UNIVERSITY OF LIVERPOOL

Research, Partnerships and Innovation

SPIN-OUT CASE STUDY 3:

ROBOTIZ3D

Advanced robotics to improve road safety and save billions in repairs

- **Sector: Robotics and AI**
- **Financial and advisory support from CERN, Robotics Inspection and Maintenance Activities, and Innovate UK SMART grant**
- **£1.25M external investment in 18 months**

In the UK, the cost of repairing potholes hit £1bn for the last decade alone with over 18 million filled. The crisis is only expected to escalate as our roads age, numbers of road users increase and damage from climate extremes becomes more frequent. Current remediation methods are expensive and take time, and risk the safety of maintenance crews on busy roads.

Combining artificial intelligence (AI) and robotics provides the answer. Robotiz3d, a spin-out established in 2020, is developing autonomous robotic platforms that can detect damage to the road and perform repairs and maintenance rapidly, at low cost, and without the need to endanger maintenance crews.

Robotiz3d was founded by a team from the School of Engineering along with company partner and investor a2e Industries. In the last two years, they secured a variety of further funding and support, including Horizon Europe initiative Robotics Inspection and Maintenance Activities and from CERN, the European Organisation for Nuclear Research. In their 2022 round of funding, Robotiz3d has successfully attracted £1.25m in external funding.

The team have released their first product for trial and have relocated to the CERN Business Incubator Centre at STFC Daresbury, which provides subsidised space, safe storage and testing of the autonomous vehicle. Robotiz3d has also partnered with Autoware Foundations and NVIDIA as technology partners.

"It is extremely exciting to see an idea becoming a successful PhD and then a company. The mindset shift from academic to technical director is challenging, but also very rewarding."

Dr Sebastiano Fichera
Co-founder and Lecturer in Aerospace Engineering at the University of Liverpool.

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