

***Report of Ontario's Special Task Force
on the Management of Large-Scale Information
& Information Technology Projects***

July 2005

Table of Contents

- 1. Executive Summary of Recommendations for Best Practices**
- 2. Introduction**
- 3. Terms of Reference: Mandate, Scope and Methodology**
- 4. Task Force Findings**
- 5. Task Force Recommendations for Best Practices**
- 6. Appendices:**
 - 1 Information and Information Technology Organization Chart
 - 2 Members of the Task Force
 - 3 Task Force Terms of Reference
 - 4 Summary of Research on Best practices in IT Management across Jurisdictions
 - 5 Respondents: Consultations and Interviewees

1 Executive Summary and Recommendations for Best Practices

Information and Information Technology (I&IT) has become critical for the effective management and delivery of government services. From back-office information storage and processing to citizen-facing websites, from justice systems to fishing licences, information technology (IT) is present in every aspect of government operations.

The Ontario government has successfully deployed many projects. For its efforts, it has attained international recognition as a leader in e-government. However, the province of Ontario has also had its share of project challenges and failures. A significant number of large IT projects seriously underperformed, were delivered late, and were over budget.

Over the past six months, at the request of the Minister of Government Services, the Honourable Gerry Phillips, we have studied why some very large I&IT projects struggle, and sometimes, fail. Our review included an analysis of best practices in similar jurisdictions, and how Ontario measured up in key areas. While Ontario has had its share of challenges, we note that all the jurisdictions we studied have struggled with the management of IT and large IT projects.

Large IT projects rarely fail due to IT problems alone. In fact, most projects that struggle are engaged in major business transformation, while smaller, more routine IT projects are more likely to complete their project life-cycle without issue. Major business transformation in the Ontario government is often treated merely as an IT initiative, as opposed to the complex organizational change management challenge that it actually is. Large IT projects invariably involve significant changes to business processes. However, the organization generally fails to appreciate the extent of this change, and consequently fails to manage it accordingly. As a result, projects lack organizational resolve, dedicated political-level sponsorship, or adequate project oversight. Respondents to the Task Force almost unanimously cited these traits as being central to project failure and fundamental to improving the overall success of large IT projects.

In addition to the leadership issues above, there are a few other practices that Ontario can improve to ensure more effective project delivery. These include addressing project planning, oversight, measurement, human resources issues, and procurement.

Recommendations

Our fundamental recommendation is that:

The Ontario government significantly increase the strength of its governance of major operational transformations. To that end, Ontario should enable accountability for major business transformations by establishing a new Deputy Minister position dedicated to overseeing these types of projects.

Business transformation needs to be elevated to the same level as that of the thirty Deputy Ministers focused on policy and operational issues if it is to get the decision-making attention it needs to succeed. This recommendation is critical and forms the basis for the recommendations below. They have been grouped into governance, capacity, planning and procurement.

Other Recommendations

Governance

- Management Board of Cabinet should determine the government's capacity for large IT-driven business transformations and strictly limit the number and size of concurrent projects accordingly.

- The sponsoring organization should commit and hold accountable senior executive leaders for the duration of the project. This requires solid political support at the ministerial level and project leadership at the Deputy Minister level.
- Management Board of Cabinet should shorten project approval cycle times for incremental and low-risk projects.
- The Office of the Corporate Chief Information Officer (OCCIO) should continue to strengthen overall project reporting processes to provide Management Board of Cabinet with an effective means to quickly assess the progress, timeframe and risk profile of ongoing projects.
- Management Board of Cabinet and the OCCIO should ensure project post-mortems are a regular part of project oversight.
- Management Board of Cabinet should establish an Independent Advisory Committee (IAC) for IT to provide expert and independent advice on the issue of large IT transformations.

Capacity

- Make project management a core competency of the Ontario Public Service (OPS).
- Review total compensation levels for IT executives and IT roles such as project management to help attract and retain talent.

Planning

- Management Board of Cabinet should take a Portfolio Management approach to IT investment and management.
- Project sponsors should invest a greater percentage of the project budget than they now do in up-front planning to ensure more robust business and project plans.
- Management Board of Cabinet and the OCCIO should establish and formalize a gateway review process for project approvals and funding.

Procurement

- Project sponsors and leads should prepare more thoroughly for procurement and begin projects only when a clear business case has been developed.
- Project sponsors should separate design from build in procurement.
- Project sponsors and leads should ensure that the project team members who are "closest to the action" write detailed Requests for Proposal (RFPs) – and not the procurement leads, exclusively.
- Contracts should contain "off-ramps" (that give the government the option of terminating the relationship with an underperforming or unsuitable vendor and replacing the vendor with a new one, or stopping the project).
- Management Board of Cabinet should create a forum for ongoing dialogue between the I&IT industries and government senior civil servants outside the regular procurement process.

2 Introduction

The Government of Ontario is committed to using Information and Information Technology (I&IT) to improve the ways it serves its citizens and, in particular, to support and enable the key priorities that it has identified, namely:

- Success for Students;
- Better Health;
- Strong People, Strong Economy.

The Ontario government uses I&IT systems to support virtually all aspects of its business, from helping police track offenders, to registering drivers and vehicles, to delivering health care to remote locations. Ontario invests significant resources in I&IT, spending \$926 million annually to maintain and enhance the electronic delivery of government services.

The I&IT organization is a matrix organization. It has a horizontal "clustering" (see Appendix 1) design that brings together government business organizations with the I&IT organization. As such, the Office of the Corporate Chief Information Officer (OCCIO) oversees the I&IT clusters – eight organizations that deliver IT services and support for the ministries they represent. Under the Information and Information Technology Strategy established in 1998, the OPS formed the I&IT clusters in 1999 to:

- take advantage of economies of scale and scope;
- foster more integrated government through integrated planning and management across lines of business with similar practices and clients.

I&IT clusters are the direct purchasers of iSERV services on behalf of ministries.

A Cluster Chief Information Officer heads each I&IT cluster, and has a dual reporting relationship: to the Deputy Ministers in the cluster with respect to business directives and priorities, and to the Corporate Chief Information Officer (CCIO) with respect to I&IT directives and priorities. Each cluster I&IT group develops information management and technology solutions to meet the cluster's business requirements. Where it exists, the groups use the common infrastructure and operate within corporate policies, processes, architecture, standards and plans.

The Province of Ontario has been ambitious in adopting technology. The Task Force considered 21 large I&IT projects initiated between 1997 and 2004. These large projects represent a significant percentage of the government expenditure on I&IT (10 per cent to 20 per cent in any given year). Given the spending on, and importance of, I&IT, the Government of Ontario is committed to ensuring that these investments give citizens and taxpayers the best value.

Large IT projects usually involve significant innovation in systems development or systems integration. In Ontario, as in many other jurisdictions, there have been large IT projects that have lost momentum and support, where costs have been greater than expected, benefits less than desired, and results well short of hoped-for outcomes. In Ontario today, approximately 40 per cent of IT projects still fall short of plan in some way.

In September 2004, the Honourable Gerry Phillips, Minister of Government Services, commissioned a panel of experts to offer advice on ways to improve the management of large-scale IT projects in Ontario.

The panel chair was L. Denis Desautels, formerly Auditor General of Canada. The other members of the Task Force were Carol Stephenson, Dean of the Richard Ivey School of Business at the University of Western Ontario; David Johnston, President of the University of Waterloo; and Howard Dickson, Government Chief Information Officer, Government of the Hong Kong Special Administrative Region. Appendix 2 lists the Task Force membership.

This report of the Special External Task Force on the Management of Large-Scale Information and Information Technology Projects presents recommendations that are intended to help establish effective mechanisms and structures through which to govern and manage large-scale I&IT projects enable the province to achieve optimal results.

3 Terms of Reference: Mandate, Scope, and Methodology

The mandate of the Special External Task Force was to review “large” I&IT projects that have been undertaken in Ontario. For the purposes of this analysis and subsequent recommendations, our Terms of Reference from the Minister (Appendix 3) defined a “large project” as projects that:

- involve significant business process redevelopment, procurement and system development;
- are multi-million dollar in scope;
- are multi-year in both funding and management, including both Common Purpose Procurement (CPP) and traditional contracting arrangements;
- have a major impact in the delivery of government business.

The Task Force reviewed 21 large I&IT projects that Ontario initiated between 1997 and 2004. These are listed in Table 1, below.

Table 1

Name of Initiative/ Project	Original Timeline	Original Budget
Cross-Jurisdictional Initiatives/Collaborative Seniors' Portal Project (Brockville pilot)	2002-ongoing	\$1.3M (\$0.7M is Ontario share)
Elementary Secondary Information Project (ESIP)	1998-99 to 2005-06	\$70M
Enterprise Portal Strategy	2002-07	\$40M
ePhysician Project	2000-04	\$150M
Family Responsibility Office (FRO) - Integrated Service Delivery Model (ISDM) project	2004-05 to 2007-08	\$31M
Food Safety Management and Trace-Back System	2003-07	\$12M
Government Mobile Communication Project (GMCP)	1998-2013	\$368M
Health Systems Restructuring: Infrastructure/Smart Systems for Health Agency (SSHA)	2000-05	\$488M
Integrated Financial Information System	1997-98 to 2003-04	\$102M
Integrated Financial Information System Release 2.0	2003-04 to 2006-07	\$27.3M
Integrated Justice Project (IJP)	1997- 2002	\$149M
Integrated Network Project (INP)	2001-06	\$33M
Integrated Public Health Information System (IPHIS)	2003-06	\$27.5M
Land Ambulance Response System (ARIS 2)	1998-2007	\$17.5M
Ontario Family Health Network - Ministry Systems Project	2003-05	\$27.5M
Ontario Laboratories Information System (OLIS)	1997-98 to 2008-09	\$88M
Ontario Student Assistance Program IT (OSAP)	2004-05 to 2008-09	\$28M
Road User Safety Systems Renewal	2001-06	\$86M
Service Delivery Model Technology (SDMT)	1997-98 to 2002-03	\$180M ceiling
Service Ontario - Electronic Service Delivery for Individuals	2003-04 to 2005-06	\$113M before offsets
Smartcard	2000-01 to 2004-05	\$500M

The Task Force's review included, but was not limited to, consideration of:

- how the government can move forward on large IT projects, including assessing those changes made and those that still need to be made;
- OPS IT project planning, governance, procurement processes, accountability, and project management capacity;
- technologies inside and outside the Ontario Public Service (OPS) that the government can acquire and leverage.

The work of the Task Force was to research and develop recommendations for best practices for procurement, project management, project governance and accountability mechanisms in the context of practical experience in Ontario. In carrying out its mandate, the Task Force also drew both on its members' own experience and private and public sector experiences in other jurisdictions.

The best practices that the Task Force recommends:

- span the life-cycle of a project – from inception through project and procurement planning, project execution, to the eventual hand-off of project deliverables and transition to business as usual;
- highlight process improvements at each project stage.

Together, these practices form a framework for managing large IT projects that will be an efficient, realistic, and cost-effective means for delivering results.

Best practices address areas such as, but not limited to:

- approval processes;
- business-case preparation;
- business-management practices;
- contract negotiations, including costing models;
- due-diligence issues;
- governance and accountability;
- OPS capacity;
- OPS processes;
- partnership issues;
- procurement requirements (Note: the Task Force provided advice at the strategic level. It did not provide advice on any specific procurement initiatives that the government is currently implementing);
- project planning;
- risk.

This report is made available to the public to give Ontarians confidence in the government's ability to manage large-scale IT projects in a responsible, affordable and sustainable manner. The Task Force's review and subsequent recommendations will help the government to ensure efficient and effective management of future I&IT investments, giving value to citizens and taxpayers.

The Task Force commissioned two studies on the management of large IT projects. These were:

- a research report on leading practices in information technology management across jurisdictions (see summary in Appendix 4);
- an analysis of the gap between Ontario and other jurisdictions with respect to leading practices.

The Task Force made a detailed examination of six Ontario government I&IT-enabled business transformations that were either completed or underway. This study provided the Task Force with insight into the development and management of large I&IT initiatives including associated success and risk factors.

The Task Force and its advisors conducted over 80 respondent interviews with senior members of the OPS, private sector vendors experienced in working with the OPS, and published experts in the field of large IT project management (see Appendix 5 for the list of respondents).

4 Task Force Findings

Compared to other industries and sectors, the world of information technology is new. A presenter to the Task Force compared information technology to the construction industry. In construction, building techniques are well-known and have been in place for hundreds of years. Information technology is a young sector. Organizations are still finding their way with it.

Ontario has had notable successes and received international recognition in this “first era” of IT development. It has also had challenges. A number of its large IT projects have suffered loss of momentum and support, budget overruns, and a lack of the hoped-for benefits.

The focus of our research has been to look at these challenges and determine sustainable best practices to address them. This section of our report discusses our findings, not only in Ontario but in the public sector generally. The findings are the basis for our recommendations.

4.1 Project Size

IT projects in the last few years have been closely tied to visions of public service transformation. These transformations are large-scale efforts that are much more than simply “putting in a new system”. Public service transformations require substantial improvements both to information technology infrastructure and to the way that customers and service providers interact and exchange information. During these projects, problems arise. For example, imprecise business rules or incomplete legacy data collections may appear. These problems tend to get tagged as IT problems. Calling problems in transformation projects simply “IT problems” obscures the fact that organizations may misunderstand the changes that are being made to their business. The reason that many IT projects fail is that senior executives’ understanding of the scope of the task – or their associated capability and willingness to lead and govern the change – is not aligned with the complexity, risk, and accompanying degree of change that the transformation is pursuing.

Most IT observers believe that the risk of project delays and project overruns increases exponentially beyond a certain project size. What that particular size is differs by organization, but “big-bang projects” are no longer the way to go. Projects broken down into smaller, more manageable sub-projects (e.g., no longer than one year in length) are generally successful, especially when an organization must demonstrate achievement of deliverables in each sub-project before obtaining approval and funding for the next phase of the project. In the public sector, we found that modular design and building that focuses strongly on solving a single primary problem (rather than trying to solve everyone’s problems all at once) works best. This approach gets faster, cheaper and better results, with less risk. With projects averaging less than 12 months, the organization gains the additional benefits of generating a track record of delivery and establishing credibility.

A number of leading jurisdictions found portfolio management techniques useful for managing multiple small-size projects. There is evidence that portfolio management strengthens executive sponsorship of priority initiatives. It creates a framework for better understanding the size, scope and number of projects – and their relationship to each other. Portfolio management helps channel investment and resources toward the highest priority, and most critically transformational, IT initiatives. Perhaps more importantly, it provides a way to contain the scope of both individual projects and IT programs so that they stay within the government’s transformational change capability.

We noticed that large IT projects in the Ontario government are traditionally assessed in isolation from one another, rather than in the context of other initiatives, in the context of government priorities, or with an understanding of the performance history of related initiatives.

Washington State is known as a public sector leader in portfolio management. According to the state, Washington agencies manage their IT resources as “one would manage investments in a real estate or stock portfolio. The portfolio facilitates the alignment of technology investments with agency business needs and the analysis and proper mitigation of IT investment risks”. Washington created an IT portfolio that serves as a central repository for all of its IT programs and projects. The portfolio is where government policy objectives are translated into IT investment.

4.2 Governance

A natural response to project failure in the public sector is to increase governance and oversight so that failure does not happen again. Unfortunately, this diligence means that project approvals take longer. Increasing the number of “gates” that projects must pass through forces the organization proposing a project to make to make more and more unrealistic commitments and to present its cost estimates as substantive. Thus, a project grows in order to satisfy many gatekeepers. When the project finally gets approval, it is too big, already late, and will be lucky to succeed. One presenter to the Task Force said, “Sometimes a government project is like a barge. Everyone throws everything on it and soon it is unable to leave the dock”.

In our discussions, we heard a clear call for more streamlined project governance. A review of the governance of projects is required to improve project oversight, to ensure alignment with government objectives, and also to streamline approval and oversight where possible. For example, determine the level of approval that a project requires based on the level of risk, and give Ministers and Deputy Ministers the authority to approve higher risk projects and receive regular updates for lower risk projects as they proceed, free from the associated costs and time delays of excessive approvals.

Currently, the business case (or Management Board of Cabinet’s MB20) process drives the funding and oversight of major IT initiatives. Regular reporting of a project and reassessment of its risk profile, priority, technology, and staffing are essential to prevent “scope creep” from seeping into the project and hampering delivery. For business transformation in the public sector, there is no equivalent to the Generally Accepted Accounting Principles (GAAP) for consistent inter-enterprise reporting standards that exist for operations. Transformation projects should have quarterly “fact-based” reporting. This will lead to better oversight, and will mitigate risk, particularly where the project spans several program areas and ministries.

We also noticed that oversight rests with Management Board of Cabinet, supported by I&IT Controllershship. The same body that manages the portfolio of projects and approves large projects should also work to ensure the alignment of these projects with government priorities. Best practice jurisdictions link government policy and IT projects at the highest level of oversight.

In Ontario, project steering committee membership tends to be transient. Members often do not stay with the project from conception to full implementation. Consequently, there is diffused accountability and responsibility for the project. The result is project governance that is slow in reacting to risks that threaten a major project.

4.3 Leadership

It seems obvious to say that projects need strong leadership. “Strong” means not only visionary or decisive, but also dedicated. Too often, numerous tasks and demands distract an organization’s executives. Although they want to be 100 per cent dedicated to a project, inevitably they cannot. As well, senior public servants get moved in and out of roles, affecting the continuity of an initiative. Problems are forgotten and are soon repeated.

The Ontario government provides no job stability or guarantees to an executive who carries the responsibility for managing a major project. This encourages public servants to start planning their safe landing prior to project completion, in case they are made

redundant after the project is completed.

Further, project leadership for business transformation often comes, not from the business owners, but from an IT function, as if by default. This is hard evidence that the organization treats the leadership of a major business transformation exclusively as an IT initiative, rather than the complex change management challenge that it actually is.

Large IT projects typically involve significant changes to business processes. However, the organization often does not fully understand the extent of the changes. Consequently, the changes are not accounted for and managed accordingly. As a result, these projects often suffer from a lack of organizational resolve, dedicated political and executive level sponsorship, and project oversight. Respondents to the Task Force unanimously cited these traits as fundamental to improving the overall success of large IT projects.

In the experience of many executives we heard from, projects produce real value only when the organization sees strategic transformation as vitally important; when it understands the complexities of the change; is willing and able to fund it; and dedicates appropriate time and resources to its completion. Tools, techniques, advisors and lawyers are support resources. They do not replace executive level understanding and commitment. Mission critical projects always get done.

4.4 Project Planning

A frequent problem in large IT projects that go wrong often occurs early on when project sponsors apply for funding with no thoroughly vetted, clear business plan. We often heard how decision-makers, dazzled by the proposed savings or efficiencies, overlooked a thin business case.

A business case in which project benefits are often overstated and unrealistic leads to problems in the long run, including unsatisfactory procurement and strained vendor relations, as we will note later.

Current project planning practice is biased toward giving generous amounts of time for development and implementation. As a result, up-front planning work gets short-changed. There is often inadequate or insufficient resource allocation for developing a project up to business case completion. If an organization puts more effort in up-front work, there is a risk of project delivery taking longer. That can be mitigated by making projects smaller or taking an incremental approach to building. Making a stronger investment in up-front planning gets a project off to a good start and improves the organization's likelihood of success.

To improve project planning, the Government of British Columbia separates the design phase from the build phase. It uses two or more private sector vendors to design a solution in partnership with the government. The government then selects the best design as the basis for the build phase of the project. This approach is worth considering in Ontario. We address this further in Recommendation 13 of this report.

4.5 Procurement

Procurement, more than any area of public sector IT, has received much scrutiny and been subject to much experimentation. It is clear there is no one fix or universal solution to procurement issues. However, a series of small changes will go a long way to making procurement smoother.

Presenters told us that a procurement strategy must fall within the skill, experience, and capacity of the government. To do otherwise multiplies risk. Using vendors of record is a suitably low risk approach to procurement but it has drawbacks. It is best to avoid joint ventures unless it is feasible to structure a separate legal entity (e.g., an agency) and pledge future revenue streams to refund the

initial capital investment. Joint ventures are not as well suited to IT as they are to capital projects; it is difficult to share risk when many aspects of the project are not easily known at the beginning of a project, or are difficult to predict.

The problem of “project unknowns” is often exacerbated at the Request for Proposal (RFP) stage of a project. As we have indicated, large IT projects that have gone off-track often had ill-defined business plans. These weak business plans, in turn, make for weak RFPs. For an IT project to be successful, the business plan and the RFP must have clear and specific deliverables and outcomes. The buyer must know exactly what it wants at the outset and be able to accurately state it.

The OPS has sometimes been over-reliant on vendors for project delivery and control. The OPS buyer may not understand the technology, large project management, business process redesign or change management as well as the vendor does. This lack of knowledge imbalances the vendor-client relationship and it puts the government at a disadvantage during the life of the contract. We have seen business requirements documents turned into enormous treatises, a risk-averse way of “making things appeal-proof” to cover up or compensate for what an organization perceives as its lack of capacity. In fact, the sheer size of these treatises ensures that the business owners have less than full understanding of the project. A clearer definition of success for the government’s partners will help alleviate the adversarial relationship that has developed between the government and private sector vendors.

Public and private sector organizations are different. Sometimes, vendors are unaware of the inherent complexities of working with the government on large IT projects. Often, they base their timelines and, therefore, cost estimates, on past experience with non-government projects, where governance and accountability structures are less complex than in the public sector. Vendors can fall into the trap of inadequate planning or not taking into account government characteristics like consensus building or complexity in decision and execution, which differ from those found in the private sector.

Flexibility is important in IT. No matter how well planned an IT implementation is, IT remains fraught with unknowns in a way many other “building projects” are not. There must be some degree of flexibility built into contracts in order to manage changes to the plan along the way. Contract off-ramps are a common practice.

4.6 Project management

When speaking with senior OPS executives, we heard repeatedly that proper project management is fundamental to IT project success. Indeed, we noticed that a strong project management methodology, together with formal senior level governance and oversight, was uniquely present in successful projects.

Mature project management capacity in an organization directly correlates to reduced rates of project failure and improved project performance. Maturity requires a few fundamental components.

Adequate Skill Base

First, there must be an adequate skill base. The lack of available project managers has been an ongoing challenge for public sector organizations. Ontario is not unique in the public sector in being short of qualified senior people to lead large transformational projects. Project management is not recognized within the OPS as a specialized skill. Consequently, career project managers in the public sector are a rare-breed. In the construction or engineering industries, project management is a profession. In the public sector, people with little or no previous relevant experience can end up managing large transformation projects.

Furthermore, because the IT sector is young relative to other industries, most public sector organizations have low levels of internal

IT project management experience. This partly explains why most large institutions do not have the internal staffing flexibility to match project demand. In addition, the organizational bias for long-term, envelope-driven funding operations over transient projects tends to attract internal resources away from project work. Two areas of pressure force the public sector organization to outsource some of its most important work to external service providers. These are:

- the need for resources for organizational transformation versus the need for resources to support operations;
- the need to keep the staff count down.

Although it is expedient for organizations to look at their low project management capacity and quickly decide to turn to resources outside the organization, in the end, this is not beneficial. An organization must retain control of project management or else it will lose influence over its projects. Indeed, we feel it essential that project management be considered a core business of the public service. Third party validation of projects, however, is useful. Quebec uses third party consultants to validate work done by the province's project teams. While Quebec contracts with a third party consultant to help validate project processes, it typically does not outsource the project management and oversight functions.

Human Resources Management

Secondly, an organization may have many talented project managers but its human resources structure can work against the organization's capacity to make the best use of them. IT executives from the province of Quebec noted in interviews that there was a natural tendency for the best and the brightest people within the public service to gravitate towards project initiatives. The province undertook targeted recruitment in some cases (e.g., using a high potential list) but often this was unnecessary.

As we have noted in Section 4.2 on governance, in Ontario there is often resistance to joining a project despite the attractiveness of project work. The frequent lack of an exit strategy for IT project managers on project completion forces project managers to start looking (understandably) for a new assignment while the current one is ending. This compromises their ability to bring 100 per cent of their energies and expertise to the project in progress. Presently, the OPS has no means to help a project manager move on to his/her next project or to make use of the project manager's inactive period between assignments to further develop the government's project management capacity.

Project work requires outstanding people who often do not fit the OPS's traditional human resources policies and practices for recruitment, retention, promotion, and succession planning. Developing a project management pool is one solution to this problem.

The project management pool also permits a degree of independence from day-to-day ministry operations for the duration of the project. IT executives with the governments of Quebec and British Columbia noted that, for large-scale projects, a team that is allowed to operate independently from the day-to-day operations of the ministry has a greater chance of staying within the scope of the project. It has fewer distractions, less administrative reporting requirements, greater flexibility in accessing the required human resources, and a better chance of successfully completing the project.

The other jurisdictions outside Ontario that we reviewed placed their primary emphasis on using internal public sector resources wherever possible. They acknowledged the value of using external resources to supplement internal project management resources and bringing in specialized expertise when necessary. Leading jurisdictions, like New Zealand, place additional emphasis on the transfer of project management knowledge from consultants to internal staff. New Zealand makes it very clear that the use of consultants does not mean that the government agency no longer has any responsibility for the successful outcomes of projects.

Consultants do not provide an opportunity for the public sector organization to avoid responsibility.

Like many best practice jurisdictions, Ontario is developing tools, templates and a common methodology for project management. The Project Management Excellence Initiative (PMEI), for example, is based on the standards of the Project Management Institute. The Task Force notes that the PMEI has recently received permanent funding. This suggests broad recognition of the importance and the strategic role of project management. Further, the Task Force notes that though permanent funding for the PMEI will help address certain project management issues the OPS has faced, it is only part of a broader set of the recommendations we outline below.

Some jurisdictions have taken project management one step further, expanding the "methodology package" to include risk management tools. The Office of the Chief Information Officer in the State of New South Wales, Australia, provides a comprehensive Project Risk Management Framework for managing technology projects. It is based on the standards of the International Standards Association (ISO). The State of Washington's project management framework addresses risk management in a similar way. Ontario's efforts in this area include developing a common corporate methodology – the OPS Integrated Project Management Framework and Methodology (OPS IPMFM) – to incorporate risk management best practices into existing OPS policies, guidelines, and resources for risk management. The Task Force recognizes this initiative and suggests that it continue to be refined and developed to make it more useful to project managers and, more importantly, so that it can be applied throughout the OPS.

4.7 Organizational and Human Resource Capacity

As we have noted, large projects become risky when they create more business and technological change than the sponsoring organization understands or can manage. As a result, organizations do not give transformation projects sufficient oversight, support and governance to meet the complexities and risks that the organization is facing. The root of the problem lies in the governance of projects, which is frequently inadequate when compared to the level of governance given to operations and programs. This strains the project's capacity to deliver an initiative. When the complexity and risk of a large project does not align with the organization's understanding and capabilities, the organization is obliged to bring in, and thus become dependent upon, outside consultants.

The key thing to acknowledge here is the expectations of the ministry or agency. Organizations that fail to moderate project expectations to be in keeping with, for example, their project management capacity, will find themselves pushed in the direction of outsourcing key functions of their large transformation projects. Project management utilization or a procurement strategy should fall within the skill and experience base of the government. One Canadian bank does about 150 projects per year. Of these, only two or three are very large projects, a recognition that this is all that it, as an organization, has the capacity to do. This understanding forms the basis of its strategy and planning.

The mobility of resources is central to addressing human resources capacity and capability. Flexibility in resource allocation will allow the OCCIO to move people into key positions and across ministry and cluster lines with less internal administrative red tape. It is here that the government's "high potential list" would be used to best advantage, with an inventory of highly skilled people that can be pulled "off the shelf" and slotted into positions.

IT projects in various jurisdictions offer examples of unwise delegation and outsourcing. While there have been some examples of success here, it is clear that an organization, through its most senior governance committee, should own the basic elements of operations, strategy and transformation. When problems with a business process emerge during a transformation project, they must be resolved within and by the accountable organization and not delegated to an external service provider. In major transformations, roles and responsibilities are rarely defined clearly enough for outsourcing to be effective.

4.8 Organizational Structure

The cluster model (see Introduction and Appendix 1) in our view works reasonably well. Several international delegations noted this model as a best practice. Clustering makes sense in that it balances IT responsibilities and functions. Everything is neither at the corporate centre, nor at the edges of the organization.

It is inevitable that the policy agenda of the government will change over time. The cluster structure should respond and align with it accordingly. Within the Ontario government, this occurred recently with the introduction of a new cluster for children, youth and social services.

We agree with the concept that the primary role of the clusters should be sponsoring and specifying their own business application projects – and less concerned with day-to-day IT infrastructure management. Our view is that the OCCIO should continue to look for and establish uniformity and standardize and centralize aspects of infrastructure, services, processes and methodologies where this is possible and appropriate. This concept is consistent with the business direction of the government-wide e-Ontario strategy that Ontario is currently implementing to help the government achieve its modernization goals and achieve cost savings.

5 Task Force Recommendations for Best Practices

Base Recommendation:

During the last six months, we have studied in considerable detail why many large I&T projects struggle and sometimes fail. We found that the challenges they face are rarely due to problems with IT alone. Most of the projects that face major challenges are, in fact, engaged in major business transformation. Leadership of major business transformation is lacking. The projects are often treated exclusively as IT initiatives. In fact, large IT projects typically involve significant changes to business processes. Respondents almost unanimously cited the following reasons for project failure and said addressing them is fundamental to improving the overall success of large IT projects:

- The Ontario government often fails to appreciate the extent of the significant changes to business process and does not manage accordingly.
- Projects suffer from a lack of organizational resolve as reflected in dedicated political and executive level sponsorship, and from sufficient project oversight.

Our fundamental recommendation is that:

THE ONTARIO GOVERNMENT SIGNIFICANTLY INCREASE THE STRENGTH OF ITS GOVERNANCE OF MAJOR OPERATIONAL TRANSFORMATIONS. TO THAT END, ONTARIO SHOULD ENABLE ACCOUNTABILITY FOR MAJOR BUSINESS TRANSFORMATIONS BY ESTABLISHING A NEW DEPUTY MINISTER POSITION DEDICATED TO OVERSEEING THESE TYPES OF PROJECTS.

Business transformation needs to be elevated to the same level as that of the thirty Deputy Ministers focused on policy and operational issues if it is to get the decision-making attention it needs to succeed. This recommendation is critical and forms the base for the recommendations below. They have been grouped into governance, capacity, planning and procurement.

Governance Recommendations

Recommendation 1:

MANAGEMENT BOARD OF CABINET SHOULD DETERMINE THE GOVERNMENT'S CAPACITY FOR LARGE IT-DRIVEN BUSINESS TRANSFORMATIONS AND STRICTLY LIMIT THE NUMBER AND SIZE OF PROJECTS ACCORDINGLY.

It is essential that the OPS understand and work within the limits of its organizational capacity.

One way to make projects more manageable is to keep projects short – that is, do not allow the provision of the deliverable to be several years in the future – or, at a minimum, break large IT projects into manageable modules with achievable short-term deliverables, with each coming under a gateway review (see below). Each portfolio would consist of several projects, averaging less than 12 months, with none permitted to exceed 24 months in length.

The number of projects underway at any given time should be based on an assessment of organizational capacity. These projects should reflect the priorities in a portfolio. This is discussed below.

Recommendation 2:

THE SPONSORING ORGANIZATION SHOULD COMMIT AND HOLD ACCOUNTABLE SENIOR EXECUTIVE LEADERS FOR THE DURATION OF THE PROJECT. THIS REQUIRES SOLID POLITICAL SUPPORT AT THE MINISTERIAL LEVEL AND PROJECT LEADERSHIP AT THE DEPUTY MINISTER LEVEL.

We found that executives are frequently distracted from the commitment that is necessary to effectively deliver large-scale projects. Consequently, projects suffer from a lack of organizational resolve, dedicated executive level sponsorship, and project oversight. Respondents to the Task Force unanimously cited these as fundamental to improving the overall success of large IT projects.

It is important that large IT transformation projects be on the same organizational footing as programs and operations.

In order to help institutionalize this recommendation, we believe that following the guidelines below will bolster executive commitment:

- a. Ministers and Deputy Ministers sponsor projects and have ultimate responsibility.
- b. Only one person should be in charge of a project so that there is clear and sole responsibility and accountability.
- c. If shared responsibility for a project is unavoidable, the project should be closely managed and classified as high risk. In these cases, the government should ensure that Memoranda of Understanding are in place and that they outline all parties' joint responsibilities.
- d. Project sponsors should closely monitor, and bear ultimate responsibility for, project progress and performance. Regular reporting (at least quarterly) is required.
- e. Sponsors (Ministers and Deputy Ministers) should have the benefit of a project lead – a single, senior government employee who will handle day-to-day responsibility for all aspects of the project.
- f. Establish an executive's portfolio in a way that allows him/her to devote the requisite amount of time to a large project and adjust executive performance measures accordingly.

Recommendation 3:

MANAGEMENT BOARD OF CABINET SHOULD SHORTEN PROJECT APPROVAL CYCLE TIMES FOR INCREMENTAL AND LOW RISK PROJECTS.

We noted that Management Board of Cabinet oversees both small and large projects (at the time of the Task Force review this included anything with a procurement of over \$1 million). This means that small projects (where the OPS has a strong track record of successful delivery) receive the same time and attention as big, complex projects. We believe that the dollar threshold requiring presentation to Management Board of Cabinet is set too low. We thus support a governance structure where Ministers and Deputy Ministers approve higher risk projects and receive regular updates on lower risk projects as they proceed, free from approval formalities and the associated costs and time delays.

Our recommendation is to set the dollar threshold for Management Board of Cabinet review so that the bottom 80 per cent of projects proceed with Deputy Minister approval, and the top 20 per cent, along with transformational projects, require Management Board of Cabinet approval. This would smooth processes greatly, and allow Ontario to invest its senior executive time where it counts.

Recommendation 4:

THE OCCIO SHOULD CONTINUE TO STRENGTHEN OVERALL PROJECT REPORTING PROCESSES SO AS TO PROVIDE MANAGEMENT BOARD OF CABINET WITH AN EFFECTIVE MEANS TO QUICKLY ASSESS THE PROGRESS, TIME FRAME, AND RISK PROFILE OF ONGOING PROJECTS.

The OPS has taken steps to improve its reporting processes for large IT projects, particularly with the introduction of the IT Quarterly Report – a dashboard-style report presented to cluster CIOs to track project progress. We recommend the government continue in this direction and look for more ways to strengthen reporting. For instance, it could continue reporting on key projects at regular intervals, with perhaps an additional quarterly report to Management Board of Cabinet.

We recommend that the OPS structure its reporting to encourage full and open disclosure, and not allow report content to be at the discretion of the project sponsor. Reports delivered in this spirit will help provide an early warning to the government about problems in a project.

The key to any kind of reporting is ongoing, detailed and verifiable risk assessment. We recommend that risk assessment should be everywhere in a project. It should be assessed in the business case, on scorecards, as part of a regularly scheduled project review, and in the post-mortem to see how well the organization did at assessing risks.

We recommend that every report include an updated risk report.

Recommendation 5:

MANAGEMENT BOARD OF CABINET AND THE OCCIO SHOULD ENSURE PROJECT POST-MORTEMS ARE A REGULAR PART OF PROJECT OVERSIGHT.

Post-mortems are a critical part of project management and serve a dual purpose. The first is to “close the accountability loop” to ensure that the project business case delivered what the sponsors said it was going to deliver. The second is to foster a culture of continuous improvement and learning for the organization. Post-mortems also offer a good opportunity to capture project knowledge and to build a government repository of information about what does and does not work.

Effective post-mortems should not be limited to failed projects. Post-mortem assessments should include, but not be limited to: measuring the overall timing for delivery of the promised benefits or services; determining whether the project realized the intended benefits; presenting budget performance versus the original or revised business case; and setting out the effectiveness of any corrective actions taken.

The project management team should conduct the post-mortem shortly after the project’s completion. We recommend conducting the post-mortem three to six months after the project wraps up.

Post-mortems should be conducted for Management Board of Cabinet and possibly for the Independent Advisory Committee (IAC), depending on the ultimate scope and mandate of that body.

Recommendation 6:

MANAGEMENT BOARD OF CABINET SHOULD ESTABLISH AN INDEPENDENT ADVISORY COMMITTEE FOR IT TO PROVIDE EXPERT AND INDEPENDENT ADVICE ON THE ISSUE OF LARGE IT TRANSFORMATIONS.

As we noted earlier, project oversight in the OPS is currently limited to periodic controllership reviews of major projects by Management Board of Cabinet. The reviews focus on how the project is tracking against approved business cases (the MB20s). As a result, significant project problems are often not reported nor detected early enough in the project's life-cycle to invoke contingencies, bring in additional expertise to support the project management team, "re-scope" the project, or to cancel it.

To fill this gap, many jurisdictions similar to Ontario use independent committees to provide expert and independent advice on large transformations. The terms of reference vary. Some jurisdictions give the committee both budgetary and oversight responsibilities. In others, the committee acts purely as a source of independent expert advice. We suggest that such a committee have a purely advisory mandate. Its mandate should not include management or oversight responsibilities as these should, and already do, rest squarely with Management Board of Cabinet.

In Ontario, we suggest the Independent Advisory Committee (IAC) could perform some or all of the following tasks:

- help Management Board of Cabinet to assess the feasibility and business cases of large IT projects;
- reassess the project risk profile;
- act as an "early warning system" to alert Management Board of Cabinet when projects are in trouble;
- advise on deploying triage resources to problem projects;
- advise on the ongoing viability of large IT projects that are not on course;
- provide expert counsel on trends, innovative practices and technology.

There is a need for further study of the composition of an IAC. Ideally, it should consist of recognised public and private IT sector experts. It could also include private sector CIOs and IT project managers. We suggest the Ontario IAC initially meet on a quarterly basis and report to the Chair, Management Board of Cabinet.

By way of example, the State of Washington has established the Information Services Board to provide independent oversight of its major IT initiatives. The Board plays a hands-on role overseeing the progress and risk profile of major projects as they move through the project life-cycle. The Board uses a risk-assessment process to support strategic decisions on the direction projects should take when problems arise. Seasoned project managers, experienced in large-scale project management and troubleshooting, supplement the Board. They help develop strategies to rescue, re-scope or discontinue a project.

We would also like to note that, in our experience, the key to the success of these independent committees is that the organization demonstrably values their input.

Capacity recommendations

Recommendation 7:

MAKE PROJECT MANAGEMENT A CORE COMPETENCY OF THE OPS.

Efficient use of resources is essential to an organization that is running on tighter and tighter budgets. In the interests of successful project delivery in such an environment, there is a need to be able to move staff easily into positions where they can best be used. Other organizations have used a pool of dedicated project managers as a way to supply projects with adequate resources to perform gateway reviews (UK Office of Government Commerce), to intervene and assist with project problems (Washington state), or to act as mentors to department or agency staff (Washington state, Alberta, and the UK Office of Government Commerce). To help build and develop project management capability in the organization, leaders need to turn to the project management staff pool for resources, instead of automatically seeking project managers outside the organization. Project management should be a core business and institutionalized as such.

In the OPS today, a project management career track does not extend to the most senior levels of job classifications. The organization must make it clear that work on time-limited projects is a worthy career target for the IT executive. We advise that developing a career track and a certification program for project management professionals will help create – and retain – a cadre of experienced practitioners.

It should be noted that we are referring to project management across the organization, from top to bottom. By way of example, the publication *Improving Program and Project Delivery*, from the UK Office of Public Services Reform, provides specific guidance on the comprehensive project management skills-development effort underway across the entire British civil service. We recommend the OPS establish a consistent and standardized project management methodology and that training in project management, for all sizes of project, be part of the core organizational training curriculum. To date, the Project Management Excellence Initiative (PMEI) is rolling out the OPS Integrated Project Management Framework & Methodology, a standardized, corporate, best practice approach for managing projects in the OPS. It includes step-by-step processes for managing both large and small projects. The PMEI has also developed a framework and curriculum for learning project management in the OPS. The OPS Project Management Learning Framework contains an outline of the core components of the Learning Curriculum, and provides links to existing internal and external programs and courses in project management.

We recommend that the OPS create a centralized pool of project managers and staff. In keeping with our recommendations on portfolio management, this pool should be integrated with the portfolio management function. Furthermore, we believe that adding a project management stream to the OPS Internship Program would be a good way to start building a strong core of project managers for the future.

To enhance project management practice, leading jurisdictions recognize the need to change the culture and behaviour of government staff to be one of risk management rather than risk aversion. Ontario, too, should embrace this notion.

Recommendation 8:***REVIEW TOTAL COMPENSATION LEVELS FOR IT EXECUTIVES AND KEY IT ROLES SUCH AS PROJECT MANAGEMENT TO HELP ATTRACT AND RETAIN TALENT.***

Large IT projects require highly skilled individuals in key leadership roles. These individuals are scarce. The government will need to compensate them at competitive rates in order to attract and retain them.

We recognize that the OCCIO conducts benchmarking of compensation for IT executives. We recommend that the government use that data to determine if there is, in fact, a wide gap between public- and private-sector compensation scales; and, if so, develop a government-wide policy to close that gap in order to improve the OPS's ability to attract and retain IT executives.

We are aware of the restrictions on variable compensation in the public sector. Any changes to compensation should be linked to suitable expectations and performance goals; for example, linking project performance to compensation for project sponsors and leads; using variable compensation, such as bonuses, for projects that come in under-budget or ahead of schedule; or using "hold-backs" for poorly performing projects.

Planning Recommendations**Recommendation 9:*****MANAGEMENT BOARD OF CABINET SHOULD TAKE A PORTFOLIO MANAGEMENT APPROACH TO IT INVESTMENT AND MANAGEMENT.***

We learned in our investigations that in an environment of "chunked projects", a number of leading jurisdictions had found the techniques of portfolio management an effective way to manage multiple IT projects. We recommend this practice for Ontario.

Indeed, the OPS is already doing work in this area. The Ministry of the Attorney General, the Ministry of Health and Long-term Care, and the Smart Systems for Health Agency are investing in portfolio management systems.

Portfolio management has a number of benefits. It:

- strengthens executive sponsorship of priority initiatives;
- creates a framework in which the size, scope and number of projects – and their relationship to each other – can be better understood. (We noticed that large IT projects in Ontario are traditionally assessed in isolation from one another, rather than in the context of other initiatives, or in the context of government priorities, or with an understanding of the performance history of related initiatives.);
- helps channel investment and resources toward the high priority transformational initiatives;
- provides a way to contain the scope of individual projects so that they stay within the transformational change capabilities of the government.

To help the government align policy objectives and IT investment, and to better determine whether the OPS has the necessary capacity and skills to deliver a given project, we recommend that Management Board of Cabinet use a multi-year I&T strategic plan to provide objectives, strategy and direction for I&T for the province.

Management Board of Cabinet can use the plan to establish I&T performance measurement metrics (or indicators); track how I&T resources are being managed; provide budget overview (e.g., annual, spending to date, allocations for ongoing projects); review the status of ongoing projects and IT assets; and give direction to ministries for their individual IT plans that are part of the overall IT plan. In addition, instituting a “scorecard” system might help Management Board of Cabinet when it assesses the relative value of a portfolio of IT projects.

Recommendation 10:

PROJECT SPONSORS SHOULD INVEST A GREATER PERCENTAGE OF THE PROJECT BUDGET THAN THEY NOW DO IN UP-FRONT PLANNING TO ENSURE MORE ROBUST BUSINESS AND PROJECT PLANS.

We believe that comprehensive project planning is critical to the success of a project. Consequently, we recommend the OPS invest considerably more funding in the detailed planning and preparation of a project than now occurs. Management must allow room for careful analysis without the pressure of unrealistic objectives, expectations and deadlines.

Best practice shows that the business case assessment of large IT projects has evolved well beyond a cost-benefit case model. When assessing business cases, the OPS should:

- Calculate project risk (technological, operational, organizational, and reputational) – a simple high/medium/low assessment of risk would offer improved transparency;
- Review the business case against defined policy, strategy and standards to align with the government priorities;
- Determine project feasibility by using feasibility or estimation studies as stand-alone assessments or integrate them into the overall risk management project;
- Maintain business case sensitivity to key parameters and assumptions;
- Assess a large IT project’s implied or required transformational change and determine whether the project is within the capability of the ministry or agency.

It is also important that the business user and the project team prepare the business case so that consensus is reached and all will be truly committed to the project.

Recommendation 11:

MANAGEMENT BOARD OF CABINET AND THE OCCIO SHOULD ESTABLISH AND FORMALIZE A GATEWAY REVIEW PROCESS FOR PROJECT APPROVALS AND FUNDING.

We found in our discussions that the “gateway review” approach to funding, planning, and delivery is a good model. The Office of Government Commerce (OGC) in the United Kingdom is the leader in this area. The OGC describes the Gateway Project Review Process as a series of short, focused, independent peer reviews at key stages of a program or project. The reviews are undertaken in partnership with the project team and all stakeholders. They are designed to highlight risks and issues that, if not addressed, would

threaten the successful delivery of the program or project. The reviews are not audits and are not part of the approval process, but usually coincide with the end of each project stage. Passing through a gateway means that the project is ready to progress to the next stage of development or implementation.

The OGC methodology features six gateways through which projects must pass during the life of a project. They are:

- Zero - Feasibility and Viability (in the context of government priorities)
- One - Business Case (capability and benefits vs. risk)
- Two - Procurement Strategy
- Three - Investment Decision
- Four - Readiness for Service
- Five - Benefits Realization

We note that the Office of the Corporate Chief Information Officer (OCCIO) has already begun work in this area. We recommend that the OPS continue, indeed expedite, the establishment of a gateway review process.

Procurement Recommendations

We recognize that procurement is a difficult subject. None of its challenges is exclusive to Ontario. As such, we have not recommended a preferred model of public sector IT procurement in this report. Rather, our procurement recommendations are incremental. IT procurement has been the subject of various experiments and is arguably the most rigorously scrutinized area of public sector I&IT. There are no perfect and universal solutions. However, we do encourage the government to continue investigating alternate methods of procurement.

Procurement should not be considered in isolation but woven into every aspect of the life-cycle of project development. Many of the recommendations in this report will help alleviate issues that are often seen purely as procurement issues. For example, conflict resolution will be smoother when senior level leadership is engaged for the duration of the project and, thus, has a clearer appreciation and understanding of the issues.

Similarly, imprecise business cases and technology blueprints put undue pressure on the procurement organization to fill in the gaps when going out to tender and, indeed, make procurement the focal point or driver of the initiative. Procurement inadvertently drives projects instead of the project being driven by the business area.

Recommendation 12:

PROJECT SPONSORS AND LEADS SHOULD PREPARE MORE THOROUGHLY FOR PROCUREMENT AND BEGIN ONLY WHEN A CLEAR BUSINESS CASE HAS BEEN DEVELOPED.

Earlier, we noted the benefits of keeping projects small and using a gateway methodology (Recommendation 11). Breaking up the project (and therefore the procurement) into several smaller projects will help better align the procurement process with project gateways. The advantage of a gating process is that the project steps only start once the dependent steps are completed. Pressure to get a project completed tends to force project tasks that should be undertaken sequentially to be done concurrently. We recommend planning to keep this to a minimum. This is important for procurement. A rigorous gating process would mean that the procurement

stage would begin only on completion of these key gateway reviews:

- an assessment of project feasibility and viability and an assessment of its fit with government priorities;
- a detailed business case, including a review of capability vs. risk factors;
- the development of a solution design and blueprint.

The preparatory work done before undertaking procurement must be thorough, complete, concrete and defensible. This will make the procurement process, and the work that follows it, much smoother.

Recommendation 13:

PROJECT SPONSORS SHOULD SEPARATE DESIGN FROM BUILD IN PROCUREMENT.

In the spirit of keeping projects and project steps small, we recommend that Ontario explore a practice that British Columbia is currently testing. When developing an IT solution, British Columbia separates the design phase from the build phase. It uses two or more private sector vendors to design a solution in partnership with the government. The province then uses the best design as the basis for the build phase of the project. It would be interesting to pursue this approach — and also to have the ability to pay two or more vendors for a solution design; pick the best one; and, sign a vendor (and not necessarily the firm with the winning design) to a contract for the build or implementation phase of the project.

Recommendation 14:

PROJECT SPONSORS AND LEADS SHOULD ENSURE THAT THE PROJECT TEAM MEMBERS WHO ARE "CLOSEST TO THE ACTION" WRITE DETAILED REQUESTS FOR PROPOSAL (RFPs) – AND NOT THE PROCUREMENT LEADS EXCLUSIVELY.

Often, one group in an organization writes a Request for Proposal (RFP) and another manages the project. This is natural. Projects may take a year or two to procure. The individual who will be the project manager will likely be working somewhere else while the project is in development. However, this often leads to a project manager coming on board and then having to deliver a project that he/she did not participate in setting up. Indeed, some project management methodologies advocate not selecting the project manager until the project is ready to begin development. To avoid the inevitable lack of continuity that this practice creates, we feel that the project team members who are “closest to the action” should write the RFPs. Legal and procurement teams can lend support, and an independent third party can validate the RFP if necessary, as Quebec does. Having the project team involved early on in the project makes the ultimate project delivery easier.

We would like to note that the role of procurement can be compared to the legal department or the system architects division; that is, it supplies knowledge and expertise for one piece of the puzzle. The business people behind the project must drive it. Procurement needs to be an advisor, not the de facto boss. With this in mind, we recommend viewing the role of procurement as an advisory one.

Recommendation 15:***CONTRACTS SHOULD CONTAIN OFF-RAMPS.***

We noted in our review that it is difficult to stop a project once it starts. There must be some degree of flexibility built into contracts in order to accommodate changes to plan along the way. Flexibility is important in IT. No matter how well an IT implementation is planned, IT remains fraught with unknowns in a way that many other “building projects” are not. Best practice contracts have “off-ramps” that give the government the option of terminating the relationship with an underperforming or unsuitable vendor and replacing the vendor with a new one, or stopping the project. This approach works best in staged (as opposed to “big bang”) implementations of large-scale system and transformation initiatives. Small, manageable projects allow for benefits to accrue along the way while keeping open the option of an exit, thus reducing overall risk.

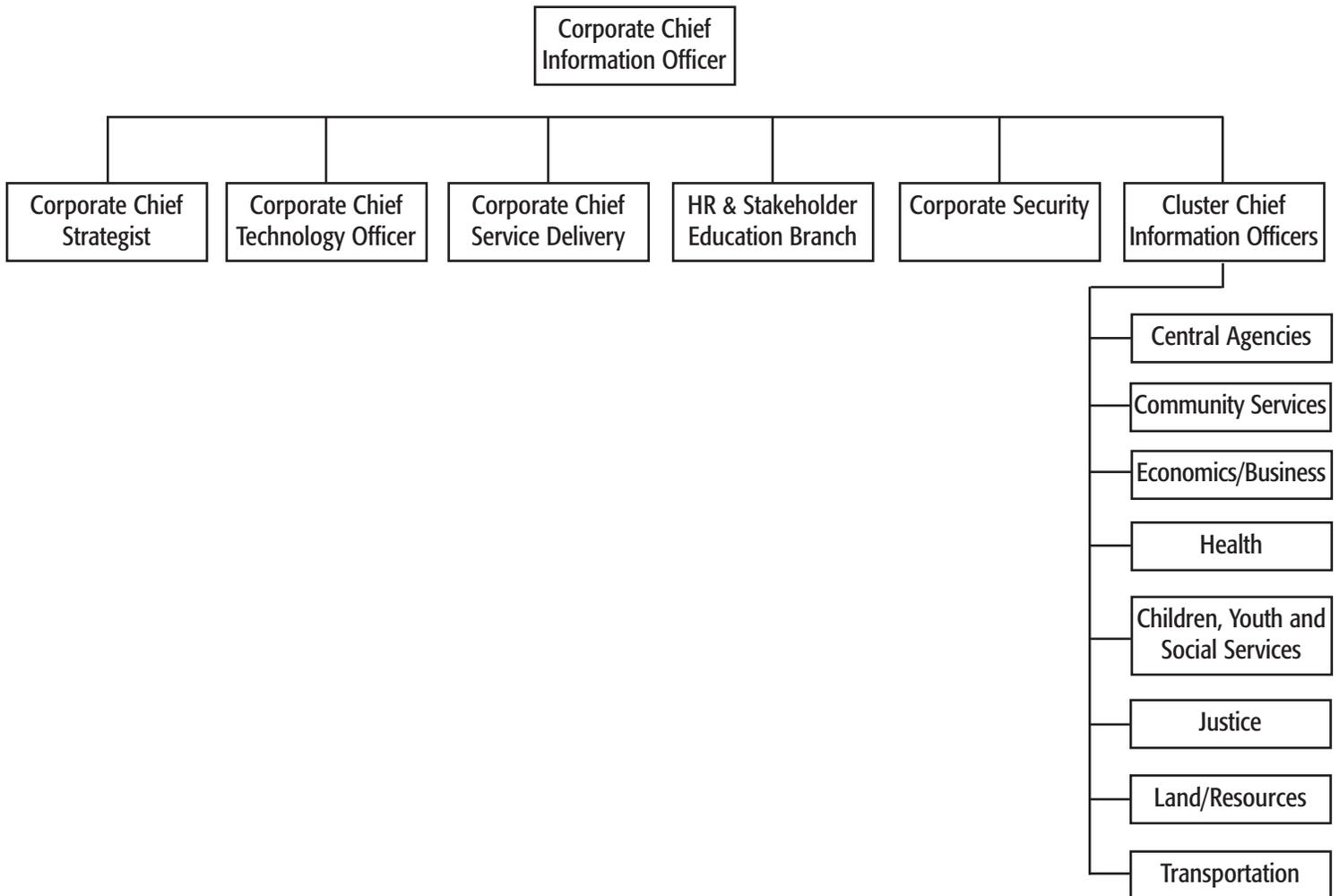
Recommendation 16:***CREATE A FORUM FOR ONGOING DIALOGUE BETWEEN THE I&IT INDUSTRY AND GOVERNMENT SENIOR CIVIL SERVANTS OUTSIDE THE REGULAR PROCUREMENT PROCESS.***

We do not address the question of whether Ontario should engage the private sector in business transformation more or less than it does now. However, we suggest that the OPS provide a mechanism for senior public servants to collaborate with the private sector on the effective use of information technology and business transformation. We recommend establishing a committee to meet periodically to work on the development of leading principles for effective enterprise-wide use of information technology and advanced business transformation.

6 Appendices

Appendix 1	Information and Information Technology Organization Chart
Appendix 2	Members of the Task Force
Appendix 3	Task Force Terms of Reference
Appendix 4	Summary of Research on Best Practices in IT Management across Jurisdictions
Appendix 5	Respondents: Consultations and Interviewees

Appendix 1: Information and Information Technology Organization Chart



Appendix 2: Members of the Task Force

Chair

L. Denis Desautels

Auditor General of Canada, 1991-2001

Executive in Residence, School of Management, University of Ottawa

Members

Howard Dickson, Government Chief Information Officer

The Government of the Hong Kong Special Administrative Region

formerly Assistant Deputy Minister, Information Management, Department of National Defence

David Johnston, President

University of Waterloo

formerly Chair, Information Highway Advisory Council

Carol Stephenson, Dean

Richard Ivey School of Business

University of Western Ontario

formerly President and CEO, Stentor; and President and CEO, Lucent Technologies

We wish to thank the following individuals for providing support to the Task Force:

Executive Director

Joel Finlayson, Principal, SECOR Consulting

Writer and Liaison to the Task Force

Contributors

Julie Dzerowicz

Senior Policy Adviser, Minister's Office, Ministry of Government Services

Craig Stewart,

Manager, IT Planning & Reporting, Ministry of Government Services

Alex Finlayson

Research Analyst, Ministry of Government Services

Niloufer Srivastav

Administrative Coordinator, Ministry of Government Services

Don Fawcett

Counsel, Ministry of Government Services

Appendix 3 Task Force Terms of Reference

Special External Task Force on the Management of Large Scale IT Projects

Terms of Reference

September 2004

Table of Contents

Introduction

Mandate

Deliverables

Composition

Resources

Conflict of Interest and Confidentiality

Administrative Considerations

1 Introduction

This government is committed to reviewing our large I&IT projects to ensure that future I&IT investments produce value to citizens and taxpayers. The review is required to ensure that the most efficient and effective mechanisms, measures and structures are in place to govern and manage large scale IT projects, and to ensure a focus on achieving results.

The government is engaging an independent panel of experts to undertake a highly focused exercise to analyze and diagnose issues and offer advice on ways to improve the management of large scale IT projects.

In an environment of fiscal constraint, one of the government's key priorities is to preserve and improve Ontario's public services while ensuring that the business of government is conducted in a responsible, affordable and sustainable manner.

The Government of Ontario is committed to using information and information technology to improve the ways we serve citizens, and in particular, to support and enable the key priorities that this government has identified, namely:

- Success for Students;
- Better Health;
- Strong People, Strong Economy.

Ontario has attained international recognition as a leader in e-government having garnered numerous awards. Often, service transformation is achieved through large I&IT projects that are established to design and deploy IT solutions. In Ontario – as in

other organizations – these sorts of I&T investments can be risky. Large IT projects can lose momentum and support, costs can be greater and benefits lower than planned, and results can sometimes fall short of expectations.

Complications with large IT projects across all sectors are not uncommon. Large IT projects usually involve significant innovation in development or integration and so have a different risk profile than other large projects. Some knowledgeable commentators on IT performance (e.g. The Standish Group, 1995) have suggested that more focus should be placed on examining successes and failures, learning lessons, and taking appropriate follow up action.

As part of the review, the Special External Task Force will examine IT project governance and accountability practices in Ontario and identify recommendations for best practices for future IT initiatives. These recommended best practices, once provided to the Chair of Management Board of Cabinet, will be released publicly on the www.gov.on.ca site.

2 Mandate

The Special External Task Force is tasked with the review of “large” I&T projects that have been undertaken in Ontario. For the purposes of this analysis and subsequent recommendations, large is defined as projects that:

- involve significant business process redevelopment, procurement and system development; and
- are multi-million dollar in scope; and
- are multi-year in both funding and management, including both Common Purpose Procurement (CPP) and traditional contracting arrangements; and
- have a major impact in the delivery of government business.

The purpose of the Task Force’s review of large I&T projects is to produce recommendations on the effective management of the government’s large IT projects.

The Task Force’s review will include, but is not limited to, consideration of the following:

- How the government can move forward on large IT projects including assessing the changes made and that still need to be made;
- Review of OPS IT project planning, governance, procurement processes, accountability, and project management capacity; and
- The technologies that can be built on and leveraged within and outside the Ontario Public Service.

The work of the Task Force will be to research and develop recommendations for best practices for procurement, project management, project governance and accountability mechanisms in the context of practical experience in Ontario. The Task Force will also draw on their own experiences and those of other jurisdictions within the private and public sectors for their report.

Best practices should span the lifecycle of a project – from inception through project and procurement planning, project execution, to the eventual hand-off of project deliverables and transition to a business as usual context – and identify process improvements at each stage that together form a framework for managing large IT projects that will be an efficient, realistic, cost-effective process for delivering results.

3 Best practices should address areas such as - but not be limited to:

- project planning;
- governance and accountability;
- business case preparation;
- procurement requirements (NOTE: the Task Force will be asked to provide advice at the strategic level and will not be asked to provide advice on any specific procurement initiatives that are currently being implemented.);
- approval processes;
- OPS processes;
- contract negotiations, including costing models;
- business management practices;
- partnership issues;
- OPS capacity;
- approvals;
- risk;
- due diligence issues.

The report will be available to the public to ensure that Ontarians have confidence in the government's ability to manage large-scale IT projects in a responsible, affordable and sustainable manner. The Task Force's review and subsequent recommendations will also help the government to ensure that future I and IT investments are efficiently and effectively managed in order to produce value to citizens and taxpayers.

4 Deliverables

The principle deliverable for the Task Force is to develop recommendations to the Government of Ontario on the management of large IT projects. The final report will include the recommended best practices together with the Task Force's rationale for them based on a review of current and past projects and processes. The rationale should be based on the Task Force's overview of the projects generally rather than any particular IT project.

The anticipated timing for roll-out of the deliverables is:

- Preliminary outline and budget submitted to the Chair of Management Board of Cabinet in October 2004.
- Interim summary of the recommendations submitted to the Chair of Management Board of Cabinet this fall.
- Final report submitted to the Chair of Management Board of Cabinet in early 2005.

The Task Force is being asked to provide strategic advice to the government related to the management of large-scale I&IT projects. The recommendations will focus on what steps should be taken and what safeguards should be put in place to ensure prudent ongoing management of IT resources in the Ontario government context. The recommendations will also include project management best practices. In order to produce these deliverables, a review of the Ontario government's project management processes and experience over the past few years is relevant.

The Task Force will also have access to experienced experts with relevant perspectives to share.

5 Composition

The Task Force is comprised of 3 members including the Chair, each a recognized expert in his or her respective field. The fields identified as most relevant to this task have been identified as Technology specialities, Public Administration and Business Administration. The Task Force may also wish to identify an additional member with specific expertise (to be determined by the Task Force).

The Chair of Management Board of Cabinet will determine membership, invite members and appoint a Chair to the Special External Task Force.

The Task Force will also have available to it support resources, including: a liaison from the I&IT organization to provide simplified 'one contact point' access to program area staff expertise and information as required; an individual with legal/procurement expertise; and, other resources as appropriate.

6 Resources

Given the very tight timelines for the delivery of the Task Force interim and final reports, funding is available to assist in administration support and report production.

The Task Force will be provided with dedicated secretariat resources including a researcher/writer and an administrative support person.

Funding will also be available to assist with any additional costs incurred for research purposes. For example: where existing documentation does not exist in a specific area, the Task Force may commission a study to address the gap.

Members will be paid a per diem in addition to other appropriate expenses. Members will be provided with a letter from the Chair of Management Board of Cabinet setting out their roles, responsibilities and remuneration.

7 Conflict of Interest and Confidentiality

Members are required to declare any potential conflicts of interest to the Chair of Management Board of Cabinet and to abide by the directions made by him. In addition, each Task Force member will be required to maintain the confidentiality of all materials provided to them for their review. Members are required to sign a Conflict of Interest and Confidentiality agreement that will be provided to them.

- For greater clarity, the Special External Task Force will not replace broader consultations with the private sector whenever needed, nor will it replace specific processes such as those included in the RFP process to establish product standards or procure products and services.
- Task Force members will be asked to provide advice at the strategic level and will not be asked to provide advice on any specific procurement initiatives that are currently being implemented. For greater clarity, the report shall not contain reference to specific IT initiatives.

8 Administrative Considerations

Frequency of Meetings:

The Task Force will meet at the discretion of its Chair and agreement of its members.

Appendix 4 Summary of Research on Best Practices in IT Management Across Jurisdictions

As part of our assessment of IT projects in Ontario, we wanted to familiarize ourselves with the best practices used in other jurisdictions. We thus commissioned research to identify best practices for the management of large I&T projects in jurisdictions similar to Ontario.

Our research focused on jurisdictions facing I&T challenges similar to those found in the Ontario government, initiatives of similar dollar value to Ontario government initiatives, and jurisdictions with a public sector structure similar to that of Ontario.

Research included a review and analysis of the relevant literature and interviews with key IT executives from Canada, the United Kingdom, the United States, and Australia, at both the national and the state/provincial level. The output of this work was an assessment of trends in I&T best practices covering five areas: IT governance and accountability; initiation and project planning; project management; procurement; and capacity building. Our findings are summarized below.

IT Governance and Accountability

The literature on IT governance consistently endorses the concept of direct executive and senior management ownership of major IT initiatives. For example, the IT Governance Institute stresses that a critical success factor for IT projects is "sensitivity to the fact that IT is integral to the enterprise and not something to be relegated to a technical function".

A research study commissioned by the California Performance Review on IT conducted by the RAND Corporation noted, "the active attention and support of top management for IT has been found to be critical to its success, across all organizations of all sizes in both public and private sectors. In studies at the local and county levels, researchers found that management support and leadership had a direct, positive influence on the commitment of employees to IT projects, organizational performance after IT implementation, and the realization of expected benefits from IT".

In this spirit, the State of Washington established an IT governance and oversight model that stresses the concept of strong political and executive sponsorship for major IT initiatives supported by stakeholder representation. The unique feature of its governance model is the Information Services Board that is directly appointed by, and accountable to, the State Governor. In 1996, in response to significant IT project failures and problems, the Treasury Board Secretariat (TBS) of the Government of Canada introduced its Enhanced Framework for the Management of Information Technology Projects. One of its findings was that "senior management's understanding, involvement and support are lacking". Therefore, TBS established in its framework a key principle for accountability for projects: federal government departments are accountable for the successful completion of projects.

The IT Governance Institute states that organizations should have governance, planning, and monitoring processes in place to enforce those responsibilities, which generally relate to IT's alignment and use within all activities of the enterprise. In 1999, the State of Washington introduced an IT portfolio management policy to produce improved alignment between agency and state strategic objectives and IT investments.

A growing interest in risk management was also identified as a common theme. The TBS emphasizes that "successfully managing risk requires a thorough understanding of all the risks in a project, including: scope, complexity, extent of change in the business functions, skills and experience of the project team, the employment of new technology and the number of organizations involved". The TBS endorses the concept of using a continuous risk management methodology such as the Continuous Risk Management (CRM) methodology developed by the Software Engineering Institute (SEI), throughout the life of the project.

Initiation and Project Planning

Both the literature and the interviews showed that “leading practice” jurisdictions apply a three-tiered portfolio management model for overall management of projects, where programs are a superset of projects, and portfolios are a superset of programs and projects.

Portfolio management is a reasonably mature concept. The Project Management Institute (PMI) has clearly articulated its interpretation of these three levels of project management in the Organizational Project Management Maturity Model (OPM3), published in 2004. While other maturity models dealing with portfolio management are still at the development stage (e.g., the Prince Project Maturity Model), a variety of jurisdictions have already moved to implement their own frameworks for managing IT at a portfolio level. Portfolio management is at an early stage of maturity in Virginia and Washington. Alberta and California indicate that establishing portfolio management for their department and agency initiatives is their preferred direction.

Planning should be formalized and thorough. A mature approach to managing phased projects is the gating process that the UK Office of Government Commerce advocates. The UK’s aerospace and defence programs have made extensive use of the gating concept for many years.

A governance model should include stakeholder input and approval. The research outlined strong approaches to engaging stakeholders. This included examples such as the involvement of internal stakeholders as part of a project oversight process in Virginia or the Customer Advisory Board in the State of Washington. An example of external stakeholder engagement was providing public access to project status dashboards that were posted on the website of the Virginia Information Technologies Agency. This demonstrates transparency and public accountability for IT project performance.

Project Management

The level of rigour in the application of project management methodology was often the key to a project’s success. Some jurisdictions have gone beyond establishing resource databases, templates and proprietary tools to support their project management processes. They have established Enterprise Project Management Offices or Enterprise Program Management Offices (EPMOs) to achieve standardization and project management maturity. EPMO’s can also be key to the management of IT portfolios and improving IT governance and control across multiple agencies, departments and jurisdictions. Florida, Minnesota, North Carolina, North Dakota and Texas are using enterprise management principles.

There was broad consensus among interviewees that establishing project metrics (or ways to measure progress or success) was critical. Interviewees frequently cited the adage, “that which is not measured, is not managed”. Metrics consistent with leading methodologies such as PMBOK and Prince2 are in place in the leading IT project management jurisdictions of Washington, Virginia and New York State.

Procurement

Many initiatives undertaken by I&IT departments are business transformation projects. Therefore, the objectives of a business transformation projects should clearly state the benefits. For example, one benefit is a reduction in costs because of increased efficiencies or improvements in service quality. Achieving this and other benefits requires defined processes and concerted action. Our research found a number of examples in which a technology project succeeded in delivering the required system but failed to deliver the intended benefits.

This points to the fact that the approach to procurement should be benefits-driven. The leading practices that were identified in this area are: focus on value, expressed in terms of benefits, and reduce risk by specifying outcomes.

A benefits-driven procurement approach emphasizes the results and benefits to be derived from a project, instead of focusing only on a specific solution to a business problem or its detailed specifications and requirements. The Government of Canada is a leading user of the benefits-driven approach. Virginia's ProReform procurement reform program is moving toward a solutions-based request for proposals approach and a "value orientation, not a price orientation". Massachusetts has published a policy that all agencies must conduct a "best value" evaluation of IT investments.

Procurement methodology should be tailored to the real level of risk. Risk is reduced by specifying outcomes in terms of the purpose of the work to be performed – not "how" it is to be accomplished or the number of hours to be provided. In the past, public sector definitions of responsible stewardship of taxpayer dollars often led government to take a conservative approach based on risk aversion. Buying information technology services is different from buying commodity products. Change, uncertainty and risk are inherent in technology projects but not normally in commodity projects. Leading practice research indicates that public sector organizations are moving away from risk aversion to risk management.

Our research also noted the practice of applying mandatory gateway reviews by an independent and experienced team to mitigate procurement risk. The team examines the procurement at key decision points, providing assurance that it can move to the next stage. The Gateway Review Process is based on an assessment of the risk profile of a procurement.

Capacity Building

The public sector faces many of the same skill issues as the private sector, including obsolescence, competition, and shortages. These issues are often further complicated for government by collective bargaining agreements and constraints on compensation. Nonetheless, steps can be taken to minimize these issues. These steps are: have active and flexible relationship management to ensure that government objectives are met; and, recruit and develop staff with business skills and an understanding of corporate goals and needs, strong competencies in the performance-based management of third parties, risk management skills, and commercial skills for procurement professionals. Also, given that the organizational focus should be on the true skills required to manage complex, as well as less well-defined, technology projects, wise practice links resource planning to portfolio management.

The importance of creating and supporting a project management culture across the entire government was a key research finding. Besides using industry standard methodologies to form the basis of a project management culture, leading jurisdictions recognize the need to change the culture and behaviour of government staff to one of risk management rather than risk aversion.

The jurisdictions reviewed placed a strong emphasis on the use of internal public sector resources wherever possible. They did acknowledge the value of using external resources to supplement project management resources when necessary and of bringing in specialized expertise. Leading jurisdictions place additional emphasis on transferring project management knowledge from consultants to internal staff. New Zealand, for example, makes it very clear that the use of consultants does not absolve an agency from its responsibility to achieve successful project outcomes. Consultants do not provide risk avoidance for an agency if projects are not successful.

Appendix 5: Respondents: Consultations and Interviewees

The Task Force consulted with, interviewed or heard presentations from the following individuals for this report:

Colin Andersen, Deputy Minister, Ministry of Finance, Province of Ontario
Mike Anderson, Head, Ministry of Government Services, Province of Ontario
Richard Audet, Directeur général, Commission de la santé et de la sécurité du travail du Québec
Lois Bain, Assistant Deputy Minister, Ministry of Government Services, Province of Ontario
Kathryn Bouey, Deputy Minister, Management Board Secretariat, Province of Ontario
Dorothy Cameron, Manager, Ministry of Government Services, Province of Ontario
Gary Cameron, Vice President, Bell Canada and ITAC Ontario
Marni Campbell, Director, Ministry of Community and Social Services, Province of Ontario
Scott Campbell, Chief e-Health Strategist, Province of Ontario
Duncan C. Card, Partner, Bennett Jones LLP
Bob Christie, Deputy Minister, Ministry of Training, Colleges and Universities, Province of Ontario
Michael Connolly, Chief Executive Officer, Smart Systems for Health Agency, Province of Ontario
Kevin Costante, Deputy Minister, Ministry of Community and Social Services, Province of Ontario
Bernard Courtois, President & Chief Executive Officer, Information Technology Association of Canada
Robert Desbiens, Corporate Chief Information Officer, Gouvernement du Québec
Yves Desmarais, Senior Advisor, Office of the Corporate Chief Information Officer, Gouvernement du Québec
John DiMarco, Chief Information Officer, Justice Technology Services Division, Province of Ontario
Tim Draper, Account Executive, Telus Corp.
Michael Fenn, Deputy Minister, Ministry of Community Safety & Correctional Services, Province of Ontario
Robert Ferland, Directeur, Société de l'assurance automobile du Québec
Angela Forest, Assistant Deputy Minister, Ministry of Government Services, Province of Ontario
Sylvie Fortin, Chef du service des architectures, Commission de la santé et de la sécurité du travail du Québec
Carl Fraser, Architecte intégrateur, Commission de la santé et de la sécurité du travail du Québec
David Fulford, Assistant Deputy Minister, Ministry of Government Services, Province of Ontario
Brian Gamble, Physician Lead, ePhysician Project, Province of Ontario
Denis Garon, Sous-ministre adjoint, Ministère du revenu, Gouvernement du Québec
Greg Georgeff, Corporate Chief Information Officer, Ministry of Government Services, Province of Ontario
Allan Gunn, Assistant Deputy Minister, Ministry of the Environment, Province of Ontario
Jim Hamilton, Chief Information Officer, Community Services I&IT Cluster, Province of Ontario
Peter Heimler, Senior Principal, KPMG LLP
Brent Henderson, Client Solutions Executive, IBM Canada Ltd.
Glenn Holder, Chief, eHealth Solutions Division, Smart Systems for Health Agency, Province of Ontario
Robert T. Horwood, President, ITAC Ontario
Scott Hutchison, Partner, Stockwoods LLP
Peter Inokai, Assistant Deputy Minister, Canada - Ontario Service Collaboration Secretariat, Province of Ontario
Richard Jackson, Director, Ministry of Training, Colleges and Universities, Province of Ontario
Janice Johnston, Director, Smart Systems for Health Agency, Province of Ontario
Michael Jordan, Associate Partner, Accenture Inc. and ITAC Ontario
Sudhir Kakkar, Manager, Transportation I&IT Cluster, Province of Ontario

John K. Kaltenmark, Partner, Accenture Inc.
Ted Keys, IBM Executive Lead, IFIS Project, Province of Ontario
Mike Kishimoto, Director, Ministry of Management Services, Province of British Columbia
Bertrand Lauzon, Directeur, Secrétariat du conseil du trésor du Québec
Jean-Marie Lévesque, Directeur général, Régie de l'assurance maladie du Québec
David Lewis, President and CEO, HLB Decision Economics
Joe Liscio, Director, IFIS Project, Ministry of Government Services, Province of Ontario
Rick Looy, Manager, Ministry of Community Safety and Correctional Services, Province of Ontario
Rob Lowry, Partner, Bay Consulting Group
Jim MacLean, Primary Care Lead, Ministry of Health and Long-Term Care, Province of Ontario
Richard N. Manicom, Manicom Consulting Ltd.
Daniel Martyniuk, Manager, Ministry of Government Services, Province of Ontario
Janet Mason, Assistant Deputy Minister, Ministry of Training, Colleges and Universities, Province of Ontario
Sandy McBride, Vice President, Chartwell Inc.
Joan McCalla, Corporate Chief Strategist, Ministry of Government Services, Province of Ontario
Jim McCarter, Auditor General of Ontario
Lynn McWilliams, Director, Ministry of Training, Colleges and Universities, Province of Ontario
Claire Monette, Vice-présidente à l'administration et aux finances, Société de l'assurance automobile du Québec
Mike Moszynski, Senior Manager, KPMG
David Nicholl, Chief Information Officer, Transportation I&IT Cluster, Province of Ontario
Richard Noble, Advisory Services, KPMG
Guy Normandin, Vice President, DMR Conseil
Roman Olarnyk, Chief Information Officer, Smart Systems for Health Agency, Province of Ontario
Solly Patrontasch, Partner, Reid Eddison
Debra Paulseth, Assistant Deputy Attorney General, Ministry of the Attorney General, Province of Ontario
Richard Poutney, Assistant Deputy Minister (Acting), Ministry of Labour and Citizens' Services, Province of British Columbia
John Rabeau, Deputy Minister, Correctional Services, Province of Ontario
Saad Rafi, Deputy Minister, Ministry of Transportation, Province of Ontario
Chris Renaud, Chief Information Officer, Health Services I&IT Cluster, Province of Ontario
Guy Rochette, Directeur, Commission de la santé et de la sécurité du travail du Québec
Tom Scharien, Director, Ministry of Labour and Citizens' Services, Province of British Columbia
Gabriel Sékaly, Assistant Deputy Minister, Ministry of Finance, Province of Ontario
Neil Sentence, Assistant Deputy Minister, Ministry of Government Services, Province of Ontario
Lisa Sherin, Director, Ministry of Government Services, Province of Ontario
Jean-Pierre Soublière, President, Anderson Soublière Inc.
Mary Tate, Assistant Deputy Minister, Ministry of Government Services, Province of Ontario
Lorelle Taylor, Chief Information Officer, Health Services I&IT Cluster, Province of Ontario
Howard Thomas, Executive Director, Ministry of Provincial Revenue, Province of British Columbia
Kirsten Tisdale, Senior Advisor, Ministry of Management Services, Province of British Columbia
Jill Velenosi, Vice President, Telus Business Solutions
Dave Wallace, Corporate Chief Technology Officer, Ministry of Government Services, Province of Ontario
Grant Westcott, Executive Vice President, CIBC
Ruth Wittenberg, Assistant Deputy Minister, Ministry of Management Services, Province of British Columbia
Leslie Wolfe, Executive Contract Manager, Ministry of Health, Province of British Columbia

