

GAME-CHANGING AGRI-TECH

DEVELOPED AT THE ESA BIC UK



business
incubation
centre
United Kingdom

Scottish start-up Crover has developed world-first agricultural technology designed to reduce waste and save millions of tonnes of grain stock each year.



→ Funding of €50,000



→ Networking opportunities at the Higgs Centre for Innovation and wider STFC network

THE CHALLENGE

Every year around 630 million tonnes of grain is lost globally. When grains such as wheat and barley are stored in sheds and silos for long periods of time, they are at risk of spoilage from infestations. It is also difficult to understand the overall quality and mass of the grain.

This challenge has a knock on effect on the global food system, which is expected to provide safe and nutritious food to an ever-growing population.

Crover had designed a robot that can 'swim' through cereals and grains to monitor their condition while they are still in storage. The robotic grain monitoring solution maps the conditions inside grain stores to identify grain spoilage. In 2019, the team identified a need for satellite data connectivity so that the system could be deployable anywhere, and recognised that the ESA BIC UK would be a good fit in terms of technical development and business support for a start-up business.

THE BENEFITS

During its time at the ESA BIC UK, Crover implemented Satellite Data Transfer into the system and developed a robot that can take accurate temperature and moisture measurements as it travels through grain. This data is then transmitted, via satellite communication, to the grain store manager. Crover also accessed STFC's additive manufacturing facility (3D printing) to enable it to identify and develop the bespoke components required for its design.

In 2020, Crover competed against some of the best tech start-ups from across the world, at the TechCrunch Start-up Battlefield 2020. It was the first Scottish company ever and second UK company to be selected.

Since graduating from the ESA BIC UK in 2020 Crover has successfully raised over £300,000 in crowdfunding, doubling the target amount set.

Crover also won a Young EDGE Award, a funding competition for Scotland's most innovative start-up businesses.

The potential for the technology developed by Crover is substantial, including cutting waste, ensuring sustainable supply chains and guaranteeing optimal storage conditions. The tangible benefits of this technology have the real potential to be significant, which is exactly what the ESA BIC UK sets out to achieve.

THE SOLUTION



→ Technical support business support from STFC



→ 3D printing expertise from STFC



→ Access to laboratory space to build and test technology



Image credit: Crover

"The support received from the ESA BIC UK and being part of STFC's community has been incredibly useful. Not only the access to facilities and laboratory space but the technical and business support received has been fantastic. The opportunity to work alongside astronomers, engineers, as well as 3D printing and prototyping experts has been invaluable to our business. The Crover vision is to build a global business, which is focused on environmental and social impact."

Dr Lorenzo Conti, Founder & Managing Director

ABOUT US

The ESA Business Incubation Centre United Kingdom (ESA BIC UK) is part of ESA Space Solutions and provides start-ups with technical expertise and facilities, business support, networking, office space and funding needed to overcome innovation challenges and accelerate business growth.

Part of ESA's thriving Europe-wide network of Business Incubation Centres, the ESA BIC UK 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 start-ups working in sectors including aerospace, healthcare, energy, agriculture and digital technology.

Managed by



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