Information Technology Office

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Main points

In 2004, the Government directed the Information Technology Office (ITO) to begin delivering information technology (IT) services to ministries. Ministries previously provided these services for themselves. The consolidation was intended to improve IT services and save money. The consolidation involved significant risks because IT is an integral part of delivering many government programs and services and because the consolidation required significant organizational change.

At March 31, 2008, the consolidation of IT services into ITO was largely complete. Our audit objective was to assess whether, by that date, ITO delivered intended service improvements through IT consolidation and provided those services at a lower cost. We intended to examine evidence comparing changes in services and costs to a baseline or starting point. However, the evidence was incomplete and not verifiable, and we were not able to conclude on the objective.

The Government should have set out an overall business plan for the consolidation, with an estimate of total costs, together with a method for measuring progress against the plan. This would have provided a basis for the Government to evaluate the success of consolidation. We make recommendations for improvements in the areas of client satisfaction, applications and application support, and responding to service requests.

Measuring the benefits of IT consolidation

Over the past four years, the delivery of information technology (IT) services within government ministries has changed dramatically. During this period, the Information Technology Office (ITO) began providing IT services that government ministries previously provided for themselves. The Government's goal for this change was to improve service and lower costs. We examined whether at March 31, 2008 ITO improved IT services through consolidation and provided those services at a lower cost. This chapter sets out the conclusion and key findings of our audit.

Background

In December 2004, *The Information Technology Office Regulations* formally established ITO as a ministry of government.[1] Before that time, ITO had existed as a branch of another ministry. The regulations give ITO a broad mandate that includes implementing government IT policies and programs, delivering IT services to ministries and charging for those services, and setting and enforcing security policies.

In 2004, the Government directed ITO to work with ministries to restructure how government uses IT. The Government did not have an overall business plan that set out the expected costs, benefits, and risks of consolidation of IT services into ITO. The consolidation built on a pilot consolidation involving several ministries.

Consolidation included ITO:

♦ operating and managing central IT infrastructure such as networks and servers
♦ providing help desk services
♦ developing applications
♦ providing project management on IT projects
♦ obtaining, distributing, and managing IT hardware and software

At March 31, 2008, the consolidation of IT services into ITO was largely complete. Exhibit 1 lists ITO ministry clients at March 31, 2008.

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[1] Now *The Information Technology Office Regulations, 2007*.

Exhibit 1—ITO ministry clients at March 31, 2008

Advanced Education, Employment and Labour
Agriculture
Corrections, Public Safety and Policing
Education
Energy and Resources
Environment
Enterprise and Innovation
Executive Council
Finance
First Nations and Métis Relations
Government Services
Highways and Infrastructure
Information Technology Office
Intergovernmental Affairs
Justice and Attorney General
Municipal Affairs
Public Service Commission
Social Services
Tourism, Parks, Culture and Sport

Planned benefits

ITO has outlined many benefits that IT consolidation would deliver.[2] These included reduced IT costs, improved efficiency and effectiveness of IT service delivery, enhanced security, transformation of government business processes, and improvements in citizen/business service delivery.[3] The ultimate goal, according to the Government in 2004, was to "enable government to provide better and more cost-effective services to citizens and businesses."[4]

Other governments have pursued consolidation as a method of delivering IT services and managing costs. Exhibit 3 describes risks and benefits relating to differing approaches to IT, ranging from a decentralized approach to fully consolidated IT services.

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[2] Benefits were described, for example, in performance plans, annual reports, media releases, and in appearances before legislative committees.
[3] See, for example, Government of Saskatchewan News Release November 24, 2004, "Strategic Information Technology Agenda Enhanced", and 2005-2006 Provincial Budget Performance Plan, Information Technology Office, pp. 7, 10-11.
[4] 2005-2006 Provincial Budget Performance Plan, Information Technology Office, p. 7.

Managing risks of consolidation

Accomplishing change is difficult. IT projects are inherently risky, especially ones that depend on organizational change. These projects often fail to deliver intended benefits or fully meet intended goals. ITO's consolidation project involved significant organizational change in delivery of government IT services.

Because IT is an integral part of delivering many government programs and services, changes to how IT services are managed and delivered pose significant risks. Changes to IT service delivery that result in service issues could interfere with ministries delivering services effectively and achieving their objectives.

IT spending by ITO and ministries is significant, both for the cost of consolidation and for ongoing IT service delivery. ITO's annual reports indicate that its costs for the consolidation from 2004-05 to 2007-08 were $7.5 million. This amount does not include costs incurred by ministries for consolidation. The Government's 2008-09 Budget Estimates indicate that ITO will charge ministries more than $50 million for IT services annually. This amount does not include other IT costs incurred by ministries.

ITO and ministries managed risks associated with consolidation by following a structured process. After preliminary discussions with ministries on bringing them into the ITO service delivery model (partnership), ITO examined the state of IT within the ministries. ITO used this due diligence process to create business cases for the ministries. The business cases described issues facing the ministries, including:

♦   Aging computers
♦   Many different models of computers
♦   Multiple operating systems
♦   Multiple versions of common programs
♦   Multiple networks in single organizations
♦   Lack of long-term plans for hardware, software, applications
♦   Lack of standard processes for purchasing, security, maintenance

The business cases set out planned benefits that the partnership would deliver. The documents described expected cost savings and service benefits for each ministry (although, as described below, there was

limited performance-related information that could serve as a baseline for measuring changes).

ITO and ministries then reached an agreement called a project charter that set out the tasks, timing, and controls over each ministry's partnership with ITO. Through the project charters, ministries approved the conclusions that ITO had reached on the benefits of consolidation for the ministry. This process provided the foundation for bringing ministries into the partnership.

Audit objective and criteria

The objective of this audit is to assess whether at March 31, 2008 the Information Technology Office (ITO) improved information technology (IT) services through consolidation and provided those services at a lower cost.

Throughout our audit, we followed *The Standards for Assurance Engagements* established by The Canadian Institute of Chartered Accountants.

The exhibit below sets out the criteria. These criteria are based on our related work and reviews of literature (set out in the selected references). ITO agreed with the criteria.

Exhibit 2—Audit criteria

For the Information Technology Office (ITO) to have improved information technology (IT) services through consolidation and provided those services at a lower cost, we expected ITO to have:

♦   delivered service improvements
  -     achieved intended benefits
  -     measured against baseline
  -     met client needs

♦   reduced IT costs
  -     achieved intended cost savings
  -     measured against baseline
  -     included all costs

Conclusion

In the absence of reliable performance measures and costs relating to IT services for periods before and after consolidation, we are not able to determine whether at March 31, 2008, the Information Technology Office had improved information technology (IT) services through consolidation and provided those services at a lower cost.

To determine whether ITO delivered intended service improvements through IT consolidation and provided those services at a lower cost, we intended to examine evidence comparing changes in services and costs to a baseline or starting point. However, the evidence was incomplete and not verifiable.

As stated earlier, the Government did not have an overall business plan for the consolidation of IT services into ITO. The Government should have set out its overall business plan for the consolidation, with its estimate of total costs, together with a method for measuring progress against the plan. This would have provided a basis for the Government to evaluate the success of consolidation. The absence of a business plan increases the risk of user needs not being met and increased costs.

As noted, business cases did exist at the ministry level. ITO worked with ministries to prepare business cases for each ministry. However, ministries had few quantitative performance measures that ITO could use to establish meaningful baselines. Also, ITO did not develop detailed baseline performance information. As a result, there was limited performance-related baseline information for measuring changes in services and costs.

For example, to establish a cost baseline, ITO gathered the IT costs for a ministry for the preceding five years to determine the ministry's average annual IT cost. Ministries reviewed and agreed with this cost information. However, it is not appropriate to compare this average (the "before" amount) against the amount ITO billed the ministry for services for 2007-08 (the "after" amount). IT services before and after consolidation are not the same. For example, ITO introduced new services not reflected in the earlier costs. In addition, according to ministries, some existing services (particularly applications and application support) have diminished.

Because of the limited performance-related baseline information, it is not possible to attach a reliable cost to the service changes.

Accordingly, we are not able to conclude on our audit objective. In the following section, we describe key findings related to:

♦   client satisfaction
♦   infrastructure and core services
♦   applications and application support
♦   responding to service requests

We also make recommendations for improvement.

Key findings and recommendations

Client satisfaction

In examining whether IT services have improved, we considered client satisfaction. As noted in the table at Exhibit 3, meeting user needs can be challenging under a consolidated approach to IT.

Annual satisfaction surveys are required in the service level agreements that ITO has with most of its clients. ITO reports that at March 31, 2006, the number of satisfied clients was 78.3%. At March 31, 2007, the percentage was 64.8%. ITO reports that a figure was not available for 2008 due to timing of the 2007 provincial election.[5]

We interviewed officials from a broad cross-section of ministries to determine whether they found that there had been service improvements. Our interviews showed dissatisfaction with ITO's services. However, several interviewees acknowledged improvement in specific areas (see "Infrastructure and core services").

The experience of ministries varied considerably depending on when they joined the partnership. Ministries that joined later expressed less dissatisfaction. ITO and ministries adapted their processes as consolidation progressed. In addition, ministries who joined later benefited from the experience of those who joined early. ITO and

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[5] Information Technology Office, 2007-08 Annual Report, p.11.

ministries revised existing agreements to reflect later improvements reached with other ministries.

One of the principal features of consolidation was that IT staff in the ministries became ITO employees when ministries joined the partnership. In some cases, IT staff provided more than technical skills. They assisted ministries in analyzing and articulating their IT business needs. Several ministry officials told us that when these staff joined ITO, it impaired the ministries' ability to deliver programs and services effectively.

Ministries also advised that they regarded the overall IT capital planning and governance process as having improved. The revised processes require ministries seeking to undertake IT projects costing more than $250,000 to develop business cases for the projects. Ministries must seek approval from the Business Advisory Council, a group consisting of representatives from various ministries. The Council is charged with considering government-wide priorities, identifying opportunities for efficiencies (for example, by combining requests from different ministries), and making allocations.

Ministries told us that while the period after initial consolidation had been difficult, they were starting to see improvement. They said that significant improvement would take more time.

1.   **We recommend the Information Technology Office resume regularly measuring ministry satisfaction as agreed upon with ministries.**

2.   **We recommend the Information Technology Office work with ministries to prepare joint action plans to address issues identified in satisfaction surveys, as required by its service level agreements.**

3.   **We recommend the Information Technology Office assist ministries to build capacity to analyze their information technology requirements.**

Infrastructure and core services

By infrastructure and core services, we mean the provision of basic computer and network services. This includes supplying desktop computers and network connections for client employees.

For infrastructure and core services, several ministries said that consolidation had delivered limited gains in the goal of improving efficiency and effectiveness of IT service delivery. Ministries identified benefits resulting from the adoption of uniform hardware and software, consolidation of servers, and faster acquisition of new equipment. Several ministries mentioned new services that ITO had made available, including improved access to systems and data from remote locations.

Several ministries identified security as an area where consolidation had delivered improvements. However, we note from our other work that ITO has more work to do on improving security. As reported in Chapter 12 of our 2008 Report—Volume 3, ITO had adequate controls to protect the security of client systems and data except that ITO needs to:

♦   establish information technology security policies for its clients
♦   protect its systems and data from security threats
♦   have a disaster recovery plan for its data centre and client systems

Without adequate controls in these areas, client systems and data remain at risk.

Applications and application support

By applications, we mean the software programs used by ministries to help them provide their services. Application support means maintenance of software programs and assistance in their use.

Ministries indicated that service after consolidation was worse in the area of applications and application support. Because the purpose of IT is to advance business goals and objectives, this presents a serious problem to these ministries and is a significant shortfall in service delivery.

Ministries observed that consolidation of IT services has made ITO responsible for supporting hundreds of applications, some of which are specific to the needs of individual ministries (i.e., custom applications). Ministries suggested that it is difficult for ITO to obtain economies of scale given the number and diversity of these applications. At the same time, standardization of applications, particularly custom applications, will require much additional time, effort, and cost.

4.   **We recommend the Government evaluate whether the Information Technology Office should provide ministries with application support for complex and custom applications.**

Responding to service requests

Most ministries were of the view that ITO responded adequately to routine requests, such as password resets. They said that ITO response times were slower than they had experienced when IT services were in-house. However, they also observed that services were less dependent on availability of particular staff, a problem when they used in-house IT services.

Ministries further advised that when requests were not routine (i.e., when requests related to specific ministry needs and were not about basic system or network access) service was not adequate. The problems were most pronounced when ministries sought support for their complex and custom applications.

ITO provides monthly service reports to ministries. Ministries expressed the view that the information ITO provides in the service reports relates to routine requests and not to more complicated and time-consuming custom application support requests. Ministries did not view the service measures and targets in the reports as being relevant to their needs. However, we note that ministries have the ability to seek different service levels and measurement mechanisms.

5.   **We recommend the Information Technology Office agree with ministries on relevant service delivery measures and targets.**

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IT service delivery models

Exhibit 3—IT service delivery models

Issues	Decentralized IT Services	Shared Services Model	Fully Consolidated IT Services
Cost considerations	• Highest cost • Low economies of scale • Fragmented planning, budgeting and investment • Decentralized procurement; limited buying leverage	• Lower cost provider if you can win business • Middle of the road costs; economies of scale increase • Coordinated planning, budgeting, and investment • Capital investment dollars more centralized	• Lowest Cost • Cost equalization • Centralized procurement • Standardization lowers cost of operation, maintenance and support
Challenges	• Highly differentiated and difficult to coordinate • Variable standards & policies • Variable staff skills • Duplication of effort • Higher costs across government	• Promoting and marketing services • Managing service level agreements • Maintaining participation	• Slow process to implement • Continuous process • Detached from business units – limits understanding of business needs • Viewed as unresponsive to agency needs
Level of flexibility	• High departmental flexibility • Agencies have most control over planning, policy, budget, and operations • Most responsive to agency needs	• Strong measurement ability to show SLA [Service Level Agreement] adherence • Some differentiated levels of service flexibility	• Lower end user flexibility (usually highly standardized) • Often mandated • Inflexible • Limited agency influence
Concerns	• Fastest response to externalities • Disparity between the haves and the have nots	• Good marketing and customer service skills required • Hard for shared services provider to meet large department price points	• Doesn't change quickly • Funding model issues

Source: NASCIO [National Association of State Chief Information Officers] Issue Brief, March 2006, *IT Consolidation and Shared Services: States Seeking Economies of Scale*

Glossary

Application—A software program. This includes programs such as word processors, spreadsheets, and database programs, as well as customized applications developed or adapted for specific purposes.

Data centre—A central location for computer network hardware and software, especially storage devices for data.

IT infrastructure—An organization's computer and network assets.

Network—A group of computers that communicate with each other.

Server—A computer that hosts systems or data for use by other computers on a network.

Service level agreement—An agreement of one agency to provide IT services to another agency. Agreements usually specify the extent and quality of services to be provided.

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