SAFETY FIRST: SMART WORKSITES CONNECT THE WORKFORCE AND THEIR EQUIPMENT

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A construction site is a dangerous place. Moving trucks and rotating cranes carrying heavy loads or sharp objects, slippery surfaces, deep trenches, unstable walls – anything can happen, and sometimes does. According to the Occupational Safety and Health Administration (OSHA), worksite accidents account for more than 20% of all work-related deaths and injuries in the US.

The leading causes of private sector worker deaths (excluding highway collisions) in the construction industry were falls, being struck by objects, electrocution, and caught-in / between equipment or objects.

Apart from deaths on the job, thousands of construction workers also suffer from injuries and disabilities, ultimately leading to loss of productivity for their employers.

Below par productivity

Workers reporting sick requires management to deal with staffing issues leading to erosion in enterprise productivity.

Compensation claims affect insurance premiums, and may also mean that the company is penalized for safety breaches, all of which ultimately damage its standing in industry.

Smart worksite - Productivity, safety, performance are connected

A digital transformation of the worksite reduces or eliminates many of these issues. The adoption of digital solutions paves the way for the three Ps that enhance workplace safety:

Produce more work output

Prevent fatal incidents and accidents

Protect the workforce

Digital solutions that can transform a worksite are:

Wearable technology

Fitness bands and mobile phone apps that track activity and location are now mainstream technology. Wearable Technologies Ltd. (WTL) has developed wearable solutions for the workplace such as the Smart Garment, a PPE vest equipped with connectors and sensor-agnostic

Eleksen hub technology for unified communications .

The sensors track noise, gas, dust, temperature, and humidity as well as posture, physiology monitoring, and proximity (to potential hazards), communicating the data to a mobile communication hub. The data is visible to both workers and their supervisors.

This ecosystem minimizes the possibility of accidents and improves productivity, while keeping all stakeholders alert and informed, via mobile phones or PCs. Data on the worker's training programs can also be stored in the smart PPE.
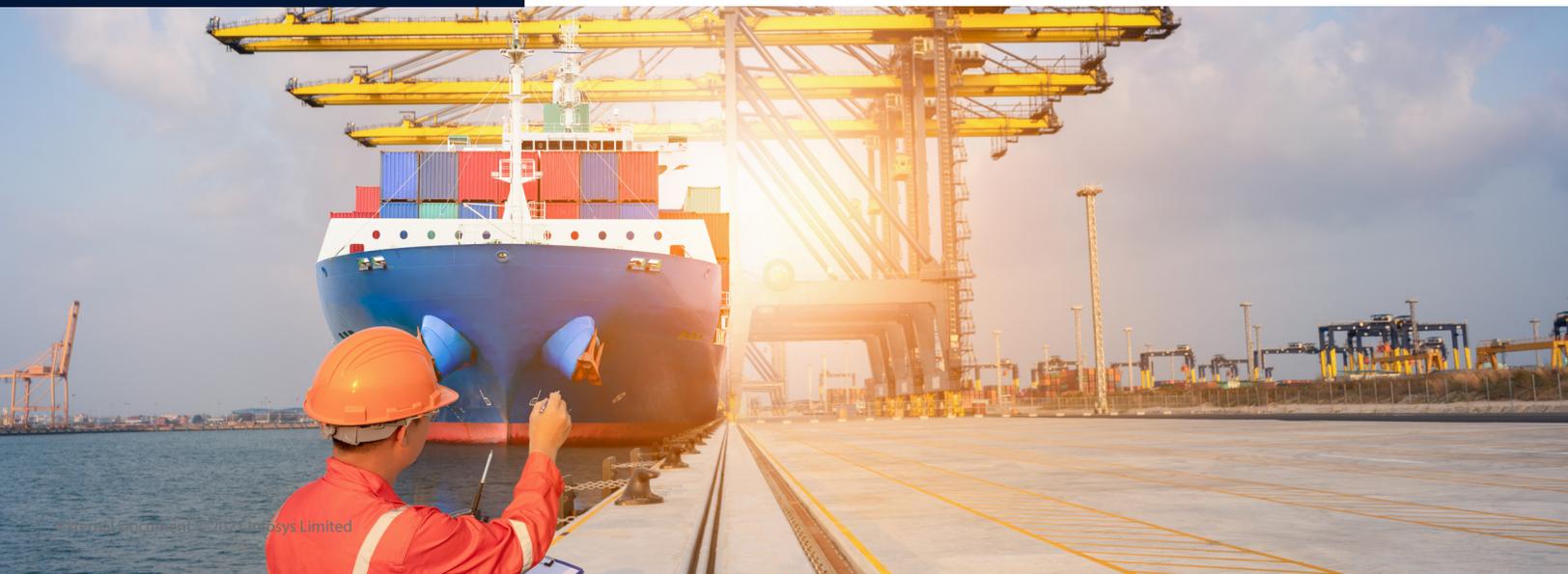
Predictive analytics

Predictive analytics enables worksite supervisors to identify possible risk areas or dangerous equipment and prevent accidents.

Connected workforce

A connected workforce will improve efficiency and safety in the worksite. For instance, IoT data from a faulty equipment unit can be viewed by the worker on a mobile device, without having to go to the location of the equipment. Sensors or tags on the safety vest provide alerts to hazards on site or the location of dangerous equipment.

A connected workforce will also enable a construction company to automate inspection and maintenance tasks, leading to fewer errors.

Data analytics

Data analytics provides managers with useful insights into operations and enables them to make prompt decisions. Real-time data enables them to monitor worksite hazards and ensure the safety of their workers. The data and business insights can be easily shared with stakeholders via multiple devices.

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