



Environmental Challenges for a Global Industry

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Transportation

Freight and the
Environment



APL

- > **Sixth-largest containership operator**
 - > Over 100 vessels
 - > 700,000 TEUs of containers
- > **2005 volumes: roughly 4 million TEUs**
- > **Services connecting six continents**
- > **4,500 employees, 90+ countries**
- > **U.S. Flag (15 vessels), including (9) enrolled in the U.S. Military Security Program "MSP"**
- > **Wholly owned subsidiary of the NOL Group (listed and headquartered in Singapore)**



Our Environmental Approach

- > Adopt best practices and technology
- > Drive environmental friendliness wherever we operate
- > Empower staff to make responsible decisions
- > Collaborate with suppliers, external agencies and customers to promote environmental responsibility



Key Environmental Concerns

INPUTS:

- > Newbuildings and existing fleet
- > Cargo, hazardous goods
- > Operational efficiency (including fuel)
- > Information

Key Areas of Focus
Water and Air
Quality



**A Leader in Global Ocean
Transportation Services**



OUTPUTS:

- > Vessel emissions
- > Ballast water
- > Yard equipment emissions
- > Care of Dangerous/Hazardous goods



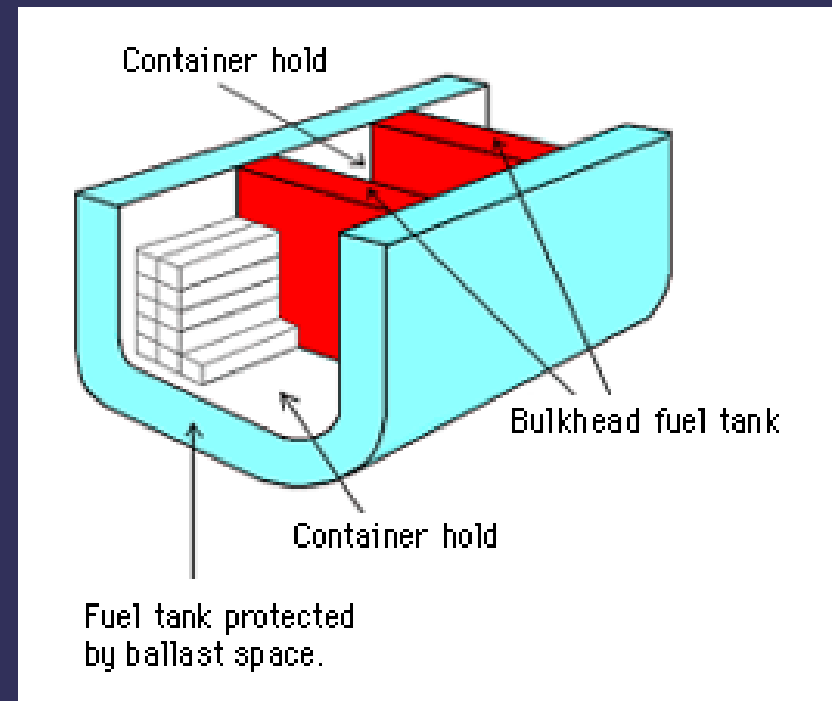
What the industry is doing

- > Terminal development, innovation
- > Terminal handling equipment (electrification and alt. fuels)
- > Cleaner fuels
- > Voluntary vessel speed reduction
- > PierPass (Southern California)
- > Ballast water research
- > Alternate marine power
- > Aligning with Customers environmental focus (e.g., IKEA)
- > World Shipping Council "WSC" engagement with EPA, State Dept., USCG, IMO and others



What the industry is doing

- > Environmental policies
- > Training
- > New technology
- > Research





What the industry is doing

“Green Ships”*

- > Designed for cleaner fuels
- > Double hull
- > Protected fuel tanks
- > High capacity “oil-water” and “grey-water” tanks
- > Alternate marine power capable
- > New under-water hull treatments



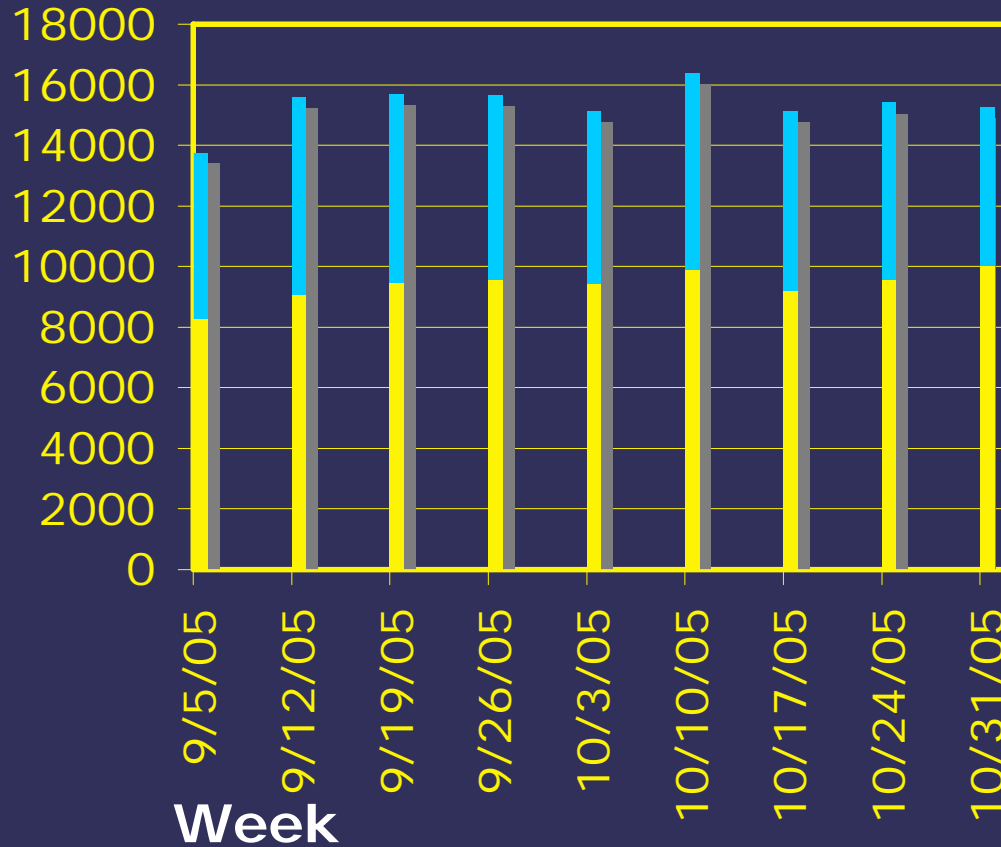
*Evergreen Marine



What the Industry is doing: APL PierPass gate activity (example)

Port of Los Angeles

Gate
Moves



Weekdays
Nights/
Weekends

41% Off-Peak
9/5 - 10/31



What APL is doing



Moving Business Forward



What APL is doing



Moving Business Forward



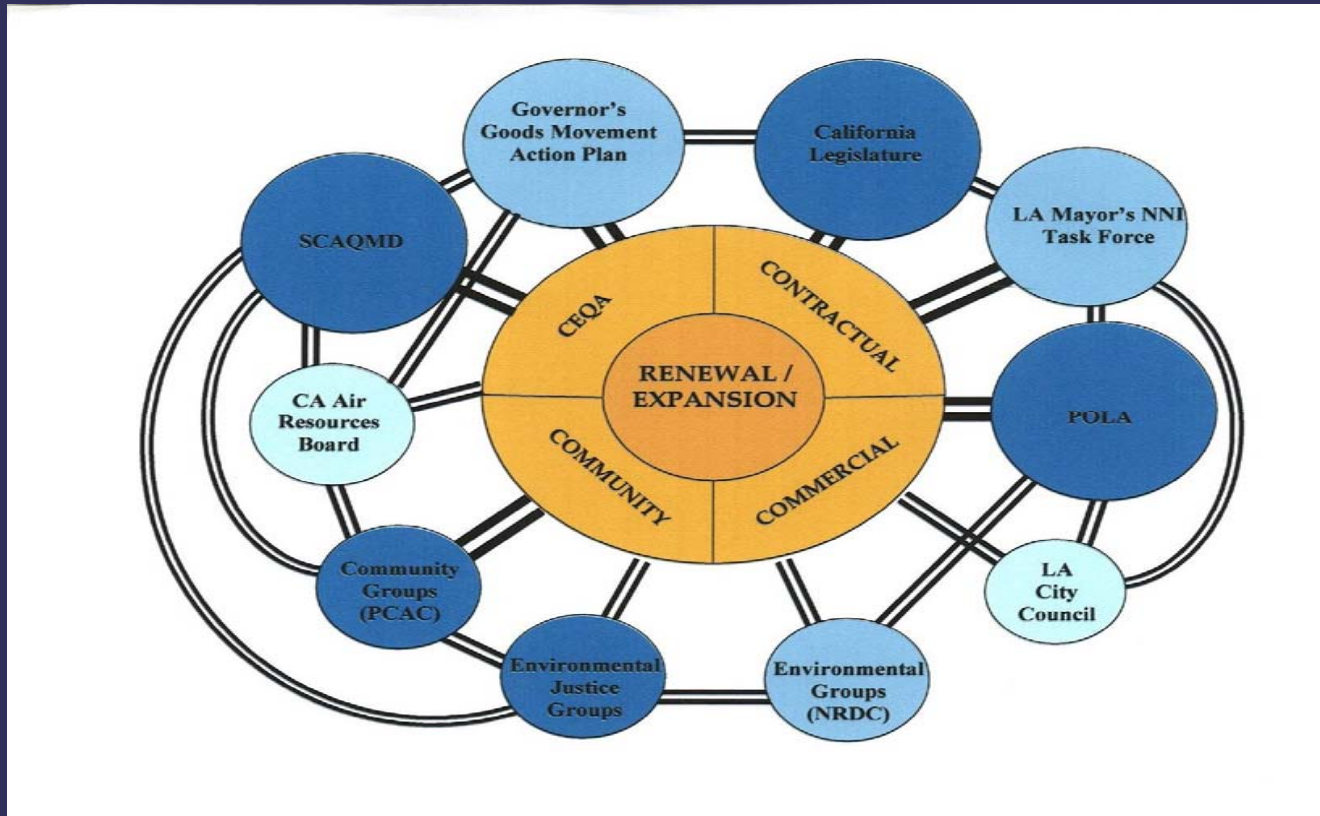
Where do we go from here?

> **Collaboration**



Moving Business Forward

Where do we go from here?



- > Collaboration
- > **Clarification**



Where do we go from here?

- > Collaboration
- > Clarification
- > **Simplification**





Cost implications

- > Shore power
- > Cleaner fuels (at sea and on land)
- > Reduced vessel speeds
- > Equipment replacement

Other factors that continue to negatively impact costs;

- > Protracted time frames to develop much needed expansion of transport infrastructure
- > Effect of layered and/or conflicting regulations





Direction from Washington

- > Ratification of international agreements
- > Consistent standards
- > Support research





Improving the Infrastructure



Moving Business Forward



Rail Challenges

- Off Dock rail terminals on the W/Coast are stressed and in need of expansion
- Intermodal “connections/corridors” that would speed trains out of the population areas needed
- Inland rail terminals at key interchange points and at inland destinations are over capacity and in need of expansion
- Volumes of both domestic and international trade continue to outpace development of additional capabilities



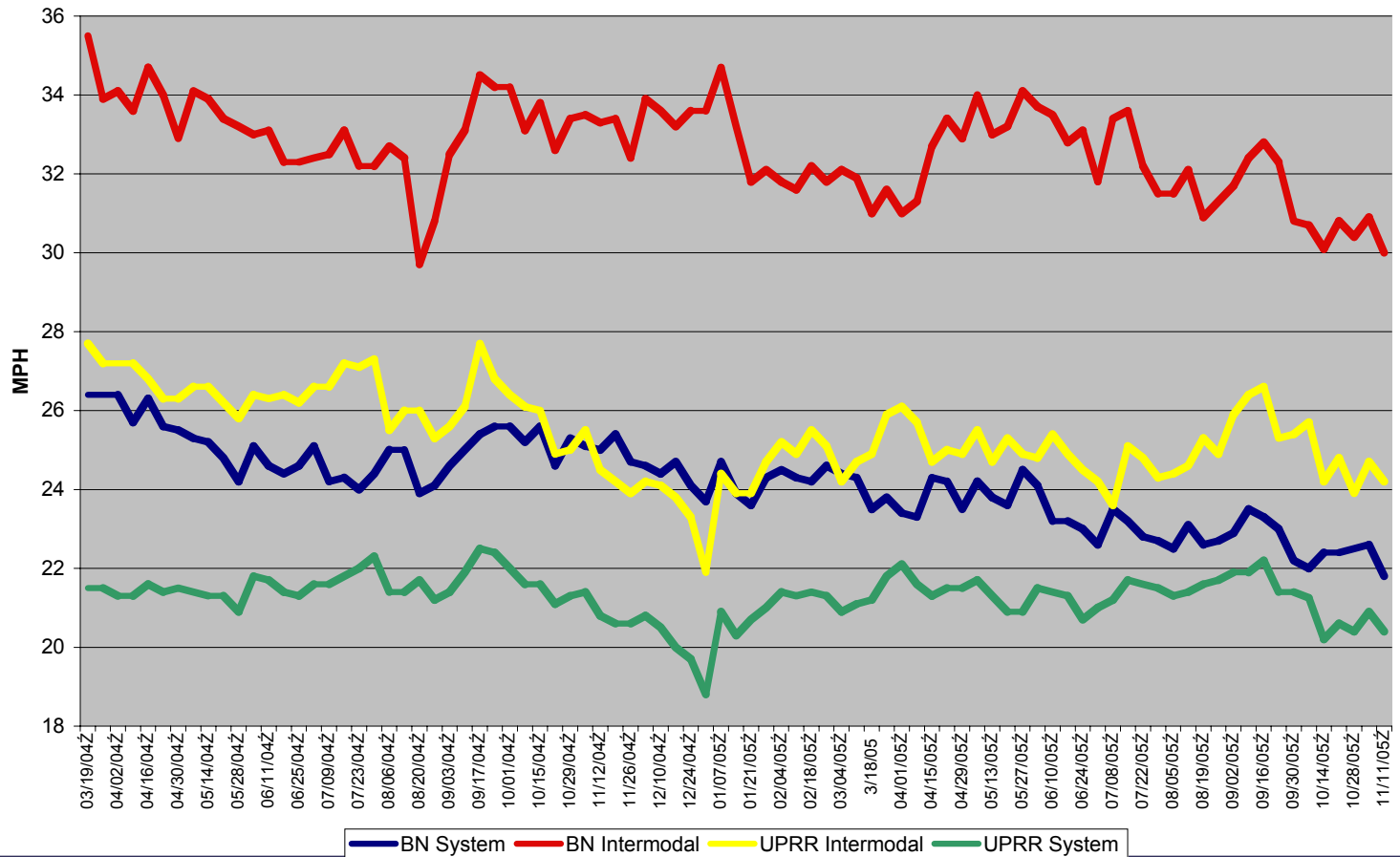
Rail Performance

- Any improvement in port transfer facilities pushes problems to next choke point....rail
- Inland terminals suffer from insufficient capacity and bunching/surges of cargo
- Shortages of locomotives still occurring at times as locomotives are trapped in a less fluid rail network
- Updated velocities reflect continuing deterioration even with avoidance of LA/LB



Rail Performance - Deteriorating

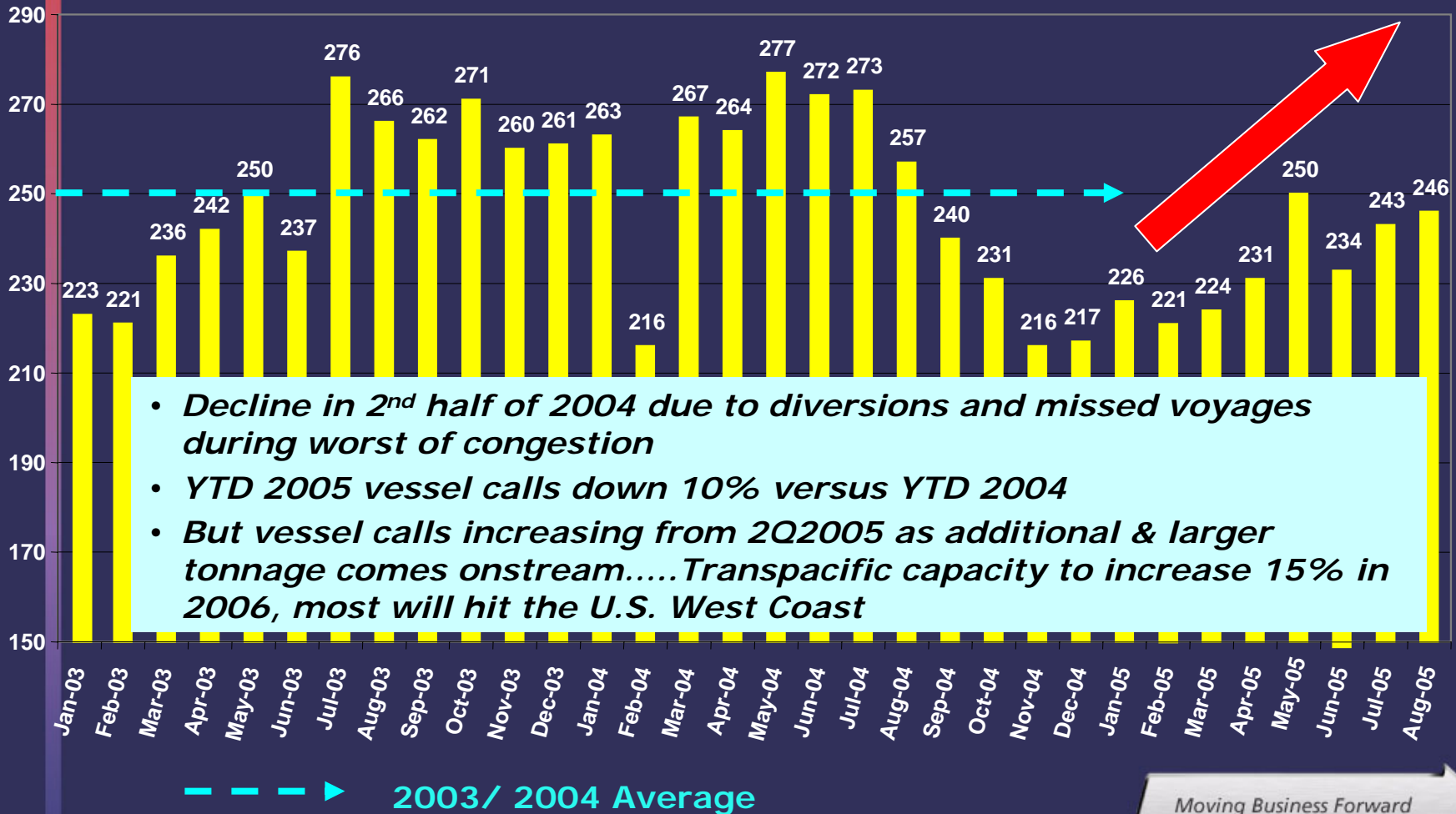
BN/UP AAR Train Velocity Trends





Vessel Calls, Southern CA

Vessel Arrivals: Los Angeles/Long Beach The Most Critical Intermodal Gateway to the U.S.





Port and Terminal Development

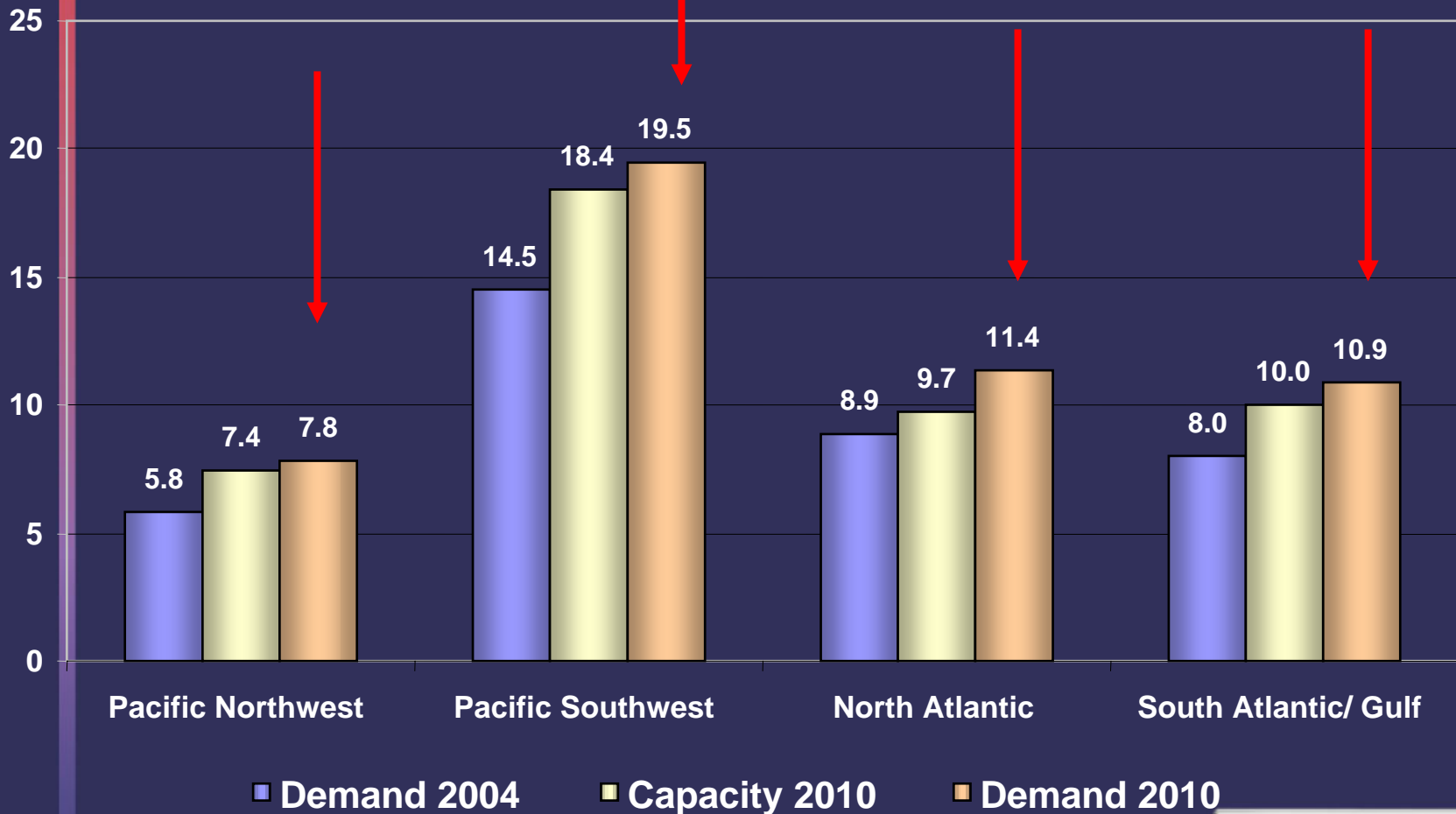


- **Approx. 20 major port and terminal development projects currently in the pipeline.**
- **Approx. value US\$2.4 billion**
- **Will increase port capacity by around 12 million TEUs between now and 2012.**

Forecast U.S. Port Capacity & Demand



Demand in 2010 forecasted to outstrip capacity however W/Coast terminals should cope with 2006 growth without major disruptions – problems will continue to be the rail



Modern Terminals Limited millions of TEUs

Moving Business Forward



Productivity

We need to find a solution to enable increased levels of productivity at Marine Terminals in the U.S.

Result would be;

- Less land and equipment required to handle trade growth
- Less congestion at Marine Terminals that results in truck idling
- Faster vessel turn-around.....less port time

Organized labor plays a major role in the process...



Summing up

- > We are developing a better understanding of the issues
- > The industry has begun to address those within its control
- > Solutions will take time and result in higher costs (until we can be significantly more efficient)
- > We need a common and consistent set of International environmental standards and regulations
- > It is critical that we find a means of enabling more rapid development of U.S. Transportation Infrastructure
- > It will take a collaborative effort



Thank you

