WHEN THE ALARM SOUNDS OFF, IS YOUR STAFF SAFE AND SOUND?

Industries such as oil (both oil rigs and refineries), mining and nuclear facilities are highly regulated when it comes to personnel safety. The need for regulations is understandable as there are a lot of dangers involved in the daily work. The best way to ensure safety is maintaining safe processes and working habits, as well as making sure that every employee is wearing protective clothing, hardhats and safety shoes. These are all regulated by maintaining safety check up areas, regular safety drills and knowing the location of the staff. The protective wear minimizes minor accidents, but what if a major incident occurs and the location of your staff is vital information?

ONE OF THE BIGGEST CHALLENGES IN PERSONNEL SAFETY IS LOCATION

- Big area to cover with sparse safety checkup areas in case of emergency or for scheduled safety drills

- Staff might change their working location during the day, depending on the tasks for a specific day.

- It might take long time for all employees to make it to the safety checkup area during a safety drill or in a case of emergency.

- The alarm might sound too late for people in remote locations and e.g. a fire can cut out the route to the safety check up area.

- Manual counting and processing of the staff at the safety check up area can take a long time, especially if the foreman of the group is the one missing.

- Getting help to the right locations can get significantly delayed if we do not know the staff's exact location.

Not knowing the location of your personnel at any given time, especially before and after the alarm has sounded, composes the biggest risk in saving lives in a dangerous situation. Using a technology that ensures that you can alarm people in good time, find them quickly and bring them help and to safety as fast as possible is the surest way to fill the requirements of regulations.

GETTING THE LOCATION OF YOUR STAFF USING WIDE AREA MESH TECHNOLOGY

A wide area mesh network, like Wirepas Connectivity, works in challenging radio environments effortlessly and setting it up is easy and fast. There is only little configuration needed in a form of anchor devices, which are placed around the tracked area with fixed locations to act as reference points for the location of the staff.

The staff is equipped with helmets that have tags, that scan the environment for the anchor devices and to which there is the strongest connection (measured with RSSI value), are considered to be the closest and with their fixed location, the location of the personnel is then derived.

The data is sent to the backend system from the network, that all the devices form, via a gateway.

SOUND OFF AN ALARM WELL BEFORE AN ACCIDENT IS ABOUT TO HAPPEN

Most of the industries use sensors to collect data that they monitor to be able to either prevent accidents or to sound an alarm when certain set levels, that are being measured, have been exceeded.

The sensor data to be collected can be:

• Gas levels – dangerous gases may explode or cause breathing problems

• Temperature – rising heat can predict explosions or fire

• Vibration – changes in vibration intervals can predict malfunctions in the machinery or start of a collapse in mine shaft

• Pressure –rising pressure level can predict malfunctions in the machinery, oil pipelines or other failure

• Smoke – may indicate a fire hazard

The anchor devices that act as the infrastructure for the location data can also provide sensor data, which can then be used to sound alarms sooner to get people to safety before the emergency is upon them. Combining the information of the location of the staff and the sensor data, the alarms can also be directed only to the right personnel if the situation at hand is only a local issue.

SAVE LIVES WITH A SIMPLE SYSTEM

Wide area mesh network ensures that in case of emergency,

• You know the last place the personnel have been to before the alarm

—In case the emergency shuts down all systems and no new data can be collected; the last known location can still help find the stranded people in time and make sure they get to safety.

• You know where the personnel are after the alarm

—You will get the information, who made it to the safety checkup area automatically – no need for manual count.

—You will also get the information, who did not make it, faster. The system will inform, where they can be found and you can rush to their aid sooner.

• In case of emergency, if the personnel are stuck in an area from which they cannot reach their safety check area, the system can help the rescue team to find them faster to enable safe recovery.

When an accident occurs, and lives are at stake, every second counts. Make sure that your superior does not waste time counting people manually, because every saved life matters.

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WIREPAS

We're changing the face of IoT. To set a new standard. To skip the bullshit. To get infinitely scalable connectivity. Gentle on your wallet and way better than cellular 5G. In a network that never fails. Without middlemen or infrastructure. Totally self-managing. Tailored for commercial and industrial applications. Just more than you need. For less. We give you very very good IoT.