

Navigation RD&T Highlights

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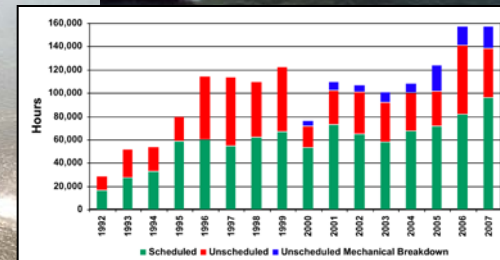
22 July 2014
Vicksburg, MS



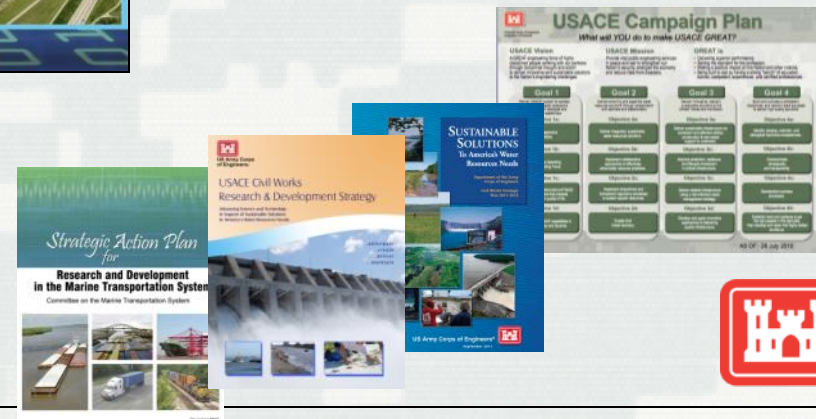
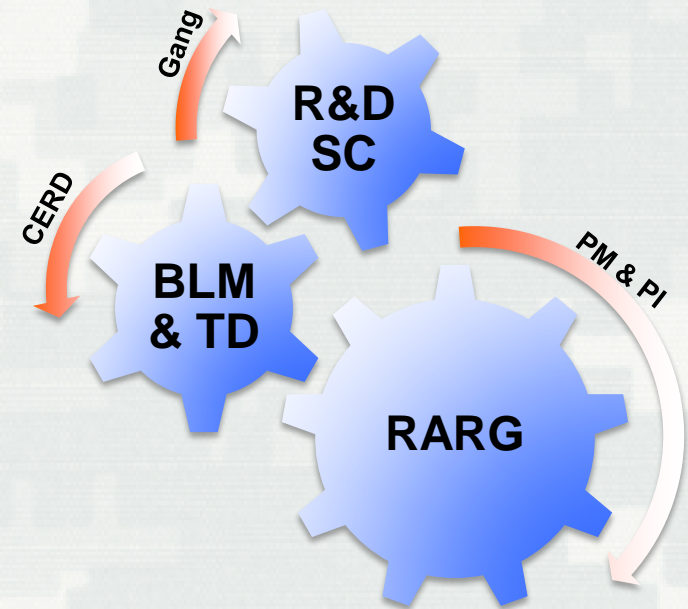
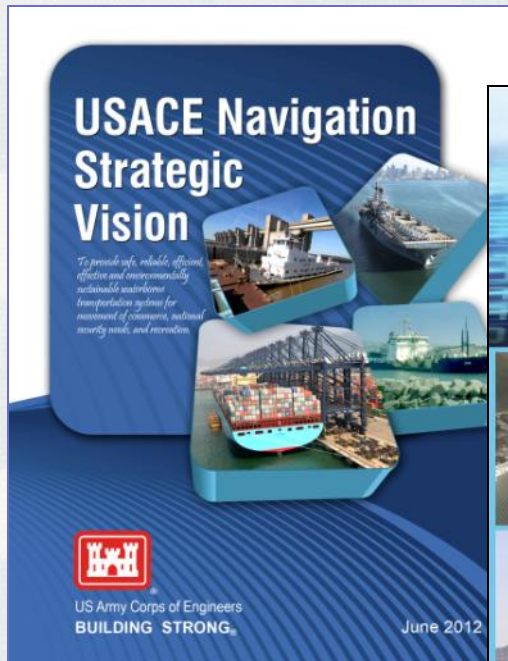
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Navigation R,D&T Guiding Documents



Navigation RD&T Strategic Needs & Priorities FY14

- **Extend the useful life of existing navigation infrastructure**
- **Operate and manage national waterborne transportation assets as an integrated system**
- **Optimize and prioritize channel availability for commercial freight movement**
- **Engineering with nature to enhance ecosystem and project processes, benefits and services**
- **Implement eNavigation throughout the National MTS**
- **Deliver sound engineering and scientific solutions to align with the Planning Modernization initiative**



Navigation RD&T Portfolio

Dredging Operations and Environmental Research

Dr. Todd Bridges

Coastal Inlets Research Program

Dr. Julie Rosati

Navigation Structures

Navigation Systems

Mr. Eddie Wiggins

Regional Sediment Management

Ms. Linda Lillycrop

Monitoring Completed Navigation Projects

Dr. Lyn Hales

Dredging Operations Technical Support

Ms. Cynthia Banks

Dredging Innovations Group

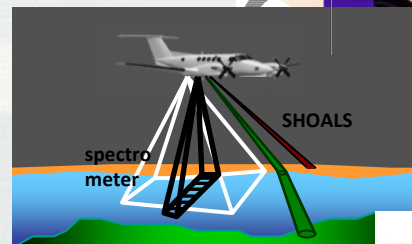
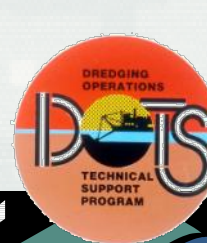
Ms. Jennifer Gerhard-Smith

Inland Electronic Navigation Charts

Dr. Bob Mann / Ms. Denise LaDue

National Coastal Mapping Program

Ms. Jennifer Wozencraft



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FY13 Highlights*

- Inland Navigation Design Center
- Extend the Life of Infrastructure Document
- Infrastructure R&D initiated early
- Engineering With Nature
- Natural & Nature-based Features
- CERB Charge
- Additional funding
- Composite demonstrations
- Trunnion Rod Testing
- Lots of publications and products!



RSM FY14 Participation



RSM FY14: 21 Districts, ERDC, IWR/HEC



**MCNP
CODS
NCDB**



Navigation Data Integration Framework

Navigation DIF Components

- Source Databases
- Hub Catalog
- Tools
- Web Services
- Portals



Navigation Sub-categories

- Dredging
- River Information Services
- Surveying & Mapping
- Infrastructure & Asset Management
- **Engineering With Nature & Regional Sediment Management**
- Marine Transportation System

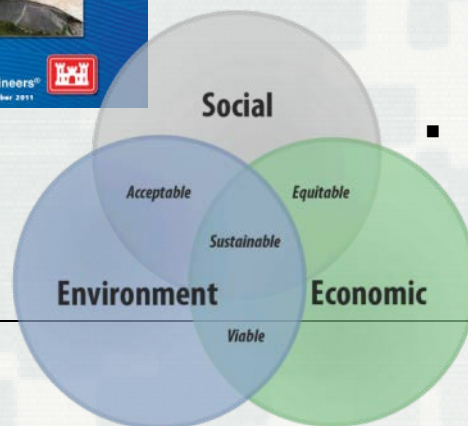
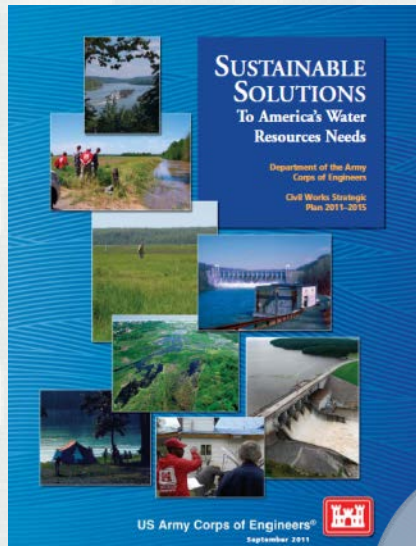




Engineering With Nature

...the intentional alignment of natural and engineering processes to efficiently and sustainably deliver economic, environmental and social benefits through collaborative processes.

- Science and engineering that produces operational efficiencies
- Using natural process to maximum benefit
- Expanding the benefits provided by projects
- Science-based collaboration



Azimuth Check on Response to 2013 CERB Charge: *Integration of Risk and Resilience in the USACE's Coastal Mission Area*

Resilience: the ability of a **system** to anticipate, resist, recover, and adapt to achieve functional performance under the stress of disturbances.

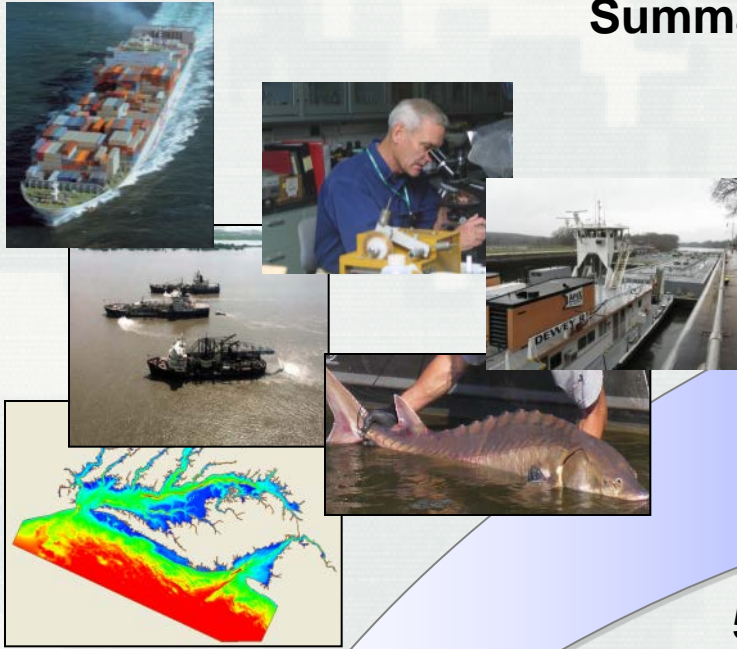


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CW R&D Technology Transfer

Summary of FY13 Products



69 Webinars

122 Tech Reports and Tech Notes

142 Conferences & Workshops

30 Software Releases

65 Journal Articles

41 Hosted Workshops

55 DOTS requests / 26 Districts

32 WOTS requests / 18 Districts

100 Federal Agencies Collaborations

100 State & Stakeholder Collaborations

86 University Collaborations

22 Guidance Documents

33 Web services or tools

Other Highlights

22 Interagency

Committees

>1M Data downloads

7 Book chapters

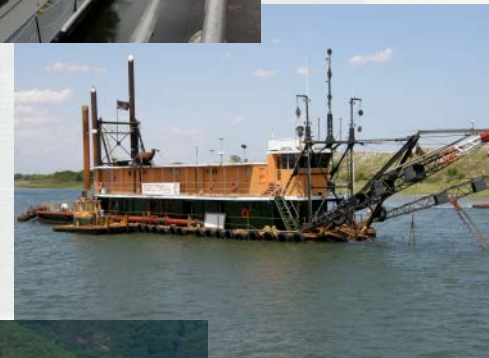
Dissertation (Dr. Alex Sanchez)



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Research Area Review Group Responsibilities

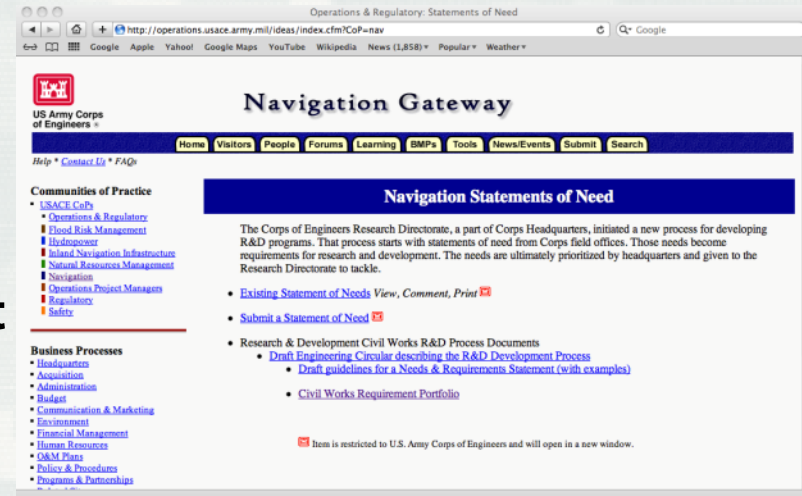
- Provide Statements of Need
- Participate in RARG 3-day Meeting
Program status
Technology Transfer
Discuss & Prioritize
- Collaborate with an ERDC PI
- Help with Tech Transfer !



Statements of Need

how it all begins

- Title
- Need that Drives Requirement
- Extent of Need Across USACE
- Requirement
- Consequences if Requirement Not Met
- Product Recommendation
- Originator



7-9 April 2015



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Thank You !



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