Data Strategy Model

A Reference Model to Develop Data Strategies

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1 Introduction and outline

Data, data, data … never before companies have had as much data as today. And the potential to gain profitability from and with data is enormous – but often not used! Either there is no awareness or a lack of qualification within the company that makes it hard or even impossible to benefit from those data. A comprehensive data strategy can enable companies to benefit from data. But data strategies are not so easy to establish and transform – and they are not even available as a model! Therefore, the at hand reference model can help closing the gap between the "we need" and the "we have" a data strategy.

The Master Thesis answers the questions why a data strategy is relevant and why a reference model is helpful, where in the company and how a data strategy has to be established, identifies the most important components of such a strategy and creates a reference model for data strategies. Complemented with guidelines for the transformation and for a maturity model, a RACI model for roles and responsibilities and an implementation roadmap, the master thesis presents a feasible reference model for data strategies.

In: M. Gäde/V. Trkulja/V. Petras (Eds.): Everything Changes, Everything Stays the Same? Understanding Information Spaces. Proceedings of the 15th International Symposium of Information Science (ISI 2017), Berlin, 13th–15th March 2017. Glückstadt: Verlag Werner Hülsbusch, pp. 274–277.

2 Developing the reference model for data strategies

Based on a literature and market research, possible components for a data strategy were identified. Ensuing, the identified components were assessed and a justification for each of the identified components has been made to decide on the acceptance for the data strategy model.

Further, similar components were grouped and functions/features introduced to consider complementary components. The reference model also distinguishes supporting/dependent functions. But unlike the components or functions/features, they are not directly related to the components of a data strategy however they are important for the transformation.

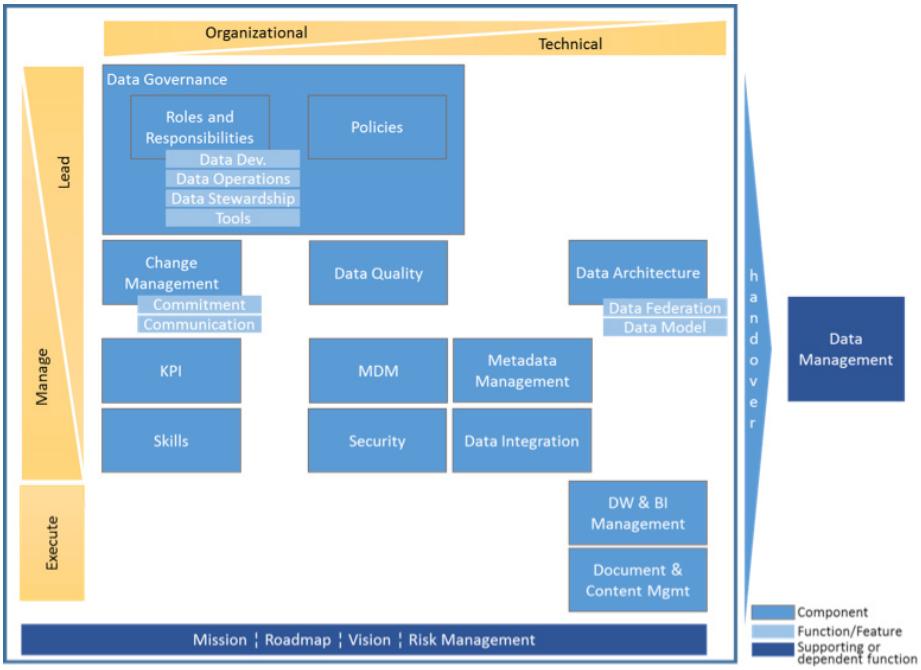

Fig. 1 Data strategy reference model

In addition, implementation levels and a differentiation between a more organizational or technical approach were introduced. This structure supports the later transformation in the company and with that the responsibilities: the implementation levels “lead”, “manage” and “execute” mainly support the

role allocation and the differentiation between organizational and technical approach facilitates the task allocation.

With the selected components and functions, the data strategy reference model has been developed:

3 Putting the data strategy into action

With the developed reference model, the basis for implementing a data strategy has been established. In order to be able to put a strategy into action, transformation guidance is necessary. The master thesis provides guidelines and templates for the following transformation steps: First, a maturity assessment of each of the components/functions has to be done. With the result – the gap between the current and the future state – it becomes clear for a company which of the components/functions need to be implemented, enhanced or even "ignored" for the moment in case they are already well established. Second, a RACI model helps companies to identify the most important roles concerning the transformation and further development of the data strategy. With the identified gaps (maturity model) and the identified persons responsible (RACI model), the transformation itself can be executed. For this step, the master thesis also provides information in the form of instructions for the strategy program including a strategic management model.

4 The role of information science

Information scientist can play a leading role in the area of data strategies since developing and transforming data strategies requires a unique mix of skills: a data strategist needs to be able to understand the technical dimension of a data strategy since he or she is responsible for a well implemented data architecture, security concept and other more technical oriented components and functions of a data strategy. Furthermore, organizational and economic skills are required to lead and manage for example responsibilities, policies and the important change management. Last but not least, strategic thinking is expected to embed the data strategy in the company and to lead it into the

future where topics like big data, AI or semantic technologies are dependent on a comprehensive data strategy.

5 Outlook

This data strategy reference model is a first work in this specific area. The field is open for more interesting research regarding the assessment and trends of identified or even new components, the positioning of the data strategy within the company, the integration of semantic technologies, big data and many other interesting topics where information scientist can make a huge contribution.