



Universal Site Monitoring Case Study

Universal Site Monitoring was founded seven years ago by local businessmen Emil Tastula and Andrew Thurlow. Their idea to develop a real-time safety device for workers was conceived by Emil after years of exposure to the results of poor safety practices. After three years of research and development, the PSM Hero 715 is now close to commercialisation. NERA spoke to Emil about their motivations, their hopes for commercialising the device, and the innovation environment in Darwin.

What's so innovative about the PSM Hero 715 and how is it different to other products in the market?

In Australia, workforce fatalities have been steady at around 200 per year for some time, with gas exposure and falling from heights as the third and fourth most common causes. Our Personal Safety Monitor can help protect workers in any industrial complex by giving control room operators real time oversight of the health and wellbeing of their people.

Universal Site Monitoring's PSM Hero 715 is a device worn by workers to alert them of potentially dangerous situations, including gas exposure, entering restricted zones, atmospheric changes, slips, trips and falls, and physiological changes such as in an individual's heart rate. The monitors are linked to a data interface that is accessible to site controllers and allows direct voice communications between wearers and controllers. When an alarm is activated, controllers can access real-time monitoring data to understand what has happened and to trigger an emergency response to a worker, using GPS location-based information.

Other devices focus on a singular feature, whereas the PSM Hero 715 incorporates multiple features into one hand-held unit. The PSM Hero 715 is also intrinsically safe and can be taken into LNG and petrochemical facilities that are rated Zone 1 hazardous areas.

There are already systems that bring in real-time data from fixed plant and machinery and trend out information, and alert control room operators on the plant's status. What our PSM Hero 715 and Universal Data Interface do that is different is to bring that real-time data about people working in the field, around the fixed plant, around the machinery, into the control room.

What motivated you to take your PSM Hero 715 from an idea to the commercialisation stage?

Andrew had worked in the technology field for 20 years. I had a background in oil and gas, mining and industrial marine sectors and we have both had personal experience with serious workplace incidents. I lost two friends on a gold processing plant and Andrew was personally overcome by gas in an underground nickel mine and had to be rescued.

Developing technology that could prevent these workplace accidents was a big driver for us, and while it's too late for our friends, maybe in the future we can help protect other people's friends and family members. Our dream and value proposition is to save lives with our technology by getting it into workplaces around the world.

What helped you to commercialise your innovation?

We've had a lot of support from friends and family in Darwin, which has been critical to our success. Andrew and I have both put a sizeable amount of capital in, and our shareholders are family members, friends from school and people that we've worked with over the years. Without them we wouldn't have got this far.

The Federal Government's Accelerating Commercialisation program was also critical for us. In addition to a grant to assist us with research and development costs, it also provided a forum to bounce our ideas, access to a very good mentor, and support to develop a good business plan and marketing strategy. It also allowed us to access other key professionals to help with business and technical issues outside our experience.

We also established a relationship with a global resources company that allowed us to trial our technology with them. This helped us realise that the PSM Hero 715 would have broader application than just oil and gas, so we've created a product that can be used in a lot of industries where workers are at potential risk, such as mining, construction, logistics and manufacturing.

We were very fortunate to leverage Austrade's 'Landing Pads' program, which provides market-ready Australian startups with access to some of the world's most renowned innovation and startup hubs at a shared co-working space. We are heading to the Berlin Landing Pad and can't wait to take advantage of the business development assistance and the chance to immerse ourselves in everything the program has to offer so we can nail our first sale.

What didn't help or would you do differently?

One of the biggest challenges we faced in getting the PSM Hero 715 designed was finding suitable staff. There's not a big population in Darwin and we've had a lot of trouble getting the right people to help develop this technology here. We are now a lot better at defining what knowledge and skills we need and confirming these at the interview stage, but initially we were finding large gaps between people's resumes and skills.

Working on innovative designs is not easy and, by nature, new to everyone involved, so we just had to learn as we went along. We are at the point now where we have a patent in the United States on the PSM Hero 715, our certification is now complete, and we are trialling devices and doing further testing prior to going on sale later this year.