

Building Protection Systems, Inc. (BPSI) - METRO SENTRY ONE



GENERAL DESCRIPTION:

The Metro Sentry One (MSO) is a mechanical system installed to monitor areas of terrorist concerns such as an underground Metro Transit Authority station environment. The MSO monitors both directly and remotely, airborne toxins in the fresh air supply, points of ingress and egress and the ambient platform environment. If a toxin is detected, the MSO enacts a sequence of predetermined alerts and mechanical protocols to isolate toxins thus preventing continued distribution to prevent loss of life, preserve assets, and to provide an early warning system for first responders in the event of a targeted terrorist attack using chemical, radiological or biological materials or an accidental release. The MSO is installed as an all-in-one full backbone system and can integrate directly into an existing security command platform or into BPSI's extensive fusion platform. The MSO detects a defined spectrum of chemical contaminants, a wide library of radiological isotopes and select biological agents with sensitivity levels customized for each specific toxin. The MSO has been designed in modular fashion to support continued advances in chemical, radiological and biological sensory technology, with a "Plug and Play" overlay into the Sentry One network. No known similar systems exist. The Metro Sentry One is a fully functioning "Next Generation" detection backbone system that integrates sensory technology into a market ready transit retrofit project. With embedded controls, logic, software, mechanical protocols and remote monitoring coupled with multiple security means, this system is designed to operate 24/7/365 in the absence of false positive readings.



TECHNICAL DESCRIPTION:

BPSI's Metro Sentry One (MSO) is a COTS based system that detects a defined spectrum of toxic compounds, a 120+ library of radiological isotopes and select biological agents in a transit environment on a continuous 24/7/365 basis with virtually zero false positive alarms. Through the integration of programmable logic controllers and sensor arrays, linked to a PC infrastructure with multi-layer communications protocols, the Metro Sentry One solution offers a dynamic set of customized security measures. The MSO's backbone architecture mesh simply and easily with existing systems, in a seamless process that gives the end user virtually unlimited options for protection.

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
FIELD USE System	●		
MOBILE Laboratory			●
DIAGNOSTIC Laboratory			●
ANALYTICAL Laboratory			●

CONTACT INFORMATION

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COST

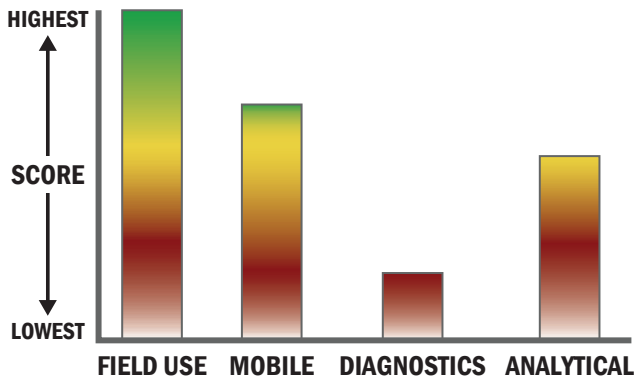
- N/A/system
- \$0/analysis

Survey Source

Vendor Supplied Information

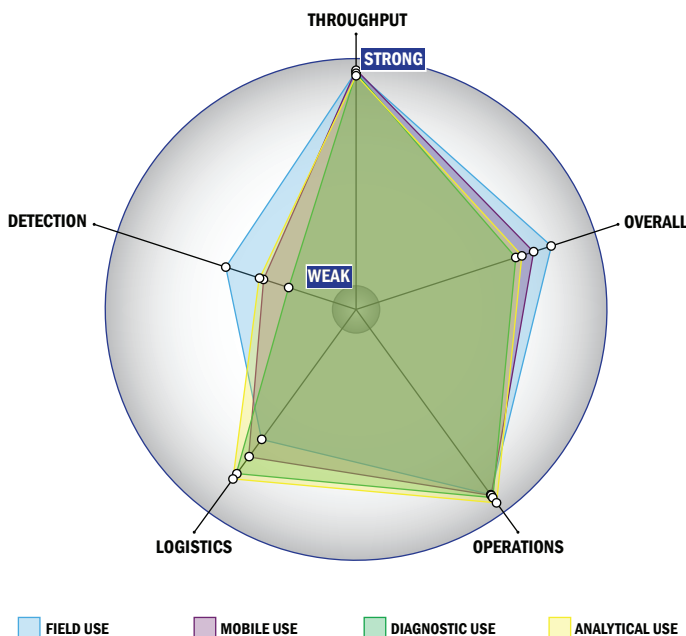
Scoring Analysis

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.



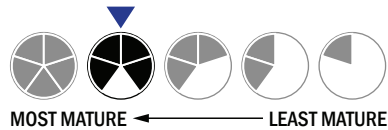
Evaluation Criteria

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 every 2 hours
- The system or device is currently fully automated
- Device or system is intended for multiple detection assays
- 0-1 solutions, buffer, eluents, and/or reagents
- 1 component
- No set-up of the system is required
- 1-2 steps are required for detection

Logistics:

- Very brief (minutes-hours) training and minimal technical skills
- Approximately the size of a toaster
- Between 1 and 5 kg
- Wired connections are available
- System or device has 110V electrical requirement



Operations:

- Can be used from 4 °C to 41 °C
- Performance is not influenced by relative humidity
- Greater than 3 years shelf life
- 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 open and available for modification
- The system hardware is open and available for modification

Detection:

- This system does not test liquids
- Superior specificity. System has a false alarm rate approaching zero (~0%)
- Add on capability that is full or semi-automated for spore lysis
- 1×10^{-6} - 3×10^{-5} mg/m³
- System currently can identify aerosolized chemical agent
- Total dose, dose rate and count rate with simultaneous display readout
- Down to background level radiation for dose rate
- Down to background level radiation for count rate
- System is used for area air sampling

