Partnering Infrastructure Development to Meet Hemispheric Growth

AAPA Port Commissioners Seminar

June 15, 2006
Agenda

I. Objectives
II. Hemispheric Growth Prospects
III. Modal Challenges
IV. Partnering Solutions—the Key to a Systemic Solution
V. Implications for the Port Industry
I. Objectives

- Review the Growth Prospects
- Define the Challenge
- Outline Some Options
- Discuss Some Specifics
Hemispheric bulk cargo performance has been mixed over the past five years.

2000-2005 Americas' Bulk Cargo Growth

Note: Bubble size indicates 2005 tonnage.
Mexico has lead the way in terms of growth in hemispheric container trade.

Note: Bubble size indicates 2005 tonnage.
While almost all regions have contributed to overall growth in breakbulk cargoes.
Trade Growth Will Continue to Increase the Pressure on Ports

- At a 5% CAGR, trade doubles every 15 years
- At a 7.5% CAGR, trade doubles every 10 years
- In 2005, the major North American ports handled a reported 44+ million TEUs
- By 2010, this volume will approximate 60-65 million TEUs
The next five years will see sustained growth across the hemisphere.
II. Define the Challenges
Motor Carrier Challenges
Several factors have driven productivity gains

- Trailer size increased from 40’ to 53’
- Truck engine and maintenance cycles lengthened
- Truck engine fuel efficiency increased
- Empty miles were reduced
- Unionized carriers share down
- Improved technology and processes
However, many of these productivity opportunities may be reaching their end.

<table>
<thead>
<tr>
<th>Area of Improvement</th>
<th>Inhibitor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment Gains</td>
<td>• 53’ to 57’ Unlikely</td>
</tr>
<tr>
<td>Fuel Efficiency Gains</td>
<td>• Environmental Regulations</td>
</tr>
<tr>
<td>Labor Gains</td>
<td>• Hours-of-Service Regulations</td>
</tr>
</tbody>
</table>

In addition to slower productivity gains, the infrastructure is reaching its capacity.
Highway infrastructure is facing significant constraints

<table>
<thead>
<tr>
<th>Percent of Peak-Period Travel at Congestion Level</th>
<th>1982</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uncongested</td>
<td>70%</td>
<td>33%</td>
</tr>
<tr>
<td>Heavy</td>
<td>8%</td>
<td>13%</td>
</tr>
<tr>
<td>Moderate</td>
<td>10%</td>
<td>14%</td>
</tr>
<tr>
<td>Severe</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>Extreme</td>
<td>5%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Source: Texas Transportation Institute at Texas A&M University
Rail Industry Challenges
Railroads have more than halved their cost/revenue ton-mile since deregulation

Railroad Expenditures per Revenue Ton-Mile (1982$)

Note: 1980 and 1981 Salaries & Wages Data reflect AAR’s estimate of 95% of total payroll expenses. In comparison year (1982), this measure differs from the 1975,1982-2002 methodology by 0.4%.
Sources: AAR “Railroad Ten-Year Trends.” (various ed.); AAR “Analysis of Class 1 Railroads.” (1981); AAR “Railroad Facts” (various ed.).
Productivity gains have contributed to the decreasing cost/revenue ton mile

Productivity Improvements

- Labor requirements declined
- Networks and track were rationalized following mergers
- Engine fuel efficiency increased
- Railcars increased to 286,000 lb. gross rail load
- Many railcar types were improved
For railroads, some of these productivity opportunities may have reached their limits.

### Area of Improvement

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<tr>
<td>Equipment Gains</td>
<td>315,000 GTW Unlikely</td>
</tr>
<tr>
<td>Labor Gains</td>
<td>Adding Employees</td>
</tr>
<tr>
<td>Fuel Efficiency Gains</td>
<td>Future Locomotive Environment Regulations?</td>
</tr>
</tbody>
</table>

In addition to slower productivity gains, the infrastructure is reaching its capacity.
Port Industry Challenges
North American port infrastructure is under increasing pressure.
Port Region Container Capacity Summaries

<table>
<thead>
<tr>
<th>Port Region</th>
<th>2005 Net Position</th>
<th>2010 Net Position</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSW</td>
<td><img src="image" alt="Red" /></td>
<td><img src="image" alt="Red" /></td>
<td>LA/LB face significant capacity challenges during the next five years. Oakland should have ample capacity</td>
</tr>
<tr>
<td>PNW</td>
<td><img src="image" alt="Green" /></td>
<td><img src="image" alt="Yellow" /></td>
<td>Tacoma has largest expansion potential although port-rail and continued PSW diversions pose challenges</td>
</tr>
<tr>
<td>Atlantic</td>
<td><img src="image" alt="Green" /></td>
<td><img src="image" alt="Yellow" /></td>
<td>North Atlantic, particularly with the AMPT-Portsmouth terminal should provide adequate capacity. The South Atlantic will need to improve density and reduce dwells. A significant increase in Suez services would pose challenges.</td>
</tr>
<tr>
<td>South Florida</td>
<td><img src="image" alt="Green" /></td>
<td><img src="image" alt="Green" /></td>
<td>Southport expansion, terminal reconfiguration, higher density and lower dwell should accommodate growth</td>
</tr>
<tr>
<td>Gulf</td>
<td><img src="image" alt="Yellow" /></td>
<td><img src="image" alt="Green" /></td>
<td>Bayport, Choctaw and some combination of Tampa, Texas City, Corpus Christi, Brownsville, Millennium Port and a rebuilt Gulfport should provide adequate capacity</td>
</tr>
</tbody>
</table>

2010 Net Position

2005 Net Position

Comments
The Port Industry challenge is multi-dimensional

- Security
- Environmental
- Community
- Harbor deepening
- Labor efficiency and effectiveness
- Berth utilization
- Reducing dwell times/increasing velocity
- Port-rail interface
- Regional transportation infrastructure
Security Challenges: Evolutionary or Revolutionary?

<table>
<thead>
<tr>
<th>Operational Challenges</th>
<th>Financial Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Scope: all trade, regional trade, specific goods, specific companies?</td>
<td>• What will it cost given it’s a moving target?</td>
</tr>
<tr>
<td>• Approach: 100% inspection, sampling, profiling?</td>
<td>• Who benefits?</td>
</tr>
<tr>
<td>• Technology</td>
<td>• Who should pay?</td>
</tr>
<tr>
<td>• Sustaining/improving Productivity &amp; efficiency</td>
<td>• What are the funding options?</td>
</tr>
<tr>
<td></td>
<td>• Which are most equitable?</td>
</tr>
</tbody>
</table>
Environmental & Community Challenges

Environmental Challenges

- Who is in charge?
- What are the rules?
- What are the standards?
- How far should/must we go?
  - Compliance
  - Tested state of the art
  - The extra mile, i.e. net improvement
- Who benefits/who should pay?
- What is the balance among stewardship, sustainability and financial realities?

Community Challenges

- Drivers
  - Globalization & trade growth
  - Urbanization of the waterfront
- Issues
  - Noise, lights, congestion, air quality
  - “Quality of life”? 
  - Local vs. regional vs. national trade
- Challenges
  - Defining the issues
  - Establishing a fact-based, objective dialogue
  - Finding the balance
IV. Partnering Solutions, the Key to a Systemic Approach
## US Transportation Funding

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<th>Characteristic</th>
<th>Highway</th>
<th>Aviation</th>
<th>Maritime</th>
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<tr>
<td>Constituency</td>
<td>Broad-based</td>
<td>Broad-based</td>
<td>Narrow, fragmented</td>
</tr>
<tr>
<td>Funding Source</td>
<td>User fees</td>
<td>User fees</td>
<td>User fees and general funds</td>
</tr>
<tr>
<td>Management</td>
<td>Centralized: FHWA</td>
<td>Centralized: FAA</td>
<td>Fragmented</td>
</tr>
<tr>
<td>Disbursements</td>
<td>Formula-driven</td>
<td>Formula-driven</td>
<td>Generally project-based</td>
</tr>
<tr>
<td>Funding availability</td>
<td>Predictable</td>
<td>Predictable</td>
<td>Unpredictable</td>
</tr>
<tr>
<td>Cost-benefit linkages</td>
<td>Clear</td>
<td>Clear</td>
<td>Unclear</td>
</tr>
<tr>
<td>User fee visibility</td>
<td>Low: gas taxes</td>
<td>Low: ticket fees</td>
<td>High: HMF, fuel taxes</td>
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## Canadian Transportation Funding

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Overview of Canada’s Pacific Gateway Strategy

- Precedent setting policy change in federal government policy

- **Objective**: Address the interconnected issues in an integrated way and accelerate the development of the Pacific Gateway, and its benefits for British Columbia, Western provinces and the entire country

- **Content**: $590 million in specific measures and commitments in several interconnected areas that impact the effectiveness of the Pacific Gateway, and how well Canada takes advantage of it
The Challenges

- Funding shortfalls
- Modally focused
- Environmental & Community challenges
- Maritime Industry: Fragmented approach
- Maritime visibility
- Security Needs
- Finding the Common Ground

Needs are increasing
## Lessons Learned

<table>
<thead>
<tr>
<th>What Has Worked</th>
<th>What Hasn’t Worked</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Project-specific; focused on bottlenecks</td>
<td>• Policy-related</td>
</tr>
<tr>
<td>• Finite timelines</td>
<td>• Large scale</td>
</tr>
<tr>
<td>• Environmentally oriented</td>
<td>• Capacity-driven</td>
</tr>
<tr>
<td>• Comparatively small</td>
<td>• Broad benefits</td>
</tr>
<tr>
<td>• Tangible benefits</td>
<td>• Complex funding</td>
</tr>
<tr>
<td>• User-fee based funding</td>
<td>• Grant or appropriations based funding</td>
</tr>
</tbody>
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American Association of Port Authorities

Norbridge
What Are Some of the Options?

The “Big Bang”
- Centralized, integrated, multimodal policy and funding
- Integrates the surface modes
- Builds on best practices
- Systemic approach to investment

Phased Approach
- Redesign the Maritime Model
- Design a Rail Model
- Develop a sustainable funding source for multimodal projects
- Long-term, evaluate comprehensive modal integration

Incrementalism
- Cooperative, project-specific, industry-driven approach
- Significant industry participation
- Works within existing regulation and funding mechanisms
- Identifies and implements an evolutionary approach to funding

Norbridge
Pragmatism & Political Realities Are Key Success Drivers in the Short to Mid-Term

<table>
<thead>
<tr>
<th>Complexity</th>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope</td>
<td>Policy</td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>Multiple Modal Focus</td>
<td></td>
</tr>
<tr>
<td>All Surface</td>
<td>Incrementalism</td>
<td>Phased</td>
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Implications: A dual strategy most likely represents the best approach

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<th>Short-to-Midterm</th>
<th>Mid-to-Long Term</th>
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<tr>
<td>• Focus on enhancing Maritime funding based on current best practices</td>
<td>• Phased approach that integrates road, rail and maritime (deep sea, short sea, inland).</td>
</tr>
<tr>
<td>– Centralized</td>
<td>– Initial focus on what works</td>
</tr>
<tr>
<td>– Dedicated funding</td>
<td>– Multimodal</td>
</tr>
<tr>
<td>– Full disbursement of collected funds</td>
<td>– Mitigation: congestion, air</td>
</tr>
<tr>
<td>– User fee based</td>
<td>– Specific projects</td>
</tr>
<tr>
<td>– Industry participation</td>
<td>– Incremental expansion built on successes</td>
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Implications for the Port Industry
It depends on how one views the glass

Half Empty

Half Full
The Port Industry is highly diverse in terms of ports’ capabilities and needs

<table>
<thead>
<tr>
<th>Financial Health</th>
<th>Business Base &amp; Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong &amp; Diverse</td>
<td>We can probably survive</td>
</tr>
<tr>
<td>Weak &amp; Concentrated</td>
<td>An industry approach is critical</td>
</tr>
<tr>
<td>Narrow &amp; small</td>
<td>We need to pursue all options</td>
</tr>
<tr>
<td>High &amp; dedicated</td>
<td>Large &amp; diverse</td>
</tr>
</tbody>
</table>

We are winning

Access to Capital

Strong & Diverse

We can probably survive

An industry approach is critical

We need to pursue all options

Small & limited

High & dedicated

Large & diverse

American Association of Port Authorities

Norbridge
It depends on how one sees the glass

Half Empty
- The pot of funds is shrinking
- The status quo is the best we can hope for
- Emphasis is on getting my fair share
- We will cooperate when it is compelling

Half Full
- We can grow the pot of funds
- The status quo is not an option
- We will gain more by cooperating
What is Required?

- Internal Assessment
- Port/Maritime Industry Game Plan
- Multimodal Game Plan
Internal Assessment

• Is the status quo acceptable or is change imperative?
• What do we need?
• What are the critical success factors?
• What are worldwide best practices?
• Are we committed to a sustained change effort?
• How do we fund it?
Port/Maritime Industry Game Plan

• Is it a Port or Maritime Industry Game Plan?
• Who are the key players?
• What are the roles and responsibilities?
  – Government
  – Port Industry
  – Private sector
• What are the key elements of the game plan?
  – Governance
  – Funding: who pays, who benefits
  – Disbursement
  – Oversight & control
  – Performance monitoring
  – Setting long-term direction
Port/Maritime Industry Game Plan—Continued

• What is the contingency plan?
  – Public-private partnerships
  – A national tariff that is competition neutral
  – Financial self-sufficiency
  – Taxing authority
Multimodal Game Plan

• Who are the key decision-makers?
• Is there common ground?
• Is there a commitment to partnering solutions?
• What does each of the parties bring to the table?
• What does each party leave at the table?
• What is the plan?
• How do we execute?
• Many of these questions are the focus of the Framework for a National Freight Policy
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