



State Pilotage – A Critical Component of a Resilient Marine Transportation System

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Outline

➤ **Dependability is Key to a Resilient MTS**

*** Safe * Reliable * Adaptable * "Reboundable"**

- **Many factors – planned or unexpected, human-caused or natural – can create uncertainty that can impact MTS dependability; pilots face all of these factors**
- **State Pilot System was designed to ensure effective 24/7/365, nondiscriminatory pilotage that is adaptable in order to best meet *local* port needs**
- **24 coastal state pilotage systems, though tailored for local needs, form nation-wide pilotage system that is vital to national MTS resiliency**



MTS Dependability

- **MTS is used for commerce, recreation and national defense**
- **While important, let's put aside recreation for now...**
- **A dependable MTS is vital to America's economy**
- **National defense – both access to military bases and uninterrupted supply chain – requires dependable MTS**



Factors That Can Impact MTS Dependability

- **Ships growing quickly / Channel are not keeping pace**
- **Natural and human-caused disasters**
- **Overreliance on technology**
- **U.S. commitment to electronic navigation infrastructure (NDGPS, GPS back-up)**
- **Uncertainty about Aids-to-Navigation constellation**
- **Fatigue regulations vs. shipping economics**

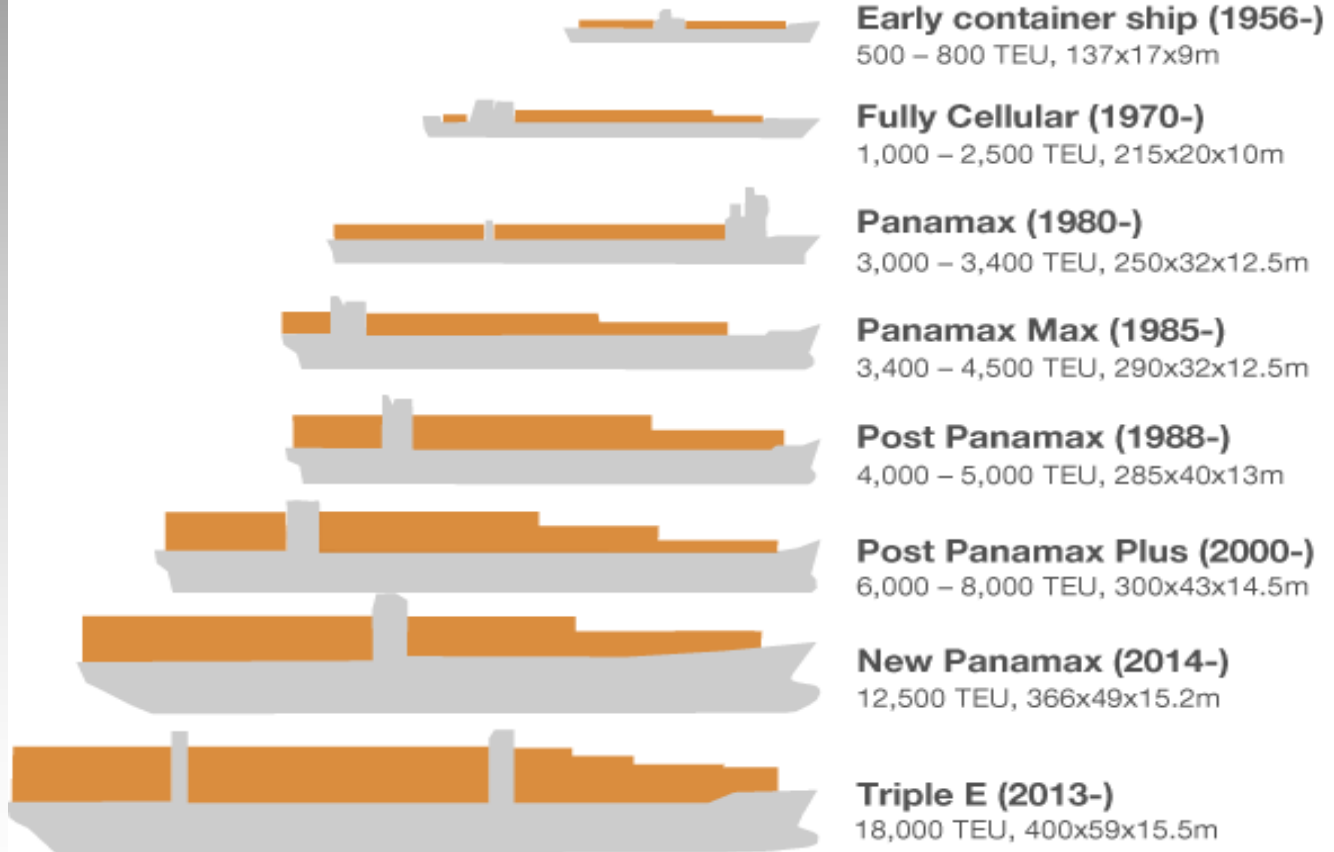
Pilots impacted by each of these MTS dependability challenges



*Ships are **GROWING***

Evolution of container ships

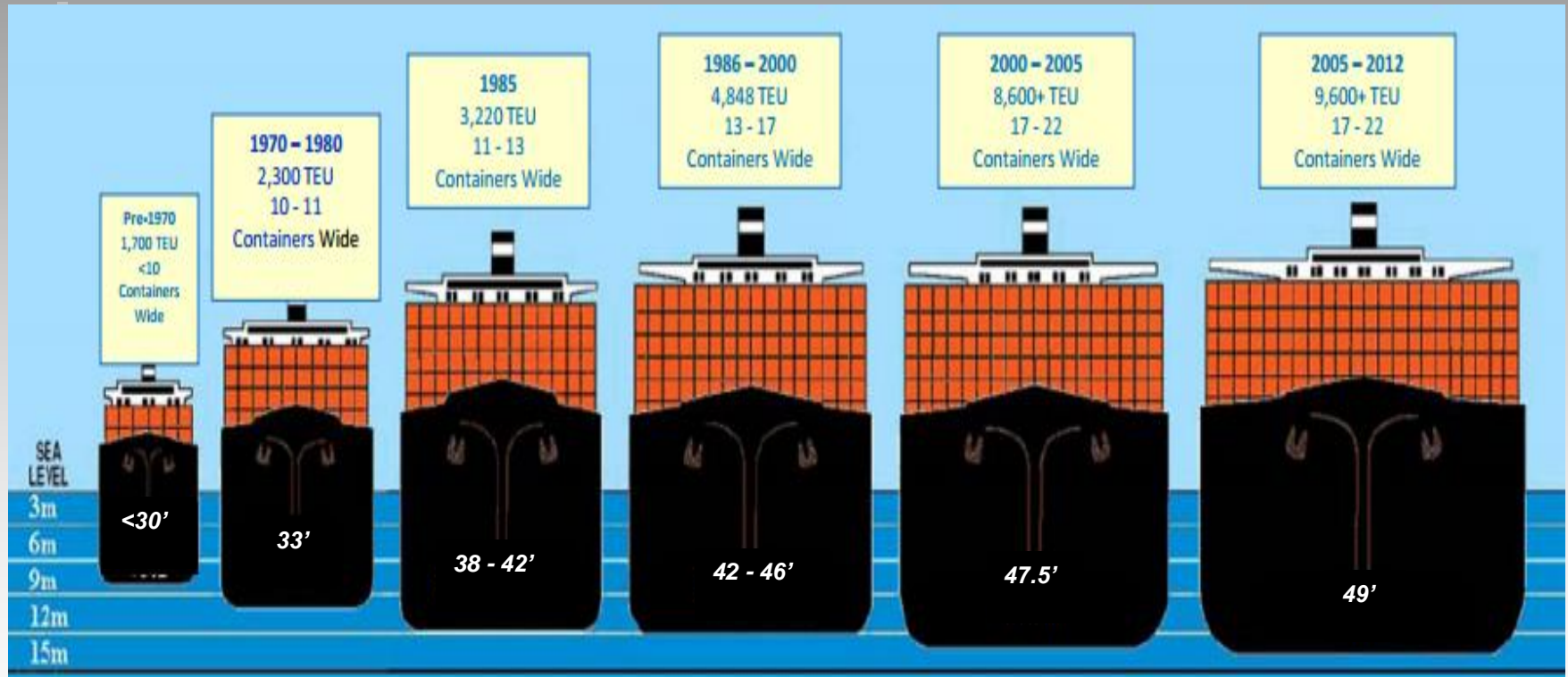
TEU: twenty-foot equivalent units,
length x width x depth below water in metres



Adapted with permission from The Geography of Transport Systems, Jean-Paul Rodrigue



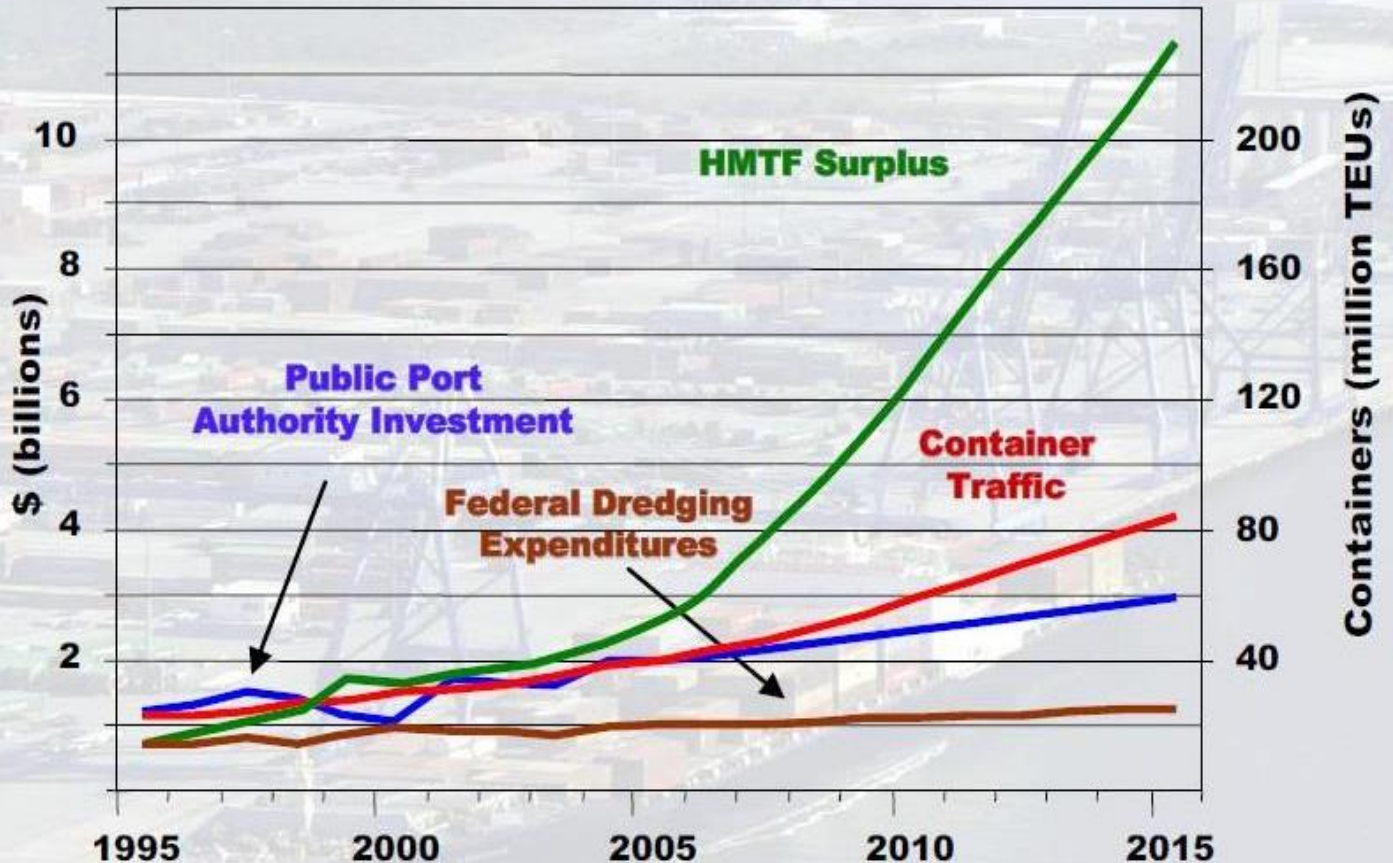
*Ships are **GROWING***





...but channels not keeping pace

FEDERAL INVESTMENT LAGGING *Trust Fund Surplus Skyrocketing*



Sources: AAPA, Budgets of the United States, Energy and Water Development Appropriations Acts, MARAD, and the Corps of Engineers.



Natural & Human-Caused Disasters

Natural Disaster or Terrorist Attack can pose serious threats to MTS, our economy, and national security by:

- ***Shutting down a port or coastal region***
- ***Disrupting critical supply chains***
- ***Impacting naval / USCG asset deployment***

CBO has estimated billions of dollars per day in economic damages from past west coast labor disputes and multi-billion dollar losses due to major storms that shut down port areas for significant periods of time.



Overreliance on Technology

"We have noticed a trend for too much reliance on electronic navigation. If there is an instrument failure, a control failure or presentation failure there are distinct disadvantages to those not familiar with the handling of a vessel. There is a definite trend toward driving the ship electronically, and while some may argue that this is the future, we are not there today."

Captain Jorge Viso
Chairman, Navigation & Technology Committee
American Pilots' Association
March 26, 2014 – NTSB Cruise Ship Safety Forum



Commitment to Electronic Navigation Infrastructure?

1) NO certain back-up to GPS - USCG stopped transmitting LORAN signals in 2010 calling it, "an antiquated system no longer required by armed forces, the transportation sector or the nation's security interests." Dismantling infrastructure.

What about eLORAN? Independent assessment team within U.S. government held that eLORAN is "*the only system which could provide position, navigation, time, and frequency back up capability for all current and potential needs.*"

Reprieve? House-passed Coast Guard Authorization Bill



Commitment to Electronic Navigation Infrastructure?

2) Future of NDGPS – In April 2013, USCG sought comments on “the need to retain NDGPS” and the “impact if NDGPS signals were not available.”

Navigation Safety Advisory Council strongly urged USCG to “announce publically a clear policy to maintain and continue to operate NDGPS in coastal, harbor entrance and approach and inland waterway areas.”

These views echoed throughout maritime industry.



Uncertainty Over AtoN Constellation

- **Agencies contend electronic navigation has “fundamentally changed mariners’ reliance on traditional navigation services.”**
- **See opportunity to “modernize” & “optimize” AtoN systems.**
- **Exploring AIS AtoN, including “virtual” AtoN.**
- **Assurances given this is neither a budget-cutting exercise, nor an effort to eliminate physical AtoNs, but USCG budgets instructive.**
 - **2014 enacted budget authority for AtoN was 5.6% less than 2013.**
 - **2015 requested amount is 10% less than 2014.**



Fatigue Regulation

- **NTSB & USCG have correctly ID'd fatigue as a safety concern.**
- **Maritime industry out of no-cost responses. Any effective measure to reduce fatigue will require more workers and/or fewer hours of service. THIS HAS A COST and margins are thin.**
- **“Minimally-crewed” ships are the norm.**
- **Pilotage faces similar pressures from shipping. Adjustments to pilot numbers or work schedules to mitigate fatigue are frequently vigorously opposed by the parties that pay pilot fees.**



The State Pilotage System

In one of its FIRST acts, Congress passed the Lighthouse Act of 1789, which gave States the authority to regulate pilotage.

Why this delegation? Pilotage is uniquely suited to state/local control.

- **Pilotage is “best provided for, not by one system, or plan of regulations, but by as many as...the States should deem applicable to the local peculiarities of the ports within their limits.”**

- U.S. Supreme Court



The State Pilotage System

- **Each of the 24 coastal states has taken the authority delegated by Congress and fashioned a comprehensive pilotage system tailored to the specific local conditions and navigational demands.**
- **Foreign flag vessels and U.S. flag vessels in foreign trade are required to take a state-licensed pilot (e.g., compulsory pilotage).**
- **Together, the 24 state systems comprise a national program of navigation safety regulation and environmental protection that is vital to MTS dependability.**



The State Pilotage System

- **A State compulsory pilotage requirement is among the most effective mechanisms available to a government to protect its marine environment while facilitating waterborne commerce.**
- **It is effective because it places on the bridge of a ship a highly trained and locally experienced individual whose primary responsibility is to protect the interests of the State.**
- **Pilots are insulated from shipping economic pressures and are able to exercise independent judgment.**
- **The principal “customer” of the State pilot is not the ship or the shipowner but rather the State, its citizens, and its public interests.**



The State Pilotage System

- **Pilotage rates, set by government authorities in public proceedings, are designed to cover the costs of a 24/7/365, modern, safe, and efficient pilotage system.**
- **These necessary expenses include infrastructure (pilot boats, boat crews, dispatch systems, PPU's, etc.), training, and compensation.**
- **State pilotage systems not only license pilots and oversee their professional activities, they also seek to ensure a reliable, expert pilotage operation, and that all vessels that require a pilot will be provided, without delay or discrimination, a trained, competent, well-prepared pilot.**



The State Pilotage System – Key to MTS Resiliency

Ships Growing / Channels Not Keeping Pace

- **Shipping companies / masters depend on pilots' indepth local knowledge and experience with the local channels and all types of shipping traffic.**
- **State pilots work closely with shipping companies and port authorities on models and simulations to determine maximum safe parameters for ships to enter port.**
- **...but State pilot answers not to shipping interests, but rather the State, its citizens, and its public interests.**



The State Pilotage System – Key to MTS Resiliency

Natural & Human-Caused Disasters HURRICANE SANDY

“The Ports of Connecticut and Long Island Sound have a Maritime Transportation System Recovery Unit in place that coordinates the reopening and survey of local waterways and facilities. Coast Guard in conjunction with the Army Corps of Engineers, local harbor pilots and state and local authorities will inspect shore-side facilities for damage...check positions on every buoy in the port...identify areas where shoaling has occurred due to the passing storm...and prioritize ship movement to ensure normal commerce resumes.”

- U.S. Coast Guard Press Release, October 30, 2012



The State Pilotage System – Key to MTS Resiliency

Natural & Human-Caused Disasters

HURRICANE KATRINA

“Twice-daily conference calls started between the pilots, the Coast Guard and the Army Corps of Engineers. The group set priorities: where to begin dredging out silt that Katrina tossed up; where to reinstall lights first; and how to allocate resources, such as helicopters needed to move pilots near ships.”

- USA Today – September 27, 2005



The State Pilotage System – Key to MTS Resiliency

Natural & Human-Caused Disasters

Post- 9/11 Anti-terrorism Measures

- In an October 2001 speech, then Coast Guard Commandant lauded the actions of a state-licensed river pilot aboard an inbound foreign-flagged merchant ship.
- Pilot noticed something suspicious and reported it to the Coast Guard Captain of the Port.
- In the midst of this Coast Guard investigation, a crewman fled, but was later apprehended. Linked to a person on FBI's most wanted list.
- USCG Commandant said, "it was the vigilance of a river pilot that might have deterred potential terrorist activity."



The State Pilotage System – Key to MTS Resiliency

Overreliance on Technology

- **Pilots embrace technology and have led advancements.**
- **Proud proponents and users of cutting edge technologies.**
- **PPU among earliest examples of “eNavigation”**
- **...but to pilots, electronic navigation technology is another tool.**
- **Not used in isolation, continual cross-checking with other navigation means.**
- **Supported by indepth local knowledge and experience.**



The State Pilotage System – Key to MTS Resiliency

Commitment to Electronic Navigation Infrastructure / Uncertainty Over AtoN Constellation

- **In depth local knowledge, experience and “piloting” skills never more important than in today’s “shrinking channels.”**
- **Pilots key partner with federal government agencies responsible for navigation infrastructure policy and decisions.**
- **Continual engagement at local, regional and national level.**



The State Pilotage System – Key to MTS Resiliency

Fatigue Regulations vs. Shipping Economics

- **Pilots understand better than most the importance of work/rest balance. A pilot's livelihood, personal safety, as well as the protection of the waterways, depends on it.**
- **Ratemaking systems are designed to ensure the "right" number of pilots.**
- **State regulatory systems insulate pilots from the economic pressures on shipping companies.**



The State Pilotage System

A Critical Component of a Resilient MTS

- **Local regulation = ability to adapt quickly**
- **Ratemaking systems ensure modern, efficient, and effective pilotage that is available 24/7/365 to all vessels required to take a state pilot.**
- **Works with shipping companies and port authorities to maximize channel utilization.**
- **Coordinates with government to reopen port after natural or human-caused disasters.**
- **Training, experience, and knowledge act as cross-check to potential vessel overreliance on technology.**
- **As navigation infrastructure (NDGPS, eLORAN, AtoN) uncertainties grow, State pilot services become ever more vital.**



The State Pilotage System

“Pilots are thus *indispensable cogs in the transportation system of every maritime economy.* Their work prevents traffic congestion and accidents which would impair navigation in and to the ports. It affects the safety of lives and cargo, the cost and time expended in port calls, and, in some measure, the competitive attractiveness of particular ports.”

- United States Supreme Court