

# Canada

## Equipment and Services for Urban Transit Systems

EFFICIENT  ENVIRONMENTALLY RESPONSIBLE  INNOVATIVE

**Canada's public transit industry** has a rich history of success in sharing its expertise and products globally! "Canadian" is a synonym for quality and experience whether the requirement is transit vehicles, planning, consulting and engineering services, software solutions or staff training.

### VEHICLES

International clients have long been drawn to Canadian transit vehicles. Three major urban bus builders and the world's largest railcar manufacturer operate in Canada, having over 3000 skilled employees. More than 80 per cent of production is sold internationally.

While well-known for innovative solutions and products in aviation, **Bombardier Transportation** ([www.transportation.bombardier.com](http://www.transportation.bombardier.com)) is the indisputable world leader in urban and mainline passenger rail equipment manufacturing and servicing. Sites in over 20 countries produce total transit systems, vehicles, and propulsion and rail control solutions.

**The Canadian Hydrogen Energy Corporation** ([www.chechfi.com](http://www.chechfi.com)) manufactures a patented Hydrogen Fuel Injection System that disassociates hydrogen and oxygen from distilled water and injects them into the air intake system on heavy-duty diesel or gasoline engines. In use by over 100 fleets, the system improves fuel economy and reduces

emissions as proven in over 80 million vehicle kilometres over the past eight years.

**New Flyer** ([www.newflyer.com](http://www.newflyer.com)) is North America's largest manufacturer of heavy-duty transit buses, offering different sizes with clean diesel, natural gas, electric and hybrid propulsion systems. As a technology leader and award winner, its innovative firsts include: low-floor buses; programmable logic control electrical systems; and articulated high and low-floor buses. International clients purchase 85 per cent of its production.

**Nova Bus** ([www.novabus.com](http://www.novabus.com)) has been successfully marketing its 40-foot Nova LFS in the US and Canada. This vehicle withstands the most demanding weather conditions and provides best-in-class stainless steel structure, a fiberglass outer shell as well as great customer experience at a low operating cost. For these reasons, more than 1100 buses have been delivered to public and private operators in the US over the past nine years.

**Orion Bus Industries** ([www.orionbus.com](http://www.orionbus.com)) uses hybrid technology for success in the sharply competitive US transit bus market. Their already environmentally friendly vehicles are becoming even "greener": the hybrid bus integrates diesel and electric technologies to secure the greatest efficiency from each, resulting in 25 per cent higher fuel economy and 70 per cent lower emissions. New York City Transit deploys 325 Orion hybrid buses combining clean air with safe, comfortable transit service.

**T-Ji Talfourd-Jones Inc.** ([www.talfourd-jones.com](http://www.talfourd-jones.com)) supplies energy absorbing transit bumpers, padded stanchions, and molded fenders. Its high-performance parts and sub-assemblies have been selected by leading US producers of advanced transit equipment, which must be equipped with energy absorbing bumpers. T.Ji's patented Reflex Bumper™ is the only configurable bumper certified for curb-weights up to 23,191kg.



Photo: Nova Bus

## PLANNING AND DESIGN

Planning and designing urban public transit systems have long been the domain of Canadian specialists. Globally, the design of rapid transit systems, operational and planning reviews, and terminal studies frequently involve Canadian planners. Representative projects include:

**ENTRA Consultants** ([www.entraconsultants.com](http://www.entraconsultants.com)) is a leader in transit and transportation planning. ENTRA's engineering and planning professionals have expertise in developing transportation solutions that contribute to a livable urban environment and a balanced transportation system. Internationally, ENTRA has an ongoing involvement in business plan development, paratransit planning, driver monitoring, and customer consultation for the Central Ohio Transit Authority.

**The IBI Group** ([www.ibigroup.com](http://www.ibigroup.com)), a multidisciplinary consulting firm, provides services in transportation, planning, systems and architecture. The group works in all modes of public transport including heavy rail, rapid transit, Light

Rapid Transit (LRT), Bus Rapid Transit (BRT) and conventional bus operations. The firm is active in public transport projects in Canada, the US, the UK, Europe and the Middle East.

**LEA Consulting Ltd.** ([www.lea.ca](http://www.lea.ca)) provides transportation planning; project management; traffic operations; and designs for roads, bridges, public transit, intelligent transportation systems, and infrastructure security systems. LEA's transit expertise includes transit management, advanced fare collection, and transit signal priority design. A current international project is the development of a transportation master plan for Mumbai, India, which may be the world's largest urban transportation planning study.

**Marshall Macklin Monaghan** ([www.mmm.ca](http://www.mmm.ca)) is an industry leader in program/project management and the provision of planning, engineering and geomatics services for public and private sectors. Multidisciplinary specialists provide comprehensive planning and engineering solutions to effectively move people and goods. Current Canadian projects include York Region, Ottawa and GO Transit programs. Ecuador's Quito International Airport presents a prominent international accomplishment.

**McCormick Rankin Corporation** ([www.mrc.ca](http://www.mrc.ca)) is a leading transportation engineering consultant with a specialization in BRT. MRC was involved in South East busway in Brisbane, Australia, providing expertise and strategic advice in the areas of planning, preliminary design, operational, service and ITS planning. MRC has experience in Canada, Australia, New Zealand, US and UK.



Photo: Bombardier Transportation

**Paradigm Transportation Solutions** ([www.ptsl.com](http://www.ptsl.com))

is a unique consulting practice that specializes in transportation planning, public transit, traffic and parking studies. A typical project was the Border Crossing Travel Study carried out for the Ontario and Michigan transportation departments. This project provided a comprehensive assessment of travel characteristics and origin-destination patterns of non-commercial travel utilizing four major border crossings with the US.

**TRAINING**

Since 1984, the **Canadian Urban Transit Association (CUTA)** ([www.cutaactu.ca](http://www.cutaactu.ca)) has pioneered and provided training and professional development services and core curriculum to more than 300 transit systems in the US, Europe, Australia, the Caribbean and the Middle East. Programs in transit management, supervision, planning, scheduling, labour relations and maintenance management are delivered by seasoned professionals who understand the challenges of public transit. CUTA's flagship customer service program **Transit Ambassador** imparts a strong customer orientation, while **SmartDRIVER** teaches fuel-efficient driving skills for bus operators.

**SCHEDULING AND INTELLIGENT TRANSPORTATION SYSTEMS**

Behind the scenes, the computers that run transit systems use software developed by several global leaders in scheduling and dispatching functions.

**GIRO** ([www.giro.ca](http://www.giro.ca)) is a software firm specializing in computer-assisted productivity tools for paratransit and fixed-route scheduling, as well as related customer information and dispatching systems. These tools combine sophisticated optimization techniques and geographic databases with effective user-friendly interfaces. GIRO serves over 250 customers world-wide.

**Mentor Engineering** ([www.mentoreng.com](http://www.mentoreng.com)) provides mobile computing, dispatching and vehicle location systems to the transit industry. Mentor's in-vehicle computers enable vehicle tracking with GPS, real-time schedule updates, and automated data collection. Among its many international projects, Mentor was prime contractor for Maryland Transit Administration's mobile data/AVL installation, including over 280 demand response vehicles with MDCs and contactless smart card readers for fare payment and passenger identification.

**Novax Industries Corporation** ([www.novax.com](http://www.novax.com)) has provided custom engineered ITS solutions for almost thirty years. Novax offers the only "virtual" Transit Signal Priority (TSP) system available today which requires no physical on-street detection equipment. Novax optimizes scarce transit resources and avoids high infrastructure costs.

**Trapeze Group** ([www.trapezesoftware.com](http://www.trapezesoftware.com)) delivers advanced technologies to support, build and manage more efficient public and community transit, ridesharing, medical and school transportation. Trapeze technologies enhance service, increase ridership and improve return-on-investment. Successes include an integrated planning and scheduling system in Dallas, an online trip planning solution for Seattle, a demand-response scheduling system in Rotterdam, and operations management solutions for German and Scandinavian bus and rail companies.



Photo: Orion Bus Industries

**BUSES: A CANADIAN SPECIALTY! Our bus manufacturers are among the top suppliers of city buses in the United States, and produce well over half of all buses in North America.**



## WOULD YOU LIKE MORE INFORMATION ON CANADA?

### Canadian Urban Transit Suppliers

- ▶ **The Canadian Urban Transportation Association (CUTA)** ([www.cutaactu.ca](http://www.cutaactu.ca)) is the voice for enhancing the public transit industry in Canada, and represents over 100 urban transit systems, 250 manufacturers, suppliers and consultants, as well as 75 government agencies and affiliates. Its mission is to establish public transit as the primary solution to urban mobility in the achievement of sustainable transportation, and to assist its members in the fulfillment of their mandates.
- ▶ **The Intelligent Transportation Systems Society of Canada (ITS Canada)** ([www.itscanada.ca](http://www.itscanada.ca)) is the focal point of the Canadian ITS industry domestically and internationally. ITS Canada actively promotes the application of ITS technologies in the planning, design, implementation, management, operation and maintenance of transportation facilities worldwide.

*Canada is well versed in public transit! The Canadian Urban Transit Association reports that over 100 conventional transit services in Canada handle about 2.5 billion passenger boardings every year. Canadian equipment and services make this possible!*

- ▶ **The Canadian government** maintains a comprehensive on-line database of firms, products and capabilities at: <http://strategis.ic.gc.ca/epic/internet/inremi-pmf.nsf/en/ti01007e.html>

### CANADA HELPS BUILD URBAN TRANSIT SYSTEMS AROUND THE WORLD!



Mumbai, India  
(Photo: LEA Consulting)



Brisbane, Australia  
(Photo: McCormick Rankin Corporation)

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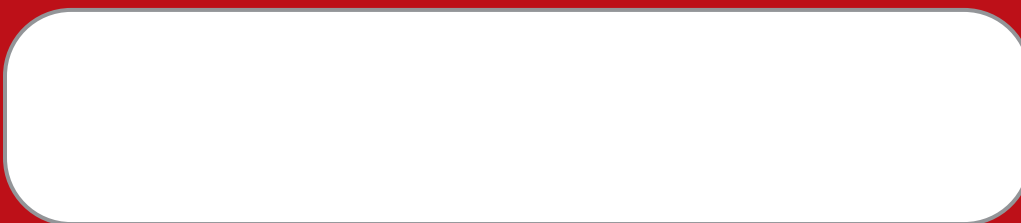
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