

# Deep Draft Navigation Planning Center of Expertise (DDNPCX)

## The DDNPCX - A Driver of Change

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# The Need is Clear ... The Commitment Strong ...

“The Nation's aging infrastructure, increased demands, and limited funding compel us to assess our ability to deliver studies and projects that meet the Nation's needs.”

“Delivering quality products...in a timely, cost-effective manner is vital.”

Major General Michael J. Walsh



## DDNPCX “A Driver of Change”

# Civil Works Transformation ... Bold!

- Modernize the project *planning process*.
- Enhance the *budget development process through a systems-oriented watershed approach, collaboration and innovative financing*.
- Evaluate the current and required portfolio of water resources projects through a smart *infrastructure strategy to deliver solutions to water resources problems*.
- Improve *methods of delivery to produce and deliver critical products and services through water infrastructure and other water resources solutions*.

Boldest action in Civil Works in a quarter of a century since WRDA 1986



# DDNPCX’s Transformative Actions

## ***Increasing Quality / Reducing Time and Cost (2013)***

- Reviews
  - 32 Navigation Review Plans
  - 21 Agency Technical Reviews
  - 5 Independent External Peer Reviews
- Model Certification / Templates
  - 6 Model Documentation Reports
  - HarborSym, Example Spreadsheets
- Economic Production Team
  - 18 Production Studies
  - Charleston, Wilmington, Jacksonville, Palm Beach/Lake Worth Inlet
- 3x3x3 (\$3M, 3 years, 3 levels of command)
  - Planning Charettes – making decisions up front





# DDNPCX “A Driver of Change”

## 3x3x3 Initiatives

- DDNPCX actively engaged in re-scoping charrettes (i.e. - Charleston Harbor and Jacksonville Harbor)
- 44% Charleston cost and scope reduction
- 48% Wilmington cost and scope reduction
- 50% Mobile Harbor LRR cost and scope reduction
- Weekly/Monthly coordination with Jacksonville, Alaska, and Galveston District
- Engaged in obtaining waivers for large navigation studies (i.e. – Charleston Harbor)



# Deep Draft Models

Consistency throughout Nation for Deep Draft Economic Analysis:

- HarborSym and associated tools
  - Standardized methodology
  - Consistent fleet and commodity forecasting
  - Providing one set of data subscription for each district's use
- Simplified Deep Draft Navigation Spreadsheet
  - Simplified approach for the economic evaluation
  - Analysis for projects with less risk/non-controversial
  - Federal investment is minimal
- Developing templates for benefits that cannot be captured in HarborSym
  - Vessel repair and construction benefits
  - Cruise Ship benefits (i.e. regional impacts)
  - Changes in landside transportation costs



# Implementation of OpOrder

## Production Mission

- Only PCX with nation-wide production responsibility
- The Center is currently producing or assisting economic analysis for 18 deep draft navigation studies across the country
- The Center has employed over 12 technical experts across the Corps to perform technical reviews

## Deep Draft Economists

- The Center has developed a roster of 28 economists with deep draft navigation experience
- The Center has already engaged 15 economic experts across the Corps for production of deep draft navigation studies this year
- Corps certified Economist for Agency Technical Review. 16 Economists have been identified.
- The Center's core group in Mobile contains 3 expert economists



# Reaching out to Industry

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- AAPA
  - QPI Partnership
- U.S. Ports
  - Learning Port Operations
- Merchant Marine Academy
  - Intermodal Training





# Infrastructure

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- US Ports and Waterways Modernization Strategy
  - Addressing the critical need for additional port and inland waterway modernization to accommodate post-Panamax vessels
- Impact of climate change on transportation systems study



# Communications

- District – Commander to Commander (Dashboard)
  - Provides monthly update on project status
- Month/Weekly conference calls
  - SAJ/SAD
  - SWG
  - POA/POD
- Industry Interface
  - AAPA – QPI
  - Learning Port Operations



# Deep Draft Navigation Studies

<b>Bayou Casotte, MS</b>	<b>Wilmington Harbor, NC</b>
<b>Brazos Island Harbor, TX</b>	<b>Houston-Galveston, TX</b>
<b>Charleston Harbor, SC</b>	<b>Tampa Harbor, FL</b>
<b>Grays Harbor, WA</b>	<b>Redwood City, CA</b>
<b>Jacksonville Harbor, FL</b>	<b>Hilo Harbor, HI</b>
<b>Palm Beach Harbor, FL</b>	<b>Houston, TX</b>
<b>Port Everglades Harbor, FL</b>	<b>Mobile Harbor, AL</b>
<b>Searsport Harbor, ME</b>	<b>Alaska Deep Draft Ports</b>



# Takeaways

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Our models take economic credibility and GAO, etc. issues off the table

Giant step toward getting Nation's ports ready for Panama Canal Expansion

Major step toward processing Chief's reports.

Progress toward open and transparent communication with the industry



# Takeaways

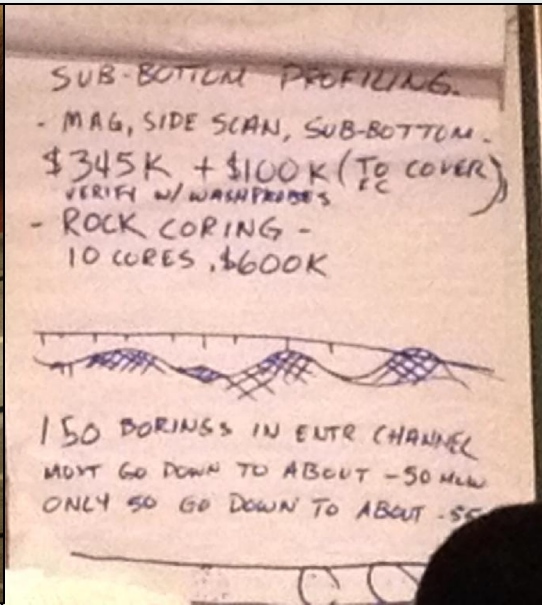
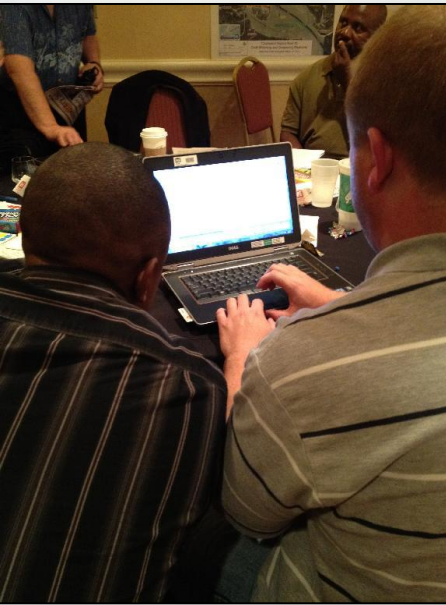
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- As an enterprise level enterprise, We embrace the challenge of being a major driver for change in the Corps
- DDNPX Critical to CW Transformation
- Nation's ports ready for Panama Canal Expansion
- Major step toward processing Chief's reports
- Corporate models addressing ongoing economic issues
- We value ideas generated in forums like QPI as a means of "GETTING BETTER"!





# Photos



# Photos

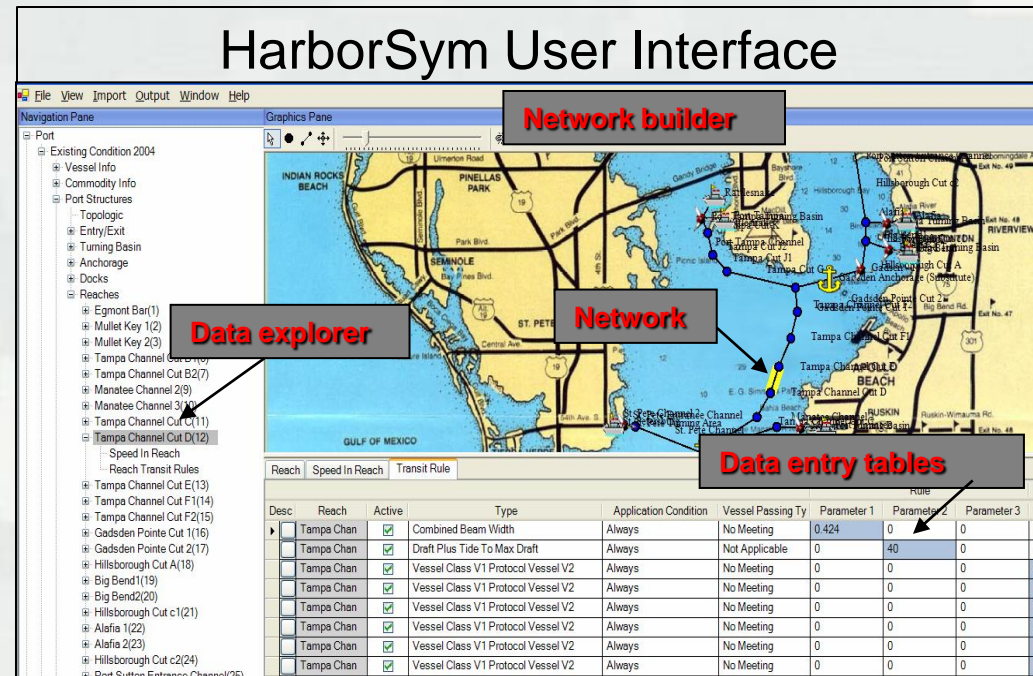




# Top Notch Planning

Recruit, develop and sustain top notch planning expertise through:

- Training
  - HarborSym
  - Intermodal Considerations (Merchant Marine Academy)
  - Developmental – DDN Planning Associates
  - Comprehensive Aquatic Systems model (ERDC)
  - Agency Technical Review Guide
- Workshops
  - DDNPCX Workshop
  - DDN Economics



# Corps Economic Experts

- The Center has developed a roster of 28 economists with deep draft navigation experience
- The Center has already engaged 15 economic experts across the Corps for production of deep draft navigation studies this year
- The Center is training 5 economists for future use in deep draft production this year
- The Center’s core group in Mobile contains 3 expert economists



# Lean, Mean, and Effective

DDNPCX Organization is making a difference!

- Collaboration
  - Research Area Review Group
  - Strategic Navigation Action Team
- Training
  - Creating consistency
  - How to...
  - HarborSym
  - Review Leads

### HarborSym User Interface

The screenshot displays the HarborSym User Interface. The main window shows a map of Tampa Bay with various navigation channels and structures. The interface includes a Navigation Pane on the left, a Graphics Pane at the top, and a Data entry table at the bottom. Red callout boxes highlight the 'Network builder', 'Data explorer', 'Network', and 'Data entry tables'.

**Navigation Pane:**

- Port
- Existing Condition 2004
  - Vessel Info
  - Commodity Info
  - Port Structures
    - Topologic
    - Entry/Exit
    - Turning Basin
    - Anchorage
    - Docks
  - Reaches
    - Egmont Bar(1)
    - Mullet Key 1(2)
    - Mullet Key 2(3)
    - Tampa Channel Cut B(27)
    - Manatee Channel 2(9)
    - Manatee Channel 3(10)
    - Tampa Channel Cut C(11)
    - Tampa Channel Cut D(12)
      - Speed In Reach
      - Reach Transit Rules
    - Tampa Channel Cut E(13)
    - Tampa Channel Cut F(14)
    - Gadsden Pointe Cut 1(16)
    - Gadsden Pointe Cut 2(17)
    - Hillsborough Cut A(18)
    - Big Bend(19)
    - Big Bend(20)
    - Hillsborough Cut c1(21)
    - Alafia 1(22)
    - Alafia 2(23)
    - Hillsborough Cut c2(24)
    - Port Sutton Entrance Channel(25)

**Data entry table:**

Desc	Reach	Active	Type	Application Condition	Vessel Passing Ty	Parameter 1	Parameter 2	Parameter 3
Tampa Chan		<input checked="" type="checkbox"/>	Combined Beam Width	Always	No Meeting	0.424	0	0
Tampa Chan		<input checked="" type="checkbox"/>	Draft Plus Tide To Max Draft	Always	Not Applicable	0	40	0
Tampa Chan		<input checked="" type="checkbox"/>	Vessel Class V1 Protocol Vessel V2	Always	No Meeting	0	0	S
Tampa Chan		<input checked="" type="checkbox"/>	Vessel Class V1 Protocol Vessel V2	Always	No Meeting	0	0	M
Tampa Chan		<input checked="" type="checkbox"/>	Vessel Class V1 Protocol Vessel V2	Always	No Meeting	0	0	L
Tampa Chan		<input checked="" type="checkbox"/>	Vessel Class V1 Protocol Vessel V2	Always	No Meeting	0	0	S
Tampa Chan		<input checked="" type="checkbox"/>	Vessel Class V1 Protocol Vessel V2	Always	No Meeting	0	0	M
Tampa Chan		<input checked="" type="checkbox"/>	Vessel Class V1 Protocol Vessel V2	Always	No Meeting	0	0	L



# DDNPCX Transformative Actions

## ***Increasing Quality / Reducing Time and Cost***

- 3x3x3 (\$3M, 3 years, 3 levels of command)
- Planning Charettes – Plans for completing in 3 years
- Models and Tools – Standardized process
- Training – Developing expertise of limiting resources
- Procedures – Developing standards for Corps-wide use (requesting services, study outlines)
- Quality – Building it in up front
  - Emphasis on Quality Control
  - Review Lead engaged throughout study

