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# **Large-Scale Sustainable Information Systems Development in a Developing Country: The Making of an Islamic Banking Package**

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## **EXECUTIVE SUMMARY**

Information technology (IT) transfer to developing countries is often affected by various problems. Most available application packages are too expensive and were originally designed to work in a developed economy. The international features of the application packages reduced the problems associated with long duration and huge cost of customization. Nevertheless, there are still some processes that require many peculiar requirements that customization of the off-the-shelf applications cannot meet. With the rapid changes in IT and the business environment, it is becoming essential to rely on information system that can be sustained and upgraded without much cost in order to meet those changes. This case describes a project for the development of such a system.

We present the background of the IT company and an Islamic bank as the customer. We highlight the circumstances that led to their decision to develop the systems locally. We discuss the facts that surround the development of the system: the outsourcing decision made by the African Arab Islamic Bank (AFAIB), the project management and systems development at Technology Associates Ltd. (TA), and other information system issues related to developing countries and their effect on the project's success.

## BACKGROUND

While information systems management (e.g., Yahya, 1993) and implementation (Nidumolu & Goodman, 1996; Kirlidog, 1997; Lin & Berg, 2001) in developing countries has received some attention in the literature, there are few reports of cases of information systems development processes (e.g., Madon, 1992). Most efforts are focused on problems of infrastructure (Odedra, Lawrie, Bennett, & Goodman, 1993; Moyo, 1996). The call for more case study research by Montealegre (1999) was again focused on implementation issues. The activities of the indigenous software developers and companies have not received proper attention and make the possible lessons that could be learned from them limited. Information systems research has traditionally focused on organizations in the US and Western Europe without considering how this could be applied and extended to developing countries (Dasgupta, Agawrwal, & Ioannidis, 1999). The actual implementation in developing countries has not been able to benefit from this kind of results, as the local factors pose significantly different circumstances. Several systems have been developed where only the context of region of origin has been taken into account. This has resulted in information systems solutions that are not sustainable, even if they meet the needs of organizations in developing countries.

With globalization and internationalization of labor, it becomes important that we begin to have more contextual knowledge of information systems development in developing countries. In this regard, a locally oriented information systems methodology has even been proposed (Korpela, 1994; Korpela, Soriyan, Olufokunbi, & Mursu, 2000), yet comprehensive knowledge of the IS development activities from a real-life example could broaden our understanding of the processes and methods.

## SETTING THE STAGE

Around December 12, 1996, the staff members at the research and software development (R&D) unit of the Technology Associates (TA) company were busy thinking what would be the best strategy to convince the management of AFAIB, a new company licensed to operate Islamic banking in Country X, to award the banking software project to the company. Khaled Al-Sayer, an expatriate finance manager from the Islamic Development Bank, Jeddah, was not convinced that any local company in a small country like Country X should be entrusted with such a mission-critical strategic system. Among his major concerns were the complexity of the Islamic banking operation compared to conventional banking, the tight schedule, and the budget.

Khaled had worked in many Islamic banks in the Middle East. In his last place of work in Bahrain, he worked with a group of programmers to develop the system they use there. Upon his posting to Country X, he had made arrangement to adapt the system for the new bank without considering the fact that the system was developed specifically for a particular bank and not for general use in any Islamic bank. This has been the problem with most of the available Islamic banking packages and is one of the reasons why that bank had to develop its own system locally. There was also the problem of technology, as, at that time, there was no local expertise in Country X to support the kind of technology used in the development of the system at Bahrain. In 1996, the Internet was not very available in Country X and remote support would have been too expensive. Due to other capital expenses, AFAIB had limited resources to acquire available expensive commercial banking packages. In addition to the fact that the operation of Islamic banking differs from conventional banking practices,

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