### III. THE CONTEXT

## The Vision, the Trends, and the Issues

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The transportation system of North America represents a huge investment in infrastructure and delivery capacity, and throughout the 20<sup>th</sup> century, transportation services have been a major force in economic development. Individual modal networks—highway, rail, air, ports and waterways—convey vast amounts of freight and impressive numbers of passengers.

During most of this century, each mode strove to be a full-service provider, meeting the requirements of the customers from origin to destination. In the US experience, partnerships between modes of transportation were limited, until recently, to those that were absolutely necessary. The Canadian experience, however, has been significantly different. At the turn of the last century, the Canadian Pacific Railway Company ran an intermodal empire, with ownership and operation of railroad, ocean steamship, lake steamship, local freight delivery and pickup services, and later adding intercity trucks and an airline. Arguably, the absence of antitrust legislation and a regulatory climate that did not segregate modal ownership and operation were responsible for this path of development. The development of transportation services in Mexico provides another pattern. Foreign shipping companies dominated early transportation until national maritime and railroad companies were created in this century. Today, the privatization of the Ferrocarriles Nacionales de Mexico (FNM) railroad and the intermodal development of Transportacion Maritima Mexicana (TMM) and Ado y Empresas Coordinadas bus services are proceeding rapidly.

However, within all three countries today, the customers are changing and their needs are changing. Not only has the emergence of global trade widened the options, it has also increased the challenges and created new opportunities. On the demand side of the market equation, customers now insist upon transportation service that is fast, efficient, safe, reliable, and provided at the lowest possible cost.

On the supply side, technological innovation has spurred new concepts and new thinking about what is possible. Computers, communications, and ultramodern operating equipment have expanded capacity and augmented marketing potential. The container has become the standard conveyance package for international freight. Mammoth ocean vessels deliver 2,000 containers-per-ship to dockside, where railroads pick them up by the trainload for delivery inland or for transshipment on land bridges. The next generation of container ships will double that capacity.

In recent years, however, insightful observers have come to note that conventional networks, built around individual modes, have pushed-up against capacity and service limits. The following trends illustrate the problem:

- highway congestion has reached unacceptable levels;
- highway fatalities and injuries have persisted at troubling levels, despite billions of dollars of investments to improve safety;
- inadequate land-side connections have devalued the premium of speed and frequency upon which commercial aviation has built its reputation;
- small towns and rural regions have been disconnected from transportation main lines because they could not offer the volume of freight or passengers that the individual modes require for cost-efficient operations; and,
- urban regions throughout North America have confronted problems of land use, pollution, and congestion.

Paradoxically, transportation is both a visible cause of these problems and also the apparent remedy. A vision of transportation for

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the 21<sup>st</sup> century now is emerging. By integrating the separate modal networks into an integrated, intermodal system, transportation will not only meet the economic and

mobility needs of North America, but it can also alleviate the nagging problems of pollution, safety, energy consumption, and congestion.

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#### NAFTA AND ECONOMIC COMPETITIVENESS

TRENDS: In a world that is rapidly dividing into a number of regional trading blocs including the European Union, Japan and the Pacific Rim Countries, Mercosur, and NAFTA, transportation networks will play an increasingly important role, particularly in economic competitiveness. To meet the requirements of this new global economy, change in transportation systems is being forced, by becoming more intermodal and by incorporating new technologies.

Transportation among the trading blocks-NAFTA, APEC and the European Union—appears to be adapting more quickly to the changing global environment. Intermodal transport within trading blocks, however, has shown itself to have a greater inertia to change. NAFTA's goal of creating a free-trade area of more than 375 million people with a threenation GNP of over \$8 trillion—where goods and people can move easily-places significant demands for change upon the North American transportation system.

At the same time, major changes are occurring in the ways that North American firms do business. These changes are moving the transportation system inexorably toward an integrated, intermodal system. As an example, the recent actions to create partnerships among the railroads operating in the United States, Canada, and Mexico offer the potential for the development of a North American rail system, which could improve economic competitiveness substantially.

ISSUES: It is imperative that the evolution of an intermodal transportation system in North America position the economy of the continent so that it is capable of meeting the increasing competition from Europe and Asia. Although actions by governments and transportation companies have served to alleviate delays at highway and rail border crossings between Mexico and the United States, the sheer increase in volume of freight traffic may well overtake the scale of past accomplishments. The new transportation industry partnerships must move quickly to capture operating efficiencies to achieve the benefits that were the objectives of these partnerships.

#### ACCELERATING INTERMODAL DEVELOPMENT

TRENDS: The marketplace currently drives the evolution of the freight intermodal transportation system. A large number of intermodal services come as the result of initiatives on the part of freight customers. State and local governments have begun to consider intermodal issues in their transportation planning efforts, and some have sponsored the development of intermodal terminal facilities as an effort to improve their competitiveness, to reduce congestion, and to help solve air-quality problems. Governmental actions at the federal level, such as the 1991

Intermodal Surface Transportation Efficiency Act in the US, have begun to alter national policies toward intermodal projects and solutions.

ISSUES: The proper role of government in promoting intermodal transportation is still in the process of being defined—a process that should be brought to discussion and resolution. The role of intermodal transportation in reducing pollution and congestion will be determined by public policy at several levels of government and among various agencies at each level. The evolution of an intermodal passenger system lags behind that of the freight transportation system, and since many passenger operations use public infrastructure, a different governmental role in the promotion of passenger intermodalism may be called for.

#### TOWARD SUSTAINABLE TRANSPORTATION

TRENDS: Although transportation systems are essential to society and its commerce, there are negative impacts on land-use, safety, and pollution levels. Acquiring sites for new transportation facilities—airports in particular—has become more difficult. Urban-area ports compete with residential and non-transportation demands for land and access. Public accessibility has suffered in the development of new air passenger terminals. While some modes and many routes are burdened with congestion, others have substantial unused capacity. Adding increments of capacity to existing highway transportation routes often results in staggering costs. And, paradoxically, the expansion of highway infrastructure capacity to end congestion has merely made congestion worse, to which point the conditions in Los Angeles amply attest.

ISSUES: Minimizing adverse impacts, maintaining equity, enhancing economic growth, and permitting consumer freedom of choices repre-

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sent an enormous challenge. Specific governmental actions to achieve certain goals—such as reduction of air pollution at the local level—have linkages to the development of an intermodal system over a much larger region. Public policy and economic investment should support the expansion of an intermodal system that builds upon the strengths of each

mode and that reduces the overall adverse impacts of transportation.

Visions of the future are essential for human progress. As Dag Hammaskjöld once remarked, "only he who keeps his eyes fixed on the far horizon will find the right road."

Szyliowicz et al.: The Vision, the Trends, and the Issues



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Universities are uniquely suited to facilitate discussion of public policy issues, particularly those that require thinking, quite literally, beyond the boundaries and into the future. The University of Denver welcomes the opportunity to host this Summit.



#### Chairman Gilbert E. Carmichael Intermodal Transportation Institute University of Denver

Our aim at this North American Transportation Summit is to identify problems—and how to resolve them, to recognize opportunities—and how to realize them. With your active participation, this landmark event can be informative, stimulating, and productive.



#### Provost William Zaranka University of Denver

The University of Denver is committed to helping the Intermodal Transportation Institute bring together international transportation leaders and policymakers to discuss important issues that will lead us into the next century.



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We believe that it is time for industry, governments, and non-governmental organizations to work together for an efficient, safe, and sustainable system of transporting freight and people. We stakeholders must forge a better system and be the architects of a new public policy.