



# Ultrasound remote monitoring - the latest technology trend

The ability to monitor the condition of assets 24/7, from any location, is becoming the new trend in maintenance practices. Ultrasound, being a key technology in condition monitoring, will play a key role in this trend. UE Systems' Adrian Messer CMRP, reports.

**J**ust as technology has been rapidly developing in fields like telecom, data analytics, smart devices and infrastructure, the same can be said of asset condition monitoring. Just how far has technology come in asset maintenance, and what does that mean going forward? What current technology is the equivalent of cutting-edge developments in those other fields – playing the role of RFID or the internet of things? For asset maintenance, it's remote monitoring – the ability for technicians to utilize modern tools to collect and parse through continuous data sets from a given asset without the need for 24/7 in-person attention.

It's important to recognise that new technology often calls into question old methodologies or habits. Each time some development emerges, the industry involved must adapt to make best use from it. That can be particularly difficult in the industrial setting, often driven by the mantra, "If it's not broken, don't fix it."

But plant maintenance technicians have increasingly recognized the benefits of predictive maintenance in terms of keeping equipment online, preventing unplanned shutdowns, increasing plant efficiency and saving money for in the organisation.

### The paradigm shifts of asset condition monitoring

The book "Asset Condition Monitoring Management" by Jack Nicholas, Jr., outlines four ways asset condition monitoring has changed over the decades, including nowadays:

- In the 1980s, microprocessors made way for more portable data collection devices.

- In the 1990s, laptops emerged while software packages gave all computers better memory storage.
- In the 2000s, wireless data transfer arrived as the methods for reporting and analysing data grew more sophisticated.

In this decade, the condition monitoring paradigm shifts include the internet of things, cloud computing, big data, tablets, virtual and augmented reality, wearables devices and so on.

Though the technologies have changed, many of the challenges remain the same: will technicians and practitioners accept the change and alter their behaviour? Can IT departments keep newly online assets safe from cybercrime? Is the infrastructure available for massive amounts of data? Do we have the skilled workers necessary to champion these tools and then pass their knowledge along to other? And finally – what do we even do with all this data?

Finally, to add a bit of perspective, consider this: today's college graduates were born after Amazon opened, eBay came online and Yahoo registered its domain name. They have largely grown up with technology – that's a good thing. Those who go into engineering and maintenance will be comfortable using modern tools and techniques – and organizations must be prepared for a generation of labourers who expect the most up-to-date tools to be available.

### Ultrasound remote monitoring

Ultrasound technology has emerged as an essential tool in its own right. It's no longer simply a leak detector – it is a valuable technology that

