Integrating Freight into Transportation Planning

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FDOT DISTRICT 1 FLP

Purpose

- To provide a general orientation of the evolution of transportation and introduction to key principles and items to consider for integrating freight into transportation planning

Tell the Freight Story, Develop a Plan, and Sell the Story & Plan

Transportation: Evolution and Change

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Office of Freight, Logistics and Passenger Operations

Transportation Overview

Transportation provides the flow of materials, products and persons between production facilities, warehouses, distribution centers, terminals and customer locations - consumes a major proportion (est. **1/3 to 2/3**) of total logistics costs.

Economics of Transportation – it's a pervasive element of daily life impacting citizens':

- Economic well being
- Safety
- Social interaction
- Quality of physical environment
- Quality of daily life

Both of these influence transportation planning to varying degrees

Demand for Transportation –

- Regions or areas tend to specialize in certain economic activities
- Specialization creates physical gap between markets and areas of production
- This gap creates a demand for transport

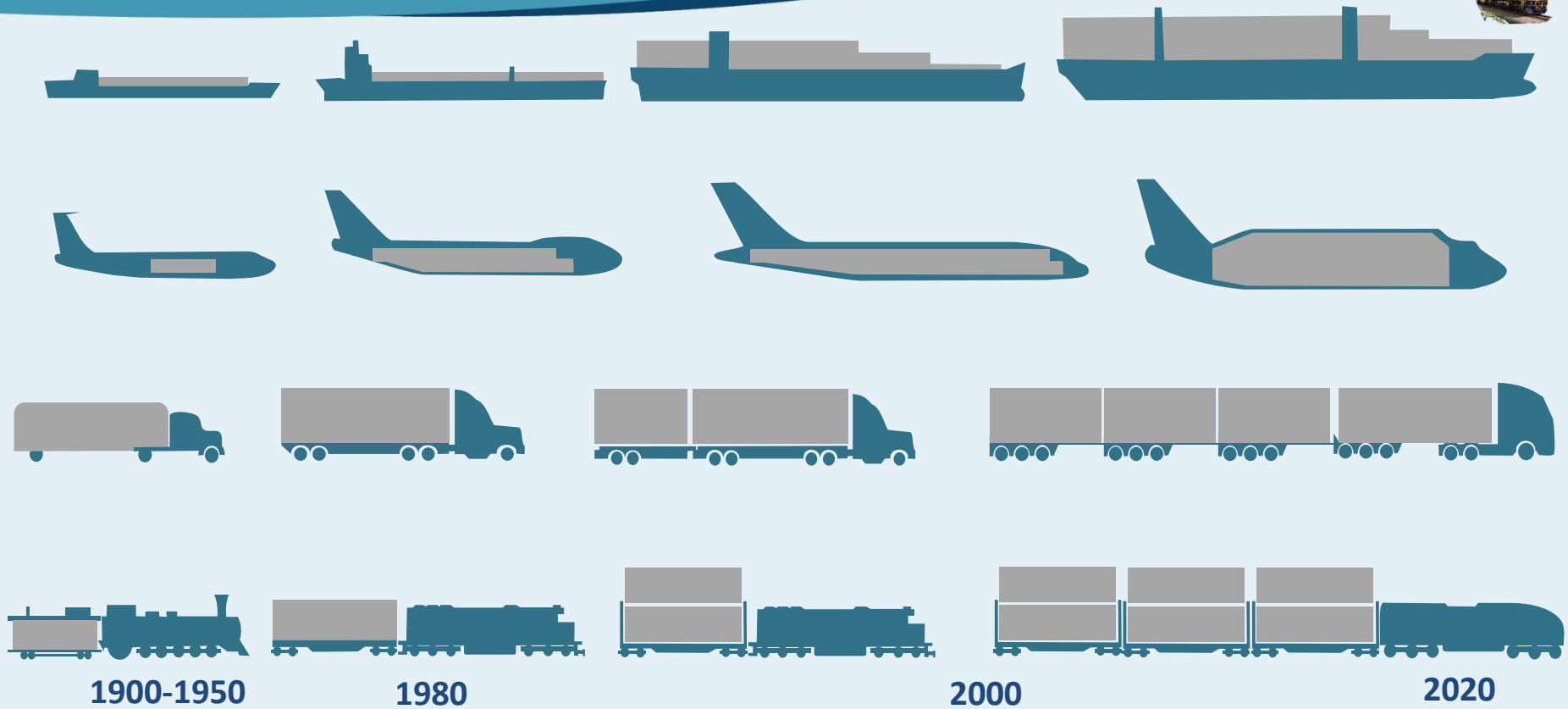
Supply Channel ***Distribution Channel***

- Fundamental economic role of transport is to bridge this supply-demand gap

Evolution of Transportation

From…	To…
Moving vehicles	Moving people and freight
Individual modes and facilities	Complete end-to-end trip
Individual jurisdictions	Economic regions and trade corridors
Physical capacity	Operational performance, flexibility, and reliability
Travel time and vehicle operating costs	Business logistics and economic competitiveness
Reacting to economic growth and community and environmental impacts	Proactive planning for economic, community and environmental goals

Changing Face of Freight Vehicles



- Transport influences location of manufacturing plants and distribution facilities
  - Influences very pronounced for firms producing or marketing globally
- Influences are dynamic – as economic activity locations shift, the pattern of transport demand also shifts and vice versa

Freight in Transportation Planning

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Some Source Material from: Federal Highway Administration's National Highway Institute class on *"Integrating Freight in the Transportation Planning Process"*

Freight Impacts

There are both positive and negative impacts of freight in each of these areas.

The challenge is to plan for both in a balancing act to enable the most positive outcome for all stakeholders.

Broad Trends Affecting Freight Transportation

Anticipated Growth in Freight Traffic

Strong in all modes – tons transported doubling by 2035 – capacity has not increased at near the same pace, and in many cases has not changed at all since the 1970's – rapid growth in containerized traffic – largest mode increase is truck traffic

Shift from Manufacturing to Service Economy

More small shipments of light, high-value items – increasing demand for reliable, flexible, cost-effective, timely, and door-to-door freight services – emergence of e-commerce and e-business requiring faster and more efficient flow of information

Shift from National to Global Markets

Trade not constrained by jurisdictional boundaries – businesses everywhere are conducting business on a global scale managing international supply chains and distribution networks

Balance Between Freight Efficiency and Security

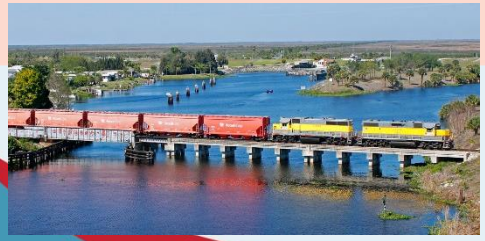
Multiple law enforcement agencies involved – new technology (ITS) for tracking and monitoring carriers and goods – greater emphasis on international shipments – impacts on cost and delay at multiple levels

Issues & Challenges to Freight Transportation

Infrastructure Challenges

Physical Condition of the System

- Intermodal Connectors
- Orphan status of connectors
- Geometry problems
- Pavement conditions
- Weight, height, depth limitations and / or restrictions
- Limited access – lack of space and / or facilities
- Dated facilities at border crossings
- Age of the infrastructure in general – just not up to par for today's transport



Operational Challenges

Performance of the System

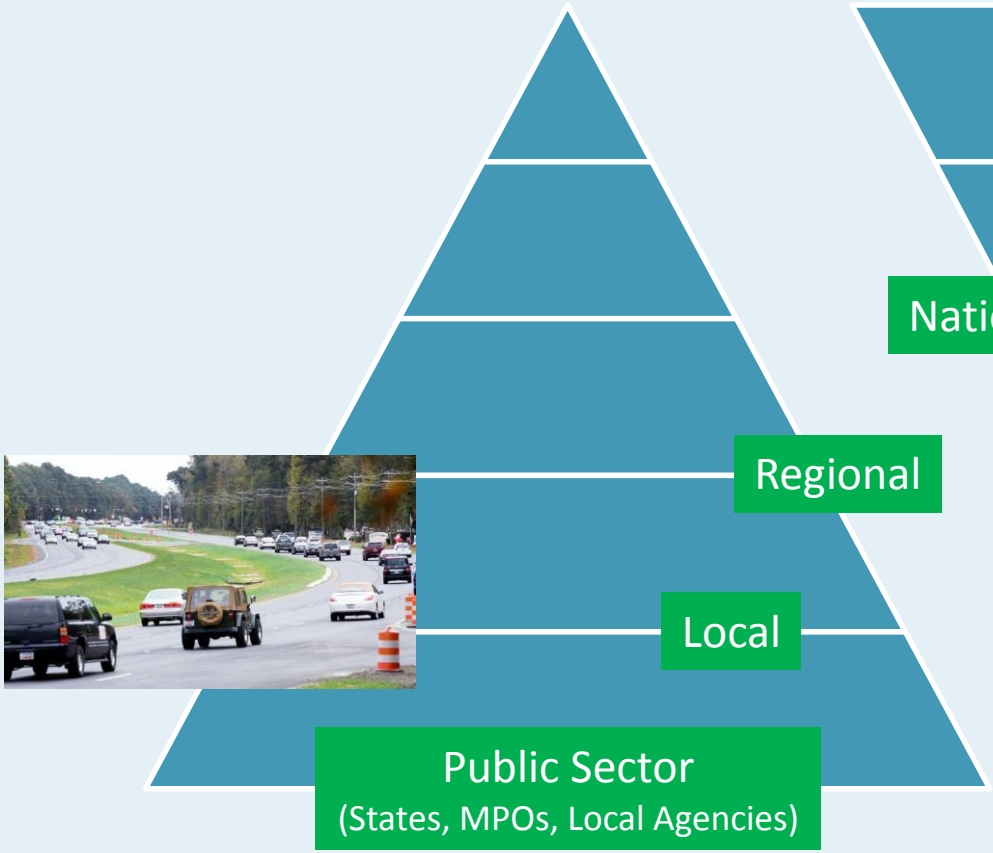
- Congestion
- Available truck routes for bypass
- Chokepoints on rail system – sharing of right of way with passenger service – passenger trains take priority over freight
- Longer trains – delays at crossings
- Port access – freight and passenger service conflicts and congestion / delay getting in or out of the port
- System reliability – the degree of certainty and predictability in travel times on the system

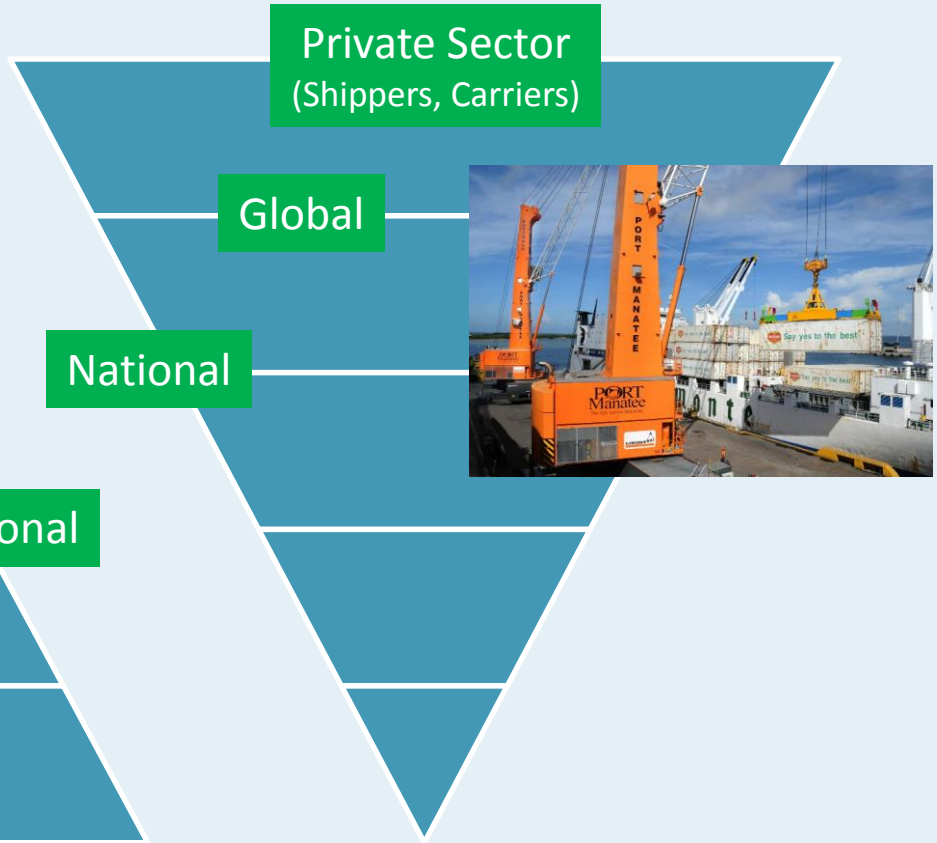
Institutional and Policy Challenges

Planning and Management of the System

- Balancing freight efficiency and security
- Balancing freight and passenger mobility needs
- Balancing economic competitiveness and environmental / community needs

Freight Planning Perspectives





Integrating Freight into the Transportation Planning Process – Things to Consider

Goals & Objectives	• Provide structure and focus • Provide a foundation to effectively develop and implement plans
Staff Organization & Resources	• Technical staff are an important resource • Stove-piped organizational structures have very defined lines for reporting and coordination
Coordination	• Freight movements are multi-jurisdictional in nature affecting multiple agencies, states or countries • Often require very detailed and coordinated planning efforts
Private Sector Participation	• Critical to the success of statewide and local planning efforts • Primary users of the freight transportation system • Background and expertise to conduct effective freight planning • Privately owned and operated facilities still have an impact on the public system
Financial Planning & Funding	• Freight planning activities can be sourced from multiple sources • Highway freight improvement projects are usually eligible for federal or state funding

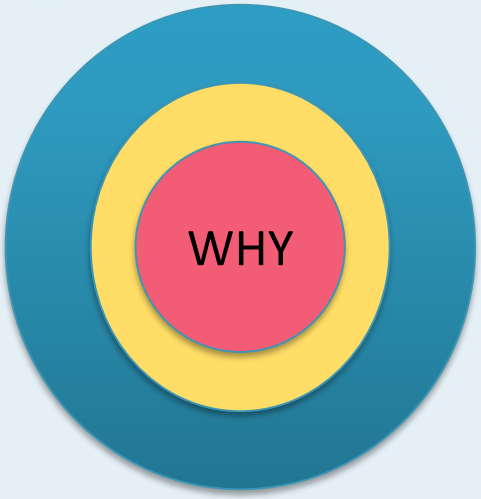
Integrating Freight into the Transportation Planning Process – Challenges

Goals & Objectives	• Limited specific guidance on freight planning • Reactive rather than proactive
Staff Organization & Resources	• Can lack a single advocate or champion • Few decision makers / planners fully understand freight, its issues and impacts
Coordination	• Freight movements are multi-jurisdictional – interlocking requirements for coordination, etc. • Little to no influence or authority over non-highway modes
Private Sector Participation	• Vastly different planning timelines • Lack of understanding between public and private processes
Financial Planning & Funding	• Evaluation criteria for freight projects is missing • Freight projects sometimes perceived to inordinately benefit private industry • Project costs are local – benefits accrue regionally or nationally

Integrating Freight into the Transportation Planning Process – Success Factors

Goals & Objectives	• Specific goals / objectives define a freight planning program • Involve the private sector in the process
Staff Organization & Resources	• Freight advocate / champion raises awareness of freight issues • Outreach to transportation decision makers • Take advantage of formal / informal training opportunities
Coordination	• Neutral forum for cooperation and census building • Cooperation early in the process builds relationships and prevents crises • Track private sector projects w/significant public sector impacts • Pool resources to encourage participation of multiple players
Private Sector Participation	• Provide immediate, tangible results to encourage continued participation • Having input to the process – more than just a forum for discussing issues • Not a time drain – frequent, long meetings at inconvenient times
Financial Planning & Funding	• Outreach for recognition of public / private sector benefits • Use of multiple sources for funding • Clarifying expectations of all partners – execute MOU's

Freight Transportation Planning – Putting it all Together

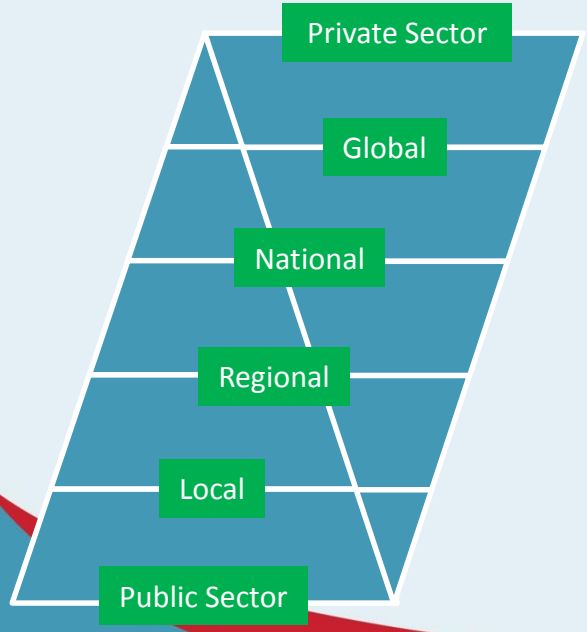


- Anticipated Growth in Freight Traffic
- Shift from Manufacturing to Service Economy
- Shift from National to Global Markets
- Balance Between Freight Efficiency and Security

Infrastructure Challenges
Physical Condition of the System

Operational Challenges
Performance of the System

Institutional and Policy Challenges
Planning and Management of the System



- Goals & Objectives
- Staff Organization & Resources
- Coordination
- Private Sector Participation
- Financial Planning & Funding

Questions?

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