

Chapter XI

The GEA: Governance Enterprise Architecture–Framework and Models

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ABSTRACT

Departing from the lack of coherent and ready-to-use models and domain descriptions for public administration, we present here our effort to build a set of generic models that serves as a top-level, generic and thus reusable Enterprise Architecture for the overall public administration domain. We have called this set of models Governance Enterprise Architecture (GEA). GEA has deliberately remained technology independent and following the Model Driven Architecture approach, GEA constitutes a computationally independent model for the domain. GEA has been derived from multi-disciplinary influences and insights and identifies two broad modeling areas, called governance mega-processes: Public Policy Formulation and Service Provision. These two, together with the object versus process perspective, form a four-cell matrix that defines four modeling areas for the GEA models. To populate these cells with models we use a challenging metaphor: we model the society - public administration interaction as a discourse to identify important elements and functions of the governance system. Until now, a large number of services has been modeled using GEA and more recently, an extended modeling effort has started with GEA being chosen for use by a national EU-country project. GEA can be also used as a knowledge infrastructure for applying semantic technologies. In this line, it has been used for creating a public administration specialization of a formal Semantic Web Service ontology, namely WSMO.

1. INTRODUCTION – MOTIVATION

In the era of a highly networked world, public administrations (henceforth: PAs) worldwide are facing similar types of problems and challenges:

- Re-inventing government in a client-focus approach
- Improving performance & quality through measurements
- Changing organizational boundaries and structure
- Building partnerships with the private sector
- Delegating decisions and responsibilities to independent agencies
- Globalization & competition
- Information Technology (IT) enabled services

The use of IT to facilitate the major efforts of reorganization, modernization and reinvention of governance has proven not to be a simple task. There is an increasing pressure on PA organizations to manage information systems and information technology as an enterprise key capital resource (Tapscott & Caston, 1994). IT-based solutions need to overcome a series of negative PA specific characteristics in order to add value to the administrative outcome:

- High complexity of the administrative procedures since many actors, many interests, and many goals are intertwined.
- Sparse, hierarchical (vertical) and low quality communication amongst PA agencies, leading to “stovepipe” or “legacy” systems both organizationally and from an information viewpoint.
- Diverged views, definitions and terminology for the same piece of information.
- Vague business processes.

Through historical analysis, we conclude that contemporary PA systems have gradually developed a great degree of internal differentiation in order to cope with a turbulent and complex external environment. However, this progress was not supported with the required level of integration, through the development of adequate internal PA interfaces amongst agencies. The result has been a highly fragmented administrative space. In addition and despite major changes in PA size, output and culture during the last century, the external PA-society interface remains mostly the same. Thus, we identify a dual communication /integration problem:

- Internally among PA agencies and
- Externally between PA and its external environment.

This has been called the “dual PA integration deficit” (Peristeras V. & Tarabanis K., 2006). Related to this, a clear business need for all PA systems emerges:

In order to manage the volume and diversity of social needs and at the same time avoid fragmentation, dissolution and a legitimacy deficit, PA systems should be reengineered and a paradigm shift of today’s modus operandi should be introduced in order to facilitate the necessary PA internal and external systemic adjustment. Specifically, PA systems should develop advanced internal and external interfaces to address the dual PA integration deficit; that is, to achieve internal integration at the administrative intra- and inter-agency level, external integration with society.

Thus, the need for inter- and intra- organizational exchange of information becomes indispensable: PAs must shift the proportion of resources dedicated to maintaining existing stove-piped systems to architected systems focusing on enterprise-wide data, processes and technology based on open architectures.

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