

# Chapter 1

## Systemic Enterprise Architecture as Future: Tackling Complexity in Governments in the Cusp of Change

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### ABSTRACT

*Governments are changing by design, necessity, and compulsion. This change is being exacerbated and shaped by megaforges that interact in a complex labyrinth of evolving nodes and connections. As a result, today's government leaders and policy makers operate in a realm of confounding uncertainties and astounding complexities. These lead to incomplete and often non-actionable information that make decisions increasingly speculative. To unlock the grid and move forward, it is acknowledged that governments of the future have to be connected. Connected government is no utopia. It is simply a pragmatic approach to capitalize on complexity. Enterprise Architecture (EA) as a meta-discipline provides governments and leaders the means to address the twin challenges of dynamism and complexity. As governments become increasingly hyper-connected, they ought to be examined as systems, where holism, causality, heterarchy, and interrelationships are crucial to ensuring overall coherence in a state of omnipresent flux. This contrasts with the traditional fixation on efficiency and cost. Going beyond the rhetoric, this chapter demonstrates the value of amalgamating the systems approach within the EA methodology to address a national priority in Singapore, and provides insights to amplify the impact of EA by integrating creative thinking to tackle complex problems.*

### INTRODUCTION

*The interior department is in charge of salmon while they're in fresh water, but the commerce department handles them when they're in saltwater. And I hear, it gets even more complicated once they're smoked.* - President Barack Obama, 2012

Governments around the world are faced with new demands, expectations and challenges in delicately balancing often conflicting requirements. These are further being exacerbated by nearly uncontrolled information flows enabled by massive advances in information technology (APCICT, 2011). Many countries are in the midst of unprecedented economic and political changes, at times even bordering on crisis situations. These

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provide the ideal fodder for ballooning trust deficit between governments and their citizenries. The governments' ability to provide clean, transparent and development-oriented governance is being questioned like never before. The perception of the inability of governments to provide better governance is dominant, particularly in key areas like – crime, education, healthcare, sustainable economic growth, transportation, wellness and welfare. The delicate nexus between governments, citizens, civil society, businesses and other stakeholders is being subjected to tremendous pressures and tensions, often contributing to the role of the government itself being redefined and even reinvented (Chapman, 2004). This labyrinth of factors is leading to growing disillusionment and approaching the danger point. Additionally, the people and civil services are becoming increasingly vocal in their objection to government policies, ever-increasing administrative loads and the plummeting quality of government services. In the United Nations (UN) e-government survey of 2012, the need for a holistic approach to governance, which integrates factors pertaining to the efficiency and distributional aspects of sectoral policies, has been identified (UNDESA, 2012). The holistic approach to government and government services are acquiescent to and consistent with the expectations from greater adoption of ICT (APDIP, 2007a, 2007b). The survey brings forth three crucial strategies to achieve the holistic perspective:

- Recognize the opportunity for synergy among institutions that deliver government services.
- Reengineer the enabling ecosystem of government services to actualize inter-institutional linkages within the government.
- Advance coordination and connectivity between ecosystems and development outcomes.

Though this has been a common thread across the UN e-government surveys in 2008 and 2010, the 2012 survey clearly identifies the mega-trends in e-government, which include the increasing acceptance of whole-of government (W-O-G) paradigm in architecting and delivering government services, the importance of embracing multi-channel service delivery perspective, factoring in the prevalence of digital divide in certain countries, fulfilling ever increasing demands from citizens and pushing for an inclusive approach (UNDESA, 2008, 2010, 2012). To move forward, the recommendations from the survey include recognizing the transformative nature of e-government when embracing a W-O-G perspective, shifting from structurally disintegrated forms of government to one that is more connected, collaborative, and coherent, to ensure that the digital divide does not remain an insurmountable obstacle and fulfil the need to reach out to all citizens, particularly the disadvantaged and vulnerable groups (CISCO IBSG, 2004).

## **THE FUTURE OF GOVERNMENT**

The World Economic Forum (WEF) in its report in 2011 provided ample insights into how governments of the future would be (WEF, 2011a, 2011b). Interestingly, the recommendations are closely aligned and consistent with the strategies shown in the UN e-government survey of 2012, which were briefly mentioned earlier in this chapter. According to WEF, governments will necessarily have to be:

- Networked that connects governments, businesses, citizens, NGOs and the civil society at multiple scales and levels; hence for governments it is crucial to build the capacity to operate effectively in complex, interdependent networks of enterprises and

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