Chapter 18
A Framework to Evaluate the Informatization Level

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INTRODUCTION
As information and communication technologies have rapidly developed in the 1990s, enormous changes have taken place everywhere. At work environment, these have been newer tools for increasing organizational productivity, and these are transforming organizations to the degree that Taylorism once did (Davenport, 1998). These trends have spread over various fields of society, and have over countries caused economical and cultural innovation and reformation. These phenomena can be summarized as informatization. Informatization is defined as “converting the main goods and energy of a social economy to information through the revolution of high data communication technology and utilizing information produced by gathering, processing and distributing data within the vast fields of the society” (National Computerization Agency [NCA], 1997).

Since The United States’ NII project has been evaluated as one of the important success factors for economical growth, most countries have considered informatization as one of the most effective means for improving a nation’s competitiveness. Similarly, many organizations have considered informatization as a strategy to improve quality of public service and productivity. They have tried to implement informatization and extensive investments are often budgeted and expanded to acquire information technology (IT).

An Information Strategy Plan (ISP) is needed at first to implement informatization of an organization. ISP usually includes business strategy,
information technology strategy, project priorities, and an organization’s 
structure strategy. Thus, when an ISP is set up, it describes whether the 
business or organization’s strategic goals and objectives can be achieved 
through IT, in which field further IT investment will be needed, and whether 
efficient investment in IT will be made. In order to discuss these topics, the 
current organization’s informatization level first must be known.

Moreover, since the middle of 1990, many countries have put emphasis 
on performance based management, in which the government has to set up 
investment plans according to its performance. For example, to budget IT, it 
is required to first evaluate its performance and results.

In this respect, evaluation of an organization’s informatization level in 
order to review how much organization informatization it achieves is an 
important managerial concern. However, this is not a simple problem because 
informatization includes many intangible factors such as the quality of 
information and an organization’s culture.

In this chapter, framework and metrics are introduced to evaluate the 
organization’s informatization level. This framework is designed to provide 
reasonable information by gathering and analyzing various IT metrics for 
determining whether organizations have made efficient and effective use of 
IT and have achieved the organizational strategic goals and objectives 
through IT. Therefore, the evaluation results can be used to improve the 
organization’s informatization level.

The remainder of this paper is organized as follows: in the following 
section, some case studies and background information are presented. The 
next section introduces a framework, and then future trends are discussed in 
the next section. Finally, the summary and conclusion are presented.

BACKGROUND

Similar to other countries, Korea has been actively pursuing its vision and 
goals through informatization since the early 1990s, and will continue to do 
so. The Information Promotion Master plan was formulated following the 
Basic Act on Informatization on Promotion (BAIP) in 1996. According to this 
national master plan, every public organization such as the government, 
cities, agencies and so on, has established their Information Strategy Plan 
(ISP) and started to implement IT. The government has allowed a large budget 
for constructing infrastructure and implementing application software to 
improve quality of public service and productivity of government.

Recently, the government and public organizations have been interested 
in how their investments in IT have been made effective and efficient. 
Although the measurement of the performance of the government is more
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