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# 100 PROJECTS:
## SELECTED PUBLIC-PRIVATE PARTNERSHIPS ACROSS CANADA

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# Introduction

The Canadian Council for Public-Private Partnerships, in cooperation with Industry Canada, is pleased to present "100 Projects: Selected Public-Private Partnerships Across Canada". This is the third edition of the Canadian inventory of projects and activities, the first two being published in 1996 and 1998 respectively. As a valuable reference source for senior decision-makers in the public and private sectors, it highlights interesting projects that have been developed or are emerging in the public-private partnership field. In order to make specific projects easier to find, this edition has been organized by sector, rather than by geographic area. "100 Projects" is not intended to be a comprehensive listing of all P3 activity in Canada. Rather, it is a compendium of activity and projects across the country that demonstrate new approaches being used by governments, in partnership with private sector interests, to deliver both infrastructure and services to their communities.

Some interesting developments have occurred over the intervening three years since the 1998 edition was published. First, an increase in the number of projects in the healthcare and information technology sectors has been documented. The electronic Child Health Network project in Ontario is one such project that will act as a "pathfinder" for future projects around the world. Secondly, a new wave of innovation is occurring in the area of community multiplex-type facilities. Projects such as Skyreach Place in Kelowna have established some of the essential ingredients required to produce extraordinary facilities to serve their communities. Finally, governments increasingly are turning to the private sector to assist in high-priority projects. Projects such as the Halifax Harbour Solutions Project, the Seymour Water Filtration Plant in Vancouver and the Goderich Water and Wastewater System in Ontario are all examples in which municipalities have extended an invitation to the private sector to propose an alternative way to deliver the services their residents require. Readers with an interest in this particular sector may find useful a recent publication, released in November 2000 by the CCPPP, entitled "Overview of Successful Public-Private Partnerships in the Water Sector." It details successful water and wastewater projects throughout North America with comments from the key decision-makers.

The Canadian Council for Public-Private Partnerships notes the process used to create this publication: each project is based on information collected through a variety of sources including government reports, media notices, conference presentations and interviews. Public sector contacts for each project were called upon to validate all the information contained in the project description to ensure individual project accuracy. In many cases, the private sector contact may also have assisted in this validation process. As in past editions, and although the system of project validation is thorough, The Canadian Council for Public-Private Partnerships assumes no responsibility for the accuracy of the information contained herein and readers are advised to verify such information before using or relying on it. As contact names are provided for all projects, the reader is encouraged to follow up directly with the contact if more information is required.

## Acknowledgements

The Canadian Council for Public-Private Partnerships would like to acknowledge and thank Mr. Jeff Bowden of Nexus Communications and Consulting for his extraordinary efforts to research and document the projects contained in this report. We greatly appreciate the scope of the task and the complexity involved in representing often very detailed and complicated arrangements in a reader-friendly manner.

We would also like to extend our sincere appreciation to all the people who assisted throughout the project in offering information and validating the descriptions provided to them. Without their participation, a project of this nature would simply not be possible.

And finally, thank you to Industry Canada, which has generously supported The Canadian Council for Public-Private Partnerships in this research effort. Specifically, two individuals – Mr. Lucien Bradet, Director General and Mr. Brian Wallace of the Service Industries and Capital Projects Branch, Industry Canada in Ottawa – have provided tremendous support and guidance.

## Definition of Public-Private Partnerships

The term "public-private partnership" often means many different things to different people. While some do not consider a traditional design-build agreement as a partnership, others prefer to use the term for any form of public-private collaboration. The Canadian Council for Public-Private Partnerships has developed the following definition to help clarify the issue and provide some parameters for discussion:

> **"A cooperative venture between the public and private sectors, built on the expertise of each partner, that best meets clearly defined public needs through the appropriate allocation of resources, risks and rewards."**

The Council has endeavoured to use this definition in the development of this publication. Other terms used in this report are defined below for your reference:

**Build-Lease-Operate-Transfer**: The private sector designs, finances and constructs a new facility on public land under a long-term lease and operates the facility during the term of the lease. The private owner transfers the new facility to the public sector at the end of the lease term.

**Build-Own-Operate**: The private sector finances, builds, owns and operates a facility or service in perpetuity. The public constraints are stated in the original agreement and through on-going regulatory authority.

**Build-Own-Operate-Transfer**: A private entity receives a franchise to finance, design, build and operate a facility (and to charge user fees) for a specified period, after which ownership is transferred back to the public sector.

**Buy-Build-Operate**: Transfer of a public asset to a private or quasi-public entity usually under contract that the assets are to be upgraded and operated for a specified period of time. Public control is exercised through the contract at the time of transfer.

**Design-Build**: The private sector designs and builds infrastructure to meet public sector performance specifications, often for a fixed price so risk of cost overruns is transferred to the private sector.

**Design-Build-Operate:** A design-build contract for construction of infrastructure, followed up by an operating and maintenance contract. The assets remain publicly-owned throughout.

**Lease-Develop-Operate**: A private or non-profit operator, under long-term lease, expands and operates an existing public facility. The expanded facility remains publicly owned and is transferred back to the public sector at the end of the lease term.

**Operation & Maintenance Contract**: A private operator, under contract, operates a publicly-owned asset for a specified term.

**Service Contract**: Similar to an operation and maintenance contract, except that any assets remain privately-owned.

**Operation License**: A private operator receives a license or rights to operate a public service, usually for a specified term. This is often used in IT projects.

**Finance Only**: A private entity, usually a financial services company, funds a project directly or using various mechanisms such as a long-term lease or bond issue.

**RFEI**: Request for Expressions of Interest

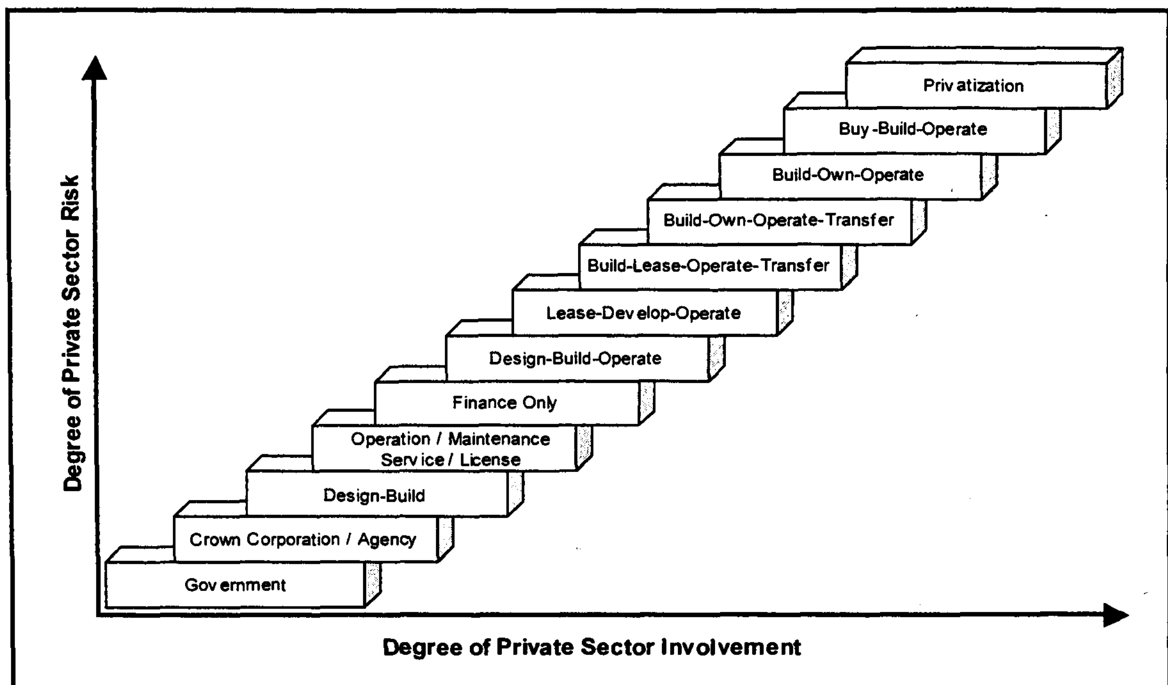
**RFP**: Request for Proposals

**RFQ**: Request for Qualifications

## Scale of Public-Private Partnerships

The options available for delivery of public services range from direct provision by a ministry or government department to outright privatization, where the government transfers all responsibilities, risks and rewards for service delivery to the private sector. Within this spectrum, public-private partnerships can be categorized based on the extent of public and private sector involvement and the degree of risk allocation. All partnerships have a unique risk/reward allocation. A simplified spectrum including the above models for public-private partnerships follows:

**The Scale of Public-Private Partnerships: Degrees of Risk vs. Involvement**



# 1 Hamilton International Airport

**Model:** Lease-Develop-Operate

### Project Impetus:

The Region of Hamilton-Wentworth (now City of Hamilton) sought a public-private partnership to eliminate the operating deficit and realize the full economic potential of the airport.

### Project Description:

In response to a Request for Proposals, TradePort International Corporation assumed responsibility for all operations and maintenance at Hamilton International Airport (YHM) from the Region of Hamilton-Wentworth in July 1996. As a result, Hamilton is one of the few privately operated airports in Canada. TradePort is a consortium of: Westpark Developments, a local Hamilton land development company; LIUNA, the Labourers International Union of North America; and YVR Airport Services, a subsidiary company of the Vancouver International Airport Authority, which operates and manages airports around the world.

Prior to the partnership the airport was running at a loss of $500,000 annually. It now operates profitably, with no cost to taxpayers and a profit-sharing relationship with the City of Hamilton. The workforce has grown from 726 to approximately 1,100 full-time employees under TradePort. The company has facilitated more than $17.6 million worth of capital investment since taking over operations. The courier business has grown to be Canada's largest, and passenger business is also growing through recent partnerships with WestJet.

Major capital projects have included:

- $3.2 million for rehabilitating and resurfacing the main runway
- $7.5 million for runway extension in 1999
- $4.9 million for expanding the main cargo and passenger apron, including the installation of a state-of-the-art glycol recovery system for de-icing chemicals

### Financial Characteristics:

TradePort has a proprietary revenue-sharing arrangement with the City of Hamilton.

**Related Website:** http://www.yhm.com

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# 2 NAV CANADA

**Model:** Buy-Build-Operate

### Project Impetus:

In the 1990's, the cost of providing state-of-the-art civil air navigation and growing inefficiencies across the country led to demands from the airline industry to restructure the system. After an intense study of options, the Federal Government announced in the federal budget of 1995 that it would commercialize operations under a newly created corporation called NAV CANADA.

### Project Description:

NAV CANADA is a private non-share capital corporation that was established in May 1995 to own and operate Canada's civil air navigation system. A comprehensive transfer agreement was signed on April 1, 1996, with NAV CANADA assuming full ownership and operation on November 1, 1996. Canada became the first country in the world to have a privately owned, operated and financed air navigation system. The Board of Directors for the company includes representatives from the aviation industry, Federal Government, the company itself and the unions. This structure ensures that the aviation industry, who are users of the system, have input into both how the system is run and what fees are charged. This "user pay - user say" arrangement eliminated the need for the complex rate regulation system required when under government control. Transport Canada retains complete authority over regulating safety and a formal safety management structure with public reporting has been instituted. The business, technological and administrative risks have all been transferred to NAV CANADA.

While under government control, the system was funded through an air transportation tax levied on passengers as well as $200 million in annual subsidies. The tax was eliminated over a two-year period and funding came entirely from airline charges when NAV CANADA took over. The company now employs 5,250 people and manages assets of $2.2 billion. There has been a measurable reduction in operating irregularities since 1996. The company recently installed a state-of-the-art air traffic control system that consolidates radar, flight data, weather and other information on integrated, high-performance workstations, enabling controllers to handle increased traffic levels safely and more efficiently. NAV CANADA is planning to export its expertise to air navigation systems worldwide.

### Financial Characteristics:

NAV CANADA is mandated to collect only the revenues required to cover the costs of delivering air navigation services. The Company maintains a rate stabilization fund to mitigate the effect on customer service charges of unexpected fluctuations in air traffic volumes. Revenues for the fiscal year ending August 31, 2000 were $909 million. They reflect both continued growth in air traffic and the reduction in customer service charges, which became effective September 1, 1999 and were extended to December 31, 2001. The company continues to control operating expenditures consistent with its mandate to operate a safe and efficient air navigation system. Total operating expenses for the year were $703 million, including salaries and benefits of $470 million.

**Related Website:** http://www.navcanada.ca/

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# 3 Pearson International Airport

**Model:** Lease-Develop-Operate

### Project Impetus:

On December 2, 1996, the Federal Government transferred management, operation and maintenance of Pearson Airport to the Greater Toronto Airports Authority (GTAA). Projections of significant increases in passenger volumes and the inadequacy of existing infrastructure prompted the GTAA to initiate a major capital improvement plan in 1998.

### Project Description:

The Greater Toronto Airports Authority is a not-for-profit, non-share capital corporation with a 15-member board that is representative of local government, business, organized labour and consumers. The GTAA was incorporated on March 3, 1993, and is recognized as a Canadian Airport Authority. As such it is authorized to operate the airport on a commercial basis and set fees, rates and charges for the use of the airport. The ground lease with the federal government began in December 1996 and lasts for 60 years, with one renewal term of 20 years. Lease payments, estimated at $122 million for 2000, are calculated on a capped passenger volume formula subject to adjustments for inflation. The terms of the lease stipulate that the GTAA must meet certain capital expenditure targets in the first 20 years or a deficiency rent payment is levied.

An Airport Development Program (ADP) was initiated in 1998 to upgrade the passenger, runway, concession and utility services at Pearson. As per federal requirements, the GTAA issued Requests for Proposals for this work, which will be conducted over the next 12 years. The ADP will be undertaken in phases and initiated as demand justifies, at a total cost of over $4.4 billion. The most prolific project is a new horseshoe-shaped terminal building that will replace terminals 1 and 2. It will be capable of handling 50 million passengers per year, with the first phase expected to open in 2003. A new eight level parking structure is also being built with a capacity of approximately 12,600 cars, making it the largest single parking structure in Canada. In order to improve local transportation links to the 400-series highway system, the GTAA purchased a portion of Highway 409 from the Province in 1999. Under the GTAA, Pearson is the first North American airport, and only third in the world to be certified for ISO 14001.

### Financial Characteristics:

1999 revenues for the GTAA were $417 million with expenses of $378 million. The Authority issued revenue bonds totalling $950 million in December 1997, primarily to fund the acquisition of Terminal 3, and $500 million in July 1999 to fund the ADP. In addition, the GTAA has a revolving bank facility of $550 million, which is used to fund ongoing operations and the capital program prior to the issuance of revenue bonds.

**Related Website:** http://www.gtaa.com

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# 4 Vancouver International Airport

**Model:** Lease-Develop-Operate

### Project Impetus:
The Federal Government handed over responsibility to non-profit authorities in 1992 as part of its strategy to decentralize airport management and reduce costs.

### Project Description:
Vancouver International Airport Authority is an independent, non-governmental not-for-profit corporation. The Airport Authority has been operating the Vancouver International Airport under a 60-year ground lease with the Government of Canada since 1992, when the Federal Government transferred management of airports to local authorities. The Authority has the option to extend the lease by 20 years. In order to streamline human resources, the Authority negotiated the previous 17 collective agreements representing 300 employees down to two. It also instituted a major job training and employee advancement program, which resulted in an award from BC Business magazine as one of the top ten employers in the province.

Recent major capital improvements include a new $250 million International Terminal Building and a $100 million runway in 1996. These were funded through an Airport Improvement Fee of $15 charged to users ($5 for B.C. travellers, $10 for North American travellers and $15 for internationals).

The Airport Authority created a holding company and a wholly-owned subsidiary to provide operating and consulting services to airports and other clients around the world. Vancouver Airport Enterprises Ltd. (VAEL) is a wholly owned subsidiary of the Vancouver International Airport Authority. Its purpose is to hold the Airport Authority's interest in the operating subsidiary YVR Airport Services Ltd. (YVRAS), which provides airport commercial services to other airports and develops business opportunities based on experience gained at the Vancouver Airport.

The Airport is rated among the most modern, attractive, and efficient airports in the industry. It is the second busiest international passenger airport on the West Coast of North America. The International Air Transport Association ranked Vancouver International #1 in North America and #4 in the world for customer satisfaction in 2000.

### Financial Characteristics:
Annual "rent" is paid to the federal government ($57 million in 1999), which includes both base rent and a percentage of gross revenue earned by the Airport Authority. Net earnings in 1999 were $49.5 million on revenues of $245.1 million.

**Related Website:** http://www.yvr.ca

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# 5 Aurora College Family Student Housing

**Model:** Build-Own-Operate

### Project Impetus:
The Government of the Northwest Territories wanted to achieve value for money in building a new family student housing complex for Aurora College.

### Project Description:
The development of family student housing at Aurora College was the first public-private partnership of its kind in the Northwest Territories. Following a Request for Proposals process, the Territorial Government signed a 20-year design, build, lease, and operation agreement with Aurora Building Developers, a privately-owned developer from Fort Smith. The 25 three- and four-bedroom townhomes were completed in February, 2000. In order for Aurora Building Developers to amortize the asset, it was necessary to stipulate that the Government could purchase the complex at fair market value at the end of the lease, rather than just assume ownership. As a result, the lease is classified as a true operating lease and tax savings can be passed onto the Government.

The Financial Management Board Secretariat made a comprehensive comparison of the private proposal and the Government's estimated cost if traditional public sector capital methods were used. The complex was built at least five years sooner and at 4% lower cost than through traditional procurement and construction. It is estimated that the partnership will generate $16 million in economic benefits to the community over the life of the 20-year agreement. Aurora also made guarantees regarding local and Aboriginal employment and procurement. There is different ownership risk for Aurora in developing this project in a small northern town rather than a large urban centre since it relies on the local resource base to sustain economic activity in the area.

### Financial Characteristics:
Capital cost of the residence was $4.7 million, financed by the developer through CIBC. Annual lease payments are currently $745,000, which escalate each year. At the end of the 20-year operating lease, the Government of NWT may renew the lease for another 10 years, buy at fair market value, or walk away.

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# 6 Business at the Summit

**Model:** Finance & Operate

### Project Impetus:

The traditional model for discussions on economic development in aboriginal communities was handled through the Federal Department of Indian and Northern Development (DIAND). In 1994, local First Nations groups approached BC Hydro and the Department to discuss the feasibility of holding an annual business conference to encourage face-to-face discussions between aboriginal and non-aboriginal business leaders in British Columbia.

### Project Description:

Business at the Summit was launched in 1995 as an offshoot of the Treaty negotiation process in British Columbia, and was the first event of its kind in Canada. The intent of the Summit was to encourage proactive economic development discussions directly between First Nations communities and non-aboriginal business leaders, without direct involvement from DIAND. Each year, stakeholders from DIAND, First Nations and local businesses secure sponsorships and in-kind support from a list of targeted organizations. The sponsors receive recognition at the event and in the conference's final report, which is circulated throughout the country each year. The event has spawned discussions on a host of new business partnerships with over 30 major banks, consulting firms, utilities, engineering and transportation companies, and individual First Nations and Tribal Groups.

Some innovative techniques used at the Summit include:

- Role playing techniques where business scenarios are acted out
- Identification of essential "business tools"
- Showcasing success stories and joint ventures
- Identification of key elements for successful partnerships
- Break-out events allowing participants to focus on specific areas of interest

The 6th Annual Conference was held in October 2000, and was attended by over 230 delegates from 90 organizations.

### Financial Characteristics:

The average annual budget of the conference is $120,000. To date, the Department of Indian and Northern Development has contributed $120,000, and other partners have provided $92,000 in funding. Other revenues are obtained through conference registrations.

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**Other Partners:** BC Hydro; First Nations Summit; Deloitte Touche; Royal Bank

# 7 JobWaveBC

**Model:** Service Contract

**Project Impetus:**
The Government of British Columbia wanted to leverage the experience of the private sector in training and placing individuals on income assistance, primarily in the small business and tourism sectors.

**Project Description:**
In January 2000, the Province of B.C., through the Ministry of Social Development and Economic Security, partnered with two private companies in order to provide income assistance participants with direct services and supports to access employment quickly. The private partners are responsible for finding prospective employers, interviewing participants to determine program suitability, providing necessary supports to obtain employment, and following up to ensure that the participants remain employed. The Province refers a prescribed number of participants (approximately 3,000/month) to the partners, determines program savings and compensation, and arranges for third party evaluation of the program.

Expenditures for JobWaveBC, delivered in partnership with the British Columbia Chamber of Commerce, are funded from the cost savings in BC Benefits payments that accrue when a recipient is placed in a job and no longer requires provincial income assistance (IA). The partner agency begins receiving payments after the participant is employed and becomes independent of income assistance. Research has shown that the longer an individual remains independent of IA, the greater the likelihood they will remain off assistance. Thus, the private agencies receive continued payments for 19 months as long as the participant remains on the job and off assistance. JobWaveBC is co-managed by the Province and the private partners through a steering committee, and the partnership recognizes the strengths of both sides through a flexible reporting and regulatory structure. The program also reflects a significant policy change for the Government, since it provides immediate employment rather than welfare to eligible individuals.

As of December 15, 2000, more than 6,000 people have been placed in jobs across the province. Of these people, over 2,600 are independent of BC Benefits and earning an average of $10.09 per hour. JobWaveBC will undergo a thorough evaluation in 2002, following the two-year pilot.

**Financial Characteristics:**
It is estimated that the Province will save $125 million in BC Benefits payments as a result of the two-year pilot. The private sector partners share $75 million of the savings, for a net savings to taxpayers of $50 million. If a participant is placed in employment for the full 19 months, the private sector partner receives a maximum of $4,865, which is paid in eleven instalments over the same period.

**Related Website:** http://www.jobwavebc.com/

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**Other Partners:** Council of Tourism Associations of British Columbia; Destinations Marketing

# 8 O'Connell Drive Elementary School

**Model:** Build-Lease-Operate-Transfer

### Project Impetus:

The Province of Nova Scotia had a backlog of schools slated for construction due to increased demand in some urban centres and decreased enrolment in several coastal areas. In 1997, the Province announced that it would enter into operating leases with the private sector for the use of schools, keeping the costs of construction off balance sheet.

### Project Description:

O'Connell Drive Elementary School, located on the outskirts of Dartmouth, was the pilot of 39 schools built under the Province of Nova Scotia's P3 program. Nova Learning Inc., a private company set up to pursue P3's in school development, was chosen as the successful bidder. Unlike previous design-build projects for schools, Nova was given the opportunity to design a "school of the future" using leading-edge technologies. The finished product, completed in September 1997, served about 450 students and became a standard for many of the school projects to follow in Nova Scotia.

The school was groundbreaking for several reasons:

- the design incorporated input from the entire community, including teachers, parents and the school board rather than following strict guidelines set by the Province
- school layout is based on a town centre, reflecting the building as a multi-use community centre during school hours and after
- cutting-edge information technology included a high-speed Internet connection and internal network

The Government cancelled the P3 school program in the fall of 1999, citing the fact that it did not meet the criteria of "off balance sheet" financing as an operating lease. However, in June 2001, it announced plans to develop 17 new schools throughout the province over the next four years using design-build contracts.

### Financial Characteristics:

Project cost was $8 million. The school is leased to the Province for $59,000 per month, including high-speed communications links valued at $7,300 per month. Nova Learning maintains a long-term equity investment of more than 11% for the life of the agreement. The Province is responsible for operating costs, and maintenance is contracted out to Oxford Properties Group, a private sector property maintenance firm. At the end of 20 years, the Province can buy the school at 50% of cost, renew the lease for 5 years (twice), or walk away.

**Related Website:** http://www.novalearning.ns.ca

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**Other Partners:** Lydon Lynch Architects; Ellis-Don Construction Ltd.; Interaccess Consulting; EDS Canada; Access Communications Inc.; Dufferin Financial Services

# 9 Sheridan College Centre for Animation and Emerging Technologies (SCAET)

**Model:** Design-Build-Operate

**Project Impetus:**
Sheridan College required outside expertise to build a state-of-the-art multimedia centre in order to expand its course offerings in computer animation, advanced TV and film, new media journalism, interactive multimedia, new media design and telecommunications. SCAET also houses the Visualization Design Institute, Sheridan's first foray into applied research.

**Project Description:**
Sheridan College, located in Oakville, Ontario, is world-renowned for its multimedia and animation programs. Its reputation formed the basis for a unique Request for Proposals (RFP) in 1998-1999 with several private sector partners involved in networking, data transmission, computer animation and telecommunications. The college adapted a standard RFP for infrastructure delivery to include partnership options ranging from sponsorships to preferred vendor agreements. It wanted to push the proponents to their full extent, creating a competitive environment among vendors that would reduce costs and improve innovation. The product was the $32 million Sheridan Centre for Animation & Emerging Technologies (SCAET), opened on September 5, 2000.

Innovative technologies built into the facility include:

- leading-edge computer animation and visual effects technology
- an integrated network of voice, data and multimedia
- a dedicated line to globally transmit and receive broadcast-quality video and multimedia content in real time over the Internet

While the agreement with each vendor is unique, they all include risk and reward sharing. Companies provided a variety of services, including equipment leases, donations and capital investments. Many offered discounts greater than the standard educational discount. Sheridan obtained a $12 million loan from the Province of Ontario to assist with construction costs and the College has raised $26 million to date to off-set further capital and operating expenditures. As for returns, the companies are able to showcase a state-of-the-art facility to potential clients and benefit from the College's reputation.

**Financial Characteristics:**
The capital cost of the facility is estimated at $32 million, partly funded through a $12 million loan from the Province of Ontario, which will be paid back over 7 years. Additional revenues are obtained through a fundraising drive from outside sources and financing from project partners.

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**Other Partners:** Cisco Systems Canada; IBM Canada Ltd.; SGI Canada Inc.; Alias|Wavefront

# 10 TELUS Learning Connection

**Model:** Finance & Operate

### Project Impetus:

Given the rapid change of Internet technology and its potential as a classroom teaching tool, several public education delivery partners in Alberta sought out a private sector partner to develop an initiative whose focus was to help teachers obtain the skills and resources they need to integrate information and communications technology into the learning experience.

### Project Description:

The partnership was launched in September 1997 under an initial four-year agreement. It is funded jointly by four public sector partners (see below) and TELUS, a private telecommunications provider. As the sole corporate sponsor, the company receives a charitable receipt for its funding, and also provides in-kind donations such as servers and other telecommunications products and services. The public partners provide administrative, legal and professional expertise. The TELUS Learning Connection employs three full-time teachers to operate the program as well as three other administrative support personnel.

The foundation of the program involves 250-plus leaders who are given significant release time from classrooms to work with colleagues. They provide training on a regional or provincial basis. The goal is to have at least one teacher in every school to model the effective use of information and communication technologies for both students and teachers. The group calls this method "cascade learning" because knowledge is transferred from teacher to teacher throughout the respective schools. Participants also contribute to a website that currently has over 3,000 pages of resources with an average of 2.2 million hits per month, and has been used by 12,000 teachers to date.

A detailed workplan outlines roles and responsibilities for each partner, with monthly reports to all stakeholders. Teacher-Leaders use online reports to provide reports and feedback. These reports, in turn, are analyzed and used to make changes quickly and to prepare an annual report on the program. The partners recently renewed the program for a further two years (2001-2003).

### Financial Characteristics:

TELUS Corporation provided $500,000 in each of years' one and two and $300,000 in each of the following two years. Alberta Learning, the province's education Ministry, provided $125,000 in each of the first two years and $300,000 in each of years' three and four. In-kind contributions from all five partners are equal to more than $200,000 annually.

**Related Website:** http://www.2learn.ca/

**Public Sector Contact:**
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**Private Sector Contact:**
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**Other Partners:** Alberta Teachers' Association; College of Alberta School Superintendents; Alberta School Boards' Association

# 11 Twin Brooks Elementary School

**Model:** Build-Lease-Operate-Transfer (Proposed)

### Project Impetus:

Community demand and a growing population prompted the Edmonton Public School Board to approach the Province of Alberta with several proposals to develop a new elementary school in the Twin Brooks community. Through the School Facilities Innovation Fund, the province has allocated funds for school proposals that "enhance education program delivery and reduce capital infrastructure costs."

### Project Description:

Since 1991, the Edmonton Public School Board has made five proposals for development of a new school in the Twin Brooks community. The most common reason for the Province's rejection of proposals was that the Board did not meet the Provincial Utilization Rate of 85%. In other words, with other schools not meeting a certain capacity and the Board owning excess land, funding for new construction would not be approved.

The latest proposal, submitted in June 2000, proposed a multi-use facility for the Twin Brooks School. Other partners with the School Board are from the public and private sectors, including a health services organization, a community group, a private doctor's office, and the YMCA. The Edmonton Catholic School Board also joined in the proposal, allowing for a design that would have the two schools at either end of a single community facility, providing a civic focal point for the neighbourhood. The province has asked the Board to address its utilization rates and is evaluating the Twin Brooks submission.

Cost savings using this model would be achieved through:

- one electric & water service to and from the facility
- fewer exterior walls and less construction material needed
- sharing of major systems including HVAC and mechanical
- concentrated surface parking area
- reduced material and labour due to economies of scale

### Financial Characteristics:

The School Board proposed three financial options for building and operating the facility:

- developer-built, owned, and leased back - tenants would make annual lease payments to the owner over a 25-year period;
- third party financed - the School Boards would own all or a portion of its facility and the developer would own the rest;
- Province funds the cost of the School Boards' portions of the facility and remaining partner spaces are to be paid for by way of lease-back or up-front capital

### Public Sector Contact:

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### Private Sector Contact:

Not yet determined

# 12 Drive Clean Program

**Model:** Service Contract

### Project Impetus:

The Government of Ontario wanted to reduce vehicle emissions on a province-wide basis using a cost-effective and convenient partnership with private operators.

### Project Description:

In 1999, the Ontario Ministry of the Environment's Drive Clean office partnered with several private sector contractors and automotive service outlets to conduct vehicle emission tests and repairs on 4.75 million personal and commercial vehicles in the Greater Toronto Area and Hamilton-Wentworth. The program is being rolled out to vehicles registered in 13 additional southern Ontario urban areas and their commuting zones in January 2001.

Each vehicle over three model years old (but less than 20) is required to take an emission test every two years. Vehicle license plates cannot be renewed without a valid test. Emission tests are also required for re-registration of vehicles. Drive Clean testing facilities charge customers a $30 emission test fee, $10 of which is passed along to the province to cover program administrative costs. Instead of delivering the program at government-test facilities, existing privately owned automotive service and repair shops are used. Private garages must be accredited through staff training, equipment purchase and signing of a performance contract. The Drive Clean Office is responsible for developing standards, regulations, enforcement and program monitoring.

Separate private sector contracts are administered in a variety of program-support functions that include: 1) information systems, 2) quality assurance/control for light duty vehicles, 3) quality assurance/control for heavy-duty vehicles, 4) training, 5) public 1-800 call centre service, 6) communications and 7) supply fulfilment for an expansive network of automotive service outlets. Public communications and information systems are designed to ensure both consumer protection and convenience. The emission testing method is computer-controlled for accuracy and results are monitored by the Drive Clean Office. The program has achieved a public acceptance rating of 83% among those surveyed.

### Financial Characteristics:

Given the limited geographic rollout to date and the fact that the program has been operating for less than one year, complete financial information is not yet available.

**Related Website:** http://www.driveclean.com/

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# 13 Toronto Better Buildings Partnership

**Model:** Design-Build-Finance & Performance Contract

**Project Impetus:**
In line with the Kyoto Protocol to reduce greenhouse gas emissions and the City of Toronto's commitment to reduce $CO_2$ emissions by 20% relative to the 1990 levels by 2005, the City of Toronto began a city-wide initiative of energy efficiency retrofits and building improvements in 1996.

**Project Description:**
This multi-stakeholder partnership includes Enbridge Consumers Gas, Toronto Hydro Electric System, Toronto Hydro Energy Services, Ontario Hydro Energy, The Toronto Atmospheric Fund, the City of Toronto and more than 40 Energy Management Firms (EMFs). The targets for energy efficiency retrofits and building renewals include public and private sector buildings throughout the City of Toronto. The firms provide training and educational programs, technical advice, system design and installation. Financing is provided through three main avenues: a) loans and grants provided by the Toronto Atmospheric Fund, a $23 million endowment set up by the City, b) financing packages through the energy management firms, including the Loan Recourse Fund managed by Enbridge and c) The Better Buildings Partnership Revolving Fund, an $8 million interest-free repayable loan fund, administered by the City's Energy Efficiency Office.

Project components include:

- Multi Residential Energy Retrofits and Awareness Initiatives - increase multi-residential knowledge of energy efficiency and conservation
- Buildings Programs - programs tailored to all major building sectors including large office, small/medium commercial, multi-residential non-profit and municipal
- BBP Registry and Environmental Award of Excellence Programs - an on-line listing of participants and a biennial award recognition program for participants

To date, 255 buildings have participated in the program, resulting in $10 million annual projected savings and a reduction of 130,000 tonnes in $CO_2$ emissions per year. Based on this experience, the City estimates that it can increase the number of retrofits by 400-800% per year with a corresponding reduction in $CO_2$ emissions of 3 million tonnes by 2012.

**Financial Characteristics:**
Project spending to date is $130 million with full scale funding expected to be $3 billion. Funding includes a mix of short and long-term payback measures (3-10 years) where energy and water technology is bundled with other building renewal in order to decrease capital costs and increase flexibility. The Loan Recourse Fund provides competitive loans with no down payment, which can be repaid through utility bills. Any shortfall in energy savings is guaranteed by the energy management firm or third parties.

**Related Website:** http://www.torontobbp.on.ca/

**Public Sector Contact:**
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Energy Engineer, Technical Services Division
City of Toronto Energy Efficiency Office
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**Other Partners:** Toronto Hydro; Toronto Atmospheric Fund; several energy management firms

# 14 Toronto Better Transportation Partnership

**Model:** Finance & Consultation

### Project Impetus:

In order to support the goal of reducing carbon dioxide emissions, the City of Toronto wanted to reduce smog through innovative transportation technologies and alliances.

### Project Description:

Based on the experience and goals of the Better Buildings Partnership (see page 13), the City of Toronto initiated the Better Transportation Partnership (BTP) in early 2000 to replace its existing light duty fleet with low emission vehicles. The strategy of the BTP is to use the net present value of the fuel savings, realized by the switch from gasoline to natural gas, to renew the existing fleet and gain the environmental benefits available from natural gas vehicles (NGV). The program is currently in the pilot stage, to be evaluated in 2002. Through a "pay from savings" scheme, the BTP provides the City of Toronto with funding to purchase one additional factory-built light duty natural gas vehicle for every four others it buys between 2000 and 2002. Based on the annual fuel savings of $2,400 per natural gas vehicle, the City is able to purchase the fifth natural gas vehicle without additional budget impacts. The BTP may accelerate the replacement of aging light duty vehicles at a rate up to 25% greater than permitted by annual operating budgets.

Enbridge Consumers Gas provided resources and services for the BTP. Given the low public awareness of natural gas vehicles and alternative fuel sources, the company benefits from a demonstration project with a large government client. The partnership also provides an effective channel to help Enbridge meet its regulatory obligations for natural gas savings through demand side management. Future goals include the introduction of other alternative fuels, involving other energy management firms, and expanding the program beyond City of Toronto agencies, boards and commissions. The City has targeted to complete conversion of its entire light duty fleet to low emission vehicles by 2005.

### Financial Characteristics:

The Federal and Provincial Governments, vehicle manufacturers and Enbridge Consumers Gas provide incentives for the acquisition of factory built dedicated natural gas vehicles totalling up to $6,500 per vehicle. Enbridge will co-ordinate the receipt of all applicable incentives and provide financing for the acquisition of the fifth "pay from savings" vehicle over a 48-month period.

**Related Website:** http://www.torontobbp.on.ca/

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**Other Partners:** Natural Resources Canada; Ford Motor Company; Province of Ontario

# 15 Peel Incineration Facility

**Model:** Build-Own-Operate-Transfer

### Project Impetus:

The Region of Peel, located in southern Ontario, wanted to reduce reliance on landfilling as their traditional landfill site began filling up. Electricity generation and cost savings were also seen as benefits of partnering with the private sector.

### Project Description:

The Peel incineration facility is owned by the KMS Power Income Fund, which is a publicly traded Trust listed on the TSE and managed through KMS Energy Canada (previously Peel Resource Recovery Inc.). KMS financed, built and owns the assets of the facility, while the Region pays a tipping fee to partially cover the cost of operation. The original facility was constructed in 1992. Following a year of operation processing residential waste, KMS accepted more profitable industrial, commercial and institutional waste in 1993. Two-thirds of these revenues were shared with the Region.

In 2000, KMS financed and built a bottom-ash processing facility, which utilizes the ash left over after incineration. The capital cost was $700,000, with the Region paying $6.83 per tonne for ash processing. Late in 2000, KMS Peel Inc. will begin drying the processed ash to use it as an alternative aggregate in markets yet to be determined. Cost savings are $570,000 annually for diverting the ash from landfill.

KMS is building a fifth incineration unit, resulting in increased electricity production and 36,000 additional tonnes per year capacity. It will be operational by the end of 2000, with an upgraded pollution control system that exceeds Ministry standards. To compensate KMS for the capital and operation costs of this expansion, the company will now receive all revenues from industrial, commercial and institutional (ICI) waste processing. The Region has the option to buy the entire incineration facility at the end of the contract in 2012, or earlier for a premium.

The incineration facility burns 500 tonnes of residential and ICI waste per day, selling the electricity generated (15 megawatts annually once expansion is complete) back to Ontario Power Generation for a profit. This electricity sale is governed by a long term Power Purchase Agreement that stipulates a price of $0.07 per kilowatt-hour, which is better than the average market price.

### Financial Characteristics:

The original capital cost of the facility was $50 million, built and financed by KMS. The Region offsets operation and maintenance costs on a per tonne basis (tipping fee of $70/tonne for 130,000 tonnes per year). Once a particular annual volume is reached, the fee drops to $6.50 per tonne. Air emission credits are split 50-50 between KMS and the Region.

**Related Website:** http://www.kms-energy.com/peel.htm

### Public Sector Contact:

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### Private Sector Contact:

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# 16 Toronto Biosolid Beneficial Use Program

**Model:** Design-Build

### Project Impetus:

The cost of operating an incineration facility at the Ashbridges Bay Wastewater Treatment Facility and the public demand for alternatives prompted the City of Toronto to look to the private sector for an alternative to process biosolid residue from the wastewater treatment process.

### Project Description:

USF Canada Ltd., an international supplier of water and wastewater treatment solutions, was awarded the design-build of a biosolids processing facility at the Ashbridges Bay Wastewater Treatment Plant in Toronto in 1999. The plant, expected to be completed early in 2001, will recycle the residual biosolids from the wastewater treatment process into a pelletized product for sale as a fertilizer and beneficial soil amendment. It is being built on the same footprint of the previous incineration facility at Ashbridges. The facility will process an average of 25,000 tonnes per year, or half of the Plant's annual biosolid production, with a maximum capacity of 32,500 tonnes. Revenue sharing has yet to be negotiated, but current rates are $13.35 per dry tonne. The City will own and operate the facility once it goes online.

The pelletized biosolids market is fairly new, and the City will be negotiating with USF Canada to market and distribute the product to agricultural customers over a proposed 15-year agreement. Public acceptance of the product has also yet to be tested.

### Financial Characteristics:

The capital cost of the facility is $23 million, funded entirely by the City and paid to USF Canada on a monthly schedule.

**Related Website:** http://www.city.toronto.on.ca/sewers/biosolid.htm

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# 17 Windsor Biosolids Processing Facility

**Model:** Build-Own-Operate-Transfer

### Project Impetus:

In 1998, the City of Windsor decided that its current treatment process for sewage sludge was unacceptable to the local public and wanted to divert the waste from the existing outdoor lime-stabilization/land application technology. As a result, it sought a long-term private sector partnership to process the biosolids and manufacture a marketable product, and to do so in an enclosed state-of-the-art facility.

### Project Description:

The City of Windsor contracted with Prism Berlie (now Azurix North America) to build, finance, own and operate a biosolids processing facility for 20 years. The facility was completed in the spring of 1999, adding 12 new positions to the local economy. Under the agreement, Azurix will transfer ownership of the facility back to the City in 2019. The facility uses heat drying to convert sewage sludge (biosolids) from Windsor's two sewage treatment plants into marketable fertilizer pellets. The waste is a combination of residential, commercial and industrial waste from the City of Windsor and neighbouring Lasalle and Tecumseh.

The City is responsible for providing a minimum of 30,000 wet tonnes per year to Azurix, ensuring that the waste stream is free from substances that are not permitted for fertilizer applications. Azurix is responsible for transportation from the City plants, all facility operations, permits and marketing the pellets to end users. The company receives all revenues from fertilizer sales. Since the facility is located close to a hydroelectric generating station, there is a future option to use waste energy from the station to heat the biosolids.

### Financial Characteristics:

The original capital cost of the project, financed by then-Prism Berlie, was $10 million. The operating cost is estimated at $60 million over the 20-year agreement, including repayment of the capital as well as ongoing maintenance costs. At the end of the agreement, the facility will be transferred to the City at no cost.

**Related Website:** http://www.city.windsor.on.ca/pubworks/default.asp

### Public Sector Contact:

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# 18 Essex-Windsor Regional Landfill

**Model:** Finance

### Project Impetus:
The County of Essex and City of Windsor, Ontario wanted to secure capital funding at a low interest rate for an existing landfill operation.

### Project Description:
In 1997, the County of Essex and City of Windsor, Ontario, began operating a 58-hectare regional landfill that takes waste from the local area. The municipalities conducted some financial projections and decided to solicit new funding for the landfill in order to expand it, increase revenues and improve efficiencies. MFP Financial Services Ltd., a private financial solutions advisor, was the successful proponent from the RFP and set up a special-purpose financing vehicle - an Investment Trust. The Trust leases the landfill from the owner, the Corporation of the County of Essex, and sub-leases it to the operators, the Corporations of the City of Windsor and the County of Essex. These two municipalities established the Essex-Windsor Solid Waste Authority as a non-profit partnership to manage the landfill.

The initial financing of $10 million was delivered at a rate of 4.12%, which at the time was more than 200 basis points below the municipalities' equivalent term debenture rates. Low interest rates were also guaranteed for any landfill expansions over the following 38 years. Revenues are achieved through an innovative pay-per-use program. Landfill users from the industrial, commercial and institutional sector and neighbouring municipalities pay fees that are tailored to the portion of the landfill consumed in any given year. This means that landfill operations are based on a user pay philosophy and not directly subsidized through local tax levies. A portion of the Trust funds are contributed to a local charity, which is required in order to achieve a favourable tax treatment for investors, and ultimately the lower interest rate for lessees.

Economic modelling conducted by MFP Financial Services also determined that the purchase of a larger compactor would allow the municipalities to mine previously filled landfill cells, recompact the waste, and increase the landfill's capacity by 15% or 900,000 tonnes. The company also set up a specialized amortization model, which amortizes capital costs over the estimated life of the landfill and amortizes individual cell development costs over the estimated life of each cell. These two initiatives increased revenues and spread costs out over longer periods.

### Financial Characteristics:
Costs incurred during the original development of the landfill (cell one) and carrying costs amounted to $26.7 million. Additional financing for opening and closing remaining cells is estimated at $21.3 million. Monthly payments on the loan are calculated using a formula based on volumes and tipping fees, with a minimum yearly payment of $500,000. This innovative model allowed the municipalities to pay back the loan even with large fluctuations in commercial waste revenues.

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# 19 Guelph Recycling Program

**Model:** Build-Own-Operate

**Project Impetus:**
Super Blue Box Recycling Corp (SUBBOR), an affiliate of Eastern Power Ltd., approached the City of Guelph to showcase its organics recycling technology for export. Guelph was interested in the project as it offered additional diversion of municipal solid waste from the landfill stream.

**Project Description:**
The Wet/Dry Recycling Facility became fully operational under the City of Guelph in 1996. It utilizes a unique system whereby organics are separated from "dry" goods at the source, and processed with an aerobic organics composter at the facility. In 1998, the City was approached by SUBBOR, a private waste management and engineering firm, with a request to allow the company to design, construct, own and operate a mixed waste organics recycling operation adjacent to the existing Wet/Dry facility. SUBBOR leases the land from the City under a three-year agreement (2000-2003), with the option for a ten-year extension.

The advantages of SUBBOR's technology are: it provides greater than 90% diversion from landfill; it produces biogas to generate electricity; and no composting is required to complete the treatment. The facility is permitted to accept residential and ICI waste from all over Ontario. Infrastructure costs were reduced since SUBBOR's facility shares a tipping floor, access road and other operations with the Wet/Dry facility. SUBBOR and the City provide their own staff. Revenues will come from the sale of peat, electricity and through tipping fees charged to customers.

The three main components of the facility are:

1. Material sorting – aluminium and steel are separated for recycling, leaving an organic-rich feed material for digestion.
2. The organics are subjected to thermally enhanced anaerobic digestion for 40 days. Material is then cleaned and dried, creating a high-quality marketable organic peat.
3. Six megawatts of electricity (net) will be produced from stage two and will be marketed to the electric grid once processing needs are met. This process provides a $CO_2$ reduction of 2.8 tonnes for each tonne of waste. Emission credits may also be possible once the facility begins producing electricity, expected in early 2001.

**Financial Characteristics:**
The facility cost $25 million to build, which was funded through and investment loan from Industry Canada, the National Research Council and by Eastern Power / SUBBOR. A yearly lease payment structure is currently under negotiation.

**Related Website:**

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# 20 Toronto Waste Disposal Plan

**Model:** Service Contract

### Project Impetus:

The Keele Valley Landfill, located in the City of Vaughan, is used by the City of Toronto and surrounding municipalities for waste disposal. It was originally scheduled to close in the spring of 2002. The City had been searching for a large-scale waste disposal alternative for over a decade, which culminated in a Request for Proposals in the fall of 1999. Rail Cycle North, a consortium established to haul and dispose of Toronto's residual waste in the Adams Mine Landfill, a closed open pit mine located near Kirkland Lake, Ontario, was selected as the preferred supplier to manage municipal solid waste. Republic Services of Canada Ltd. ("Republic"), was selected as the preferred supplier to manage private sector solid waste received by the City for disposal. Negotiations with Rail Cycle North concerning the 20 year, $1 billion contract broke down in October when the consortium could not successfully address City Council's demand to remove a clause calling on the City to provide compensation for "unavoidable costs" greater than $1 per tonne. City staff did not have authority to negotiate a settlement in connection with City Council's demand and, as a consequence, discussions related to contract language were terminated. The City's contract with Republic carries a clause that allows the City to direct municipal solid waste to that company following a notification period.

### Project Description:

The 20-year contract with Republic will provide disposal for 285,000 tonnes of the City's waste annually until the end of 2002. Volumes thereafter are guaranteed to be at least 100,000 tonnes. There are options at 5, 8, 10, 15, and 18 years, at the City's sole discretion. Wilson Logistics Inc. will provide waste haulage under contract to the City of Toronto. The company will haul waste from three transfer stations in Toronto, through the Sarnia border crossing, to Republic's Carleton Farms Landfill in Michigan. As a result of diverting 285,000 tonnes a year from the Keele Valley Landfill over the course of 2001 and 2002, its service life will be extended until the end of 2002. The Premier has advised Toronto that it is the government's policy not to allow the service life of the Keele Valley Landfill to extend past 2002.

An existing 5-year contract with Superior Arbor Hills Landfill Inc. (formerly BFI) for the haulage and disposal of a portion of the City's residential waste began in January 1998. Current volumes are 450,000 tonnes per year with waste hauled to the Arbor Hills Landfill in Michigan.

### Financial Characteristics:

Under the contracts with Republic and Wilson Logistics, the City's combined haulage and disposal rate is $50.75 per tonne. The City has a conditional preferred customer status relative to other Regional Municipalities in the Greater Toronto Area following the start of the contract. There is an inflationary provision of 75% applicable percentage change in the CPI each year for the life of the contract.

**Related Website:** http://www.city.toronto.on.ca/involved/swm/swmmep.htm

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# 21 Alberta Capital Region Wastewater Treatment Plant

**Model:** Operation & Maintenance

### Project Impetus:
In order to maintain value for money and improve efficiency, the communities surrounding the City of Edmonton began contracting out wastewater treatment operations in 1984. UMA Engineering was the original private operator, followed by a contract with United Water in 1991.

### Project Description:
OMI Canada's contract with the Alberta Capital Region Wastewater Commission (ACRWC) began in 1998. OMI is a subsidiary of CH2MHILL, an international private supplier of water and wastewater solutions. The contract is for the fixed price operation and maintenance of facilities until 2006. Under the agreement, OMI is responsible for capital improvements paid for by the ACRWC. Eighteen staff were transferred from the old contract and an average savings of $400,000 annually was achieved over the previous supplier. The customer service functions of the regional system remain under the Commission.

Each year, OMI prepares a five-year capital improvement plan for the treatment facilities, which serve approximately 170,000 residents surrounding the City of Edmonton. The company is also providing computer-modeling services to assist in implementing mandatory improvements in nutrient control and effluent disinfection. These will be operational by 2005.

"The Commission has provided efficient and economical service to its members over the past 15 years by contracting out the operation of its facilities. The contract has been competitively bid twice during this time to ensure that the best value for cost is being achieved. A close, cooperative working relationship with the contractor is being maintained, which is essential for a successful contract operation."
-- Gordon Thompson, General Manager, ACRWC

### Financial Characteristics:
Capital improvements expected over the life of the agreement total $2.5 million. Revenues have been steadily increasing due to increased demand for sewage services.

### Public Sector Contact:
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General Manager
Alberta Capital Region Sewage Commission
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### Private Sector Contact:
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# 22 Edmonton Sanitary Servicing Strategy Fund

**Model:** Finance

### Project Impetus:

Because of the large capital expenditure required to build sanitary trunk sewers, neither the City of Edmonton nor the local developers could afford to fund the front-end costs. As a result, an impasse had occurred that was threatening growth within the City, and a strategy was developed for funding this infrastructure with developers, homebuilders and the City.

### Project Description:

This initiative involved development of a shared, self-sufficient Trust Fund to pay for $430 million of trunk sewer construction over the next 50 years. Instead of having to borrow considerable dollars for new construction, the Fund provides sufficient accumulation and interest prior to construction. By involving "non-traditional" partners such as homebuilders , the capital burden for major trunk sewers is lessened for developers and the City.

A Fund Management Committee, comprised of City staff and private sector partners, ensure the long-term viability of the Fund, setting rates and meeting the construction needs of the development community. It succeeds in delaying the collection of fees involving non-traditional partners. It also serves as an incentive to contain urban sprawl since higher charges are applied in outlying areas.

### Financial Characteristics:

The fund collects revenue from three sources:

1. City of Edmonton Sanitary Utility contributes $2.6 million annually
2. The Sanitary Sewer Trunk Charge is collected at the time of the Development/Building Permit
3. An Expansion Assessment is applied at time of Servicing Agreement (Subdivision) to the undeveloped, outlying areas of the City

Currently, the fund has a balance of $15.5 million, with revenues of $7 million and expenditures of $5 million expected in 2000. The 2001 revenues are expected to be $7.5 million with expenditures $10 million. It is anticipated that the Fund will remain in a positive balance throughout its life.

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### Private Sector Contact:

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# 23 Halifax Harbour Solutions

**Model:** Design-Build-(Finance)-Operate

### Project Impetus:

Halifax Harbour is polluted by approximately 140 million litres of untreated wastewater per day from sanitary sewers and storm water. The Halifax Regional Municipality is seeking a solution to build and operate up to four new wastewater treatment plants to process discharges and runoff at less cost than in-house.

### Project Description:

Responses to the Request for Proposals were submitted on October 13, 2000 by two consortia for the design-build of sewage collection systems and the design, building, financing, and operation of four new wastewater treatment plants. Ownership would remain with the Halifax Regional Municipality (HRM) unless otherwise required in support of a financing proposal. The operating period is for 30 years beginning when the first facility is commissioned. HRM would also have the option to buy out the operating agreement at years 15 and 20. The Municipality would pay the proponent a guaranteed maximum price for construction costs when facilities are completed or through a long-term financing arrangement. Project elements would be phased in over an eight-year schedule in order for HRM's financing to be complete. The private sector also had the option to include a financing proposal, which would be accepted if it can be shown that it is better than HRM's own financing.

The HRM has a Shadow or Reference Bid to compare with the private sector submissions in order to ensure the municipality is achieving cost savings versus undertaking the project in-house. Staff will be making periodic reports to the Halifax Harbour Solutions Project Selection Committee, with a final report to Council expected in February, 2001.

### Financial Characteristics:

The expected total capital cost is $ 315 million, of which $210 million will be provided by HRM. Approximately $50 million of this was already raised through a surcharge on local water rates and the remainder will be financed through an annual increase in water rates introduced two years ago and continued over each of the next two years. HRM will also be soliciting the provincial and federal governments to fund the remaining $105 million. Operating costs, based on an earlier technical report, will be $6.5 million annually.

**Related Website:** http://www.region.halifax.ns.ca/harboursol/index.html

### Public Sector Contact:

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Halifax Regional Municipality
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### Private Sector Contact:

Not yet determined.

# 24 Norfolk Wastewater Treatment

**Model:** Operation & Maintenance

### Project Impetus:

The Regional Municipality of Haldimand-Norfolk (now Town of Norfolk), located in Southwestern Ontario, wanted to tap the business knowledge and skills of the private sector while retaining ownership of their wastewater system assets. Saving money without compromising the environment, assets or service was also critical.

### Project Description:

US Filter Operating Services, a large private provider of water and wastewater treatment services, began the contract with the Region in January, 1998. The five-year operations and maintenance contract covers 13 wastewater treatment facilities, 43 pumping stations, related watermains and management of the biosolids land application program.

USF offered existing municipal staff improved wages, benefits and advancement opportunities. The record of environmental compliance has improved along with a better maintenance regime. A computerized maintenance management system was instituted along with aggressive preventive and predictive maintenance.

"The private sector brings its business knowledge and skills while the public sector owns the infrastructure needed to deliver the service. A combining of these sectors has resulted in improved service levels and savings to customers. The Region entered into our public-private partnership competitive process with great care, with the objective of saving money without compromising the environment, our assets, or service. Our competitive process and the selection of USF has resulted in our objectives being exceeded beyond our expectations."
-- Eric R. D'Hondt, Commissioner of Engineering, Town of Norfolk

### Financial Characteristics:

Cost savings are estimated to be $1 million per year, which is 34% better than under municipal management.

### Public Sector Contact:

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# 25 York Region Trunk Sewer

**Model:** Design-Build-(Finance)

### Project Impetus:

In 1997, the Region of York, located north of Toronto, completed a sewage system master plan, which identified the need for a $700 million expansion of the existing system to accommodate rapid growth in the Region up to 2031. As one of the first components of a parallel system to the existing sewage system, the new sewer along Ninth Line (a main regional artery) will also service immediate development in the Town of Markham.

### Project Description:

In May 1999, the Region of York issued an RFP for the design-build of a sewer trunk line along a main artery (Ninth Line). Council authorized awarding of the contract to a private consortium comprised of McNally International and BFC Civil J.V. in June of the following year. The consortium had submitted an alternative proposal, which included a provisional item for tunnelling of an adjacent trunk sewer line on Sixteenth Avenue, which would result in significant savings to the Region versus contracting the project separately. The excavation of the tunnel required temporary lowering of the groundwater table through dewatering. Mitigation plans were developed to deal with private well interference and groundwater discharge.

The consortium was required to implement a public consultation component both prior to and throughout the construction process, due to the potential effect on local residents. A detailed public complaint procedure was also instituted by the partners.

A unique partnership aspect to this project was the development of a Partnering Charter, which was a non-legally-binding agreement between the design-build team and the Region to work proactively together, thereby minimizing public disruption and maintain cost accountability. The Charter was the product of a meeting facilitated by a third party prior to project start-up, when the partners came together to discuss their challenges, goals and communications' philosophy. The first component is expected to be completed in July 2001, with final completion in April 2002.

### Financial Characteristics:

The guaranteed maximum price of the trunk sewer line construction is $35.3 million, with a total project cost of $37 million. The development community in Markham and Stouffville provided prepaid development charge funding in the amount of $22.8 million, and the Region provided $14.2 million.

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### Private Sector Contact:

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# 26 Canmore Water & Wastewater Treatment

**Model:** Design-Build-Operate

### Project Impetus:

The Town of Canmore, located in the Alberta's Bow Valley between Calgary and Banff, was experiencing high population growth, increased demand for improved technology, greater cost-effectiveness and more stringent environmental regulations. It decided to look for a private sector provider for all of its water and wastewater services.

### Project Description:

Following an RFQ and RFP process beginning in 1999, the Town of Canmore signed a 10-year utility management agreement in May 2000 with EPCOR, a diversified utility company wholly owned by the City of Edmonton. Contracted services include water and wastewater treatment, water distribution, wastewater collection, storm drainage, biosolids handling meter reading, billing and account management. Water treatment volumes average 6.2 megalitres per day through two water sources: a surface water supply treated with direct filtration and chlorination, and a groundwater source with chlorination treatment. Wastewater volumes are 5.4 megalitres per day through the treatment plant, which services the 10,500 permanent residents of Canmore. The company is also responsible for system-wide capital improvements and an upgrade to Canmore's surface water treatment facility (expected to begin in 2001). The Town retains ownership of all assets and receives the revenue stream from residents' utility bills, although EPCOR distributes the bills themselves.

EPCOR has brought increased operational efficiencies to the services, including a preventive maintenance program, as well as scientific and lab services that were previously not as extensive. The company is required to meet performance levels in environmental compliance, quality and efficiency, customer satisfaction and response, as well as safety and training. A structured reporting system has been put in place, and the company publishes the water quality results on its website (see below). Nine existing municipal staff in Canmore were transferred with equivalent wages and benefits, under their existing CUPE union local. The company has offered them opportunities for career advancement and professional development.

Some highlights from operations in 2000 include a new quality assurance/control program for the Canmore lab analyses, upgraded control and monitoring systems for the treatment plants, and installation of a computerized maintenance management program.

### Financial Characteristics:

Expected savings amount to over $1 million in operations over the first five years of the contract and over $3 million in capital in the first 3 years of the ten-year contract. There is an option to renew the contract for another ten years in 2010.

### Public Sector Contact:

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### Private Sector Contact:

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# 27 Goderich Water & Wastewater Services

**Model:** Operation & Maintenance

### Project Impetus:

The Town of Goderich, located in Southwestern Ontario, wanted to ensure the safety of its drinking water and reduce costs through a public-private partnership.

### Project Description:

The Town of Goderich initiated a contract with USF Canada Inc. for operation and maintenance of its water and wastewater treatment facilities, water distribution system and sewage collection system. The contract term is five years, beginning in December 2000, with an option to renew for an additional five. Capitalizing on the restructuring of the electricity sector in Ontario, the Town restructured its Public Utility Corporation into a local electricity distributor and separated out the water function. The new Goderich Hydro retains responsibility for water billing, with service provision transferred to USF. The original staff of eight municipal employees was transferred to USF and reduced, through attrition, to six. Four of these employees received substantial wage increases.

USF Canada has assumed all maintenance risk for the assets, and instituted a state-of-the-art computerized maintenance regime. Operational efficiency will allow the expansion of services to clients outside the Town boundaries.

"Although we will see cost savings over time, our primary objective for entering into this public-private partnership is to improve safety and reduce the risk of harm to our residents, and we feel that a P3 best accomplishes these goals. The partnership provides us the best of both worlds. USF Canada will apply the latest expertise to make sure we have the safest and most reliable water supply, and we will retain ownership of the assets and the authority to maintain rates for residents throughout the term of the partnership."
-- Delbert Shewfelt, Mayor, Town of Goderich

### Financial Characteristics:

Cost savings are expected under private management, but have not yet been established given the short operations period.

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# 28 Hamilton-Wentworth Water & Wastewater Treatment

**Model:** Operation & Maintenance

### Project Impetus:

The Region of Hamilton-Wentworth (City of Hamilton as of January 2001) wanted to utilize the expertise of the private sector in wastewater treatment and water purification while retaining the assets and direct interfaces with the public (i.e. water distribution and wastewater collection).

### Project Description:

Beginning in 1995, the Region of Hamilton-Wentworth entered into two contracts with the private sector for improvements to its water and wastewater treatment operations. A unique component of these contracts was the commitment of the private sector to invest in the community and locate offices in the downtown core to improve economic development.

In 1995, the Region signed a 10-year operations and maintenance contract with Philip Utilities Management Corporation (PUMC) for wastewater treatment and water purification, and a second contract to operate and maintain over 100 outstations and remote facilities. The contracts included guaranteed economic development (creation of 100 full-time jobs), joint marketing, and $15 million in capital investment. The municipal employees who transferred to PUMC also had a profit-sharing plan.

In May 1999, the Region signed a new agreement with Azurix, an international private water and wastewater services provider, who purchased the Region's contract from PUMC. As part of this new agreement Azurix was to design, build, finance and operate an upgraded preliminary treatment system at the Woodward Avenue Wastewater Treatment Plant valued at $7.5 million. The completion date is targeted for the summer of 2001. Azurix also agreed to increase the number of employees at its North American headquarters in Hamilton to 23 and to relocate 53 staff from another office by November, 2000. In 1996/97, the company constructed and financed a hot water heating system to treat wastewater using waste heat from the Region's energy-from-waste facility, resulting in at least $500,000 annual savings and reduced greenhouse gas emissions.

In the 1990's, municipalities around the Great Lakes experienced problems with taste and odour of the drinking water supply. As a result of these problems, the Region issued an RFP for an improved treatment system at the Woodward Avenue Plant. It contracted with Horseshoe Carbons Inc. for a granulated activated carbon treatment process at a cost of $2.9 million. Annual operating costs are estimated at $1.3 million, resulting in an average increase of 2.5% to the monthly residential water bill.

### Financial Characteristics:

The original contract with PUMC achieved savings of $500,000 per year. Under the contract with Azurix, the Region is guaranteed $703,000 (1995 dollars) in annual savings, Azurix receives the additional $1 million, employees receive monies under the profit-sharing plan and the remaining profits are split 60:40 between Azurix and the Region.

### Public Sector Contact:

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### Private Sector Contact:

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# 29 Port Hardy Water Treatment Facility

**Model:** Design-Build-Operate

**Project Impetus:**

Throughout the 1990's, the District of Port Hardy, located on the northeastern shore of Vancouver Island, had a history of poor water quality and public health concerns. In order to address these issues as well as stimulate economic growth, the District wanted to explore better treatment options and financial partnerships with private expertise.

**Project Description:**

Port Hardy signed a 20-year performance contract with EPCOR (then Aqualta) in 1999 to design, build and operate a water treatment facility and related waterworks infrastructure. It was the first public-private partnership for a water utility in B.C. There is also an additional five-year wastewater management contract for the sewer collection system and two treatment plants. The water treatment facility was completed in April, 2000, eight months after construction began. EPCOR is responsible for all technological performance and has underwritten the risks related to water quality regulatory changes over the first five years of the contract. The company provided a cost guarantee for the life of the contract and receives incentives for operating cost savings. The District of Port Hardy is responsible for revenue collection. Seven full-time staff were transferred to the company, and all previous collective agreements were honoured.

The Port Hardy Water Treatment Plant has the capacity to deliver 10 million litres of treated drinking water per day and serves a population of 6,200 people. Prior to beginning the project, public input was obtained according to the BC Municipal Act, receiving only one counter petition from local residents. Over 100 calls complimenting the District on the improved water quality were received in the week following the commissioning of the new plant. Water quality standards are considered the most stringent in the province, and the Ministry of Health is using the operating permit and reporting requirements as a model for other projects. EPCOR was incorporated in 1996 in response to the deregulation of Alberta's energy market. The City of Edmonton is the company's sole shareholder, and it has an independent board of directors.

**Financial Characteristics:**

The cost of plant construction was $3.67 million, which is considerably less than the estimated $6 million price tag had the project been delivered in-house. Financing was arranged between the District of Port Hardy and an intermediary leasing company with guarantees from the Municipal Finance Authority. The lending rate is prime minus 1%. EPCOR receives $900,000 annually to operate and maintain the plant, with incentives for cost savings.

**Public Sector Contact:**

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# 30 Halton Water Delivery Project

**Model:** Design-Build-Finance

### Project Impetus:

The Urban Structure Plan, developed by the Region of Halton in Ontario in 1994, identified the need for new water and wastewater delivery infrastructure in order to support planned development for 100,000 new residents and 5,000 acres of employment lands by 2021 in the Milton and North Oakville areas. The Region decided to have the project funded by land developers in order to mitigate the impact on existing taxpayers.

### Project Description:

Following an Expressions of Interest in 1998, the Region of Halton short-listed three submissions and called for design-build proposals. The Region of Halton created what it termed a "partnership triangle" to deliver the infrastructure needs of this project both quickly and cost-effectively. The three parties consisted of the Region as regulatory overseer, the development community as funding source and the construction team (D'Orazio-Walter Joint Venture) as design-build consortium. The first phase became collectively known as "The Big Pipe" since it consisted of new trunk water and wastewater mains, and an intermediate sewage pumping station along the Highway 25 corridor. Construction began in January 2000 and full operation is expected by Spring 2001, in time for new housing services in May. Phase Two will involve further development of watermain arteries and pumping stations throughout the Region.

Project risk for cost estimates, cost overruns and project completion timing was shared among the three parties. The Region and developers shared project financing and planning approvals jointly. These shared risks and a fixed price for the design-build allowed the developers to secure external funding, which would not have been likely under a conventional arrangement.

Project innovations included:

- relocation of a pumping station from private to Region-owned land, avoiding acquisition costs
- a partnering workshop attended by all partners to affirm roles and responsibilities, resulting in a Partnering Agreement and Charter
- rerouting of wastewater trunk sewer to avoid major environmental impacts and reduce costs

### Financial Characteristics:

Total expenditures for "The Big Pipe" are $29 million, which is part of the larger infrastructure renewal program totalling $79 million for Phase One. The pipe is paid for almost entirely by the development community, and costs were 20% below the original project estimates. The estimated construction value made possible by the project is projected to be $12.7 billion in 1995 dollars.

**Related Website:** http://www.thebigpipe.on.ca

**Public Sector Contact:**
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**Other Partners:** Walter Construction Canada Ltd.; Dilon Consulting Ltd.; Acres and Associates Ltd.; R.V. Anderson Associates Ltd.

# 31 Lake Major Water Treatment Plant

**Model:** Design-Build

### Project Impetus:

The Halifax Regional Water Commission (HRWC) wanted to build a much-needed water treatment facility in Dartmouth at a guaranteed price and faster than through a traditional design, bid and construction model with multiple contractors.

### Project Description:

The City of Dartmouth, N.S. originally called for a 20-year design, build, finance and operation contract with the private sector. Due to municipal amalgamation and resulting synergies brought forward by the HRWC, the project was changed to a design-build model after negotiations with the preferred proponent. The Lake Major Water Treatment Partnership (LMWPT), a 50/50 partnership between Inland Pacific Waterworks (member of BC Gas Inc.) and CH2M Waterworks (Canada) Ltd. were the preferred proponents after submission of the Request for Proposals in 1997. The plant, completed in December 1998, serves 100,000 residents of Dartmouth with 11 million gallons of water per day. The facility has an output capacity of 20 million gallons per day, expandable to 32 million gallons.

Contract provisions set damages if LMWPT delivered the project late. The fixed-price contract protected taxpayers and ratepayers from cost over-runs, including $250,000 in extra charges when very difficult rock conditions required extensive blasting. Extra precautions in building the Treatment Plant in a watershed were also successfully implemented.

"In order to accelerate construction, the HRWC chose to build the plant through a public-private partnership. The design-build approach ensured the project would be delivered in a set time period for an agreed price. When the designer and builder are on the same team, the process moves much faster than in the traditional approach involving three separate processes: design, competitive bidding and construction by a different firm."
-- Jamie Hannem, HRWC Chief Engineer

### Financial Characteristics:

Compared to the City's own estimate to undertake the project, LMWPT delivered a facility with savings of $200,000 in capital costs.

### Public Sector Contact:

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### Private Sector Contact:

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# 32 London & Area Water Treatment Facilities

**Model:** Operation & Maintenance (Proposed)

### Project Impetus:
In the fall of 2000, the Government of Ontario transferred ownership of the two local water systems from the Ontario Clean Water Agency (OCWA), a Schedule 4 agency of the Province, to two newly created water boards in Southwestern Ontario. The City of London was designated as the administering body for the two water supply systems. The water boards decided that a competitive bid process would ensure that the area communities received the best value for money.

### Project Description:
In November 2000, the City of London issued an RFQ for the operation and maintenance of the Lake Huron and Elgin Area Primary Water Supply Systems, along with several of the area's Secondary Water Supply Systems. Six consortia responded, and the City will be issuing an RFP to the qualified bidders in March 2001 for a ten-year contract with an optional five-year extension. An interim operating agreement with the Ontario Clean Water Agency is in place until the water board signs a new contract with the successful proponent. The guiding principles adopted by the water board for the private operation of the facility include: equal or better water quality; value for service; retention of the assets; a performance-based contract arrangement; asset protection and maintenance to ensure adequate resources upon contract expiry; minimal environmental impact; and appropriate allocation of financial and operational risk between the partners.

The system consists of two treatment plants located in Port Stanley (along Lake Erie) and Grand Bend (along Lake Huron) with two main transmission mains running from each to the City of London, and a series of secondary systems, all of which will need to be expanded as demand increases. The current combined population served is 420,000 residents, with a combined treatment capacity of 410 million litres per day. The City is especially interested in innovative operational performance and the prospect of new capital investment in the ageing infrastructure. It is expected that transition to private operation would begin in October 2000, and full operation would commence in January 2002.

### Financial Characteristics:
The current operating budget for the entire system is $7 million annually, with a capital budget of approximately $5-$7 million per year.

**Related Website:** http://www.city.london.on.ca/WaterSupply

### Public Sector Contact:
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### Private Sector Contact:
Not yet determined.

# 33 Moncton Water Treatment Facility

**Model:** Build-Lease-Operate-Transfer

### Project Impetus:
The City of Moncton, N.B. wanted to build and operate a new water treatment plant with less capital and operating cost than traditional delivery through the private sector. Quality of the existing water supply had become increasingly difficult to maintain.

### Project Description:
In 1998, the City of Moncton formed a partnership with USF Canada, a private water and wastewater management company, under two contracts. The first was the design, build and finance of a new water treatment facility to serve the 100,000 residents in the City of Moncton and neighbouring towns of Dieppe and Riverview. The second contract was an operations and maintenance agreement and lease for the facility over 20 years.

USF Canada has guaranteed a fixed rate for water charges throughout the contract (it sells the treated water to the City). However, any changes to electrical, chemical or sludge removal costs will be compensated as the market dictates. USF is responsible for all operating responsibilities, including performance standards that meet or exceed the Canadian Drinking Water Guidelines. A detailed repair and replacement schedule ensures that major components are replaced in a timely manner. Savings over the life of the 20-year contract are expected to be $12 million, based on the calculations by the City to run the operation itself.

### Financial Characteristics:
Original capital cost of the facility was $23 million. USF Canada and The Hardman Group financed it internally, with a fixed interest rate over the 20-year contract. The total of the construction and operation contracts is $85 million. USF has the option to re-finance through a third party, with the permission of the City of Moncton, but the interest rate and payment schedule would remain unchanged.

**Related Website:** http://www.moncton.org/english/water.htm

**Public Sector Contact:**
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**Original Partners:** The Hardman Group Ltd.

# 34 Seymour Filtration Project

**Model:** Design-Build-Operate

### Project Impetus:

The Greater Vancouver Water District (GVWD) supplies water to 18 member municipalities in B.C.'s lower mainland. A water treatment program initiated in 1994 identified the need for a new filtration plant at the Seymour Watershed, located in the mountains just north of the City of North Vancouver. The improvements will address the growing population in the area, which is expected to increase by 800,000 in the next 20 years. The Seymour plant will also ensure that water quality meets federal and provincial standards.

### Project Description:

The Greater Vancouver Regional District, the political body that operates the GVWD, conducted public consultations with local residents in the summer of 2000 to solicit feedback on the project's social and environmental impact. In November 2000, the GVWD received submissions from six consortia in response to a call for Expressions of Interest and Statements of Qualifications. The contract will be a design-build-operate under either: 1) a five-year term with the GVWD's option for a 15-year renewal, or 2) a 20-year contract. It is expected that a short-list will be announced in early 2001, and the contract will be awarded by the end of 2001, following a Request for Proposals.

The GVWD does not anticipate issuing an overly prescriptive RFP, allowing for private sector innovation, and each unsuccessful short-listed proponent will be given a $100,000 honorarium for their proposal costs. The Seymour Plant will serve one-third of the Region's water needs, or 800,000 residents, when it begins operation (slated for 2005). Output is anticipated to be up to one billion litres per day. Given the fact that the plant is being built in the Lower Seymour Conservation Reserve, a new ten-kilometre trail is being built in consultation with the public to ensure that safe recreational access is maintained throughout the construction period.

### Financial Characteristics:

The Greater Vancouver Water District will be financing the entire project. Capital and operation costs have not yet been determined.

**Related Website:** http://www.gvrd.bc.ca/services/water/projects/index.html

### Public Sector Contact:

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### Private Sector Contact:

Not yet determined.

**Other Partners:** PricewaterhouseCoopers LLP; Associated Engineering (B.C.) Ltd.; R.W. Beck

# 35 Winnipeg Water Treatment

**Model:** To be determined

### Project Impetus:

The source of the City of Winnipeg's current water supply is Shoal Lake, located southeast of the City. Water is treated with chlorine, and delivered via a 160 km aqueduct to four terminal reservoirs just east of the City. The water is then rechlorinated, and fluoride and orthophosphate are added before it is transferred to three balancing reservoirs adjoining pumping stations located throughout the City. The system serves approximately 650,000 residents with an average throughput of 215 megalitres per day. In 1996, an international review panel concluded that the existing system did not adequately protect customers from a public health perspective, and would not conform to anticipated drinking water guidelines/regulations.

### Project Description:

Following a series of public consultations in the fall of 2000, City Council approved a Water Treatment Program for Winnipeg. A recommended treatment process has been established to meet specified treatment objectives, based on extensive pilot work and preliminary design. Supplementary work to assess evolving technologies such as ultraviolet disinfection and membrane filtration will be undertaken immediately. The City will then finalize the treatment technology and undertake a study to determine how best to deliver the project. The study will consider various public-private options, including design, construction, ownership and operation of the water treatment facility.

In 2002, the City will conduct an Environmental Impact Assessment and apply for the necessary approvals for the project. The Province is then expected to conduct public hearings of the Clean Environment Commission. Design of the facility is scheduled for completion by 2003, with construction of the facility starting in 2004 and operation in the fall of 2006. A $54 million rehabilitation of the existing aqueduct is currently on-going, and is expected to extend its life for at least another 50 years.

### Financial Characteristics:

Total estimated capital cost for a new plant is $204 million, which includes design, construction and environmental approval costs. Operating costs are estimated at $12 million annually. In1993, the City established a Water Treatment Plant Reserve Fund to cash finance $102 million of the project by 2006, and the balance will be financed through long-term debt. As of 1999, 16.5 cents of every dollar residents pay through their water bill goes into the Fund. The City may also apply for monies from the provincial and federal governments.

**Related Website:** http://www.city.winnipeg.mb.ca/interhom/govern/water/

### Public Sector Contact:

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### Private Sector Contact:

Not yet determined.

# 36 Centracare Psychiatric Care Facility

**Model:** Design-Build-Operate

### Project Impetus:

The Province of New Brunswick needed to replace a 150 year-old psychiatric facility with a smaller 50-bed institution at less cost.

### Project Description:

Changes in health care delivery, including smaller institutions, advances in mental health care and balancing program delivery costs with facility operating costs prompted the need for a new 50-bed tertiary psychiatric care facility. The Province developed a unique facility design that utilized clustered living areas and a low-profile exterior, in contrast to the traditional institutional design of psychiatric facilities. Cardinal Pomerleau Inc., a private company specializing in facility construction and property management, was chosen as the financier, builder and operator following a Request for Proposal. It leases the building to the Province under a 25-year operating agreement. The company is responsible for major capital maintenance (e.g. roof replacement, mechanical systems), while the Province covers day-to-day operational expenses.

The Province has the following options:

a) To purchase the facility at the end of year 20 for $2,540,769.
b) To purchase the facility at the end of year 25 for fair market value.
c) To renew the lease for ten more years at a fair market rent which shall not exceed the rent during the initial term.
d) To surrender the premises to Cardinal Pomerleau Inc. at no cost to the Province.

Risks and responsibilities were allocated as follows:

- Developer - financing, construction schedule (penalties for late completion), major capital maintenance, base design construction cost
- Province of New Brunswick - design, daily maintenance, construction cost above base design

By closing the previous 1500-bed facility and using a private partner, the Province was able to reduce construction and operating costs significantly.

### Financial Characteristics:

The capital cost of the facility was $6,425,000, paid for by Cardinal Pomerleau Inc. Operating lease payments are $648,580 annually for 25 years. The company provides the Province with refurbishing and equipment replacement allowances in the amount of $35,000 annually.

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### Private Sector Contact:

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# 37 University Health Network Redevelopment

**Model:** Finance

### Project Impetus:
The University Health Network (UHN), located in Toronto, Ontario, needed to upgrade its hospital facilities, but infrastructure renewal funding was not available from the Province.

### Project Description:
The University Health Network is an umbrella of three hospitals (Toronto General, Toronto Western and Princess Margaret) that were amalgamated by the Province of Ontario in 1998. In September 1998, the UHN announced a major redevelopment plan to demolish several buildings on the Western and General Hospitals, construct new ones and renovate others. In order to fund the initiative, the UHN used a unique vehicle - a private sector bond issue. It allowed the hospital redevelopment to be approved sooner (3 months total) and construction competed faster than through traditional grants-based funding. The latter would have meant an estimated 15 - 25 year project timeline.

The bonds are to be repaid over a 25-year period from annual capital contributions and operating savings achieved through reduced real estate and improved operational efficiencies. The Province did not provide any guarantees to the bondholders concerning operating grants and there is no legal recourse for investors to the Province.

An unprecedented partnership between the Ministry of Health and Long-Term Care, the Ontario Financing Authority, the Ministry of Finance and Scotia Capital Markets allowed this project to occur in such a short time. The Province had to make fast-track changes to legislation in order for this financial model to go ahead.

### Financial Characteristics:
Through a private sector bond issue, the UHN secured $281 million of the $349 million required for hospital redevelopment. The remaining capital came from private sector research partnerships, real estate sales and income earned from bond proceeds during construction. A $25 million contingency fund was established to protect the bondholders and hospital operations in case of financial difficulties. The UHN secured a "AA" bond rating, and with help from the Ontario Financing Authority, the final interest rate was 5.64% (only 20 basis points higher than the Province's rate).

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**Other Partners:** Ontario Financing Authority; Ontario Ministry of Finance; Ontario Ministry of Health & Long-Term Care

# 38 Shouldice Hospital

**Model:** Build-Own-Operate

### Project Impetus:

Dr. Edward Earl Shouldice opened the Shouldice Hospital in Toronto in 1945 to serve the growing demand for specialized repair of abdominal wall hernias.

### Project Description:

Shouldice Hospital is a privately owned, partly publicly-funded institution that has become internationally renowned for its hernia treatment specialty, as well as its clinical and low cost per patient record in relation to general public hospitals. The Hospital has become the subject of several business case studies due to its "focused factory" approach to healthcare, in which the hospital infrastructure and clinical management is specifically concentrated on elective hernia surgery. This allows Shouldice to eliminate the need for extra resources (e.g. radiology, labs) and costs associated with general hospitals.

The Hospital also employs a screening and preparation process in which patients are evaluated for medical conditions and then managed with diet or medications in order to minimize complications. This has resulted in one of the lowest bacterial infection rates in the world. The Hospital incurs a cost of only $24.50 for disposable items following surgery versus the average of CDN$250 to $850 per hernia surgery in the rest of North America. Unlike public hospitals that bump elective surgeries if emergency procedures occur as a higher priority, Shouldice is able to guarantee surgery dates to its 7,000 patients per year, which ultimately reduces the emotional and financial impact on the community.

Shouldice is privately held by shareholders and accountable through a management structure consisting of a Board of Directors, executive committee (with hospital representation), Managing Director and Chief Surgeon. It is required to report to the Ministry of Health regarding financial performance, similar to other hospitals, makes information available annually to the Canadian Institute for Health Information, and is regulated by the Private Hospital Act of the Province of Ontario.

### Financial Characteristics:

Shouldice Hospital's budget for 2000 was $3 million. The Hospital receives a global budget allocation for general hospital operation from the Ontario Ministry of Health, and unlike public hospitals, must return any surpluses back to the Ministry. Under the Private Hospitals Act, it is also not permitted to operate a foundation or conduct charitable fundraising. The Ontario Health Insurance Program (OHIP) provides funding covering medical and surgical services, based on a fee schedule that is universal for doctors in both public and private hospitals across the province. Other revenues are received for patients from other provinces, under the Inter-Provincial Agreement on Health, as well as out-of-country patients who pay for services directly to the hospital. Under a 1996 study comparing the case costs of 25 hospitals providing hernia procedures, Shouldice's per diem costs were up to 70% lower than the average of $825 to $1,000 per day.

**Related Website:** http://www.shouldice.com

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# 39 Telehealth Ontario

**Model:** Service Contract

### Project Impetus:
In order to improve access to healthcare and to help the public make decisions regarding appropriate options for care, the Province of Ontario established a Telehealth Task Force in 1998 to advise on policies required for the implementation and operation of a telecare education and triage/advisory service.

### Project Description:
The Province of Ontario began a pilot telecare program in Northern Ontario in June 1999. Clinidata, a private provider of telephone triage services, was chosen to operate the pilot. Following release of the Task Force Report, in July 2000, the Ministry of Health and Long-Term Care (MOHLTC) issued an RFP for operation of a new 24-hour, seven days a week telecare service in the 905 and 416 area codes (Greater Toronto Area). Clinidata, the successful vendor, signed a 4.5 year contract to operate the telecare service in the Greater Toronto Area beginning in February 2001, and has hired approximately 150 Registered Nurses. The nurses will help callers decide whether they need to go quickly to an emergency room, see their doctor or other community health service provider, or administer self-care at home. These "telenurse practitioners" will have numerous computerized resources available to help them provide health advice, information and referrals to other providers.

Clinidata is responsible for all duties associated with service operation, and is required to provide monthly reports to MOHLTC regarding the number, type and disposition of calls. The Ministry is responsible for promotion and evaluation of the service, and the performance-based contract applies penalties for non-compliance. It is anticipated that the 416/905 rollout will receive approximately 600,000 calls in its first year of operation. By the end of 2001, Telehealth Ontario (as the telecare service will be known) will be made available across the province. While cost savings were not deemed to be the primary thrust behind the program, it is anticipated that telecare will improve access to quality healthcare for patients, increase the options for service delivery, result in more appropriate use of emergency rooms and reduce the burden on family doctors, particularly during evening and weekend hours.

### Financial Characteristics:
The May 2000 Ontario Government budget allotted $45 million for telehealth. The pilot program in Northern Ontario cost approximately $4.9 million, and was funded through the Northern Ontario Heritage Foundation Corp., a non-share capital corporation owned by the Province.

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# 40 Aboriginal Development Program

**Model:** Finance & Operate

### Project Impetus:

The Regional Municipality of Wood Buffalo, located in northern Alberta, has one of Canada's highest proportions of Aboriginal people as a percentage of the entire population. Increased activity in the oil sand industry has had a significant impact in the surrounding First Nations communities. Traditional approaches to concerns from stakeholders proved too difficult, and the Athabasca Tribal Council, a council representing five area bands, took the initiative by developing a strategic plan. The plan later formed the basis of a three-year agreement (the Capacity Building Agreement) between the Athabasca Tribal Council (ATC) and a group of resource industry companies, called the Athabasca Regional Developers.

### Project Description:

The parties involved see the Building Capacity Agreement as an integral component to ensuring the responsible development of the oil sands in the Athabasca region. The Athabasca Regional Developers and the ATC agree that the ATC and member First Nations require the capacity to deal with resource development in areas that they consider to be on traditional lands. The parties identified environmental issues, employment and training initiatives, as well as human and physical infrastructure as key values in the work they undertake.

Goals of the program are:

- to ensure that First Nations people and businesses are well informed of the ramifications of more than $26 billion of new investment in the oil sands
- to ensure that concerns are addressed effectively
- to ensure that First Nations people are well positioned to share fully in the economic opportunity that emerges from the expansion

Some recent projects include a Youth Career Path program that matches education, life skills training and job placements for youth with companies that meet their individual career goals. In the environmental area, four Aboriginal technicians have been trained and hired to represent their respective communities when new oil sands projects are developed. Ten people received educational funding for courses at the Northern Alberta Institute of Technology to become local experts in home maintenance and development of new infrastructure in their home communities. A research partnership with the University of Alberta is conducting an evaluation and inventory of social programs in local First Nations communities to determine their effectiveness.

### Financial Characteristics:

The funding requirement to build community capacity in the ATC and member nations as determined by the ATC/Industry Terms of Reference is in the order of $1.5 million per year. Industry reviews the programs described under these terms and will fund certain programs to a maximum of $850,000 annually. All three levels of government have signed companion agreements with the ATC to provide the remaining funding required.

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# 41 Saskatchewan Multi-Party Training Plan

**Model:** Finance & Operation

### Project Impetus:
In the mid-1990's, the Provincial Government recognized that there were many barriers to people finding employment in Northern Saskatchewan. Expansion in the resource sector offered opportunities, and the government wanted to ensure that a training-to-employment initiative would capitalize on this.

### Project Description:
This project reflects a unique multi-stakeholder partnership between public, private and non-profit organizations. Phase One of the Multi-Party Training Plan began in 1993 as a cooperative, training-to-employment initiative among the province, federal government, Aboriginal agencies, Northlands College, and the northern mining industry. It enables competing mining companies to pool their labour projections and other partners to combine resources in linking training directly to the mineral sector's demand.

Phase Two of the Plan began in 1998, adding all northern Métis and First Nations agencies, a gold mining company, the three major uranium mining companies, and several federal and provincial departments involved in economic development, training and employment. The scope has also been expanded to include: professional, job skill and technical training; retraining of existing employees with new skills; and support to entrepreneurs.

An industry-led Mineral Sector Steering Committee plans and coordinates training under the larger umbrella of the Northern Labour Market Committee, a multi-party north-wide forum for addressing labour market and economic development issues. Participating agencies will share an aggregate total funding of $13 million over five years for the implementation of Phase Two. Cost savings have been achieved through reduced social assistance and EI spending, pooled resources among government agencies, in-kind donations from the mining industry and higher success rates from training due to work placements. To date, the partners have funded 1,500 training seats with 90% of those enrolled of Aboriginal ancestry.

### Financial Characteristics:
The average cost per training seat is $11,639, which is comparable to other post-secondary training programs. The mining industry contributes 50% of the total ($6.5 million), principally in the form of in-kind contributions related to work placements and apprenticeships. The Federal Government provides $2.75 million through funded Aboriginal agencies and training for EI clients. The Province provides $4.7 million including $1.2 million for its share of EI funding.

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**Other Partners:** Northlands College; Human Resources Development Canada; Prince Albert Grand Council; Cameco Corporation; Cigar Lake Mining Corp.

# 42 Alberta Wellnet

**Model:** Design-Build-Finance-Operate

### Project Impetus:
To provide the information infrastructure to support a more integrated health delivery system and because of an under-investment in IT among healthcare professionals in the province and the cost benefits of providing a shared network, the Government of Alberta initiated a partnership with a variety of healthcare organizations and companies to develop an online health information resource.

### Project Description:
Following a competitive process to find private sector partners, the Alberta Department of Health and Wellness signed a 6-year agreement with IBM Canada to provide a range of consulting and technical services to develop Alberta Wellnet. The system is an umbrella for a series of province-wide and regional initiatives to build an integrated health information network in the province. The goal is to facilitate improvements to the delivery of health services to Albertans by improving access to health information. The system is being designed to ensure both privacy and security through a series of user authentications and the ability to "mask" information from particular users.

The users include health authorities and their hospitals, physician offices, pharmacies, the Ministry of Health and Wellness and other healthcare providers. The Pharmaceutical Information Network is scheduled to begin rollout in 2001. IBM is developing an integrated application and investing in enhancing most of the hardware as well as software licenses to the users for a fixed price. Thus, IBM assumes the risk for on-time delivery and cost overruns, while the Province is responsible for getting physicians and pharmacies to use the system. The proposal was reviewed by several independent consulting firms to ensure the pharmacies received the best cost, technology and customer interface possible.

### Financial Characteristics:
Provincial funding for 1999-2000 was $30 million.

**Related Website:** http://www.albertawellnet.org/index.html

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# 43 Atlantic Canada On-Line

**Model:** Design-Build-Operate

### Project Impetus:

The Provinces of Nova Scotia, New Brunswick, Newfoundland and PEI wanted to improve services to their business clients and the public, reduce costs through economies of scale by leveraging a single infrastructure and generate new revenues through a region-wide online network.

### Project Description:

Atlantic Canada On-Line (ACOL) has been operating since November 1997, enabling government clients to quickly retrieve, search, update and register information needed for business transactions or for legislative compliance purposes. Following a Request for Proposals, the Atlantic provincial governments and Unisys Canada Inc. signed a seven-year contract on May 10, 1996. Unisys designed, owns and operates ACOL, while the governments provide the information assets and remain custodians of the data. Joint responsibilities include marketing, pricing and assisting departments in making their databases available.

ACOL is offered through subscription. Clients are issued software, user ID and password enabling connectivity to the ACOL network using Windows or direct Internet. Transaction fees, typically established by government legislation and regulations, are payable through a positive balance account. Deposits are made through electronic funds transfer, electronic cheque, credit card, cheques, or money orders. Fees are directed electronically to government with full financial reporting provided to government and clients. The ACOL business office is responsible for client, transaction, accounting and revenue management. A toll-free, bilingual Client Support Centre is the single contact point for prospective and existing clients for information, registration and assistance.

Services available online include:

- Driver Insurance Abstracts - allows registered clients to search for driver records
- Personal Property Registry - allows both individuals and institutions to record their financial interest in personal property (such as cars, boats and appliances)

### Financial Characteristics:

Unisys invested $10 million in designing and developing the ACOL service. The business model for each service offering is transaction based. Unisys and the government partners share in the transaction fees paid by clients using the service. From its launch in November 1997 until December 2000, ACOL generated gross transaction revenues of $28 million.

**Related Website:** http://www.acol.ca

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# 44 B.C. Justice Integrated System (JUSTIN)

**Model:** Design-Build-Operate

**Project Impetus:**
The inefficiency of information sharing among various justice organizations in British Columbia prompted the Ministry of Attorney General to look at options for an integrated IT platform to share information across the system in real time.

**Project Description:**
The B.C. Ministry of Attorney General and Sierra Systems, a private IT development firm headquartered in B.C., signed a five-year strategic alliance agreement in 1996. The system allows police agencies, Crown Counsel, Court Registry, the Judiciary and Corrections to share and re-use information captured during each stage of the justice process. Data is re-used to produce legal documents, which are electronically signed. Software development began in April 1996 and was deployed through a series of pilot prototypes that tested each application and confirmed user requirements. Overall project management is conducted by the Ministry, while Sierra manages the software development. Sierra offered a payment stream that facilitated development to ensure the project could proceed without delay and a blended rate for their resources, which helped to monitor and contain costs. In return, it receives sole intellectual and marketing rights for the system. The Government will receive royalties from the sale of JUSTIN to other jurisdictions. By March 31, 2001, the system will be available to 8,000 users throughout the province, and information will represent approximately 94% of the criminal caseload.

Improvements have been noted in the following areas:
- data reuse has reduced data entry and improved accuracy
- all agencies now share information through a single consolidated database with real-time access
- trial scheduling has improved dramatically, resulting in cost savings for police witnesses and courtroom resources
- incompatible legacy systems were replaced by a single graphical software suite, meaning the Ministry can respond to legislative changes more efficiently

**Financial Characteristics:**
The Ministry has invested $8.4 million to date for software development, project management and training materials. Sierra Systems has invested approximately $2 million in prototypes, project management and training. A further $3.1 million expenditure is anticipated over the next two years (2001-2002) for upgrading and integration, which are funded through the equivalent cost reduction for data entry and staff overtime.

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**Other Partners:** Municipal Police; RCMP; B.C. Government Branches (Criminal Justice, Court Services, Corrections, Judiciary); Federal Department of Justice; B.C. Ministry of Children & Families; Immigration Canada; Federal Corrections

# 45 B.C. OnLine

**Model:** Operation License/Sale

**Project Impetus:**
The Government of British Columbia wanted to reduce costs and provide a leading-edge one-stop source of online information for a variety of government and Crown corporation data products.

**Project Description:**
The Province of British Columbia began operation of an online data access service, BC OnLine, over ten years ago. It realized that, although the operation was successful, the private sector was better placed to keep the technology current, finance business expansion and market and develop new products. In May 1999, the Government implemented a 10-year operating agreement with MacDonald, Dettwiler and Associates Ltd. (MDA), a BC-based international software systems engineering and land information company, to operate the province's online information service. BC OnLine currently serves almost 8,000 customers (including lawyers, real estate agents, appraisers and environmental consultants). Services include information on property assessments, companies, gas/electrical permits, land titles, manufactured homes, personal property, taxes, wills and site environmental information.

Innovative features of the partnership include:

- shared economic incentives to create new products utilizing data from public and private sources
- rights granted to MDA to develop new government information products, but with government flexibility maintained
- a master service level agreement that specifies service levels that must be achieved by MDA, with escalating penalties for failing to meet standards, ranging from minor financial penalties to default and termination
- a performance-based development fee to MDA and annual technology plan to ensure the system remains state-of-the-art
- a risk-sharing provision whereby, if transaction volumes are below a projected level due to the action or inaction on one of the parties, the responsible party must keep the other whole
- a five-year secondment agreement that gives union employees job security and a periodic choice to permanently move to MDA or return to government
- an effective contract renewal process for both parties, if desired

**Financial Characteristics:**
The Province received $55 million from MDA as a business acquisition fee for the business operation, and retains its annual revenue stream from customers for the purchase of its information products. The Province pays MDA a performance, transaction-based development fee, and the company receives a $1.50 transaction fee from end users for existing products, and a slightly lower transaction fee for future similar products. The Province may receive new fees and royalties from new types of products.

**Related Website:** http://www.bconline.gov.bc.ca/

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# 46 Emergency Services Mobile Communications Project

**Model:** Design-Build-Finance-Operate

### Project Impetus:

Due to increasing obsolescence of radio communications infrastructures and rising maintenance costs, the Ontario Government needed to consolidate and replace its various emergency radio networks with a common network infrastructure based on private sector technical and project financing expertise.

### Project Description:

The Province completed a Common Purpose Procurement process in June 1998 for the consolidation and replacement of five two-way public radio networks. The procurement was significantly different than the standard process because short-listed candidates developed business proposals during a due diligence phase with the Government, rather than the traditional tender and evaluation method. A 15-year design, build, finance, and operate contract was signed with Bell Mobility Radio Inc. The system is the first of its kind involving the pooling of a public safety radio spectrum, and the sharing of public and private radio tower sites as well as other infrastructure assets, resulting in a common network across the province. Moreover, the service has been designed to expand beyond the provincial public safety/emergency services agencies, representing 40-50 thousand users, and to accommodate other network users in the broader public sector (e.g. municipal police/fire agencies).

The partners created a joint project office to lead the development and implementation of the new network. Instead of having to use ageing infrastructure, the Government will now have access to state-of-the-art equipment, which will also allow for increased interconnectivity and interoperability among the various public safety/emergency services agencies operating on a new network service. The shared services approach advanced by the project has also allowed for other synergies to be achieved among the provincial agencies (e.g. equipment and other resource sharing arrangements) that have traditionally worked in "silos."

### Financial Characteristics:

The capital investment in plant and equipment is estimated to be $110 million. The Province will pay $20 million per year over the 15-year contract, without inflation. Efficiencies result from the pooling of technical infrastructure and resources, resulting in cost avoidance for the Province over the life of the agreement, estimated to be $50 million. The savings from the broader public sector in avoiding capital expenditures by joining the network are expected to be significant and in the order of 20% to 30% less than the comparable cost to own and operate an equivalent system.

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**Other Partners:** Ministries of the Solicitor General, Correctional Services, Transportation, Health and Natural Resources; Bell Canada; Motorola Canada Ltd.; MFP Technology Services Ltd.; IBM Canada Ltd.

# 47 Lanark Communications Network

**Model:** Design-Build-Operate

### Project Impetus:

In 1994, Lanark County (located west of Ottawa) began looking for options to deliver advanced telecommunications applications and infrastructure throughout the area. In 1998, the 17 existing municipalities in the County were restructured into nine. This allowed for more streamlined administrative functions as well as easier deployment of a wide area network.

### Project Description:

To provide administrative and operational coordination for the project, a not-for-profit corporation called the Lanark Communications Network (LCN) was formed with membership from local school boards, hospitals, private companies and the County. The first formal partnership with the private sector came in February 1999, when LCN signed a 4-year Memorandum of Understanding with Bell Canada to deploy a high-capacity telecommunications network throughout the County. Bell provides technical expertise and reduced pricing for network connections in both public and private organizations. LCN also formed a partnership with the Centre for Geographic Information Systems, a local service provider and Autodesk to deliver GIS services to customers throughout the County over a new municipal network. The network connects all nine municipalities over a secure high-speed Intranet system.

Other services delivered in partnership with the LCN include:

- Canadian Rural Partnerships - facilitates design of Internet-based applications and partnerships with other communities for agri-business
- Distance Education - development of online courses and multimedia lab at Algonquin College
- Integrated Medical Records & Remote Diagnostics - links local hospitals with a high-speed network, shared patient records, electronic x-ray transmission and remote medical examinations

Over 50 other Canadian communities have approached Lanark County to assist them with similar community networks and application development strategies. LCN, Bell Canada and Nortel Networks are planning to develop an Integrated Community Network (ICN) Institute to train and certify ICN professionals. Consulting projects have also been secured in Argentina, Colombia, China and Italy.

### Financial Characteristics:

As of 2000, total investment in the Network is $12 million. Bell Canada provided $8.5 million, Autodesk Canada contributed $1 million, the Ontario Ministry of Energy, Science & Technology funded $1.5 million, Industry Canada provided $500,000, County and local municipalities funded $300,000 and the Ministry of Agriculture, Food and Rural Affairs granted $200,000.

**Related Website:** http://www.thelcn.on.ca/

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**Private Sector Contact:**
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**Other Partners:** Autodesk Canada; Ontario Ministry of Energy, Science & Technology; Ontario Ministry of Agriculture, Food and Rural Affairs; Industry Canada; Human Resources Development Canada

# 48 Manitoba Government Online Services

**Model:** Service Contract

### Project Impetus:

Due to growing demand by citizens for more convenient and efficient services, the Province of Manitoba spent several years redefining how it would deliver eGovernment applications. It recognized that the private sector could bring expertise and cutting-edge technology to the table.

### Project Description:

In 1997, the Province signed a five-year agreement with IBM Canada Inc. for delivery of electronic services across several departments (Consumer & Corporate Affairs, Family Services & Housing; and Education & Training). What became known as the Better Systems Initiative (BSI) launched eGovernment services through a central website. Under the agreement, IBM provides hardware, application development, project management and integration services. The company has first right of refusal for any new applications the government wishes to develop and can subcontract services to other vendors. A key directive of the initiative was that all services must be open, flexible and scaleable. Another distinguishing feature is interactivity, allowing users to retrieve information and complete transactions online in real time.

The system consists of the following five major services, which were deployed to the Internet as of 2001:

- The Personal Property Registry - records personal property as security for a loan or collateral
- Land Titles Survey Index - a searchable database that enables a list of plans and deposits to be retrieved through a Dominion Government Survey search
- The Human Services Guide - describes services, eligibility information, and contact numbers for services or referrals
- Subsidy Eligibility Estimator - estimates the family fee and the amount of child day care subsidy for a four-week period for a Manitoba family choosing licensed child care
- Student Financial Assistance - general information about government financial programs (e.g. loans and bursaries) as well as an on-line capability to apply for financial assistance

The benefits of the partnership for the government have been a greater understanding of general and IT-specific project management, and IBM was able to provide expertise to address issues that would not have been readily available in the government. IBM benefits from the experience gained in a large multi-faceted contract and has enhanced the government service skills of its staff. Manitoba has been consulted by several domestic and international organizations as a model of eGovernment delivery.

### Financial Characteristics:

Project costs are estimated at $137 million, with funding allocated yearly based on specific deliverables. The project uses a self-funding model where departments coordinate their improvements and system development efforts, sharing expertise, services and technology. This reduces the cost of developing new technologies and enables a seamless interface to citizens.

**Related Website:** http://www.direct.gov.mb.ca

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# 49 Nova Scotia TeleHealth Network

**Model:** Operation & Maintenance

**Project Impetus:**
The Province wanted to reduce health costs, provide care closer to home and offer better access to continuing medical education in remote locations.

**Project Description:**
The project linking all 42 healthcare facilities in Nova Scotia was completed in September 1999, making it the first province-wide network in Canada. The TeleHealth Network transmits medical data, video images and audio between doctors or other health care workers at two or more locations. It also allows doctors and other health care workers to conduct face-to-face consultations while working in different communities. Nurses, doctors and others can use the network to participate in continuing medical education sessions from remote locations.

Costs savings will result from improved clinical outcomes, reduced travel time by healthcare professionals and reduced mailing costs for records and x-rays. It is also expected that improving support to doctors in rural areas will improve physician recruitment and retention. In 1999/2000, the system supported 410 consultations, 16,000 x-ray cases, 1,031 education sessions and 332 administrative meetings.

TecKnowledge Healthcare Systems Inc., a private IT company specializing in healthcare solutions, has been operating the now province-wide system since 1997 under an operating contract. A new Request for Proposals is targeted for completion in 2000-2001. The outcome is expected to be a more detailed partnership arrangement with the private contractor. Responsibilities will include call centre support, maintenance and upgrades, training and system management. The proponent will be subject to a detailed service agreement.

**Financial Characteristics:**
Total cost of the network was $8 million, funded by the N.S. Department of Health ($2.6 million) and the Canada/Nova Scotia COOPERATION Agreement on Economic Diversification. The operating budget for 1999/2000 was $1.9 million from the Department of Health, not including staffing and resources and each telehealth facility.

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**Other Partners:** MTT; Dalhousie Medical School; Atlantic Canada Opportunities Agency; Nova Scotia Department of Economic Development & Tourism

# 50 Ontario Data Services Improvement Program

**Model:** Build-Own-Operate

### Project Impetus:

In 1998, the Ontario Ministry of Energy, Science and Technology (MEST) commissioned a study to examine the existing state of telecommunications and information services available throughout Ontario. The study identified several infrastructure gaps, particularly in the more rural areas of the province. In 1999, the independent review panel of the Telecommunications Access Partnership program (TAP), a provincial program to fund Information Highway initiatives, recommended that the Ministry provide funding for the Data Services Improvement Program.

### Project Description:

The main goal of the Data Services Improvement Program (DSIP) was to upgrade 306 telephone exchanges across Ontario to the Special Services Digital Network (SSDN) standard, which is a universal measure for high speed voice and data infrastructure. DSIP itself does not provide fast access to the Internet, but rather lays out the basic infrastructure that will improve access to such services across large parts of the province. The system will enable video-conferencing (for telehealth, distance learning, and commerce), as well as data networking for business and public sector institutions. The upgrades will also allow local Internet Service Providers to establish operations in new markets on equal footing with their urban counterparts.

The project involved several partners:

- Bell Canada
- Ontario Telephone Association – an association of local independent telecom companies
- 20 local independent telecom companies
- Regional Networks for Ontario – a not-for-profit corporation whose membership includes most community/regional networks across the province
- Ontario Rural Council – an association of 20 Ontario groups dedicated to economic improvement

The Ontario Rural Council and Regional Networks of Ontario, in partnership with the ministry and the private sector partners, staged more than 30 workshops and regional meetings across Southern Ontario during 2000 to work with communities to identify how they can best take advantage of the new level of services. Bell Canada and the local independent telephone companies provided engineering design and infrastructure upgrades to their systems. The upgrades took place between October 1999 and October 2000.

### Financial Characteristics:

The total project cost was over $13.2 million. The Province invested $4.2 million and the private sector invested $9 million in the project. At the end of 2000, the Telecommunications Access Partnerships program had funded 35 projects. Total TAP project investments by the Ontario government and the projects' partners amounted to $100 million.

**Related Website:** http://www.networks-ontario.com

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# 51 Operation Online

**Model:** Operation

### Project Impetus:

In 1995, a task force was appointed to develop an Action Plan for the information technology (IT) sector in the Province of Newfoundland and Labrador. The goal was to increase competitiveness, innovation and knowledge-based industry in the province. The task force recommended the establishment of a public-private organization to carry out the strategies contained within the Action Plan.

### Project Description:

Operation ONLINE was officially launched in November 1996. The organization is a not-for-profit corporation led by a private sector-dominated board of directors, established to advance growth in Newfoundland and Labrador's information technology sector. Its mandate is to provide leadership and investment in IT as a catalyst for provincial economic renewal and growth. Operation ONLINE's activities involve partnering and business development, accessing national and international markets, promotion and awareness, building human resources and spurning economic growth in other sectors. Areas of particular focus include distance education, new media, telehealth and e-business. The brokering of strategic partnerships locally, nationally and internationally, with both public and private entities, has been successful in developing local expertise and bringing new investment to Newfoundland and Labrador.

Some major projects initiated by Operation ONLINE include:

- Partnering with Sun Microsystems of Canada Inc. on a centre to develop business opportunities in Java technology and network computing
- Establishment of a Digital Animation Centre in the public college in partnership with Silicon Graphics Canada.
- Facilitation of a local consortium (including Siemens Business Services) to deliver a wireless home healthcare application
- Creation of an e-business portal site and online training programs for small and medium-sized enterprises to capitalize on e-business opportunities

### Financial Characteristics:

Operation ONLINE is funded over five years through a $10 million investment from the Canada/Newfoundland Agreement on Economic Renewal. The company has obtained investment from companies in the form of training, hardware and in-kind support.

**Related Website:** http://www.online.nf.ca

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# 52 Publications Ontario On-Line

**Model:** Operation & Maintenance

### Project Impetus:

Publications Ontario wanted to improve customer service and access to the Province's publications and documents with an e-commerce application. It also wanted to demonstrate leadership in the area of electronic services.

### Project Description:

Publications Ontario is responsible for distributing all of the Government of Ontario's public access documents. Traditionally, this had been through their retail outlet in downtown Toronto or via telephone orders. In 1997, when Publications Ontario decided to go ahead with an e-commerce application, Internet commerce was fairly novel and the agency was essentially creating new policy for online government services.

The first component developed was Enhanced On-line Catalogue Ordering System (EOCOS), which is used by more than 500 libraries across Ontario to order over 10,000 government publications directly. Since public libraries are entitled to one free copy of every Government publication, the system keeps track of which are "entitlements" and which are charged orders. Using a similar model, the project was expanded to an Internet storefront allowing the public to browse abstracts of all the publications and make purchases online with a credit card. Along with documents for purchase, the system also provides links to free documents that are available on other Ontario Government websites. The website notifies users of the inventory status of documents by linking to the fulfillment department at Publications Ontario.

Web Front, a Toronto-based web design company, was chosen as the website developer and is a vendor of record for the project's on-going operation. It receives a per diem for operation and maintenance of the website and database application. Web Front and the Royal Bank were one of the few suppliers offering secure online transaction solutions when POOL began. Web Front has used the POOL website model to develop websites for Ontario Government Stores, including the Ministry of Natural Resources.

### Financial Characteristics:

The Province's cost (then under Management Board Secretariat) for developing the library ordering system and public online ordering system was $30,000. Annual savings are approximately $75,000 as a result of reduced printing and mailing costs for paper ordering and inventory control. Total publication sales since opening in 1997 are $1.6 million.

**Related Website:** http://pubont.stores.gov.on.ca/pool/

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**Other Partners:** CyberCash; Royal Bank; Web Front Communications Inc.

# 53 Saskatoon Tax Management System

**Model:** Design & License

### Project Impetus:

In the mid-1990's, the City of Saskatoon began looking for a tax management application that would streamline tax data and incorporate an automated billing function. When it could not find an appropriate system in the marketplace, city staff decided to find a contractor to design a tailored application.

### Project Description:

In 1997, the City signed an open-ended agreement with Sierra Systems Group, a private IT systems integration firm, to develop a management application for property tax processing. The software tracks the assessed values of over 75,000 households, applies the mill rate and generates customized tax bills. The application also has the ability to keep track of customers and is integrated with the City's revenue collection system. The City was responsible for converting its existing data over to the new system, as well as providing a data model and reporting structure. Sierra provided all the source code and provided systems consultation throughout. A relational database houses the information at the back end and the software uses a graphical interface, similar to other in-house applications.

The agreement between the two parties was very open-ended, without a lot of restrictive specifications. This allowed the partners to innovate as the project developed and also led to an on-going royalty agreement. Based on the fact that the software was the first of its kind for Sierra, the City assigned rights to the company to market the application to other municipalities in return for a share of the sales. After developing the software to replace the old system, the City assigned rights to Sierra Systems to market the computer software to other municipalities. So far, Saskatoon's Tax Management System has been successfully marketed to Regina, Moose Jaw, Winnipeg, Prince Albert, Kitchener and Oshawa. The City has entered into a similar contract with Sierra for the development of the new Utility Billing System, which operates similar to the tax system, and is used for electric, water and sewer customers.

### Financial Characteristics:

The Corporate Information Services Department has recouped most of the cost of its own tax management system through royalties on sales to other municipalities. Saskatoon received $40,000 in royalties from the sale to the City of Winnipeg alone.

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# 54 Sault Ste. Marie Innovation Centre

**Model:** Service Contract

### Project Impetus:

In 1998, the Province of Ontario hosted a series of Innovation Summits across the province to encourage communities to invest in information technology and work with the private sector to improve government services. In part as a result of Algoma Steel's downsizing in February 1999, the City of Sault Ste. Marie fast-tracked their plans to develop an Innovation Centre, which would encourage private sector expertise and government service improvements in the area using IT.

### Project Description:

The Sault Ste. Marie Innovation Centre officially opened on November 2, 2000 as a not-for-profit corporation. Although still in its development stage, the Centre will expand the area's capacity to provide both IT consulting and solutions to public and private sector organizations throughout the Algoma District. EDS Canada functions as the IT integrator for the Centre, providing both consulting services and applications that will be used for future projects. Revenues for the Centre are expected in three areas: 1) partnering in the sales of products and services 2) business incubation in return for future revenues, and 3) provision of office space to IT start-ups, with a three-year lease of escalating payments.

The first service area of the Innovation Centre, the Integrated Geomatics Service (IGS), has been established with EDS as the project manager. Other services to be developed include IT solutions and administration; integrated health care technology; business development and IT support for new companies; development & implementation of call centres; and the Natural Resources Renaissance Network (NRRN), which focuses on bringing technology and innovation to the resource-based industries in the region.

To date, the IGS has signed about $3 million dollars in multi-year contracts with the City of Sault Ste. Marie and the Sault Ste. Marie Public Utilities Commission. The IGS will provide a complete GIS solution to pinpoint problems, assess damage and improve response times in areas such as watermain breaks. The Centre is also working with Bell Canada to implement a call centre development strategy that will attract both large call centres users as well as niche providers, such as healthcare providers, that will cluster around specific IT applications.

### Financial Characteristics:

The Centre received a $1 million start-up grant from the City, $1.2 million from the Ontario Ministry of Energy, Science and Technology, $300,000 from Human Resources Development Canada and several donations in kind from EDS Canada. The goal is for the Centre to be self-sustaining within two years.

**Related Website:** http://www.ssmic.com

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# 55 Smart Choices

**Model:** Finance & In-Kind Service

### Project Impetus:
In 1998, the Federal Government announced the creation of the Smart Communities Panel to advise the government on how to create a world-class demonstration project in each province, in the North and in an Aboriginal community by 2000. The projects were to show how information and communication technologies can be harnessed by communities to support economic development and to enrich community life.

### Project Description:
The cities of Coquitlam and Port Moody, B.C. formed the demonstration project (known as "Smart Choices") for B.C. under a not-for-profit corporation along with the local school board and Douglas College. The goal of their initiative is to encourage greater public use of the Internet and provide single-window Internet access to government and community services.

Smart Choices has five key projects:

- A Community Portal – unified Internet access to community services and information
- Learning Linkage – fosters a continuous learning environment for all citizens, demystifying technology and developing links between parents and their child's classroom
- Safety Net – provides information related to personal safety by linking residents and businesses to community policing offices, as well as health and support services
- Business Choices – attracts local business investment by providing economic and community asset information over the Internet; business and community centre will help develop, expand and retain small businesses and match employment opportunities to available skills in the community
- e-Z Community Services – access to government and community services through interactive registration and payment system for leisure, cultural educational and municipal services

### Financial Characteristics:
Smart Choices attracted commitments of $4.6 million from Industry Canada, $1.5 million from the City of Coquitlam and $375,000 from the City of Port Moody, as well as significant in-kind contributions from the cities, private and community organizations. Partnership discussions are proceeding with large private-sector firms that will bring in additional resources and in kind contributions.

**Related Website:** http://www.smartcommunity.bc.ca

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**Other Partners:** Class Software Solutions; School District 43; Douglas College; Human Resources Development Canada; Simon Fraser University; business associations; arts organizations; language and multi-cultural organizations; non-profit societies

# 56 The electronic Child Health Network

**Model:** Finance & Procurement

### Project Impetus:

In order to improve health services for children and their families, The Hospital for Sick Children in Toronto decided to forge strategic partnerships with four other healthcare organizations in the Greater Toronto Area. The result was an electronic information-sharing network known as the electronic Child Health Network (eCHN).

### Project Description:

The goal of eCHN is to ensure children's health information is available quickly, easily, and securely wherever the patient seeks care. The Hospital for Sick Children (HSC) partnered with IBM Canada, based on its expertise in software and systems configuration, for a three-year pilot project beginning in 1997. The greatest challenge was designing a system that would link disparate systems from five healthcare providers. IBM provided free consulting services for one year, project financing and the server infrastructure. HSC provided funding to link the systems as well as staff resources for design and implementation. The Ontario Ministry of Health has been a major funding source and consultant.

The three major components of The electronic Child Health Network are:

- Your Child's Health - an information website on child health for parents and children
- Practitioner Online Forum - a professional development tool for healthcare providers
- Health Data Network - an electronic network that links healthcare facilities, enabling them to coordinate and share patient information

The pilot stage of the project is now complete, and the system will be expanded to seven more healthcare providers over the next year. Each member will pay an annual membership fee to cover operating costs. Cost savings are expected from several increased efficiencies: tests will not have to be repeated, care can be given closer to home, health information will be available instantaneously and parents will have ready access to reliable prevention information through the Internet. The system also has the potential to include telehealth so physicians in remote areas will benefit from access to current health information and additional resources. IBM believes that this innovative model will have export potential throughout Canada and internationally.

### Financial Characteristics:

The initial $15 million cost of implementing the three-year proof of concept stage was shared by HSC, the Ontario Ministry of Health and IBM. Recently, the Ministry has provided a further $4 million to expedite the expansion of the network over the next two years.

**Related Website:** http://www.echn.ca/

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**Other Partners:** Centenary Health Centre; St. Joseph's Health Centre; Orillia Soldiers' Memorial Hospital; Saint Elizabeth Health Care

# 57 Consolidated Clothing Contract

**Model:** Service Contract

### Project Impetus:
The Department of National Defence (DND) wanted to consolidate the inventory management of all uniform clothing with one supplier to improve efficiencies and reduce costs.

### Project Description:
Until this program was implemented, DND had to contract for each item of clothing separately, resulting in procurement lead times up to 400 days. Following a competitive bidding process, Logistik Unicorp was selected as the consolidated manufacturer and distributor under a five-year contract, beginning in 1996. As a result, it became responsible for approximately 500 generic items and over 4,000 separate NATO stock numbers. DND also transferred an existing clothing inventory valued at $80 million to Logistik's facilities. System improvements have meant that 98% of orders are now shipped within 17 days. The introduction of an automated ordering system, an improved reporting system and adequate inventory on hand has contributed to this success.

Risk sharing includes guaranteed quantities, a buy-back agreement for obsolete items and a buy-back based on usage at conclusion of the contract. A customer service survey showed 89% satisfaction with the new system and changes were made immediately to areas needing improvement. The project created 150 jobs in the private sector and sustained a further 2,175 existing jobs. DND was able to reassign the personnel that previously worked on clothing distribution.

The success of the program has prompted DND to consider introducing electronic ordering for all Canadian Forces members. The partners have also designed a similar electronic inventory ordering system for 60,000 cadets across Canada, following a successful pilot, which has since evolved to an Internet ordering system.

### Financial Characteristics:
The value of the contract totals $107 million over 5 years. Logistik carries over $5 million in raw materials and finished goods. Estimated savings over the life of the agreement are $78 million.

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# 58 Downtown Commercial-Law Court Project

**Model:** Build-Own-Operate

### Project Impetus:
The City of Chilliwack, B.C. is predominantly a farming community, and provincial legislation includes restrictive development policies about building in areas outside the city limits. As a result, the City has focused on the downtown core to revitalize economic development and encourage retail and commercial activity. The City approached the Province to pursue avenues for joint funding and possible building partnerships. They decided that a law court combined with commercial/retail space, public plaza and clock tower would provide an economic stimulant in the downtown area, while achieving economies of scale.

### Project Description:
The City of Chilliwack issued a Request for Proposals for the design, building and ownership of the "Five Corners Project," which will consist of a 32,000 square foot courthouse, and a three-story, 18,000 square foot commercial/retail building. The City, through its private corporation Chilliwack Economic Partners Corporation, and the B.C. Building Corporation will together lease 15,000 square feet of the commercial/retail space with the remaining 3,000 square feet being offered to local business at fair market values.

Negotiations with Van Maren, a local private construction firm, were completed in January 2000 and construction is expected to commence in March 2001. The building's design will incorporate a heritage look in keeping with architectural features of the 1920's. Van Maren is designing the entire project, subject to review by the Design Review Panel of the City. The law courts building, the commercial/retail space, the public plaza and the clock tower are targeted for completion in March 2002.

### Financial Characteristics:
The value of the project is estimated to be in excess of $10 million. The Province has committed $7.5 million in cash and the City has assembled and committed the land value.

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### Private Sector Contact:
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**Other Partners:** B.C. Building Corporation

# 59 Ontario Correctional Facility Modernization

**Model:** Design-Build; Operation & Maintenance

**Project Impetus:**
In 1996, the Government of Ontario began a major effort to expand, retrofit and build new adult and young offender corrections facilities throughout the province. The initiative includes partnering with private companies as well as other government and non-profit organizations for the delivery of corrections facility operations.

**Project Description:**
Highlights of the major projects occurring across Ontario include the following:

**Central North Correctional Centre (Penetanguishene)**
The construction of this new 1,200-bed facility began in May 1998, and is slated for completion in spring 2001. The building design for this institution and the Central East Correctional Centre are similar. The government is pursuing a public-private partnership for the operation of the Central North Correctional Centre. The RFQ was issued in August 2000 and closed in October 2000. Following a comprehensive review of the submissions, the RFP was issued to the qualified bidders. Provided a proposal is received that meets the government's high expectations, it is expected a successful partner will be identified in early spring 2001. A five-year contract is anticipated.

**Cook Chill Food Preparation Centre (co-located with the Maplehurst Correctional Complex)**
The Cook Chill Food Preparation Centre is part of an extensive expansion project at the Maplehurst Correctional Complex. The province will be issuing an RFP for the operation of the Cook Chill Food Preparation Unit in winter 2001. It will serve meals to inmates and staff at the Maplehurst Correctional Complex, the Central North Correctional Centre (Penetanguishene), the Central East Correctional Centre (Lindsay) and other correctional institutions.

**Young Offender and Adult Strict Discipline Facilities (throughout Ontario)**
The Rideau Correctional and Treatment Centre in Merrickville is scheduled for decommissioning in Summer 2002. Plans are to renovate the existing facility for the purpose of creating a new strict discipline facility for young offenders. A second new strict discipline facility is planned for Southwestern Ontario at a site yet to be determined. Both are being considered for design-build and/or operation with private sector involvement. The government has also announced plans for a new strict discipline facility for adult offenders at a site in the Near North region. A public-private partnership opportunity is planned for this facility. The Government will continue to maintain strict legislative control over all of Ontario's correctional facilities, and intends to set and enforce results-based performance standards.

**Financial Characteristics:**
Total expenditures at Maplehurst total $89 million. Estimated construction costs for the Central North Correctional Facility are $85 million.

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**Private Sector Contact:**
Not yet determined.

# 60 ByWard Market Building Revitalization

**Model:** Lease-Develop-Operate

### Project Impetus:

The City of Ottawa wanted to reintroduce specialty food retail in the city-owned ByWard Market Building given that it needed renovations and was operating at a loss. Since renovation and operation costs were too high for the City to bear, it looked to the private sector for a long-term partnership.

### Project Description:

The ByWard Market Building Revitalization Group (BMBRG) is a partnership of five business people who have a stake in the market, including an architect, builder, property manager, restaurateur and property owner. Under the 30-year lease, BMBRG pays the City a portion of the rent it receives from tenants.

The City's commitment to maintaining specialty food retail in the Building made the long-term profit projections limited and financing was challenging for BMBRG. However, the Building has proven to be a catalyst for development in the area with increased sales reported by outdoor market stands around it. The Building is also fully leased, and ground floor square footage increased by 300%.

The City reports that it now has more time and resources to spend on marketing the historically and culturally significant ByWard Market area. The number of specialty food retailers in the Building increased to its 1983 level of 32, which fits with the City's Strategic Plan for the area and ensures a viable mix of retail uses.

### Financial Characteristics:

BMBRG invested over $2 million in the renovation, with an additional $2 million from tenants for retrofits. The City of Ottawa receives rent on a sliding scale from 5% of the first $200,000 in annual net rent to 50% of any annual net rent above $300,000. Annual net rents for 2000 are estimated to be $324,000, of which the City would receive $37,000. Prior to the renovation, the ByWard Market Building was operating at a loss of $100,000 annually.

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# 61 Deerfoot Business Park (Calgary)

**Model:** Finance

### Project Impetus:
The City of Calgary owned 59 acres of unserviced land, but no capital budget or staff resources to develop the land. It wanted to encourage light industrial/office use outside the city core and capitalize on the strong real estate market.

### Project Description:
In March 1998, the City partnered with a reputed local developer, Remington Development, to jointly develop an industrial-commercial park in suburban Calgary and share in the proceeds. Before proceeding with development, a formula was calculated to ensure that both the City and Remington received the proportionate number of lots to their investment. First, a "Swing Lot" was assigned in the original lot distribution. Following verification of actual development costs, a pro-rated interest in proceeds from the Swing Lot was assigned to each party. Each party was then provided with a number of serviced lots proportionate to their contributions.

Co-management throughout the project ensured that the City's interests were secured. The City held title to the land until servicing was complete in December 1998, and a letter of credit from Remington ensured it fulfilled its development responsibilities.

Industrial land was serviced and sold in 16 months versus the minimum 36 months if the City developed on its own. To date, over $60 million in building construction has been completed. The legal framework established with the project has reduced the timeframe of subsequent public-private ventures for the City.

### Financial Characteristics:
The City invested $3.8 million worth of unserviced land and Remington invested $5.3 million for development costs. The net gain for the City (after deducting the investment interest earned from selling the land as is) was $997,000, which equalled a 25.5% ROI. Actual proceeds to the City are in the range of $4.5 million since the true cost of the land was far less than the market value used to establish the City's share of the joint venture. The City will also receive $1.3 million annually in additional tax revenue.

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# 62 Maple Ridge Downtown Development

**Model:** Build-Lease-Operate

### Project Impetus:

In the late 1990's, the District of Maple Ridge (located 40 km east of Vancouver) conducted a series of studies and public consultations concerning redevelopment of the town centre. There was strong public support and a financial impetus to build new public and private buildings without recourse to the tax base. The B.C. Government had also indicated that few funds would be available for municipal infrastructure projects in the coming years.

### Project Description:

In 1998, Maple Ridge Town Centre Development Ltd. approached the town to develop the downtown area, and agreed to provide funding for planning architectural reviews, traffic studies, environmental impact analysis and economic feasibility studies. In return, the company along with other firms in its consortium, would receive the contract to build and renovate several buildings. The town was clear that it wanted to transfer some risks to the private sector for the project as well as minimize its financial obligations.

The components of the redevelopment include:

- expansion of existing library from 15,000 square feet to 40,000 square feet, adding full accessibility, better parking and improved lighting
- a new 43,000 square foot arts centre with a 500-seat theatre, 150-seat studio, gallery and gift shop
- a 33,000 square foot addition to the leisure centre, adding a pool, waterslide and fitness centre
- a new 15,000 square foot Youth Centre, connected to the Leisure Centre
- a new seven story, 140,000 square foot office building with 50,000 square feet of commercial/retail space on the ground floor
- a new six story, 100-room hotel and 1,000 new underground parking spaces
- an expansion and refurbishment of the existing Memorial Park

The District of Maple Ridge retains ownership of all the land (with the exception of that under the hotel and office building) and will enter a 5-year lease with the developer for the library, youth centre, leisure centre expansion, parking, and some office space. At the end of the lease, the District can renew it, purchase the assets or walk away.

### Financial Characteristics:

The total capital costs for the project are $50 million, which were set at a fixed price. Annual net (new) operating lease payments from the District will total $2 million, with $600,000 and $156,000 in annual payments for the library and youth centre respectively. The arts centre will be operated by the Arts Council under a fee for service contract with the District, with revenues from ticket sales and concessions. A profit-sharing agreement will see the developer receive a capped 10% return on the capital cost investment and then split profits 40/60 with the District.

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# 63 Toronto Waterfront Revitalization

**Model:** To be determined.

**Project Impetus:**
Toronto is one of the few major cities in the world that has not undergone a major refurbishment of its docklands in recent years. Although not the driving force, the 2008 Olympic bid is also seen as a catalyst for development along the city's waterfront. Properties are owned by the federal, provincial and municipal government as well as the private sector, making a special-purpose authority a key factor in developing and implementing the project.

**Project Description:**
The three governments established the Task Force on Waterfront Revitalization in November 1999. In the spring of 2000, the Task Force issued its report with recommendations on the scope of renewal along the 46 kilometres of waterfront, particularly in the central waterfront. The area includes 2,000 acres of mostly under-utilized land that is characterized by polluted soils, flooding and water quality problems.

The Task Force recommended a three-part business plan:

1. A Development Plan that includes new housing and work areas for 100,000 people, alternatives to the existing Gardiner Expressway viaduct, hundreds of acres of new parks and public spaces, new transportation infrastructure, environmental remediation and reconfiguration of the mouth of the Don River.
2. A Financial Plan that estimates and integrates costs, revenues and funding sources over a 15-year period.
3. An Implementation Plan that establishes a Toronto Waterfront Authority to manage renewal over 15-20 years and be terminated upon completion.

A main premise of the revitalization would be to create an environment that attracts private investment and spurs economic activity. Private sector sponsorship is also a key contingent for the Olympic bid venues. The three governments are currently investigating the options for a development corporation to oversee the project and the City is preparing a Central Waterfront Official Plan. It will be presented to Council in the spring of 2001, and will be followed by public consultations. It is anticipated that private sector participation in land development and infrastructure construction would be tendered through a series of RFP's over the next decade or more.

**Financial Characteristics:**
Total project costs for the initiative are estimated at $5.2 billion for infrastructure, remedial works, transportation and management. The additional costs of building development by the private sector are calculated to be $7 billion. Initial intergovernmental funding of $1.5 billion was committed in October 2000, and will be offset by future revenues expected from the sale or lease of lands.

**Related Website:** http://www.city.toronto.on.ca/waterfront/index.htm

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**Private Sector Contact:**
Not yet determined.

# 64 Belledune Port Authority Refinancing

**Model:** Finance

### Project Impetus:

When management of the Port of Belledune, N.B. transferred from the Federal Government to a local Port Authority, an existing loan from the federal government had to be refinanced through the private sector and the balance was to be written off.

### Project Description:

In 1998, the Canada Marine Act stipulated that management of all ports operated by the Canada Ports Corporation was to be changed. Management of the Port of Belledune transferred to a local, independent Authority. With it came the responsibility for financing a $38 million loan from the federal government.

The financing of the Belledune Port Authority (BPA) was unique because it uses a hybrid lease securitization where terms typically used in the private sector were adapted to the public-private financing. Since the lease cannot be assigned as federal government property, security was taken on the revenue streams only from tenants at the Port, not the lease itself. The Trust Notes also contain covenants that allow the Port Authority wide latitude in day-to-day operations, versus the restrictions often associated with traditional bank financing.

The private institutional lenders and the BPA equitably share the benefits of the agreement. The former obtained an attractive higher fixed-rate return on their investment and the BPA received a significantly lower fixed interest rate because the covenants were shared with NB Power, a large tenant at the Port.

### Financial Characteristics:

The federal loan of $38 million was refinanced through the issuance of $27 million in Secured Trust Notes at 7.535%. These are fully amortizing with equal quarterly blended principal and interest payments. The Notes are secured by an assignment of revenues from the lease with NB Power. A debt service reserve fund and major maintenance reserve fund were set up to ensure adequate financial resources for maintenance at the coal wharf.

**Related Website:** http://www.portofbelledune.ca/

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**Other Partners:** PricewaterhouseCoopers Securities Inc.; NB Power

# 65 Goderich Harbour Revitalization

**Model:** Buy-Build-Operate

### Project Impetus:

While under the Federal Government's control, port fees for users were very high, and infrastructure investment was not keeping pace with other markets. The Town of Goderich, Ontario, wanted to own the port and set up a partnership that would ensure the long-term competitiveness of port users as well as pay for the cost of infrastructure improvement from user fees, rather than from the Municipal tax base.

### Project Description:

In 1996, the Federal Government began divesting its ownership in regional ports across the country. The Town of Goderich was interested in buying its port, but did not want to use taxpayer funding for the purchase or much-needed capital improvements. After four years of negotiations with Transport Canada, the Town and users were able to lower the original appraisal of $3.5 million to purchase the Port due to the fact that a total of $30 million was required over the next 15 years for infrastructure rehabilitation. The final purchase price agreed on was $650,000. The Town then conducted negotiations with Sifto Canada Inc., the port's largest user, to establish a non-profit port manager (Goderich Port Management Corporation) with Board representation from Sifto. Sifto also acquired the land on which its salt mine is located from the Town at fair market value. Commencing in January 2000, the GPMC paid the Town for its original capital investment and other costs incurred to negotiate the purchase. User fees were also lowered in comparison to those charged by Transport Canada in order to keep the port more competitive with others in the area.

The advantages of this partnership for Sifto and other port users has been a substantial savings in user fees, which could total $1 million per year, as well as long term improvements to the infrastructure. The Town was able to purchase an asset without any taxpayer funding and has a growing account for improvements to the beach area around the port.

### Financial Characteristics:

To fund long-term capital investments, the Town and GPMC established a trust account of $1.4 million per year from user fees at the port. In addition, the Town created a Waterfront Reserve Fund to improve beaches and infrastructure around the port. The GPMC contributes $135,000 to the fund annually with an additional $40,000 from leases held by the Town.

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# 66 St. Lawrence Seaway

**Model:** Operation & Maintenance

### Project Impetus:

Operational control of the Canadian portion of the Seaway was officially transferred from The St. Lawrence Seaway Authority under federal control to The St. Lawrence Seaway Management Corporation, a not-for-profit entity, in October 1998.

### Project Description:

Under the agreement with the Federal Government until March 31, 2018, The St. Lawrence Seaway Management Corporation (SLSMC) operates and maintains leases, licences, bridges, tunnels and locks along the Seaway. The Government of Canada continues to own the infrastructure and to act as regulator. The Seaway itself is 3,700 kms. long and serves 15 international ports and 50 regional ports (including more than 800 docks/terminals) located in eight American states and two Canadian provinces. The SLSMC manages and operates a series of 13 locks in two sections - the Montreal/Lake Ontario Section and the Welland Canal. The Federal Government approved a five-year business plan in 1998, stipulating that annual toll increases would not exceed 2% over the following five years and infrastructure renewal expenditures would be at least $126 million. The SLSMC operates the Seaway in conjunction with the U.S. Saint Lawrence Seaway Development Corporation.

In 1998, the SLSMC invested significant capital in information technology systems, including a state-of-the-art traffic management system, and plans for the next year include an e-commerce component for users as well as online traffic and weather information. Planning has also been improved through a series of strategic initiatives designed to infuse a more flexible management system throughout the organization. The SLSMC is governed by an eight-member Board, composed of Seaway users (represented by five appointed board members), and three appointees from the Federal Government, Province of Quebec and Province of Ontario.

### Financial Characteristics:

In fiscal year 1999/2000, the SLSMC spent $23.4 million on asset renewal and amortization. Revenues totalled $76 million, which were on target with operating budgets set in 1998, and were $7.6 million less than the previous fiscal year, primarily due to lower iron and steel shipments.

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# 67 CBC Building Management

**Model:** Operation & Maintenance

### Project Impetus:
The Canadian Broadcasting Corporation was looking for a national private corporation to manage its buildings, reduce costs and ensure continual operation of its critical building systems.

### Project Description:
In response to a Request for Proposals, the CBC signed a five-year agreement with ProFac Facilities Management Services, a private operator of building assets and property. The operations and maintenance agreement includes 3.3 million square feet in 52 buildings from Vancouver to St. John's, with the exception of Quebec and Moncton, N.B. ProFac hired 40% of existing CBC staff from related areas. The service contract includes HVAC operation, cleaning, security, utilities provision, courier services, and printing, and was phased in across the country beginning in September, 1997. ProFac also advises on capital planning, real estate and leasing services.

The two corporations work closely together, where problems are dealt with transparently and cooperatively on a day-to-day basis. Given the nature of CBC's business, ProFac is under specific performance requirements to ensure electrical and cooling systems remain fully operational 24 hours per day, 7 days a week. The broadcaster relies on a continuous electricity supply to generate its signal as well as adequate cooling to ensure that vital broadcasting equipment does not overheat. Penalties are assigned if ProFac does not meet specified levels for critical systems, but also receives credits for failure-free operation. The company is paid extra management fees for project management of major projects such as roof replacement or building renovations.

As a company solely focussed on property management, ProFac is able to achieve economies of scale, and has instituted innovative systems such as an Internet-based approval process for building maintenance and procurement. The main advantage to the CBC was having a coordinated, national management firm that was able to improve efficiencies system-wide.

### Financial Characteristics:
The annual value of the contract is $18.8 million, which represents a cost savings of 20% from when CBC managed its own assets. If ProFac is able to achieve additional cost savings through agreed service level changes, a defined cost savings sharing formula is applied.

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# 68 Goose Bay Airforce Base

**Model:** Operation & Maintenance

### Project Impetus:

In 1995, the Department of National Defence (DND) conducted an alternative service delivery review of Goose Bay to reduce costs and improve efficiencies. The desire was to continue operating the low level flying training program affordably for allied air forces and keep a much-needed community employer intact.

### Project Description:

Following an RFP in 1998, the Department of National Defence began a five-year contract with Serco Facilities Management Inc., an international task management company, to operate and maintain a wide variety of services at the Goose Bay Airforce Base, located in Northeastern Labrador. These included air traffic control, weather services, transportation, facilities and grounds maintenance, fire services, food and accommodation services and purchasing. The timeline from RFP to site transfer was just over one year, which was fast-tracked in order to compensate displaced personnel under more favourable federal legislation that expired on March 31, 1998.

An interesting human resources component to this project was the successful application by the Public Service Alliance of Canada to act as the bargaining agent for Serco employees under the contract and the subsequent Canada Labour Relations Board ruling that Successor Rights applied to the transfer. As a result, Serco retroactively compensated employees for wages from the time of the transfer (7 months). SERCO initially offered an average salary, which is over 90% of the average Public Service salary for the group. Seventy percent of Serco's new jobs were also offered to previous DND employees, resulting in 162 public servants transferring to the private sector. The original staff complement at the base was 500 civilians and 275 military.

The Italian Air Force began flying operations at Goose Bay in the summer of 2000 under a newly signed ten-year agreement between the Italian and Canadian Government. This Italian training program injects about $10 million annually into the Canadian economy, or over $100 million during the life of the ten-year agreement. When added to the expenditures of other Allied Air Forces training at Goose Bay, total offshore expenditures into this region of Canada rise from about $60 million per year to $70 million annually. The operational benefits of training at Goose Bay, the cost reductions resulting from the application of ASD and successful marketing by DND of both attributes, have meant the continued operation of Goose Bay in a community that depends heavily on its economic contributions.

### Financial Characteristics:

The initial contract was for $135 million over five years, which resulted in approximately $14 million annual savings, taking into account the bill for successor rights. This is a considerably greater reduction in costs than the original expectations of $8 million annual savings. A performance incentive of $1.6 million per year is available to SERCO upon review by clients, providing service exceeds the parameters set in the contract.

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# 69 Government of Nunavut Buildings

**Model:** Build-Own-Operate

**Project Impetus:**
In 1997, the Federal Government looked to the private sector to build legislative chamber space, offices and housing for the new Territory of Nunavut at a reasonable cost while maximizing local benefits.

**Project Description:**
Nunavut Construction Corporation, an Inuit owned construction company, was chosen to design, finance, build, own and operate the buildings under a 20 year lease arrangement with the Territorial Government of Nunavut. The project consists of 10 government office buildings (including the Legislative Assembly in Iqaluit) and 250 units of employee housing in 11 different communities throughout Nunavut. It was a priority of the Government of Canada to have an Inuit company own and finance the project using local talent, to ensure maximum benefits, wages, material and services supply and job opportunities remained in Nunavut. The Department of Indian Affairs & Northern Development (DIAND) monitored the project, signed the leases and transferred them to the Territorial Government once Nunavut was established. Public Works & Government Services Canada provided technical assistance to DIAND, which included investment analysis of the alternative methods of implementation, project management and leasing services.

The final office buildings and housing units were completed in the spring of 2000 on budget, one year ahead of the four-year schedule. The Legislative Assembly is designed to look like the interior of a large igloo, reflecting local Inuit culture and history. Nunavut Construction Corporation is responsible for all operation and maintenance of the buildings and will retain ownership of assets upon expiration of the lease. Nunavut Construction Corporation is a consortium of four Inuit Birthright Corporations, making 85% of Nunavut residents shareholders in the company.

Primarily because of this initiative, the Company has grown from a small-scale construction company to a large real estate development corporation with 230 employees and assets in the range of $130 million. It has now been restructured as part of the Nunavut Investment Group with divisions of Construction, Residential and Commercial Property Management and NCC Development for new projects. The transfer of knowledge from the Government of Canada has helped establish the company as an important engine of economic growth and private sector development for the Territory.

**Financial Characteristics:**
The project was funded by Nunavut Construction Corporation in excess of $130 million. Construction financing was provided through the Royal Bank. The company owns all the buildings and a monthly lease payment structure has been set up with the Territory for 20 years. The company's long-term debt for the project was purchased mainly by the life insurance industry.

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**Other Partners:** Nunasi Corporation; Kitikmeot Corporation; Qikiqtaaluk Corporation; Sakku Investments Corporation; Royal Bank; Canada Life Assurance Co.

# 70 National Trade Centre Food Operations

**Model:** Build-Lease-Operate-Transfer

### Project Impetus:

In 1997, the City of Toronto began development of The National Trade Centre at Exhibition Place through a $180 million infrastructure grant from the federal, provincial and municipal governments. In order to leverage the value of the grant and draw on private sector expertise, the City decided to contract out the construction and operation of food service facilities in the Trade Centre.

### Project Description:

In 1996, City Council approved appointment of O&Y/SMG Canada, a private trade centre operator, to manage the National Trade Centre. Council also directed the company to manage the RFP process for a private food service contractor. O&Y/SMG issued an RFP with the option to bid on just The National Trade Centre food services or the entire Exhibition Place concessions. Exceptions were stipulated for the facility's peak events, including the Canadian National Exhibition, Royal Agricultural Winter Fair and Molson Indy, since they provided significant revenues directly to the City.

Following RFP submissions from five vendors, the City of Toronto signed a five-year contract in 1997 with Servo Canada, a subsidiary of U.S.-based Service America, which provides food and catering services throughout North America. The company designed and financed the construction of a 10,000 square foot kitchen facility and several food concessions located throughout the one million square foot trade floor space. Servo is responsible for the provision of all food catering in the facility and other Exhibition Place venues, and assists with marketing and promotions for events. The National Trade Centre, which is managed by a Board of Governors, an agency of the City, hosts over 100 events each year. The contract gave Servo a stronger presence in the Canadian market, and Exhibition Place benefits from the expertise and resources of a large company that specializes in five-star food operations. Moreover, Exhibition Place did not need to extend its budget to finance the initial capital costs for kitchen/concession facilities.

### Financial Characteristics:

Servo Canada leases the kitchen and associated office space from Exhibition Place for $1 per year plus taxes. Exhibition Place receives a guaranteed percentage of sales each year and additional payments based on further gross revenue levels. In fiscal year 1999, its share totalled $1.4 million and is projected to increase by $100,000 over each of the following two years. Servo provides funding for marketing and promotion up to a maximum annual rate. At the end of the five-year contract, Exhibition Place has the option to renew or pay Servo for the amortized value of the assets.

**Related Website:** http://www.ntc.on.ca

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# 71 Ontario Realty Corporation

**Model:** Operation & Maintenance

**Project Impetus:**
The Ontario Realty Corporation opted to employ alternate methods for the delivery of facility management services, in order to provide more accessible, responsive and affordable customer-driven facility management services.

**Project Description:**
ProFac a leading private sector provider of integrated facilities management services, was awarded a 5-year contract in June of 1999 by the Ontario Realty Corporation (ORC) to provide services to fully and partially operated government owned buildings as well as leased sites occupied by government functions effective October 1, 1999. ProFac manages approximately 31 Million square feet of space in over 2100 buildings in the Greater Toronto Area and Southwest Regions. About 250 managers, engineers, technicians and support staff manage and maintain facilities within these two distinct regions.

Principal activities include but are not limited to facilities management services, real estate strategy, asset management planning, lease administration services and project management services. Unique to this contract is a gain sharing / new business component that offers ProFac the opportunity to develop new business initiatives with the Ontario Government that will generate revenues or achieve permanent savings for the ORC. As well, ProFac has employed a dedicated customer service manager for the ORC contract, who is responsible for establishing and overseeing customer service programs.

ProFac's contract mandate is to provide services within budget and at performance standard levels equivalent to the standard levels previously delivered either directly by ORC or indirectly through service contractors. To achieve these goals, performance measurement and performance incentives were incorporated. A management performance framework lists a series of Key Performance Indicators (KPI's) that relate to four major objectives: management performance, financial performance, asset integrity and customer service. A weighting system applies to each of the key objectives. Performance is rated quarterly with results tied to financial remuneration. Should ProFac exceed performance standards an incentive bonus would be awarded on an annual basis. ProFac staff communicate with both its clients and customers at various levels to provide customer focused service, to meet customer needs, government priorities, and maintain the value of the government's assets.

**Financial Characteristics:**
The annual operating value of the contract is $65 million, with $24 million in capital expenditures per year.

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# 72 Real Property Services

**Model:** Operation & Maintenance

### Project Impetus:

Public Works and Government Services Canada (PWGSC), through its Real Property Services Branch (RPS), opted to source private sector property and facility management firms for the management and operations of over 300 Crown-owned buildings across Canada. This initiative, called Alternate Form of Delivery (AFD), was developed to meet specific objectives including "getting government right," cost savings, improvement in responsiveness to clients and the transfer of affected PWGSC staff to the successful bidder(s).

### Project Description:

PWGSC awarded 13 separate three-year contracts with four option-years to Brookfield LePage Johnson Controls (BLJC), a private facility management services firm, effective May 28, 1998. The operations & maintenance agreements include over 300 buildings representing 2.3 million square meters of space. BLJC hired almost all available PWGSC staff previously involved in the management of these facilities. The company's contractual mandate includes, but is not limited to, property management services, project delivery services and retail letting services where applicable. BLJC's performance is determined by three Key Performance Indicators (KPIs): asset integrity, customer satisfaction and financial performance. Should the company exceed performance standards, an excellence fee is awarded annually.

BLJC may initiate a variation to the contract in the form of a Management Value Incentive Program (MVIP). The MVIP provides opportunities for optimizing the operations and maintenance. Its intent is to reduce the cost of operations and to improve the equipment performance lifecycle while enabling both parties to benefit financially. Each MVIP initiative is submitted in the form of a proposal, which is then either accepted or rejected by PWGSC.

### Financial Characteristics:

The annual budget for operation and maintenance of the 13 individual contracts and 300 buildings nationally is over $200 million. The baseline operating costs under BLJC were reduced by 10%, resulting in sustained savings of $20 million per year. There are further potential savings through the Management Value Incentive Program.

### Public Sector Contact:

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Public Works and Government Services Canada
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### Private Sector Contact:

Jacques Haché
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# 73 Royal Ottawa Health Care Group

**Model:** Operation & Maintenance

### Project Impetus:

The Royal Ottawa Health Care Group's (ROHG) primary goal was to streamline building support services at two locations through integration. Integrating services through a single private partner whose core business is facility management enabled the ROHG to achieve cost savings and improved efficiencies.

### Project Description:

In 1995, the Royal Ottawa Health Care Group (ROHG) issued a Request for Proposals to divest the performance and management of its non-core support services. Brookfield LePage Johnson Controls (BLJC), a national private facilities management firm, won the bid to manage the facilities for 5 years. Their services include: nutrition and food services; custodial and linen services; supply chain management including purchasing, physical plant operations and maintenance; and space planning. These services are performed over two principal sites - the Rehabilitation Centre and the Royal Ottawa Hospital. Nearly 100 full time equivalent personnel were transitioned to the BLJC team with conditions equal to existing collective agreements including wages, benefits and all other terms of employment.

Additional services include the management of numerous contractors such as parking, security, construction, waste management and grounds. Disaster planning, printing and catering services are also performed by BLJC on behalf of ROHG. Since the start, BLJC has met all the quality requirements of The Royal Ottawa Health Care Group and its customers, with 30% less personnel. Cost savings have allowed ROHG to provide added focus to patient care and community relations. The facility management services performed by BLJC have been scrutinized and fully endorsed by The Canadian Council for Health Service Facilities Accreditation.

### Financial Characteristics:

BLJC is accountable for managing a $7 million annual operating budget. The agreement calls for ROHCG to assume the streamlined cost of services performed by BLJC plus a fixed, annual fee. Sustainable cost savings achieved beyond pre-established budgets are passed onto ROHG, and a portion of these are returned to the company as a one-time payment. Cost savings for the hospital have been reinvested into patient care and significantly offset the cost of BLJC's work.

### Public Sector Contact:

Ingo Ritums
Chief Operating Officer, ROHG
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Brockville, ON K6V 5W7
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### Private Sector Contact:

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# 74 Brampton Centre for Sports & Entertainment

**Model:** Build-Lease-Operate-Transfer

### Project Impetus:

Due to space constraints in existing facilities, the City of Brampton wanted to build a cost-effective sports and entertainment complex that would significantly increase recreational opportunities for residents. A lack of sufficient capital and a desire to utilize the operating expertise of the private sector prompted the City to issue a Request for Proposals.

### Project Description:

In January 1997, the City of Brampton signed an agreement with Brampton Sports Centre Inc., a partnership of two private developers with experience in the hospitality industry. Realstar was responsible for design, building, partial financing, operation and leasing of the facility for 34 years and Edilcan was responsible for the construction of the building. The Centre for Sports & Entertainment was completed in September, 1998, and includes four ice pads (three practice ice pads and a main 5,000-seat spectator bowl), a 300-seat restaurant and 30 private suites.

The agreement contains provisions for both partners to share the rewards and the downside of operation. On the plus side, the private partners receive $230,000 per year as a return on equity. The City receives $250,000 as a repayment of the loan. Once these payments are made, operating profits are split 60% for the City and 40% for the private operator. Should the facility not achieve positive revenues, the City will cover the first $600,000 of the mortgage, with the rest financed by Brampton Sports Centre Inc. The original profit timeline for operations was three years, but they are one year behind schedule as a result of other facilities entering the market at the same time, and expect to pass the break-even point by 2002 with annual profits of $1 million.

The private partners are responsible for all sales and marketing functions for the Centre. Paid users include adult sports organizations, an Ontario Hockey League franchise (Brampton Battalion) and several entertainment organizations. The City buys facility time from the private partners at a reduced rate for local community events and groups.

### Financial Characteristics:

Capital cost of the Centre was $26.5 million. The City provided $6 million up front with a guarantee on the privately secured mortgage of $15.5 million. The private consortium provided $5.2 million, which was recoverable over the first 20 years and a mortgage on the remaining construction balance. Brampton Sports Centre Inc. will hand over the facility to the City at the end of the agreement for no charge. Operating costs are estimated at $1.7 million annually.

### Public Sector Contact:

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The Corporation of the City of Brampton
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Brampton, ON L6Y 4R2
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### Private Sector Contact:

Jonas Prince
Chairman
Realstar Group Inc.
77 Bloor Street West, Suite 2000
Toronto, ON
Tel: (416) 923-4156 Fax: (416) 923-3654

**Other Partners:** Edilcan Development

# 75 Chilliwack Family Leisure Centre & Fair Grounds

**Model:** Design-Build-(Operate) - Proposed

**Project Impetus:**
The City of Chilliwack experienced community demand for new recreation facilities and redevelopment of its aging Exhibition Grounds and announced in 1999 that it would move ahead with a series of projects with the private sector.

**Project Description:**
The City of Chilliwack issued a Request for Proposals (RFP) for the design and building of a new leisure centre and outdoor sports area on November 21, 2000. The target date for completion is July 1, 2002. The City originally intended to outsource operation of the centre to the same design-build proponent, but decided that it would be more effective to separate the two functions. Components called for in the Leisure Centre RFP include a 25-metre training and competition lap pool, beach-style family leisure wave pool with water slides, child's pool, whirlpools, sauna, steam area, fitness and aerobics studios, office and commercial areas, food concession, outdoor pool, skateboard park, courts and parking lot. The City also wants the facility able to accommodate a future seniors centre, youth centre, multi-purpose space and gymnasium. The winning firm is expected to be chosen in spring, 2001. The proponent for operation of the leisure centre is also expected to be chosen at that time, in order for the two firms to consult with each other.

The City released two Requests for Expressions of Interest for private firms to design-build and operate recreation facilities on the 65-acre fair grounds. This includes a 150,000 sq. ft. multi-purpose building, racetrack, rodeo area and show rings. Proponents were short-listed and RFPs issued in late 2000, with project completion in line with the Leisure Centre.

**Financial Characteristics:**
Estimated project costs are $12.3 million for the leisure centre and $2 million for sports field improvements. The City will provide all funding, with the exception of a $3.3 million loan to be paid back over five years. The private proponent must include a guaranteed maximum price.

**Related Website:** http://www.chilliwack.com/cflc/

**Public Sector Contact:**
Ted Tisdale
Chief Administrative Officer
City of Chilliwack
8550 Young Road
Chilliwack, BC V2P 8A4
Tel: (604) 793-2943 Fax: (604) 792-2561

**Private Sector Contact:**
Not yet determined.

# 76 Collicutt Centre

**Model:** Design-Build-(Finance)

**Project Impetus:**
Existing recreational facilities in the City of Red Deer, many of which were over 15 years old, were proving inadequate to meet the needs of local sports organizations and the public. The City had been setting aside reserves for new recreation facilities for well over 10 years. The community wanted to build and operate a state-of-the-art facility using entrepreneurial involvement from the community.

**Project Description:**
In January 1999, the City of Red Deer issued an RFP for a company to design and build an innovative community leisure centre in the heart of the City. A consortium including local architecture firm Group 2 Architects was chosen as the successful proponent, and consulted with local sports organizations as well as residents to design the facility's components. An on-going advisory committee was also struck to provide input to the Centre's operation, which began construction in October 1999. When completed in May 2001, the Centre will house an NHL-sized ice arena with future expansion capabilities for two more surfaces, gymnastics centre, food retail area, field house, soccer centre chiropractic clinic, two climbing walls, waterpark and indoor running track, and 3,500 square foot fitness centre in the 215,000 square foot space. Several sports fields and environmentally friendly landscaping have also been developed around the facility. In addition, four significant pieces of artwork have been commissioned for the facility.

Two key City Council directives to the Centre's management were to include local organizations as both funding sources and tenants, and achieve an 80% cost recovery target for operation, versus the standard 50% - 60% recovery format. As a result, the local gymnastics club and minor hockey commission became capital founding partners and rent space throughout the year. The corporate tenants will operate on a yearly lease.

**Financial Characteristics:**
Total project cost is estimated at $30 million. Funding was provided through $2 million from local sports organizations and $1.8 million from the corporate sector. The City provided $26.2 million from reserves that were allotted for the Centre. The facility has been on budget and is on time for completion in May 2001.

**Related Website:** http://www.city.red-deer.ab.ca

**Public Sector Contact:**
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City of Red Deer
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**Private Sector Contact:**
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**Other Partners:** Red Deer Gymnastics Association

# 77 Cranbrook Multi-Purpose Recreation Complex

**Model:** Build-Lease-Operate-Transfer

### Project Impetus:

The City of Cranbrook, B.C. wanted to build a multi-use recreation facility without financing up-front capital. It also wanted to capitalize on private sector expertise in operating a large facility at less cost.

### Project Description:

The City held a public referendum on this project in February 1999 due to the large scale investment and impact on the community. The referendum passed, and the resulting agreement was a unique share of risk and rewards, including revenue opportunities for both partners. The City signed a 30-year design, build, finance, lease, operate and transfer agreement with Vestar Inc. (formerly KeenROSE Energy Services), a private building development and property management firm. The facility includes a 4,250-seat arena, training pool and leisure pool. The existing library building is adjacent to the complex, and is under discussion for an additional operations contract. Construction began in October 1999 and was completed in December, 2000, which is about 6 months ahead of the original schedule.

Under the operations agreement, the City has 1,500 hours per year of arena time to be sold, subsidized or given to community groups. The balance is available to Vestar to sell at $125 per hour. Commercial space in the building consists of a restaurant, fitness centre, sports shop, physiotherapy clinic, arcade and offices. The combined ice time and commercial space leases are to equal $1,467,384 per year (revenues from which are shared with the City). Should it fall below this rate, the company is liable for the first $142,000, with a shared liability thereafter.

### Financial Characteristics:

Vestar guaranteed the capital cost of the facility at $22.6 million. Private financing would be found at a rate not to exceed 7.25%. If not achieved, the excess would be covered by the company or a better rate shared 50-50 with the City. The lease payments from the City to Vestar are $801,000 annually for 30 years, after which the company transfers ownership. The fixed rate annual costs paid by Vestar are $1.1 million, which include allowances for major maintenance such as roof replacement. An additional annual capital repayment is also paid by Vestar, not to exceed $1.9 million. Residential tax rates are estimated to increase by $92.96 annually per $100,000 assessed value as a result of the project.

**Related Website:** http://www.city.cranbrook.bc.ca

### Public Sector Contact:

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City of Cranbrook
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### Private Sector Contact:

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Toronto, ON M2J 1R4
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# 78 Guelph Sports & Entertainment Complex

**Model:** Build-Own-Operate-Transfer

### Project Impetus:

In 1993, the City of Guelph (located in Southwestern Ontario) began researching options to replace its existing main arena. After discussing experiences with other arena owners, gathering data on financing and operating alternatives and soliciting feedback from local stakeholders, the City decided to enter a public-private partnership with a developer-operator.

### Project Description:

Before issuing an RFP, Guelph's City Council debated the merits of a west end location for the new facility, and ultimately decided to include it along with a downtown site as options in the proposal. Council was concerned that developing a site outside downtown, where the current arena is located, may negatively affect local businesses. The City of Guelph issued the RFP in 1996 for design, construction, financing, ownership and operation of a new sports and entertainment complex. Nustadia Developments Inc., a private stadium developer-operator, was chosen as the successful proponent.

The decision regarding the location of the new facility was revised in 1998 when the Eaton's department store moved out of its 100,000 square foot space in Guelph's downtown shopping mall, and the partners determined that it offered the best balance of project capital cost and location. The City purchased the entire mall from the existing owners for $1.8 million and Nustadia amended its proposal to include development of that site. Construction was completed in September 2000, and the company entered into a 35-year lease agreement for the land and operating contract for the building. At the end of the agreement, Nustadia will transfer the assets to the City for $1 in a condition equal to or better than similar Ontario Hockey League (OHL) arenas.

The stadium includes 5,000 seats, 31 private boxes, a restaurant, bar and one ice pad. Nustadia holds a 20-year lease with the Guelph Storm, the local OHL team, which was a key factor in making the project financially viable. Adult recreation groups and concerts will also be held in the facility, with plans for additional business and sports events. The City receives a share of profits but does not share in any losses incurred by Nustadia.

### Financial Characteristics:

Total capital cost of the facility was $21 million. The City leases the land to Nustadia for $1 per year. The company provided $1.5 million in equity for the project. The City guaranteed a $9 million operating loan from CIBC, to achieve more favourable rates, and also loaned $10.5 million directly to the company, which will be paid back in years 25 to 35. In February 2001, the City sold the surplus space in the mall to a developer based on a proposal to revitalize the retail component.

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**Private Sector Contact:**
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# 79 Millennium Recreation Park (Waterloo)

**Model:** Design-Build-Finance

### Project Impetus:

Throughout the 1990's, studies conducted by the City of Waterloo (located in Southwestern Ontario) and local sports and leisure groups indicated a shortage of recreational facilities amidst a growing population. There was also a desire to strengthen the community's access to the Grand River and add to the current inventory of environmental lands being preserved in the city.

### Project Description:

In April 1999, the City of Waterloo hired consultants to assist with the design, fundraising feasibility and operation of what was to be called "The Millennium Recreation Park." While the original plan was to build a golf course and add components later, the City decided in discussion with various stakeholders that it would be advantageous to develop the park features concurrently. As a community focused on environmental responsibility, the City conducted an environmental impact study in the spring of 1999 and purchased 400 acres of land, which will constitute the bulk of the Park. An on-going environmental implementation team has been instrumental in monitoring the construction practices, designing components that minimize impacts and designating an 11-acre nature sanctuary.

Construction in the park began in the spring of 2000. Design elements include a nature trail along the Grand River, an 18 hole golf course, a 13,000 square-foot park/club house, passive recreation areas, multiple sports fields and preservation of a Mennonite farmstead. The multi-use facility includes a 300,000 square foot glass façade which houses four Olympic-size ice pads with varied seating capacities of 250-500 per rink. The building also contains an indoor field house with artificial turf, which is divisible into three mini-fields; two full size gymnasiums including a performing arts stage with seating capacity up to 800; banquet, meeting, and program rooms. Private tenants in the complex will include a pro shop and local figure skating club.

The soccer fields and baseball diamonds will be ready in spring 2001, and the golf course and recreation complex will open in September of 2001. The City is considering the merits of outsourcing golf course maintenance and food service operations throughout the Park.

### Financial Characteristics:

The total estimated project cost for the park is $56.7 million. Funding sources include a $7 million fundraising campaign, $850,000 from internal reserves, and $48.8 million through a multi-faceted 30-year lease with MFP Financial Services. Council has approved an annual limit of taxpayer support of $1.2 million, which translates into an annual tax support of $26.72 per household.

**Related Website:** http://www.city.waterloo.on.ca/mrp

**Public Sector Contact:**
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Team Leader, Millennium Recreation Park
City of Waterloo
100 Regina Street South
Waterloo, ON N2J 4A8
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**Private Sector Contact:**
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MFP Financial Services Ltd.
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**Other Partners:** PCL Constructors Canada Inc.; Parkin Architects; IBI Group

# 80 Sarnia Sports & Entertainment Centre

**Model:** Build-Lease-Operate-Transfer

### Project Impetus:
In 1994, a Junior A Hockey team moved to Sarnia, Ontario on the condition that City Council consider the construction of a new arena within three years. A study indicated that there was sufficient demand for ice time to justify an expanded ice arena and the City required third party funding in order to deliver the project. Council gave approval to proceed with a public-private partnership in 1996.

### Project Description:
The new Sarnia Sports & Entertainment Centre was opened on September 7, 1998, and was the product of an agreement between the City of Sarnia, Lambton College, and Nustadia, a private consortium of design-build and facility operators. The centre consists of a 5,200 capacity main arena, including 42 private suites, 1,100 club/lounge seats, an additional ice pad with seating for 200 and a full service restaurant. The partnership began following negotiations with Lambton College to provide five acres of land and 1,300 parking spaces adjacent to the proposed main centre. The College also provides full access to their facilities (meeting rooms, gymnasiums, computers, etc.) for use as a conference venue, which are adjacent to the arena.

Once the land was obtained, the City issued a Request for Proposals for a private firm to design, build, lease and operate the facility for 20 years, with options for renewal. The City retains ownership of the facility. Nustadia was chosen for its expertise in arena building in Ontario and a consortium member, Lauridon Sports Management Inc., was selected due to its experience in operating the Ice Gardens at York University. Lauridon set up a separate operating company (Sarnia Sports & Entertainment Inc.) for the project, along with Rob and Dino Cicarelli, owners of the Sarnia Sting Junior A Hockey team. The team now experiences attendance second only to Ottawa, and virtually all demand for ice time can be met with the two ice pads. Concert seating can be expanded to 7,000 with acoustics that are exemplary for an arena building. The project has also allowed the existing municipal arenas to fully serve the youth market as well as the growing adult hockey leagues.

### Financial Characteristics:
Total capital cost for the Centre was $15.9 million. In addition, Lambton College provided approximately $3 million in land and assets, which was leased to the City for $1. The City funded $6.9 million for capital costs, primarily through the sale of other land, and Nustadia provided $1.5 million. The Royal Bank issued a loan for $7.5 million to Nustadia at a preferred interest rate, which would be paid back through operating revenues. The private operating company receives all revenues from the Centre for 20 years and the City receives a fee based on percentage of profits at a guaranteed minimum.

### Public Sector Contact:
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City of Sarnia
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### Private Sector Contact:
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Lauridon Sports Management Inc.
1455 London Road
Sarnia, ON
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**Other Partners:** Nustadia; PBK Architects and Engineers; Ball Brothers Construction; Cicarelli Family - owners of Sarnia Sting Hockey Team

# 81 Skyreach Place

**Model:** Build-Own-Operate-Transfer

### Project Impetus:

Since the mid 1980's, pressure had been mounting from the residents of Kelowna and the surrounding area for the City to build a large sports and entertainment complex to replace an existing 50 year-old memorial arena. In the mid-1990's, the City received several proposals from companies to develop a new facility, and decided that a public-private partnership was a good option since a new complex would be too difficult for the City to fund and build alone.

### Project Description:

The 30-year deal signed with RG Properties Ltd. in 1997 was the third attempt by the City of Kelowna to find a builder, financier and operator for a new stadium and concert venue. The other two agreements failed in the 11th hour due to financial hurdles. RG Properties' close partnership with an architecture firm made the outsourced design-build option attractive to the City.

The City provided an initial investment to RG Properties to offset construction costs, and further funding is made on a sliding scale over the 30-year lease. The agreement also included selling the land for the facility for $1 and selling adjacent commercial properties at fair market value to RG Properties. Including the land in the deal made funding more attractive to the banks. The facility and facility lands will be sold back to the City after 30 years for $1. Once the sale of the commercial land is complete, RG will own and develop it as would any owner of commercial land in downtown Kelowna.

RG Properties designed the 6,000-seat stadium to expand to 7,500 seats for concert venues and also included 33 corporate boxes. The City and RG agreed on performance specifications that allowed the company flexibility in building design. The City is allotted 1,500 hours in ice time for community groups, on the condition that it does not market it to adult recreational or commercial use. The facility is also a venue for a wide variety of activities including the WHL hockey (Kelowna Rockets), major concerts, business functions and community events.

### Financial Characteristics:

The City of Kelowna invested $6 million as shares in the holding company set up to operate Skyreach Place, which gave it the authority to ensure that the land would be transferred back at the end of the agreement. This investment is also a means to avoid tax on the revenue. The City further provides a stream of payments over the next 30 years, averaging $980,000 per year with a limited inflationary index. The deal allows for bigger payments in the first ten years and smaller payments in the last ten. RG Properties provided $13 million in up-front financing. The estimated tax impact to homeowners is an additional $17.50 per year for a $160,000 house, equal to a 1.6% tax increase. RG Properties operates Skyreach Place as a private independent business fully responsible for its own profit and loss and as such does not report its current financial results to the City.

### Public Sector Contact:

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City of Kelowna
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Kelowna, BC V1Y 1J4
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### Private Sector Contact:

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Vancouver, BC V6E 2K3
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# 82 Victoria Multi-Purpose Complex

**Model:** Not yet determined

### Project Impetus:

The existing Memorial Arena in Victoria, B.C., built in 1949, has limited seating capacity for 3,700, operates at a deficit and no longer meets building code standards. Both the site and building have constraints that make renovation and repair an expensive undertaking. In 1989 and again in 1992, the City conducted referendums on building a new multi-purpose facility and/or community recreation complex. It also looked at partnering with the private sector.

### Project Description:

The City of Victoria entered into negotiations with Victoria Sports/Entertainment Associates, a local engineering consortium, to build, finance and operate a new complex in 1996. The City ceased negotiations with the consortium in 1999, due in part to an inability to obtain adequate financing and a significant change in the scope of the project since the process began. The following year, the City appointed a Community Advisory Committee to assist with a comprehensive public consultation program and to report back on community support and preferences for a multi-use facility. Responses indicated that area residents strongly support a new sports and entertainment complex. Results were less conclusive regarding funding, ownership and operation.

Victoria released a Request for Expressions of Interest for a new arena in February 2001, and will submit an RFP to a qualified shortlist later in the year. A consultant has been commissioned to conduct a market study and financial analysis so that private developers and the City will have a benchmark against which to compare proposals. At that time, the City will have more information to determine the facility's size and uses. It is expected that the facility will be smaller than the one planned in 1996, with a lower seating capacity of 7,000 to 9,000 people. The private sector will have the option to upgrade the existing Memorial Arena or develop a new site. A major tenant, such as a hockey franchise, would also provide a solid foundation for funding.

### Financial Characteristics:

Given the City's proximity to 12 other municipalities and the existence of a regional level of government (Capital Region District), Victoria will be considering opportunities for joint funding. The annual budget of the current Memorial Arena is $2.3 million, with a $641,000 operating deficit.

**Related Website:** http://www.city.victoria.bc.ca/multipurpose/multipurpose.htm

**Public Sector Contact:**

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**Private Sector Contact:**

Not yet determined.

# 83 Cranberry Drying Process

**Model:** Build-Own-Operate

### Project Impetus:

Atoka Cranberries wanted to develop a cranberry drying process in order to capitalize on the $80 million cranberry market worldwide. Agriculture and Agri-Food Canada (AAFC) was looking for an innovative private partner whose research would result in a successful commercial venture.

### Project Description:

In order for Atoka Cranberries, a private cranberry grower and processor based in Quebec, to achieve its capture of 10% market share worldwide, it required research and testing that would produce a reliable cranberry drying process quickly. Agriculture and Agri-Food Canada provided research and start-up funding to Atoka over a 22-month project, beginning in 1998. The partners succeeded in developing an innovative drying process that established Atoka as the largest Canadian cranberry processor. A license agreement was signed with the company to ensure an appropriate return on the Government's investment of capital and knowledge.

The plant is designed to produce 4 million pounds of dried product per year as an alternative to conventional air drying, which uses up to 44% more energy. The unique collaboration resulted in sound research at the laboratory level and implementation of an industrial drying line.

### Financial Characteristics:

For research, development and start-up, AAFC contributed $90,450 from the Matching Investment Initiative. AAFC also provided access to lab space, pilot plants and research staff. Atoka contributed $228,620 for R&D as well as an additional $8 million in technology. An investment firm funded $2 million for infrastructure.

### Public Sector Contact:

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Agriculture & Agri-Food Canada Food Research & Development Centre
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### Private Sector Contact:

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Atoka Cranberries Inc.
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**Other Partners:** Industries d'Acier Inoxydable Ltée.; Qualtech Equipment; Michel Bérubé et associés

# 84 Durum Wheat Research Project

**Model:** Finance & Operate

### Project Impetus:

Agriculture and Agri-Food Canada (AAFC) began conducting market research in 1995 to look at opportunities for new durum varieties. Canadian durum wheat (used for pasta) generates $1 billion in farm sales annually, with 70% market share worldwide. Market research determined that a strong gluten durum with specific colour and milling traits would be a valued product, especially in Europe. This market has been dominated by U.S. and Australia. In order to maintain the competitiveness of Canadian farmers in the growing international market, the Government wanted to find partners to help support the research and niche market development for this specialty durum wheat product.

### Project Description:

The AAFC Semiarid Prairie Agricultural Research Centre at Swift Current, Saskatchewan issued a Request for Proposals in 1996 for partners to assist with the commercialization of new durum wheats. The Research Centre signed a 6-year (renewable) agreement with the Saskatchewan Wheat Pool, who committed to funding the research before the wheat varieties were registered, and to supporting the needed commercial evaluation or market testing. Several other partners (see below) also became members of the team dedicated to making the new grain a valued commodity. The main steps required from genesis to full market acceptance are as follows:

1. Gather market intelligence
2. Design protocols and identify potential products to meet customer requirements for processing
3. Devise strategies to generate sufficient stock of the product for commercial testing and supply
4. Bring the new product onto the domestic market, meeting regulatory requirements

The AAFC Research Centre was responsible for the development of the varieties and for getting the necessary quality criteria support for registration. Saskatchewan Wheat Pool, in return for their investment, gets the marketing rights and royalties from seed sales. The Wheat Pool contracted with farmers for production of the commercial grain. They receive revenues for seed sales to producers and grain handling fees for cleaning and shipping the wheat. The Canadian Wheat Board was responsible for developing domestic and international markets and devising storage and shipping methods. The wheat producers, through the Board, receive higher sales prices and increased market access. In 2000, there were some 40,000 hectares in commercial production of one of the two new varieties, known as AC Pathfinder and AC Navigator. Within the next couple of years these new varieties will likely result in additional farm income of more than $125 million annually.

### Financial Characteristics:

Each partner contributed a unique amount based on the nature of responsibilities over various timeframes: AAFC - $640,000; AAFC Matching Investment Initiative - $302,000; Grain Research Lab & Canadian Grain Commission - $148,000; Saskatchewan Wheat Pool - $306,000; Canadian Wheat Board - $162,000; Canadian International Grains Institute - $82,500.

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**Other Partners:** Grain Research Laboratory; Canadian Grain Commission; Canadian International Grains Institute; Canadian Wheat Board

# 85 Ont. Research & Development Challenge Fund

**Model:** Finance

### Project Impetus:
The Ontario Research and Development Challenge Fund (ORDCF) was introduced in the 1997 Ontario Budget to promote research excellence and partnerships between business and research institutions.

### Project Description:
The ORDCF is itself a partnership between five ministries of the Ontario government (Energy, Science and Technology; Training, Colleges and Universities; Economic Development and Trade; Finance; and Agriculture, Food and Rural Affairs). In order to ensure that funds are committed to proposals relevant to business and industry, the private sector must contribute at least one-third of the total proposal cost. The Fund supports both longer-term discovery research of interest to the private sector and shorter-term research with more immediate industrial applications. Eligible applicants include universities, colleges, hospitals, and not-for-profit research institutes. Companies, venture capital funds and business organizations are eligible private sector partners. The ORDCF Board of Directors, which consists of leaders from business, industry and the post-secondary research community who volunteer their time, makes recommendations to the government partners based on expert evaluation of applications.

The goals of the Fund are to:
- promote world-class research of interest to the private sector
- attract and retain top researchers in Ontario
- encourage more collaboration between the private sector, universities and research institutions;

Some recent examples of projects funded by the ORDCF include:
- $4.6 million toward a $13.8 million project that facilitates leading-edge new media research at Sheridan College's Centre for Animation and Emerging Technologies (see page 9)
- $36 million toward three medical imaging projects totalling $108 million, which are targeted at earlier detection and better treatment of cancer and heart disease in several Ontario hospitals and research institutes
- Over $8 million toward the $25 million SHARC-Net (Shared Hierarchical Academic Research Computing Network) led by the University of Western Ontario

### Financial Characteristics:
The Province is investing $500 million over 10 years. Contributions from industry, business, research institutions and other R&D supporters are expected to generate a total investment of $2.5 billion in research and development activity. The Province committed an additional $50 million targeted to cancer research in the 2000 Ontario Budget. As of January 2001, 77 projects received funding totalling more than $317 million. The total project value exceeds $960 million.

**Related Website:** http://www.ontariochallengefund.com


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# 86 Charleswood Bridge

**Model:** Build-Lease-Operate-Transfer; Design-Build

### Project Impetus:

The City of Winnipeg wanted to build a new bridge over the Assiniboine River as an alternative crossing for road traffic. Its objective was to avoid increased debt, accelerate project completion and identify innovative solutions.

### Project Description:

Following a Request for Qualifications and Proposals process in 1994, the City selected DBF Ltd., a local design and construction firm, to develop the 152-metre bridge and associated roadworks, in two parts.

Part One was for DBF to design, build, finance, own and perform major maintenance on the bridge and road to the south. The City is responsible for minor maintenance. Under a 30-year lease agreement, the City will make annual ascending lease payments to DBF. At the end of the agreement, ownership of the bridge transfers to the City. The City makes regular payments into a maintenance fund based on projected expenditures. At the end of the agreement, if there are any surplus funds, they are split equally between DBF and the City of Winnipeg. Financing was difficult for DBF to secure since loans of this type were rare in 1995, but the City wanted to ensure that it would not be responsible for the project's debt. Part Two was for design and construction of roadwork to the north of the Bridge.

The bridge was completed in 1995, which City staff estimated was two years faster and $1 million less expensive than if they had delivered the project on their own. Innovative design elements included subdrains on the south access road to ensure longer pavement life, and galvanized reinforcing steel in the deck over the piers to prevent corrosion.

### Financial Characteristics:

The capital costs were $10 million for Part One and $5 million for Part Two. Graduated annual lease payments began at $800,000 and will finish at $2 million in year 30.

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# 87 Confederation Bridge

**Model:** Build-Lease-Operate-Transfer

### Project Impetus:

In the early 1980's, the Federal government received unsolicited proposals from the private sector for a fixed link over the Northumberland Straight between PEI and mainland Canada. At that time, the government was operating a ferry service to meet its Constitutional obligation to provide a transportation service across the Strait at its own cost. The proposals provided an opportunity for the government to consider a partnership that would have to meet strict engineering, environmental and industrial benefits criteria and not cost more than the existing ferry service.

### Project Description:

After receiving three unsolicited proposals for a bridge-tunnel solution in 1985-1986, the Federal Government issued an Expression of Interest in 1987. At the end of 1993, the Government announced it had entered into an agreement with Strait Crossing Development Inc., a consortium of developers. The 35-year agreement called for the design, financing, construction and operation of the Confederation Bridge. Construction was completed in May, 1997, when the first vehicle paid its toll and crossed the bridge to PEI. At the end of the contract, the bridge will be transferred to the Government for $1.

The Confederation Bridge consists of several innovative design elements, including post-tensioning, which is used to tie the many smaller segments on the bridge approachments into one continuous structure. Bridge components were built on shore at a staging area and assembled using a large floating crane system. Given the length of the bridge (12.9 km), the design incorporated a series of curves in order to maintain driver alertness. It was also designed to withstand the harsh environment of Northumberland Strait and to have a service life of 100 years, which is two to three times the design life of similar infrastructure. A partnership between the Government of Canada, universities and Strait Crossing Development Inc. will be monitoring the bridge over the next 20 years through 750 sensors embedded in the bridge. This will determine the effects of ice on the bridge's stability and lifespan.

### Financial Characteristics:

Direct construction costs were $730 million. Private financing raised $660 million, which covered construction costs after interest was earned over the construction period. The Government pays Strait Crossing $41.9 million in 1992 dollars, adjusted each year to 75% of the CPI for 35 years. This was the same amount the Government previously paid as a ferry subsidy. In June, 1998 Strait Crossing issued $328 million in toll revenue bonds to finance on-going operations. 2000 tolls range from $36.25 for a passenger vehicle to $207.25 for a bus, which is less than the cost of a return trip by ferry.

**Related Website:** http://www.confederationbridge.com

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**Other Partners:** Janin Atlas Inc.; Ballast Nedam Canada Ltd.; Strait Crossing Inc.

# 88 Toronto Union Station Revitalization

**Model:** Lease-Develop-Operate (Proposed)

### Project Impetus:

In August 2000, the City of Toronto and GO Transit purchased the real estate assets of the Toronto Terminal Railways Company, a consortium operator for CN and CP Rail, including Union Station for $80 million. The City owns the station and GO Transit owns the adjacent rail corridor. Union Station was built in 1927 and is designated as a National Historic Site. The City wants to redevelop the site as a transportation hub, encourage development in the area and rehabilitate the building to its former grandeur.

### Project Description:

The City of Toronto issued a Request for Expressions of Interest (RFEI) to over 100 proponents on January 5, 2001. Given the scale of the project and the expertise necessary to redevelop the Station, the City is looking for private sector options to restore, expand, operate and maintain the assets. The RFEI indicates an opportunity to develop 25,000 sq. ft. of retail commercial space at street level (the Great Hall), a further 100,000 sq. ft. at the concourse level and 125,000 sq. ft. of office/commercial space in the west wing, which was vacated by the railways. Respondents have the opportunity to propose additional commercial area through excavation, while the heritage nature of the building would make any vertical additions challenging.

The station's annual passenger rail volume is 35 million, which exceeds that of Pearson International Airport, the country's busiest airport. There are several major lease holders in Union Station, including: GO Transit, the area's regional commuter rail network; VIA Rail, the national passenger rail carrier; and numerous small retail outlets. The Bank of Nova Scotia has already refurbished the east wing office space on a long-term lease arrangement. GO Transit owns the tracks, platforms and train-shed roof, and is planning major renovations to meet passenger volume projections over the next 20 years. The Toronto Transit Commission is also considering redevelopment of its adjacent subway station.

The RFEI has solicited a variety of options from the private sector, including the term of the agreement, ownership of the assets and business case requirements. The City is evaluating independent governance models to oversee the redevelopment and operation of the facility, which is a key element in securing federal funding. Once staff has evaluated the proposals, the City expects to release an RFP to qualified bidders in the summer of 2001. The Federal Government and Toronto Waterfront Revitalization Task Force (see page 63) have included Union Station in plans for regional transportation, including a potential rail link to Pearson International Airport.

### Financial Characteristics:

A building condition audit indicated that short-term repair requirements from the developer would total $4.4 million. Net annual rent from current tenants is $2.5 million.

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### Private Sector Contact:

Not yet determined.

# 89 Dundas Parking Management Program

**Model:** Buy-Build-Operate

### Project Impetus:

The Town of Dundas, Ontario wanted to improve the operation of its current parking program by: providing an adequate supply of convenient parking at reasonable rates; upgrading obsolete equipment; increasing revenues; decreasing operating costs; and improving compliance with parking by-laws.

### Project Description:

In 1998, the Town formed a partnership with ParkSmart Inc., a privately-held parking management firm, under an eight-year contract. ParkSmart operates and maintains the entire parking system, collects all revenues, performs parking by-law enforcement and provides customer service. Parking revenues from meters, lots and enforcement are shared between the two partners, resulting in positive net revenues for the Town. ParkSmart provides all required capital and incurs all of the operating expenses.

The sale of all of the Town's existing parking assets to ParkSmart is very unique in the parking industry. Economies of scale allowed ParkSmart to purchase and upgrade equipment at less cost. Surplus parking properties will also be sold by the Town due to excess capacity and improved utilization of the parking facilities and stalls. New technologies such as vehicle detection systems, electronic meters, an interactive voice response system for customer service and automated ticket issuance devices have contributed to increased revenues and improved efficiency.

Enforcement personnel and duties were also transferred to ParkSmart in the spring of 2000. ParkSmart's system is tied to the Ministry of Transportation and the court system to collect overdue fines. The Town is responsible for all policy-making, setting parking rates, receipt of payments, responding to customer inquiries at Town Hall and establishing operating standards. It has the option to purchase all parking equipment from ParkSmart at the end of the agreement.

Since the partnership began, the percentage of parkers who park illegally has dropped from 35% to 15%. Moreover, the number of parkers in violation who are issued infractions has tripled from 3% to 9%, and is expected to increase to 15%. A thorough communications program has kept customer confusion and complaints to a minimum, and local retailers are generally pleased with the results as increased parking turnover has meant more business.

### Financial Characteristics:

Prior to forming the partnership, the Town was running a parking deficit of $50,000 annually, and had no capital available to purchase new equipment. ParkSmart purchased the Town's existing equipment, refurbished the infrastructure and purchased new meters and other equipment for a total capital investment of $145,000. Revenues increased 122% in the first fiscal year, from $106,000 to $235,000. The Town receives a guaranteed monthly payment, ensuring a net revenue stream of $150,000 per year. Once a base revenue threshold is reached, the Town receives 80% of the surplus.

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# 90 Niagara Falls People Mover

**Model:** Design-Build-Operate (proposed)

### Project Impetus:

The City is looking for private sector expertise in this area of transit, following increased demand and local economic expansion.

### Project Description:

The Niagara Parks Commission, operates a tourist transit system along the Niagara Parkway between Niagara Falls and Niagara-on-the-Lake, which serves over 450,000 riders annually (1997). A surge in demand has prompted the City to look at expanding the system with a private sector partner through a proposed design-build-operate contract. This expansion would involve approximately 10 kilometres of service with 13 stations, mainly in the City's core.

The City is currently applying for an Environmental Assessment (EA) from the province. The EA process is unique to this project, given the variety of socio-economic and environmental factors that may impact the community. The City has held a series of public and stakeholder meetings to receive feedback from local residents and businesses.

The EA is expected to be approved by March, 2001, after which the City will commence a Request for Qualifications and Request for Proposals process that is estimated to finish sometime in 2002.

### Financial Characteristics:

Preliminary estimates are $350 million in capital costs for expansion of the existing transit system.

**Related Website:** http://www.niagaraparks.com/attract/mover-idx.html

### Public Sector Contact:

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### Private Sector Contact:

Not yet determined.

# 91 Strathcona Transit

**Model:** Service Contract

### Project Impetus:
The County of Strathcona, east of Edmonton, needed additional staff and infrastructure to support the customer service functions of their existing city transit operations.

### Project Description:
In 1996, Strathcona County Transit and Greyhound entered into a service agreement whereby Strathcona Transit would manage freight, courier and passenger ticket sales on behalf of the company in return for commissions. This partnership took only six weeks to implement following the start of discussions with Greyhound in May 1996. It has succeeded in increasing transit revenues, adding additional staff and infrastructure, providing a single stop for transit and intercity bussing, and offering a courier service to the large petroleum, commercial and light industrial customers in the County. Greyhound was able to find a turnkey provider to manage freight deliveries and increase bus ticket sales throughout Strathcona and Edmonton.

In November 1996, Strathcona Transit was able to build a new transit building and hire additional staff from the profits of the contract with Greyhound. This increased traffic in an under utilized area and provided indoor waiting areas for transit riders. In 1999, 31,000 freight packages were handled through the partnership, providing a much-needed service to local business. Courier service is available at the Strathcona Station or deliveries can be made through the place of business.

### Financial Characteristics:
The County receives 12% commission on freight service plus $1.50 per waybill. They receive 10% commission on transit tickets. 1999 revenues were $500,000 with $43,000 in sales from tickets. This represents a 100% revenue increase since the start of the project in 1996, and profits for Strathcona Transit in 1999 totalled $35,000.

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### Private Sector Contact:
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# 92 407 ETR

**Model:** Build-(Lease)-Operate-Transfer

### Project Impetus:
The Province of Ontario required a new major transportation artery running across the northern part of the Greater Toronto Area to relieve traffic congestion and provide greater access from suburban areas to the east and west. The sale gave the Province a significant cash infusion and mitigated operating costs for 99 years.

### Project Description:
The original 69-kilometre portion of 407 ETR, which runs east-west across the top of Toronto, was created under a design-build agreement with Canadian Highways International Corporation, a private infrastructure development company. It was completed in 1998 at a fixed price of $929.8 million. In April 1999, the Province of Ontario sold 407 ETR to 407 International Inc., a private consortium of international construction and infrastructure development firms, for $3.107 billion.

The sale represents the largest privatization in Canadian history (the sale of CNR in 1995 was for $2.1 billion). The consortium leased the lands from the Province for a period of 99 years and owns the road, buildings and other structures on 407 ETR lands. These will become the property of the Province at the end of the lease. In addition, the consortium will finance, design and build deferred interchanges, as well as west and east-partial extensions of the highway. The 24 kilometre western extension to the Freeman Interchange in Burlington is scheduled to open in July 2001, and a 15 kilometre extension to Brock Road in Pickering to the east is scheduled to open December 31, 2001.

The consortium has authority to set toll rates, but is required to meet pre-set traffic congestion relief targets set by the Province in order to raise tolls above a certain level. There are currently an average of 240,000 users per weekday on 407 ETR. Job offers were made to all full-time employees.

### Financial Characteristics:
The Province sold the 407 ETR Concession Company Ltd. for $3.107 billion to the private sector consortium. SNC-Lavalin holds a 23% share, Grupo Ferrovial holds 61% and Capital d'Amérique holds 16% of the consortium.

**Finance Sources:**
- $2.3 billion in bridge financing from the banks
- $1.55 billion invested by the consortium
- of these funds, $3.1 billion goes to the Province to defray acquisition costs, $500 million for construction of the two east and west extensions, and $400 million for debt servicing and working capital

**Related Website:** http://www.407etr.com

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# 93 Cobequid Pass

**Model:** Design-Build-Finance-Operate

### Project Impetus:

The Province of Nova Scotia wanted to improve safety with a bypass on the TransCanada Highway and needed a faster delivery time than by using strictly public financing.

### Project Description:

Completed in November, 1997, the Cobequid Pass is a 45-kilometre section of the TransCanada Highway (Highway 104) across Northern Nova Scotia between Truro and Amherst. It was the first highway in Canada to include private financing, through CIT Structured Finance.

To manage the highway, the Province passed legislation to create Highway 104 Western Alignment Corporation, an arms length non-profit company. It has authority to borrow money and set toll rates with no recourse to the Province for any debt, nor did the Province guarantee the debt. This succeeded in financing the project off-balance sheet. It is also responsible for the operation and maintenance of the road. Toll revenues over 30 years will: provide the investors a return; pay for toll operations; cover the $656,500 for annual maintenance; and contribute to long-term maintenance.

Atlantic Highways Corporation, a subsidiary of Canadian Highways International, was formed to design and build the highway and to operate the toll collection system for 30 years. The company receives a management fee to cover the costs of managing toll operations. The private sector partners attributed their success in the subsequent Cross Israel Highway bid to the fact that Cobequid Pass introduced the notion of private sector partnership to highway financing and construction.

### Financial Characteristics:

The Cobequid Pass was built for $113 million, which was $10 million less than if it had been built using traditional methods. The private sector financed $61 million of the project by issuing $51 million in 30-year senior toll revenue bonds and $10 million in 15-year junior toll revenue bonds. The federal and provincial governments each contributed $27.5 million, and $5.5 million in subordinated notes was invested from the Sydney Steel Corporation pension fund. The private financing incorporated an innovative structure of debt repayment -accreting debt structure matching increasing revenue generation to debt repayment. Toll revenues are expected to yield $250 million in interest for the private lenders over 30 years.

**Related Website:** http://www.cobequidpass.com

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**Other Partners:** CIT Structured Finance (formerly Newcourt Capital); Nova Construction Company; Tidewater Construction Company; BFC Civil Ltd.

# 94 Fredericton-Moncton Highway Project

**Model:** Build-Lease-Operate-Transfer

### Project Impetus:

The Province of New Brunswick recognized the inadequacy of the existing Trans-Canada Highway between Moncton and Fredericton in meeting traffic demand and the need to build and finance a new highway more quickly than through traditional means.

### Project Description:

To finance infrastructure projects in New Brunswick, the Province created a Crown Corporation called New Brunswick Highway Corporation (NBHC). It was to represent the Province in the partnership to finance, build and operate the new highway. In 1998, it signed a concession agreement with New Brunswick Project Company Inc. (Project Company), a not-for-profit company created to manage and operate the Fredericton-Moncton Highway as a toll highway for 50 years. Project Company has representatives from the government and the private sector developer/operator, Maritime Road Development Corporation (MRDC).

The capital cost of the highway was to be financed through two types of debt - toll-based debt and lease-based debt. Project Company raised $540 million in lease-based debt, which will be paid back through the sub-lease payments from NBHC, and $149.5 million in toll-based debt, which was to be paid back through toll revenues (estimated at $22 million annually over the life of the project). NBHC and Project Company have a 30-year operating contract with MRDC during which time the financing is to be repaid. Under the lease agreement, the Province will have the option to buy the highway at fair market value after 30 years or after 40 years, or ownership automatically reverts to the Province in year 50. MRDC is paid as work is carried out. Payments on the lease-based debt do not begin until two years after all 195 kms. of the highway are open to traffic, which is expected in November 2001. The consortium is responsible for all cost overruns and delays.

In March 2000, the Government announced that it would eliminate the tolling system and transfer debt to the Government's books. In its place, it implemented a traffic counting system whereby traffic volumes are monitored and classified according to type of vehicle. Corresponding monthly payments are made to Project Company to pay for its toll-based debt. Any traffic volume payments in excess of that required to pay the toll-based debt will be returned to the Province.

### Financial Characteristics:

The guaranteed maximum price for construction bid by MRDC was $584.4 million. Total capital cost is approximately $872 million. Following removal of the tolls, the revised guaranteed maximum price is $576.6 million. Annual sub-lease payments from NBHC to the Project Company are estimated at $58 million for 26 years (years 5 to 30 of the lease).

**Related Website:** http://www.gnb.ca/mrdc/index.htm

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**Other Partners:** Miller Paving; Dragados FCC Canada Inc.; Janin Atlas Inc. (formerly GTMI Canada) of Quebec

# 95 South Surrey Interchange

**Model:** Design-Build-Develop

**Project Impetus:**
The Province and City wanted to add an interchange that relieved two existing interchanges in South Surrey, British Columbia to accommodate growing traffic volumes. The City had allocated capital funding to the initiative, but the Province had not.

**Project Description:**
An agreement between the City of Surrey, the B.C. Transportation Finance Authority and the B.C. Ministry of Transportation and Highways in 1998 prompted a joint proposal call to design and build the new interchange on Highway 99 using surplus Provincial "park and ride" lands and capital from the City. The private developer, B.A. Blacktop, was also responsible for development of the surplus lands, revenues from which would be considered the Province's share of funding the interchange. Prior to and during the project, the partners held public consultations and provided information on a website for local residents to keep abreast of progress.

B.A. Blacktop designed a small footprint for the interchange, and relocated the "park and ride," allowing maximum value from the adjacent lands for commercial development. The "single point" interchange utilized a traffic signal controlled intersection beneath the freeway, which was the first of its kind in B.C. An additional off-ramp allowed rezoning of adjacent land for retail use, and a 200,000 square foot shopping centre was developed on the site. In order to help reduce the project delivery time, the City obtained environmental approvals based on a conceptual design, which is not standard practice in the province. Environmental impacts were mitigated and excavated materials from the project were used directly in City water and sewer projects.

**Financial Characteristics:**
Construction costs totalled $9.25 million, with the City contributing $2.6 million in cash plus some surplus land, and the Province providing 18.5 acres of land adjacent to the interchange. The shopping centre development added $200,000 to the City's property tax base.

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**Other Partners:** Grosvenor International Canada

# 96 Bruce Nuclear Power Plant

**Model:** Lease-Develop-Operate

### Project Impetus:

In March 1998, Ontario Hydro retained Salomon Smith Barney to conduct a worldwide search and determine interest in public-private partnerships for the company's nuclear facilities. When Ontario Power Generation was established as the generating successor to Ontario Hydro, the Ontario Energy Board directed it to divest control of assets that would give it more than 35% of the capacity to serve the electricity market in the province.

### Project Description:

In September 1999, Ontario Power Generation (OPG) issued Expressions of Interest for private equity options in the Bruce Nuclear facilities, which consist of eight Candu reactors that generate 3,140 megawatts. A lease agreement in principle with British Energy (the UK's largest private electricity generator) was approved by the Ontario Government in July 2000, subject to Bruce Power obtaining an operating license. The agreement involves an 18-year lease between OPG and Bruce Power for the Bruce A and B plants as well as the purchase of inventory (including fuel stocks).

Bruce Power is a separate operating company set up for the deal, with 95% ownership from British Energy and 5% equity from the two main unions at the site - the Power Workers' Union and The Society of Energy Professionals. Bruce Power has the option to recommission the Bruce A plant, which has been out of operation since March 1998, and will offer employment to most of OPG's employees at the site. Remaining OPG employees include those that provide waste management and centralized nuclear operations support services. As the facility owner, OPG retains contractual responsibility for nuclear used fuel, waste management and decommissioning of the Bruce facilities. These liabilities will be funded through revenues from the lease, which runs until 2018 with an option to extend for up to 25 years. In the event that Bruce Power determines that continued operation of the plant is no longer financially viable, an early termination fee of $175 million may be paid to OPG. Early termination could not occur before 2006.

### Financial Characteristics:

The total liability, including historic costs inherited from Ontario Hydro and the future costs associated with the lease, is estimated to be approximately $3.1 billion (net present value). Almost half of this liability has been funded, with an unfunded balance of $1.6 billion. Bruce Power will make an initial payment of $625 million in three instalments over the next six years. On-going fixed annual payments will escalate from $62 million in the first year to $92 million in the eighteenth year. Variable payments, which include revenue sharing, will also escalate from an estimated $90 million in 2002. They will be tied to market price and the energy production of the facility. In October 2000, Cameco Corp., the world's largest uranium supplier, purchased a stake in Bruce Power with a $100 million investment over two years.

**Related Website:** http://www.ontariopowergeneration.com

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# 97 Cornwall Electric

**Model:** Buy-Build-Operate

### Project Impetus:

Following a review of options for the City-owned electric utility in 1996, and the prospect of increased competition under a deregulated electricity market, the City decided to issue a Request for Proposals to find the best option for taxpayers and electricity consumers.

### Project Description:

On July 31, 1998, the City of Cornwall, Ontario completed the sale of Cornwall Electric and its wholly-owned subsidiary CDH District Heating Limited to Enbridge Inc., at a purchase price of $68 million. This transaction was the first such transfer in Ontario of a municipally owned electric utility to private sector ownership, and made Cornwall one of the few debt-free municipalities in the province. The two partners signed a 35-year franchise agreement, and upon termination the City can purchase back the system, facilities, equipment and relevant power supply contracts at their depreciated replacement value plus 10%. The City agreed not to establish a competing utility within the franchise area during the agreement.

The contract stipulated that Cornwall Electric must serve anyone requiring electricity service within the City, and must have the City's consent to cancel, sell or transfer the franchise to anyone except another Canadian subsidiary of Enbridge Consumers Energy Inc. Should the City decide to charge a franchise fee in the future, the utility is permitted to pass the cost on to its customers. A 15-year agreement was signed with the utility for electricity supply to street lighting, traffic lights and municipal buildings at the same rate structure as other customers. A 5-year operations and maintenance contract was also negotiated for the street and traffic lights.

Employment for all existing employees was provided with equivalent salaries, pensions and benefits. The pension plan continued to be administered by OMERS, the public sector fund manager, and there was no change to the existing collective agreement. Board representation for Cornwall Electric includes two residents from the local area.

### Financial Characteristics:

Guaranteed annual rate increases of no more than 3% were stipulated in the agreement, which are now at 7.66¢ per kilowatt hour. After July 1, 2001, rates will be set in relation to Cornwall Electric's cost and an incentive mechanism that will encourage the utility to keep rates at least 3% lower than those in other municipalities in Eastern Ontario. The 5-year services contract for the City's lighting and traffic lights is valued at $275,000 per year, with 2% annual increases.

**Related Website:** http://www.cornwallelectric.com

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# 98 Enwave District Energy Limited

**Model:** Government Business Corporation

**Project Impetus:**
In 1998, the former Toronto District Heating Corporation (TDHC), now Enwave District Energy Limited (Enwave), needed to restructure and recapitalize in order to build an innovative district cooling system in the downtown core. As a result, it transformed itself into a new private-public partnership.

**Project Description:**
In 1998, Enwave needed to obtain significant capital to develop the Deep Lake Water Cooling (DLWC), which would cool commercial and public buildings in the downtown core using naturally renewable cold water from Lake Ontario. As a non-share capital corporation, this financing proved difficult. TDHC had previously financed its existing cooling plant through capital leases and the sale of receivables. However, the Corporation determined that the DLWC project could not be financed through these methods without contracted sales, and sales could not be made without a project visibly underway.

In 1999, legislation was proclaimed enabling Enwave to be incorporated under the Ontario Business Corporations Act. The Ontario Municipal Employees Retirement System (OMERS) partnered with the City of Toronto to transform Enwave into an innovative supplier of district heating and cooling energy to the downtown Toronto core. This partnership also allowed the DLWC initiative to move forward.

The DLWC project will be a centralized cooling system for downtown businesses, replacing existing in-house air conditioning systems in commercial and government buildings. It will involve the construction of a new water intake for the City of Toronto's Island Filtration Plant, as well as pumps, pipes and heat exchangers to transfer the cold energy in the water from Lake Ontario to the district cooling system. DLWC is projected to reduce carbon dioxide emissions by 40,000 tonnes each year. Construction for this project is expected to be completed in 2003/2004.

**Financial Characteristics:**
OMERS and the City of Toronto created the public-private partnership as shareholders of a new corporation. The pension plan made an initial investment of $39 million with an additional $12 million for future capital projects. Enwave's newly adopted corporate structure will permit it to raise capital under a public-private partnership structure, allowing it to pursue new opportunities in the district energy market.

**Related Website:** http://www.enwave.com

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# 99 Hydro Mississauga

**Model:** Finance

### Project Impetus:
Following passage of the Energy Competition Act in 1998 by the Ontario Government, the City of Mississauga began looking at options for its municipal electric utility, Hydro Mississauga. The utility had traditionally generated profits that were re-invested. The decision was whether to retain ownership of the utility, merge it with other municipalities or sell it to a private or other public organization.

### Project Description:
The City held an extensive fact-finding and public input process throughout 1999 to ascertain support and options for Hydro Mississauga. It issued a Request for Proposals and City Council announced on March 29, 2000 that it would enter into a strategic partnership with Borealis Energy Corporation, a wholly owned subsidiary of the Ontario Municipal Employees Retirement System (OMERS). Under the 20-year agreement, the two partners formed a new company, Enersource, with 90% ownership from the City of Mississauga and the remaining 10% from Borealis. The new company has two divisions, one responsible for retail (energy sales, telecommunications) and the other providing distribution.

The intent was to consolidate as many municipal electric utilities as possible in the area. This would create operational efficiencies and facility sharing in preparation for a competitive electricity market in early 2001. Each utility would be given a proportionate company share, equivalent to their regulated base rate equity. Borealis retains a maximum share of 10%, increasing its investment according to the size of the total equity base. The structure of the Board of Directors includes six members from the City and two from Borealis. The Board makes approvals regarding capital investments, dividend payments, rate changes and debt issuance. The introduction of Bill 100 by the Provincial Government eliminated the potential of other utilities joining Enersource. However, Borealis and the City continue to be partners and are seeking new business opportunities within the deregulated energy sector.

### Financial Characteristics:
Under the new structure, the City of Mississauga holds $180 million in rate base equity, equivalent to 90%. Borealis invested $20 million, which is equal to 10%, and will increase its investment based on size of investment from other partners. Under new Ontario Energy Board regulations, the rate of return for shareholders will not exceed 9.88%. Additional earnings may be given based on efficiency gains or non-regulated business income (e.g. telecommunications). There are three classes of shares for the utility:

- "A" shares - issued to other municipalities as consideration for the book value of their Hydro assets; shareholders are entitled to the 9.88% rate of return and 54% of additional savings
- "B" shares - issued only to the City (90%) and Borealis (10%); they are entitled to 9.88% and 40% of additional earnings
- "C" shares - issued to Borealis with the same attributes as "A" shares; the company is entitled to 9.88% and 6% of additional earnings

**Related Website:** http://www.hydromiss.com/

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# 100 Sudbury District Energy Corporation

**Model:** Design-Build-Finance-Own-Operate

### Project Impetus:

The City of Greater Sudbury, with assistance from Natural Resources Canada, wanted to provide a cost-effective and environmentally responsible heating and cooling system for downtown buildings with assistance from a private energy firm. The initiative was the brainchild of the project manager at a local social services agency, the Sudbury "Center for Life."

### Project Description:

In 1997, the City of Greater Sudbury, Natural Resources Canada (NRC) and Sudbury Hydro began studying the technical and economic potential for a district energy system in the downtown area. A business plan was developed and customers were lined up in order to attract private sector partners and alleviate the capital investment. The City issued an Expressions of Interest, short-listed three firms, and chose Toromont Energy Ltd. as the preferred partner in the summer of 1998. A new energy company, Sudbury District energy Corporation (SDEC), was created with equal shares from the City and Toromont. The system currently serves 11 private, commercial and government clients in the downtown core.

The central heating, cooling and power system replaces individual plants in downtown buildings. The production facility began to deliver heat to downtown customers in November 1999, six months after the initial ground breaking. Five megawatts of electricity are delivered to the power grid due to waste heat recovery from the natural gas powered engines.

The project has resulted in reduced capital costs, more stable energy costs over the long term and a foundation for future economic growth in the downtown area. It has also reduced greenhouse gas emissions due to improved efficiency and economies of scale. SDEC's latest project is a stand-alone co-generation plant at the Sudbury Regional Hospital, expected to be completed in November of 2001. It will provide heating, cooling, electricity and steam, and has the ability to expand capacity for other customers.

### Financial Characteristics:

The total capital cost of the project was $15 million, with a 20% equity interest from the City of Greater Sudbury. Toromont Energy Ltd. and the City equally share the operational costs and revenues. Financing was arranged by Toromont, and Natural Resources Canada (NRC) provided $500,000 through the Climate Change Action Fund as seed funding to the City. NRC was refunded its initial investment of $100,000 for technical and business case consultation services.

**Related Website:** http://www.city.sudbury.on.ca/html/sudbury_district_energy.htm

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**Other Partners:** Sudbury Hydro; Natural Resources Canada

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