University of South Australia | Enterprise Hub

We'll stop at nothing to help you shift from traditional to advanced manufacturing.

UniSA is leading the way for Advanced Manufacturing in South Australia, partnering with organisations across the industry.

We help propel businesses into industry 4.0 – the digitisation and connectivity of systems, where the physical and digital worlds can now be linked into cyber-physical systems using new technologies like digital twins, machine learning, 3D printing and virtual reality.

UniSA leaders are also setting the stage for Industry 5.0, where new technologies will provide prosperity beyond jobs and growth, and place worker and environment wellbeing at the centre of the production process. We're realising a vision for industry beyond efficiency and productivity that reinforces the contribution industry makes to society.

Our research team have world-leading expertise in:

- 3D printing and additive manufacturing
- advanced composites, materials, and coatings
- artificial intelligence
- augmented and virtual reality
- integrated sensing and data analytics
- rapid prototyping
- micro and nanofabrication
- industrial design
- systems engineering
- data visualisation

When you connect with us, you'll have access to:

- **Future Industries Institute (FII) –** FII houses more than $80 million of specialised infrastructure, including a suite of world-class 3D printing, micro and nanofabrication facilities, an industry 4.0 testlab, cleanrooms and laboratories.
- **Industrial AI Research Centre (IAI) –** IAI combines artificial intelligence, machine learning, industry 4.0 and internet of-things technologies to produce cutting-edge solutions.
- **Australian Research Centre for Interactive and Virtual Environments (IVE) –** IVE specialises in immersive technologies that solve challenges for the manufacturing industry.
- **Australian National Fabrication Facility (ANFF) -** ANFF offers open access to more than $10 million of cutting-edge equipment in state-of-the-art cleanrooms and laboratories.

UniSA in action – laser cladding technology for longevity

LaserBond and UniSA's partnership:

- increased the lifespan of minerals processing equipment
- improved LaserBond's product quality and enabled the introduction of new products
- reduced maintenance costs and downtime for LaserBond and its customers
- increased LaserBond's revenue
- educated UniSA students to become future surface engineers.

LaserBond, an Australian surface engineering company, needed to refine the technology they used to prevent the extreme wear on mineral processing machinery. Collaborating with UniSA provided the solution.

The partnership has brought an increase in revenue for LaserBond with improvements in product quality and the introduction of new products. Subsequently, LaserBond's customers saw a reduction in maintenance costs and downtime. It can cost more than $100,000 for every hour of machine downtime, so it's an expensive problem.

"For one of our collaborative projects, LaserBond used UniSA's extensive tribology laboratories to perform accelerated wear testing in erosion, corrosion and impact abrasion. We combined results to predict wear rates so that LaserBond could use them to optimise their materials and processes," said Industry Professor Hall, UniSA Future Industries Institute.

"Through our collaboration with UniSA, we've had access to expertise and facilities that we don't have in-house. We've learnt a lot about our processes, improved product quality, increased revenue, reduced maintenance costs for our customers and have been able to showcase our improved technology to bring on new customers. We've loved working with UniSA."

Dr Thomas Schläfer
Engineering Manager
Laserbond

Some of our partners

LaserBond · DXC Technology · entX · IPACS · motherson · sementis · UCL Engineering · ferronova

University of South Australia | Enterprise Hub

UniSA's Enterprise Hub

World-leading technology and research expertise at your side

Opportunities to grow are there for businesses that can evolve and employ increased precision, customisation, and automation in their manufacturing processes.

The Enterprise Hub connects you to experts from mechanical engineering, environmental science, minerals science, logistics, mining, medical and health science, industrial design, business, project management and surface chemistry. 3000 expert academics, 30+ world class research institutes, 37,000+ students and 2500+ industry partners are within your reach.

We're here to help you solve problems, whether it's a knowledge gap that's holding you back, access to experts and the latest facilities, or discovering the right talent and support you need to grow.

Partner with us to uncover the ideas, solutions and connections that will make your business unstoppable.

To learn more, visit www.unisa.edu.au/enterprisehub.

Through the Enterprise Hub you can:

Put unstoppable research teams to work

100% of our research is world class or above. Imagine what could be possible if our team partnered with yours.

Build your best team

Bespoke training (from a three-hour webinar to a three-year degree), internships, co-located researchers, and access to talent for workforce planning. Our people are our strength, they can be yours too.

Push boundaries with access to state-of-the art equipment, systems, and places

Our doors are open. Access technology and resources out of commercial reach and unlock your organisational potential.

Explore unexpected connections

We're nurturing more than 6,500 relationships and 2,500 partnerships in a creative and collaborative space. Be part of our global ideas network that's breaking with tradition.

Advance your manufacturing with UniSA

Through our integrated approach, we will bring our sector expertise and infrastructure together with our enablers to find you the solutions you need.

"UniSA's Enterprise Hub will enable you to take the next step on your journey. Collaborating with us will give you access to pioneering facilities and equipment, industry sector experts, plus much more. Get in touch today."

Atif Majeed
Manager: Business Development Enterprise Partnerships Unit
t. +61 403 256 480 **e.** Atif.AbdulMajeed@unisa.edu.au **w.** unisa.edu.au/advanced-manufacturing