

IT Service Processes – State and Open Issues

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- Extended Abstract of Industrial Talk -

IT services are an important means to achieve competitive advantages by creating new business models or by reducing costs. Furthermore, there is an increasing pressure to provide IT services economically. Therefore, the provision and management of Information Technology (IT) services has become an important topic in many enterprises. IT services are provided and managed by so-called IT processes. They control activities to transform IT resources and coordinate the people involved in the IT processes.

Unfortunately, there are only a few academic approaches in the area of IT service processes. A first approach to capture the special properties of service process is presented in ServiceFlow [KIWe01], [WeKI04], [WeKI03]. It describes how to model service processes and how to execute them. In [BöJK03] a modularization approach for services in the information technology business is proposed. It is based on a conceptual model of IT-services that contains integration and system services. The approach is further developed in [BWFK04] but does not take into account IT processes.

Conversely, the IT Infrastructure Library (ITIL) [ITSMF] is the de facto standard for the design of IT-processes [Schm04] in industry. It is an – informal – collection of best practices for IT service processes. ITIL has been initiated in the 1980s by the British government to avoid that knowledge about the appropriate design of IT service processes be built up from the scratch for every single project. ITIL is publicly available and can be used free of charge. Therefore ITIL is a kind of “open source” for IT service processes.

ITIL is composed of six management areas which attempt to fill the gap between business and technology as shown in **Fig. 1**. The most important one is service management, which contains service delivery and service support. Service delivery defines the services to be provided to support the business. It covers subjects such as service level management, capacity management etc. Service support ensures that customers have access to the services required to perform their business. The Business perspective ensures the alignment between business and IT. It is also responsible for the procurement of IT services and the business continuity planning in case of a disaster. Infrastructure Management controls the management of networks and computer installations. The security management area gives best practices for the provision of services in a secure way. Application management is about the mapping

between the software lifecycle and the processes defined in ITIL. For example change requests recorded in service support have to be appropriately mapped to software changes. Implementation planning is a collection of best practices for the implementation of the processes described in ITIL.

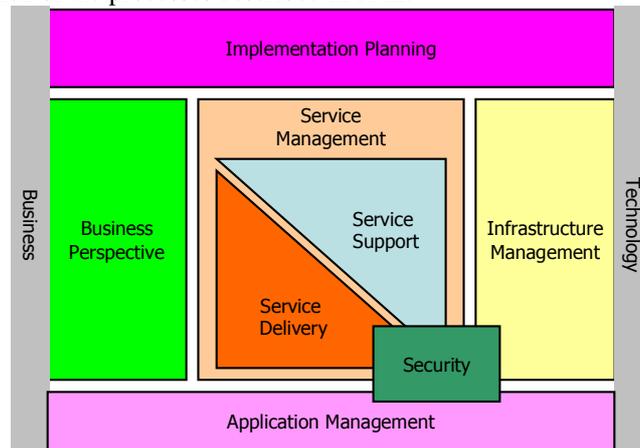


Fig. 1. : ITIL management areas

ITIL helps many organizations to optimize their IT service processes and gain substantial benefits. However, there is a growing dissatisfaction with the way ITIL processes are designed. Most important, the implementation effort of ITIL processes is too high. Especially small and medium sized enterprises are kept from introducing ITIL: they are frightened of the effort. One reason is that the process descriptions given in the ITIL documentation do not contain enough details to be directly executable. They have to be extended to create executable processes. Unfortunately, there are many ways to do this because the ITIL documentation contains many ambiguities and not enough details. As a result, a multitude of ITIL dialects have developed in practice, which are not always compatible. These vendor-specific dialects impede the quick combination of products of different vendors and therefore cause the splitting up of the ITIL consulting market.

These problems have their roots in a lack of formalisms to describe IT processes and of an appropriate method to design IT service processes. The design of IT service processes is particularly difficult, because the services provided by them are also products offered to the customer. They are at the same time processes and products. Therefore IT processes have to be flexibly adaptable to the customer's requirements while being offered at a competitive price. This creates a dilemma: individually tailored processes are unique and therefore offer no possibility of reuse of parts of the process. On the other hand, standardized processes offer reuse and economies of scale. Thus, there is a conflict between flexibility and the capability to economically provide services.

To resolve this dilemma and to provide a formal basis to IT processes, the definition of a research agenda is necessary. A first point on the research agenda is the definition of a metamodel for IT service processes. Currently, there is no common

understanding about the model elements that are necessary to define IT service processes completely and consistently. The second point on the research agenda is the creation of a design method for IT service processes that reduces the conflict between flexibility and the capability to economically execute service processes.

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