

Maritime Information Infrastructure

A Key Component of the U.S. 21st Century Freight Movement Network

Maritime “infrastructure” is generally thought of as cranes, wharves, dredged channels, locks, dams and other tangible structures. While the construction, maintenance, and operation of “hard” infrastructure are essential to safe, efficient freight movement, the same value has not historically been placed on “soft” or information infrastructure that supports maritime freight movement. Also, investment in information technology can mitigate the effects of limitations in the ability to invest in (typically more expensive) hard infrastructure by facilitating more efficient use of existing infrastructure.

The federal Committee on the Marine Transportation System (CMTS) brings together leaders of over 20 federal agencies involved in maritime freight movement to develop a more integrated set of federal information infrastructure capabilities through:

- Integrating systems
- Seamless data exchange
- Human-focused interfaces
- Decision-focused information
- Improved connectivity
- Inter-agency information coordination

EXAMPLES

NOAA’s National Ocean Service PORTS program: The National Oceanic and Atmospheric Administration’s (NOAA) National Ocean Service provides information that is invaluable to mariners for the safe navigation of vessels in and around federal navigation channels and nearby waterways. For example, NOAA builds and

maintains the nation’s suite of coastal nautical charts, an essential tool for safe navigation.

NOAA also manages the Physical Oceanographic Real-Time System (PORTS), which is a source of critical real-time data related to tides and currents. Accurate real-time information can increase safety, lower shipping costs and ultimately enhance our international competitiveness and lower consumer prices.

Integrated Marine Safety Information (MSI) project: CMTS has embarked on an effort to coordinate various government-provided navigation information services into an integrated navigation information service that can be accessed and delivered electronically in a variety of formats to meet end user needs. Eventually, the consolidated MSI will be available as web services accessible via various devices (computer, smartphone, tablet), integrated into existing navigation and logistics systems and transmitted via Automatic Identification System (AIS) to be displayed on vessel navigation systems more quickly and efficiently than can be done with current information systems and dissemination methods.

FILS/FINDE: Federal-Industry Logistics Standardization/Federal Initiative for Navigation Data Enhancement (FILS/FINDE) is a joint public-private effort by the federal government and industry working together on common data standards, identifying authoritative sources and working towards “single window” reporting of required data. The increased speed and accuracy of the data exchange is expected to save time and money not only for the marine carriers

and service providers but for other stakeholders such as port authorities as well.

ACTIONS REQUESTED:

- Expand NOAA's PORTS locations and fund the system's installation, operation and maintenance per the Hydrographic Services Improvement Act of 1998 which states that NOAA "shall, subject to the availability of appropriations, design, install, maintain, and operate real-time hydrographic monitoring systems to enhance navigation safety and efficiency." While Congress has appropriated funds for installation and design, they have not provided funds for maintaining the system. Instead, port authorities and others in the maritime sector are helping to pay for these systems even service elimination due to inadequate maintenance funding. Congress should fully fund NOAA's **PORTS program**.
- Streamline the ability for Federal Agencies to implement Public-Private-Partnership (PPP)

agreements to advance implementation of Maritime Information Infrastructure initiatives.

The importance of maritime information infrastructure has been recognized worldwide. The International Maritime Organization (IMO) has embarked on development of the concept of e-Navigation, which they define as "the harmonized collection, integration, exchange, presentation and analysis of maritime information onboard and ashore by electronic means to enhance berth-to-berth navigation and related services, for safety and security at sea and protection of the marine environment."

The efforts of U.S. federal agencies, industry, and other stakeholders to implement efforts in support of the e-Navigation concept promises to provide a positive return on investment and help reach the long-term global goals of e-Navigation.

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