# Information governance: nature and maturity practices in EU public administrations

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**Abstract**
Information governance (IG) aims to manage information as an asset understanding its value to strategic and operational organisational goals, as well as societal and individual needs. It adopts a multidimensional approach that draws together information and records management, compliance (regulations, standards, corporate charts, and policies etc.), information security, ICT, and ethics. . This chapter seeks to identify the main dimensions that compose and distinguish IG as described in academic studies and professional practice, explore IG practices and best practices in a French public administration context, profile the development of IG practices in UK public administration, and profile IG practices and best practices in European public administrations using the case study of Geneva's public administration. Finally, the chapter offers conclusions for consideration when developing IG frameworks and assessing maturity levels for public entities.

**Key words**: information governance, public administration, open government, maturity model, Geneva

## Introduction

Information Governance (IG) is defined in a range of ways often dependent upon discipline perspectives (Lomas, 2010; Makhlouf Shabou, 2019). Recognized as an alternative to simple document management, IG is sometimes defined as a subset of corporate governance.

However, there is essentially agreement that it represents a multidimensional approach that draws together strategic management, information and records management, compliance (regulations, standards, e-discovery, etc.), information security, ICT and ethics (Lomas, Makhlouf Shabou, Grazhenskaya, 2019). It includes other functions such as content management, information asset valuation, data protection, risk management, litigation preparation, long-term digital preservation and even business intelligence (Franks, 2012; Gartner Inc., n.d.; National Archives of Australia, 2017; Smallwood, 2014). IG is dependent upon a number of dimensions covering management, archival, juridical, ethical, economic, technical, and technological facets related to different data, information, records and archives processing during the various phases of their life. In addition, information assets must be optimized to ensure realization of strategic and operational corporate goals including delivery across society. This chapter seeks to:

1. identify the main dimensions that compose and distinguish IG as described in academic studies and professional practice
2. explore IG practices and best practices in a French public administration context
3. profile the development of IG practices in UK public administration, and
4. profile the IG practices and best practices in European public administration, specifically Geneva's public administration.

The chapter offers conclusions for consideration when developing IG frameworks and assessing maturity levels for public entities.

# IG: dimensions and nature in the context of public entities

## Particularities of public entities

Within the EU context, national setups for public administration differ somewhat in their structures. Broadly speaking, there are national and regional administrative structures with some semi-public structures. Across Europe, rights to access the documents of public administrations have been developing over several decades. Access involves a number of challenges and costs for public administrations. They need to guarantee the findability, availability, and sustainability of data, in conjunction with ensuring that trusted information is then delivered. Citizens' expectations around transparency have grown with open data movements pushing towards open government.

Access rights must be weighed in conjunction with other considerations such as security and privacy. These concerns dominate global debates. The latter has significantly evolved in the EU context with the 2016 EU General Data Protection Regulation (2016) mandating high standards of personal data management and security. In addition, the need to establish an effective accountability chain underpins this public need. Citizens' trust is a key information deliverable for a public administration, both in terms of protecting citizen data and providing trusted information content. In a social media context this is contested ground. For example, Twitter and Facebook have taken different stances on engagement with political advertising, which is under scrutiny because of hostile influence on democratic processes.

## An overview of previous studies and frameworks

At the academic level, several universities have developed IG courses (University of Applied Sciences and Arts Western Switzerland, Geneva School of BusinessSwitzerland; Northumbria University, UK; University of British Colombia, Canada; Northumbria University, UK; University College London, UK, etc.) to address a need for explicit IG competencies in professional and continuing education opportunities. These initiatives are delivering education which reunite professional domains, including archivists, cyber security specialists, data analysts, digital curators, forensic scientists, IT specialists, librarians, and records managers. IG requires that there be a wide set of skills underpinning information delivery and security. In addition to providing education, various IG research initiatives have been conducted to better develop an understanding of this field and its needs.

### Illustrative European IG initiatives

At the national level, Swedish researchers studied the articulation of how to develop an IG operational model. In a recent study, they examine the integrated IG model including records management principles, enterprise architecture (EA) with an agile-based method and the user experience design (Sundqvist, Sahlén & Andreasen, 2019).

In the Belgian context, the interdisciplinary project HECTOR aimed to model the organisation, transformation and preservation of hybrid documents and files (paper and digital) in the Belgian federal administrations (Maroye et al., 2016; State Archives of Belgium, n. d.; Trends Public Sector, 2018).

Wider than national perimeters, the European project E-ARK was conducted through collaboration between several public European stakeholders. Its overall goal was to harmonise archival processes at the pan-European level to keep digital records authentic and usable (E-Ark, 2017).

## IG practices and best practices in French public administrations context

In France, the IG domain is growing. Serda Group initiated an annual study to profile the IG practices maturity in public and private entities. The 8th Annual report (Serda, 2019) reveals relevant findings on major developments in information practices in this regard. Conducted among 410 organizations in France, this survey confirms that interest in IG is growing and that the main issue of digital information management is access to information resources and knowledge of the organization. A significant 85% of participants from the public sector prioritized data access and knowledge sharing control as key concerns. In contrast, the main obstacle was the lack of commitment of the public entities in this respect. The lack of knowledge of this domain was further mentioned. Around 55% of participants stated that managers are not sensitised to IG issues, around 50% think they lack knowledge on methodologies, and around 47% claim the managers under-estimate potential risks that could arise in the absence of an established corporate IG approach.

Other initiatives have been proposed in French public administration. More specifically, three relevant tools were proposed to help public administrations systematically and securely manage their data (Naud, 2019):

- *Octave*, which allows the archivist, after import, to process and manually modify file tree structures (deduplication, selection, deletion, merging, classification, renaming) (France Archives, 2020)
- *Archifiltre*, a tool for appraising structured data on the basis of a visualized file plan (Digital Factory of Social Ministries, 2020)
- *Vitam*, which allows building and manipulation of archival tree structures and editing of metadata; it has import (SIP) and export capabilities (as disk hierarchy or in csv form for file plans), and can process office files or mail containers (Programme Vitam, 2020.).

However, in the French context, the multidimensional IG vision is still missing. The policy is not articulated clearly to make sure that all services, such as the tools mentioned above, are well synchronised. The public administrations are however more sensitised to invest in such approaches.

### IG practices and best practice in UK public administration

In 1984, the UK enacted data protection legislation to protect and provide personal information rights for digital data. In 1995, KPMG, working from London, published a report which fore-fronted the place of information as an asset thus changing corporate and public sector

perceptions on the place of information in strategic planning (KPMG, 1995). Recognition of information as an asset assisted in raising the responsibility for its protection to the Board level. In the same year, the EU's Data Protection Directive required the EU Member States to implement national legislation to protect personal data (Directive 95/46/EC). Thus, the UK developed and refined the legal requirements for managing personal data. In addition, the British Standard on information security (BS7799), now ISO/IEC 27000 (International Organization for Standardization [ISO], 2018), was published.

Compared to many nations, the UK was slow to provide legislation to enable access to public sector information. The Public Records Act (1958) did provide for the protection of public documentation, but access was normally delayed for 30 years. In 2000, new access legislation was enacted (the Freedom of Information Act, 2000) and this changed the balance of power between citizen and state in terms of information management. The legislation, required public sector organisations to have publication schemes showing their structures in terms of creation of information, to establish records management programmes, under a Records Management Code of Practice (Lord Chancellor, 2009), and to provide timely access to information requested, subject to any exemptions.

Parallel to enactment of the UK freedom of information laws, the EU developed requirements for providing access to environmental information. The requirements extended the reach of access, not only to public entities but also to the third parties delivering public functions. It is to be noted that in the last 20 years, the UK has changed the divisions between public and private delivery with the development of public-private initiatives (PPIs). Within this context, there has been a public expectation for certain citizen accountability.

In 2010, Lomas (2010) published an article with a UK lens that made the case for information security and records management to work together under the IG umbrella. The most overt UK recognition of the value of multidisciplinary IG frameworks has and continues to be within the frameworks in place to support the UK's National Health Service (NHS). The NHS was quick to adopt the concept of IG and to develop and deliver an Information Governance Toolkit in 2003 bringing together compliance requirements from across the health and social care sectors (National Health Service – Department of Health, 2017); it was replaced with a Data Security and Protection Toolkit in 2018 (NHS Digital, 2018). Lessons learned from this model have been cascaded across national and local Government with many regions developing IG framework documentation.

Across the UK, there has been an increasing push for openness. The Open Government Partnership has been pushing this agenda framed by an Open Government Manifesto (Open Government Partnership (2019). It considers not only access rights, but new implications for ownership as well. Within the UK, a University College London (2019) led project entitled MIRRA (Memory-Identity-Rights in Records-Access) has been pushing for new standards for access to records for all care-experienced persons who participated in the creation and ownership of their records through time. As a result of these concerns, ethical considerations implicit in an IG framework are increasingly discussed in terms of balancing organisational and societal concerns.

More generally, there is work on reusing and gaining value from data through time. This relies on IG frameworks to ensure data quality but in addition to consider the rights and risks to those whose data may be harvested. Initiatives have been developed in this context to manage the issues; for example, the Local Government Association has considered data quality rights and

usage in the context of data lakes developed by public administrations (Local Government Association, 2019).

Information and data as assets is now well recognised in the UK with the complex dynamics of citizen delivery and public responsibilities at the fore. Practical tools for identifying and managing information assets properly, such as information asset registers, have been shared (The National Archives, 2017). Whilst not uniformly in place, IG represents a key framework tool to ensure this delivery.

## IG research in ITrust

The ITrust project's European team initiated two relevant studies in the field of IG. The first one focused on how to develop an IG Policy and the second proposed a model, a method, and a tool for IG maturity assessment to apply in European public administration contexts.

### IG policy as a main corporate guide: from vision to operations

The study initiated by Makhlouf Shabou and conducted between 2014 and 2016 aimed at developing an IG policy model (Makhlouf Shabou, 2019). This study analysed a sample of 13 policies, from different types of institutions (universities, medical institutions, state, and para-state institutions) originating from various countries and continents (America, Europe, and Oceania). It checked 19 indicators divided into four categories: content, format (style, content density and level of detail), communication (language and mode of spreading, level of visibility), and validation (date of creation and entry into force, validating and review authority, frequency of revisions). This analysis was used as the method of validation of a policy model, which aimed to serve as a template for professionals to develop IG policies adapted to their own organizational context. However, the study determined that having a policy is not an end in itself, and that it does not mean the end of investment in IG.

### Maturity model as a key tool for developing and managing IG in a public corporate context

A study conducted between 2016 and 2018 by Makhlouf Shabou and Lomas focused on researching IG within European Public Administrations and proposed a maturity model (Makhlouf Shabou, Guercio, Katuu, Lomas & Grazhenskaya, 2019; Makhlouf Shabou & Lomas, 2019). The resulting model includes five levels of maturity and ten dimensions: 1) Responsibilities and roles, 2) Stakeholder engagement, 3) Framework and policy including risk management, 4) Information asset identification, creation and ownership, 5) Information value, quality, and delivery, 6) Rights management, 7) Records management, 8) Information security and resilience, 9) Long-term preservation, and 10) Monitoring and change management. The evaluation criteria relate to people (e.g. leadership, professional expertise, citizen inclusion etc.), system (e.g. framework design, process development, software and tools, buildings and infrastructures, training etc.) and ethics (e.g. laws, regulations, directives, standards, obligations etc.). The assessment performed by the maturity model provides "a clear overview of the corporate information landscape and an accurate characterization of weaknesses and

main gaps to be addressed" (Makhlouf Shabou, B., Guercio, M. Katuu, S., Lomas, E., & Grazhenskaya, A., 2019, pp. 106-107) when considering developing an IG.

# IG practices and best practices of Swiss public administrations: the case of the canton of Geneva

## Context

Another recent project conducted in Switzerland studied the maturity level of IG practices in public administrations (Anderfuhren & Romagnoli, 2018). The case of the canton of Geneva is presented here in more detail. Switzerland, although integrating notions of IG at the federal level – for example the eCH standards in the eGovernment (Association eCH n.d.) – has the peculiarity of having a great deal of operational independence at the cantonal level, particularly in the field of information management. Although Geneva is no different, as a canton it operates according to two administrative levels – the cantonal and the communal.

At the cantonal level, information management is shared between the eight cantonal departments, all of which operate in an independent manner. Therefore, everyone has their own information professional. At the communal level, each municipality is also independent of each other. However, document management is rarely entrusted to a professional. It is often managed by the municipal employees, who do not have appropriate training. Moreover, it is important to note that Geneva is at the same time a canton and a city – the administrative organisation of the city resembles that of the canton, with its six departments, each of which has its own information officer/archivist.

## Objectives

The purpose of this work was to understand how IG is defined and implemented within Geneva's public administrations. In addition, it reflected on how to better integrate IG to improve the performance of services. More specifically, we 1) profiled the existing gaps between information management as presented in the literature and as it is experienced in professional practice, 2) proposed a definition of an IG approach for public administration, and 3) proposed a framework to be applied in European public administrations.

## Methodology

In order to measure and compare the gap between governance presented in the literature and that experienced by professionals, we adopted a comparative analytical approach: we focused on content analysis, both deductive and inductive. We selected two type of sources: the documentary sources, which represented our theoretical corpus, and the testimony of the information professionals, which covered the practical dimensions. Then we established two collection tools: a reading grid containing our documentary references, and a semi-structured interview guide to collect testimonials of the participants (Figure 1).

In order to establish the sample, the target population was defined. It consisted of information professionals active in Geneva public administration, i.e. the archivists. This profile was

selected because the archivists plays a strategic role in the IG of organisations. The research was based on the degree of expertise and business skills in the field of information. Only the professionals with a background in information sciences were kept in the final sample. The content analysis of the interviews was undertaken using the NVivo software.

<FIGURE 1 HERE>
Figure 1: Data collection schema
Source: Anderfuhren & Romagnoli 2018, p. 3

## Results – IG perception and practices as reported by information managers and archivists in public administration in Geneva

The canton of Geneva has two administrative levels: the cantonal level and the municipal level. The perception of what IG represents is not the same at both levels. For cantonal archivists, the emphasis was on the accessibility of information while governance meant bringing together all the dimensions of an administration as part of a global vision. In their view, it has the elements of ethics and values, reflecting a positive image of the State to the public. For municipal archivists, IG makes it possible to overcome the silos between the different services. Despite these differences, the participants agreed on many points, including the obstacles to the implementation of IG and the risks if it is badly implemented.

The most significant obstacle was employee resistance as they perceived IG as an attempt to control their actions. The participants observed a refusal on the part of employees to share information with other departments, as there was a consensus that this might result in losing control of skills and essentially a vulnerability, i.e. a pathway to redundancy. This is where the presence of the archivist is necessary because s/he complements development of the skills of each person, which enables them to be involved and provides value. Among the identified risks were the loss of information, the excessively long response times, the lack of traceability of information, and the unauthorised destruction of documents.

During each interview, the participants were asked to self-assess the maturity of their practices according to the ARMA model's five levels of development (substandard, in development, essential, proactive, transformational) (ARMA, 2019a). Figure 2 presents an overview of participants' average assessed maturity level for each of the ARMA principles (ARMA, 2019b). The most attributed level was the third -essential - which aligns to meeting legal and regulatory standards as well as business requirements. The dimensions that were identified as the most mature were those of protection and conservation. This is explained by the fact that mandatory laws and regulations govern these two principles which leaves little freedom in practice.

<FIGURE 2 HERE>
Figure 2: Average maturity level for each of the ARMA principles for all participants

The research resulted in the creation of a list of proposals for good practices that are easy to implement and adapt to different contexts. They focus mainly on the human and collaborative aspects, because the most resistance was found in these two aspects. In this vein, we strongly recommend considering the following actions:

- recognize information as a resource

- value information management activity, and to recognize it as useful work that requires specific skills
- involve each stakeholder in the process
- improve transparency and availability of information
- document all your actions
- control access to information
- think as a team, for the team
- analyse the information needs of each department
- go step by step, process by process
- communicate and disclose the governance programme based on feedback and exchanges with other administrations that have undertaken comparable projects, and
- establish collaborations with other organisations using IG approaches and tools to join a helpful network.

# Conclusion

In democratic societies, it is essential that public administrations respond to their main mission, delivering robust and transparent public services that ensure every citizen has the right to reliable, available, protected, and trusted information. Perhaps more so than parts of the private sector, there is a focus on building processes for scrutiny. In addition, to improving services and efficiency, public administrations must understand and consider data and information quality as an asset. This requires a range of processes to ensure data quality and respect of citizen data rights.

IG contributes to the continuous search for service improvement and quality. It is a valuable set of mechanisms (principles, tools, processes and systems) for understanding where services stand in their information practices, as well as a powerful tool for decision-makers. Recently, the ISO TC/46 Committee launched work on a new ISO standard on IG principles and concepts. This initiative recognizes the multidimensional nature of IG approaches and emphasizes the ethical dimension and its importance in the production, use and reuse of data and information.

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