Chapter IX

Transnational Information Systems: Development and Management Issues

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An increasing number of transnational information systems (TIS) is being developed and is operational. This paper describes a study that attempted to gather information from an empirical setting as a basis for theory building. The authors have studied three cases in an attempt to take some early steps towards guidelines for the development and management of TIS. General conclusions based on the analysis of the three cases are drawn.

INTRODUCTION

The Problem

Transnational information systems (TIS) are systems that cross national as well as company borders. Development and management of TIS are not straightforward. The interorganizational and international nature of these systems may introduce various organizational and technical problems. One major reason for this may be that the participants are independent in most aspects and autonomous with regard to their own proprietary information systems. Another potential cause of difficulties is the international context, which introduces cultural, legal, and language difficulties among participants.

However, the globalization of the economy gives rise to an increasing demand for information systems that transcend national boundaries. Developments in information and communication technology now make it possible to support many processes and tasks that cross company and national boundaries. Alternatively, economic and political developments create demand for TIS. This demand is clearly evident within the European Union in the context of a European market for persons, goods, capital, and services. Similar developments can be seen on a global scale due to increased internationalization.

As to their international and interorganizational dimension, most individual TIS are being developed up to now on an ad hoc basis. Currently there are no known general techniques, tools, or guidelines to help develop and manage TIS. Practical experience and empirical research, however, show that many problems and solutions at first glance appear to be specific to a particular development effort, but often they are not unique at all. As the needs and opportunities for TIS become more prevalent, the call for generalized knowledge and guidelines increases. Organizations want to know how to avoid difficulties and, if problems should occur, how to address them. Organizations that consider to use, develop, manage, or participate in TIS may benefit from the availability of structured “dos and don’ts.”

The Literature

Studies addressing the combined transorganizational and transnational IS setting are lacking. There is, however, a stream of literature concerning the development of information systems linking parts of multinationals located in different countries (Deans and Kane, 1992; Palvia and Palvia, 1994). Apart from research about global systems, there is also a substantial body of writing about systems crossing company boundaries. Much of the early discussion about interorganizational systems (IOS) focused on competitive benefits of developing IOS (Porter and Millar, 1985) and on facilitating and inhibiting factors in the development process (Reich and Benbasat, 1990). More recently research has taken on a more realistic approach, pointing out that not all IOS provide benefits to all participants (Webster, 1995), that IOS may involve risks and conflict (Kumar and van Dissel, 1996), and that IOS involve management of relationships among participants (Meier, 1995).

The general impression is that findings from literature on IOS and global systems are relevant for TIS. The combination of systems crossing organizational as well as national boundaries has hardly been mentioned in the literature. The use of IT in TIS is a fairly recent phenomenon, and this may explain the dearth of research in this area.

Outline of the Paper

This paper describes a multidisciplinary case study as three cases regarding TIS development and management. It is an attempt to take some early steps towards guidelines for the development and management of TIS. In view of the fact that very little existing research is available about TIS, this study focused on gathering information from an empirical setting as a basis for theory building.

The paper proceeds as follows. First, the research approach is lined out and the three cases are discussed briefly. Then, the main TIS issues and other issues that emerged during the research are summarized. In the last paragraph, a few concluding remarks are added.

RESEARCH APPROACH

Within the public sector in the European Union alone, about 30 TIS are operational or under development (Kroon, 1997). Experience and knowledge based on these systems tend to remain within the organizations involved unless an attempt is made to collate and generalize the lessons learned by individual organizations. For this reason it was decided to conduct an empirical study addressing a wide range of TIS issues in order to present this accumulated experience and knowledge to other interested parties, as well, using inductive case research methods and employing a multidisciplinary research team.
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