email	909	96%
2 I heard about it	17	2%
3 I found it while browsing on the Intranet	17	2%



Analysis:
As per table below.

9.6. Appendix 9.6: analysis of survey comments

Total number of comments received: 167
Analysis per issue:

Positive notes about the intranet	13	8%
Important issues related with the intranet	11	7%
Intranet search capabilities	7	4%
Publishing issues	3	2%
No time to use	16	10%
Training and induction	4	2%
Constant changes	5	3%
Q&A	2	1%
Other intranet issues	20	12%
Positive comments about the survey	41	25%
Problems with the survey	25	15%
No classification	7	4%
No fit in any "where you work" categories	4	2%
Survey is incomplete	10	6%
	167	

(x/y) where "x" is number of statements shown here as most relevant and "y" is the total number of statements in that category.

POSITIVE NOTES ABOUT THE INTRANET (5/13)

The intranet is very useful for communication within the organisation. It's hard to remember what it was like before we had this facility. It's excellent.

Pym's page is first class giving readers an up to the minute guide to key developments. I wish that other directors follow his lead.

The Intranet is most important being a home worker it keeps us up to date with lending policy and Management Information and any other charges I think it is great

I beleive the Intranet is a quick and efficient way to obtain information I require for my job. In addition it keeps you informed of changes in the Group. The social aspect is good.

As a part timer I find the intranet invaluable as it brings me up to date when I come into work on a Monday

IMPORTANT ISSUES RELATED WITH THE INTRANET (8/11)

Although I use the Intranet a lot I feel it is more Carlton Park biased and it would be nice to have some more news from outside Leicester!

Whilst I find the intranet useful to obtain info quickly, I would not always rely on this. Sometimes it's obviously out of date and therefore unreliable. Also I feel that much of it is written as if it were a press release for external consumption, rather than in talking to me as a trusted empoyee and part of the same organisation. This is particularly obvious when a page is signed by a Senior Manager, who is using it as a political platform, rather than a communication tool! As for feeling involved, this is difficult when the area in which I work is not even mentioned, having been designated "none core" by the wholesale bank, so that is hardly a motivator or an engager!

Although it provides a very straight forward method of cascading information through A & L networks, the personal touch is still very important and the vast gap between senior management and branch level interaction seems to indicate the lack of value placed on the foot soldiers in the business

This survey did not allow for me to note my feelings that although the Intranet is a brilliant source of information and knowledge it should not become the sole means of communication and development of staff as people have varying learning styles and reading is not everyone's medium. Nothing can replace face to face communication and discussion for full understanding of new information.

I would like to make the point that the Intranet is so heavily policed and so consistent that it becomes drab and Orwellian. Some humour, individuality and controversy would make it more attractive and trustworthy - but this is just not allowed.

If the Intranet is intended to be a tool to help us maximise our job potential, and close the gap between Management and their staff, why have I never been advised or encouraged to utilise it?

In this day and age I think we should expect the intranet to become increasingly important as a method of communication - enabling people to find things out for themselves rather than waiting to be told. I would like to see more content for Senior Managers - covering similar issues to the future focus and other Senior Manager meetings but on a more frequent and informal basis. Most Senior Managers have very little personal contact with the Directors and this would be a way of keeping everyone feeling 'part of the team'.

I fee the intranet does not focus on back offices whose work is an integral part of the business - it would be helpful if for example once a month focus could be placed on a particular back office i.e. like recoveries so other areas can see what goes on and how we work.

INTRANET SEARCH CAPABILITIES (4/7)

One thing I must say about the Intranet is that it is not easy to find the information that you are looking for.

Can you please look to improve the search engine? Thank you!

Would it be possible to make it easier to find information on the cashiering manuals and investment manuals? I sometimes wonder whether these are up to date and because of that I would prefer a paper manual. If you could make these manuals user friendly I would use them much more.

PUBLISHING ISSUES (2/3)

The group Intranet would be a lot more professional if more care was given to proof reading items before they are made available. Proper reading, not just using a spell checker. This is especially true in the Daily Press cuttings pages.

Each page has an 'owner' at the bottom. In the majority of cases when I make contact with the page owner i am advised that they are not the page owner & redirected to another person. Are the page owners updated?

NO TIME TO USE (3/16)

The intranet is full of information but staff are not given the time or encouragement to use it

I would just like to advise that in the contact centre no time is allocated for staff to read information on the intranet. So we tend to use the same pages all the time, forms warehouse, interest rates, branch list, etc. I think it would improve standards if staff were allocated a set time each day to surf the intranet and update and increase their knowledge.

I would like to use the facility more, but do not have the time to use it.

TRAINING AND INDUCTION (1/4)

I am very new to the Group but have not had any explanation of the site or how to use it to fully take advantage. Being in 2 branches and very busy app book there is not time to sit and play to use it to full benefit. I am sure it would be very useful if only there was time and training relevant to my job role to give an insight of what it offers. There was not a question relevant to this-Have you been made aware of this?

CONSTANT CHANGES (1/5)

My main concerns are the navigation through the intranet, once you find where something is it invariably moves

Q&A (2/2)

a number of answers on the Q&A pages either wilfully misunderstand, or don't answer, the question. There should be some sort of policing/referral if the Q&A is to maintain its credibility.

I feel that the Group only answers the questions they want to and that not all questions are answered fully.

OTHER INTRANET ISSUES (4/20)

My only comment isn't necessarily about the survey itself, but more about the different web sites the group has. For example, I was needing to send a prospective counterparty some info about the A&L and the 2004 Results, and didn't know access had to be made to www.alliance-leicester-group.co.uk - a direct link to the intranet MAY have been useful

I use the Intranet regularly to check information held with HR. When I phone to clarify these details the written explanation is not always the same as the verbal explanation I receive via the phone.

I think that the intranet is a great tool to use in my day to day work. It does, however, highlight the haves and have nots within the company as you are able to see how every business area is dealt with.

I think the Intranet is a fantastic tool. The only complaints I have about it are: 1. To difficult and time consuming to find relevant articles when required. 2. Keep shifting things around, you just find the areas that you require when you receive a message that the Intranet has been reviewed and changes made. 3. No time in the branch to browse the Intranet to read all the information other than MI each day around 2.30

POSITIVE COMMENTS ABOUT THE SURVEY (8/41)

I rarely ever use the intranet but after completing this survey, I'm going to try and make better use of it. I've never been encouraged to use it however I'll now try and access it more often and involve it in my work.

Thanks for the opportunity to voice my opinion. I can honestly say iv never used the intranet before. But this small survey has enabled me to see how simple it is.

I think its a good idea to run a survey including everyone's views from different working departments of Alliance & Leicester. It allows people to make honest opinions and statements which can identity areas of need or improvement so make us as a company even more recognised amongst our competitors.

I found it interesting. Some of my responses related to my findings where others related to my feelings.

Easy to follow and not complicated.

About time we took the intranet seriously

The survey was good as it explored many aspects of the intranet and was also communicated well.

Quite good. Easy to access and do. Good for a busy branch.

PROBLEMS WITH THE SURVEY (6/25)

I found some of the questions difficult to give a true answer to. There were frequently two separate questions being asked but linked together, expecting one answer. E.g. one asked about the reliability of the intranet content and my confidence in using the intranet. These are clearly two separate topics but merged into one question. Other than that it is good to see that feedback is being sort on a tool that is becoming more and more utilised throughout the group and whose role is changing in the business world. Thank You

I found some of the questions leading.

A bit too long when trying to complete between calls

As ever with a survey, the questions are open to interpretation, and how this is done affects the responses. However i still think it is a useful exercise which is why i joined in.

The survey could of had a section for ideas/comments to improve the intranet. Otherwise it was comprehensive!

I was invited to fill this survey in, i didn't really have the time & found it quite repetitive & quite long.

INCOMPLETE (3/7)

Could do with a question directly to do with 'up to datedness' of information. Sometimes you know in outline that things have changed, e.g. a departmental restructure, but changes have not made to relevant intranet pages (or at least an indication of when updates will be made.

A comments box would have been good.

Very interesting, but why was only a random sample chosen? Surely it would have been more beneficial to have a larger section of the company if not all to respond.

DEMOGRAPHICS (1/4)

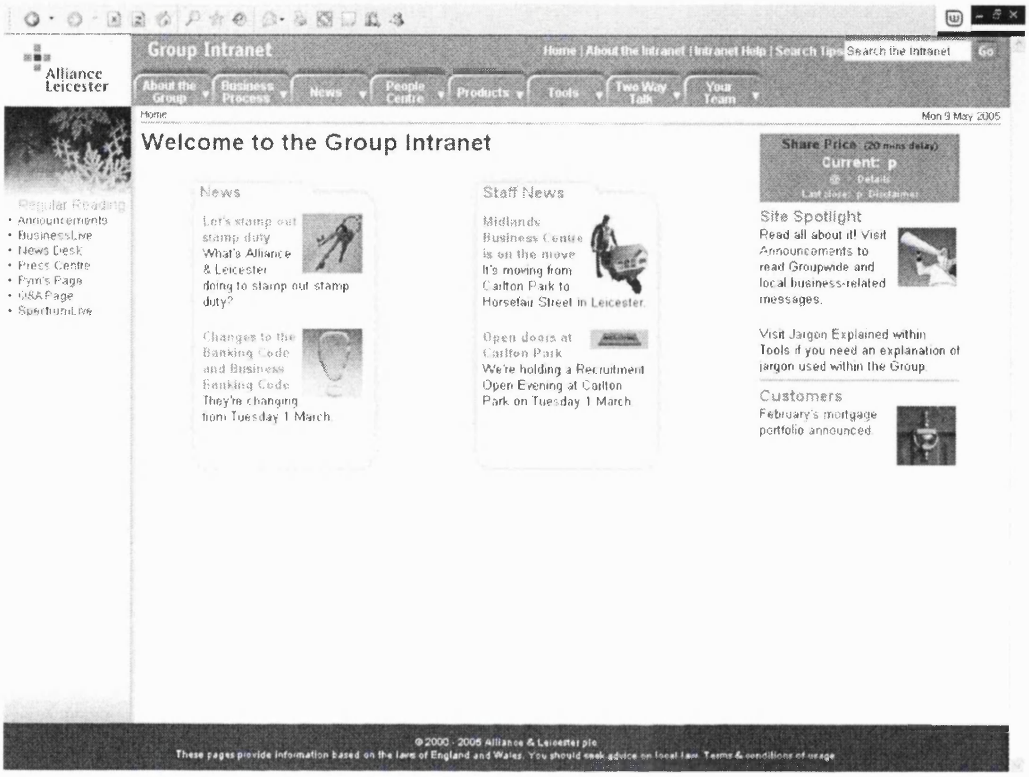
There wasn't an entry for Group Functions under "where you work".

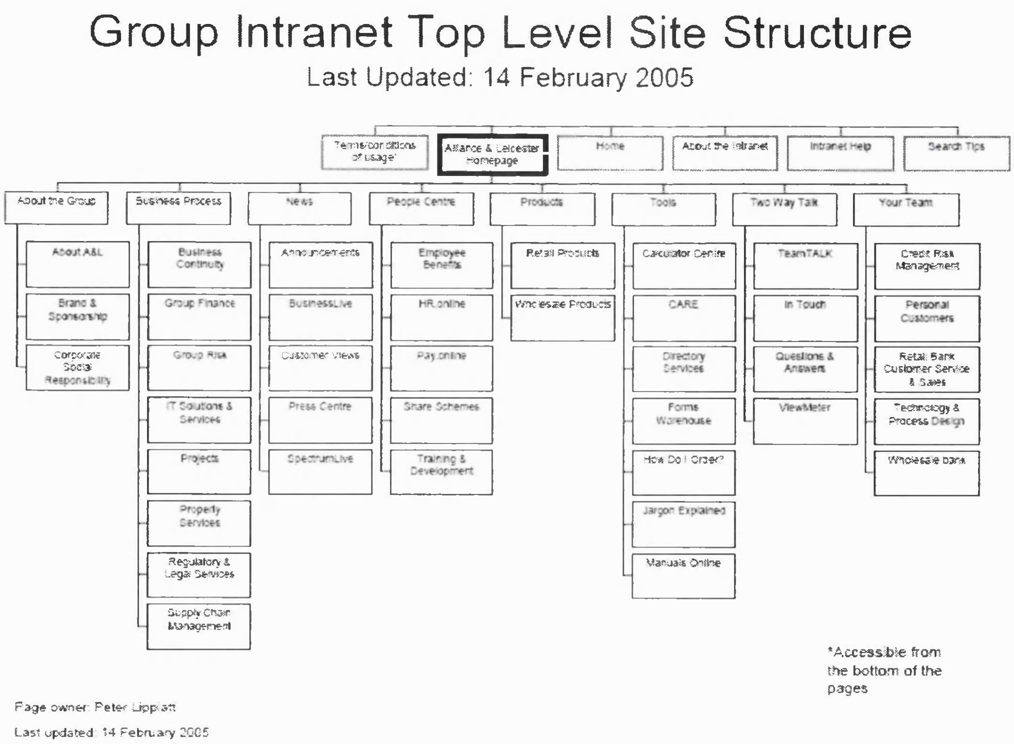
NO CLASSIFICATION (1/10)

No comment.

9.7. Appendix 9.7: Homepage and site structure

Screenshot of homepage on 14 February 2005 and structure of site at same time:





Description of all section of A&L's intranet homepage:

Main section	Sub-section	Site description
About the Group	About A&L	Information About A&L including the history of Alliance & Leicester, a business profile, meet the Board, structure charts and details of Awards the Group has won.
	Brand & Sponsorship	Brand & Sponsorship provides information on our Brand Strategy, our Vision and Values as well as the latest Sponsorship activities we are involved in.
	Corporate Social Responsibility	The CSR site contains the Corporate Social Responsibility Report, the Group's environment policy which details how the Group operates in an environmentally friendly manner, charities the Group supports and how you can get involved in volunteering initiatives
Business Process	Business Continuity	Access the Business Continuity site to log on to the contingency planning system and find information on the current Contingency Policy, Contingency Standards and SunGard Recovery Centres.
	Group Finance	The Group Finance site provides information about the departments within Group Finance and the people within these departments, and it gives access to financial and accounting information, procedures and forms.
	Group Risk	The Group Risk site provides information on effective risk management it also gives details of who Group Risk are and what they do.
	IT Solutions & Services	IT Solutions & Services provides information relating to IT in use by the Group. It includes Self Help solutions, the AdvantageLine Helpdesk, Desktop Provisioning and Technology Training Services, all provided by the Technology & Process Design directorate (T&PD).
	Projects	The Projects site provides the framework for project governance within Alliance & Leicester, together with up to date information on current SOC (Systems & Operations Committee) projects.
	Property Services	The Property Services site contains information on property-related matters for premises around the Group. Where applicable, this also covers information on such matters as booking meeting rooms or hospitality, taxis, first aid, fire evacuation procedures or recycling. It includes information on maintenance matters for branches.
	Regulatory & Legal Services	Regulatory & Legal Services site provides information and advice on audit, compliance, legal and secretariat issues, as well as the details of the teams that provide the support.
	Supply Chain Management	The Supply Chain Management site provides information and guidance on delivering the best possible value from both external suppliers and the internal supply chain on behalf of the Group.
News	Announcements	Read the latest Group Announcements
	BusinessLive	The BusinessLive site is the online newsletter which focuses on Alliance & Leicester as a business, including regular articles, financial news pages, news desk and the monthly summary of articles of interest from the previous month

	CustomerViews	The Customer Views site provides research information on what our customers think about Alliance & Leicester.
	PressCentre	The Press Centre site gathers together the daily press cuttings, our press releases, financial news, as well as updates, bulletins and circulars from the BBA and CML..
	SpectrumLive	The SpectrumLive site is the online newsletter which focuses on the news of our people. It also includes Competitions, Events, and the Sports & Social pages.
People Centre	Employee Benefits	The Employee Benefits site allows you to understand the full range of your benefits package provided by the Group.
	HR.online	HR.online gives guidance, information, forms and support for all your key people issues. Includes Terms of Employment, Vacancies and Health & Safety.
	Pay.online	The Pay.online site gives an explanation of your payslip, with detail about overtime, income tax, national insurance, and guidance for new starters, leavers and managers.
	Share Schemes	The Share Schemes site provides information and tools to help you manage your Alliance & Leicester share schemes.
	Training & Development	Within the Training & Development site you will find A to Z of training solutions, eLearning and information relevant to the four Training & Development areas across the Group.
Products	Retail Products	Here you will find all the information you need on our Retail Products from the latest competitor information and interest rates to the most recent marketing communications we are sending to our customers.
	Wholesale Products	Here you will find information relating to the Wholesale Products the Group offers.
Tools	Calculator Centre	The Calculator Centre site is a collection of calculators that you may use to help you do your job or calculate your Alliance & Leicester staff benefit.
	CARE	The CARE site contains information about how to handle Customer complaints, and to obtain access to the CARE system to log complaints.
	Directory Services	The Directory Services site contains the External Phone Book, the Internal Phone Book, the Branch Network Directory and ATM / Branch Locator. It also provides information on mobile phones and internal dialling codes.
	Forms Warehouse	The Forms Warehouse site is the main location for Group forms and enables you to type directly onto forms, both interactive and online, prior to printing locally or emailing directly.
	How do I Order?	The How do I order? site enables you to order anything from banking consumables to cleaning facilities, explaining the process in an easy to follow manner.
	Jargon Explained	Jargon Explained is a search tool that provides explanations of jargon terms used within Alliance & Leicester. You can also submit jargon that is not already listed and obtain a definition.
	Manuals Online	Manuals Online contains those manuals that you need to your job so whether you work in a branch, call centre or a business function.

Two Way Talk	TeamTALK	Within the Team*TALK* site you will find the latest briefing for team meetings and the previous briefings. Also included is a range of information to help you facilitate, organise and structure a successful meeting.
	Lunch & Learn	Lunch & Learns are small presentations or events run by specific business areas with a clear reason/objective for taking place.
	Questions & Answers	Use the Questions & Answers site to ask a question that your line manager isn't able to answer. Once an answer is obtained it will then be published, without names, on the site.
	ViewMeter	The ViewMeter site is dedicated to surveying the views and opinions of Alliance and Leicester Employees. Its aims are to collect information from the Group's employees, on group-wide issues, report the results, and encourage follow up action.
Your Team	Credit Risk Management	The Credit Risk Management site contains news and information relevant for all staff working in Credit Risk Management as well as being of general interest to the Group.
	Personal Customers	The Personal Customers site is designed to provide everyone in the Personal Customers Team with easy access to useful information and updates about the department as well as tools for their role within Marketing.
	Retail Bank Customer Service & Sales	The Retail Bank Customer Service & Sales site brings together the information for staff working within all three centres of excellence and the Retail Network.
	Technology & Process Design	The Technology & Process Design site is designed to provide everyone in the T&PD directorate with access to useful information and updates about the area as well as tools for their role.
	Wholesale Bank	The Wholesale Bank site provides information on the services we offer to businesses from sole traders to large corporates, as well as information on our teams.
Home		Welcome to the Group Intranet
About the Intranet	Meet the Teams	Meet the teams responsible for the development of the Group Intranet.
	Managing a Site	Managing a site contains all the information needed to get an Intranet site up and running.
	Newsroom	Newsroom contains the latest Intranet developments and other useful communications.
	Site Map	A pictorial view of the Group Intranet Top Level Site Structure (PDF 16KB).
	Publishing Toolbox	Information about Group Intranet publishing tools and policies:
Intranet help	How to use the browser toolbar	
	How to Navigate through Group Intranet pages?	
	Search Tips	
	Technical Problems	
	Training	
Search Tips		Here are some suggestions on making the most of the search engine's functionality.

9.8. Appendix 9.8: roles and responsibilities of local publishing teams

This is a summarised version of the policy regulating roles and responsibilities.

Role	Responsibilities
Sponsoring Directors	▪ Ensuring that the site supports the strategic aims of the Department and the Group ▪ Committing financial and manpower resources to the Site in the immediate and long term. ▪ Overall accountability for adherence to **Group Intranet Policies and Standards**, Group Internal Codes of Practice and External Codes of Practice, Policies and Legislation.
Site Licence Holder	▪ Ensuring that the Local Content Update Process is working effectively, including meeting with other departments to resolve discrepancies, conflicts of interest etc. ▪ Monitoring / reviewing adherence to **Group Intranet Policies and Standards**, Group Internal Codes of Practice and External Codes of Practice, Policies and Legislation ▪ Flagging issues to the Sponsoring Director and Group Intranet Team, including development needs, finance/resource issues, potential breaches of standards etc.
Site Manager	▪ Co-ordinating and managing the maintenance and development of the site, including handling new content development, analysis of web statistics, correcting error, negotiating with other Site Managers and Publishers etc. ▪ Developing processes and procedures to ensure that the content is up-to-date and authorised for publication at the appropriate level. This includes the retention of appropriate records for audit purposes ▪ Working with Publishers and Authors to maintain adherence to locally agreed Content Update Processes and elevating breaches of procedures to the License Holder
Publisher	▪ Building pages in line with **Group Intranet Policies and Standards**. Ensuring that the Author has confirmed that the content adheres to Intranet, Internal and External Codes/Policies/Legislation ▪ Alerting breaches of procedures/operational issues to the Site Manager ▪ Testing and correcting technical page errors before publishing authorised content onto the server.
Author	▪ Producing content in line with Intranet Guidelines and Internal and External Codes, Policies and Legislation and adhering to the Communications Standards. ▪ Keeping the published content relevant and up-to-date. This may be in line with the Local Publishing Team Content Development Plan. Liaising with the appropriate internal experts, such as Legal, Compliance or Audit, and obtaining sign off for the content as necessary ▪ Proof reading, correcting and signing-off the electronic pages before publication.
Business Manager	▪ Accuracy of content published on the pages ▪ Agreeing development/update plans with the Site Manager ▪ Managing other devolved responsibilities. These must be documented on the Site Proposition document

9.9. Appendix 9.9: copy of the Group Intranet Site License

Group Intranet Publishing Licence
"Site Name"

Document Owner:	
Location:	
Telephone:	

Issue	Date	Stage
1		
2		
3		
4		
5		
6		
7		

Authorised (Business Area): ____________________
Authorised (Corporate Communications): ____________________

Date: ____________________

Group Intranet Site Publishing Licence

Group Intranet pages are published under licence to Corporate Communications. This document details the terms and responsibilities of the site licence.

Part A - Objectives
This section clarifies the purpose and business benefit of the site:

Site/Area name:		**If Area, Main Site name**	
Site description:			
Key purpose: What do you want people to know or do as a result of using your site?			
Key departmental objectives achieved through the site:			
Specifically: What will not be covered by your site? How will your site work with other offline supporting material? How will your site work with other Intranet sites?			
Audience:	Primary:		
	Secondary:		
Site details:	Template Name:	/templates/	
	Site Map:		
	Metadata:	"Site Name" –	
Responsibilities:	The publishing team is responsible for the ensuring that all content is appropriate and agreed for publication with the relevant parties. The production and maintenance of content must be undertaken in line with all Group and Intranet Guidelines		

Part B – IT Support for content on the Intranet Servers

Intranet Service Level Agreement
The Group Intranet Web and SQL Servers are supported by Technology & Process Design to the following standards:

	Mon-Fri	Sat - Sun
Services	Level	Level
Service Availability	24 X 7	24 x 7
Support Availability	0900 – 1700	

Your site will be automatically supported within the above standards. If you have a business reason for extending the SLA to cover your content, please specify the specific content/application and the impact that a loss of service will have on the business.

Application/Content	Purpose	Reason	Business impact

You will be contacted separately to discuss support for these applications.

Contingency
The Group Intranet Web, Trove and SQL servers are contingent and the service is listed as Criticality level A.
For information purposes, please detail the criticality of the content that you have placed on these servers.

Application/content	Purpose	Criticality level	Business impact

Note: This information is only captured to manage the Intranet Infrastructure in the event of a disaster situation. You must also consider whether these requirements should be detailed within your local team's Contingency Plan.

Part C – IT support for content held on additional applications/servers

Group Intranet pages may act as a gateway to applications hosted on other Group Servers or to information accessed via the Internet.
To manage the service support and linkage between these various systems, you must list the external content that you access from your site.

Applications/Servers

Application/Server	Server address	Business owner	Support team (T&PD/Other)	Required availability	Contingency status

You will be contacted separately to discuss support and contingency for these applications.

Links to the Internet

All links to Internet sites must be in line with the ISM Guidance. All publishers are accountable for the consequences of providing a link to Internet sites.

Site name and address	Reason for link	Optional/ Essential link

Site manager:	
DW publisher(s) & line manager:	
	Contingency publisher(s):
Trove publishers:	
	Contingency publisher(s):
BIP publishers:	
	Contingency publisher(s):
Authors:	
	Key authors/librarians
Responsibilities:	• Collectively, the publishing team accept and undertake the Roles and Responsibilities of the Intranet Publishing • Contingency support is provided for key people within the local publishing team • Unsupported content will be removed from the site by the Group Intranet Team regardless of business criticality

2004 Budget

Applications (£):	
People:	

I accept the terms and responsibilities indicated within the licence agreement. These responsibilities have been communicated and agreed within the Publishing team

Authorised: ______________________
Site Licence Holder

Authorised: ______________________
Group Intranet Manager

Date: ______________________

9.10. Appendix 9.10: web enabled technologies code of practice

1. As a user, what am I permitted to use the Group Intranet for?
    - Line managers must encourage effective use of the intranet and ensure that appropriate provision is made for all staff to access it
    - Intranet content can change frequently and information should be retrieved and read from the Intranet each time it is required.
    - Intranet content, such as competitions, prize draws and other notice board services, may be used by employees on the understanding that they comply with the terms and conditions posted on those pages

Any inappropriate use of the Group Intranet may lead to disciplinary action being taken under the Group Discipline Policy published in HR.online

2. What are the Data Protection, Confidentiality and Copyright Issues that apply to me as a user?

Copyright
- It is possible for any member of staff to use any materials that appear on the Group Intranet, unless expressly requested not to do so. However, you should bear in mind that intranet pages are updated frequently and care must be taken to ensure that any copied information is updated accordingly.

Data Protection & Confidentiality
- You and the Group have legal obligations under the Data Protection Acts to protect personal data, whether such data relates to our customers or to our employees. Any breach of this legislation can expose the Group and you personally, to liability and to enforcement action by the Data Protection authorities.
- In addition to familiarising yourself with the Data Protection Guidelines, you can help ensure compliance by following these basic rules:
- Do not disclose any information about a person via the Group Intranet that you would not want to be disclosed about yourself.
- Do not disclose any personal information to anyone other than the person concerned without his or her prior formal agreement (except where such disclosure is properly authorised and permitted under Data Protection legislation as being required for the effective management of employees, e.g. reports produced by Personnel & Development, Legal, etc.). Be aware that information concerning a person's racial or ethnic origin, sexual life, political beliefs, trade union membership, religious beliefs, physical or mental health, financial matters or criminal history may be of a sensitive and confidential nature.
- You must think carefully before submitting information via the Group Intranet.

3. Will my use of the intranet be monitored?

- All connections to the Group Intranet by members of staff are recorded for statistical purposes to measure the effectiveness of the intranet.
- The Group can, and will, identify individual users where there is evidence of misuse.

4. All content is published on the Group Intranet under licence to Corporate Communications.

The generic roles and responsibilities of a publishing team are documented in About the Intranet and the specific responsibilities are documented in each publishing team's site licence document. Any use of the Group Intranet for any of the following prohibited purposes will be treated as a serious disciplinary matter which may lead to dismissal. As a publisher or content provider you must not, under any circumstances:

- Publish any materials that are obscene or may otherwise cause offence. The following list provides some examples of such unacceptable materials, but it is not exhaustive:
  - any sexually explicit content, excessively strong language or scenes depicting violence;
  - any sexist or racist remarks;
  - remarks relating to a person's sexual orientation, gender reassignment, religion, disability or age;
  - personal comments which may be upsetting or insulting to any member of staff or other person
  - photographs of individuals without their permission.
- Use material which breaches the Group's legal obligations (for example, the Data Protection Act, Consumer Credit Act, Copyright Designs and Patents Act or the Financial Services & Markets Act) or contravenes any of the Group's policies or procedures, including the Equal Opportunities Policy
- Publish any information that contains offensive language or has an offensive image attached. If you receive such information inform AdvantageLine immediately (8801) 6969. AdvantageLine will contact Information Security Management who will then give you instructions about how and when to delete the message. In the meantime, you must not forward it to anyone else (other than Information Security Management, if requested to do so).
- Publish any materials that could be defamatory. Any statement that contains negative remarks about other persons or companies will be defamatory unless the statement is factually correct. If in doubt, do not publish it.
- Publish information which misrepresents or vilifies the Alliance & Leicester Group.
- Any prize draws, competitions or other noticeboard services much be agreed in principle with Corporate Communications and have clear terms and conditions which are approved by Legal.
- The Group reserves the right to copy and/or to delete any material published on the intranet if the contents are regarded to be in breach of this Code. Where possible, the publisher will be approached in the first instance and asked to remove or amend the material, however, the

Intranet Team will deal with the matter if the publisher is not available to do so.

5. The Alliance & Leicester Group supports one intranet infrastructure, which is currently known as the Group Intranet. All web content for internal use must be made available via the Group Intranet.

- All intranet communications and information is published under licence to Corporate Communications. Departments and business areas can obtain a licence to publish Intranet content by following the procedures in About the Intranet. This licence sets out the following terms:
- Content be published by the department that is responsible for or owns that information. Content must only be published once and must not be re-published in different sites.
- The responsibility for the relevance and accuracy of content published in each site Intranet is delegated to the authorised publishing team
- Generally, all material published on the Group Intranet will be made available to all staff. Publishing teams must not publish material that may be confidential, for limited distribution or inappropriate to become known in the public domain. Password restricted areas may be permitted on a case-by-case basis where price or commercially sensitive needs to be published via the Intranet
- The technology used to publish intranet content is determined by Technology & Process Design with Corporate Communications and is specified within the Technology Policies, Principles and Standards
- The Intranet will only be made available to view on technology installed and supported by Technology & Process Design
- All applications accessed via the Group Intranet must be developed by Technology & Process Design or by a third party approved by Technology & Process Design. These applications must adhere to Group Technology Standards and be managed by Technology & Process Design.

6. What standards apply if I publish on the intranet?

All materials published on the Group Intranet must adhere to Group Intranet Publishing Standards and Guidelines.

Information published via the Intranet may be used in support of court proceedings, employment tribunal proceedings or as part of an investigation by a regulatory body. For the purposes of providing evidence, a copy of the intranet is taken each week and stored with the Group Archivist. To support this, all publishing teams must ensure that all published material is properly authorised and the appropriate sign off documents can be made available as necessary.

Remember: Publish your intranet pages with the consideration that they may be relied upon in Court. Breach of this Code could result in Civil and/or Criminal liability both for you and for the Group. If you fail to adhere to this Code, you may be liable to disciplinary action being taken against you under the Group Discipline Policy, including summary dismissal.

9.11. Appendix 9.11: evolution of intranet adoption

User adoption evolved rapidly since the launch of the intranet in 2000. The earliest survey in December 2000 reported that only 4.7% said that they used the intranet more than once a day and 22% said that they never used the intranet. Only nearly half of those surveyed used the Group Intranet once a week or more (43%). Of those who said they never used the intranet (22%), nearly half (48%) said they had their own workstation (6% had a standalone PC intranet station and 9% said their nearest access point was a colleague's PC). 11% said they had no access and 23% said that they didn't know where their nearest access point was.

In 2005 the situation is completely different. In the April 2005 survey, 0% said they never used the intranet (compared to the 22% in 2000). 60% said they used the intranet "Many times a day". 20% said they used the PC once a day and 16% several times a week. 6% said once a week or less.

Table 13 shows the evolution of intranet usage. The table shows a sharp rise in the number of visits per day (both week and weekend) and in the number of page views per visitor. The average time per visit rose from 9mins to 20mins and the number of single visits (visits to one page only) dropped considerable from 722 in 2002 to 280 in 2004 showing that users spend much more time online.

	May 2002	**May 2003**	**May 2004**
No of hits:	na	1,282,085	2,439,341
No of visits:	na	172,786	354,361
Single visits only:	722	604	280
Average number of visits per weekday:	5,275	7,287	15,866
Average number of visits per weekend day:	1,605	2,493	4,231
Average page view per unique visitor:	97	126	199
Average time of visit (min:sec):	9.00	9:24	20:15

Table 13: Evolution of entire site usage

In May 2004 over 90% of all staff viewed the Intranet and of these 3% viewed it only once. The most popular area is the Announcements site while the Wholesale Bank site shows the greatest increase in usage rising over 30%.

Table 14 shows the evolution in the most popular sites. The social content seems predominant in the top 5 sites. The Classified pages (withdrawn in 2004 because of misuse) appeared in top 2 in 2002 and 2003. Business*Live* and Spectrum*Live*, the company magazines, are also in the top 5. HR.online and FormsWarehouse appear are the most popular after social content. The Questions and Answers site is also in the top 5 every year.

	2002	2003	2004
1	Classifieds	Breaking news	Announcements
2	HR.online	Classifieds	Business*Live*
3	Press Centre	Q & A	Branch MI
4	Spectrum*Liv e*	Spectrum*Live*	Forms Warehouse
5	Sitemap	Calculator Centre	Q&A

Table 14: Evolution of most popular sites and pages

An analysis of the terms used in the search engine also helps to understand what users expect to see on the intranet. The top search entries in 2004 were "restaurant" or "menu" with 2256 searches. The next most searched name was "MI" or "Branch MI" (this is the performance indicator for branch staff performance) with 2021 searches. Users use the intranet for simple day to day activities such as checking the restaurant menu. Branch employees also use the intranet to check their sales performance which has a large impact on their salaries and bonus.

Evolution of entire site usage

	2002		2003		2004	
	May	**April**	**May**	**April**	**May**	**April**
No of hits:			1,282,085	1,356,398	2,439,341	1,961,373
No of visits:			172,786	179,624	354,361	351,938
Unique number of visitors: (visited at least once based on IP address)	*8234*	*8,167*	8,888	9,146	9,000	9,021

Single visits only:	*722*	*779*	604	621	280	317
Average number of visits per weekday:	*5275*	*5,634*	7,287	7,687	15,866	15,123
Average number of visits per weekend day:	*1605*	*1,700*	2,493	2,626	4,231	4,808
Average page view per unique visitor:	*97*	*96*	126	128	199	149
Average time of visit (mins/sec):	*9.00*	*9:26*	9:24	9:27	02:15	02:16

Top-Line Directory Reports

MAY 2002

Site	*No. of visits entire site*	*Most popular page in the site*	*No. of visits popular page*
1. Social & Community	21968	Classifieds	31641
2. HR.online (inc. Terms of Employment)	19788	Vacancies (Terms of Emp Main Page)	7868
3. Press Centre	17307	Press Summary	15791
4. Spectrum	15381	Q&A 03/05/02	3560
5. Leeds	12447	Sitemap	4805
6. Products	12218	Internet Banking Introduction	3548
7. Our Customers	10708	CARE Main page	7156
8. Calculator Centre	8240	Main page	7449
9. Business*Live*	5403	Pym's page	1076
10. Group Compliance	5080	Terrorist Financial activities	1774

May 2003

Site	*No. of Visits Entire Site*	*Most popular page in the site*	*No. of Visits Popular Page*
1. Branch Network	26,778	Breaking news	19,547
2. Social & Community (inc Charity & Volunteering)	22,885 (259)	Classifieds (Events list)	32,831 268
3. Q and A	20,356	Latest Questions	19,898
4. Spectrum*Live*	19,957	LCFC main	2,879
5. Calculator Centre	17,630	Calc Centre Main	15,522
6. HR.online (inc. Terms of Employment)	17,127 (3,362)	Vacancies (terms of employment index)	8.574 (1,734)
7. A&L Direct	14,364	New Business Home	5,765
8. Business*Live*	12,079	Newsdesk article	3,333
9. Products	11,558	Savings Current Rates	3,880
10. Ashford	8,077	Reference Main	1,987

May 2004

Site	No. of Visits Entire Site	Most popular page in the site	No. of Visits Popular Page
1. Announcements	48,919	Pay Negotiations	4,571
2. BusinessLive *Financial News *Monthly Summary *Newsdesk	44,771	Focus on pay negotiations	3,571
3. RBCSS	33,308	Branch MI	28,915
4. Forms Warehouse	31,302	Contact Centre Electronic forms	3,170
5. Q&A	30,920	Latest answers	28,814
6. Calc Centre	28,909	Life Insurance	11,546
7. SpectrumLive *Social & Community	23,618	Congratulations to...	2,957
8. CCC	22,804	Leeds Homepage	6,061
9. Retail Products	19,408	Savings Current rates	6,211
10. HR	17,128	Job opportunities main	8,982

Terminology

Unique Visitors - Individuals who visited the site during the report period. If someone visits more than once, they are counted only the first time they visit.

Average Number of Visits (per day on weekdays) - The average number of visits for each individual day of the week.

Average Number of Visits (per weekend) - The average number of visits for both Saturdays and Sundays combined.

Average Page Views per Unique Visitor - Number of page views divided by the total number of unique visitors.

Median Visit Length - Median of non-zero length visit. Half the visit lengths are longer than the median, and half are shorter.

Key publications from this research

Five papers have now been produced based on this research. One paper, presented at the Academy of Management 2006 (AoM), links the literature on intranets with the organisational trust literature and discusses the impacts of intranets to organisations. Another paper was presented at the International Conference of Information Systems 2006 (ICIS) studies the effect of intranets on employee perception and behaviour. These papers are being prepared for journal publication.

A third paper was submitted to the Information Systems Research Journal, but has not been accepted for publication. This paper explored the role of the interplay, between the intranet and its hosting organisation, in forming social networks. Further developments for this paper are being considered.

A new paper has been submitted to JSIS (with Sue Newell and Wendy Currie) accepted for presentation at a special event at ICIS 2007. The paper looks at paradoxical effects of institutionalisation. It explores the research finding that the collective awareness of the strategic significance of the intranet declines as it becomes more institutionalised in the organisation. A revised version of this paper has been accepted for presentation at the Academy of Management 2008.

A fifth paper has been accepted for publication in the best paper proceedings of the Academy of Management 2008 and is under review for a special call for papers of JIT on Institutional Theory. The paper re-centres institutionalisation as a micro process of generation of institutionalised behaviour through the gradual embedding of technology in work practices and social fabric of organisations.

Full references of these papers:

Baptista, J., Backhouse, J., and Canhoto, A., *"Intranet institutionalisation and organisational trust: a longitudinal case study in a UK bank"* Academy of Management 2006

Abstract:
This study investigates the impact of intranet institutionalisation on organisations. Using the perspective of the organisational trust research, it examines the mutually conditioning relationship between intranets as a technology and the culture of the host organization. A longitudinal case study in a UK bank over a 5 year period explores how employees adopt and incorporate the intranet into their routine everyday experience, tracing the impacts in employee perceptions, behaviour and organisational culture. Using a theoretical framework developed from Institutional-based Trust Theory for key constructs, the study uses Sequential Exploratory Research Design (Creswell 2003) for collecting and analysing qualitative and quantitative data. The findings reveal intranet institutionalisation as a process where users gradually evolve a familiarity and a sense of normality towards the system, ultimately taking for granted the accuracy and value of its information and functionality, with clear implications for the development of organisational trust.

Baptista, J., Backhouse, J., and Canhoto, A.. (2006), *"Impact of intranets on employee perception and behaviour: a case study in a UK bank"* Proceedings of the International Conference of Information Systems, Milwaukee USA

Abstract:
This paper deals with the question of how intranets impact on employee perception and behaviour. The study uses a 5 year longitudinal study

following the evolution of an intranet in a UK bank to analyze how it changed the relationships between employees and between managers and employees. The discussion integrates two different research domains, the intranet literature and the organizational trust literature. Qualitative data is presented to show the impact of intranets on communication, sharing of information, collaboration, organizational bonding, feeling of empowerment, power distance, and sense of closeness. The discussion uses three metaphors to convey the key findings: The Plumbing System, the Iconic Building and the Soap Opera. The main contribution of this paper is in using constructs from the organizational trust literature to better understand how intranets impact on employee perception and behaviour.

Baptista, J., Newell, S., and Currie, W., *"Paradoxical Effects of Intranet Institutionalization and its Strategic Awareness in Organizations"* Academy of Management 2008

Abstract:

This paper offers a longitudinal analysis of the institutionalization of intranet technology in the financial services sector. Our case study data points up a paradox in that institutionalization is accompanied by a reduction in the collective awareness of organizational members of the strategic role of technology. This occurs as technology becomes embedded into existing working practices and becomes part of the day-to-day routines of individuals. This research contributes to the growing body of work on the processes of institutionalization. It reinforces existing studies that suggest that institutionalization is a multi-level process with both intended and unintended outcomes and offers new insights on the relationship between institutionalized technology and strategy.

Baptista, J., *"Institutionalization as a Process of Interplay between Technology and its Organizational Context of Use"* Best paper proceedings of the Academy of Management 2008 and under review for the JIT

Abstract:

This study contributes to the IS literature with a distinct explanation of the process of institutionalization of technology in organizations. The research analyzes the role of micro level processes of interplay in embedding an intranet in the formal functioning of an organization and in the habits and routines of its employees. Findings identify two types of processes of interplay underpinning this process of institutionalization. The first operates at the level of constitutive expectations and refers to mutual changes to the governance, policy and control mechanisms which foster the perception that the intranet is part of the expected formal functioning of the organization. The second operates at the level of background expectations and refers to mutual changes that make the intranet look more familiar, functional, easier to use, fostering its embedding in routines and habits of the employees. The study aims to motivate more research on institutionalization as a bottom-up process of gradual development of institutionalized behaviour.

Bibliography

Alavi, M. and D. E. Leidner (2001) "Review: Knowledge Management and Knowledge Systems: Conceptual Foundations and Research Issues", *MIS Quarterly,* **25 (1),** p. 107.

Andersen, T. J. (2001) "Information Technology, Strategic Decision Making Approaches and Organizational Performance in Different Industrial Settings", *Journal of Strategic Information Systems,* **10 (2),** pp. 101-119.

Avgerou, C. (2000) "Information Systems: What Sort of Science Is It?" *Omega,* **28 (5),** p. 567.

Avgerou, C. (2001) "The Significance of Context in Information Systems and Organizational Change", *Information Systems Journal,* **11 (1),** p. 43.

Backhouse, J., C. W. Hsu and L. Silva (2006) "Circuits of Power in Creating De Jure Standards: Shaping an International Information Systems Security Standard", *MIS Quarterly,* **30** p. 413.

Banck, B. and C. A. Nystrom (2005) "Intranet Use: A Study of Five Swedish Organizations", *Journal of Organisational Transformation & Social Change,* **2 (2),** p. 153.

Bansler, J. P., J. Damsgaard, *et al.* (2000) "Corporate Intranet Implementation: Managing Emergent Technologies and Organizational Practices", *Journal of the Association for Information Systems,* **1 (Paper 10),** pp. 1-39.

Barber, B. (1983) *The Logic and Limits of Trust,* Rutgers University Press, New Brunswick, N.J.

Barley, S. R. (1986) "Technology as an Occasion for Structuring: Evidence from Observations of Ct Scanners and the Social Order of Radiology Departments", *Administrative Science Quarterly,* **31 (1),** p. 78.

Barnfield, E. (2002) "How to Manage Your Intranet Publishing Community", *Strategic Communication Management,* **6 (5),** p. 30.

Benbasat, I., D. K. Goldstein and M. Mead (1987) "The Case Research Strategy in Studies of Information Systems", *MIS Quarterly,* **11 (3),** p. 368.

Berger, P. L. and T. Luckmann (1967) *The Social Construction of Reality. A Treatise in the Sociology of Knowledge,* The Penguin Press, London.

Bjiker, W. E., T. Hughes and T. J. Pinch (1987) *The Social Construction of Technological Systems,* MIT Press, London.

Boland, R. (1985) "Phenomenology: A Preferred Approach to Research in Information Systems" in *Research Methods in Information Systems,* (Mumford, E., R. A. Hirschheim, G. Fitzgerald and T. Wood-Harper eds) North-Holland, Amsterdam, pp. 193-201.

Boland, R. J. (1991) "Information System Use as a Hermeneutic Process" in *Information Systems Research: Contemporary Approaches and Emergent Traditions,* (Nissen, H.-E., H. K. Klein and R. A. Hirschheim eds) North Holland, Amsterdam, pp. 439-464.

Brynjolfsson, E. and T. W. Malone (1994) "Does Information Technology Lead to Smaller Firms?" *Management Science,* **40 (12),** p. 1628.

Burrell, G. and G. Morgan (1979) *Sociological Paradigms and Organizational Analysis,* Hienemann, London.

Butler, T. (2003) "An Institutional Perspective on Developing and Implementing Intranet- and Internet-Based Information Systems", *Information Systems Journal,* **13 (3),** p. 209.

Cecez-Kecmanovic, D., D. Moodie, A. Busuttil and F. Plesman (1999) "Organisational Change Mediated by E-Mail and Intranet - an Ethnographic Study", *Information Technology & People,* **12 (1),** pp. 9-26.

Chatterjee, D., R. Grewal and V. Sambamurthy (2002) "Shaping up for E-Commerce: Institutional Enablers of the Organizational Assimilation of Web Technologies", *MIS Quarterly,* **26 (2),** p. 65.

Child, J. and G. Mollering (2003) "Contextual Confidence and Active Trust Development in the Chinese Business Environment", *Organization Science: A Journal of the Institute of Management Sciences,* **14 (1),** p. 69.

Chin, P. (2003) *Intranet Content: Long Live the King* Last accessed: 20/09/2005 Last updated: 20/06/2003 Address: http://www.intranetjournal.com/articles/200306/ij_06_20_03a.html.

Chin, P. (2005) *Taking Stock: Intranet Content Audits* Last accessed: 20/09/2005 Last updated: 09/09/2005 Address: http://www.intranetjournal.com/articles/200509/ij_09_09_05a.html.

Ciborra, C. (2000) *From Control to Drift: The Dynamics of Corporate Information Infastructures,* Oxford University Press, Oxford.

Ciborra, C. and T. Jelassi (1994) *Strategic Information Systems: A European Perspective,* Wiley, Chichester; New York.

Ciborra, C. U. and O. Hanseth (1998) "From Tool to Gestell: Agendas for Managing the Information Infrastructure." *Information, Technology & People,* **11** p. 305–327.

Ciborra, C. U. and G. F. Lanzara (1994) "Formative Contexts and Information Technology: Understanding the Dynamics of Innovation in Organizations", *Accounting, Management and Information Technologies,* **4 (2),** p. 61.

Clarke, K. and D. Preece (2005) "Constructing and Using a Company Intranet: It's a Very Cultural Thing", *New Technology, Work & Employment,* **20 (2),** p. 150.

Clegg, S. (1990) *Modern Organisations: Organisation Studies in the Post-Modern World,* SAGE Publications, London.

Clegg, S. R. (1981) "Organisation and Control", *Administrative Science Quarterly,* **26 (4),** pp. 545-562.

Clegg, S. R. (1989) *Frameworks of Power,* Sage Publications, London.

Creswell, J. W. (1998) *Qualitative Inquiry and Research Design: Choosing among Five Traditions,* Sage Publications, Thousand Oaks, Calif.

Creswell, J. W. (2002) *Research Design: Qualitative, Quantitative, and Mixed Method Approaches,* (2nd ed) Sage, London.

Creswell, J. W. (2003) *Research Design: Qualitative, Quantitative, and Mixed Method Approaches,* (2nd ed) Sage, London.

Currie, W. L. (2004) "The Organizing Vision of Application Service Provision: A Process-Oriented Analysis", *Information & Organization,* **14 (4),** p. 237.

Currie, W. L. and M. W. Guah (2007) "Conflicting Institutional Logics: A National Programme for It in the Organisational Field of Healthcare", *Journal Of Information Technology,* **22** pp. 235-247.

Curry, A. and L. Stancich (2000) "The Intranet -- an Intrinsic Component of Strategic Information Management?" *International Journal of Information Management,* **20 (4),** p. 249.

Damsgaard, J. and R. Scheepers (1997) "Using Internet Technology within the Organization: A Structurational Analysis of Intranets". in *Proceedings of the International ACM SIGGROUP Conference on Supporting Group Work,* Phoenix, AZ, USA,

Damsgaard, J. and R. Scheepers (1999) "Power, Influence and Intranet Implementation: A Safari of South African Organizations", *Information Technology & People,* **12 (4),** pp. 333-358.

Damsgaard, J. and R. Scheepers (2000) "Managing the Crises in Intranet Implementation: A Stage Model", *Information Systems Journal,* **10 (2),** p. 131.

Damsgaard, J. and R. Scheepers (2001) "Harnessing Intranet Technology for Organisational Knowledge Creation", *Australian Journal of Information Systems, Special Edition on Knowledge Management,* **4 (15),** pp. 333-358.

Dejean, F., J.-P. Gond and B. Leca (2004) "Measuring the Unmeasured: An Institutional Entrepreneur Strategy in an Emerging Industry", *Human Relations,* **57 (6),** p. 740.

Denton, D. K. (2003a) "Use an Intranet for Performance Measurement", *Industrial Management,* **45 (1),** p. 28.

Denton, D. K. (2003b) "Using the Intranet to Get Rid of Work", *Canadian Manager,* **28 (4),** p. 11.

Denzin, N. K. and Y. S. Lincoln (2000) *Handbook of Qualitative Research,* (2nd ed.) Sage Publications, Thousand Oaks, Calif.; London.

DeSanctis, G. and M. S. Poole (1994) "Capturing the Complexity in Advanced Technology Use: Adaptive Structuration Theory", *Organization Science,* **5 (2),** p. 121.

Dias, C. (2001) "Corporate Portals: A Literature of a New Concept in Information Management", *International Journal of Information Management,* **21 (4),** p. 269.
Dickey, M. H. and B. Ives (2000) "The Impact of Intranet Technology on Power in Franchisee/Franchisor Relationships", *Information Systems Frontiers,* **2 (1),** pp. 99-114.
DiMaggio, P. J. and W. W. Powell (1983) "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organisational Fields", *American Sociological Review,* **48 (2),** p. 147.
DiMaggio, P. J. and W. W. Powell (1991a) "Introduction" in *The New Institutionalism in Organisational Analysis,* (Powell, W. W. and P. J. DiMaggio eds) University of Chicago Press, Chicago, pp. 1-38.
DiMaggio, P. J. and W. W. Powell (1991b) "The Iron Cage Revisited: Institutional Isomorphomism and Collective Rationality in Organisational Fields" in *The New Institutionalism in Organisational Analysis,* (Powell, W. W. and P. J. DiMaggio eds) University of Chicago Press, Chicago, pp. 63-82.
Douglas, M. (1982) "The Effects of Modernisation on Religious Change", *Daedalus,* **(Winter),** pp. 1-19.
Duane, A. and P. Finnegan (2003) "Managing Empowerment and Control in an Intranet Environment", *Information Systems Journal,* **13 (2),** pp. 133-158.
Fichter, D. (2005) "Intranets, Wikis, Blikis, and Collaborative Working", *Online,* **29 (5),** p. 47.
Foucault, M. (1977) *Discipline and Punish: The Birth of the Prison,* Allen Lane, London.
Garfinkel, H. (1963) "A Conception of, and Experiments with, 'Trust' as a Condition of Stable Concerted Actions" in *Motivation and Social Interaction,* (Harvey, O. J. ed.) The Ronald Press, New York.
Garfinkel, H. (1967) *Studies in Ethnomethodology,* Prentice-Hall, Englewood Cliffs, N.J.
Gee-Woo, B., R. W. Zmud, K. Young-Gul and L. Jae-Nam (2005) "Behavioural Intention Formation in Knowledge Sharing: Examining the Roles of Extrinsic Motivators, Social-Psychological Forces, and Organisational Climate", *MIS Quarterly,* **29 (1),** p. 87.
Giddens, A. (1976) *New Rules of Sociological Method,* Basic Books, New York.
Giddens, A. (1979) *Central Problems in Social Theory: Action, Structure, and Contradiction in Social Analysis,* University of California Press, Berkeley.
Giddens, A. (1984) *The Constitution of Society: Outline of the Theory of Structuration,* University of California Press, Berkeley.
Giddens, A. (1990) *The Consequences of Modernity,* Polity Press in association with Basil Blackwell, Oxford, UK, Cambridge, UK.
Goles, T. and R. Hirschheim (Eds.) (1997) *Intranet: The Next Is Solution?* Information Systems Research Centre, College of Business Administration, University of Houston.
Granovetter, M. (1985) "Economic-Action and Social-Structure - the Problem of Embeddedness", *American Journal Of Sociology,* **91 (3),** pp. 481-510.
Guba, E. G. and Y. S. Lincoln (1994) "Competing Paradigms in Qualitative Research" in *Handbook of Qualitative Research,* (Denzin, N. K. and Y. S. Lincoln eds) Sage, Thousand Oaks, pp. 105-117.
Gupta, V. K., S. Govindarajan and T. Johnson (2001) "Overview of Content Management Approaches and Strategies", *Electronic Markets,* **11 (4),** p. 281.
Hasselbladh, H. and J. Kallinikos (2000) "The Project of Rationalization: A Critique and Reappraisal of Neo-Institutionalism in Organization Studies", *Organization Studies (Walter de Gruyter GmbH & Co. KG.),* **21 (4),** p. 697.
Hayes, N. and G. Walsham (2000) "Safe Enclaves, Political Enclaves and Knowledge Working" in *Managing Knowledge: Critical Investigations of Work and Learning,* (C. Prichard, R. H., M. Chumer and H. Willmott ed.) Macmillan, London, pp. 69-87.
Heal, G. and W. Karlenzig (2001) "An Intranet Can Be the Key to Successful Merger", *Pipeline & Gas Journal,* **228 (12),** p. 40.
Holtz, S. (2000) *The Intranet Advantage: Your Guide to Understanding the Total Intranet and the Communicator's Role,* (Second edition) IABC, Emeryville, Calif.
Hu, Q., P. Hart and D. Cooke (2007) "The Role of External and Internal Influences on Information Systems Security – a Neo-Institutional Perspective", *Journal of Strategic Information Systems,* **16 (2),** pp. 153-172.

Jacko, J. A., G. Salvendy, F. Sainfort and e. al (2002) "Intranets and Organizational Learning: A Research and Development Agenda", *International Journal of Human-Computer Interaction,* **14 (1),** p. 93.
Jacoby, G. A. and Luqi (2007) "Intranet Model and Metrics", *Communications of the ACM,* **50 (2),** p. 43.
Karlsberg, J., J. Damsgaard and R. Scheepers (2003) "A Taxonomy of Intranet Implementation Strategies: To Make or to Buy?" *Journal of Global Information Management,* **11 (3),** p. 39.
Keen, P. G. W. (1981) "Information System and Organizational Change", *Communications of the ACM,* **24 (1),** p. 24.
Klein, H. and M. Myers (1999) "A Set of Principles for Conducting and Evaluating Interpretive Field Studies in Information Systems", *MIS Quarterly,* **23** p. 67.
Kramer, R. M. (1996) "Divergent Realities and Convergent Disappointments in the Hierarchical Relation: Trust and the Intuitive Auditor at Work" in *Trust in Organizations: Frontiers of Theory and Research*, (Kramer, R. M. and T. R. Tyler eds) Sage Publications, Thousand Oaks, Calif., pp. pp. 216-46.
Kuhn, T. S. (1996) *The Structure of Scientific Revolutions,* (3rd ed.) University of Chicago Press, Chicago; London.
Kvale, S. (1996) *Interviews: An Introduction to Qualitative Research Interviewing,* SAGE, Thousand Oaks; London.
Lai, V. S. (2001) "Intraorganisational Communication with Intranets", *Communications of the ACM,* **44 (7),** p. 95.
Lamb, R. (1999) "Using Intranets: Preliminary Results from a Socio-Technical Field Study". in *32nd Hawaii International Conference on System Science,*
Lamb, R. (2001) "Tracing Influence through Intranets of Compliance". in *Proceedings of the 34th Hawaii International Conference on System Sciences - 2001,*
Lamb, R. (2002) "Intranet Boundaries: Social Actors and Systems Integration". in *15th Bled Electronic Commerce Conference,*
Lamb, R. and E. Davidson (2000) "The New Computing Archipelago: Intranet Islands of Practice." in *Proceedings of the IFIPWG8.2_Working Conference on Information Technology and Changes in Organizational Work,*
Lamb, R. and E. Davidson (2005) "Understanding Intranets in the Context of End-User Computing", *Database for Advances in Information Systems,* **36 (1),** p. 64.
Lamb, R. and R. Kling (2003) "Reconceptualising Users as Social Actors in Information Systems Research", *MIS Quarterly,* **27 (2),** p. 197.
Lane, C. and R. Bachmann (1996) "The Social Constitution of Trust: Supplier Relations in Britain and Germany", *Organization Studies (Walter de Gruyter GmbH & Co. KG.),* **17 (3),** p. 365.
Lee, A. S. (1991) "Integrating Positivst and Interpretive Approaches to Organisational Research", *Organization Science: A Journal of the Institute of Management Sciences,* **2 (4),** p. 342.
Lee, A. S. (1994) "Electronic Mail as a Medium for Rich Communication: An Empirical Investigation Using Hermeneutic", *MIS Quarterly,* **18 (2),** p. 143.
Lee, A. S. (1999) "Researching Mis" in *Rethinking Management Information Systems: An Interdisciplinary Perspective*, (Currie, W. L. and R. D. Galliers eds) Oxford University Press, Oxford, UK, pp. 7-27.
Lee, A. S. and R. L. Baskerville (2003) "Generalizing Generalizability in Information Systems Research", *Information Systems Research,* **14 (3),** p. 221.
Leow, K.-m. and A. Maclennan (2000) "An Investigation of the Use of Intranet Technology in Uk Retail Banks", *JOURNAL OF LIBRARIANSHIP AND INFORMATION SCIENCE,* **32 (3).**
Levi, M. (1998) "A State of Trust" in *Trust and Governance*, (Braithwaite, V. and M. Levi eds) Russel Sage Foundation, New York, pp. 77-101.
Lewis, J. D. and A. Weigert (1985a) "Trust as a Social-Reality", *Social Forces,* **63 (4),** pp. 967-985.
Lewis, J. D. and A. J. Weigert (1985b) "Social Atomism, Holism, and Trust", *Sociological Quarterly,* **26 (4),** pp. 455-471.
Liang, H., S. Nilesh, Q. Hu and Y. Xue (2007) "Assimilation of Enterprise Systems: The Effect of Institutional Pressures and the Mediating Role of Top Management", *MIS Quarterly,* **31 (1),** p. 59.

Luhmann, N. (1979) *Trust and Power,* John Wiley and Sons,
Luhmann, N. (1988) "Familiarity, Confidence, Trust: Problems and Alternatives" in *Trust: Making and Breaking Co-Operative Relations*, (D. Gambetta, e. ed.) Basil Blackwell, Oxford, U.K., pp. 94-107.
Lyytinen, K., G. Rose and R. Welke (1998) in *Inform. Systems J.*, Vol. 8, p 241.
Malone, T. W., J. Yates and R. I. Benjamin (1987) "Electronic Markets and Electronic Hierarchies", *Communications of the ACM,* **30 (6),** p. 484.
March, J. and H. Simon (1958) *Organisations,* Wiley, New York.
Markus, M. L. (1983) "Power, Politics, and Mis Implementation", *Communications of the ACM,* **26 (6),** pp. 430-444.
Markus, M. L. (1994) "Electronic Mail as the Medium of Managerial Choice", *Organization Science: A Journal of the Institute of Management Sciences,* **5 (4),** p. 502.
Mayer, R. C., J. H. Davis and F. D. Schoorman (1995) "An Integrative Model of Organizational Trust", *Academy of Management Review,* **20 (3),** pp. 709-734.
McFarland, J. (2001) "Corporate Portals", *Harvard Management Communication Letter,* **4 (6),** p. 9.
McKnight, D. H., V. Choudhury and C. Kacmar (2002) "Developing and Validating Trust Measures for E-Commerce: An Integrative Typology", *Information Systems Research,* **13 (3),** pp. 334-359.
Meyer, J. and B. Rowan (1977) "Institutionalised Organisations: Formal Structure as Myth and Ceremony", *American Journal of Sociology,* **83** pp. 340-63.
Mingers, J. (2001) "Combining Is Research Methods: Towards a Pluralist Methodology", *Information Systems Research,* **12 (3),** pp. 240-259.
Misztal, B. A. (1996) *Trust in Modern Societies: The Search for the Bases of Social Order,* Blackwell Publishers, Inc., Cambridge, U.K.
Morgan, D. (1998) "Practical Strategies for Combining Qualitative and Quantitative Methods: Applications to Health Research", *Qualitative health research,* **8 (3),** pp. 362-376.
Morse, J. M. (1991) "Approaches to Qualitative-Quantitative Methodological Triangulation", *Nursing research,* **40 (1),** pp. 120-123.
Murgolo-Poore, M. E., L. F. Pitt, P. R. Berthon and G. Prendegast (2003) "Corporate Intelligence Dissemination as a Consequence of Intranet Effectiveness: An Empirical Study", *Public Relations Review,* **29 (2),** p. 171.
Murgolo-Poore, M. E., L. F. Pitt and M. T. Ewing (2002) "Intranet Effectiveness: A Public Relations Paper-and-Pencil Checklist", *Public Relations Review,* **28 (1),** p. 113.
Myers, M. D. (1997) *Qualitative Research in Information Systems* Last accessed: Last updated: July 26, 2005 Address: http://www.misq.org/discovery/MISQD_isworld/.
Newell, S., H. Scarbrough and J. Swan (2001) "From Global Knowledge Management to Internal Electronic Fences: Contradictory Outcomes of Intranet Development", *British Journal of Management,* **12 (2),** p. 97.
Newell, S., H. Scarbrough, J. Swan and D. Hislop (2000) "Intranets and Knowledge Management: De-Centred Technologies and the Limits of Technological Discourse" in *Managing Knowledge: Critical Investigations of Work and Learning*, (C. Prichard, R. H., M. Chumer and H. Willmott ed.) Macmillan, London, pp. 88-106.
Newell, S. and J. Swan (1999) "The Intranet as a Knowledge Management Tool? Creating New Electronic Fences". in *Information Resources Management Association International Conference,*
Newell, S. and J. Swan (2000) "Trust and Inter-Organizational Networking", *Human Relations,* **53 (10),** p. 1287.
Orlikowski, W. (2007) "Sociomaterial Practices: Exploring Technology at Work", *Organization Studies,* **28 (9),** pp. 1435-1448.
Orlikowski, W. and J. J. Baroudi (1991) "Studying Information Technology in Organizations: Research Approaches and Assumptions", *Information Systems Research,* **2 (1),** p. 1.
Orlikowski, W. J. (1992) "The Duality of Technology: Rethinking the Concept of Technology in Organizations", *Organization Science,* **3 (3),** pp. 398-427.
Orlikowski, W. J. (1993) "Learning from Notes: Organisational Issues in Groupware Implementation." *The Information Society Journal,* **9** pp. pp 3428-92.
Orlikowski, W. J., J. Yates, K. Okamura and M. Fujimoto (1995) "Shaping Electronic Communication: The Metastructuring of Technology in the Context of Use", *Organization Science: A Journal of the Institute of Management Sciences,* **6 (4),** p. 423.

Parsons, T. (1939) "The Professionals and the Social Structure", *Social Forces,* **17** pp. 457-467.
Parsons, T. (1969) *Politics and Social Structure,* Free press, New York.
Pavlou, P. A. (2002) "Institutional-Based Trust in Interorganizational Exchange Relationships: The Role of Online B2b Marketplaces on Trust Formation", *Journal of Strategic Information Systems,* **11 (3-4),** pp. 215-243.
Peter, R. and D. K. Denton (2007) "Using the Intranet to Build Teamwork", *Team Performance Management,* **13 (5),** p. 184.
Pettigrew, A. M. (1990) "Longitudinal Field Research on Change: Theory and Practice", *Organization Science,* **1 (3),** p. 267.
Powell, W. W. (1996) "Trust-Based Forms of Governance" in *Trust in Organizations: Frontiers of Theory and Research*, (Kramer, R. M. and T. R. Tyler eds) SAGE publications, inc., pp. 51-67.
Rempel, J. K., J. G. Holmes and M. P. Zanna (1985) "Trust in Close Relationships", *Journal of Personality and Social Psychology,* **49 (1),** pp. 95-112.
Rotter, J. B. (1967) "A New Scale for the Measurement of Interpersonal Trust", *Journal of Personality,* **35** pp. 651-665.
Rotter, J. B. (1971) "Generalized Expectancies for Interpersonal Trust", *American Psychologist,* **26 (5),** pp. 443-452.
Rousseau, D. M., S. B. Sitkin, R. S. Burt and C. Camerer (1998) "Not So Different after All: A Cross-Discipline View of Trust", *Academy of Management Review,* **23 (3),** pp. 393-404.
Ruppel, C. P. and S. J. Harrington (2001) "Sharing Knowledge through Intranets: A Study of Organizational Culture and Intranet Implementation", *IEEE Transactions on Professional Communication,* **44 (1),** p. 37.
Salmeron, J. L. and S. Bueno (2006) "An Information Technologies and Information Systems Industry-Based Classification in Small and Medium-Sized Enterprises: An Institutional View", *European Journal of Operational Research,* **173 (3),** p. 1012.
Scheepers, R. and J. Damsgaard (1997) "Using Internet Technology within the Organization: A Structurational Analysis of Intranets". in *Proceedings of the international ACM SIGGROUP conference on Supporting group work: the integration challenge,* Phoenix, Arizona, United States, pp. 9-18, ACM Press.
Schutz, A. (1962) *Collected Papers: The Problem of Social Reality,* (Maurice Natanson eds.) The Hague: Martinus Nijhoff, London.
Scott, J. E. (1998) "Organizational Knowledge and the Intranet", *Decision Support Systems,* **23 (1),** p. 3.
Scott, W. R. (2001) *Institutions and Organisations,* Thousand Oaks: SAGE,
Sewell, G. and B. Wilkinson (1992) "Someone to Watch over Me: Surveillance, Discipline and the Just-in-Time Labour Process", *Sociology,* **26 (2),** p. 271.
Shapiro, S. P. (1987) "The Social-Control of Impersonal Trust", *American Journal of Sociology,* **93 (3),** pp. 623-658.
Shifrin, T. (2005) "Government Intranet Races Ahead", *Computer Weekly,* p. 10.
Silva, L. and J. Backhouse (1997) "Becoming Part of the Furniture: The Institutionalization of Information Systems" in *Information Systems and Qualitative Research (Proceedings of Ifip 8.2),* (Lee, A. S., J. Liebenau and J. i. DeGross eds) Chapman & Hall, London, Philadelphia, US, pp. 389-414.
Silva, L. and J. Backhouse (2003) "The Circuits-of-Power Framework for Studying Power in Institutionalization of Information Systems", *Journal of the Association for Information Systems,* **4 (6),** p. 294.
Simmel, G. (1978) *The Philosophy of Money,* Routledge and Kegan Paul, London.
Solomon, R. C. and C. F. Flores (2003) *Building Trust: In Business, Politics, Relationships, and Life,* Oxford University Press, Oxford.
Stenmark, D. (2002) Designing the New Intranet.
Swan, J., S. Newell, H. Scarborough and D. Hislop (1999) "Knowledge Management and Innovation: Networks and Networking", *Journal of Knowledge Management,* **3 (4),** pp. 262-75.
Telleen, S. L. (1997a) *Intranet Organization: Strategies for Managing Change,* Wiley, New York.
Telleen, S. L. (1997b) *The Intranet Paradigm* iorg.com Last accessed: 21/09/2005 Last updated: 24/06/1997 Address: http://www.iorg.com/papers/paradigm.html.

Teo, H. H., K. K. Wei and I. Benbasat (2003) "Predicting Intention to Adopt Interorganizational Linkages: An Institutional Perspective", *MIS Quarterly,* **27 (1),** p. 19.
Tolbert, P. S. and L. G. Zucker (1996) "The Institutionalisation of Institutional Theory" in *Handbook of Organisation Studies*, (Clegg, S., C. Hardy and W. Nord eds) SAGE Publications, London, pp. 175-190.
Toyoki, S., A. Spicer and R. Elliott (2006) "Beyond Old Horizons: Theorising the Rhythms of Social Reproduction", *Journal of Critical Postmodern Organisation Science,* **5 (5.2).**
Truch, E. (2001) "Managing Personal Knowledge: The Key to Tomorrow's Employability", *Journal of Change Management,* **2 (2),** p. 102.
Vitalari, N. (1985) "The Need for Longitudinal Designs in the Study of Computing Environments" in *Research Methods in Information Systems, Proceedings of Ifip 8.2*, (Fitzgerald, G., R. Hirschheim, E. Mumford and A. T. Wood-Harper eds) Elsevier Science Publishers, Amsterdam, pp. 235-258.
Wachter, R. M. and J. N. D. Gupta (1997) "The Establishment and Management of Corporate Intranets", *International Journal of Information Management,* **17 (6),** p. 393.
Walsham, G. (1993) *Interpreting Information Systems in Organizations,* Wiley & Sons, Chichester.
Walsham, G. (1995) "The Emergence of Interpretivism in Is Research", *Information Systems Research,* **6 (4),** pp. 376-394.
Ward, T. (2002) *Measuring the Rois of Intranets: Mission Possible?* Last accessed: 25/09/2005 Last updated: 11/08/2002 Address: http://www.intranetjournal.com/articles/200211/ij_11_08_02a.html.
Watson, J. and J. Fenner (2000) "Understanding Portals", *Information Management Journal,* **34 (3),** p. 18.
Weber, R. (2004) "The Rhetoric of Positivism Versus Interpretivism: A Personal View", *MIS Quarterly,* **28 (1),** pp. iii-xii.
Weick, K. E. (1995) *Sensemaking in Organizations,* Sage Publications, Thousand Oaks; London.
Wikipedia (2006) *Girobank* Last accessed: 1 Dec 2006 Last updated: Address: http://en.wikipedia.org/wiki/Girobank.
Williamson, O. E. (1993) "Calculativeness, Trust, and Economic Organisation", *Journal of Law and Economics,* **36** pp. 453-502.
Wright, P. (2001) "Creating an Indispensable Intranet", *Strategic Communication Management,* **5 (4),** p. 14.
Yin, R. K. (1994) *Case Study Research: Design and Methods,* (2nd) Sage Publications, Newbury Park.
Zaheer, A., B. McEvily and V. Perrone (1998) "Does Trust Matter? Exploring the Effects of Interorganizational and Interpersonal Trust on Performance", *Organization Science,* **9 (2),** pp. 141-159.
Zuboff, S. (1988) *In the Age of the Smart Machine: The Future of Work and Power,* Heinemann Professional, Oxford.
Zucker, L. G. (1977) "The Role of Institutionalisation in Cultural Persistence", *American Sociological Review,* **42 (5),** p. 726.
Zucker, L. G. (1983) "Organisations as Institutions" in *Research in the Sociology of Organisations*, (Bacharach, S. B. ed.) JAI Press, Greenwich, pp. 1-42.
Zucker, L. G. (1986) "Production of Trust: Institutional Sources of Economic Structure, 1840-1920", *Research in Organisational Behaviour,* **8 (1),** pp. 53-111.
Zucker, L. G. (1987) "Institutional Theories of Organization", *Annual Review of Sociology,* **13** pp. 443-464.
Zucker, L. G. (1988) "Where Do Institutional Patterns Come From? Organisations as Actors in Social Systems" in *Institutional Patterns and Organisations: Culture and Environment*, (Zucker, L. G. ed.) Ballinger, Cambridge, MA.
Zucker, L. G. (1991) "The Role of Institutionalisation in Cultural Persistence" in *The New Institutionalism in Organisational Analysis*, (Powell, W. and P. DiMaggio eds) University of Chicago Press, Chicago, pp. 83-107.