

L'ADRESSE SYMPHONIQUE, QUEBEC

STATE-OF-THE-ART CONSTRUCTION. WORLD-CLASS ACOUSTICS.



THE CANADIAN COUNCIL FOR PUBLIC-PRIVATE PARTNERSHIPS

2011 NATIONAL AWARD CASE STUDY

The Canadian Council for
Public-Private Partnerships



Le Conseil Canadien pour
les Partenariats Public-Privé





The Canadian Council For Public-Private Partnerships
2011 National Award Case Study
Gold Award for Infrastructure

L'Adresse symphonique
Montreal, Quebec

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Introduction

Public-private partnerships (PPPs or P3s) have become a common tool for building infrastructure and delivering services. Numerous projects are completed or underway across Canada involving a wide array of sectors and include hospitals, courthouses, roads, bridges, transit systems and water treatment facilities. Canadians and their governments at the municipal, provincial and federal level are seeing the benefits: on-time and on-budget delivery, value for money, long-term cost certainty and the delivery of state-of-the-art facilities to communities. This made-in-Canada P3 approach is garnering international attention, and opportunities are growing to take Canadian industry experience and expertise global.

The Canadian Council for Public-Private Partnerships (CCPPP) believes that when the spheres of government and business intersect there are many benefits for both, and is committed to promoting best practices and informing others about the P3 model.

Each year since 1998, CCPPP's National Awards Committee has honoured the achievements of municipal, provincial/territorial and federal governments and their private-sector partners, recognizing projects that exemplify excellence in providing public facilities and services to Canadians.

Gold and Silver Awards are given annually for project financing, service delivery, and infrastructure. The selection panel may also recognize an exemplary project based on its unique merits. All of the winning projects are chosen on the basis of the following criteria:

- Innovative features;
- Relevance or significance as a national and/or international model;
- Economic benefit (job creation, enhanced economic value, export potential, etc.);
- Measurable enhancement of quality and excellence in service or project;
- Appropriate allocation of risks, responsibilities, and returns between partners; and
- Effective use of financing and/or use of non-traditional sources of revenue.

Since the inception of its Awards, CCPPP has also published 51 case studies that examine some of these exemplary P3 projects.

Designed to inspire others to consider innovative and efficient models for procuring public infrastructure, the studies highlight many of the lessons learned about public-private partnerships over the past decade. Each case provides a close look at how a successful P3 has worked, including how the partnership was established, its structure and operation, and its resulting benefits. A complete list is included in the Appendix.

Common Features

Although the case studies examine projects from a wide range of sectors and jurisdictions and point to a variety of benefits and trends, they share many common features. These include:

- Value for money to taxpayers related to on-time and on-budget construction;
- Innovative financing that has adapted to changes in the economy;
- Significant financial and social benefits both during construction and operation;
- Strong public-sector oversight through transparent procurement processes, competitive bidding, and fairness monitoring;
- Increased efficiencies when project design, building, financing and operation are integrated;
- Active engagement of and communication with community members and service users;
- Opportunities for Canadian companies to export their expertise; and
- A focus on outcomes rather than inputs, resulting in infrastructure that breaks new ground—whether in building design, technological innovation, or environmental standards.

In the early 21st century Canada is facing the complex challenges of population growth, urbanization, aging infrastructure, changing global trade patterns, and environmental sustainability. Public-private partnerships offer an innovative and cost-effective solution to meet the varied public infrastructure needs of Canadians.

2011 Award Winners

For the 2011 Awards, the selection panel recognized Gold and Silver Award winners in each category, as well as a P3 Champion and an Award of Merit recipient for infrastructure. Three of these projects were selected to be written up as case studies.

Gold Award for Infrastructure: L'Adresse symphonique

Quebec's Minister of Culture, Communications and the Status of Women partnered with Groupe immobilier Ovation to build a world-class concert hall that would be a fitting home for the internationally-renowned Orchestre symphonique de Montréal (OSM) and an attraction for music lovers. L'Adresse symphonique Project delivered La Maison Symphonique, a 1,900-seat hall in the heart of Montreal's entertainment district that boasts the most stringent international acoustical standards ever required of a concert hall of this magnitude.

Gold Award for Service Delivery:

Sea-To-Sky Highway Improvement Project

The Sea-to-Sky Highway Improvement Project widened roads, added passing lanes and rumble strips, improving the highway's safety, sightlines and slope stabilization in time to meet the traffic spike of the 2010 Winter Olympics and the ongoing needs of seven growing communities along the only coastal highway linking Vancouver and the busy tourist destination of Whistler. The British Columbia Ministry of Transportation and Infrastructure partnered with a private consortium led by Sea to Sky Highway Investment Limited Partnership for this key legacy infrastructure.

Gold Award for Project Financing:

Surrey Pretrial Services Centre Expansion

The partnership between British Columbia's Minister of Labour, Citizens' Services and Open Government and Brookfield Infrastructure Partnerships Surrey is providing the Surrey Pretrial Services Centre with 216 high-security inmate cells in six new living units, renovations to the existing 149 cells, and long-term facility maintenance services. Part of B.C.'s largest single investment in corrections facilities in more than half a century, the project is funded through an innovative mix of public and private financing.

Silver Award for Infrastructure:

Ontario Ministry of Government Services' New Data Centre

The New Data Centre in Guelph, Ontario is a critical part of Ontario's e-Government strategy, adding data storage capacity and increasing the security and reliability of government information systems. The state-of-the-art information technology facility, built with the Plenary Properties team, is the first Canadian data centre project to use the Alternative Financing and Procurement (AFP) or P3 model.

Silver Award Winner for Service Delivery:

Durham Region Courthouse, Ontario

By replacing eight aging, overcrowded facilities scattered throughout the Durham region with one 42,000-square-metre building in downtown Oshawa, the Ontario Government increased its capacity to deliver timely and efficient justice services. Created in partnership with the Access Justice Durham consortium, the state-of-the-art facility is the most technologically advanced courthouse in Ontario, with many enhanced security features, 33 courtrooms, and a jury assembly room with capacity for 300 people.

Silver Award for Project Financing: Communications Security

Establishment Long-Term Accommodation Project

Communication Security Establishment Canada (CSEC) provides the Government of Canada with foreign signals intelligence in support of defence and foreign policy and the protection of electronic information and communication. CSEC's P3 agreement with Plenary Properties LTAP LP requires the private partner to design, build, finance, operate and maintain select services, including the fully committed IT solution over the 30-year contract, while meeting the national cryptologic agency's highly classified and technical standards. The project's innovative financing earned its bond offering an "A" from international rating agencies.

Award of Merit for Infrastructure:

The Stoney Trail Extension Northeast Freeway

The Alberta government recognized that ring roads around Calgary and Edmonton would improve access, highway safety and reliability. The Stoney Trail Extension Northeast Freeway project involves a 21-kilometre stretch of the Calgary Ring Road that includes 23 bridges and 100 lane-kilometres of freeway-status road. Alberta Transportation undertook this portion of the ring road with Stoney Trail General Partnership in a P3 valued at \$650.7 million—approximately 63% of the cost of traditional procurement.

2011 Champion: David J. Johnstone

David J. Johnstone, CCPPP's 2011 P3 Champion, has been an outstanding leader in developing major P3 projects in New Brunswick. He was president of the New Brunswick Highway Corporation from its 1995 inception to 2010, oversaw its delivery agency for transportation infrastructure projects as deputy minister of the New Brunswick Department of Transportation from 1998 to 2010, and served as president of the public companies established for each highway project.

Acknowledgements

We would like to thank our Awards selection panel volunteers, who had the difficult task of choosing the best among the dozens of excellent projects at various stages of procurement and operation submitted for consideration in 2011. The panelists included:

- Cliff Inskip, Managing Director, Head of Infrastructure and Project Finance, CIBC World Markets
- Peter Hepburn, Managing Director and Co-Head, Infrastructure Finance, National Bank Financial
- Alain Massicotte, Partner, Blakes LLP, Montreal
- Alan Russell, Professor and Chair, Computer Integrated Design and Construction, Department of Civil Engineering, University of British Columbia, Vancouver CCPPP Board Members:
- Larry McCabe, Clerk-Administrator of the Town of Goderich, Ontario
- D. Robert Beaumont, Partner, Osler, Hoskin & Harcourt LLP
- Jack Davis, Chairman, CEO, Mobile Inc.
- Guy Choinière, former Vice President Investments, PPP Canada
- Cynthia Robertson, Principal Parkridge Consulting Inc. (Chair, National Awards Committee)

We also appreciate the tangible support of the following sponsors for Canadian excellence in P3s, which makes the Awards program possible:



CCPPP wishes to acknowledge and thank all those who assisted in the development of the case studies for their valuable input and PPP Canada for its research contribution.



About CCPPP

CCPPP is a national, nonpartisan and not-for-profit member-sponsored organization founded in 1993, with representatives from both the public and private sectors. The organization's mission is to promote innovative approaches to infrastructure development and service delivery through public-private partnerships with all levels of government. The Council advocates for evidence-based public policy in support of P3s, facilitates the adoption of international best practices, and educates stakeholders and the community about economic and social benefits of P3s. CCPPP's activities include strategic research, an annual conference and regional events, a national awards program and a national P3 project database.

CCPPP's publications contribute to the ongoing development of Canada's expertise in public-private partnerships, emphasizing innovative and successful P3 practices and projects. All CCPPP publications, including case studies, research reports, surveys and guides can be purchased at www.pppcouncil.ca/bookstore

Quick Facts

L'Adresse symphonique

Project Type

Design-Build-Finance-Maintain (DBFM) with partial operation (excludes booking and sale of tickets)

Asset/Service

29-year partnership agreement for design, construction, maintenance and rehabilitation of the facility:

- Two years for construction
- 27 years for maintenance and rehabilitation

Partners

- Government of Quebec (represented by Ministry of Culture, Communications and the Status of Women and Infrastructure Québec)
- Groupe immobilier Ovation – one hundred per cent owned by SNC-Lavalin.

Other Participants

- Diamond and Schmitt Architects and AEdifica
- New York-based acoustics consulting firm – Artec
- Quebec-based engineering firm – Cima Plus
- Orchestre symphonique de Montréal
- Société de la Place des Arts de Montréal

Financing

- The total project cost was \$259 million present value.
- The project is financed through a mix of debt and equity. SNC-Lavalin provided up to \$16 million, which amounted to 100% of the equity.
- The remainder, \$137 million, was financed through a long-term bank loan set up by SNC-Lavalin.
- For the risks taken on by the partner, the partner received basic payments, per-event payments, payments for additional reception staffing requirements and payments for property taxes. In addition, SNC-Lavalin keeps all revenue generated by cloakrooms and the sale of bar service products.
- The Ministry introduced a \$75-million construction payment, paid upon substantial completion of the hall.

Construction Start and Finish

- In the Spring of 2009 an existing parking lot was demolished and construction commenced. Construction of the new hall began later that summer.
- In the Spring of 2010 the parking lot and concert hall structure were erected.
- The hall opened to the public in the Fall of 2011.

Other Features

L'Adresse symphonique provides many benefits and efficiencies to the Province of Quebec and citizens of Montreal. Many of the efficiencies were the result of P3 cost-saving measures. The project also benefited from innovations in acoustic design and construction specifically made for the challenging urban environment in which the hall is located.

The benefits and features include:

- Estimated cost savings of \$46.8 million over the duration of the agreement;
- Quebec's first P3 cultural facility project;
- Venue to attract world-famous acoustic performers;
- Renewal to the Place des Arts site and added cultural sophistication for the Quartier des spectacles entertainment district;
- Creation of a model for other infrastructure projects in the province;
- LEED certification; and
- Development of new and innovative construction methods (e.g., placing the auditorium on insulating rubber cushions).

Project Web Page

www.adressesymphonique.gouv.qc.ca

Project Agreement

www.infra.gouv.qc.ca/fr/projets/culture-communications/maison-symphonique



Overview

In September 2011, a new state-of-the-art 1,900-seat concert hall for the Orchestre symphonique de Montreal (OSM) was opened that exemplified the highest standard in world-class acoustics. This \$259 million project was the culmination of a five-year process incorporating a public-private partnership (P3) model of procurement, financing and construction, which was a relatively new approach to building cultural facilities for the Province of Quebec. This partnership brought together the Ministry of Culture, Communications and the Status of Women (The Ministry), Infrastructure Québec (IQ) and Group immobilier Ovation (GIO, a consortium led by SNC-Lavalin). Each partner had a unique role in the development of the business case, analysis of the project, the qualifying and selection of bids as well as in the financing and construction elements of the project.

The project includes the 2-year design and construction period and a 27-year operations agreement with GIO. L'Adresse symphonique was financed through an optimal mix of debt and equity. GIO provided 100% of the equity in the amount of up to \$16 million, and the remainder (\$137 million) was financed through a long-term bank loan, a unique achievement given the uncertainty created by the global financial crisis of 2008. While GIO was responsible for the construction, financing and ultimate operation of the facility, the Ministry retained responsibility for acoustics and stage design.

Because of the complicated nature of the project's specifications as well as the desire to provide a facility with state-of-the-art acoustic sound and design, the Ministry also hired a multi-disciplinary engineering firm, Cima Plus, prior to the bidding process. This allowed the Ministry to create the proper specifications that were eventually communicated to potential bidders, thereby attracting the appropriate bidders for this type of project.

The new concert hall forms part of the Place des Arts, a cultural complex with five other halls located in the heart of Montreal's entertainment district, the Quartier des spectacles. L'Adresse symphonique is LEED-certified and will save Quebecers an estimated \$46.8 million over the lifetime of the operations agreement. The facility was completed on time and within budget.

Background and rationale

For some time the Government of Quebec had been interested in providing a new and permanent home to the internationally renowned Orchestre symphonique de Montréal (OSM). The OSM's concerts were being held at the Salle Wilfrid-Pelletier, which had been designed as a multi-purpose space for plays, operas and other performances at the Place des Arts, and was not meeting the OSM's needs. The decision was made to design and build a facility that would better serve the OSM and meet international acoustic and design standards.

The new hall, designed solely for music, provides the OSM with the optimum acoustics required by virtuoso performers and their audiences. The OSM is expected to be the main user of the hall for nearly two-thirds of the year. The other third will be used by the Place des Arts for classical performances and prestigious concerts by internationally renowned performers.

After a lengthy business case and analysis from Infrastructure Québec, it was concluded that the P3 model would be the most efficient and effective way of completing the project on time and on budget, while at the same time delegating all of the financing and construction risk to a private partner. Also, beyond the other projects already incorporating a P3 procurement model (such as roads, bridges and other standard infrastructure projects), the Government of Quebec had made a deliberate decision to use the P3 model for the purposes of building a cultural centre.

The new hall, designed solely for music, provides the optimum acoustics required by virtuoso performers and their audiences.

The project was well-suited to be designed and built through the P3 procurement model because the model allows all parties to know in advance how much the design, construction, operation, servicing and maintenance of a building will cost before work is even started.

Partnership agreements that are negotiated in advance of the project getting underway help to guarantee that assets are maintained over the long term and that project deadlines are met. In this case, GIO has a 29-year lease on the project including design and build time. The government will take on management of the building, returned in an appropriate condition, at the end of the partnership contract.

The project agreement allocates the risks between the parties and defines their respective responsibilities. It is not up to the private partner to determine the quality of services to be offered. The public sector, as the operating authority, establishes requirements concerning the services to be provided and their expected results. As such, the private partner is under the obligation to respect these requirements; failing that, it will not receive full remuneration.

The agreement gives the Ministry a variety of important contractual clauses that promote on-time and on-budget delivery. By grouping design, construction, financing, service delivery, operation and maintenance within a single contract, activities are streamlined and integrated. Also, the Ministry has the ability to concentrate on its supervisory role, allowing GIO to focus on delivery. Ultimately this makes it easier for the Ministry to intervene in the event of non-compliance with the contract requirements. Finally, maintenance and rehabilitation of the hall are planned for in the agreement itself.

Description of the Project

In September 2006, the Ministry announced L'Adresse symphonique would be one of the first P3-model urban projects completed in the Province of Quebec. By December 2006 a qualifying bid round was launched and by April 2007 three consortia were selected for the final RFP bid. The winning bidder was the SNC-Lavalin-led consortium, GIO. The hall is a joint project between the Ministry and GIO.

The new hall is set within a unique area of Montreal that consists of several important cultural facilities within a single block, and takes up a total gross area of about 19,000 square metres. It is an integral part of the Place des Arts site and of the urban landscape and cultural makeup of the city of Montreal.

Three types of space combine to give the symphony hall its character: the main foyer for public events, the auditorium for musical performances, and the backstage area for performers. The strength of the architectural concept lies in the open design of its public spaces.

The transparent façade is intended to invite interaction and to make this particular art form more accessible to the public. The design of the main foyer, VIP room and the artists' room facilitate a constant interaction with the indoor public spaces and between spectators and the immediate urban environment.

The hall itself has been designed with state-of-the-art acoustic elements by New York-based acousticians Artec Consultants. The acoustic element of the project was the one portion of construction and design retained by the Ministry. All other elements of design, financing and construction were given over to GIO.

Urban integration

L'Adresse symphonique was required to be comparable to or surpass other symphony spaces elsewhere in the world. In addition, it was to be part of the Place des Arts campus and built alongside a number of cultural and educational facilities, including Théâtre du Nouveau Monde, Musée d'art contemporain, Complexe Desjardins and the UQAM's Complexe des sciences Pierre-Dansereau.

The Place des Arts sector is part of the Quartier des spectacles, and has as many as 80 centres for culture, including over 30 concert halls and theatres providing a total of 28,000 seats. It hosts a variety of prominent festivals, and is home to diverse art and alternative cultural venues.

In accordance with its land use plan, the City of Montreal intends to revitalize the Quartier des spectacles by raising its visibility as a cultural destination. A concentration of activities is being carefully planned to help increase this cultural profile, including the development and support of venues for the production, creation and dissemination of culture as a complement to the neighbourhood's residential and commercial functions. L'Adresse symphonique is considered to be the jewel in the crown of this cultural renewal.

The new hall constitutes an important addition to the northeast corner of the Place des Arts site, which is unique to Montreal and to Canada, since several important cultural facilities are located within a single block.

The Hall

L'Adresse symphonique is designed not only with the highest international acoustic standards but also uses a "shoebox" concept. This is the model of choice for world-class concert halls in which auditoriums are long, narrow, geometrically-proportioned spaces, with balconies projected into the room in a way that avoids creating obstacles and maintains acoustic integrity.

The auditorium, at 50 metres long, 25 metres wide and 21 metres high, allows sound to develop to its fullest extent and enhances the acoustic quality and intimacy of the room.

There are large acoustic reflectors in the ceiling made of solid wood, covered with clear, smooth plaster and slightly arched to reduce their visual impact. The fixed reflectors at the rear of the auditorium are less massive in construction, but identical in appearance. They are all independently suspended, and the gaps between them can be used for technical equipment such as lighting bars.

All stage machinery has been acoustically managed to operate in total silence and to have no impact on the ideal performing and listening conditions. The auditorium is placed on insulating rubber cushions, and a triple-glazed curtain wall was specially designed and installed. A low-speed mechanical system with silencers was also installed to minimize interference and sound distortions.

Key Dimensions of L'Adresse symphonique

Area	19,187 m ²
Capacity	1,900 seats (2,100 if there is no chorus on stage)
Hall Dimensions	Length – 50 m Width – 25 m Height – 21 m
Stage Capacity	Up to 120 instrumentalists and 200 choristers, or a seating section if required
Stage Dimensions	Width – 19 m Depth – 17 m

Procurement Process

Selecting the P3 model

Procurement within the P3 model allowed the Ministry to select a firm that could provide the financing, construction and design of the project. In traditional procurement these assignments are handled separately and can create a gap between conception, construction and operation. In the case of L'Adresse symphonique, all elements were handled and will continue to be operated by GIO for a 27-year period.

Other reasons for selecting the P3 model:

- The Province of Quebec was seeking to add more diverse P3 procurement projects, such as L'Adresse symphonique, to its other P3 projects already underway (roads and bridges);
- Following a business case analyzed by Infrastructure Québec, the P3 model was determined to be the most efficient and economic route;
- A P3 allowed the government to delegate the financing, construction and operations to a single provider;
- The P3 model provided an opportunity for GIO to make key decisions without being affected by the financing constraints sometimes imposed by government;
- The P3 model allowed the government to transfer significant risk to the private partner, such that:
 - overrun costs were assumed by GIO;
 - the partner assumed scheduling responsibility with a potential penalty for not meeting deadlines;
 - financing guarantees were provided to the government by GIO; and
 - operational responsibility is assumed by GIO, thereby assuring government of quality maintenance.
- The partnership contains contractual clauses that promoted on-time and on-budget delivery;

Under the agreement, the maintenance and rehabilitation of the hall are included. The government is assured through contractual agreements that regular and asset-maintenance budgets will be available for the duration of the agreement. Should certain non-performance items present themselves, the Ministry can deduct payments calculated on a number of non-performance points awarded during each payment period. Also, the payments to the private partner will be subject to holdbacks if it fails to comply with the end-of-agreement requirements. These will be calculated on the basis of the total cost of the work that must be carried out to ensure compliance with the end-of-agreement requirements and estimated by an independent expert.

Selecting a partner

Procurement was handled by Infrastructure Québec, which acted on behalf of its client—in this case, the Ministry of Culture, Communications and the Status of Women.

Initially, a tender was released to engage a multi-disciplinary firm to assist the project office with engineering, architecture and technical specifications for the Request for Qualifications (RFQ) and the Request for Proposals (RFP). Montreal-based Cima Plus was selected and assisted Infrastructure Québec in creating the performance structure, mechanical specifications, electrical specifications, etc.

The two-part procurement process involved an RFQ process, which began in December 2006 and concluded in March 2007. Three proponents qualified for the RFP process, and the winning bid was selected from that group one year later.

Request for Qualifications

The objective of the RFQ was to select a maximum of three proponents to take part in the RFP. The three proponents were required to demonstrate their ability:

- in the area of architectural design;
- to design and construct the concert hall;
- to operate and maintain the hall;
- to put financing in place as required; and
- to meet the project objectives set by the government.

In early 2007, the three qualifying teams selected by the government were GIO, Accès Symphonique Montréal and Axor-Dalkia.

Request for Proposals

Over the course of a year, the three selected proponents were asked to present detailed proposals including technical aspects of the project, financing and a bid bond.

The technical proposals by the private partner had to address architectural and structural strategies, coupled with an assessment of their merit and technical feasibility.

The financial proposal dealt mostly with the amount of the payments associated with availability and performance, and the payments connected with use of the hall. The amount of the payments and the architectural quality of the proposal were the determining factors that led to the selection of the private partner.

Timelines



cont.

2009 May

Launching of construction work and demolition of old parking lot.

2009 Summer

Construction of the new parking lot and the Grand Foyer Culturel of Place des Arts.

2009 Fall

Begin construction of the new concert hall.

2010 Spring

Erection of structure and parking lot.

2011 August

Provisional delivery of the concert hall (final delivery in August 2012).

- Mechanical engineering and electricity construction; and
- Interior and exterior architecture.¹

2011 Fall

Opening of the concert hall in September 2011 featuring the OSM, officially launching its 2011-2012 season.

Infrastructure Québec, as the lead in the RFP process, was the primary point of contact. A Cabinet committee approved major direction for the project; a steering committee presided over by the Ministry's deputy minister was tasked with identifying the group of companies that offered the best quality-price ratio and was the group most qualified to undertake the project and the most likely to meet all the obligations specified in the agreement, not only during the design and construction phases, but also for the duration of the agreement (i.e., until 2038, when control of the concert hall is returned to the Government of Quebec).

GIO's internal financing capabilities allowed it to provide the long-term financing necessary for such a large building project. While short-term financing may have been easier to acquire by other firms and/or the government, longer-term financing was more problematic, and GIO was able to satisfy that requirement. Separately, GIO offered sound construction and operational capabilities that were strict requirements of the project.

¹ In P3s, substantial completion refers to delivery to the client, but there is often a period of time (usually one year) to complete the project. For L'Adresse symphonique, the public spaces were completed in August 2011, but the back-of-house and OSM offices were completed in the winter of 2011/12.

Overall Structure of the Agreement

The agreement between the parties allocated the risks as well as defined the respective responsibilities for the project.

While Infrastructure Québec and the Ministry shared responsibility, the agency was not part of the final structure or agreement, although it was essential in developing the business case for the project, and acted as a monitor for certain elements such as scheduling and budgeting. OSM and the Société de la Place des Arts de Montréal also sat on the steering committee, whose mandate was to ensure the major directions of the project were implemented. The Ministry also supervised the project management office operations and activities and ensured that budgets and deadlines were met.

The Ministry retained responsibility for obtaining some of the permits and authorizations for the project, removal of hazardous materials as well as the requirements for acoustic design. After the construction phase was completed, the Ministry held responsibility for the facility's use, such as programming events, managing ticket sales and commercial activity.

GIO, as the private partner, retained responsibility for the financing, design and construction. Also, a 29-year lease is held by GIO to operate and maintain the facility including areas such as regular maintenance and energy management. Upon completion, GIO has agreed to retain responsibility for revenue collection from the bars and cloakrooms on-site. However, unlike most other P3 projects, L'Adresse symphonique is used by third parties even though the Ministry remains responsible for the users if they misuse or damage the facility.

Revenue for the facility is collected by the Ministry. Availability payments, as well as other payments proportional to the use of the hall, are paid to the private partner.

Partnership advantages

This public-private partnership offered the following benefits:

- Access to the globally recognized expertise of SNC-Lavalin;
- Acoustic design by renowned acoustics consultant Artec;
- Cost savings of \$46.8 million in current net value as of June 1, 2008 for all design, construction, financing, maintenance, operating and rehabilitation services of the lifetime of the partnership;
- A seven-month reduction in construction and commissioning time for the infrastructure;
- Risk-sharing benefits from the transfer to the private partner of risk of construction, scheduling, operating, maintenance and rehabilitation cost overruns; and
- The creation of a world-class cultural facility that benefits from the creativity, innovation and know-how of the private partner.

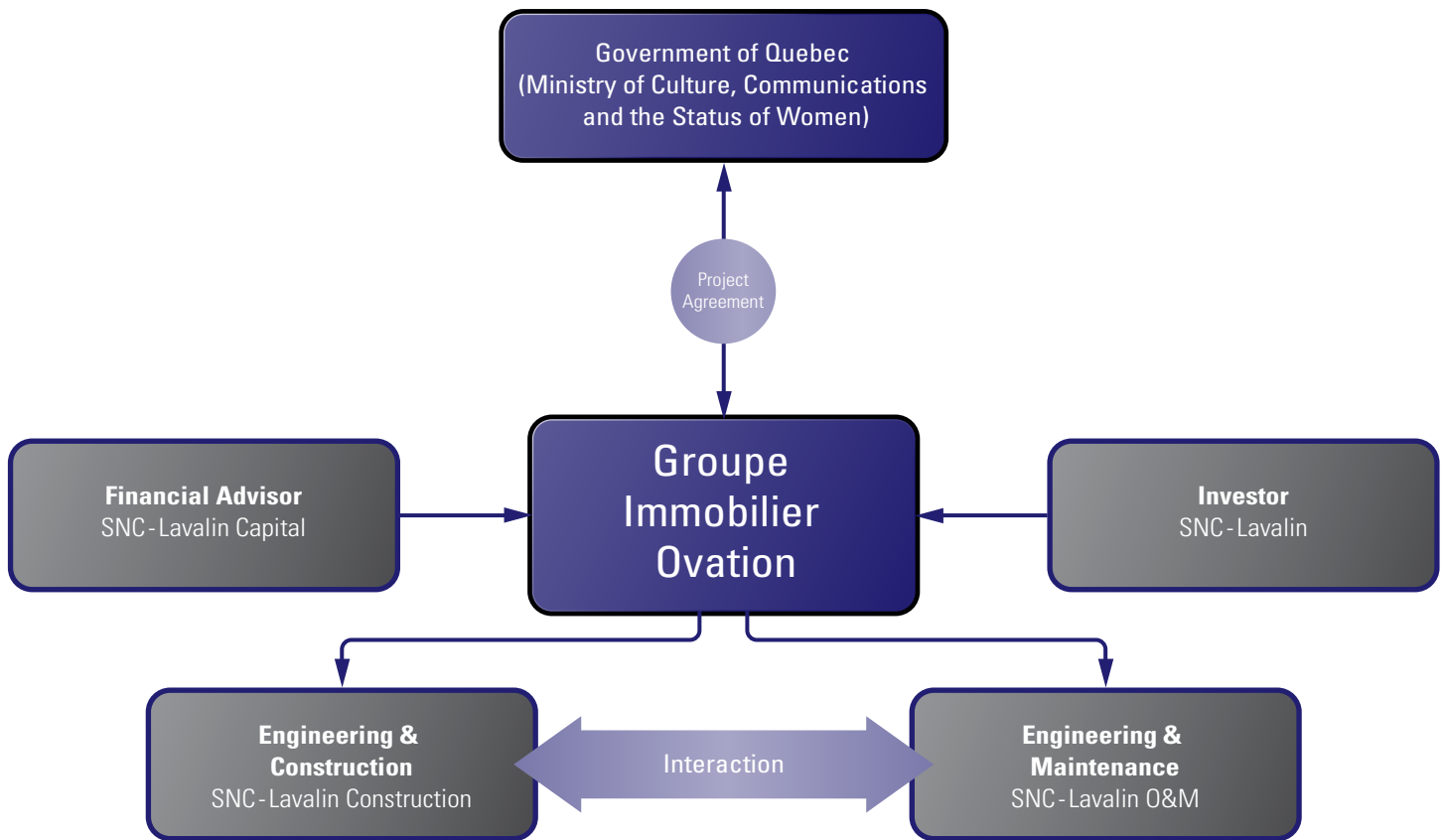
Highlights of the Partnership Agreement²

SNC-Lavalin	Ministry of Culture, Communications and the Status of Women
<ul style="list-style-type: none"> ■ Adhere to agreement requirements until its expiry in 2038. ■ Complete design and construction within two years and assume operations and maintenance for 27 years. ■ Oversee the design, construction and commissioning of the hall and assume the related risks. ■ Meet the acoustic standards issued by Artec. ■ Raise the funds needed for the project. ■ Acquire specialized equipment needed. ■ Undertake standard maintenance and major works. 	<ul style="list-style-type: none"> ■ Assume control of the concert hall in 2038. ■ Deliver a site free of any hazardous material. ■ Outline the hall's acoustic quality requirements based on specifications from Artec consulting firm. ■ Provide \$75 million installment payment upon delivery of the hall. ■ Provide monthly payments for operations and maintenance starting the first day of commissioning. ■ Oversee use of the hall and arts management (by the OSM and Place des Arts).

Figure 1 illustrates the relationship among the project partners:

² Source: Ministry of Culture, Communications and the Status of Women

Figure 1: Partnership Structure



Financial Arrangements

The project is financed through a mix of debt and equity. SNC-Lavalin provided 100% of the equity up to \$16 million. The remainder of the financing comes by way of a long-term bank loan of \$137 million. This is considered a significant accomplishment as all financing was conducted in the midst of the global financial crisis of 2008–2009.

For its share of the risks, GIO receives a series of payments (either availability or per event). GIO also keeps all cloakroom and bar-service revenue. In addition, the Ministry introduced a \$75 million construction payment paid upon substantial completion of the hall, which helped alleviate some of the pressure affecting the ability to obtain long-term financing. Substantial completion payments can act as a motivator to private sector partners, since it provides an element of funding and is only paid out once certain milestones have been met.

Risk Allocation

Risks associated with the financing, design, construction and operation of the symphony hall are borne by the private partner, GIO. The government bears the responsibility for permits, authorizations and the acoustic design. Upon completion, the government is also responsible for event programming, ticket sales and commercial activities. Table 1 outlines the division of risks and responsibilities between the government and private sector partner:

Table 1

Main Risks and Responsibilities	Responsibility	
	Partner	Minister
Site		
Determination of concert hall location		■
Management and removal of hazardous materials		■
Design and Construction		
Acoustic and stage design		■
Design (other than acoustic and stage design)	■	
Arts integration policy	■	
Construction, including the risk of cost overruns and delays	■	
Acquisition and installation of equipment, including specialized equipment	■	
Access to the parking garage during construction	■	
Financing	■	
Operation		
Energy supply and consumption	■	
Security	■	
Maintenance		
Regular and major building maintenance	■	
Maintenance of specialized equipment	■	
Activities by Users (stage management and daily use of specialized equipment and equipment provided by users)		■
Programming and Management of Commercial Activities		
Management of bars and cloakrooms	■	
Management of reception services	■	
Management of concert hall reservations		■
Management of shared spaces with PdA spaces		■
Parking management		■
Ticket sales management		■
Sales of promotional products and management of the OSM boutique		■
Management of advertising and displays		■



Benefits

Benefits of the project range from financial savings and cultural renewal to the successful use of the P3 model in Quebec.

From a cultural and urban renewal point of view, Montreal has achieved a world-class symphony space with state-of-the-art acoustic design. The entire facility space, not just the concert hall, was designed with three elements in mind—acoustics, intimacy and elegance.

The hall provides a carefully planned, leading-edge acoustic environment, improved sightlines for every seat and an intimate interior design.

- A coherent link with the urban setting has been woven into the fabric of the neighbourhood;
- The large glass façade along De Maisonneuve Boulevard contributes to the dynamic look of the site;
- To increase a connection with the neighbourhood, the esplanade, foyer and main floor in the hall are all at the same level;
- Artwork that pays homage to the symphony orchestra, its conductor and the musicians has been integrated into the project and complements the architectural expression of the hall.

Acoustic innovations

The transparency of the public spaces contrasts with the sealed box created by the auditorium envelope, which cuts off all contact with the outside world and has earned the building an N-1 noise reduction rating.

Because of the extreme acoustic quality required of L'Adresse symphonique, innovative solutions were needed to isolate the vibrations of the underground parking and noise of street traffic from the hall itself. Solutions to overcome these problems included placing the auditorium on an insulating rubber cushion and designing a triple-glazed curtain wall to keep out outside noise. In addition, low-speed mechanical systems with silencers are used in the hall.

The mechanical room operates the highest standard ventilation system, designed to meet the acoustic standard the Ministry set for the project. As well, the auditorium itself employs a ventilation system that eliminates all noise and vibration.

Nine mobile sound reflectors have been installed in the hall. These can be adjusted to produce the volume needed to accommodate many types of performances and events.

Risk and cost

The risks of cost overruns, scheduling and over-budgeting were borne by the private partner. The government paid the construction costs only upon facility completion, and has acquired a partner directly engaged both in construction and maintenance of the facility. A cost saving of \$46.8 million in current value for all design, construction, financing, maintenance, and rehabilitation activities over the lifetime of the partnership was realized.

The agreement gave the Ministry the most efficient and effective process with which to move forward with the project as well as allowing it to concentrate on its supervisory role. By grouping design, construction, financing, service delivery, operation and maintenance within one contract, all activities could be integrated, monitored and streamlined.

Communications

Between the partners

During the RFP process, the partners of L'Adresse symphonique created communications mechanisms between themselves that included information sessions, electronic documentation sites, a protocol for covering requests for and the transmission of written information, joint thematic workshops and individual meetings.

A general information session was organized for Ministry representatives, proponents and their teams to facilitate a proposal by each respondent. These meetings covered topics such as:

- the general presentation of the project;
- the technical presentation of the project, including compulsory elements;
- main elements that related to the payment of the private partner; and
- an overview of the consultation and private partner process.

Proponents wishing to ask questions related to the RFP were asked to do so by submitting a written request to the Ministry representative. Each respondent's representative was the only person authorized to communicate with the Ministry representative and vice versa.

A series of five bilateral workshops after the information sessions gave each respondent an opportunity to make comments and requests for clarification. The workshops were organized to address issues such as consultation and selection processes, requirements of urban integration, architecture and the construction of the site, operating and maintenance, requirements for acoustic and stage design and agreement and payment mechanisms.

Some workshops consisted of closed-door meetings where information was confidential and ideas were not binding, giving participants the ability to express new ideas, frustrations, and solutions without consequences.

With the public

All public information was managed by the Ministry. Regular press releases at key stages of the project were provided to the public, and relayed information regarding:

- launch of the request for qualification;
- list of proponents;
- qualification of proponents;
- launch of RFP;
- submission of proposals;
- selection of a proponent; and
- signing of the agreement and the start of work.

As well, a website (www.adressesymphonique.gouv.qc.ca) was created during the project to update and provide regular information on the status of the construction. This site provided updates, project management milestones, names of team members and all aspects of the build/design schedule of the hall.

Dispute resolution mechanism

The project agreement provided for mechanisms for resolving disputes, including submission of a dispute to an independent expert, sending of notices, designation of representatives for each partner, and an arbitration board.

Labour

At the initial stages of the business case analysis, Infrastructure Québec provided the Ministry with information related to human resources or labour issues that could impact the project.

It was estimated that the project would lead to the creation of approximately 350 new construction jobs by the private partner. The public partner did not expect to lose any jobs.

The hall, because it is a new cultural infrastructure and an addition to the Place des Arts complex, helped create approximately 30 full-time equivalent positions.

Under the contract, operation and maintenance is the responsibility of the private partner, as is collection of specific revenues from bars and cloakrooms. Also, because of the nature of the contract, no labour agreements were ratified or affected, and there was no transition plan or union negotiation process needed.

Monitoring

Monitoring of the project during construction was conducted through the Project Director's office at the Ministry. While construction was not monitored daily, the contract was monitored in terms of scheduling and timing. Cima Plus, Artec and Infrastructure Québec also had roles in this process—Artec for acoustic design and Cima Plus for the performance specifications. Separately, the Ministry hired an independent expert to decide if the building met contract specifications. This expert was selected in partnership with GIO and was paid for by both parties.

Performance Management

Ongoing payments are subject to deductions for non-availability, non-performance and end-of-agreement holdbacks.

Non-availability deductions:

Payments to GIO will be subject to deductions in situations where the private partner's actions compromise the availability of the concert hall. This is calculated on the basis of

- the duration of non-availability;
- the number of unavailable places; and
- the relative importance of the non-available places.

Non-performance deduction:

The payments to GIO will be subject to deductions for non-performance if it fails to comply with the requirements relating to operations, maintenance and other activities, as defined in the agreement, calculated on the basis of the number of non-performance points awarded during each pay period.

End-of-agreement holdback:

Payments to SNC-Lavalin are subject to holdbacks if it fails to comply with the end-of-agreement requirements estimated by an independent expert. The expert ensures all work that constitutes compliance with the end-of-work agreement is carried out. Holdbacks may be applied to payment due to GIO, or the private partner may choose to issue a letter of credit for the amount of the holdbacks.



Other Issues

Lessons learned

The P3 process allowed for the financing, conception, construction and operation of the project to occur simultaneously under a single "special purpose vehicle" or SPV. In many cases the consortium is made up of a separate building contractor, a maintenance company and bank lender(s). In the case of L'Adresse symphonique, the SPV was made up entirely by GIO. Its ability to structure the financing for the deal as well as provide design, construction and project management work made it uniquely qualified to address all elements of the project under one umbrella. By working on all aspects at the same time and having all information under one lead, the entire process ran more efficiently and ensured the right decisions were made and executed. Says Etienne Lavoie-Gagnon, Vice-President Infrastructure Investment of SNC Lavalin (Capital), "Every day you have to make choices that impact the operation for 30 years—this is different from just having construction with a fixed price. When the two are working together, you really have to analyze to assess potential problems that can arise depending on different choices."

Rigorous preparation before launching the RFP also proved to be the best possible investment to ensure that the process was effective and produced a high-quality result.

Fairness and transparency of the process were paramount. They were not compromised and guaranteed the success of the procurement.

The terms of the project review process were detailed and sufficient, which helped accommodate the tight timetable for the completion of the project. However, work moved more rapidly than perhaps had been initially anticipated, and the deadline for comments from the Ministry became difficult as the project proceeded. For example, the contract between the private partner and the Ministry included certain rules relating to comments about improvements or changes in which the Ministry had a specific amount of time to comment. Work was sometimes undertaken at such a rapid pace, however, that it was difficult to wait for comments, since decisions needed to be made sooner rather than later.

As a result, a “lighter” process was set in place that allowed for control, but also provided the flexibility needed to make fast decisions. This allowed the Ministry to be more adaptable, as timelines were often changed or altered, depending on design constraints and/or the immediacy needed to make decisions on various parts of the project.

Finally, the agreement gave the Ministry of Culture, Communications and the Status of Women the advantage of optimized performance, the result of the competition for both the project development and project operation phases. By grouping design, construction, financing, service delivery, operation and maintenance within a single contract, activities could be integrated and streamlined.

The agreement allowed the Ministry to concentrate on its supervisory role, leaving delivery in the hands of GIO. This made it easier for the Ministry to intervene in the event of non-compliance with the contract requirements.

Use of wood

The architect used timber from Quebec in various ways to create balcony facings, floors and seat backs—all employ local wood to convey a warm, inviting feeling. Each surface in the Auditorium contributes to the room’s unique sound and to the life of the building. The wall segments are covered in wood veneer and play a role in both the acoustic and visual design, since they reflect and diffuse sound.

The floors are also made of wood, fixed to the concrete substrate to prevent the absorption of any sound. The beveled-edge flooring makes the reflective surface less perfect and mirror-like, promoting a slight undulation in the sound diffusion. The doors of solid wood are of key importance in the acoustic isolation of the Auditorium. Similarly, the thickness of the wooden chair backs and wooden sheathing are designed to ensure their rigidity and density, two conceptual criteria that could not be met using metal or plastic.

Wood is also used more sparingly to provide continuity between the Auditorium and the public spaces. To add warmth, everything touchable—including handrails, service counters and cabinetry—is made of wood.

The conceptual ideas within the hall are all intended to support an intimate musical experience that is shared collectively, and also to make a positive contribution to public life in Montreal. The comings and goings of the concert-goers will be visible from the street, including their animated conversations during intermissions and their social interactions. It is expected that passers-by will congregate and form a second audience, thereby creating a living environment.

Applicability Elsewhere

L’Adresse symphonique overcame an unprecedented financing environment and construction challenges, and is attracting interest outside of Quebec for its unique characteristics and design.

The innovative solutions that SNC-Lavalin came up with during construction—in eliminating vibrations, ensuring soundproofing and achieving acoustic excellence, for example—as well as the new skills and the lessons it learned over the course of the project, have all added to the company’s expertise and can be used in its other projects around the world.

Concluding Comments

The first major P3 infrastructure project in Quebec not associated with roads or bridges, L’Adresse symphonique has proven many of the advantages of building a high-profile cultural centre, compared to a conventional construction approach.

The main advantages of working with a private partner and utilizing the P3 model include:

- Lower cost: total savings in the amount of \$46.8 million (June 1, 2008 values) for all design, construction, financing, maintenance and rehabilitation activities over the duration of the project agreement of 29 years;
- A seven-month savings in time, resulting in a faster construction and opening date;
- Risk sharing: transfer to the private partner of the risk of construction, scheduling, operating, maintenance and rehabilitation cost overruns for the duration of the project agreement; and
- The construction of a high-quality infrastructure project, with state-of-the-art acoustic design, that benefits from the innovations introduced by the private partner.

The project provided a remarkable, state-of-the-art facility to house the OSM for generations—and the government and private partners were able to accomplish this mammoth undertaking in the depths of a global recession of a magnitude not seen in decades.

Beyond the technical and financial aspects of the project, the Ministry of Culture, Communications and the Status of Women along with its private partner, GIO, have created a model not just for future projects in Quebec, but also for future projects around the world. There is no doubt that other regions, municipalities and governments will study the benefits of the P3 approach for L’Adresse symphonique and emulate its success elsewhere.

Testimonials

Public sector

The choice of the public-private partnership formula to construct an acoustic concert hall of international calibre was quite a daring one, because it opened up a new path. Although the formula is readily applied to infrastructures with characteristics and performances that are easy to describe and measure, it is a less obvious choice for a concert hall project of this scope.

Just as the Quebec government was unwilling to tolerate any compromise in terms of acoustics, the budgetary objectives and construction schedule also had to be respected. The challenge, in a project of this kind, was to reconcile all these objectives. The Agence des partenariats public-privé du Québec (the Quebec public-private partnership agency), later to become Infrastructure Québec, analyzed the project in depth from all angles, before concluding that a public-private partnership was the best way to achieve all the target results, and the Government decided to apply the PPP formula to complete the project.

No effort was spared to obtain the target acoustics, while ensuring an optimum transfer of risks and responsibilities in compliance with both the schedule and the budgetary envelope. Performance specifications and sophisticated consultation and selection mechanisms were established by the Ministère de la Culture, des Communications et de la Condition Féminine (MCCCF), leading to the signing of a transaction with Groupe immobilier Ovation that will generate savings of around \$46 million over the lifetime of the agreement.

Work on L'Adresse symphonique is proceeding at a good pace. The building shell has emerged from the ground and has attracted a great deal of attention as the largest construction site in Montreal's Quartier des spectacles. In the fall of 2011 we will all discover what will surely become one of the most prestigious concert halls on the international circuit, and the new home of L'Orchestre symphonique de Montréal.

Sylvie Barcelo

Deputy Minister

Ministère de la Culture, des Communications et de la Condition féminine

Private sector

L'Adresse symphonique is a prestigious project that will become an icon for culture in Montreal and whose influence will be felt throughout Quebec and Canada. Having attracted a degree of media visibility that is unusual for an infrastructure project, it will not only be judged by its immediate users, but also by the 2000 or so spectators and media representatives who will attend each evening concert over a period of 27 years or more. As a result, Groupe immobilier Ovation and its owner SNC-Lavalin embarked on this adventure with the greatest enthusiasm and commitment.

L'Adresse symphonique offers an eloquent example of a project that is a win-win situation for all parties.

For the Ministère de la Culture, des Communications et de la Condition Féminine (MCCCF), the project will ensure that a building of high cultural value is delivered with no risk of over-running the schedule or budgetary targets set in the call for bids. The MCCCF will enjoy a turnkey solution provided by a world-class private partner whose reputation is built on similarly complex projects. The challenges presented by the project were met by the combined efforts of all SNC-Lavalin divisions at all stages.

This synergy allowed maximum control over the project risks and the offer of a solution with the best price-quality ratio for the MCCCF.

For Groupe immobilier Ovation and SNC-Lavalin, in addition to the business opportunity and a fascinating technical challenge, this will be a signature project that will leave its mark on the company's history. In fact, the OSM's first season in the new concert hall will coincide with SNC-Lavalin's 100th anniversary.

For the general public, the project will provide a high-class concert hall that meets the most stringent international requirements in terms of acoustics. Music lovers will enjoy a unique musical experience, totally isolated from outside noise and vibrations, even though the hall is located in the heart of downtown Montreal. I have no doubt that L'Adresse symphonique will become a source of pride for the Montreal population as a whole.

Obtaining financing for the project was not necessarily an easy task. The strict conditions set in the call for bids stated that the financing had to remain in place over the long term, for the duration of the period of operation. During the bidding process, the 2008 financial crisis struck, significantly affecting the ability of markets to provide long-term financial commitments. During this period of upheaval, several PPP projects had to be postponed, modified or even cancelled. Despite this unprecedented crisis, the long-term financing for the project was set up thanks to the collaboration, dialogue and real willingness to move forward shown by the MCCCF and the private sector.

Opening night ribbon cutting



In one respect, MCCCCF innovated by introducing a \$75-million construction payment to be paid upon the substantial completion of the concert hall, diverging from the traditional PPP payment formula under which the private partner receives only monthly payments during the operating term of the facility. With this construction payment, the MCCCCF reduced some of the pressure affecting the ability to obtain long-term financing.

In another respect, SNC-Lavalin, thanks to its sound finances and vast network of contact with various financial institutions, was able to set up long-term financial commitments covering the period of operation.

The key element in financing the project was therefore the combination of

- A public partner open to innovation that was able to define a financing framework that remained viable even in the midst of a financial crisis; and
- SNC-Lavalin's expertise in project financing, combined with the financial strength of the private partner.

Etienne Lavoie-Gagnon

President

Groupe immobilier Ovation

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Appendix: CCPPP's National Award Case Studies 1998 - 2012

Communications

Connecting Small Schools in Newfoundland (2003)

Education

Alberta School Alternative Procurement – Phase 1 (ASAP I), Alberta (2010)
O'Connell Drive Elementary School, Nova Scotia (1998)

Energy

Britannia Landfill Gas to Electricity Project, Ontario (2005)
Vancouver Landfill Gas Cogeneration Project, B.C. (2003)
Bruce Nuclear Power Facility, Ontario (2000)
Waterloo Landfill Gas Power Project, Ontario (2000)

Government Services

Archives of Ontario – Offsite Archival Storage (2006)
Cook Chill Food Production Centre, Ontario (2005)
DriveTest: Ontario Driver Examination Services (2004)
Transforming the Delivery of Ontario's Social Assistance System (2003)
Emergency Service Mobile Communications in Ontario (2000)
Electronic Child Health Network, Toronto, Ontario (1999)
Teranet, Ontario (1998)

Health

Glen Campus – McGill University Health Centre, Quebec (2010)
Women's College Hospital Redevelopment Project, Ontario (2010)
Royal Jubilee Hospital Patient Care Centre, B.C. (2009)
VIHA Residential Care and Assisted Living Capacity Initiative, B.C. (2007)
Abbotsford Regional Hospital and Cancer Centre, B.C. (2008, 2005)
Facility Management for the Royal Ottawa Health Care Group, Ontario (2000)
Devonshire Care Centre, Alberta (2000)
Shaikh Khalifa Medical Centre, United Arab Emirates (2000)

Justice & Corrections

Durham Consolidated Courthouse, Ontario (2007)
Central North Correctional Centre, Ontario (2002)
Five Corners Project, B.C. (2002)

Real Estate

Aurora College Family Student Housing, Northwest Territories (1999)
Legislative Chamber, Offices and Housing, Nunavut (1999)

Recreation & Culture

SHOAL Centre: Seniors Recreation Centre, B.C. (2004)
John Labatt Centre, London, Ontario (2002)
Skyreach Place, B.C. (2000)

Transportation

Canada Line, B.C. (2009)
Confederation Bridge, PEI (2009)
Highway 407 ETR, Ontario (2008 & 1999)
Autoroute 30, Montreal, Quebec (2008)
Northwest Anthony Henday Drive, Alberta (2008)
William R. Bennett Bridge, B.C. (2008)
Autoroute 25, Montreal, Quebec (2007)
Kicking Horse Canyon Project – Phase 2, B.C. (2007)
Golden Ears Bridge, B.C. (2006)
Anthony Henday Drive Southeast Leg Ring Road, Alberta (2005)
Sea-to-Sky Highway Improvement Project, B.C. (2005)
Sierra Yoyo Desan Resource Road, B.C. (2004)
Fredericton-Moncton Highway Project, New Brunswick (2003)
Belledune Port Authority, New Brunswick (2000)
Retendering Alberta's Highway Maintenance Contracts (2000)
Cobequid Pass Toll Highway, Nova Scotia (1998)

Water & Wastewater

Britannia Mine Water Treatment Plant, B.C. (2006)
Goderich Water and Sewer Services, Ontario (2000)
Port Hardy Treatment Project, B.C. (2000)

These case studies can be obtained through CCPPP's online bookstore at: www.pppcouncil.ca/bookstore

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