

# SUMMARY

This report provides the results of a technical maturity assessment (TMA) of the lightweight Epidemiology Advanced Detection and Emergency Response System (LEADERS). Conducted in two parts, from 29 October through 9 November 2001 and 15-16 November 2001. The assessment venues included various locations in northern Virginia and one location in San Antonio, Texas.

The goal was to demonstrate the technical maturity of LEADERS when deployed and operated by designated users and subject matter experts (SME) in a simulated operational environment. The assessment objectives were to identify and document critical operational and technical system issues, and to make a determination regarding the feasibility and utility of follow-up spiral development of the system.

LEADERS is web-based, centrally hosted, and modular. It provides a Comprehensive set of integrated software tools and data storage capabilities to support the collection, storage, analysis, and distribution of critical medical data and emergency response information. LEADERS is designed to enable rapid, effective, and coordinated responses to natural disease outbreaks and covert biological attacks. The system includes a complete set of command and control (C<sub>2</sub>) tools and functions in both Event-based and continuous surveillance modes.

The main components of the system are the Medical Surveillance (MedSurv), the Incident Management (IM), and the System Administrator (SA) modules. Additional modules or components include the Ruggedized Advanced Pathogen Identification Device (RAPID) and the Critical Care Tracking (CCT) module. LEADERS uses a hosted Application Service Provider (ASP) and is designed to provide 24-hour per day, seven day per week web-based medical surveillance capability. This allows participating organizations to exchange critical incident and pertinent medical information using browser-based technology.

Four salient areas of interest were identified for technical review and evaluation during the TMA. These were the training protocol, the IM module, the CCT module, and the MedSurv module. Interoperability issues, although considered important, were left to follow-up development and assessment during a subsequent military utility assessment (MUA) and were not directly assessed during the TMA. Some interoperability Issues were, nevertheless, identified during the TMA process.

Det 1 AFOTEC conducted the TMA. An assessment plan was developed That included critical operational issues (COI), measures of effectiveness (MOE), and measures of performance (MOP). These measures were developed in conjunction with representatives of HQ USAF/SGXY, the United States Air Force Surgeon General's Office for Infection Control (USAF/SGT), Air Force Medical Evaluation Support Activity (AFMESA), and Det 1 AFOTEC.

- Subjective data were collected for all system modules, to include training, via SME and operator/user surveys, questionnaires, and direct interviews that were conducted by the assessors.
- On-site observations by assigned assessor personnel provide dedicational feedback regarding technical maturity and utility.
- Recommendations were obtained from SMEs and users/operators regarding the maturity and utility of the modules tested.