

## Deakin, Xefco, Proficiency Contracting partner for \$3.4m IMCRC project

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Deakin's Institute for Frontier Materials (IFM) is joining textile technology experts Xefco and engineering equipment specialists Proficiency Contracting on a new \$3.4 million manufacturing R&D project co-funded by the Innovative Manufacturing Cooperative Research Centre (IMCRC).

The three-year project aims to scale newly-developed advanced coating technologies, which will result in better durability for textile coatings and reduced energy, water and chemical consumption during the manufacturing process.

IFM and Xefco researchers have developed a novel atmospheric plasma coating system that reduces the costs and complexities of existing coating equipment. The next stage of the project will be dedicated to adapting and moving the technology from lab scale to a commercially viable textile coating system.

The Atmospheric Plasma Coating System project is being led by IFM Senior Research Fellow in Plasma Dr Weiwei Lei who said that this team was looking forward to taking the technology to the next level.

"What we've managed to develop is a coating system that reduces the costs and complexities of existing equipment used to apply coatings, such as those that make textiles water-repellent, absorbent, flame retardant or odour free."

"Thanks to support from our partners and IMCRC, we will now aim to improve and optimise the functional coating process, to get this lab-scale technology ready for production testing at a textile mill and global commercial use by 2021."

By developing, testing and manufacturing the system in Australia, tapping into a local network of manufacturers, Xefco will establish an advanced manufacturing supply chain that provides local manufacturers new opportunities in the sector.

Xefco CEO Thomas Hussey said the technologies in development will bring a much needed step change to the textile processing industry by elevating performance while reducing the environmental footprint in an otherwise traditionally unsustainable sector.

The partnership with the IMCRC, Deakin and Proficiency Contracting is a major step forward for the development of innovative technologies for the global textile industry. This project brings a broad spectrum of scientific and engineering expertise together with the required resources to rapidly elevate it to commercial readiness.

David Chuter, CEO and Managing Director at IMCRC, said the project was a great example of how research-led innovation had the potential to disrupt and transform the textile manufacturing and processing industry – not just in Australia, but globally.

"Over the past decade there have been significant developments in the application technologies, machinery and processes for textile coating that have enhanced and extended the range of functional performance of textiles," Mr Chuter said.

"The next decade will be about innovative textile manufacturing technologies and processes that are environmentally friendly and resource-efficient. The novel atmospheric plasma system that Xefco and IFM are developing will set the path for the future viability of the industry."

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## **About Xefco**

Xefco™ was born as a spin-off in 2018 from the performance fabric division of sailing brand Zhik™. Partnering with leading Australian research institutes, Xefco develops and implements advanced manufacturing technologies that provide proven functional benefits to enhance performance, comfort and protection while reducing impact on the environment. More at [www.xefco.com](http://www.xefco.com)

## **About Proficiency Contracting**

Proficiency Contracting are a Geelong based engineering company with over 35 years of engineering experience focused on conception and design of new systems. Proficiency Contracting have a strong track record of developing new to market, bespoke manufacturing equipment for the mass production industry.

More at [www.proficiencycontracting.com.au](http://www.proficiencycontracting.com.au)

## **About the IMCRC**

The IMCRC has a vision for Australian manufacturing to be thriving, relevant and globally integrated. As a not-for-profit, independent cooperative research centre, the IMCRC helps Australian companies increase their relevance through collaborative, market-driven research in manufacturing business models, products, processes, and services.

More at [www.imcrc.org](http://www.imcrc.org)

## **Deakin University:**

Deakin, named after Australia's second Prime Minister, is a young contemporary university with a reputation for being innovative. We aspire to combine excellent research and outstanding teaching with a strong focus on the communities we serve. Deakin is ranked in the top 2 per cent of the world's universities in each of the major rankings and ranked 211 in the Academic Ranking of World Universities (ARWU). Deakin researchers are making a difference through world-class research and innovation.