PROJECT FACTSHEET

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Rational Architecture

Linking enterprise architecture principles with their architectural design decisions

Inspiration

Modern day organisations are in a constant state of change due to changing market situations, new products, novel technologies, etc. Organisations increasingly use enterprise architecture to direct change processes by steering their transformation and innovation. In creating enterprise architectures, several design decisions have to be made, which are to a large extent based on assumptions about the existing situation.

Innovation

Carried out within the Enterprise Engineering unit of the Service Science & Innovation department at the Luxembourg Insitute of Science & Technology (LIST), the aim of RationalArchitecture is to explicitly link architects' assumptions to architectural design decisions. In doing so, architects justify their design decision and trace back previous executions for auditing purposes. The resulting traceability between decisions and their assumptions (e.g., principles, drivers, goals) will enable a better underpinning of architectures. Moreover, architects will be able to analyze the impact during changes in assumptions. This is beyond the ability of existing mainstream enterprise architecture tools. To that end, the project’s rationalization approach will provide techniques and methods to optimise business design and guarantee agreement with corporate strategies.

Impact

The project will result in a logic-based framework to capture the rationalization of architecture-related design decisions, and to reason about the relationship between these decisions and their underlying assumptions. The framework will cater for uncertainties in the underlying assumptions, as well as negotiation between different stakeholders involved in the creation and implementation of architectures. The framework will be specialized further towards two classes of properties of enterprises and their IT: security and modifiability, while the relevance of the results will be validated through a number of real-world case studies.

Partners

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