

International Impact:

New Zealand research on the global stage.

The AETP program, "Electrifying Large Scale Transportation", is a collaboration between internationally recognised research groups across New Zealand. As well as developing capability within New Zealand, the programme aims to generate tangible impact on the global stage. Working together and individually, the programme participants are achieving real results through strong international connections in industry and academia. Examples of note include:

AIRBUS UpNext collaboration

A highlight of 2025 was a visit from AIRBUS UpNext personnel, who travelled to Auckland, Wellington and Christchurch to meet the program teams. We were able to showcase technology advances relevant to future electric aircraft and at the same time gain valuable insights into the AIRBUS vision for electric flight. In order to accelerate the development of technologies that will be needed in larger electric aircraft, they are clear that scale is key. So while the UpNext team is working to deliver their own demonstrator motors for electric aircraft, they are also actively supporting research and capability-building at select organisations worldwide.

These discussions have already led to the University of Auckland and Robinson Research Institute being introduced to new networks in the European electric aviation sector, with the goal of attracting overseas research funding to further expand our capabilities.

International superconductor manufacturing connections

The AETP program is focused on applications for superconductors and cryo-electric systems and because of this we have generated strong interest internationally with the companies that manufacture components for these systems. Robinson Research Institute has worked with USA companies, such as Hypertech and Solid Material Solutions, that are developing new superconductor wires focused on aviation applications, and we have published joint research papers with each. Other wire companies and research consortia from Europe, the USA and Korea have actively sought out Robinson's expertise. These projects will take the world closer to

electrification of aviation and we are anticipating that these will develop into success stories for commercialisation of New Zealand generated IP. Other international industry connections that we have made due to our research outputs have led to contract research proposals for projects in fusion energy and land transport.

The University of Canterbury's new Cryo-lab has seen similar international interest in the cryogenic engineering capabilities that they have been able to showcase as they publish numerous papers on their research outputs from AETP. Recent approaches from European companies seeking commercial engagements will allow them to expand the team's already impressive track record in delivering real industrial solutions. This boost in profile is a direct result of U.C. Cryolab's work in the program and their presence at international forums on superconductivity and cryogenics.

All of these international industry connections and collaborations create tangible opportunities for commercial benefit to New Zealand. This could be via direct licensing of technology, know-how and contracted research funds, but it can also provide opportunities for our local industry partners to connect at an early stage with new product development programs outside New Zealand.