



Introduction to the course

This introduction does not contain the actual course material. Before you start studying the course, we want to inform you of our intentions with this course, of its structure and content, and of the working method we expect you to follow.

1. General course information

A core competence of graduates who work at the intersection of IT deployment and the design or redesign of business processes is the ability to contribute independently to the integration and improvement of IT-based work systems. Accordingly, in the Data Governance course, you will be describing, analysing and assessing an organisation's Data Governance situation in a structured way. You will be expected to answer the following central question:

In view of the importance of data for the organisation, does the organisation take a structurally sound approach to manage its data assets?

The *importance of data assets for the organisation* can be determined on the basis of a study and analysis of opportunities and threats associated with the effects of data on the organisation's performance and competitive position.

The *soundness of the organisation's approach to manage data assets* can be gauged by identifying strengths and weaknesses related to the data management processes executed by the organisation, for example data quality management, data architecture management and data security management.

The central question of the course can then be answered with a so-called SWOT-analysis. You will take a structured approach following a step-by-step plan.

The Data Governance course has been developed at the Faculty of Management, Science & Technology (MST) of the Open University of the Netherlands. It is a course at the scientific master's programme level with a study load of about 280 hours (10 EC).

The course material consists of the following components:

- a reader;
- an Step-by-step Data Governance Audit Plan;
- a workbook (the course document you are currently reading);
- supplementary articles;
- answer templates;
- rubrics for feedback on and assessment of the study tasks.

All current information about the course as well as all electronic course materials can be found on the course website.

We recommend that you read this introduction carefully. Following this, you can begin the first study task individually straightaway.

2. Data Governance audit

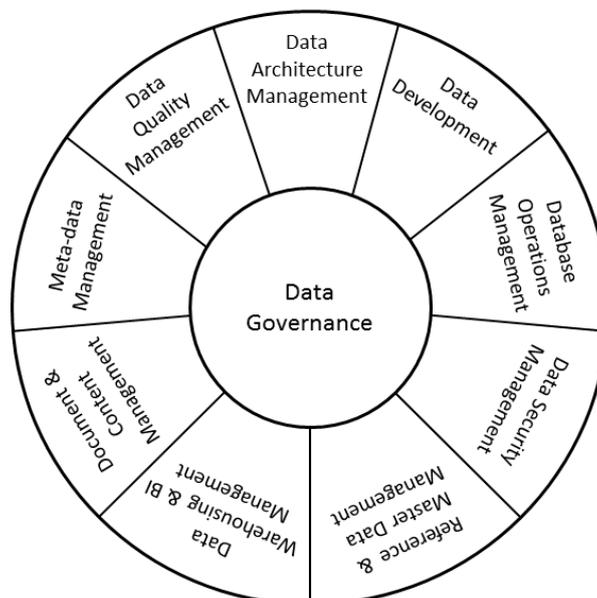
The term Data Governance is a comprehensive concept. Three definitions are given here:

- Data governance specifies the framework for decision rights and accountabilities to encourage desirable behaviour in the use of data (Wende, 2007)
- Data governance refers to who holds the decision rights and is held accountable for an organisation's decision-making about its data assets (Khatri & Brown, 2010).
- Data governance is the exercise of authority and control (planning, monitoring, and enforcement) over the management of data assets (Brackett et al. 2010).

The definitions demonstrate that there is a high degree of consensus on what data governance is because all definitions refer to decision rights and accountabilities in relation to data as an asset. However, some authors also use the term information governance, e.g. Kooper et al. (2011). These authors define Information governance as: “involves establishing an environment and opportunities, rules and decision-making rights for the valuation, creation, collection, analysis, distribution, storage, use and control of information; it answers the question “what information do we need, how do we make use of it and who is responsible for it?”. Their definition of information governance is based on the definition of Khatri& Brown (2010), but they argue that it is information (being interpreted data) what is of added value for an organisation instead of just data.

The Data Management Association (DAMA) places Data Governance in the wider context of Data Management in their “DAMA Guide to the Data Management Body of Knowledge”(Brackett et al. 2010). They consider data governance to be part of the overall data management function. Besides Data Governance this includes functions such as: Data Quality Management, Data Architecture Management, Data Security Management, and Meta Data Management (for complete overview see figure 1). The decision rights and accountabilities defined as part of data governance, influence the actual data management in the other data management functions of the DAMA model,

FIGURE 1. DAMA wheel: overview of data management functions





A good design and implementation of Data Governance increases a company's effectiveness by organising the data assets and data management activities in such a way as to:

- Achieve that the business is provided with the required data for achieving the business goals;
- Ensure the security, reliability, and integrity of strategic data assets;
- Improve the use of data in all facets of the organisation;
- Ensure appropriate management of the data assets at the organisation level.

In many organisations, the volume and importance of data has increased considerably in the last decade. Data has become an important asset for organisations that is supposed to result in improved decision making and to generate business value. Consequently, the importance of adequate Data Governance and appropriate leadership within the organisation has increased considerably. This is reflected in questions such as:

- What design and organisation of the data management function best supports business activities and widens their scope?
- How should data be governed within the organisation in order to manage the data related risks correctly and to ensure the value of this strategic and unmissable business resource?

Questions such as these give every organisation a reason to submit its Data Governance to careful and structured periodic scrutiny.

2.1 Audit and SWOT analysis

This course takes the shape of the actual design and implementation of a Data Governance audit (Hofstee et al., 2017; Botha & Boon, 2003; Buchanan & Gibb, 1998, 2007, 2008) in an existing organisation. As professionals, graduates should be able to obtain relevant research results about the Data Governance situation by designing and carrying out such an audit.

Following Khatri & Brown (2010) (who on their turn based their data governance framework on the work of Weill (2004) on IT Governance), we define an analysis of the Data Governance situation as comprising an audit that describes, analyses and assesses a number of main categories of decisions concerning data assets in an actual organisation. This includes Data principles, Data quality, Meta-data, Data access and the Data lifecycle.

In the audit, you will weigh up your analyses of strengths and weaknesses against opportunities and threats using a SWOT analysis (Dyson, 2004; Weihrich, 1982). These analyses should allow you to draw conclusions about the Data Governance situation in the organisation.

With these conclusions, recommendations can be made to the management for directions for improvement that are in line with the desired business strategy.

For an extensive description of the Data Governance audit as a specific type of audit, we refer you to the article by Hofstee et al. (2017), which is included on the course website.

2.2 System of standards: developing your own reference models

An audit requires an adequate system of standards. However, there is no generally accepted system of standards for use in a Data Governance audit. There is, however, a considerable body of knowledge in the

academic literature, as well as in the practitioner literature (e.g. DAMA's Data Management Body of Knowledge), that can form the basis for *developing your own* system of standards.

A good example of this is the reader composed for this course. We consider the articles in the reader as a state-of-the-art source for developing reference models and setting up a system of standards. It is the audit team's task to develop reference models for many Data Governance subjects on the basis of this source (you can of course consult supplementary literature as well).

In this course, we define reference models as a number of general, interrelated statements on what would be an adequate (sensible or wise) decision in which circumstance, with reference to the Data Governance subject concerned. From these, you will infer a decision rule, meaning you will have determined in advance which empirical observations to use for classing these observational facts as opportunities, threats, strengths or weaknesses.

Reference models are statements based on concepts, frameworks and theories about a number of specific Data Governance subjects described in the reader.

You will use a reference model as defined here as 'perspective' from which to observe the relevant Data Governance subject in the organisation: you will describe, analyse and assess. In order to do so responsibly, you will require specific research questions (for the description) which you will infer from the reference model. You will have encapsulated the 'perspective' (for the analysis and assessment) in the decision rule.

2.3 Complex tasks

The work related to a Data Governance audit inherently consists of very complex tasks, which is why we believe that acquiring the competences needed to implement them requires a complex learning process. The skills needed for carrying out a Governance audit are internalised in practice above all else, which is why your study activities will be guided by so-called authentic study tasks: assignments that represent real-life tasks that auditors may come across in the course of their work.

This means the study tasks have been designed for you to:

- Specifically search theoretical sources for knowledge and insights required to carry out the study task. With this knowledge and these insights, you can design reference models with which to recognise and apply the Data Governance subjects in the organisation. You will do this with the help of the textbook and the articles;
- Have supporting information to carry out the study tasks; i.e.: the study task will offer pointers about to what to look for or review in the sources;
- Have the procedural information needed to carry out the study tasks. Procedures are intended for carrying out routine aspects of tasks; in this course, this is the Step-by-step Data Governance Audit Plan.
- Have the opportunity to do additional exercises (parallel to carrying out the study task), such as the examples and the sample answer included in the Step-by-step Data Governance Audit Plan.

In this approach, you should first take careful note of current theory in the Data Governance area of expertise as described in the reader before starting on the Data Governance audit or parts thereof. The study tasks will guide you in doing so.