

BICS: Biological Identification Capabilities Sets

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Background

- The Joint Emergent Operational Needs Statement (JEONS) required : **Theater Validation** analysis of 50-100 samples within 24 hrs
- BICS identifies bio toxins and pathogens of operational concern
- JEONS recommended common materiel solutions with: **NGDS, CALS, and Defense Lab Network**
- JEONS identified 3 locations:
 - **Yongsan Garrison**
 - **Osan Air Base**
 - **Kunsan Air Base**



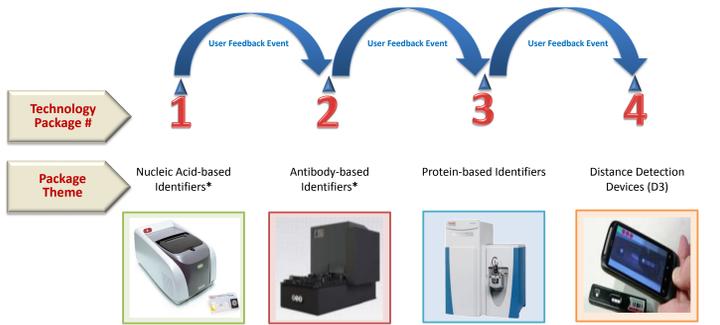
BICS Transition Partners



Market Surveys



BICS Strategy



- Biosurveillance technology introduced to USFK in "packages"
- SME-led user feedback event (UFE) held in parallel with package deliveries to help evaluate technologies
- Services develop new or augment existing TTPs based on UFE outcomes with the goal of an interim residual capability (packages 1 and 2 only)

BICS Technologies

Type	Instrument	Technology	BICS Use	Description	Anticipated User
Nucleic Acid-Based	BioFire Defense FilmArray	Polymerase Chain Reaction (PCR)	• Bacteria • Virus	<ul style="list-style-type: none"> • NGDS down-selected instrument to replace JBAIDS (pending a protest) • BICS will use BioFire's COTS 17-plex biothreat assay pouch • Analyzes <u>1 sample</u> per run 	<ul style="list-style-type: none"> • USAF • USAPHC
	Meso Scale Defense (MSD) PR2-1800	Electrochem-iluminescence (ECL)	• Bacteria • Virus • Toxins	<ul style="list-style-type: none"> • ALS fielded instrument to NGB to replace M1M for toxins analysis • MSD currently supplying ricin, SEB, and bot. plates that use both CRP and commercial antibodies • Analyzes up to <u>96 samples</u> per run 	<ul style="list-style-type: none"> • USAF • USAPHC
Antibody-Based	Luminex MAGPIX	xMAP	• Bacteria • Virus • Toxins	<ul style="list-style-type: none"> • Instrument part of GBTI equipment suite • ECBC developing assays for both BICS and GBTI • Analyzes up to <u>96 samples</u> per run 	<ul style="list-style-type: none"> • USAPHC
Protein-Based	Thermo Q Exactive LC-MS/MS	Quadrupole-Orbitrap Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS)	• Toxins	<ul style="list-style-type: none"> • Instrument uses ECBC's ABOid protein-matching software to identify targets • BICS to use for toxins only • Analyzes <u>1 sample</u> per run 	<ul style="list-style-type: none"> • USAPHC

