

## Chapter 13

# Designing E–Government Platforms using Systems Thinking Perspectives and Performance Measurement Frameworks

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### ABSTRACT

*This chapter intends to present information systems philosophies on design of affluent e-Government platform design. The chapter looks at e-Government platform design in two ways. First, it looks at it as a prevailing concept and philosophy that emanate through the combination of literature in the academic disciplines of government and governance, ICT and information society, and e-Business. Hence, the chapter argues that these fields of study provided the theoretical basis influencing e-Government platform design. Second, the chapter proposes that if the philosophies embedded in the literature dealing with systems thinking and performance measurement are included as part of the theories for e-Government conceptualization, this may culminate into developing a new philosophy. This philosophy may be based on asking relevant and appropriate socio-cultural questions that may facilitate the design of better e-Government platforms. The chapter proposes a model for incorporating the said philosophical standpoints into actual e-Government design. The anticipation is that such a platform may culminate into e-Government platforms that may meet social requirements necessary for requisite e-Government platforms.*

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## INTRODUCTION

Academic fields such as information systems, computer science and information technology (IT) management are confronted with the challenge of meeting organizational and societal IT needs in the most efficient and effective manner. This is the reason why several questions have been raised and answered in the literature regarding organizational performance, quality benchmarks and organizational thinking when developing plans to implement any IT solution (Neely, Adams & Kennerley, 2002; Kaplan & Norton, 1996; Waring, 1996; Ridway, 1956). Consequently, we think that despite the fact that issues that relate to performance management and systems thinking have been well integrated into the operations and design of organizations, its tenets and principles can also be appropriately adopted to suit and improve on non-commercial business processes, products and services. This will allow the conceptualization of new strategies which non-commercial entities can adopt to attain organizational efficiency and effectiveness. A very good example of this is the adoption of performance management and systems thinking philosophies to the design of e-Government platforms. This is proposed because the design of IT artifact such as e-Government platform requires that the wants and needs of all the stakeholders for whom it is designed must be identified, assessed and satisfied.

In the literature, systems thinking has been conceptualized as a management perspective that deals with understanding complex social and technical phenomena. Systems thinking perspective allows an actor dealing with a complex situation to assess it from a holistic perspective, that is, to assess the relationship that exist between the parts that formed the whole system as the possible source of the social and technical complexity. According to Aronson (1998) systems thinking is fundamentally a management approach towards analyzing, understanding and solving problems. In his words, systems thinking “focuses on how

the thing being studied interacts with the other constituents of the system-a set of elements that interact to produce behavior-of which it is a part” (p. 1). If we consider revelations from the study carried out by Matavire, Chigona, Roode, Sewchurran, Davids, Mukudu and Boamah-Abu (2010) in which they found out that the following; leadership, project fragmentation, perceived value of information technology, citizen inclusion and task coordination constitute major setbacks hindering e-Government implementation in South Africa, we would then agree that e-Government platform design requires a system thinking approach. This is on the one hand. On the other hand, performance management has been defined as the identification and the management of the measures of factors considered important to the success of any organization. The academic fields dealing with performance management have brought immense transformation into its conceptualization which resulted to the transformational development of about five performance measurement frameworks (Neely, *et al.*, 2005). While all the five frameworks have different philosophies and tenets through which they judge the performances of organizations, Kaplan and Norton’s (1992) balanced scorecard and Neely, Adams and Kennerley’s (2002) performance prism are by far the most popular in business circles.

According to Kaplan and Norton (1996) balanced score card is a balanced presentation of both financial and operational measures in contemporary business management which results to asking and providing answers to four basic questions regarding customers, internal processes, innovation and learning, and financial perspective. These consist of question such as: how do customers see us? What must we excel at? Can we continue to improve and create value? How do we look to shareholders? Neely *et al.* (2002) on the other hand put forward that performance prism is “a second generation measurement framework designed to assist performance measurement selection...It is a comprehensive measurement framework that

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