

Section 5: MAKING MANAGEMENT MORE EFFECTIVE

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5.1 Strengthening information systems

A particular initiative in strengthening information systems: The Information Systems Strategic Plan

A technology plan is a document which charts the course of an organisation from where it is at present to where it would like to go, based on a sound understanding of the business needs that are driving it. Such business needs may have to do with needs of information for critical decision-making, large volume information processing requirements, streamlining operations, or simply providing tools that will better equip people to deliver services more cost effectively. Government is the most complex and largest business enterprise in Malta, and thus technology becomes an even more critical tool to render it more accountable and effective.

The preparation of an Information Systems Strategic Plan (ISSP) brought the Operations Review to a conclusion in July 1990. The Plan identified the information needs of government and the opportunities for application of computer technology, as well as proposing a strategy for addressing these.

The Plan was confined to addressing the information needs and technology application opportunities within ministries and departments of the public service. Thus, application needs of parastatal organisations were not included, though the Plan did point to some information sharing opportunities for future consideration.

Background to the initiative

The business of government comprises policy formulation, executive activities and the management of resources. The lifeblood of these business activities is information, rendered useful and made available through organised systems, i.e. information systems. Information is a vital resource. Like similar corporate resources, such as people and money, it requires careful planning to ensure the resource is best applied to meet business aims and objectives.

The Government of Malta came into computerisation rather late. A Government Computer Centre was established in 1981 to consolidate the limited available computer system expertise. However, economic and technical limitations constrained management in the processing and development methodologies that were adopted. These factors coupled with the absence of a suitable mechanism such as a Strategic Plan or a User Committee to determine priorities among an immense backlog of applications served to exacerbate the strains on the organisation.

In commissioning the Information Systems Strategic Plan, the Government of Malta recognised the relevance of information technology in today's complex public administration. The strategy itself addressed a wide range of technology and information management issues, among them sound analysis of business needs; the locus of responsibility for technology plans; standards for hardware, software, LAN, telecommunications and methodologies for development of information systems; feasibility studies; data ownership and protection; the role of users in development of computer systems; and the role and status of advisory and executive IT committees.

Preparing the plan

Preparation of the ISSP began with a structured needs survey through which ministries were surveyed to:

- obtain a function-by-function identification of information needs;
- define and quantify these requirements;
- assess the frequency and type of reference to such information;
- define functional activities suitable for computerisation, including the inputs and outputs of these;
- establish the amount of resources presently dedicated to these;
- assess the benefits that could be derived from computerisation;
- assess the amount and type of technology needed to support the various application areas; and
- assess the cost of meeting an identified need.

Following the needs survey, the Plan itself was drafted. The contents of the document comprise:

- a review of issues that the ISSP needs to address;
- a review of the various application areas;
- an examination of the options for application of computer technology, the cost/benefits of several approaches and the implications of these, organisational and otherwise;

- strategies for implementation – technical, organisational, training, management or contingency;
- an attempt at computing the costs of implementation and proposing a strategy for meeting these;
- a description of the organisation that needs to be in place to realise successful implementation;
- an implementation plan.

Training

The key to successful implementation of the ISSP is education and training at all levels. In the first place ministers and senior civil servants needed to understand and accept its broad concepts, its contents and the benefits to their respective organisations of subscribing to it. Secondly, in today's milieu it is virtually impossible for any manager to function without some information technology literacy, to include its capabilities and limitations. From time to time, therefore, beginning in April 1990, i.e. several months before the Plan was finalised, IT awareness sessions have been organised for top government officials, ranging from Cabinet ministers to heads of departments.

After the Information Systems Division was established within the Management Systems Unit, IT awareness sessions were complemented by an ambitious training programme, the nature and scope of which is described earlier in entry 1.5.

Timescale

The needs survey was carried out and the Plan drafted in approximately one year ending in July 1990. Immediately after, work began to select a core group of IT experts to establish the Information Systems Division within the MSU, which was itself coming into being at the time. The Division arrived at its full complement during 1993. A significant proportion of this expertise is expatriate, and engaged on short- or medium-term contracts: it tides over what is hoped to be a temporary national shortage of IT expertise that the training and development effort is intended to address.

The Plan envisaged a total capital disbursement of approximately Lm25m over the five-year period 1991-1995. The plan, however, is perceived as a rolling plan and it is updated every year to account for changing needs and technology demands. Furthermore, a new five-year plan is under way for the period 1996- 2001. Annual

capital budget allocations for this purpose have been consistent with the planned projections.

An implementation strategy

Through the ISSP, Government now has a good picture of its range of informational needs. The picture may be daunting in some respects, but with one major redeeming feature: this overview enables Government to come to grips with the need for a fresh start on all application fronts. This is a marvellous opportunity for a small country to execute implementation in a cohesive, comprehensive and integrated fashion, one that should realise a good return on what is a significant investment.

The Plan was the last component of the Operations Review to be completed, because it was hoped that the necessary re-structuring of ministries and departments would have taken place by the time it was drafted. While information needs may not change materially as a result of re-organisation, information flow can be greatly affected. To reap the benefits of new technology, new organisations, doing new things in new ways, must be created. That means questioning the traditions of decades of doing business. More daunting than the technical obstacles to successful automation, therefore, are the organisational ones.

With this in mind the strategy proposed that a central information systems (services) group should lay down a corporate 'architecture' to ensure that, where viable, each ministry's new information system will work in complementary fashion with systems of the same or other ministries. Furthermore, skilled manpower shortages dictate that development should be centrally co-ordinated. As against this, it is anticipated that 75 per cent of the systems needs identified in the ISSP could be met by desk-top, stand-alone personal computers or linked through Local Area Networks.

The ISSP is underpinned by a strategic approach to *information resource management* and by the development of an *integrated communications network*. Both initiatives are described below.

The Plan identified over two hundred applications across government that need to be introduced. These are grouped into several categories.

"National applications" are directly related to a key government programme having national importance. This is considered as a number one development priority. The *Geographic Information System* described below is an example of one national application that is under incremental development in Malta. An important national application currently under development is the *Social Security Computerisation*

Project (see below) for managing the collection of NI contributions and the delivery of benefits.

"Corporate applications" systems are required for effective administration of corporate financial and human resources. *E-mail Services for Government* and *Pay-roll/Personnel Management System* are two such corporate applications also reviewed below.

"Major application systems" support one key programme. A lower developmental priority is presently attached to these systems. The ISSP envisages, *inter alia*, a *Court System* for scheduling court sittings and managing judicial case loads, and a *Students' Administration System* for developing student records, report generation, class schedules and teacher schedules.

"Standard local systems" have utility in several places and share a standard functionality. It is much more cost effective to develop these as common systems than as custom applications for each user group. Examples include local inventory management, scheduling systems and local computerised files/databases.

"Specialised systems" partially automate one or more functions as against managing a programme. A completed system – *Government Information Service* – is explained below.

A particular initiative in strengthening information systems: information resource management

The information resource management (IRM) approach is based on recognising information as a valuable corporate resource, and focuses on maximising the value of information. In practical terms it leads to:

- data driven design where application systems designs are based on inherent information needs rather than processing procedures – systems designs based on data relationships tend to be more stable and adaptable than those based on processing procedures;
- shareable databases where only one set of data is shared among all users - this leads to improved data quality and integrity;
- top-down planning where system designs on long-term information needs are built in stages – this ensures that systems that are developed meet business needs.

A corollary to IRM is the principle of a corporate data architecture that is based on the concept of shareable databases where only one set of data is to be shared among all its users. This ensures currency, consistency and integrity of data with due regard to maintaining confidentiality where necessary.

Sharing data

To understand the desirability of sharing data there is no better example than an individual's basic 'tombstone' data: name, surname, address, identification number, date of birth. This data is required by almost every ministry or department: for pensions, children's allowances, income tax assessments, registering patients, for the issue of birth or death certificates. The list indicates the extent to which data may be shared. By making this relatively small set of data widely available across the public service, and by implementing systems which utilise the shared data, IRM can offer real benefits to citizens.

There are direct savings to be achieved since today each department typically keeps its own name and address file. This information rapidly becomes inconsistent and makes life difficult and expensive for all concerned: citizens seeking a government service as well as public officers seeking to provide the service. The re-engineering of government procedures can offer greater benefits by building new applications on the shared data facility.

Introducing information resource management

The first objective is the design of an overall data architecture, usually expressed as a high level data and process model. This provides an initial scoping model for each application that ensures clear definition of project boundaries and thus clearly defines interfaces between systems. Consistent data definition is the next objective typically through a process of co-ordination of the various developments to:

- extend and refine the canonical model whilst ensuring that the required views of data are obtainable to meet project information needs; and
- build an overall data dictionary defining all of the data elements needed by the information systems.

In the case of packaged applications whilst integration is frequently represented by the definition of interfaces at the physical level, an understanding of the data model used helps to avoid implementation problems.

Linkages

Information resource management is closely linked with other aspects of information systems development.

First, three main stakeholder groups have an interest in the management of information resources:

- the user community;
- systems development projects;
- the IRM team.

The user community are stewards of Government's information; systems development projects successively refine the meaning of the information and extend its scope; whereas the IRM team provides standards, technical services and infrastructure required to make the information available to the user community and to systems development projects.

The IRM team undertakes data analysis, design and construction tasks to obtain the desired performance criteria by translation of the definitions provided by systems development project teams into suitable physical database definitions. The definition of such steps is necessary in order to ensure the required availability of systems and data, and to exercise appropriate recovery procedures as required.

Second, security measures are implemented within an overall security plan, which includes assessments of the impact of loss of use of a system, loss of data, corruption of data, sensitive aspects of system or data, and high security requirements. Implementation is followed by continuous monitoring of the performance of database systems and by the design and introduction of database structures and procedures to enhance system performance as necessary. Data protection legislation is currently being drafted.

Third, the shared data approach identifies responsibilities for all members of the user community and for the information systems support services. It is important that all parties are involved in defining the way that new procedures will operate in regard to data and data access.

Finally, the policy definitions which direct the implementation of information resource management are set by an IRM Policy Committee chaired by the Permanent Secretary, Office of the Prime Minister. An important policy issue concerns the use of unique ID numbers for citizen identification. For this purpose a National Identification Number is used as the personal identifier and the Department of Civil Registration is identified as the corporate database owner.

Timescale

IRM is a long-term activity. In the short-term, benefits have been achieved and progress demonstrated. The IRM team which consists of four persons produced an overall architectural model in a relatively short period. Methods and tools in support of the IRM activities are available and provide considerable personal productivity gains to the IRM group. At the development co-ordination activity adequate resources are deployed to ensure that data analysis problems are dealt with at an early stage and that the results of analysis work immediately contribute to the construction of the data dictionary. Technical specialists are at hand to provide support in the detailed construction and maintenance of databases.

The scope of Information Resource Management

The policy definitions under development, or established by the IRM Policy Committee, address:

- data stewardship role definition;
- data management;
- data security, retention and archiving;

- access controls.

Mechanisms for co-ordinating systems development projects with regard to their information needs have been established with responsibilities for:

- developing data models at corporate and project level;
- developing physical database definitions and ensuring their establishment in the technical environment;
- monitoring of the performance of the database system;
- designing database structures and procedures to enhance system performance.

Procedures to ensure the security of client systems and data are under design and will be implemented:

- designing authorisation and denial of access rights to data;
- ensuring that the ability to recover data is tested at regular intervals;
- ensuring that only production databases contain secret, confidential, or personal data;
- maintaining a register of information system assets.

The mechanisms used to control access to government systems and data are being established and include:

- defining user ID name standards and allocation procedures;
- maintaining a log of all system accesses;
- enforcing time out of inactive users;
- enforcing terminal/line disablement after nominated number of unsuccessful attempts to log in;
- implementing access controls;
- introducing document security policies at departmental level;
- ensuring compliance with security policies;

- promoting awareness of security policies;
- monitoring transfers of data;
- erasing procedures for files held on magnetic media.

A particular initiative in strengthening information systems: an integrated communications network

The implementation of on-line applications systems will necessitate inter-connections between computer systems and work stations served by them. The development of this communications network is based on the following strategy:

- a single network to support all applications as against one network per application – this will improve cost effectiveness by eliminating multiplicity of data links, modems and controllers;
- the ability to inter-connect both mini- and micro-computers as well as terminals;
- allowing any terminals to access any application – this means that a person will need only one terminal to access any number of applications;
- providing support for all potential users;
- support for international standards wherever feasible.

In order to achieve this, a three-tier infrastructure architecture is being put into place:

- at the corporate or national level, the architecture provides for a repository for corporate-wide applications and databases which are shared amongst all ministries and departments – the central point of systems and network management;
- at ministry levels, the architecture provides for a repository for ministry-wide applications and databases which are shared amongst all departments within the ministry;
- at departmental levels, the architecture recognises the need for departmental applications and databases residing on local area networks.

The three tiers allow a physical separation between computer systems for purposes of implementation, management and administration. Logically, however, all systems are inter-connected via a wide area network thus allowing a seamless and transparent view for users.

To provide the network capacity necessary to meet current and future requirements of government, a fibre optic network is planned for implementation. This high

speed network will inter-connect all offices which are geographically highly concentrated in the country's capital and will allow imaging and other leading edge technology.

As part of the Government's goal to join the European Union, plans for extensive international data communications are in the course of implementation. The long-term objective is to allow any user on the government network with the appropriate privileges to exchange electronic mail elsewhere outside the shores of Malta. Early investigations point to extensive traffic between Malta and its foreign embassies, the European Union, off-shore vendors, foreign consultancy bodies, and electronic data banks.

A defined architecture serves as the framework for the planning of all systems and networks. Standards supply the guidelines which aid in mapping out plans. Ultimately, the infrastructure provides the tools and building blocks for implementation of computer systems.

The need for integration

The infrastructure under construction is the basis for inter-connection and communications between information systems. This allows government to maximise the value of information. Without the underlying infrastructure, isolated information systems would become islands of information providing no real value.

By defining and promoting the systems and network architecture, the integration of all systems and networks within the whole is achieved. A major part of this process results from the use of standards. The architecture which is currently being introduced is, primarily, built upon European and international standards. This minimises changes that may result from Malta's prospective inclusion in the European Union.

Technical and human resources

From a technical infrastructure point of view, the preconditions for success are a strong, reliable communications backbone as well as a highly skilled workforce.

The planned fibre optic network provides a high performance network. On-going research and investment will ensure the availability of enhanced and expanded services.

Although the workforce is highly educated, the experience necessary to implement some of the larger projects dictates the need for foreign expertise. Expatriate

consultants are contracted to aid in implementation as well as to provide skills transfer to local personnel.

The future

Malta is being transformed into a hub that provides financial, maritime, telecommunications and other services to countries on the Mediterranean rim and beyond. Within the context of this goal, the Management Systems Unit is working closely with the country's telecommunications provider, Telemalta Corporation, to ensure that the Government's Information Technology initiatives integrate and strengthen that vision.

Considerable progress is being made at departmental level with the installation of local area networks linking dozens of users. As the needs of departments are gathered, specialised systems are installed along with general applications such as word processing, spreadsheets, planning tools and electronic mail.

The installation of the wide area network is also progressing at a steady rate as new ministries and departments are brought on-line. The network rate of growth is correlated to the rate by which individual ministries and departments are computerised and linked into it.

The fibre optic network is planned for completion in 1996, while international connectivity is envisioned by 1995.

A particular initiative in strengthening information systems: a Geographical Information System

Geographical Information System (GIS) is a corporate or national IT application and is included in government's corporate information technology strategy to:

- provide a common medium through which various government ministries and departments will access, share and distribute geographical related data;
- add another functional dimension to government's corporate information technology strategy by incorporating spatial query and analysis capabilities;
- implement a complete geo-coding functionality at a corporate level, based on the street network of the country, which will allow the translation of a textual address to a geographic location and vice versa. Apart from creating an address database that can be used by all government departments, this functionality will also allow data sets to be merged geographically for statistical and demographic analysis.

The benefits

One of the benefits offered by GIS is the graphical front end through which data sets and analyses results are displayed pictorially. GIS offers a simple and effective way of combining data from various sources and displaying such data in a variety of easily understood graphical formats such as layered thematic maps or pin maps.

GIS also gives the ability to relate seemingly unconnected data sets through attributes of geographical position. Given that around 90 per cent of all Government data may be geographically referenced, GIS will help to establish the necessary links between various departmental data sets.

In this context, the benefits offered by GIS through improved data presentation and improved communication between departments are considered as critical. The widespread use of query-only low-end GIS packages is envisaged at a corporate-wide level, once certain headway is made in implementation.

Digital maps

The digital base maps which serve as the common ground on which the GIS data sets are built are already available. In a national context, digital maps may be required at a scale of 1/2500 for a national level, while more detailed maps at a

scale of 1/1000 may be more suited for some of the urban areas.

Linkages

GIS is closely linked with other aspects of information systems development. In essence, GIS will share and make use of data kept at various levels within the corporate data model.

Distributed GIS applications will place heavier demands on the communication network in terms of network traffic volumes as vaster amounts of graphic data would need to be exchanged. The physical communication network will thus dictate how GIS is implemented and adopted across government.

Timescale

GIS is a long-term activity. In the short-term, however, benefits have been achieved and progress demonstrated by the implementation of individual projects which readily lend themselves to GIS concepts and technology. Such projects include a land registration system using a GIS core to relate property and ownership details to parcel boundaries drawn over digital base maps, scenario configurations for the development of local councils, new postal beats, and new school transport routes.

GIS may also create spin-offs from such short-term projects. The land registration project, for example, apart from demonstrating GIS functional capabilities has helped to set up the mechanisms for creating and maintaining land assets registers.

Preconditions

In order to draw up an effective GIS implementation plan, the policy definitions which direct the way in which GIS is phased in have to be established. In particular, it is necessary to identify the data sets for whose capture and updating government organisations should be responsible, and subsequently to integrate such data into the corporate data model.

Policies on data management also need to be specified and implemented. Such policies should handle issues arising from data access and security, infringements of citizens' rights and of intellectual and other property rights.

A particular initiative in strengthening information systems: the social security computerisation project

The Department of Social Security embarked on this national level computerisation project in order to business re-engineer its information and administrative systems. The new system is constructed around the personal 'tombstone' data lodged at the Department of Civil Registration. It provides comprehensive social security benefit claim and payment facilities as well as integrating the collection of national insurance contributions.

The development of the system conforms to traditional development and implementation procedures. The strategy primarily focuses on incremental delivery by means of module development. The priority is that of establishing a solid base of data upon which future functionalities can be built.

The computerisation project is directly linked with an organisational operations review.

The potential gains

Information relating to social security collections and benefits is cumbersome to collate and, invariably, unreliable. The volume of payments – over one million cheques are generated annually – provides ample opportunities for direct benefits to derive from this project. These include:

- improved customer service as all social security administration information will be available on-line in District/Area Offices for enquiry purposes – this will eliminate the need for citizens living at the other end of Malta to call at the Department of Social Security (which is sited in the capital city, Valletta) for information;
- faster turnaround of benefit claims and anticipation of public requirements/entitlements;
- ability to enforce national insurance payments and therefore collect outstanding revenue faster;
- exchange of information with other government organisations, in particular the Inland Revenue Division;
- improved and accurate information on financial status and trends, thereby allowing for better formulation of policy.

The first phase

The first phase of the computerisation project concentrated on integrating all benefits and contributions information into one system. Once this conversion work is completed (the data is currently manually processed) the data will then be manipulated, consolidated and rationalised.

The most visible aspect of the project rests on the turnaround time for social security claims as well as the accuracy and timeliness of payments. The strategy focuses on the payments side of the project in order to demonstrate to the public an improved service level. An example is that of consolidating all social security payments to an individual within one cheque with an accompanying statement showing the relevant breakdown. This will not only save money by cutting down mailing and processing costs but will also achieve the by-product benefit of encouraging direct credits to bank accounts.

Concurrent with this part of the project is work directed towards aligning personal 'tombstone' data with that of the Department of Civil Registration. The objective is to minimise the public's interaction with government departments by allowing for sharing of data. One spin-off resulting from this is that it provides more accurate information to the Inland Revenue Division and thereby minimises fraud.

High profile

The Department of Social Security has the unique traits of being both a revenue collector and a distributor with a social conscience and therefore attracts public attention. This has given the social security project a priority ranking.

Timescale

The first payments of social security benefits by the new system were to be made at the end of 1994. 1995 will see conversion of other benefits with work being directed towards improving the revenue part of the business process as well as establishing links with other ministries. Implementation progress is ultimately determined by how long it takes to capture and validate existing data.

A particular initiative in strengthening information systems: the introduction of electronic mail services

One of the major objectives of the Information Systems Strategic Plan is to assist the public service to improve its communications and sharing of information. Concurrently, office systems are being implemented across government in order to ensure the shifting of office papers (correspondence, reports, documents, other) onto electronic media. The electronic mail service for government, a corporate IT application, will allow for effective sharing of those documents as well as providing an interface with other business applications which should enhance day-to-day communications.

Objectives

The main objectives for introducing electronic mail service within government include:

- encouraging communications at a more informal level and thus helping to break down some of the barriers of rank;
- broadening communications horizons amongst ministries, departments and generally across government;
- saving time and avoiding duplication by sharing information developed at the office level – such as regular procedures or guidelines;
- enhancing document/report production by sharing knowledge, input, editing;
- providing mechanisms to allow for more information on a more timely basis to support managers in making more informed decisions quicker;
- encouraging the seeking of information from other sources available in electronic media, even those external to government;
- providing a link to distributed business applications.

The electronic mail service is the first step towards introducing new practices with regard to communications and information-sharing within the public service. The ability to assimilate information quickly, deal with it, move on to the next piece of information, is becoming increasingly critical for the public service to maintain its

effectiveness and to sustain large volumes of day-to-day activities.

Other technology such as Executive Information Systems (EIS), electronic data interchange, work flow management, and work group computing is under consideration and will soon become the standard tool set for public officers. Electronic mail is easy to use and is a rather subtle way to introduce better communication practices.

Pilot testing

The necessary communication infrastructure and hardware must be in place. Concurrent with the introduction of the necessary architecture and infrastructure, an electronic mail package has to be identified. The implementation strategy consists of the selection of a package and testing it within a pilot area. The pilot phase of the strategy is under way.

Timescale

It is expected that completion of the project – from initiation of preparatory work, to introduction of electronic mail across government and user training – will take approximately four years. The introduction of electronic mail will be phased, with initial introduction taking place in the more strategically oriented ministries. In ministries where electronic mail is introduced, the impact on the speed and efficiency of communication will be immediate.

An integrated approach

The implementation of new technology is universally considered as a progressive approach to a more efficient operation. Whilst the success of electronic mail technology speaks for itself, the full investment can only be realised and benefits maximised if the introduction of procedures and practices is an integral component of the implementation strategy. The following critical objectives have to be achieved:

- understanding the communications and information sharing requirements of government today;
- examining other potential communication and information sharing opportunities;
- examining the hierarchical boundaries and determining communications/

information-sharing barriers;

- procuring the best-fitting electronic mail product for both today and tomorrow's requirements.

Good practices

It is important to prepare the organisation for new technology. The dissemination of good practices will prepare the ground for successful implementation.

The following are examples of initiatives required to ensure good practice:

- educating the user – the user must understand the benefits in order to be able to exploit the technology to advantage;
- extensive training is critical – new skills to maximise the benefits of the technology are necessary;
- encouraging the user to recognise and champion changes that bring about a better and more effective business environment;
- ensuring that the user assumes ownership and assumes pride in its success.

Once the user is prepared, the specific protocols and practices of an electronic mail environment will evolve naturally. However, a foundation of good practices must be introduced within an electronic mail environment. In particular:

- an electronic mail account management system must be introduced as users should understand clearly what entitles them to an electronic mail account and the responsibility attached to it;
- since an electronic mail environment allows for the sharing of all kinds of information, the discipline of good discretion and judgement has to be inculcated in order to ensure that the tool is not abused and that other users are not inundated with 'useless' or 'junk' mail;
- general information which is of interest to some but not others should be communicated through bulletin board technology as opposed to specific individual mail boxes;
- requests for a receipt should be used only in instances where it is critical that the sender should be assured that the reader has seen the information in the message in a specific time period;

- the benefits of communication and the breaking down of hierarchical barriers should be promoted whilst maintaining appropriate protocols;
- good practices regarding privacy and censorship should be introduced.

A particular initiative in strengthening information systems: the pay-roll/personnel management system

This corporate application is an integrated pay-roll/personnel system that will provide for effective and improved financial and human resource management within the public service. The pay-roll/personnel system will integrate with other information systems to reduce maintenance overheads and eliminate redundancy of information.

The steps to be followed involve traditional development and simple implementation strategies. The strategy, primarily, focuses on incremental delivery by means of module development. The priority is that of establishing a solid base upon which future functionalities can be built.

The background

Information relating to employee skills as well as the skills required to efficiently staff work positions is currently not available. Promotion has, traditionally, been based on seniority. Consequently skills are not matched to jobs, and younger, more able employees are held back from achieving potential. The introduction of a computerised pay-roll/personnel system will enable skills to be recorded for employees and positions, and allow these to be optimally matched. The system will support succession planning by enabling the identification of training required in order to achieve the necessary skill set for positions within the service.

Information relating to employees is, primarily, paper-based. Inevitably, this engenders duplication of information which results in unnecessary work and increases opportunities for error. The pay-roll/personnel system will maintain a single information set to be accessible to authorised employees.

The costs of paying and administering employees are currently high as the process is extensively manual, with an enormous duplication of effort and information throughout the system. A fully functioning pay-roll/personnel system will eliminate repetitive clerical tasks, increase work productivity and allow for critical human resources to be deployed in other areas of activity.

Preconditions and benefits

The introduction of the pay-roll/personnel system is not an end in itself but rather a support to the changes currently under way in the financial and human

management spheres respectively.

The essential precondition for attaining change is to modify the attitudes and behaviour of the public service workforce which has been exposed only to a centralised mode of operations. As mentioned earlier in this profile, it is only now that modern concepts of financial management and human resource management are being introduced.

The primary objective of the pay-roll component of the system is that of ensuring that public officers are accurately paid what they are due on time. This, however, offers an opportunity to accurately capture employee information, current as well as historical, thereby increasing potential benefits.

In order for the system to support the early stages of change it must be designed in a fashion that enables utmost flexibility. This requirement is critical because the system must allow for the dissemination of control from centre to line departments, and to encompass employees' increasing awareness of the possibilities of work rationalisation. This flexibility increases the cost of systems development by a factor of up to twenty per cent.

The matching of employees' skills with available jobs to provide efficient service, and rewarding employees for ability, is the most potentially beneficial result of the personnel component of the system. Other financial management measures (i.e. more accurate employee pay due to later cut-off times) are less important in the long-term, but will quickly reduce clerical effort in correcting errors.

Timescale

It is anticipated that the system will take five years to develop and implement. Development and implementation is two pronged: the development and introduction of a short-term system to address immediate needs, and concurrent development of the full system.

The short-term system has been designed and is currently implemented in a number of pilot areas.

A particular initiative in strengthening information systems: the Government Information Service

The Government Information Service is a computerised telephone enquiry service which processes any queries from the general public related to government and the public service. The primary objective of this project is to provide a quality customer service by:

- creating an efficient point of reference that effects an immediate response to any possible query from the public;
- assisting citizens to avoid bureaucratic difficulties in dealing with government.

It is anticipated that this system will help to improve the public's perception of the service.

The need for change

It was felt that the service must become more client-conscious and therefore more accessible to the user. A 'We Care' culture has to be inculcated. In this context, a situation analysis, carried out as an initial phase of the project, revealed major deficiencies in the methods by which information was conveyed to users of public services.

The Department of Information's role in dealing with queries was solely that of directing enquirer to the relevant government departments. This could become a time-consuming affair where the client ended up embroiled in lengthy correspondence with and possible non-co-operation from the department concerned.

First steps

The first major requirement was a commitment from senior public officers to the introduction of the service. Constant and direct liaison with all staff directly or indirectly involved with the project was considered as a priority and communication sessions were held at every stage of development.

Co-ordination with other departments was continuously maintained in order to acquire the necessary information and ensure that the database once in place is regularly updated. Costs included:

- site development;
- software design;
- hardware selection and acquisition;
- training of staff.

The following were the main stages in the project's cycle:

- obtaining the commitment of the Department of Information;
- carrying out a situation analysis to identify the objectives and the project plan;
- carrying out an information technology assessment to analyse the system required and identify hardware, followed by commissioning of development of the system;
- carrying out of fieldwork which included a public survey to identify key data that had to be included in the database;
- selecting and training staff to run the system;
- collating, inputting and validating data;
- communicating and launching of the service (including publicity).

Future developments

It is intended to expand this service into a complaints service, based on the same computerised system in which all complaints would be addressed to a central point.

The introduction of a computerised information data bank to be located within each of the 67 Local Councils has been pioneered as an extension of the system.

The campaign to create a more customer-focused public service is supplemented by other initiatives such as the publication of information leaflets relating to various government bodies and procedures; TV campaigns ranging from selected advertisement campaigns to programmes on government services.

Timescale

The project spanned two years from design to implementation. Upon completion the impact was immediate and pervasive:

- this centralised service greatly reduced the time and effort previously spent by public officers in various departments processing enquiries from the public.
- the service was widely accepted and used by the public.

5.2 Delegating authority for appointments and discipline

The Constitution of Malta vests the appointment (including promotion) and disciplining of public officers in the Prime Minister, acting on the advice of the Public Service Commission (PSC) – subject to certain exceptions.

The Constitution permits the Prime Minister, acting on the recommendation of the PSC, to delegate such of these powers as he chooses, and under such conditions as may be specified. These powers of delegation, however, have rarely been used. This has inevitably, resulted in a highly centralised system of appointments and of discipline.

In order to decentralise, a study undertaken by the Management Systems Unit proposed that the PSC should move from controlling the detail of each case to monitoring principles and procedures. The study recommends that the PSC advises the Prime Minister to delegate this power of appointment and discipline in the public service. The basis of delegation proposed that:

- the power of appointment be entrusted to the Permanent Secretary of each ministry, with further delegation as may be necessary to the Director-General or Director responsible for each division or department (or to the Director of Corporate Services or a similar officer acting on behalf of the Permanent Secretary, Director-General or Director);
- improvements in disciplinary procedures be introduced together with further delegation of disciplinary authority to lower levels of management.

The limits of delegated authority have not been defined, but the proposals envisage that:

- for appointments:
 - clear procedural requirements would be laid down;
 - the appointing authority would have full discretion as to the choice of person, provided that the prescribed procedures had been followed;
 - appeal would be allowed only where it could be shown that there had been a clear breach of prescribed procedures;

- for discipline:
 - every disciplinary authority would have access to a wide range of penalties;
 - only the Permanent Secretary would have the power of dismissal;
 - there would be an appeal procedure under the supervision of the Public Service Commission.

The recommendations propose that the Permanent Secretary of the Office of the Prime Minister arranges for the Management and Personnel Office to:

- issue directives on appointments and discipline;
- publish a recommended scale of penalties for the guidance of disciplinary authorities;
- provide advice and support to permanent secretaries and other officers exercising delegated powers;
- monitor their activities and report periodically to the PSC about the exercise of those powers.

The role of the Public Service Commission would be:

- to satisfy itself on an on-going basis, that procedures in use where delegation of appointments and discipline existed were based on sound principles and would result in freedom from improper bias;
- to satisfy itself on an on-going basis, by post hoc audit, that approved procedures were being properly implemented in all areas where delegation existed, and to recommend withdrawal of delegation if necessary;
- to supervise a system of appeals against appointments and discipline;
- to issue an annual report on the exercise of delegated powers.

The context for change

The study identifies three main issues:

- The systems of appointments and of discipline are highly centralised and

make excessive demands on the time of senior people; these result in delay, inefficiency and abdication of responsibilities.

- The current systems do not achieve the results intended; appointments are not free from bias and improper interference, and unnecessary posts are created to accommodate favoured candidates; complaints about lack of discipline in the Service are frequent, and it is rare to find a first-line supervisor or a more senior manager being disciplined for tolerating poor standards.
- The extent to which permanent secretaries, heads of departments and their subordinates are held accountable for results in the areas of their responsibilities is limited by the fact that they have limited control over human resources.

Implementing change

The first requirement is a decision in principle by the PSC to change its approach from controlling the detail of each case to monitoring principles and procedures, implementing this decision in stages as appropriate changes can be made in the public service to make it.

If the PSC accepts this basic premise, the way ahead would be for it to seek the approval of the Prime Minister and the Cabinet Committee on Reform. The PSC would advise the Prime Minister to make one or more instruments of delegation regarding powers of appointment and discipline in the public service under the terms of Section 110 of the Constitution, with:

- the phased introduction of a system of delegation of appointment based on:
 - delegation to the permanent secretary of each ministry, with a further delegation from the permanent secretary to heads of department;
- the phased introduction of a system of delegation of discipline based on:
 - improvements in procedures, further delegation to lower levels of management and an educational campaign to explain that higher standards are to be demanded;
- a requirement that persons exercising delegated powers comply with regulations to be made by the PSC with the consent of the Prime Minister;

- a requirement that delegated powers be introduced in ministries or parts thereof only when the MPO has confirmed to the PSC that the work can be performed to standards set up by the PSC;
- a requirement that the exercise of delegated powers be monitored by the MPO on behalf of the PSC, under arrangements approved by the PSC;
- a requirement that the MPO report to the PSC on the manner in which delegated powers are being exercised and on the monitoring thereof, as and when requested;
- a provision that delegated powers may at any time be withdrawn by the PSC from an individual or a group of officers or in a specified part of the service.

The PSC would also seek the approval of the Prime Minister for changes in the *Public Service Commission Regulations 1960* and the *Public Service Commission (Disciplinary Procedure) Regulations 1977* which would bring these provisions into effect.

Subsequent steps would be:

- the PSC and the MPO would issue more detailed information within the public service setting out the changes in regard to appointments and discipline in the wider context of increased managerial accountability and emphasis on the merit principle;
- the MPO would give the unions advance warning of the above steps and consult with them about the proposed changes;
- the MPO would make appropriate changes to its training programmes and the educational material to be used in ministries publicising the changes of discipline;
- the instrument of delegation would be signed and *Regulations* amended;
- the necessary organisational changes would be made:
 - the MPO would bring together a small group of staff who would work under the supervision of the PSC to develop the procedures required for the new approach to appointments;
 - that group would carry out a phased programme of work with the MPO and the MSU to prepare selected ministries or parts thereof to exercise delegated powers of appointment, to standards set by

the PSC;

- the group would gradually take on the new duties assigned to the MPO under the new system of appointments;
- the phased programme of preparing parts of the Service to exercise delegated powers of appointment would continue, under the supervision of the PSC, until the process was completed.
- the new system of appointments would be brought into effect in any ministry or part thereof when the permanent secretary was able to demonstrate to the MPO that the powers could be exercised to the standards set by the PSC;
- similarly, the new Regulations regarding discipline would be brought into effect in any ministry or part thereof when the permanent secretary was able to demonstrate to the MPO that the powers could be exercised to the standards set up by the PSC.

It is believed that an immediate and demonstrable impact on the operation of the service will arise within months of the delegation of appointments and discipline.

5.3 Delegating financial management responsibilities

The tenor of managerial reform in the Maltese public service favours giving managers – notably heads of executive departments – effective control over the resources required to carry out their respective organisations' substantive functions, by giving them a wide measure of discretion in using information, people and funds.

The changes contemplated or in hand in the field of financial management are designated by the generic heading of *Financial Delegation and Accountability Initiative*. The *Financial Delegation Framework* is one such change.

Recommendations on financial delegation are the subject of a policy document that has been approved in principle and now awaits implementation. The document stipulates the financial duties and responsibilities of the Minister of Finance, other ministers, parliamentary secretaries, permanent secretaries, heads of departments, Directors of Corporate Services and Directors of Finance and Administration. In other words, it envisages considerable re-distribution, by means of formal delegation, of the statutory authority which is presently vested in and exercised by the Minister of Finance and the Permanent Secretary for Finance, among the top structures of ministries and departments.

The context for change

The highly centralised financial administration and management of the public service no longer meets the needs of a modern government's diverse and complex operations and functions. It focuses on processes and policies rather than on outputs and results, and operates on a pre-audit system. The delayed and, to some extent, arbitrary decisions that result from over-centralisation are not conducive to responsible and accountable departmental management. The view that the supposed safeguards against over-spending are less effective than they purport to be, is widespread.

Delegation of authority in financial administration will accelerate the development of more accountable financial management by giving ministries and their managers the freedom to manage in pursuit of set objectives without having to seek authorisation for each transaction from the Ministry of Finance.

The most important prerequisite for successful action is a firm legislative and regulatory foundation upon which to build a framework for financial delegation. This requires substantive amendment of the *Financial Administration and Audit Act*,

1962 and the General Financial Regulations, 1966.

The necessary amendments were prepared by a project team led by the Management Systems Unit's Financial Management Group, and including representatives of various divisions of the Ministry of Finance.

Financial delegation is complemented by substantive improvements in the accounting policies, accounting systems, tendering procedures and internal audit employed in the Maltese public service, which are explained in Section Six of this Profile.

Financial delegation relates closely to the proposals on parastatal accountability (see entry 4.1).

In devising the framework of financial delegation, technical, organisational and attitudinal issues were given attention.

The most important *technical* consideration was that delegation of authority requires that the appropriate balance be struck between the Minister of Finance's need for control in order to satisfy Parliament, and the operating ministries' freedom to manage within limits established by government as embodied in legislation, business plans and annual budgetary allocations approved by Parliament. In the process of transition from a highly centralised administration to a decentralised one, the focus must be on the delegation and not the abdication of financial responsibility. Thus ministries and departments must first be fully equipped to receive such delegation and all the necessary safeguards must be in place to ensure that financial control is strengthened and not weakened by such delegation. This meant:

- defining financial management policies;
- devising or re-vamping accounting and tendering procedures;
- introducing internal audit, as a first line of defence against improper financial administration; and
- developing a training plan and appropriate curricula.

These measures are explained in Section Six of this Profile.

The principal *organisational* consideration is to secure a good 'fit' between delegated authority and top structures, as well as providing a well-defined repository for the expertise required to support ministers and heads of department in the exercise of delegated authority. This meant examining each ministry's organisation, identifying positions within it to which financial authority could be

delegated and agreeing how extensive such delegation could be. It was not possible to design one 'model' organisational structure which met the needs of all ministries, and therefore there was some tailoring of the general pattern in order to suit ministries of different sizes and those with complex and varied programmes. The scheme spells out in some detail the functions and organisation of Directorates of Corporate Services in ministries, which will play a leading role in supporting the exercise of delegated authority and securing accountability.

Attitudinal considerations stem from the long tradition of centralised administration. It is difficult to overstate the importance of frequent consultations with the Ministry of Finance and with senior public servants who will be required to operate in this changed environment, both to benefit from their advice and to ensure their understanding, and if possible their support, for the measures being proposed. This process of consultation offers many opportunities to assure Ministry of Finance officials that their responsibilities are not being diminished and the members of operating ministries that they are not being overburdened with responsibility.

Approximately one year was required to devise the framework of delegation, comprising not only amendments to the principal law and regulations, but also specifying the measure of authority to be exercised at each level and by each component of the top structures.

The parliamentary timetable for passage of the proposed legislation is less certain: much depends on the priority assigned to the amendments among other government business in the House of Representatives.

Beyond these first steps, full and effective implementation of the new provisions in legislation will be influenced by the pace of wider decentralisation in the public service – in matters such as human resource management, reviewed earlier in the Profile, as well as in the operational business of ministries. The Ministry of Finance may view itself as the loser in the process of decentralisation and may require frequent reassurance on the subject of the different but still central role which it will continue to play in a public service which is decentralised. It is also reasonable to expect that some appointees to new and unfamiliar responsibilities will need intensive training in the financial operations of government and that, even after receiving such training, will be reluctant to assume the full responsibilities of their positions. All of these factors will combine to increase the time required to secure fully decentralised financial administration.