



Additive
manufacturing

Sustainable
manufacturing

Advanced
polymer
products

Innovation

Nano
manufacturing

Collaboration

Industry
focus

Project Summary

June 2022

NW**CAM**

North West Centre for Advanced Manufacturing

Atlantic Technological University



Ollscoil
Teicneolaíochta
an Atlantaigh

Atlantic
Technological
University

Atlantic Technological University (ATU) is Ireland's newest technological university. Established in April 2022, ATU was formed by the merger of the Galway-Mayo Institute of Technology (GMIT), the Letterkenny Institute of Technology (LYIT) and the Institute of Technology Sligo (ITS). With 8 campuses across the west and north-west of Ireland (Donegal Letterkenny, Donegal Killybegs, Sligo St. Angela's, Sligo, Mayo, Connemara, Mountbellew, and Galway City) ATU has over 20,000 students and around 2,250 staff.

ATU's Sligo campus is home to the Precision Engineering and Manufacturing Centre (PEM). Set up in 2013 PEM is the only research centre in Ireland which provides a portfolio of complementary manufacturing process and material science expertise which is converged for developing precision engineering solutions to industry. PEM is one of Enterprise Ireland's 16 Technology Gateways, centres of R&D excellence which are working with industry to deliver innovation expertise and solutions. As a Technology Gateway PEM provides engineering and technical solutions along with process improvements across the full product lifecycle, with specialisation in product design and development in the engineering and manufacturing sectors.

The Centre's expertise covers precision engineering, design for manufacture, design for assembly, mechanical engineering, materials science, micro-machining, polymer processing, rapid prototyping, general manufacturing process control, and statistical process analysis. Research themes focus on precision engineering and design; advanced process monitoring and control; manufacturing process modelling and simulation; and materials synthesis characterisation and development.

Based at ATU's Donegal-Letterkenny campus, the Wireless Sensor and Applied Research Lab (WiSAR Lab) develops products and industry solutions using expertise in wireless embedded systems and related software. As one of the Enterprise Ireland's 16 Technology Gateways, WiSAR is a centre of R&D excellence in the Internet of Things (IoT), health monitoring and wearables, and intelligent systems and software control. With expertise across a range of technology areas (polymers, photonics, biotech, pharmaceuticals, embedded systems, wireless services), WiSAR enables the delivery of innovative R&D solutions in sectors such as manufacturing, health, leisure, agriculture and ICT.

As a result of its expertise in advanced material applications, sustainable manufacturing processes, and wireless embedded systems, the Atlantic Technological University collaborated with three industry partners on three projects aligned to the NWCAM themes of additive manufacturing and sustainable manufacturing.

www.atu.ie
www.pemcentre.ie
www.wisar.ie