

Intercity rail

and urban transit

The Canadian dream was to build a great transcontinental rail line linking east with west. It would mean for the first time that Canada would be a unified country, with the means to connect its people and resources efficiently. Some 30 000 men toiled for five years to lay 3 500 km of rail. An epic in railway engineering was completed. The year was 1885.

The 1980s demand new approaches, new products. Today, the Canadian rail system is one of the longest and most sophisticated in the world. Canadians continue to be at the forefront in developing and exporting rail and transit products and technologies, such as the LRC.

Bombardier's *LRC*, which stands for "light, rapid, comfortable" passenger train, is in service along Canada's busiest traffic corridors — Toronto, Montreal, Ottawa and Quebec City. These trains can take curves at full speed while maintaining maximum passenger comfort.

What has been learned in moving people and goods efficiently across thousands of kilometres has been adapted to solve the problem of moving thousands of people quickly and comfortably across short distances in the cities.

The *Advanced Light Rapid Transit (ALRT)* vehicle, developed by the Urban Transportation Development Corporation (UTDC), can move up to 20 000 people an hour per direction and is operating in Detroit, Toronto and Vancouver. The ALRT, or sky train, can be elevated on its own right-of-way, up and out of the way of city traffic without the visual and noise pollution associated with other types of elevated rail systems.

The ALRT is a special application of proven and new transit technologies. It incorporated such technical innovations as linear motors and steerable axle undercarriages. Together, they significantly reduce noise and wear. The steerable axle undercarriage improves ride quality, reduces screeching on curves, and creates substantial savings by extending the life of wheels and rails.

Each ALRT car has two linear induction motors that use magnetic force to propel the vehicle forward and to provide braking. These motors do not use gears or transmissions, and have no moving parts that require maintenance. The ALRT can be equipped with a computerized train control that eliminates the need for a driver. As well, the waiting



The LRC is Bombardier's highly successful intercity train.



The ALRT — up and out of the way of city traffic.