

## Chapter XII

# Enterprise Architecture and Governance Challenges for Orchestrating Public–Private Cooperation

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### ABSTRACT

*The ambition of the Dutch government is to create a demand-driven government by means of effective use of information and communication technology. This requires not only public, but also private parties to interact with each other. This is a complex endeavour as private and public organizations have their own goals, systems and architectures that need to be coordinated. Within this setting, a new architecture should be created for managing and orchestrating the interactions among governmental and private organizations. In this chapter we present an architecture aimed at supporting the coordination of public and private parties for creating a one stop shop and the main challenges therein. We found that a public-private service network poses higher requirements on the architecture of a service network, whereas the variety in systems of the various organizations and different aims make it more difficult to develop such an architecture. Furthermore, it is difficult to isolate architectural challenges from governance aspects, as many architectural issues need to be complemented by governance mechanisms. Architecture and governance cannot be considered in isolation.*

## INTRODUCTION

It is the ambition of many governments to improve service-delivery to citizens. One way to do this is by ensuring a widespread and effective use of information and communication technology to create a demand-driven government. Many governmental organizations offer products and services to citizens. From the citizen's perspective, the services provided by one organization are often only one part of the total service process they require. From their point of view, their situation involves multiple steps to be taken, and some of these steps have to be fulfilled by services performed by various governmental organizations. This is especially true in countries with highly fragmented governments where the government consists of many agencies and organizations that each have a relatively high degree of autonomy. To fulfil the objective of demand-driven e-government, the focus should shift from services offered by a single organization to an integrated service-delivery process fulfilling citizens' needs. From the citizen's perspective, these services do not stop at organizational boundaries. Therefore, many citizens' requests require multiple organizations to interact with each other. These cross-agency service-delivery processes need to be coordinated.

In the Netherlands, this call for coordination recently gave rise to the development of a national reference architecture (for a comprehensive description see the chapter 'A Service-Oriented Reference Architecture for E-Government' by Lankhorst and Bayens in this book). The Dutch Government Reference Architecture (abbreviated as NORA (Nederlandse Overheid Referentie Architectuur) in Dutch) provides a common ground for developing the electronic government (Kenniscentrum, 2007). It consists of design principles arranged by an architecture framework based on the Zachman framework and models for the (re)engineering of (electronic) government service

delivery (ICTU, 2007). The NORA is based on a Service Oriented Architecture (SOA), which is a fundamental principle, but it also includes very specific guidelines. Some of those principles are mandatory (by law), some are advisory. The task of this reference architecture is to guide public organizations in the direction of a responsive, demand-driven and efficient government.

Demand-driven service-delivery does not stop at the boundaries of individual organizations, nor does it at the boundaries between the public and the private sector. Private parties might be involved in the service provisioning, in several ways. Sometimes governmental services are funded by public money, but are in fact executed by private organizations. This might be considered a form of outsourcing. Furthermore, services provided by private parties can be closely related to governmental services, even so close that from the citizen's perspective, it is part of the same service-delivery process. Health care is a good example, in countries that publicly fund basic health care services, the actual care may be provided by privately held organizations. From the citizen's perspective this does not consist of separate processes at the government and the health care provider, but it is one and the same process. Finally, governmental organization might deliver their services using channels operated by private parties (Janssen, Kuk, & Wagenaar, 2008). For example, when buying a car, the car dealer also registers the car and the new owner at the responsible governmental agency. In these cases, truly demand-driven e-government requires cooperation with private organizations as well. In this chapter, the cooperation between public and private organizations will be denoted as public-private service networks, or service networks for short.

Given these public-private service networks, there is a need to go beyond a governmental reference architecture and to design an enterprise architecture that supports the cooperation between

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