

Chapter 5

Government Enterprise Architecture:

Towards the Inter-Connected Government in the Kingdom of Saudi Arabia

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ABSTRACT

The growth of ICT-mediated services in the private and public sectors demands that organizations become more focused in delivering efficient services to well-informed and demanding consumers. Governments, being very large enterprises, are increasingly under pressure to optimize and align their Information and Communications Technology (ICT) strategies and resources to support the business of government. The Kingdom of Saudi Arabia responds to this challenge by adopting the use of Enterprise Architecture (EA) to transform traditional government services into eGovernment services or eServices. Yesser Enterprise Level Architecture Framework (Y-ELAF) is an Enterprise Architecture Framework that is an adaptation of the industry-recognized framework, The Open Group Architecture Framework (TOGAF) Version 9, modified to fit the government environment of Saudi Arabia. This chapter describes the seven iterative phases of Y-ELAF to develop the Enterprise Architecture of a government agency, the outcomes, and lessons learned.

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INTRODUCTION

Since the 1950s, when computers became commercially viable, governments have utilized their data processing capabilities to resolve issues on repetitive activities such as local administrative and accounting system. Governments, as early adopters of computer systems, become increasingly dependent on these systems to automate certain processes and functions, and as this dependence increases, the situation becomes more complex in terms of systems that are isolated, dispersed, incompatible, as well as hard and expensive to sustain and maintain. As technology continued to mature, different approaches were introduced as a way to deal with the increasing complexities. Such approaches included Client-Server Architecture, Distributed Processing, Distributed Databases, etc. These approaches also introduced their own inherent complexities and issues. Technology advances, particularly the Internet and mobile technologies, coupled with the increasing demand of more competitive and efficient services and products, result in a more demanding and a well-informed clientele—the Customer is King. More focus was needed on becoming more and more service-oriented and technological developments continued to change and mold to fulfill the ever-increasing demands. Great emphasis was placed on Service Oriented Architecture (SOA) as a way to become more service-oriented and more resilient to change. For large enterprises and conglomerates, the challenges were multifold. The enterprise could no longer operate as a set of isolated functions. The enterprise had to function like an ecosystem where business, technology, infrastructure, people, and the environment all work in harmony. This was the birth of Enterprise Architecture (EA). Some Governments, being large enterprises, saw the potential for a long term, more organized and well planned approach for fast tracking e-transformation initiatives through Enterprise Architecture across the public sector.

The need to optimize the use of ICT (Information and Communication Technology) resources to support the business of government has become increasingly critical. Governments, large corporations, and ICT industry associations need to use Enterprise Architecture to align ICT, government business processes, and other components required to deliver government services efficiently and effectively. In order to unify and standardize approaches to Enterprise Architecture development, several frameworks have evolved over the past few years.

The Saudi eGovernment Program (Yesser) opted to develop its own EA framework called Y-ELAF (Yesser Enterprise Level Architecture Framework) based on TOGAF Version 9 (The Open Group Architecture Framework Version 9). Y-ELAF provides Yesser with a set of tools to develop Enterprise Architectures for agencies in a rigorous and repeatable fashion. The development of Enterprise Architectures for agencies using Y-ELAF helps agencies to document their eGovernment Transformation Strategic Plans in a systematic way. Y-ELAF is a comprehensive Enterprise Architecture Framework containing all the tools required for developing an Enterprise Architecture including reference architecture models, development guidelines, checklists, templates and the use of a common vocabulary to name a few. The use of Y-ELF has greatly enhanced the success of implementing eGovernment projects in the Kingdom of Saudi Arabia. This chapter introduces Y-ELAF as the framework adopted in the government of Saudi Arabia to address the need to align ICT resources with the business of providing efficient and effective online services (eServices) to the nation.

WHAT IS eGOVERNMENT?

The definition of the term eGovernment ranges from “... refers to the use by government agencies of information technologies (such as Wide Area

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