

Media Release

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CRC building more robust medical supply chains

Until healthcare around the world was hit by unexpected shortages of masks and hand sanitiser with the onset of the pandemic last year, few of us would have given much thought to how supplies of medical consumables like personal protective equipment (PPE), drugs and vaccines were maintained.

While the PPE shortages have been resolved, challenges associated with medical supply chains are not only related to the pandemic.

To address this, Macquarie University has applied for Federal Government funding to establish a Critical Supply Chain Cooperative Research Centre (CRC), which will work with industry to co-design digital solutions to create one of the world's most advanced supply chain management systems.

If funded, the CRC is a ten-year mission that will bring together eight universities and 44 industry partners in a venture worth hundreds of millions of dollars.

Professor Tao Gu, from the Macquarie University School of Computing, is an internationally renowned expert on the Internet of Things. He is researching digitisation for supply chains and originated the idea of a CRC.

“Problems with maintaining supply chains existed before the pandemic – COVID-19 simply brought them to everyone’s attention with the fragility of Australia’s medical supply chains,” Professor Gu said.

“Supply chains have been disrupted before and unless they are modernised, they will continue to be affected into the future, as we are seeing now with the so-called ‘Shortage of Everything’.

“With the Critical Supply Chain CRC, we are looking at ways of working across a range of industries to improve every aspect of the medical supply chain, from manufacturing, logistics and transport, right through to the way the end user keeps track of what they have in stock and places orders.

“Technology such as the Internet of Things, artificial intelligence and blockchains can be used to digitise ordering, inventories, stocktake, manage risks, and automate the compliance, quality and safety system.

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“They can track the amount of a product being used today and predict how much of the product will be needed next week, and they remove the possibility for human error.

“There will always be unforeseen circumstances – such as the onset of a pandemic – but digitisation will result in more robust and resilient supply chains in the long run.”

Today, Macquarie University is hosting an online roundtable on critical supply chains, which will be attended by the Vice Chancellor, S. Bruce Downton, the Minister for Customer Service and Member for Ryde, the Hon. Victor Dominello MP, and a number of government and industry representatives.

Macquarie University Hospital CEO Walter Kmet will chair the event, which includes two sessions to discuss what a roadmap for improved critical supply chains might look like, and how technologies like IoT, artificial intelligence and blockchains might assist.

The sessions will explore the real issues for health organisations and the impacts of supply chain in the post-pandemic era, the benefits of adopting better supply chain management methods, and the flow-on benefits of these new technologies being applied to healthcare organisations more broadly.

“If it was not already apparent, the COVID-19 pandemic has demonstrated the importance of responsive and flexible supply chains,” Mr Kmet said.

“Planning to potentially activate system resources, particularly those that can respond regionally or locally, is needed well in advance.

“The critical skill that healthcare organisations can benefit from is the ability to build effective partnerships, often across traditional boundaries that can see us in competition mode.

“Some important developments have come out of the COVID-19 era, and these are a good starting point, further building on the work we have already done around integrated care.”

[Learn more about the Critical Supply Chain CRC](#)

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