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An Organizational Plan for Informatics (1985 - 1990)

Department of
External
Affairs

Ministère des
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Canada

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PEAT MARWICK
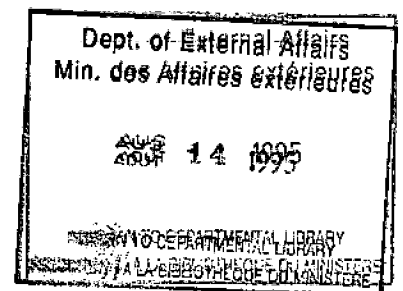
DEPARTMENT OF EXTERNAL AFFAIRS

AN ORGANIZATIONAL PLAN FOR
INFORMATICS (1985-1990)

Final Report

July 12, 1985

DEPARTMENT OF EXTERNAL AFFAIRS

AN ORGANIZATIONAL PLAN FOR
INFORMATICS (1985-1990)

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I - EXECUTIVE SUMMARY

This document presents the analysis, conclusions, and recommendations of Peat Marwick in relation to the recent study of short and long-range EDP/MIS organizational options and implications.

STUDY SCOPE

The scope of the study included all EDP-related functions in the Department of External Affairs, with the exception of the Passport Office, which operates and maintains its own computer and application systems with its own staff.

Accordingly, the scope included those EDP and EDP-related functions performed within the Management Services Division (MFS) and the Communications and General Services Bureau (MGD).

BACKGROUND

The recently published Long-Term Strategic Plan for Informatics (1985 - 1990) has been the major impetus for the EDP Organization Study. The Strategic Plan sets out a series of major Departmental EDP initiatives which are linked closely to Departmental program objectives and priorities, and presents them in the form of prioritized projects to be undertaken over the next five years. The focus of the study has, therefore, been prospective, not retrospective in nature.

Prior to consolidation (in January 1982, with the trade sector of the former Department of Industry, Trade and Commerce), the Department was primarily a modest user of EDP, mainly in the areas of administrative support. The Department had a small EDP organization which responded to requirements as they were identified and developed systems solutions accordingly in an effective manner. With consolidation, the Department adopted a number of mature systems and a much larger, demanding user community for EDP support. However, the

level of resourcing of the EDP function has not increased commensurately with the level of demand for EDP services. As a result, it has become increasingly difficult for the EDP function to cope with existing workloads, let alone the increased demands of the users. In order to maintain high levels of service to their users, members of the EDP organization have had to assume additional roles and effort that, under normal circumstances, would have become the responsibility of any incremental resources assigned to the EDP function.

It is clear that if the Department is to achieve the objectives set out in the Strategic Plan for Informatics, significant incremental resourcing of the EDP function is required. Moreover, EDP policies, standards and procedures need to be kept under review to ensure that they provide a firm basis for future EDP initiatives.

STUDY OBJECTIVES

In order to move ahead effectively and successfully, it was recognized by the EDP Policy Committee that the organization of the Departmental functions responsible for informatics (EDP, telecommunications, and office automation) needed to be reviewed and adjusted to reflect the full scope of technological and management challenges encompassed within the Strategic Plan. The following excerpt from the Executive Summary of the Strategic Plan summarized the resourcing implications of the EDP initiatives set out for the next five years:

> "The Department's base of professional (EDP) personnel has
> not kept pace with the large expansion that has taken place
> in the number of Departmental Systems. As a result, it is
> poised on the brink of a major step forward in the
> Informatics area without the resources to sustain it.
> Unless new resources can be made available, there will have
> to be a drastic reduction in the projects included in the
> Action Plan." (Chapter 1, page 2)

Taking into consideration the above situation, the following specific study objectives were set:

- To recommend an appropriate organizational context for the departmental EDP function, including:

  - its placement and relationships with other organizational units

  - its internal structure, based on an updated scope of functions reflecting current EDP management principles and on the Strategic Plan requirements, and

  - its staffing level and rank requirements.

- To provide an assessment of the impact on the rank levels of current EDP positions if the recommendations were adopted.

- To survey a sample of EDP organizations in other government departments, and to discuss EDP organizational requirements and successful organizational models with them and with other central agencies, as appropriate.

In addition, the study was to raise some of the key implementation considerations for the Department in moving from the current to any proposed new organizational context for informatics.

SUMMARY OF MAIN ISSUES

The main issues which were addressed by the study are briefly discussed below:

1. Current EDP Organizational Status

   Current EDP functions are organizationally dispersed and some functions are lacking or need greater emphasis to keep

pace with EDP technology and management practices. The
other EDP-related functions within the informatics context
- namely, telecommunications and word processing - are also
organizationally separate from the EDP functions. All of
the functions, however, fall within the authority of the
Administration Branch. This study examined the need for
rationalization of these functions, and for the establish-
ment of new ones.

2.   Organizational Placement

Most of the EDP functions fall within the scope of MFS,
which is one of several organizational units within the
Finance and Management Services Bureau (MFD). Traditional-
ly, most EDP organizations have been founded within the
finance/accounting functions of business and government
organizations. However, in recent years, there has been a
general upward trend in the organizational placement of the
EDP function in both the private and public sectors. This
trend has been due to the increasing dependence on informa-
tion systems by the organization as a whole. The study
examined alternative organizational placements of the EDP
function within the Department.

3.   Expectations of the EDP Function

In determining a proposed organizational context for the
Departmental EDP function, it was important to understand
the expectations that senior management and users of EDP
services have of the EDP function. The study interviewed
some of the members of the EDP Policy Committee and the EDP
Users Group to solicit their views on the departmental
expectations for the EDP organization, and on what future
mandate for the EDP organization and what working relation-
ships with the user community are essential if the
Strategic Plan is to be achieved.

4.   Need for Two-Way Understanding

An issue arising from the study was the confirmation of the
need to:

-        maintain the awareness of EDP management and staff of
         the program objectives and substantive information
         requirements of Departmental senior management

- increase the education of the Departmental user community in general EDP concepts, in the capabilities and constraints of technology, and in the process of developing and implementing information systems.

The two-way understanding is important to ensure that expectations are kept at a realistic level. The study examined ways in which the design of the EDP organization could support this important aspect for the Department.

5. Short-Term vs. Long-Term Organizational Solutions

An issue which the study addressed was the focus for organizational design: that is, should the study focus on the immediate (short-term) requirements, or on the longer-term organizational requirements? The study addressed the need to consider both short and long-term requirements, and to plan the evolutionary path between the two sets of requirements.

SUMMARY OF RECOMMENDATIONS

The study has resulted in the following recommendations:

1. That the Department establish a new Information Systems Bureau within the Administration Branch, headed by a Director-General, and comprising three major functional groups:

   - Systems Policy, Planning, and Integration

   - Computer Services

   - Client Services.

   Figure 1 depicts the sub-functions and person-year requirements of the new Bureau.

2. That the following existing EDP and EDP-related functions and staff be encompassed immediately within the new Information Systems Bureau, with adjusted function names and scope of responsibilities:

FIGURE 1

DEPARTMENT OF EXTERNAL AFFAIRS

PROPOSED INFORMATION SYSTEMS ORGANIZATION (SHORT-TERM)

```
                          DIRECTOR GENERAL,
                          INFORMATION
                          SYSTEMS

                          EK-2
                                          SECRETARY    SCY-3
```

```
DIRECTOR,                DIRECTOR,                    DIRECTOR,
SYSTEMS POLICY    SM     COMPUTER          SM         CLIENT SERVICES   SM
PLANNING AND             SERVICES                     DIVISION
INTEGRATION              DIVISION

         SECRETARY  SCY-2      SECRETARY  SCY-2              SECRETARY  SCY-2
```

SYSTEMS POLICY AND PLANNING	ADMINISTRATIVE SERVICES	SYSTEMS INTEGRATION	COMPUTER OPERATIONS	MANAGER, SYSTEMS DEVELOPMENT AND MAINTENANCE	TECHNOLOGY PLANNING AND RESEARCH	OFFICE PRODUCTIVITY SERVICES	WORD PROCESSING SERVICES	INFORMATION SYSTEMS CONSULTING SERVICES
1 CS-4	1 AS-3	1 CS-4	1 DAPRO-5	CS-4	1 CS-4	1 OM-5	1 AS-4	1 CS-3
2 CS-3	2 AS-2	3 CS-3	5 DAPRO-4		2 CS-3	1 OM-4	1 AS-2	2 CS-2
		1 CS-2				2 CS-2	5 CR-5	1 OM-2
						2 OM-3	12 OCE-3	
						3 OM-2	15 OCE-2	

```
              HEADQUARTERS          POSTS
              APPLICATIONS          APPLICATIONS

                 7 CS-3               4 CS-3
                 9 CS-2               7 CS-2
```

TOTAL PERSON-YEAR
COMPLEMENT: 103

Existing Organizational Unit/Function	Proposed Placement Within New Structure
MCBS	Systems Policy, Planning and Integration Division
MFSC	Computer Services Division; Systems Development and Maintenance Unit
MFSX	Client Services Division; Office Productivity Services Unit
MFSP	Systems Policy, Planning and Integration Division; Administrative Services Unit
MGDW	Client Services Division; Word Processing Services Unit
Computer Operator (MGIC)	Computer Services Division; Computer Operations Unit.

3. That the Management Consulting Group (MFSM) be maintained as a general management consulting group outside the Information Systems Bureau. The scope of services offered by this group (including contracting support, organization studies, and front-end systems requirements studies) satisfy a broader set of requirements of the Department than those services mainly provided by an information systems organization. However, because some of the work undertaken by MFSM often leads directly to information systems projects, there should be a strong relationship established between MFSM and the Client Services Division of the new Information Systems Bureau, to ensure an effective handover of responsibility for satisfying the client's overall needs. A specific organizational placement recommendation for the management consulting function has not been made in this study, but several possible options are discussed in this document.

4. That the Administrative Publications Group (MFSA) be immediately integrated within the Headquarters Facilities Management Division (MGF). With this transfer, the existing Management Services (MFS) organization, with the possible exception of MFSM, would be totally removed from the Finance and Management Services Bureau.

5. That certain informatics-related functions currently performed within the Telecommunications Division (MGT) and, potentially, within the Records Management Division (MGI), should be merged with the Information Systems Bureau in the medium to long-term (3 to 5 years from now) to form a full-scope Informatics organization; and that a more detailed study of this next organizational evolution be undertaken in 1986/87, after the establishment and initial stabilization of the new Information Systems organization.

6. That the Department continue to identify opportunities, and to establish mechanisms whereby rotational personnel can contribute directly to project initiatives undertaken by the new Bureau. While most rotational personnel lack the technical qualifications to undertake many of the functions performed in the current and proposed organizations, their substantive knowledge of and experience with the Department's activities, especially abroad can provide real benefits to areas like systems planning, the definition of user requirements for application systems, and office automation.

7. That the new Bureau maintain under review the existing infrastructure of EDP policies, standards and procedures to ensure that it provides a firm basis for planning and managing the existing systems and the projects set out in the Strategic Plan. A sound infrastructure will also enable the Bureau to manage the expectations of the expanding Departmental user community which they must service.

8. That the implementation of the short-term Information Systems organization proceed as quickly as possible, so that the initiatives set out in the Strategic Plan can be actioned at the earliest possible date.

9. That the implementation strategy consider an appropriate balance between top-down and bottom-up resourcing and establishment of organizational units. While there is a recognized desire and need to undertake the organizational changes proposed herein, there is also an ever-present need to maintain existing support and to undertake high-priority initiatives to the extent possible, while the organizational structuring and resourcing are being approved.

CRITICAL SUCCESS FACTORS

The Department has developed and approved to a Long-Term Strategic Plan for Informatics. This Strategic Plan is a strong indication that the understanding and appreciation of the potential benefits of automation and information systems is spreading quickly throughout the Department.

As such, the expectations and interest of the user community are very high, which will put increasing pressure on the new Information Systems organization to "deliver" new systems and therefore to satisfy needs. In order to properly manage these expectations and to manage the technological challenges of the projects themselves, the following factors are seen as critical to the successful establishment and management of a new Information Systems Bureau:

1. ### Leadership of the Informatics Bureau

   The individual filling the Director General position must have both the confidence of Departmental senior management and the confidence of the technical management and staff within the Bureau. The technical skill requirements for this position are very high, as well as the need for effective communications abilities.

   The individual must continually demonstrate a comprehensive understanding of the substantive nature of the Department's operations, as well as of advances in the state-of-the-art in informatics technology and management practices.

2. ### Communication of Role and Mandate

   It will be essential that the role and mandate of the new Information Systems Bureau be clearly communicated both to the staff to be encompassed within the new Bureau, as well as to the Department at large. This will help to eliminate the "mystique" of EDP and to foster open communications between the new Bureau and the Departmental user community.

3. ### Managing Expectations

   The new Bureau should not try to tackle everything at once. The work should be focused on agreed priority projects and

every effort should be made to continuously deliver results
on time and within budget. This will quickly establish
credibility with new users within the Department, and
sustain and maintain credibility with existing users of EDP
services. The Bureau will then find itself able to
continuously understand, and therefore "manage" the
expectations of the user community.

For more detailed understanding of the roles and responsibilities of the
various functions and sub-functions of the new Information Systems Bureau, and
of the eventual evolutionary path to an Informatics organization, the reader is
encouraged to read Sections IV to VI of this report.

II - CURRENT EDP ORGANIZATIONAL STATUS

This section provides a brief overview of the existing EDP and EDP-related functions in the Department, their organization placement, structure and staffing, and some of the organizational issues which exist because of the current situation.

DEFINITIONS AND TERMS

The following abbreviated glossary will assist the reader in understanding the terminology used throughout this report.

EDP (Electronic Data Processing) - the application of computer technology to the storage, manipulation and retrieval of data related to business events and transactions.

Office Automation - the application of computer and electronic technologies to office-related activities like correspondence, filing, meeting/event scheduling, copying and distribution, and inter-office communications.

Telecommunications - the transmission of voice, data or images over short or long distances using physical media (e.g., wire, cable) or other electronic means (radio, microwave, satellite).

Informatics - the electronic means used to collect, store, retrieve, produce, manipulate, display and disseminate information; includes the primary technologies of traditional EDP, telecommunications, and emerging office automation, and the technology associated with their convergence and interconnection. (This definition has been derived from a study paper entitled Organizational Trends in Informatics, published in November, 1984 by the Treasury Board's Task Force on Informatics.)

CURRENT EDP ORGANIZATION

The current organization supporting the planning for, and the design, development and ongoing support of EDP and emerging office automation systems rests fully within the authority of the Administration Branch (MCB), and primarily within the Management Services Division (MFS).

Structure and Organizational Placement

The EDP/MIS Systems Planning Group (MCBS) has been responsible for the development and publication of the Long-Range Strategic Plan for Informatics. One member of this planning group is the present Director of the MFS function.

MFS is structured into five distinct functional areas, three of which directly relate to EDP/office automation, and two of which are more of a general administrative nature.

The Computer Systems (MFSC) function is primarily responsible for the analysis and specification, design, programming, testing, installation, and ongoing support of computer-based application systems at Headquarters and at Posts; for technical support of existing mainframe and minicomputer hardware and software; and for the management of outside EDP contractor arrangements. In addition, the Departmental EDP Security Officer resides within this function.

The Office Automation (MFSX) function is primarily responsible for developing policies, procedures and guidelines relating to office automation and microcomputers; managing the acquisition of office automation equipment and its current use within the context of the New York and Headquarters pilot projects; co-ordinating the acquisition of word processing equipment for posts; managing the microcomputer support centre; and evaluating new office automation/word processing/microcomputer software.

The Management Consulting (MFSM) function splits its time between EDP-related and non EDP-related activities. This function is primarily responsible for co-ordinating the definition of EDP requirements for subsequent analysis by MFSC. The non-EDP responsibilities include the conduct of managerial/ organizational/operational studies for Headquarters and posts; training and interpretation advice for Departmental policies and procedures; and for general supervision of contracting arrangements.

The Administrative Publications (MFSA) function is primarily responsible for the publication and distribution of Departmental administrative manuals (e.g., Finance, Materiel, Authorities Index; design of administrative forms; super- vision of the Departmental printing operation; and for supervision of related contractor arrangements.

The Projects and Budget Control (MFSP) function is primarily responsible for the development and control of all MFS budgets; and for the budgeting and control of projects undertaken within MFS.

Computer Operations

The only Headquarters mainframe computer (excluding the Passport office) is located within and operated by the Records Management Division (MGI), since the Information Storage and Retrieval (IS&R) system is the primary application system supporting the substantive activities of the Department. The MGI computer, however, is also the residency for the Headquarters Financial Management System (FMS) and the Personnel Management Information System (PMIS). A new computer is planned for the new editions of the FMS and PMIS systems, currently under development.

At the present time, one computer operator (an MGI position) runs the computer centre, with hardware and software technical support provided by MFSC.

Person-Year/Classification Summary

The following table summarizes the number of authorized and filled positions for each of the above functional units, and the existing position classifications information for each.

Functional Unit	Authorized PY Complement	Classification(s)	Filled PY Complement	Classification(s)
MCBS	2		2	EX(FS)-2, SM
MFS (Director)	1	SM	1	SM
MFSC	11	CS-4, 7@CS-3, 3@CS-2	10	CS-4, 6@CS-3, 3@CS-2
MFSM	4	OM-5, 3@OM-4	4	OM-5, 3@OM-4
MFSX	4	OM-5, OM-4, OM-3, AS-3	3	OM-5, OM-4, AS-3
MFSP	1	AS-2	1	AS-2
MGI Computer Operator	1	DA-PRO4	1	DA-PRO4
Secretarial	1	SCY-3	1	SCY-3
Total EDP-Related	25		23	
MFSA	7	AS-4, AS-3, AS-2, 2@AS-1, 2@CR-4	7	AS-4, AS-3, AS-2, 2@AS-1, 2@CR-4

OTHER INFORMATICS FUNCTIONS

The Department has additional functions outside of MFS/MGI which fall within the earlier definition of Informatics.

The Telecommunications Division (MGT) undertakes a mix of informatics-related and non informatics-related work. Those responsibilities involving the design, establishment and operation of Headquarters-based and worldwide voice and data communications networks, with the provision and maintenance of technical and communications security, and with the acquisition, installation and maintenance of secure word processing equipment at Headquarters and at posts, certainly

fall within the informatics definition. Those responsibilities of MGT relating to personal safety/chancery security abroad, to the diplomatic courier service, and to staff training and development are not informatics-related.

The Headquarters Telephone Services (MGFT) function would also fall within the voice telecommunications scope of informatics.

The Word Processing Services (MGDW) function is responsible for the establishment and provision of Headquarters word processing centres; and for the co-ordination of word processing equipment/software acquisition at Headquarters.

PERSON-YEAR SUMMARY

The following table summarizes the person-year summary for each of the above informatics-related functional units:

Functional Unit	Current PY Complement
MGT	395 (205 Headquarters; 190 abroad)
MGFT	6
MGDW	34

ORGANIZATIONAL ISSUES

The following issues arose from the existing organizational situation described above:

● The need to integrate the word processing/office automation responsibilities currently held by MFSX and MGDW.

● The issue of where MFSM should be located within the Department, given its current responsibilities to provide both general management consulting support and EDP-related management consulting support.

- The issue of technical/functional authority over computer operations staff, currently outside the authority of the primary EDP organizational units within MFS.

- The issue of co-ordinating EDP/telecommunications activities between MFS and MGT, as more networked systems are designed and built.

- The lack of resources who can devote their full attention to important EDP functions like data management and quality assurance.

These issues arose based on a look at the existing EDP organization. The following section introduces additional issues as a result of the proposed future EDP initiatives, either planned or underway.

III - IMPACT OF THE STRATEGIC PLAN FOR INFORMATICS

The Long-Term Strategic Plan for Informatics (1985-1990) focuses mainly on the growth and implementation of information and office systems in the Department over the next five years. Special recognition has been given in the plan to the need for a base of professional personnel that can support and sustain the large expansion in the number of Departmental systems. This section of our report examines the organizational implications of the Strategic Plan in light of base requirements for establishing the new organization and the personnel resources needed to implement the projects identified in the plan.

MAJOR INITIATIVES HAVING ORGANIZATIONAL IMPLICATIONS

The dramatic increase in the number of new and enhanced systems to support departmental activities and objectives is readily apparent from the Plan. To achieve the level of systems development activity envisioned in the Plan, the Department will require a larger resource base of analysts, designers, and programmers to create the new application systems. Moreover, once the new applications are implemented, there is likely to be a significant demand for on-going maintenance and enhancement to the systems.

Some of the organizational units which will be using the new applications will be faced with major changes in the way they perform their office activities. Examples of change include the introduction of terminals, new procedural and filing methods, and changes in the way internal communications are accomplished. We see a definite role for the new organization in the overall approach of the Department to managing the introduction of change by providing information systems consulting support to the user community. This support will include a definition of automation requirements, review, and revision of procedures to support automation, documentation assistance, and training.

The Strategic Plan also identifies a significant increase in in-house computing resource capacity to support the future application systems base. As the number of Departmental computers increases, there will be a greater need for evaluating hardware and systems software, for establishing specifications for new hardware and software, and for analyzing computer facilities performance. There will also be an increase in the number of staff required to operate the various computer centres. The existing computer operator is currently positioned within the organization that is the principal user of the computer system (e.g., MGI). Because of the number of new computers planned for the Department, the new EDP organization should consider an operations group as part of its own mandate, in order to facilitate scheduling of staff, staff training, and to control and monitor standards of technical performance.

Office automation and end-user computing have been identified as key delivery mechanisms of EDP systems and services at both Headquarters and posts. The high-priority projects identified in the Strategic Plan for Informatics will demand a combination of skills and resources to define, implement, and maintain the applications. Effective co-ordination will be required between the application designers, hardware specialists, and telecommunications specialists to ensure successful completion of the projects.

The concept of managing information as a major resource of the Department is strongly endorsed by the Strategic Plan. Data management and data base administration functions have not been formally defined in the Department. Establishment of these functions will be a priority to permit the Department to define a data management framework and ensure that future systems development initiatives are undertaken within an overall, integrated data management context.

A policy, planning, and standards framework is essential for the development strategy documented in the strategic plan. The Department has begun to build the framework through the preparation of the Strategic Plan and the continued refinement of its EDP policy. Much of this activity has been performed, in

support of, but external to, the existing EDP organization. Future policy and standards development and strategic and operational planning are logical components of an EDP organization and should be included within the new organization structure and mandate.

Concurrent with the development of the Strategic Plan, the Department authorized a word processing study to "recommend a policy and an organizational framework designed to lead to the provision of more efficient and effective word processing services in Headquarters" (Chapter 4, 1.9). Recommendations have been developed by the study team and presented to the Department for review and acceptance. One of the recommendations proposes the organizational placement of word processing services (MGDW) as part of MFS, in the intermediate term, and eventually, in the long term, as a component of a 'User Computing Division' within an Information Services Bureau. We agree in principle with this recommendation, and will examine the impact and implementation of the recommendation in the context of the overall EDP organization.

FUNCTIONAL GAPS TO BE FILLED

In addition to identifying an increase in resources to deliver EDP services, the Strategic Plan also leads to an identification of the scope of functions that need to be performed for successful implementation of the plan. Many of the functions are performed at present by members of the current EDP organization, but in addition to their primary responsibilities. However, their increasing importance to a successful informatics organization means that additional resources must be devoted to them; resources that must be devoted on a full-time basis. Functions that fall into this category include:

- Data Management. This unit would concentrate on the effective management and control of data as a departmental resource. The activities of the data management group would be geared to improving the availability, accessibility, and utilization of data in the Department.

- Technology Planning, and Research. Technical support services would be provided to the EDP organization units as

a whole by this group. The scope of responsibility could include researching and evaluating the applicability of state-of-the-art methods, tools, and technologies, providing technical expertise to the Planning, Development and Operations groups, and determining both equipment and system software needs and their locations. This organizational unit would play a pivotal role in developing a technology strategy for the Department that would meet the objectives established for the strategy in the Strategic Plan and that would allow the Department to take full advantage of the rapidly changing technological environment.

- Planning and Performance Measurement. The overall planning of short and longer term departmental responses to meet the information systems requirements of the Department are essential to determining future user requirements and system solutions, and minimizing future costs. Measurement of in-service application systems performance will assume greater importance as the Department's base of installed applications expands. The results of such measurements will represent an important source of input for developing the application systems strategy as part of the planning process. A long range planning process has been defined by the Department and was used by MCBS for the preparation of the Strategic Plan. As this is the first formal EDP-related strategic planning document prepared by the Department, the responsibility, organization placement, and processes of MCBS should be reviewed in light of experience gained with the first plan and the overall structuring of the new EDP organization.

- Policy, Procedure, and Standards Development. Policy, procedures, and standards will govern the management of information technology and systems in the Department. The Department recognizes in the Strategic Plan that much work has to be done to review and refine policies, standards, and procedures documentation.

OTHER ORGANIZATIONAL BASE REQUIREMENTS

The Strategic Plan has outlined an aggressive strategy to introduce information systems and technology more widely in the Department in support of its operations. Potential benefits identified as a result of increased automation could include the more effective use of human resources, increased efficiency and

production, and improved program delivery effectiveness. The opportunity to improve program delivery within existing operating and capital resource constraints will serve to focus the attention of the Department on the EDP organization to deliver these benefits. It will be essential for the EDP organization, as the provider of EDP services and support throughout the Department, to build on the accomplishments of the existing EDP organization, to maintain a strong service orientation and to continue to work jointly with the user community on the development and implementation of applications. Unless the EDP organization has the capability to respond to user demands, the Department faces the substantial risk of having EDP activities duplicated within the user community, as the users attempt to find alternate means of satisfying their information processing requirements.

Because of the technical content and expected growth in the demands requested of the new organization, the organization members need to maintain a sound understanding of advances in the state-of-the-art in information technology and management practices, as well as good understanding of the Department's operations. Issues such as software development tools and methodologies, data resource management concepts, office automation, end-user computing, and software and hardware evaluation and selection are represented in the many projects documented in the plan.

PERSON-YEAR REQUIREMENTS

Estimated person-year requirements for existing and planned projects were reviewed in considerable detail by the developers of the Strategic Plan and Peat Marwick staff in order to provide a basis for estimating the optimal size of the new organization. We reviewed underlying assumptions used in developing the plan elements, the skills and experience of the personnel required to perform the tasks identified in the plan, and the current approval status of

projects listed in the plan. Figure 2 summarizes estimated person-year requirements by type of function to be performed and provides a comparison with existing person-year establishments. Certain functions that would be needed to implement the Strategic Plan did not have person-year estimates included in the resource requirements analysis. We have included these functions in Figure 2 and developed person-year estimates of the level of effort required to support these functions, based upon our experience and upon information obtained from our interviews with other departments.

Appendix C, attached to this report, provides a detailed analysis of the personnel requirement impact of the Strategic Plan.

FIGURE 2

PERSONNEL REQUIREMENT IMPACT OF THE STRATEGIC EDP PLAN

FUNCTION	TOTAL STRATEGIC PLAN ESTIMATE	EXISTING PERSON-YEAR UTILIZATION	SHORTFALL
Management[1]	5	1	4
Secretarial Support[1]	4	1	3
Systems Policy and Planning[1]	2	2	–
Administrative Services[1]	3	1	2
Data Management	4	–	4
Security	1	1	–
Computer Operations	6[3]	1	5
Technology Planning and Research[1]	3	–	3
Systems Development and Maintenance	28	10	18
Office Automation/End-User Computing	9	4	5
Word Processing[2]	34	34	–
Information Systems Consulting	4[3]	2[4]	2
TOTAL	103	57	46

Notes:

[1] These functions were referenced in the Strategic Plan. However, the Resources Profile and Resources Analysis data did not estimate person-year requirements. The figures shown represent Peat Marwick's estimated requirements.

[2] Word processing was identified in the Plan as being under review. A recommendation of the word processing study to place word processing as part of EDP was incorporated by the EDP organization study team.

[3] A revision to strategic plan estimate by the Peat Marwick study team, based upon a review of planning assumptions and planned projects.

[4] Represents an approximate "PY-equivalent" proportion of MFSM activity which is EDP-related.

IV - SHORT-TERM ORGANIZATION CONTEXT

This section presents our recommended organizational context for EDP and office automation functions for the immediate-to-short term (next 2 years). It is based on the immediate requirement to establish an organization which can:

- continue to effectively maintain existing established EDP and office systems at Headquarters and at posts

- initiate and implement the highest priority projects outlined in the Long-Range Strategic Plan for Informatics

- develop visibility, credibility and working relationships with new end users of EDP and office systems across the Department.

In the longer-term (4-to-5 years) the organization must further evolve to recognize the full scope of informatics technology. Section VI of this report discusses this future evolution in more detail.

ORGANIZATIONAL PLACEMENT

We recommend that a new Information Systems Bureau be established, reporting directly to the Assistant Deputy Minister, Administration. This placement recognizes the growing importance of information systems and office systems as contributors to increased Departmental effectiveness and efficiency, and the increased need to satisfy the requirements of the substantive programs, in addition to the needs of the financial, personnel and other administrative functions. Other organizational placements were considered and discussed with senior management in arriving at this recommendation.

We believe that this increased status of the information systems function is necessary to instil and maintain ongoing commitment to the Strategic Plan for

Informatics, and to ensure that the planned high-priority projects are provided the leadership and visibility they require.

SCOPE OF FUNCTIONS

The Information Systems Bureau should encompass the following major functional responsibilities:

- Definition, establishment and maintenance of Departmental Information Systems policies and standards, in concert with the EDP (Information Systems) Policy Committee.

- Development, monitoring and maintenance of strategic (long-term) and operational (annual) plans for information systems applications, technology and resources, in line with Departmental and Central Agency requirements.

- Conduct of feasibility studies and requirements definition studies as a basis for defining and scoping future projects to be undertaken by the Information Systems Bureau.

- Design, development, implementation and quality assurance of automated systems solutions which satisfy specified requirements of end users. The solutions will involve custom or packaged software, microcomputer/minicomputer/ mainframe computer hardware, stand-alone or networked applications, and secure or non-secure environments. The solutions will satisfy both traditional EDP and office-oriented requirements.

- Management and provision of staff to operate all mainframe computers in Headquarters (excluding the Passport office in the short-term), and to co-ordinate their maintenance and enhancement on an ongoing basis.

- Conduct of research and provision of technical advice regarding the changes in hardware and software technology, both mainframe-based and microcomputer-based, by Information Systems staff, and for the end user community within the Department.

- Management of the day-to-day operation of the distributed word processing units in Headquarters, and participation in the determination of appropriate word processing technology for Headquarters and posts abroad.

- Negotiation of contracts for services relating to information systems activities, and the supervision of the selected contractors.

- Establishment and development of a data administration function in line with the strategy presented in the Strategic Plan for Informatics.

The above scope of functions includes only two of the three elements of informatics. We recommend that the telecommunications functions (the third element) currently performed by MGT should not be integrated with the EDP/ office systems functions until the latter have matured and stabilized. The significantly larger size of MGT, and its existing high service level justifies leaving it as a separate organizational unit at this time. However, we believe that the Information Systems/MGT link needs to be strengthened through policy and procedure improvement, and through frequent consultation. This situation should suffice for the next 2 to 3 years as the Information Systems Bureau establishes itself.

STRUCTURE: SHORT-TO-MEDIUM TERM

Figure 3 illustrates the proposed structure of the Information Systems Bureau, and the distribution of the functional responsibilities described above.

The highlights of the organization structure are as follows:

- The Bureau will be headed by a Director General, Information Systems, who will report directly to the Assistant Deputy Minister, Administration.

FIGURE 3

DEPARTMENT OF EXTERNAL AFFAIRS

PROPOSED INFORMATION SYSTEMS ORGANIZATION (SHORT-TERM)
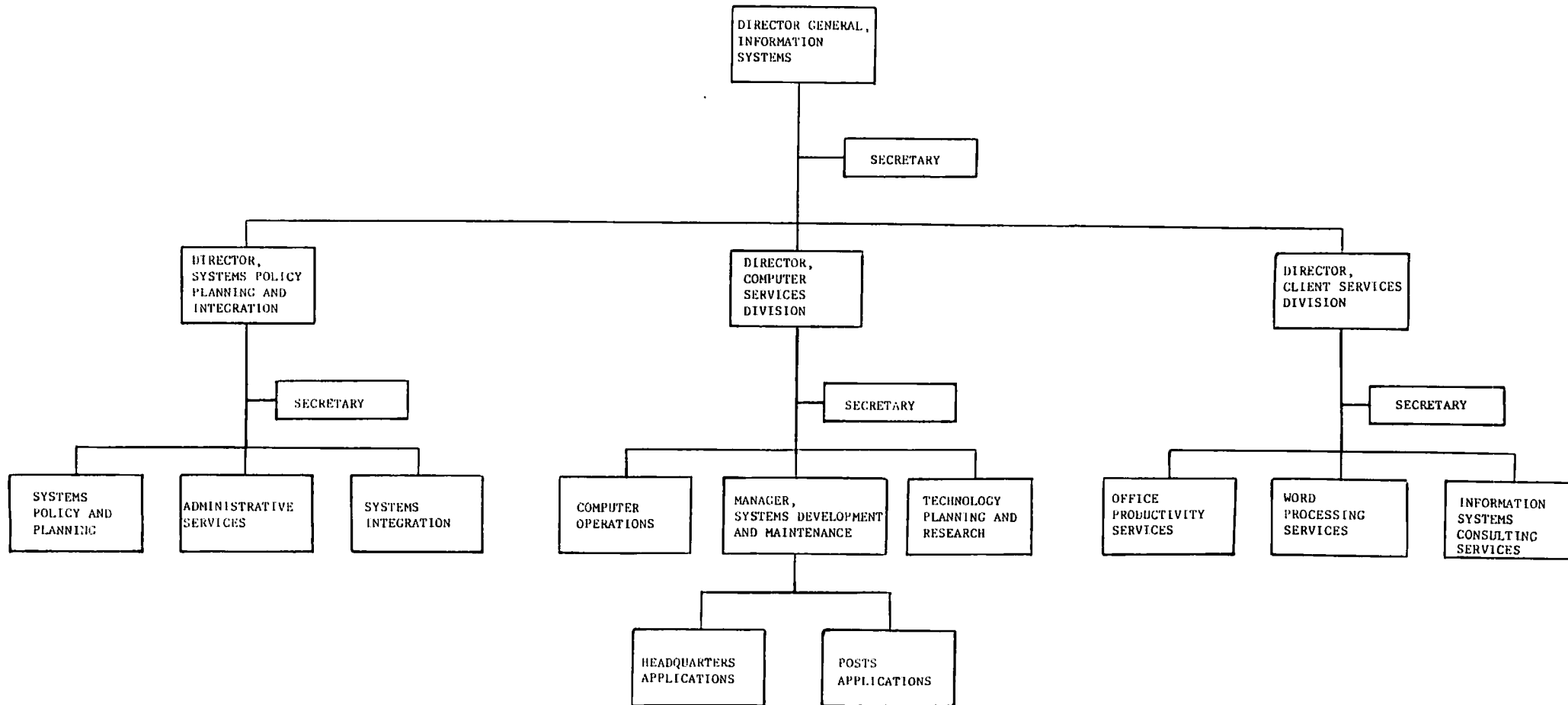
- The Bureau will comprise three divisions, each headed by a Director:

  - Director, Systems Policy, Planning and Integration

  - Director, Computer Services

  - Director, Client Services.

- Each division will have three functional units, as follows:

Division	Functional Units
Systems Policy, Planning and Integration	- Systems Policy and Planning - Systems Integration - Administrative Services
Computer Services	- Systems Development and Maintenance - Technology Planning and Research - Computer Operations
Client Services	- Office Productivity Services - Word Processing Services - Information Systems Consulting Services.

This overall structure is designed to recognize the three key roles of the Information Systems Bureau which are to plan its short and long-range activities, to develop new systems support and maintain current systems support, and to maintain client service at all times.

Functional Units/Key Responsibilities

Each of the functional units in the new Bureau will assume a set of responsibilities, some of which are currently being performed within the existing organization structure, and some of which will be new or modified from the current situation to reflect the changing world of informatics.

The distribution of responsibilities, by major functional unit, is outlined below for each of the three Divisions:

Division	Organizational Unit	Major Responsibilities
Systems Policy, Planning and Integration	• Systems Policy and Planning	• Develop departmental strategic and operational automation plans
		• Monitor progress against plans/budgets
		• Provide secretariat services to EDP policy committee
		• Manage planning for and production of Information Systems policies, standards and procedures documentation
		• Monitor performance of existing applications to ensure effective/efficient utilization of bureau resources
	• Administrative Services	• Administer the acquisition of departmental EDP goods and services
		• Administer project control and cost accounting processes
		• Co-ordinate the development and maintenance of the budgets for bureau activities
	• Administrative Services (Cont'd)	• Administer contracts with external firms
		• Provide training administrative support for Informatics training within the Department generally and the Information Systems organization in particular
	• Systems Integration	• Research and document the nature and use of various types of data within the Department
		• Develop and maintain a departmental data dictionary
		• Develop the content for appropriate data administration policies and standards
		• Develop a training plan for the data administration program

Division	Organizational Unit	Major Responsibilities
Systems Policy, Planning and Integration (Cont'd)		• Provide leadership and co-ordination to data administrators located in the functional units (e.g., personnel, records management)
		• Prepare EDP Security strategy for data and software
		• Develop related security procedures
		• Develop and test back-up and contingency plans
		• Develop content of security policies and standards
		• Monitor adherance to security plans and procedures
Computer Services	• Computer Operations	• Operate computer centres
	• Computer Operations (Cont'd)	• Co-ordinate maintenance of EDP facilities
		• Oversee preventive maintenance and conduct back-up
		• Ensure compliance with physical/data security measures as established by the systems integration unit and by MGT and ZSS
	• Systems Development and Maintenance	• Design, develop, test and implement new automated systems at Headquarters and posts
		• Maintain and enhance production application systems
		• Project manage application development efforts
		• Record, report and resolve operational problems encountered with production application systems

Division	Organizational Unit	Major Responsibilities
Computer Services (Cont'd)		• Provide a range of technical services and products for the design, development, implementation and maintenance of application systems
		• Develop the content of systems development and maintenance policies and standards
		• Project manage systems development work being undertaken by contractors
		• Establish and maintain sound quality assurance policies and procedures for development/maintenance work.
	• Technology Planning and Research	• Coordinate the evaluation of hardware (mainframe, mini, micro, office automation, word processing) and software options to ensure the most appropriate use of integrated technology to meet overall departmental needs
		• Analyze performance of departmental automation facilities
		• Conduct systems software maintenance
		• Establish specifications for new hardware/software for planning and acquisition purposes
		• Provide technical expertise to other Information Systems organizational units, as required
Client Services	• Office Productivity Services	• Provide a focal point for the introduction of officer/support staff productivity aids
		• Promote the use of automated productivity aids
		• Ensure that users receive the assistance needed to define their needs

Division	Organizational Unit	Major Responsibilities
Client Services (Cont'd)	Office Productivity Services (Cont'd)	• Co-ordinate the selection and initiate the acquisition of office productivity systems hardware and software, and liaise with MGT as necessary
		• Ensure that the appropriate level of training is provided to users of office productivity systems
		• Develop content of policies, procedures and standards for the acquisition, use and deployment of office productivity systems
		• Operate the bureau's "Micro Centre" and assist users in resolving day-to-day problems
	. Word Processing Services	• Manage the day-to-day operation of the distributed word processing units in Headquarters
		• Participate in the determination of appropriate word processing hardware and software for Headquarters and posts
	. Information Systems Consulting Services	• Assist clients in defining their requirements for automated systems
		• Conduct feasibility studies for automated systems
		• Assist clients in defining information systems training needs
		• Assist clients in preparing requests for proposals for EDP-related contracts utilizing external resources, and in selecting outside consultants
		• Manage projects for which outside consultants have been assigned.

The above distribution of responsibilities reflects the earlier stated needs
for the Information Services Bureau to continue currently existing EDP

responsibilities, to formalize new responsibilities (e.g., data management, quality assurance, policy/standards), and to integrate currently dispersed EDP-related functions (e.g., computer operations, word processing). It also satisfies the need for a sound policy and planning framework, for a strong client service orientation, and for furthering the process of two-way understanding between EDP and non-EDP functions of the Department.

Person-Year Classification Requirements

Figure 4 repeats the organization chart for the Information Systems Bureau, but adds the proposed person-year complement by classification for each major position and each functional unit.

In total, the Information Systems Bureau will require a person-year complement of 103 positions, based on the estimates provided in the Strategic Plan for proposed projects, on operational plan estimates for maintaining current systems and for running approved projects and those in progress, and on our estimates for management and administrative support positions.

The proposed classifications for the senior management positions reflect the levels of similar positions in other Departments across the Federal Government, and are as follows:

- Director General, Information Systems Bureau: EX-2

- Director, Systems Policy, Planning and Integration Division: SM

- Director, Computer Services Division: SM

- Director, Client Services Division: SM.

Approval of such classifications, however, rests with Treasury Board.

Similarly, the proposed classifications for the other positions generally reflect current classifications where similar or identical positions exist in the current organization, or typical classifications where the position is new to this Department.

FIGURE 4

DEPARTMENT OF EXTERNAL AFFAIRS

PROPOSED INFORMATION SYSTEMS ORGANIZATION (SHORT-TERM)

```
                          ┌─────────────────┐
                          │ DIRECTOR GENERAL,│
                          │ INFORMATION      │
                          │ SYSTEMS          │
                          └─────────────────┘
                             EX-2
                                    ┌───────────┐
                                    │ SECRETARY │  SCY-3
                                    └───────────┘
```

DIRECTOR, SYSTEMS POLICY PLANNING AND INTEGRATION — SM	DIRECTOR, COMPUTER SERVICES DIVISION — SM	DIRECTOR, CLIENT SERVICES DIVISION — SM
SECRETARY SCY-2	SECRETARY SCY-2	SECRETARY SCY-2

DIRECTOR, SYSTEMS POLICY PLANNING AND INTEGRATION

- SYSTEMS POLICY AND PLANNING
  - 1 CS-4
  - 2 CS-3
- ADMINISTRATIVE SERVICES
  - 1 AS-3
  - 2 AS-2
- SYSTEMS INTEGRATION
  - 1 CS-4
  - 3 CS-3
  - 1 CS-2

DIRECTOR, COMPUTER SERVICES DIVISION

- COMPUTER OPERATIONS
  - 1 DAPRO-5
  - 5 DAPRO-4
- MANAGER, SYSTEMS DEVELOPMENT AND MAINTENANCE — CS-4
  - HEADQUARTERS APPLICATIONS
    - 7 CS-3
    - 9 CS-2
  - POSTS APPLICATIONS
    - 4 CS-3
    - 7 CS-2
- TECHNOLOGY PLANNING AND RESEARCH
  - 1 CS-4
  - 2 CS-3

DIRECTOR, CLIENT SERVICES DIVISION

- OFFICE PRODUCTIVITY SERVICES
  - 1 OM-5
  - 1 OM-4
  - 2 CS-2
  - 2 OM-3
  - 3 OM-2
- WORD PROCESSING SERVICES
  - 1 AS-4
  - 1 AS-2
  - 5 CR-5
  - 12 OCE-3
  - 15 OCE-2
- INFORMATION SYSTEMS CONSULTING SERVICES
  - 1 CS-3
  - 2 CS-2
  - 1 OM-2

TOTAL PERSON-YEAR COMPLEMENT: 103

Consideration of Existing Staff and Classifications

The proposed organization structure has taken existing staff and classification levels into consideration by ensuring that current position classifications and levels within MCBS, MFS, and MGDW, with the exception of the Administrative Publications Group (MFSA) and the Management Consulting Group (MFSM) positions, are included in the new structure. These latter groups are seen as units which should be positioned outside the new Information Systems Bureau.

Accordingly, our recommendations for MFSA and MFSM are as follows:

- It is proposed that MFSA be relocated within the Headquarters Facilities Management Division (MGF), since MFSA is a non-EDP function and more closely fits the common services focus of MGF.

- While MFSM currently performs some EDP-related functions, the larger proportion of its work relates to general management consulting for the Department as a whole. This latter responsibility must be maintained within the Department, but does not organizationally fit within the context of an Information Systems Bureau. On the other hand, the EDP-related functions currently performed by MFSM do fit within the scope of responsibilities of an Information Systems Bureau. Therefore, we envisage the establishment of a general management consulting unit outside the new Bureau, as well as the establishment of an Information Systems Consulting Services Unit within the Client Services Division of the new Bureau, over the short-to-medium term. Our immediate recommendation would be to establish MFSM and its existing staff complement and mandate outside the new Bureau while resourcing for the Information Systems Consulting Services unit is being established. Eventually, the two units should discuss and agree respective roles and mandates for EDP-related activities, and for orderly handover of EDP-related problems from MFSM to the new Bureau as they arise on a day-to-day basis from more general management consulting work. Three possible organizational placement options for the management consulting function are as follows:

    - establish MFSM as a staff function reporting directly to the ADM, Administration;

- move MFSM within the scope of the Communications and General Services (MGD) function; or

- maintain MFSM within the overall responsibility of MFD.

The first option would provide MFSM with a perspective on the total Department's needs as the scope of users of consulting services broadens. However, it would also increase the span of control of the ADM. The second option would be viable as another "general service" offered to the Department from MGD.

In total, we see that the new Information Systems Bureau organization provides opportunities for career growth for existing management and staff working in EDP-related functions.

WORKING RELATIONSHIPS

The structure, hierarchy, and division of responsibilities is only part of the essential design of a sound organization. The other, equally important part of organizational design is the way in which the organization operates internally, and relates to the remaining organizational units of the Department. These working relationships, or processes, will ensure that the new Information Systems Bureau becomes an important, integral part of the Department as a whole.

Internal Processes and Mechanisms

Despite the functional division of responsibilities shown on the organization chart, the majority of the Bureau's work will be undertaken on a project basis, where any given project will be undertaken with a team comprised of staff from a variety of Divisions and units across the Bureau.

In the annual planning process, the Systems Policy, Planning and Integration Division will coordinate and assemble the planning documents, but the content

for the plans will be developed, to a large extent, by the other functional units within the Bureau, and by the user community. A similar process will be followed in developing policies and standards for the Informatics Bureau.

The Systems Development and Maintenance Unit and the Office Productivity Unit will work closely together where requirements for access to Corporate information is required by microcomputer users, for example.

The above are examples of some of the major internal relationships which should exist within the Information Systems Bureau. These relationships can be strengthened through the establishment of policies, and through the development of methodologies, procedures, and other mechanisms which ensure that such interactions occur on a regular basis.

External Processes and Mechanisms

The way in which the Bureau relates to the rest of the Department will also depend, to a large extent, on the establishment of formal processes and mechanisms.

The Department should consider how rotational personnel could be utilized effectively by the new Bureau. They bring with them a wide experience in various aspects of the Department's activities, especially abroad. Against this asset, however, must be balanced liabilities. Most of them lack the technical qualifications that are required to carry out the duties of many of the positions in both the present and proposed EDP organizations. Moreover, generally rotational assignments tend not be be of sufficient length to enable incumbents to develop a detailed understanding of technical subjects. Nevertheless, despite this the Department would find it advantageous to assign rotational personnel to the Information Systems Bureau, especially when they have some knowledge or interest in information systems, or when they can have an opportunity to work on a project related to positions they have held in the Department.

Rotational personnel would be able to broaden their experience by learning about the kind of technology upon which the Department will become increasingly dependent in its daily operations in future years. They would therefore be better able to manage the use of technology both at Headquarters and at Posts abroad and, in particular, they would have a better understanding of its impact on employees. Assignments need not necessarily be to fill permanent positions in the organization. A Branch acquiring a major system would find considerable benefit in having one of its staff assigned on the basis of a long term loan arrangement to the EDP organization to participate in the system development and implementation process. Indeed, the close collaboration that will result from such involvement will help ensure that the user's needs are fully met.

Other mechanisms, like well-defined procedures outlining roles and responsibilities for user participation in annual systems planning processes and in systems development projects, will also assist in strengthening the relationship between the Information Systems Bureau and the rest of the Department. This is particularly important for the short-term relationship with MGT, where increased reliance on telecommunications knowledge will be essential.

Links to EDP Policy Committee/EDP Users Group

The increased level of informatics activity established in the Long-Term Strategic Plan for Infomatics demands that the EDP Policy Committee role will become more important. It will be essential that the Committee represent all major functional programs of the Department, since the Committee will be faced with the need to prioritize major systems projects on a year-by-year basis.

In addition, the Committee will be asked to provide direction and to decide and agree policy from time to time, in relation to major systems initiatives. Some of these decisions may have to be made at ad-hoc meetings, as opposed to regularly scheduled meetings.

It will be the responsibility of the Information Systems Bureau to advise the EDP Policy Committee on the technical/technological implications of potential decisions. Accordingly, the EDP Policy Committee should seek out such advice before making some decisions. This advice should be provided at two levels: firstly, on a global basis as part of the annual Deparmental/corporate planning process; and secondly, on a project/initiative basis, as addressed periodically by the Committee.

The EDP Users Group should be seen as a mechanism for Departmental systems users to discuss and share experiences and concerns amongst themselves and with management and staff of the Information Systems Bureau. It should not be used as an approval body, but as a forum for generating recommendations for changes in policies, procedures, standards, and working relationships with respect to information systems.

V - IMPLEMENTATION STRATEGY

Given the above placement, structure, scope of responsibilities, and proposed working relationships for the Information Systems Bureau, there are a number of implementation challenges the Department will face in establishing the new Bureau as quickly as possible.

The first and foremost challenge is to discuss and agree to the organizational design as presented herein and to reconfirm the Department's commitment to the Long-Range Strategic Plan for Informatics. Once this is done by executive management, formal representation must be made to Treasury Board, and their approval for incremental person-years and for senior management positions must be sought.

The following discussion is based on the assumption that the organization design will be approved by Treasury Board, but that the numbers of person-years and the classification levels for some of the positions will require justification and negotiation with Treasury Board and the Public Service Commission (PSC).

CLASSIFICATION AND STAFFING STRATEGY

The complement of 103 person-years represents a significant increase (46 person-years) over the current complement of 57. Prior to classifying and staffing these 103 positions, two separate approvals must be obtained from the Treasury Board, as follows:

- Approval for an increase of 46 person-years over 5 years (we would suggest 18 in the first year, 10 in the second, and 6 in each of the third, fourth and fifth years).

- Approval for an increase in Executive and Senior Management complements.

Top-Down Classification

The Treasury Board has retained the authority to classify positions in the Executive and Senior Management category, and in the Computer Systems group at level 3 and above. Therefore, when the Department decides on how to implement the suggested organizational changes, position descriptions for up to 27 positions must be submitted to the Treasury Board for classification.

Following Treasury Board approval of the requisite additions to the Department's EX and SM complements for the new Bureau, the positions should be classified on a top-down basis. Executive and Senior Management positions should be classified first, as the levels assigned to these positions will affect the classifications of positions under them.

Senior level, non-management positions (CS-3, 4, OM-5) should be the next to be classified by Treasury Board. This strategy will ensure that all key positions in the new organization are classified as quickly as possible.

Top-Down/Bottom-Up Staffing

Under the assumption that the proposed classification levels are achieved, the Department then faces the task of staffing new organizational positions. We believe there is a need to balance staffing between a top-down versus a bottom-up approach. The extent to which one strategy is preferable to the other or outbalances the other will be dependent upon the extent and timing of approvals for the additional person-year complement. In general terms, if PY increments are approved in small batches, then a bottom-up staffing strategy is more appropriate, so that new project work can be initiated at the working level. If larger PY increments are achieved, then there should be a balanced approach taken to filling management and staff positions, in order that the objectives and direction of the new Bureau can be established in a management sense as well.

Staffing of senior-level, non-management positions can be handled internally, but must be opened to public servants in all government departments, and cannot be restricted to External Affairs personnel.

As a final step, the Position Analysis Schedules of all remaining positions should be reviewed. In many instances, positions in the new organization will be identical to those in the old (e.g., systems analyst, word processing operators). Where positions are identical, both positions and incumbents may be transferred to the new organization. For other positions, the changes in responsibilities will reflect changes in the Department's priorities and plans, and whether or not such positions should be subject to staffing competitions should be decided by External Affairs on the basis of the applicable Treasury Board guidelines.

The functional unit descending priority sequence for staffing should be as follows, in order to satisfy the early requirements of the Strategic Plan:

- Systems Development and Maintenance Unit

- Systems Integration Unit (Data Management function)

- Technology Planning and Research Unit

- Systems Policy and Planning Unit

- Office Productivity Services Unit

- Information Systems Consulting Services Unit

- Administrative Services Unit.

The Word Processing Unit is expected to be staffed with current positions in MGDW.

INTRA-DEPARTMENTAL COMMUNICATIONS

Upon approval of the organization design by the Undersecretary of State for External Affairs, the Department should plan and initiate a communications program at two levels:

- firstly, with the management and staff to be directly affected by the re-organization (MCBS, MGDW, the MGI computer operator, and all units within MFS), and their immediate superiors (MGD, MFD)

- secondly, for the Department as a whole.

Communications With Affected Staff

Employees should be advised of the target organization structure and the mechanisms that will be put in place to staff all new positions. This step will serve to alleviate some concerns and uncertainties that employees may have about the organizational changes, and will allow them to think about where they would see themselves fitting and developing within the new Bureau structure.

Department-Wide Communications

At a broader level, a well-planned internal announcement/public relations campaign should be launched to tell Departmental employees at Headquarters and at Posts about the re-organization and the objectives being sought through initiatives outlined in the Strategic Plan.

The announcement(s) should address important topics such as the following:

- The major information systems initiatives being undertaken in the next 1 to 2 years: the effects they will have on the Department, and who will benefit from them.

- The organization structure of the new Information Systems Bureau and the proposed working relationships with the user community in undertaking the above initiatives.

- The proposed rotational assignment process, including a call for expressions of interest, in cooperation with the appropriate assignment divisions of the Personnel Branch, from officers in the Department who would like to discuss potential rotational positions within the Information Systems Bureau in the future.

- The types of training/orientation programs that are planned/currently available within the Department or within the Public Service Commission relating to subjects involving computer concepts, office automation, human factors, or careers in information systems.

These factors will assist greatly in communicating senior management's commitment to informatics and its desire to maximize the benefits of new technology to Departmental employees.

MAINTAINING CREDIBILITY AND ACCEPTANCE

The proposed Information Systems Bureau will depend heavily on the leadership exhibited by the individual filling the Director General position. The Director General must exhibit an understanding of the Department's corporate objectives, goals, and strategies, and must fully understand the direction established in the Long-Term Strategic Plan for Informatics. Opportunities to exhibit such understanding and to communicate new or supporting ideas to senior management will facilitate the Director General's "upward" credibility and acceptance.

Equally important will be the Director General's ability to exhibit an understanding of the existing technical environment and how it has evolved, to exhibit a sound knowledge of informatics technology and its management implications, and to know the capabilities of the existing staff in the Information Systems functions. Through this process, the Director General can use judgement in applying his leadership skills and his own technical knowledge in establishing "downward" technical credibility with Bureau staff.

While the above steps are required both on an initial and ongoing basis, the ultimate credibility and acceptance will come in the future as they have in the past from the actual successful delivery of information systems services in accordance with plans and agreed priorities, and from the balancing of end user expectations with practical realities. This management of expectations is a very difficult, but essential, role for continuous credibility and acceptance.

VI - EVOLUTION OF THE INFORMATICS ORGANIZATION

We have already mentioned the ultimate need for integration of all facets of informatics into a closely knit organization in the long-term. This section discusses how we envisage the further evolution of the Information Systems Bureau beyond the short-term structure presented in Section IV.

SCOPE OF FUNCTIONS

The most obvious set of functions which should be combined with the Information Systems Bureau function in a future organizational context are the telecommunications functions relating to electronic transmission of information in voice, data, and image form. Currently the responsibilities of MGT and MGFT, these functions will become more important as online and distributed information systems at Headquarters and at Posts abroad become more prevalent, and as integrated electronic workstations and worldwide telecommunications networks become more sophisticated. As previously mentioned, we feel it is premature to integrate the MGT functions in the new organization structure immediately, but that such integration is essential in the next 3 to 5 years, after the Information Systems Bureau has established itself.

A second potential addition to the scope of the informatics function in the long term would be the records management functions currently performed by MGI. From an end-user perspective with External Affairs, a desk officer requires information in whatever form he or she can get it: verbal, paper, and electronic. There are convincing arguments for considering MGI within an Informatics organization, and the Royal Canadian Mounted Police (RCMP), with one of the most mature and sophisticated informatics organizations in Ottawa, has already included the records management function in their organization.

We believe that the major scope changes suggested by the potential bringing together of MGT and MGI with the Information Systems Bureau will require a more detailed analysis of the impact of such integration, and we recommend that a study be undertaken in 1986/87 in this regard.

STRUCTURE AND PLACEMENT EVOLUTION

It is inevitable that as the importance of informatics to the Department increases, so will its organizational status. It is not far-fetched to envisage an Informatics organization at the Branch level within 5 to 10 years, with three major bureaux:

- Information Systems

- Telecommunications

- Records Management.

We expect that precedents in this regard will be set within the next few years in several Federal Government Departments where the informatics function is now matured or is maturing rapidly. Certainly, the private sector has many precedents where the head of the information systems/telecommunications function reports to the chief executive officer, and Canada Post Corporation has recently undertaken such an organizational re-alignment.

Other adjustments in the internal structuring of functions within the Information Systems Bureau will likely be required over the years, including:

- more significant organizational status for the data management function, as its importance is understood and recognized by individuals both within the Bureau and outside the Bureau

- adjustments in the working relationships between, and the organizational structuring of, the Systems Development and Maintenance, and the Office Productivity Services Units, as the concept of end-user computing blurs the lines between computer systems and office systems

- gradual reduction in the size of the Word Processing Services Unit to a smaller unit which carries out work for highly specialized functions; this will be a reflection of the shift in word processing workload as more end users acquire their own word processing equipment and as they start to use word processing software on their microcomputers.

Other minor adjustments will inevitably arise due to technological advances and the need for specialization in certain areas.

PERSON-YEAR REQUIREMENTS

Notwithstanding the incremental effects of integrating functions like MGT and MGI, the Information Systems Bureau is not likely to require much more than the 103 person-years proposed herein over the foreseeable future. Several conflicting trends justify this statement:

- the expected increased demand for information systems will continue, and technological change will create the need for new types of skills; however . . . .

- end users will become more sophisticated and will start to build some of their own "personal" systems

- productivity tools for system developers and maintainers will increase the per-person capacity to build systems

- packaged software will continue to improve and become more tailorable and will become easier to install and implement.

The first trend would indicate an increased requirement for person-years over time, while the latter three would justify the need for less resources. In balance, we believe these trends will counteract each other quite evenly over the foreseeable future.

IMPLEMENTATION CONSIDERATIONS

The evolution as described above is based on an assumption that maturing of the informatics function within the Department will take 3 to 5 years. If, in fact, the maturing happens at a faster rate than anticipated, some of the evolutionary timeframes would be accelerated. The reverse would also be true.

Regardless, the successful implementation of organizational change will be highly dependent upon:

- leadership of the function

- opportunities for existing staff to develop with the new Bureau

- a thorough analysis of the potential impacts and implications before making formal organizational changes

- open communications channels.

External Affairs faces an exciting future in the evolution of informatics, and in the realization of the true benefits it offers.

Peat, Marwick and Partners

LIST OF INTERVIEWEES AND DOCUMENTS REVIEWED

INTERVIEWEES

    ADMINISTRATION BRANCH:

MCB	–	G.R. Harman
MCBS	–	J.D.L. Rose
	–	N. Subramani
MGD	–	A.D. Small
MGDW	–	B. MacVicar
MGI	–	E.H.A. Bergbusch
	–	M.J. Hutton
MGT	–	D.G. Woods
MFD	–	D. Bresnahan
MFS	–	P.S. Dunseath
MFSA	–	W.E. Haner
MFSC	–	J. Rodgers
	–	K. Mori
MFSM	–	P.R. Fraser
MFSC	–	M. Duncan
	–	E. Dolan
MFSP	–	K.L. Checkland

    OTHER DEPARTMENTAL BRANCHES:

CCB	–	G. Shortliffe
TPD	–	B. Schumacher
ADD	–	A.D. Morgan
ZSS	–	R.W. Clark

    OTHER GOVERNMENT DEPARTMENTS/ORGANIZATIONS

        Treasury Board:
           Task Force On Informatics   – G. Guruprasad
           Comptroller General of Canada – W.G. Anderson
                                       – B. Handel
        National Defence   – B.Gen. D. Harrison
        RCMP   – P. McLellan
        Secretary of State   – H. Vovan
        Transport Canada   – P. Janega

LIST OF INTERVIEWEES AND DOCUMENTS REVIEWED (Cont'd)

DOCUMENTS REVIEWED

- Long-Term Strategic Plan for Information 1985 – 1990

- Manual of EDP Policy (Draft)

- Report on the Evaluation of the IS&R System, December 1980

- Headquarters Word Processing Study, April 1985

- Electronic Data Processing Organization Study for the Department of External Affairs, January 1984 (Bureau of Management Consulting)

- Management Information Systems Needs at HQ (CC14) – A Review of Corporate, Personnel and Financial Information Needs of Senior Management, August 1984

- Organizational Trends in Informatics, A Study Paper, Task Force on Informatics, November 1984

- Administrative Services Functions Pertaining to the Headquarters Building: Organizational Analysis and Design Report, December 1983

APPENDIX B

DEFINITION OF THE SCOPE OF FUNCTIONS OF KEY MANAGEMENT POSITIONS

- Director General, Information Systems Bureau

- Director, Systems Policy, Planning, and Integration Division

- Director, Computer Services Division

- Director, Client Services Division

POSITION TITLE: Director General

DIVISION: Information Systems Bureau

BRANCH: Administration

POSITION NUMBER:

LOCATION: Ottawa

INCUMBENT:

DATE: May 13, 1985

GENERAL ACCOUNTABILITY

The Director General, Information Systems Bureau is accountable
for the provision of effective electronic data processing, office
automation and word processing services that supports program
delivery; the provision of effective support systems related to
those services; and for providing professional guidance, critical
advice, and technical expertise to senior management in the
Department in respect of those services.

ORGANIZATION STRUCTURE

This position is one of six reporting to the Assistant Deputy
Minister, Administration Branch. The other five are:

- the Director General, Communications and General
  Services Bureau

- the Director General, Finance and Management Services
  Bureau

- the Director General, Management Review and Audit
  Bureau

- the Director General, Passport Bureau

- the Director General, Physical Resources Bureau.

Reporting directly to the Director General, Information Systems
Bureau are three positions:

- the Director, Systems Policy, Planning, and Integration
  Division (staff of 12)

- the Director. Computer Services Division (staff of 38)

- the Director, Client Services Division (staff of 48).

Specific functions of the three positions reporting to the
incumbent are:

Director, Systems Policy, Planning, and Integration Division

To coordinate the development of the Department's
Informatics policies, and strategic, and long range
Informatics plans; to research and document the nature
and use of data within the Department; to develop and
monitor adherence to Informatics security policies
and standards; to provide financial and administration
support to the Bureau.

Director, Computer Services Division

To design, develop, test and implement new automated
systems; to maintain and enhance production application
systems; to operate 5 computer centres; to coordinate
the maintenance of EDP facilities; to provide a range of
technical services and products for the design, development,
implementation, and maintenance of application systems.

Director, Client Services Division

To assist departmental clients in defining their
requirements for automated systems; to assist clients
in defining the organizational and resource implications
arising from the introduction of automated systems; to
coordinate the selection and initiate the acquisition
of office productivity systems hardware and software (i.e.
word processing and office automation equipment and micro-
computers); to ensure that the appropriate level of training
and support is provided to users of office productivity
systems; to manage the day-to-day operation of distributed
word processing units.

NATURE AND SCOPE

The Information Systems Bureau has been established in response
to the Department's recognition that there is a need:

- to plan and manage the rapidly merging
technologies of electronic data processing
(EDP), telecommunications and office automation
as integrated components of a single discipline

- to operate and maintain several major computer systems
that support program delivery at headquarters and
at Posts abroad

- to undertake significant computer system redevelopment
efforts

- to develop new automated systems that will increase
the effectiveness of the Department's program delivery
and improve the quality of service with a minimal
increase to resource levels.

The Director General of the Bureau is expected to exercise
managerial, administrative, and technical skills to ensure that
informatics policies and procedures are established; to ensure
that technological services are provided in support of program
delivery and in accordance with established priorities; to ensure
that data is managed as a departmental resource; and most
importantly. to provide effective guidance to management at a
time when rapid technological change and significant systems
development and redevelopment efforts are occurring.

The Director General is personally responsible for providing
advice and information to senior management with respect to the
role Informatics can play in increasing the effectiveness and
cost savings in program delivery at headquarters and Posts
abroad.

Part of this responsibility is realized through participation in
the Department's EDP Policy Committee. The Director General,
Information Systems provides assistance, critical advice, and
expertise to the Committee in its deliberations on the competing
goals and objectives of various operational units requiring
Informatics services, and in establishing information system
priorities for the Department.

The Director General also directs the development of Informatics
policies and procedures, and recommends the adoption and
implementation of these policies and procedures to the EDP Policy
Committee. The approved policies and procedures will provide the
framework within which the Information Systems Bureau will
operate and will govern the acquisition, development, operation,
and maintenance of information systems in the Department.

The Director General is responsible for directing the operation
of the Bureau to achieve efficient operations and a high level of
service to departmental clients. The Director General has total
responsibility for the achievement of approved objectives of the
Information Systems Bureau.

The incumbent provides the Assistant Deputy Minister,
Administration Branch with an evaluation of Bureau operations,
progress against plans, and reports on any significant
difficulties being encountered in attaining approved objectives,
priorities or goals. The need for adjustments to resource levels
(person years and dollars), or to timeframes is discussed with
the Assistant Deputy Minister, Administration Branch.

The greatest challenges of the job are to demonstrate that
electronic data processing, telecommunications and office
automation technologies can be managed and planned as an
integrated discipline and can provide the mechanism for improving
the quality and effectiveness of program delivery. In meeting
this challenge, the Director General will meet with all senior
departmental managers to discuss the feasibility of applying
Informatics technology to operational problems; to identify the
most viable technological alternatives; to discuss the costs,
benefits, environmental and organizational implications of
implementing Informatics technology; and to resolve any
operational, maintenance, acquisition, data security, data
management, development or redevelopment concerns or problems.

POSITION DIMENSIONS

Staff: 102

Operating Budget (1 year):

Informatics Capital Budget (1 year):

SPECIFIC ACCOUNTABILITIES:

1. Develop an understanding and acceptance by management of
    Informatics technology and the role it can play in improving
    the effectiveness and reducing the costs of program delivery,
    by effectively selling the Bureau's services, programs and
    policies.

2. Establish an organization that facilitates the economical
    and effective use of available human, physical and financial
    resources.

3. Develop Informatics policies, procedures, and plans which
    reflect departmental objectives and priorities, and which
    provide a framework for managing the Bureau and for
    developing effective support systems.

4. Ensure that the Bureau provides an acceptable level of
    service to its departmental clients and that projects are
    completed on time and at planned costs.

POSITION TITLE: Director

DIVISION: Systems Policy, Planning and Integration,
                   Information Systems Bureau

BRANCH: Administration

POSITION NUMBER:

LOCATION: Ottawa

INCUMBENT:

DATE: ˙   May 16, 1985

GENERAL ACCOUNTABILITY

The Director, Systems Policy, Planning and Integration Division is
accountable for co-ordinating the development of the Department's
Informatics policies, and strategic and long range Informatics plans;
researching and documenting the nature and use of data within the
Department; developing and monitoring adherence to Informatics security
policies and standards; providing financial and administrative support to
the Bureau; and for the development of policies and procedures affecting
the Division's operations.

ORGANIZATION STRUCTURE

This position is one of three reporting to the Director General,
Information Systems Bureau, Administration Branch. The other two are the
Director, Computer Services Division, and the Director, Client Services
Division.

Reporting directly to the Director, Systems Policy, Planning and
Integration are three positions:

-       the Head, Systems Policy and Planning (staff of 2);

-       the Head, Administrative Services (staff of 2);

-       the Head, Systems Integration (staff of 4).

Specific functions of the three positions reporting to the incumbent are:

Head, Systems Policy and Planning

● To coordinate the documentation of departmental strategic and long range Informatics plans; to coordinate the documentation of Bureau operational plans; to monitor progress against plans; to coordinate the development and ensure the documentation and promulgation of the Department's Informatics policies, standards and procedures; to ensure that existing computer applications are evaluated for effectiveness; and to provide input to the policies and procedures affecting the unit's operations.

Head, Administrative Services

● To administer the acquisition of departmental EDP goods and services; to administer project control and cost accounting processes; to manage contracts with external firms; and to provide input to the policies and procedures affecting the unit's operations.

Head, Systems Integration

● To research and document the nature and use of data within the Department; to develop and maintain a departmental data dictionary; to ensure that an EDP security strategy is developed and that adherence to security plans and procedures is monitored; to provide the facilities to store, modify and access the Department's data and to provide input to the policies and procedures affecting the unit's operations.

NATURE AND SCOPE

The Information Systems Bureau has been established in response to the Department's recognition that significant changes are occurring in the area of information management. Firstly, the technologies of electronic data processing, telecommunications and office automation are rapidly merging. Secondly, the Department has changed from being an operator of modest systems for administrative support to being responsible for several major systems supporting complicated processes. If the expansion and integration of systems technologies are to meet departmental objectives, policies and procedures must be developed to serve as a framework for systems development, operations and maintenance. Furthermore, data must be managed as a departmental resource and security practices and procedures must be instituted to protect this resource.

The Director, Systems Policy, Planning and Intregration will be responsible for co-ordinating the development, documentation, and promulgation of the Department's Informatics policies, standards and procedures; the coordination of the Department's strategic and long range Informatics plans, and the coordination of the Bureau's operational plans. In carrying out these responsibilities, the Director will receive direction and input from the Director General, Information Systems Bureau and the Department's EDP Policy Committee. The Director will accomplish these responsibilities:

- by consulting with the Director, Computer Services Division, the Director Client Services Division, the Director of Telecommunications, and members of the Department's Systems Users Group, to obtain their input to the strategic and long range Informatics plan;

- by liaising with central agencies and other government organizations in matters relating to EDP planning and approvals to ensure appropriate application and interpretation of government policies, directives and guidelines in the context of specific departmental needs;

- by providing Directors within the Bureau with guidelines and directions for the preparation of operational plans;

- by providing Directors within the Bureau with guidelines and directions for the preparation of policies, standards and procedures affecting information systems;

- by ensuring that all policies, procedures, standards, and plans are documented and presented to the EDP Policy Committee for approval;

- by ensuring that approved policies, procedures, standards, and plans are distributed to all departmental staff affected by them; and

- by monitoring adherence to policies, procedures, standards, and plans, reporting results to the EDP Policy Committee and recommending revisions to policies, procedures, standards and plans to reflect operational requirements.

The Director, Systems Policy, Planning and Integration will be personally responsible for providing Secretariat Services to the EDP Policy Committee. This responsibility will entail attending all EDP Policy Committee meetings, preparing agendas and minutes of meetings, summarizing documentation for Committee members, identifying the implications of proposed policies, plans, standards, and procedures, and providing technical advice as required.

The Director is also personally responsible for directing the operation of the Systems Policy. Planning and Integration Division to ensure efficient operations and a high level of administrative and financial support service to the Bureau. The Director has total responsibility for the achievement of approved objectives of the Division.

The Director will accomplish these objectives:

- by developing policies and procedures to govern the operation of the Division;

- by forecasting and planning for anticipated Division workloads;

- by allocating responsibilities to Division staff based on requirements, capabilities and availability of staff;

- by establishing performance standards for staff;

- by co-ordinating the preparation of budgetary requirements for the Division, monitoring progress against approved budgets, and providing financial progress reports to the Director General, Information Systems Bureau;

- by reviewing work in progress and on completion to ensure that desired objectives are met; and

- by assessing the performance of subordinates.

The incumbent provides the Director General, Information Systems Bureau with Bureau financial progress reports, and reports on Bureau adherence to policies, standards and procedures, particularly as they apply to data management and data and systems security.

The incumbent also provides the Director General with an evaluation of Division operations, progress against plans, and reports on any significant difficulties being encountered in attaining approved objectives, priorities or goals. The need for adjustments to resource levels (person years and dollars) or to timeframes is also reported to the Director General.

The greatest challenge of the position is to provide a solid policy and procedural framework for the Department's systems development and operational efforts, that reflects the major technological changes in the field of Informatics.

POSITION DIMENSIONS

Staff: 12

Division Operating Budget (1 year):

Division Capital Budget (1 year):

SPECIFIC ACCOUNTABILITIES

1. Ensure that the Division provides the policy and procedural framework for the Department's systems development efforts.

2. Ensure that the Department's strategic, and long-range Informatics plans are documented and promulgated to departmental users.

3. Ensure that data is managed as a departmental resource.

4. Ensure that the data and systems entrusted to the Bureau are secure.

5. Ensure that an appropriate level of financial and administrative support services are provided to the Bureau.

6. Ensure that specialist support in the physical design, administration and operation of data base systems is provided to the Information Systems Bureau.

7. Establish an organization that facilitates the economical and effective use of available human and financial resources.

POSITION TITLE: Director

DIVISION: Computer Services Division,
                     Information Systems Bureau

BRANCH: Administration

POSITION NUMBER:

LOCATION: Ottawa

INCUMBENT:

DATE: May 16, 1985

GENERAL ACCOUNTABILITY

The Director, Computer Services Division is accountable for the design,
development, operation and maintenance of the Department's automated
information systems; the operation and maintenance of five EDP facilities;
the preventive maintenance of system hardware and software; the provision
of a range of technical services and products associated with the design,
development, implementation and maintenance of application systems; and the
development of policy and procedures affecting the development, maintenance
and operation of automated systems.

ORGANIZATION STRUCTURE

This position is one of three reporting to the Director General,
Information Systems Bureau, Administration Branch. The other two are the
Director, Systems Policy, Planning and Integration Division, and the
Director, Client Services Division.

Reporting directly to the Director, Computer Services Division are three
positions:

    1.   the Chief, Computer Operations (staff of 5);

    2.   the Manager, Systems Development and Maintenance (staff of 27);

    3.   the Head, Technology, Planning and Research (staff of 2).

Specific functions of the three positions reporting to the incumbent are:

Manager, Systems Development and Maintenance

- To coordinate the design, development, testing and implementation of automated information systems; to coordinate the maintenance and enhancement of production application systems; to ensure that application development efforts are managed to approved standards; to ensure that operational problems encountered with production application systems are resolved; and to provide input to the development of policies and procedures affecting systems development and maintenance.

Chief, Computer Operations

- To coordinate operations scheduling; to coordinate systems software maintenance, preventive maintenance and backup; to coordinate the maintenance of EDP facilities; to operate systems and conduct preventive maintenance and backup; to provide input to policies and procedures affecting computer operations.

Head Technology, Planning and Research

- To research and evaluate alternative hardware and software technologies, including mainframe, minicomputer and microcomputer technologies; to provide a range of technical services and products associated with the design, development, implementation and maintenance of application and database systems; to develop productivity aids and monitor their usage; and to provide input to the development of policies and procedures affecting the unit's operations and the technology and research and development function.

NATURE AND SCOPE

Major development and redevelopment projects have been planned by the Department for the period 1985 - 1990. These projects have been initiated in response to Program requirements at both headquarters and Posts abroad. Development, modification and redevelopment projects over this timeframe will include major system developments in support of the finance and personnel functions, trade initiatives and immigration requirements, and minicomputer and microcomputer applications for headquarters and Posts.

During these development and redevelopment efforts, existing systems will have to be maintained and operated. Five major computer systems are operated by the Department, at least two of which must be accessible by users across the country for 13 hours out of every 24.

The Department's development and maintenance activities will be carried out during a period in which the technologies of electronic data processing, telecommunications and office automation are rapidly merging. In order to ensure that effective and economical systems design and development decisions are made, there is a need to conduct research into alternative approaches to software development and maintenance, and to evaluate advances being made in systems technologies.

The Director, Computer Services Division will be responsible for ensuring that systems development and maintenance activities are carried out to the satisfaction of users and in accordance with departmental and central agency policies, plans, procedures and standards. In carrying out these responsibilities, the Director will be personally responsible for ensuring that user requirements have been documented and that user involvement is continued throughout the design, development, testing and implementation of new or modified systems; that users and the Director General, Information Systems Bureau, are given progress reports throughout the systems development life cycle; that the quality assurance function is carried out, that is, that systems are tested to meet performance standards and user requirements.

The Director, Computer Services Division also attends Systems Users Group meetings at which user requirements and problems are identified, priorities are established, policies, procedures and standards affecting systems users are reviewed for appropriateness, and input is prepared for the Department's Long Term and Strategic Informatics Plans. The Director is expected to provide technical advice and guidance to Committee members in their efforts to resolve conflicting requirements and to establish priorities.

The Director is personally responsible for directing the operation of the Computer Services Division to ensure efficient operations and a high level of service to its departmental clients. The Director has total responsibility for the achievement of approved objectives of the Division.

The Director will accomplish these objectives:

- by consulting, individually and at Systems User Group meetings, with directors of the functional and geographic bureaux, heads of Posts, and other management personnel to identify their requirements and areas that would benefit from the introduction of automated systems;

- by developing policies and procedures to govern the operation of the Division;

- by forecasting and planning for anticipated Division workloads;

-   by coordinating the provision of services by allocating assignments based on requirements, the scope of the project, capabilities and availability of staff;

-   by establishing performance standards for each unit with the Division;

-   by coordinating the preparation of budgetary requirements for the Division, monitoring progress against approved budgets, and providing financial progress reports to the Director General, Information Systems Bureau;

-   by reviewing work in progress and on completion to ensure that the objectives of the project have been met;

-   by assessing the performance of subordinates;

-   by monitoring user satisfaction with the services provided by the Division.

The incumbent provides the Director General, Information Systems Bureau with an evaluation of Division operations, progress against plans, and reports on any significant difficulties being encountered in attaining approved objectives, priorities or goals. The need for adjustments to resource levels (person years and dollars) or to timeframes is also reported.

The greatest challenges of the position are to ensure that the Department's automated information systems are designed and developed on time, within budget and to the users' satisfaction, and that they are operated and maintained efficiently and economically.

POSITION DIMENSIONS

Staff: 38

Division Operating Budget (1 year):

Division Capital Budget (1 year):

SPECIFIC ACCOUNTABILITY

1. Ensure that the Department's automated information systems are
    designed and developed on time, within budget and to the users'
    satisfaction.

2. Ensure that automated systems are operated and maintained
    efficiently and economically.

3. Ensure that the Division provides an acceptable level of service
    to its departmental clients in the area of automated systems
    development, operation and maintenance.

4. Establish an organization that facilitates the economical and
    effective use of available human, physical and financial
    resources.

5. Develop policies, procedures and plans that reflect departmental
    and Bureau objectives and priorities, and which provide a
    framework for managing the Division and providing service to
    users at headquarters and Posts abroad.

POSITION TITLE: Director

DIVISION: Client Services Division, Information Systems Bureau

BRANCH: Administration

DEPARTMENT: External Affairs

POSITION NUMBER:

LOCATION: Ottawa

INCUMBENT:

DATE: May 13, 1985

GENERAL ACCOUNTABILITY

The Director, Client Services Division is accountable for the provision of
effective office productivity support and information systems consulting
services to departmental staff at headquarters and at Posts; the provision
of a decentralized word processng service to headquarters staff; and the
development of the content of policies and procedures affecting Client
Services Support.

ORGANIZATION STRUCTURE

This position is one of three reporting to the Director General,
Information Systems Bureau, Administration Branch. The other two are the
Director, Systems Policy. Planning and Integration, and the Director,
Computer Services Division.

Reporting directly to the Director, Client Services Division are three
positions: the Head, Office Productivity Services (staff of 8); the Head,
Word Processing Services (staff of 33); the Head, Information Systems
Services (staff of 3).

Specific functions of the three positions reporting to the incumbent are:

Head, Office Productivity Services

    To provide a focal point for the introduction of office pro-
    ductivity aids; to ensure that users receive the assistance
    they require in defining their needs, and in developing a plan for
    meeting needs for office productivity aids; to coordinate
    the selection and initiate the acquisition of non-secure office

productivity systems hardware and software; to ensure that reactive
and proactive support and training are provided to users of office
automation equipment. word processors and microcomputers; and to
develop the content of policies, procedures and standards for the
acquisition, use and deployment of office productivity systems;

Head, Word Processing Services

To manage the day-to-day operation; to provide
archiving and back-up assistance to decentralized word
processing units; and to provide input to policies and procedures
affecting the day-to-day operations of Word Processing Services.

Head, Information Systems Services

To assist departmental clients in defining their requirements for
automated systems, the environmental and organizational implications
of introducing automation, and the training requirements related to
automated systems; to assist department clients in selecting external
resources to assist in the development, operation or maintenance of
automated systems projects to which external resources have been
assigned; and to provide input to policies and procedures affecting
the day-to-day operation of Information Systems Services.

NATURE AND SCOPE

There has been a significant increase, over the past few years in
the acquisition and use of office automation equipment, word
processors and microcomputers, that is, office productivity aids.
However, the use of the productivity aids has not been supported
adequately. Users of the equipment require assistance in
determining the type of equipment and applications, in developing
new applications to meet specific or unique requirements, and in
resolving problems with equipment and/or applications.

Furthermore, word processing technology and office automation
technology are becoming integrated, and it is likely that office
functions will be performed eventually on one type of equipment.
which will be more like a microcomputer than a word processing
unit. This integration necessitates an ongoing evaluation of new
hardware and software to ensure that acquisitions are appropriate
and adequately justified.

Finally, the functions that can now be performed by office productivity systems are such that the need for an EDP mainframe or for a smaller system is more difficult to ascertain.

The Director, Client Services Division is expected to exercise managerial, administrative and technical skills to ensure that user needs are properly diagnosed by either Office Productivity Services staff or Information Systems Services staff; to ensure that users receive both proactive and reactive support for the use of office productivity aids; and to ensure that an acceptable level of service is provided to users of the Department's decentralized word processing units.

The Director is personally responsible for directing the operation of the Client Services Division to ensure efficient operations and a high level of service to its departmental clients. The Director has total responsibility for the achievement of approved objectives of the Division.

The Director will accomplish these objectives:

-      by consulting, individually and at Systems Users Group meetings, with directors of the functional and geographic bureaux, heads of Posts, and other management personnel to identify their requirements and areas that would benefit from the introduction of office productivity aids or automated systems

-      by developing policies and procedures to govern the operation of the Division

-      by forecasting and planning for anticipated Division workloads

-      by coordinating the provision of services by allocating assignments based on requirements, project scope, capabilities and availability of staff

-      by establishing performance standards for each sector

-      by coordinating the preparation of budgetary requirements for the Division, monitoring progress against approved budgets, and providing financial progress reports to the Director General, Information Systems Bureau

-      by reviewing work in progress and on completion to ensure that the objectives of the project are met

-    by assessing the performance of subordinates

-    by monitoring user satisfaction with the services
     provided by the Division.

The Director, Client Services Division also attends Systems Users Group
meetings at which user requirements and problems are identified, priorities
are established, policies, procedures and standards affecting systems users
are reviewed for appropriateness, and input is prepared for the
Department's Long Term and Strategic Informatics Plans. The Director is
expected to provide technical advice and guidance to Committee members in
their efforts to resolve conflicting requirements and to establish
priorities.

The incumbent provides the Director General, Information Systems Bureau
with an evaluation of Division operations, progress against
plans, and reports on any significant difficulties being
encountered in attaining approved objectives, priorities or
goals. The need for adjustments to resource levels (person years
and dollars) or to timeframes is reported to the Director
General.

The greatest challenge of the position is to provide a high level
of service and professional advice to users and potential users
of office productivity aids and other automated systems.

POSITION DIMENSIONS

Staff: 48

Division Operating Budget (1 year):

Division Capital Budget (1 year):

SPECIFIC ACCOUNTABILITIES

1. Ensure that the Division provides an acceptable level of
    service to its departmental clients in the area of office
    productivity systems support, word processing services,
    and Informatics advisory services.

2. Establish an organization that facilitates the economical
    and effective use of available human, physical and financial
    resources.

3. Develop policies, procedures and plans that reflect
    departmental and Bureau objectives and priorities, and which
    provide a framework for managing the Division and providing
    support to service users at headquarters and Posts abroad.

APPENDIX C

PERSONNEL REQUIREMENT IMPACT OF THE LONG-TERM
STRATEGIC PLAN FOR INFORMATICS - DETAILED ANALYSIS

PERSON YEAR ESTIMATES BY TYPE OF FUNCTION

PROJECT	DESCRIPTION/PLANNING ASSUMPTIONS	EXISTING (E)/ PLANNED (P)	TOTAL PY ESTIMATE 85/ 86/ 87/ 88/ 89/ 86 87 88 89 90					DEVELOPMENT/ MAINTENANCE PY ESTIMATE 85/ 86/ 87/ 88/ 89/ 86 87 88 89 90					OPERATING PY ESTIMATE 85/ 86/ 87/ 88/ 89/ 86 87 88 89 90					CONSULTING PY ESTIMATE 85/ 86/ 87/ 88/ 89/ 86 87 88 89 90					OFFICE SYSTEMS PY ESTIMATE 85/ 86/ 87/ 88/ 89/ 86 87 88 89 90				
● Defence Export System	– maintain value of present system – a requirement to manage consultants working on the project.	E	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1																
● Promotional Projects	– conversion to in-house computer virtually complete. – responsibility of computer operation will remain with the user. – EDP resources devoted to maintenance, minor enhancements.	E	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25																
● PEMD	– one CS from MFSC assigned full-time to PEMD maintenance – works on client site. – CS will work on PEMD upgrade.	E	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0																
● Import Processing (STRB)	– one CS committed to maintenance of existing system until new import and export processing systems are designed. Note: see also 'Import/Export Processing' under planned project – most of maintenance now done using contract personnel.	E	1.0	(1.0)	(1.0)	(1.0)	(1.0)	1.0	(1.0)	(1.0)	(1.0)	(1.0)																
● Economic Intelligence	– MFS director, only, has required security clearance. 'Minimal' support time.																											
● Immigration	– maintenance, minor enhancements.	E	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1																
● PMIS	– maintenance of existing system. Planning for new PMIS in 86/87 – see 'PMIS' under planned project.	E	.5					.5																				
● ALOSS	– maintenance.	E	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15																
● OLIS	– maintenance.	E	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15																
● Budget & Commitment Control	– minimal support by microcentre.																											
● PY Salary																												
● Miscellaneous Personal Micro Applications	– support from MFSC, microcentre, MFSM – Note: allocation between Consulting and Office Systems is an estimate.	E	1	1	1	1	1											.25	.25	.25	.25	.25	.75	.75	.75	.75	.75

APPENDIX C

PERSON YEAR ESTIMATES BY TYPE OF FUNCTION

PROJECT	DESCRIPTION/PLANNING ASSUMPTIONS	EXISTING (E)/ PLANNED (P)	TOTAL PY ESTIMATE					DEVELOPMENT/ MAINTENANCE PY ESTIMATE					OPERATING PY ESTIMATE					CONSULTING PY ESTIMATE					OFFICE SYSTEMS PY ESTIMATE				
			85/ 86	86/ 87	87/ 88	88/ 89	89/ 90	85/ 86	86/ 87	87/ 88	88/ 89	89/ 90	85/ 86	86/ 87	87/ 88	88/ 89	89/ 90	85/ 86	86/ 87	87/ 88	88/ 89	89/ 90	85/ 86	86/ 87	87/ 88	88/ 89	89/ 90
o FMS	- 3 CS's to support existing FMS plus development/implementation of post's financial applications - new FMS planned for implementation in 86/87 - see 'FMS' under planned projects.	E	3	3				3	3																			
● MYOP	- microcentre support.	E	.1	.1	.1	.1	.1																	.1	.1	.1	.1	.1
● Area Management Budgets	- work done by the user. It is likely that the application will be taken out of service.																											
● Library Systems ● Library ARS ● Library (Country Statistics Profile)	- operations support primarily by Library Services Division - some maintenance by MFSC, MFSX. Allocation between Development/Maintenance and Office Systems is an estimate.	E	.2	.2	.2	.2	.2	.1	.1	.1	.1	.1												.1	.1	.1	.1	.1
● International Trade	- operations support primarily by Library Services Division.	E	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1																
● ISR	- support to ISR does not appear in 85/86 MFS workplan - from MGIC perspective, little support is requested from MFS.	E	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2																
● NOCAMS	- supported by MGT.																											
● Physical Resources Bureau	- no MFS resources assigned for maintenance of the existing system - plan to redevelop the application in 85/86.																											
● Passport	- minimal support required - Passport data centre not to be considered for operation by MFS.																											
● Legal	- management of consultants conducting a feasibility study.	E	.15	.15				.15	.15																			
● Protocol ● Visits Management	- minimal support.																											

PERSON YEAR ESTIMATES BY TYPE OF FUNCTION

PROJECT	DESCRIPTION/PLANNING ASSUMPTIONS	EXISTING (E)/ PLANNED (P)	TOTAL PY ESTIMATE					DEVELOPMENT/ MAINTENANCE PY ESTIMATE					OPERATING PY ESTIMATE					CONSULTING PY ESTIMATE					OFFICE SYSTEMS PY ESTIMATE				
			85/86	86/87	87/88	88/89	89/90	85/86	86/87	87/88	88/89	89/90	85/86	86/87	87/88	88/89	89/90	85/86	86/87	87/88	88/89	89/90	85/86	86/87	87/88	88/89	89/90
● Office Automation	– Office Automation pilot – plan estimate of 3.5 PYs based upon assumption of 1 PY support per 20 terminals. Department has 70 terminals installed for Headquarters, New York pilot – Note: only 2 PYs allocated in 85/86 MFS workplan.	E	3.5																								
● Miscellaneous Headquarters Applications	– mixture of CS, consulting type services, allocation not estimated – Note: no PYs allocated in 85/86 MFS workplan.	E	2	2	2	2	2	2	2	2	2	2															
● Posts – Washington	– implementation of applications that have been installed at other posts – rule of thumb for estimating PY requirements: – .75 PYs for implementation – .25 Pys for on-going support.	E	.75	.25	.25	.25	.25	.75	.25	.25	.25	.25															
● Posts – Paris	– on-going support.	E	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25															
● Posts – London	– conversion to new computer in 85/86, plus on-going support – Note: only .75 PYs allocated in 85/86 MFS workplan.	E	1.0	.25	.25	.25	.25	1.0	.25	.25	.25	.25															
● Posts – Bonn		E	.75	.25	.25	.25	.25	.5	.25	.25	.25	.25						.25									
● Posts – Brussels or Tokyo		E	.75	.25	.25	.25	.25	.5	.25	.25	.25	.25						.25									
● Posts – Hong Kong		E	.5	.25	.25	.25	.25	.5	.25	.25	.25	.25															
● Defence Import System	– anticipated that project will proceed in 85/86 – development complete in 85/86; maintenance from 86/87 on – MFS to project manage consultant staff who will develop and do minor enhancements.	P	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2															

PERSON YEAR ESTIMATES BY TYPE OF FUNCTION

PROJECT	DESCRIPTION/PLANNING ASSUMPTIONS	EXISTING (E)/ PLANNED (P)	TOTAL PY ESTIMATE					DEVELOPMENT/ MAINTENANCE PY ESTIMATE					OPERATING PY ESTIMATE					CONSULTING PY ESTIMATE					OFFICE SYSTEMS PY ESTIMATE				
			85/ 86	86/ 87	87/ 88	88/ 89	89/ 90	85/ 86	86/ 87	87/ 88	88/ 89	89/ 90	85/ 86	86/ 87	87/ 88	88/ 89	89/ 90	85/ 86	86/ 87	87/ 88	88/ 89	89/ 90	85/ 86	86/ 87	87/ 88	88/ 89	89/ 90
• Import/Export Processing System	− development funding approved for 85/86 − 3 CS's from MFS planned for development effort of both systems in 85/86. Note: .25 PY's allocated in 85/86 MFS workplan − plan to patriate application from service bureau to in-house computer ('Trade Computer') − proposed to have MFS assume responsibility for operations of Trade computer − estimate 2 PY's for maintenance for 86/87 on.	P	3	4	4	4	4	3	2	2	2	2		2	2	2	2										
⊙ PMIS	− project approved. Expect 85/86 development time frame, implementation in 86/87 − 1 PY in 85/86 is development; .75 PY's in 86/87 is for conversion from old to new system − on-going maintenance to be performed by consultants − Note: .25 PY's allocated to new PMIS in 85/86 MFS workplan.	P	1.0	.75	.5	.5	.5	1.0	.75	.5	.5	.5															
• FMS	− project underway − consultant team − MFSC not currently involved with project team − MFSC allocation for 85/86 to FMS will be devoted to maintenance of existing FMS and posts financial application system plus installation of new pots financial systems − planned PY's for 85/86 on are: 85/86-86/87: for development. Positions do not exist 87/88-89/90: for maintenance. New FMS is a departmental vs. MFR system. Therefore, anticipate greater demand for access to data, integration.	P	3	3	3	3	3	3	3	3	3	3															
• NOCAMS	− anticipate some MFS involvement in re-design − NOCAMS is not an option for MFS to operate the NOCAMS data centre.	P	.25	.5	.5	.5	.5	.25	.5	.5	.5	.5															

APPENDIX C

PERSON YEAR ESTIMATES BY TYPE OF FUNCTION

PROJECT	DESCRIPTION/PLANNING ASSUMPTIONS	EXISTING (E)/ PLANNED (P)	TOTAL PY ESTIMATE					DEVELOPMENT/ MAINTENANCE PY ESTIMATE					OPERATING PY ESTIMATE					CONSULTING PY ESTIMATE					OFFICE SYSTEMS PY ESTIMATE				
			85/86	86/87	87/88	88/89	89/90	85/86	86/87	87/88	88/89	89/90	85/86	86/87	87/88	88/89	89/90	85/86	86/87	87/88	88/89	89/90	85/86	86/87	87/88	88/89	89/90
• Physical Resources Bureau	− plan to install the new application on the administration computer − development in 85/86-86/87: mostly CS, some consulting and office automation − PY estimates for 87/88 on are for maintenance − allocation of PY's between development, consulting etc., is an estimate.	P	2	2	1	1	1	1.5	1.5	1	1	1						.25	.25				.25	.25			
• Office Automation Secure Prototype	− allocation between development and office productivity is an estimate.	P		2	2	2	2		.5	.5	.5	.5												1.5	1.5	1.5	1.5
• Corporate Management Bureau		P	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1															
• General Trade Policy (GATT)	− user supplies PY resources as well.	P	.1.	.1	.1	.1	.1	.1	.1	.1	.1	.1															
• Consular Management Systems		P	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1															
• Public Affairs Bureau		P	.25	.25	.25	.25	.25	.25	.25	.25	.25	.25															
• Posts − Trade		P	.2	.15	.15	.15	.15		.15	.15	.15	.15						.2									
• Posts − FMO/IMM	− assumption: 4 FMO/IMM posts per year will be implemented beginning in 87/88 : planning/preliminary work in 85/86, 86/87 : rule of thumb for estimating PY requirements − .75 PY's for implementation/post − .25 PY's for on-going support/post − consulting time is planning, requirements definition for installation.	P	.25	.25	3	4	5			2	3	4						.25	.25	1	1	1					
• Posts − FMS	− micros for financial application in the smaller posts − support required by developers, micro support center.	P	.1	.1	.1	.1	.1																.1	.1	.1	.1	.1
• Non FMO/IMM Posts	− micro applications for local needs.	P	1.25	2	2	2	2																1.25	2	2	2	2

C.5

APPENDIX C

PERSON YEAR ESTIMATES BY TYPE OF FUNCTION

PROJECT	DESCRIPTION/PLANNING ASSUMPTIONS	EXISTING (E)/ PLANNED (P)	TOTAL PY ESTIMATE 85/86 86/87 87/88 88/89 89/90					DEVELOPMENT/ MAINTENANCE PY ESTIMATE 85/86 86/87 87/88 88/89 89/90					OPERATING PY ESTIMATE 85/86 86/87 87/88 88/89 89/90					CONSULTING PY ESTIMATE 85/86 86/87 87/88 88/89 89/90					OFFICE SYSTEMS PY ESTIMATE 85/86 86/87 87/88 88/89 89/90				
• US Posts	– recent development. Includes providing assistance/support with existing applications; little original system design. Most micro support centre involvement	P		3	4	3	3																		3	4	3	3
• Pacific Bureau	– minor. Any time is covered under Miscellaneous HQ Applications project.																											
• Assignment of Rotational Staff		P	.1					.1																			
• HQ Secure LAN	– mostly liaison with MCT	P	.25	.5																			.25	.5			
• Office Automation	– acquisition of new computer – computer operation by MFS – same operator(s) for Administration computer should be able to operate this computer – mostly CS time; some office automation support.	P		.5	1.5	1.5	1.5		.5	1.5	1.5	1.5															
• Social Affairs/ Programme Computer		P			3	3	1.75			2	2	.75					1				1	1					
• Administrative Computer		P	3.5	3.5	3.5	3.5	3.5	3.5	1.5	1.5	1.5	1.5		2	2	2	2										
• IS&R		P	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1										
• Data Management	– PY estimate for research, technical support type role	P	4	1.5	1.5	1.5	1.5	4	1.5	1.5	1.5	1.5															
TOTAL			39.5	37	40	40	39.5	31.5	22.5	24	25	24.5	1	5	5	5	6	1.5	1	2.5	2.5	1.5	6.5	8.5	8.5	7.5	7.5