esa business incubation centre
Harwell

Funding research scientists to further product development

The ESA BIC Harwell has part-funded a leading British scientist to assist SubTeraNDT in scaling down space technology to use in their innovative detector.

The challenge

Corrosion is one of the biggest causes of leaks and component failures within most process industries. Often going undetected below the surface of insulation and paintwork, deterioration is not only costly to repair but poses a potential threat to life. In 2014 one of the leading energy companies in the production of oil and gas worldwide, halted its operations on one of its platforms in the North Sea. The shutdown followed a routine inspection which exposed corrosion damage on a tank in the auxiliary system. In order to rectify the problem and restore normal function to the platform the entire pipe needed replacing, resulting in its closure for an entire week, costing the oil giant approximately $75 million in sales.

The solution

ESA BIC Harwell alumni, SubTeraNDT, has developed a non contact and non ionising system to inspect underneath insulation and coatings for corrosion or other abnormalities on plants in primarily oil and gas markets. Through funding opportunities available through the ESA BIC, SubTeraNDT was able to subcontract a British scientist in the field of millimetre wave technology from the ESA StarTiger programme. This enabled them to transfer space technology into their non-space application. As an added benefit, SubTeraNDT was also able to collaborate with a fellow ESA BIC company, Teratech Components Ltd, to purchase some of the components they manufacture. Through this partnership SubTeraNDT was able to scale down their technology to produce a reliable prototype, now known as B1080.

The benefits

By being part of the ESA BIC Harwell, SubTeraNDT has been able to access the funding and expertise required to incorporate space technology into their product. B1080 is a tripod mounted version of the technology that can inspect large areas and objects for corrosion and erosion damage to incredible accuracy. The detector includes a non-ionising technique in the detection process, meaning it is both environmentally friendly and cost effective. It is believed had this technology been implemented in the case of the platform in the North Sea, they could have identified the problem early enough to suggest a solution that would have not only reduced damage to the pipe and profits but the technology could have paid for itself in 3 seconds.

About us

The ESA Business Incubation Centre Harwell (ESA BIC Harwell) provides entrepreneurs and start-ups with access to funding, technical expertise and business support to transform space technologies and systems into vibrant non-space businesses.

Part of ESA's thriving Europe-wide network of Business Incubation Centres, ESA BIC Harwell is managed by the Science and Technology Facilities Council (STFC) and draws on both organisations' outstanding track record in business incubation – providing a unique environment perfectly engineered to accelerate innovation and unlock commercial potential. Each year we support up to 10 start-ups working in sectors including healthcare, energy, agriculture, digital technology and defence.

To find out how you can join us:
Tel: +44 (0)1235 446 075 Email: enquiries@esa-bic.org.uk Twitter: @stfc_b2b #esabicharwell

Managed by
Science & Technology Facilities Council