

# On the Capability Notion in Business Informatics

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The business environments of today are changing rapidly, entailing complex and dynamic organizational constellations. Enterprises operating in these conditions need to have the capability to deliver their services in a variety of business contexts with sustainable quality and moreover to leverage them to competitive advantage. Lately the notion of *capability* has gained a growing attention, due to a number of factors: the notion directs business investment focus, it can be used as a baseline for business planning, and it leads directly to service specification and design.

Linguistically, *capability* means *having power of doing something*. Historically, the notion of capability has been examined in Economics [1], Sociology [2, 3], and Management Science [4, 5, 6]. Capability is seen as originating from competence-based management and military frameworks, offering a complement to traditional enterprise modelling approaches by representing organizational knowledge from a result-based perspective. Thus it is as an abstraction away from the specifics of how (process), who (agent) and why (goals), i.e. with focus on results and benefits.

More recently, capability is gaining more attention in the context of business-IT alignment. In the specification and design of services using business planning as the baseline [7], capability is seen as the fundamental abstraction to describe what a core business does in the sense of the capacity to achieve a desired outcome. It is viewed as a hierarchy, where each level is a decomposition of one or more capabilities at a higher level. Capabilities are further mapped to solutions, such as IT applications. Similarly, in [8, 9], capability is seen as an ability or capacity for a company to deliver value, either to customers or shareholders, right beneath the business strategy. At the same time capability should allow fairly straightforward integrations with established enterprise model components, such as goals (through “goal fulfilment”), processes (through “modelling”), and services (through “servicing”). The latter relation, specific to service-oriented engineering has been described in Service Oriented Architecture [10], i.e. a capability is seen as existing business functionality able to address a well-defined need implemented through a service accessible through an interface. In addition to the outlined related concepts, in [11], capability is set closely to the notion of business context to enable an enterprise to achieve business goals in varying and dynamically changing environments.

However, the knowledge, role and the usage of enterprise capabilities in the named disciplines in terms of people competencies and the capacity of the resources, are still unclear and open to different interpretations. How to utilize “capability” knowledge in

enterprise modelling and architectures as a foundation for sustainable Information System planning and management in the presence of varying social and business contexts is likely to yield substantial results in both research and practice in years to come. In the meantime, we endeavour to address the concerns of solving the relation between capability and services, capability-driven methods in business process engineering, capability and variability, capability-driven cloud applications, and technology support for capability-based tools, to name just a few.

## References

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