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EXECUTIVE SUMMARY

As a knowledge-based organization, the Department of Justice must manage information well. Since information management is increasingly achieved by automated means, the Department has become more and more dependent on information technology (IT) to meet corporate goals of improving operations while holding the line on costs.

The Information Management Branch (IMB) of the Department is the key element, but not the sole element, in managing IT. The Department also provides IT services through a number of regional offices across the country. These services are locally supported by IT resources outside of IMB. In addition, major business sectors within the Department run projects independent of IMB.

This audit was initiated to assess the degree to which current processes in IMB meet international standards represented by the International Organization for Standardization (ISO). The scope of the review included all management and work processes within IMB relating to the provision of IT services, and the relationship of IMB to all supporting and interfacing organizations that provide input to IT planning, setting of objectives, product acceptance, or process improvement. This report is based on audit work carried out between October 2001 and January 2002.

This audit examined IMB operations with respect to its planning and organization, acquisition and implementation, delivery and support, and monitoring.

Planning and Organization

The organizational structure of the Branch has not substantively changed for some time and is now feeling pressure from the demand generated by departmental growth and the wider acceptance of IMB's role as a significant broker of IT services. More efforts are needed for IMB to achieve its full leadership potential in this role. Attempts by IMB management to develop a

leadership position for IT service delivery have been limited by a combination of general departmental conservatism and financial restrictions.

In response to audit questions concerning how business solutions are developed, clients indicated that teamwork is a weak element. Designing, building, and operating successful automated business solutions requires effective partnerships between IMB and its clients. However, fragmented planning, no mutual understanding of roles and responsibilities, no understanding of IMB processes by clients or of client business needs by IMB all serve to render partnership efforts less effective.

A key question for IMB concerns the level of resources available to meet Department of Justice corporate IT requirements. Departmental growth has placed strain on both the funding and the human resources assigned to IMB. Although some improvement can be achieved by better training of existing staff, a benchmark is needed to firmly establish the level of investment the Department should expect to make in order to deliver appropriate IT services that will help to achieve current and future corporate objectives.

IT projects arise both in IMB and in the client sectors that IMB serves. A lack of common standards for project management results in inconsistent management of such projects. The Treasury Board Secretariat (TBS) endorses the Enhanced Management Framework (EMF), which offers guidance and direction in the management of IT projects in government. The Department is expected to adhere to the EMF regardless of the origin of the project, who the key players are, and the level of project management expertise. Part of that direction is the continual monitoring of risk and the evaluation of privacy concerns. Neither process is formalized in the Department of Justice. A corporate policy on project management and increased IMB attention to standardized management tools and techniques are required.

Acquisition and Implementation

The main component of a development process is a system development lifecycle (SDLC). A SDLC outlines the general approach to development efforts by describing usual tasks and deliverables. No SDLC exists in the Department of Justice, resulting in a varied and often uncontrollable approach to system development. Development processes have been put in place but lack maturity and are not used in a consistent manner.

The lack of a standard approach generates two specific weaknesses important to the Department—requirements management and configuration management. In both cases improvements are necessary to meet corporate objectives for developing quality business solutions.

Managing business requirements demands that IMB specialists are able to understand the business of departmental clients and that client staff are able to express requirements in a way that IT people can capture. Clients often do not understand the technology, their function in a project environment, how to express their requirements, nor how to estimate risks and costs. On the other hand, clients often complain that IMB specialists do not understand the business of the Department and see themselves only as providing technical services and not as proposing business solutions. IMB must work at improving teamwork with clients on projects.

The IMB's configuration management/change management (moving from development status to production status) are core requirements needing significant improvement, especially when effecting the transition of a business solution to the IMB production environment. Configuration management is also central to operations delivery and support.

An offshoot of business solution development is ongoing change to the technical infrastructure of the Department. IMB is responsible for the management of the infrastructure through which information is collected, used, and stored. More and more organizations are realizing that managing an infrastructure means anticipating change, not reacting to it. Such an approach to infrastructure management is missing in the Department.

Delivery and Support

A historical decision to co-locate technical resources with functional resources has affected how business systems are centrally supported. Also, the central Help Desk is outsourced and operating well, but is not consistently used by all business systems. By fragmenting system support, centralized operations are missing expert knowledge in some areas. This void results in a lack of two crucial processes—a central configuration management (CM) process and central quality assurance.

A central CM process governs how technical products are accepted into the operational environment. The lack of such a process means no formal release management process exists and migration tools (tools to control the transition of a business solution from development status to production status) vary. During the audit period, IMB staff proposed using a CM process that

is part of the Information Technology Infrastructure Library (ITIL) as the departmental standard. Within the IT world, ITIL is a internationally accepted source for overall service delivery management processes, of which CM is one component, and is based on industry best practices. It must be understood that ITIL is a framework, not a recipe, for implementing a set of existing processes. However, during the audit period, the IMB advocate for using ITIL left the Branch. As a result, it is unclear if the effort to implement the ITIL process will actually be made.

Normally, a central support group acts as the quality control point for the implementation of new systems and of changes to existing ones. The intent is to protect the operating environment from unexpected impacts on the technical infrastructure or on other operating systems. Without a standard approach to configuration management, support staff lack the means to insert themselves into the process to provide this assurance.

Monitoring

Monitoring is made exceedingly difficult because standard processes are not in place. As a result, little monitoring is now carried out. Two concepts must be central to any monitoring approach: adding a monitoring element to every management process implemented and ensuring that the idea of continuous improvement of processes is part of the monitoring element.

Conclusion

Improving IT processes has become imperative as the Department of Justice grows. IMB is struggling to keep up with changes to the technical infrastructure. In addition, projects continue to surface outside IMB without accompanying standard development or management approaches. The following two issues should be considered by IMB management. First, certain processes—service management (e.g. ITIL), project management, and SDLC—are needed as soon as they can be put in place. Second, IMB must consider how to develop the recommended processes without affecting current workloads.

The management response to the recommendations contained in this report was provided by the Chief Information Officer of the Information Management Branch on January 28, 2003.

1. INTRODUCTION

1.1 Background Information

Like most organizations responding to fiscal restraint, the Department of Justice has been drawn by the promise of better service and improved use of resources based on new software, hardware, and communications technologies. As a result, the Department has become increasingly reliant on information technology (IT) and information management (IM) to reduce costs and improve operations.

The Information Management Branch (IMB) forms part of the Department's administration business line. IMB is responsible for providing IT, library, and records services to departmental staff, which includes corporate networks, hardware, applications, systems, and services. These services and supports must be achieved in an environment of increasing public expectations, growing globalization of many legal concerns such as organized crime, and a corresponding increase in the demand for legal services. As a result, two key priorities for IT stated in the Department's corporate strategic IM/IT plan are "to expand communications and to facilitate the sharing of knowledge." To provide this support, IMB is organized into seven internal directorates plus a number of special purpose offices each reporting to the Director General (DG). This organization was in the process of change during the audit time frame.

As well as providing IT services through the central IMB organization, the Department also has a number of regional offices across the country. Regional IT resources report to the regional management and are seen by IMB as separate service providers. In addition, the Department has outsourced some IT support services; this contract is managed through IMB. As a result, the regions are both stakeholders in that they provide some IT services, and clients in that they are reliant on the technical infrastructure provided by IMB. Other clients represent the remaining business lines of the Department—some are very dependent on IMB services and some tend to be more self-reliant.

1.2 Audit Objectives

This audit was initiated to assess the degree to which current processes in the Information Management Branch (IMB) meet international standards represented by the International Organization for Standardization (ISO).

The objectives of this audit were to review and assess:

- the effectiveness of the Management Control Framework (MCF) implemented by IMB for IT, including those processes intended to meet planned objectives, to manage change, to manage risks, and to provide for adequate control;
- the ability of the organization to meet client and management expectations for IT development, and for management and support using current processes, including (but not limited to) processes for system development lifecycle (SDLC) activities, project management, software control (such as version control, configuration management, requirements management, and user expectations management);
- the ability of the organization to manage quality in accordance with approved plans, including (but not limited to) processes involving total quality management, defect detection and repair, overall defect reduction, general user acceptance;
- the approach of IMB toward continual IT process improvement, including for example peer reviews and user satisfaction surveys.

1.3 Audit Scope

The audit's scope included all management and work processes within IMB relating to the provision of IT services, and the relationship of IMB to all supporting and interfacing organizations that provide input to IT planning, setting of objectives, product acceptance, or process improvement, such as the regional offices, large client sectors, and the Help Desk operation.

This report is based on audit work carried out between October 2001 and January 2002. During that time, the audit team conducted 39 interviews within IMB, with regional IT service providers and with several IMB clients. To further understand the IT processes under review, we obtained documents from all organizational areas and all stages of processes. Information obtained was

corroborated by direct observation and by walking senior IMB staff members through the process analysis.

An international reference for quality requirements in business-to-business dealings is the ISO 9000 family of standards. The ISO identifies the ISO 9000 as “generic management system standards,” meaning they can apply to any organization and any product. These standards centre on clients. They relate to how an organization can improve client satisfaction by meeting client needs while fulfilling applicable regulatory requirements. They also help enforce a management position of ensuring continual improvement of processes. Organizations can become certified as having achieved appropriate adherence to ISO 9000 standards. Part of that certification involves an independent audit to validate the organization’s claim of adherence. This assessment is not to be considered that audit step, but rather a measurement of the gap between ISO standards and current IMB IT processes as a first step toward gap resolution, process improvement, and possible eventual certification.

1.4 Audit Methodology

This audit used the governance structure of the *Control and Audit for Information and Related Technology* (COBIT 3rd Edition)¹ to establish a process-level model for comparative purposes.

COBIT consists of four major sections, or domains, the sum of which describes a complete management cycle. These domains are planning and organization, acquisition and implementation, delivery and support, and monitoring. By this framework COBIT portrays a complete IT governance model. IT governance is a structure of relationships and processes to direct and control an enterprise in order to achieve the enterprise’s goals. Such governance adds value while balancing risk versus return over IT and its processes. (For a more complete discussion on IT governance and COBIT, see Appendix A.)

To achieve this model the Institute of the Information Systems Audit and Control Foundation (ISACF) and the IT Governance Institute brought together a multitude of commonly used business standards and best practices from a number of well-known sources, including the ISO. Consequently, COBIT is designed to be employed, not only by users and auditors, but also as

¹ Published by the IT Governance Institute of the Information Systems Audit and Control Foundation, Rolling Meadows, Illinois, July 2000.

comprehensive guidance for management and business process owners. As a result, COBIT itself goes beyond any of the contributing sources to provide IT and business management guidance. The use of COBIT as a process level model permitted a better assessment of the governance structure in IMB. The result is a very detailed and precise approach to assessing an IT organization.

Since IMB was last audited using the COBIT model in 1996, the audit team took this opportunity to compare results wherever possible. In some cases, that comparison was not useful as the organization had changed considerably in the intervening period.

2. DETAILED FINDINGS

The findings are presented following the organization of the COBIT model, that is, by domain. This organization is for presentation purposes only and does not signify priority of results.

2.1 Planning and Organization

The COBIT planning and organization domain consists of a number of key processes which, to facilitate reporting, we have gathered into four basic categories: strategic IT management control framework, investment management, resource management, and project management. Figure 1 portrays the audit team's concept of a process flow for this domain.

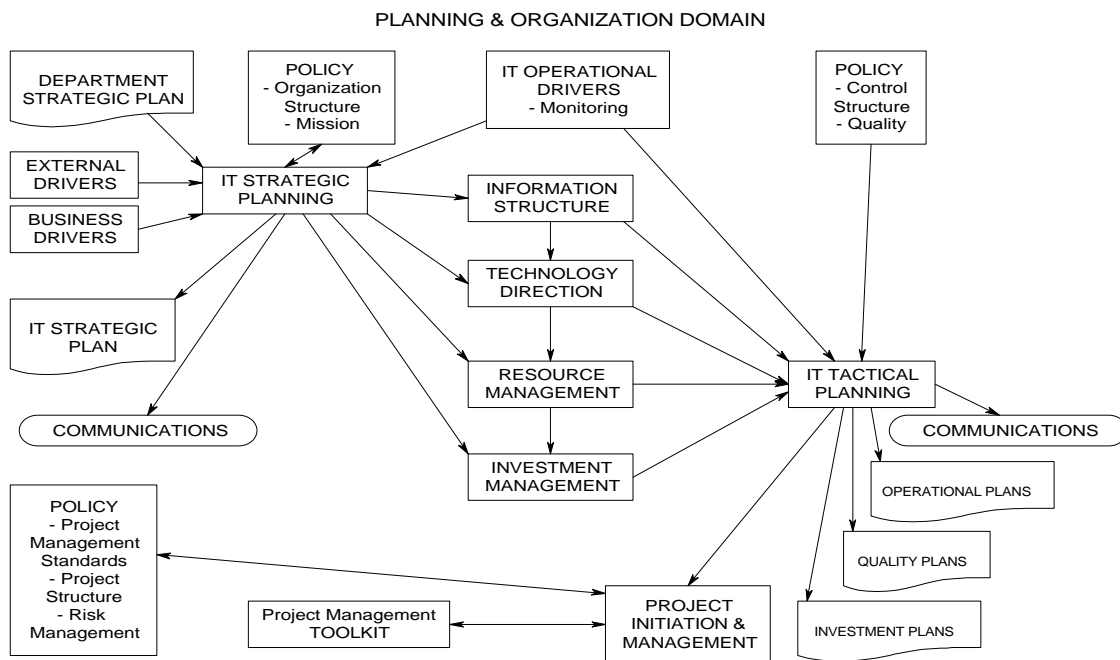


Figure 1

Strategic IT Management Control Framework

The strategic IT management control framework (SMCF) is composed of five management process components that are used throughout the federal government: organization (e.g. policy statements), leadership (e.g. management accords and role assignment), planning, control (management processes to establish control over work flows), and communications. For reporting purposes, we have combined the organization and leadership categories.

Organization and Leadership

At the time of the audit, IMB was organized into several major components:

- System development and support services were delivered by the Back Office and Front Office units.
- Informatics Services supported the technical infrastructure and acted as first point of contact for departmental users.
- Information Management was responsible for records and related systems.
- Library Services provided paper and electronic holdings and research services for departmental staff.
- Internal Services provided administration and support for IMB as an organization.
- Planning and Architecture provided the planning and overall architecture support for IMB.²

Several other special purpose units were also in place. They were Justice On-Line, providing the Department's response to Government On-Line, Technology in Litigation, looking at how technology can further support ongoing litigation, and Connectivity, dealing with bringing diverse and distributed legal organizations into better communications through technology.

No real review of this organizational structure has taken place since it was implemented some five years ago, and recent departmental growth and a wider acceptance of IMB's role throughout the organization is placing increasing demands on the Branch. Considering the direction provided by the corporate strategic plan "to expand communications and to facilitate the sharing of knowledge," it is becoming clear that the use of information technology strategically affects the Department. Both IMB's current structure and its reporting

² During the audit period, IMB undertook a reorganization, which didn't affect the scope of this audit.

hierarchy within the Department may not give appropriate attention to the IT requirements of an organization as highly knowledge-oriented as the Department of Justice.

Within the Department of Justice the role of IMB as the primary broker of IT services is more accepted now than it has previously been, but greater effort is needed by IMB to gain the confidence of their users. General departmental conservatism and financial restrictions have impeded IMB management attempts to develop a leadership position. As a result, the IT policy put forward by IMB has not been widely accepted across the Department. A number of factors complicate this issue. First, information about how IMB is organized—who is responsible for what areas, what resources are available to its clients, and what roles or functions certain teams fulfill—have not been well communicated. Clients and stakeholders see this as a lack of partnership/teamwork. Clients want IMB to accept the role of business solution provider, but IMB staff see themselves as technical services providers. In fact, IMB can only become a business solution provider by establishing an effective partnership with the departmental business sectors and by working toward the same objectives. Clients will only get what they want by working closely with IMB—clients providing the business knowledge and IMB the technical expertise.

User knowledge of IT can also be generally unsophisticated and superficial in terms of understanding what the technology can do and the responsibilities involved. For example, in the fall of 2001, inappropriate user actions brought the e-mail system to a standstill. In contrast, several departmental units with a much higher level of sophistication provide for their own IT needs by contracting with external sources. IMB staff feel that clients generally have unrealistic expectations based on a lack of understanding of the roles and responsibilities involved in managing IT. Conversely, there is a perceived, as well as a real, lack of knowledge on the part of IMB concerning the business of the Department of Justice. This concern is especially prevalent in the legislative area where the requirements are very specific. IMB needs to increase its client focus in order to build effective client partnerships. To this end, the audit team notes that many organizations approach client-focused service delivery by using an “account manager,” where an IT specialist is assigned to a specific client to take on the role of client advocate and act as a focus for the client’s concerns and knowledge. This approach to service delivery would provide an improved communications conduit and would further partnership-building efforts.

Since other sectors in the Department have their own budgets, they can and do proceed with IT activity outside of the IMB sphere of influence. Often these initiatives have progressed significantly before IMB is made aware of them. For example, the Mock Courtroom initiative

was seriously considering using a computer technology entirely different from the existing Department of Justice technical infrastructure. No thought had been given to the impact of such a decision. A survey conducted by the audit team revealed that users perceive that IMB is not always able to deliver services quickly. Some client areas are moving much faster than others to adopt new technology, making it more difficult for IMB to support everyone equally.

In addition to gaps in perception, organizational gaps are also evident in IMB. Specifically, integrated data management and data/information security services are missing. Given the nature of the Department's requirements for knowledge management and security of information gathered, stored, and used, a data management function might be expected to ensure sufficient consideration is given to appropriate control of all processes. In fact, a data management unit did exist in IMB some time ago, but was affected by a series of organizational decisions. In some cases technical staff were co-located with functional or client staff thus splintering the technical groups. Further, the Department decided to use major Enterprise Resource Planning (ERP) commercial products. Normally the use of ERP products can provide a data management facility where none exists. However, all ERPs accomplish this differently. Since many systems operate across the Department, there are incompatible approaches to data management and security as well as several systems that do not use ERPs. The decisions, therefore, to co-locate staff and to use ERP products make it more difficult to easily manage data at a corporate level without a central function for that purpose.

To take a leadership position, IMB must set out an overall architecture for its organization. A key level of documentation is architectural design. Normally, organizations document technical directions in terms of overall architecture. IMB is pursuing the development of a documented architecture in the following areas: employee desktop technology, corporate-wide servers, telecommunications, electronic messaging, IT security, and computer applications. Data architecture is a conspicuous gap. Although security is being addressed, a security architecture is deficient without a data architecture. TBS's Enhanced Management Framework provides guidelines for security and privacy characteristics of data used in business systems and requires assessment of security and privacy standards and that steps are taken to address concerns that come to light. Typically, such guidelines require the production of formal documentation such as statements of sensitivity and threat/risk assessments. These documents are not currently produced during the course of system development at the Department of Justice. Both a security and a data architecture are needed to ensure that data electronically accumulated, stored, and used in the Department are managed with the degree of protection necessary to their security profile.

Planning

Planning as a Branch process has received attention and has improved since the last audit in 1996. Management has made an effort to create a more strategic IT vision and plan. Many IT projects are submitted via a formal process through which budget decisions are made. However, not all projects proceed this way, and clients are in the process of developing their own strategic plans. The result is an absence of an integrated process to assemble and prioritize IMB workload.

The effect of strategic IT planning is limited by the fact that IMB is not the only supplier of IT services in the Department. The Department has a strategic plan that provides several key strategies for IM/IT, such as improving communications through electronic means. However, regular changes in departmental strategy make it difficult to align Branch reporting to current strategic issues. The IMB strategic IT plan addresses a five-year horizon but is still in draft form and has not yet been shared with key stakeholders and clients.

With respect to planning, the lack of communication is bilateral. IMB is closely aligned with certain client sectors that, as stated above, are in the process of developing long-term plans of their own. Although IMB must react to these plans, the Branch is often not involved in their development. Teamwork needs to become a two-way process. IMB could improve its bilateral communications by putting account managers in place to liaise between IMB and its departmental clients.

As an organization, the Branch is very reactive to operational problems. This focus on operation problems makes it very difficult to accomplish special initiatives that arise from the strategic IT plan. Each unit in IMB has its own approach to normal operational planning. Thus, no formal way exists to capture and prioritize all work being done by IMB—operational and strategic. Overall, co-located teams using ERP commercial products such as SAP and PeopleSoft do a better job of operational planning.

Management Control

Branch management exerts overall control through review processes, which will be further explored in subsequent sections of this report. As an example of a review process, the Branch's Project Review Committee (PRC) looks at each project/activity area to determine whether projects are being managed wisely to meet objectives and using the allocated resources.

However, management control is adversely affected by a number of factors. First, clients outside of IMB run projects. This means that IMB management and staff have little control over IT standards used, if any. Second, standards and policies to control IT activities are sparse and sporadically implemented within IMB, which results in inconsistent IT support across the organization. (See the section on “Project Management” in this report for more discussion of this issue.) For example, as no standard approach is available, each unit in IMB has a somewhat different way of managing their specific operations. Also, the PRC process is relatively recent and is only now maturing. A further complicating factor is that some client areas are attempting to secure their own IT support staff. Should they succeed, this will once again dilute the impact IMB can have on a standardized provision of IT services.

Communications

Although the Branch management team tries to maintain a relatively high level of external communications, internal communications remain varied and patchy in terms of effectiveness. IMB’s Internal Services provides communications services for IMB as an organization. Overall, communications have increased (e.g. newsletters, official communications with users, service level agreements, packages that go along with service releases), creating a large workload in terms of paperwork and time invested. Certain activities that can have strong communications impact are very well accepted, notably the National Informatics Committee conferences (meetings held with regional colleagues).

Because clients are very busy, they do not have the time to search for information. Clients need all the information presented to them to be structured, concise, and finely targeted to a specific concern. However, communications staff are often not well informed about the activities of the various units within the Branch, and overall communications tends to be treated as an afterthought by the rest of the Branch staff. IMB management has stated its intention to improve communications and has begun to increase communications staff and raise awareness of the need for better communications both within the Branch and outside of the Branch. However, it has not yet achieved the communications levels necessary to interface effectively with clients.

Recommendations and Management Response

1. It is recommended that the DG IMB facilitate partnerships with key clients by:

a) Clarifying roles and responsibilities, both within IMB and between IMB and clients/stakeholders.

Agreed. IMB is reorganizing to create a new unit to manage clients needs and expectations. This will improve communications and mutual understanding among both IMB and client staff. Also a delegation chart will be prepared as a follow up to the IM/IT spending review.

b) Promoting teamwork by improving general client communications and client knowledge of IMB roles and structures.

Agreed. IMB is reorganizing to create a new unit to manage clients needs and expectations. This will improve communications and mutual understanding among both IMB and client staff. IMB will also start receiving its communications support from Communications Branch via an MOU. As a preamble to this MOU, IMB's communications needs will be redefined at a strategic and operational levels.

c) Developing a client focus by creating a service delivery model where an IT specialist takes on the role of client advocate and acts as a focus for client concerns and knowledge (e.g. account managers).

Agreed. IMB is reorganizing to create a new unit to manage clients needs and expectations. This will improve communications and mutual understanding among both IMB and client staff.

d) Having the IMB planning process ratified by clients.

Agreed. IMB has undertaken to review and update the governance process through the IM/IT governance review project. This will include ratification of the Planning and Projects approval Process by BIT.COM.

- e) **Promoting better communication of project plans between clients and IMB by communicating the IMB strategic IM/IT Plan to clients.**

Agreed. The IM/IT Strategic Plan was communicated and presented to Senior Managers and staff across Canada in 2002. The plan will be updated and presented for approval again in 03/04 after which it will be presented to staff and managers.

- 2. **It is recommended that the DG IMB meet the security and privacy objectives of the Enhanced Management Framework by:**

- a) **Ensuring the creation of a data architecture for the Department to relate to the application and security architectures now being developed.**

Agreed. Subject to staffing approvals and allocation of adequate funds. Zachman methodology established to document the various components of the Architecture. Data models being populated based on information already available. Work on Application and Security architectures to start in 2003-2004.

- b) **Re-establishing data management function as a fundamental element in the IMB organizational structure.**

Agreed. Depending on support throughout DOJ and funding available.

- c) **Reviewing the data security and privacy requirements in operating and developing systems through the use of standard security documentation such as statements of sensitivity and threat/risk assessments.**

Agreed. Has always been done in the past, and will continue in the foreseeable future.

Investment Management

Investment management, a process for how budgets in IMB are to be determined in terms of work planning and costs required to achieve business goals, is still being formalized. The IMB IT budget has been stressed by both departmental growth and the overall growth in acceptance of IT by Department of Justice staff. The IMB IT budget was established when the Department had significantly fewer employees and was largely located in a few locations. IMB is now supporting over 4200 desktop computers in a growing number of locations. Therefore, the cost of support has correspondingly increased. Overall IT spending in the Department is over \$31 million per annum (salary plus O&M); however, IMB is allocated only \$13.5 million of that yearly amount. Four to five per cent of the departmental budget is devoted to IMB IT, not including client expenditures for IT. IMB management is of the view that if a benchmark comparison were carried out, a representative allocation of budgeted IT spending would equal nine to ten percent of the Department's total budget. There has been no benchmark exercise carried out.

Both IMB and some client organizations expressed concern that investment in IMB is insufficient to actually improve processes. Senior departmental management has given limited recognition to budgetary insufficiencies and to the corresponding negative impact on some elements within IMB. For example, as a result of such limitations, efforts to prepare the Department of Justice technical infrastructure for future growth and change tend to be administered on an ad hoc basis.

Funding requirements are often laid out in strategic and tactical plans, but such plans do not outline the source of funds needed to achieve the goals. For example, IMB management has come to the realization, as have many other larger organizations, that rather than simply reacting to changing requirements in the technical infrastructure as they arise, the Department needs to anticipate them. This concept of anticipating changing needs is known as "evergreening." However, the funds necessary to create an evergreening approach have not been planned for. Furthermore, although funding based on careful planning could be requested, the time lag inherent in the federal budgetary system means planning must always be well ahead of established IMB funding.

Recommendations and Management Response

- 3. It is recommended that the DG IMB seek approval from the departmental Executive Council to authorize an assessment of the best way to deliver IT services across the Department of Justice (not just the IMB component) and determine an appropriate budget.**

Agreed. The Governance & IM/IT spending review projects currently underway are addressing this. A key direction will be the definition and national funding of common core services across the Department. Also a regional organization review has been initiated to recommend the best regional delivery model(s).

Resource management

IMB management considers current allocations of financial, human, and technical resources insufficient to accomplish the work required at the desired level of quality. With regard to human resources, the Branch is seen by most employees as a good place to work. However, it still lacks a sufficient number of reliable and experienced people. This situation increases the difficulty of implementing standard processes.

Resource planning is affected by the organizational structure of the Department of Justice and by the ability of IMB to communicate with other stakeholders (clients, users, regional office support and other service delivery agents for Department of Justice services). Both the regional offices and the offices of the independent NCR-based stakeholders contain IT resources, yet IMB has no control over these resources. Decisions taken elsewhere in terms of financial, human, and technical resources can significantly affect IMB. Much of the IT work requirement is dictated by the clients and, as a result, resources are stretched thinly and are not always available when required. No accepted benchmark with other government and legal organizations is available with which the Department can compare its IT investment. IMB needs a definitive benchmark to determine the support cost per desktop (a standard industry measure).

IMB management has acknowledged that skill levels are weak in some employees and in some units—hence the large investment in contracted resources. There is a high ratio of consultants to employees (about 50:50). High turnover among the consultant population adds to the Branch's risk of service interruption. Vacancies in the organization chart are often filled with casuals and students, which can mean a high degree of turnover. Many acting positions can mean that

incumbents are stretched beyond their current skill level. In many units not all positions are filled and in some cases key roles are vacant. Hiring processes are lengthy and put pressure on a management staff, who are already significantly tasked.

Better training is required for both client and IMB staff. The IMB management team is now addressing some training issues by offering a project management course. This course seems to be well designed and most management team members have attended. Outside of IMB, most clients do not get project management training regardless of how high their level of responsibility for a project may be. In addition, regional staff see most career development in the regions as resulting from local mentoring and individual initiatives, and not from corporate training strategies. (Project management is discussed in greater detail in the next section of this report.)

Recommendations and Management Response

- 4. It is recommended that the DG of IMB arrange to undertake a benchmark exercise to establish a comparative level of IT resourcing (fiscal, human, and technical) to meet corporate objectives for the implementation of technology solutions.**

Agreed. The Governance & IM/IT spending review projects currently underway will address these areas.

- 5. It is recommended that the DG of IMB develop a human resources development plan based on a benchmark (see Recommendation 4), plus an assessment of skills available to IMB. As part of this exercise, the DG IMB should:**

- a) Consider a greater investment in training linked to plans and strategies.**

Agreed in principle. In reality it will depend on IMB's O&M budget for 2003-04. Once the staffing freeze is lifted, as the renewal process takes place, an HR regime based on competencies will be implemented.

b) Develop a proposal to achieve better awareness within IMB and key client units of IMB-supported IT standards.

Agreed. IMB is reorganizing to create a new unit to manage clients needs and expectations. In addition an IM/IT Policy, Standards and Guidelines committee has been established to develop a more strategic agenda in this regard. Also the IMB communication needs and a strategy to address them will be developed (see item 1b).

c) Create a staff renewal plan to ensure the continuity and provision of essential skills.

Agreed. As the IMB renewal takes place, skills gaps and requirements will be identified and addressed to the extent that resources will be available.

Project Management

Some standard processes exist for managing projects and a number of templates (standardized forms) exist on Intranet Web sites for use by technical staff. However, such standards (e.g. project plan, implementation plan, project charter) are either new, not yet fully implemented, or not used consistently, or local in scope. Project managers have not yet accepted these standards and are not always using the available templates.

TBS's Enhanced Management Framework offers guidance and direction in the management of IT projects in government. The Department of Justice is expected to adhere to the EMF regardless of the origin of the project, who the key players are, and the level of project management expertise demonstrated. Part of that direction requires the continual monitoring of risk and the evaluation of privacy concerns. Neither process is formalized in the Department.

Currently, IMB management is considering establishing a central project management office—a centre of excellence within the Branch for project management. This organization would be able to sponsor project management policy, processes, and tools. Unfortunately, resources are lacking for the full establishment of this unit. Although weekly project review meetings occur, most project managers are not yet adept at sharing information. In addition, project risk assessment is not a formal process.

As a result of the relatively informal nature of project management discipline in the Department, several situations are present that increase risk of not delivering a successful business solution. For example, no standard project management tool set exists, nor any common language such as is found in organizations that have developed highly standardized processes. This means that project managers, even if motivated to use standard processes, cannot always find them in IMB. Software project planning, project tracking and oversight, quality assurance, and contract management for projects staffed with consultants all use varied project management processes. Furthermore, there is no formal quality management process and no standard feedback from users.

Recommendations and Management Response

- 6. It is recommended that the DG of IMB request the support of the Executive Council to strengthen the authority of IMB to act as a central review point for all projects in the Department of Justice.**

Agreed. The Governance & IM/IT spending review projects currently underway are addressing this.

- 7. It is recommended that the DG of IMB develop a corporate IT policy wherein all IT projects must be subjected to the same or similar project management process, regardless of origin (internal or external of IMB).**

Agreed. A new governance regime, based on project management principles, is being proposed to BIT.COM for approval. A Project Review Committee is in place to monitor all IMB projects. A general IT policy was also drafted. It was accepted at all levels and needs to be presented at BIT.COM. This is an umbrella policy which will give IMB and Regional IM/IT units the authority to review all IM/IT expenditures and projects.

- 8. It is recommended that the DG IMB develop a centre of excellence in IMB to improve the management of projects. As a centre of excellence, this project management office should:**

- a) Develop, implement, and promote a standard project management process for all Department of Justice IT projects.**

Agreed. See 7.

- b) Ensure project team buy-in by providing ongoing training in project management techniques.**

Agreed. A Project management course was developed in 2001-02. Training was provided to all IMB staff. More training is scheduled for this fiscal and next.

- c) Improve project management discipline by ensuring a formal, continuous, and regular project review that embodies the spirit of the EMF in terms of project status, risk, and achievement.**

Agreed. As per 7 and 8.

- d) Provide a standard project management tool set to be adapted and used on all Department of Justice IT projects.**

Agreed. Will be considered in light of available resources.

- e) Provide ongoing support to IT projects by advising project staff on project management techniques and by providing technical experts to work on project teams.**

Agreed. As per 7 and 8.

Chief Information Officer

The Planning and Organization domain of the COBIT framework covers a wide variety of structural elements, processes, and policies that help to define how the supply of IT services will occur. The Department's IT management structure and its characteristics have changed over time such that many IT clients are no longer sure of how IT services are actually provided or should best be provided. Much of what has been outlined in this report concerns how to change the characteristics of providing IT services to better meet client and overall departmental requirements.

In many ways, change is restricted by the inability of IMB to speak for the Department, even as overall IT service coordinator. Other organizations in the federal government have moved

toward using a chief information officer (CIO) as the focus for representing IT services and issues. The CIO is the senior executive responsible for all aspects of an organization's information technology and is seen in the industry as one of the most complex of all corporate officer positions. In fact, the TBS has a CIO Branch, which is responsible for the federal government's overall approach to information technology and management. For example, the TBS CIO Branch is the sponsor of the Enhanced Management Framework. However, there is no such CIO role defined for the Department of Justice.

Some of the conclusions in this report outline the weaknesses occurring in an organization that lacks effective coordination of IT services. To address such weaknesses, our recommendations have tended to go beyond simply enhancing IMB processes. The audit team is of the opinion that it will be very difficult for IMB to address process improvements when no central control or coordination can be exercised over the services being provided. Senior management should consider how an IM/IT CIO for the Department of Justice might help to resolve these issues.

Recommendations and Management Response

- 9. It is recommended that the DG of IMB discuss with Executive Council the need to revisit the role of the IM/IT Chief Information Officer to ensure that IM/IT is best positioned to assist the Department in achieving its corporate objectives.**

Agreed. CIO position has been established and governance and IM/IT spending reviews are being conducted to address this area.

2.2 Acquisition and Implementation

The COBIT acquisition and implementation domain consists of a number of key processes which, to facilitate reporting, we have gathered into three categories: system development process management, existing application management, and infrastructure management. Figure 2 displays the audit team's concept of the process flow for this domain.

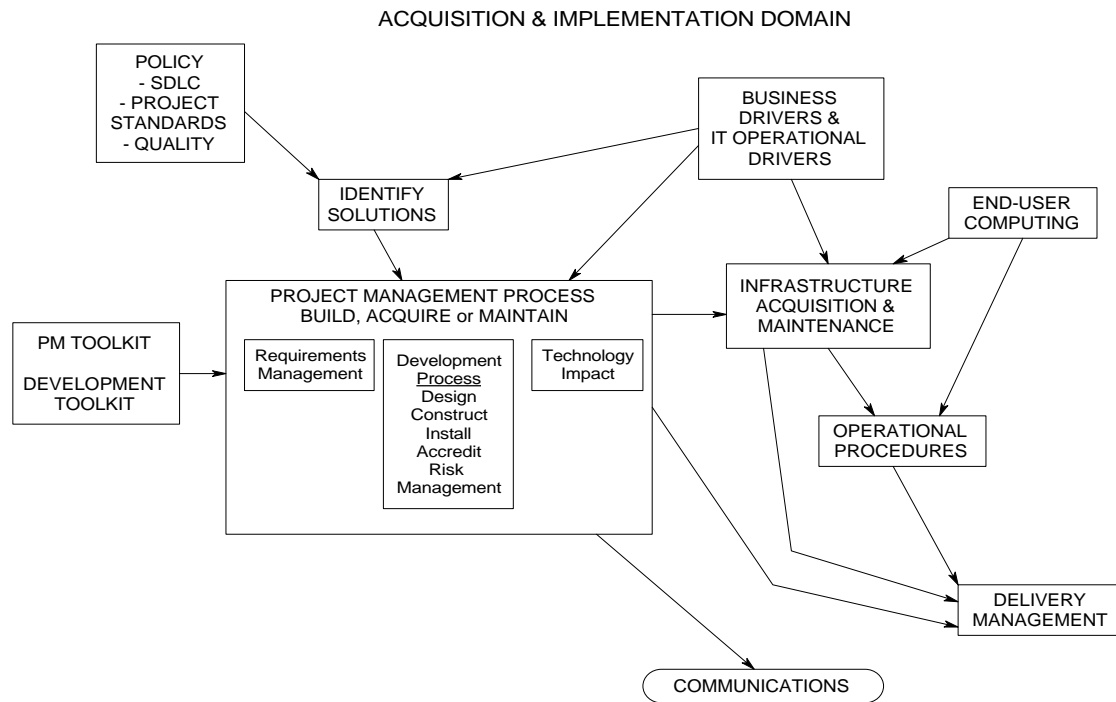


Figure 2

System Development Process Management

A standard system development lifecycle (SDLC) process has become the cornerstone of common best practices in system development. An SDLC is an approach to developing an information system or software product that is characterized by a sequence of steps that progress from start to finish in an organized, controlled, and repeatable manner. The steps would include design, construction, installation, accreditation, and risk management. An SDLC for the identification, development, installation, and management of software products does not exist in the Department of Justice. System development processes are being instituted in the Branch and are showing improvement. However, they lack maturity in that no standard tool set or common terminology exists. Rather than managing projects in a standardized and repeatable manner, reliance is placed on very senior and experienced project managers, who may be employees or consultants and who manage their projects in their own way.

In addition, since IT projects are often initiated in the client zone independent of IMB, less opportunity exists to institute standard development processes, as IMB is unable to enforce such standards. Each team has a somewhat different approach to the various stages of development—

design, construction, accreditation, and implementation. Although templates have been designed and are maintained on the IMB internal Web site for most major elements of a project (e.g. project charter, test plan, installation plan), not all project managers actively use the templates. Some teams are more conscious of standard processes, and larger projects are more likely to make use of more formal tools.

Other problem areas are a lack of sufficiency of testing, lack of a corporate data model, uncertainty whether standard software construction processes are being used, and lack of attention to ongoing support costs. Although staff interviewed maintain that software accreditation does occur, testing facilities and capabilities are varied and some felt that more testing could be done.

Some people are confused about what an SDLC represents and what the elements of a project management framework are. Specifically, the current templates blur this distinction. IMB management has proposed using an ISO standard process (ISO 12207). This is a high-level standard that covers a broad range of processes involving operations, maintenance, and development. Although this process allows for flexibility in implementation, it also needs individuals with real experience to interpret and use it fully.

Weaknesses were also cited by both IMB and client staff with regard to requirements management and configuration management. In order to meet corporate objectives for developing quality business solutions, two aspects of the management of business requirements need improvement: the ability of IMB specialists to understand the business of Department of Justice clients, and the ability of client staff to express requirements in a way that can be captured by IT people. Clients often do not understand the technology, their own function in a project environment, how to express the requirement, nor how to estimate risks and costs. On the other hand, clients often complain that IMB specialists do not understand the business of the Department of Justice, seeing themselves only as providers of technical services and thus tending to be unsupportive in proposing a business solution. As recommended, better understanding of client business lines can be established by instituting an “account manager” approach to service delivery.

Project management controls the development and delivery of a business solution. Configuration management is the control process under which that solution is put into formal operation. Configuration management needs improvement, especially when business solutions make the transition from a development stage to an IMB production environment. At present, no formal

standard connects how projects are managed and how the resulting IT products are put into production. Further, when a business solution is implemented, IMB's client support organization becomes involved. But the lack of communication between IMB and clients and within IMB itself results in central support staff always having to react to projects, whether those projects are in IMB or in client sectors. Because a centralized process for configuration management is lacking, attempts by central client support to increase involvement are particularly resource-intensive. A shortage of resources further impedes progress. As the configuration and change management processes are shared by the Delivery and Support section of the audit model, see that section of this report for further discussion.

Recommendations and Management Response

10. It is recommended that the DG IMB improve the system development process management by:

- a) **Developing or acquiring and adapting a single common system development life cycle (SDLC) process.**

Agreed. Depending on funding.

- b) **Ensuring that all departmental IT project managers use the SDLC process throughout the project life cycle.**

Agreed. Research will continue to select the best tool as funding becomes available.

Existing Applications Management

Responsibility for software development and maintenance is largely shared among key teams in the Front Office and Back Office units of the Department of Justice. The different units have different approaches to maintenance. End-user computing (software development by end-users) is also commonplace. Smaller applications are often developed without IMB knowledge or involvement. However, IMB is sometimes called upon for support, but often finds that there are no acknowledged owners of the applications. Some 1800 Microsoft Access databases exist outside the scope of IMB—unsupported. In addition, no common standard process exists to implement changes to current computer applications, although more control is exerted over the major ERP environments of SAP and PeopleSoft.

End-user computing remains a component of the environment that IMB must deal with. The audit team feels that IMB should continue to monitor end-user activities, but that priority for action should be given to the recommendations provided in this report.

Infrastructure Management

IMB is responsible for providing an extensive infrastructure to connect a geographically dispersed organization. Clients and stakeholders both acknowledge that IMB has done a good job in this regard. However, IMB is aware that in order to maintain client and stakeholder satisfaction, management must strive to anticipate future requirements—the concept of evergreening—as opposed to reacting when the need occurs. Implementing this concept in the Department is not easily accomplished, because changes to infrastructure technology are not assessed, planned, controlled, or evaluated by the same methods applied to IT systems. Various other factors also have an adverse effect on infrastructure development and management.

- The existence of multiple applications development teams as well as major applications areas, such as PeopleSoft and SAP, that control their own applications servers can all have an effect.
- The regional offices are nominally part of the whole infrastructure, but they can and do make decisions on their own that can be detrimental to the overall architecture.
- Departmental Legal Service Units are supported by their host department and must conform to that architecture.
- Some areas such as Family Law are more related to provincial partners than they are to the Department.
- The lack of a separately funded infrastructure initiative combined with significant departmental growth and an overall lack of resources compound the problem.

Within IMB's infrastructure management, technical architecture staff are spread thinly. For example, during the audit period no position for an overall technical architect was evident, backup staff responsible for server support were relatively inexperienced, and some critical areas had no backup staff (e.g. Web, firewall, and security).

As a result of these deficiencies, planning, budgeting, and maintaining the Department's infrastructure is not done as a separate, strategic component of IT service delivery.

Recommendations and Management Response

11. It is recommended that the DG IMB promote the development of a strategic concept for the Department of Justice IT infrastructure by:

a) Developing an evergreening approach to infrastructure management.

Agreed. The IM/IT Spending Review & Governance projects are addressing this. A capital replacement plan has been proposed but it is unlikely to be implemented in the near future due to the current fiscal situation.

b) Building a separate IT infrastructure component for planning and funding purposes.

Agreed. Has been proposed as part of the IM/IT spending review. Will gradually be initiated.

2.3 Delivery and Support

The COBIT delivery and support domain consists of a number of key processes which, to facilitate reporting, we have gathered into two categories: operations support and facilities management. Figure 3 displays the audit team's concept of the process flow for this domain.

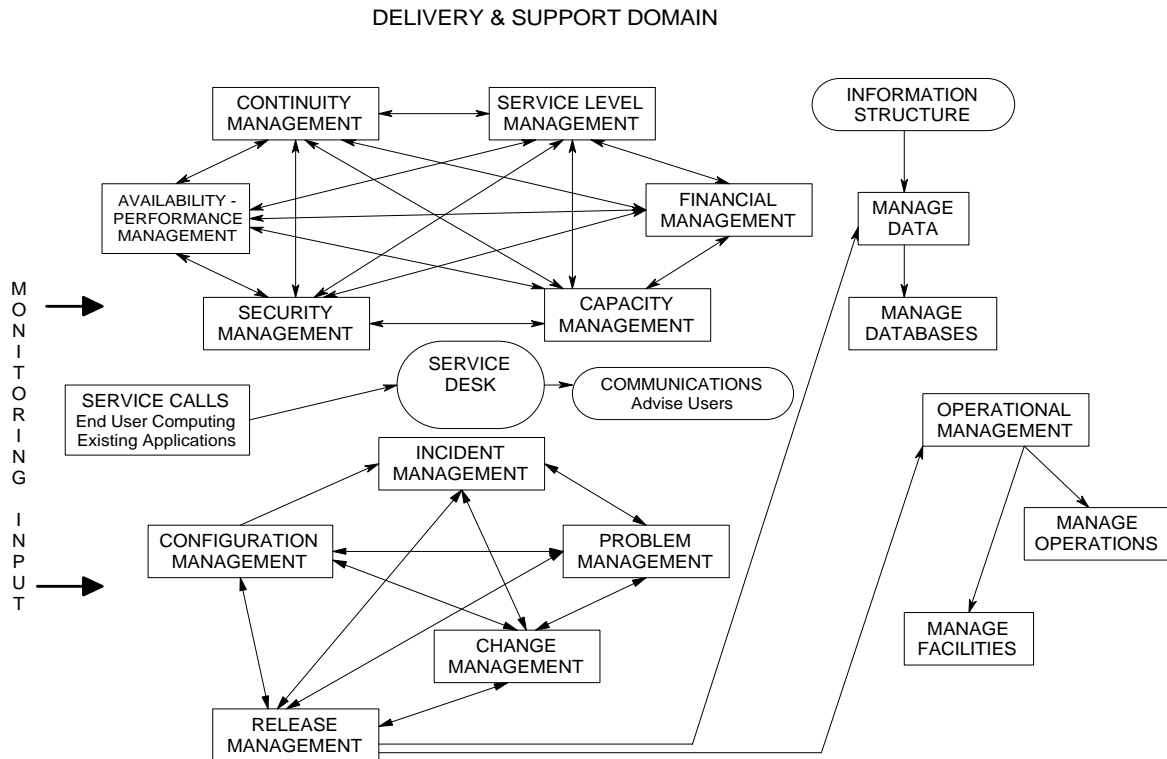


Figure 3

Operations Support

There are two models for putting a business solution into operation—development/support team control or central control. Within the Department, support teams such as Finance (SAP) and Human Resources (PeopleSoft) control their own operations. When the system development staff were co-located with functional people, they undertook the control of operations. As a result, IMB now has little in the way of central operations staff for such business solutions.

Staffing of the Help Desk operation, intended to be the first point of contact with IMB, is contracted out to a client support team. This team is a strong positive influence. It operates well and is generally viewed as successful by clients and IMB, although not so much so by regional staff who cite duplication of services because they also have local operations support. As the Department experiences a growth in new users coming online to the various business solutions, it is expected that there will be increased calls to the Help Desk. To maintain the Help Desk's

current level of success, consideration should be given to expanding the operation, where possible.

The lack of an overall standardized process for technology operations support has had a number of adverse effects. For example, since current practices largely rely on specific individuals, a change of individual can mean the loss of acquired knowledge and practices. In addition, large functional clients such as Finance and Human Resources (HR) that run ERP business solutions tend to circumvent the Help Desk and use their own help lines. By distributing operations support, there is a risk that security and recovery planning will suffer. For example, Business Resumption Planning (BRP) efforts put in place to prepare for the Year 2000 transition require ongoing review to be kept current. However, distributing operations support means that BRP review must also be distributed and such work is considered low priority when placed against daily operations.

At the time of the audit, central IT security for IMB was being addressed by an individual who is in an acting position for another significant IT role. As a result, security concerns were not always dealt with on a priority basis. Finally, although IMB is often held responsible for errors that occur in applications managed elsewhere, no provision for quality assurance at production delivery exists because of a lack of assigned resources. Therefore, IMB is unable to ensure that a delivered product has no unexpected effects on other areas of technical or applications architecture.

Although all of the foregoing are serious, the most crucial missing element is a central configuration management (CM) process to govern how technical products are accepted into the operational environment in the Department of Justice. No formal release management process exists and migration tools (tools to control the transition of a business solution from development status to production status) vary. During the audit period IMB staff proposed using, as the Department of Justice standard, a CM process espoused by the Information Technology Infrastructure Library (ITIL). The ITIL is a source for overall service delivery management processes of which CM, based on industry best practices, is one component. It must be understood that ITIL is a framework, not a recipe, for implementing a set of existing processes. IMB intended to start implementing an ITIL-based CM process focused on the file and print servers, then move on to applications and mail servers. However, shortly before the end of the audit period, the IMB advocate for ITIL left the Branch with the result that continued effort on this initiative is not certain.

Recommendations and Management Response

12. It is recommended that the DG IMB develop a central concept of service delivery management that is based on the ITIL framework and against which the further development of specific processes can be measured.

Agreed. Research will continue in this area when funding becomes available.

13. It is recommended that in the short term the DG IMB develop a common service delivery process to:

a) **Address central configuration management and release management with a view to controlling the transition of all business solutions, technology changes, and related processes from the development environment to the ongoing production environment in the Department of Justice.**

Agreed. See 12.

b) **Expand the Help Desk operation and consider how the ITIL framework might be used to improve client service.**

Agreed. A new RFP incorporating the possibility to implement ITIL will be issued.

c) **Improve security and business resumption planning.**

Agreed. A Security Blanket Project is underway. A security architecture will be developed. The BRP is currently being updated.

14. It is recommended that the DG IMB review the central operations role and determine the overall resourcing level required. It is further recommended that a central quality assurance function be considered.

Agreed. Core services to be implemented across the Department will be defined and gradually implemented. Those will include IMB central services offered.

Facilities Management

Facilities management is normally part of the overall responsibility of a central operations staff. However, in this case it is not clear where the responsibility lies—IMB or the Materiel Management area in the Department. For instance, the central server room is in the basement of the East Memorial building where IMB was located several years ago. As IMB has no central operations staff who are responsible for managing facilities. Therefore, no one has any real need to visit the server room. IMB management expects Materiel Management to monitor the room, but indications are this is not being done. For example, the server room experienced a flood that went undetected for several days. When it finally was discovered, there was one-half foot of water in the room. As, well, power and space is also not being well managed. Departmental growth is putting real pressure on space in the server room to the extent that air conditioning and power have become a concern. The audit team was told of an incident in which, on a weekend, the air conditioning was mistakenly turned off, and it was by chance that the situation was discovered before there was an equipment failure. In another case, the uninterruptible power supply overloaded and shut down, bringing down several elements of the network with it, including the servers for the Deputy Minister.

Recommendations and Management Response

15. It is recommended that the DG IMB develop a formal Memorandum of Understanding (MOU) with Materiel Management to govern the management of IT facilities. It is further recommended that IMB have a central role in monitoring the MOU.

Agreed. Negotiations taking place for further centralization of all servers in one area. There are now regular meetings between IMB and facilities, and this is working well. As needed roles and responsibilities will be clarified through an MOU.

2.4 Monitoring

The COBIT monitoring domain consists of a number of key processes which, to facilitate reporting, we have gathered into two categories: ongoing monitoring and evaluation. Ongoing monitoring consists of strategic and operational monitoring (e.g. management reporting, project review, delivery statistics, user satisfaction). Evaluation refers to management review and audits. Figure 4 displays the audit team's concept of the process flow for this domain.

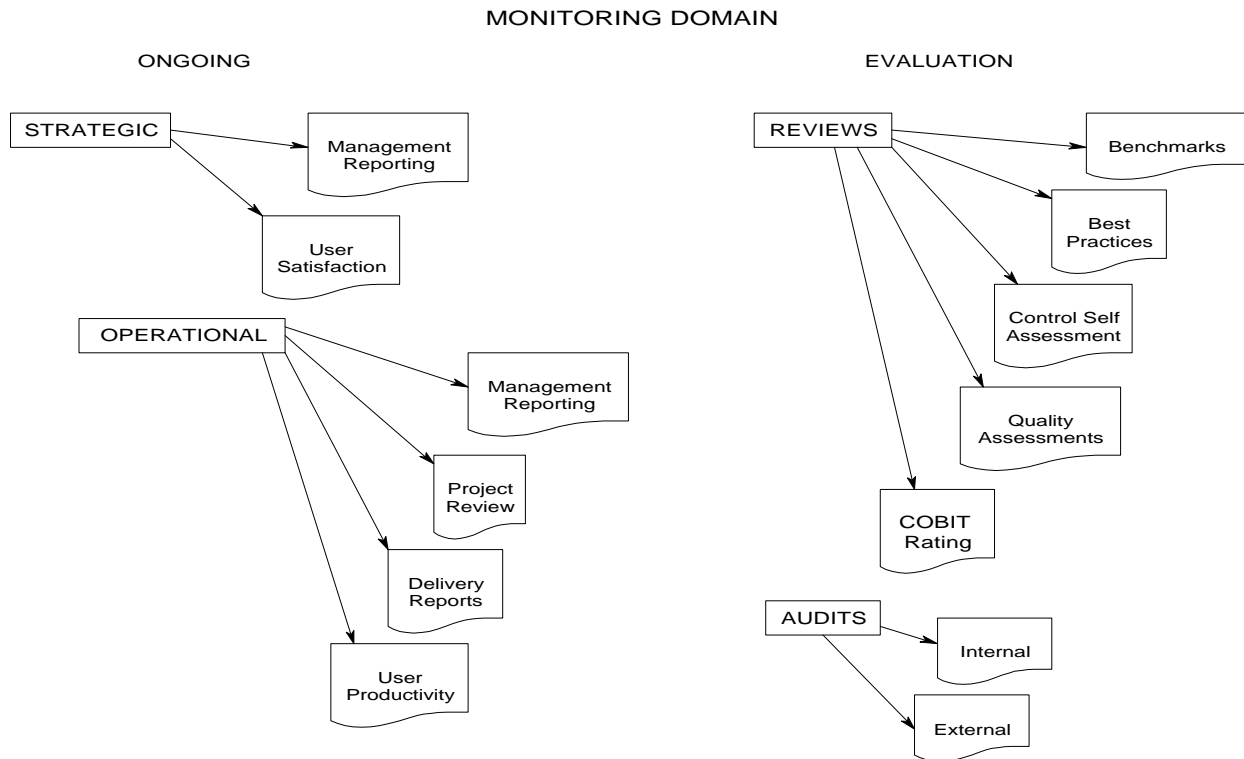


Figure 4

One of the key elements of the ISO approach to standards is the provision for improving processes once they have been implemented. Monitoring must be built into IMB’s regular IT processes in order to provide the opportunity for process improvement.

Ongoing

Monitoring operational process is part of planning, development/acquisition, delivery, and support activities. However, within IMB these procedures are often informal or immature. Except for the Help Desk, service levels are not measured. Operational processes are difficult to monitor as the information flow (e.g. reports, project analysis, statistics gathering) is restricted, inconsistent, or non-existent. As a result, it is extremely difficult to improve processes on a regular basis unless they are specifically targeted for improvement by IMB management.

Management review of Branch activity is generally evident at all levels of operation. Review structures that exist include three committees—BIT.COM, BYTE.COM, and the Branch’s PRC—and the individual management groups at various levels of the Branch. However, the committee structure is relatively recent and needs to mature. In addition, the lack of procedures,

the lack of buy-in by all managers and supervisors, and the stovepipe nature of IT services in IMB result in inconsistent review of projects and overall operations. At the level of strategic monitoring the Branch is also weak. No method is in use to measure client satisfaction, nor is there any management reporting.

Recommendations and Management Response

16. It is recommended that the DG IMB improve monitoring of its overall processes by:

- a) Ensuring monitoring is considered and included when developing, implementing, and activating management processes in all areas of the IMB mandate.**

Agreed. Accountability Accords and periodic reviews with managers. Monitoring progress through Project Review, Policy Committee, Extended Management, BIT.COM and Steering Committees.

- b) Including the concept of continuous process improvement when monitoring all management processes.**

Agreed. Accountability Accords and periodic reviews with managers. Monitoring progress through Project Review, Policy Committee, Extended Management, BIT.COM and Steering Committees.

Evaluation

Evaluation is a key process in the COBIT model. The audit team is of the opinion that before evaluation of IMB processes can be considered in-depth, that the other areas considered in this report first require priority attention.

Several external reviews of various elements of IMB operations have been carried out, but an overall benchmark to clarify, for example, the amount of funding required for human resources has not been done (see the discussion benchmarking under Investment Management). Although establishing a benchmark is made difficult by the complicated nature of the Department of Justice organizational structure, this effort is needed.

3. CONCLUSIONS

Information technology has become a strategic component of Department of Justice service delivery to clients and the public. To ensure that strategic goals can be met in the future the Department will require a more consistent IT service. Although IMB management has made improvements since the 1996 audit, there is still room for improving the efficiency and effectiveness of IMB. Instituting standard practices is an important step to bringing about needed improvements.

3.1 Key Priorities

To address the immediate objective of providing effective and efficient IMB services, certain of the 15 recommendations provided in the body of this report should have a higher priority. Although all recommendations in this report will need to be addressed in order for IMB to achieve effective standardized processes, immediate results will follow by first, addressing operations by improving management of the client interface; second, improving project management and system delivery; third, improving client partnership and planning; and finally, improving monitoring.

Improve Management of the Client Interface

Of immediate concern to clients is how IMB handles the day-to-day issues. By providing a more standardized approach to IT operations and support, IMB management can develop support from clients for other changes in IT service delivery. Key recommendations that address improving operational concerns include:

- developing a concept of central operations using ITIL as a compendium of industry best practices;

- implementing common service delivery processes—concentrate on configuration management, service desk, and release management;
- developing a strategic concept for evergreening the Department of Justice IT technical infrastructure.

Better Meet Project Management and System Delivery Commitments

Projects continue to be initiated and run outside IMB without standard approaches. By standardizing IT project management and system development processes, IMB can improve its consistency in meeting IT commitments to its clients. By assisting in IT projects that arise outside the Branch, IMB can encourage improvement in IT project management department-wide. Recommendations made to improve these areas include:

- developing a Department of Justice policy to ensure a common process is used for all projects regardless of origin;
- becoming a centre of excellence within the Department of Justice by creating a central project management office, enhancing the project management discipline, and using a common system development life cycle (SDLC) process.

Improve Communications and Planning Processes

For success in the longer term, IMB must promote teamwork with clients and users. To achieve this objective, IMB management must improve communications and planning processes. Recommendations that address planning include:

- clarifying roles and responsibilities between IMB and client sectors for planning and business solution development;
- improving communications with and training for users and stakeholders on IMB processes and structures;
- better integrating IMB and client planning and improving the ability to understand user needs through improved communications and by instituting an account manager style of structure within IMB.

Integrate Monitoring

Equally important over the longer term, IMB must improve reaction time to and consistency in addressing client concerns. Key in accomplishing this goal is adequate monitoring of the processes involved. Recommendations that address improved monitoring include:

- integrating monitoring when devising, implementing, and activating management processes;
- including the concept of continual process improvement when monitoring management processes.

3.2 Future Considerations

As the Department of Justice grows, improvements to IT process have become imperative. IMB is struggling to keep up with changes to the technical infrastructure. In addition, projects continue to surface outside IMB without standard development or management approaches. In planning future priorities, IMB management should evaluate the following considerations: first, certain processes—service management using ITIL, project management, and system development lifecycle—are needed as soon as they can be put in place; second, to avoid affecting current workloads IMB should develop certain processes off-line. In addition, some changes are better developed internally such as policy changes, teamwork improvement, setting up the project management office, and developing an infrastructure evergreening strategy. Alternatively, some changes may be better instituted by making use of external resources. Opportunities to maximize use of external resources (contracting) include developing the overall concept of how IT services are going to operate in the Department—using ITIL best practices, improving key delivery processes described herein, enhancing project management, and setting up a common SDLC.

4. RECOMMENDATIONS AND MANAGEMENT RESPONSE

1. It is recommended that the DG IMB facilitate partnerships with key clients by:15

- a) Clarifying roles and responsibilities, both within IMB and between IMB and clients/stakeholders.**

Agreed. IMB is reorganizing to create a new unit to manage clients needs and expectations. This will improve communications and mutual understanding among both IMB and client staff. Also a delegation chart will be prepared as a follow up to the IM/IT spending review.

- b) Promoting teamwork by improving general client communications and client knowledge of IMB roles and structures.**

Agreed. IMB is reorganizing to create a new unit to manage clients needs and expectations. This will improve communications and mutual understanding among both IMB and client staff. IMB will also start receiving its communications support from Communications Branch via an MOU. As a preamble to this MOU, IMB's communications needs will be redefined at a strategic and operational levels.

- b) Developing a client focus by creating a service delivery model where an IT specialist takes on the role of client advocate and acts as a focus for client concerns and knowledge (e.g. account managers).**

Agreed. IMB is reorganizing to create a new unit to manage clients needs and expectations. This will improve communications and mutual understanding among both IMB and client staff.

c) Having the IMB planning process ratified by clients.

Agreed. IMB has undertaken to review and update the governance process through the IM/IT governance review project. This will include ratification of the Planning and Projects approval Process by BIT.COM.

d) Promoting better communication of project plans between clients and IMB by communicating the IMB strategic IM/IT Plan to clients.

Agreed. The IM/IT Strategic Plan was communicated and presented to Senior Managers and staff across Canada in 2002. The plan will be updated and presented for approval again in 03/04 after which it will be presented to staff and managers.

2. It is recommended that the DG IMB meet the security and privacy objectives of the Enhanced Management Framework by:16

a) Ensuring the creation of a data architecture for the Department to relate to the application and security architectures now being developed.

Agreed. Subject to staffing approvals and allocation of adequate funds. Zachman methodology established to document the various components of the Architecture. Data models being populated based on information already available. Work on Application and Security architectures to start in 2003-2004.

b) Re-establishing data management function as a fundamental element in the IMB organizational structure.

Agreed. Depending on support throughout DOJ and funding available.

c) Reviewing the data security and privacy requirements in operating and developing systems through the use of standard security documentation such as statements of sensitivity and threat/risk assessments.

Agreed. Has always been done in the past, and will continue in the foreseeable future.

- 3. It is recommended that the DG IMB seek approval from the departmental Executive Council to authorize an assessment of the best way to deliver IT services across the Department of Justice (not just the IMB component) and determine an appropriate budget.....18**

Agreed. The Governance & IM/IT spending review projects currently underway are addressing this. A key direction will be the definition and national funding of common core services across the Department. Also a regional organization review has been initiated to recommend the best regional delivery model(s).

- 4. It is recommended that the DG of IMB arrange to undertake a benchmark exercise to establish a comparative level of IT resourcing (fiscal, human, and technical) to meet corporate objectives for the implementation of technology solutions.....19**

Agreed. The Governance & IM/IT spending review projects currently underway will address these areas.

- 5. It is recommended that the DG of IMB develop a human resources development plan based on a benchmark (see Recommendation 4), plus an assessment of skills available to IMB. As part of this exercise, the DG IMB should:.....19**

- a) Consider a greater investment in training linked to plans and strategies.**

Agreed in principle. In reality it will depend on IMB's O&M budget for 2003-04. Once the staffing freeze is lifted, as the renewal process takes place, an HR regime based on competencies will be implemented.

- b) Develop a proposal to achieve better awareness within IMB and key client units of IMB-supported IT standards.**

Agreed. IMB is reorganizing to create a new unit to manage clients needs and expectations. In addition an IM/IT Policy, Standards and Guidelines committee has been established to develop a more strategic agenda in this regard. Also the IMB communication needs and a strategy to address them will be developed (see item 1b).

c) Create a staff renewal plan to ensure the continuity and provision of essential skills.

Agreed. As the IMB renewal takes place, skills gaps and requirements will be identified and addressed to the extent that resources will be available.

6. It is recommended that the DG of IMB request the support of the Executive Council to strengthen the authority of IMB to act as a central review point for all projects in the Department of Justice.....21

Agreed. The Governance & IM/IT spending review projects currently underway are addressing this.

7. It is recommended that the DG of IMB develop a corporate IT policy wherein all IT projects must be subjected to the same or similar project management process, regardless of origin (internal or external of IMB).21

Agreed. A new governance regime, based on project management principles, is being proposed to BIT.COM for approval. A Project Review Committee is in place to monitor all IMB projects. A general IT policy was also drafted. It was accepted at all levels and needs to be presented at BIT.COM. This is an umbrella policy which will give IMB and Regional IM/IT units the authority to review all IM/IT expenditures and projects.

8. It is recommended that the DG IMB develop a centre of excellence in IMB to improve the management of projects. As a centre of excellence, this project management office should:.....21

a) Develop, implement, and promote a standard project management process for all Department of Justice IT projects.

Agreed. See 7.

b) Ensure project team buy-in by providing ongoing training in project management techniques.

Agreed. A Project management course was developed in 2001-02. Training was provided to all IMB staff. More training is scheduled for this fiscal and next.

- c) **Improve project management discipline by ensuring a formal, continuous, and regular project review that embodies the spirit of the EMF in terms of project status, risk, and achievement.**

Agreed. As per 7 and 8.

- d) **Provide a standard project management tool set to be adapted and used on all Department of Justice IT projects.**

Agreed. Will be considered in light of available resources.

- e) **Provide ongoing support to IT projects by advising project staff on project management techniques and by providing technical experts to work on project teams.**

Agreed. As per 7 and 8.

- 9. **It is recommended that the DG of IMB discuss with Executive Council the need to revisit the role of the IM/IT Chief Information Officer to ensure that IM/IT is best positioned to assist the Department in achieving its corporate objectives.....23**

Agreed. CIO position has been established and governance and IM/IT spending reviews are being conducted to address this area.

- 10. **It is recommended that the DG IMB improve the system development process management by:**

- a) **Developing or acquiring and adapting a single common system development life cycle (SDLC) process.**

Agreed. Depending on funding.

- b) Ensuring that all departmental IT project managers use the SDLC process throughout the project life cycle.**

Agreed. Research will continue to select the best tool as funding becomes available.

11. It is recommended that the DG IMB promote the development of a strategic concept for the Department of Justice IT infrastructure by:.....28

- a) Developing an evergreening approach to infrastructure management.**

Agreed. The IM/IT Spending Review & Governance projects are addressing this. A capital replacement plan has been proposed but it is unlikely to be implemented in the near future due to the current fiscal situation.

- b) Building a separate IT infrastructure component for planning and funding purposes.**

Agreed. Has been proposed as part of the IM/IT spending review. Will gradually be initiated.

12. It is recommended that the DG IMB develop a central concept of service delivery management that is based on the ITIL framework and against which the further development of specific processes can be measured.31

Agreed. Research will continue in this area when funding becomes available.

13 It is recommended that in the short term the DG IMB develop a common service delivery process to:31

- a) Address central configuration management and release management with a view to controlling the transition of all business solutions, technology changes, and related processes from the development environment to the ongoing production environment in the Department of Justice.**

Agreed. See 12.

- b) Expand the Help Desk operation and consider how the ITIL framework might be used to improve client service.**

Agreed. A new RFP incorporating the possibility to implement ITIL will be issued.

- c) Improve security and business resumption planning.**

Agreed. A Security Blanket Project is underway. A security architecture will be developed. The BRP is currently being updated.

- 14. It is recommended that the DG IMB review the central operations role and determine the overall resourcing level required. It is further recommended that a central quality assurance function be considered.....31**

Agreed. Core services to be implemented across the Department will be defined and gradually implemented. Those will include IMB central services offered.

- 15. It is recommended that the DG IMB develop a formal Memorandum of Understanding (MOU) with Materiel Management to govern the management of IT facilities. It is further recommended that IMB have a central role in monitoring the MOU.....32**

Agreed. Negotiations taking place for further centralization of all servers in one area. There are now regular meetings between IMB and facilities, and this is working well. As needed roles and responsibilities will be clarified through an MOU.

- 16. It is recommended that the DG IMB improve monitoring of its overall processes by: ...34**

- a) Ensuring monitoring is considered and included when developing, implementing, and activating management processes in all areas of the IMB mandate.**

Agreed. Accountability Accords and periodic reviews with managers. Monitoring progress through Project Review, Policy Committee, Extended Management, BIT.COM and Steering Committees.

b) Including the concept of continuous process improvement when monitoring all management processes.

Agreed. Accountability Accords and periodic reviews with managers. Monitoring progress through Project Review, Policy Committee, Extended Management, BIT.COM and Steering Committees.

APPENDIX A: COBIT

The COBIT mission is “To research, develop, publicize and promote an authoritative, up-to-date, international set of generally accepted information technology control objectives for day-to-day use by business managers and auditors.”³

For many organizations, information and the technology to manage it represent the organization's most valuable assets. Moreover, in today's very competitive and rapidly changing business environment, management has heightened expectations regarding IT delivery functions. Management requires increased quality, functionality, and ease of use; decreased delivery time; and continuously improving service levels, while demanding that all this be accomplished at lower costs.

IT governance is integral to the success of enterprise governance by assuring efficient and effective measurable improvements in related enterprise processes. IT governance provides the structure that links IT processes, IT resources, and information to enterprise strategies and objectives. Furthermore, IT governance integrates and institutionalizes good (or best) practices of planning and organizing, acquiring and implementing, delivering and supporting, and monitoring IT performance to ensure that the enterprise's information and related technology support its business objectives. IT governance thus enables the enterprise to take full advantage of its information, thereby maximizing benefits, capitalizing on opportunities, and gaining competitive advantage.

Control Objectives for Information and related Technology (COBIT), now in its 3rd edition, helps meet the multiple needs of management by bridging the gaps between business risks, control needs, and technical issues. It provides good practices across a domain and process framework and presents activities in a manageable and logical structure. What COBIT's “good practices” mean is consensus of the experts—they will help optimize information investments and will

³ COBIT Steering Committee and IT Governance Institute, Rolling Meadows, Illinois, July 2000.

provide a measure to be judged against when things do go wrong. Some of the standards from which COBIT is drawn include:

- technical standards from the International Organization for Standardization (ISO), Electronic Data Interchange for Administration, Commerce and Transport (EDIFACT);
- codes of conduct issued by the Council of Europe, Organization for Economic Co-operation and Development (OECD), Information Systems Audit and Control Association (ISACA);
- qualification criteria for IT systems and processes such as Industry Training, Simulation and Education Conference (ITSEC), Trusted Computer Systems Evaluation Criteria (TCSEC), ISO 9000, Software Process Improvement and Capability determination (SPICE), TickIT, Common Criteria (CC);
- professional standards for internal control and auditing from Committee of Sponsoring Organizations of the Treadway Commission (COSO), International Federation of Automatic Control (IFAC), Accounting and Auditing for Related Parties and Related Party Transactions (AICPA), Canadian Institute of Chartered Accountants (CICA), Information Systems Audit and Control Association (ISACA), Institute of Internal Auditors (IIA), Le Passeport de Compétences Informatique Européen (PCIE), General Accounting Office (GAO);
- industry practices and requirements from industry forums such as European Science Foundation (ESF), International Information Integrity Institute (I4), and government-sponsored platforms such as Internet Business Access Group (IBAG), National Institute of Standards and Technology (NIST), Department of Trade and Industry (DTI).

