A DISCUSSION PAPER

Auditing Public-Private Partnerships

CANADIAN AUDIT
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FOUNDATION

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Introduction

Public-Private Partnerships: A Growing Trend in Canada

In recent years, public-private partnerships (P3s) have become a common way to deliver large public infrastructure projects in Canada. In fact, Canada is considered a world leader in supporting and delivering P3 projects, with over 200 projects having moved past the procurement phase, meaning that a contractual agreement is in place and implementation has begun. These projects—representing more than $70 billion in capital investment—include highways, bridges, light-rail transit, hospitals, schools, courts of justice, water treatment plants, and more.

Provincial governments have been particularly supportive of the P3 approach. Six of the 10 Canadian provinces have established a government agency for supporting the P3 approach to deliver infrastructure and services. The federal government also has its own agency, PPP Canada, and many municipalities have recently started to deliver projects using public-private partnerships.

While government support for public-private partnerships is growing, there remains much public debate on their merits—value for money and service quality are key issues—with strong voices on both sides of the debate. The question remains a political one and support for P3s can vary over time in a jurisdiction depending on which political party is in power.

Purpose and Structure of this Discussion Paper

Public-private partnership projects are often large in scope, require significant investments of taxpayer money, and involve significant risks. These characteristics, and the fact that the use of P3s is increasing in many jurisdictions where there is little experience with such projects, make P3 projects potentially interesting for performance auditors. However, only a small number of Canadian performance audits have so far focused their attention on P3 projects.

There is limited guidance for auditors on this subject. Because the practice of auditing public- private partnerships is still emerging, this paper is more a starting point than a how-to guide. It is meant to stimulate discussion and sharing about public-private partnerships within the legislative and public sector performance auditing community. Its content is based on a literature review and on a series of interviews conducted with Canadian performance auditors who had direct experience in auditing P3 projects.

The discussion paper has three main sections:

1. Public-Private Partnerships in Canada: This section describes the main characteristics of the P3 approach adopted in Canada and provides a brief overview of the delivery of P3 projects across the country.

2. Canadian Legislative Audits of P3 Projects: This section provides an overview of the P3 audits that have been completed by provincial and federal legislative auditors between 2008 and 2015.

3. The Perspectives of Legislative Auditors on P3 Audits: This section presents the views of the legislative auditors we interviewed on different aspects of P3 audits. The challenges of auditing P3 and lessons learned in doing so are discussed, among other topics.

Finally, a selection of publications on public-private partnerships is provided at the end of this paper for further reading.

Public-Private Partnerships in Canada

What Is a Public-Private Partnership?

A public-private partnership is a way of delivering infrastructure and services to citizens through cooperative venture agreements binding a government and a private company or consortium.

In a public-private partnership, project risks and rewards are allocated between public and private sectors, in contrast to conventional procurement, in which governments assume most risks. In a P3 arrangement, financing, construction, and maintenance are often the responsibility of the private sector, while control and ownership of the assets remain with the public sector. **Table 1** presents the main differences between conventional procurement and public-private partnerships.

Table 1 –Differences Between Conventional Procurement and P3s

	Conventional Procurement	P3 Procurement
Project phases	Typically, elements are design, bid, and build; maintenance and operation are often handled separately.	Can include some or all of the following: design, build, finance, operate, and maintain.
Contracts	Typically limited to design and build. Maintenance and operation are handled separately.	Often long-term, including operations and maintenance over extended periods (25-30 years or more, depending on the expected life of the assets).
Timing of payments	Progress payments over construction period, with contractor fully paid upon completion of construction.	Can include lump-sum contributions (e.g. substantial completion payment) and annual service payments extending over the life of the contract.
Financing	Government.	Private sector, including significant equity financing (with possible government contributions).
Stewardship	Management of constructed assets remains with government.	Management of constructed assets remains with the contractor for the life of the agreement (but does not apply in cases where contract is only Design-Build or Design-Build-Finance).
Risk allocation	Some risks borne by the private sector.	More risks borne by the private sector than under conventional procurement.

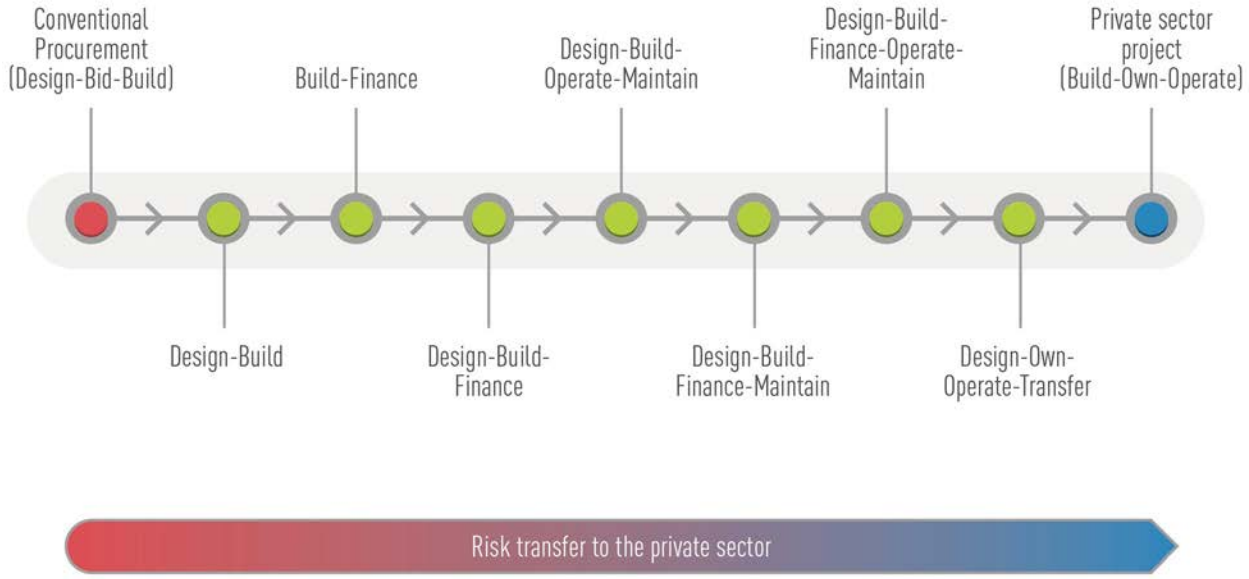
Source: Adapted from Provincial Auditor of Saskatchewan (2015), "SaskBuilds – Evaluating Potential Use of P3s."

The responsibilities of the private sector partners in a P3 project can include up to five main elements, commonly referred to as:

- design,
- build,
- finance,
- maintain, and
- operate.

The contractual arrangements for P3 projects take different forms, depending on the scope (the number of elements included) and duration of projects, as well as the extent of risk transfer to the private sector. **Figure 1** situates the different forms of public-private partnerships along a continuum going from a conventional governmental procurement to a private sector project – all the project models between the two extremities are P3 options. The arrow at the bottom of the figure illustrates the increasing transfer of risks to the private sector as its responsibilities become greater and extend over longer periods.

Figure 1 – The Continuum of Project Models for the Delivery of Public Infrastructure Projects



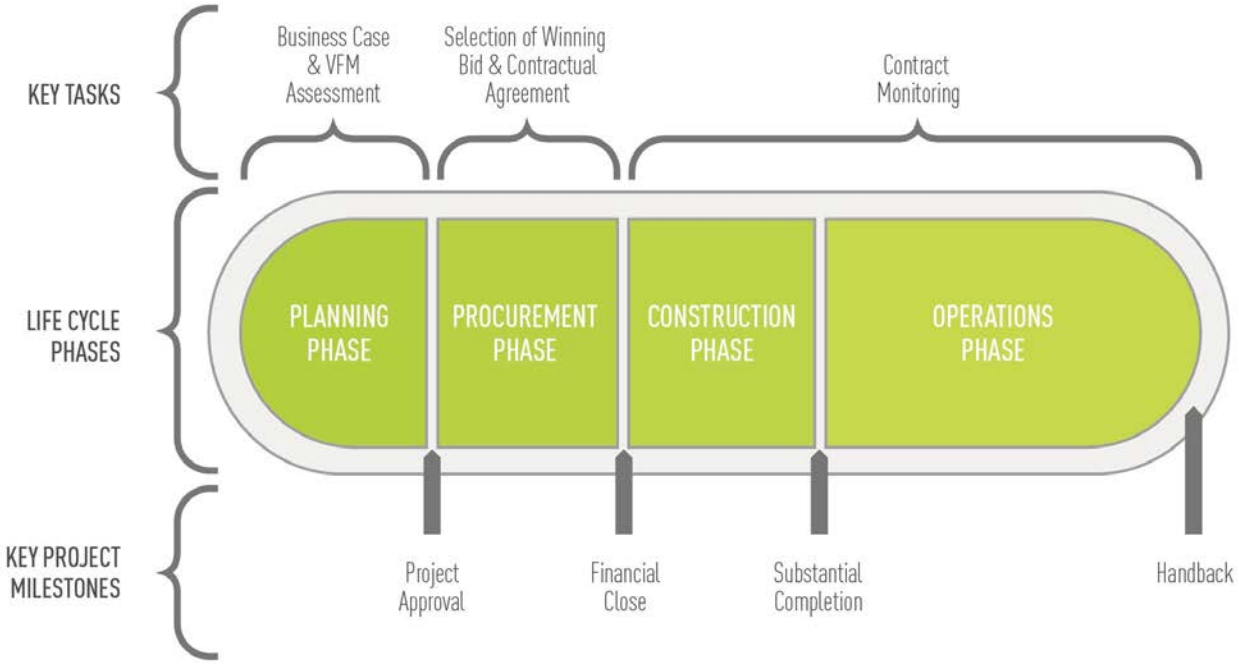
Source: Modified from Provincial Auditor of Saskatchewan (2015), "SaskBuilds – Evaluating Potential Use of P3s."

Public-private partnerships are usually large capital projects with assets intended to be used over the long term. From a public sector point of view, the full life cycle of a P3 project includes four phases: planning, procurement, construction, and operations. **Figure 2** provides an overview of this life cycle, including the four phases, key tasks, and key project milestones.

For the public sector, the possibility of transferring risks to the private sector is the main rationale for public-private partnerships. In a P3 contract, responsibility for specific risks (including, among others, design flaws,

delays, cost overruns, construction defects, and unexpected maintenance requirements) can be transferred to the private sector in exchange for a price. In theory, each risk is allocated to the party that is in the best position to manage that risk cost-effectively. The private sector bids a fixed price for a bundled contract with defined responsibilities for risks and becomes responsible for unforeseen expenses should those risks become reality during the contract's duration.

Figure 2 – Life Cycle of a P3 Project



Public-private partnerships are attractive for the private sector because they provide business stability and a long-term revenue stream paid by a government (in contracts that include the Operations phase). Public-private partnerships also give more flexibility to the private sector for project design; the public sector defines its key objectives and the private sector develops the best design to meet these. In projects where the design, construction, and maintenance phases are bundled under a single contract, the private sector has an incentive to build innovations into the project design that will result in lower maintenance costs over the operational phase of long-term projects. Where they occur, these savings can be shared between the public and private sector partners according to contractual provisions.

In addition to risk transfer and innovation, governments can pursue other benefits through P3 contracts. For example, governments may be interested in the private sector's reputation for being better able to deliver projects on time and on budget under a P3 approach. Government may also justify its choice of adopting a P3 approach by arguing that this alternative method will provide better value for money for taxpayers. (Note that better value for money does not necessarily mean cost savings because value can include non-financial aspects such as better service quality and innovation.)

In the early days of the P3 approach, some Canadian jurisdictions used public-private partnerships as a way to keep large capital expenditures "off the books," with the payments to the private sector being spread over many years. (This is in contrast to large construction expenditures being made early on under conventional procurement.) However, changes in accounting standards and in practices have since made this strategy obsolete. Nowadays, the decisions of Canadian governments to use the P3 approach rest on other arguments.

Over the years, studies have shown that P3 projects can perform better than conventional procurement, at least in terms of on-time, on-budget construction. However, this is not always the case —public-private partnerships are not a panacea and their mere use does not guarantee success or better value. Each case must be assessed thoroughly in order to determine whether a P3 approach would be the best option. Where a P3 approach is appropriate, success depends in large part on the quality and clarity of contractual agreements and on the availability within the public sector of the expertise required to develop sound value-for-money assessments and to negotiate good contracts.

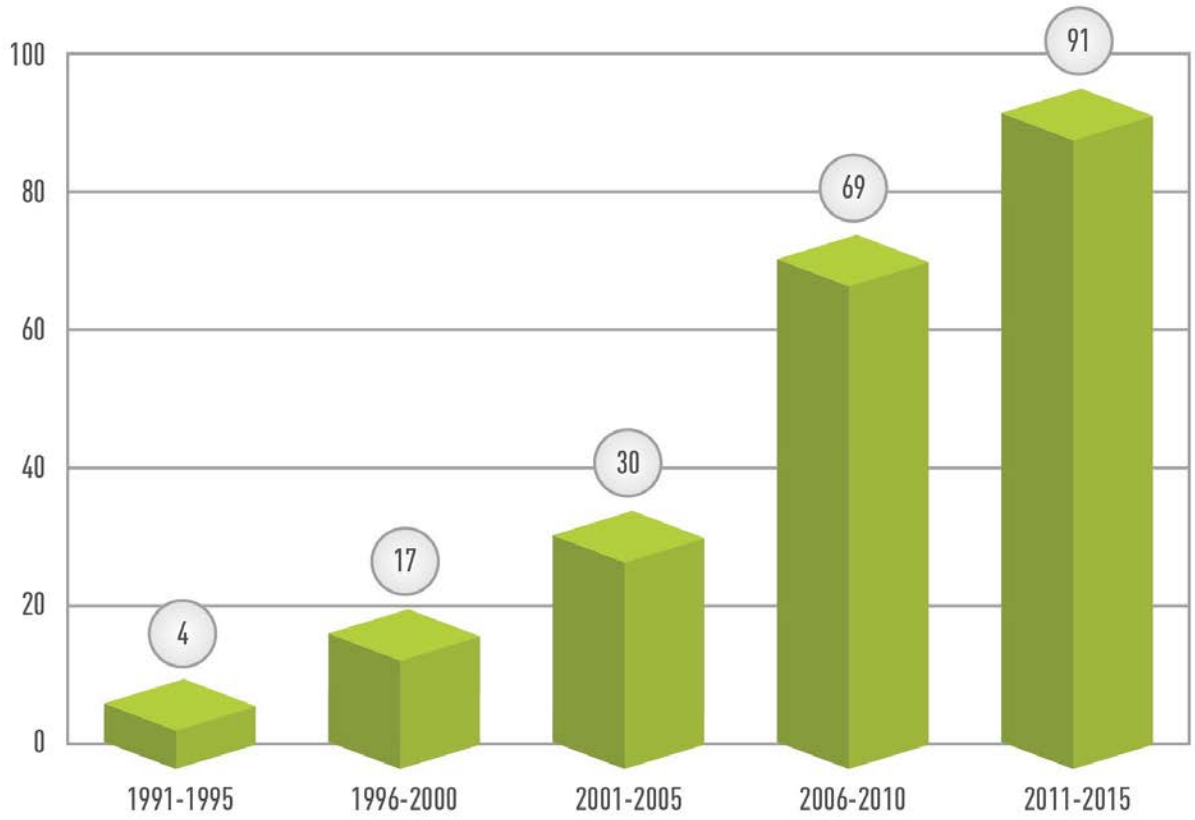
Public-private partnerships also have some drawbacks. For example, private financing costs more than public financing and this cost needs to be offset by the value of risks transferred to the private sector. In addition, the necessity to assess the value-for-money proposition of projects for periods over 30 years or more and to compare the P3 option with the conventional procurement option adds time to the procurement process. Negotiating the lengthy contractual agreements also requires specialized expertise, which increases transaction costs. The use of public-private partnerships is therefore normally limited to high-value projects (a minimum of $50 – $100 million) because the extra costs involved would not make a P3 option cost-effective for smaller projects.

P3 Projects in Canada

The use of public-private partnerships in Canada started in the early 1990s. An early milestone was the 1992 announcement by the federal government of the construction of the Confederation Bridge between New Brunswick and Prince Edward Island under a P3 arrangement. Since then, more than 200 projects across the country have reached financial close, meaning that a contractual agreement is in place and implementation can begin.

While the numbers of new P3 projects grew slowly in the 1990s, a notable increase in new projects per year has been observed since the early 2000s. The number of new projects more than tripled in the last decade (2006–2015) compared with the previous decade (1996–2005), increasing from 48 to 160 (this last number does not include data for the last two months of 2015). **Figure 3** shows the overall trend over the last 25 years.

Figure 3 – Evolution of the Canadian P3 Market: Number of P3 Projects Reaching Financial Close in Successive 5-Year Periods, 1991–2015*

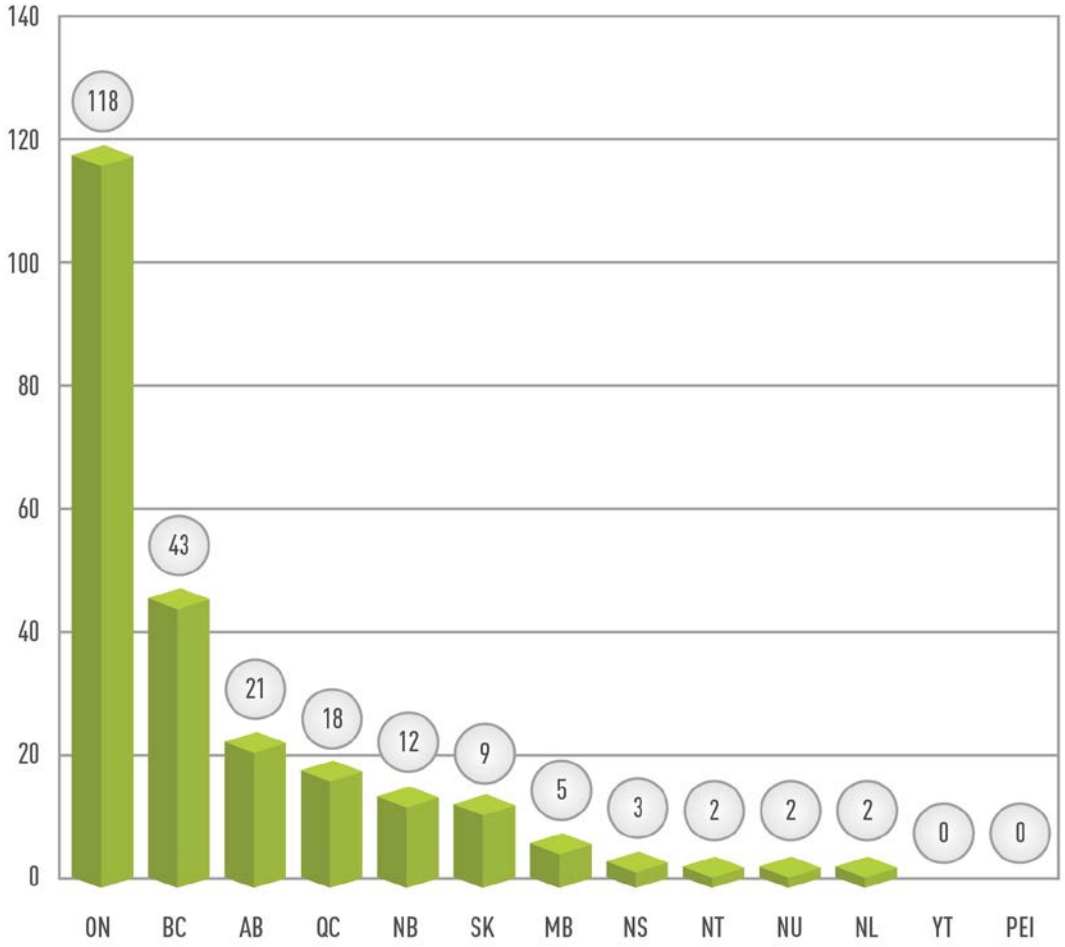


* 2015 data does not include months of November and December.
Source: Data from the Canadian PPP Project Database, maintained by the Canadian Council for Public-Private Partnerships. Available at http://projects.pppcouncil.ca

Over these 25 years, all Canadian provinces and territories except Prince Edward Island (the Confederation Bridge was a federal project) and Yukon Territory have used public-private partnerships at least once to procure public infrastructure. Provincial governments have initiated the majority of these projects, but a number of municipalities have also used the P3 alternative in recent years. In 2013, for example, a majority of Regina citizens voted in a referendum for the use of a P3 arrangement for the upgrading and running of the city's wastewater treatment plant. (It was the first Canadian referendum about a P3 project.)

As shown in **Figure 4**, Ontario is by far the Canadian leader in terms of number of P3 projects. Ontario's 118 P3 projects between 1991 and 2015 (not including the last two months of 2015) represented 50 percent of the 235 provincial/territorial P3 projects over that period (of the 235 projects, 85% had a contractual agreement in place as of October 2015). British Columbia, Alberta, and Quebec together accounted for 35 percent of all projects, while the other provinces and territories accounted for the remaining 15 percent of projects.

Figure 4 – Number of P3 Projects per Province or Territory, 1991–2015*



* 2015 data does not include months of November and December. The chart also excludes three projects led by the federal government. Source: Data from the Canadian PPP Project Database, maintained by the Canadian Council for Public-Private Partnerships. Available at http://projects.pppcouncil.ca

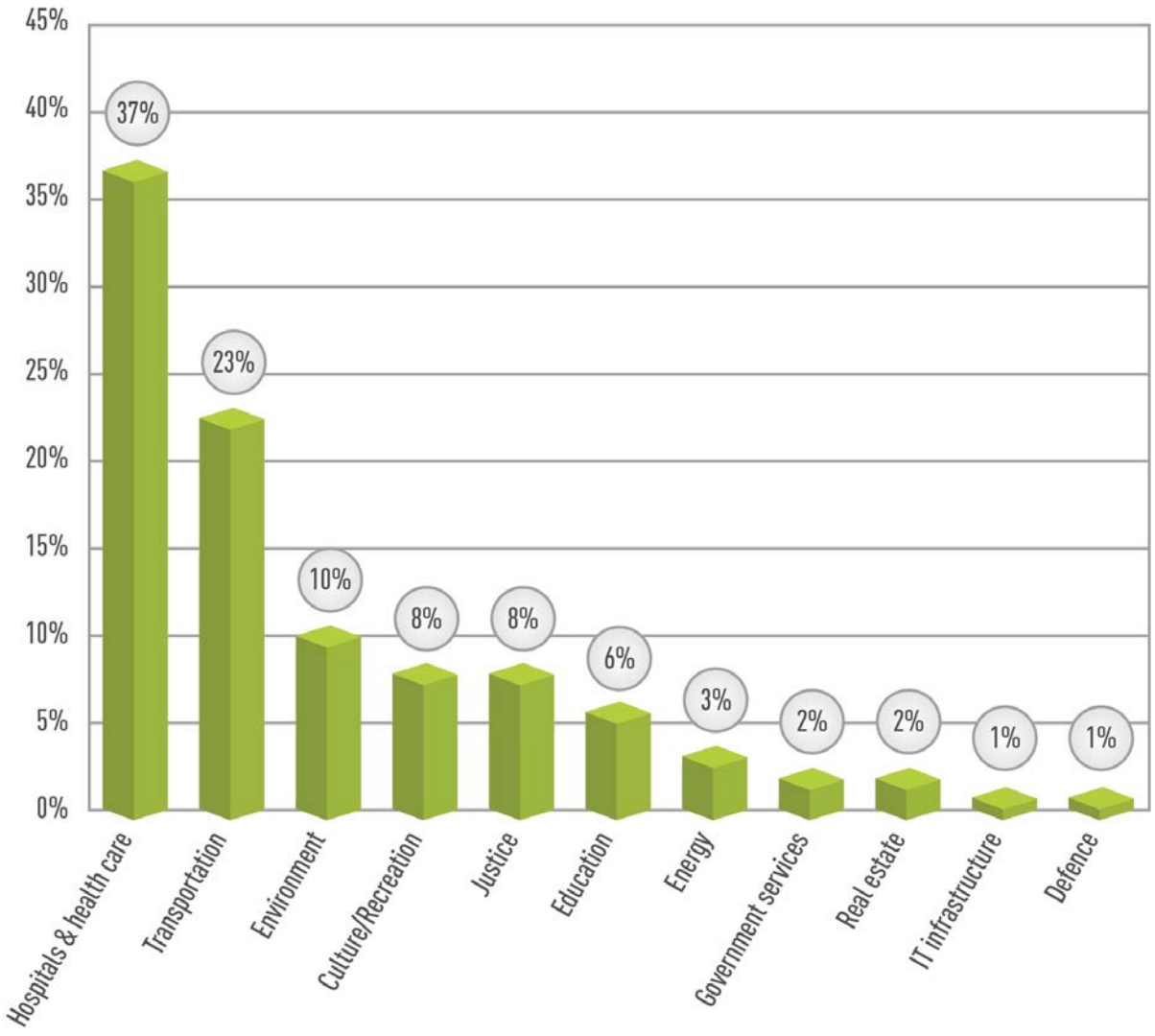
Just as **Figure 4** shows that P3 projects are not distributed evenly across Canadian jurisdictions, **Figure 5** shows that P3 projects are not distributed evenly across sectors of activity.

With 37 percent of all projects (88 of 238 projects), the health care sector (hospitals and health centres) has been the most active one in terms of P3 projects since 1991. This was followed by transportation, with 23 percent of all projects (including highways, bridges, light rail transit, and transit stations), and the environmental sector (including wastewater treatment plants, biosolids management facilities, and landfill gas power projects) with 10 percent.

As the number and diversity of P3 projects has grown in Canada, so has the support of provincial and federal governments for the delivery of public infrastructure and services through public-private partnerships. In addition to the federal government's PPP Canada (a Crown corporation), six provinces now have an agency or office dedicated (exclusively or in part) to the management or the support of P3 projects. The latest of these agencies was established in Saskatchewan in 2012. **Table 2** lists these agencies and offices.

Each of these agencies has its own mandate and its own methodology for assessing the value-for-money of proposed P3 projects. Municipalities under these jurisdictions are not bound to use the methodology adopted by their provincial agency.

Figure 5 – Proportion of P3 Projects per Sector of Activity, 1991–2015*



* 2015 data does not include the months of November and December.
Source: Data from the Canadian PPP Project Database, maintained by the Canadian Council for Public-Private Partnerships. Available at http://projects.pppcouncil.ca

Table 2 – Agencies and Offices Dedicated to the Management or Support of P3 Projects

Jurisdiction	Agency or Office
Canada	PPP Canada
British Columbia	Partnerships British Columbia
Alberta	Strategic Partnership Office (located within Alberta Infrastructure)
Saskatchewan	SaskBuilds
Ontario	Infrastructure Ontario
Quebec	Société québécoise des infrastructures
New Brunswick	Partnerships New Brunswick

Canadian Legislative Audits of P3 Projects

An Overview of Canadian P3 Audits

Canadian legislative auditors have the mandate to audit the management of public infrastructure projects under the responsibility of federal, provincial, and territorial governments, whether those projects are conventional procurements or public-private partnerships.

The first Canadian performance audit of a P3 project did not lag much behind the first P3 projects in the country: in 1995, the Office of the Auditor General of Canada released an audit of the Northumberland Strait Crossing Project, now known as the Confederation Bridge. This audit made positive observations about risk management and the procurement process, but raised questions about the costs of private financing and the off–balance sheet accounting treatment of the project.

As the use of P3 arrangements by Canadian governments increased in the first decade of the new millennium (see **Figure 3**), audits of public-private partnerships also became more common. **Table 3** lists the 13 performance audits that Canadian legislative audit offices published between 2008 and 2015. The findings of seven of these audits have been summarized in our previous publication *Focus On Large Procurement Projects*.

Table 3 – Canadian Performance Audits on Public-Private Partnerships, 2008–2015

Legislative Audit Office	Topic	Year
OAG Canada	Deh Cho Bridge Project	2011
OAG New Brunswick	P3: Eleanor W. Graham Middle School and Moncton North School	2011
OAG Nova Scotia	Contract Management of P3 Schools	2010
Auditor General of Quebec	Vigie relative aux projets de modernisation des centres hospitaliers de Montréal – P3s (French report only) Vigie relative aux projets de modernisation des centres hospitaliers universitaires de Montréal (French report only) Réalisation et exploitation d'aires de service (French report only)	2009 2010 2014
OAG Ontario	Brampton Civic Hospital P3 Project Infrastructure Ontario – Alternative Financing and Procurement	2008 2014

Legislative Audit Office	Topic	Year
Provincial Auditor of Saskatchewan	SaskBuilds – Evaluating Potential Use of P3s	2015
OAG Alberta	Alberta Schools Alternative Procurement	2010
OAG British Columbia	Academic Ambulatory Care Centre P3: Vancouver Coastal Health Authority Two P3 Projects in the Sea-to-Sky Corridor Evergreen Line Rapid Transit Project	2011 2012 2013

Source: Data from the *Audit News Database*. Available at: https://caaf-fcar.ca/en/performance-audit/audit-news/database

Over the period covered in **Table 3**, performance audits of P3 projects have tended to focus on the management of one specific project (a hospital, a bridge, a transit project) or on a limited number of related projects (a small number of schools, several hospital buildings) managed by the same department. The 2014 audit of Infrastructure Ontario and the 2015 audit of SaskBuilds took a different approach, focusing instead on a systematic review of the systems and processes put in place by P3 agencies to manage their portfolio of public-private partnerships.

About two thirds of audits listed in **Table 3** have focused on the planning phase of projects, which involves the assessment of value for money and the selection of the P3 model as the best project delivery vehicle. Slightly more than a third of the audits have covered the construction and operations phases of projects, including one audit that has covered all project phases. (See the **Appendix** for details on the coverage of individual audits.)

Finally, in addition to performance audits, several audit offices have published other types of documents about public-private partnerships, to provide basic information and best practices on the topic or to review the accounting treatment of P3 projects in the Public Accounts. The Office of the Auditor General of British Columbia has published a backgrounder document in 2011, while the Provincial Auditor of Saskatchewan has produced a best practice document about managing the risks of public-private partnerships in 2014. The Auditor General of Quebec published in 2012 a report on the accounting treatment of P3 projects in the province's Public Accounts (available in French only).

The Perspectives of Legislative Auditors on P3 Audits

This section presents the perspectives of a number of Canadian legislative auditors on P3 audits. The information included in this section is the result of a research study undertaken by the CCAF in 2014 and 2015.

Methodology of the CCAF Study

The first phase of the study took place in the spring and summer of 2014. During this period, CCAF identified and reviewed all the audits of P3 projects that had been published by Canadian legislative auditors since 2008. CCAF next contacted all the audit offices that had published these audits and arranged, where possible, to interview at least one team member of each audit team that had recent experience auditing P3 projects.

In the end, CCAF interviewed 10 senior auditors (see names in the **Acknowledgements** section of this paper), from six audit offices, who had worked on a total of 10 audit reports:

- Auditor General of Quebec (3 audits)
- Office of the Auditor General of Nova Scotia (1 audit)
- Office of the Auditor General of Ontario (1 audit)
- Office of the Auditor General of Alberta (1 audit)
- Office of the Auditor General of British Columbia (3 audits)
- Office of the Auditor General of Canada (1 audit)

All interviewees were asked the same questions and their responses were recorded. Once the interviews were completed, all the answers were analyzed and a summary was prepared for each question. These summaries constitute the basis for the remainder of this paper.

In addition to the structured interviews with auditors, an additional interview was held with the Auditor General of Canada in July 2014. The discussions held by a panel of senior auditors convened at the 2013 Canadian Council for Public-Private Partnerships' national conference were also considered part of the study. This panel included Michael Ferguson, Auditor General of Canada; Bonnie Lysyk, Auditor General of Ontario; and Ed Humpherson, Executive Leader at the United Kingdom National Audit Office.

A literature review was also conducted. This review included Canadian and international studies and discussion papers on the evolution and current practice of P3 procurement in different countries, including Canada.

Finally, the contents of the discussion paper were also informed by the comments made by reviewers on a consultation draft.

Main Challenges in Auditing P3 Projects

We asked interviewees what, in their opinion, are the main challenges auditors face when auditing public-private partnerships. Their answers generally fell under four categories:

- length and complexity of P3 projects,
- access to information,
- political controversy, and
- expectations of parliamentarians and the public.

Details on each of these categories are presented below.

Length and complexity of P3 projects

Public-private partnership contracts that include the design, construction, and operations phases of large infrastructure projects often span more than 20 or 30 years. The long-term nature of these P3 projects creates challenges with retaining large amounts of information over many years. With time, information may be discarded or lost, or recordkeeping practices may be poor or may change. Staff turnover in responsible entities may also lead to a loss of project history and a lack of continuity on a file. For these reasons, auditors may find it difficult to find all the information they would need to conclude on some audit criteria, especially when they are looking at projects that have been operational for many years. (Internal recordkeeping can also be a problem if an audit office is doing a follow-up of a P3 audit done many years before.)

The contracts that define the rules pertaining to 30-year P3 projects are usually lengthy and complex. Unlike traditional contracts, they include multiple project phases and can contain additional provisions on private financing and risk sharing. They can also be supported by large amounts of analysis and financial calculations. Similarly, the tasks that auditors may have to conduct during a P3 audit can be quite complex, like assessing the adequacy of project option analysis and business cases, or evaluating the value-for-money assessments and risk assessments prepared by responsible entities. This level of complexity can create challenges for auditors. More time and effort may be needed to complete the audit's planning and examination phases and the scope of the audit may need to be kept rather narrow in order to stay within the audit's budget.

Specialized expertise may be needed because of the high complexity and nature of P3 projects—the scope of projects, multiple project phases, financial projections over long periods, value-for-money assessments, risk sharing, and lengthy contractual agreements. Audit teams may need to have specialized expertise at their disposal, such as financial modelling and analysis expertise, as well as engineering, quantity surveying, and legal expertise. This expertise may be available within an audit office or the services of an external expert may be acquired as needed. In any case, the team needs to be able to look at complex projects from a diversity of perspectives (such as finance, contracting, and governance), while also being able to see the big picture. For example, the value of P3s is measured not only in terms of dollars, but also in terms of innovation.

However, it can be difficult for auditors to find an independent expert in their own province because these experts will often be involved in one or more P3 projects. It is often necessary to seek an expert in other jurisdictions to avoid conflicts of interest. Doing so may take extra time and effort.

Hiring experts to help audit teams conduct P3 audits can be very helpful, but it can also bring its own risks. When questions such as the assumptions made in predicting project costs over 30 years are discussed, different experts may have different opinions and it may be impossible to determine who is right—no one can predict interest rates so far in the future. In such cases, there is a potential for conflicts between experts to erupt—something that auditors will likely want to avoid.

Access to information

The interviewees identified three types of access to information challenges that may emerge during P3 audits.

The first is related to the close involvement of private partners in project delivery that derives from the partnership. Auditors may need to obtain project information from private partners in the course of their audit. Unless there is an audit clause that allows this access in the contractual agreement with the government, auditors may not get access if the private partners claim that the requested information is of a sensitive commercial nature and therefore cannot be shared. Also, if legal proceedings are underway between the private partners and the government, it may not be possible to talk to the private partners at all during an audit.

Another challenge may arise if the public sector entities managing P3 projects refuse to share the analysis supporting the decisions to use the P3 model on the ground that this information is subject to Cabinet confidence. Auditors should normally be able to obtain the analysis provided to Cabinet for approval, but not Cabinet deliberations on the topic. However, obtaining this information in a timely manner may not be possible in every case.

Finally, in those instances where auditors decide to audit a P3 project early in its development, before a contractual agreement is reached, it may prove more difficult to obtain project information if the responsible entities are reluctant to share information that is used to conduct negotiations with the private sector and that may change significantly with time. In such cases, auditors may face delays as lawyers resolve access issues between them.

Political controversy

Opinions on public-private partnerships tend to be polarized between the strongly supportive and the strongly opposed. For this reason, the issue is a politically sensitive one in many jurisdictions and it is important for auditors to remain objective on the subject in order to preserve their independence and credibility.

In this environment, auditing projects that do not yet have a contractual agreement in place can be particularly challenging for auditors. Fight back from the responsible entities can be expected. (Entities may argue that too many things are still in flux and that auditors should not assess their work until a contract is

signed.) Access to information may often prove difficult, as mentioned previously. In addition, auditors must be especially careful not to release information that could jeopardize a government's negotiations with private partners. To avoid this problem, the Auditor General of Quebec used a fictional project budget in its 2009 audit to support its arguments about assumptions made in estimating project costs.

Expectations of parliamentarians and the public

Some interviewees noted that the expectations of parliamentarians and the public regarding P3 audits can be high and extend beyond auditors' capacity to fully address their concerns, either because of the inherent complexity of the question or because of mandate and resource limitations. For example, parliamentarians may want to know whether P3 projects achieve better value for money than conventional procurements or if their jurisdiction's management of P3 projects is better or worse than in other jurisdictions.

Interviewees said that it is important to manage the expectations of the report's audience. Auditors cannot answer all questions in a single audit and they simply cannot answer some questions at all, even if they have unlimited resources. For example, some questions, like what discount rate or inflation rate to use in a 30-year contract, don't have a definitive answer. Yet these values and other assumptions in P3 business cases can significantly affect key decisions and project outcomes. Auditors cannot give categorical answers on the value for money of complex, long-term projects. But they can assess the information and the processes that supported key decisions and determine whether the assumptions made and the conclusions reached were reasonable in the circumstances. They can also highlight factors, like innovation in project design, that should be considered along with costs when trying to draw general conclusions on value for money of P3 projects.

Significant Issues to Audit

We asked interviewees what, in their opinions, are the key audit issues that should be considered for inclusion in the scope of a P3 audit.

Context is key

First, interviewees pointed out that the selection of audit issues depends on the context prevailing in each jurisdiction. The results of a risk analysis conducted to identify significant risks will differ depending on a number of factors, including:

- the maturity of the P3 market and of the procurement processes for large capital projects in each province or territory,
- the presence or absence of clear guidance and standardized procedures and contractual agreements for public-private partnerships,
- the presence or absence of a dedicated P3 agency, and
- the complexity and materiality of P3 projects.

Another key factor that influences the selection of audit issues is the stage of the procurement process that has been reached by the P3 project. For example, if no P3 projects have yet to enter the post-construction

phase in a jurisdiction, then the list of potential audit issues will be shorter because it will not be possible to audit the monitoring of operational projects.

Whether an audit office has produced previous audits on P3 projects will also influence scoping decisions. If an audit office has done previous P3 audits, then looking at progress on recommendations and at recurring issues are options.

Important audit issues

The auditors we interviewed identified many important issues that audit teams should consider including in their audit plans:

- the adequacy of the value-for-money (VFM) assessment process,
- the governance and decision-making processes supporting large infrastructure projects and their realization under a P3 approach,
- the performance of systems and processes used to manage portfolios of P3 projects,
- the fairness and transparency of the procurement process (including measures to manage potential conflicts of interest),
- the departmental processes (and capacity) to monitor P3 contract performance over the duration of the operations phase of projects,
- the achievement of expected project outcomes,
- the reporting of project performance over time, and
- the performance of dedicated P3 agencies in delivering on their mandate.

While all these questions are important ones, the interviewees put particular emphasis on the first three.

The first key issue they identified is the value-for-money assessment process that serves as the basis for justifying decisions to adopt a P3 approach for delivering large public infrastructure projects.

The steps to complete a VFM assessment for a proposed public-private partnership infrastructure project are as follows.

1. Conduct a risk analysis.
2. Complete risk identification and risk allocation.
3. Quantify risks.
4. Estimate the value of risks retained by the public sector under the traditional model and the P3 model.
5. Estimate life-cycle costs to the public sector to deliver the project using a traditional model, including retained risks (this estimate is called the Public Sector Comparator).
6. Estimate life-cycle costs to the public sector to deliver the project using a P3, including retained risks (this estimate is called the Shadow Bid; it is an estimate of the private sector bid ahead of receiving the bid when the VFM assessment is done before the Request For Proposal process).
7. Develop cash flow models for the project under the traditional model and under a P3.

8. Calculate the net present value for the project under the traditional model and under a P3.
9. Compare the costs of the project under the traditional model and under a P3 to arrive at the value for money.

The objective of the VFM assessment process is to estimate the cost of the project if it were realized under a conventional procurement approach (the Public Sector Comparator) and to compare this estimate with the estimated cost of the same project if it were realized under a P3 approach (the Shadow Bid) in order to determine which option offers the best value for money. To estimate these costs, auditors need to do the following:

- Develop or adopt a financial model.
- Make a number of assumptions (interest rates and inflation rates over long periods, for example).
- Estimate the price to be paid for the risks transferred to the private sector under a P3 contract for each risk.
- Make detailed calculations to estimate the costs of operating and maintaining assets over several decades.

The VFM assessment is a crucial tool used to support decision making. The process used to produce VFM assessments includes many steps that can be looked at in detail by performance auditors. Beyond compliance with documented procedures, auditors can determine, for example, whether:

- the VFM process follows best practices and clear guidance is available to support the officials responsible for conducting the assessments;
- the assumptions made in the VFM assessments are realistic and fair (that is, they are applied consistently for both the Public Sector Comparator and the Shadow Bid);
- the project construction and operation cost estimates used for the Public Sector Comparator are derived from previous projects;
- the decisions to transfer specific risks to the private sector were based on sound assumptions, data, and analysis;
- the estimated values assigned to the risks transferred to the private sector were established based on risk and cost data from previous projects;
- the estimated value assigned to innovation was based on sound assumptions, data, and analysis; and
- sensitivity analysis has been used to assess the relative importance of separate factors in the assessments.

The second key audit topic identified by interviewees is the governance and decision-making processes related to large infrastructure projects and their realization under a P3 approach. Best practices state that decisions to select a public-private partnership model for an important infrastructure project should be based on sound analysis and information, not on political or ideological grounds. Auditors can therefore look at project oversight mechanisms and at decision-making processes and determine whether procedures have

been followed as designed and whether the decisions made (risk transfer and pricing, for example) were in fact based on sufficient and sound information.

Interviewees also identified the performance of P3 projects at the portfolio level as another key audit question. This can include determining whether responsible entities apply project management systems and processes consistently across their P3 portfolio, whether projects are generally on time and on budget, and whether the agencies are taking actions based on lessons learned in past projects. However, it was noted that identifying what "on budget" means for a P3 project may be difficult to determine in cases where there were no clear targets set for specific project phases.

Finally, interviewees observed that the complexity and long-term nature of P3 projects may make it difficult for auditors to make definitive judgments on value for money and results. For this reason, P3 audits tend to put more emphasis on systems and processes than on results.

Selecting P3 Project Phases to Audit

We asked interviewees which phases of P3 projects auditors should focus their efforts on and why.

Which project phase to audit?

Auditors are often tasked to look at projects or programs after the fact. Since public-private partnerships can last more than 25 years, it would not be convenient or effective for auditors to wait until their completion to audit them. Instead, auditors can audit P3 projects at different phases of their life cycle (see **Figure 2**) and examine how the government ensures that the best value is achieved. The question is therefore: which project phase to audit?

Auditors generally agree that each phase of a large, long-term P3 project is worthy of an audit and that some useful recommendations can be made at each phase. However, a majority of P3 audits published in the last decade have focused on the planning and procurement phases of projects. According to interviewees, this situation can be explained by several factors.

- It reflects the fact that the planning and procurement phases can extend over a few years and that, because P3 projects are still relatively new, the number of projects that are well into their operations phase is limited.
- Auditors are particularly interested in the planning and procurement phases of P3 projects because they include key processes (such as business case development and VFM assessment) and decisions (chosen procurement option, risk transfer, and contractual arrangements) that have a critical influence on later project phases.
- By auditing the planning phase, auditors feel that they can have an impact on the construction and operations phases (especially if the audit takes place before the contractual agreement is signed).

Auditors can decide to include more than one phase of P3 projects in the scope of an audit. Of course, the limiting factors will be time and resources. Interviewees explained that, given the complexity of P3 contracts

and of the subject matter, P3 audits can take more time and resources to complete than audits of conventional procurements. For this reason, audit offices that have relatively small budgets for performance audits (500–2,000 hours per project) may not be able to cover more than one P3 project phase in an audit. In such cases, it may be better to conduct several audits over a number of years, with each audit focusing on a distinct project phase.

Interviewees felt that an audit office that is conducting its first P3 audit should start with a project in its planning phase and review the VFM assessment and risk transfer decisions, crucial steps that have repercussions in all project phases and with which auditors should become familiar early on. Later, auditors could use this knowledge as a basis on which to start an audit of the construction or operations phase of the same project. For example, auditors could assess whether the risks were effectively transferred and managed as set out in the contractual agreement.

Planning and procurement phases

It is possible to audit P3 projects before the contractual agreement stage. However, there are pros and cons to consider. On the one hand, audits done before the end of contract negotiations can be more difficult to conduct (because the project is a moving target and access to information may be a challenge) and tend to be very political. On the other hand, these audits have the potential to make recommendations that may significantly improve the project's overall value for money and outcomes over its lifetime.

Conversely, audits done after contract signature may be easier to conduct, but their findings and recommendations may not be timely because the responsible entities may not be able to amend a contract or change direction. The recommendations, however, can point to additional oversight mechanisms that could remedy identified weaknesses in active projects and highlight additional actions that should be taken in future P3 projects.

Construction phase

The construction phase of P3 projects is where some of the main risks are to be found: cost overruns, construction delays, use of poor materials and workmanship, risk transfer issues, performance-based payments, and so on. A few P3 audits have looked at this phase in recent years, although none has had this phase as its exclusive focus.

While the findings and recommendations of audits done at this stage of a P3 project may not always be made on a timely basis for a project already well underway, they will be useful for all future P3 projects.

Operations phase

After construction is complete, many of the risks associated with P3 projects are reduced or become irrelevant. However, risks related to asset operation and maintenance remain relevant and can be quite significant in cases where high-value long-term contracts have been signed. For this reason, auditors may be justified in undertaking audits of the operations phase of P3 projects. In particular, the question of whether long-term asset maintenance under a P3 contract represents better value for money than under traditional contracts should be relevant to most P3 contracts.

Interviewees indicated that operations phase risks can pertain to the clarity of project agreements or to the responsible entity's capacity for monitoring long-term contracts. For example, one risk may arise from the fact that, in general, departments put less effort in the monitoring of the operations phase of P3 projects and have less expertise available than for previous project phases. As a result, there may be a lack of monitoring experience, which will adversely affect the oversight of projects.

Risks also include the appearance of conflicts between project partners due to unclear roles and responsibilities or vague definitions in the contractual agreement. In such a situation, or in the case where a government must deal with the bankruptcy of a project partner, audit offices may decide to conduct an audit to identify the causes of failures and to make recommendations to prevent their recurrence in other P3 projects.

The last part of the operations phase of P3 projects is called the handback. This is the process whereby responsibility for the operation of an asset reverts back to the public sector. At this stage, the private sector partner is responsible for ensuring that the condition of the asset meets predetermined standards on the date the contractual agreement expires. Should those standards not be met, the private sector partner becomes liable for the cost of the work required to bring the asset's condition up to expectations.

Because few P3 projects have reached the end of the life cycle so far, there have been few opportunities to audit the handback stage. (No recent Canadian audit has covered this topic.) In the future, when more projects reach their end, auditing the handback stage may become an area of interest for auditors. Similarly, the end of projects would provide opportunities to examine whether projects have met their intended outcomes and delivered the value for money that was expected at project approval.

How Performance Auditors Can Add Value

We asked interviewees how, in their opinion, auditors can add value and best assist the public sector to improve and perfect the management of P3 projects.

Opportunities to add value before a contractual agreement is in place

Considering that more and more P3 projects are undertaken and that the approach is still relatively new, there are significant opportunities for auditors to add value and help improve the management and oversight of P3 projects by public sector entities across Canada.

The timing of audits is an important factor in assessing how a P3 audit could add value. If an audit team decides to audit a project that does not yet have a contractual agreement in place, the audit may be able to influence important decisions by providing additional input for decision makers to consider. For example, auditors can:

- comment on the quality and completeness of the information provided to decision makers;
- point to such things as information gaps, weaknesses in the VFM assessment, unclear or missing clauses in standard contracts, and a lack of adequate performance indicators; and

- provide assessments of the adequacy of the information supporting risk transfer decisions and risk valuation.

By bringing their observations on these matters to responsible entities in a timely manner, auditors can help the government to make better-informed decisions that should result in increased value for money over the full life of P3 projects. In addition, the lessons learned for one project will likely be applicable to other projects.

Opportunities to add value after a contractual agreement is in place

Auditors can also audit projects that recently moved past the procurement phase or that have been in operation for many years already. There are opportunities to add value in these situations, too. For example, auditors can assess:

- the effectiveness of contract management processes, as well as the contract monitoring capacity, that exist in public sector entities;
- the cost-effectiveness of long-term maintenance agreements compared with the cost of traditional maintenance arrangements; and
- the achievement of results against initial objectives and whether the initial objectives of P3 projects, other than on-time and on-budget delivery, have been attained (such as increased safety or better service quality).

By making observations and recommendations on these issues, performance auditors can have a positive influence on the practices used to manage and monitor the performance of public-private partnerships. While it may sometimes be too late to influence a project already underway because of the difficulty of renegotiating the contractual agreement, the observations and recommendations that auditors make will always have the potential to influence the management of future P3 projects, highlighting opportunities for improvement and preventing the repeat of past mistakes.

Making useful recommendations

Performance auditors can add value by making clear, relevant, and useful recommendations. Interviewees indicated that auditors could add value by making recommendations that would:

- help responsible entities and P3 agencies to improve the effectiveness, efficiency and transparency of their project management processes and practices;
- encourage responsible entities to use better cost information assessment to support risk valuation and the preparation of the cost estimates;
- promote an increase in the quality, completeness, and clarity of clauses in future P3 contracts; and
- promote better project documentation and better retention of information over the life cycle of P3 projects.

Providing objective information to stakeholders

Finally, interviewees suggested that auditors can add value by contributing objective and independent information to parties that are involved in discussions about the merits of public-private partnerships.

The value of legislative audit reports lies in the fact that they provide reliable and independent information to decision makers and interested parties. By presenting objective, fact-based information to parliamentarians and the public on public-private partnerships, auditors can clarify misconceptions about this procurement model and contribute information to the debate that stakeholders will know they can trust. Audit reports can also be useful to public sector entities by highlighting best practices in managing P3 projects and lessons learned in previous projects.

In addition, because they have access to information that is not yet in the public domain, auditors can contribute to increasing the transparency of public-private partnerships. Parliamentarians, the public, and the media can all benefit from having more information at their disposal on this important topic.

Lessons Learned in Auditing P3 Projects

We asked interviewees what key lessons they had learned from their experience of conducting a P3 audit.

Ensure you have enough time and expertise

Auditing public-private partnerships takes more time than auditing conventional procurement projects. The length and complexity of P3 contracts can make even a narrow audit scope more difficult to manage than anticipated.

Early in the audit, legislative auditors should determine what their access to information rights are (that is, whether the contracts include an audit clause). They should also review the contract(s) early on to assess their complexity and their clarity. This will help auditors to better estimate the level of effort necessary to carry out the audit, as well as determine what special expertise will be required (legal, financial, or engineering expertise, for example).

Hiring out-of-province experts is a good option because they are more likely to be independent. Auditors can also consult experts in universities or consult auditors in other provinces. Secondment of an experienced auditor from another jurisdiction is another option that can be explored in order to obtain sufficient expertise for the duration of the audit project.

Be aware of P3 politics and manage expectations

Auditing P3 projects can involve more politics than other audits. There are some very strong proponents of P3s in the public and private sectors, so P3s can be very political and the bureaucracy may be under pressure to please their political bosses even though that might mean not following all due process. For example, biased assumptions and estimates may be used instead of supporting data based on previous projects. Auditors need to know the difference and check for bias.

Auditors also need to remain neutral. In other words, they must not be perceived to be for or against P3s. Neutrality and objectivity are key to maintaining good relationships with the P3 agencies throughout the audit process.

Finally, auditors must manage the expectations of parliamentarians and the public. This can be done in part by clearly explaining the objective, scope, and limits of any audit that examines public-private partnerships. Stating what is excluded from the audit scope and what the audit does not comment on is an effective way of avoiding any confusion.

Auditing public-private partnerships is challenging, but feasible

For the following reasons, many performance auditors may feel that auditing P3 projects is a daunting, even impossible, task.

- Public-private partnerships are usually long-term, complex projects.
- Specialized expertise (for example, financial modelling and analysis expertise, as well as engineering, quantity surveying, and legal expertise) is often required to audit these projects and more time and effort is often required.
- There may be access to information issues and difficulties in reaching some conclusions because of the absence of key documents due to poor documentation practices or staff turnover and lack of continuity over the long life of projects.
- It may be challenging to find independent experts to support the audit team.

However, there are steps auditors can take to make P3 audits manageable. For example:

- Audit offices that have little experience in this area can make scoping decisions that will facilitate the work of audit teams. For example:
    - selecting more recent contracts will mean shorter project histories and fewer chances of lost documentation and staff turnover, and
    - focusing on a single project or on a single project phase will help to prevent scope creep.
- Audit managers can also reach out to their colleagues in other jurisdictions who have previous experience auditing P3s in order to discuss challenges, audit plans, or potential experts.

Ultimately, public-private partnerships are procurement projects and audit offices have plenty of experience auditing procurement projects. It is just a case of allowing sufficient time and resources to understand the intricacies of the systems and processes that support the management of P3 projects. With time, effort, and appropriate support from experts and lawyers, auditors can conduct P3 audits with success.

Conclusion

The number of large infrastructure projects delivered through public-private partnerships has been increasing steadily across Canada in recent years. With strong government support and new dedicated P3 agencies in many provinces and at the federal level, this trend is set to continue well into the future.

As the number of public-private partnerships has grown in the past decade, so has the number of performance audits on this topic. However, the total number of audits is still small and many audit offices currently have limited audit experience and expertise in this area. As such, the practice of auditing P3s is still an emerging one. There is an opportunity for Canadian legislative auditors to build their expertise in this area by discussing their experiences in auditing public-private partnerships, and by sharing their practices and lessons learned in this regard.

This discussion paper has provided basic information on public-private partnerships and an overview of recent Canadian performance audits on this topic. It has also presented the perspectives of a small number of senior auditors on the challenges of auditing P3s, the main audit questions that should be considered for inclusion in audit plans, the key audit issues that pertain to each phase of a P3 project, and the best opportunities to add value.

Finally, the discussion paper argues that, while auditing public-private partnerships is a challenging task for auditors, it is certainly a feasible one if sufficient resources and expertise are available to audit teams. By completing and publishing performance audits of public-private partnerships, Canadian legislative audit offices can play an important role in helping the public sector to obtain better value for money from its long-term investments in large infrastructure projects.

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Appendix

Coverage of P3 Project Phases by Recent Canadian Audits

#	Source and Audit Topic	Planning Phase	Procurement Phase	Construction Phase	Operations Phase
1	OAG British Columbia, 2013 – Evergreen Line (public transit)	■			
2	Provincial Auditor of Saskatchewan, 2015 – SaskBuilds	■			
3	OAG New Brunswick, 2011 – P3 Schools	■			
4	Auditor General of Quebec, 2009 – CHUM (hospitals)	■			
5	Auditor General of Quebec, 2010 – CHUM (hospitals)	■	■		
6	OAG Ontario, 2008 – Brampton Civic Hospital	■	■		
7	OAG Ontario, 2014 – Portfolio of 75 P3 projects: supporting systems and processes	■	■		
8	OAG Alberta, 2010 – P3 Schools	■	■		
9	OAG Canada, 2011– Deh Cho Bridge	■	■	■	
10	Auditor General of Quebec, 2014 – Service Areas	■	■	■	■
11	OAG British Columbia, 2012 – Sea-to-Sky Highway		■	■	■
12	OAG British Columbia, 2012 – Britannia Mine			■	■
13	OAG British Columbia, 2011 – Academic Ambulatory Care Centre			■	■
14	OAG Nova Scotia, 2010 – P3 Schools				■