Shifting International Trade Routes:
Planning for the Panama Canal Expansion

Financing Future Infrastructure Needs
Port Public-Private-Partnerships
What should ports want . . . What do your partners expect?

William L. Ralph
**Top 10 U.S. Ports Container Volume, 1997-2007**

(in 000 TEU, including loads & empties)

<table>
<thead>
<tr>
<th></th>
<th>1997</th>
<th>2007</th>
<th>% chg. '07 vs '06</th>
<th>10-Year CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Los Angeles</td>
<td>2,960</td>
<td>8,355</td>
<td>-1%</td>
<td>10.9%</td>
</tr>
<tr>
<td>2 Long Beach</td>
<td>3,505</td>
<td>7,312</td>
<td>flat</td>
<td>7.6%</td>
</tr>
<tr>
<td>3 NY/NJ</td>
<td>2,457</td>
<td>5,350</td>
<td>4%</td>
<td>8.1%</td>
</tr>
<tr>
<td>4 Savannah</td>
<td>735</td>
<td>2,605</td>
<td>21%</td>
<td>13.5%</td>
</tr>
<tr>
<td>5 Oakland</td>
<td>1,531</td>
<td>2,388</td>
<td>-1%</td>
<td>4.5%</td>
</tr>
<tr>
<td>6 Hampton Roads</td>
<td>1,233</td>
<td>2,190</td>
<td>7%</td>
<td>5.9%</td>
</tr>
<tr>
<td>7 Seattle</td>
<td>1,476</td>
<td>1,967</td>
<td>-1%</td>
<td>2.9%</td>
</tr>
<tr>
<td>8 Tacoma</td>
<td>1,158</td>
<td>1,925</td>
<td>-7%</td>
<td>5.2%</td>
</tr>
<tr>
<td>9 Houston</td>
<td>934</td>
<td>1,769</td>
<td>10%</td>
<td>6.6%</td>
</tr>
<tr>
<td>10 Charleston</td>
<td>1,218</td>
<td>1,754</td>
<td>-11%</td>
<td>3.7%</td>
</tr>
</tbody>
</table>

Source: RKJA estimates based on AAPA and port data, excludes Alaska, Hawaii & Puerto Rico

- 40 container ports in North America, with U.S. Top-10 holding 80% share
- Box throughput doubled since 1997
- North Asia = 57% of trade, up from 42% in 1997
Panama Canal Impact
All-Water Coastal Shares
of North Asia to U.S. Trade
(000 loaded TEU)

2000

East Coast: 839 (15%)
West Coast: 4,699 (85%)

2006

East Coast: 2,431 (22%)
West Coast: 8,570 (77%)

2025

East Coast: 11,800 (30%)
West Coast: 27,201 (67%)

Source: R. K. Johns
Asia All-Water Services
Fleet Deployment by Vessel Size

Assumption:
- each weekly vessel string deploys 8 ships

Source: R. K. Johns
### North America 10-Year Container Port Outlook

*Where will the next doubling of cargo go?*

#### Total Container Port Acreage

- **Announced & Planned**

<table>
<thead>
<tr>
<th>Region</th>
<th>2007</th>
<th>2017</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Coast</td>
<td>4,593</td>
<td>6,070</td>
<td>32%</td>
</tr>
<tr>
<td>Gulf Coast</td>
<td>458</td>
<td>932</td>
<td>103%</td>
</tr>
<tr>
<td>West Coast</td>
<td>5,504</td>
<td>6,898</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>10,555</td>
<td>13,900</td>
<td>32%</td>
</tr>
</tbody>
</table>

Includes Top 25 ports, excludes Mexico
North America
10-Year Container Port Outlook
Where will the next doubling of cargo go?

$9-$10 billion port investment needed for planned “in the ground” assets to even create terminal business value

Expansion minded: (+acres)

**East Coast**
- Norfolk- APMT & Craney Is., +800
- N.C.- Southport +600
- Charleston- Navy base +250
- Savannah – Jasper +400
- Jacksonville- MOL/Hanjin +300

**Gulf & West Coast**
- Houston- Bayport +375
  (Texas City & Pelican Is. ?+1,600)
- Tacoma – Blair waterway +350
- Vancouver – T2 +200
- Prince Rupert – 2 terminals
  +160 to +350
If the project fits . . . PPP it?
In their own words

“As a result of rampant demand, the infrastructure sector is suffering from the dual curse of overvaluation and excessive leverage – the classic symptom of a bubble, similar to the dot-com era.”

Standard & Poors, Infrastructure Report 2006

“Today there is a fairly broad acceptance that higher levels of operating efficiency can be achieved if container terminals are managed by private companies, motivated by profit, rather than by state bureaucracy. There are also benefits for governments from shifting port development funding to the private sector, easing the burden on the public.”

Drewry Shipping, Container Terminal Report 2007

“We were attracted to the NY port by global trade trends, the port’s tight capacity, stable volume & container revenue, the large consumer market and resultant opportunities for terminal value creation.”

AIG Highstar, Journal of Commerce 2008
There are Proponents & Critics On both Sides of the PPP Fence

Why are Port Authority governing bodies attracted to PPPs?

► Asset monetization (Cash!)
► Ability to defease/collateralize debt
► Still own & control port as a landlord
► Improve operating efficiency
► Develop new port facilities
► Fund related infrastructure projects
► Redeploy gov’t. spending/taxes
► Share/redirect risk
  (political, operational, labor, economic, etc.)
New Players ... Same Port Business ... Perhaps different Values & Objectives

Why are Private Investors attracted to Ports?

“Most investors emphasize that privatization is not a panacea, but rather a financing tool.”

_Standard & Poors, Infrastructure Report 2007_

► Long term leases, low risk assets
► Visible & predictable earnings
► Inflation linked revenue
► Barriers to entry & high cost for Greenfields
► Performance not tied to common financial instruments
► Ability to build a better mousetrap (scale up)
► Client “stickiness”: durable contracts & guarantees
► Opportunity to create & leverage value
How has the Terminal Prom Played out so far …

• Financial buyers acquiring existing lease concessions
• Banks active & aggressive in lending, 7-year deal has been the norm
• Most common debt-to-equity shares: 70/30 or 80/20 (two deals appear to have been more conservatively priced 60/40)
• Bank lending rates fairly similar among deals: Libor + 120 bp (low), + 185 bp (high), common +140/150 bp
• Lending rates are scaled on a sliding debt-to-EBITDA multiple
O.K. so what do I do to prepare for the BIG Dance?

✓ **Know the ground rules:**
  buyers look first at discounted cash flow, which is “driven” by the demand forecast

✓ **Know the limitations of demand forecasting:**
  accurate in the short term at the 50,000-ft. level, but only a guideline when projecting out concession life (30-50 years)
O.K. so what do I do to prepare for the BIG Dance?

✓ **Know what makes your port & terminals special:**
  do your homework on
  risks/rules (especially environmental),
  landside +/- (road & rail)
  competition
  customer details (like DC control)
  operating issues
  labor
  expansion capability & capital requirements

✓ **Know when to call in outside help:**
  engineering & economic “assessments” that bench-test
  terminal capacity, competitiveness & upside opportunities
  (you are not just selling a terminal, but a connection)
Who do I dance with & when?

- Be patient, be thorough!
- Look internally first at your financing costs & options: GO & revenue bonds, taxing authority, trust funds, buy/lease backs, public benefit corp. options, etc.
- Be realistic in your value assessment: assets, liabilities, business model, future plans
- Be able to explain what you mean to your customers
- PPP strategy should include entry, transition & exit plans
- Is financial maximization the only criteria?
- Can/will the port authority consider joint ventures?
- Investor interest does not stop at containers (bulk, breakbulk, intermodal, etc.)
Thank you!