

# COMPONENT V: ONGOING MANAGEMENT AND MAINTENANCE

The Ongoing Management and Maintenance component of NIMS contains two subsections: the National Integration Center (NIC) and Supporting Technologies. The NIC section of the document sets forth the responsibilities of the NIC. The Supporting Technologies Section discusses principles necessary to leverage science and technology to improve capabilities and lower costs.

## A. NATIONAL INTEGRATION CENTER

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Homeland Security Presidential Directive 5 required the Secretary of Homeland Security to establish a mechanism for ensuring the ongoing management and maintenance of NIMS, including regular consultation with other Federal departments and agencies; State, tribal, and local stakeholders; nongovernmental organizations (NGOs); and the private sector. To this end, the Secretary established the NIC to serve as an informational assistance resource for government agencies at all levels, NGOs, and the private sector that are implementing NIMS. The NIC provides strategic direction for and oversight of NIMS, supporting routine maintenance and continuous refinement of the system and its components over the long term. The NIC solicits participation from Federal departments and agencies; State, tribal, and local governments; and emergency management/response personnel,<sup>24</sup> including those from NGOs and the private sector. Revisions to NIMS and other issues can be proposed by all NIMS users (including Federal, State, tribal, substate regional, and local governments, as well as the private sector, voluntary organizations, academia, nonprofit organizations, and other NIMS-related professional associations).

Additionally, the NIC administers NIMS compliance requirements, facilitates the development of guidance standards for typing and credentialing, supports NIMS training and exercises, and manages the publication of various NIMS-related materials.

### 1. CONCEPTS AND PRINCIPLES

The process for managing and maintaining NIMS ensures that all users and stakeholders—including all levels of government, functional disciplines, NGOs, and the private sector—are given the opportunity to participate in NIC activities. The NIMS management and maintenance process relies heavily on lessons learned from actual incidents and incident management training and exercises, as well as recognized best practices across jurisdictions and functional disciplines.

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<sup>24</sup> Emergency management/response personnel include Federal, State, territorial, tribal, substate regional, and local governments, nongovernmental organizations, private-sector organizations, critical infrastructure owners and operators, and all other organizations and individuals who assume an emergency management role.

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### 2. NIMS REVISION PROCESS

The NIMS document will be reviewed on a 2-year cycle and revised to incorporate new Presidential directives, legislative changes, and procedural changes based on lessons learned from exercises, actual incidents, and planned events. Proposed changes to NIMS will be submitted to the NIC for consideration, approval, and publication.

The Secretary is responsible for publishing revisions and modifications to NIMS-related documents, including supplementary standards, procedures, and other materials, and will do so with regular consultation with other Federal departments and agencies and State and local governments.

### 3. NIC RESPONSIBILITIES

#### a. Administration and Compliance

To manage ongoing administration and implementation of NIMS, including specification of compliance measures, the NIC is responsible for working toward the following:

- Developing and maintaining a national program for NIMS education and awareness, including specific instruction on the purpose and content of this document and NIMS in general.
- Promoting compatibility between national-level standards for NIMS and those developed by other public, private, and professional groups.
- Facilitating the establishment and maintenance of a documentation and database system related to qualification, certification, and credentialing of emergency management/response personnel and organizations that includes reviewing and approving discipline-specific requirements (with input from Federal, State, tribal, local, private-sector, nongovernmental, and national professional organizations, as appropriate).
- Developing assessment criteria for the various components of NIMS, as well as compliance requirements and timelines for Federal, State, tribal, and local governments regarding NIMS standards and guidelines.
- Integrating into the national research and development (R&D) agenda—in coordination with the Department of Homeland Security (DHS) Under Secretary for Science and Technology—the NIMS-related science and technology needs of departments, agencies, disciplines, NGOs, and the private sector operating within NIMS.

#### b. Standards and Credentialing

The NIC will work with appropriate standards development organizations (SDOs) to ensure the adoption of common national standards and credentialing systems that are compatible and aligned with the implementation of NIMS. Identification, adoption, and development of common standards and credentialing programs include the following:

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- Facilitating the development and publication of national standards, guidelines, and protocols for the qualification, licensure, and certification of emergency management/response personnel, as appropriate.
- Reviewing and approving discipline-specific qualification and certification requirements (with input from Federal, State, tribal, local, nongovernmental, private-sector, and national professional organizations, as appropriate).
- Establishing a data maintenance system to provide incident managers with the detailed qualification, experience, and training information needed to credential personnel for prescribed national incident management positions.
- Coordinating minimum professional certification standards and facilitating the design and implementation of a nationwide credentialing system.
- Facilitating—with input from Federal, State, tribal, local, nongovernmental, private-sector, and national professional organizations—the establishment of standards for the performance, compatibility, and interoperability of incident management equipment and communications systems, including the following:
  - Facilitating the development and publication of national standards, guidelines, and protocols for equipment certification, including the incorporation of existing standards and certification programs used by incident management and emergency response organizations nationwide.
  - Reviewing and approving lists of equipment that meet these established equipment certification requirements.
  - Collaborating with organizations responsible for emergency-responder equipment evaluation and testing.
- Facilitating the development and issuance of national standards for resource typing.
- Facilitating the definition and maintenance of the information framework required for the development of NIMS information systems, including the development of data standards.
- Coordinating the establishment of technical and technology standards for NIMS users in concert with the DHS Under Secretary for Science and Technology and recognized SDOs.

**The NIC recommends that State and local governments voluntarily adopt the following National Fire Protection Association (NFPA) standards: NFPA 1600, “Standard on Disaster/Emergency Management and Business Continuity Programs,” and NFPA 1561, “Standard on Emergency Services Incident Management System.” These standards, if adopted by the jurisdiction, can assist in NIMS implementation. For information regarding the latest NIC-recommended standards, please visit the NIMS guidance section of the NIC Web site. Other standards may be issued periodically by the NIC and recommended for voluntary adoption.**

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### c. Training and Exercise Support

To lead the development of training and exercises that further appropriate agencies' and organizations' knowledge, adoption, and implementation of NIMS, the NIC will coordinate with them to do the following:

- Facilitate the definition of general training requirements and the development of national-level training standards and course curricula associated with NIMS, including the following:
  - The use of modeling and simulation capabilities for training and exercise programs.
  - Field-based training, specification of mission-essential tasks, requirements for specialized instruction and instructor training, and course completion documentation for all NIMS users.
  - The review and recommendation (in coordination with Federal, State, tribal, local, nongovernmental, private-sector, and national professional organizations) of discipline-specific NIMS training courses.
- Facilitate the development of national standards, guidelines, and protocols for incident management training and exercises, including consideration of existing exercise and training programs at all jurisdictional levels.
- Facilitate the development of training necessary to support the incorporation of NIMS across all jurisdictional levels.
- Establish and maintain a repository for reports and lessons learned from actual incidents, training, and exercises, as well as for best practices, model structures, and processes for NIMS-related functions.

### d. Publication Management

Publication management for NIMS includes the development of naming and numbering conventions, the review and certification of publications, development of methods for publications control, identification of sources and suppliers for publications and related services, management of publication distribution, and assurance of product accessibility.<sup>25</sup>

NIMS publication management includes the following types of products:

- Qualifications information.
- Training course and exercise information.
- Task books.
- Incident Command System training, forms, and templates (and other necessary forms).
- Job aids and guides.
- Computer programs.
- Audio and video resources.
- Best-practices manuals/models/recommendations.

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<sup>25</sup> 47 U.S.C. § 794, Rehabilitation Act of 1973.

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To manage NIMS-related publications, the NIC will coordinate with appropriate agencies and organizations and take the lead on the following:

- Facilitating the establishment and maintenance of a publication management system for NIMS-related publications and materials, including the development or coordination of general publications for all NIMS users.
- Issuing documents or information by means of the NIMS publication management system.
- Facilitating the development and publication of standardized templates and materials, such as supplementary documentation and desk guides, to support the implementation and continuous refinement of NIMS.
- Reviewing discipline-specific publication management requirements (with input from Federal, State, tribal, and local governments, as well as nongovernmental, private-sector, and national professional organizations).

## B. SUPPORTING TECHNOLOGIES

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Ongoing development of science and technology is integral to the continual improvement and refinement of NIMS. Strategic R&D ensures that this development takes place. NIMS also relies on scientifically based technical standards that support incident management. Maintaining a focus on appropriate science and technology solutions will necessitate a long-term collaborative effort among NIMS partners.

To ensure the effective development of incident-management science and technology solutions, the NIC must work in coordination with the DHS Under Secretary for Science and Technology to assess the needs of emergency management/response personnel and their affiliated organizations.

### 1. CONCEPTS AND PRINCIPLES

NIMS leverages science and technology to improve capabilities and lower costs. It observes the five key principles defined below.

#### a. Interoperability and Compatibility

Systems operating in an incident management environment must be able to interact smoothly across disciplines and jurisdictions. Interoperability and compatibility are achieved through the use of tools such as common communications and data standards, digital data formats, equipment standards, and design standards.

#### b. Technology Support

Technology support is the use and incorporation of new and existing technologies to improve efficiency and effectiveness in all aspects of incident management. Technology support permits organizations using NIMS to enhance all aspects of emergency management and incident response. Technology support facilitates incident operations and sustains the R&D programs that underpin the long-term investment in the Nation's future incident management capabilities.

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### c. Technology Standards

Supporting systems and technologies are based on requirements developed in collaboration with Federal, State, tribal, and local governments, as well as NGOs, the private sector, and national professional organizations. National standards may be required to facilitate the interoperability and compatibility of key systems across jurisdictions and/or disciplines.

### d. Broad-Based Requirements

Needs for new technologies, procedures, protocols, and standards to facilitate incident management are identified before, during, and after an incident. As these needs could exceed available resources, NIMS provides a mechanism for aggregating and prioritizing needs and resources. These needs will be met by coordinating testing and evaluation activities for basic, applied, developmental, and demonstration-based research.

### e. Strategic R&D Planning

Strategic R&D planning identifies future technologies that can improve or lower the cost of existing incident management capabilities. To ensure effective R&D, the NIC, in coordination with the DHS Under Secretary for Science and Technology, will integrate into the national R&D agenda the incident management science and technology needs of all emergency management/response personnel and their affiliated organizations.

## 2. SUPPORTING INCIDENT MANAGEMENT WITH SCIENCE AND TECHNOLOGY

Supporting technologies enhance incident management capabilities or lower costs through three principal activities, which are more fully defined below.

### a. Operational Scientific Support

Operational scientific support identifies and, on request, mobilizes scientific and technical resources that can be used to support incident management activities. Operational scientific support draws on the scientific and technological expertise of other agencies and organizations. Planning for this category of support is done at each level of government through NIMS preparedness organizations.<sup>26</sup> Operational scientific support is requested and provided through various programs coordinated by DHS and other organizations and agencies.

### b. Technical Standards Support

Technical standards support enables the development and coordination of technology standards for NIMS to ensure that personnel, organizations, communications and information systems, and other equipment coordinate and perform consistently, effectively, and reliably without disrupting one another. In coordination with the DHS Science and Technology Directorate, the NIC will coordinate the establishment of technical standards for NIMS users. The following principles will be used in defining these standards:

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<sup>26</sup> See page 13, Component I: Preparedness, Preparedness Organizations.

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### ***(1) Performance Measurement***

Performance measurement (the collection of “hard” data) is the most reliable basis for standards that ensure the safety and mission effectiveness of emergency responders and incident managers. Within the technology standards process, a performance measurement infrastructure develops guidelines, performance standards, testing protocols, personnel certification, reassessment, and training procedures to help incident management organizations use equipment systems effectively.

### ***(2) Consensus-Based Performance***

A consensus-based approach to developing and modifying standards takes advantage of existing SDOs with longstanding interest and expertise in incident management. These SDOs include the National Institute of Justice, National Institute for Standards and Technology, National Institute for Occupational Safety and Health, American National Standards Institute, ASTM International, and NFPA. NIMS, through the NIC, enables working relationships among these SDOs and incident management organizations to develop performance standards for incident management technology.

### ***(3) Testing and Evaluation***

NIMS technology criteria will rely on private- and public-sector testing laboratories to evaluate equipment against NIMS technical standards. These organizations will be selected in accordance with guidelines that ensure that testing organizations are both technically proficient and objective (free from conflicting interests) in their testing. The NIC will issue appropriate guidelines as part of its standards development and facilitation responsibilities.

### ***(4) Technical Guidelines for Training Emergency Responders on Equipment Use***

Inputs from vulnerability analysts, equipment developers, users, and standards experts are employed to develop scientifically based technical guidelines for training emergency management/response personnel on proper use of equipment. Based on incident management protocols, instruments, and instrument systems, these training guidelines reflect threat and vulnerability information, equipment and systems capabilities, and a range of expected operating conditions. In addition, performance measures and testing protocols developed from these training guidelines provide a repeatable method of measuring the effectiveness of equipment and systems.

## **c. R&D Support**

R&D planning will be based on the operational needs of the entire range of NIMS users. These needs represent key inputs as the Nation formulates its R&D agenda for developing new and improved incident management capabilities. Since operational needs may exceed the resources available for research to address them, these needs must be validated, integrated, and prioritized. DHS is responsible for integrating user needs at all levels into the national R&D agenda.