Toward a Zero-Injury Workplace

As an industry with some of the most dangerous workplaces in the world, the oil and gas sector faces myriad challenges in keeping its employees, contractors, customers and visitors safe on company premises and job sites. For some time, RFID providers have toiled to create a solution that could track

personnel in real time in dense, metallic and explosive environments; leverage real-time information to anticipate incidents; minimize the effects of incidents when they occur; and eliminate the need for human action, such as card swiping. But no one system met all these needs cost-effectively. Today, though, RFID technology advances are helping the industry in its effort to achieve a zero-injury workplace.

Typically, a personnel-tracking solution locates workers based on reads of their RFID-enabled ID badges. To protect an individual's privacy, it tracks workers by zone rather than specific location, disclosing location details only when necessary. Some systems can notify managers via text message or e-mail if someone enters an unauthorized area and may be in harm's way—for example, if a contractor takes a wrong turn and enters a restricted environment instead of the assigned work zone.

Real-time data also provides companies with actionable information to prevent incidents, by monitoring workers and alerting them to potential hazards. This includes notifying heavy-machinery operators of the presence of unauthorized people in the proximity of vehicles or cargo.

In an emergency, managers can view workers' locations in real time on the facility map, to see how many people are in safety stations and how many need to be evacuated. The managers can direct rescue operations accordingly, minimizing time to provide assistance and avoiding unnecessary risks for

rescuers. Comprehensive reports on drills and evacuations can be used to monitor and improve safety procedures. In addition, these solutions can help companies comply with government regulations that require a proper accounting of personnel.

Companies can choose the most cost-effective technology—including active RFID, ultrawide-band (UWB) and Wi-Fi—based on each site's specific need. For example, the Personnel Safety System, from Zebra Technologies?, is available in Dart UWB to provide very accurate location in dense metal environments; a WhereNet long-range location system to monitor large facilities or areas; and a Wi-Fi system that can leverage a site's Wi-Fi infrastructure.

It's impossible to put a price on human life, but the infrastructure deployed to protect workers can be leveraged to track assets, maximizing a company's return on investment. These solutions can also improve worker safety in the chemical, mining and steel manufacturing industries.

Euro Beinat is VP of location solutions at Zebra Technologies, a global leader in enabling technologies that extend visibility into operations.