

Planning for Electronic Government in a Remote Malaysian Site

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INTRODUCTION

A regional government IT master plan sets out a viable path for the use of information technology (IT) to support local government operations, align local IT use to national initiatives, and build the organizational capacity necessary to take maximum advantage of the future emergence of more advanced tools. It guides IT deployment in three domains:

1. Within and among the various agencies of the local government
2. Among these agencies and organizations in the private sector
3. Among these agencies and members of the general public

This article, based on a synthesis of the theories of service quality and strategic planning, lays out a basic structure, process, and content for a strategic IT plan, and provides a planning template that serves as a starting point for jurisdictions in a remote context.

Like any tool, the planning process must fit its context. This includes its geographic, political, social, and economic environment, the organizational structure, and its scale, scope, culture, policies, core technology, and access to IT and other resources. The scope for IT planning includes selecting computing and communications hardware and software, structuring and staffing IT service delivery, specifying IT-based applications and data resources serving the host agency, and designing products or services based on information delivered via IT infrastructure.

The case site is a state government in Malaysia. One of 13 states, Sabah occupies 76,000 square kilometers on the island of Borneo, 600 kilometers east of Peninsular Malaysia. A population of 2.5 million embraces over 30 different races speaking over 80 different dialects. Primary commodities such as agriculture, forestry, mining, and petroleum dominate the export-oriented economy. Emerging industries include manufacturing and tourism. Roads, electricity, and telephone networks are less well developed than in Malaysia's peninsular states (UN, 2002), reflecting the tendency for development projects to ben-

efit large cities and regions near capitals, rather than remote regions (Sorensen, 1997).

The context is interesting due to its remoteness, widely dispersed population, interest among public leaders in IT-based solutions, and emerging national policies that may support and enhance local efforts. As many of its lessons apply to other remote locations, the purpose of this case is to illuminate the strategic interactions among local goals, the local agency context, and its external environment.

BACKGROUND: THE STRATEGIC CONTEXT FOR IT PLANNING

Strategic IT direction is realized through the pragmatic and concrete acquisition and deployment of resources that will support the vision expressed by leaders. These decisions and actions emerge from an analysis of the vision in the context of an intensive environmental scan *to identify external opportunities and threats resulting from changes in the environment* and a realistic internal scrutiny *to identify potential strengths and weaknesses*.

Shifting Environmental Forces

The environmental scan diagnoses the future impact of structural forces on the organization (Hax & Maljuf, 1984). For local government, the significant environmental forces stem from shifts in the global economy, introduction of new technology, and rapid development of the nation and of its people. Technological trends include the following:

1. Broad adoption of cross-platform browsers and platform-independent languages that create common interfaces
2. Emergence of low-cost digital network access "appliances" for use in small offices and homes
3. Rapid increases in bandwidth from investments in fixed and wireless networks, combined with improved efficiency through data compression and other technological advances
4. Improved data management tools, such as data warehousing

Alignment to National Policy

The Malaysian government embarked on a policy to bring its people into the ranks of the developed world by the year 2020. Within this broad initiative, it formulated a Multimedia Super Corridor (MSC), to support former Prime Minister Mahathir's vision of an information-rich society. This demands the development and use of IT, plus an acculturation process to enable citizen participation in the shift to a knowledge-based society:

Information-Rich Society: one which thrives and grows in all its activities through the ready and dynamic utilization of information, brought about by its active appreciation, acquisition, assimilation, application, and transmission. (Former Malaysian Prime Minister, Dr. Mahathir bin Mohamad)

The Multimedia Super Corridor (MSC) project involved attracting and nurturing a cluster of enterprises to peninsular Malaysia, and flagship applications including electronic government. This was an opportunity to link local efforts to the larger, deeper MSC plan, which hoped to (Han, 1996):

- Offer efficient, high-quality administrative services to citizens and businesses
- Streamline internal government processes to improve service quality and lower costs
- Strengthen data security while protecting privacy
- Strengthen democracy

The government mandated that ministries (including the Prime Minister's office) operate electronically, which required formulating and enacting new legislation to protect security and privacy and establishing government-wide standards to allow cross-ministry use of selected mission-critical infrastructure components and databases.

What governments do forms a context for what IT can do for government. Today's government institutions were designed to support a rapidly industrializing society that is disappearing. In Alvin Toffler's view, customization replaces standardization; complexity with its holistic view replaces the specialization practice of breaking down tasks into component parts; just-in-time production replaces synchronization; flat organization charts replaces hierarchy; and decentralization replaces centralization. IT is the enabling technology for all these strategic shifts (Toffler, 1980).

THE FUTURE OF ELECTRONIC GOVERNMENT IN REMOTE AREAS

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The key policy objectives were to improve public service levels and create an environment that attracts investment, which would then create new and better jobs for residents and generate wealth. The viability issues were (1) rapid introduction of relevant new technologies, (2) availability of specific skills and interests in using this technology, (3) recent emergence of a small but active local market for technology (which supports local vendors and attracts overseas technology sources), and (4) potential availability of a vast amount of useful content. The plan outlined below was developed by state government planners, supported by consultants with IT management experience (ITMP, 1997).

Strengths

Over the near term, the primary strengths of the agency were leadership who strongly support the strategic goals of administrative renewal and bringing the government closer to its citizens; access to the necessary financial resources; and key "islands of competence" in various disciplines (such as a strong state library system, deep knowledge of institutional systems, and recent local initiatives in electronic publishing) that were critical to successful deployment of the new media.

Weaknesses

For the Sabah case, these were an inadequate public and local government telecommunications network infrastructure; information technology architecture too weak to enable the necessary level of connectivity and data sharing; lack of data administration; scarcity of skilled manpower resources, both technical and managerial, needed to build, operate, and manage a state-of-the-art IT infrastructure and the electronically enabled business processes that will enable direct delivery of government services; and very little service quality management experience.

Opportunities

The falling cost of IT and telecommunications would speed diffusion. Television, print, and radio share the basic characteristics of broadcast media. Messages are one-way, distributed indiscriminately to a wide audience.

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