

RSC ROTTERDAM



FHWA



Mission

To identify challenges, opportunities, government strategies and market responses associated with the European Union experience in forming a common market...and relating them to the North American context, such as:

- National and sub-national freight investment decisions**
- Public/private sector freight initiatives**
- NAFTA**

Scan panel included representatives from:

- **The Federal Highway Administration and Ministries of Transport from Canada and Mexico**
- **American Association of State Highway and Transportation Officials**
- **Florida, Ohio, and Minnesota Departments of Transportation**
- **MPO—Chicago Area Transportation Study (CATS)**
- **Intermodal Research and Education Foundation**
- **University**

Panel met with representatives from:

Government

- **The Netherlands' Ministry of Transport, Public Works, and Water Management**
- **EU—Directorate General for Energy and Transport**
- **Ports of Rotterdam and Gioia Tauro (Italy)**

Facility Developers/Operators

- **The Netherlands: Betuweroute, Rail service center, port terminal operator (ECT)**
- **Medcenter container terminal (Gioia Tauro)**
- **Freight village (Verona, IT)**
- **Frankfurt (GER) airport**

Private Sector Service Providers

- **Railion (The Netherlands)**
- **Maersk (Italy)**
- **CEMAT (Italy)**
- **HUPAC Intermodal (Switzerland)**
- **LKW Walter International/Trucking/Intermodal (Austria)**

Logistics Service Providers

- **Holland International Distribution Council**
- **Kombi verkehr (Germany)**

Context...

| | EU-15 | US |
|--------------------------------------|--------------|--------------|
| Population (millions) | 375 | 270 |
| Urban population (millions) | 78 | 77 |
| Area (million km²) | 3.24 | 9.36 |
| GDP (ECU billion) | 7,586 | 7,760 |
| Exports (ECU billion) | 731 | 606 |
| Imports (ECU billion) | 712 | 792 |
| Road network (million kms) | 3,500 | 6,460 |
| Rail network (million kms) | 156 | 240 |

Source: EU Statistical Pocketbook, 2000

Freight Transport, billion tonne-kms, 1997

| | EU-15 | US |
|---------------------|--------------|--------------|
| Road | 1,205 | 1,534 |
| Rail | 238 | 2,165 |
| Inland water | 118 | 520 |
| Pipeline | 85 | 901 |
| Short sea | 1,124 | 511 |

Source: EU Statistical Pocketbook, 2000

(Note: 1 ton-mile = 1.46 tonne-kilometer)

Freight Transportation Challenges Facing EU

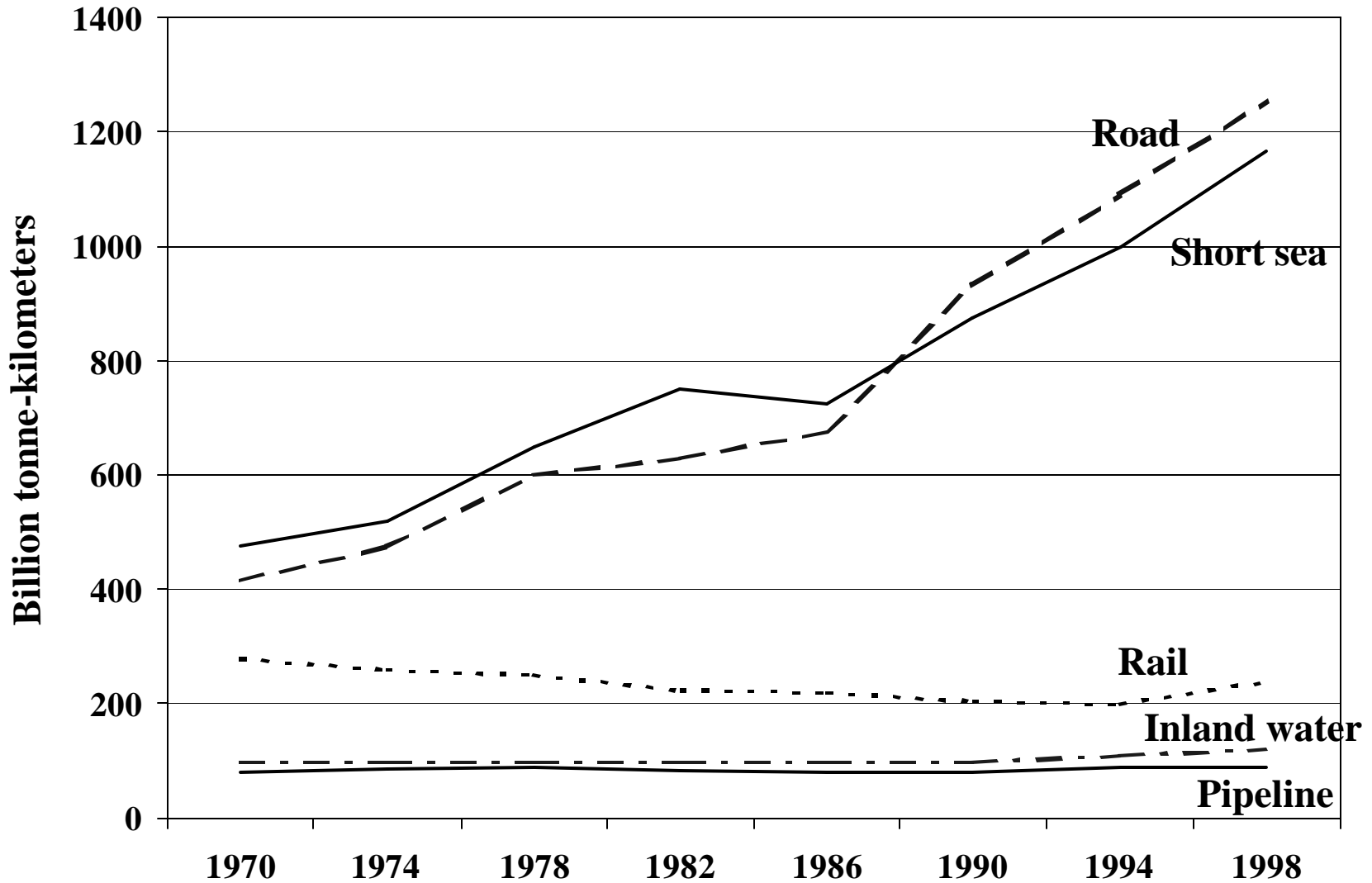
- **Substantial increases in passenger and freight movement over the past 20 years have led to significant levels of road and freight/passenger terminal congestion**
- **Many freight transport movements occur on same facilities as passenger movement (e.g. rail and road systems) creating pressures on facility space management**



- **Historically, national transport systems were designed for national defense purposes to constrain cross boundary movements, leaving a legacy in some cases of incompatible operational systems and design**

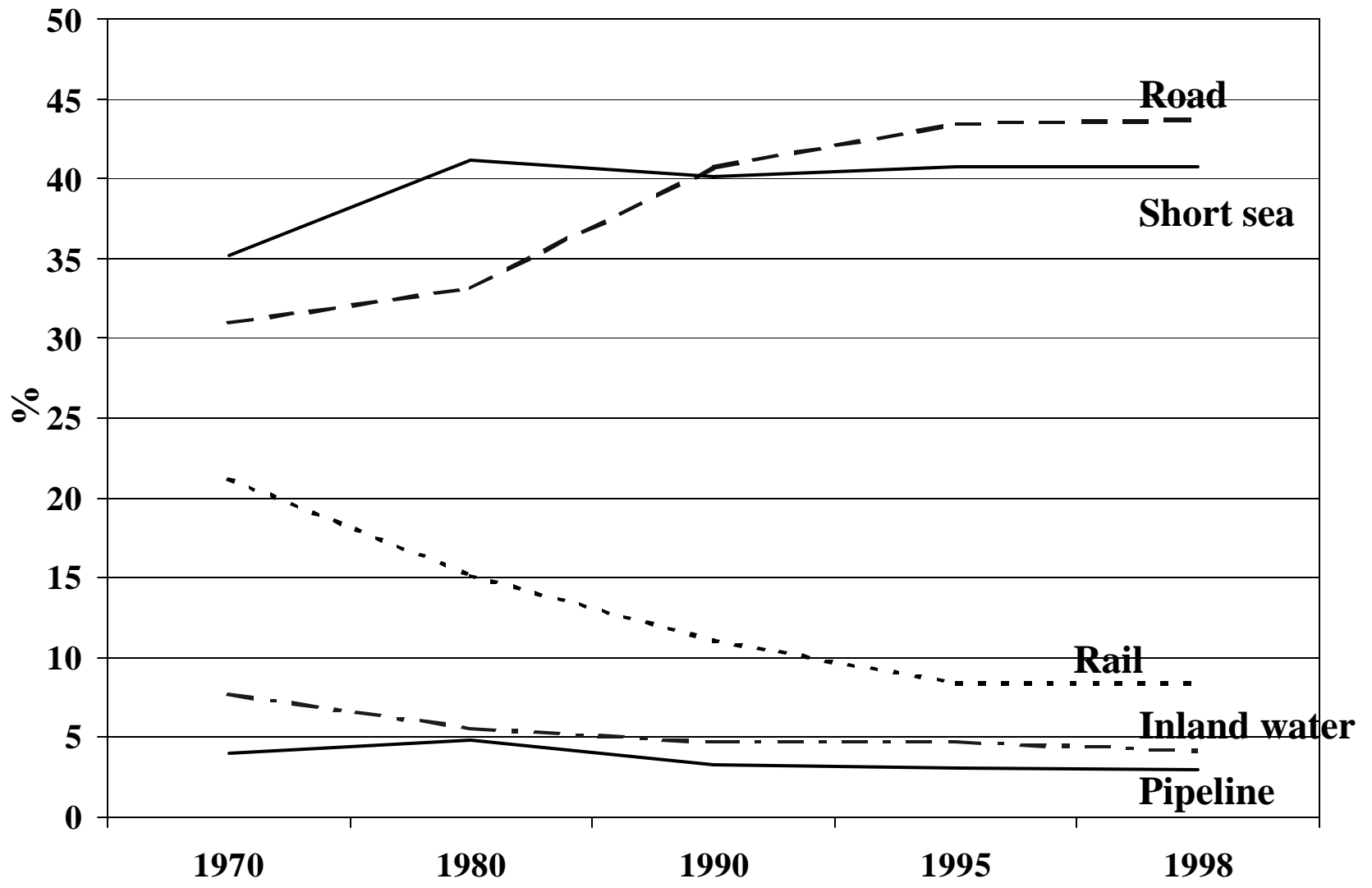
- **Level of transport infrastructure development varies across EU countries**
- **Strategic geographic barriers hinder easy continent-wide transportation (e.g., English Channel, the Alps, etc.)**
- **Transport policy is integrally linked to EU and national policies on environment/sustainability/energy; this leads to differences of opinion on most appropriate transport investment policies**
- **Freight modal distribution has steadily shifted toward truck and short sea movements**





EU Transport System Freight Use, 1970-1998 (billion t-km)

(Note: 1 ton-mile = 1.46 tonne-kilometer)



EU Transport System Freight Mode Split, 1970-1998

How is Europe Responding?

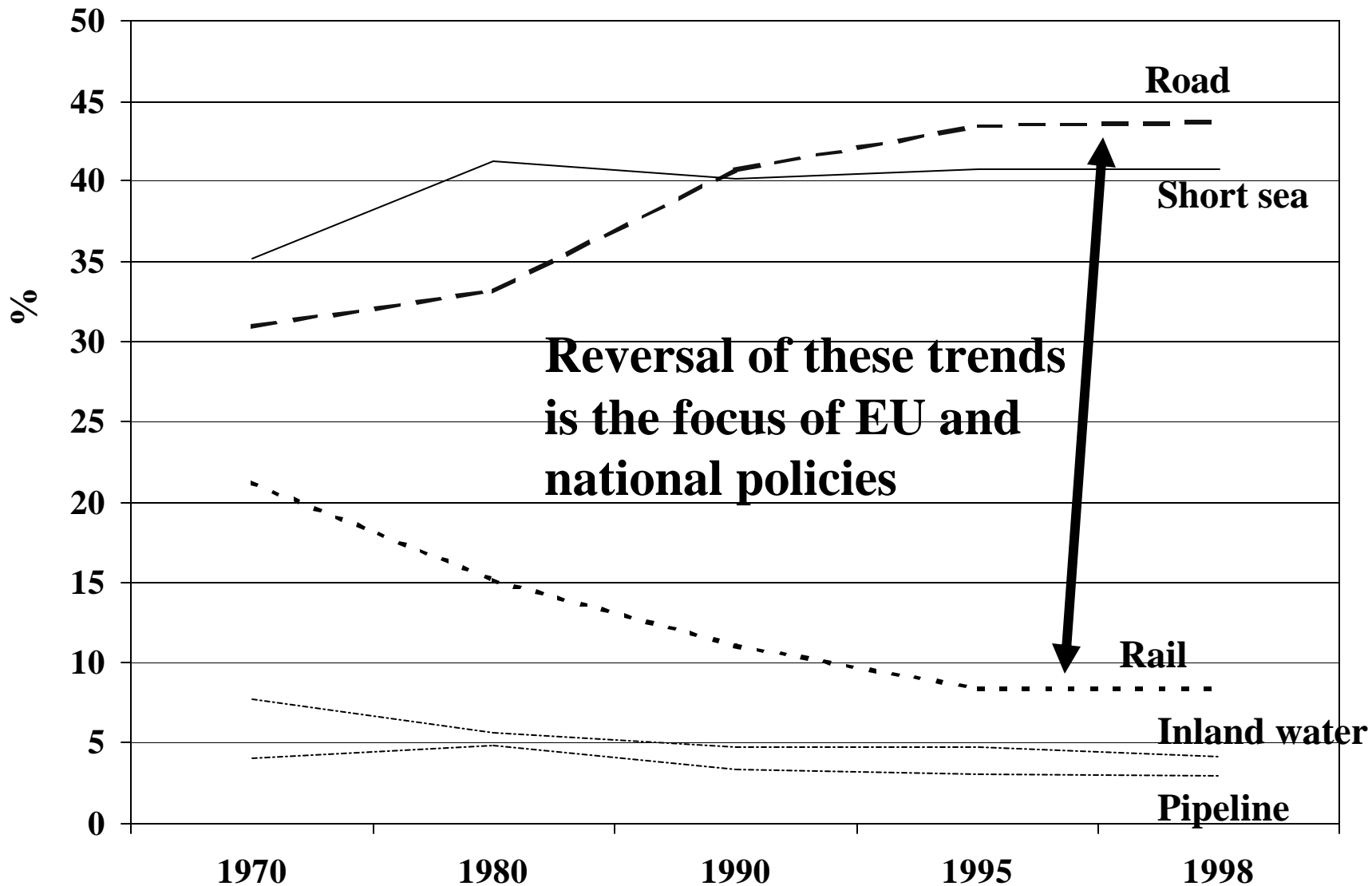


Public Sector--European Union (EU)

The EU created to establish common economic market and to deal with history of conflict; coordination and development of EU's transport system was one of the first areas of attention

Major focus of initial EU efforts was on developing free competition and consistent interoperability

Strong policy linkage between transport goals and environment/sustainability/energy goals; major policy approach has been to establish target market shares for modes



EU Transport System Freight Mode Split, 1970-1998

EU has several roles:

- **Advocates** common principles and interests
- **Facilitates** multi-country activities
- **Coordinates** multi-country planning, policy and research activities
- **Establishes** EU vision and policy for EU/member state action
- **Provides** varying levels of funding support for EU priority projects

- **Targets** human resource development/training in transportation projects
- **Establishes** legally binding rules and regulations for such things as safety and vehicle characteristics (e.g., infrastructure manager for railroads should be different from operator)
- **Monitors** member nation actions and, if necessary, takes to action to European Court

Public Sector--Member Nations

Member nations are responsible for implementing EU policies and directives; little enforcement of this response unless issue is of such significance that it goes to European Court

Some examples of adopting market share targets as basis for national transport policy

Public/private partnerships have been used to provide joint investment in freight infrastructure

Trend toward separating freight infrastructure ownership from operations responsibility

Public Sector--Local Governments

Several examples found of local government financial support of freight infrastructure

Success of these initiatives was related to ability of local officials to link economic development objectives with broader community goals

Competitive advantage in a global, or at least European, market was a key driving force

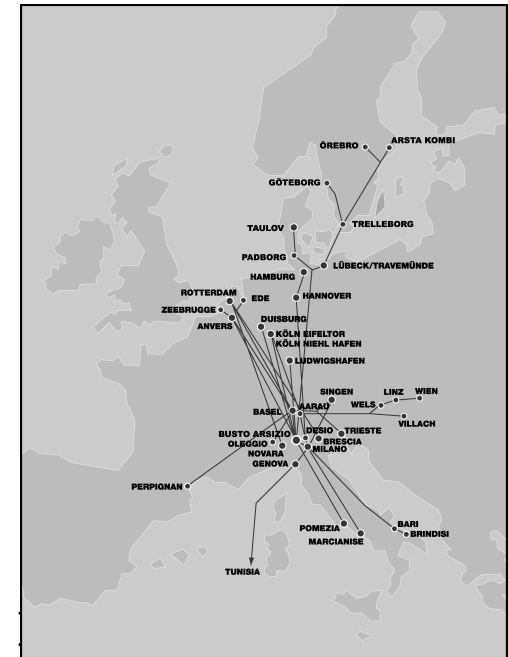
Private Sector (carriers/logistics companies/terminal operators)

Focused on rationalization of services and operations with strategies to increase economies of scale

- larger ships and ports
- block trains/unit trains/shuttles
- freight villages
- intermodal consolidation terminals
- automated operations

Trend toward more hub operations

Intermodal freight movement has been handling increasing freight movements



Some Examples....

Facility Service Investment

- The Betuwe corridor
- Gioia Tauro port development
- Swiss shuttle trains

Institutional Framework

- _____ --Dutch program on logistics efficiency
- _____ --German public investment in intermodal terminals

The Betuwe Corridor

First railway in Holland designed exclusively for freight

Connects Rotterdam to Germany with 160 kms of track

Approximate \$4 billion in investment; Contributions from The Netherlands, EU, and private sector

Separation of infrastructure ownership and operations



Gioia Tauro Port Development

New container port in southern Italy designed to act as trans-shipment point for containers coming from Asia and Middle East

1993--0 movements

2000--2.7 million TEUs; 3,060 vessel calls; 95% trans-shipment to other vessels



Expansion plans for larger vessels and creation of European Free Trade Zone

Estimated government investment \$50 million; \$250 million from terminal operators; EU provides funds for training

Investment being made (with EU support) for improved rail access to Europe; Port officials view this as important in making Gioia Tauro possible intermodal port to northern markets



Swiss Shuttle Trains

Switzerland not a member of the EU; has agreements with EU concerning transport

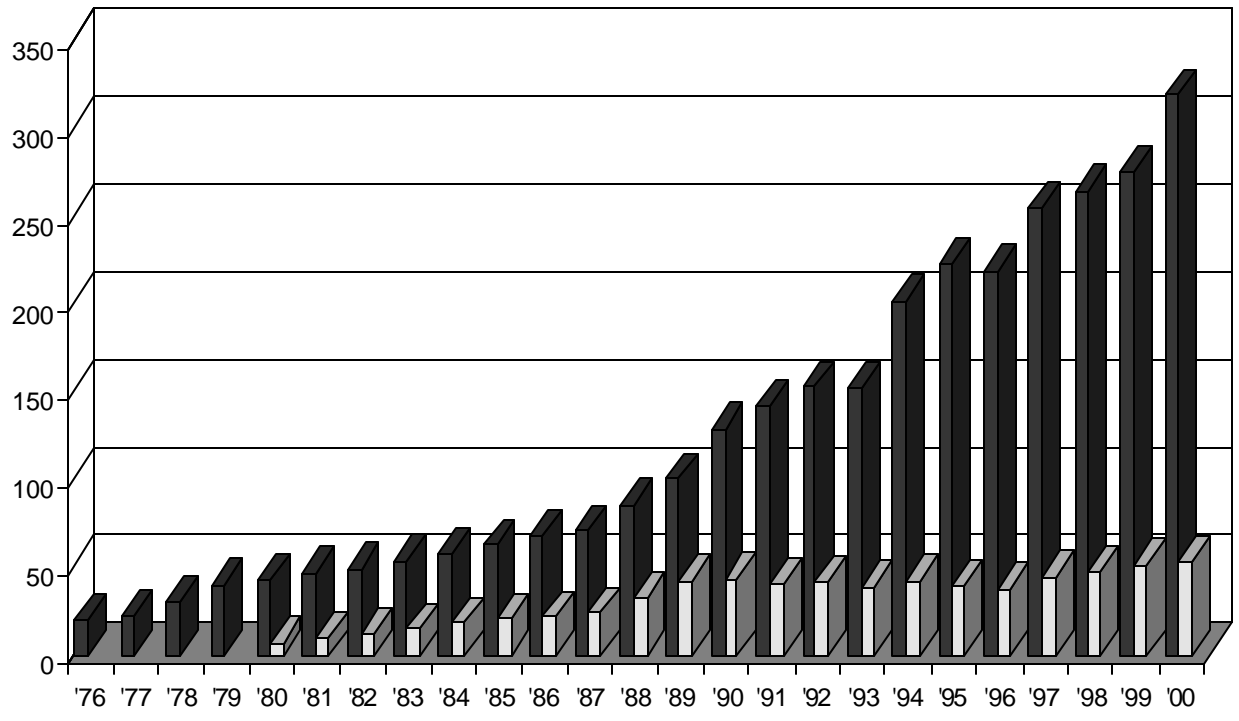
Alps serves as significant barrier to freight movement along north-south axis; Swiss also had more stringent truck weight limits



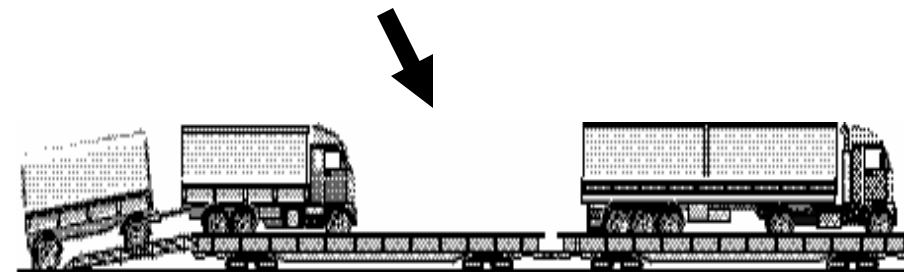
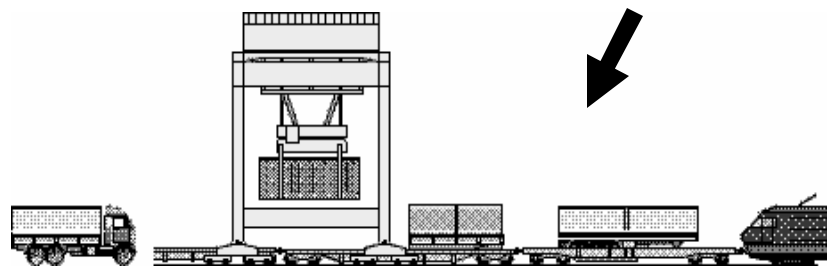
Swiss have imposed new truck tolls of \$200/truck at border

Part of strategy is to provide shuttle trains for containers or trailers





Unaccompanied combined transport
 Rolling Highway



The Netherlands: ‘Transactie Modal Shift’ Program

- **Provides government funds to shippers to conduct logistics scans and to develop long-term plans for more efficient goods movement**
- **Proposed actions have included:**
 - **Development of new logistics strategies (e.g., reduction in scheduled deliveries and improved route planning)**
 - **Changes in transport technology (e.g., use of sea containers)**
 - **Consolidation of freight distribution activities at freight centers**
 - **Enhanced training to improve vehicle fuel efficiency.**

- **From 1997 to 2000**
 - 200 logistics efficiency scans**
 - 100 mode shift scans**
 - 50 integrated scans**
 - 142 implemented projects.**
- **Seventy-five of the mode shift scans showed the possibility of using intermodal services**
- **Approximately 10 percent of these cases, such service was cheaper than existing truck service.**
- **Estimated reduction of 72 million vehicle-kilometers due to more efficient logistics strategies; 18 million vehicle kilometers due to targeted mode shift strategies.**

German government provides funds for construction or expansion of intermodal terminals that include the exchange of freight from truck to rail, inland barge, or coastal shipping.

- **The terminal improvement must not be economically viable solely with private financing.**
- **The terminal operator must be different than the organization that owns the terminal**
- **Open access to the terminal improvements will be allowed to all who desire to use the operation**
- **An intermodal facility or facility expansion is planned in the region by one of the intermodal carriers**

- **The funding recipient must commit to operating the facility for a specified period of time, which varies according to how much of the initial cost is borne by the recipient**

At least 20 percent of the government funding will come in the form of an interest-free loan, with the rest being a construction grant.

Eligible activities, for example, loading and siding tracks, road connections, loading equipment, support buildings, signalization, and automated vehicle identification (AVI) systems.

Planning costs up to 10 percent of the eligible construction costs are also allowed.

Lessons learned....

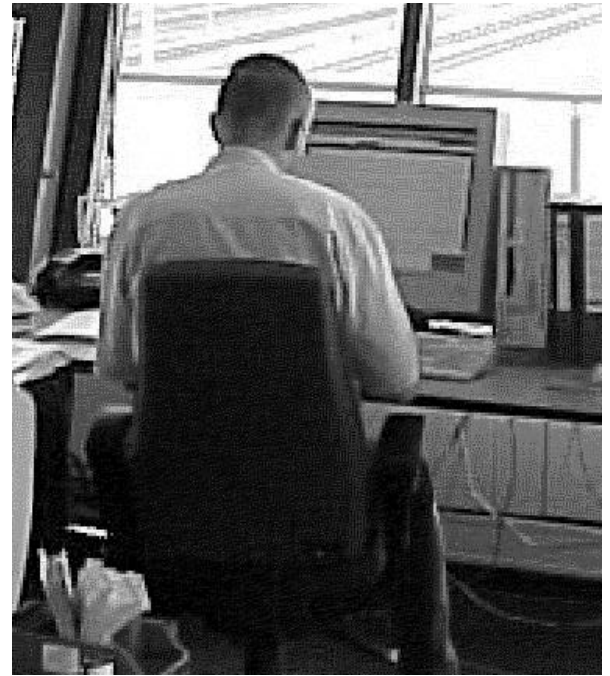
- **Understanding the motivations for logistics decisions and their implications on transportation system performance is a critical point of departure for a national or multinational effort to foster trade.**
- **Identifying freight bottlenecks and “solving them,” should be an important focus of regional, state national, and international planning/policy efforts.**

- **An international and national strategy for investing in freight transportation facilities and services is an important component of transportation policy. Public investment in the EU has been designed to act as catalyst for private sector investment.**
- **Public investment targeted at improving freight movement should be based on incentives that leads to private decisions that best meet corporate needs while achieving public goals (e.g., economic development, sustainability, etc.). This was described as “market-driven” policy.**

- **Focus on best use of existing transportation options while also looking at needs for new infrastructure; this suggests an important role for integrated information systems that can manage transportation system.**
- **Interoperability and consistency in national laws are important areas of multinational concern; interoperability leads to a focus on compatible information systems. However, EU experience shows that there are many other transportation issues that need to be examined in establishing a common trade market.**

- **Important role for multinational efforts is to foster open competition and open borders; free access allows market to take advantage of productivity economies and the results of market-placed decisions.**
- **EU has served as an important forum for establishing consensus on strategies for establishing a competitive market in Europe. Such a forum provides an institutional framework for developing a common message among government agencies and stakeholders and is able to raise transportation issues to a high level of political attention.**

- **Human resource development/training is an important element of public/private initiatives to improve freight transportation.**



Further Studies....

- **Monitor response of intermodal freight to national and EU policies**
- **Examine results of EU “rationalization” of transportation infrastructure. For example, what happens to ports or terminals when the EU’s transport plan suggests a smaller number of such facilities will better serve EU purposes?**
- **Compare North American and EU productivity in freight transportation, and the differing criteria for investment.**

- **Review existing forums/mechanisms for NAFTA discussions to see if there are more effective means of tri-lateral cooperation with regard to transportation decisions. How do we get trade/commerce groups involved in these discussions?**
- **Continue monitoring EU experience with road pricing and relative success in fostering mode shifts**
- **Investigate role of MPO in freight transportation, especially in those issues having national importance**

- **Investigate public/private partnerships for freight improvement projects. How can public investment be related to public benefits?**
- **Examine the use of a “systems perspective” for freight transportation; conceptual development and use of performance measures**
- **Consider role that technology innovation can play in international and national trade markets; vehicle and network changes as well as information systems**