



# Lockheed Martin - AbleSentry

## GENERAL DESCRIPTION:

AbleSentry® is a flexible, functional, integrated system designed to provide tactical early warning of a possible attack with chemical, biological, or radiological agents. Fusing data from multiple sensor nodes over a wide area, AbleSentry® provides the capability to detect invisible threat clouds in sufficient time to permit units to take protective action and thus significantly mitigate potential effects. By utilizing a true network of integrated sensor nodes, AbleSentry® provides high detection probability with low false alarm rates while utilizing straight-forward, easy-to-maintain technologies.



## TECHNICAL DESCRIPTION:

Chemical: IMS  
 Biological: Particle count, sizing, and fluorescence  
 Radiological: Gamma and Neutron

## CONTACT INFORMATION

Lockheed Martin, Mission Systems & Sensors (MS2)  
 300 M Street  
 Washington, DC 20003  
 POC: Rick Read  
 703-367-1546  
 richard.read@lmco.com  
 www.lockheedmartin.com

## COST

- \$750,000/system
- N/A/analysis

## Tier Selection

Final tier assignment is based on overall product score.

- Top Tier
- Second Tier
- Third Tier
- ◐ Fourth Tier
- Bottom Tier

### RANKINGS

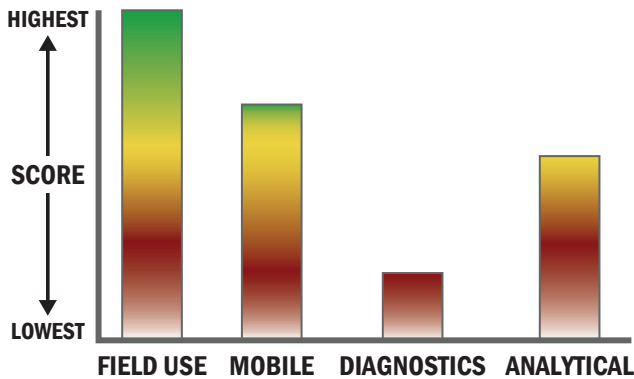
	Biological	Chemical	Radiological
<b>FIELD USE System</b>			
<b>MOBILE Laboratory</b>			
<b>DIAGNOSTIC Laboratory</b>			
<b>ANALYTICAL Laboratory</b>			

## Survey Source

Vendor and Internet Supplied Information

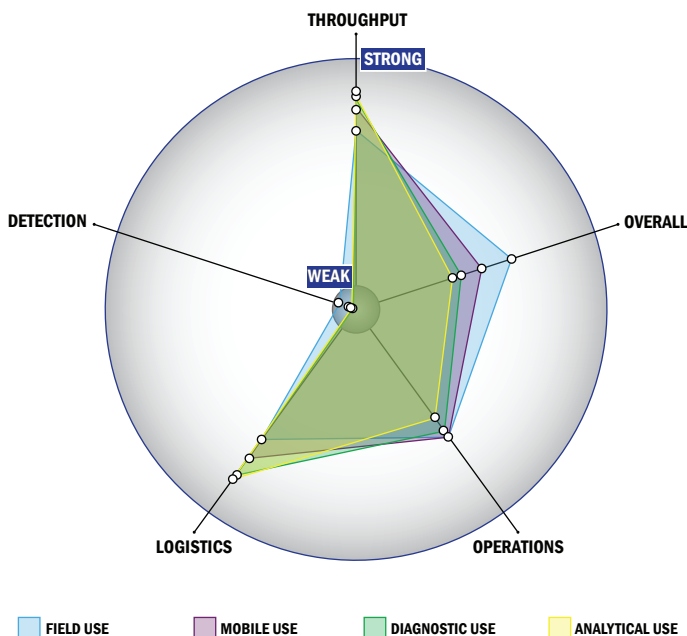
## Scoring Analysis

System scores are compared across the four scenarios and ranked from highest to lowest.



## Impact Chart

The Impact Chart is a spider graph representing specific categories and designed to give the reader a visual depiction of how a particular system is expected to operate across the four different scenarios. The score for each of the seven categories is presented as the percentage of the total possible score. Higher category scores extend the spokes of a graphic toward the outer edge of the chart. The area graphed for each of the four scenarios relates to how well the system performed in that scenario. Graphics for each of the four scenarios are super-imposed for ease of comparison.



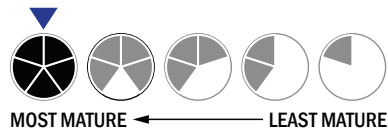
## Evaluation Criteria

### Throughput:

- 2 minutes or less for detection
- Multiple samples, multiple tests/sample per run
- System is continuous and provides real time analysis with no defined tests/samples
- The system or device is currently semi-automated
- Device or system is intended for multiple detection assays
- 0-1 solutions, buffer, eluents, and/or reagents
- Less than 5 minutes is required for set-up
- 3-5 steps are required for detection

### Logistics:

- Very brief (minutes-hours) training and minimal technical skills
- Approximately the size of a carry-on luggage suitcase
- Between 5 and 25 kg
- Satellite, wireless and wired connections are available
- System or device has 110V electrical requirement
- Is commercially available and meets military specifications



### Operations:

- Can be used from -21 °C to 41 °C
- This system does not require consumable components
- Device or system has peak performance at normal relative humidity conditions
- Greater than 10 years expected life
- Results can be viewed in real-time
- The system or device is currently fully autonomous
- The system software is closed and not available for modification
- The system hardware is open and available for modification

### Detection:

- Superior specificity. System has a false alarm rate approaching zero (~0%)
- System does not detect spores
- System currently can detect aerosolized chemical agent
- Not possible for the system to detect liquid chemical agent
- Manual kit not integrated with the system handles spore lysis

