

STRATEGY 7

HARNESSING INFORMATION TECHNOLOGY

Information technology is fundamental to the strategies for public service reform, both because it is key to service improvements, and because developments in information technology are driving organisational and system change throughout the public service.

Computerisation in the public service has traditionally been built around highly centralised systems within the government, mainly geared to financial, accounting, and statistical systems. Sectoral activities within the public service, including agriculture, health, and education, had gained relatively little from computerisation. In the late 1970s and 1980s, the increased availability of micro-computers at reduced prices and the growing awareness of the limitations of the centralised large national systems led the change in this established pattern.

Developments in communications systems have enabled governments to plan for integrated information technology communication networks which have enhanced the use of computers at all levels in government. Computers are now being used at the level of local authorities and rural offices as well as in agriculture, education departments, health authorities and in most public services involved in the delivery of services to customers.

INVESTING IN INFORMATION TECHNOLOGY

Government departments are major users of computers and management information systems, and these have become a major item of government expenditure.

While there are disparities in the extent of information technology investment in the public service between countries, there are broad patterns. The public sector plays a dominant role in the use and development of IT systems and major improvements have been achieved in revenue collection, financial management and accounting and inter-departmental communication systems.

- Significant automation programmes have been implemented in Australia, Singapore, Malaysia, Malta, Mauritius and the U.K. Information technology has also been used in providing better interface with customers by developing one-stop/non-stop service centres and public information systems in Malaysia.
- In New Zealand such systems were estimated to cost the taxpayer NZ\$400,000,000 annually since 1992.

- In Singapore the budget for computerisation had also increased to S\$150,000,000 in 1990 from S\$14,000,000 in 1985. In 1990, Singapore had 107 main-frame and mini-computers and 10,000 personal computers and terminals, 293 operation application systems and 606 computer professionals in various departments and government institutions.
- In Malaysia M\$243,000,000 was spent in 1993 on information technology compared with M\$197,000,000 in 1992. In terms of sectors, the biggest approval in 1993 was for administration and finance (M\$153,140,000) followed by education, social and support services and land and agriculture. In the five years from 1989-1993 the Malaysian Government has approved a total investment on information technology amounting to M\$851,490,000.

INFORMATION TECHNOLOGY POLICY

Many governments have developed policy frameworks which provide a public service-wide focus for effective planning and management of information systems, technology, and organisational engineering involving information technology.

The New Zealand Government has recently set up three bodies to advise on information technology policy.

- **Inter-departmental Committee of Information Technology** made up of representatives from six departments and convened by the State Services Commission. Its function is to advise on issues relating to the Government's role as a user and purchaser of IT. It considers the collective interests which cross departmental boundaries.
- **IT Policy Unit** housed in the Ministry of Commerce, whose scope is to advise on IT issues relating to the Government's role as a social/economic policy-maker. These have included copyright and education.
- **IT Advisory Group** made up of 10 leading private sector managers. Their role is to advise the Minister for IT on issues relating to the government as economic policy-maker from a supplier and user perspective.

Other governmental bodies include the Government Communications Security Bureau which has an advisory role on matters of computer security.

- Canada has recently released a blueprint paper suggesting ways of using new information technology to deliver improved services to the public. The blueprint for renewing government services using information technology could result in substantial changes in the way technology is implemented throughout government and how public sector workers carry out their duties.

- U.K. experience supports a strategic approach where departments identify and prioritise group elements for information systems and ensure compatibility with other existing and planned systems. This benefits the approving authority by providing a backcloth against which to consider each proposal for expenditure.

Information technology frameworks require clear co-ordination and identified lead agencies capable of tracking fast-moving developments in technology and systems.

As a result of reorganisation in June 1993, an Office of the Information Management Systems and Technology was created within the Treasury Board of Canada. The Chief Informatics Officer (CIO) heads this Office.

The mandate ranges from policy development and implementation, administrative re-engineering, to what has been called "the care and feeding of the information technology community".

The activities of the Office support the government's restructuring objectives and provide a vision for transformation. The following elements are included:

- service and support functions rationalised across departments and programmes to reduce duplication and streamline operations;
- services delivered directly to the clients, or made easily accessible to them, through electronic means;
- a standard suite of inter-connected management and employee system tools, available at the fingertips to support decision-making and service delivery;
- a standards-based tele-computing infrastructure in place to enable integrated government operations across the country;
- routine processes (80 per cent of all business activities) automated to reduce costs and the need for human intervention.

- Within the U.K. civil service, the Government Centre for Information Systems (part of the Office of Public Service and Science, itself part of the Cabinet Office) is responsible for promoting business effectiveness and efficiency in government through the use of information system. While its customers are chiefly government departments and executive agencies, its business environment is wider and includes European and other national governments. It provides specific services to government departments and agencies, such as helping them plan their spending on information systems and advising them on the best use of their information technology by evaluating various systems available against needs and value for money.

- In Singapore the National Computer Board (NCB) was formed in 1981 to promote, implement, and guide the development of information systems in the Singapore Civil Service. The Civil Service Computerisation Programme (CSCP) was introduced by the NCB in September 1981 to improve both efficiency and productivity in the Civil Service by promoting the widespread use of computers amongst Civil Service.

In Malaysia, information technology planning takes place both at both the macro- and micro-level. At the micro-level there is a National Committee on Data Processing (NCDP) which has been entrusted with the role of formulating national policies and promoting the usage of IT for administrative modernisation and national development. The Malaysian Administration Modernisation and Planning Unit (MAMPU) is the Secretariat to NCDP. To assist the NCDP in carrying out its activities, MAMPU has established three advisory committees, the Administration and Implementation Committee, the Technical Operations Committee and the Education and Training Committee. Guidelines have been prepared to assist MAMPU as the central agency responsible for government computerisation and all government agencies in their computerisation efforts.

APPLICATIONS FOR EFFICIENCY AND QUALITY

Information technology applications, particularly when taking advantage of networking opportunities between departments, are achieving significant efficiency savings for the public service.

In many of the Commonwealth countries, the use of information technology has been undertaken with the aim of replacing existing manual systems through a major office automation programme. Computerised text processing, information storage and retrieval, and communication systems have been introduced to increase efficiency and enhance productivity.

Experience has shown, however, that there are some cautions. As departments are increasingly able to exercise autonomy in the development of their management information systems, it is important that information technology managers have adequate training and guidance to support their decisions. Equally, the management information systems in public service must take into account the statutory requirements that apply to information technology. For example, in New Zealand, under the 1957 Archives Act, government departments are not allowed to destroy records without permission of the Chief Archivist.

- Computerisation has made extensive inroads in the Singapore Civil Service and has enabled it to improve efficiency by reducing manpower costs. The Singapore Civil Service Programme has generated S\$2.71 in return for

every dollar spent on computerisation and reduced the need for 5,000 posts in the civil service by automating manual and repetitive tasks and streamlining operations.

- In Malta one of the key parameters of the strategic plan for public service reform is based on maximising the information resource through the sharing of information, within the confines of Malta's legislation to avoid duplication in information collection and maintenance. In order to achieve this, the Government of Malta has established an open client-server architecture platform that allows seamless access of applications systems from a single workstation, with appropriate security safeguards. This infusion of technology has been very significant in a relatively short space of time, with applications systems in place, or in the course of development, in most major areas of government.
- The Malaysian Government's objective is to move towards an era of paperless bureaucracy. A public service network is being established as a facility which enables government agencies to offer their counter services on-line to the public using the computer and network facilities of the post offices. It is hoped that this public service network will support the provision of "one-stop non-stop" services to the public.
- The Canadian Government recently announced a blueprint for renewing government services through the use of information technology in Canada and thereby bringing services to clients and providing them with "single-window" accesses for multiple services.

Malaysia has established a Civil Service Link to act as an information centre responsible for acquiring, organising and making available on request, information concerning the public service.

The Civil Service Link's functions include:

- creating a repository or database containing information related to public sector administration and management;
- providing users with the facilities to access information, either on-line or off-line;
- acting as a clearing-house for applications/requests for government information;
- promoting the creation of public domain databases in government departments;
- promoting research and development in government information and its utilisation; and
- linking up other such databases in government agencies to its computer system.