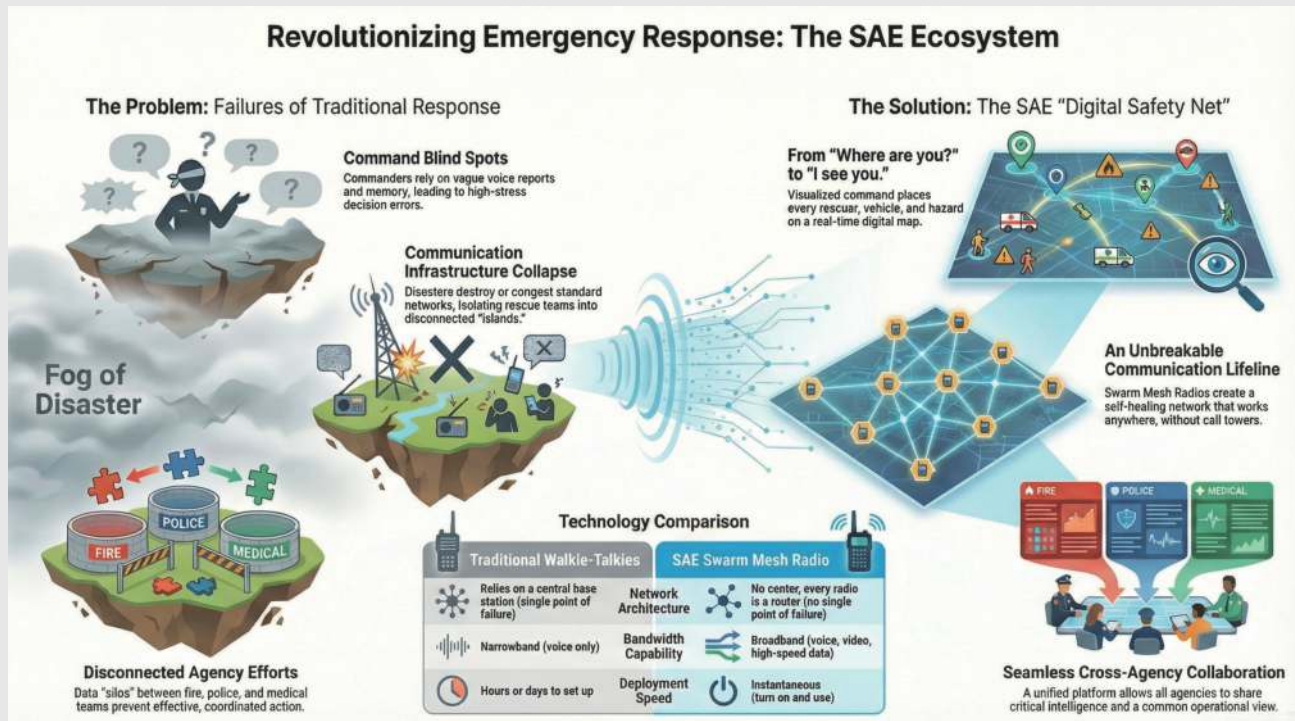


SAE – Situational Awareness & Edge Command System



**SEE EVERYTHING. DECIDE FASTER.
EVEN WHEN EVERYTHING IS CUT OFF.**

- Operates in No Power / No Network / No Command environments
- Real-time situational awareness & distributed decision support
- Designed for extreme terrain, extreme heat & high-risk zones

**SAE is situational awareness + edge command,
built for disconnected operations.**



Product Definition

SAE is a full-domain situational awareness and edge command system—designed to maintain perception, coordination and decision-making in disconnected, degraded and extreme environments.

SAE enables teams to see, decide and act locally, even when higher-level command and infrastructure are unavailable.

Core Capabilities

- Multi-hop Mesh Networking
- Edge Intelligence & Distributed Decision Support
- Real-time Positioning & Asset Status Awareness
- AI-assisted Path Planning & Task Coordination
- Unified Situational Visualization

System Architecture

- Terminal Layer Wearable, vehicle-mounted and unmanned nodes
- Network Layer Ad-hoc mesh with radio / satellite / 5G fusion
- Decision Layer Edge computing with local autonomous operation

Designed to function independently at the edge while remaining interoperable with higher-level systems.

Typical Applications

- Wildland Firefighting
- High-Temperature Industrial Emergencies
- Energy, Mining & Remote Operations
- UXO / No-Go Zones
- Disaster Response & Civil Defence

SAE can be deployed as

- A standalone situational awareness system
- An edge command module integrated with vehicles
- A distributed backbone for manned & unmanned assets

SAE reaches its full capability when deployed on high-mobility all-terrain platforms.

SAE + Articulated Tracked Platform

A Complete Solution for Human-Inaccessible Scenarios



Solution Definition

This solution integrates the SAE Situational Awareness & Intelligence Distribution System with an articulated all-terrain tracked platform, forming a mobile, unmanned-capable tactical emergency response system.

It is purpose-built for extreme environments and no-entry scenarios, where conventional vehicles and human crews cannot safely or continuously operate.

Operational Scenarios

- **Southeast Asia**
Peat fires & roadless terrain
Amphibious penetration & underground smoldering detection
- **Middle East**
50 °C+ extreme heat & petrochemical zones
Unmanned operation & human-machine separation
- **Europe**
UXO & restricted no-go zones
Proactive unmanned firefighting without human exposure

When humans cannot enter, the system still advances.

我们的解决方案：针对特定市场的战术重构

Our Solution: Tactical Reconstruction for Specific Markets

中东：耐高温无人化智能扑救系统

Middle East: High-Temp Unmanned Intelligent Firefighting System

核心场景：50°C高温下的石化设施火灾或沙漠边缘林火
Core Scenario: 50°C+ High Temp Petrochemical Fire or Desert Edge Wildfire

载具平台：BN117-X1 涡扇炮车（无人遥控版）
Vehicle Platform: BN117-X1 Turbofan Cannon Vehicle (Unmanned)

集成SAE无人系统控制模块，超视距遥控
Integrated SAE unmanned control module, Beyond Visual Line of Sight (BVLOS) remote control

涡扇细水雾技术，高效降温灭火，节水
Turbofan fine water mist technology, efficient cooling & extinguishing, water-saving

数字孪生与人机分离

Digital Twin & Human-Machine Separation

SAE态势分发遥控器
SAE Situation Distribution Remote Controller

指挥平板终端
Command Tablet (产品介绍.pdf)

接入NEOM智慧城市数字孪生平台
Integrated with NEOM Smart City Digital Twin Platform

感知与控制：操作员在空调指挥车内，通过VR/AR远程操控，接入智慧城市数据
Perception & Control: Operator in AC command vehicle, remote control via VR/AR, integrated with smart city data

生命体征监测

Vital Signs Monitoring

少量进入人员佩戴SAE腕式终端，实时监测，热衰竭自动报警并规划撤离
Few entering personnel wear SAE wrist terminals, real-time monitoring, automatic heat exhaustion alarm and evacuation route planning

SAE腕式终端
SAE Wrist-Worn Terminal (产品介绍.pdf)

比较优势 / Comparative Advantage

维度 Dimension	同类竞品 Competitor	SAE + 巨斯方案 SAE + Megavarun Solution
人员安全 Personnel Safety	侧重于知道人员“在哪里”，但人员仍暴露在高温一线 Focuses on knowing "where" personnel are, but they are still exposed to high heat	物理隔离，通过无人化操作让人员彻底远离致命高温和爆炸风险 Physical isolation, unmanned operation keeps personnel completely away from deadly heat and explosion risks
灭火效能 Firefighting Efficiency	传统水炮耗水量大，补给困难 Traditional water cannons use lots of water, difficult to resupply	涡扇细水雾技术，降温快、耗水少，战术效能倍增 Turbofan fine water mist, fast cooling, low water usage, tactical efficiency multiplied
智能融合 Intelligent Fusion	需要手动标记地图 Requires manual map marking	与智慧城市数据深度API集成，自动生成战术建议 Deep API integration with smart city data, automatically generates tactical suggestions

Why an Articulated Tracked Platform

- Ultra-low ground pressure for swamp, peat, snow, and soft soil
- Amphibious capability for flood and wetland operations
- Superior obstacle-crossing and terrain adaptability
- High payload capacity for mission-specific equipment
- Modular mission payload architecture

Why SAE Integration

- Maintains command and coordination in disconnected environments
- Enables remote, unmanned, and human-machine-separated operations
- Provides real-time, multi-source tactical visualization
- Supports AI-assisted situational awareness and decision-making
- Forms a closed operational loop from perception → decision → action

System-Level Advantage

Mobility, perception, and decision-making delivered as one unified system.

Unlike standalone vehicles or isolated command platforms, this solution ensures that mobility assets, sensors, and command nodes operate as a single coherent operational entity.