

'A catalyst for revolution': Launch of Thrive looks to safeguard public health



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Brisbane is positioned to become the global hub for healthy buildings with today's launch of [the ARC Training Centre for Advanced Building Systems against Airborne Infection Transmission \(Thrive\)](#).

Officially hosted by QUT, the \$5 million training centre is working to design and develop a building system that reduces indoor airborne infection transmission by improving indoor air quality while maintaining comfort and energy efficiency.

Heading up the centre is QUT [Distinguished Professor Lidia Morawska](#) who is recognised as one of the world's foremost authorities in atmospheric, aerosol and exposure science in the context of building infection transmission.



From left: Professor Zoran Ristovski, QUT Vice-Chancellor Professor Margaret Sheil, Professor Lidia Morawska, Acting CEO of ARC Dr Richard Johnson and Assistant Minister for Education Anthony Chisholm at the opening of the ARC Training Centre for Advanced Building Systems against Airborne Infection Transmission Thrive.

“Every drop of water we drink and every piece of food we put in our mouth is highly regulated – yet the indoor air, which we take into our lungs 12 times a minute, is not regulated at all,” Professor Morawska said.

“I firmly believe the centre will be a catalyst for revolution and bring us closer to clean indoor air becoming the norm. This work has the potential to touch billions of lives in the next decade by enhancing safety from airborne transmission of infections in indoor spaces.”

While complex buildings normally have a building management or automation system that may use integrated sensors, these systems are not yet sufficiently advanced to support clean indoor air.

The purpose and novelty of Thrive, Professor Morawska said, will be to bring together a body of interdisciplinary academic and industry experts to advance the design of a sophisticated system that can future-proof our built environments from potential epidemics.

“You can think of that system as a brain within a building that supports its operation, and a network of nerves and sensors that provide information and allow control of its operation to ensure clean indoor air with minimal energy consumption,” Professor Morawska said.

Furthermore, Thrive will work towards building improved technologies, quantitative methods for building control, evidence for policymaking and recommendations for operational guidelines.

The centre includes international experts and partners from Australia, USA, Italy, China, The Netherlands, New Zealand, and Sweden.

University collaborators include QUT, University of Melbourne, University of New South Wales, Jinan University, Peking University, University of Cassino and Southern Lazio, and the University of Surrey.

“The need for change is clear, but the political, commercial, and social will to do so has not occurred organically. In some circumstances, we need rules and regulations imposed to ensure a better quality of life and it has become clear that indoor air quality is one of those,” Professor Jason Monty, Head of Mechanical Engineering at the University of Melbourne, said.

“Thrive is a critical vehicle for Australia that will build on lessons learned from the COVID-19 pandemic to show the world how we can breathe better indoors.”

Industry partners include Aerosol Devices, AREMA, Aspen Medical, AIRAH, BULCS Holdings, Mycotec, Philips Domestic Appliances, QED Environmental Services, Samsung, Trane Technologies, Fraunhofer WKI, Blue IoT, VASciences, Mote Ltd, and WHP Architects.



QUT Distinguished Professor Lidia Morawska at the opening of the ARC Training Centre for Advanced Building Systems against Airborne Infection Transmission, Thrive.

Dr Heike Neumeister-Kemp, CEO and Principal Mycologist of Mycotec, aims to raise awareness about the critical importance of eliminating mould from buildings and HVAC systems.

“Our efforts are focused on lobbying for the establishment of Australian mould threshold levels, which would set clear standards for acceptable mould concentrations. By doing so, we hope to protect public health, particularly in indoor environments where people spend the majority of their time,” she said.

Zubin Varghese, Senior Director at Trane Technologies, works to bring efficient and sustainable climate solutions to buildings, homes and transportation.

“Through our partnership with Thrive, we hope to help set worldwide standards on indoor air quality and identify strategies to improve standards in commercial and industrial buildings while reducing energy intensity,” he said.



Professor Morawska in the new Thrive laboratory.

In 2021, [Professor Morawska was named in the 2021 TIME100](#) as one of the 100 most influential people in the world for her leadership role in alerting the global community to the aerosolization of the COVID-19 virus as a means of indoor spread.

Her many previous accolades include receiving the prestigious [2023 L'Oréal-UNESCO for Women in Science Laureate for Asia and the Pacific](#). Earlier this year she was elected as a member of the [American Academy of Arts and Sciences](#).

The ARC Training Centre for Advanced Building Systems Against Airborne Infection Transmission (Thrive) is funded by the Australian Government and industry partners through the [Australian Research Council Industrial Transformation Training Centre Program](#).

Main image: QUT Distinguished Professor Lidia Morawska at the launch of [the ARC Training Centre for Advanced Building Systems against Airborne Infection Transmission \(Thrive\)](#).

Media contact:

Lauren Baxter, 07 3138 3984, lauren.baxter@qut.edu.au

After hours: 0407 585 901, media@qut.edu.au

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