UNIVERSITY OF LIVERPOOL

Research, Partnerships and Innovation

**SPIN-OUT CASE STUDY 4:**

# META ADDITIVE

**Manipulating materials at the molecular level to create truly bespoke components**

**Sector: Additive manufacturing**

- **£1.2M Innovate UK Smart grant in 2020**
- **Acquired by Desktop Metal in 2021 for $15M**

Additive manufacturing also known as 3D printing, is becoming an integral part of industrial production. It enables us to create bespoke components rapidly, often more sustainably and inexpensively, and has significant applications in many key sectors. New smarter printing technologies and processes are needed to maintain and expand future production solutions.

Meta Additive spun out from the University of Liverpool in 2019 and is based on research from Professor Kate Black in the School of Engineering. In 2020, the team secured a £1.2M Innovate UK Smart grant, allowing the team to continue to develop their novel printing technology. They focus on using a chemical approach to additively manufacture metal and ceramic components for mass manufacturing. The team have developed a new binder process that means whole components are printed from multiple materials, allowing for complete customisation of the material's mechanical and structural characteristics, helping to maintain and expand future production solutions.

In 2021, Meta Additive was acquired by US company Desktop Metal and the University received $4.7m for the sale. This has provided an opportunity for Meta Additive to further develop its technology portfolio, begin higher-volume manufacturing and take its technology to a wider market.

**"It is amazing to be able to take my research which started life in a laboratory at the University and then translate it into the real-world, helping to create jobs and providing industry with smart manufacturing solutions"**

Professor Kate Black
Co-founder and Professor of Additive Manufacturing in Additive Manufacturing at the University of Liverpool.

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