

# IMTS Progress Update

## Inland Marine Transportation System (IMTS)

Presentation by Dave Sneberger

Information Briefing

22 Jan 2010



## Introduction/Background

### ❖ NavLocks Study 2007-8

- Business Process Review
- 115 Improvement ideas from workforce and industry



John Branson (left) talks to Al Wise about Lock 25

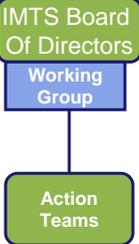


Clay Williams, industry pilot, (center, holding sheet) discusses ideas with the study team



## IMTS Structure and Process

- ❖ **IMTS Board of Directors:**
  - Chaired by Deputy CG for Civil Works and Emergency Ops
  - Members are Division Commanders and HQ USACE Chief of Ops
  - Working Group: cross section of skills from across IMTS
- ❖ **Action Teams**
  - Composed of experts with hands-on experience (lockmasters, Ops Managers, etc.)
  - Develop draft outputs for review by workforce and industry, review and approval by Board
  - Implementation of new standards/policies IMTS-wide by Board of Directors



```

graph TD
    A[IMTS Board Of Directors] --- B[Working Group]
    B --- C[Action Teams]
  
```

**Key: an open process with participation by workforce and industry users**

3



## Overview of Status of Products

- A. Products Completed
  1. NavLocks Condition Assessment process
  2. Human Resource (HR) Center of Standardization
  3. Crew Change Policy
  4. PRIP User Guide
  5. IMTS Booklet for Equipment Acquisition
- B. Products Under Review or in the Pipeline
  1. Sharing Knowledge on Lock Operations & Daily Operational Maintenance
  2. Navigation Business Trends
  3. IMTS Standard Decision-Making Process for Remote Operations of IMTS Infrastructure
- C. Planned Products
  1. Training and Certification of lock operators
  2. Strengthening Communication Process
  3. Maintenance Standard for Navigation Locks and Dams
  4. Channel Maintenance Improvement Plan
  5. Assistance with Implementation of LOMA (AIS-based system)

4



## NavLocks Condition Assessment Process

Products Completed (1 of 5 Products)

- ❖ NavLocks Condition Assessment.
  - Key step toward long-term goal: Risk-informed Budget Development Process

Condition Assessment (probability of Failure) **X** Consequences of Failure **= Risk**

- Process to be used for baseline condition assessments in FY10
- Results to be used for FY13 Budget Development (begins Mar 2011)

IMTS Process to be used for FY10 baseline condition assessments




5



## Human Resource (HR) Center of Standardization

Products Completed (2 of 5 Products)

- ❖ #1 IMTS Asset = Human Capital
- ❖ Focus of many improvements from NavLocks improvement study
- ❖ Center to provide capability to implement the improvements
- ❖ Center approved and recruitment actions underway
- ❖ Action team formed and working




Example: sharing best practices on training

6

**IMTS-wide Crew Change Policy**  
Products Completed (3 of 5 Products)

❖ **New IMTS Standard**

- Currently, Crew Change Policy varies by district. Huge challenge to change.
- Goal: IMTS-wide policy
- Draft policy reviewed by industry and workforce
- Draft policy reviewed by offices at HQ: legal, safety, security

Crew Change at lock facility

Typical customer journey is through several districts 7

**PRIP User Guide**  
Products Completed (4 of 5 Products)

❖ **Plant Replacement and Improvement Program (PRIP)**

- Major Program for long-term investments in shared assets
- Big challenge: loss of institutional knowledge and expertise
- User Guide completed for Plant Replacement and Improvement Program (PRIP)

8

**IMTS Booklet for Equipment Acquisition**  
 Products Completed (5 of 5 Products)

- ❖ “Living Document” for Tips and New Cost Saving Ideas
  - How to purchase standard designs for land and floating plant equipment
  - Bonus added: tips on purchase of used equipment
  - Overcome myths



9

**Sharing Knowledge on Lock Operations and Daily Operational Maintenance**  
 Products Under Review (1 of 3 Products)

- ❖ Goal: develop systematic approach to share vital knowledge IMTS-wide
  - Started Dec 2008
  - Reviewed past experiences of all divisions and examined alternatives
  - Draft report on findings and recommendations reviewed by Working Group
  - To be sent for review by workforce



10



## Navigation Business Trends

Products Under Review (2 of 3 Products)

- ❖ Product: Projections of Navigation Business Trends over the next 20 to 30 years
  - Briefed at Aug BOD meeting
  - To provide support for future IMTS decision-making
- ❖ Status Update
  - Literature Search: complete
  - Interviews with Functional Experts: complete
  - Draft being reviewed by IMTS Working Group



11



## IMTS Standard Decision-making Process for Remote Operations of IMTS Infrastructure

Products under Review (3 of 3 Products)

- ❖ Overall goal: establish IMTS standard decision-making process that incorporates
  - Past experience
  - Safety considerations
  - Cost analysis
- ❖ Update of progress
  - Recruited action team members
  - Collected information on past experiences
- ❖ Draft process to be reviewed by all stakeholders in open process




12

## Training and Certification of Lock & Dam Operators

Planned Products (1 of 5 Products)

- ❖ Lock operation personnel
  - Face situations that require prompt action
  - Must have sound judgment and in-depth understanding of principles
  - Liability for safety of people & damage to equipment

- ❖ Goal: IMTS-wide
  - Operator Training manual
  - Curriculum and training methods
  - Certification process





13

## Strengthening Communications Process

Planned Products (2 of 5 Products)

- ❖ Improving IMTS Communications is top priority (BPR Topic #8)
- ❖ Immediate focus: enhance distribution to workforce
  - Use electronic e-mail list (ListServ) capability on Navigation Gateway site
  - Powerful capability to use for workforce communications
  - Special: add link to process to share knowledge on accidents/incidents



```

graph LR
    Editor[EDITOR] --> Manager[EMAIL LIST MANAGER]
    Manager --> Subscribers[OPT-IN SUBSCRIBERS]
    Subscribers --- Announcement[ANNOUNCEMENT LIST]
          
```



Lifting of Markland Gate

14



## Maintenance Standard for Locks and Dams

Planned Products (3 of 5 Products)

- ❖ Short-term: share a “best practice” for division maintenance standard:
  - Single communication document for key info
  - Annual updating process with command emphasis
- ❖ Long-term: IMTS Maintenance Standard
  - Use single document format to identify consensus minimum IMTS standards
  - Foundation for “World-class” Maintenance Management System for NavLocks



Scheduling Major Maintenance



Standard for “Spare Parts”

15



## Channel Maintenance Improvement plan

Planned Products (4 of 5 Products)

- ❖ Voted as the #1 priority for remaining improvement topics
- ❖ Action Team being formed
- ❖ Key focus for action team: develop scope for this overall topic and the baseline
- ❖ Special emphasis on “Channel Availability Performance” metric



Dredging by Hurley



Note: Coastal Dredging is not included in IMTS

16

## Assist with Implementation of LOMA

Planned Products (5 of 5 Products)

- ❖ Lock Operation Management Application (LOMA)
  - Web-based software being developed by ERDC with help from IWR
  - Uses signals from Automatic Identification System (AIS) hardware, based on international standard
  - AIS systems in wide use across Europe and along U.S. Coasts
  - Shored-based AIS units to be installed along inland waterways at USACE locks
  - Overall target: 31 Dec 2010
- ❖ Role of IMTS Working Group: assist
  - Communications
  - Beta testing
  - Training of lock operators

Demo of LOMA at Mel Price: Web-based system uses international protocol (AIS)

Example of display From GIWW lock

## Vision of IMTS in 5 Years

- ❖ Goal: present a vision of where we expect IMTS to be in 5 years
- ❖ Three major elements
  - “World Class” Maintenance Management System
  - Lock Operations with strong customer focus
  - Enhanced Processes for IMTS Workforce

18



## “World Class” IMTS Maintenance Management System

- ❖ IMTS-wide Maintenance Standard
- ❖ Coordinated Scheduling of Major Maintenance
- ❖ IMTS Policy on Spares
- ❖ 3-Phase Inspection System
- ❖ Corporate Sharing of Major Maintenance Knowledge



19



## Lock Operations with Stronger Customer Focus

- ❖ IMTS Crew Change Policy
- ❖ Standard Locking Procedures
- ❖ Standard Water Control Procedures
- ❖ Advanced Waterway Information System –
  - IMTS-wide standard format
  - Single-point access, geographical-based
- ❖ Overall shift to “Systems-based” operation



20



## Enhanced Processes for IMTS Workforce

- ❖ Trained and Certified Lock Operators
- ❖ Standard Job Descriptions
- ❖ Enhanced Hiring Process
- ❖ Extended Workforce Planning
- ❖ More uniform and consistent approach to Drug Testing and other policies
- ❖ Family-friendly lock shifts



21

## Questions?? Comments???



Operation & Maintenance



Major Maintenance Projects



Dredging

Reminder - Send questions or comments on the IMTS by e-mail to  
E-mail address: [IMTS@usace.army.mil](mailto:IMTS@usace.army.mil)

IMTS Web site for IMTS Navigation workforce, industry and public:  
<http://operations.usace.army.mil/navigation>



**BUILDING STRONG®**