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EXECUTIVE SUMMARY

The Legislative Services Branch (LSB) offers legislation drafting, editing, and management services. Services are a combined effort with the House of Commons, the Senate, the Privy Council Office and Public Works and Government Services. The Branch, with these other stakeholders, is developing a new system for drafting, consolidating, managing, and publishing legislation (bills, regulations, and statutes).

The Legislation Information Management System (LIMS) is being designed in three major modules: authoring/drafting, paper-oriented publishing, and electronic content management and delivery. The product will be implemented using the international standard XML data mark-up language over a development timeframe of 3 to 4 years.

This audit assessed the extent to which the LIMS project adheres to generally accepted system-under-development practices and principles by assessing four areas of risk: governance, business, project, and technology.

Governance Risk

Project governance has been addressed recently in the hiring of a professional Project Director and the creation of a Project Charter. This has resulted in a cautious optimism on the part of project team members and stakeholders. However, two elements of project governance require additional attention: scope management and project funding estimates. These topics are obviously related as with a better idea of total project scope comes better estimates of what that scope will cost.

Project Risk

The project governance is still not completely formulated but is much improved since the delivery of the Project Charter. There are several realities surrounding project management in the Department of Justice that have been recognized by project staff (e.g. the early isolation of the project from the departmental informatics group), but require management attention to fully resolve. The new LIMS organizational track involving Technical Integration should more fully involve the Department's Information Management Branch (IMB) on the project.

Project control has been largely affected by the lack of formal project organization. As a result, control has lacked formality and completeness, and tends to be reactive and not proactive. Getting the right resources involved has been difficult, and getting a significant time commitment has also been difficult—even the Project Architect has only worked part-time on the project. The addition of an internal Project Manager to specifically address project control has evidenced some success in the area of contract management. The more recent addition of the Project Director has highlighted the control issue. In addition, the renewed relationship with IMB could provide the necessary technical resources that can bolster control. In all the cases above, the new charter and appropriate attention from the Project Director and other governance elements should address the weaknesses.

There is no departmental development process to be used in this project. Development management has basically been the responsibility of the prime contractors engaged to provide the business solution. Ultimately, it is an IMB responsibility to provide a corporate development standard for IT business solutions.

Business Risk

Work has commenced and is progressing without a full understanding of the requirements (the system functions that will meet the users' needs) to be met. While action is ongoing to better define requirements, Phase I deadlines are near enough that it is unrealistic to delay the project while requirements are fully investigated and documented. Although Phase II should be better managed, a requirements process is needed to mitigate risk.

Evaluation of the delivered products is limited by the lack of formal requirements documentation. Departmental management must accept risk as the requirements for Phase I were

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not fully captured, and must ensure an appropriate evaluation approach is undertaken to measure product quality.

It is to be expected that a business solution of this scope will require organizational change. Yet, a readiness assessment of the organizations that will be impacted by the LIMS has not been done to date. Although process maps built by the project team can lead to the identification of potential process change, there is no client representative on the project team to handle this kind of issue. Business user acceptance of the product is crucial to success and acceptance must be promoted.

Technology Risk

Technology does not appear to be a concern at this time. However, much depends on the ability of the project management group to activate the plans declared in the Project Charter.

Overall Conclusions

Historically, the project was poorly managed in terms of documenting business requirements, documenting overall solution design and planning the steps to achieve the concept. A lack of management attention and commitment, and the resulting lack of resources all contributed to the historical picture.

In terms of project and management governance, there has been a dramatic turnabout in recent months, to the extent that many of the risks should now abate. The new charter describes much of what was missing earlier, and filling the Project Director position has provided project management expertise that was missing before.

Improvements carried out during the course of the audit are becoming obvious. However, the project was badly flawed from the outset and much has occurred that will have future impacts. There is still a high risk of scope growth and change, significant time delays, significant cost overruns, and ongoing problems with change management. As a result, there are a number of conclusions that do not at this time generate recommendations but that management must be aware of to suitably control the project.

- The capability of the project management team to actually implement the charter and create effective processes is crucial to project success. The outline in the charter guides the project toward suitable control, but the outline needs more detail, processes must be put in place and made to work, and management support must be provided.
- Departmental management must understand that project risk remains high for Phase I due to residual effects of past problems. Lack of documented requirements, poor overall planning, and earlier problems with scope management leave the project susceptible to continued changes, potential delays, and cost increases.
- Departmental management should also understand that it is not simple to improve control and that project costs are likely to increase as a result.

Recommendations

Recommendations are presented in this report dealing with the following concerns.

- Processes are needed to control scope change, fully document and control business requirements, and manage the development of the desired business solution.
- Additional effort is needed to determine the full scope of the project with associated potential costs, to study the potential business impact of the organizational change required by the new business workflow, and to define a formal evaluation approach to be used in assessing the products delivered by the development teams.
- Efforts must be taken to ensure the project team has access to sufficient levels of business resources during the life cycle of the LIMS project.

The management response to the recommendations contained in this report was provided by the Deputy Chief Legislative Counsel, Legislative Services, on November 13, 2002.

1. INTRODUCTION

The Department of Justice Legislative Services Branch (LSB) offers legislative and regulation drafting, editing, and management services to federal departments, agencies, and entities. Drafts of a bill are usually produced by LSB in response to a Record of Decision by Parliament. Regulations are often drafted by the Department of Justice, but can be developed by client departments in consultation with the Department of Justice. Draft bills are transmitted electronically, reviewed, and changed as necessary by several stakeholders in the process—the House of Commons, the Senate, the Privy Council Office, and the sponsoring departments. Once bills receive "Royal Assent," the House of Commons returns the electronic files to the Department of Justice and the formal paper publication is delivered by the Canada Gazette Directorate in Public Works and Government Services Canada (PWGSC). Regulations, once complete, are published in the *Canada Gazette*. In both cases, last minute changes are common.

LSB services must integrate with those of the House of Commons, the Senate, the Privy Council Office, and PWGSC. The current system environment consists of a blend of aging technologies, requires multiple electronic file transfers between stakeholders, and forces file conversion at several points. Apart from being expensive, the combination of equipment and software technology raises the risk of service interruption due to breakdown. Consequently, LSB, with these other stakeholders, is developing a new electronic system for drafting, consolidating, managing, and publishing legislation (bills, regulations, and statutes).

1.1 The Legislative Information Management System

The Legislation Information Management System (LIMS) is being designed as the key management software tool that will comprise three major modules: authoring/drafting, paper-oriented publishing, and electronic content management and delivery. These modules will provide LSB staff and stakeholders with an updated capability to manage the legislative drafting process from first drafts to final electronic and paper publication. The overall system, in these three business modules, is to be implemented in an incremental fashion over the next two years.

The LIMS has been discussed, analyzed, and sporadically advanced for the past several years. The current development timeframe is further discussed in the recent Project Charter, dated February 2002, which outlines two phases of delivery. Phase 1 will deliver authoring, printing, content management and content delivery solutions for drafting and publishing statutes. Phase 2 will deliver those solutions for drafting and publishing regulations. The completion dates cited in the charter have since been delayed: Phase 1 delivery was expected by June 2002 and will now be finalized in January 2003; Phase 2 is now expected to be completed in February 2004.

The three business modules of drafting, publication, and content management will be implemented using the international standard XML data mark-up language. LSB services and processes will continue to be characterized by file transfer and change, therefore, it is important that XML is used as the XML language is independent of the computer platform on which it is run, making file transfers easier to accomplish and better controlled. In turn, this control is also crucial as the predictable quality of the electronic files is essential to the legislative development process.

The LIMS project is now entering a major development period. Development of the authoring and publishing modules is well under way and development of the content management module was starting at the time of the audit. Development for the LIMS project entails package customization and integration of three separate software tools to make the entire business solution fully compliant with known business requirements. The authoring product makes use of the package ArborText Epic Editor; the publication module uses the Advent 3B2 print engine. In both cases, work has been ongoing for some time. The content management module will be the central repository for all published statutes using the package Structures Information Manager (SIM).

1.2 LIMS Organizational Structure

The Project Charter (February 2002) outlined a governance structure for the remainder of the development and implementation process. That governance structure consists of three levels of involvement and oversight. At the senior management level, BIT.COM is a Department of Justice committee with responsibility for overseeing IT project activities for the Department. BIT.COM serves as the "executive committee" for the LIMS project by monitoring where the LIMS fits in relation to departmental priorities, reviewing funding and resource allocation, and
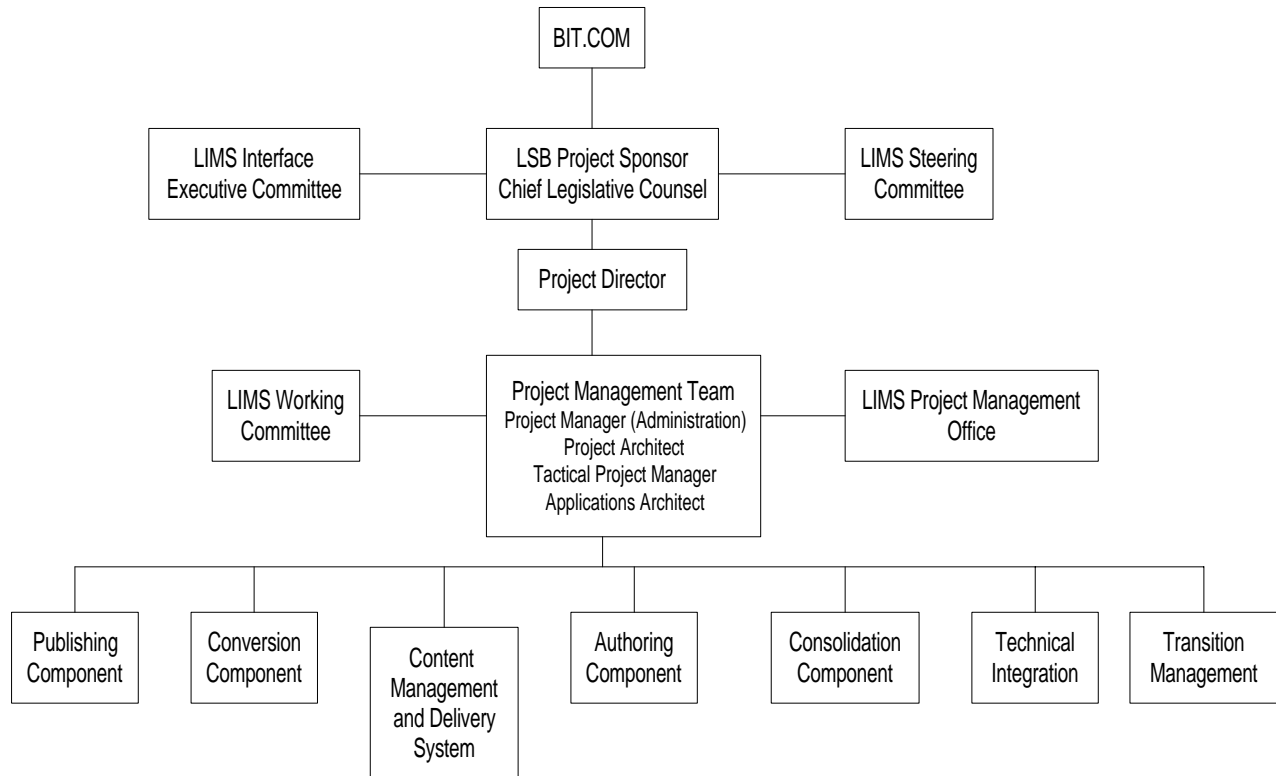
serving as a central point where escalated problems and issues are resolved. The LIMS project has obtained funding through the Government On-Line (GOL) initiative which, in the Department of Justice, is called Justice On-Line (JOL). The JOL Senior Director is both a member of BIT.COM and a LIMS project advisor to ensure coordination of the LIMS project with the JOL-related activities.[1]

The LSB Chief Legislative Counsel is the overall Project Sponsor and is the key business level representative responsible for maintaining the relationship among the stakeholders and for delivering the ultimate business benefits to be derived from system implementation. Two committees have been initiated to assist in this essential role. The LIMS Steering Committee has representation from LSB, Information Management Branch (IMB), and the Communications Branch within the Department of Justice. And, the LIMS Interface Executive Committee is made up of representatives of the project's key stakeholders: LSB, IMB, House of Commons, and the Senate.

At the start of the audit, the project team structure had gone through several iterations yet remained confusing and lacked standard documentation. The Project Charter outlines roles and responsibilities of the various teams and the members of the management team. The following organization chart shows the Project Director's vision for how the team organization will address the business requirement and deliver the ultimate business solution.

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[1] LIMS development includes a Web site component that will make up-to-date legislation and regulations available to the public on the Internet, thus meeting GOL objectives.

Figure 1: LIMS Organization Chart

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                              ┌──────────┐
                              │ BIT.COM  │
                              └────┬─────┘
                                   │
┌──────────────────┐    ┌──────────────────────┐    ┌──────────────┐
│ LIMS Interface   │────│ LSB Project Sponsor  │────│ LIMS Steering│
│ Executive        │    │ Chief Legislative    │    │ Committee    │
│ Committee        │    │ Counsel              │    │              │
└──────────────────┘    └──────────┬───────────┘    └──────────────┘
                                   │
                          ┌────────────────┐
                          │ Project Director│
                          └────────┬────────┘
                                   │
┌──────────────┐   ┌──────────────────────────────┐   ┌──────────────────────┐
│ LIMS Working │───│ Project Management Team      │───│ LIMS Project         │
│ Committee    │   │ Project Manager              │   │ Management Office     │
│              │   │ (Administration)             │   │                      │
│              │   │ Project Architect            │   │                      │
│              │   │ Tactical Project Manager     │   │                      │
│              │   │ Applications Architect       │   │                      │
└──────────────┘   └───────────────┬──────────────┘   └──────────────────────┘
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Publishing Component | Conversion Component | Content Management and Delivery System | Authoring Component | Consolidation Component | Technical Integration | Transition Management

1.3 Scope and Objectives

The overall objective of this audit was to assess the extent to which the LIMS project adheres to generally accepted system-under-development practices and principles. The audit also assessed:

- the efficiency and effectiveness of project management,
- the extent to which the system provides for adequate audit trails and controls to ensure the integrity of data,
- the appropriateness of controls for the management of the system's operation,
- the extent to which the system will meet the functional requirements and achieve the stated benefits.

The fieldwork for this system-under-development audit took place between November 2001 and March 2002 and included reviewing all aspects of the development effort.

1.4 Approach and Methodology

The audit team gathered information through documentation review and interviews with the project team, stakeholders, Department of Justice business users, and members of the LIMS governance structure (IMB and LSB management).

The approach chosen for this audit involves the use of a basic risk framework within which all projects must normally function. This framework consists of four components of risk—governance, business, project and technology—each of which must be controlled if a project is to be successful. The audit team has attempted to assess these components against a basic risk baseline that considers whether project outcomes will deliver expected functions, on time, and within budget.

We considered governance risk by assessing the adequacy of the strategic management control framework for the LIMS project. We reviewed whether the LIMS management control framework shows evidence of a well-defined structure of roles, responsibilities, and authorities, and whether major decisions concerning the scope and objectives of the project were made within a well-defined control framework.

Business risk was assessed by reviewing:

- the clarity and stability of the business rules and processes from which the business solution's requirements will be derived,
- whether the integrity and robustness of the design will be able to meet requirements and achieve stated benefits,
- the extent to which the system design provides for adequate audit trails and controls to ensure integrity of data,
- the capacity of the organization to organize itself for changes and to manage the changes that the introduction of a new system implies.

Project risk concerns were assessed by reviewing the internal organization and management of the project, and its monitoring, reporting, control and communications functions. This class of risk also considers:

- the tools, techniques, methods, and procedures needed to do the actual work of the project;
- the requirements that have to be addressed, and whether there is adequate understanding to design, develop, implement and make operational a relevant, reliable, usable business solution.

Crucial to project success is the approach to business solution testing and accreditation—the level of preparedness exhibited by the project in planning for, conducting, and proving the results of appropriate testing.

We assessed technology risk with respect to the degree of inherent risk in the technology platforms chosen to support the system. Newer and less widely proven platforms have substantially higher risk than mature and widely used platforms. Not only is there a greater probability of a flaw in the platform, but the know-how to deal with flaws is also rare. This class of risk also pertains to the transition of the application into the infrastructure within which it will operate. Newly developed and implemented infrastructures pose more risk than a structured, mature one.

2. DETAILED FINDINGS—GOVERNANCE RISK

Governance risk deals with three risk elements that must be managed by senior departmental management in order to support project activity—management controls, change/scope management, and investment management/benefits achievement. First, senior management must put in place a control framework within which the project can pursue the desired objectives. We have called this framework the strategic management control framework or SMCF. Within the SMCF, senior management are responsible for making the scope and investment decisions required to ensure achievement of project objectives.

2.1 Strategic Management Control Framework (SMCF)

The strategic management control framework (SMCF) refers to the governance structure in the Department of Justice within which the project must operate and report. The governance structure for the LIMS project is complicated by several environmental factors. First, there are several stakeholders involved in this effort that are not part of the Department of Justice, have their own objectives and organizations, and follow their own standards. Second, the LSB has been running this project in isolation from the departmental informatics service provider, the IMB, and thus must ensure effective coordination with that organization. Lastly, the LIMS project now falls under the umbrella of JOL, another coordination point.

Shortly after the beginning of the audit period a comprehensive Project Charter was developed that outlined a newly structured project team. Our observations reflect situations as they were and had been, and provide comment on whether the new charter and team were making progress toward resolving historical problems.

The relationships with the other key stakeholders for legislative drafting (the House of Commons, the Senate, the Privy Council Office, and PWGSC) and with the Treasury Board Secretariat (TBS) for GOL/JOL are crucial. The stakeholder relationship, specifically with the

House of Commons, had been frustrating and the LIMS project team had lost credibility with this stakeholder when the Department of Justice LIMS effort faltered in the past.

In addition, there are signs that overall support for the project among Department of Justice senior management has been lacking, and that the project has experienced difficulty in getting management attention and commitment in the form of funding, allocation of time and human resources, and appropriate departmental representation (business staff) on the project team. Until recently, the LIMS Steering Committee and the LIMS Interface Executive Committee had not met regularly, and the situation had been exacerbated by the inability of early project management to capture the requirements and sell senior management on the proposed product.

Project governance has been redeveloped since January 2002, and new project management positions have been defined and filled to provide more professional support. Management support has also been greatly improved with the arrival of the Project Director (January 2002) and the acceptance of the new Project Charter. The charter, discussed further under Project Risk, outlines the organization structure of the project team. It also provides for regular reporting on achievements and problems by setting up regular sessions with the LIMS Executive Committee, biweekly meetings with the project sponsor, bimonthly meetings with key stakeholders, and monthly sessions with the internal LIMS Steering Committee.

The SMCF is now much more capable of sustaining the project until expected products can be delivered. For example, the recent restructuring of the LIMS SMCF has greatly improved the relationship between the LIMS project staff and stakeholders. The new Project Director has rebuilt relationships by meeting with all the stakeholders. There is now an obvious sense of optimism from the stakeholders that the LIMS project is under control. In addition, a proposal from IMB on the provision of technical support (discussed further under "Project Risk") cements the connection to the internal informatics group. The lack of connection with this group had previously been a source of risk for the stakeholders.

2.2 Change/Scope Management

Scope management is typically carried out at the departmental governance level with suitable input for the project team. There is normally a specific process by which changes to scope with associated costs are submitted, reviewed, and decided upon as part of project management oversight.

LIMS management of change to project scope has been somewhat informal due to the initially informal nature of the project structure. Prior to the new charter being in place, we found that project management was making decisions about the product without involving the project team members doing the work and without a formal process (documenting change, approval, and sign-off). For example, discussions about dealing with legislative drafting separately from regulations drafting, which involved apparent changes to the project scope, had been going on without all project team members being aware.

The new charter accepted by TBS and by Department of Justice senior management specifies a number of roles, including a LIMS Executive Committee, a Project Sponsor, and a LIMS Steering Committee. Along with a better understanding of the governance structure, scope management as part of the management role should now improve. The approval process should now involve the Project Sponsor, the Project Director, and the Project Manager (administration). However, a formal scope management process has not been defined and no specific role or person has been assigned to manage project scope management.

The project has been focused on delivering the entire initial concept—the integrated system management of drafting and publication functions for both legislation and regulations. Management and stakeholders acknowledge this concept as an excellent idea that can solve integration and dated technology problems that exist today. However, there is some doubt that business line management and staff (those staff who manage and deliver the daily services of LSB) have developed an overall understanding of the project and its broader implications. This will be addressed more closely under Requirements Management, but with respect to change/scope management, we find there is a risk that business line management priorities can impede LIMS development by not making business staff available for consultation on LIMS development. The LIMS is re-creating the service functions of composition/authoring, publication, and data management. While LIMS project members felt that departmental management generally understood the significance of what is being done, it is also felt that the difficulty involved and the effort required was not fully appreciated. (See discussion under "Business Requirements Management.")

In order to achieve GOL/JOL goals, project scope decisions have become necessary. The new charter manages scope better by specifically outlining two separate phases with several delivery releases for the ultimate production of the desired business solution in the Department of Justice and for related stakeholders. Phase I will focus on legislative requirements; Phase II on

regulations. Although the charter clarifies the LIMS project scope for the Department's management and the stakeholders, it remains for the project team to fully explore the effect these charter decisions will have on project timings, costs, and business impacts.

2.3 Investment Management/Benefits Achievement

In this context, investment management refers to the process of comparing what the Department is willing to spend on the final product, while ensuring that it gets the product with the expected benefits. Typically, a business case outlines these ideas and costs.

There is no fully documented business case that has been seen and reviewed by departmental management, members of the project team or stakeholder organizations. Without a business case, there will be no way to easily measure benefits achieved. In this case, the quality of the result is of utmost concern in order to inspire users' confidence and acceptance. As a business case is normally used to develop management support and trigger resourcing decisions, not having a well-developed business case has made this support more difficult to obtain.

Departmental senior management has a measure of understanding of the issues and the potential costs and benefits involved in LIMS. Early project documentation suggested benefits in excess of an estimated $1 million a year. However, these benefits are acknowledged as soft and tending to accrue outside of the Department.[2] Until the new charter was developed, the estimated costs were set at $5.5 million for the delivery of the technology needed. It is the opinion of the audit team that this cost estimate was significantly understated as it referred to the delivery of the products only and not to all other related costs of fully implementing the solution (e.g. training users, making organizational changes, planning for ongoing maintenance).

The new charter contains elements of a business case in describing basic planned deliverables and projected costs. Normal industry intelligence indicates that development costs often equal delivery costs. Thus, the $5.5 million to develop the needed products would have represented only half of the total cost necessary to implement the system and make it fully functional. The charter now estimates development and delivery at $10 million with an additional $2 million to handle as yet undisclosed requirements. While clearly a better estimate of the potential cost for

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[2] The LIMS system will implement drafting and editing process changes which should lead to improved productivity and thereby realize savings. LIMS Web site development will make legislation available on-line, also realizing savings on print production of legislative documents.

the LIMS, the project may still be under-funded. It is unclear to the audit team whether the new estimate has considered all transition issues (e.g. moving from the old system to the new system, organizational change).

Attempting to implement the system with inadequate resources could have significant adverse consequences. If there is any doubt about the quality of the product produced with the system (e.g., accuracy of legal text), if it provides less functionality, or the same functionality but with more effort required by users, the legislative drafting staff will not use the system. It was unclear to the auditors whether the old system would remain operational for a period of time once the new system is in place. In the past, when changing to the current system, it took years to gain the confidence of the drafters. Anticipated benefits from the system will be difficult to achieve if, due to a lack of resources, system development is not well done and the product inadequate for users' needs. Consequently, it is essential that accurate cost estimates are generated for the completion and implementation of LIMS. For example, the completion of the regulations study, which will define the requirements for one of the system modules for Phase II deliverables, will have an impact on the project's scope that must be measured. In addition, managing the implementation of the entire system, with close attention to how the business processes will change is yet to be fully costed. This could have a significant impact on total project cost.

To date, $3.2 million in funding has been secured and has actually been budgeted for; little is available for the fiscal year 2002-2003 and beyond. As discussed, the initial funding estimate of $5.5 million is problematic, and actual budgeted monies fall far short of even that figure. The Project Director is fully aware of this situation and is researching sources of funds in other departmental projects that could benefit from expected LIMS outputs.

2.4 Conclusions and Recommendations

Project governance has been addressed recently in the hiring of a professional Project Director, and the creation of a Project Charter. This has resulted in a cautious optimism on the part of project team members and stakeholders. However, two elements of project governance require additional attention: scope management and project funding estimates. These topics are obviously related: a better idea of total project scope allows better estimates of what that scope will cost. More fully developed cost estimates are required to ensure management support is realized for the full development and implementation cycle of this proposed business solution. Notably, the management of organizational change is crucial in this regard and could be quite costly.

Recommendations and Management Response

1. **It is recommended that the LIMS Project Director further define the scope management process and assign a single team member to manage the process.**

2. **It is recommended that the LIMS Project Director fully study the potential impact of scope changes as part of a formal scope management process.**

   1 and 2: The LIMS business project manager and the project director are very much aware of the need to define the scope of the project. For this reason, the project has been implemented in distinct stages. The first stage deals with legislation component of the project. This stage began in 2001 and is expected to be generally completed by June 2003. The second stage which addresses the regulations component began earlier this year and is expected to last until 2004. Each stage has a detailed work plan which allows for a gradual and predictable evolution towards the set objectives. As well, and as with any information technology project, LIMS users, from time to time, request that developers incorporate additional, unplanned functions and capacities. The implementation of the governance and project management processes in accordance to the TBS *Enhanced Framework for the Management of IT Project*, as identified in the revised Project Charter (August 16, 2002), ensures that such requests for incremental changes in the system design and functionality are evaluated to ensure that they do not result in "scope creep" and consequent increases in the time and budget required. The project management team works with drafters and others who will use the new system to explain the importance of scope management and to obtain their cooperation in limiting change requests. Where such requests are made, the team documents and assesses them for

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incorporation in the development plan, but will only approve a change if it has a high priority and it is clear that it will not affect the project's scope.

While the audit recommended that a single team member be assigned to manage the "scope management process," the project management team have vested this responsibility in the business and technical project managers, who are responsible for raising unsolved issues to the project director and routinely reporting to the Steering Committee, which meets on a regular basis. This approach ensures that both business and technology perspectives are considered in the change control evaluations and integrated in advice to the project director and Steering Committee.

The LIMS Steering Committee, the project's key decision maker, provides senior management level direction and guidance to all aspect of the LIMS project. Its members are the Chief Legislative Counsel, the Deputy Chief Legislative Counsel, the ADM, Business and Regulatory Law, the Chief Information Officer (CIO) and the DG, Communications.

3. **It is recommended that the Project Director fully investigate all components of the project's scope and deliver to senior management a more accurate estimate of cost.**

The scope of the LIMS project has been fully reviewed and changes documented and approved in the revised Project Charter (August 16, 2002) provided to Government On-Line Office, TBS, as part of the TBS Submission process.

[Note: In May 2002, the Treasury Board Secretariat Advisory Committee (TBSAC) on Information Management Subcommittee (TIMS) approved funding for the LIMS project for the 2002-2003 fiscal year, subject to the presentation of a submission for a Preliminary Project Approval (PPA) to carry out Phase I of the project. TIMS also recommended an additional $2.6 million in funding for the 2003-2004 fiscal year, on the condition that a study on the regulatory business model be completed and approved.[3]

On September 30, 2003, following the submission of the PPA, the Treasury Board Secretariat approved $2.4 million in funding to develop Phase I of LIMS for the 2002-2003 fiscal year.

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[3] The response of the Project Management Office refers to a business case. It involves, rather, as mentioned above, a study on the regulatory business model.

Moreover, in May 2002, we also submitted a study on the regulatory business model to be approved by the GOL Project Office in October 2002. However, the GOL Project Office did not examine the study until July 2002 and gave the LIMS project office its first comments in January 2003. Consequently, we have revised our timetable in order to submit our final version of the study–adapted in relation to the comments received–to the GOL Project Office in March 2003, to thus obtain an approval at the end of April 2003.]

Phase 1 project cost estimates have been adjusted based on the work that led to the revised scope statement and an evaluation of actual expenditures over the two preceding years and approved by the LIMS Steering Committee. The project team will finalize Phase 2 cost estimates by mid-December in the course of preparing it submission for effective project approval (EPA) and 2003-2004 and 2004-2005 funding.

[Note: As we pointed out above, TIMS is planning to award $2.6 million in funding for the 2003-2004 fiscal year subject to the approval of the study at the end of April 2003. Once the study is approved, the LIMS Project Office will present a submission in September 2003 to recover the $2.6 million.

With regard to funding for 2004-2005, the LIMS Project Office still has not finalized its action plan. The GOL Project Office has shown significant interest to support multi-year funding in order to carry out an additional phase of the LIMS project, that is, a collaborative environment to draft regulations. The LIMS Project Office is consulting with 10 departments to determine the feasibility of such a project. The funding strategy still has not been determined.]

With respect to current FY, the project has implemented controls that have ensured that actual and projected expenditures are consistent with the approved budget.

3. DETAILED FINDINGS—PROJECT RISK

Assessing project risk focuses on reviewing project management, the process of developing a business solution, and how the project team controls that process. Risk components are:

- project structure—how the project is organized and staffed to deliver its mandate;
- project control—the management processes governing planning, budgeting, contracting, monitoring and reporting;
- development process—the tools, techniques, methods, and procedures needed to understand the requirements to be addressed, and develop and implement the business solution.

3.1 Project Structure

The overall project structure has been slow to evolve, very changeable, complicated and confusing, and driven by the original concept developer (who is now the Project Architect). Until recently there had been no single strong point of leadership for the LIMS project. As a result, the project's development has suffered from not having experienced staff on the team, as has been discussed in previous sections of this report. There are several project components involved in the LIMS effort (refer to Figure 1), but not all components have team leaders or fully developed team structures.

As a result of these problems, the information provided to management also suffered and how the LIMS project related to other management forums in the Department was unclear. For example, there are a number of committees involved in the management of information technology in the Department of Justice, including BIT.COM and BYTE.COM. The members of the LIMS Executive Committee are also members of the departmental BIT.COM, but how the groups coordinate on funding decisions was unclear. The relationship of the LIMS to the JOL project was also unclear. Funding has become confused as has the related roles and responsibilities.

As discussed, these issues are now being addressed by a new SMCF and Project Charter. In particular, the charter outlines a structure for the LIMS for the duration of the project life, including the various committees. Several roles are described including:

- a Project Director to take over full responsibility for the project,
- a Tactical Project Manager who was brought in to provide early assistance to the Project Architect in terms of project process including planning,
- a Project Manager (administration),
- an LSB employee who was added to the project roster to help build better control, especially over contracts,
- an Applications Architect.

The Applications Architect is expected to assess the applications design and ensure that gaps and overlaps are adequately managed. This is a good development that indicates project management is now looking beyond development toward implementation. The LIMS organization chart proposed in the charter, but which was not yet in place at the end of the audit period, shows a new team structure with new areas of activity like Transition Management and Technical Integration. Each project team will be assigned a team leader. This also indicates that the project team is more adequately considering ultimate delivery and concentrating less on product development only. Other roles filled since the commencement of the audit include a TBS-experienced business analyst who was instrumental in the creation of the appropriate documentation (e.g. the charter) to achieve TBS approval.

The project team has had some difficulty getting the right type and the correct amount of resources together to assure management that the product can be delivered in the planned timeframe. For example, the contractor responsible for the authoring module now lives out of the country and is experiencing difficulty delivering all functionality. We were informed that it is very difficult to get experienced resources with the correct technical expertise and the appropriate business experience for this project. Although the authoring product was to have been evaluated by a panel of legislative drafters, this group needs training in XML to be effective and project staff are too busy to provide this training. Everyone assigned to the project from the business sector also has a full normal workload, including the Project Architect who built the original concept and still is the only person with the full view of the ultimate business solution. As a result, the evaluation of the authoring product had not yet started at the conclusion of this audit. The LIMS project is now looking to IMB for technical leadership. A proposal from IMB outlines

roles for technical team leaders, team members and a system architect. It is hoped that the IMB proposal will adequately address the technical resource issue.

3.2 Project Control

Elements of a project control framework would normally involve appropriate planning and scheduling, monitoring of workflow against established plans, managing contracted components of those plans, ensuring quality deliverables from contractors, budgeting and cash flow management, and risk management. Project control to date has been characterized by extreme flexibility of project objectives and proposed accomplishments, as well as evidence of a reactive approach (due to inadequate planning and tracking processes) to project management and control.

<u>Planning</u>

As project planning has been limited, the risk of not meeting scheduled deliverables is high. The project team is concerned that senior management is overly optimistic about what the project can achieve in the scheduled timeframe. There have been several schedule slippages to date, and there is no reason to believe this will not be repeated until the project plan is well thought out. It is reasonable to expect that such slippages have added cost to the overall project budget. Management has little ability to measure progress if plans are faulty. Lack of apparent progress has been the biggest concern to date among stakeholders.

The new charter provides a basic plan for project delivery organized into two phases:

- Phase I—the development and delivery of system functionalities for the production of bills (drafting and publication of legislation) with three separate releases;
- Phase II—Web site development and development and delivery of system functionalities for the production of regulations (drafting and publication) with two separate releases.

This shows a much better understanding of project management concerns and issues. The September 2002 deadline for initial implementation of LIMS modules for the production of bills has been delayed until January 2003. The project will use the extra time for thorough testing. Essentially, the project is now planning for Phase II, but is adapting to make best use of what is in place for Phase I. As a result, despite the lack of plans and requirements documentation, the

Project Director feels that the scheduled January 2003 delivery can be achieved, although the threat of further delay remains.

Project Tracking

Project tracking requires a plan that can be used as a central control point and against which progress can be measured at regular intervals. Normally, team leaders would be tracking their own deliverables, but as noted already, not all team leaders were in place at the end of the audit period. The project management team has been meeting regularly and the Tactical Project Manager has built a process for team leader meetings. Regular reporting to management is part of the new structure and should greatly improve now that the charter has been accepted.

Contracting

Contracts are in place and funds are being spent, yet the scope of the product is still changing. The Project Manager (Administration) works full-time on existing contracts yet has expressed a concern about having enough time to keep the contract situation under control. The contracts were set up when the project concept was established but before actual business requirements were fully settled. In addition, the contracts are widely dispersed. For example, the publishing software comes from England, the authoring software from USA, and the content management software comes from Australia. This makes it difficult to find local talent experienced enough to do the work required. The prime contractor is situated in Montreal with a sub-contractor in Australia, and a second sub-contractor in France. In some cases payments were tied to specific dates, but they were not linked to deliverables.

The Project Director has initiated a renewed focus on the contracting situation of the project. The prime contractor site has been visited and the project management team has achieved a new sense of comfort over the apparent ability of the contractor to deliver. In addition, the contract has been amended to realign the payment with actual delivery of the desired product.

Other Control Components

As opposed to controlling overall project scope, project change management is a function at the product level to control the ongoing development of the ultimate business solution. Project change management is not yet a developed function on this project, although the Tactical Manager is addressing this issue. There is no departmental standard change process for IT

projects that can be implemented. Therefore, there was no differentiation between broad scope management and detailed project management changes. Project changes were communicated to the prime contractor but not adequately tracked and controlled. According to the charter, managing ongoing change on the project is to be the responsibility of the team leaders, when all teams actually have leaders assigned.

Risk Management has not yet been fully addressed as a project control function. Major risks outlined in the charter, and our observations of the project's attempts to address the risks, are as follows.

- Funding is not identified beyond the 2002–03 fiscal year. The Project Director is to address this specific issue by researching other sources of funds.
- Business resources are not assigned to the project. The Project Architect and the Project Manager (Administration) will address the issue of getting business people assigned to the project at the required times.
- Management of organizational change has not been adequately considered. The charter states the project will attempt to minimize changes. However, we saw little evidence that management is aware of the scope of workflow changes and the need for staff training and acceptance.
- Technical resource management presents a concern. This risk focuses on the prime contract management and obtaining the services of more local people. In this case, the prime contract has been adjusted to align deliverables with payment schedules and the project team is looking for local contractors.
- Technical and business acceptance criteria is not included in current contracts. The IMB technical team leaders will be expected to assist in contract management, specifically in terms of evaluating contract deliverables.

The Project Manager (Administration) is now assigned to the management of project risk. However, there are no additional resources to be added to assist in this task, nor is there a specific process to identify, document, and manage risk. Although the lack of requirements documentation is not reflected as a major risk, nonetheless, it is a risk. As well, the inevitable organizational change that will result from introducing new technical products is also a risk in that it has not yet been fully explored in terms of how to manage the situation.

Communications have been poor throughout the project. For example, project status is often not well communicated on the team—deadline dates have often changed without project staff being

aware. This situation should change as the various meeting schedules outlined in the charter begin to take effect.

3.3 Development Process

Basically, development management (tools, techniques, methods and procedures needed to understand the requirements to be addressed, and to develop and implement the business solution) has been the responsibility of the prime contractors, who were engaged to provide the ultimate solution. There is no standard development process supported by IMB than can be used on the LIMS project. Part of the problem has been that the scope of the project is still variable, and there has been reluctance on the part of some project team members to implement a formal process.

Given that external contractors are developing the business solution, an in-house process must allow for points of contact at which time the viability of the product can be determined. Normally this would be at the point of solution design and product testing. As yet, the design of the LIMS business solution exists in a conceptual form only. There is no documented solution. Testing remains to be done and will require an approach that needs a detailed understanding of what is desired in terms of the product (requirements). In both cases, most of that knowledge is held by the Project Architect but is not well documented.

The Project Charter has a basic process described within it that addresses product development. Based on the Rational Unified Process or RUP methodology, it adheres to the tenets of the Enhanced Management Framework for projects that is espoused by TBS. The charter refers to quality assurance testing, but not how this will be accomplished. In addition, ongoing support of the product, with its supporting software packages, is not yet being investigated. The renewed relationship with IMB is expected to derive benefits in all cases cited above as IMB technical staff will be involved in all stages of product evaluation.

3.4 Conclusions and Recommendations

The project structure and governance is still not completely formulated but is much improved since the delivery of the Project Charter. Several realities surrounding departmental project management have been recognized by project staff, such as the lack of project management expertise on the team, the early isolation of the project from the departmental informatics group (IMB), and the lack of full project planning. These issues require management attention to fully resolve. The new LIMS organizational approach, which will involve key project teams in areas such as technical integration, should more fully involve IMB on the project.

Project control has been largely affected by the lack of formal project organization. As a result, control has lacked formality and completeness, and tends to be reactive and not proactive. The more recent addition of the Project Director has highlighted the control issue. Getting the right resources involved has been difficult, and getting a significant time commitment has also been difficult. Even the Project Architect has only worked part-time on the LIMS project. The addition of a Project Manager (Administration) was specifically meant to improve project control, and has evidenced some success (e.g. contracts management, contract payouts aligned with deliverables). In addition, the renewed relationship with IMB could provide the necessary technical resources that can bolster control. In all the cases above, the new charter and appropriate attention from the Project Director and other governance elements should address the weaknesses.

There is no departmental development process being used in this project; development management has been basically the responsibility of the prime contractors engaged to provide the ultimate solution. However, it is ultimately an IMB responsibility to provide a corporate development standard for departmental IT business solutions.

Recommendations and Management Response

4. It is recommended that the Project Director, with full support of IMB technical support resources, establish a standard development process for the LIMS project.

The project management team is adapting selected components of the Rational Unified Process (RUP), notably the iterative release approach, for its development process. Full implementation of the RUP was considered, but consultations with several technical and project management specialists led to the conclusion that it would difficult and counter-productive to do so in a project that is as far advanced as LIMS.

4. DETAILED FINDINGS—BUSINESS RISK

Assessing business risk involves reviewing the clarity and stability of the business rules and processes from which the business solution requirements will be derived. Establishing the business rules and processes is normally the responsibility of the project sponsor and representative business function staff. There are three elements of business risk:

- requirements management, which deals with a thorough understanding and documentation of the business needs that the developed solution (LIMS) must meet;
- solution design management, which addresses how well the design will meet those requirements;
- management of change, which looks at the capacity of the organization to manage the organizational and business flow changes that the introduction of the new business solution will require.

4.1 Business Requirements Management

Business requirements refer to the various business functions that the LIMS will need to be capable of performing in order to meet all service delivery needs. Business requirements management is the process of determining and defining all the functions required of the system in order for it to meet the users needs.

Despite the fact that contracts have been put in place and funds are being spent to move ahead with the development of the LIMS, a baseline requirements document had not been prepared at the time of this audit. Not having a baseline requirements document means that the vision being addressed is only in the heads of the project staff, notably that of the Project Architect. As a result, this informal approach to requirements management has allowed changes to the overall concept without adequate analysis of potential impacts of those changes. Without a shared understanding of business requirements, there is also no common technical understanding of the LIMS concept, and no shared vision of what the whole solution will be capable of doing.

Because there is no baseline requirements document currently in place, the audit team was unable to assess the adequacy of the requirements, including data integrity.

Business requirements management is also complicated by the fact that several organizations are involved in the development of LIMS, and that requirements coordination is a "grey" area. There is no single business contact on the project, and many of those we interviewed expressed a concern that no one person really fully understands the ultimate business solution.

The LIMS project management team is attempting to draw departmental business staff into the project and to develop local processes for requirements capture, validation, and management. Importantly, these established processes will be of most use for Phase II deliverables. Phase I is expected to commence live operation in January 2003, and is too far progressed to turn back now. The Project Director has indicated that Phase II will be carried out in a more regular fashion. The regulations study has started to further define the business requirements for the drafting and editing of regulations and their integration with the legislation. Also, the Applications Architect will assess overall design and highlight gaps, weaknesses and potential impacts.

Part of the problem experienced to date in the capture and management of business requirements has been the low level of representation from the business sectors involved in legislation development and management. This factor both contributes to and is affected by the slow progress on the part of the project team in achieving development targets.

4.2 Solution Design

Solution design management addresses how well the system design will meet the business requirements. The design of the ultimate solution will be affected by the lack of firm, documented requirements, although the purchase of established software products is a strong favourable point. Although an overall concept for a business solution does exist, it is difficult to determine independently if the benefits declared for the project will be achieved with the planned design when the requirements have not yet been completely gathered. Projects often resort to a "requirements matrix" to follow the requirements from initial document to ultimate product. Without a solid requirements document, it is virtually impossible to establish this kind of matrix control.

With respect to the contracted work and the expected product delivery, we initially found it difficult to determine who had the most recent knowledge of progress and contract deliverables. The new charter offers a structure with technical team leaders from IMB to help manage contracts—they and the new Project Manager (Administration) have already made improvements in this regard (see "Project Control"). In addition, a Tactical Project Manager is trying to set up "technical review teams" to ensure the product actually meets requirements. While the charter stresses testing and user acceptance, it does not specify how this will be achieved. Proposed testing teams will need input from functional user groups to develop adequate plans for testing and to ensure test results will prove that functional requirements will achieve stated objectives. We were told that at times in the past, user representation has been difficult to secure.

In the absence of documented requirements, some concerns have arisen either in the client sector or on the project team concerning how the solution will handle business needs. The fundamental requirement for the XML authoring tool (Epic) must provide equivalent functionality to the existing WordPerfect system, which is now very stable. Drafters are under too much time pressure to cope with a system that is not fully functional. The project team understands that this means that the LSB can't "evolve" into Epic (i.e. adding bits of functionality over time) the way it evolved into the existing WP system. The authoring tool must be fully functional at start-up.

LSB drafters have superficial exposure to the LIMS and generally know little about the XML structured environment and what it will mean to them. As a result, there is a risk of gaps in user expectation. With the LIMS Project Sponsor being the head of the LSB, this should provide for better overall understanding and commitment. However, the LSB needs to free up some drafters on a priority basis to help develop the authoring tool.

4.3 Management of Organizational Change

New business systems often cause or require changes to the host organization. Typically, the overall impact of change would be assessed at several points during the life of a major project. Such an assessment is often called a "readiness assessment" and is intended to measure the organizations capability to change.

There is the potential for some very broad impacts on the current workflows in the legislative services area of LSB that will require advance analysis, planning, and management. For example, legislative drafting is now done using WordPerfect whereas the rest of the Department uses

Microsoft Word. The shift to the XML Epic product for authoring will require a shift to Microsoft Word for non-drafting applications.

There are other more detailed concerns about the Epic product and its ability to meet the needs of current work tasks. XML is a structured environment: this means that the drafter can only do what the product will permit through definitions of the data elements and their relationships to each other. It is a very constrained environment quite different from what exists today. For example, the Epic drafter loses ability to block text and paste it anywhere in a draft, which affects how drafters copy the text of precedents in creating new legislation.

In both cases above, training will be required. There could be a high risk in terms of staff resistance to change. The Project Charter cites training as a key component of each release, but the overall impact of process change has yet to be measured. Good business practices suggest that a readiness assessment of the organization should be conducted to outline where changes are going to occur, to plan for organizational support and user training, and to determine the cost of implementing a new business solution.

Stakeholders also see the management of change as a crucial risk that is not yet being well managed. There is no one on the LIMS project tasked with managing the stakeholder relationship, so this risk is not yet being mitigated from the perspective of the stakeholders.

4.4 Conclusions and Recommendations

LIMS development has begun and is progressing without a full understanding of the requirements to be met. Phase 1 is due for completion and delivery in less than a year. While action is ongoing to better define requirements, Phase I deliverables are close enough that it is unrealistic to delay the project while requirements are fully investigated and documented. Although Phase II should be better managed, a more formal requirements definition process is needed to mitigate risk.

Evaluation of the delivered products for LIMS Phase I will also be limited by the lack of formal requirements documentation. Although, departmental management must accept a greater level of risk because the requirements were not fully captured, they must still ensure an appropriate evaluation approach is undertaken to measure product quality.

There has been no assessment done on organizational readiness for this project or product to date. Although process maps built by the project team can lead to the identification of potential process change, there is no client representative on the project team to handle this kind of issue.

Recommendations and Management Response

5. It is recommended that the Project Director, with support from the Project Sponsor, implement a formal requirements management process which addresses:

- **development of business requirements,**
- **full documentation of business requirements,**
- **control of changes to requirements.**

The LIMS project management team have taken steps to implement an appropriate requirements management process:

- With respect to the *development of business requirements*, there has been, until recently, limited end-user participation because the objective of the Phase 1 work was to replicate in the "new" authoring tools the functionalities available to drafters in the "old" tools – to design a solution the enhances the overall efficiency of the drafting process without imposing significant demands for LSB drafters and editors to change how they do their work. The working prototype that the LIMS team has developed through this process will now serve as the baseline to validate user requirements through a pilot project exercise (see response to Recommendation 8). The development of the Phase 2 business requirements is underway following completion of the regulations study and business case.

- With respect to the need for *full documentation of business requirements*, the project has taken steps, noted above, to retroactively document Phase 1 requirements. Phase 2 project planning has made provision for requirements documentation consistent with accepted project management practices.

- With respect to the *control of change to requirements* for Phase 1, the project office has established the pilot project working group composed of four legislative drafters, the Deputy Chief Legislative Counsel, the Manager of the Legislation Section, the technical and business project managers and a representative of the development team. The

working group is responsible for sharing information, identifying major bugs and irritants, and ensuring that all new requirements are analyzed, addressed and prioritized. For Phase 2, the process is facilitated by a Regulatory Advisory Committee that provides guidance, feedback and advice on operational user and client requirements and ensures coordination of ongoing consultations with key departments and agencies including PCO and Canada Gazette.

6. **It is recommended that the Project Director, with the proposed IMB technical support resources, define a formal design evaluation approach including client/user acceptance testing.**

The project management team has adopted a "pilot project" strategy to evaluate Phase 1 deliverables required for authoring and publishing bills. The pilot will see a team of four legislative drafters using the authoring, printing and content management tools developed by the LIMS project, with the full time support of project staff, undertake drafting of two bills that are scheduled to be tabled in the House. The exercise will test the new solutions in a "real time" environment allowing drafters (the clients/users) and project personnel to identify needs, if any, for fixes or changes. Any proposed changes will be documented, contributing to the documentation of Phase 1 business requirements, and evaluated through the project's change control process to ensure that they are "in scope."

The Phase 2 project plan includes provision for the development of acceptance criteria consistent with established project management principles.

7. **It is recommended that the Project Sponsor, with input from the project management team, determine how best to ensure appropriate levels of business staff involvement on the project at crucial points of development.**

To better ensure that the perspectives and requirements of the ultimate users of the Phase 1 products are involved, the project has established a pilot project working group described in the response to Recommendation 5. In addition, a LIMS analyst for the publishing module has been assigned at the House of Common to make sure that the needs of legislative drafters are taken into account in the development of the publishing tool.

To ensure Phase 2 proceeds with adequate end user representation and involvement, the project management team has:

- Undertaken focus group testing of the Internet service prototype to assess its utility for members of the legal profession, the general public and other users.
- Completed a study and consultations involving PCO, TBS, the Canada Gazette and five other departments and agencies directly concerned with the drafting and publication of regulations.
- Established the Regulatory Advisory Committee.

8. It is recommended that the Project Sponsor undertake a formal study of potential workflow and organizational changes to be expected from the implementation of the LIMS business solution.

The project management team will procure, through an external contract that will start beginning of December 2002, the services of a "business transformation architect" to assess the workflow and organizational implications that will follow from the full deployment of the LIMS and recommend, in April 2003, a deployment strategy for Phase 1 and Phase 2. The plan will address both implementation and ongoing operational requirements including user training and technical support. The pilot project will facilitate the assessment of the workflow and organization change implications of Phase 1.

5. DETAILED FINDINGS—TECHNOLOGY RISK

Assessing the technology risk involves examining the inherent risk in the technology platforms on which the developed business solution must operate. There are two components of risk involved:

- infrastructure management—how the technology used in the Department is likely to change to actively support the new products;
- technology transition—how the organization is planning for and controlling the transition to the new platform.

Essentially, both of these risk areas address the impact the new technology with have on the organization implementing it.

5.1 Technology Impact

The technology selected to build the business solution involves three products to support authoring, publishing, and content management. The authoring product is called Epic and the publishing product is 3B2. Content management will use another product called SIM to build the database of bills and regulations. These three software components are being integrated to deliver the ultimate business solution and are XML-based—a technology that is vendor and platform neutral and hence should provide better capability to meet a variety needs with fewer unexpected impacts. The authoring and publishing technologies are well understood; EPIC has been tested in the lab and proven to have no impact on the Department of Justice technical infrastructure. The House of Commons is already using 3BS, so its viability is proven. SIM has not yet been tested; this will be the only Canadian implementation and the only government implementation in North America. How these products will integrate and the ability of the contractor to deliver the business solution are unproven.

The LIMS technology transition approach that is being planned includes:

- Rebuilding the relationship with IMB to provide the project with much needed technical support. Part of that support will be the technical evaluation of the products as they are delivered by the contractors.
- Assessing the potential impact on the overall infrastructure that could arise from the implementation of the products. IMB has hired a technical/system architect to evaluate infrastructure impact. In addition, the LIMS Applications Architect is looking at the SIM product itself at a detailed level.
- Specific plans are being made to evaluate the SIM product in a lab environment. The evaluation will be conducted by the LIMS project team.

Ongoing support for the new LIMS technology has been left up to the details in the IMB support proposal. These products are not simple. Indeed, the project team's publishing business analyst feels that the 3B2 product requires a full-time resource from IMB to support it.

5.2 Conclusions

The overall business solution consists of three separate packages each suitably customized for use at the Department of Justice. Of these, two components have been proved, a third is planned for evaluation. With more technical staff becoming part of the project team, there is every expectation that the technical viability of the proposed solution will be tested.

Technology does not appear to be a concern at this time. However, much depends on the ability of the project management group to activate the plans declared in the Project Charter.

6. OVERALL CONCLUSIONS

Historically, the LIMS project was poorly managed in terms of documenting business requirements, documenting overall solution design, and planning the steps to achieve the concept. A lack of management attention and commitment, and the resulting lack of resources all contributed to the historical picture.

In terms of project and management governance, there has been a dramatic turnabout in recent months, to the extent that many of the risks should now abate. The new charter describes much of what was missing earlier, and filling the Project Director position has provided project management expertise that was missing before.

Improvements carried out during the course of the audit are becoming obvious. However, the project was badly flawed from the outset and much has occurred that will have future impacts. Risk is still high of scope change and growth, significant time delays, significant cost overruns, and ongoing problems with change management.

As a result, there are a number of conclusions that do not at this time generate recommendations, but that management must be aware of to suitably control the project.

- The capability of the project management team to actually implement the charter and create effective processes is crucial to project success. The outline in the charter points the project toward suitable control, but the outline must be filled out with more detail, processes must be put in place and made to work, and management support must be felt.
- Departmental management must understand that project risk remains high for Phase I due to residual effects of past problems. Lack of documented requirements, poor overall planning, and earlier problems with scope management leaves the project susceptible to continued changes, potential delays, and cost increases.
- Departmental management should also understand that it is not simple to improve control and that project costs are likely to increase as a result.

7. LIMS PROJECT OFFICE MANAGEMENT RESPONSE

Introduction

The Audit and Management Studies Division, Justice Canada (DoJ), conducted an audit of the Legislation Information Management System (LIMS) project to assess the extent to which it adhered to generally accepted "system under-development" practices and principles. The field work for the audit, which included interviews with Information Management Branch (IMB) and Legislative Services Branch (LSB) management, project staff, stakeholders and business users, was concluded in February 2002.

The project management team not only agrees with the audits findings and recommendations, but, in advance of receiving the report, had taken remedial action consistent with them.

Background

LIMS, which is a significant enterprise project for LSB and the DoJ, had been managed as a number of independent small projects until late 2001. As a result, and as the audit report observes, the project had been affected by a lack of formal project organization resulting in, among other things:

- Undocumented business requirements and acceptance criteria,
- The absence of long-term multi-year funding,
- A lack of management commitment,
- Limited client/stakeholder involvement and ownership,
- Outstanding requirement for Treasury Board/GOL submissions and approvals,
- The lack of an effective governance structure,
- *Ad hoc* and inconsistent procurement and contract arrangements, and
- A failure to establish a comprehensive and integrated project plan.

In the third quarter of 2001-2002, LSB initiated important changes to implement appropriate project management practices and principles to stabilize and sustain the LIMS project and significantly mitigate the project risks identified by management and confirmed by the audit. This has been accomplished by, among other things:

- Establishing a project office and recruiting a project director, a business project manager and a technical project manager,
- Involving IMB more directly in the project management process through the appointment of an IMB staff member as the technical project manager and the assignment of two other IMB personnel to the team and two more to come,
- Defining and implementing a project governance structure consistent with the principles set out by Treasury Board Secretariat (TBS) in the Enhanced Framework for the Management of Information Technology Projects,
- Developing an integrated two-phase project plan (Phase 1 covers the development and delivery of solutions for drafting and publishing bills; Phase 2 covers the development and delivery of solutions for drafting and publishing regulations),
- Re-building relationships with key external stakeholders (House, Senate, Privy Council Office (PCO), Canada Gazette, TBS, and PWGSC) and departmental partners (IMB, Communications Branch (CB), and financial and contracting units),
- Preparing and obtaining approval of the project charter and a two phase project plan,
- Completing required TBS and GOL submissions to secure multi-year funding,
- Completing the Regulations Business Case as the foundation for Phase 2 of the project plan, and
- Securing multi-year funding commitments.

Recommendations and Management Responses

The audit makes eight (8) recommendations for remedial action, all of which have been accepted. The project team's responses to the recommendations are identified below.

1. **It is recommended that the LIMS project director further define the scope management process and assign a single team member to manage the process. 16**

2. **It is recommended that the LIMS project director fully study the potential impact of scope changes as part of the formal scope management process.....................................16**

1 and 2: The LIMS business project manager and the project director are very much aware of the need to define the scope of the project. For this reason, the project has been implemented in distinct stages. The first stage deals with legislation component of the project. This stage began in 2001 and is expected to be generally completed by June 2003. The second stage which addresses the regulations component began earlier this year and is expected to last until 2004. Each stage has a detailed work plan which allows for a gradual and predictable evolution towards the set objectives. As well, and as with any information technology project, LIMS users, from time to time, request that developers incorporate additional, unplanned functions and capacities. The implementation of the governance and project management processes in accordance to the TBS *Enhanced Framework for the Management of IT Project*, as identified in the revised Project Charter (August 16, 2002), ensures that such requests for incremental changes in the system design and functionality are evaluated to ensure that they do not result in "scope creep" and consequent increases in the time and budget required. The project management team works with drafters and others who will use the new system to explain the importance of scope management and to obtain their cooperation in limiting change requests. Where such requests are made, the team documents and assesses them for incorporation in the development plan, but will only approve a change if it has a high priority and it is clear that it will not affect the project's scope.

While the audit recommended that a single team member be assigned to manage the "scope management process," the project management team have vested this responsibility in the business and technical project managers, who are responsible for raising unsolved issues to the project director and routinely reporting to the Steering Committee, which meets on a regular basis. This approach ensures that both business and technology perspectives are considered in the change control evaluations and integrated in advice to the project director and Steering Committee.

The LIMS Steering Committee, the project's key decision maker, provides senior management level direction and guidance to all aspect of the LIMS project. Its members are

the Chief Legislative Counsel, the Deputy Chief Legislative Counsel, the ADM, Business and Regulatory Law, the Chief Information Officer (CIO) and the DG, Communications.

3. It is recommended that the project director fully investigate all components of the project's scope and deliver to senior management a more accurate estimate of costs. ...17

The scope of the LIMS project has been fully reviewed and changes documented and approved in the revised Project Charter (August 16, 2002) provided to Government On-Line Office, TBS, as part of the TBS Submission process.

[Note: In May 2002, the Treasury Board Secretariat Advisory Committee (TBSAC) on Information Management Subcommittee (TIMS) approved funding for the LIMS project for the 2002-2003 fiscal year, subject to the presentation of a submission for a Preliminary Project Approval (PPA) to carry out Phase I of the project. TIMS also recommended an additional $2.6 million in funding for the 2003-2004 fiscal year, on the condition that a study on the regulatory business model be completed and approved.[3]

On September 30, 2003, following the submission of the PPA, the Treasury Board Secretariat approved $2.4 million in funding to develop Phase I of LIMS for the 2002-2003 fiscal year.

Moreover, in May 2002, we also submitted a study on the regulatory business model to be approved by the GOL Project Office in October 2002. However, the GOL Project Office did not examine the study until July 2002 and gave the LIMS project office its first comments in January 2003. Consequently, we have revised our timetable in order to submit our final version of the study–adapted in relation to the comments received–to the GOL Project Office in March 2003, to thus obtain an approval at the end of April 2003.]

Phase 1 project cost estimates have been adjusted based on the work that led to the revised scope statement and an evaluation of actual expenditures over the two preceding years and approved by the LIMS Steering Committee. The project team will finalize Phase 2 cost estimates by mid-December in the course of preparing it submission for effective project approval (EPA) and 2003-2004 and 2004-2005 funding.

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[3] The response of the Project Management Office refers to a business case. It involves, rather, as mentioned above, a study on the regulatory business model.

[Note: As we pointed out above, TIMS is planning to award $2.6 million in funding for the 2003-2004 fiscal year subject to the approval of the study at the end of April 2003. Once the study is approved, the LIMS Project Office will present a submission in September 2003 to recover the $2.6 million.

With regard to funding for 2004-2005, the LIMS Project Office still has not finalized its action plan. The GOL Project Office has shown significant interest to support multi-year funding in order to carry out an additional phase of the LIMS project, that is, a collaborative environment to draft regulations. The LIMS Project Office is consulting with 10 departments to determine the feasibility of such a project. The funding strategy still has not been determined.]

With respect to current FY, the project has implemented controls that have ensured that actual and projected expenditures are consistent with the approved budget.

4. It is recommended that the project director, with the full support of IMB technical support resources, establish a standard development process for the LIMS project......25

The project management team is adapting selected components of the Rational Unified Process (RUP), notably the iterative release approach, for its development process. Full implementation of the RUP was considered, but consultations with several technical and project management specialists led to the conclusion that it would difficult and counter-productive to do so in a project that is as far advanced as LIMS.

5. It is recommended that the project director, with the support of the project sponsor, implement a formal requirements management process which addresses:

- **Development of business requirements,**
- **Full documentation of business requirements**
- **Control of change to requirements. 31**

The LIMS project management team have taken steps to implement an appropriate requirements management process:

- With respect to the *development of business requirements*, there has been, until recently, limited end-user participation because the objective of the Phase 1 work was to replicate

in the "new" authoring tools the functionalities available to drafters in the "old" tools – to design a solution the enhances the overall efficiency of the drafting process without imposing significant demands for LSB drafters and editors to change how they do their work. The working prototype that the LIMS team has developed through this process will now serve as the baseline to validate user requirements through a pilot project exercise (see response to Recommendation 8). The development of the Phase 2 business requirements is underway following completion of the regulations study and business case.

- With respect to the need for *full documentation of business requirements*, the project has taken steps, noted above, to retroactively document Phase 1 requirements. Phase 2 project planning has made provision for requirements documentation consistent with accepted project management practices.

- With respect to the *control of change to requirements* for Phase 1, the project office has established the pilot project working group composed of four legislative drafters, the Deputy Chief Legislative Counsel, the Manager of the Legislation Section, the technical and business project managers and a representative of the development team. The working group is responsible for sharing information, identifying major bugs and irritants, and ensuring that all new requirements are analyzed, addressed and prioritized. For Phase 2, the process is facilitated by a Regulatory Advisory Committee that provides guidance, feedback and advice on operational user and client requirements and ensures coordination of ongoing consultations with key departments and agencies including PCO and Canada Gazette.

6. **It is recommended that the project director, with the proposed IMB technical support resources, define a formal evaluation approach including client/user acceptance testing.32**

The project management team has adopted a "pilot project" strategy to evaluate Phase 1 deliverables required for authoring and publishing bills. The pilot will see a team of four legislative drafters using the authoring, printing and content management tools developed by the LIMS project, with the full time support of project staff, undertake drafting of two bills that are scheduled to be tabled in the House. The exercise will test the new solutions in a "real time" environment allowing drafters (the clients/users) and project personnel to identify needs, if any, for fixes or changes. Any proposed changes will be documented, contributing

to the documentation of Phase 1 business requirements, and evaluated through the project's change control process to ensure that they are "in scope."

The Phase 2 project plan includes provision for the development of acceptance criteria consistent with established project management principles.

7. It is recommended that the project sponsor, with input from the project management team, determine how best to ensure appropriate levels of business staff involvement on the project at crucial points of development. 33

To better ensure that the perspectives and requirements of the ultimate users of the Phase 1 products are involved, the project has established a pilot project working group described in the response to Recommendation 5. In addition, a LIMS analyst for the publishing module has been assigned at the House of Common to make sure that the needs of legislative drafters are taken into account in the development of the publishing tool.

To ensure Phase 2 proceeds with adequate end user representation and involvement, the project management team has:

- Undertaken focus group testing of the Internet service prototype to assess its utility for members of the legal profession, the general public and other users.
- Completed a study and consultations involving PCO, TBS, the Canada Gazette and five other departments and agencies directly concerned with the drafting and publication of regulations.
- Established the Regulatory Advisory Committee.

8. It is recommended that the project sponsor undertake a formal study of the potential workflow and organizational changes to be expected from implementation of the LIMS business solution. --33

The project management team will procure, through an external contract that will start beginning of December 2002, the services of a "business transformation architect" to assess the workflow and organizational implications that will follow from the full deployment of the LIMS and recommend, in April 2003, a deployment strategy for Phase 1 and Phase 2. The plan will address both implementation and ongoing operational requirements including user

training and technical support. The pilot project will facilitate the assessment of the workflow and organization change implications of Phase 1.

Conclusion

The LIMS project, as the audit notes, has had a very significant turnaround over the past several months. There is now every reason to expect that it will meet the scope, schedule and cost objectives for Phase 1 and Phase 2. These positive outcomes are the results of the planning and funding commitment made by the department's senior management and the continued cooperation and assistance of LIMS Project Office, drafters and other LSB staff and other stakeholders in the Department such as IMB, Communications Branch, and the Business and Regulatory Law Portfolio.