

# DHS Science and Technology Directorate

## Homeland Security Systems Engineering and Development Institute (HSSEDI) Factsheet

### HSSEDI's PURPOSE

Provide specialized independent and objective technical and systems engineering expertise to Department components, program managers and operating elements in addressing national homeland security system development issues related to development and delivery of novel Department capabilities.

### BACKGROUND AND HISTORY

The Homeland Security Act of 2002 authorized the DHS Secretary, acting through the Under Secretary for Science and Technology, to establish one or more federally funded research and development centers to provide independent analysis of homeland security issues, or to carry out other responsibilities under the Act. In 2009, the MITRE Corporation was selected to operate the Homeland Security Systems Engineering and Development Institute (HSSEDI) FFRDC. DHS established the HSSEDI FFRDC to serve as its primary systems engineering resource and to meet DHS-wide demand for rapid access to deep technical expertise.

### UNIQUE PURPOSE & OPERATION

The purpose of HSSEDI is to provide specialized independent and objective technical and systems engineering expertise to Department components, program managers and operating elements in addressing national homeland security system development issues in order to promote fair and open competition for the development and delivery of Department capabilities in focus areas including:

- Acquisition Planning and Development
- Concept Exploration, Experimentation and Evaluation
- Information Technology, Communications and Cyber Security
- System Architecture and Integration
- Quality and Performance
- Independent Test and Evaluation

HSSEDI generally works on only the most complex homeland security issues and systems and assist the Department in evolving towards an integrated "one DHS" system-of-systems

approach through various enterprise modernization efforts and process efficiencies. Through its long term relationship with the Department, HSSEDI promotes compatibilities across the various homeland security platforms and equipment to reduce our Nation's risk to terrorism and catastrophic incidents.

HSSEDI program objectives are generally achieved through the recommendation of new technologies; development of prototypes and proof-of-concept demonstrations; review of systems design optimization and trade-space considerations; development of integrating architectures and frameworks; application of enterprise systems engineering principles for improved interoperability and information sharing; establishment of technical standards, measures and best practices; and, development of realistic test environments and scenarios.



### HSSEDI CORE RESEARCH PROGRAM

The FFRDC PMO awards a percentage of all sponsored task order funding towards establishment and execution of a Core Research Program (CRP). The overall objective of the CRP is to enhance the effectiveness of the entire DHS enterprise by leveraging the work performed for individual components for the benefit of the Department; conducting forward-looking R&D and experimentation to enable DHS agility in preventing and responding to future threats; providing critical quick-response research and analysis; developing strategic program concept evolution capabilities; and tracking and documenting lessons learned and best practices.

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