

## KEIT LTD

## FROM SPACE TRAVEL TO REAL-TIME INDUSTRIAL APPLICATIONS ON EARTH



Keit Ltd started life in 2012 in the European Space Agency Business Incubation Centre on the Harwell

Campus. Six years on and Keit now has its own purpose-built facility, but still based at Harwell. Dan Wood, CEO, is tasked with commercialising Keit's spectrometer technology, which was invented by Dr Hugh Mortimer and originally designed for space to measure the atmosphere around Mars. In order to do this, it needed to withstand the rigours of space travel and further R&D took the technology to a new commercial incarnation designed for industrial applications on Earth.

Today, the technology, IRmadillo, is a rugged FTIR spectrometer for on-line, real-time process monitoring, with an analytical instrument that can provide chemical process analysis of fluids in industrial settings. Uses include biofuel companies wanting to monitor their fermentation processes; oil and gas and petrochemical companies needing to monitor glycol dehydration and other processes; and chemical, pharmaceutical and food and beverage companies needing a new type of instrument sturdy enough to be used right in the production plant for real-time insight, rather than waiting for remote sample analysis.

Dan Wood explains: "The advantage of having the spectrometer in situ is its ability to capture the reaction analysis as it happens in real-time, and thereby alerting production managers of potential irregularities, which enables faster decision-making and better overall resource management."

Keit is venture capital backed and has raised £7.5 million to date through a series of funding rounds. The last round raised £2.5

million and Dan says that the company is now starting to generate revenue and sales. Dan joined Keit four years ago and the application for the technology was so vast that he spent the first six months deciding all the things that Keit wasn't going to do. He comments "We're taking liquid monitoring equipment into highly explosive environments so we have to demonstrate that it will never cause an explosion."

Understandably organisations are cautious, and this means the sales cycle can be long and detailed with numerous certification hurdles to get over. This is not only resource intensive but it is also costly. Dan adds: "Some of the bigger organisations will spend millions a year on analytical equipment. They will test one instrument and test it for months, sometimes years, to ensure that it can withstand the environment it is in."

However, Dan goes on to say that, on the positive side, once the product is tested in these organisations it can normally go into multiple locations around the world. He adds: "The biofuel, oil and gas and petrochemical industries are all very collaborative and, while they may compete on an R&D level, they are happy to share how they use chemical processes. If they solve a problem using our product they'll be up on a podium telling their peers."

The big focus now is getting the spectrometer installed in as many sites as possible. However, there is a whole industry of analytical instrument companies but very few who can provide an analytical process in the plant in real-time.

Keit has 16 people in the organisation and its ultimate ambition is to be acquired. Dan comments: "We have to grow to the size of

at least £10 – 15 million, with the ambition of much more, and current revenues are at £1.5 million. The longer we get to run at this the bigger we get to be and the more fun we will have in the process."

Dan sees a big opportunity in the year ahead for exporting to America. However, there is a barrier to entry in gaining certifications and Keit will need to spend £150k to deliver US versions of the products that are certified for potentially explosive environments. Fortunately, like all barriers to entry, this will then give Keit a significant market advantage.

Where Brexit is concerned, Dan doesn't think it will have a material impact. As an exported business de-valuation of the pound works in Keit's favour. The biggest risk on the horizon will be if organisations cut back on their Capex spending which would impact on Keit as its spectrometer is a Capex purchase.

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DAN WOOD  
CEO | Keit Ltd