Celab COMMUNICATIONS

MOTOROLA SOLUTIONS
PLATINUM VALUE ADDED RESELLER
Professional and Commercial Radio Elite Specialist
Mission Critical Radio Systems Specialist

How to keep your lone workers safe.

Work environment is naturally a big issue. Fortunately, most countries have had strict regulations concerning worker health and safety for a long time. However, to comply with them can be both cumbersome and expensive unless measures are introduced in a smart way.

According to (Swedish) health and safety legislation working alone concerns both physical and social isolation. Social isolation includes work among people but where help is not assured in case of an emergency. This definition can include everyone from the cashier at the minimart and the electrician to the security guard and/or some machine operators within manufacturing. The list goes on.

Besides insuring that the worker has sufficient knowledge to complete their tasks in a safe way he or she should also be guaranteed quick assistance in case of emergency. This can be solved by more people present during the work or with technical equipment. With all the technology readily available today you don't have to search far for alternatives. However, they are of varying types and safety levels.

Mobile phones

There are several apps available designed to keep lone workers safe, for both Android and iOS. They usually work by activating a timer that represents, for instance, the end of the shift. If the timer is not manually deactivated before the time runs out the app triggers a sequence of events. The app can automatically call or send a message to a preconfigured number. Some apps can also attach information like location or medical data.

Almost everyone carries a smartphone today but, even if there are rugged devices on the market most of the are fragile which can cause major problems in emergency situations. They also require cell reception to function, which can be lacking in some places, especially indoors.

Personal alarms

Portable personal alarms are designed specifically to transmit emergencies. They are available in various robust models depending on the need. Simple devices that "only" transmit emergency calls or advanced units that can attach location data and open voice communications. The common denominator is that they all transmit emergency messages to a receiver that (usually) relays the information to a PSAP or a security company.

Some devices offer several different features to trigger emergencies, like if the user falls over or remains still during an extend period of time. In addition to GNSS tracking solutions for indoor location tracking can be implemented and used with emergency calls. The devices are also available for specific areas of use like in potentially explosive environments (Ex).

Two-way radios

Two-way radio provides, in this case, the best of both worlds. With rugged devices that manage everyday communications and at the same time also offers all safety features of the personal alarm.

With radios emergencies can be sent directly between two devices, without the involvement of a network. Although, generally they are connected to a "private" system. This means that necessary accessibility, coverage and redundancy can be achieved, always.

Just like the personal alarms two-way radios provides several features to trigger an emergency. The same is applies to the possibility to ad location information, both indoors and outdoors.

With a modern radio different types of sensors (gas sensors, heart rate monitors, etc) can be connected to provide an additional level of protection. This particularly useful if you implement a local control room in the radio system. With a computer aided console you can monitor worker health as well as other resources in real-time.

Overview	Mobile phones	Personal alarm	Two-way radios
Rugged Devices	○	•	•
Devices for different areas of use	○	•	•
Emergency button		•	•
Programmable procedures	○	•	•
Free from subscriptions			•
Point-to-point communications (simplex)			•
Tailored netowrk/system			•
Manages everyday communications	•		•
Tailored redundancy/accessibility			•
GNSS location tracking	•	•	•
Indoor location tracking		•	•
Man-Down		•	•
Lone Worker		•	•
Remote Monitor			•
Hot Mic		•	•
Supports external sensors			•

Safety dictionary

Physical isolation
Work in a remote location where help is not available in an emergency.

Social isolation
Work among people but where help is not assured in case of an emergency.

Emergency call
Message that is transmitted to one or several recipient to alert them of the emergency. Can also trigger a chain of events.

Emergency button
Dedicated button on a device that triggers an emergency call.

Alarm route
The technology used to transfer the emergency call to the recipient.

Emergency procedure
The chain of events that is initiated when a emergency call is activated.

Man-Down
Feature that triggers an emergency call if the device remains still in a specific angle for a predefined period of time.

Lone Worker
Feature that continuosly forces the user to manually prevent an emergency call to be initiated.

Remote Monitor
Feature that allows an operator to activate the microphone on a radio to listen in on a situation.

Hot Mic
Activate the microphone for voice communications when a emergency calls is initiated.

Sensors
Gas sensors, heart rate monitor and geiger counters that actively increases safety in harsh environments.

ATEX
In some explosive environments the technical equipement requires specific certification (Ex).

GNSS tracking
Location tracking using integrated GNSS module (GPS/Glonass/Beidou/Galileo).

Indoor location tracking
By strategically placing Bluetooth beacons tracking of Bluetooth activated devices is possible.