

THE CASE FOR

WEARABLE TECHNOLOGY

IN THE CONSTRUCTION INDUSTRY

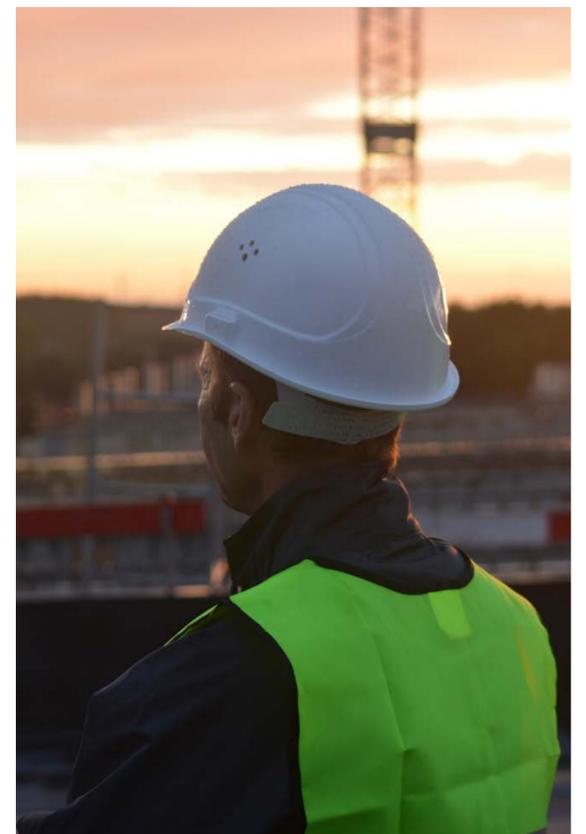
THE ISSUES

Construction is one of the largest industries in the UK but at the same time one of the most dangerous. In addition to accidents and musculoskeletal injury, ill-health is prevalent mainly in the form of respiratory diseases, hand-arm vibration syndrome and noise induced hearing loss. It may be surprising to learn that fatalities from ill-health currently outweigh those from accidents by 100:1. Generally speaking, health and safety relies on historical data or lagging indicators which is seen as a barrier to progress.



However, a construction site presents many particular challenges; it is not as 'controlled' an environment as a factory setting, it is very dynamic in nature, the workforce itself is transient and risk appreciation according to the TUC is generally low. Also there is a lack of Occupational Hygiene provision; a scientific discipline that in other sectors mitigates risk by quantifying worker's exposure and advises on suitable control methods. Plus the chronic effects of exposure to dust, vapours, noise and vibration can take many years before obvious symptoms develop, altogether presenting a complex management challenge. As well as the obvious human costs, there are financial ones too; having people off sick means lost

productivity and extra management time spent dealing with sickness and staffing. It can have an adverse knock-on effect on insurance premiums as well as leading to prosecutions and large fines for serious breaches, compensation claims and not least reputational damage. The Construction (Design and Management) Regulations, 2015 together with the revised sentencing guidelines for offences under the Health and Safety at Work Act 1974 placed additional emphasis on the issue for all stakeholders. With so many different aspects to consider, how can the latest technology help managers better meet their health and safety responsibilities?



THE SOLUTION

We're all familiar with fitness watches and mobile phone apps that track activity and location and our Eleksen solution is an extension of this technology tailored specifically for the workplace. We have developed an end-to-end platform that offers 'mix & match' sensors for noise, gas, dust, temperature & humidity in addition to posture, physiology monitoring and proximity (to moving hazards) with a mobile communication hub. These are incorporated into a smart hi-vis jacket and the data is available on a dashboard that can alert both the manager and the worker to health and safety events through centralised and local alarms. Such a digital revolution will turn the way health and safety is managed on its head through actionable insights offering cost savings and productivity improvements.

Imagine having access to 'real-time everything' on your mobile, tablet or desktop PC meaning you can mitigate the risk of exposure or injury and immediately investigate near-miss incidents. These often otherwise go unreported meaning lost opportunities for corrective action and improvements.

How does it work?

For the worker a visible alarm is incorporated into their existing PPE which alerts them and their co-workers to surrounding hazards 'nudging' them to stop the task, check that they have the correct PPE or control methods or seek supervision when necessary. Data produced by the Connected Worker Platform can be analysed to show patterns and pinch points, allowing effective action to be taken to avoid future incidents.

The modern workforce is well disposed to adopting new technology which will drive their engagement. More participation in health & safety will bring about behavioural change, a critical success factor in delivering productivity improvements, cost savings but most importantly better health outcomes and quality of life.



Wearable Technologies Limited
eLEKSEN
Data-led workforce safety

**FOR MORE INFORMATION OR A DEMONSTRATION
PLEASE TELEPHONE 01455 563000
OR EMAIL: eleksen.sales@eleksen.com**