

New Zealand Aerospace Summit 2026

Informing Key Insights,
Implications and Next Steps
to the South Canterbury
Aerospace Strategy Group



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Key Insights, Implications and Next Steps

New Zealand companies are already delivering high-value technologies and services to international customers

Across two days, international delegates, industry leaders and sector enablers gathered in Ōtautahi Christchurch to share insights on the next frontier of aerospace and space, challenge ideas, celebrate success and consider what comes next for the sector.

For the South Canterbury Aerospace Strategy Group, the Summit provided an opportunity to step outside our region, understand the direction of the national and international sector, and consider what this means for South Canterbury.

This report captures some of the key observations from the Summit and, importantly, begins the conversation about where we go next as a region. It builds on the capability work already undertaken by the South Canterbury Aerospace Strategy Group, which has mapped the businesses, infrastructure, skills and supporting capability that exists across the region.

The capability map gives us a starting point. The Summit has provided further context around where the sector is heading and where demand may emerge. As the sector develops and our understanding of the opportunities becomes clearer, we will continue to refine our view of where South Canterbury can add genuine value.

The intention is not to replicate capability that already exists elsewhere in New Zealand, but to understand where our existing strengths can connect into the wider aerospace ecosystem and where there may be opportunities to build new capability.



South Canterbury has already established a foundation of capability, relationships and collaboration through the work of the Strategy Group.

The Summit has provided a broader view of where the sector is heading and the commercial opportunities emerging from that growth.

The next step is to bring those two pieces together.

Our capability mapping tells us what we have.

The wider aerospace sector is showing us where demand is developing.

The opportunity for the South Canterbury Aerospace Strategy Group is to bring these together and identify where there is a strong fit.

This will be an ongoing process. As the sector develops and our understanding improves, we can continue to refine our capability map, strengthen connections and identify opportunities where South Canterbury can add genuine value.

The opportunity now is for the Strategy Group to consider what we have learned, test it against our existing capability mapping and collectively determine where South Canterbury has the strongest opportunity to contribute, where we need to build capability, and where we should focus our connections and effort next.



Key Highlights

1. Aerospace is an established New Zealand industry with global reach

A clear message from the Summit was that aerospace is no longer an emerging sector for New Zealand. New Zealand companies are already delivering high-value technologies and services to international customers, with applications across health technology, surveillance, communications, aerial imaging and data.

The opportunity is increasingly about moving from innovation to commercial scale.

A consistent theme throughout the Summit was that New Zealand does not necessarily need to compete on volume. Our strength is in high-value, specialised innovation – developing technologies that solve real problems, proving them here and then taking them to global markets.

This creates opportunities well beyond the companies' developing aircraft, spacecraft or satellites themselves. Aerospace relies on a much wider ecosystem of engineering, advanced manufacturing, electronics, software, materials, testing, logistics and specialist services.

2. New Zealand companies are moving from innovation into global commercial markets

The Summit showcased a growing number of New Zealand companies that have moved beyond research and development into products and services being adopted internationally.

This changes the economic opportunity. These companies are building commercial revenue, attracting international investment, creating highly skilled jobs and developing products that can be sold repeatedly into global markets.

Dawn Aerospace is a strong example.



3. Commercial access to space is creating new markets

Reusable space vehicles, propulsion systems and in-orbit refuelling are creating new opportunities for businesses to use space as part of their research, development and commercial activities.

The development of high-frequency, reusable space transportation means customer payloads can be transported to space more regularly. This opens opportunities across scientific research, pharmaceutical development, manufacturing, defence and other commercial applications.

The work of Dr Sarah Kessans and the University of Canterbury provides a strong Canterbury example of this emerging model.

4. Growth requires capability, connections and people

A strong theme throughout the Summit was the challenge of supporting growth with the skills and capability required to deliver it.

As New Zealand aerospace companies grow into international markets, workforce availability, specialist skills, supply chains and collaboration between industry, research and education will become increasingly important.

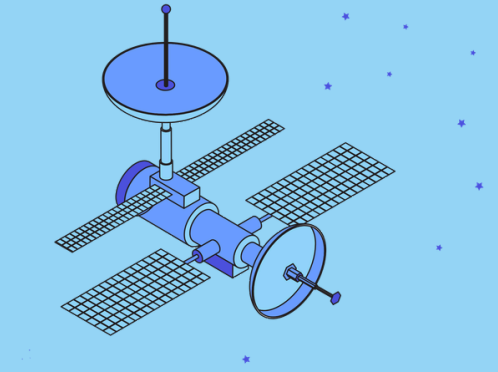
For South Canterbury, this reinforces the value of understanding our existing capability and how it can connect into the wider aerospace ecosystem.



What we heard

Dawn Aerospace

From high-value innovation to global commercial scale.



Dawn Aerospace provides one of the clearest examples of how New Zealand aerospace innovation is moving from technology development into commercial scale.

Dawn Aerospace is a space transportation company developing technologies that enable more frequent access to space and greater mobility once there.

The company is a leading supplier of turnkey nitrous oxide propulsion systems, using safe and accessible propellants. Its propulsion hardware is now operating on more than 50 spacecraft globally, with hundreds more in production.

Dawn is also developing Loop, its in-orbit refuelling network. The technology is being developed to allow spacecraft to refuel in orbit, manoeuvre more freely and remain operational for longer.

Alongside its propulsion and refuelling technology, Dawn is developing Aurora, a reusable suborbital spaceplane combining the performance of rocket propulsion with the rapid reusability of an aircraft.

Aurora has completed 64 test flights. Full-performance Aurora flights are expected to begin in 2027.

The company is targeting a significant milestone: Aurora is expected to become the first vehicle capable of flying above the Kármán line twice in a single day.

Dawn has a partnership with the State of Oklahoma to deliver this Mach 3.7 capability, with operations expected to begin in 2027 under a US\$17 million agreement.

The commercial opportunity

The significance of Aurora's reusable and high-frequency capability is the commercial access it creates.

Flying above the Kármán line twice in a day creates the ability to transport customer payloads to space on a regular basis. Customers can use the spaceplane for applications including microgravity research, atmospheric science, space technology development, manufacturing and defence-related activities.

This creates opportunities for businesses to use access to space as part of their own research, development and commercial activities.

Dawn's propulsion and refuelling technologies add another layer to this emerging commercial ecosystem. Spacecraft can be designed with the ability to refuel in orbit, extending their operational life and allowing them to manoeuvre and undertake additional missions.

Dawn is therefore developing a suite of technologies that support multiple stages of commercial space activity – propulsion, transportation, payload delivery and in-orbit servicing.

Global demand is driving growth

Dawn's international expansion demonstrates the global demand for these capabilities.

The company recently announced its expansion into Germany to support Germany's rapidly growing defence and national security space sectors.

Germany has committed €35 billion to space-related defence projects. Dawn's expansion responds to demand for propulsion for new surveillance and communications constellations, with existing domestic suppliers facing challenges in meeting the production scale required for high-volume defence procurement.

Dawn's technology provides defence primes and government partners with flight-proven propulsion systems and established production capability.

Dawn has also raised US\$25 million in Series B investment to accelerate the growth of programmes where the company has strong customer demand and confidence in its technology.

“As a cash-flow positive company, raising capital is about accelerating the growth of programs we have extremely high conviction in, and that our customers are desperate for,”

— Stefan Powell, CEO, Dawn Aerospace.

This provides a useful indicator of the commercial maturity being reached by New Zealand aerospace companies. Dawn is generating commercial revenue, responding to customer demand and investing in the international expansion of its technology.

Stefan Powell also reinforced at the Summit that Dawn will maintain a presence in New Zealand.



Founded in 2017,
Dawn Aerospace now operates
globally with more than 150
staff across the Netherlands,
France, Germany, New Zealand
and the United States.

[Learn more about Dawn Aerospace](#)

What we heard

Dr Sarah Kessans

From Space Technology to Commercial Applications

The work being undertaken by Associate Professor Sarah Kessans and the University of Canterbury provides a strong example of how new access to space can support commercial applications.

Dr Kessans and her team are developing technology to grow protein crystals in microgravity.

Protein crystallisation is important in understanding the structure of proteins involved in disease and can support the development of new medicines and treatments.

The team has received \$9.9 million in government funding to develop a fully automated protein crystallisation laboratory capable of operating in space. The project has been described as a world-first initiative and is designed to create a pathway towards pharmaceutical and biotechnology applications.

The research has already been taken to the International Space Station, and the next stage involves testing the technology using Dawn Aerospace's Aurora spaceplane. The longer-term opportunity is to provide pharmaceutical and biotechnology companies with access to microgravity as part of their research and drug-development programmes.

Dawn's reusable spaceplane provides the transport infrastructure that can make this type of research more frequent and commercially accessible.

This provides a clear pathway:

University research → aerospace technology → engineering → access to space → pharmaceutical and biotechnology applications.

A Canterbury Ecosystem

The Kessans project also demonstrates the collaborative nature of the Canterbury aerospace ecosystem.

University research, aerospace technology, engineering capability and commercial applications are being brought together around a common opportunity.

The University of Canterbury contributes scientific research and expertise. Dawn Aerospace provides space transportation technology. Canterbury engineering and

technology businesses contribute to developing and integrating the technology. The longer-term commercial opportunity is for pharmaceutical and biotechnology companies to use the resulting capability in drug research and development.

This model is helping establish Canterbury as a significant centre for New Zealand's space sector.

It demonstrates how the commercial value of aerospace extends across an ecosystem of research, engineering, manufacturing, electronics, software, testing, integration, logistics and specialist services.

For South Canterbury, this provides a useful example of the connections we need to understand and develop.



MachineCraft Precision Engineering, Timaru

Commissioned by Asteria Engineering, Andrew Geddes of MachineCraft machined the front panels for the payload box pictured above, which will carry the payload to space aboard Dawn Aerospace's Aurora next year. The payload supports Dr Sarah Kessans' research into producing proteins in space, highlighting the collaboration between South Canterbury engineering capability and Canterbury's growing aerospace and research sector.

“In microgravity, you get much bigger, much higher quality, more perfect protein crystals,” says Associate Professor Kessans. “If we can get better crystals, we can get better protein structures and design and develop better drugs.”.

[Learn more bout this world first application](#)



What we heard

Workforce Capability

Growth brings a workforce challenge

One of the strongest conversations throughout the Summit was not simply how to grow aerospace, but how to prepare for growth.

New Zealand companies are experiencing increasing demand, while the country faces an ageing workforce and declining birth rates.

Access to skilled people will be an important factor in determining how quickly companies can scale.

This challenge extends across aerospace, advanced manufacturing, engineering, technology and other high-productivity industries.

South Canterbury already has experience in developing capability around strong local industries. Our agriculture and manufacturing sectors demonstrate the value of businesses, education providers and other organisations working together to develop skills and supply chains.

There are already examples of this approach emerging nationally. The AMA Earn as You Learn programme brings together education and industry to create practical pathways into manufacturing. Canterbury's first cohort is due to begin next year through a partnership between Ara and local manufacturing businesses.

These types of partnerships provide useful models for developing the workforce required to support future growth.



What does this mean for South Canterbury?

The opportunity is to understand where South Canterbury has a genuine point of difference and where our existing capability can contribute to the wider aerospace supply chain.

Where is our place to play?

The answer is unlikely to be about trying to replicate the capability already developing in Christchurch or elsewhere in New Zealand.

Instead, the opportunity is to understand where South Canterbury has a genuine point of difference and where our existing capability can contribute to the wider aerospace supply chain.

South Canterbury already has a range of capabilities that can contribute to the wider aerospace ecosystem.

Our capability mapping has identified businesses and infrastructure across areas including:

- ✓ advanced and precision manufacturing
- ✓ engineering
- ✓ aviation
- ✓ automation
- ✓ electronics and technology
- ✓ agricultural technology
- ✓ specialist services
- ✓ testing and integration
- ✓ supporting infrastructure and logistics.

We also have strong connections between agriculture, manufacturing and engineering, creating opportunities to apply existing knowledge and capability to new markets.

The emerging aerospace and space economy provides another potential market for these capabilities.

As the sector grows, opportunities may emerge through supply chains, specialist manufacturing, engineering, testing, technology, research and applications of aerospace technology across other industries.

The examples from Dawn Aerospace and the University of Canterbury demonstrate how interconnected these opportunities can become.

Aerospace technology creates new possibilities for research.

Research creates new commercial applications.

Commercial applications create demand for engineering, manufacturing and specialist services.

This is the wider ecosystem that South Canterbury needs to understand and connect into.

Our capability map should therefore be viewed as a living piece of work.

It provides a picture of where we are today, but it will continue to evolve as we learn more about the requirements of the aerospace sector, understand emerging opportunities and identify where South Canterbury can provide genuine value.

The Summit has given us further information to test against our existing capability.

Continuing to Refine Our Capability

The capability mapping undertaken by the South Canterbury Aerospace Strategy Group provides an important starting point for this work.

The Summit has given us further information to test against that mapping.

As we learn more about the requirements of aerospace companies, emerging supply chains and future applications, we should continue to refine our understanding of where South Canterbury can add value.

This includes identifying:

- ✓ capabilities that already have a clear application in aerospace
- ✓ capabilities that could be adapted for aerospace applications
- ✓ businesses that could connect into emerging supply chains
- ✓ areas where collaboration could create new opportunities
- ✓ skills and infrastructure that may be required as the sector develops
- ✓ gaps where further capability development could strengthen our position.

The capability map should continue to evolve alongside our understanding of the sector.

What should we explore next?

The Summit does not give us a definitive answer about where South Canterbury should focus, but it does provide a clearer picture of the direction of the sector and some useful questions for the Strategy Group to work through.

Our next phase should therefore focus on testing our existing capability against the opportunities and requirements emerging from the national and international aerospace sector.

The Summit provides useful information, but the next steps need to be informed collectively by the South Canterbury Aerospace Strategy Group.

The following areas provide a starting point for that discussion.

1. Refine our capability map

Continue developing the capability mapping already completed, testing it against the requirements and opportunities emerging from the national and international aerospace sector.

As our understanding of the sector develops, we can refine the map to distinguish between capability that is immediately relevant to aerospace, capability that could be adapted for aerospace applications, and capability where further development may be required.

2. Identify where South Canterbury can add value

Determine the areas where our existing businesses, infrastructure, skills and knowledge provide the strongest opportunities to contribute to aerospace supply chains and applications.

This could include specialist manufacturing, precision engineering, testing, integration, aviation capability, agricultural applications, data, automation or other areas identified through the cluster's work.

3. Build connections into the wider aerospace ecosystem

Continue strengthening relationships with Christchurch and Canterbury aerospace companies, universities, research organisations, education providers, national sector organisations and potential customers.

These connections will help us understand where demand is emerging and where South Canterbury businesses may be able to participate

4. Explore supply-chain opportunities

Identify where local businesses could provide manufacturing, engineering, components, technology, testing, integration or specialist services to companies operating in the aerospace sector.

5. Consider future applications

Explore how aerospace technology could connect with South Canterbury's existing strengths in agriculture, food production, manufacturing, engineering and other industries.

6. Understand the workforce requirements

Consider the skills required to support future aerospace participation and how industry, education providers and businesses can work together to develop those skills.

7. Continue to test and refine our direction

The aerospace sector is developing quickly. Our approach should remain responsive as new technologies, markets, customers and supply-chain opportunities emerge.

The Strategy Group can continue to test our assumptions, update the capability map and refine where we believe South Canterbury has the strongest opportunity to contribute.



Scott Spooner, SPS Automation NZ Aerospace Summit Panelist

Who is in control? Humans, automation and autonomous aircraft. Scott Spooner joined panellists Peter Johnson of Composites NZ, Dr Isaac Henderson of DroneShows, Catherine MacGowan from the Civil Aviation Authority and Air Commodore Andy Scott of the NZ Defence Force to explore a fundamental question facing aviation as autonomous systems move from experiment to everyday operation: where does human judgement end?





The group is pictured with Mark Rocket, CEO and Company Director of Kea Aerospace

Canterbury Aerospace Business Tours

Andrew Geddes and Tania Stoddart joined UK and US delegates for a Christchurch Aerospace Business Tour, led by ChristchurchNZ Aerospace Lead Emma Renowden, who is driving the strategy to establish Christchurch as New Zealand's aerospace hub. The group visited established companies at the forefront of aerospace innovation, including Dawn Aerospace, Kea Aerospace, Fabrum and Argus Manufacturing, alongside the University of Canterbury.

From the earliest powered flight experiments to autonomous drones, reusable spaceplane testing grounds and precision aerospace manufacturing, our region continues to provide the environment, expertise and pioneering mindset to help shape the future of flight.

Find out more about the
South Canterbury Aerospace
Strategy Group

