



The Impact of Panama Canal

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Presentation Outline

3 *Comments* on Canal Expansion

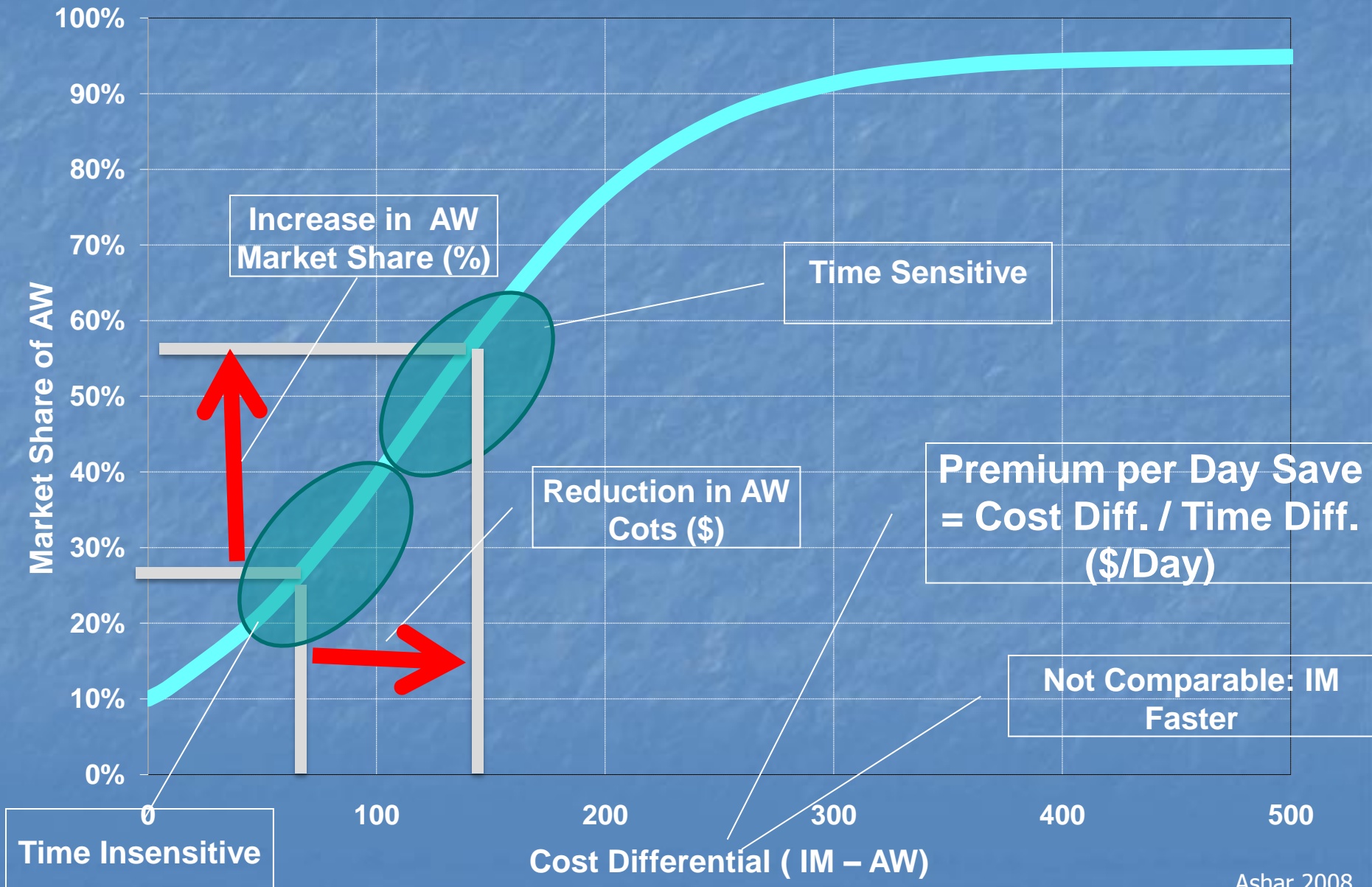
- North America: All-Water vs. Intermodal Transpacific
- South America: Direct vs. Transshipment
- Decision on Panama Canal Expansion: by Default

Impact on North America Transpacific Alternatives:

All-Water vs. Intermodal

AW vs. IM

IM-to-AW Diversion ("Logit")



Simple Example

Prior to Expansion

- Cost Diff. = \$500
- Time Diff. = 7 Days
- $PDS = 500 / 7 = 71$ \$/Day

- If $> \$71/\text{Day}$ -- IM
- If $< \$71/\text{Day}$ -- AW

Post Expansion

- Cost Diff. = \$700
- Time Diff. = 7 Days
- $PDS = 700 / 7 = 100$ \$/Day

- If $> \$100/\text{Day}$ -- IM
- If $< \$100/\text{Day}$ -- AW

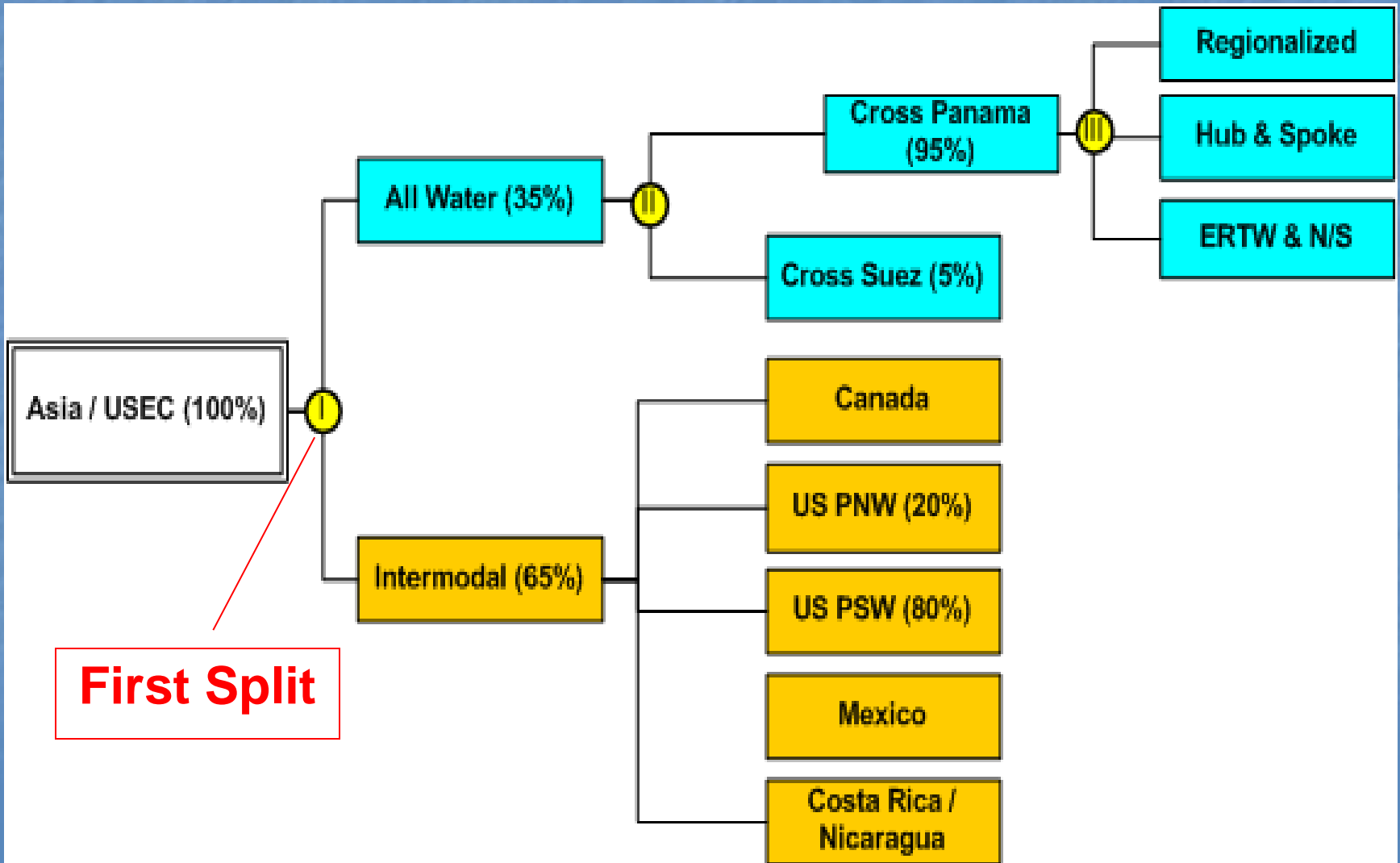
- **IM Loss = AW Gain**

Voyage Cost Differentials

TEU	4,800	6,000	8,000	12,500
Voyage Cost (\$/TEU)	495	470	405	325
Differentials (\$/TEU)		25	65	80

- Based on "standard" 8-ship Service (4 Asia, 1 Panama, 3 USEC Ports)
- Ship Size (before and after Expansion)
- Service Pattern (before and after Expansion)
- Cost of Fuel (70 – 80%)
- Panama Tolls (\$40 to 72)

Multi choices: Sequential Allocation



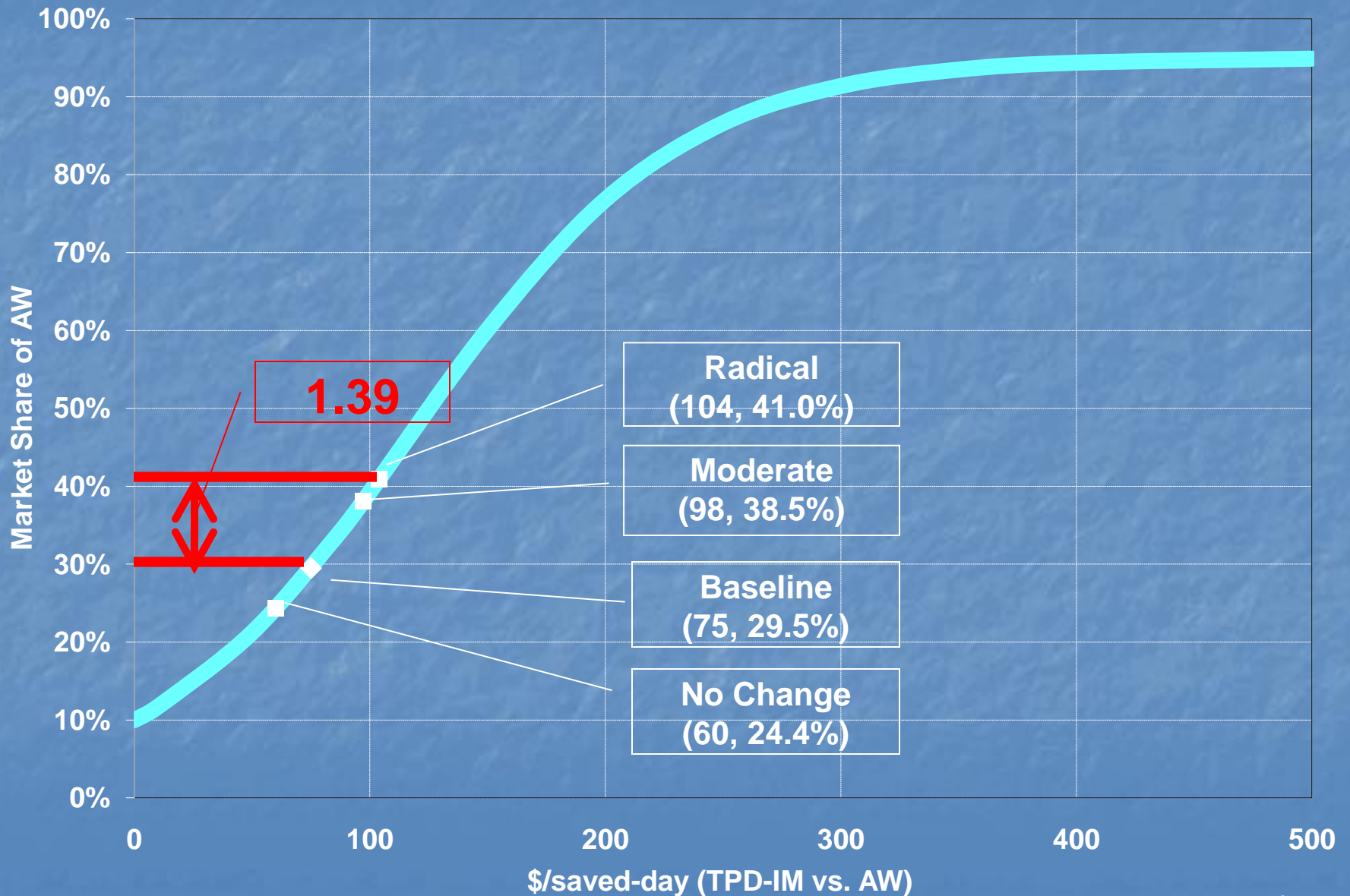
Post Expansion Patterns

Feeding NY ?



Guantanamo Bay Hub?

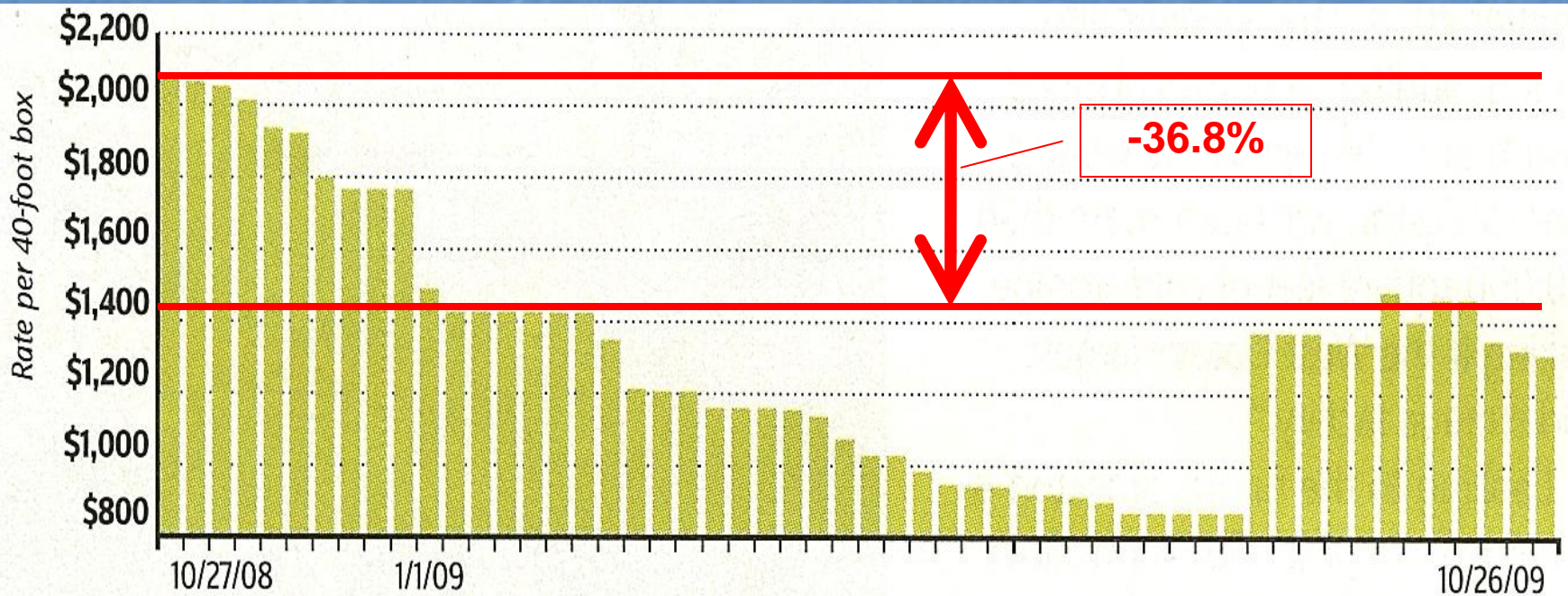
Model Results: Allocation Scenarios



More about is "Cost"

- Delivered Cost (Water, Port, Rail, **Road**)
- O/D Points (Foreign and Hinterland US)
- IM Gateways (Prince Rupert, Seattle/Tacoma, LA/LB, Punta Colonet, Lazaros Cardenas, New Orleans, Jacksonville, Savannah, Norfolk, NY, Halifax, Sydney)
- Use **Costs or Freight Rates?**

Freight Rates Fluctuations



The Oct. 26 average spot market freight rate declined 1.1 percent from the week before, but was 36.8 percent less than the \$2,073 per FEU rate of a year ago.

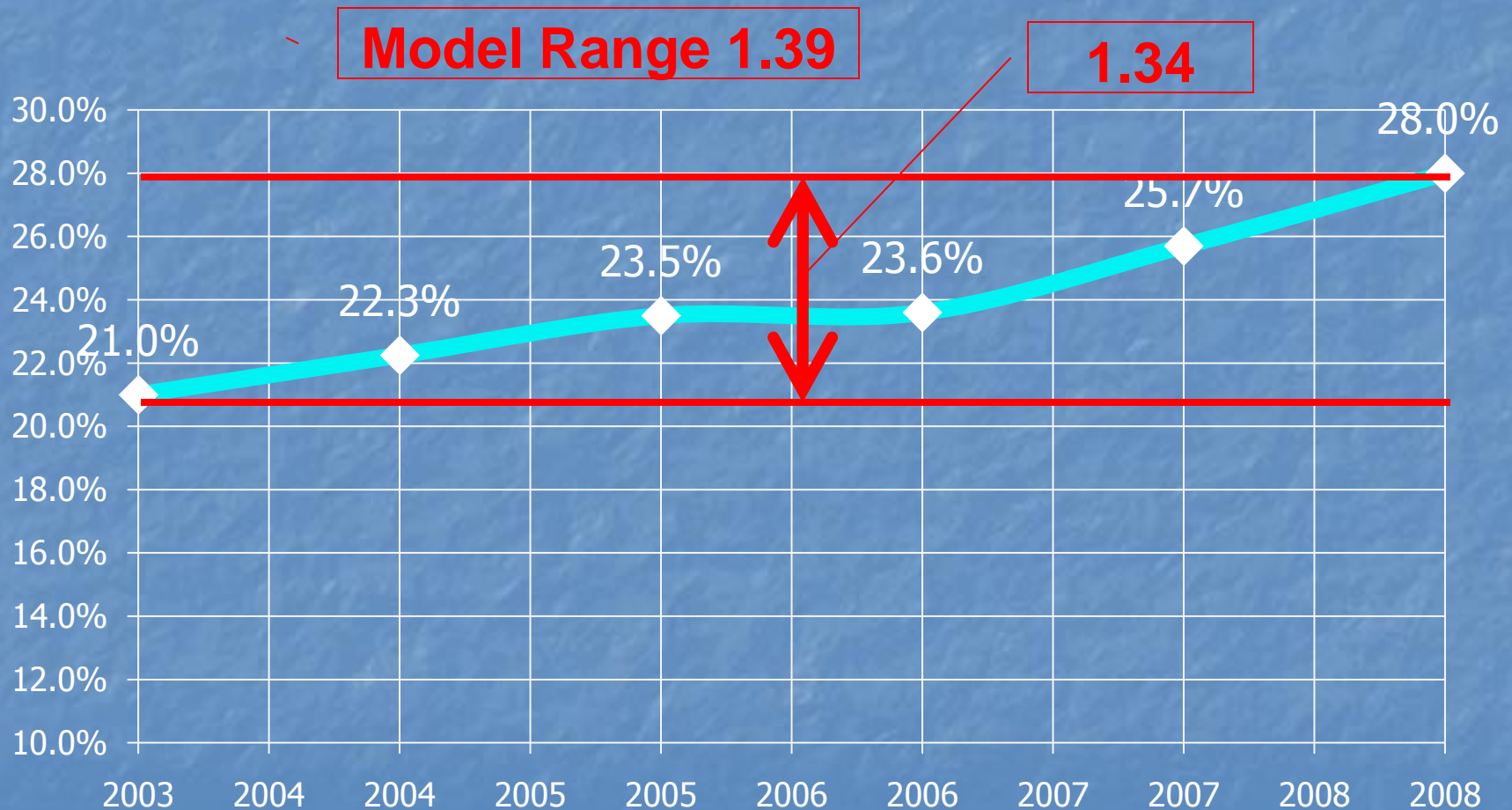
More about the “Traffic”

- Trends in Trade Pattern
 - *W-Shape* Recession
 - US Downsizing (houses, cars, credit)
 - Near Sourcing /SE Asia
- Cargo Composition
 - Changes in Time Value (perishability)
 - Full vs. Empty (unbalanced trade flows)
 - Further Containerization (grain)

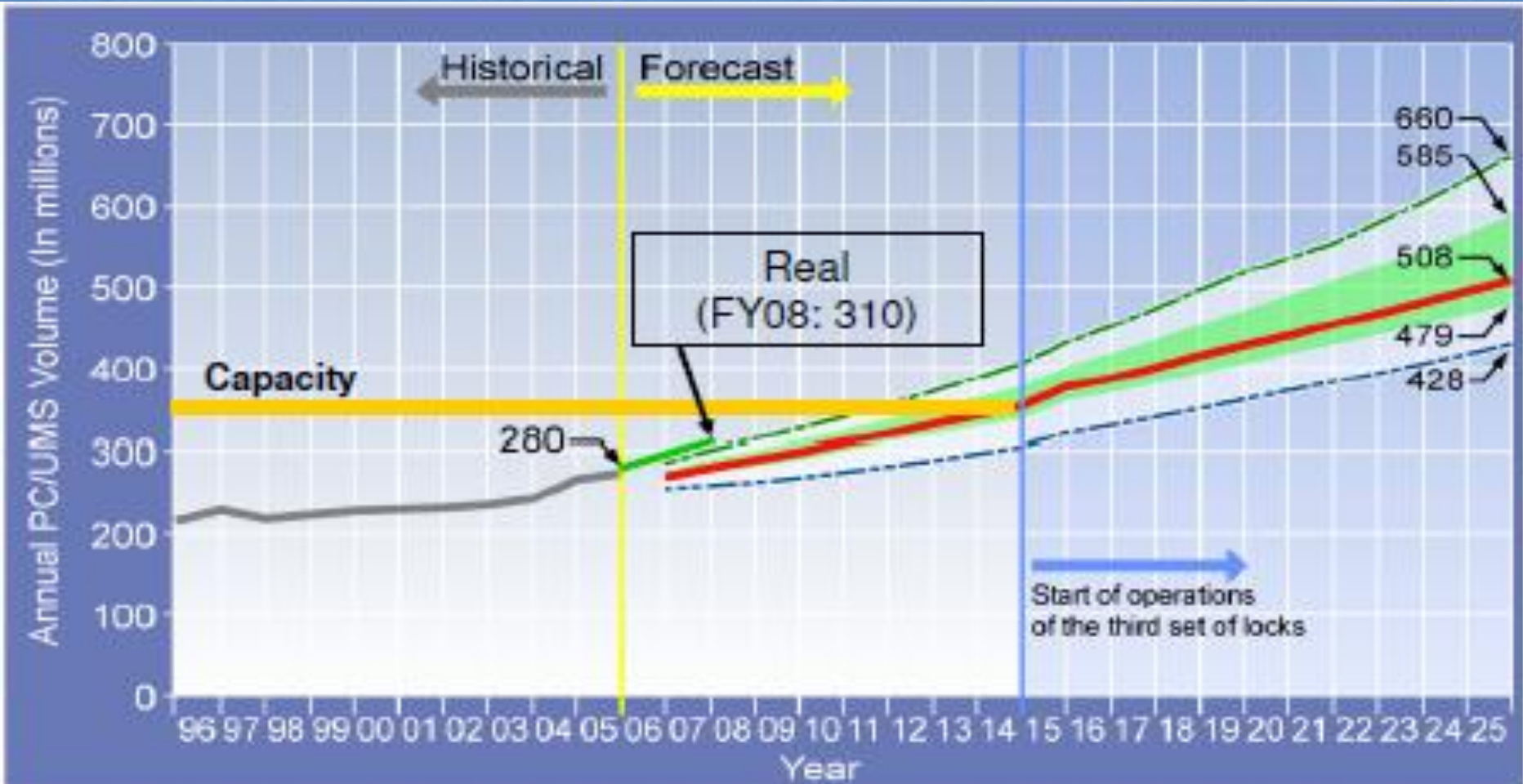
Other Factors

- Decision Makers
 - Lines -- Terminal Commitment
 - Shippers -- Distribution Centers
- West Coast Port Capacity; East Coast Draft
- Intermodal Coalition (“All In”, “IM Pricing”)
- Land, Rail-Based Ports
- Transloading -- *“Domesticazion”* of International Traffic
- Combination of International and Domestic

Pre-Expansion Diversion



ACP's Forecast for Expanded Canal



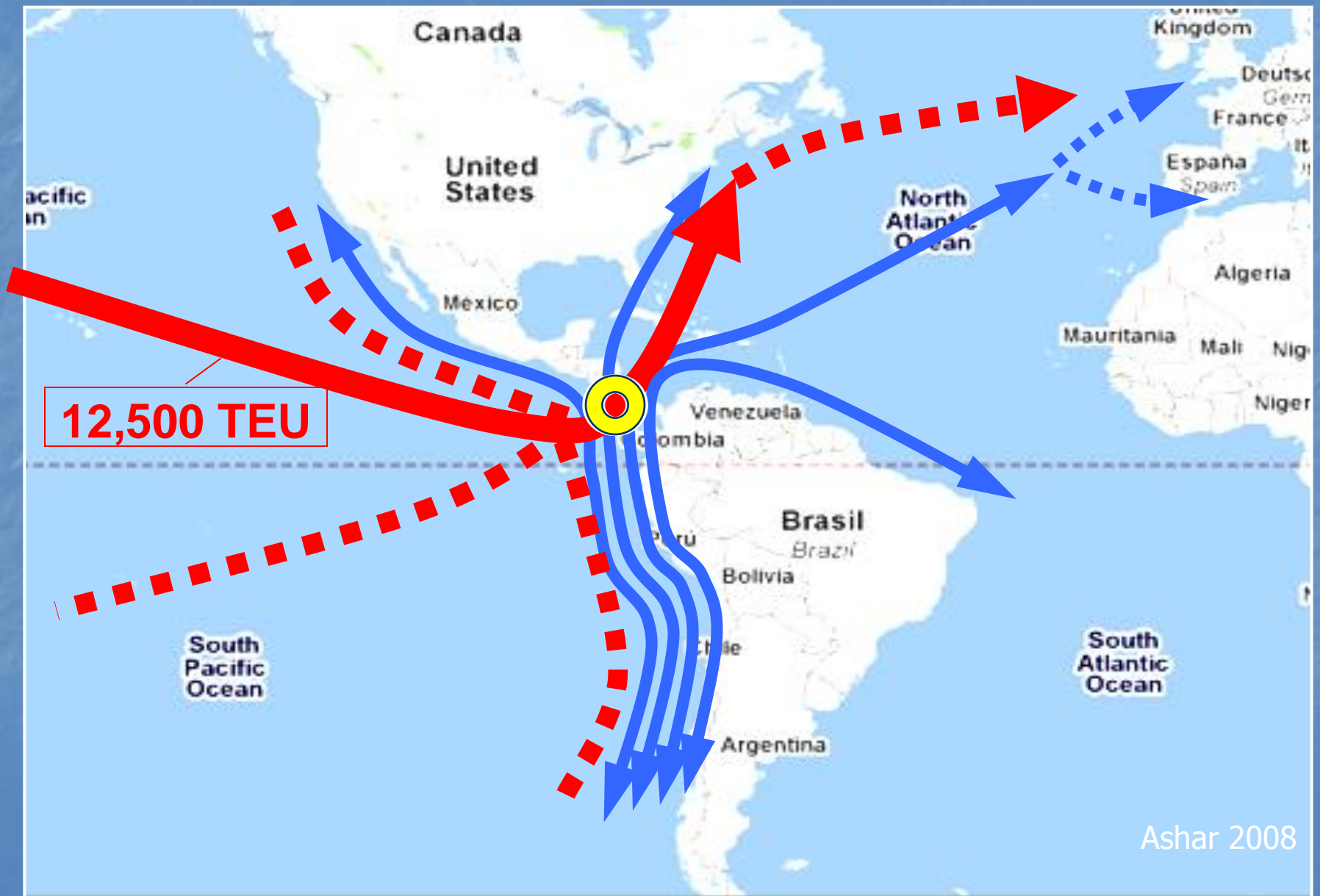
Historical Most Probable Forecast Probable Range Forecast
Optimistic Forecast Pesimistic Forecast

Source: ACP with Mercer Management Consulting's demand model

Impact on South America Service Pattern:

Direct vs. Transshipment
Services via *Canal Hubs*

Global Restructuring – *E/W & N/S*



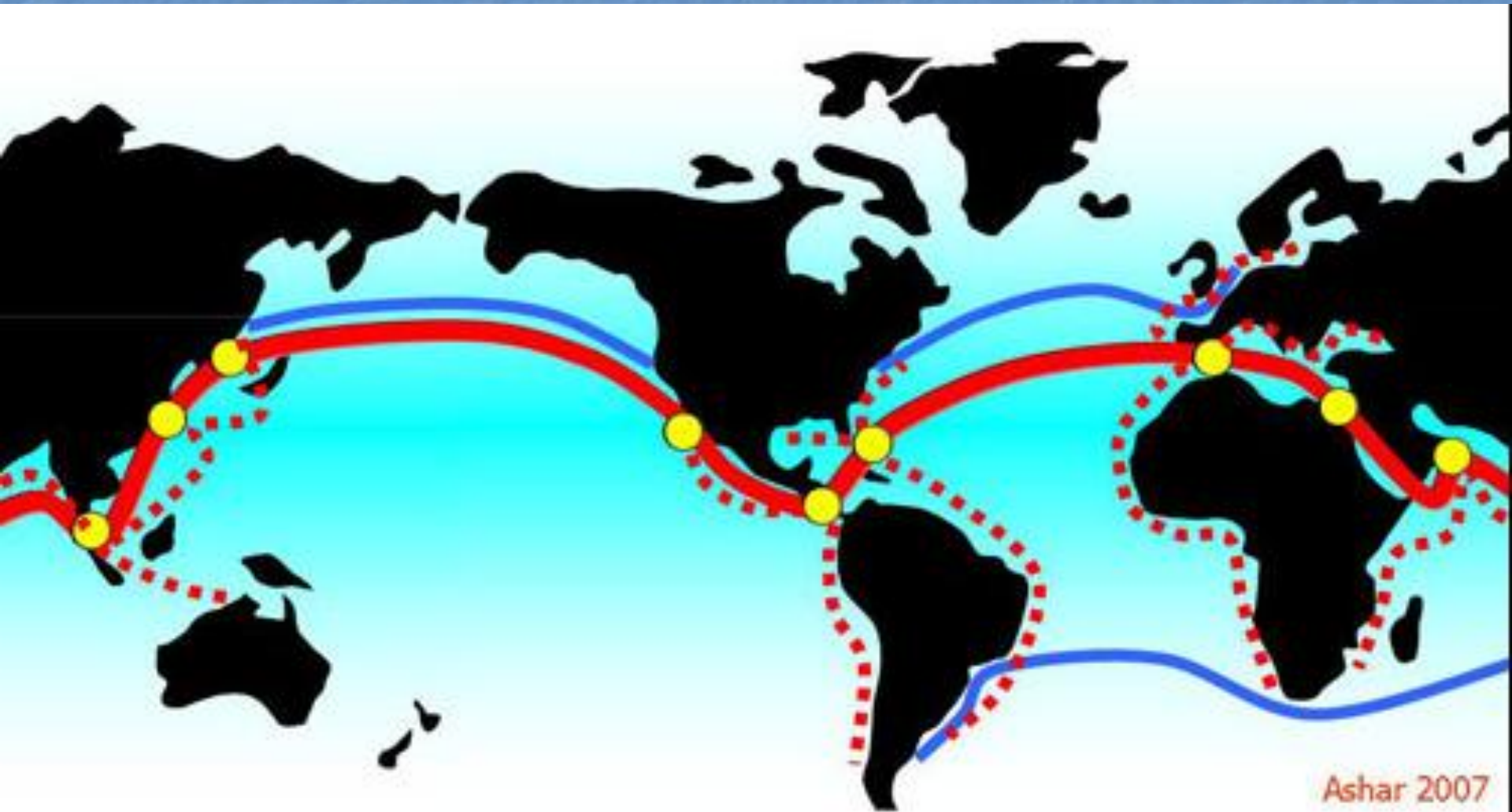
South America Direct Services

- Improvement of SA Ports
 - SAEC Asia and Europe are not Canal Influenced
 - Feeder River Plate
- Hamburg Sud's Rio-class Ships
- "Unemployed" Post Panamax Ships
- Joint Services Remain

Decision Making in the Modeling Era

Is it Feasible to Expand
the Cannal?

2000: 4th Revolution *"Global Grid"*



Ashar 2007

Canal's Opportunity Cost

- No newbuildings of Panamax – AW Service ***Degradation***
- Losing market share to ***alternatives***: land bridges, “dry” canals, Suez, Capes
- ***Degeneration***: congestion, low-value cargoes, captive trades
- Loss of ***Port Cluster*** and related ***Economic impact***
- ***“Strategic”*** decision (no other choice)

Thank you!

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