



## The Canada Line: Transport for tomorrow comes to Vancouver

Vancouver is a city that's growing fast. To service the needs of a suburban population soon to exceed 3 million, the Canada Line is a vital link. This driverless rapid transit system will run north-south, connecting downtown Vancouver with Richmond, the Vancouver International Airport and Sea Island.

The Canada Line is a truly ground-breaking, unmanned light rail system and is the first public-private partnership (PPP) project to be completed in North America. Commissioned in August 2009 - 3 months ahead of schedule, the system will be a key part of passenger movement for the 2010 Winter Olympics. It will carry 100,000 passengers per day at launch and 142,000 passengers by 2021.

The line covers 19km, both underground and overground, and the project includes a bored tunnel, a cut-and-cover tunnel, and two-directional track running either side-by-side or stacked on separate decks. There are a total of 16 stations along the route: nine in Vancouver, four in Richmond and three on Sea Island, though there are plans for expansion in the future.

### A more considered solution

SNC Lavalin - the company contracted to design, build, partially-finance, maintain and operate this exciting

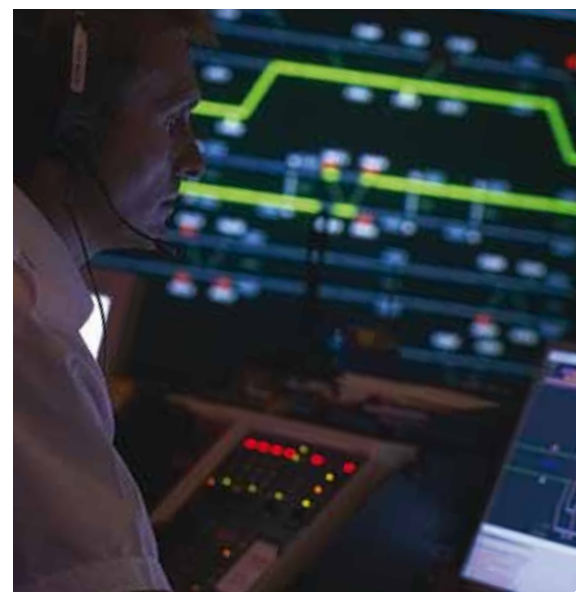
project realised that getting the right control system was essential to the project's success. They were aware of our Systemat**ICS** solution, and our past successes in delivering safe, fully integrated control systems, so contacted Invensys Rail for expert advice from the outset.

### Integrated by design

Systemat**ICS** is unique in its ability to integrate typically disparate systems. It allows operators to manage separate functions all in one place, improve efficiency and reduce costs, while enhancing operational capability. In the case of the Canada Line, it has been designed to control and monitor:

- Traction power
- Electrical and mechanical equipment
- Tunnel ventilation
- Passenger information (on-train and station-based)
- CCTV
- Passenger counting
- Radio and telephone networks

Furthermore, Systemat**ICS** allows train operators to access vital data on fire detection, Automatic Train Control, fare collection and performance management, all in one place, all with ease.



### Connected and efficient

Integrated control was just the start. The whole system will be linked by an Invensys Rail-supplied Fibre Optic Transmission Network (FOTN) covering every station on the line, to ensure connectivity between subsystems. In fact, SystematICS was designed to integrate subsystems, so effortlessly achieves a common, seamless, user-friendly Human Machine Interface (HMI) based at the Operations and Maintenance Centre (OMC) Control Room.

### No ordinary Metro

Canadian weather conditions can be extreme and the new line travels through some of the most built-up and congested areas of Vancouver. Invensys Rail was tasked with the turnkey design and supply of a completely new integrated communications and control system, including the control centre itself. The system has to integrate seamlessly with the Automatic Train Control (ATC) system, and the new radio system (also our responsibility), providing resilient and reliable performance above and below ground.

### Invensys Rail - a logical choice

With over 150 years of railway experience, Invensys Rail is a world leader in supplying communication and signalling solutions into existing infrastructure as well as green-field sites.

Besides demonstrating a thorough understanding of SNC Lavalin's technical and local requirements, Invensys Rail has proven expertise in managing large-scale international, complex and multi-vendor contracts. SNC Lavalin also appreciates our pragmatism. With a flexible approach to project implementation, we can help customers significantly reduce their allocated budget for project engineering, interface and integration management, and hence the overall project risk.



Invensys Rail's expert team is always keen to discuss how SystematICS can enhance efficiency and safety while cutting costs for your network. Call us today on +44 (0)1249 441 441 or visit [www.invensysrail.com](http://www.invensysrail.com)

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