

Thesis at the BMW Group

Sharing Data with Third Parties – Data Governance Framework Design in a Digital Ecosystem

Motivation:

Today, previously unimaginable varieties and volumes of data about various business operations are collected, aggregated, and analyzed. These data are valuable resources for multiple inter and intra organizational stakeholders to extract value consistent with their interests and priorities, which may support or conflict with other stakeholders' interests. Data resources are typically treated as proprietary assets of the organizations (and IT platforms) that capture or otherwise acquire data. However, if we consider data as societal resources rather than (or in addition to) privately held assets, then how data governance takes shape and whether governance addresses diverse goals, priorities, and interests become important research and policy questions.

Data governance is a broad concept that includes the processes and institutional structures for managing data, and the policies and practices for granting accessing to and authorizing acceptable uses of data. Information technologies and systems not only generate the growing stockpiles of digitized data but are also crucial elements in data governance policies and practices.

The goals of this thesis is to stimulate and advance academic and practice-focused knowledge on cross-company data governance by designing a governance process model for sharing data with third parties for addressing “*grand challenges*”. We define Grand challenges as critical cross-company problems, which might be solved through science, technology and innovation but which require moving beyond existing organizational, technological, and scientific approaches. There is immense potential for shared data resources to be used to address grand challenges in production and operations management such as traceability, sustainability, quality management, predictive maintenance to name just a few. How potentially relevant data are governed – by whom, for what purposes, on whose behalf and through what sociotechnical actions and structures – present imperative questions to business leaders, policy makers, technologists, and researchers.

The focus of this work can be narrowed down as follows:

- Familiarization with the fundamentals of data governance and established frameworks in the company (practice)
- Identifying relevant theories as a fundament for X-Company data governance process design (research)
- Inspired by relevant practices and theories: Iterative design and implementation of a data governance framework for sharing data with third parties following BPMN 2.0 and using an action design science approach
- Evaluation of the framework using real data use cases coming from an automotive ecosystem

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