



The Joint USFK Product Integrated Threat Reduction (JUPITR) Advanced Technology Demonstration (ATD) is comprised of four “legs” (core capabilities). The **Early Warning Leg** will provide the user with a system designed to warn military leadership, currently residing on the Korean Peninsula, of an impending chemical and/or biological attack. When an “early warning” is determined to be a real threat, **Advanced Environmental Detectors** positioned around the peninsula would be “triggered” to sample and provide presumptive identification. Once the sample is collected it would be transferred to a **Biological Identification Capabilities Set** laboratory for theater validation. The results would be reported to the appropriate personnel and uploaded to the **Biosurveillance Portal**. Commanders will access the portal and gather a multitude of information in order to make informed tactical decisions within their area of responsibility.

Early Warning (EW)

The primary objective of the EW “leg” is to demonstrate the value of fusion, automation, and integration to enhance the Joint CBRN Hazard Awareness and Understanding (HAU) capability at the Installation level in a simulated increased security environment. In theater, EW will demonstrate the value of automating integrated Force Protection and CB sensors while fusing the resulting data which could enhance the Joint CBRN HAU capability. This design would be designated for fixed site installations within the all hazards incident management construct in concert with the Integrated Unit, Base, and Installation Protection capabilities-based analysis tenets. The product will enhance situational awareness and provide local commanders a reduced troop-to-task situation leading to a more effective response. The successful outcome of the EW leg will be used to inform a Program of Record to create an effective operational solution.

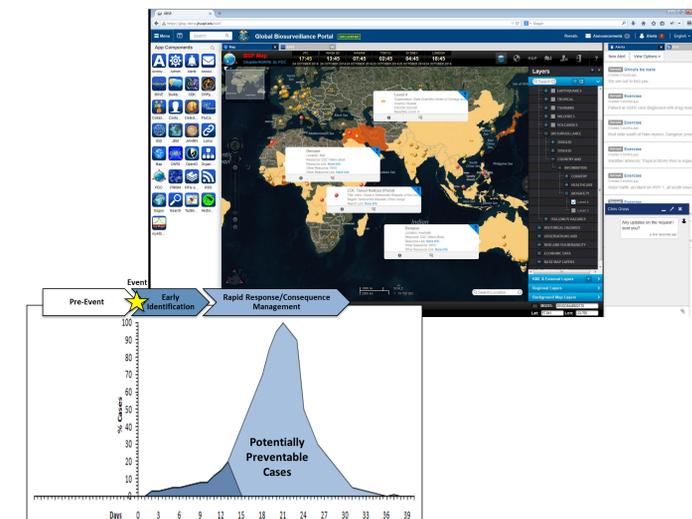


Advanced Environmental Detectors (AED)

The primary objective of the AED “leg” is to provide sensor technologies and determine maximum capability at the lowest cost while meeting and exceeding biosurveillance needs to Republic of Korea and Maritime facilities. Before deploying to theater, local research scientists will perform agent challenges in the Ambient Breeze Tunnel to determine baseline performance for each technology. Reliability and user feedback data will be collected and the services will select the best solution in the Korean Theater. For the Operational Demonstration, these technologies will be positioned either at Osan Air Base or at a predetermined location at Camp Humphreys.

Biological Identification Capabilities Set (BICS)

BICS will be providing and demonstrating an array of advanced technologies for USFK and ROK personnel in order to provide alternatives for agent identification. The end user will be introduced to a multitude of PCR, antibody, and mass spectroscopy commercially based systems as well as being educated on forward based solutions such as smartphone detection, iPad, sequencing, and bioinformatic approaches. These technologies will be able to identify pathogens of operational concern with the intention of meeting and/or lowering levels of agent detection set forth by current fielded technologies in theater. Deployed ECBC Scientists are tasked to provide the operational and scientific expertise necessary to increase military utility for USFK and ROK laboratory personnel.



Biosurveillance Portal (BSP)

The BSP is an unclassified web-based enterprise environment that will facilitate collaboration, communication, and information sharing in support of the detection, management, and mitigation of man-made and naturally occurring biological events. It provides a set of tools and capabilities to facilitate timely identification and detection of biological events to minimize operational impacts to US Forces. The BSP provides an integrated suite of web-based components targeted for public health officers, clinicians, laboratory technicians, hospital personnel, force readiness personnel, and commanding officers. It does not duplicate existing DoD capabilities, but rather leverages existing tools, models, and technologies to provide users across multiple organizations and disciplines with a centralized “one-stop shop” for all of their biosurveillance resources.