# Disaster Response Trade Study Tool

## Report Details

**Date Report Generated:** Saturday, July 23, 2016 5:26:42 PM EDT  
**Country Report Generated:** United States

## Best Architecture

|  |  |  |
| --- | --- | --- |
| Technology | Type | Description of Selected Technology |
| Heavy UAV | Platform | Cost Rank: 2 [1 < 5]  Range: 2800.0 kilometers  Ops Duration: 24.0 hours  Payload: 160.0 kg |
| LTE Cellular | Communications | Cost Rank: 1 [1 < 5]  Range: 8.0 km  Data Rate: 300.0 Mbps  Weight: 1.0 kg |
| SWIR | Sensors | Cost Rank: 2 [1 < 5]  Swath Size: 0.8 km  Ground Sample Distance: 0.4 m  Weight: 40.0 kg |

## Selected Disaster Effects

|  |  |
| --- | --- |
| Disaster Effect | Selected |
| Flood |  |
| Debris |  |
| Smoke/Dust (airborne) |  |
| Ground Instability |  |
| Land Slide |  |
| Mud Slide |  |
| Structural Damage |  |
| High Wind (near term) |  |
| Hazardous Material Spill |  |
| Radiological Spill |  |
| Lava |  |
| Ash | ✓ |
| Fire |  |
| Infrastructure Breakdown |  |

## Environment Definition

|  |  |  |
| --- | --- | --- |
| Terrain Effect | Value Selected | Description of selected value |
| Elevation | 0 | No Factor |
| Roads | 0 | No Factor |
| Bridges | 0 | No Factor |
| Foliage | 0 | No Factor |
| Wetness | 0 | No Factor |
| Streams | 0 | No Factor |
| Beach | 0 | No Factor |
| Water Ways | 0 | No Factor |
| Urbanization | 0 | No Factor |
| Range | 0 | No Factor |
| Population | 0 | No Factor |
| Persistence | 0 | No Factor |
| Trafficability | 0 | No Factor |
| Slope | 0 | No Factor |

## Defined Weighting Criteria

### Platforms

|  |  |
| --- | --- |
| Platform Attributes | Weighting |
| Cost Rank ([1 < 5]) | 25% |
| Range (kilometers) | 25% |
| Ops Duration (hours) | 25% |
| Payload (kg) | 25% |

### Communications

|  |  |
| --- | --- |
| Communications Attributes | Weighting |
| Cost Rank ([1 < 5]) | 25% |
| Range (km) | 25% |
| Data Rate (Mbps) | 25% |
| Weight (kg) | 25% |

### Sensor

|  |  |
| --- | --- |
| Sensor Attributes | Weighting |
| Cost Rank ([1 < 5]) | 25% |
| Swath Size (km) | 25% |
| Ground Sample Distance (m) | 25% |
| Weight (kg) | 25% |