Agenda

- Global Supply Chain
- Transportation’s role in the supply chain
- Role of maritime transportation & ports
- Port basics, statistics, and importance
- Preparing for the future with investment
- Economic impacts
- Past port projects and their results
Sample Supply Chain for PC’s

Source: Abbey, Twist and Koonmen
Transportation is Key to Success

- The efficient, effective flow of materials and finished goods through the supply chain depends upon your transportation network!!
- Transportation provides the physical links across the supply chain
- Transportation disruptions can cause supply chain failures and unhappy customers
- Water transportation is a key component!
Role and Importance of Ports

- Make global supply chains possible
  - Facilitate global transportation and storage activities
  - Facilitate efficient product and goods movement
  - Provide economies of scale beyond other modes
  - Create cost effective capacity to ship a variety of products

- Serve as economic catalysts for their region
  - Assist businesses with physical flow of goods
  - Support businesses who locate in the region
Key Water Port Statistics

- 300+ commercial marine ports
- 2.3 billion tons of annual cargo
- 16,000+ annual vessel arrivals
- Critical for international trade
- Imports traveling via water in 2010
  - 50% of the value ($944 billion) of all U.S. imports
  - 70% of the volume of all U.S. imports
- Exports traveling via water in 2010
  - 35% of the value ($469 billion) of all U.S. exports
  - 75% of the volume of all U.S. exports

Source: American Society of Civil Engineers
Major US Facilities of the South
# US Ports: Recent TEU Rankings

<table>
<thead>
<tr>
<th>City</th>
<th>TEU</th>
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<tbody>
<tr>
<td>Los Angeles, CA</td>
<td>6,010,566</td>
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<tr>
<td>Long Beach, CA</td>
<td>4,318,239</td>
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<tr>
<td>New York, NY</td>
<td>4,263,596</td>
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<td>Savannah, GA</td>
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<td>Oakland, CA</td>
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<td>Norfolk, VA</td>
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<td>Houston, TX</td>
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<td>Seattle, WA</td>
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<td>Charleston, SC</td>
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<td>Tacoma, WA</td>
<td>885,766</td>
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<td>Miami, FL</td>
<td>733,692</td>
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<tr>
<td>Port Everglades, FL</td>
<td>616,891</td>
</tr>
</tbody>
</table>

Source: Bureau of Transportation Statistics
Key Port Selection Factors

- **Cargo and carrier compatibility**
  - Draft and docking capacity
  - Size and type of ship

- **Equipment availability**
  - type/number of cranes, bulk handling systems

- **Intermodal capabilities**
  - easy access to rail & road networks

- **Loss and damage record**
Preparing for the Future

- Current operational and maintenance needs
- Keeping pace with expected growth
- Minimizing port congestion to support international trade
- Enhancing intermodal transportation to facilitate trade
- Enhancing technology for security and efficiency
- Accommodating large “new-Panamax” vessels
  - Panama canal expansion- 2015
  - Accommodate 8,000 + TEU vessels
  - Driving dredging projects
  - Terminal and crane expansion

Source: American Society of Civil Engineers
Panama Canal Expansion Project

- Expansion will alter the cargo shipping landscape
  - Handles ships 10’ deeper, 56’ wider, 250’ longer
  - Pre-expansion: Canal handles ≈5,000 TEU ships
  - Post-expansion: Canal handles ≈13,000 TEU ships

- What is impacted
  - Roughly 35% of Canal cargo is container traffic
  - 40% of Canal cargo is bulk (25% dry, 15% liquid)
  - Other 25% is a mixture (vehicles, general, other)
Infrastructure Needs-- $$$

- Many using Public-Private Partnerships
- Collaborate/ invest to reach common goals
- By 2016
  - Public (Port Authorities) plan to invest $18 B
  - Private anticipates investing $27.6 B
- Benefits expected to be substantial
- Investments fall short of expected needs

Source: American Society of Civil Engineers
Investment Impacts

**ANCHORING THE U.S. ECONOMY**

Our nation’s seaports and waterways open markets for international trade that creates ripple effects throughout our economy.

- **Widener and deeper harbors and waterways will allow for larger ships, reducing the cost of freight shipment.**

- **The construction of wider and more efficient locks will provide faster and more reliable service.**

- **These infrastructure needs in both the inland waterway and seaport sectors are significant and current investment trends aren’t keeping up:**
  - **$15.8 billion investment gap**
  - **$14.4 billion needed for filling the gap**
  - **$697 billion in GDP**
  - **$270 billion in exports**
  - **738,000 jobs**
  - **$770 per U.S. household**

**By 2020, an additional investment of $15.8 billion will protect:***
- **$270 billion in exports**
- **$697 billion in GDP**
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- **$770 per household**

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Source: American Society of Civil Engineers

 Infrastructure investments are vital and impact our global competitiveness by affecting businesses and consumers.
EXAMPLES OF:

1) ECONOMIC IMPACTS AND

2) PORT INFRASTRUCTURE PROJECTS
Overall Impact of Ports

- **Alabama State Port Authority Generates:**
  - Over 125,000 jobs
  - Over $500 Million in tax impact
  - Total economic value of over $18 B

- **Florida - Port Canaveral Generates**
  - **Cargo**
    - Over 3,000 jobs,
    - Over $220 Million in total income (over $20 Million in taxes)
  - **Cruise**
    - Over 11,000 jobs,
    - Over $480 Million in total income (over $44 Million in taxes)

*AL Source: Martin Associates – October 2012 Study*  
*FL Source: Martin Associates 2012 Economic Impact Study*
Overall Impact of Ports

- **Georgia- Port of Savannah**
  - Over 352,000 full and part-time jobs
  - Over $65 B in sales
  - Almost 8% of GA gross state product
  - ≈ $2.5 B in state and local tax revenue

- **Florida- Port of Miami**
  - Estimates the port supports 270,000 jobs
  - Estimates the port contributes $27 B annually to the economy
  - Provides service to over 100 countries and 250 ports globally

**Rule of Thumb:** for every $1 invested, the return is $3 to $7
Overall Impact of Ports

- South Carolina- Port of Charleston
  - Supports over 10% of total statewide employment
  - Value-added impact of over $18 B
  - Over 12% of South Carolina’s gross state product
  - Almost $45 B in total economic output annually

- Louisiana- Port of New Orleans
  - Over 31 M tons of cargo in 2012
  - ≈ 1 M cruise ship passengers in 2012
  - Serviced by all 6 Class I railroads
  - ≈ $100 M investment= $66 M earnings & 1,740 jobs

LA Source: Economic Impact Study, Dr. Richardson, LSU
SC Source: Wilber Smith Associates
U.S. Logistics in total

- National impacts
  - U.S. logistics costs totaled over $1.33 T in 2012
  - U.S. logistics costs remain comparatively low in the U.S. (8.5% of GDP)
  - Transportation is a significant component of “logistics” both in terms of cost and functionality

To retain competitive advantage over other industrialized nations will require continued infrastructure investment
Harbor Deepening Projects

- Bigger vessels navigating the seas require deeper water.
- Trying to deepen ASAP due to the Canal expansion.
- Miami, Savannah, and Charleston (among others) responding with port deepening projects.
  - Miami going from 42 feet to 50+ feet ≈ completion by 2015.
  - Savannah trying to go from 42' to 48' but significant legal and regulatory challenges remain ≈ completion by 2019 or beyond.
  - Charleston expects to go to 48 or 50 feet by 2019.

As ships continue to grow, where does it end??
Other Port Projects

- South Carolina- Port of Charleston
  - New container terminal
  - Cruise ship operations
- Georgia- Port of Savannah
  - Garden City Terminal serviced by 2 Class I railroads
  - Immediate interstate access
- Garden City Expansion
  - Invest $1.2 B over next 10 years
  - Expand to 25 cranes & add larger, high speed cranes
Other Port Projects

- Alabama - Port of Mobile
  - Recently expanded capabilities to include container freight
  - Continues active bulk business
  - 5 Class I railroads
  - Access to I-10 & I-65
Other Port Projects

• Port of Miami investing over $2 B
  • on-port railway restoration & improvement project
  • port tunnel to provide direct access to I-395 and I-95

• Miami projects are designed to:
  • improve transportation options & reduce congestion
  • enhance overall physical flow capability & capacity

≈ Miami improvement project economic impact =
33,000 jobs, $34 B
Conclusions

- Ports are a key part of U.S. infrastructure
- Import & export volumes through ports will rise
- Will require multiple ports to handle traffic
- Ports must continue to improve to secure business
- Enough volume for all ports to participate
- Environment will remain competitive
- Port infrastructure improvement is both:
  - Important to the country and region and
  - A great investment when structured properly
  - Can create a “win-win” result benefitting everyone
Thanks you your attention!

Questions?