

Advanced Lone Worker Protection in Hazardous Industrial Environments: VerticalMan by Aldea on i.safe MOBILE Devices

Introduction

Workers who carry out maintenance, inspection, or transport tasks alone in explosive atmospheres face a risk that many companies still struggle to manage: if an incident happens and no colleague is nearby, every minute without help increases the danger.

VerticalMan by Aldea, running on i.safe MOBILE's intrinsically safe and certified smartphones, closes this gap. The Android app detects incidents automatically, alerts the right people through several channels, and pinpoints the worker's exact location, indoors and outdoors, so rescue teams can reach them faster.

i.safe MOBILE | ALDEA

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The Integrated Solution

Automated Incident Detection

- Recognises loss of verticality, prolonged immobility, and vehicle accidents automatically
- Manual alarm via a dedicated red SOS button on the device
- Local pre-alarm gives the worker a chance to cancel a false alert before a remote alarm is sent
- Automatic alerts flag any faulty configuration, so the system is always ready for an emergency

Multi-Channel Alerts and Precise Location

- Alarms are sent via SMS, e-mail, phone call, Wi-Fi, or mobile data, and integrate with SMS gateways, VoIP, and PTT clients
- Every alarm includes the worker's location via GPS, A-GPS, BLE beacons, or Wi-Fi
- Indoor positioning identifies the exact floor, guiding rescuers along the fastest route in multi-storey buildings
- Acknowledgement tracking and event logging document the full sequence of an incident for later review



VerticalMan alarm screen with live geolocation

Flexible Configuration and Deployment

- More than 150 configurable parameters adapt the app to almost any operational requirement
- Settings are stored in the cloud, so new devices can be rolled out quickly with a consistent configuration
- Optional external Bluetooth accelerometer for extra comfort during physically demanding tasks
- Runs on Android 5.1 to 16; tested on i.safe MOBILE's IS530.x, IS540.x and IS880.x

Industry Applications and Use Cases

Oil & Gas and Chemicals

Maintenance and inspection staff often work alone in remote plant sections or ATEX zones. VerticalMan continuously monitors for falls, immobility, or exposure to toxic gases* and low oxygen levels*, and raises an alarm automatically if something goes wrong

Pharmaceuticals

Technicians and quality assurance staff performing solitary tasks in cleanrooms and production areas benefit from the same monitoring, without disrupting the controlled environment they work in.

Power Generation

Power plants often combine underground passages with multi-storey buildings, where each floor requires a different route to reach a worker in an emergency. Precise indoor positioning down to the floor level is therefore essential. VerticalMan's location data guides rescuers directly to the right place, saving valuable time in large and complex facilities.

Logistics & Transport

Tanker drivers working alone during loading and unloading are monitored throughout the operation, with automatic alerts if a fall, prolonged immobility, or an accident occurs near hazardous materials.

(*) when paired with a supported Bluetooth gas detector.

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Key Benefits

- All-in-one-device: employees use a single smartphone for calls, messaging, and everyday apps as well as safety monitoring, reducing equipment and training overhead
- Faster rescue: precise indoor positioning, down to the floor and route, cuts the time rescuers need to reach an incident
- Broad detection: automatic monitoring covers situations workers cannot report themselves, complemented by manual alarm and vehicle accident detection
- High reliability: Wi-Fi based alarm transmission lets IT teams verify network integrity with tools they already use
- Full flexibility: over 150 parameters let every customer tailor the system to its own safety protocols, from confined space entry to mobile patrols



VerticalMan main screen with live sensor and status overview

Technical Integration and Security

Device Compatibility

- Android app available as a demo on Google Play; the full version is provided via Aldea's website
- Certified for use with i.safe MOBILE's IS530.x, IS540.x and IS880.x devices
- Supports Android 5.1 to 16

Security and Privacy

- All communication with the platform is encrypted via HTTPS
- Location data stay on the device and are only transmitted during an active alarm, to support rescue operations
- No tracking of worker location outside an alarm situation

Support and Training

- Operators only need to wear the smartphone or the external sensor; no further training is required for daily use
- Aldea offers a two-hour administrator training course, delivered in person or via video conference
- Technical support is available by e-mail, with phone follow-up when further investigation is needed

Summary

VerticalMan turns the i.safe MOBILE smartphone that workers already carry into a reliable lone worker protection system. Automated incident detection, multi-channel alerts, and precise indoor positioning help companies in oil & gas, chemicals, pharmaceuticals, power generation, and logistics protect their people and respond faster when it matters most.



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