



NIEM Gets a Uniform and Takes to the Seas

Since its inception in 2005, the [National Information Exchange Model \(NIEM\)](#) has expanded into many new and exciting areas within the justice and homeland security missions. This new strategic growth is a testament to the usability of NIEM and the many people and agencies involved in making NIEM a success. In 2008, NIEM continued to grow across the federal government through two key relationships—Universal Core (UCore) and the Maritime Information Exchange Model (MIEM).

UCore is an interagency information sharing initiative being developed by the [Department of Defense \(DoD\)](#), the [Department of Justice \(DOJ\)](#), the [Department of Homeland Security \(DHS\)](#), and the [Intelligence Community \(IC\)](#). The former NIEM Program Management Office (PMO) Executive Director, Jeremy Warren, served as the federal co-lead for the effort, along with Dan Green from the [Department of the Navy](#). Technically, UCore is an information exchange specification and implementation profile that is a functional element of the [National Strategy for Information Sharing](#). UCore includes definitions of the most commonly exchanged concepts (who, what, when, and where), security markings, and XML representations of these concepts. UCore's extension rules allow for tailoring information exchanges for specific mission areas, and it also creates a messaging framework to package and unpackage the content consistently. The UCore initiative leverages the success of many other DoD, DHS, DOJ, and IC data-sharing efforts.

In August 2008, the NIEM PMO announced that the involvement of the NIEM program in the requirements, design, and implementation of UCore 2.0 ensured its compatibility with NIEM and the DOJ's Logical Entity eXchange Specifications (LEXS). UCore 2.0 shares the same underlying message structure as LEXS, which creates a substantial functional alignment between the two and allows for greatly simplified translation of messages.

Information exchange partners from across the federal government will not need to view UCore and NIEM as an either/or choice. UCore has been designed to be interoperable with NIEM and LEXS, and current NIEM-based systems will not need to deviate from existing implementations to share information via UCore. The NIEM program is fully committed to ensuring that future versions of NIEM and LEXS will remain compatible with UCore.

Following its successful relationship-building with UCore, on November 5, 2008, the NIEM Program and the DoD Executive Agent (DoD EA) for Maritime Domain Awareness (MDA) entered into a strategic partnership with NIEM designed to strengthen information exchange for this critical mission area. Under this agreement, the [Department of the Navy](#) and the DoD Executive Agent for MDA will work with the NIEM Program to transition the Maritime Information Exchange Model (MIEM) 1.0, developed by the MDA Data Sharing Community of Interest, into NIEM as its maritime information domain component.



MIEM was created as part of the Comprehensive Maritime Awareness Joint Capability Technology Demonstration sponsored by the U.S. Navy and DoD and performed jointly with the Republic of Singapore (ROS). The Department of the Navy worked within the established community of interest, including the [U.S. Coast Guard](#), to ensure that MIEM would meet the maritime community's requirements for information sharing. The development of MIEM included leveraging significant portions of NIEM and extending beyond NIEM to include maritime-specific elements required for information exchange. The transition of MIEM will allow the maritime community of interest to leverage the tools, training, and governance provided by NIEM at a fraction of the cost.

The NIEM and MIEM partnership furthers the objectives for ensuring that Maritime Domain Awareness situation intelligence is actionable for homeland security and will ensure the long-term stewardship of the maritime model for information exchange. Most important, it provides enabling technology for executing the [National Maritime Strategy](#) signed by both DoD (Navy and Marine Corps) and DHS (Coast Guard).

Because of the widespread adoption of NIEM throughout state and local governments, the inclusion of maritime information exchange data components in NIEM offers the potential for much greater information sharing at lower costs to state and local law enforcement and homeland security professionals, who have a need to share information about maritime activities and events. Law enforcement officials at the state and local levels are forging new collaboration efforts with ports and maritime organizations to respond to potential threats in shipping and from suspicious vessels. It is important to create the ability to facilitate information sharing across the domains of maritime, law enforcement, and intelligence—which is the fundamental purpose of NIEM—not just for counterterrorism activities but also for exchanging information related to smuggling, drug interdiction, and other criminal behavior.

Law enforcement agencies having jurisdiction over ports, inland waterways, bridges, and other connections to maritime environments realize that the ability to share information about the locations, crews, characteristics, and contents of vessels is critical to preventing crime or acts of terror, as well as investigating criminal activity. The magnitude of information sharing that is needed to support collaborative efforts among local, state, and federal agencies requires high-speed, automated systems and a standard for computer-based information sharing across domain boundaries. Having the maritime domain as a part of NIEM will expedite information sharing and increase its efficiency.

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