

The Wireless Age of Gas Detection - The Connected Worker

The goal of any Safety or Industrial Hygiene professional is to minimise the risk for people in their everyday working lives, be that from an immediately dangerous atmosphere or a long-term potential danger. Work should enrich and not cost our lives - a principal that I have mentioned a number of times.

So what does the future look like and where can we go now? Well there have certainly been some interesting and bold strides recently and it's the goal of this article to take a look in a bit more detail at where we are and maybe where we are heading.



Over the last 10 years I have been with Shawcity, I have seen the market for gas detection change markedly with a higher delineation between compliance monitoring for basic worker safety and the more advanced data logging and industrial hygiene equipment. However, the emergence of wireless technology in fixed or semi-permanent applications has bridged the divide.

A number of manufacturers now offer systems capable of replacing traditional wired fixed gas detection systems with easily adaptable systems that can be changed and moved simply for shorter term assessments or used in a variety of environments where cabling is impractical or not cost-effective. The bespoke nature of these systems has provided unparalleled flexibility but the cost has been prohibitive in some environments.

Similar strides have been made in the portable and personal marketplace with the adaptation of existing hardware in to mesh or simple small scale p2p or closed loop projects. This functionality has provided some great access to data for those with large coffers or provided superior team protection on small team projects such as wing tank entry or small turnaround projects. Having a team leader immediately aware of all his team's exposures at any time and an alarm immediately raised if something happens gives some great options on a small scale project limited to around 2km line of site.

However, the draw back has always been the merging of these two options, how to get unparalleled data access for all employees without building expansive mesh networks of routers and receivers? And where does this leave lone workers? Is a basic confined space gas monitor which will warn them of any event good enough. What if a situation happens and they can't raise an alarm?

The goal for a number of years for many companies has been the connected worker, complete access to all the exposure information for that worker from their gas monitors. But why stop there? Why not consider biometrics, heat stress, heart rate etc, giving the facilities for every worker to have an eye in the sky no matter what they are doing and what risk factors they may be subjected to.

With the advance in smart phones over the last few years this has seemed only a breath away and I am personally very pleased to see that now this technology is available and not for only those with the big budgets. I currently have an ATEX zone 1 smart phone connected via Bluetooth to a confined space gas monitor and I'm sure, very soon, a heart rate sensor.

I work primarily on my own and visit a great number of sites which require ATEX. I also need communications and now I have that and the monitoring in my pocket. It even has a panic button for immediate emergency response and a two-way radio for coms if I need a direct line to a small team without the need to even dial. If something happens to me, my phone has GPS and I can be located easily without any problems, even in the harshest environments. This technology blows me away and personally I can't wait to see what's coming next.

One day will we all be allocated a biometric suit on every site. Will our GPS location be tracked along with all our exposures based on the risks present on site? Will our PPE also become smart? Your thoughts? Let me know.

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