

# Management of Strategic Knowledge and Technology in Government Agencies for Public Value

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## INTRODUCTION

Despite all the recent studies for the appraisal and assessment of ICT, Irani and Love (2008) still emphasize the need for developing an evaluation framework which is balanced, generic and detailed at the same time. They also emphasize the importance of ex-post evaluation to compare planned with actual achievements, and to provide for a feedback allowing better management of resources, including ICT investments (Güçlü & Bilgen, 2011).

In Turkey, government institutions have started to recognize the need to apply strategic management and knowledge management. Part of this recognition is due to the legislative work that practically requires the agencies to operate a functional strategic management unit (law # 5018), and additionally from strategic initiatives at national level towards becoming an information/knowledge society (State Planning Organization (SPO) 2007, Ministry of Development, 2013).

Information and communication technology (ICT) investments and initiatives within government sector have already reached significant amounts. The public ICT budget increased from approximately 900 million TL in 2008 and 2009 to 1.147 and 2.061 million TL in 2010 and 2011 respectively (SPO, 2011). World Eco-

nomics Forum (WEF) also underlined that in 2010-2011 period Turkey's ranking of government procurement of advanced technology placed the country at the 61st place among 139 countries, and in 2012 the ranking became 56 among 142, and 32 among 144 in 2013. (WEF, 2010; 2011; 2012). Here, the concept of value for money, in particular the public value of the ICT and e-government investments have become increasingly crucial for sustainability.

Some of the knowledge society and ICT initiatives that the co-authors have been involved together or separately include electronic transformation and inventory development of public services, business process management, ontology development and management, enterprise resource planning, knowledge mapping, information and document management systems, among others. The article itself aims to share the experiences from these involvements, underlying significant aspects of the related initiatives and projects. All of these initiatives and project works are very important as not only the capacity building of the owning institutions but also as the innovative and leading-edge practices for Turkey, a country with a target of accession to Europe, claiming political and technological influence in the region. While most of these works are still ongoing, as far as the authors are concerned (and disclosure rights

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will allow) useful inferences can be drawn as insights, lessons-learned and best practices. The resulting work will be a documentation of previously-found-no-where integration of existing (academic and practical) information about the initiatives related with the management of strategic knowledge and technology for public value in Turkey, which may set an example for other developing countries.

Accordingly, the article will first introduce specifically a public value framework. Next, based on this framework, examples of application areas will be provided. SGB.net, a government resources management system, partially or totally in use at more than 140 agencies in Turkey, will be the main focus as an application case of the conceptual framework. Before conclusion, information on ongoing initiatives and future outlook will also be provided.

## BACKGROUND

### Conceptual Framework

Huge sums are invested in ICT, which have not really served organizations' business strategies as effectively as expected. Therefore, there is a need to justify ICT expenditure by examining its contribution to achieving organizational goals. Unfortunately, there is yet no holistic approach on assessing the value and effectiveness of ICT. There is no unified model with individual and aggregate indices. Moreover, most of the findings are generally derived from developed countries, which cannot be generalized to cover fundamentally variant political, economic, social, and cultural characteristics.

It is essential to develop a unified adaptive and time-variant model for the assessment of the effectiveness of ICT, taking into account both tangible and intangible values; both direct and indirect measurements. This is particularly applicable to the public sector as the value in public investments drain more public resources provided through citizens' time for integration of value delivery processes and are hard to calculate in currency. This assessment model should cover *ex-ante* (for selection of initiatives), *in-term* and *ex-post* (for deriving lessons and comparisons) evaluations for better and informed decision making.

Effectiveness has to be linked with PV, through public expenditure both from goals identified in the

SP to the budgeting, and from expenditure back to the fulfillment of the state's goals and targets. Measurements should take into account direct citizen value, non-direct social value, government operational/foundational value, government financial value, and strategic/political value; and multidimensional models should be used with a mix of quantitative and qualitative measures, and the benefits/impacts are generally measured through subjective mechanisms; hence the mechanisms of continuous data collection and analysis directly from operational systems have to be introduced to reduce subjectivity.

Overall, the government focus should not be on financial but business management, and financial goals set in the Medium Term Expenditure Framework should not be separated from the service delivery goals, and budgeting and accounting have to be used as means of planning and control.

This can be achieved through correct understanding and modelling of Public Value. Public Value (PV), which was first introduced by Moore (1995), can be defined as the value delivered to the public at large, through a set of well-planned activities of government agencies, and funded by tax-payers. The issues continue to attract attention from different authors. For instance, Cresswell (2010) expands a PV framework, suggesting public return on investment (ROI) value propositions. Furthermore, in the PV Chain (Güçlü & Bilgen, 2010), each government service provided to the public is delivered through one or more processes and the beneficiary's expectation is expressed in terms of value for money, namely the tax paid or payment for the services, as depicted in Figure 1:

One of the mostly used trilogy within the PFM, including law 5018 in Turkey, is "Economy, Efficiency, Effectiveness." These three terms combined, can sometimes be referred to as "Value for Money" (VFM) or "Public Value."

Economy is careful use of resources to save expense, time or effort; in other words it is minimizing the cost of resources ('doing things at a low price').

Efficiency is performing tasks with reasonable effort ('doing things the right way'). Efficiency is delivering the same level of service for less cost, time or effort, i.e. attaining the most program outputs possible for each program input; and is usually expressed in monetary terms. Technical efficiency is associated with productivity, cost per unit of work done or service delivered, whereas economic efficiency is associated

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