



Chapter I

A Framework for an Organization's Transition to Globalization – Investigation of IT Issues

Yi-chen Lan

University of Western Sydney, Australia

ABSTRACT

This chapter explores information technology (IT) issues in regard to an organization's transition towards globalization. The challenges of IT dealing with transforming enterprises to globalized organizations require the identification, consolidation, and resolution of issues to support the organizations towards globalization. The chapter begins with identifying and classifying four major IT transition issues: global IT infrastructure, global business applications, global telecommunication network, and data/information systems improvement. It is then followed by detailed discussion of each issue with regards to its importance and relevance in global transformation. The chapter concludes by indicating a future research direction to incorporate organizational scopes (inter-organizational and intra-organizational) in the global IT transition framework.

INTRODUCTION

Rapid development of information technology (IT) has the capability of providing most organizations to conduct their business operations efficiently. It is even more significant for multinational corporations (MNCs). Undoubtedly, a well-designed global information system is a critical success factor for managing and operating the MNCs smoothly and

effectively. In the past decade, researchers have identified a number of IT issues that relate to an organization's transition to globalization (Burn et al., 1993; Edberg et al., 2001; Nelson, 1996; Palvia et al., 1992; Sankar & Prabhakar, 1992; Watson et al., 1997). However, the challenges of information technology dealing with transforming enterprises to globalized organizations are not just identifying the IT issues, but consolidating and resolving these issues to support the organizations towards globalization. The intent of this chapter is to identify and classify the IT issues in globalization process, and develop a global transition framework based on these IT issues.

GLOBAL IT TRANSITION FRAMEWORK

Based on the review of the global IT literature and its issues, an organization's IT structure can be divided into four classes (Sankar & Prabhakar, 1992; Lan, 2002), and they are:

1. *Global IT infrastructure*—refers to system hardware
2. *Global business applications*—refers to systems software
3. *Global telecommunication network*—refers to communication
4. *Data/information systems improvement*—refers to data and information

In order to obtain in depth understanding of the global IT management issues, the following sections investigate each of these classes and explore the corresponding issues for the conceptual direction of global IT transition.

Global Information Technology Infrastructure

Global information technology infrastructure is made up of the equipment and facilities that support the global information systems. It can be classified in four categories:

1. *Computer hardware*—includes workstations (desktop computers, terminals), mainframes, servers, digital cameras, printers, and scanners.
2. *Network related facilities*—includes cables, modems, gateways, routers, adapters, bridges, converters, hubs, concentrators, repeaters, switches, transceivers, and multiplexers.
3. *Backup equipment*—includes storage facilities such as tape and disk, and uninterrupted power supply (UPS) devices.
4. *Mobile equipment*—includes notebook computers, personal digital assistants (PDAs), mobile phones and wireless facilities.

Global Business Applications

Global business applications refer to the agents, or instruments that make the business operation. These agents are principally business functional and personal software applications in the global business environment. Hence, effective management and utilization of these applications is critical to the construction and operation of global information systems. Furthermore, issues such as handling systems integration, maintaining software application availability, and applying systems standards are imperative to the successful implementation and management of global information systems. Thus they are further explored in the following sections.

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