

# Chapter 11

## The Role of Services in Governmental Enterprise Architectures: The Case of the German Federal Government

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### ABSTRACT

*In the public sector, Information Technology (IT) as a means to support governmental processes is as important as in industry today. Delivering high quality eGovernment services requires an efficient and effective IT support. This IT support can only be provided if the requirements specified in the processes are correctly and completely transformed into IT solutions. Services are seen as major means to support this transformation. In this chapter, the authors propose a method which systematically translates business processes into services. The method contains 1) a data model describing the structure of the work products of the method, 2) a technique for emergent data modeling, which allows its users to customize the data model according to the government's needs, 3) a role model describing the required competen-*

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*cies for each step, and 4) a process model describing the required steps to derive services from business processes. To succeed in a governmental context with diverse, federative organizational structures, the method needs a high degree of flexibility. In particular, the proposed method has been designed to be compatible with different process modeling techniques.*

## **1. INTRODUCTION**

Electronic Government (eGovernment) has a long tradition in Europe. This long tradition was recently underlined by the Ministerial Declaration on eGovernment (Ministers of the European Union, 2009). Among others, this so-called Malmö declaration strives for designing eGovernment services around the needs of the users, to reduce the effort for using these services and to increase the availability of public sector information (p. 2f).

The Malmö declaration was also influenced by Europe's Digital Agenda (European Commission, 2010c). The Digital Agenda describes problem areas, political goals, and actions for the development of Europe's IT. The major elements of Europe's Digital Agenda are the notions of business process orientation and service orientation (p. 15). Business process orientation as well as service orientation have been refined in more technical terms in the European Interoperability Strategy (EIS, European Commission, 2010a) and the European Interoperability Architecture (EIF 2.0, European Commission, 2010b).

Especially the EIF emphasizes the fact that eGovernment is more than the communication between administrations and citizens (A2C) or the communication between administrations and businesses (A2B). It particularly includes the communication between different administrative bodies (A2A). Although this communication is "invisible" to the citizen and the business, it directly supports the goals of increasing the efficiency and effectiveness of public services as expressed in the Malmö Declaration and the EIS (European Commission, 2010a; Ministers of the European Union, 2009). Therefore, we understand eGovernment as follows:

*eGovernment is the IT-supported exchange of services between public administrations and citizens (A2C), between public administrations and industry (A2B), and between different public administrations (A2A).*

Providing such administrative services efficiently requires that these services are supported by IT. The IT support, however, is only effective if the requirements of the business processes are correctly and completely translated into IT solutions. In this chapter, we cover the first step of this translation: We propose a method to systematically derive services from business processes.

*Research Question: How can services systematically be derived from business processes?*

Thereby, we understand the term *service* as follows:

*A service is a set of requirements, which is already supported by IT solutions or will be realized by IT solutions in the future. By IT solutions we mean any software, or component thereof, which is capable to realize a service.*

Given this definition, services are the crucial link between business and IT. On the one hand, services are extracted from business processes and are directly linked to them. On the other hand, IT solutions may implement one or more services so that these IT solutions are also linked to services. Services enable the business process engineer to support his/her processes with IT without any knowledge of the internal structure of the IT solutions. In the other direction, the solution owner does not need to have complete knowledge of the

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