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Information Technology Procurement
A lead paper by the Office of the Auditor General of Canada

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Exhibit 1 Spending on information technology by departments and agencies, 1998-99

Appendix 1 Information Technology Procurement: a synopsis of issues for country papers

Information Technology Procurement

1. Summary

A synopsis of information technology (IT) procurement issues was prepared to solicit interest from SAIs and facilitate their preparation of country papers on this topic. This lead paper was written subsequently to address those issues in a Canadian context.

In this paper, we shared our methodology and approach in analyzing IT procurement data. We discussed our recent experience in using concepts and approaches developed by the Canadian government to improve acquisitions for large IT project. We identified some good practices that, in our opinion, add value to acquiring personal computers and we shared current issues we face in purchasing software products and related services.

In our view, the discussion of this subject is very timely. In Canada, IT procurement has been identified as a potential impediment in implementing Government On-Line, our initiative in moving toward e-Government. The lead paper and the related country papers should form the basis for a most interesting and informative discussion at the Symposium on how best to improve government procurement for IT goods and service.

2. Introduction

Significance of information technology procurement

Organizations around the world, including governments, invest significantly in information technology (IT) goods and services. In general, procurement regimes in government are already complex. In addition to supporting government objectives that go beyond seeking best value and striving for efficiency and effectiveness, technology evolves at a rapid pace. At the same time, the procurement process is a critical factor in ensuring appropriate return on IT investments.

Following a moratorium on information system changes as a precautionary step in preparing for the Year 2000 computer problem, governments and most other large organizations have built up a pent-up demand for IT acquisitions and system development projects. The development of E-Commerce and E-Government initiatives also makes IT procurement an important activity and one that governments need to manage well to succeed in implementing the initiatives. All of these factors underscore the importance of IT procurement in government. Thus, the subject merits examination by legislative auditors.

Purpose and scope of the Canadian lead paper

To prepare for the Third Symposium of IT Performance Auditing to be held in May 2001 in Slovenia, we provided a synopsis to SAIs to provoke thoughts and facilitate interested members in preparing countries papers on this subject (see Appendix I). This lead paper discusses strengths and weaknesses in the Canadian system as assessed in our value-for-money audit entitled "Information Technology: Acquisition of goods and services". The audit was completed in 2000 and reported to the Parliament of Canada in February 2001.

In the synopsis, we identified the following 5 areas of interest for discussion at the Symposium:

- analyzing and reporting information on IT procurement;
- acquiring goods and services for large IT projects;
- supplying hardware;
- purchasing software products and related services; and
- contracting for IT professional services.

This paper will include a discussion of the first four areas. Contracting for IT professional services was not specifically covered in the Canadian audit and is thus not part of this paper. It is our intention to facilitate a discussion of that area during the Symposium to facilitate exchange of experiences from other SAIs.

3. Analyzing and Reporting Information on Information Technology Procurement

Planning and methodology for the analysis

We assumed that IT investments are significant for government. As one of the first steps, we attempted to analyze available information on IT acquisitions in government. Such analysis would not only help validate our assumption but also provide a better understanding of the nature and extent of IT investments. This understanding was essential in deciding the scope of the audit that followed.

From a planning perspective, we started by requesting government-wide analyses and reports on IT investments. Should that information not be available, we would conduct our own analysis based on data sources resident in government. Primarily, we were interested in the answers to the following questions:

- How much does the government invest year-over-year on IT goods and services?
- Who in government is investing and is the trend consistent?
- What are government departments and agencies buying?

We quickly came to the conclusion that this type of information on a government-wide basis was not available. Each department or agency maintain its own data; the IT contracting data resident in the central procurement department is not complete nor is there any assurance that it can be relied upon. There were contracting reports for the entire government but they included both IT and non-IT contracting activities. We have also observed shortcomings in that system and there was no ready mechanism to extract contracts pertaining specifically to IT only.

As a result, we used our alternative plan and undertook to analyze available government data. There were two potential data sources – IT contracting data (direct) and general expenditure data (indirect). We assessed the advantages and disadvantages of each data source and concluded that the general expenditure data would better serve our needs. The data can be reconciled to audited financial statements and are thus more reliable and complete. It also came aggregated.

We used the IDEA package as the data analysis tool. Using the coding block for the expenditure data of the Government of Canada, we identified and aggregated IT expenditures over the past four years. The longer period was selected to normalize expenditures that might have arisen as a result of the work on the Year 2000 computer problem. The analysis also included an estimated portion of salary costs relating to IT. The estimates were made based on a study of human resources in information management and information technology by the Treasury Board Secretariat of Canada.

Results of the data analysis

The analysis showed a rising trend of IT expenditures in dollars as well as in relation to total budgetary expenditures for government operations. For 1998-99, the government expended approximately \$3.4 billion or about 10.1 percent of the overall budgetary expenditures on IT-related goods and services (\$3 billion and 8.6 percent for 1995-96). These estimates are conservative because they do not include integrated scientific or military systems such as laboratory equipment, weaponry or satellite systems. Those expenditures were not captured because of limitation in the coding block.

By virtue of using the expenditure data that supported the government's books of accounts, we readily tabulated the data by department and agency. We were also able to categorize users by the size of their IT spending:

- large (>\$100 million per annum);
- medium (\$25 million to \$100 million per annum);

- small (<\$25 million per annum).

From 1995 to 1999, the same four departments appeared as large IT users year after year. A total of about 15 departments represented the group of medium IT users. There were some variations in the group's composition over the four-year period. The remaining group of small IT users totalled about 60. It was also noteworthy that the top 20 IT users in government accounted for about 90 percent of IT expenditures (Exhibit 1).

Moreover, we set out to analyze IT expenditures by types – hardware, software, professional services and large IT projects. Tabulation of that information would have been useful to better focus our audit efforts. However, it was not possible to complete that analysis because each department used the lower level coding block differently. As a result, an aggregation across departments would not provide any meaningful result.

Overall, it was a worthwhile project. The analysis confirmed our hypothesis. The IT expenditures were significant and rising. The analysis provided empirical data for discussion with government departments as well as a landscape of the population for auditing. The information on departmental IT spending provided the basis for selecting portfolios for this and future IT audits.

4. Acquiring Goods and Services for Large Information Technology Projects

A Canadian approach of acquisition for large projects

It has been noted in many studies that large IT projects has a propensity for failure. Late implementation, not meeting full specification and requirements and cost over-runs were often

part of the outcome. In Canada, we acknowledge that the contracting phase is a major factor that has a direct impact on the successful implementation of a large IT project. Our experience has been that multi-year, fixed-price contracts with detailed specifications carry higher risks.

Arising from our audits of systems under development, the Canadian government developed a framework (called Enhanced Management Framework or EMF) to improve project and risk management. Important aspects of this framework includes developing a business case and providing “off-ramps” which, in effect, divide a large project into smaller “chunks” and create opportunities to halt the project if appropriate. In a separate yet related initiative, the government worked with the private sector vendor community to revise its procurement approach. The Benefits Driven Procurement (BDP) approach was pronounced in 1997 as a solution to the acquisition phase of large IT projects. The approach is fully consistent with the Enhanced Management Framework for managing large IT development projects.

The BDP approach emphasizes the results and benefits to be derived from a project, rather than emphasizing a specific solution to a business problem. Thus, it focusses on making a strong business case. Instead of the detailed specifications and requirements of a solution, the approach highlights the benefits that the solution will provide. The project is delivered in phases that provide off-ramps. Compensation is based on performance, usually at the completion of defined tasks. In addition, BDP supports clear accountability by all parties to the contract, and sound project management disciplines that include rigorous identification and management of risk. Since its development, the approach has been recommended for use in the procurement for large and complex IT projects.

Our experience from two case examples

Our 2000 value-for-money audit examined the acquisition phase of two large IT projects. The objective of the audit examination was to review the strength and weakness of the new BDP approach based on experience and its application.

National Defence had earlier made a number of attempts to optimize the availability of its equipment and weaponry systems. The Materiel Acquisition and Support Information System (MASIS) project in its current form is aimed at optimizing their availability throughout their life cycle. It is meant to provide an integrated environment for Canada's Air, Land and Marine Forces and the Department's administrative units, to replace the separate information systems that have managed and supported the military equipment and weaponry systems of each Force.

The Export and Import Controls System (EICS) project at Foreign Affairs and International Trade was designed to support the Department's control over export and import activities under the *Export and Import Permits Act*. It was intended to replace two existing systems that were becoming obsolete, and to provide interfaces with key stakeholders in industry and in other government entities.

Our examination of the two large IT projects showed that many essential elements of the Benefits Driven Procurement approach can work and produce results. A discussion of those elements and how they applied in the two projects follows.

Developing a business case. The business case is a cornerstone of successful implementation of large, complex IT projects. Developing a strong business case is at the core of the Benefits Driven Procurement (BDP) approach and is a key element of the Enhanced

Management Framework (EMF). Both IT projects we looked at developed comprehensive business cases.

The business case for the Export and Import Controls System (EICS) project identified the desired outcomes and benefits that the project was to deliver. It related those benefits to the mandate of Foreign Affairs and International Trade and to the program direction of the Export and Import Controls Bureau. The business case also contained an analysis of several potential solutions to the business problem, including their long-term costing implications. The rationale for the recommended solution was also documented.

The Materiel Acquisition and Support Information System (MASIS) project was supported by a business case that described the re-engineering challenge and the benefits of integrating information systems maintained at the time by separate Forces and administrative units. The business case has been reviewed as the project has developed, and adjustments have been made as appropriate. All off-ramp decisions, new tasks and changes in scope are governed by the business case. It is also the basis for assessing performance.

Using a phased approach. By breaking a project down into phases, the BDP approach provides checkpoints for deciding whether the benefits accruing to end users can no longer justify a further investment of resources. Both projects used a phased approach with successive off-ramps. In addition, both departments used the first phase of the project to develop the strategy for the business solution and to define the development and construction phase of the project. Both projects emphasized the overall benefits to be achieved, rather than defining detailed specifications and requirements at the outset.

For the EICS project, the Department contracted with a consulting firm to help prepare the request for proposals, including evaluation criteria. The project itself involved a definition phase and a construction phase. The contract for the definition phase ended in January 2000 with the successful completion of formal system requirements. The contract for the construction phase contains many tasks that are used as checkpoints, providing additional opportunities for either party to exit the contract if desired. Full deployment of the project is expected in April 2001.

For the MASIS project, National Defence began the formal acquisition process by releasing a draft request for proposal. The final request for proposal contained minimal functional specifications and it was expected that the IT industry would provide the solution. The contract for the first phase involved not only developing an overall system design and implementation plan but also replacing an obsolete system at the Department's workshop depot in Montreal with at least 30 percent of the functionality planned for the new system. The contract for the second phase deals with the construction and delivery of the full system. Deployment of the overall system involves incremental rollouts with off-ramps, and is expected to be completed by June 2004.

Establishing governance and getting senior-level sponsorship. Senior sponsorship and appropriate governance are key ingredients in successfully implementing large IT projects. We found aspects of both in the two projects that we reviewed. Moreover, there has been no turnover among the several senior officials who are responsible for the projects.

The Director General of the Export and Import Controls Bureau has served as the senior sponsor for the EICS project since the beginning. The project is guided by a steering committee, comprising senior departmental officials and a senior representative of the

contractor firm. The respective roles and responsibilities of the Department and the contractor are stated in each of the two contracts.

For MASIS, the sponsor is a senior official of National Defence's Materiel Comptrollership and Business Management Directorate. The project manager is a senior officer of the Materiel Group and has been in that capacity since 1996. Internally, the project team reports to the MASIS Senior Review Board, which consists of senior staff from all three Forces, Defence Information Services, Logistics, and Engineering. An Executive MASIS Steering Committee oversees the project. The Steering Committee includes senior officials of all stakeholders — National Defence, Public Works and Government Services Canada (PWGSC, the contracting authority and central procurement agency for users departments and agencies) and the contractor firm.

Managing the project and related risks. Although it has not been identified as a key element of the BDP approach and the Enhanced Management Framework, an integrated team has been used to manage each of the two projects we reviewed. Integrated project management teams comprise staff of the department and consultants from the contractor firm. Use of the teams provides for flexibility and speed in making changes to advance the project or to mitigate risks.

The Integrated Project Management Office for EICS involves departmental officials with participants from the contractor firm. It is chaired by the project authority from the Export and Import Controls Bureau, and a senior official in the Department's Information Management and Technology Bureau is also a member. Each month, the Office updates a detailed risk analysis of the project and reviews the updated analysis to determine whether changes or additional actions are warranted. The contractor firm receives payment upon the successful completion of

authorized tasks by the target dates. The contract also contains provisions for avoiding or resolving disputes.

In the case of MASIS, the requirement to use an integrated project team was stipulated in the Statement of Work for each phase of the project. In addition to providing for flexibility and quick action, the integrated team approach is expected to increase efficiency, improve communication and streamline management oversight. Like EICS, the MASIS request for proposal stated that a risk management plan was a requirement. Each phase of the project was broken down into a series of subprojects with defined tasks. Payments are subject to the successful completion of pre-authorized tasks. In addition to remedy clauses, the MASIS contracts provide for incentive conditions to be negotiated for superior performance.

Both EICS and MASIS were in the construction phase. Although full implementation and deployment are not assured, both projects have progressed and delivered as planned. At July 2000, they had met expectations on schedule and stayed within budgeted costs.

The first-phase contracts for the EICS and MASIS projects were successfully completed and formed the basis for the work under the second-phase contracts. The deployment of EICS was expected in April 2001, as planned. For MASIS, by September 1999 the first-phase contract had provided systems capability for 30 percent of functional requirements at the Department's workshop depot in Montreal. With incremental rollouts, full deployment of the project was expected by June 2004.

In our view, the emphasis on front-end planning was an essential element in the positive outcome of the two projects to date. Its merit goes beyond serving as guidance and

recommended procedure. It ought to be required as a general practice in procuring and developing large IT projects. The front–end planning included:

- focussing on business needs, defined in terms of program mandate and business outcomes, and not on the solution;
- breaking the project down into phases and tasks;
- obtaining the commitment and ongoing involvement of senior management;
- establishing a governance structure; and
- involving PWGSC early in the development of an appropriate procurement strategy.

Since two projects do not form the basis of a successful procurement approach, we recommended that the government analyze the experience of recent acquisitions and specify the practices that they will generally require of user departments and agencies in large IT projects.

While the result of the two projects to date has been promising, we noted that there were issues that remain to be addressed. Of primary concern was the length of time taken for the acquisition phase of large IT projects.

Technology advances at a rapid pace. New products with ever–increasing processing speed and capacity are constantly evolving. Moreover, the workplace changes continually, along with program requirements and operational needs. The longer it takes to acquire, develop and

implement technological solutions, the higher is the risk that the business needs will change and the solutions become less beneficial and relevant. Long phases of acquisition and implementation also increase the risk that the acquired technology will become obsolete by the time it is deployed. Consequently, acquisition activities that require shorter time spans will add significant value to projects.

We reviewed the chronology of activities of the two large projects and analyzed the time span of the acquisition activities. We found that they spanned periods exceeding 18 months. The EICS project needs were first analyzed in 1997 and the first phase contract was awarded in late May 1999. Prior to adopting the BDP approach, the need for MASIS had been identified and attempts had been made to develop it as early as 1994. The MASIS project in its current form was initiated in 1996 and its first-phase contract was awarded in December 1998.

The Canadian government has imposed a deadline of 2004 for Government On-Line (GOL, the e-Government initiative in Canada). The scope of the GOL initiative is unprecedented and much more far-reaching than that of the Year 2000 computer problem. In order to meet this challenge, government procurement activities need to provide timely access to the necessary IT goods and services.

5. Method of Supply for Hardware

Governments buy personal computers and often in large quantities. In North America, laptops and desktops have sprung up on most desks and work areas in all government departments and agencies. With IT strategies that include “evergreening policies”, the trend is likely going to continue. For this reason, we examined the government’s method of supply to assess if it meets the objective of ensuring meeting user needs and

achieving good value for money, while respecting the government's procurement framework.

General method of supply for routine and low-volume purchases

Standing offers are a procurement instrument used by PWGSC -- the central procurement agency -- that allows user departments and agencies to order directly from suppliers. They provide a means to acquire goods and services at pre-negotiated prices that remain in effect for a specified period of time.

Public Works and Government Services Canada has arranged national master standing offers for routine, low-volume purchases of microcomputers and LAN-related products, including desktop and notebook computers and servers. Within the limits of delegated authority, user departments and agencies can issue call-ups against a standing offer with a specific supplier, requesting the exact quantities of goods and services they require. In general, a user department can issue a call-up for desktop and notebook computers directly to a specific NMSO supplier, up to a maximum of \$40,000. The limit for servers is \$100,000 per call-up. When a call-up is made against a standing offer, there is generally no further negotiation of price and the supplier is obliged to meet the call-up requirement.

The standing offers are awarded competitively to suppliers that meet technical and benchmarking requirements. In order to qualify, the supplier must also offer a product at a price within a defined range of the average price submitted by other suppliers for products in the same category. By awarding the standing offers competitively, this method of supply addresses an essential element within the government's procurement framework.

From our examination, we observed good practices as well as weaknesses in this method of supply. They are described below for sharing and discussion at the Symposium.

Benchmarking products for users

The central procurement agency provides guidance and support to user departments and agencies for acquiring personal computers. In addition PWGSC requires vendors of notebooks and desktops to submit them for benchmark testing in order to qualify for inclusion as national master standing offers. We support this approach because it provides assurance to users that the products they intend to procure meet established testing standards.

Working with a private sector partner, PWGSC tests the personal computers for compatibility, features and usability. In the case of laptop computers, battery performance testing is also carried out. Examples of testing and evaluation factors include:

- stress testing – execute workload of DOS-based and Windows applications in a continuous loop for a period of time.

- evaluate usability for a number of factors – such as, system teardown; setup/configuration; documentation; hard drive installation; and ease of service, in the case of desktop computers.

- assess features – such as, processor; BIOS; software; system RAM; shadow RAM; secondary cache; security; I/O ports; hard disk and controller etc.

The personal computers are categorized to facilitate selection. Because these national master standing offers have been awarded competitively, user departments can choose directly from vendors that are in the same category. Provided that the total value of the acquisition falls within the delegated limits of authority stated above, these standing offers provide a quick and ready tool for users to acquire the required goods to meet operational needs.

Features for better economy

The national master standing offers for desktop computers are heavily used. Thus, Public Works and Government Services Canada offers additional features to help users get more out of their IT budgets. On a biweekly basis, PWGSC assesses products and identifies those that offer the lowest cost in each of the desktop categories, based on a combined evaluation of technical merits and price. The products with the lowest evaluated costs are posted on the Department's website. To encourage the use of those products, PWGSC also raises their call-up limit from \$40,000 to \$100,000.

Standing offers are arranged to accommodate routine, low-volume purchases. To support larger-volume purchases, PWGSC provides user departments and agencies with an option to issue a request for volume discount (RVD) to standing offer suppliers on their listed prices. The RVDs can be used for purchases up to \$10 million. They are processed on a competitive basis and are thus an alternative to the traditional competition that involves issuing requests for proposals.

There is room for best value

While we concluded that the arrangement of standing offers as a method of supply for personal computers and LAN-related products had merit, our audit noted that opportunities existed for more cost savings.

Call-ups on a national master standing offer are intended for low-volume purchases. In exercising a call-up, a user department usually purchases the listed product at the specified price. That price has been set within a competitive price range but usually at a premium, because of the low purchase volume anticipated. Although the RVD process was available for obtaining volume discounts, most microcomputers and LAN-related products purchased in the last two years were acquired through departments' call-ups.

We reviewed information from Public Works and Government Services Canada on purchases of microcomputers and LAN-related products in 1998-99 and 1999-2000. We noted that on average, RVD procurements accounted for around 25 percent of about \$200 million in total annual acquisitions of those products. About two-thirds of all microcomputers and LAN-related products that were purchased using standing offers were acquired in the last three months of the fiscal year. An analysis of fourth-quarter data from four sample departments confirmed that low-volume purchases dominate. We analyzed a sample of RVD transactions processed by PWGSC in 1999-2000 and found that savings from volume discounts averaged about 17 percent.

Some users expressed the concern that RVDs may take a long time. However, in a small sample of RVD acquisitions made in 1999-2000, procurement averaged four weeks — a significant advantage over the traditional competitive process using requests for proposals.

Other users who had reservations about using RVDs cited their preference for retaining sole control or their concern that PWGSC might lack flexibility.

We recognize that RVD procurement may not always be feasible, and there are occasions when simple call-ups are appropriate and provide the best value. However, increasing the use of RVD procurement could lead to cost savings in the neighbourhood of \$10 million every year. This does not take into account the use of acquisition cards or local purchase orders for those products. For expediency, departments and agencies use acquisition cards and local purchase orders for purchases under \$5,000. In smaller or highly decentralized departments, such purchases can represent a significant portion of the department's total procurement.

User departments that we audited have identified a potential weakness in establishing the standing offers. The concern was that the categories as well as the product lists were not always sufficiently up-to-date. Due to the rapidly changing environment, there were times when certain products listed on standing offers were no longer available. To accommodate those situations, a supplier was permitted to substitute listed products with improved or upgraded versions, provided they met or exceeded benchmarking requirements and were offered at the same or lower prices. However, there was still a risk that users might acquire a lower level product with very marginal savings or purchase products that the open market no longer supported.

6. Purchasing Software Products and Related Services

Competition and the government procurement framework in Canada

The Canadian government procurement framework encompasses policies and directives set by Treasury Board Secretariat, contracting regulations made pursuant to the *Financial*

Administration Act, and the Supply Manual, the central procurement agency's procedural manual for supply activities. Government acquisitions are also Government acquisitions are also subject to multilateral and federal–provincial trade agreements: the *North American Free Trade Agreement*, the *World Trade Organization–Agreement on Government Procurement*, and the *Agreement on Internal Trade*. The Canadian International Trade Tribunal, an administrative tribunal, conducts inquiries into complaints by potential suppliers about government procurement actions, where they are covered by the trade agreements.

In addition to the pre-eminence of operational requirements, the importance of enhancing competition and complying with the government's obligations under the trade agreements was clearly stated within the policy statements. This general procurement framework applies to all government procurement, including those related to IT goods and services.

Purchasing software as a commodity

Like purchasing microcomputers and LAN–related products, user departments and agencies were using national master standing offers to purchase commercial off–the–shelf software products directly from suppliers, subject to the authorized limits. Those limits were \$40,000 for software licences and \$50,000 for software solutions involving services. Purchases above the limits were processed by PWGSC. In addition to using call–ups, departments and agencies made direct purchases using acquisition cards, local purchase orders and sole–source contracts. In some instances, a full competitive process using Request for Proposals was also used.

The standing offer method of supply was widely used. During 1998-99, PWGSC processed a total of about \$200 million in software purchases, of which about \$120 million involved standing offer transactions.

Unlike those for microcomputers and LAN-related products, the national master standing offers for software products were awarded to vendors without competition. The criteria were based solely on previous volumes of business and did not involve technical specifications or pricing. Using this and other non-competitive methods of supply, over time departments could build up a substantial investment in certain software products acquired piecemeal and on a non-competitive basis. Efficient means of acquisition took priority over managing software as an investment. In essence, software acquisitions have been treated like those of any other commodity.

Software products are not a simple commodity

In reality, software products are much more than typical goods. The products are not interchangeable and they are upgraded continually. The pricing of software is based on the number of users rather than the number of physical goods. The market is extremely competitive and involves many players.

More significantly, software products often have far-reaching implications for an organization. They must be integrated with other technology products in order to function. Maintenance and upgrade costs are usually substantial. Software products have a direct impact on users, and the costs associated with changes, such as training needs and lost productivity, are high. Software procurements are more akin to acquiring a relationship that includes a life cycle than to purchasing a readily replaceable commodity. In cases where software products form part of

the IT infrastructure or an enterprise-wide installed base, their acquisition should be treated as that for large IT projects and be subjected to the same rigour and discipline. In the audit, we concluded that the government lacked a strategy for acquiring software as an IT investment and recommended that there be one.

Installed software base became an issue

As described earlier, over time, user departments could build up an installed base of software acquired on a piecemeal and non-competitive basis. This could become a significant procurement problem if a department needed to extend the use of the software to the entire department, or when it needed to procure department-wide maintenance services and software upgrades.

In recent years, potential bidders have successfully challenged the government's solicitation to upgrade existing installed bases of software. In each of three cases that we examined, the user department was acquiring additional licences or upgrades for software already implemented in its information systems. They were sole-source contracts that were let under the provision of international trade agreements on limited tendering.

The international trade agreements place a restriction on limited tendering to prevent it from being used to avoid the maximum possible competition, to discriminate among suppliers, or to protect domestic suppliers. Limited tendering can be used only under certain circumstances and conditions, as defined by the trade agreements. The Canadian International Trade Tribunal has determined that if a sole-source contract is challenged, the onus is on the government to prove that limited tendering was justified.

In those three cases, the Tribunal found that the government could not prove it had met the conditions for limited tendering. Consequently, it determined that an open, competitive procurement process should have been used. Moreover, in one of the three cases, the Tribunal determined that PWGSC could not impute the cost of converting the installed software as a basis for awarding a sole-source contract. The Tribunal stated that conversion and training costs ought to be determined through an open competition.

We analyzed data for the past three fiscal years to assess the extent to which government departments had acquired software licences piecemeal and non-competitively. Our analysis of nine major software vendors showed that a large majority of software purchases from April 1997 to March 2000 were non-competitive. We found that the purchases in 1999-2000 were almost exclusively non-competitive; this represents well over 95 percent of the total purchases from those nine vendors. Moreover we found that since April 1997, only one user department has acquired its installed base of enterprise-wide office automation software on a competitive basis.

The trade agreements permit the use of limited tendering to upgrade software or purchase additional licences only if certain narrowly defined conditions are met. Thus, the use of sole-source contracts for a department-wide upgrade of a software product, or for acquiring additional licences to extend the use of a software product to the entire department, can be vulnerable to formal complaints from potential bidders at the Tribunal. A competitive process for that type of software procurement is complex and involves many issues, including defining and evaluating conversion costs. Despite renewed efforts in revising the procurement approach in recent years, we concluded that acquiring additional licences or upgrading software for use across a department continued to be a challenge for the government.

7. Conclusion

Procurement for IT goods and services is an important activity in supporting governments around the world to transform their service delivery via the Internet. The Canadian government has identified it as a key impediment in moving forward to meet our E-Government agenda by 2004 as announced. This paper identified some Canadian practices, positive as well as negative, for discussion with and consideration by other SAIs.