USACE Navigation Business Line

ERDC
Engineer Research & Development Center

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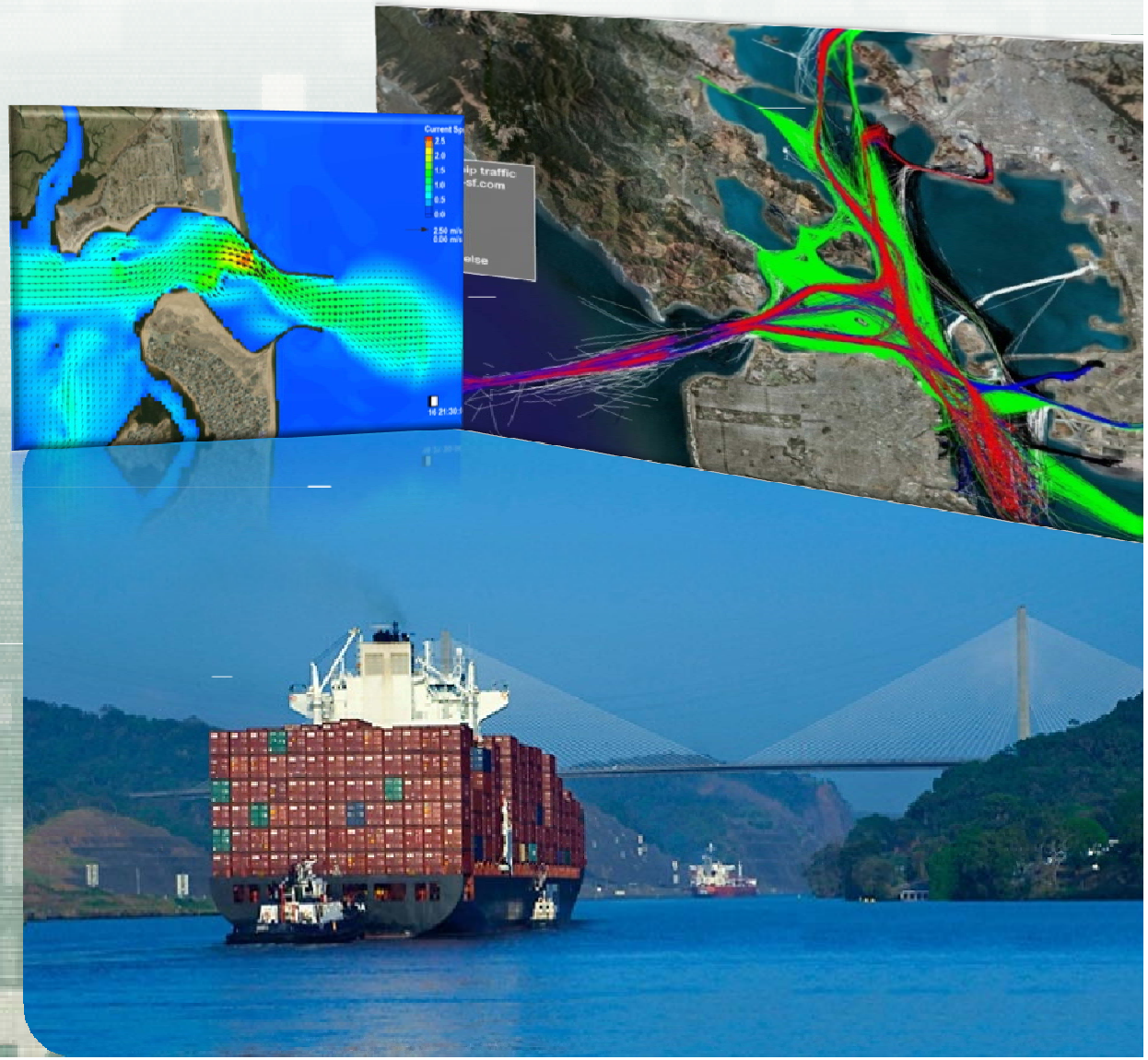
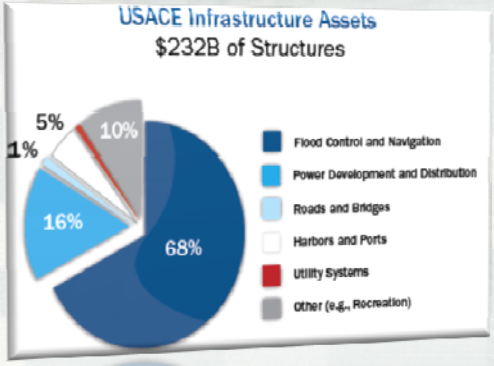
Engineering Research and Development Center
Coastal & Hydraulics Laboratory



US Army Corps of Engineers
BUILDING STRONG®

Asset Management



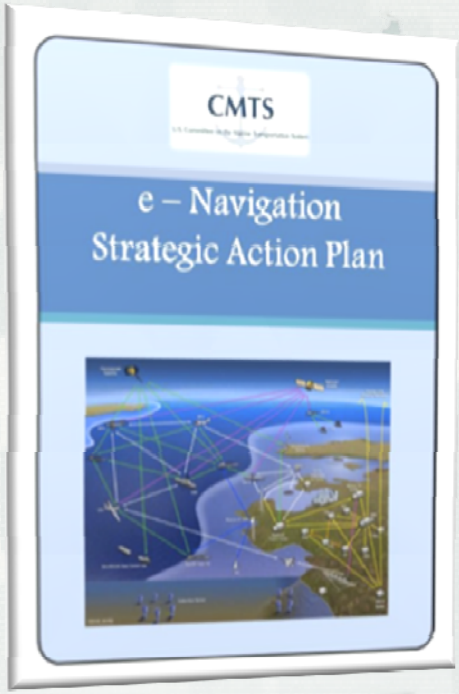
- What is AM?
  - Risk-informed approach that assess life-cycle of portfolio within watershed
- Why AM?
  - USACE maintains $232B of navigation infrastructure
- How will AM work?
  - Operational Conditional Assessments
  - Relative Risk Index

More information: http://operations.usace.army.mil/asset.cfm

eNavigation

USACE's inland navigation covers:

- 8,200 miles of rivers in 22 states
- 276 lock chambers with a total lift of 6,100 feet
- 625 million tons of commodities annually



Inland Electronic Navigational Charts

- 6,992 miles of navigable rivers electronically charted
- International S-57 Hydrographic Data format
- Large-scale, accurate, and up-to-date IENCs
  - *Accurate and real-time display of vessel positions relative to waterway features*
  - *Improved voyage planning and monitoring*
  - *Integrated display of river charts, radar and Automatic Identification Systems (AIS) overlay*

US Committee on Marine Transportation System

- *International involvement – IMO, IALA, PIANC*
- *River Information Systems (RIS)*
- *Lock Operations Management Application*
  Use AIS to exchange ship to shore information

http://www.cmts.gov/Activities/ActionTeams.aspx

Performance Indicators

GOAL:

To create indicators to measure the performance and delivery of services that the Army Corps provides to the Marine Transportation System in the following areas:

- Economic Benefits to the Nation
- Capacity
- Safety & Security
- Environmental Stewardship
- Resilience & Reliability

PREDICTED OUTCOME:

The use of MTS performance indicators in USACE Navigation will lead to more informed and better infrastructure investment decisions.

STATUS:

- Leading and participating in inter-agency teams at the US DOT including aligning our work with MAP-21 efforts to develop network wide performance metrics.
- Lending expertise to TRB efforts to develop enhanced freight performance networks and analytic capacity.

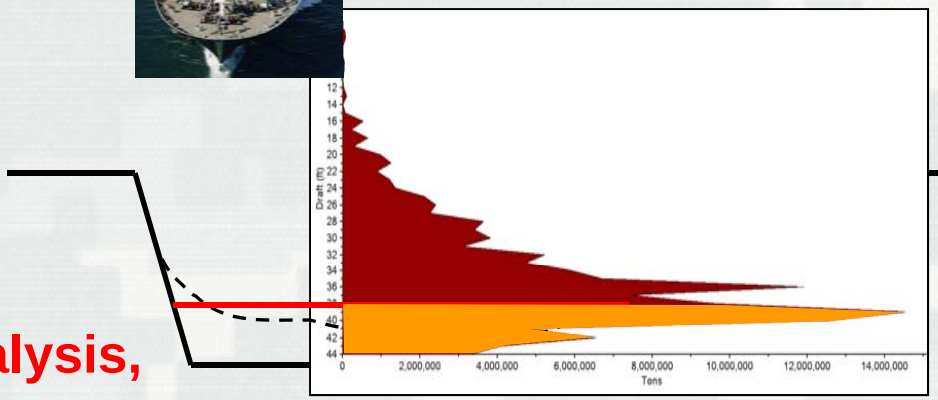
CPT and CSMART

Channel Portfolio Tool (CPT):

Web-based application that relates navigable depths to cargo most vulnerable to shoaling. Allows for detailed, reach-level analysis as well as regional and national summaries of the waterborne transportation systems supported by Corps navigation projects.

https://cpt.usace.army.mil

CPT-LITE



Coastal Structures Management, Analysis, and Ranking Tool (CSMART):

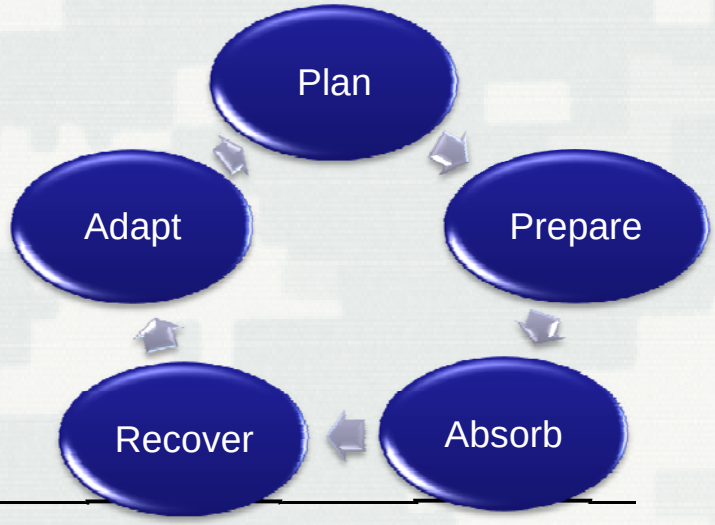
Web-based application that prioritizes coastal structures according to user-specified criteria and weightings on metrics such as condition rating, commercial tonnage, fish landings, and cruise and ferry passengers. Allows local, regional, and national queries and comparisons. https://itlgis01.usace.army.mil/CPT/Silverlight/CSMART

Hurricane Sandy Support

- Disaster Relief Appropriations Act signed 1/29/2013
- Supplemental appropriations:
  - Address damages from Sandy
  - Reduce future flood risk
  - Support long-term sustainability of coastal ecosystem & communities

80% of funds

- Key concepts:
  - Design for Resiliency
  - Engineering, Environment, Community



New Infrastructure R&D Program

- New R&D Program focused on inland navigation infrastructure
- Will begin in FY14 with 6 R&D Work Areas