Chapter 4
Integrating Agency Enterprise Architecture into Government–Wide Enterprise Architecture:
The Case of Korean Government Initiatives

Young-Joo Lee
National Information Society Agency, South Korea

Shinae Shin
National Information Society Agency, South Korea

ABSTRACT

Since the Korean government mandated public entities to adopt Enterprise Architecture (EA) in 2005, 75.8% of central agencies, municipal governments, and other public organizations have adopted EA. Following a two-year project, which defined all government-level architecture components and collected relevant data from each agency's EA, the Korean Government-Wide EA (KGEA) was rolled out. As of the end of 2010, KGEA manages IT projects, information systems, work processes, data, hardware, and other related information of 809 agencies in a single repository. All information is shared with all the agencies through the KGEA portal (www.geap.or.kr). This chapter illustrates a case of how EA works for aligning an agency's IT resources with the national IT agenda and enhances IT investment management at a government-wide level. By applying the analytical framework suggested by Janssen and Hjort-Madsen (2007), the development and accomplishments of KGEA are then discussed in terms of connected government—specifically national IT investment and resource management, public service improvements, and interoperability across agencies. This case may offer practical guidance to government CIOs of other countries when implementing Government-Wide EA (GEA).

INTRODUCTION

Beginning with the development of the Technical Architecture Framework for Information Management (TAFIM) by the US Department of Defense in 1992, 67% of countries in the world are in the process of developing EA or similar programs in order to improve interoperability among public administration information systems, mitigate project duplication, and maximize the return on investment (Liimataine, et al., 2007).

Government-Wide EA (GEA, also known as National Enterprise Architecture, NEA) is aimed at ensuring interoperability, avoiding the duplication of efforts and enabling government-wide reuse. Under this conception, the term 'enterprise' refers to the scope of the architecture dealing with multiple agencies in a given country. However, the public sector EA is carried out in common but also differs slightly in form according to the geographical, cultural, and regulatory characteristics of each country, and its degree of utilization also varies because of various regulatory factors (Hjort-Madsen, 2007).

At the same time, there are challenges in the GEA programs related to integration and interoperability within and between public agencies. Some researchers find these challenges very hard to overcome (Hjort-Madsen & Burkard, 2006). Other researchers observe that EA in the public sector has yet to be transformed from an IT-centric to a business-centric, and a governance system at the entire national viewpoint is often times seen as unattainable (Hjort-Madsen & Gotze, 2004; Isomäki & Liimataine, 2008). These schools of thought are often associated with the loss of confidence within; many countries are not confident especially in terms of realizable benefits and performance of EA, which are among the most important drivers in the continued advancement of EA projects (Liimataine, et al., 2007).

Korea is one of the world's best in national IT competitiveness, as indicated by being ranked no. 1 in the evaluation of e-government readiness conducted by the UN in 2010. At the same time, it has been actively driving the deployment of EA to ensure efficient management of IT investments. As a result, Korea has been able to create an enabling environment highly conducive to actual deployment and utilization of EA at the working level, unlike many other countries still remaining at the early stage of defining conceptual definition and methodology of EA. In particular, the recent Korean GEA (hereafter KGEA) program has unified EA of individual agencies enabling a holistic view at a whole-governmental level.

The objective of this chapter is to introduce the successful case of GEA implemented by the Korean Government. The chapter will be structured as follows. First, a brief history and the current status of KGEA program is introduced. Next, the characteristics of KGEA will be reviewed using the analytical framework suggested by Janssen and Hjort-Madsen (2007). Finally, the strength and potential weakness of the case will be discussed in terms of its relevance in realizing connected governments and furthering future advancement.

BACKGROUND: FRAMEWORK FOR ANALYZING THE KGEA CASE

Previous case studies on EA were mostly conducted at the organizational level with an interpretative approach and ad-hoc analysis (i.e. Armour, et al., 2003; Hjort-Madsen, 2006; Pulkkinen, 2006). However, an analytical framework which is well-suited for the analysis on the government level is needed because of the dynamic regulatory characteristics of the public sector. The seminal study on the government-level EA case was conducted by Janssen and Hjort-Madsen (2007). They developed an analytic framework based on the institutional theory (Scott, 1995) in order to provide insights into institutional aspects such as policies, actors, frameworks, principles standards, and implementations. The framework was used to compare GEA cases in Denmark and the

Related Content

Structural Effects of Trust in E-Filing Software on E-Filing Acceptance in Services Sector
Abdulsalam Mas'udand Mohammed Abdullahi Umar (2019). *International Journal of Enterprise Information Systems (pp. 76-94).*
www.irma-international.org/article/structural-effects-of-trust-in-e-filing-software-on-e-filing-acceptance-in-services-sector/227003

A Good Role Model for Ontologies: Collaborations
Michael Pradel, Jakob Henrikssonand Uwe Aßmann (2012). *Enterprise Information Systems and Advancing Business Solutions: Emerging Models (pp. 225-235).*
www.irma-international.org/chapter/good-role-model-ontologies/66578

Approaches for Automating ERP Category Configuration for SMEs
Klaus Wölfel (2017). *Enterprise Information Systems and the Digitalization of Business Functions (pp. 66-98).*
www.irma-international.org/chapter/approaches-for-automating-erp-category-configuration-for-smes/177339

Critical Success Factors (CSFs) for Enterprise Resource Planning (ERP) Solution Implementation in SMEs: What Does Matter for Business Integration
Simona Sternad, Samo Bobek, Zdenko Dezelakand Ana Lampret (2009). *International Journal of Enterprise Information Systems (pp. 27-46).*
www.irma-international.org/article/critical-success-factors-csfs-enterprise/37199

A McKinsey 7S Model-Based Framework for ERP Readiness Assessment
Payam Hanafizadehand Ahad Zare Ravasan (2011). *International Journal of Enterprise Information Systems (pp. 23-63).*
www.irma-international.org/article/mckinsey-model-based-framework-erp/60403