

Abstract

Titel: Data and Information Architecture Governance and Processes in a federated IT Organization

Kurzzusammenfassung: Data and Information Architecture is a part of the overall IT architecture. As a part of architecture, its objective is to reduce the complexity of the information landscape within the bank to save costs. At Credit Suisse, enterprise-wide data and information architecture is currently at foundation level. Therefore, there are efforts made to enforce the data and information perspective in IT architecture and revise the architectural approach. This thesis outlines the current situation within Credit Suisse IT and describes the revised approach for processes and governance elements in the field of data and information architecture.

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Ausgangslage, Ziel, Vorgehen, Erkenntnisse:

Starting Situation

Data and information architecture is a discipline of enterprise architecture. Within Credit Suisse data and information architecture is in different organizational units of Credit Suisse differently defined and practiced. With the growing complexity in the IT-landscape, the challenges to control the data and interface universe in an efficient and effective way grow as well.

This situation and the increasing cost pressure in the whole banking industry lead to the demand of a more efficient data landscape. Credit Suisse IT decided to revise and enforce the currently existing data and information architecture framework. The analysis of the current framework and the development of a new approach are the topic of this thesis.

Objective:

The bachelor thesis focuses on the topic of analysis and definition of processes and governance for the development of global data and information architecture. This project has the following objectives, which are derived from the mentioned mission:

- Analysis of standards and best practices
- Identification of process steps that involve data and information architecture
- Derive Governance elements to run data and information architecture effectively and efficiently
- Show how the results can be implemented in a sustainable way
- Validation of results and identification of additional needs

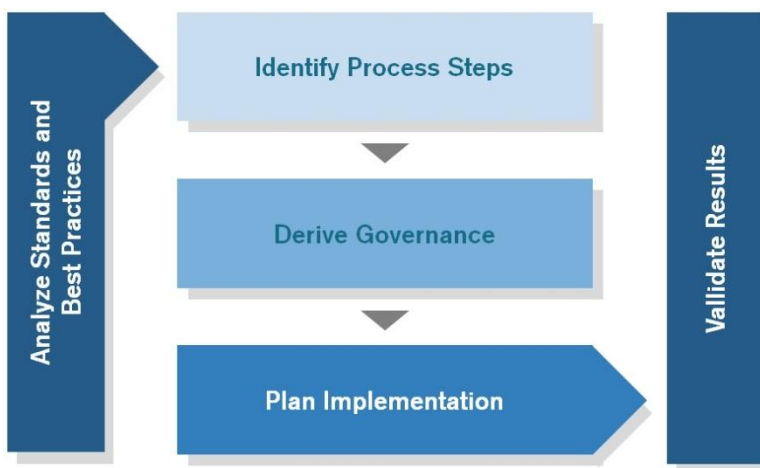


Figure 1 Research Approach to Derive the Target Framework. Source: own figure.

Approach

The development of the data and information architecture framework is based on two pillars, namely the research of standards and best practices found in reference frameworks and the analysis of the current framework at Credit Suisse.

At the time, organizations and experts have developed a big variety of architecture frameworks in the IT area. Most of the frameworks are enterprise architecture frameworks and contain the whole aspect of IT architecture and do consider data and information architecture as an important part of overall architecture. The two frameworks analyzed in the thesis are the Zachman Framework for enterprise architecture and TOGAF framework. Both of them strongly consider data and information perspective in their methodology.

The second pillar of the development of the target framework is the framework that is currently in place at Credit Suisse. Therefore the data and information architecture framework that is currently in place was investigated and analyzed for strengths and weaknesses. These findings then led to new measures in the target framework that will help to optimize the data landscape.

Findings

A positive element of the current data and information architecture framework is the data and information architecture pyramid. It illustrates the division of business objects into different layers of scope and abstraction. This is important to handle the data models in an environment like Credit Suisse. The layers are divided into conceptual, logical and physical models, which all serve different needs. Conceptual is near to banking business and oriented towards business stakeholder, whereas logical models are the technical interpretation of conceptual models and physical models are blueprints for the implementation. This separation of the different layers is very important to support architects and engineers in their job of designing and implementing managed data sources.

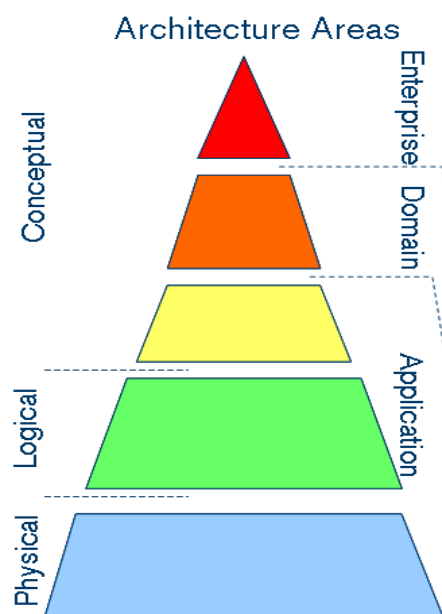


Figure 2 Data and Information Architecture Pyramid.
Source: CS Internal.

Improvement of data sources is only possible if all objects are assigned to unique owners that are responsible for the maintenance and improvements. Therefore, the new framework assigns every object to a position on business side and in the IT departments. As a result, every object has a unique ownership on business and IT side that operates as single point of contact for all issues regarding the data object. This ownership declares responsibility and authority of all relevant decisions for a data objects.

A weakness in the current framework is the mixing of analysis and design phase within IT projects. There is no strict separation of business engineering and solution architecture. Today's some major design decisions are preconceived within the analysis phase. Therefore, the new framework strictly separates analysis process from the design of a solution. This results in the modification of data models, which change their content to be more implementation agnostic. Finally, the analysis is pure research of the requirements and solution design takes all decisions regarding how the analyzed requirements will be implemented. This enforces the development of real solution candidates within projects.

These three changes are main renewals of the new data and information architecture framework. But the new framework needs to be established in a holistic way and needs to be supported by standards and guidelines that help practitioners in their daily work. In addition to the description of the target governance and processes, the thesis includes a roadmap with major steps that need to be accomplished to successfully implement the new framework.

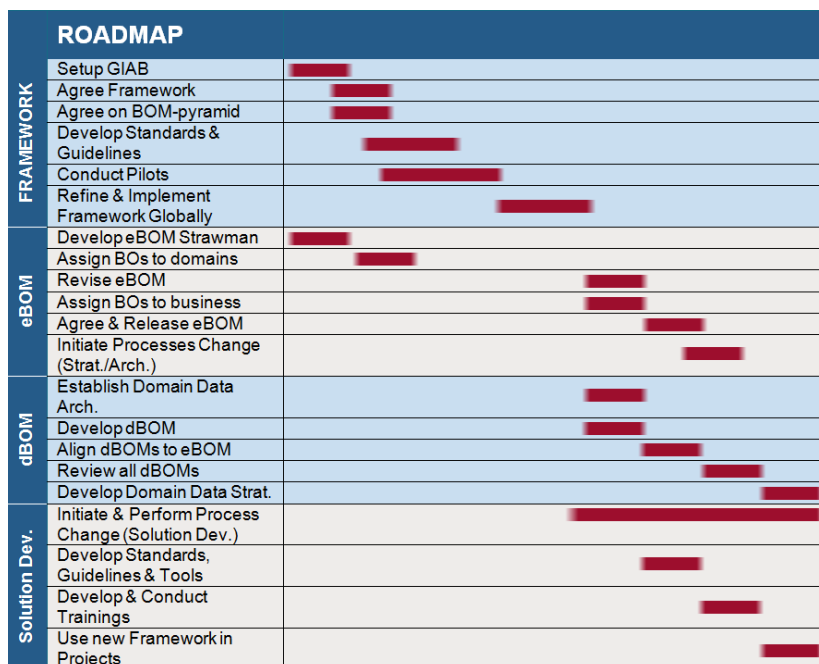


Figure 3 Roadmap to Implement and Establish the new Framework