An Enterprise Architecture Evaluation of E-Government Progress: Afghanistan as a Case Study

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Abstract
The purpose of this study is to analyze the current governance system and state of Afghanistan’s Information Communication Technology (ICT) sector in the context of existing problems that hinder the implementation and deployment of e-government (electronic government) solutions. In particular, it discusses the challenges Afghanistan faces in terms of deploying the tools of Enterprise Architecture (EA). A study-specific definition and overview for EA is provided, and the closely related question of Enterprise Architecture Frameworks (EAFs) is discussed. Issues from managerial, communication, and related areas arising from the use of this technique are then presented. A case study of EA in Afghanistan is then used, beginning with a background and then an in-depth overview of e-government projects, to craft a set of questions and considerations for responsible institutions, lawmakers, and policy authors.

Background
For emerging countries, a significant barrier to the success of e-government initiatives is a lack of being able to define and understand EA for use in the public service sector. Even with the lack of awareness of EA concepts and its advantages, emerging nations have recognized that using ICT solutions, particularly the Internet, can be a vital alternative to paper-based government systems. For example, in Afghanistan after the fall of the Taliban regime in 2001, the communication sector has expanded rapidly, improved markedly, and played a significant part in the success of Afghanistan’s transition period to a more modern ICT system, allowing delivery of government services to its citizens. Of course, there is still much to be done in both Afghanistan and other emerging countries, despite the progress made in this area.

E-Afghanistan, continued
sites reaches 7072, about 90% of the country’s population is under telecom services coverage, and total investment in the telecom sector has reached AFN 183 billion (ATRA, 2020). So far, some achievements have been made and many ICT projects were completed, but there still are many challenges that need to be resolved and more to be done in order to establish e-government structure in its true sense in Afghanistan.

EA Development Challenges
Lack of communication and collaboration are the main managerial obstacles that lead to ICT barriers when implementing EA. There are many other factors that harmed the communication and collaboration, including: Lack of knowledge and support inside organization, hesitation in training personnel, setting too ambitious goals, constant change of management, (lack of) clarity in EA development process, lack of budget, forcing personnel to adopt EA, lack of motivation, organizational culture, and organizational structure deficiencies.

E-Afghanistan
Telecommunication is one of the important sectors in Afghanistan that has made significant progress lately and has been a remarkable achievement since 2003. A functional telecommunications network was created virtually from nothing, and now it covers over 90% of the population (ATRA, 2020). Currently there are five companies providing telecom services to the nation, which includes Afghan Telecom, AWCC, Roshan, MTN and Etisalat. There are about 22.4 million active SIMs in the country, the number of telecom companies’

Conclusion
EA was created in the more developed world. Here it was created around institutions—IBM, Hewett Packard, etc.—that were well established and already working in a more mature context of highly developed infrastructures and stable governments. Within an environment where computing and digital communications became more common, EA was able to become increasingly integrated into ICT at a sophisticated level.

In contrast, EA in Afghanistan and other emerging countries, has, in a sense, been wrenched out of this industrialized world’s more accommodating context. The emerging nations setting for EA, of course, is much more fluid—i.e., less political stability, rapid demographic changes, etc. —and generally much more complicated in terms of transportation, logistical, and IT systems that are considerably less developed.

This emerging nation situation may not be entirely negative for the EA field. EA’s earlier context and history in the developed world, and the assumptions that go with it—i.e., a regular supply of electricity, general physical security, etc.—does not necessarily need to hamper the application of EA and e-government among the emerging countries.

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