# Research International, Inc. - ASAP V

## GENERAL DESCRIPTION:

The ASAP V Multi-Threat Infrastructure Monitoring System is a flexible counter-terrorism tool that can be used in a variety of locations. It allows users to select which threats are monitored for, and to implement only those features currently needed.. Current ASAP V capabilities include: biodetection, bio-identification, chemical and explosives detection, radiation detection/identification and visual detection (visible or thermal IR imaging).

Each separate threat detection device is coupled to the monitored space and to a host industrial computer built into the ASAP V. The outputs from all detectors are merged into one monitoring program. This allows implementation of sophisticated situation responses that are based on all the detector outputs. The dedicated computer makes possible the implementation of a wide range of digital communication links with external monitoring sites.

## TECHNICAL DESCRIPTION:

Airborne samples are collected using a built-in air handler that incorporates a computer-controlled centrifugal blower. Individual detectors take air from this primary sampling stream. The ASAP V currently uses an OEM version of Environic's ChemProFX for detecting chemical agents. The ASAP V uses Research International's TacBio™ biological aerosol detector to monitor changes in bio-aerosol levels. Aerosol samples are collected for later analysis using RI's SASS 4100 two-stage high volume aerosol sampler. Identification of biological threats may be done using Alexeter Technologies bioassay strips or alternatively, identification may be performed on-line using either RI's RAPTOR or BioHawk automated bio-identifiers. RI has formed a strategic partnership with the Scientific Production Center ASPECT to provide radiation detection equipment. This equipment is usually in the form of a portal monitor that detects radioactive materials being transported by individuals.

## 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 | Fourth Tier | Bottom Tier | Bottom Tier |
| **MOBILE** Laboratory | Second Tier | Third Tier | Fourth Tier |
| **DIAGNOSTIC** Laboratory | Third Tier | Second Tier | Third Tier |
| **ANALYTICAL** Laboratory | Second Tier | Third Tier | Third Tier |

## CONTACT INFORMATION

Research International, Inc.
17161 Beaton Road SE
Monroe, WA 98272
POC: Jonathon Toblemann
703-625-8381

## COST

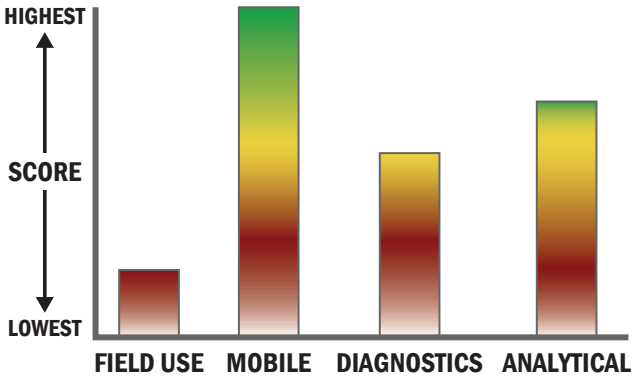
- $100,000-$250,000/system
- $25/analysis

## Survey Source

Vendor Supplied Information

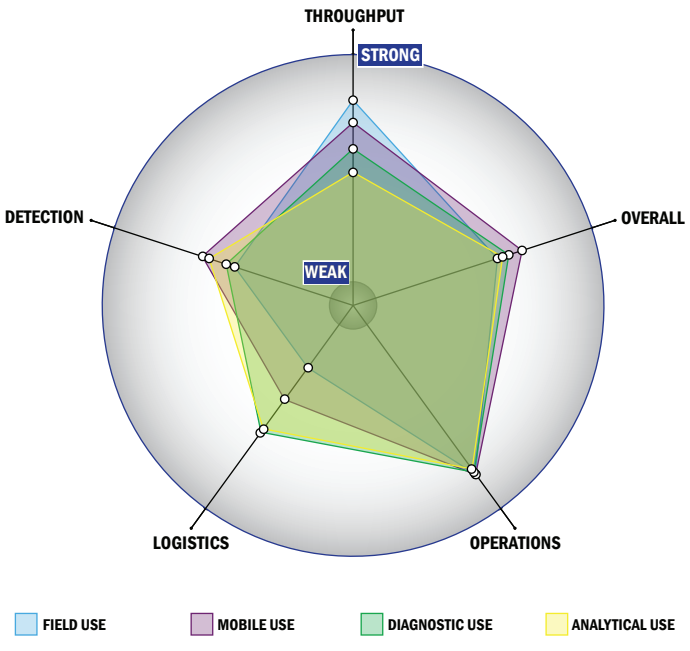
## Scoring Analysis

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.



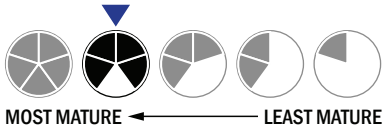

## Evaluation Criteria

### Throughput:

- Between 15 and 30 minutes for detection
- 1 sample, <10 tests/sample per run
- Less than 32 samples every 2 hours
- The system or device is currently fully automated
- Device or system is intended for multiple detection assays
- 2 solutions, buffer, eluents, and/or reagents
- 1 component
- No set-up of the system is required
- 1-2 steps are required for detection

### Logistics:

- An afternoon of training and some technical skills required
- Larger than a home dishwasher
- More than 50 kg
- Wireless and wired connections are available
- System or device has 220V electrical requirement




### Operations:

- Can be used from -21°C to 41°C
- Components must be stored at room temperature (27°C)
- Performance is not influenced by relative humidity
- Between 6 months and 1 year shelf life
- 5-10 years expected life
- Results cannot 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 closed and not available for modification

### Detection:

- Possible the system could receive 510K clearance, no current efforts at this time
- Less than 250 µL
- Excellent specificity. System has occasional false alarms under certain conditions (<2%)
- 10,000-100,000 CFU per mL
- Greater than 100,000 PFU per mL
- 1-10 ng per mL
- > $1x10^{-3}$ mg/$m^3$
- > 1 ppt
- Only count rate
- Display indicates 0 until more than 1 mR/hr is detected for count rate
- System is used for area air sampling