Safety Corner

What would a crystal ball tell us about safety management in 2028?

I have no crystal ball but the following items will become more prominent in safety management in the near future.

- Safety apps. Everyone possesses at least one smartphone for communication and social media engagement. Although it is extremely unsafe to use mobile devices while doing safety critical jobs due to possible distraction, mobile devices are effective in reporting a near-miss and hazards, sharing information in text and videos, storing a library of work instructions, training, remote monitoring and more. If this can be combined with BIM and diagnostic software, engineers will get useful information and even big data analyses at their fingertips. We need to invest more resources in safety-related apps.
- Wearable devices. Data from wearable devices such as a smart-safety helmet allows close monitoring of workers' vital signs, where about, stress and strain level, usage frequency and others. This also allows an early extraction of workers in trouble, such as early indication of heart exhaustion or fatigue, and pinpointing locations for rescue. The data collected can aid audit reports, incident investigations, competency control. Latest breakthroughs in wearable electronics allow more effective devices to improve safety.
- Smart sensors, internet of Things and use of drones. More machines, buildings, engineering systems will be monitored by smart sensors and drones to provide accurate data on the "health status" of the engineering systems and whether there are any malfunctions that need to be addressed because of the actual failure. This can reduce operations and maintenance costs while improving safety management. Drones are particularly useful in emergency response to provide an aerial view of the situation.
- Wellbeing of employees. Employers will pay more attention to their workers' physical and mental health and wellness. Automated process and artificial intelligence will be used in areas where human errors should be reduced. Employers will take a closer look at employee' lifestyle habits: their fitness, diet, smoking habits, blood pressure, cholesterol readings and the like. It reduces not only healthcare costs but also accident risks.

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