



Creating a

# Transportation Blueprint for the Next Decade and Beyond: DEFINING THE CHALLENGES



Transport  
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## FOREWORD BY THE MINISTER

*Throughout Canada's history, visionary transportation policies have brought Canadians together, ensured our prosperity, and improved our quality of life.*

*On April 11, 2001, I announced the Transportation Blueprint project, the purpose of which is to develop a strategic plan for the Government of Canada that will allow the Canadian transportation sector to address the main challenges we foresee for the next 10 years and beyond. The development of the Transportation Blueprint will involve extensive consultation. This document provides a backdrop to that consultation by outlining some of the challenges facing Canada's transportation system.*

*Over the last decade, the Government of Canada has transformed its role in the transportation sector. We have become a world leader in the implementation of innovative service delivery models and the establishment of market-based policies, while contributing to safety improvements. In response, our transportation sector has made great strides and is better prepared to support the global economy. Building on our past successes, we must now turn our sights to a new set of challenges.*

*Today, more than ever, transportation plays an essential role in our quality of life and prosperity. The global knowledge-based economy requires the efficient and seamless movement of goods and people in our cities and rural and remote areas, and an innovative transportation system to connect Canadians with each other and with the world.*

*Safety is the key to maintaining confidence in our transportation system. In addition, we need an environmentally friendly transportation system to preserve a healthy environment for all Canadians, now and into the future. Attracting, retaining and developing a highly qualified workforce to make our system even better than it is today will also be critical to meeting our objectives.*

*This document will provide a focus for constructive discussion and debate over the next 12 months as we develop the Transportation Blueprint. It will form the cornerstone of a dynamic consultative process that will build upon the work of the Canada Transportation Act Review Panel, the Transportation Climate Change Table and the views expressed during the 2000 Millennium Transportation Conference.*

*The need for leadership, partnerships, and a strategic focus is greater than ever. Your views are essential. Please take the time to share your ideas and questions as we work together to shape transportation policy for the next decade and beyond.*

*Hon. David M. Collenette, P.C., M.P.  
Minister of Transport, Canada*

# Creating a Transportation Blueprint for the Next Decade and Beyond: DEFINING THE CHALLENGES

*“Our goal is to have the best national transportation system in the world, and I am committed to gathering ideas and opinions from Canadians on how to achieve it.”*

Hon. David M. Collenette, P.C., M.P.  
Minister of Transport, Canada  
April 11, 2001

## I. Introduction

Canada's transportation system is undergoing rapid change. Over the coming 12 months, the Minister of Transport will be developing a new blueprint for guiding decisions and responding to the many challenges the transportation sector will face during this first decade of the millennium and beyond. The blueprint will build on the findings of three major sources:

- the review of the *Canada Transportation Act*;
- the work of the Transportation Climate Change Table; and
- the views expressed during the June 2000 Millennium Transportation Conference.

Canada's transportation sector faces numerous and varied challenges that our transportation policy will have to address. These have been grouped into nine areas within this document.

During the summer and fall, the Minister of Transport will host a number of meetings so that stakeholders can share their perspectives on these challenges. In addition, Canadians will be able to register their comments on future directions for transportation policy in Canada at Transport Canada's web site: [www.tc.gc.ca/blueprint](http://www.tc.gc.ca/blueprint)

## II. Challenges of the 21<sup>st</sup> Century

### 1. Globalization and Marketplace Frameworks

Of all the economies of the G-8 countries, Canada's is one of the most open. And with export trade growing vigorously (accounting for 46 per cent of our economy at the turn of the millennium), the focus for our transportation industry is becoming increasingly global. As a result, more and more of our transportation firms generate their revenues from services offered beyond this country's borders. Many of these firms have begun to define themselves as North American or global players, and are broadening the scope of their operations through acquisitions, mergers, or strategic alliances.

In this changed environment, governments have to find the right balance between the interests of the public and those of transportation users and providers, taking into account both domestic and international trends.

As globalization progresses, Canada and its trading partners will, more and more, have to harmonize their transportation industries' safety and regulatory regimes. The trucking industry in particular has been asking the federal government to take a strong leadership role in this respect.

Canadian transport carriers competing in the North American and the global marketplace are requesting a competitive business environment. Both carriers and infrastructure providers are calling for a level playing field with international competitors — especially those from the United States, who benefit from a different taxation regime and fee structure. Canada needs to balance these requests with the need to secure adequate sources of revenue for financing programs and services and to ensure

fair compensation for the property or services offered by the public sector.

In the airline industry, restructuring has resulted in the emergence of a dominant carrier — although new players have already begun to challenge Air Canada’s position. The size of the Canadian market, however, does impose certain constraints. Consequently, it will remain a challenge to balance a strong and viable Canadian presence in an increasingly global market with service at home that meets Canadians’ expectations.

The North American railway industry is also evolving rapidly. Only six major carriers now remain in Canada and the United States, with the possibility of additional merger proposals. While mergers may improve connectivity and achieve economies of scale, Canadians are concerned about possible reductions in competition. Related to this issue is the question of the access regime for rail infrastructure — a matter now being examined by the *Canada Transportation Act Review Panel*.

## 2. Integration

The advantages of a seamless, integrated transportation system are undeniable. Both shippers and carriers benefit when their goods and equipment can be quickly and easily exchanged between the modes. Carriers can gain a competitive advantage by building strategic alliances which lower costs and extend their reach into new markets, enabling them to serve their customers better. The public is better served when congestion, pollution and the need to expand or replace infrastructure can be avoided by the effective use of intermodal transportation. Travelers also benefit when services blend together to meet their needs in a smooth and effortless manner.

Many have recognized such benefits. For instance, one solution to congestion used by close to 160 airports worldwide is to provide fast transportation connections between airports and city

**The advantages of a seamless, integrated transportation system are undeniable.**





**Urban congestion affects the competitiveness of Canada's major economic centres.**

centres. Combined with convenient links to transit, commuter and intercity rail, taxis and buses, this becomes an attractive alternative to the automobile.

Integrated transportation requires extensive cooperation within the industry, effective connections between modes, and supportive government policies and regulations. It also requires that jurisdictions work together to find common benefits from harmonizing standards and rules whose inconsistencies serve as barriers to efficiency, safety or environmental protection. As well, governments need to be sensitive to the impact of policy and program decisions on the competitive position of individual modes or combination of modes.

The vision of an integrated transportation system making the best use of all modes of transportation is more appealing than ever before. Yet, it continues to raise major challenges. For example, some components of Canada's transportation network are congested while other links, such as the Great Lakes/St. Lawrence Seaway system, are not being used to their full potential. Given the high cost of building new transportation infrastructure, ways need to be sought to maximize the use of existing, underutilized transportation capacity.

Creating a seamless border for safe, secure and legal traffic is another key challenge. Due to changing trade patterns, Canada's transportation flows along the North-South axis have been growing at a significantly faster pace than our traditional, East-West domestic flows. At current rates, commercial vehicle traffic at the Canada-U.S. border doubles every eight years. The strain of this increased volume requires that we pay increased attention to our border crossings. In the same vein, attention is also required to connect Canada's vast territory to our principal gateways by supporting corridors that are important to international trade and tourism.

### 3. Urbanization

Canada has become one of the most urbanized countries in the world. More than one-third of Canadians live in the three major metropolitan areas of Toronto, Montreal and Vancouver, and two-thirds reside in our 25 largest cities.

The supporting transportation infrastructure has had difficulty keeping pace. We are driving more cars, and we are driving them over longer distances. We are transporting more goods within and through our urban centres. Our urban road network cannot keep up to this growing demand, and our public transit systems are struggling to provide a viable alternative to moving people.

As a result, an increasing number of Canadians spend more of their time in their vehicles. It is estimated that Canadians now spend some three billion hours annually commuting during the workweek. Not only does this commuting time represent a loss in productivity, it also contributes to the high level of time-related stress reported by 25 per cent of full-time workers.

Another source of stress is noise. The noise generated by transportation, particularly in urban areas, has a negative impact on our quality of life. Increasingly, noise considerations will be factored into decisions.

Not surprisingly, urban congestion affects the competitiveness of Canada's major economic centres. Access to airports and ports, freight pick-up and delivery, just-in-time delivery schedules, and business activities are all compromised by congestion. It results in greater fuel consumption and additional emissions of air pollutants and greenhouse gases. Congestion also reduces the effectiveness of our national transportation system by constraining the movement of goods and passengers within and through major urban centres.

Given all these factors, one of the key challenges facing the transportation sector will be to make public transit more attractive. Achieving this goal will do much to contain the growth of private vehicles on our streets, alleviate congestion and pollution, and improve safety, as well as avoid or postpone the costs



**Environmental challenges... will shape the transportation agenda in the years to come.**

of road infrastructure repairs. Additional challenges include: better management of existing infrastructure and of transportation demand; better integration of land use and transportation planning; and better coordination of both public and private sector actions.

The 2001 Speech from the Throne highlighted the Government of Canada's commitment to cooperate with provincial and municipal partners to help improve urban transit infrastructure.

In addition, the *Canada Transportation Act Review Panel* is examining the preservation of urban rail corridors that may be required to address future transportation needs.

#### **4. Rural and Remote Areas**

Our national transportation system should be affordable and accessible, but the limited traffic base in rural and remote areas makes it difficult to sustain the costs of infrastructure and services. Rural and remote communities are often dependent on exporting resources to world markets, or on tourism, and transportation is a critical factor in the competitiveness of these products and services. Of course, remote communities are also very dependent on transportation for provision of basic supplies and services.

Policies and programs that work in our major cities may be less relevant in rural and remote areas. In recent years, the government has been mindful of this reality by preserving, for example, a direct management responsibility for selected remote ports and airports. It has also confirmed its long-term commitment to subsidizing passenger rail services to remote communities.

The viewpoints of Canadians living in rural and remote areas must continue to be taken into account when designing national programs or policies to ensure that sufficient resources

and appropriate policy frameworks are in place to address the transportation needs of rural Canadians.

## 5. Environment

Transportation plays an essential role in maintaining the Canadian way of life, but it also has an impact on the environment. Environmental challenges such as the increased use of non-renewable resources, pollution, and the loss of agricultural land and wildlife habitat will shape the transportation agenda in the years to come. Furthermore, climatic and resource pressures will increase as economic growth over the next 40 years is expected to result in 800 million more people owning cars worldwide.

Transportation is the largest single source of Canada's greenhouse gas (GHG) emissions, accounting for about one-quarter of total Canadian emissions, two-thirds of which originate in urban areas. If current rates continue, GHG emissions from transportation are expected to exceed 1990 levels by 32 per cent in 2010, and by 53 per cent by 2020. This will happen when economic growth stimulates transportation activities and if less GHG-intensive modes (urban transit, bus, rail and marine) continue to lose ground to more emission-intensive modes (aviation, trucking and private vehicle).

Exhaust emissions from transportation sources are also the major contributor to smog in urban areas. Although the full impact of air pollution on health is only beginning to be understood, it is already clear that smog contributes to a wide range of health effects such as impaired lung function, respiratory infection and asthma.

Another challenge is to prevent or control the discharge of effluents by ships. Releasing ballast water, or waste materials, for example, can contaminate groundwater, rivers, lakes, oceans, harbours and beaches. Such discharges can also introduce non-native aquatic species into our waterways.

## 6. Safety and Security

**S**afety and security are critical foundations upon which the general public's confidence in the national transportation system is built. Safety improvements will require continued, collective effort by industry, the general public and government.

Transportation accidents in Canada are declining and acts of unlawful interference have become less frequent worldwide, yet steady growth in the demand for transportation services, as well as new security threats, require that we remain vigilant. Traffic growth, particularly in road and air transportation, will challenge us to become increasingly innovative in order to reach new safety and security targets.

A key focus, in cooperation with provinces and territories, should be road transportation. More than 90 per cent of all Canadian transportation fatalities involve motor vehicles. Understanding and dealing with human factors, the single largest contributor to transportation accidents, must also remain a priority.

Safety objectives must increasingly be defined in an international context. Globalization is challenging governments to work with international partners to develop commonly agreed upon standards to ensure that equipment, personnel and carriers meet acceptable levels of safety and security. Common standards can facilitate trade and help respond to a fast-moving transportation-manufacturing industry that requires products to be certified before they are marketed.

## 7. Accessibility

**F**ederal transportation policies are sensitive to the needs of all Canadians, in particular those with disabilities who have difficulties accessing the national transportation system on reasonable terms and conditions. Principles governing

the provision of transportation services to persons with disabilities have been enshrined in legislation.

As Canada's population ages, a growing challenge for transportation service providers will be to respond to the significant and increasing proportion of Canadians with disabilities who are demanding services that meet their needs so they can fully participate as members of our society.

## 8. Innovation

**C**oordinated, strategic approaches to transportation research and development (R&D) priorities are essential, and will in turn require the establishment of a strong range of partnerships with the private sector, provinces and academia. We will be challenged to develop partnerships with knowledge centres and universities in areas such as road safety, traffic management, or highway and border congestion.

But R&D is not enough in and of itself. To fully benefit from potential safety, environmental, and efficiency gains, promising R&D efforts need to be commercialized rapidly and broadly. A key challenge will be to improve the marketability of Canadian transportation innovations both domestically and internationally by showcasing technological capabilities and encouraging pilot projects and the widespread application of lessons learned.

Support for the development and deployment of Intelligent Transportation Systems (ITS) will enable transportation systems to perform better, without necessarily having to physically alter existing infrastructure. By allowing the seamless exchange of information between users, vehicles and infrastructure, ITS will

**Building capacity for innovation has the potential to set us apart from the global competition.**

enable transportation operators and users to optimize the potential of existing resources and to better integrate services.

For its part, the Government of Canada is creating the framework and environment that will enable the transparent sharing and transfer of information between transportation agencies, jurisdictions and modes. Technology such as Road Weather Information Systems (RWIS) will help ensure that maintenance operations are conducted in ways that minimize environmental impacts while maximizing the safety performance of passenger and commercial vehicles. At the same time, cross-cutting ITS communications systems could produce significant gains in improved location and mobility information, increased system efficiency and interoperability, and reduced energy consumption and emissions.

To achieve the full potential of ITS, we must focus on increasing awareness of its potential benefits and making greater use of existing ITS architecture in Canada. In addition, we will have to support the development of national and international ITS standards, and expand training of more skilled professionals capable of using and developing ITS.

The Government of Canada has challenged the private and public sectors to work together toward the goal of capturing five per cent of global e-commerce markets — conservatively estimated at between US\$1.3 and \$1.8 trillion by 2003. The transportation sector plays a critical role in facilitating the expansion of e-commerce, as it is the glue that binds supply and demand together. E-commerce and e-technology are also expected to play a significant role in fueling further productivity gains in transportation by facilitating greater and more effective interaction between carriers and shippers or travelers. However, small- and medium-sized transportation firms are lagging behind larger-sized firms in their use of e-commerce.

The fundamental reforms in transportation over the last decade have contributed to reducing costs and improving productivity in the sector. Looking forward, building capacity for innovation

has the potential to set us apart from global competition and to meet many of the challenges facing Canada's transportation sector.

## 9. Skills

A highly innovative economy will in turn require a highly skilled workforce that can respond to rapid changes in technology and new ways of doing business.

Transportation innovations will require additional qualifications and multiple skills from transportation sector employees. At the same time, intense competition for the same skilled workers, combined with retirements, will challenge the sector to find innovative ways to attract, develop and retain its workforce.

Already, there are current and anticipated shortages for such skilled occupations as certified pilots, truck drivers, civil engineers, researchers, certified mechanics and ships' officers. Similarly, it will be critical to ensure that Transport Canada has the necessary skills to continue fulfilling its public-safety mandate. Our knowledge-based economy will increasingly emphasize continuous learning and learning organizations.

## III. Conclusion

The transportation sector faces many and varied challenges. The *Canada Transportation Act* Review will be completed in June of this year. As well, the work of the Transportation Climate Change Table, together with the views expressed during the Millennium Transportation Conference in June 2000, provide us with a strong basis for clarifying how some of these challenges might be addressed. Both freight and passenger issues need to be examined as part of the development of a new blueprint. It will be critical to make strategic choices and focus our attention on those issues that will have the greatest impact on the quality of life of Canadians.

In considering how we will advance the new Transportation Blueprint, it is clear that no single player can bring about the



required changes. In the past, the Government of Canada has experimented with a wide spectrum of governance arrangements to address the challenges it has faced. Innovation, broad-based partnerships, more integrated and intermodal approaches, and a clear strategic focus will continue to be key to addressing the growing pressures faced by Canada's transportation sector.

To help focus the debate in shaping a new blueprint, we have identified three key areas for consideration:

- Have the right key challenges been identified in this document? Are there other important challenges that have not been raised? If so, what are they?
- Which challenges should receive priority over the next ten years? Why?
- What public and private sector action is required to best meet challenges identified as priorities?

You can forward your comments in writing or by e-mail to:

**Blueprint Project**  
**Transport Canada**  
**Place de Ville**  
**Ottawa, Ontario**  
**K1A 0N5**  
**[blueprint@tc.gc.ca](mailto:blueprint@tc.gc.ca)**

Due to the expected volume of comments, we will not be able to acknowledge the receipt of contributions. However, please rest assured that all comments will be carefully examined.

#### **NOTE**

This document as well as additional information on this initiative can be found on Transport Canada's web site at [www.tc.gc.ca/blueprint](http://www.tc.gc.ca/blueprint). A "list serve" facility is available whereby interested parties can be automatically notified, if they wish, when new material is added.