CHAPTER 1

Background and context

Every organization has an information culture. Being able to analyse and understand this culture is instrumental in developing records management programmes and systems that take people, the employees of the organization, into account. The purpose of this initial chapter is to provide the background detail which describes and explains the foundations of the assessment framework discussed in the remainder of the book. The chapter begins by tracking the origins of the concept of information culture, reporting on efforts to date studying it from societal, national and organizational perspectives. It is this latter organizational perspective which is of key relevance to records management in the 21st-century workplace. At this organizational level, two incompatible (alternative) points of view can be identified: one that regards an information culture as being conducive to good information management, and the other that takes the view that all organizations have an information culture, no matter how effective the latter may be perceived.

This then leads into the specific theoretical orientation influencing our approach to information culture, which is the records continuum. We explain how information culture is an integral part of a new conceptualization of records management: recordkeeping informatics. This chapter then provides an overall introduction to the Information Culture Framework (ICF), briefly explaining the different levels and the relationships between them.

Finally, the ICF is clearly differentiated by considering it in the context of other evaluation methodologies and tools, such as information audits, information maturity models, DIRKS (State Records New South Wales’ Design and Implementation of Recordkeeping Systems), the Impact Calculator, and ARMA International’s Generally Accepted Recordkeeping Principles (GARP).
The concept of information culture

Information culture has been studied from two main perspectives: societal (including national) and organizational. The main focus of this book is on organizational information culture, but societal- and national-level considerations have to be acknowledged as these different approaches are not by any means mutually exclusive. Anyone interested in organizational information culture cannot fail to be concerned with discussions occurring at the other levels, as these will influence and provide insight into what happens in the workplace. So before introducing the ideas specifically relating to organizational information culture we will briefly sketch out some of the thinking around societal- and national-level views.

Societal information culture

Analysing information culture from a societal level necessitates a much broader and more philosophical view of the changes inherent in our information environment than the organizational level that is the main focus of this book. Societal information culture can be understood as encompassing the influences on, and interactions between, human cultural expression and information systems of all types including both technological and legal systems. Looking at information culture in this big picture way considers the rapidly changing and expanding power of information in the context of new and emerging technologies that enable developments in our everyday lives, such as social media and mobile banking. Taking this societal perspective may provide a predictive, explanatory frame of reference to help us start to grapple with the complexities of the digital age. Frank Upward’s continuum theory (see, for instance, Upward (1997) and later in this chapter for more discussion) can be viewed as providing that explanatory power, and that is indeed where this much more grounded exploration of organizations sits.

But continuum theory is by no means the only game in town; there are many other less theoretical and better publicized attempts to provide insight into today’s information environment, some attempting a holistic view, others focusing on a single feature.

Luke Tredinnick, for example, takes a holistic view in attempting to describe our current information environment as a digital information culture (Tredinnick, 2008). The focus of his work is the influence of new
information technologies on our everyday life, from the perspective that these new technologies have a transformational effect. He approaches digital information culture by singling out the following issues for discussion: textuality, authenticity, knowledge, power, identity and memory. He places his work in the context of ongoing attempts to make sense of the changing nature of communication and the role of information technologies, such as Marshall McLuhan’s *Understanding Media: the extensions of man* (1964) and Alvin Toffler’s *Future Shock* (1970). In so doing, Tredinnick emphasizes throughout the ongoing nature of such change, concluding with the words: ‘The last chapter of socio-cultural change always remains unwritten’ (2008, 168).

### Memory and forgetting

The concept of memory in any information culture perspective is an important one. As records managers we are concerned with organizational memory, which will be influenced by technological developments in society. Viktor Mayer-Schoenberger (2009) focuses on one particular aspect of memory that is changing rapidly. That is, the power to forget, and the danger of losing that ability to forget in a time when information is stored in vast virtual warehouses; commercial interests provide motivation for continued ‘remembering’ even when existing norms would seem to dictate the opposite. He explores remembering and forgetting through history, charting the development of tools to assist in remembering, from pictures through the development of script to print, all striving towards an ideal of perfect recall.

Mayer-Schoenberger paints a rich picture of the usages of technology enabling the creation of a perfect digital memory. Usages of technology range from our active participation in constructing virtual lives in social networking sites such as Facebook, to our unwitting involvement in surveillance activities such as Google and Microsoft collecting data showing our online presence, reflecting our interests, thoughts and dreams. This perfect memory may be more comprehensive than we ever thought possible, but forgetting, an essential component of memory, has shifted from being the default position to not being there unless it is consciously specified.

Mayer-Schoenberger emphasizes that although technology provides the power to construct this ‘perfect’ and comprehensive digital memory, it rests with humans to change the situation. Possible solutions proposed and trialled
include the following. Firstly, digital abstinence, in other words individuals taking responsibility for their digital footprint, increasing awareness so that people will exercise more judgement in what information they share publicly. This is a topic that will be further discussed in Chapter 5. Another set of strategies rests on information privacy legislation and regulation, and the construction of an infrastructure for digital privacy rights. The author also proposes a further suggestion, that is, to assign an expiration date to information, presenting this as a novel answer to a new situation. A combination of these approaches is undoubtedly required, but the expiration date suggestion should particularly resonate with records managers.

For anyone well versed in the principles of records management this is of course very familiar and well-known territory – assigning retention periods to information, instituting systematic review and destruction or transferring to archival custody are the very essence of recordkeeping practice. The international standard on records management, ISO15489, states that:

> Records systems should be capable of facilitating and implementing decisions on the retention or disposition of records. It should be possible for these decisions to be made at any time in the existence of records, including during the design stage of records systems. It should also be possible, where appropriate, for disposition to be activated automatically.

ISO15489, 8.3.7

This highlights an essential and vital role for recordkeeping practitioners in organizations. There is unfortunately a tendency for records managers to clearly demarcate their areas of responsibility (this is a record, this isn’t …) which is perfectly understandable in terms of trying to cope with what can seem an impossible workload. However, in the long term, records managers will become more and more marginalized and risk appearing increasingly irrelevant unless they can clearly demonstrate the appropriateness of their knowledge and skills in today’s changing environment. Our expertise with the nuances of forgetting, the robust policies and procedures that we have developed to ensure short-term and long-term memories, our awareness of the need to strike a balance between the right to know and the protection of privacy, have the potential to contribute greatly to the debate about perfect digital memories which is now occurring at societal level. But to do this we must move out of our highly specialized disciplinary silo and take a broader
perspective of our roles and responsibilities. The complex set of strategies identified by Mayer-Schoenberg to make sure forgetting is a component in our societal digital memory speaks to our imperative as records managers to position our procedures in a similar setting.

The encroaching world of social media

Andrew Keen’s *The Cult of the Amateur* (2007) also focuses on the downside of new, enabling technologies. His view of the effect that information technology (IT), in the form of the internet, is having on our minds, on our very ability to think and reason, is a very negative one. The subtitle to this book is *How today’s internet is killing our culture and assaulting our economy*, which sends a very clear signal as to the author’s view of digital technologies. He equates today’s technology enabled world with T. H. Huxley’s infinite monkey theorem: if an infinite number of monkeys are provided with an infinite number of typewriters, the chances are that some monkey will produce a masterpiece (Keen, 2007, 2). He then proceeds to extend the analogy first to blogs:

> At the heart of the infinite monkey experiment in self publishing is the Internet diary, the ubiquitous blog. Blogging has become such a mania that a new blog is being created every second of every minute of every hour of every day. We are blogging with monkeylike shamelessness about our private lives, our sex lives, our dream lives, our lack of lives, our Second Lives.

Keen, 2007, 3

and then to YouTube videos:

> YouTube eclipses even the blogs in the inanity and absurdity of its content. Nothing seems too prosaic or narcissistic for these videographer monkeys. The site is an infinite gallery of amateur movies showing poor fools dancing, singing, eating, washing, shopping, driving, cleaning, sleeping, or just staring into their computers.

Keen, 2007, 5

Provocative views, which some will find deeply disturbing, but which will strike a harmonious chord in others. Regardless of readers’ reactions what
does become clear is the need for change. The sheer scale and variety of types of information, coupled with the changing roles of authorship and publication, need vastly different sets of skills on the part of both information creators and consumers in order to make sense of this new world of technology enhanced information. Chapter 5 will further explore the dimensions of digital literacy.

What does the web world of social media, including blogs and YouTube videos have to do with records management? Well, we can ignore it at our peril. As more and more organizations in both the private and public sector use social media such as Facebook and Twitter as communications tools, records managers need to develop the appropriate strategies to manage this information as evidence for accountability purposes. To be effective, these strategies have to fit with the culture of the organization and to seamlessly integrate with the way that people work, rather than hinder or obstruct workflows. Diagnosing the organization’s information culture is the essential first step to achieving these objectives, and this is only possible if we have a good understanding of these societal perspectives.

The work of Tredinnick, Mayer-Schoenberg and Keen is discussed here to show examples of contemporary analysis and concerns about society's information culture. They clearly show that the issues and challenges that our information age pose are increasing in complexity, and that societal information culture will continue to attract attention from researchers and provocative thought from commentators. This is the overall context in which we work at organizational level, all is part of the discourse that frames and influences our attempts at records management.

Discussion of societal information culture is usually presented as being universally applicable, although some may dispute this on the basis that the environment under scrutiny is primarily that of the Western, developed world. Tredinnick’s discussion of the development of written language and printing, for instance, is Eurocentric (2008, 59–76); Mayer-Schoenberg does not take indigenous views into account when considering attitudes towards sharing of information and knowledge (2009, 131–4); Keen equates widespread access to broadband in the US as an indicator of a fully connected, networked society (2007, 15). Despite this, it is possible to distinguish consideration of information culture that clearly takes a more explicit focus on particular countries.
Focusing on a specific country

Various researchers have applied the information culture lens to specific national settings, for example China (Zheng, 2005), the Maldives (Riyaz and Smith, 2012) and Hungary (Szecskö, 1986). In addition, there are of course many other studies that have been conducted on various features or dimensions of information culture (for example, information policy in Canada (Nilsen, 1994), Brazil (Rosenberg, 1982) or Norway (Audunson and Nordlie, 2003)) but it is beyond the scope of this book to provide a comprehensive analysis of this literature. However, if attempting to analyse the information culture of a particular country the first step would be to search for relevant literature on specific features such as information literacy, information technology, legislation, and so on. Our organizational-level perspective necessarily takes into account the legislative, linguistic and technological features associated with the country that the organization is situated in. These features, which often have a supranational character (e.g. the European Union (EU) legislation, most languages spoken in the world, and the internet are all phenomena that cross national boundaries), will be discussed in the context of the ICF in Chapters 4 and 6.

Information culture in organizations

Ideas about cultural influences on the ways in which information is managed, accessed and used in organizations have been discussed and explored since the 1980s (see, for instance, Brown and Starkey, 1994; Curry and Moore, 2003; Davenport, Eccles, and Prusak, 1992; Davenport and Prusak, 1997; Jarvenpaa and Staples, 2000, 2001). Understandings and interpretations, though, vary greatly. The first mention of information culture specifically is generally credited to Mariam Ginman, who used the phrase to characterize a particular organizational type, namely one with a management style responsive to information from the external environment and open to change and innovation (Ginman, 1993). This research resulted in some considerable interest from the special library community, and led to a proposal presented to the British Library to investigate the correlation between information culture and successful business performance (Grimshaw, 1995). Information culture has been specifically linked to recognition of the critical nature of information in organizations, so defined as a setting conducive to effective information management:
The value and utility of information in achieving operational and strategic goals is recognised, where information forms the basis of organizational decision-making and Information Technology is readily exploited as an enabler for effective Information Systems.

Curry and Moore, 2003

This body of work seems to focus on a ‘culture of information’ perspective. Following on from this attention has turned to investigating the ways in which people interact and use information in organizations.

In Europe, research has been undertaken to explore the relationship between information culture and information behaviours in organizations, notably led by Gunilla Widén-Wulff (Widén-Wulff, 2000; Widén-Wulff et al., 2008; Widén-Wulff and Ginman, 2004; Widén and Hansen, 2012).

In Canada, studies of the relationship between information culture and information use have been carried out. A survey of three Canadian organizations concluded that information culture significantly affects information use outcomes. Information use outcomes are defined as including the shaping of new knowledge, contributing to decision-making and influencing and exchanging information with colleagues (Choo et al., 2008, 796). This research formulated definitions of information behaviours and values, based on Marchand et al. (2002). The variables identified are as shown in Table 1.1.

The definitions provided for these variables indicate that they can only

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<th>Table 1.1</th>
<th>Information behaviours and values, from Choo et al. (2008), 796</th>
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<tr>
<td><strong>Research variable</strong></td>
<td><strong>Definition</strong></td>
</tr>
<tr>
<td>Information sharing</td>
<td>Willingness to provide others with information in an appropriate and collaborative manner</td>
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<tr>
<td>Information proactiveness</td>
<td>Active concern to obtain and apply new information to respond to changes and to promote innovation</td>
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<tr>
<td>Information transparency</td>
<td>Openness in reporting information on errors and failures, thus allowing learning from mistakes</td>
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<tr>
<td>Information integrity</td>
<td>Use of information in a trustful and principled manner at the individual and organizational level</td>
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<tr>
<td>Information informality</td>
<td>Willingness to use and trust informal sources over institutionalized information</td>
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<tr>
<td>Information control</td>
<td>Information is presented to people to manage and monitor their performance</td>
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provide a partial reflection of the information culture of an organization. They do not encompass the broader view of organizational and environmental systems which influence information governance. Similarly no distinction is made between information as a source of knowledge and information as evidence; accountability is not mentioned. However, the variables do include those that seem to be related to trust (especially information integrity and information informality).

Janine Douglas studied the information culture of state government departments in Australia, resulting in a proposed new definition of information culture:

An information culture is an emerging complex system of values, attitudes, beliefs and behaviours that influence how information is used in an organisation. It exists in the context of, and is influenced by, an organisational culture and wider environments.

Douglas, 2010, 307

Again, there is a clear emphasis on information use, which does not seem to acknowledge the ongoing creation of information within organizations, nor its maintenance when it may not be frequently used. The definition does, however, importantly recognize the influence of organizational culture and external factors. The general philosophy underlying this approach still seems to lie in the ‘culture of information’ camp.

Another exploration of information culture (Martin et al., 2003) distinguished information cultures (plural) as differentiating between the business and the information technology function in an organization. These authors’ depiction of an effectively functioning information intensive organization is one where the information culture is integrated, i.e. where similar values and attitudes to information are present across the board. These findings are useful in that they do acknowledge the likely existence of subcultures within an organization, and do not assume a pre-existing uniform set of beliefs and values.

Our organizational research

Our interest in information culture has been fuelled by research studies undertaken independently, but which highlighted a shared concern for
developing a much more nuanced understanding of organizational contexts than has previously existed. Gillian undertook three case studies which looked at ways in which organizations carrying out the same functions in regions of the world that are likely to have very different cultural profiles manage information (see Oliver (2008) for overall findings from this project).

Gillian found that there were clearly very distinct differences in the ways in which individuals in these three organizations approached the creation and management of the information needed to record business activities. More discussion of the possible influence of national cultural dimensions on information management can be found in her work on organizational culture (Oliver, 2011). Not surprisingly, many of those features are relevant to the current consideration of records management and the ICF in this book, so more detail about cultural dimensions can be found in Chapter 3.

However, although a key area of interest of Gillian’s was to discover linkages between values and behaviours towards information and national cultural differences, it was clearly apparent that the situation was more complex than could be explained by restricting consideration to national cultural dimensions. An additional case study looked at the work carried out by the committee responsible for drafting the international standard on records management, ISO15489. The content was based on a pre-existing document, the Australian standard on records management, and thus it should not have taken a great deal of time and effort to reshape this for an international audience. The fact that it did take a number of years has been attributed to the differing national factions represented on the negotiating committee. However, on talking to those involved Gillian discovered that occupational differences – conflicting viewpoints put forward by records managers and archivists – appeared to be the primary reason for the long, drawn-out process (Oliver, 2011, 104–6). Ten years after this particular case study, the committee in question continues to meet and despite a number of changes in membership the same underlying issues and tensions are still apparent.

Inspired by Gillian’s study on the relationship between recordkeeping practices and national cultural differences, Fiorella drew on some of Hofstede’s (2001) ideas in her doctoral dissertation research (Foscarini, 2009). Sociologist Geert Hofstede developed a matrix in which two cultural dimensions – that, in his view, would be crucial to define the character of any organized group (i.e. power distance and uncertainty avoidance) – are
matched against types of bureaucracies (from full bureaucracy to the village market) and geographic regions. Despite Hofstede’s deterministic approach, his matrix appeared to be a useful framework to identify a number of institutions (central banks, in the case of Fiorella’s study) located in different countries, each likely to be associated with a specific organizational configuration. The purpose of this case-study research was to investigate how people understand and use the notion of business function when dealing with function-based records classification systems, either as developers or as users of such systems. Findings confirmed that some types of organizations (namely, traditional, full bureaucracies) are more conducive than others to the straightforward application of the functional approach.

More importantly, through her study Fiorella started to identify ‘factors’ that appeared to affect people’s perceptions of their responsibilities towards the corporate record, their willingness to accept a new (functional) system, their ways of making sense of the new system (also known as ‘appropriation moves’ (DeSanctis and Poole, 1994)), and so on. Such factors had to do with the employees’ professional background, the adoption of certain management philosophies at higher levels in the organization, political motives, and internal group dynamics. This analysis made her conclude that a ‘redefinition of the analytical skills that records professionals should be equipped with’ (Foscarini, 2012, 32) would seem to be necessary. This book aims at providing its readers with the ‘soft’ skills that will help them unveil the deep motives underlying organizational processes and behaviours, and take appropriate actions.

The above research findings led to a definition of information culture as the values accorded to information, and attitudes towards it, specifically within organizational contexts. Thus two views of organizational information culture emerge from the literature, reminiscent of the different use of the term applied in national studies. One perspective considers ‘cultures of information’ where the concept is used to describe environments which are conducive to the management of information. The other acknowledges the universal nature of information culture, regardless of whether effective usage or management of information is a characteristic.

The approach taken in this book is unequivocally in the second category. All organizations have an information culture no matter what sector they are active in, where in the world they are located, regardless of their size, complexity and extent of their information technology capabilities.
Furthermore, some elements of information culture are more amenable to change than others. The framework for assessment, which is described later in this chapter, makes clear distinction between these constituent elements. But first it is necessary to provide the theoretical background for this approach: continuum theory.

**Underlying theory**

Most recordkeeping professionals (records managers and archivists) will have heard of Frank Upward’s records continuum theory. Much less well known, however, are the related continua models that have subsequently been developed to apply the same thinking to other specialist areas, such as cultural heritage, information systems and publishing (Upward, 2000), so it is useful to delve beyond the familiar dimensional representation of the records continuum. In this book, both the information continuum and records continuum are drawn on so are briefly discussed below.

The basis of continuum theory is Anthony Giddens’ structuration theory (Upward, 1997). The essence of structuration theory is the recognition of the duality of agency and structure: one affects the other, recursively. To grossly over-simplify, nothing stays the same, society is in a constant state of flux, as organizations change in response to their environment so their environment changes, and thus the organization will again adapt to those new conditions – and so on and so on. This theoretical setting facilitates the recognition of the fluid, slippery nature of information, the ongoing development of new technologies as well as the structural environment shaped by legislation and standards.

**The information continuum**

The information continuum was originally developed as a teaching tool by academics (Don Schauder, Barbara Reed and Frank Upward) at the School of Information Management at Monash University in Melbourne, Australia. The school’s master’s degree programme was a holistic one, encompassing professional education for both librarians and recordkeepers, and it was necessary to clearly articulate the different needs of these professional groups. At the heart of the information continuum model is the recognition of the different purposes for which library and recordkeeping professionals
manage information. Librarians manage information primarily for the purpose of promoting knowledge or awareness, and also in some settings (the public library domain, for instance) for the purpose of entertainment. Records managers and archivists, however, primarily manage information as evidence, for the purpose of accountability. These primary purposes do not negate the existence of other, secondary purposes, but serve to establish some primary settings for the uses of different techniques and application of different policies.

This distinction of unique purpose for records managers and archivists is a critical consideration, and is of immense benefit in considering the comprehensiveness and utility of other information culture definitions and models. There is virtually no acknowledgement from other information culture researchers of the need to consider information as evidence; emphasis on information seeking behaviour and information use does not highlight accountability needs.

The records continuum

The records continuum (Figure 1.1 overleaf) provides a way of making sense of the complexity of recordkeeping in our digital environment. The four dimensions (create, capture, organize and pluralize) and the four axes (recordkeeping, evidential, transactional and identity) can be used as a practical tool to identify at which stage of development an organization is at in terms of managing its information as evidence, for accountability.

The first dimension, create, is where all individual employees are actively creating information to perform their business. Second-dimension (capture) activities occur if sufficient controls (e.g. assigning relevant metadata such as a meaningful file name, storing the information in a location that can be accessed by multiple individuals such as a shared directory or filing cabinet) are applied that enable the information to be accessed by other individuals within the same team or workgroup. It is only in the third dimension, organize, where it can be considered that the controls that will ensure the maintenance of the critical characteristics of records (usability, authenticity, integrity and reliability) are applied and, depending on access requirements, information is made available across the organization. The fourth dimension, pluralize, refers to the deployment of information outside the creating and maintaining organization, in response to broader societal needs.
For the purposes of this book, and the aim of analysing information culture with a view to developing a culture conducive to records management it is important to understand that these ideas are developed in the context of continuum theory. The perceived inadequacy of current records management practice to achieve the goal of successfully comprehensively managing information for accountability in organizations has led to a proposal for a new disciplinary approach to this area: recordkeeping informatics.

Recordkeeping informatics

The absence of a current records management textbook that truly reflected continuum thinking was the primary motivator for one of us (Gillian) to get together with Barbara Reed, Frank Upward and Joanne Evans to develop ideas for a totally new approach to records management (Oliver et al., 2009, 2010; Upward et al., 2013). Two fundamental ideas that underpinned their thinking were as follows:

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**Figure 1.1** Records continuum model, reproduced with permission of Frank Upward

For the purposes of this book, and the aim of analysing information culture with a view to developing a culture conducive to records management it is important to understand that these ideas are developed in the context of continuum theory. The perceived inadequacy of current records management practice to achieve the goal of successfully comprehensively managing information for accountability in organizations has led to a proposal for a new disciplinary approach to this area: recordkeeping informatics.
The problematic assumption that records can be managed. This implies that records are fixed and unchanging, that once identified (by, for instance, a records management survey) they can be marshalled and controlled. This does not reflect the nature of today’s workplace characterized by multiple formal and informal information channels, systems and processes, where every employee is likely to be creating and (re-)using records whether they are aware of it or not. The inherent fluidity of most systems used to create and manage today’s records (e.g. web-based interactive systems, dynamic databases) contributes to their instability.

Records managers are not the only key players involved in managing organizational information, particularly where the transactions of an organization’s activities are recorded in multiple business systems (for instance, human resources and finance systems, enterprise information management systems, and so on). There is a need for all information professionals to be able to work together collaboratively, each bringing their own particular expertise to the mix. The situation could be viewed as analogous to health care, where the role of general practitioner is widely understood as providing primary care, and specialists (neurologists, paediatricians, dermatologists, etc.) are referred to as and when necessary. It is perhaps a sign of insecurity that records managers seek to defend their turf against information technology incomers and that the environment seems more competitive than collaborative.

The juxtaposition of these two ideas seemed to be records managers in a King Canute-type role, unable to effectively control the ever-increasing tide of information recording organizational transactions and inevitably lacking the broad range of technical skills and expertise necessary to manage all organizational systems. The end result of course will be records managers becoming an extinct species. This situation cannot be addressed by simply re-branding and claiming a more inclusive (but even more unclear) title of information manager, but needs a paradigmatic shift in thinking and understanding the nature of the ways in which information as evidence needs to be managed in order to provide accountability of actions.

This thinking led to the reconceptualization of records management as recordkeeping informatics.

Informatics has been defined as follows:
Informatics is the science of information. It studies the representation, processing, and communication of information in natural and artificial systems. Since computers, individuals and organizations all process information, informatics has computational, cognitive and social aspects. Used as a compound, in conjunction with the name of a discipline, as in medical informatics, bio-informatics, etc., it denotes the specialization of informatics to the management and processing of data, information and knowledge in the named discipline.

Fourman, 2003

In this case, the ‘named discipline’ is recordkeeping. Combining these two concepts signifies the specialist nature of the focus of concern for records managers, and at the same time acknowledges that there are technological, cognitive and social aspects that have to be taken into account. It can be seen then that it becomes of prime importance to understand the environment in which practice is taking place in order to develop and apply successful interventions. This is the broad context in which the need to identify and evaluate organizational information culture becomes apparent.

The information culture assessment framework

The case studies that were carried out in Germany, Australia and Hong Kong enabled Gillian to describe the information cultures of those specific organizations, and to tease out the various contributing factors. But in order for these findings to be of any practical use, a further step was necessary. This led to the compilation of the factors into a framework, with the view of being able to use the framework to assess or diagnose the culture in different organizations (Oliver, 2011).

It was apparent that some factors appeared to be associated with national cultural differences, which means that these characteristics would be deeply embedded in the ways in which people act, and very resistant to change. On the other hand, some characteristics reflected features which appeared to be much more organization specific, rather than country specific. These features would indeed be possible to change.

The missing piece of the puzzle came into sharper focus when discussing information management problems with employees of a Pacific Islands nation regional body which had responsibility for providing technical
advice and services for a very wide range of different specialties. In other words, there were many different sub-cultures in this particular organization, including expatriate employees from developed countries, local hires from various Pacific Island nations, in addition to all the different occupations and professions represented. There was huge variation in people’s ability to work with the technological tools available (e.g. familiarity with a shared drive environment, or coping strategies for an environment affected by frequent power outages). This really highlighted the importance of information-related competencies, including digital literacy. This was a clear skills gap, which can be effectively addressed by training, in conjunction with the more traditional areas of training targeted by recordkeeping practitioners: knowledge and understanding of recordkeeping requirements.

The resulting Framework is shown in Figure 1.2.

Level 1 is the bottom layer of the pyramid. This layer represents those factors which are so fundamental that they are very hard to change. However, it is extremely important to find out what they are so that strategies, policies and procedures can be designed appropriately. The factors to be taken into consideration at this level are as follows:

![Information Culture Framework](image-url)

Figure 1.2 Information Culture Framework
The value accorded to records, or respect for information as evidence. Recognition and awareness of the need to manage certain information for the purposes of accountability.

Preferences for different communication media and formats, as well as preferences with regard to sharing information. The former involves consideration of preferred primary sources for information; the latter, the level of granularity to which information sharing is regarded as the norm by employees.

Language requirements. What happens when multiple languages are required or when one language becomes dominant.

Regional technological infrastructure. The technological infrastructure in the country or region that the organization is located in.

Respect for information as evidence is discussed in detail in Chapter 2; preferences for different media and formats, willingness to share information and differing views of which resources can be most relied on are considered in Chapter 3. The final two factors, language requirements and regional technological infrastructure, are addressed in Chapter 4.

The second level of the pyramid represents the skills, knowledge and expertise of employees relating to information management, which can be acquired and/or extended in the workplace. This is placed in the middle of the triangle because training development will take into account those fundamental influences at the bottom. The skills, knowledge and expertise can be divided into two broad categories:

- Information-related competencies, including information and digital literacy.
- Awareness of environmental (societal and organizational) requirements relating to recordkeeping.

These categories are discussed in Chapters 5 and 6, respectively.

At the tip of the pyramid are two organizational features which are highly significant for successful recordkeeping and are the most susceptible to change. These two features are:

- The information governance model that is in place in the organization, as reflected in the organization’s information technology infrastructure.
• Trust in organizational recordkeeping systems.

Corporate information technology governance is discussed in Chapter 7, trust in recordkeeping systems in Chapter 8.

Each chapter not only identifies and describes the various components of the Framework, but also provides guidance as to how to go about assessment, and then suggests what actions can be taken once that data has been collected in order to provide a way through ‘the people problem’. The sequencing of discussion in the book corresponds to levels 1, 2 and 3 – but this consecutive approach is not the only way of approaching assessment. It is possible to target just one level of the Framework, as time and resources permit, and thus take a piecemeal approach to building the information culture profile. The only proviso to working in this way is to remember that the factors at other levels are present, and not to discount those influences.

The key question is, of course, why bother at all? What is so special about information culture, why expend all this time and effort? Why not use another assessment methodology?

Why information culture?

As argued above, organizational culture has been acknowledged to be a critical concept to be taken into account when implementing recordkeeping systems. However, organizational culture is a nebulous concept, used and defined in many different ways and thus open to significant misinterpretation. Information culture, on the other hand, consciously embraces multiple layers of culture (e.g. national, occupational and corporate) and, most importantly, ensures that attention is directed to the heart of the matter, information, and yet does not ignore the underlying and encompassing organizational contextual issues. This is the key point, and one of the main differentiators between an information culture approach and other holistic strategies such as information audit and the information maturity model. In recent years a plethora of assessment strategies and tools have been developed, which is unsurprising given the increasingly standards-driven nature of records management. These strategies and tools may supplement rather than replace an information culture assessment. Other holistic approaches and assessment tools are discussed in the following two sections.
Other approaches

In order to clearly differentiate the new approach afforded by the ICF, it is necessary to spend some time considering the alternatives. These include information audits and information maturity models, as well as the tools that have been developed specifically for records management: DIRKS (Designing and Implementing Recordkeeping Systems), Jisc’s Impact Calculator and records management maturity models, and ARMA International’s Generally Accepted Recordkeeping Principles (GARP).

Information audits

Information audits achieved some popularity as an organizational strategy from the early 1990s onwards and still appear to have credence with some practitioners and consultants. Susan Henczel, one of the leading exponents of information auditing, provides the following explanation:

The information audit is a process that will effectively determine the current information environment by identifying what information is required to meet the needs of the organization. It establishes what information is currently supplied, and allows a matching of the two to identify gaps, inconsistencies and duplications. The process will also facilitate the mapping of information flows throughout the organization and between the organization and its external environment to enable the identification of bottlenecks and inefficiencies.

Henczel, 2001, 45

Similarly, Elizabeth Orna refers to the definition adopted by ASLIB, the British professional association for information management:

A systematic evaluation of information use, resources and flows, with a verification by reference to both people and existing documents in order to establish the extent to which they are contributing to an organization’s objectives.

Orna, 1999, 69

Despite the representation of information audits as a holistic approach to information management within organizations, neither definition appears to remotely allude to records – information as evidence – but seem to focus on
information as (a source of) knowledge, for the purpose of increasing awareness.

Although Henczel refers to audit as a standardized management methodology (2001, 45), it has been pointed out that there is no single standardized way of carrying out an information audit (Botha and Boon, 2003). These authors reviewed the various methodologies and concluded that the following elements, broadly interpreted, could represent a standardized approach:

- planning
- information needs assessment
- information survey
- costing and valuing information resources
- analysis
- reporting.

No doubt the scope of an audit could be stretched to include records, but the value of doing this is dubious to say the least. The notion that records are static objects that can be inventoried is completely at odds with our world of complex and emerging digital technologies and systems. Records are evidence of business transactions, thus they are inextricably linked with actions, with doing something. Identifying and listing the outputs of activities that continue to take place as the organization carries out its functions is a time-wasting and ultimately profitless endeavour. Identifying and understanding the processes of the business, however, and making sure that knowledge reflects ongoing developments within the organization, will provide insight into the records that need to be created and managed.

Furthermore, finding out what information is available and what the information needs of users are will not provide any assistance in figuring out how to meet those needs – and which of them are needs for evidence. The essence of the information culture approach is a rich understanding of the ways in which the members of the organization interact with information, and using this insight to develop strategies tailored to the specific context.
Information maturity models

Another holistic approach to assessing the extent to which organizations successfully work with information is the information maturity model (the Jisc records specific version of this is discussed in the following section). Maturity models were first developed in the 1970s to 1980s to assess quality management (Crosby, 1979) and capability in software engineering (Humphrey, 1988). Since then the underlying concept has been adapted to focus on various organizational features. Variations on the information maturity model are used by consultants; an open source version credited to a Gartner Group company is available online.1 This model provides five levels for assessment of information management:

- aware
- reactive
- proactive
- managed
- optimized,

with ‘Aware’ as the lowest level, signifying that there is awareness of problems but no action undertaken, and ‘Optimized’ as the highest, where information management is a strategic priority. The methodology used to determine information maturity is a survey based on a series of ‘capability statements’, which reflect either the business capabilities that the organization wants to achieve or improve, or the data management capabilities that are the enablers of the business capabilities. Thus capability statements are divided into clusters such as data cleansing, data collection standards, etc. Each statement is associated with a framework consisting of the following elements: Policy, Practice (Process), People/Organization, Technology, Measurement and Compliance. Associating each question with a framework element then provides insight into the relative strengths and weaknesses of those areas.

From this brief and rather superficial description it can be seen that the methodology is very highly and tightly structured, in contrast to the information audit approach. An attempt has been made to cover all angles, and the model appears to be designed for use by consultants with specific training in this methodology rather than by practitioners. It thus certainly has the look and feel, and consequently the appeal of a very rigorous tool
that will make sense of the messy and fluid nature of organizational information management. However, it is the very complexity of the information environment that presents the critical challenges, and recognition of the different purposes for which information needs to be managed is at the heart of the matter. A holistic information management maturity model assessment is unlikely to have the subtlety required to capture perceptions, deep motives and unstated goals, in order to identify the features that make up a recordkeeping culture.

Other assessment tools

The recordkeeping environment has become increasingly standards driven. In keeping with this, a number of assessment tools and methodologies targeted specifically at records management have been developed.

Designing and Implementing Recordkeeping Systems (DIRKS)

The forerunner of them all is the Australian methodology Designing and Implementing Recordkeeping Systems (DIRKS). This was originally developed by the public records authority in New South Wales (NSW), and then subsequently promoted and supported in partnership with the federal National Archives of Australia. The State Records NSW website explains that DIRKS was initially developed as part of AS4390, the Australian precursor to the international standard on records management. The international standard continues to reflect DIRKS structure and guidance (State Records NSW, 2007).

The DIRKS methodology consists of eight stages, corresponding to system design methodology but adapted to a specifically recordkeeping environment. In essence, the methodology aims to assess the existing organizational needs for recordkeeping and then use this information in order to design a recordkeeping system. Thus specific stages are as follows:

- preliminary investigation
- analysis of business activity
- identification of recordkeeping requirements
- assessment of existing systems
- identification of strategies for recordkeeping
• design of a recordkeeping system
• implementation of a recordkeeping system
• post-implementation review.

A very detailed manual of guidance is freely available for download from State Records NSW. The methodology and manual are appropriate for both public and private sector, although not surprisingly specifically targeted at the New South Wales state government sector (State Records NSW, 2007).

So far, so good. The methodology has been recognized internationally, hence its inclusion in ISO15489. However, further investigation shows that the application of DIRKS has been problematic. It is no longer available on the National Archives of Australia (NAA) website, as the following statement makes clear:

The National Archives of Australia has removed the Designing and Implementing Recordkeeping Systems (DIRKS) Manual from the website. DIRKS has not been recommended for use by agencies since 2007 and has been superseded by other advice on the National Archives website. It has been removed from the website to avoid confusion.²

There has been a lot of anecdotal evidence over the years about difficulties experienced by organizations in implementing DIRKS, but it was only recently that published comment explained the situation:

The DIRKS process model for designing and implementing record-keeping systems is a fairly straightforward, flexible, and logical model for systems implementation. Yet, the NAA managed to antagonize a large number of government agencies unnecessarily by insisting upon an overly complicated and rigid set of DIRKS implementation processes for identifying and documenting business functions and activities, and their associated record-keeping requirements. As a result, DIRKS projects were bogged down in years of glacial progress and often fruitless effort.

Cunningham, 2011, 26

The message here is clear. Any assessment methodology, if it is to be implemented successfully by organizations, has to be relatively simple and straightforward. The more complex the process becomes the less likely it is
to be used. Furthermore, as Cunningham also points out, recent research has indicated that people issues are a highly significant factor to be taken into account in developing effective recordkeeping systems (25).

The research that Adrian Cunningham refers to is the Accelerating Positive Change in Electronic Records Management (AC+erm) Project conducted at Northumbria University, and also referred to in the Introduction to this book. The findings are particularly significant because they represent input from the international community, and do not just reflect views from one nation or theoretical perspective. The key points from this project include the following, which are particularly germane to this discussion:

• the people, process and systems/technology aspects of ERM (electronic records management) are inextricably linked; though useful for the research design and as an analytical tool, the distinction between them is not one that can legitimately be drawn in modelling what actually happens
• people issues are predominant, fundamental and challenging as they concern culture, philosophical attitudes, awareness of RM (records management) and ERM issues, preferences, knowledge and skills
• records professionals may be part of the problem as well as part of the solution, e.g. they take the holistic view and have the principles and tools to manage records but their demands may be unrealistic or too constraining
• solutions for ERM are contextualized and complex.

McLeod et al., 2010, 17

An information culture approach is designed to get to the heart of those people issues which predominate, while taking into account the systems and processes involved. Gaining an in-depth understanding of the culture of the organization will enable records professionals to take a much more realistic view of organizational life and to be able to develop strategies that facilitate rather than constrain. Despite the marked lack of success of DIRKS there is much in it that is valuable and useful. The manual can perhaps best be used as a reference resource, for guidance on specific activities documented in ISO15489, rather than be regarded as a definitive methodology for implementation. It is referred to further in Chapters 6 and 8, where specific DIRKS steps are particularly relevant.

Other assessment tools subsequently developed include Jisc’s Impact
Calculator and Records Management Maturity Model and ARMA International’s GARP. The contribution of each of these is discussed below.

**Impact Calculator and Records Management Maturity Model**

Under the auspices of Jisc InfoNet (a service providing advice and guidance on records management to the UK education sector) two tools, which aim to provide empirical data on the return on investment of records management programmes, have been developed. A characteristic of records management has been the lack of verifiable data to support frequently made claims such as promises for efficiency improvements or space savings. We have tended to rely on anecdotal evidence, such as spurious claims to achieve x% savings by introducing a certain storage system. To quote from the literature review conducted to support the development of the Impact Calculator:

> Statements concerning efficiency are repeatedly made in the literature, more so in the professional magazines and vendor information than the academic journals. The statements are often articulated in terms of improvements such as decreased storage space or reduced turnaround times for fulfilling customer orders. The statements tend to be general or tenuous (or both)…

Jisc InfoNet, 2009, 12

The aim of the Impact Calculator is described as follows:

> To assist in measuring the actual impact of a change initiative. Impact in this instance can be defined as a comparison of the measurable benefits, generally efficiency savings or gains brought about by a change initiative, and the costs incurred by implementing it. The Impact Calculator supports the collation of information relating to measurable benefits that can be quantified in both monetary and non-monetary terms.

Bailey, 2011, 48

The calculator can be downloaded free of charge from Jisc.³ It was pilot tested by six universities, each attempting to measure benefits from the implementation of a specific activity leading to change (for example, training in email management). The overall findings from these pilot studies are reported by Bailey (2011), and although he concludes by reiterating the
value of the calculator not all pilot study participants were as positive. The final report from the University of Aberdeen, for instance, notes some important concerns, namely difficulties in using the calculator for their chosen project, and the fundamental issue of records management outcomes rarely matching direct savings:

Many records managers with long experience of the profession would note that good records management does not always translate into cost savings (eg an extra square metre of space in 20 rooms does not equate to an extra 20 square metre room) and the danger of being seen as nothing more than a cost-cutter is one which can undermine the profession.

University of Aberdeen, 2010, 2

It appears that the Impact Calculator may have some utility in measuring quantifiable benefits achieved in the implementation of some (but not all) change initiatives. Before attempting to use this tool it would be wise to read the reports from all the pilot studies. The types of projects chosen varied greatly, some were more suited to the use of the calculator than others, and the insight into practical usage issues is invaluable. Making these case studies freely available is a commendable strength of the work on this tool overall and should greatly assist decision-making as to if and when to use it.

The other tool developed as part of this Jisc initiative is the Records Management Maturity Model. This is a spreadsheet model. The tool was developed for a very specific situation, namely to enable tertiary sector institutions to self-assess progress towards meeting the requirements set out in the records management code of practice which accompanied the introduction of freedom of information legislation in the United Kingdom (Jisc InfoNet, 2012).

The design of the model follows the general pattern described above for the Information Management Maturity Model. In this case, statements describing specific features of records management programmes are clustered into 33 distinct groups. For each statement one of four rankings can be selected:

- 0 Absent – Institution shows no evidence of awareness of the need to take a strategic approach to the management of records;
- 1 Aware – Uncoordinated local attempts to improve records management in
response to local issues;
  • 2 Defined – Coordinated attempts to improve records management underway across the institution; and
  • 3 Embedded – The effective management of records is fully integrated within the institution’s strategic and operational activities.

The resulting data is calculated for each area, and an overall summary generated which provides an overview of the stage of development of the programme. This, and similar audit tools developed for specific jurisdictions, provides an effective way of highlighting areas of strength and weakness. It does not however provide any insight as to why these weaknesses exist, and how best to tackle them.

**Generally Accepted Recordkeeping Principles (GARP)**

The final evaluation method considered here has been developed by the United States professional records managers’ association, ARMA International. The name GARP was selected because of the similarity to the widely known GAAP, Generally Accepted Accounting Principles. There are eight principles, which are as follows:

  • Accountability
  • Integrity
  • Protection
  • Compliance
  • Availability
  • Retention
  • Disposition
  • Transparency

Once again, the underlying tool is that of a maturity model, in this case the information governance maturity model. (The concept of information governance is discussed in Chapter 7.) Unlike the two Jisc tools, the assessment tool is not made freely available but has to be purchased, and fee-paid training courses are also available. There is, however, a ‘health
check-up’ tool free to download,\(^6\) which consists of a list of 70 audit-type questions on a spreadsheet, with a thermometer graphic displaying the health of the programme when scores are entered for each question.

The principles identified for GARP appear to present a useful way to communicate findings about recordkeeping to senior management. Ringing endorsement for GARP can be found in the pages of the *Information Management Journal*, published by ARMA International (see, for instance, Colgan, 2011; Hoke, 2011; Susec, 2011; Whan, 2011). Depending on the organization type and its location, GARP may provide a valid approach to assessment of recordkeeping activities. However, as with the Impact Calculator and the Records Management Maturity Model, no insight is provided into why this is the case, or how best to go about improving the situation. In other words, the all-important nuances are not evident in these quantitative approaches to assessment. To use the language of academic research, the tools that generate numeric scores (Information Management Maturity Model, Impact Calculator, Records Management Maturity Model, GARP) stem from the positivist tradition. This view of the world considers that everything is measurable, that is, quantifiable and objectively knowable. By assuming that the reality ‘out there’ is subject to laws that can be discovered and verified, this research tradition attempts to apply methods used in the natural sciences to the social sciences.

The Information Audit on the other hand is a bit of a misfit. Despite its name there does not appear to be a standardized methodology in place, but use of the word ‘audit’ does imply that the intention is for checking and review with the ultimate aim of attributing a score.

By way of contrast, the ICF offers a much more holistic view of the information environment. By taking into account influences external to the organization and identifying cultural characteristics that, rather than changed, have to be taken into account, it provides a means to address those ‘how’ and ‘why’ questions. In other words, it belongs in the interpretive tradition of enquiry, a tradition that privileges qualitative methods over quantitative ones, and that is primarily concerned with ‘meaning’. According to this research paradigm, our social world is interpreted or constructed by people, and is therefore different from the natural world.
Summary and conclusions

The concept of information culture can and has been applied to societies and nation states as well as to organizations. The literature relating to organizational information culture does convey sometimes confusing and conflicting views, but in general acknowledges linkages with organizational culture. Our standpoint is that every organization has an information culture, whether or not it is conducive to good records and information management. How to assess or diagnose the information culture of individual organizations is our aim in the subsequent chapters of this book. We maintain that figuring out the characteristic features of an organization’s information culture is a crucial and essential step on the path to addressing the people problems that have proved to be the stumbling block in establishing effective records management programmes to date.

Information culture assessment needs to be undertaken in the context of understanding the nature and purpose of other approaches to assessment, such as DIRKS and maturity models. It is not proposed as a means by which metrics can be collected, rather it should be viewed as a complementary component to those existing tools, facilitating deep understanding of a highly complex environment. The remaining chapters provide practical guidance for assessment at each of the three levels of the ICF.

Notes

3 www.jiscinfonet.ac.uk/tools/impact-calculator [accessed 7 November 2013].
4 www.jiscinfonet.ac.uk/projects/impact-calculator-pilots [accessed 18 September 2013].
5 www.jiscinfonet.ac.uk/tools/maturity-model [accessed 18 September 2013].

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