



The Independent Reviewer's Handbook

How to conduct an independent project review



© Her Majesty the Queen in Right of Canada,
represented by the President of the Treasury Board, 2010

Catalogue No. BT53-17/2010E-PDF
ISBN 978-1-100-15689-7

This document is available on the Treasury Board of Canada Secretariat
website at <http://www.tbs-sct.gc.ca>

This document is available in alternative formats upon request.

Table of Contents

Foreword	1
1 Introduction and Background.....	2
1.1 The independent review program	2
1.2 The independent review sponsor	5
1.3 Overview of the handbook	6
2 The Independent Review—An Overview	8
2.1 Defining independence.....	8
2.2 An independent review.....	10
2.3 Types of reviews	12
2.4 How long does a review last?	17
2.5 Who are the review team members and what are their roles?	17
2.6 Conduct of reviewers	20
2.7 Equipment, logistical support, and travel	24
3 The Gating Framework	25
3.1 Gate 1 Review—Strategic assessment and concept	29
3.2 Gate 2 Review—Project approach	30
3.3 Gate 3 Review—Business case and general readiness	32
3.4 Gate 4 Review—Project charter / PMP	34
3.5 Gate 5 Review—Detailed project plan and functional specifications.....	36
3.6 Gate 6 Review—Construction complete and deployment readiness	38
3.7 Gate 7 Review—Post-implementation review	40
4 Review Methodology	41
4.1 Step 1: Review set-up and launch phase	41
4.2 Step 2: Discovery phase	46
4.3 Step 3: Analysis phase.....	55
4.4 Step 4: Reporting phase.....	66
4.5 Step 5: Review post-mortem phase	74
4.6 Methodologies for the workshop, quick, and health check reviews .	76

5	Conclusion.....	79
	Appendix A—Gating.....	81
	Appendix B—Sample Review Documents.....	82
	Appendix C—Project Class Definitions.....	91
	Appendix D—Abbreviations	93
	Appendix E—Glossary.....	94
	Appendix F—Related Policies and Publications.....	95

Foreword

This handbook is intended for use by independent reviewers. It contains the core methodology for conducting independent project reviews, be they full reviews, quick reviews, workshop reviews, or health check reviews. The review methodology—much like the gating structure that signals when reviews are needed—is designed to adapt to a wide range of project sizes, circumstances, and complexity levels. Early response from reviewers suggests that the methodology will adapt to any gating structure a federal government department might already have in place. It will fit in well where departments have an established executive committee to govern investment decisions for information technology (IT)-enabled projects and provide ongoing oversight.

1 Introduction and Background

1.1 The independent review program

Increasing the success of IT-enabled projects is critical for the Government of Canada. Large IT-enabled projects are one of the government's largest categories of investment, second only to major capital investments such as bridges, roads, and defence hardware. When these projects are not completed or overrun their budgets dramatically, the impacts are broad. Money is wasted, promised benefits such as reduced operating costs or improved services to citizens are not realized, and confidence in government is eroded.

The Government of Canada's first large IT-enabled projects, operating between 1960 and 1980, were relatively successful. But since the 1990s, there have been significant failures as government IT-enabled projects became larger and more complex—the result of newer technology and a more modern vision about how government services should be delivered.

The Office of the Auditor General (OAG) examined IT systems under development in government-wide audits in 1995, 1996, and 1997. The audits found inadequate analyses of underlying business issues, inconsistent support from management, a lack of experienced resources on project teams, inconsistent involvement on the part of users, and a lack of effective monitoring.

In May 1996, the Standing Committee on Public Accounts released a report on the issue and recommended that the government:

- ▶ Allocate more resources to monitor large IT projects;
- ▶ Submit an annual report to the Standing Committee on the status of departments' investments in systems that are under development;
- ▶ Have the Treasury Board Secretariat (TBS) take steps to ensure that there is complete ownership and accountability for large IT projects; and
- ▶ Whenever possible, divide projects into smaller, more manageable components.

In 1998, partly in response to the OAG's recommendations, TBS created an overall guidance document called *An Enhanced Framework for the Management of Information Technology Projects—Part II (EMF)*.

Eight years later, the OAG again studied the management of large IT projects within the federal government and issued a November 2006 report called *Chapter 3: Large Information Technology Projects*. This audit examined seven large IT projects from four perspectives: governance, business case, organizational capacity, and project management. The audit concluded that overall, the government had made limited progress since the last audit of IT projects in 1997. The audit made six recommendations concerning the overall management of IT projects, all of which were accepted by the government.

Meanwhile, TBS issued a report in 2007 called *Improving IT Project Performance: Conception, Assessment and Monitoring*. It found that three major factors contribute to project failures:

- ▶ Project conception that results in unwise approaches;
- ▶ Unsupportive project environments that contain barriers to success; and
- ▶ Project participants who lack the necessary qualifications or experience regarding IT-enabled projects.

In response to the OAG's November 2006 report, the Standing Committee on Public Accounts issued a report on large IT projects in February 2008 that endorsed the findings and recommendations of the OAG audit, and made further recommendations on several issues.

TBS, acting on the Standing Committee's recommendations, has introduced new requirements for large complex IT projects, and these requirements include independent reviews.

As the massive IT investments in systems and infrastructure of the 1970s and 1980s come due for renewal, new structures are required for service delivery to meet increasing public expectations. The use of IT is now pervasive, having moved from a back office role to front-line direct interaction with the public for service delivery. Moreover, during the past decade or so, Internet-based systems have become catalysts for change and business transformation, with attendant privacy and security issues. All of this increases the pressure to have IT-enabled projects succeed.

Experience has shown that two key practices help significantly in this regard.

The first is the use of a gating framework—the adoption of defined points during the life of a project, from early concept to post-implementation, when executive management carefully considers the project status and grants approval to proceed to the next decision point, or “gate.” Early project examination is especially crucial. A number of past federal government undertakings suffered from a lack of scrutiny at project conception and initiation, and were eventually proven to be fundamentally unwise.

The second key practice is the use of independent project reviews—critical assessments of a project conducted by people who are at arm’s length from it. Independent reviews are most helpful when they are timed to provide assessment just before a gate decision point, thereby supporting the gating process.

Until now, there has been no set methodology for doing project reviews, no requirement that reviews be conducted under defined circumstances or at specified points, and no precise qualifications required for project reviewers. The present initiative changes that. How?

1. **By defining a gating process**, it clarifies when reviews should be performed and which issues should be examined at those points in time, while still allowing flexibility for ad hoc or health check reviews.
2. **By developing a reviewer’s handbook and a comprehensive set of review topics for enquiry to be examined in project reviews**, it provides a review methodology that is linked to the criteria associated with different gates.
3. **By setting out qualifications for reviewers, providing training on the methodology, and establishing pools of qualified reviewers**, it assures that reviews are conducted by experienced, qualified, and dispassionate experts.

Having this methodology and a pool of reviewers provides added value to projects planned or under way by better informing the people who are accountable for these projects—namely, the executives of the departments and agencies sponsoring or executing the projects. Maintaining a pool of qualified reviewers helps departments assemble and conduct a review quickly. Departments or agencies that capitalize on these project review resources can be assured that when they later cite the review in their dealings with TBS on any aspect of their project, TBS will have a basis for confidence in the integrity of the review. Several departments and agencies have already implemented a project gating structure and made effective use of independent reviews.

The independent review program is sponsored and maintained by the Chief Information Officer Branch (CIOB) at TBS. TBS CIOB has developed guidance materials to assist departments in implementing these key practices.

While it is not a source of funding for review work, CIOB is accountable for supporting IT-enabled project gating and independent review processes in other ways. CIOB provides guidance to departmental clients on the application of project gates and independent reviews in accordance with Treasury Board (TB) policy. CIOB creates and sustains the guidance and tools that support the reviews. This includes maintaining alignment with TB policy and directives, and ensuring continuous improvement based on the industry's best practices and lessons learned from the reviews performed.

To further support the independent review program, CIOB has developed a set of criteria for selecting independent reviewers and has established pools of qualified reviewers, comprising private sector consultants and senior public service executives, from which departments may select review team members. CIOB provides advice and guidance to reviewers and review teams during the conduct of reviews.

The guidance provided on independent project reviews and gating is not an additional layer of oversight or a reporting requirement. Reviewers are independent of the oversight functions in TBS. It has been developed to help departments implement the best practices for ensuring the success of their IT-enabled project portfolio.

The program consists of:

1. A project gating framework that determines at what point a gate and its supporting independent review are required;
2. A methodology and approach to independent reviews described in this handbook and its companion piece, *Review Topics for Enquiry*;
3. Pools of pre-qualified reviewers from the private sector and federal public service, managed by CIOB; and
4. A one-day course to train reviewers to conduct an independent project review.

1.2 The independent review sponsor

The sponsor of an independent review (the “review sponsor”) should be either the project sponsor—usually at the assistant deputy minister (ADM) level—or the senior executive/manager to whom the project sponsor reports.

The independent review sponsor should not expect or attempt to control the outcome of a review. The review sponsor should recognize that a second, independent opinion is required, and any attempt to manipulate that opinion destroys its value.

Broadly, the independent review sponsor is responsible for:

- ▶ Establishing the terms of reference and developing the statement of work for the review;
- ▶ Identifying specific areas of focus or questions to be answered;
- ▶ Helping to identify the reviewers;
- ▶ Engaging the reviewers;
- ▶ Announcing the independent review to the project and stakeholder community;
- ▶ Ensuring that the review logistics are addressed;
- ▶ Meeting with reviewers on a regular basis to obtain status updates;
- ▶ Acting as the last resort to resolve problems and ensure timely responses from the project management team;
- ▶ Hosting review team presentations and, in particular, the final review team presentation, which should be made to the most senior executive governance committee associated with the project;
- ▶ Receiving review team reports, disseminating the reports, and coordinating responses;
- ▶ Ensuring that recommendations are effectively addressed and actions are communicated;
- ▶ Setting up the review post-mortem jointly with the review team leader; and
- ▶ Assessing the performance of the review team.

1.3 Overview of the handbook

This handbook contains the following main components.

1. **Introduction and Background:** This chapter explains why significant failures in large IT-enabled projects have plagued the Government of Canada since the 1990s, and why two new practices—that of a gating framework and independent reviews—will help large IT-enabled projects succeed.
2. **The Independent Review—An Overview:** This chapter defines independence in the context of project reviews, and examines the purpose and structure of an independent review, the types of reviews (workshop review, quick review, full review, and health check review), the role and conduct of review team members, and the equipment and logistical support necessary to aid reviewers while on the job.

-
3. **The Gating Framework:** This chapter explores the seven gates that large IT-enabled projects pass through—from concept through to post-implementation review—in order to provide an informed assessment of progress and issues, and to ensure that projects are on track before proceeding to the next gate. In addition to the full gating framework, there are also shorter streamlined gating and light gating frameworks for cases that do not require overly rigorous assessment.
 4. **Review Methodology:** This chapter contains detailed instructions for carrying out an independent project review. Review team members follow a five-part methodology. It takes them from the set-up and crucial interviewing phase of a project review through to analysis (in which findings, conclusions, and recommendations are unveiled), reporting, and a post-mortem that furnishes essential feedback for continual improvement in the review process.
 5. **Conclusion:** A final summary of the merits of the review process and of the highly experienced project reviewers whose perspectives and judgments will greatly aid project teams responsible for large, expensive IT-enabled projects.
 6. **Appendices:** Six are included. The first is a chart showing the positioning of gates relative to the classic systems development life cycle (SDLC), and the juxtaposition of workshop reviews and health check reviews. The second provides samples for seven documents that a review team will need: an independent review work plan, the review sponsor's announcement of the independent review, an email from reviewers requesting an interview, an interview schedule, a table of findings, an excerpt from a review presentation, and a client satisfaction survey. The third appendix defines the sustaining, tactical, evolutionary, and transformational classes of projects. The fourth and fifth appendices contain abbreviations and a glossary, respectively. The sixth appendix lists Treasury Board policies, policy instruments, and other resources of interest.

2 The Independent Review—An Overview

2.1 Defining independence

An independent review aims to arrive at the best assessment possible of a project situation and to meet the objectives of the review sponsor, remaining unaffected by the views of those who have an interest in the project.

What is meant by “independent”? It is not unusual for project proponents or managers to have presented a much more positive view of their project during the proposal or execution phase than would have been presented by a person with no interest in it. They may have minimized risk assessments, exaggerated potential benefits, misrepresented progress, or presented unrealistic budget or schedule outlooks. Generally, these misrepresentations do not intend to mislead but result from a feeling of pressure to get a project approved, or the desire to be free of excessive scrutiny by approval and oversight authorities, or to be given approval to pursue a particular project approach.

A reviewer is considered independent if:

1. He or she **does not have a conflict of interest**—real or perceived—with regards to the project, and;
2. He or she **is not influenced** by someone with an interest in the project.

Conflict of interest, real or perceived: Generally, these conditions can be spotted and avoided. For example, if the reviewer had been involved in promoting the project in a previous job, his or her assessment of it during the execution phase might be tainted. If the reviewer has personal relationships with key people on the project, or is close to a critical supplier, or is a known exponent of a technique being used by the project, these factors might influence the reviewer’s impartiality or have an effect on the perception of the reviewer’s impartiality.

Not influenced by others: If the project management group or the management structure to which this group reports has authority over the reviewer, then the “not subject to control” criterion has not been met. However, it is possible for a reviewer to be independent in these cases if his or her organization instructs the reviewer properly and does not interfere with the reviewer’s findings. Still, an outside party may perceive the reviewer to be under management control, even though the reviewer is acting independently.

When closer ties prevail in a situation, all parties must resist the urge to influence the reviewer.

To help understand the spectrum of relationships and the degree of independence of these relationships, here are some examples set out in order of increasing independence. They are written from the point of view of the manager of the project under review.

1. **Works for me but has not been involved in the issue under review.** I have asked individual A, who has experience in project estimating and has not been involved in the estimating activity on this project, to challenge the project estimates and report to me.
 - This can constitute an effective review if I do not influence individual A's work or conclusions. If the findings are unfavourable, and that is highly inconvenient, I will have to resist the urge to minimize, dismiss, or bury the findings, all of which I have the power to do. If, through subtle messaging, I have suggested a favourable review would be welcome or is needed, that is what I might get, since I arguably hold individual A's career in my hands.
2. **Does not work for me but works for my superior.** My superior has asked individual B to review the estimates on my project and report the findings to him. Individual B is also in charge of estimating on another project that my superior oversees. While individual B does not report to me, I am higher in rank or level than this individual and at some point in the future, he or she may report to me.
 - It is harder for me to exercise influence, since individual B answers to my superior and not to me. Due to seniority, I may have subtle but indirect influence and, if individual B is not self-confident, I may be able to influence the findings.
3. **Works for our organization but does not work for me or my superior.** The organization has assembled a team of people from areas outside my manager's authority to conduct a review of my project. The team will report to my manager's superior on their findings.
 - These people may be at the same management level as I am, and I might consider them peers. Even if they are at a lower level, it will be harder for me to influence them since they are organizationally more distant and will report their findings above the level of my own manager.

4. **Does not work for our organization but has been hired by the senior executive to conduct the review of my project and will work under the direction of the senior executive.**

- It will be hard for me to influence these reviewers. The success of the arrangement depends on the style of our senior executive, who may choose to instruct the reviewers to go easy or be supportive. To decide how much weight to put on the review findings, an observer will have to gauge both the competence of the consultants doing the review, and the integrity and style of our senior executive in instructing the reviewers.

5. **Does not work for our organization but is engaged by the senior executive from pools of qualified experts who work according to a methodology that reduces our organization's ability to influence the review.**

- It will be difficult, if not impossible, for me or any managers senior to me, including our senior executive, to influence the findings of a review undertaken in this way. This model offers the greatest assurance of independence.

It could be argued that no one is independent. Every public service employee ultimately works for the federal government and, as such, is not outside the organization. Anyone who is hired is arguably indebted to the organization that hires them. Current experience suggests, however, that this is overstating the matter, because:

- ▶ Public service employees from outside the department, suitably instructed and empowered, are able to resist influence and be fully and constructively critical;
- ▶ Hired consultants, suitably instructed, are equally able to be critical and not influenced; and
- ▶ In some cases, under the right conditions, public service employees are able to maintain their independence when critiquing work from another area in their department.

2.2 An independent review

An independent review may address such needs as:

- ▶ Preparing for a specific gate decision meeting;
- ▶ Conducting a health check during the course of a long-term project; and
- ▶ Staging a workshop review of one specific topic (e.g., a business requirement capture review, a design review, a technology architecture review) or selecting a course of action to deal with a critical issue that has arisen.

For each situation, the project sponsor should select the most appropriate type of review. See Section 2.3, "Types of Reviews."

All independent reviews should be:

- ▶ **Independent**—They report above the project group, preferably to an ADM-level project sponsor or management group within the department.
- ▶ **Framed by terms of reference and objectives that are established by the review sponsor**—These terms of reference may require additional focus on specific areas of concern to the review sponsor but should not constrain the review from exploring other concerns that arise.
- ▶ **Holistic**—The review should look at the entire situation from strategy and approach through to environment, execution, and planning. It can also be regarded as a targeted health check in support of senior executive decisions required at a planned decision point.
- ▶ **Brief and intensive**—Even in the advanced stages of larger projects, a review should last no longer than an elapsed time of about six weeks (four weeks is the standard for regular projects). The review is intended to represent a snapshot of the project.
- ▶ **Experience-based**—Utilizing reviewers' extensive project experience and leveraging lessons learned from other projects and reviews will keep reviews concise and on track, providing maximum value from the exercise. The independent reviewer knows that there are recurring themes and patterns in project failures. It is the reviewer's job to detect symptoms of these themes or patterns in the project under review.
- ▶ **Performed by qualified reviewers**—Qualified reviewers have the knowledge (of gating framework and independent review methodology) and extensive project experience required to ensure each independent review is expertly conducted.
- ▶ **Based on the use of the TBS independent review methodology**—The methodology provides a proven framework for conducting, documenting, and reporting the review. This is a framework, not a checklist. It ultimately depends on the skills and experience of the reviewer to ask the right questions, interpret, and perform a qualitative assessment of the available information.
- ▶ **Normally scheduled to be performed prior to a gate decision point**—These points require executive decisions about whether and how the project should proceed. An independent review should operate in project time. The review should be completed between the time the project is ready for review and the time when the results are needed by the project sponsor to satisfy a gate condition. That way, remedial actions can be identified for any issues reported in the review. This will prevent the review process from inflicting unnecessary and disruptive delays on the project.

-
- ▶ **Ultimately intended to provide constructive help to the project sponsor and the project management team**—The review should focus on ensuring that the project is valid, viable, properly resourced, and effectively supported, particularly at the executive level. Also, it should provide some assurance that risks are being mitigated and significant issues are being appropriately addressed.

It is also important to understand what an independent review is *not* meant to be:

- ▶ **Not intended to supplant normal project monitoring measures**—The review is not a project status report in that it does not perform tracking. It does, of course, draw on the factual information in status reports.
- ▶ **Not exhaustive**—The review looks at samples and investigates further only where a problem is sensed.
- ▶ **Not intended to be a substitute for an ongoing Independent Verification and Validation function**—It does not operate at the level of detail usually expected for an Independent Verification and Validation.
- ▶ **Not a substitute for the project quality assurance processes**—Again, the independent review is checking for warning signs and does not normally perform detailed analysis.
- ▶ **Not a substitute for an audit**—It is not forensic in nature and does not have the rigour of a typical audit. It is somewhat more subjective in assessment and, where necessary, relies on experience to supplement circumstantial evidence.
- ▶ **Not intended to be burdensome or create barriers for the project**—The review requirements should be stated well in advance as part of a larger quality assurance plan. All documents under review should be available for the given stage of the project; otherwise, the review is premature. The interview process typically consists of 15 to 20 one-hour interviews, along with a limited number of presentations and demonstrations.

The review sponsor and the project management team should give full consideration to the review findings, conclusions, and recommendations, and respond appropriately—either with actions, a rationale for not acting, or a rebuttal.

2.3 Types of reviews

There are four types of reviews: a workshop review, a quick review, a full review, and a health check review. The type and timing of independent reviews should be built into the project plan as it evolves. Please note that the workshop review and quick review do not require reviewers to create all deliverables required for the full review and the health check review. The review terms of reference should identify which deliverables are required.

The review methodology is closely linked to the process of a project passing through a series of gates, or checkpoints, as it moves from concept through approval, design, and implementation. A project gating structure—which is part of TBS CIOB’s independent review program, along with the project review methodology—is described in detail in Chapter 3, “The Gating Framework.” A gate is a decision point at which certain criteria is expected to have been met, certain issues resolved, and a plan in place to proceed to the next gate. The gate definitions in Chapter 3 are further supported by *Review Topics for Enquiry*, a companion publication to this handbook that identifies topics reviewers typically consider when conducting a review. *Review Topics for Enquiry* also describes, gate by gate, issues that reviewers should keep in mind according to the next gate that the project will pass through.

Workshop review

The workshop review is most appropriate for the early project gates, such as Gate 1—Strategic assessment and concept, and Gate 2—Project approach. Workshop reviews might also be set up to consider ad hoc issues such as architecture, privacy, and security, and may lead to a handful of targeted individual interviews. This is because the group discussion setting of a workshop review may inhibit free-flowing discourse among participants who know that their opinions are unpopular or who lack the self-confidence to speak up. To overcome this drawback, a small number of targeted interviews can be scheduled in the two or three days following the workshop. These interviews can either pursue an issue further or seek views from people who did not have much to say but, considering their role on the project, should have views.

Here are some sample uses of workshop reviews:

- For **Gate 1**, the workshop review provides a reality check. It typically involves a half- to full-day workshop where the project sponsor and initial project staff provide reviewers with an overview of the project concept and its alignment with the strategies and goals of the organization. The independent review team typically consists of two or three members. Other project staff members provide technological, project management, and service delivery perspectives, preferably with some knowledge of the business subject matter, as required. The reading preparation for such a review typically involves half a day, and the post-workshop debriefing and reporting activities take about half a day as well.

-
- ▶ For **Gate 2**, the workshop review provides an early assessment of feasibility. It begins with consideration of the business imperative. Project definition, alignment, and positioning are more fully elaborated here. Expected outcomes, early notions of the proposed solution, and preliminary areas of potential risk are also considered. The review team again is typically two or three members, and particular attention should be given to ensure that one or more reviewers are comfortable with challenging the approach to the project being proposed, as this is the major focus of the gate. The Gate 2 workshop itself normally involves one day, preceded by a day of reading preparation and followed by half a day for debriefing and reporting.
 - ▶ For **specific issues**, a workshop-style review may be organized to address a specific project area of concern. The review team again involves two or three members but, in this case, the emphasis of team composition is on subject matter expertise. Specific issue reviews can be extremely valuable. The following is a sampling:
 - **Architecture review.** Large undertakings often have a large architecture component. Some projects have experienced difficulty resulting from inappropriate architectural concepts. In such a review, a panel of independent experts from the systems architecture field critiques the architecture component.
 - **Requirements review.** Collecting business requirements can be challenging, particularly in organizations that do not regularly run systems development projects. In such a review, requirements experts examine the processes and disciplines used to gather and document requirements, and judge their completeness and reasonableness before proceeding with design and construction.
 - **Technical design review.** Such a review is targeted at the systems design. It normally seeks to confirm the soundness of the technological design and addresses problematic issues such as designing for performance, availability, recoverability, and security.

Total elapsed time for a workshop review is typically about one week.

Quick review

The quick review assesses areas of risk in project components without incurring the costs of a full review (not only the direct review cost, but the impact of the review on the project activities). The quick review is highly focussed on the objectives set by the review sponsor and review team leader. It considers the project status primarily in terms of:

- ▶ The approach and how it is evolving;
- ▶ The environment, including project capacity, and how it is performing; and
- ▶ The project executives (business, technical, and senior) and decision-making processes.

The quick review typically involves a day of reading followed by up to five days at the client's site. The on-site period might consist of two days to hear presentations by the project group, two days for key interviews, and a one-day review team session to consolidate and validate observations, and to develop conclusions and preliminary recommendations. To manage time efficiently, the review team should define the expected content of the project presentations in its first meeting.

The team leader then uses the results of the team session to produce a review presentation for delivery to the review sponsor. The total elapsed time of a quick review is expected to be less than three weeks, with three to five review team members.

Full review

The full review represents an intensive review of what has been accomplished up to the applicable gate. It establishes readiness to proceed with the next project phase. A full review involves a team of three to five reviewers, including a review team leader, with additional support, as required, for coverage of specialized areas that might be involved such as policy work, biometric processing, or knowledge of products such as SAP or Siebel. The full review is normally conducted over a period of four to six weeks and may involve delivery of a report, in addition to the usual review presentation. The five steps outlined in Chapter 4, "Review Methodology," provides a detailed explanation of the requirements of a full review.

Health check review

A health check review is a special type of review that may be conducted between predetermined project gates. Its level of effort rests between that of a quick review and a full review. Rather than focussing on the expectations for a specific gate, the health check review might examine how the project is set up and structured in terms of governance, roles and responsibilities, working relationships, staffing and budgeting, management processes, and tools. It might also address efficiency and effectiveness issues related to the project, as well as general progress toward planned outcomes. The health check review follows a process similar to that of a full review. It usually lasts three to five weeks with a team of two or three reviewers.

Attributes of Different Types of Reviews				
	Workshop Review	Quick Review	Full Review	Health Check Review
When appropriate	<ul style="list-style-type: none"> For early project gates (such as Gates 1 and 2) For specific issues 	<ul style="list-style-type: none"> For Gates 3 to 7 Assesses risk in project components without the expense of a full review 	<ul style="list-style-type: none"> For Gates 3 to 6 (and occasionally Gate 7) 	<ul style="list-style-type: none"> Instead of looking at a gate's expectations, it focusses on factors such as governance, budgeting, working relationships, etc.
Time required (elapsed)	<ul style="list-style-type: none"> About one week 	<ul style="list-style-type: none"> Less than three weeks 	<ul style="list-style-type: none"> Four to six weeks 	<ul style="list-style-type: none"> Three to five weeks
Size of review team	<ul style="list-style-type: none"> Two to three members. There is 100% participation by members 	<ul style="list-style-type: none"> Three to five members. There is 80% participation by members 	<ul style="list-style-type: none"> Three to five members. There is 50 to 70% participation by members 	<ul style="list-style-type: none"> Two to three members. There is 50 to 70% participation by members
Tasks	<ul style="list-style-type: none"> Reading preparation Workshop with review sponsor, project staff, and review team Possibly conducting a few targeted interviews Making conclusions/recommendations Debriefing and reporting 	<ul style="list-style-type: none"> Reading preparation Listening to presentations by project group Doing key interviews Consolidating/validating observations Making conclusions/recommendations Debriefing and reporting 	<ul style="list-style-type: none"> Reading preparation Listening to presentations by project group Doing 15 to 20 interviews Consolidating/validating observations Making conclusions/recommendations Debriefing and reporting 	<ul style="list-style-type: none"> Reading preparation Listening to presentations by project group Doing interviews Consolidating/validating observations Making conclusions/recommendations Debriefing and reporting
Deliverables	<ul style="list-style-type: none"> Report or review presentation 	<ul style="list-style-type: none"> Review presentation 	<ul style="list-style-type: none"> Review presentation Executive summary presentation Executive briefing note Report Executive summary of report 	<ul style="list-style-type: none"> Review presentation Executive summary presentation Executive briefing note Report Executive summary of report

For more information on gates, see Chapter 3, “The Gating Framework.”

2.4 How long does a review last?

A typical full review involves 15 days per reviewer and 20 days for the team leader over a 4- to 6-week period. A typical health check review, which is slightly shorter, involves 10 days per reviewer and 15 days for the team leader over a 3- to 5-week period. A typical quick review involves 12 days per reviewer and 14 days for the team leader over a 3-week period. Lastly, a typical workshop review involves 7 business days for the whole review team. The total level of effort required is highly dependent on the scope and size of the project and the scope of the review. Travel, if required, may also increase the effort.

It is assumed that reviewers will have been identified and any procurement requirements or assignment agreements put in place well ahead of the review. Reviewers must be prepared to work on a part-time basis with varying intensity over the review period.

The schedule is usually time-constrained so that the review environment does not change significantly from start to finish, and so that the review results will still be relevant. Also, the review should be completed between the time the project is deemed ready for review and the time results are needed by the project sponsor to satisfy a gate condition.

In Chapter 4, “Review Methodology,” preliminary numbers for effort and duration of a typical full review have been suggested as a starting point. The review methodology should also be adjusted to fit the type of review—workshop review, quick review, full review, or health check review.

2.5 Who are the review team members and what are their roles?

The size of a team depends on the scope of the review and its objectives. Typically, the review team consists of a mix of government reviewers and private sector reviewers on contract. In addition to their extensive project delivery and review experience, team members may also be selected for other technical or business experience that is relevant to the project. Given that public sector reviewers normally have full-time jobs to perform, private sector contractors may be called upon to do the more time-consuming tasks such as documenting, detailed investigations and research, draft review presentation development, and report writing.

The review team consists of a review team leader and at least one reviewer. One-person independent reviews are generally not effective. A second reviewer is essential to:

- ▶ Act as a sounding board;
- ▶ Provide an alternative perspective;
- ▶ Increase effectiveness in key interview situations;
- ▶ Provide quality assurance; and
- ▶ Accommodate potential schedule conflicts.

On larger teams of up to five reviewers, subject matter specialists and apprentice review team members may also take part. It is best to cap the size of teams at five—larger teams become more difficult to orchestrate, the focus of enquiry is harder to achieve, and getting consensus on schedules is challenging.

The reviewer's responsibilities, which should be included in the review terms of reference, include:

- ▶ Following the guidance and methodology of TBS's *The Independent Reviewer's Handbook* and the associated *Review Topics for Enquiry*.
- ▶ Performing an assigned role on the review team and taking direction from the team leader in accordance with the statement of work agreed to with the review sponsor.
- ▶ Acting independently and being perceived as independent and unbiased. The reviewer must have no vested interest in the project under review and should be outside the organizational chain of command delivering the project.
- ▶ Behaving professionally in all dealings with people associated with the project review. Any personal opinions and viewpoints expressed by those under review or by the review sponsor must be treated with the utmost discretion. That is, they should be disclosed only to those who have a legitimate need or right to know.
- ▶ Exercising his or her responsibility to the review sponsor and the sponsoring organization(s) by presenting the assessment in its entirety and maintaining full objectivity, frankness, and detachment from the opinions and views of those outside the review team.

1. **Review team leader**—All reviewers report to the review team leader. The leader is responsible for:

- Participating in the selection of the reviewers at the request of the review sponsor;
- Developing the review plan;
- Conducting the review in accordance with TBS's *The Independent Reviewer's Handbook* and the associated *Review Topics for Enquiry*;
- Assigning and delegating work to reviewers;
- Performing reviewer activities;
- Liaising between the team and the review sponsor—reporting to the review sponsor, either by telephone or in person, and resolving any review issues with the review sponsor;
- Providing the review sponsor with status updates;

-
- Ensuring that reviewers work effectively as a team and achieve consensus on how to report issues;
 - Conducting review team meetings;
 - Integrating reviewer findings;
 - Leading the development of conclusions and recommendations;
 - Leading the development of review presentations;
 - Performing quality assurance on deliverables; and
 - Conducting a review post-mortem and lessons-learned analysis, and sharing the findings with CIOB in order to improve these processes.
2. **Reviewer**—Reports to the review team leader and is assigned to perform the following activities:
- Participating in team leader activities, as delegated;
 - Performing the review work in accordance with TBS’s *The Independent Reviewer’s Handbook* and *Review Topics for Enquiry*;
 - Reviewing project documentation;
 - Attending project group presentations and demonstrations;
 - Conducting interviews/workshops;
 - Assessing and validating findings;
 - Analyzing and developing conclusions and recommendations;
 - Integrating findings, conclusions, and recommendations with the results of the other team members;
 - Helping to develop the review presentation and report;
 - Assisting with quality assurance of these deliverables;
 - Assisting in the delivery of review presentations; and
 - Participating in the review post-mortem and lessons-learned analysis.
3. **Subject matter specialist**—The review team leader may determine whether one or more subject matter specialist needs to be part of the review team. The area of expertise may be business-oriented (e.g., policy work, grants and contributions), technical in nature (e.g., high performance systems, biometric processing), or product-oriented (e.g., SAP, Siebel). The subject matter specialist may have a highly focussed and brief involvement in the review, or perform the functions of a full reviewer.

-
4. **Administrative support contact**—The review sponsor should designate an administrative support contact from the department to assist the review team on a part-time basis. The administrative support contact should make supporting the review team a high priority for the duration of the review. Duties might include:
- Scheduling all interviews;
 - Scheduling meetings and booking conference calls;
 - Booking meeting rooms;
 - Accessing and distributing project files and documents to the team;
 - Providing email and telephone contact lists;
 - Assisting in the publishing and distribution of documents developed by the review team;
 - Booking travel arrangements; and
 - Providing general administrative assistance.
5. **Management liaison**—Most reviews require a management liaison to support the review team with day-to-day management decisions and advice related to the conduct of the review. Usually this role would be performed by a manager on the project group (typically at an EX 1 level or equivalent) with reasonable tenure on the project and a broad understanding of its objectives. This role demands about half an hour each day, as needed. The management liaison:
- Helps identify sources of information;
 - Recommends interview contacts;
 - Obtains answers to questions; and
 - May also be required to delegate project group personnel to deliver presentations and conduct demonstrations.

Reviewers must have a current security clearance at a level specified by the project group prior to the start of the review.

2.6 Conduct of reviewers

A review's effectiveness is highly dependent on how reviewers are regarded. Reviewers must consistently be perceived as professional and credible. The review team should not create unnecessary opportunities for anyone to undermine their credibility. Consider the following issues:

Dress code—At a minimum, reviewers should adopt the dress code of the organization under review. They should typically dress in smart business casual attire. When contact with senior executives is required, more formal business attire is expected. The objective is not to intimidate those under review, but to be seen as an executive consultant.

Organization and punctuality—The reviewer must be seen to be well prepared and organized at all meetings and interviews. This means taking the time to prepare an agenda for each meeting and an outline for each interview, and doing sufficient homework to participate effectively. Being prepared and organized demonstrates that the review team knows what it is doing.

The reviewer should be on time, or slightly early, for every meeting. Punctuality is the mark of respect. It also indicates that the review team is in control of the review.

Organization and punctuality send a message that the reviewer attaches importance to the task at hand and to the review overall.

Loyalty—The first loyalty of the review team should be to the project, and its role is to provide advice that might make a material difference to the project's outcome—whether this advice is within the terms of the mandate statement or not.

Confidentiality—Any opinion offered to the reviewers must be shared only with those who have a legitimate need or right to know (this may include the processing of requests for access under the *Access to Information Act* or *Privacy Act*). Further, reviewers must refrain from discussing review matters with anyone outside the team except the review sponsor or those designated by the review sponsor. During the review, it is unwise to discuss possible findings with anyone since information that has not yet come to light might significantly change those findings.

Information Management and Privacy—Reviewers must comply with access to information and privacy legislation (for more details, consult the *Access to Information Act* and the *Privacy Act*). Items that may be affected by such legislation include review presentations, reports, working notes, and any other documentation relating to the review activity.

Security and third-party proprietary information—The reviewers must adhere to all security requirements and ensure actions are consistent with personal security clearances. Individual departments and agencies may have their own specific requirements.

Security concerns extend beyond the treatment of government classified information. They involve any proprietary information provided by third parties such as vendor proposals, vendor pricing, and intellectual property. If there is any doubt about whether information is proprietary, the status of the information should be clarified with the source.

Respect and sensitivity—Reviewers must treat all project personnel encountered during the review with the utmost respect and sensitivity. As professionals, they will likely understand the necessity of the review and generally appreciate the resulting benefits. However, most people do not enjoy having their actions or performance scrutinized. Reviewers need to appreciate that, in many cases, the people they contact throughout the review have invested a considerable amount of their energy, professional skills, and personal lives in the project. Their professional careers may ultimately be affected by the review outcome. This may occasionally result in the appearance of defensive and self-serving behaviour. Occasionally, that behaviour may be aggressive and challenging toward the reviewers.

As a starting point, reviewers should assume that the people involved in the project are intelligent and motivated, and are trying to do a good job to the best of their ability and experience. It is also useful to remember that not all project participants have experience with large IT-enabled projects. Many project group members are doing their best to learn on the job. In large project reviews, it is often easy to be critical of work and to second-guess project decisions. Reviewers must remember that they have not, in effect, walked in the shoes of these people. In large and complex undertakings, tough choices often need to be made. Reviewers must view the situation dispassionately and not let their judgment be coloured by personal styles or behaviours that surface during the review process.

Finally, while many on the project may find it therapeutic to talk to a reviewer, the temptation to take on the role of ombudsman or therapist must be avoided.

The rumour mill—It is not unusual for concern and uncertainty about a review's outcome to arise among project personnel. The review period can foster a climate that allows the rumour mill to flourish. Rumours typically centre on hypothetical worst-case scenarios. These can be debilitating to the project's overall well-being.

Open and transparent communication from the review sponsor that clarifies the terms of reference for the review can alleviate this negative influence. The review team should try to be aware of any rumours in circulation by asking interviewees and others what they are hearing, then attempt to put rumours to rest. However, reviewers must avoid making statements that give false assurances or that might later tie their hands when preparing objective conclusions and recommendations.

Perceptions and rushing to judgment—One common pitfall for reviewers is drawing premature conclusions or recommendations from the reading and interviews done early in the review. Reviewers often hear very compelling evidence that causes them to adopt premature positions on issues, only to have these positions refuted later on. If premature judgments have been communicated to the review sponsor, it can be very hard to change direction later without discrediting the entire review. The situation is frequently exacerbated by the project sponsor or other senior executives who are anxious to know the team’s preliminary thinking and early conclusions.

Though difficult, it is important for reviewers to reserve judgment until the review team has gathered all the evidence considered necessary. If sufficient information on a particular issue cannot be gathered in the review time frame, launching a further investigation of the topic in question may be a valid recommendation.

Flexibility and self-sufficiency—Reviewers must be able to adapt their style to deal with a wide range of government employees and suppliers: everyone from junior staff to senior executives. Typically, reviewers are professionals with diverse personalities, skill sets, and years of experience. Reviewers must also be able to fit into an unfamiliar review team setting and do whatever is necessary to get the job done.

Reviewers need to be flexible with their time as well, and be willing to accommodate interviewees who have to meet the demands of full-time jobs. It is not unusual to schedule interviews and meetings early in the morning before regular working hours, at lunch hour, late in the afternoon, or early in the evening. In addition, reviewers must be willing to adapt to rapidly changing schedules. On some days, reviewers might be required for only a few hours. At other times, they will have to work long days, possibly for several days in a row.

Finally, reviewers must be self-sufficient. They must bring their own materials and equipment, and operate from their own office when not at the review site. They must be proficient in using the methodology and adapting to whatever on-site equipment is available (e.g., photocopiers, printers, fax machines, etc.). In general, reviewers should expect minimal administrative or logistical support other than what is specified in this handbook.

2.7 Equipment, logistical support, and travel

Each member of the independent review team should be equipped with the following items at a minimum:

- ▶ Cell phone or a wireless personal digital assistant (e.g., a BlackBerry);
- ▶ Laptop computer with software compatible to the departmental standard of the review sponsor (e.g. Microsoft Office and Windows); and
- ▶ High-speed Internet access capable of receiving email attachments up to five megabytes.

It is recommended that logistical requirements be identified to the review sponsor at least two weeks before the review begins so that most elements are in place for the start of the review. Logistics have a significant impact on efficiency and how much work reviewers can accomplish in the time available.

The review team should have a dedicated meeting room on the project site from which to operate. The room should be a suitable place for team members to review documents, conduct interviews, and hold team meetings. Ideally, it should accommodate between four and six people, and come equipped with a large work table, a secure storage cabinet, a speakerphone, and Internet access. The team should also have access to a photocopier. If possible, a desktop workstation may be useful to access team emails and project documentation.

Some members of the review team should be issued temporary access badges to the buildings where most of the interviews and meetings will be held. This saves time and frustration for the reviewers and the interviewees.

Local travel within the geographical area of the host organization is the reviewer's responsibility (i.e., arrangements and costs are included in the per diem price of a private sector reviewer). The reviewer is normally obliged to arrange for travel to local work sites. Travel requirements to conduct interviews beyond the review location should be identified in conjunction with the review sponsor early in the life of the review. Trips should be consolidated to minimize travel expenses and travel time. Identification of travel requirements after the review has commenced can lead to delays in scheduling, extra time needed to create and approve task authorization and contract amendments, and constraints due to availability of flights.

3 The Gating Framework

Overview of the gating framework

This chapter describes the gating framework recommended by TBS as a process to ensure that IT-enabled projects are on course for success. The full gating framework defines seven gates. The purpose and issues associated with each gate, as well as types of reviews typical for the gate, are summarized in table format in Sections 3.1 to 3.7. In addition to the full gating framework, there are streamlined gating and light gating frameworks. These merge certain gates together and are feasible alternatives if less rigorous project assessment will suffice.

To give executives who are accountable for large and complex IT-enabled projects effective discipline and control, it is recommended that those projects be structured to provide for a clear, comprehensive, and objective assessment of how the project is performing against planned objectives at all stages. Key to success is ensuring that resource implications and results are visible to executives at logical predetermined checkpoints, or “gates.” Gates provide the opportunity for an informed assessment of progress and issues. This permits executives to make better decisions on future plans and investments.

The gating framework recommended by TBS draws upon ideas from the United Kingdom’s Office of Government Commerce (OGC) Gateway Process and the Province of Ontario’s IT Project Gateway Review Process as well as components of the Stage-Gate Process adopted by several departments. All of these frameworks and methodologies are tried and proven. However, the TBS-recommended gating framework also takes into account the decentralized and less standardized environment that exists in the federal government and the larger size of typical IT-enabled projects (compared with provincial jurisdictions and most private sector organizations). This includes the tendency in the federal government to procure project components piece by piece rather than all at once for the complete project or business service.

The full gating framework defines seven gates that might logically be present in every project. Its actual application, however, will depend on each case. The seven gates are:

Gate 1—Strategic assessment and concept

- ▶ For confirmation of the project’s objectives—both what is to be done and why—and the identification of key stakeholders

Gate 2—Project approach

- ▶ For confirmation of how the project’s objectives will be achieved

Gate 3—Business case and general readiness

- ▶ For confirmation of funding and business outcomes

Gate 4—Project charter / project management plan (PMP)

- ▶ For confirmation of resources, support, and governance

Gate 5—Detailed project plan and functional specifications

- ▶ For confirmation of readiness to proceed with construction

Gate 6—Construction complete and deployment readiness

- ▶ For confirmation of readiness to deploy for both business and IT domains

Gate 7—Post-implementation review

- ▶ A post-mortem and final step to gather lessons learned.

The seven-gate structure described in this handbook, along with other gate structures that may be in use, follow similar principles. Gates are created such that at each successive gate, the project becomes more precisely defined, and uncertainties and risks become clearer and are resolved or mitigated. The project is also expected to have made certain accomplishments, indicated by project progress documents that permit an assessment to be made of the project's state and its readiness to proceed to the next gate. In addition to reviews associated with a gate, health check reviews or workshop reviews on particular issues may also occur at other times. The figure in Appendix A, "Gating," shows the positioning of gates relative to the classic SDLC (systems development life cycle). The choice of health check and workshop reviews in Appendix A are merely examples, whereas the gate reviews are shown where they would typically occur.

While the SDLC follows a traditional waterfall methodology, the positioning of gates can be adapted to various methodologies, overlapping phases, and multiple-release projects. (A waterfall methodology is one in which the entire scope of the project passes through each phase before work begins on the next step. This is the opposite of the iterative methodology in which an initial solution that meets only part of the requirement is developed and implemented, followed by subsequent cycles of development and implementation.)

Deciding which gates to use for a project is important. In departments where there is an executive-level oversight group for project or investment management, this group may make a decision based on its assessment of the project's risk or complexity. In other departments, the decision may be left to the project sponsor.

The best practice is that all projects go through all seven gates. If a less rigorous course is considered acceptable, then streamlined gating and light gating—which collapse certain gates into one gating point—are viable options (see the following figures of streamlined gating and light gating). Independent reviews are performed at gates where an external opinion is felt to be

beneficial. On very large and/or long-term projects, at least one independent full review or health check review should occur each year. The *Review Topics for Enquiry* supplement to this handbook provides the reviewer with a comprehensive summary of issues for consideration, depending on the circumstances at hand. Lines of examination can be selected as appropriate to the applicable gate and review type (see Section 2.3, “Types of Reviews”).

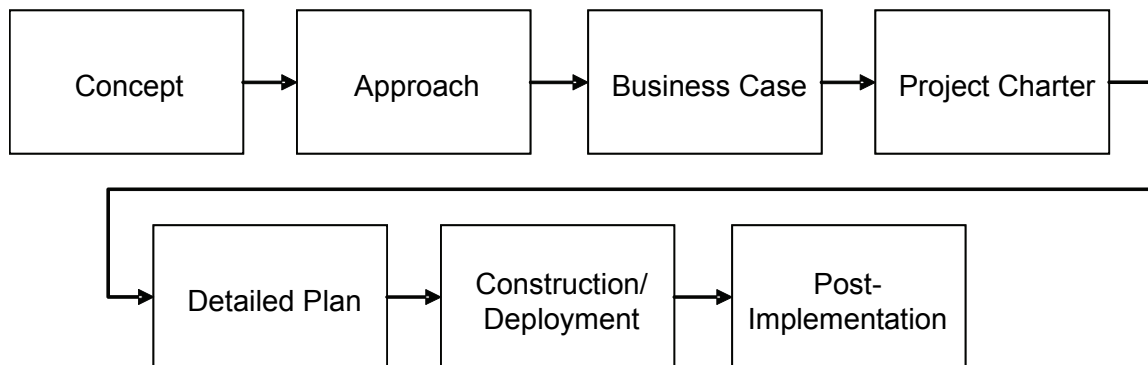
In the tables that follow describing each of the gates, percentages indicate the accuracy of project estimates that reviewers should normally expect to find. At each gate, two estimates are examined: an estimate for the entire project and an estimate of the work required between the most recently completed gate and the next gate. The first estimate forecasts the total project effort. Normally, this estimate would change from an extremely rough approximation during the early gates when the project is still a concept, to an increasingly accurate estimate at later gates, until it finally reduces to an estimate of ± 15 per cent at Gate 5, just before construction starts.

The second estimate forecasts the work that needs to be done before the next gate. Since this is work that is about to begin immediately and most issues should be known, the estimate should be accurate (± 10 per cent); this requirement appears under the “Supporting items” section in the tables that follow.

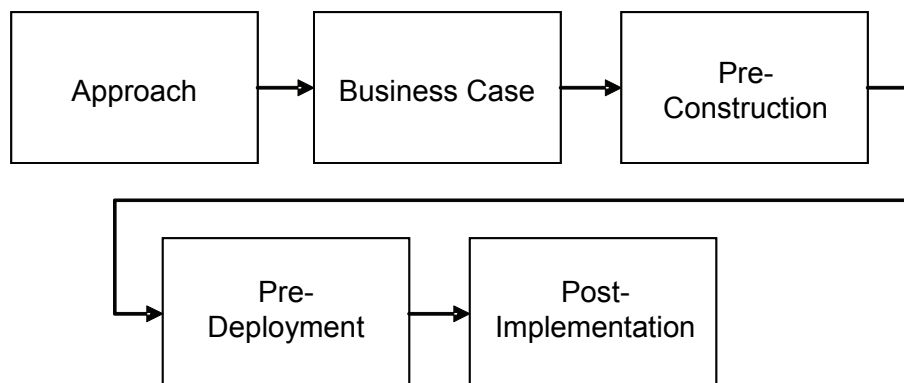
It is important not to confuse these two different estimates—one is for the project overall, and the other is for the work necessary to arrive at the next gate.

Here are three project phase and gating models:

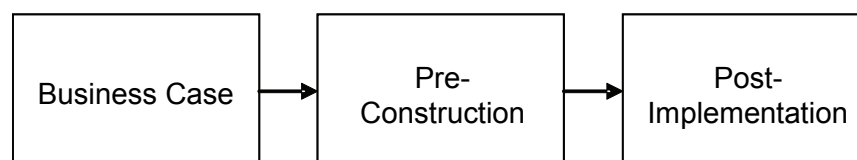
1. Full gating for very large and highly complex projects:



2. Streamlined gating for projects of medium size, risk, and complexity:



3. Light gating for small, low-risk projects with little complexity:



3.1 Gate 1 Review—Strategic assessment and concept

Purpose: To answer the key questions “What do we want to do?” and “Why?” The objectives at this early stage are to test the wisdom and appropriateness of the proposed undertaking, and to ensure that key stakeholders are identified, and that everyone understands what is to be done and why. A half- to one-day workshop session is typical, preceded by reading of any available early project documents. The Gate 1 review seeks to arm the review sponsor with considerations that should be addressed before the next phase of the project and, in some cases, may actually dictate going back to the drawing board before proceeding further.	
Review issues	<ul style="list-style-type: none"> • Validation of the rationale for the project • Confirmation that underlying fundamentals make sense • Assessment that the project is doable as proposed
Why	<ul style="list-style-type: none"> • To eliminate ideas that do not make sense or will prove to be impossible to execute
Core review items for this gate	<ol style="list-style-type: none"> 1. Wisdom and appropriateness of proposed undertaking 2. Articulation of the business problem and validity of the business imperative 3. Definition and boundaries of scope 4. Definition and measures of success 5. Degree of common understanding about the proposal among parties involved 6. Identification of stakeholders and extent of support and commitment for the initiative 7. Confirmation that the project makes sense in the context of the departmental project portfolio and federal government priorities
Supporting item(s)	<ol style="list-style-type: none"> 1. Plan and estimate ($\pm 10\%$) for tasks and level of effort to next project gate
Typical input to the review	<p>The project group provides reviewers with an understanding of why the project is being proposed, what it is intended to accomplish, and how it is defined. Supporting information to position the full context of the proposal might include reference to departmental reports and plans as well as an overview of the department's main business lines.</p> <p>The following areas need to be addressed:</p> <ul style="list-style-type: none"> • The concept and imperative of the project, including identification of the project sponsor, the business problem statement in the context of the overall business strategy, the broad scope of the project, expected general business outcomes and indicators of success, key stakeholders, general business risks, approximate sizing of the project, and critical success factors. • The alignment of the project proposal with departmental Program Activity Architecture, program(s) delivery, departmental plans and priorities, broader federal government or cross-departmental goals, as appropriate, and positioning of the project in the context of the departmental information management and IT portfolio (including reference to departmental architectures). The positioning might also reference TBS-sponsored shared or common services and cluster initiatives, if relevant.
Review format	Workshop review (conducting a few targeted interviews may be necessary)

3.2 Gate 2 Review—Project approach

<p>Purpose: To confirm that the approach to address the business problem or opportunity is wise by testing its feasibility and appropriateness. As in the Gate 1 review, this gate is not intended to be an overly burdensome undertaking and can often be performed in a one-day workshop session. The project group is expected to provide information on the approach envisaged for the undertaking—a discussion that should flow logically from the focus on the business problem and alignment issues of the Gate 1 review.</p>	
Review issues	<ul style="list-style-type: none"> • Validation of the wisdom and feasibility of the proposed approach to the project
Why	<ul style="list-style-type: none"> • Experience and studies show that unwise decisions on project approach have frequently proven to be a major contributing factor to project failure
Core review items for this gate	<ol style="list-style-type: none"> 1. Reconfirmation of underlying business wisdom, precision of goals, commitment of stakeholders, and how expected business outcomes will be measured 2. Project classification (e.g., sustaining, tactical, etc.). See Appendix C for definitions of project class 3. Assessment of key elements in the approach description document, including: <ul style="list-style-type: none"> • How much redesigning will be required for the business process, model, and program delivery strategy • How business change will be decided upon and achieved • Precision of definition and scope—is the project definable and can its scope be bounded? • Preliminary business model • Extent of reuse of existing assets—systems, data, business rules, procedures, and program delivery infrastructures • How transition to new environments will occur for both the business program and the associated IT systems • Make-versus-buy considerations • Environment in which project will be undertaken • Preview of risk assessment for the selected approach • Preview of how project will be governed <p>Note: The expected level of detail for the above items relates to what is necessary to permit an assessment of the feasibility of the approach; the focus is on whether the approach is reasonable.</p>
Supporting item(s)	<ol style="list-style-type: none"> 1. Reviewers would also benefit from previewing: <ul style="list-style-type: none"> • Project packaging (order of magnitude sizing [$\pm 100\%$]), possible technological solutions, project staging and time frames, key roles and staffing considerations, goal alignment, architectural considerations, key assumptions, and risks • Project environment (governance, relative departmental capacity, project culture and discipline, business ownership, executive engagement and capacity, supporting functions such as human resources, finance, procurement, etc.) 2. Updated plan and estimate ($\pm 10\%$) for tasks and level of effort to next project gate

3.2 Gate 2 Review—Project approach (*continued*)

Typical input to the review	<ul style="list-style-type: none">• Information on project approach according to core review items• Preliminary results from a Project Complexity and Risk Assessment (PCRA) and Organizational Project Management Capacity Assessment (OPMCA), if required
Review format	Workshop review (conducting a few targeted interviews may be necessary)

Note that in some situations, particularly for smaller projects, Gates 1 and 2 may be combined.

3.3 Gate 3 Review—Business case and general readiness

<p>Purpose: To answer the key question “How?” The most feasible project options are considered here and the preferred option recommended. The project approach is now fully articulated. A high-level project plan has been tabled, upon which preliminary costing is based. The business case should include an investment rationale and describe outcomes to be achieved, as well as their justification relative to the proposed cost. Project cost and schedule estimates for the entire project should be in the 40% range. (Ranges assume a typical development or integration project where there are many unknowns at the early stages. An infrastructure replacement project might have a much smaller estimating range.)</p>	
Review issues	<ul style="list-style-type: none"> • Assurance that the business case is thorough, complete, and compelling • Confirmation that the organization is ready to undertake the project
Why	<ul style="list-style-type: none"> • To confirm that the business case is sufficiently compelling to justify, sustain, and guide the project • To identify any shortcomings in readiness for action before approval and confirm that key identified risks can be managed
Core review items for this gate	<ol style="list-style-type: none"> 1. Business case requirements: <ul style="list-style-type: none"> • Clarity of business problem statement • Clarity and precision of project goals—must be sufficiently clear to provide focussed outcomes, and guide what is in and out of project scope • Clear business justification for the project investment, including how goals can be quantified and measured, and their attainment confirmed • Reconfirmation of the alignment of the project with organization’s goals • Thoroughness of options analysis, including reasonableness of costs and benefits for each option and reasonableness of selected option • Indicative cost estimate and schedule • Estimating methodology, basis for assumptions, and sensitivity analysis 2. Organizational readiness to undertake the project: <ul style="list-style-type: none"> • Arrangements decided upon—Project Management Office (PMO), strategies for outcome management, performance management, and risk management • Initial project planning under way and mechanisms in place • Business requirements approach fully defined • Preparation of environment in which to run project • Assessment of organizational capacity relative to project difficulty (OPMCA) • Evidence of intent and ability to create an environment for project success

3.3 Gate 3 Review—Business case and general readiness (continued)

Supporting item(s)	<ol style="list-style-type: none">1. Complete definition of the project:<ul style="list-style-type: none">• Project complexity and risk levels, scope, size, and packaging• Risks, constraints, and dependencies (PCRA)• Architecture and technological alignment (within federal government and department)• Privacy issues (Privacy Impact Assessment, or PIA), security issues (Threat and Risk Assessment, or TRA), and other policy issues2. Updated plan and estimate ($\pm 10\%$) for tasks, level of effort to next project gate3. PCRA and OPMCA
Typical input to the review	<ul style="list-style-type: none">• Business case standard, and detailed supporting analysis and documentation• PCRA• OPMCA
Review format	Workshop review; in very large or complex projects, may be a quick review

3.4 Gate 4 Review—Project charter / PMP

Purpose: To address business case unknowns. A complete project charter, high-level PMP, and definition of the business solution are prerequisites for this gate. Any business case unknowns should be resolved here (or a plan in place to resolve them). Project cost and schedule estimates for the entire project should be $\pm 25\%$.	
Review issues	<ul style="list-style-type: none"> • Validation that the project charter has addressed all issues critical for a successful project • Confirmation that proper project governance, planning, and management are in place
Why	<ul style="list-style-type: none"> • To ensure that all necessary ingredients for successful execution are in place prior to construction and implementation • To reduce the risk of having to introduce quick fixes later
Core review items for this gate	<ol style="list-style-type: none"> 1. Reconfirmation of business case, particularly feasibility of realizing outcomes, assumptions, constraints, and dependencies: <ul style="list-style-type: none"> • Refinement of estimates and estimating assumptions 2. Reconfirmation of readiness to undertake the project 3. Completeness of the project charter: <ul style="list-style-type: none"> • Absolute clarity of definition, and what is in and out of project scope • Clarity of roles, project sponsor, stakeholders, and governance • Documented definition of success, business outcomes and how they will be measured, and clarity of accountability for attaining the business outcomes • Summary of approach, with a focus on roles, governance, and risks • Identification of risks and assessment of whether risks are contained well enough to proceed 4. Definition of business solution: <ul style="list-style-type: none"> • Business architecture or model • Solution description, including high-level program design and business model; business transformation strategy and business process re-engineering strategy, if applicable • High-level functional requirements, and technical and performance requirements • High-level data model and data considerations • High-level functional design and concept of operations • Commercial off-the-shelf options assessment, if applicable 5. High-level PMP: <ul style="list-style-type: none"> • Elaboration of the project plan (work breakdown structure) and link to estimated costs and schedule • Requirements-gathering workshop • Procurement plan—Is it achievable in project time? • Business change management strategy and ability to be absorbed by organization • Business deployment strategy, including data issues 6. Skeleton PMO in place, suitable project manager identified, and key project staffing initiated
Supporting item(s)	<ol style="list-style-type: none"> 1. Updated plan and estimate ($\pm 10\%$) for tasks and level of effort to next project gate

3.4 Gate 4 Review—Project charter / PMP (*continued*)

Typical input to the review	<ul style="list-style-type: none">• Updated business case• Project charter standard• Preliminary PMP• Solution description
Review format	Full review for larger projects or quick review as considered appropriate for smaller, low-risk initiatives

3.5 Gate 5 Review—Detailed project plan and functional specifications

Purpose: To confirm the completeness and feasibility of the detailed project plan and definition of requirements. Decisions to go ahead with major spending commitments and to make major procurement choices (such as issuing requests for proposals or awarding contracts) take place here. All major unknowns have been sufficiently researched to provide assurance that high-impact risks have been effectively mitigated. Estimates for the entire project should be $\pm 15\%$. (Note that project contingency should never fall below 10–15%).	
Review issues	<ul style="list-style-type: none"> • Ensure that the detailed plan provides a firm baseline for managing and tracking, and that unknowns are reduced to a minimum • Assess clarity of project deliverables and accountability
Why	<ul style="list-style-type: none"> • To ensure that executive(s) responsible for the project have a clear basis for assessing progress and taking remedial action • To ensure that the project is ready to proceed to construction with minimal risk of delays caused by inattention to essential details
Core review items for this gate	<ol style="list-style-type: none"> 1. Reconfirmation of business case and project charter 2. Detailed management plan: <ul style="list-style-type: none"> • Detailed project scope—What is in scope and what is out? • Project dependencies specified with appropriate commitments documented, including an assessment of impact and risk • Architectural plans and decisions specified (architectural review completed) • Business change management and detailed business deployment plans, including data migration and conversion, training, and transition plans • Project organizational structure and resource requirements fully defined • Detailed work breakdown structure • Traceability matrix in place for requirements • Detailed list of deliverables and high-level acceptance plan • Preliminary implementation and system migration plans, including release management plan • Detailed schedule, substantive budget estimates (with assumptions, contingencies) • Tracking, control, and status reporting set-up • Detailed outcomes measurement plan • Updated risk assessment, PCRA, and OPMCA 3. Firm costs, refined estimates, and estimating assumptions 4. Management and key position staffing (full PMO tool set in place) 5. High-level functional requirements (Requirements Traceability Matrix) and design; perhaps proof of concepts and design workshops to ensure solution in principle 6. Business change management and deployment planning 7. Architectural, technological, and design decisions taken 8. Procurement plans and Request for Proposal progress or documents 9. Security certification, privacy plans. TRAs, PIAs performed; mitigations stated 10. Acceptance and outcomes measurement plan

3.5 Gate 5 Review—Detailed project plan and functional specifications *(continued)*

Supporting item(s)	1. Updated plan and estimate ($\pm 10\%$) for tasks and level of effort to next project gate
Typical input to the review	<ul style="list-style-type: none">• Complete detailed project plan• All sign-offs on procurement requirements, TRAs, PIAs, etc., as required to allow construction to proceed
Review format	Quick or full review, depending on project

3.6 Gate 6 Review—Construction complete and deployment readiness

<p>Purpose: To verify that the system under development is ready for implementation and that the project is fully prepared for a successful deployment. This gate represents a major point of approval for business readiness. There may be only one or a number of sub-gates and sub-gate reviews related to construction and deployment. (Other gateway approaches reviewed tended to treat construction or construction and deployment as one gate. This is perhaps because the projects under consideration were small or because there is an assumption that construction and deployment are well understood and have relatively low risk.) Based on the given situation and the degree of risk, the department should decide on the number, timing, and focus area for intermediate Gate 6 reviews during construction and deployment. For example, depending on the project structure, a gate could be established at the completion of a major development release or at the completion of a major rollout and deployment to a specified set of users. (See “Notes on Gate 6” below.)</p>	
Review issues	<ul style="list-style-type: none"> • Verification that construction is complete with user acceptance testing and migration to production firmly based on meeting acceptance criteria that support proceeding with deployment • Confirm that deployment teams have been established and are prepared to manage a smooth transition
Why	<ul style="list-style-type: none"> • To ensure the project is ready to proceed with deployment, and that system migration plans and ongoing support are in place
Core review items for this gate	<ol style="list-style-type: none"> 1. Reconfirmation that the project is aligned with departmental goals, the business case is valid, and expected outcomes will occur 2. Construction complete and deliverables, including all documentation, accepted 3. System migrated to production, and user acceptance testing complete 4. Business change management, deployment, training, data migration, and conversion plans complete 5. System migration plan validated 6. Ongoing support and service management plans in place 7. Vulnerability assessment complete 8. Overall business and project readiness
Supporting item(s)	<ol style="list-style-type: none"> 1. Updated plan and estimate ($\pm 10\%$) for tasks and level of effort to project close-out
Typical input to the review	<ul style="list-style-type: none"> • All sign-offs for user acceptance, production acceptance by operations, security certification and accreditation to go into production, maintenance team acceptance of documentation • Deployment, training, data migration and system migration plans, and vulnerability assessment approved • Support and service management plan • Disaster recovery and business resumption plans
Review format	Quick or full review, depending on project size, risk, and complexity

Notes on Gate 6

Projects may adopt a variety of phasing approaches, and not all phasing approaches will be sequential. Some may be structured with parallel phases, making the choice of gates and the scope of gate reviews more subjective. In the case of large iterative development methodologies, gates and review points would ideally be established to ensure that development is moving toward closure—that the iterations would not continue indefinitely or until the project runs out of time and money. The focus, then, is on the sign-offs against what has been delivered and on the clear agreement on what remains to be done. Examples of intermediate gates within the purview of Gate 6 include:

- ▶ **Construction release completion**—In a project that is structured to have multiple major releases, it is recommended that a gate be established at the completion of one or more of these releases.
- ▶ **Mid-phase health check**—A health check could be established in the middle of a project phase even if no major deliverables have been completed or decision points reached. The decision to do so might be based on some combination of dollars spent (e.g., \$25 million), time elapsed (e.g., one year), and rate of expenditure (e.g., \$2 million per month).
- ▶ **Construction and deployment readiness**—In many projects, deployment activities and construction actually occur in parallel. In some cases, deployment occurs after the completion of construction. Depending on the nature and size of the project, a gate might be established to create a decision point about whether or not to deploy.
- ▶ **Pilot deployment and full deployment readiness**—In some projects, a pilot deployment occurs immediately following the construction phase as a basis for deciding whether the system is ready for general deployment. This might be an appropriate point at which to establish a gate, depending on the size and nature of the project.

3.7 Gate 7 Review—Post-implementation review

Purpose: To confirm completion, assess the extent to which the project has achieved its goals, and provide an assessment of value for money. This gate typically occurs approximately six months following project completion. A review at this point can also catalogue the lessons learned during the project—those identified by the project group and those captured by independent reviewers.	
Review issues	<ul style="list-style-type: none">• Verify that the project was completed as planned and that the expected business outcomes were actually realized• Assess the degree of success for the transition to an ongoing service
Why	<ul style="list-style-type: none">• To confirm success from a project delivery and business perspective• To determine what lessons might benefit the department and the broader community in future undertakings
Core review items for this gate	<ol style="list-style-type: none">1. Project delivery measured against original objectives2. Confirmation of the archiving of information and deliverables, as applicable3. Knowledge transfer and transition to successful service4. Completion of contractual obligations5. Validation of business outcomes6. Capture of lessons learned, including review process7. Project close-out report completed
Typical input to the review	<ul style="list-style-type: none">• Project close-out report• Business outcomes measurement plan• Contract acceptance reports• Project lessons learned
Review format	<ul style="list-style-type: none">• Workshop to full review, depending on project

In some cases, it may be premature to definitively determine the achievement of business outcomes during this gate. In that case, a plan might be developed to address further follow-up on the core items.

An important area for assessment is the effectiveness of the independent review itself and its positive and negative impact on the outcome of the project. It is recommended that lessons learned about project management and independent reviews be fed back to TBS CIOB for continuous improvement.

4 Review Methodology

The review methodology

This section describes the methodology for conducting reviews, set out in five steps. The description here is for a full review, in order to completely illustrate the methodology. At the end of the section are notes on the other types of reviews—the workshop review, the quick review, and the health check review.

4.1 Step 1: Review set-up and launch phase

Level of effort	Typically two days per reviewer and three days for the team leader, over a week
Tasks	<ul style="list-style-type: none">• The review team develops a detailed draft review work plan• The reviewers meet with the review sponsor to:<ul style="list-style-type: none">– determine documentation to review;– develop a list of primary interviewees and interviews to be scheduled;– create interview plans and an interview schedule; and– establish logistical arrangements• The review team creates a list of general topics for interviews, plus a list of presentations/demonstrations for the project group to prepare
Outputs	<ul style="list-style-type: none">• Work plan• List of interviewees and list of general topics for interviews• Interview plans• List of project group presentations or demonstrations required• Schedule of interviews, presentations, or demonstrations• Communication to project group (ensure that the sponsor sends this out)
Deliverables	<ul style="list-style-type: none">• None for Step 1
Samples (see Appendix B)	<ul style="list-style-type: none">• Work plan• Review sponsor announcement of the independent review• Review email requesting an interview• Interview schedule

How to set up a work plan

At the outset, it is often not known what direction reviews will take. Nevertheless, there is value in preparing and communicating a work plan so that reviewers, as well as the project group and project stakeholders, know what is envisaged. A work plan also puts people on notice about their required participation during particular timelines.

Full reviews and workshop reviews will have substantially different work plans.

The general approach to developing a work plan is to:

1. Identify the broad time constraints of the start date and desired completion date;
2. Estimate the length of the longest phase, usually discovery, by working from the estimated number of interviews and hence interview days;
3. Decide on a reasonable time between the set-up activity and the start of discovery—this must be a practical length of time to allow interviews to be set up and other logistical issues to be addressed;
4. Sketch out a rough timeline for the review by adding in analysis days subsequent to discovery and a flexible time for reporting, since there may be a number of briefing sessions required depending on the situation;
5. Add to the timeline target dates on which critical items will occur, such as identification of pre-reading material, receipt of pre-reading material, launch meeting, start and end of discovery, end of analysis, and reporting period;
6. Add to the plan any significant demands on the project team, such as demonstrations;
7. Test the overall work plan for reasonableness based on experience; and
8. Document and communicate the plan.

How to set up interviews

Setting up an overall interview plan at the beginning of the review process is effective. It can save considerable time and frustration later. The initial list of interviewees, developed jointly with the review sponsor and the review team, should consist of 10 to 15 interviewees. Initial interviews typically cover:

- ▶ Project management team and leaders of its major groups;
- ▶ Business stakeholders;
- ▶ Areas serving the project (e.g., IT, procurement);
- ▶ Senior executives, including the project sponsor; and
- ▶ External agencies (e.g., TBS program sector, TBS CIOB).

As project documentation is reviewed and interviews progress, the need for more interviews is generally identified. However, 15 to 20 interviews total for a full review is standard.

Interviewing more than one person in the same session is generally not satisfactory. People with different opinions may not be willing to express themselves or offer a true assessment. The amount of time for each interviewee is constrained and one person may tend to dominate. In such cases, only one of several possible versions of events may emerge.

Finally, review team members should not accommodate a request by the review and project sponsor or project group to send a representative to the interviews. Many times this situation springs from a desire to understand the review process and the lines of questioning, but this scenario inevitably inhibits free expression.

To get the greatest value from each interview, it must be clear to interviewees that their comments will be shared only with those who have a legitimate need or right to know. They must also understand that their comments are unlikely to be used in the final assessment, unless validated by other sources.

Doing interviews on site

Ideally, the review team is provided with a meeting room or dedicated office on site where the majority of the project group resides. It is best to hold an interview in the interviewee's office or in a review team meeting room on site—not in an open cubicle. A designated meeting room lets interviewees get away from office disruptions and saves the review team time (no travel, and no time spent tracking down the interviewee's office).

Doing telephone interviews

Try to avoid telephone interviews when everyone is located in the same city. Telephone interviews make it difficult for parties to share documentation, pick up on non-verbal cues, or be aware of other people in the office. Allow for travel time when scheduling trips to interviewee locations around the city. When in-person interviews are not possible, consider video conferencing, which offers significant advantages over teleconferencing.

Doing interviews in remote locations

If several people are to be interviewed in the same remote location, it may be beneficial to interview these people in person. Visiting the remote work site and seeing the project environment first-hand is usually well worth the cost of travel and time.

Number of daily interviews

Up to four should be grouped on the same day in order to minimize travel and preparation time—although long days of six or seven interviews are not uncommon. Still, reviewers are usually not able to digest more than four interviews in a day. Time is needed to reflect on the content of the interviews in order to develop or adjust lines of questioning for subsequent interviews.

Length of each interview

Each interview typically lasts 45 minutes to one hour. Longer interviews reach a point of diminishing returns. The interview should be followed by a half-hour break for reviewers to consolidate impressions and notes from the interview, and to organize themselves for the next interview. The break also builds in flexibility if the interview overruns its allotted time.

Accommodate requests for interviews

People who are not on the interview list often approach a reviewer and request an interview. Such requests should be accommodated.

Help keep schedule up to date

The administrative support contact designated by the review sponsor to set up and maintain the schedule of interviews and meetings should contact and confirm schedule changes with each reviewer. It is essential that reviewers provide an up-to-date schedule of their availability to this contact on a regular basis.

Start with some key interviews to establish context

It is recommended that reviewers do some key interviews at the outset to establish the overall context of the situation, then interview as much as possible from the bottom of the organization up. This allows issues that are raised at the lower levels of the project group to be tested at progressively higher levels of management. A sample format for an interview schedule is included in Appendix B, “Sample Review Documents.” Full titles should be provided for each interviewee, as well as full contact information. If the interviewee has an executive assistant, the contact information for that person should also be provided. Any instructions regarding access to the location should be noted as well.

Send advance email confirmation of interviews

The administrative contact should send an email to interviewees with a copy to interviewers to confirm the time and location of the interview, identify the interviewers, reinforce the importance of the interview process and the urgency of completing the interview, and provide relevant instructions and interview topics for discussion. Samples of an interview confirmation email and interview instructions are included in Appendix B, “Sample Review Documents.” Establishing a basis for discussion will help put interviewees at ease. While interviewees may want to know what they will be asked, this is not possible to answer definitively because issues emerge over time. Providing a list of 10 or 15 generic topics—starting with the interviewee’s background and roles on the project, then allowing some freedom to choose the topics they feel qualified to discuss—provides enough structure to get the interview started. A second email can be sent later to inform the interviewee about specific issues or questions that will be addressed so that he or she has time to prepare.

Start with an interview plan

Prepare an interview plan for each interviewee that outlines the issues that reviewers wish to pursue. The interview plan can be quite specific when pursuing a particular issue or general in nature when no specific issues face the selected interviewee.

Potential issues

- ▶ If a prospective interviewee cannot be contacted (he or she may be on vacation or sick leave, for example), then the review sponsor should assist in identifying an appropriate alternate person. If the unavailable person returns before the review report is delivered, plans could be made to schedule an interview to determine if the person has significant information to add.
- ▶ Suppliers and contractors may also be among those to be interviewed, depending on their role in the project. When the interviewee list is being prepared, reviewers should insist on being advised of any supplier affiliations. Reviewers need to take into account that the relationship of suppliers to their client might have an impact on their views about the project.
- ▶ Reviewers should exercise judgment on whether substitutes for the key players are acceptable or not. If, for example, the review team is not able to secure ADM-level interviews for the key executive stakeholder roles, there is a risk that these same executives could discount the review findings, arguing that they were not consulted. It is best to have few substitutions.
- ▶ Often, the early meetings to set up the project will reveal areas that are already considered problematic. The order and selection of interviewees and the choice of topics to be pursued can take this into account. In other cases where the project team considers there to be no significant issues, the interview plan should be broad and general, probing at potential issue areas.

4.2 Step 2: Discovery phase

Level of effort	Typically five to seven days of work per reviewer over a period of two to three weeks
Tasks	<ul style="list-style-type: none">• Review team members read project documentation. All members read key documents.• The review team leader assigns responsibilities for presentations and demonstrations to be provided by the project group. The review team:<ul style="list-style-type: none">– outlines presentations to address areas that require the interaction of multiple project group members; and– identifies demonstrations (e.g., prototypes, proofs of concept) to explain the legacy system or current status of the system being developed.• Conduct all interviews. (The review has 15 to 20 interviews total. The reviewers and review sponsor determine the first 10 interviews to be scheduled, and then later determine the final 5 to 10 interviews to be scheduled.)
Outputs	<ul style="list-style-type: none">• Categorized summary of findings• Tentative conclusions for each category
Deliverables	<ul style="list-style-type: none">• None for Step 2
Samples (see Appendix B)	<ul style="list-style-type: none">• None for Step 2

Interview plan

The general approach to an interview, set out as follows, is appropriate for most interview situations. This approach is not used for second interviews, however. At that point, the interview typically goes directly to the areas of concern the reviewers wish to pursue. For senior management interviews, the first two steps are likely not needed since it is normally not necessary to put that type of interviewee at ease.

1. **Begin with an easy-to-answer question** to put the interviewee at ease and start conversation. This could include asking about the interviewee's role and background on the project or inquiring about any previous project experiences. Most people enjoy talking about their work, and this will get the interviewee speaking freely.
2. **Gradually steer the discussion to the interviewee's areas of responsibility** on the project to determine how things are going from his or her perspective, and what issues are personally important.

-
3. **Determine the interviewee's broader perspective of the project**, including opinions about the people he or she interacts with, sends work to, or receives work from, and the interviewee's view of the project overall.
 4. **Determine what the interviewee considers to be the key issues or concerns** about the project and ask what he or she would do about these issues, if the interviewee had the authority and resources to address them.

Interview methods may alter depending on the objective, and judgment is required to determine how much detail to pursue. For example, asking detailed questions about the number of test cases to be used could be a way to assess whether the interviewee is qualified to be managing the test process. The questions may not be driven by any real interest in the number of test cases.

Determining issues to pursue in an interview

Review Topics for Enquiry is a companion publication to this handbook. It is the reviewer's guide to determining what issues to pursue during interviews. The reviewers will already have familiarized themselves with the 12 topics described in the publication and, depending on which gate or gates apply to the particular review, will have narrowed their focus to points tailored to the situation and relevant to the interviewee.

As *Review Topics for Enquiry* reveals, at a Gate 3 review, topic 6, "Project Structure and Mechanics," identifies three issues to examine: (1) the PMO, (2) project management methodology and discipline, and (3) estimating and related assumptions. In an interview with a PMO representative, the reviewers would look to the "Suggested Lines of Enquiry" column and, for each of those issues, would find potential items to enquire about or assess.

When interviewing someone working on business requirements, the primary focus would be on other issues. Reviewers would find guidance for these under other topics in the publication but still within the Gate 3 subsection. It is important not to ask questions relevant to a different gate since how far the issue will have evolved depends on the gate and will elicit different responses.

How to conduct interviews

Effective interviews produce the review team's most important source of information. While project documentation and correspondence, together with formal presentations and demonstrations, provide the review process with necessary and important facts, it is often only through personal interaction with project group members and stakeholders in an interview setting that the key issues underlying project status are truly revealed.

Interviews also represent a considerable investment of time and effort on the part of reviewers and interviewees. Interview opportunities are frequently limited by personal availability within the compressed time frame of project reviews. For these reasons, interviews must be carefully planned, structured, and executed to ensure that the maximum benefit is gained.

- ▶ **Have at least two interviewers:** Two interviewers are better than one when it comes to extracting the maximum amount of relevant information and ensuring that the information and opinions provided (including non-verbal cues) are captured and documented accurately. This does not mean that one person always asks questions and the other always takes notes. If an issue being discussed during an interview falls more within the experience of one reviewer than the other, then roles can be reversed to best capture the point at hand. In other cases, reviewers may decide in advance to alternate questioning and note-taking tasks during the interview, simply for variety.
- ▶ **Shape the questioning:** The first task is to manage the lines of enquiry as the interview proceeds. *Review Topics for Enquiry*, the supplement to this handbook, provides the basis for complete and comprehensive coverage of subject matter, but clearly it must be adapted to the flow of the interview in each circumstance. In addition to being well planned, the process must be somewhat dynamic—interviewees’ responses often change the course of the questioning. The reviewer should accommodate changes in the flow of the discussion, provided that the new directions are productive and do not distract from the main information-gathering objective.
- ▶ **Document *all* information that the interview yields:** Capturing the full results of the interview process effectively involves not only documenting the actual responses to the formal line of questioning, but also observing the reactions, nuances, and body language accompanying the interviewee’s responses.
- ▶ **Adapt interview techniques to the situation:** To extract facts and opinions, carefully use a variety of interview techniques, altering the interview style and method for each interviewee.
 1. **Put the apprehensive interviewee at ease.** Reviewers are seen as authority figures or auditors with superior knowledge of best practices who sit in judgment of the project group and its approaches. Consequently, interviewees are often nervous. There may be a sense that negative consequences will ensue. Further, reviewers may be current or former senior-ranking public service executives, which adds to their air of authority. For these reasons, reviewers must find a way to put interviewees at ease—otherwise little useful information will be forthcoming.

-
2. **Get the reluctant interviewee to voice an opinion.** Some interviewees may be reluctant to give an opinion, preferring to stick to facts. Opinions are valuable, although they must be understood as opinions only. Successful reviewers find ways of getting interviewees to express their opinions.
 3. **Assess the interviewee's credibility.** During an interview, the reviewer is both collecting input (facts, a version of the facts, or opinion) and assessing how much weight to put on the information provided. The reviewer must pose questions or find other ways to assess the interviewee's credibility and thus his or her input, either overall or on a particular issue.
 4. **Probe further if there is conflicting information.** Reviewers often hear conflicting information, including multiple versions of the supposed facts and a wide range of opinion. While divergence of opinion can be understood and explained by different points of view, conflicting factual information normally requires further inquiry. Are there reasons that explain why interviewees would differ on the reported facts of the situation? Or is information being deliberately misrepresented? If so, why?
- **Manage interview time:** In some cases, interviewees may not be talkative and provide the briefest possible answers. Here it is best to ask broad, expansive questions that require a broad answer. In other cases, interviewees may provide excessive detail on simple questions and risk using up the allocated time before reviewers can address core issues. Here, questions should be very precise in order to elicit concise responses. In all cases, reviewers should remind the interviewee at the end of an interview to contact them by email or telephone if anything further comes to mind. The interviewee should also be reminded to forward any supporting documentation.

Sample questions for particular situations

Icebreaker—getting the interviewee to feel comfortable talking:

So that we have some context for your remarks, could we ask you to begin by explaining your present position and role on the project, and any previous roles you have performed? It is helpful for us to understand the viewpoint of the person we are speaking to.

Could you tell us a bit about your background? Have you always been a systems developer (or requirements expert, tester, etc.)? Have you worked on any other projects that we might be aware of? What relevant experience have you been able to bring to the project?

Investigating different versions of the facts:

Now that we have your views on the matter, if we were to ask the same question to (name or position of other person), would their view likely be different? What would it be and why?

We have heard from other interviewees that the situation is A, while you are indicating it is B. Can you help us understand why perspectives on this would be different?

Assessing capability:

Draw on a series of questions, with increasing use of terminology from the particular discipline, and assess whether the interviewee stays with the discussion and appears comfortable.

You mentioned that the project group is using product A to assist in capturing business requirements. What do you think the strengths and weaknesses of the product are for that purpose, and are there other products that could have been selected that might have been more suitable?

The real goal of this question is to see if the interviewee is comfortable with the discussion.

Extracting opinion:

If you were appointed manager of the project for one day and given the authority to change three things about the project, what would they be?

Imagine that, down the road, the project has wrapped up, but let's say for argument's sake that it has been deemed a failure. Are there things being done now that, looking back on them from that future time, you would likely consider to be mistakes?

What three things worry you the most about the project?

Are there things you were expecting us to ask that we have not? What are they?

Are there any specific messages you would like to see delivered by this review?

Is there anything else you would like to say?

Determining project management mechanics:

What are your next two or three deliverables and what are their due dates?

Did you develop the estimates for your tasks and, if not, do you agree with them?

Determining whether the overall status of the project has been transmitted to workers:

What is the goal and the target dates for the overall project?

How do you know the status of the overall project?

Is the overall project on time and on budget? If not, do you know why?

Do you know why the project is important to the department?

Interviewing senior executives

Normally, there are several senior executives to be interviewed separately. These should include the business executive who made the case for the project. If the project addresses multiple business areas, all executives responsible should be interviewed. Additionally, there is usually an interview with the executive to whom the project director reports. If that person is not the ADM responsible or equivalent, the most senior person should be interviewed. If it is a large project, such as a Major Crown Project, then the deputy minister should be included as an interviewee—except perhaps in departments that regularly run Major Crown Projects.

For all executives, the issues to pursue tend to be similar:

- ▶ Establish whether there is strong and uniform buy-in to the project, its goals and outcomes, the approach, and the way it is being run. If there are any outlying views, they have to be identified and explored. Lack of consistent executive support dramatically increases project risk. A sample question for the business executive might be the following:

Please tell us about the importance of the project to your business operation—how your business will be different and better once it is done. Then please speak to your accountabilities for the results and relate them to the accountabilities of the executive to whom the IT portion of the project reports.

- ▶ Establish whether there is a single point for overall accountability at the executive level, and whether portions of the project have been assigned to one or more executives. Establish if the nature and roles of these accountabilities are clear, and whether there is a good working relationship between these executives.

-
- ▶ Assess the suitability and strength of the executives in the preceding roles relative to the type of challenges, decision-making, and action-oriented style required to perform these respective roles:

What do you perceive to be the principal risks and challenges relative to the portion of the project for which you are responsible?

Have you ever had a responsibility comparable to this one, even if smaller in size, and have you ever had a responsibility for a project outcome as opposed to an on-going process?

What kind of environment does the project need to succeed, and are there any aspects of such an environment missing from this project?

- ▶ The deputy minister's view of the accountability arrangements should be consistent with the answers given by these executives:

Please describe the accountability arrangements you have in place for the direct reports (the people reporting directly to you) who have a role in this project. Is it clear which executive is responsible for each part of the outcome?

- ▶ If the project involves multiple business areas, particularly if these cross departments or jurisdictions, the accountability and governance arrangements must be fully explored. Reviewers must determine that leadership and accountability are clear, despite the range of stakeholders involved.
- ▶ Finally, assess the buy-in among executives to the review itself. Some will see it as a perfunctory exercise to satisfy a process and some may want a blanket endorsement of what has been done on the project to date, while others may be looking for confirmation of opinions they have already formed, or may genuinely be seeking constructive advice:

What are you hoping to have come out of the review?

Senior executives may have their own agenda and a set of messages they want the review to embrace. Others may try to deflect questions by asking reviewers what they have observed so far and what they think the outcome of the review might be. Be ready for this question and have something to report, then indicate that many issues remain unresolved and that the goal of the interview is to seek the interviewee's view of the project, its goals, his or her role in it, and the relationship of that role to the roles of other senior executives. Normally, questions can be asked directly. Evasive or imprecise answers usually mean that the items are not clear. As with all interviewees, the reviewers are also assessing capability during the interview.

Interviewing junior team members

Vital information can be gathered by interviewing junior project team members on the business and IT sides. Be aware that junior members often view reviewers as part of an elite, experienced group. They may be easily intimidated by the prospect of being questioned by two senior people in an investigative role.

Every effort should be made to put the interviewee at ease:

- ▶ If the interviewee is wearing business casual and the reviewers are more formally dressed, remove a jacket, loosen a tie, or make some such gesture to bridge the gap.
- ▶ A little self-deprecating humour goes a long way to levelling the seniority imbalance.
- ▶ Reviewers should avoid sitting at the head of the table or appearing authoritative.
- ▶ Avoid being condescending. Treat the interviewee like a peer, with deserved respect.
- ▶ Above all, be patient. Let interviewees express themselves fully and listen carefully to their opinions, which often offer great insight into the project situation.

Interviewing suppliers

When interviewing non-management-level suppliers on the project, there are often no special items to address, since these people are equivalent in every way to employees doing similar work. It is, however, wise to ask questions that help determine their loyalty to the project.

When interviewing suppliers who are in management, such as team leaders and those who have shadow or shared management roles, it is important to determine their previous experience and to find out whether the present arrangement creates any divided loyalty or conflict of interest. A supplier working on a fixed-price basis has a different motivational framework than one working on a cost-plus or daily-price basis.

A particular concern is when the supplier's role on the project allows for significant decision making. This depends on the contractual situation.

In such cases, any conflicts of interest need to be understood and addressed. Reviewers need to be aware that the supplier representative may be working under a complex compensation arrangement that provides incentives for any combination of additional sales (in the form of additional contractors), revenue, profit (which might encourage offering the lowest possible skill for the highest possible price), and related product sales such as hardware and software. In some cases, the prime motivation for the supplier may be to use the present contract as a reference in later marketing activity. People who have not worked with suppliers usually underestimate the complexity of the incentive scheme that may be influencing supplier behaviour.

How to document interviews

During the interview, one or more reviewers are usually taking notes. Notes are intended solely to support the reviewers. They are not intended to be part of the review record, as might be the case in an audit. All interview notes should be regarded as confidential working papers and not shared outside the review team.

- ▶ **Take notes discreetly:** Note-taking should be done in a relatively unobtrusive manner so as not to disrupt the train of thought of the interviewee or create concern about what information is being recorded.
- ▶ **Compare notes after the interview:** It is good practice for interviewers to compare notes and agree on what they heard, and what can be inferred from the discussion. Sometimes it may be necessary to contact the interviewee after the interview to validate an item in the notes. This should be done if there is any uncertainty. Often reviewers create a brief point-form electronic document summarizing the interview, and share this reference file with other team members.

Potential issues

- ▶ A minimum of two interviewers is not always necessary. In certain cases, one interviewer may be acceptable and desirable. For example, the interviewee may want to confide in the reviewer on a sensitive issue. Alternatively, the interviewee may be delivering strictly factual and clearly documented information where there is little value in using two reviewers.
- ▶ Senior executives can present significant interviewing challenges. Reviewers should expect frequent changes in scheduled appointments, delays, truncated meetings, or interviews with multiple interruptions. Depending on the situation, the reviewers may have to decide that they cannot proceed to conclusions without completing a cancelled or truncated interview and, in extreme cases, may have to cease all review work until a meeting can be arranged. Reviewers should be careful not to allow a senior executive to remove an issue from consideration, or to imply what they expect the review to find.
- ▶ If the physical arrangements and the timing of interviews do not allow the reviewers to briefly consult privately after each interview, some value from the interview will be lost. Reviewers need to compare impressions of the interview—particularly any messaging they consider was being transmitted—to determine if they both had the same impression. It is hard to reconstruct these nuances after a day of interviewing.
- ▶ In some situations, an interviewee may bring another person to the interview. Unless agreed to in advance, it is best not to allow this. Instead, offer to meet the other person separately. Reviewers need to assess capability, and bringing another person may indicate that the incumbent cannot answer the questions that he or she should be able to answer. This capability cannot be assessed if the second person answers the questions.

4.3 Step 3: Analysis phase

Level of effort	Typically two to three days per reviewer and three to four days for the team leader over a period of one week
Tasks	<ul style="list-style-type: none">• The review team analyzes findings from the discovery phase. If there are gaps or conflicts in any information, team members may have to acquire additional documentation or conduct more interviews.• The team should summarize findings under categories and develop tentative conclusions for each category. These will be validated in discussions with the review sponsor and key members of the project management team, and should be reassessed as necessary, with errors being corrected.• The review team states its findings and conclusions in final form and develops tentative recommendations.• The viability of recommendations is discussed, and recommendations are reassessed and revised as appropriate.
Outputs	<ul style="list-style-type: none">• Final findings and conclusions• Final recommendations• Table of findings
Deliverables	<ul style="list-style-type: none">• None for Step 3
Samples (see Appendix B)	<ul style="list-style-type: none">• Table of findings

Overview of the process to reach conclusions and recommendations

Although the process is often not a conscious one, and for some reviewers, may be occurring subconsciously during the discovery phase, it is useful to understand the steps that occur in reaching the conclusions and developing the recommendations of the review. To aid the discussion, the following terms are used, with their meanings as shown:

Term	Meaning
Facts	What the reviewers are told (or more precisely, the subset of what they conclude to be accurate from what they are told).
Opinion	Informed opinions of the reviewers based on their judgment and experience.
Issues	These are an interim work product used during the analysis process. They are produced in a meeting among the reviewers as they consider matters arising from the facts and opinions that need to be considered in the analysis activity.
Analysis	A process in which hypotheses are advanced by the reviewers to explain the facts—in effect, hypotheses that pass a test of logic become findings.
Findings	Once the facts and opinions input to the process have undergone analysis—and judgment and experience have been applied—the outputs are the reviewers’ findings.
Conclusions	These are packaged findings, brought up to a higher level by summarizing multiple findings.
Recommendations	The actions that the reviewers consider appropriate to address the areas that require attention, be they expressed at a detailed level, such as a specific finding, or at a broader level, as in a packaged conclusion.

How to conduct an analysis

The analysis phase is critical. Without conducting an analysis, reviewers are at risk of merely reporting what they have been told and presenting a factual summary, minus the added value of insight into root causes and potential corrective measures. Project reviews are fact-based but must go well beyond the facts. The significant value that review team members can bring is their interpretation of the facts, their analysis of underlying root causes, and their informed opinions about what the problem might be, what might happen, and what should be done.

The executives who request or sponsor an independent review want far more than facts. They expect to be able to draw upon the insight of the reviewers not only to assist in resolving issues, but also to search out and identify symptoms, uncover patterns, and apply indicators or norms that identify underlying problems before they surface. The project group presumably reports on the facts regularly to senior management. A function such as an internal audit can verify whether the reported facts are correct. A project review goes much further by attempting to uncover the root causes of project difficulties and present informed recommendations for corrective measures.

During an independent review, analytical thinking can occur throughout the entire information-gathering process. Experienced reviewers find, however, that a distinct analysis phase is useful. It may be as short as half a day in a less complex project, or it may require multiple days to fully explore all the issues in a larger, more complex project. An analysis session including all review team members ensures that all members have a chance to share their views and add what value they can. Debate among team members about conclusions that can be drawn from a review is valuable, and normally leads to a more insightful assessment than a single reviewer appraisal.

Many review teams also choose to have a preliminary analysis session before they have finished gathering all the facts. That way, there is still time for re-interviewing or adjusting interview requests to pursue the questions that emerge during the preliminary analysis.

A review's ultimate product is its conclusions, and these come from three sources: facts, analysis, and opinion.

Discuss the issues

- ▶ **Brainstorm to pinpoint issues:** To conduct an analysis, first decide as a team what issues have emerged from the interviews and the review of documents. This engages team members in a debate that is less contentious than the conclusions or recommendations of the review, and prepares them for the more difficult debates ahead. A brainstorming method is effective in deciding what the issues are—a moderator simply writes all the ideas for issues on a whiteboard. It often appears at this stage as if there are many issues, perhaps dozens, but as the team begins to refine them, the issues can be narrowed down to a manageable number, such as 10 or less. To help structure an analysis, review teams may also wish to consult the publication *Review Topics for Enquiry* since it identifies common issues.
- ▶ **Discuss the issues and revamp the list:** Once a list has been established, discussion on each issue can begin. Note, however, that conclusions reached about one issue may create new ones or cause others to disappear or merge. The list of issues is a moving target until the end of the process. Here are some issues from actual project reviews:
 - The project seems unable to come to closure on any area of the requirements;
 - The technical team appears seriously under-qualified for the difficulty of the project, as indicated by some of the technical decisions reached;
 - In selecting the approach, the project group appears to have ignored the feasibility of the only implementation scenario that will be possible;
 - There appears to be a serious mismatch between the tasks officially reported as complete and what interviewees indicate as complete;

-
- The project manager is spending more time feeding the governance process than running the project; and
 - There is no indication that anyone on the project has previous experience testing systems in a situation as difficult as this one.

Analyze the issues

Analysis is the thinking part of the project review. Reviewers must look for the root cause or causes, and find out why the project is having difficulty finalizing the requirements. Let's examine the analysis process using a hypothetical example: the issue of closure on business requirements.

- 1. What do we know?** Reviewers think about what they were told in interviews and read in documents, and look for hints of problems. The IT people are blaming the business people for the delay on requirements. The business people, in turn, point fingers at the IT team for disputing or not understanding what they consider to be requirements. The business area believes they have done everything reasonably possible. They provided subject matter experts to participate in the definition of requirements and brought in many people from field offices with expertise in current processes and business rules. The IT people, on the other hand, report that those field experts often disagree with each other about how particular processes work and that headquarters staff usually defer to field staff on matters of business process. There is little consensus on how the business process works now, let alone any meaningful dialogue on how it should work in the future. The project's documentation of business requirements shows that the work was done by a firm contracted to do so at a fixed price. This firm may have been inclined to cut corners to meet their profitability objectives.
- 2. Can we advance any hypotheses to explain the problem?** This is essentially a problem-solving exercise in which one or more hypotheses are advanced and then tested against the known information. In the business requirements example, a reasonable hypothesis would be that the contracted firm's focus on completion rather than quality is a contributing factor to the problem. Before proceeding further with the analysis, reviewers should get more information about the reported divergence of opinion among field representatives and the deferential attitude of headquarters staff. When the review team requests formal clarification on whether headquarters or the field is recognized as the authority on business processes and rules, an inconclusive or vague answer is returned. The team then asks whether there is written policy and procedure to ensure that business is conducted by the same processes in each field office. The answer they receive is no.

Other evidence emerges that applies to the problem. During a briefing session on the history of one of the legacy systems that the project will replace, an interviewee noted that the system had not been successful because some of the field units had refused to use it. It was unclear to the interviewee how they got their work done in that domain without using the system. More evidence arises when the reviewers look at the headquarters organization chart and note that there is a branch called “policy” and another called “operations,” but no branch called “program management.” All the field units report to the operations branch. Efforts to clarify which branch (policy or operations) has the lead on activities such as program design, procedures, and business rules are inconclusive.

A number of hypotheses are possible to explain the difficulties with the business requirements:

- a) The contracted vendor is using shortcuts to contain costs on the fixed-price contract.
- b) The business side has failed to assign competent staff to the business requirements work.
- c) The business processes are not stable, since a weak or non-existent program management function at headquarters defers matters of business process to the field units; these offices elect not to work in the same way (this could explain the inconsistent answers).

The evidence matches the third hypothesis best. The first hypothesis may also be a factor, although the review team has no hard evidence for it. There is no evidence to support the second hypothesis. It could well be that all the people assigned were fully competent. The underlying problem is that there is little consistency among the business people as to what the process actually is. Note that the review team asked further questions arising during the analysis process.

Summarize the findings

Once an issue has been analyzed, the reviewers have one or more hypotheses that they believe to be correct, inasmuch as the hypotheses match the available evidence and have withstood any tests of reasonableness and attempts to verify them.

The next step is to summarize the reviewers’ findings on the issue under categories such as governance or project management disciplines. Reviewers may wish to use categories outlined in *Review Topics for Enquiry*. Findings are simply the subset of information that is relevant to assessing the health of the project, understanding any underlying causes of problems, and formulating recommendations later. Findings do not represent all information. The analysis must filter out insignificant details to get at the essential points that matter. Reviewers have to apply judgment to what is reported to them.

The following table shows the findings that the reviewers might propose for the requirements issue at this point in the review. Some of the findings restate relevant facts, others are outputs of the analysis process, and still others are opinions based on the experience and judgment of the reviewers. All are valuable. Remember that conclusions come from three distinct sources: facts, analysis, and opinion based on experience and judgment.

Finding	Source
1. There is a problem with the requirements process.	Project schedule reports show it is late and that deliverables marked as complete frequently have to be revised. Both business and IT representatives described problems and expressed concern. There was some finger pointing.
2. The underlying problems are: <ul style="list-style-type: none"> • The business processes are not stable; • There is no clear business process authority; and • There are significant local variances in business process. 	The analysis process
3. The requirements issue will threaten the project outcome either by causing the project to build the wrong solution or by creating costly rework.	Experience and judgment of the reviewers
4. The environment may be unsuitable for project success—business processes must be stable and uniform if they are to be successfully automated.	Experience and judgment of the reviewers

Complete the analysis—reach conclusions

It is tempting to leap to conclusions and recommendations as soon as an issue has been analyzed. In the case just illustrated, most people who have project experience can no doubt think of one or more recommendations they would make to address the four findings. Generally, it is better to wait until all the issue areas have been analyzed and all the findings arrived at before proceeding very far with recommendations. Why?

1. Setting out all the findings first helps reviewers narrow them down to a manageable number. Reviewers are better able to see the bigger picture and identify systemic faults or issues on the project.

-
2. Often findings are numerous, and there may be several on a given subject. In the preceding example, there are several findings related to the requirements issue. Further work to group the findings into major areas of conclusion is required. This helps the review sponsor see the bigger picture of areas of concern rather than many individual concerns.
 3. Findings on another issue may shed new or different light on an issue already completed, requiring reconsideration of its analysis and findings.
 4. If recommendations are conceived finding by finding, there is increased likelihood that a proposed recommendation will prove unfeasible due to a finding that arises in another area.
 5. It is possible that a recommendation arising in another area will address the issue in the present area.
 6. Issues presently considered to be separate may later collapse into a single issue.

If the team chooses to spend a lot of time on recommendations at this point, a certain amount of work will have to be redone.

How to develop conclusions

Conclusions are a summary of individual findings, grouped in a way that is understandable to the intended audience. Significant value can be added by presenting fewer than 10 major areas of conclusion, rather than dozens of individual findings. In the preceding example, there are several findings related to the subject of requirements. The first is important, and a concern, but the underlying problems described in the second finding is potentially far more serious, as is the assessment of the possible consequence presented in the third finding. These could all be grouped into a single conclusion about requirements, and the fourth could be placed either with that conclusion, or with a separate conclusion about the project environment, if there are findings from other parts of the analysis about the project environment. Reviewers use judgment to decide how to do the packaging to be as helpful in communicating their message as possible.

Hence, if the example cited here has a number of conclusions, the one about requirements might read as follows (this could be text from slides in a final presentation or a page of text in a report).

The project is experiencing significant difficulties in coming to closure on business requirements, an essential step before proceeding. The reasons for these difficulties point to potentially serious issues requiring intervention:

- ▶ *The business processes the project seeks to automate do not appear stable, in that work is carried out in different ways in different local offices.*
- ▶ *The organization seems to tolerate more local variations in work process than is generally considered wise, and the absence of a clear authority over the business processes effectively permits, if not encourages, local variance.*
- ▶ *It is unwise and costly to choose to automate multiple versions of a business process to cater to local preferences on workflow. This will introduce inconsistency in the way the department handles cases.*
- ▶ *This issue is highly likely to threaten the project, either by delaying the start of construction, or worse, by resulting in an unacceptably complex and costly implementation that accommodates local variances.*
- ▶ *Resolving the issue of a single authority to be responsible for ruling on issues of business process is a key prerequisite to addressing this situation.*

Note that there is no recommendation. As noted earlier, it is best to wait until findings and conclusions are stable before contemplating recommendations.

Reviewers are advised to make considerable effort to boil their findings down into a small number of conclusions. If the situation is complex, it can be useful to report your findings in conclusion areas, and then have multiple conclusions within an area. But if you approach a senior executive session with 15 conclusions to discuss, value will be lost. One approach is to apply the elevator technique. Imagine you are riding the elevator. The project sponsor gets on at floor 5 and hits the button for floor 10, and says, “What are your conclusions?” You have about 20 seconds, and hence focussing on the really key points is essential.

Another useful conclusions technique is to take a whole group of conclusions out of the main findings and summarize them in a single conclusion, indicating that the details are not of concern to executives and so you will pass them directly to the project group. Here is an example.

During the course of the review, a number of departures from best project management practices were noted. While some are not of concern, a group of them are. We have provided more detail on these to the project manager. The issues include:

- ▶ *The authority of the project control office and the balance of power between the project control office and the various project work teams;*
- ▶ *Weakness in verification that work reported as complete is in fact complete;*
- ▶ *A lack of precision in the approach to testing, including how test cases will be developed, how many there will be, and the related estimates for conducting the testing activity; and*
- ▶ *The tracking of earned value.*

This approach lets the executives know that there are issues in “project mechanics.” While they might not understand the issues, they will want to ensure that these issues are addressed.

Validate the findings and conclusions

It is usually not practical or necessary to validate all the findings and conclusions with the project manager or review sponsor. It is useful, however, to discuss any findings or conclusions that the review team thinks will likely be controversial or are likely to cause significant concern. In our example regarding the requirements issue, the reviewers may have absolute confidence in some of their findings but are not absolutely certain of others. So, for example, they might choose to meet with the project manager and suggest that requirements definition is clearly an issue for the project. They know for sure that variances in local work practices are an issue, but it seems there is no single business requirements authority. They ask if the latter point is correct.

- ▶ **Check with those responsible for the project:** Find a way to validate findings and conclusions with those who are responsible for the project. There is always the risk that, as outsiders, reviewers have incorrectly assessed a situation, or did not speak to a key person, or see a vital document that would provide clarity, or were misinformed—deliberately or otherwise. Generally, informing key contacts on preliminary findings and conclusions is a useful step in validation. It allows project principals to react early and provides an opportunity to pursue issues that arise from the trial run of the findings and conclusions.
- ▶ **Findings and conclusions should be solid, representative, and defensible:** Findings and conclusions are more fundamental than recommendations. Reviewers should expect a variety of views, many of them valid, on ways to correct deficiencies. It is imperative that the findings and conclusions be solid, represent a consensus of reviewers’ assessments, and be defensible. Validating the findings—the fundamental conclusions the review team has reached about the difficulties on the project—with the project principals is a critical step in ensuring they are correct.

-
- ▶ **Go beyond terms of reference, if necessary:** Project reviews usually are framed and guided by terms of reference or similar guiding documents. Yet reviewers should not be bound by the terms of reference if they detect other issues that, in their view, threaten the project outcome. The first loyalty of the review team should be to the project, and their role is to provide advice that might make a material difference to the project's outcome—whether this advice is within the terms of the mandate statement or not.
 - ▶ **Check against the *Review Topics for Enquiry*:** Reviewers should not feel constrained to reporting findings and conclusions in the same structure as outlined in the *Review Topics for Enquiry*, but they may find it useful to cross-check against that document to ensure they have considered all the topics that apply to the project at its point in the project life cycle.
 - ▶ **Do not try to fix everything, though:** Reviewers should not go too far afield. It is not appropriate, and may be potentially distracting from the main goal, to get involved in issues that need correction or attention but are not fundamental to the project. There is no time during a project review to try to fix every problem found.

Consider the following example. A project is threatened because it is receiving poor service from a technical support group within the IT sector of the organization. The reviewers have the clear impression that the group is poorly managed and that the issue has to do with weak management processes. In this case, the reviewers are best advised to make the point that IT support is inadequate and needs attention. They might go as far as suggesting that there are indications of systemic problems. But they would clearly be overstepping their role if they were to recommend fixing the management processes in the technical support group. Reviewers might give verbal advice to the responsible manager and suggest that the issue needs attention. Fixing the problem, however, is outside the useful scope of the review.

How to develop recommendations

Developing recommendations can be difficult. Reviewers are not likely to have a one-to-one match of recommendations with findings because one recommendation can address several findings and vice versa. The following two tests can be applied to recommendations:

1. They must be realistic. Reviewers must honestly believe that they would actually do what is being recommended if they were in the decision-making role on the project.
2. They must be specific and actionable. A vague recommendation to fix or address an issue is not useful unless reviewers make it clear how to do so.

Remember—and be sure to remind project and executive management—that the value added in a project review comes from the findings and conclusions. The recommendations may be less useful because there are often various ways of addressing issues and, as outsiders, reviewers may not have all the information needed to figure out the best way to address an issue.

Finally, consider starting the draft of the review presentation and/or report in advance of the recommended point, Step 4: Reporting phase.

Potential issues

- ▶ Should rifts between reviewers appear in any phase of the review process, it is likely to be during the analysis phase. People have different thought processes, some being highly analytical and others more intuitive, for example. Should reviewers see issues very differently, it falls to the review team leader to manage the situation so that all ideas are heard. The leader is well advised to be aware of the different thought styles of people. Similarly, there may be sharply different views on what to do about an issue. In some cases, it may be effective to indicate in the findings that the reviewers had a range of views on the possible corrective actions to a problem.
- ▶ During analysis, reviewers need to take care that they have not been subliminally influenced about the underlying issues in the project situation. This can occur when an interviewee with a persuasive style has advanced an argument that, if examined carefully, is flawed. The best advice is to be absolutely certain that the results of the analysis process reflect the best balance of evidence and judgment the reviewers can bring to bear.

4.4 Step 4: Reporting phase

Level of effort	Typically two to three days per reviewer and five to seven person days for preparation of a draft report (if required) based on the review presentation, all spread over a period of one week
Tasks	<ul style="list-style-type: none">• The appropriate team members develop a draft review presentation. A final version is created, taking into account comments of individual reviewers. In some situations, a summary version for senior executives is created.• Team members deliver the final review presentation to the review and project sponsors, stakeholders, and management.
Outputs	<ul style="list-style-type: none">• Draft review presentation• Draft executive summary presentation (if required)• Draft executive briefing note (if required)• Draft report (if required)
Deliverables	<ul style="list-style-type: none">• Final review presentation• Executive summary presentation (if required)• Executive briefing note (if required)• Final report (if required)
Samples (see Appendix B)	<ul style="list-style-type: none">• Final review presentation• Executive summary presentation• Executive briefing note• Report• Executive summary of report

Determining the required deliverables

Regardless of the type of review employed, the main deliverable is normally the same—a presentation that summarizes the review. A sample outline follows. The review presentation should strive to capture all the principal findings, grouped into conclusion areas, in enough detail so that it is completely clear what the review team found and concluded. It should also cover recommendations. However, the principal value of the review is not the recommendations but rather the findings and conclusions.

Depending on the situation, it may be useful to make a summary version of the review presentation. For example, if the findings are going to be presented to a deputy minister or to a departmental management committee comprising ADMs outside of the project, the review presentation likely contains more detail than such a group needs or wants, particularly in areas such as project mechanics. If a summary or executive version is prepared, it should be much briefer, probably more at the level of conclusions than findings. If backup detail on method, interviewees and so on is required, that material should be included as appendices after the end of the presentation.

Review teams have on occasion been asked to summarize the review findings in an executive briefing note to a deputy minister or minister. In this case, this task would be carried out the same way any executive briefing note is prepared: with a short written document under the traditional headings of (1) issue, (2) background, (3) discussion, and (4) planned actions. Generally, if such a note went forward to a deputy minister or minister, it would contain a section on the project's response to the review findings. Or the project's response might be interwoven with the findings, in which case such a brief is more likely to be prepared by departmental officials than reviewers.

Some departments request a full report in addition to the review presentation. This is a significant amount of effort—a report covering a 20-slide presentation is likely to be a 40-page document. Increasingly, departments do not wish this, feeling no one will read them. Rather, they prefer the presentation-style deck but with the points fleshed out thoroughly.

How to create various deliverables

1. Review presentation (*1 hour with additional discussion time, 20 to 30 slides*)

The review presentation is critical because it distills the gathered information, the analysis, the conclusions, and the recommendations of the review into a useful management deliverable. It helps executives understand the project situation and offers appropriate remedial measures. The review presentation (optionally complemented by a report) is the formal vehicle for delivering the results of the review to the review sponsor and stakeholders, and ultimately represents the official record of the review. It also represents one of the important permanent documents resulting from the project review. As such, it can be expected to receive relatively wide distribution and may well be referenced for unforeseen purposes long after the review has been conducted.

- ▶ **Length of review presentation:** The body of a full discussion review presentation should not be more than 20 to 30 slides. Even for the largest project reviews, review presentations should not exceed two hours. Essential detailed supporting information can be provided in the appendices or as reference material.
- ▶ **Self-explanatory and versatile:** Since the review presentation is typically presented to a variety of audiences, such as senior executives, the project management team, project staff, and other stakeholders, it is best to create a wide-ranging presentation to avoid having to make multiple versions. Detailed points of interest for select experts can be put in an appendix. The review presentation is often the only record of the review, so it should be self-explanatory, using fully formed sentences as opposed to abbreviated bullet points that do not convey the meaning on their own.

-
- ▶ **A continually evolving document:** Development of the review presentation starts about halfway through the review as a means of summarizing principal findings as they arise. The draft document constantly evolves from that point on. It eventually includes the recommendations of the review team.
 - ▶ **Make the message timeless:** The test of a good review presentation is whether the message it is intended to convey is readily apparent to a reader who might examine the findings, conclusions, and recommendations months or even years after its original delivery.
 - ▶ **Keep review presentation impersonal and professional:** Statements should not be directed at a specific individual. The use of position titles (e.g., the project manager) is encouraged and preferred to directly naming the incumbents. It is easy to inadvertently make inflammatory statements or overstate a position to make a point. The draft review presentation should be carefully assessed, keeping in mind the perspectives of the report recipients and the people under review.
 - ▶ **Use business language and graphics throughout:** The style of the review presentation or the report should be objective and professional. It should be written in business rather than conversational language. It should be concise and to the point. Facts must be carefully separated from anecdotal evidence or opinion. Otherwise, the credibility of the entire review presentation may be undermined. Statements and observations should be clear, unambiguous, and complete. Use complete thoughts on slides (as opposed to key words or sentence fragments) so that individuals do not have the opportunity to derive their own interpretations from the material presented. The use of graphic material is encouraged—the saying “a picture is worth a thousand words” often bears true. However, there must be enough supporting text to ensure that the pictures are understood without verbal explanation.
 - ▶ **Proofread carefully:** Thoroughly proofread the review documents. Even minor inadvertent errors can serve to discredit the entire piece of work.

Here is a typical table of contents for review presentations:

- ▶ Agenda;
- ▶ Introduction and background;
- ▶ Review objectives;
- ▶ Review methodology;
- ▶ Findings;
- ▶ Conclusions;
- ▶ Recommendations;
- ▶ Concluding statement or summation; and

► Appendices.

Agenda: The agenda sets out the structure and flow of the review report in point form.

Introduction and background: This section should contain a brief summary of the project under review and its current status. It should also include a summary of the review methodology and the review's terms of reference. Some context for the review may be provided, such as issues or changes that have arisen, external influences, or the specific stage that the project has reached (e.g., Gate 4). This section should also provide basic data about the review, such as the name and position of the review sponsor, review dates, reviewer names, etc.

Review objectives: This section outlines the review's scope and objectives, and possibly specific questions the review sponsor has asked to be addressed.

Review methodology: This section describes how the review was conducted and should mention the review methodology used, which project documents were reviewed, the number and selection of interviews, any constraints involved, and other factors that affect the method taken.

Findings: The findings and observations should be grouped into major categories in a logical schema. Main categories would normally represent a subset of the 12 primary issues discussed in the document, *Review Topics for Enquiry*. For each review, only some of these issues will be dominant. It would be highly unusual for more than 3 to 5 major topics to come into play at any given project stage. Where possible, the main findings in each category should then be condensed to the most important 3 to 5 items. Sometimes findings do not fit neatly within the scope and objectives of the review but can still be communicated separately to the review sponsor or project group if they are deemed important. One method is to include slide notes (e.g., "A note on performance considerations"). Only findings that are relevant and of interest to the executive-level audience for which the review presentation is intended should be documented.

Conclusions: Conclusions reached represent the review team's interpretation of the findings and its attempt to create order from them. The conclusions should provide a general synopsis of the situation in which the project finds itself and identify major options that are available to the project group at this stage. The conclusions should be a direct consequence of the findings. All findings should map to a conclusion (i.e., there may be several findings leading to one conclusion). The conclusions, to some extent, represent the opinions of reviewers. For this reason, each conclusion should be presented with a supporting rationale.

Recommendations: For maximum impact, the number of major recommendations should be limited to five or six key items ranked in order of importance. Too many recommendations tend to dilute impact and weaken executive focus, resulting in the danger that few will end up being

dealt with effectively. Use action verbs when stating recommendations (e.g., “It is recommended that the PMO complete the work breakdown structure in sufficient detail...”). It is sometimes useful to separate general recommendations from specific recommendations. Each major recommendation can have a number of subordinate recommendations. Generally, a recommendation should describe what needs to happen, who needs to act, and when. It should not be overly prescriptive about how the recommended action should be accomplished. The objective of the review, after all, is not to take over management of the project.

Concluding statement or summation: Here, reviewers have an opportunity to summarize the review results and indicate future prospects for the project. For example: “The project has the necessary ingredients to succeed, but the above-noted obstacles to success must be removed.”

Appendices: The following items could be included as appendices. Although all may not be applicable in every case, they should all be considered in the interest of completeness:

- ▶ List of interviewees;
- ▶ Profile of review team members, including background and experience;
- ▶ Detailed review terms of reference;
- ▶ Detailed findings on specific areas as required;
- ▶ Bibliography of references; and
- ▶ Essential supporting material.

It is acceptable to vary the grouping of findings, conclusions, and recommendations. For example, each group of findings could be followed by corresponding conclusions and recommendations. The review presentation would then conclude with a few overarching recommendations or conclusions. What is key is being able to trace each finding through to a conclusion and an associated recommendation, as appropriate.

2. Executive summary presentation (*1 hour, 10 slides or fewer*)

This document should be a concise summary of findings, conclusions, and recommendations. It is tailored for maximum effect within the limited time typically available for presentations to senior executive audiences. It focusses on essential information and primarily addresses those recommendations and actions that senior executives can act upon.

3. Executive briefing note (*1 to 2 pages*)

This document normally takes the form of a one- or two-page summary in briefing note format and should contain only information that is relevant and appropriate at the deputy minister level.

4. Report (10 to 40 pages)

A report, if required, is usually a narrative elaboration of the full review presentation, often including supplementary supporting information and examples in the form of appendices. Care must be taken to ensure that the additional detail is relevant and does not detract from the main focus of the review.

Potential issues

Challenges may arise during the reporting phase of the project review. A sampling follows with some suggestions for handling each situation.

1. **Maintaining a clinical separation from the situation.** A project reviewer is most effective when detached from the situation. The best tone in writing and speaking might be described as sensitive but independent. Reviewers must be sensitive to the impact of what they are saying on the people hearing it, without compromising the delivery of their assessment. Otherwise, the value of the assessment is lost. Successful reviewers develop the ability to separate findings from anything that looks like gratuitous criticism or attack.
2. **Resistance to the findings and recommendations.** Key people on the project or the executive responsible for the project may challenge the findings and recommendations in a number of ways. Some may object to a particular recommendation on an issue, saying it is not workable, regardless of the fact that the finding behind it is solid. When concerns are expressed, reviewers should listen carefully, make sure they fully understand the point of view and why it is held, and only then decide on an appropriate response. Before deciding if a change is needed, it may be necessary to reconsider the evidence on the issue, look at the logic behind the assessment, and review past project experience. If reviewers feel that a change is not required, a full explanation of the prevailing evidence, logic, and judgment is warranted to support the stance taken on the finding.
3. **Demanding evidence to support a finding.** A review is not an audit. The findings are arrived at based on what the reviewers were told and what they saw and assessed against the backdrop of their experience and judgment. When evidence is demanded, state what is available and then explain the experience-based assessment behind the finding.
4. **Change of tone or words.** This is a common issue. It is very easy for outsiders to choose words that have a particular connotation in a given situation that they are not aware of and, by using these words, open an old wound. When people under review request a change of tone or different wording that does not change the import of a finding or recommendation, it is best to listen carefully, get an explanation of the sensitive point, and accommodate the change if possible.

-
5. **Endless offering of further clarifying information.** The project group, unhappy with a finding, may offer further information for consideration with a view to changing the initial assessment. This may be a valid response—perhaps all the facts were not available at the beginning of the review—and this is an important reason for validating the findings before finalizing them. It offers a chance for such clarification to occur. Be aware, however, that some people under review will seek to offer endless further clarification. Reviewers need to use judgment to decide when this type of response is really an attempt to force an inappropriate concession on a critical assessment point.
 6. **Attempt to discredit the review and the reviewers.** Signs of this include repeated requests for evidence to back up findings and disputing those aspects of the assessment that are based on the reviewers' experience and judgment. If senior management does not have confidence in the reviewers, that decision should have been made before the review, not when the findings have been reached. The first line of defence is the experience and credentials of the reviewers, including their project review experience. The second line of defence is the thoroughness and diligence of the work done during the review. If management ultimately decides they do not have confidence in the reviewers or their findings, there is little choice but to redo the review with different reviewers in whom management has confidence.
 7. **Manage the news, soften the findings.** Many people have observed that bad news gets better and better as it is retold to successively higher levels of management. It is best to ensure that findings are phrased unequivocally. In review presentations, either written or oral, use enough detail to allow no room for misinterpretation. It is useful to put any statement of weakness in context by mentioning its relative severity compared to what has been observed in other projects of similar dimension or difficulty.
 8. **Point out the consequences of an unfavourable review.** The project group may point out that if the review findings are unfavourable, project authority to continue will not be granted, or some other unfavourable consequence may ensue. While sympathizing with such consequences, reviewers should keep in mind that their only currency is competent, honest, and frank assessments which, if compromised, reduce their value as reviewers. Unfavourable consequences are not a good reason to change findings.

-
9. **The project is imperative and will go ahead regardless of the review findings.** This is a common response when a project needs to meet a legislated or other deadline-driven mandatory requirement. Despite the deadline, the findings and recommendations still need to be tabled, and the department has to decide how to react to the recommendations. Should the review recommend, for example, that the project not proceed until some deficiency is fixed, then the appropriate levels of management would have to assess the risks of ignoring this advice.
 10. **Threat of escalation to higher levels of management.** The most likely reason for this to occur is that the project review is not reporting to the right level of management. The project reviewers should normally report to the executive responsible for the project, but above the project manager. Typically, all ADM-level executives who are stakeholders in the project would know that a review is under way (many may have been interviewees). In effect, there are few higher managers to whom escalation can go. If such a threat occurs, reviewers should not make changes to their assessment. Rather, escalation should proceed. Senior management should assess the reviewers' credentials, and determine that the reviewers are truly independent and have no motivation to provide anything but their best assessment of the situation.

4.5 Step 5: Review post-mortem phase

Level of effort	Half a day per reviewer and one and a half days for the review team leader
Tasks	<ul style="list-style-type: none">• Two to three weeks after the review has been completed, a post-mortem analysis related to the conduct of the review should be convened in two separate meetings as part of the continuous improvement process. These meetings usually last one to two hours and may be followed up by emails or calls. The meetings include:<ul style="list-style-type: none">– a meeting with the review sponsor, key project management personnel, and stakeholders; and– a meeting of the review team.
Outputs	<ul style="list-style-type: none">• None for Step 5
Deliverables	<ul style="list-style-type: none">• Minutes from feedback meetings• Feedback on methodology for CIOB continuous improvement process (optional)
Samples (see Appendix B)	<ul style="list-style-type: none">• None for Step 5

Review sponsor and client feedback meeting

The purpose of this meeting is to obtain the client's views on the effectiveness of the review. The meeting is usually hosted by the review sponsor. Lines of discussion might include the following:

- ▶ Were the recommendations in the review of value to the review sponsor and project management? Can the recommendations be acted upon?
- ▶ Did the review findings and conclusions provide additional insight into the project for the review sponsor and project management? Did they provide needed confirmation of suspected issues?
- ▶ Was the review useful in helping the project group deal with senior executives?
- ▶ Did the review process trigger constructive or remedial actions during the course of the review?
- ▶ Was the review timely? Was it at the right level of management?
- ▶ Did the review team operate in a professional and effective manner? Did the team have the appropriate expertise?
- ▶ Was the review sufficiently thorough and complete?
- ▶ Did the team minimize the burden on the project group?
- ▶ In retrospect, what would the client have done differently in initiating this review?
- ▶ What recommendations would the client make to improve the review process? What should the review team have done differently?

-
- ▶ What recommendations would the review team make to the client to improve the effectiveness of future reviews?

The review team leader and all reviewers attend this meeting. The review team leader prepares minutes of the meeting and distributes them to the attendees for validation.

Review team feedback meeting

The purpose of the meeting is to obtain reviewer feedback and gather lessons learned on the independent review program and methodology. The meeting is hosted by the review team leader. Lines of discussion include the following:

- ▶ Did the review provide value to the client?
- ▶ Was the review process effective in this environment? Did the team work effectively together?
- ▶ Was the client open to the review and in a position to be reviewed effectively?
- ▶ In retrospect, what would the team have done differently?
- ▶ What recommendations would the reviewers make to improve the review process and methodology?
- ▶ What recommendations would the review team make to the client to improve the effectiveness of future reviews?

The review team leader and all reviewers attend this meeting. A representative of CIOB may be invited by the team leader to attend. The review team leader prepares minutes of the meeting and distributes them to the attendees for validation.

Lessons learned and continuous improvement

The feedback from the review team post-mortem meeting will be taken into consideration in the continuous improvement of the independent review program. In addition, TBS encourages the review sponsor and review team members to contact CIOB to discuss any issues considered confidential.

Potential issues

- ▶ Some review teams may be reluctant to take the time to document their experience. But it is in the interest of the independent review program that it be maintained and continuously enhanced with what is learned through actual usage.

4.6 Methodologies for the workshop, quick, and health check reviews

As set out in the table “Attributes of Different Types of Reviews” in Section 2.3, the methodology provides for four review types. The preceding methodology description was for the full review, associated with Gates 3 to 7. The other three review types differ as follows:

Workshop review	Most effective for the early gates (1 and 2 in particular), when there is limited value in doing numerous individual interviews. A few targeted interviews may be necessary. Output is typically a short report but can sometimes be a presentation.
Quick review	A scaled-down full review, associated with a gate. It involves fewer interviews and typically has a reduced scope, focussed on selected issues or a component of the project. The quick review is chosen when there is confidence that the expense and impact of a full review is not warranted.
Health check review	Is essentially a full review but not undertaken at a gate. This is most appropriate in a large, long-term project, when it is felt too much time elapses between Gate 5 (to approve the beginning of construction) and Gate 6 (deployment readiness).

The methodology for the quick review and the health check review is the same as it is for the full review.

The methodology for the workshop review is as follows:

Step 1—The same as for the full review, with additional effort during this phase to determine the agenda for the workshop and its participants. Planned presentations, questions from the reviewers during the presentations, and interaction between the reviewers and project team members ensure that the issues that need to be covered during the workshop are covered. The success of the review depends on getting the agenda and participants right.

Step 2—This is still the discovery step, but it happens during the one (or perhaps two) days of workshop, rather than through interviews. As a result of issues discussed during the workshop, reviewers may decide that a small number of individual interviews are needed. These can be scheduled over the following days, keeping the overall time short.

Steps 3 through 5—These are the same as for the full review, except there is usually less content and fewer issues to deal with in the early stage reviews. Generally, a bit less time is required.

Workshop reviews have proven very effective, particularly in the earlier stages of a project. However, reviewers should also be aware of the shortcomings of workshop reviews and take steps to combat such problems.

Advantages	Disadvantages
<ol style="list-style-type: none"> 1. Efficient: Easier to arrange and less time-consuming to perform 2. Builds consensus: By engaging a breadth of participants in the workshop, assists in ensuring they have a common understanding of issues 3. Direct debate of differences of opinion: Where there are dissenting views, reviewers can observe the dialogue, which can be more effective than separate interviews in understanding multiple views 	<ol style="list-style-type: none"> 1. Too focussed: If an issue does not come up in the workshop, it will likely remain invisible 2. May hide dissension: A participant with a differing view who lacks the self-confidence to speak up, or knows the view is unpopular, may not do so 3. Promotes “group think”: The phenomenon in which a group may collectively develop the rationale to embrace a flawed view 4. Lack of depth: Typically, there is no time to go deeply into issues 5. Not all participants interested in all topics: Some may be bored during discussions not of concern to them or in which they have no expertise

There are a few techniques for mitigating the disadvantages:

- ▶ If a minority of participants dominate the discussion on a particular topic, be sure to ask direct questions of those who are not participating, such as, “Do you see any flaws or problems with this line of logic?” or “What risks are we taking if we go with the points of view just expressed?”
- ▶ Watch for body language that would indicate someone has a conflicting view but has not spoken up, and seek their input with a direct question.
- ▶ Schedule a small number of targeted interviews in the two or three days following the workshop. Use these interviews to pursue an issue further or seek views from people who did not have much to say but, considering their role on the project, should have views.

The supplementary targeted interview technique can be highly effective and efficient, helping to identify important project concerns. In one case, reviewers were asked to complete a workshop review from workshop to conclusions in about seven working days. This was done with a day or two of preparation (primarily for reading), followed by a one-day workshop. The entire project team was on standby for the next two days, meaning the reviewers could summon anyone for an interview on 30 minutes’ notice. The reviewers began with some targeted interviews. As they started discussing issues, they requested several more interviews to clarify matters arising on the issues. The two days of interviews were followed by a day in which the reviewers deliberated and prepared a presentation. After roughly a week, the team delivered this final presentation.

Potential issues

- ▶ An individual who does not agree with the notion of the workshop, or with the principle of an independent review, can seriously disrupt a workshop and threaten its effectiveness. The individual might, for example, ask for supporting evidence for every opinion cited, refusing to accept that the opinion has value. This would undermine the confidence of other participants who felt that the workshop was appropriate and valuable. In such a situation, the reviewers have to vigorously facilitate the session, granting speakers the floor, and cutting them off when necessary. This keeps the discussion on the right plane and ensures the dissenter does not unduly dominate. If the dissenter behaves rudely or inappropriately in some way, reviewers should maintain professional composure no matter what happens. In difficult situations, reviewers might have to invoke the authority of the most senior manager present to ask the dissenter to desist, or offer a separate meeting with the dissenter to address his or her issues. In extreme cases, the workshop might have to be suspended or the dissenter evicted.
- ▶ The workshop review can be extremely powerful in rapidly getting to key issues—so powerful, in fact, that some may not be prepared to give credence to the conclusions, viewing what seems to have been little effort put into reaching them. Reviewers would have to cite the openness of the workshop participants, and their ability to analyze the issues raised in the context of their experience, to defend the integrity of the work product despite the small investment of time.

5 Conclusion

The fundamental notion of the independent review is that projects benefit greatly when examined by experienced, qualified, dispassionate experts. The methodology described here is designed to be used by people who are experienced in project management, and who are qualified to conduct reviews. This methodology is not intended as a checklist to be carried out by an inexperienced practitioner.

Project reviewers are highly experienced, both in projects and in a wide variety of interpersonal situations. They will have developed judgment, based on experience, with which to assess the project situation. The methodology, which lays out an approach to assess the project, and the accompanying *Review Topics for Enquiry* are merely guides to assist an experienced person in conducting a good project review.

All guidance offered here is based on experience in a large number of project review situations. While this guidance is comprehensive, it must not be assumed to be exhaustive. As technology evolves and becomes more widespread, there will be new issues on IT-enabled projects that have not been identified here. For this reason, reviewers are asked to spend a few hours after each review documenting their experiences so that CIOB can continuously improve both the methodology and the topics of enquiry.

Reviewers should not hesitate to use their judgment when assessing a project situation. They have been selected to be reviewers because of their project experience. The judgment they have gained from such experience is exactly what sponsoring executives expect when they commission a project review. As one CEO said when a project review team presented a largely fact-based assessment of a project situation, “There are lesser people I could have asked if I merely wanted the facts. I want your judgment and you haven’t given it to me.”

To be effective in review situations, reviewers must display strength of character. The reviewer is cast in the roles of investigator and judge—heavy responsibilities. The findings may not be welcome. How the organization acts on the review findings will depend on how well the reviewer has articulated the issues to be addressed. There may be moments when the review team perceives that everyone involved with the project is unhappy with the review work. Yet reviewers must carry on with diligence and professionalism, and present an accurate account of the situation.

Independent project reviews within the Government of Canada have already spurred improvements. In the case of one review, project approval was made conditional pending the clarification of unclear project goals, approach, participants, roles, and governance.

Examples like this avoid the waste of public money and result in an improved project outcome.

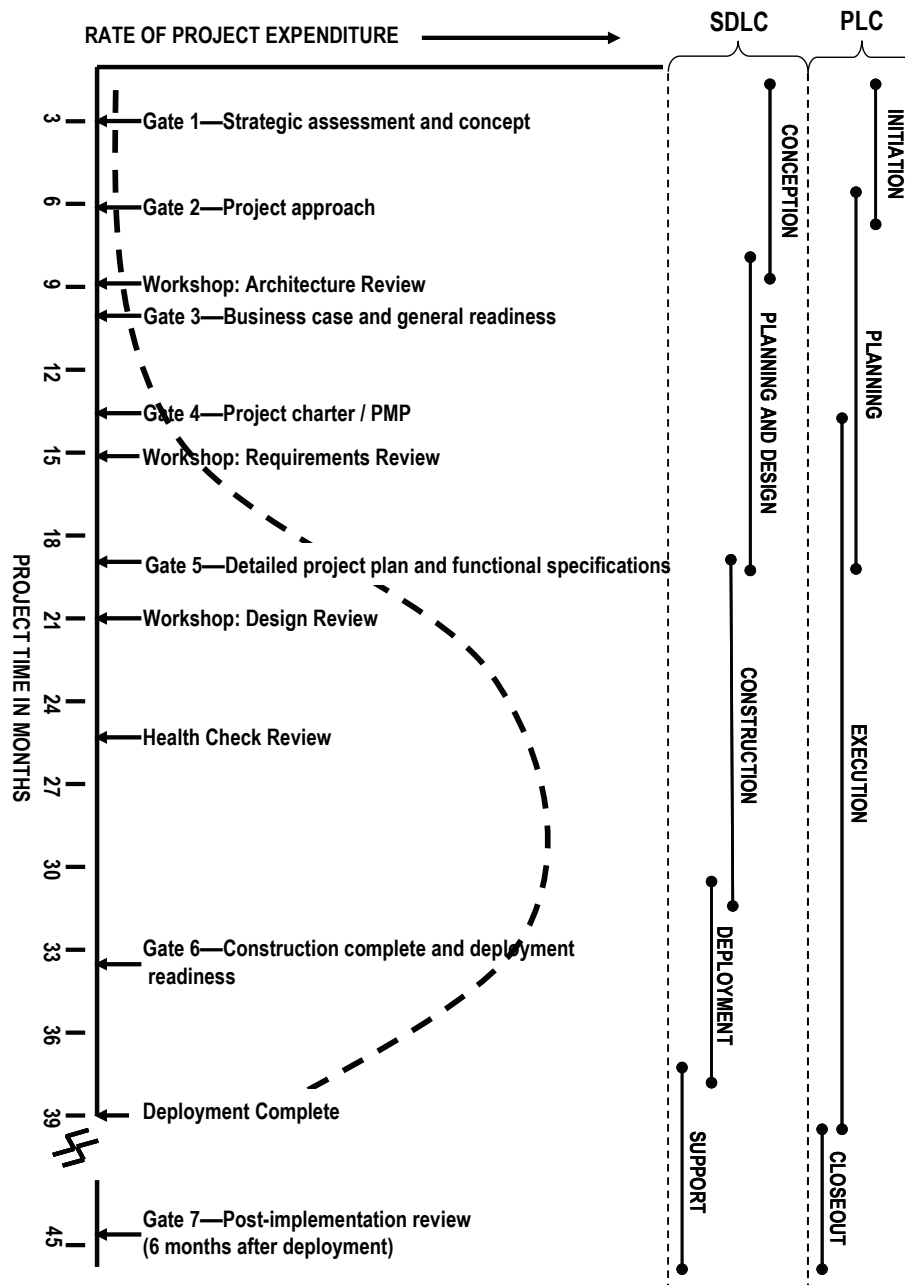
Many reviews, too, have found only minor concerns or have served to confirm concerns that were already suspected by those responsible for the project. In these cases, the organization proceeds with increased confidence, having secured a second opinion showing that project challenges are well in hand.

All executives who have commissioned an independent project review are of the strong opinion that it was useful, essential, and represented extremely high value for the cost and time required to do the review.

Appendix A—Gating

See the positioning of gates relative to the classic systems development life cycle (SDLC) in this figure on gates, workshop reviews, and health check reviews. Keep this figure in mind when reviewing the definitions of the gates. While the SDLC follows a traditional waterfall methodology, the positioning of gates can be adapted to various methodologies, overlapping phases, and multiple-release projects.

Sample Gates, Workshops and Health Checks Across Project Life Cycle (PLC)



Appendix B—Sample Review Documents

Independent review work plan

This plan is for a full review, one that has been already been staffed with a review team. It assumes the review sponsor has been identified and the review objectives and scope defined. All time frames quoted here are elapsed working days.

Timeline	Activity
Pre-review meeting	Usually a few weeks before the review, a meeting with the review sponsor is held to define the formal statement of work. This will identify an initial set of key project documents to be read, key people to be interviewed, and an approximate total number of interviewees. The number of presentations and the form of the final report is also discussed. The logistics requirements for the review are established, as are the administrative and management contacts (management contacts are usually a first or second line manager on the project).
Day 1	Kick-off meeting. Meet with review sponsor, management contact, administrative contact, and key project management to make introductions and discuss review terms of reference and statement of work. Arrange for review sponsor to send out letter to project members and stakeholders outlining scope and objectives of review. With the administrative contact, discuss logistics of setting up interviews, desired interviewees, and sequence of initial set of interviews. Arrange for delivery of binders of key project documents and confirm logistic arrangements are in place.
Days 2 to 4	Reading of project and background documents. Identify any additional documentation that may be required. On Day 4, hold review team meeting to discuss areas of focus in the interviews.
Day 5	Walk-through of the project with key members of the project and other key stakeholders, discussing the organization, scope, and actual or potential issues.
Days 6 to 10	Start initial interviews, generally three to four per day. In a typical large project, this would take an elapsed period of five days. (Note: A few stray interviews may not be completed until as late as Day 18—when the team is starting to prepare recommendations—due to people on leave, etc.)
Day 11	Review team meeting to assess output of interviews, organize findings, identify additional interviews and documentation required, identify questions for review sponsor, and develop status briefing for review sponsor.
Day 12	Brief review sponsor, obtain input and direction, and begin review team analysis meeting.

(Continued)

Timeline	Activity
Days 13 to 15	Continue analysis meeting, incorporating additional documents and interviews. Discuss conclusions. Validate specific findings and conclusions with appropriate project members as required.
Days 16 to 17	Review team members individually develop assigned sections of a presentation deck that summarizes findings and conclusions.
Day 18	Team discussion to create integrated briefing presentation to review sponsor. Brief review sponsor and obtain validation, input, and direction.
Day 19	Review team discussion to develop recommendations and validate potential recommendations with key project members and review sponsor as appropriate.
Day 20	Create draft review presentation.
Day 21	Deliver draft review presentation to review sponsor and invitees from the project and stakeholders. Review team to assess input from audience.
Day 22	Finalize review presentation.
Days 23 to 26	Develop draft report and provide to review sponsor for comments (allow no more than five days).
Days 30 to 35	Around this time, issue the final report and make additional presentations to various audiences.

Review sponsor's message announcing the independent review

The following is sample text for a message to stakeholders, project group members, and others associated with the project initiative:

As you may be aware, I have sponsored an independent review of the Gargantuan Project as we near the completion of the Project Charter / PMP phase (Gate 4). The review is being conducted in accordance with the independent review methodology recommended by TBS. The review will be conducted by Gilles Ladouceur, Christine McDonnell, and Sayid Hassan, starting April 15 with a planned completion date of May 31.

Gilles Ladouceur, the review team leader, is Director General, Application Development, at the Canada Revenue Agency.

Christine McDonnell is an independent consultant with 25 years of experience in the industry. This includes careers at ABC and DEF, in a variety of technical and management roles. She was most recently vice-president, systems integration delivery, at XYZ.

Sayid Hassan is a technology architect with 20 years of experience, most recently implementing the GHI CRM product on the FNT Project at DND.

The objectives I have set for the review are to:

- ▶ Confirm that the business case and business outcome realization plan is still valid;
- ▶ Verify the completion of Gate 4 deliverables;
- ▶ Confirm the project's readiness to commence to Phase 5; and
- ▶ Assess project health.

In addition, I have specifically asked the review team to assess the process around the collection and approval of business requirements.

You may be requested to participate in an interview with the team. If this is the case, please be open and candid with the reviewers.

Across the government, the independent review process has proven to be a constructive and effective vehicle in helping project management to engage senior executives and overcome barriers to achieving their objectives. It is my hope that this will be a learning experience for all of us and will contribute to the success of the project.

Given the short time frame available to conduct the review, I would appreciate that you give priority to any requests from the review team.

Thank you in advance for your full participation and cooperation.

The Review Sponsor

Email from the reviewers requesting an interview

Roland,

As you are aware from the review sponsor's email of April 1, 2008, regarding an independent review of the Gargantuan Project, the review team will be interviewing selected project group members and stakeholders.

Christine McDonnell and I would like to interview you during the week of April 15–19, if at all possible. We are available between 7:30 a.m. and 6:00 p.m. and would like to conduct the interview at our independent review team meeting room in the Canada Building, 10th floor, room B1002. Alternatively, we can come to your office if you prefer.

The interviews typically take 45 minutes, but we allocate one hour in case the extra time is needed.

The topics that we are suggesting for discussion are attached, but this should only be considered a starting point. Once you review the list, there may be some topics that you feel are not relevant, given your role, or others that you would like to add. Also, please bring any materials to the interview that you think would be useful.

Robin Shankton will be contacting you to schedule the interview appointment.

Thank you in advance for your cooperation and support. We look forward to an open and candid discussion.

Sayid Hassan

Interview schedule

#	Interviewee	Interviewer(s)	Date	Time	Interview Location
1.	Project Manager – Vinh Nguyen	Gilles Ladouceur / Sayid Hassan	Monday April 15/08	9:30– 10:30 a.m.	999 Bank St., 24th Floor, Office C2053 Email Nguyen.Vinh@govt.gc.ca 613-555-1111 Note: Need to give names at security and be escorted to this floor EA: Joe Fox 613-555-1112
2.	Deputy Project Manager – Terry Edgeworth	Gilles Ladouceur / Christine McDonnell	Monday April 15/08	11:00 a.m.– noon	999 Bank St., 6th Floor, Office A601 Email Edgeworth.Terry@govt.gc.ca 613-555-2222
3.	Deputy Business Director – Roland Postransky	Christine McDonnell / Sayid Hassan	Monday April 15/08	1:00–2:00 p.m.	999 Bank St., 5th Floor, Office C559 Email Postransky.Roland@govt.gc.ca 613-555-3333
4.	Deputy Project Manager – Sylvie Bouchard	Christine McDonnell / Sayid Hassan	Monday April 15/08	3:00–4:00 p.m.	111 Bronson Ave., 6th Floor, Office D699 Email Bouchard.Sylvie@govt.gc.ca 613-555-4444
5.	PMO Scheduling Risks and Issues – Matt Lavigne	Christine McDonnell / Sayid Hassan	Thursday April 18/08	9:30– 10:30 a.m.	111 Bronson Ave. Boardroom D588 Email Lavigne.Matt@govt.gc.ca 613-555-6666

Table of findings

Finding	Source
1. There is a problem with the requirements process.	Project schedule reports show it is late and that deliverables marked as complete frequently have to be revised. Both business and IT representatives described problems and expressed concern. There was some finger pointing.
2. The underlying problems are: <ul style="list-style-type: none">• The business processes are not stable;• There is no clear business process authority; and• There are significant local variances in business process.	From the analysis process
3. The requirements issue will threaten the project outcome either by causing the project to build the wrong solution or by creating costly rework.	Experience and judgment of the reviewers
4. The environment may be unsuitable for project success—business processes must be stable and uniform if they are to be successfully automated.	Experience and judgment of the reviewers

Review presentation

The following is sample text from slides (it could also be a page of text from a report).

The project is experiencing significant difficulties in coming to closure on business requirements, an essential step before proceeding. The reasons for these difficulties point to potentially serious issues requiring intervention:

- ▶ *The business processes the project seeks to automate do not appear stable, in that work is carried out in different ways in different local offices.*
- ▶ *The organization seems to tolerate more local variations in work process than is generally considered wise, and the absence of a clear authority over the business processes effectively permits, if not encourages, local variance.*
- ▶ *It is unwise and costly to choose to automate multiple versions of a business process to cater to local preferences on workflow. This will introduce inconsistency in the way the department handles cases.*
- ▶ *This issue is highly likely to threaten the project, either by delaying the start of construction or, worse, by resulting in an unacceptably complex and costly implementation that accommodates local variances.*
- ▶ *Resolving the issue of a single authority to be responsible for ruling on issues of business process is a key prerequisite to addressing this situation.*

During the course of the review, a number of departures from best project management practices were noted. While some are not of concern, a group of them are. We have provided more detail on these to the project manager. The issues include:

- ▶ *The authority of the project control office, and the balance of power between the project control office and the various project work teams;*
- ▶ *Weakness in verification that work reported as complete is in fact complete;*
- ▶ *A lack of precision in the approach to testing, including how test cases will be developed, how many there will be, and the related estimates for conducting the testing activity; and*
- ▶ *The tracking of earned value.*

Client satisfaction survey

The following is provided to the review sponsor at the completion of the review. The response may be a team exercise (i.e., input incorporated from all client executive stakeholders).

#	Question	Comments	Assessment 5 = outstanding 3 = meets requirement 1 = significant concerns
1	Did the review team have the appropriate skills and experience to perform the review?		
2	Did the team operate in a positive and constructive professional manner? Did they exhibit sound judgment? Were they open-minded?		
3	Was the review sufficiently thorough and complete?		
4	Were the findings complete and the conclusions well supported?		
5	Were the recommendations constructive and usable?		
6	Did the reviewers operate in a manner that would minimize the burden of the review on the project group?		
7	Did the reviewers have good interpersonal skills? Were they diplomatic and tactful?		
8	Did the review add value to the successful completion of the initiative? Did it provide perspective and insights that were useful to the review sponsor and project group?		
9	Did the review presentation or report document the review context, findings, conclusions, and recommendations well? Will it be useful as a reference document?		
10	Did reviewers communicate the review content effectively at an executive level?		

What did the review team do well?

What could the review team have done better?

What would you as review sponsor do differently next time?

Appendix C—Project Class Definitions

The TB’s *Policy on the Management of Projects* uses a project classification based on the level of complexity and risk of a project. The following table helps contextualize the project complexity and risk levels for IT-enabled projects. While each project will not necessarily correlate directly with this classification scheme, it is an important construct for understanding each project. Within the federal government, one of the most significant causes of project difficulty has been the failure to recognize:

- ▶ The complexity and risk level of the project undertaken and hence the management and risk characteristics associated with it; and
- ▶ That a project may have components that are higher risk and that the project management approach should reflect this.

Project Complexity and Risk Levels for IT-Enabled Projects

Class	Description	Risk Considerations
Sustaining	<ul style="list-style-type: none">• Primary project goal is to sustain service from an existing asset by addressing aging components or deficiencies that limit its ongoing use. It is not a redevelopment.• Negligible new capability or functionality added• Business-initiated changes are likely minimal• Scope confined to a single system or asset within a single program and one or few stakeholders	<ul style="list-style-type: none">• Low to no requirements risk—business changes are largely cosmetic (e.g., a usability enhancement).• Business processes essentially unchanged although technology interfaces may be different; minimal retraining required; minimal change management.• Risks more likely associated with technology than business; higher implementation risks in systems with demanding performance and availability (i.e., non-functional) characteristics.

Class	Description	Risk Considerations
Tactical	<ul style="list-style-type: none"> • Usually driven by an immediate business need to deliver an additional capability or to position an existing asset for anticipated needs by adding capability. • Capability added may be functional or non-functional and should be of modest proportion. Any redevelopment is of modest size. • Scope may involve multiple systems, programs, or organizational entities (departments), but with a clear authority and a simple governance structure. 	<ul style="list-style-type: none"> • Changes and additions to business processes are required with small- to medium-scale change management. Impact is often localized to a specific segment of the business. • Medium to high requirements risk and related risk of scope creep (additional requirements being added to the project). Development risk increases according to portion being redeveloped or added. • Technology risk may be high if significant performance and/or availability (i.e., non-functional) enhancements required; implementation risk medium, ranging to high, if underlying technology base replaced.
Evolutionary	<ul style="list-style-type: none"> • Major changes and additions to capability affecting business processes, job content, and service delivery model. Often a combination of business and technological evolution is involved. • Some base components are reused to provide a working platform on which to add function. • Scope may involve multiple systems, programs, entities, and jurisdictions and may span into client and business systems, requiring an appropriate governance structure. 	<ul style="list-style-type: none"> • High business risk due to significant change management and business process change—the greater the impact of the solution across the business, the greater the risk • High requirements risk and related risk of scope creep, hence significant development risk • Governance risk proportional to number and diversity of stakeholder interests • Conversion and implementation risks likely to be high
Transformational	<ul style="list-style-type: none"> • Project will change fundamentals about the way the business area performs its work—processes, job content, organization, outsourcing, client and business involvement, and service model. • Few, if any, existing components will be reused. • Project likely spans organizational entities; may be multi-jurisdictional, involve multiple stakeholders, and require a complex governance structure. 	<ul style="list-style-type: none"> • Carries all the risks of the evolutionary class, further increased by the absence of any significant reuse • High to very high business risk owing to project size, very high change management implications, and pervasive impact of solution across the business • High to very high governance risk • High conversion and implementation risk, variable technology risk • Few, if any, risk mitigation mechanisms visible

Appendix D—Abbreviations

ADM	Assistant deputy minister
CIOB	Chief Information Officer Branch
IT	Information technology
OPMCA	Organizational Project Management Capacity Assessment
PCRA	Project Complexity and Risk Assessment
PIA	Privacy Impact Assessment
PLC	Project Life Cycle
PMO	Project Management Office
PMP	Project Management Plan
SDLC	Systems Development Life Cycle
TB	Treasury Board
TBS	Treasury Board of Canada Secretariat
TRA	Threat and Risk Assessment

Appendix E—Glossary

Much of the terminology related to IT-enabled projects is straightforward. The following terms may not have common interpretations or are specific to project activity in the federal government.

Iterative methodology	A methodology, such as for systems development, in which an initial solution that meets only a part of the requirement is developed and implemented, followed by multiple systems development cycles, each adding to the system until it is complete
Scope creep	The tendency for the stated requirements for a proposed project to gradually increase with the passage of time, due to any of poor initial specification, changing views on what is desirable or possible, or a more complete understanding of the problem
Waterfall methodology	A methodology, such as systems development, in which all of the scope of the project passes through each of the normal phases completely before work begins on the next step

Appendix F—Related Policies and Publications

Treasury Board Policies and Policy Instruments

- ▶ *Management of Major Crown Projects* (to be rescinded April 1, 2012)
- ▶ *Policy on Access to Information*
- ▶ *Policy on Government Security*
- ▶ *Policy on Information Management*
- ▶ *Policy on Investment Planning – Assets and Acquired Services*
- ▶ *Policy on Management of Information Technology*
- ▶ *Policy on Management, Resources and Results Structures*
- ▶ *Policy on Privacy Protection*
- ▶ *Policy on the Management of Projects*
- ▶ *Project Management Policy* (to be rescinded April 1, 2012)
- ▶ *Risk Management Policy*
- ▶ *Standard for Organizational Project Management Capacity*
- ▶ *Standard for Project Complexity and Risk*

Other Resources of Interest

- ▶ Office of the Privacy Commissioner of Canada
- ▶ UK Office of Government Commerce