

# Building a risk based records management governance for the City of Rotterdam

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## ABSTRACT

This paper describes the transition process of records management in the city of Rotterdam. It anchors records management in the information architecture framework and links it to other information disciplines, in particular information security. A policy and maturity model has been developed to guide the development toward a more professional practice of records management. One of the cornerstones of the policy is a risk based approach to information and records<sup>1</sup>. Policy and the risk approach are aimed at making records management an integral part of the business and process analysis on the one hand, and system analysis on the other hand. As a result, records management should reach a more mature level in the maturity model.

The paper provides an overview of how records management is organized in the city of Rotterdam. It will highlight how records management in Rotterdam has moved away from an application-driven approach to a business and process-driven approach; it elaborates the risk approach as a starting point for further action and a method to raise awareness of records management in the organization.

## Categories and Subject Descriptors

H.1.1.0 [Information Systems]: Models and Principles - General

## General Terms

Management, Standardization.

## Keywords

Records management, Risk management, Quality management, Information governance.

## 1. INTRODUCTION

Like many government administrations, the city of Rotterdam (+600,000 inhabitants and an administration of approximately 11,000 civil servants) is in the process of adapting its structures and working methods to the needs of a rapidly changing society, and is combining this change with a reduction in costs. Keywords in this shifting role of the city administration are efficient, flexible, digital, reliable, and service-oriented.

During the last couple of years, the administration has been transformed from a decentralized structure with a rather high degree of autonomy for organizational units to a more centralized

structure. The organizational structure of Rotterdam has been “reduced” from 17 autonomous central business units and 14 local authorities to 7 autonomous central business units and 14 city districts with advisory committees. Six primary business units are supported by a shared services unit that centralizes all support services.

These changes on an organizational level both create opportunities and challenges for records management professionals. Before the organizational changes, records management services were the responsibility of the autonomous business units. Some business units were supported by only one or two records managers; others had a team of 15 to 20 records managers. Records management professionals however mainly operated on the operational level, i.e. main duties included registering incoming and outgoing correspondence on the item level, managing case files with limited use for the administration, and supporting administrative staff with practical records management issues (classification, appraisal, etc.). Some central guidance and advice originated from one of the 17 central business units, the City Archives. A central records management policy (a legal obligation for Dutch city administration), indicating in general terms responsibilities and rules, has been in place for decades, but has never been fully implemented by the business units.

Prior to 2010, various efforts were made to standardize and professionalize records management. In the years 2006-2010 a large scale attempt was made to implement a standardized and uniform digital records management application for the entire municipal organization. Due to internal and external factors, it was limited though, to the implementation of a stand-alone document management application (without integration with other business applications). In addition, it was not governed by a central records management strategy and policy, which was subscribed by the business units. In the end, only two of 17 business units adopted the application, and in 2010 further implementation was canceled.

The main reasons for the failure were:

1. The implementation was application-driven, not business-driven.
2. The implementation was not supported by a broadly accepted records management policy.
3. The application was designed to support the records flow, not the business process.
4. As a result, the range of mandatory and optional metadata to be filled manually on document level was rather high.

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<sup>1</sup> Information and records are used as synonyms in this paper.

5. Acceptance by users was lacking as the application was mainly considered as the “playground” of records management professionals. The application was considered a nuisance, rather than a tool supporting business.
6. The application was a stand-alone, without integration with business processes and applications.

A new approach was necessary. In order to be successful, it should not put an emphasis primarily on records management workflows, rules, regulations, and applications (as summarized in general in ISO 15489) [1], but on articulating the importance of good records management for the business. As a result, the call for appropriate records management would not only be propagated by records management professionals, but by the executive management level.

In 2010, the city archivist initiated a records management program. Five records management professionals were hired to initiate the change and to anchor records management in the business, especially on the executive level.

The program re-endorsed some general principles, but also introduced some new principles:

1. Records management is primarily the responsibility of the business. Records management professionals give advice to the business; however, decisions to implement are made by the business. Risks on non-compliance are the integral responsibility of the business units.
2. Records management, like information security, is a standard and integral part of each business process.
3. Records management supports the business, therefore it is preferably as invisible as possible for users.
4. The traditional distinction in stand-alone Electronic Document and Records Management Systems (EDRMS) between document management and records management is not based on records management logic, but on application logic. In a business approach to records management this distinction is not useful.
5. The required quality level of records management is determined through risk assessment. Risk assessment is executed at the process level, not at the system level.
6. Records management is just one perspective of information. Others include process (re)design, information security, information architecture, business intelligence. Collaboration and integration with these perspectives will help put records management on the agenda.

In 2014, the records management program will be canceled. As a consequence of the organizational changes, a central department of records management professionals has been created in the shared services unit.

The program has introduced a new framework for records management that comprises a governance structure, a risk based policy, a strategy and a road map, methods, and a new records management organization.

## 2. GOVERNANCE AND POLICY

As part of the organizational changes in Rotterdam, a new governance structure for all support services was introduced. The CIO, as the “business owner” and primary responsible for information and ICT, makes policies, collects demands from the primary business units, and negotiates with the shared services unit about service levels. The CIO has divided the information

field into several disciplines or “information themes,” of which records management is one. Others include information security, collaboration, business intelligence, open data, and workflow engineering. A roadmap has been described for all information themes. The records management roadmap consists of four domains:

1. Policy and integration of records management in the information architecture;
2. Integration of records management in IT systems;
3. Integration of records management in business process re-engineering;
4. Organizational culture and its relationship with awareness of the value of information.

The idea of the roadmap and the domains is that a higher level of maturity should be reached in each domain. For instance, records management functionalities can be implemented in software, but without any awareness and training (organizational culture), it will not have any effect.

In 2014, the most effort has gone into domain 1 (policy and information architecture). A new records management policy was introduced. Many chapters are dedicated to “traditional” records management activities, as summarized in ISO 15489 (e.g. classification, appraisal, metadata, etc.) [1]. However, two policy rules are not self-evident:

1. All IT projects are assessed by a records manager.
2. Various levels of quality are introduced in records management.

This last policy rule is elaborated in the next section.

## 3. RISK APPROACH

The basic principle of the Rotterdam records management policy is that not every business process requires the same quality level of records management. Some processes are not that important and (thus) imply limited risks. In addition, the importance of information and records (and thus of the choice of the records management regime), primarily determined through business needs and rules, is also diversified.

Traditionally, records management policies in The Netherlands do not differentiate between processes and records in levels of quality or importance (and risks). The retention periods, in a Dutch municipal setting mainly based on laws and regulations, only indicate how long information has some value and thus are only marginally linked to business needs and rules. The traditional approach results in a “one size fits all” solution: all records are considered as important.

The risk approach allows for differentiation in records management regimes, and thus meets the needs of the business to keep records management rules as simple and user-friendly as possible. If a process and its information have been identified as low risk from a records management perspective, then no or a very limited number of records management measures are implemented.

It is important to make three preliminary notes about the Rotterdam risk approach.

1. It is not a risk analysis in the traditional sense [2]: it does not identify specific records management risks in a business process, nor does it enumerate risks in records (management)

processes (as is done in ISO 18128 [3]). The risk analysis is a tool to make business executives aware of the importance of their process and its information. As such, it could also be called a process and information classification tool. However, using “risk assessment” in communication serves the purpose of provoking a discussion with the business about the importance of an appropriate level of records management measures.

2. The risk approach combines a calculation of the importance of the process and that of the records created in the process. Theoretically, the two are different variables and could be independently assessed. However, experience shows that in practice the valuation of the process and the records created in the process, follow a similar logic.
3. The risk approach has no ambition to create an absolutely objective result. It is possible that the same process in another city administration is valued differently, because circumstances are different.

The risk method uses four quality criteria, each divided into four quality levels, which are operationalized into three fields of control measures. It was inspired by the data classification method that is used in the field of information security. The required quality level is determined using a digital questionnaire: the “Records Management Risk Tool.” The questionnaire is filled during a workshop attended by records managers and representatives of the business. In 2014, a new version of the tool was extended with questions about information security.

The records management criteria originate from the ISO 15489 standard [1] and are based on the four characteristics of a record: authentic, reliable, integer, and usable. Reliability was not upheld as a criterion: it implies a check on the completeness of the content of a record as compared to reality. It was assumed that such a check is the sole responsibility of the business and should not be evaluated by a records management tool.

Usability, as a separate criterion, was too broad. Therefore, it was split into three criteria that could be operationalized in practice: retrievable, interpretable, and displayable.

For reasons of practicality, authenticity and integrity were merged into one criterion: it was assumed that the business would not significantly differentiate between the two.

The four records management criteria are:

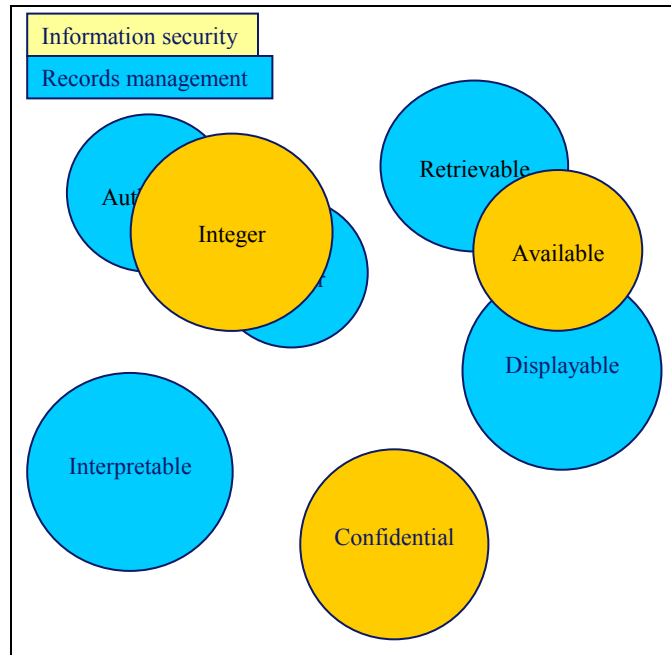
- authentic and integer;
- retrievable;
- interpretable; and
- displayable (it can be presented)

These criteria can easily be matched with the quality criteria used in the field of information security:

- Integer
- Confidential
- Available

As seen in figure 1, some of the criteria are complementary, while others partly overlap.

**Figure 1: Quality criteria of records management and information security**



The information security definition of integer partly covers the ISO 15489 definitions of authenticity and integrity. Availability implies that a record can be retrieved and represented.

Every records management criterion is divided into four quality levels, related to business requirements, as described in table 1.

**Table 1: Levels of records management quality**

Level	Authentic and integer
0	<i>Not sure:</i> the business process allows that there is no guarantee that the information is authentic and integer.
1	<i>Protected:</i> a basic level of guarantee for authenticity and integrity is required.
2	<i>High:</i> the business process allows little violation related to authenticity and integrity.
3	<i>Absolute:</i> conclusive evidence about author, moment of creation, content, and changes, is necessary.
Level	Retrievable
0	<i>Not necessary:</i> information may not be retrieved, without any consequence.
1	<i>Necessary:</i> information may incidentally not be retrieved.
2	<i>Important:</i> if necessary, information can be retrieved with special (incidental) effort.
3	<i>Essential:</i> information can be retrieved in a timely and efficient manner.
Level	Interpretable
0	<i>For those directly involved:</i> persons directly involved are able to interpret and understand the information.

1	<i>For a broader group in the organization:</i> information can be interpreted and understood by persons not directly involved in the process, shortly after closure of the case.
2	<i>For users outside the organization and through time:</i> information can be interpreted and understood by users outside the organization and after closure of the case.
3	<i>For users at a large distance in space and time:</i> information can be understood and interpreted by persons and stakeholders who are at a great distance from the original business process and its information.
<b>Level</b>	<b>Displayable</b>
0	<i>Not necessary:</i> information cannot be displayed without any consequence, even not by authorized persons.
1	<i>Necessary:</i> information cannot be displayed incidentally, even not by authorized persons.
2	<i>Important:</i> if necessary, information can be displayed with special (incidental) effort.
3	<i>Essential:</i> information can always be displayed by authorized persons.

For each criterion, indicators were formulated and translated into questions that were not too technical for persons not familiar with records management terminology.

Indicators are, for instance:

1. The impact of financial, political, reputational or health risks caused by bad quality of information.  
Rationale: the use of information of bad quality may have an impact on decisions at a financial, political, reputational or health level.  
This indicator affects all quality criteria.
2. Legal requirements related to the process (time available to finish the process).  
Rationale: timely delivery of a product is a legal requirement.  
This indicator affects the ease of retrieving records.
3. Legal requirements related to the form and status of records.  
Rationale: legislation, rules, and procedures may prescribe the formal characteristics of a record.  
This indicator affects the authenticity and integrity of records.
4. The extent to which partners, law enforcers, or accountants have to rely on information in a later phase.  
Rationale: persons involved in other processes may need information on this process.  
This indicator affects all the quality criteria.
5. The number of times a process is executed.  
Rationale: the more a process is executed, the more important the quality of information becomes.  
This indicator affects all the quality criteria.
6. Retention periods.  
Rationale: the longer information has to be preserved, the more important it is to ensure it can be used in future.  
This indicator affects the interpretability and displayability of records.
7. The quantity and complexity of the information.  
Rationale: the more information in a case file, the more important it is to be able to browse through it.  
This indicator affects the ease of retrieving records.

Indicators and rationales can all be questioned. Separately, they tend to overemphasize one little aspect of the quality of information. Taken together, the indicators give a more balanced overview of the quality requirements of information in a process.

The outcome of the questionnaire is a risk level, information classification level or information quality level, varying from 0 to 3 for the combination of the four records management quality criteria. The quality criterion with the highest score determines the overall score.

#### 4. RECORDS MANAGEMENT REGIMES

What are the consequences of these quality levels, in terms of records management measures? The records management risk approach distinguishes three fields of records management measures. Two are to be implemented in applications and one consists of procedures and is thus concerned with responsibilities and organizational culture. The three include for each quality level:

- A list of metadata, based on the ISO 23081 standard [4] and a Dutch metadata guideline [5];
- A list of functional requirements for applications, based on the Dutch standard NEN 2082 [6] and ISO 16175 [7];
- A list of procedures, describing activities related to the management of records.

The highest classification (level 3) requires that the full set of metadata, functional requirements, and process measures be implemented. This also includes a preservation regime for permanent preservation. At the other end of the scale (level 0) no records management measures are required. In other words, “records management does not care what the business is doing with its information.” Levels 1 and 2 require a subset of measures.

Classification outcomes are documented in a central registry. The ideal is to have an overview of all municipal processes with their classification level for records management and information security, as the basis for a plan, do, check, act cycle.

#### 5. IMPLEMENTATION

The risk approach has been used for approximately 50 processes in Rotterdam. Most of the classification levels are high (2 or 3). This should not come as a surprise: most of the processes that are analyzed are chosen because they are considered important by the business. Processes on legal complaints, domestic violence, debt mediation, fraud research, recovery of money, etc. have a high risk level. However, the process of issuing a Rotterdam event year card for instance scores a risk level of 1.

The added value of the risk approach is that the business is aware of the value of its information, realizes that good management of information is necessary, and is more inclined to invest in appropriate measures.

Owners of business processes in risk level 2 and 3, making use of business applications, are advised to link these business applications with a standard, integrated document and records management tool. In that way, the business is sure that functional and metadata requirements are met. If it is not possible, records management functionalities (and required metadata) are built in the business applications.

## 6. CONCLUSIONS

This paper presented the new approach to records management in the city of Rotterdam. The transition from a traditional application-driven to a process-centered approach was necessary because the technological approach failed, and did not take into account organizational changes and cultures. To address this challenge, a roadmap for records management was developed. In contrast with the previous approach, a more integrated view of records management was taken, including technical, cultural, and policy elements. The new approach is based on a risk analysis. Inspired by the characteristics of a record, a risk methodology has been developed in order to assess the required quality of information. The risk classification is the starting point for further action. Four records management regimes have been identified, ranging from no risk to high risk. The specific city of Rotterdam interpretation of risk analysis is helping to raise awareness in the business about the value of information and it is one of the principles that will move records management to a higher level.

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