Supernode

Aerospace and Future Transport

NEW ZEALAND EDUCATION | ThinkNew

Workshop Summary
11th July 2019

ChristchurchNZ™

The Challenge

How might Christchurch crystallise around key growth areas to lead in talent, innovation and business attraction?

Our Approach

Our aim is to define the global talent areas Christchurch and Canterbury can best compete in.

Augmenting our Natural Strengths

To succeed we need to take a cohesive approach. Strong connections between Education, Industry and Government is necessary to augment our market opportunity at a global scale.

The Opportunity

$100M - $1 Billion

ESTIMATED ECONOMIC IMPACT

With our open airspace and land-transport innovation Christchurch becomes an international centre, supporting niche industries through ease of prototyping and launch activity.

The global Space industry has a growing value of $360 Billion GDP.

New technologies lowering barriers to entry significantly. Demand for space and satellite services growing rapidly - driven by digital transformation and IoT. Transportation is undergoing a dynamic shift from fossil fuels to renewables.

Now more private sector driven than public.

Executive Summary

Christchurch & Canterbury represents a very unique opportunity in terms of its geography, mix of manufacturing, tech and engineering expertise and strong emergent community actively unpacking the potential of Aerospace and Future Transport (AFT).

Gill Dal Din
Business Attraction & Commercialisation Manager
ChristchurchNZ

Christchurch Future Transport and Aerospace niche global opportunities:

1. Testing ground / Launch site

Building on our geography, airspace and regulatory environment, Christchurch becomes a prototyping and R&D test ground for global AFT innovation.

2. Cube Sats and low payload, low orbit innovation

With an integrated R&D platform and launch site, existing manufacturing, engineering and technology companies can service a growing Cube Sats industry.

3. Satellite industry

Capability spans manufacture, propulsion, guidance navigation systems, data science, and AI.

4. Research and Development

Health space medicine, remote environment living (psychology), synthetic biology, rocket technology and propulsion and guidance systems.

5. Electric Vehicles Land, Sea, Air

Our access to renewable hydro energy coupled with carbon neutral policies taking effect globally positions Christchurch as a potential R&D Hub for EV technologies.

Executive Summary

The Christchurch Advantage:

- An Aerospace facing University with 20% of Engineering graduates, plus a world leading land based University and ITP with strength in Mechanical Engineering
- Strengths in manufacturing, engineering and tech businesses with the ability to pivot for the emergent market
- Highly collaborative, high trust business community that provides conditions for successful partnerships and JV's
- Flat land, flat grid city, highly flexible with many entry/exits for automation test beds
- Clear skies for testing
- Offers rapid prototyping of low orbit innovations
- Advantages with CAA regulations provides global innovators the ability to move faster in Christchurch than anywhere else in the world
- Christchurch represents the ultimate mix of environment, regulations, expertise and attitude to be a world class player in high volume, small payload launches.
- High end niche service offering for mission critical innovation
- Christchurch's access to clean hydroelectricity positions us as a green choice for electric mobility innovation, supporting the exponential electric vehicle industry.

Future needs and skills to support the industry:

- Talent practical vocational skills required in areas of high value fabrication, electronics, mechatronics and additive manufacturing
- It was suggested that data literacy is as vital as learning a second language
- Computer and Data Science skills required
- Manufacturing Industry 4.0 Skills more capability required to transform current manufacturing industry and enable a pivot towards AFT
- It was put forth that an Aerospace dedicated tech lab/hub facility that provides platform for talent and entrepreneurs to hone their skills,
- experiment and prototype will drive growth opportunities
- Get students on the job mid tertiary internships, work focused projects, sponsorship and graduate programmes are needed

Executive Summary

Formalising learning pathways:

- Learning needs to be integrated with industry more opportunities for industry to communicate their needs and problems, so education can create programmes that explore relevant solutions.
- Create internship opportunities integrated throughout all study, not just towards end of tertiary study
- Vocational training needs to be more hands on. Qualified technicians are in high demand.
- Cultural and gender inclusion needs to be front and centre
- There is a need for more pathways to Data Science

Attraction Channels & Telling the Story:

- Need to communicate globally of the ease to do business in Christchurch and NZ
- A strong AFT proposition can position Christchurch as a forward thinking city shaping the future
- Create an Industry focused VISA / Scholarship package up competitive scholarships that attract the best global talent into key focus areas
- Focus on niche
- Greenfield being part of something new may be attractive to entrepreneurs, and being small can be an advantage especially for disruptive technologies
- By aligning immigration, employment opportunity, lifestyle and R&D funding, the AFT Supernode package has potential to be a strong global attraction channel for high value human capital.

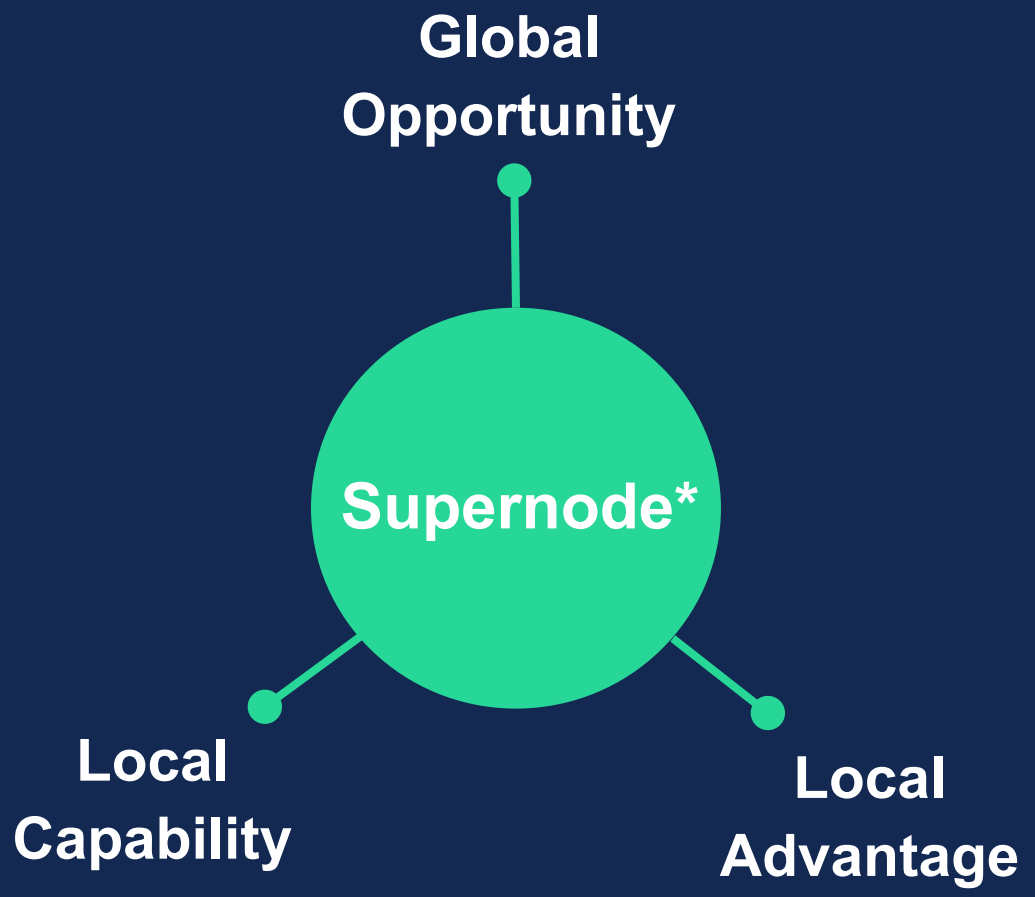
Introduction

Critical to maintaining the momentum of the regeneration of the city we've initiated a process of alignment between education, enterprise and government that stimulates future innovation within key focus areas.

As we enter the Fourth Industrial Revolution, and with it a rapid rate of technological change, our objective is to define primary focus areas that Christchurch can genuinely own in the **global economy.**

***The definition of a Supernode** is a highly connected and active zone within a global network.

In order to remain competitive in the global talent market, we recognise that we need to leverage the strength of key established industries by creating more opportunities of engagement for fresh, innovative and technically capable talent who are connected to a wider innovative community.



Activating Supernodes for concentrated growth

ChristchurchNZ™

Globalisation 4.0, powered by Industry 4.0, is a digitally connected economy where cities across the world compete to develop, attract, and more importantly retain high-value industry.

Many cities and countries around the world are defining and promoting their natural strengths in the global economy.

Our aim is to grow the Christchurch economy by activating and supporting a range of globally recognised, yet locally relevant Supernode communities.

Canada: Superclusters

A five year investment to support business-led innovation superclusters that have potential to build world-leading innovation ecosystems.

Utah: Industry Clusters

Utah works to create sustainable advantages around emerging (and mature) sectors by combining and aligning a wide variety of business interests.

Eindhoven: Brainport

Brainport is a hub for solutions to some of the big issues that the EU faces today in the areas of health, mobility, energy, food and safety.

Supernode Model

Four Supernodes have been identified as strategic growth areas, with Hi-Tech Services acting as an enabler and the lenses on the left.

Tikanga Māori

Sustainable Prosperity

Exploration and Unity

Workshop Process

Aerospace & Future Transport

The objective of the Supernode initiative is to establish inter-disciplinary communities of practice around strategic growth areas in the Canterbury economy.

The objective of the discovery workshop was to unpack the current dynamic at play that could either accelerate or stagnate the attraction and creation of talent and business into our economy – including;

- Skills & capability building
- Learning Pathways
- Attraction Channels
- Global Opportunity

SUPERNODE AMBITION

Overview of the current trends within our economy and why we must focus on collaborative Supernodes.

FUTURE GROWTH & ATTRACTION

Unpack the current areas of focus in the Supernode to understand needs in terms of igniting human potential and attracting the best talent.

ULTIMATE OPPORTUNITY

Apply some thinking around a potential growth area using the Supernode Canvas to further understand the Ultimate Opportunity.

BUSINESS CASE

Apply an action plan to the Ultimate Opportunities in the short, medium and long-term, creating a 10 year Supernode roadmap.

1. Future Growth

Christchurch represents a very unique opportunity in terms of its geography, mix of manufacturing, tech and engineering expertise and strong emergent community actively unpacking the potential of Aerospace and Future Transport (AFT).

Key Takeaways:

- The potential of the sector lies in current strong collaborations between industry, education and government to work collaboratively, lowering barriers and create pathways
- Reinvigorate the capability of current manufacturing and tech businesses
- An integrated launch facility has high potential to stimulate innovation and attract global talent

#1

Testing ground / Launch site

Building on our geography, airspace and regulatory environment, Christchurch becomes a prototyping and R&D test ground for global AFT innovation.

#2

Cube Sats and low-payload, low orbit innovation

With a integrated R&D platform and launch site, existing manufacturing, engineering and technology companies can service a growing Cube Stats industry.

#3

Get Smarter with Data

Spatial data, satellite data and data analysis is the life-blood of industry 4.0. A data capable AFT industry has potential to create efficiencies in both transport and other industries, such as agriculture.

#4

Electric Vehicles - Land, Sea, Air

Our access to renewable hydro-energy coupled with carbon neutral policies taking effect globally positions Christchurch as a potential R&D Hub for EV technologies.

Other Insights

Growth of established players

Christchurch Engine Centre doubling in output over next two years, adding credibility to the sector.

Christchurch already ‘on the map’ nationally

The recent growth of the Aerospace community and the success of the Space Challenge has firmly set Christchurch’s future intentions to other regions.

1. Future Growth

Ideas & Insights

Diving deeper into the Future Growth insights some key messages emerged:

- Geographically Christchurch has a clear advantage over many other cities in terms of developing automated transport tech.
- The ability to offer rapid prototyping of low-orbit innovations relies heavily on our current CAA regulations. This regulatory advantage provides global innovators the ability to move faster in Christchurch than anywhere else in the world.

Set for Automation

Christchurch is a flat grid city, it is also highly flexible with many entry/exits (unlike Wtgn/Akld) - making it a great testing ground for automation research.

Find our Niche

Niche focus - supply chain, sensor components

Growth through partnership

Team-up young entrepreneurs, start-ups and researchers with established businesses in order to help them pivot towards Space tech.

Tell our success stories now

Start promoting Canterbury as a test destination, collecting the current success stories and promoting them.

An Integrated Offer

Establishing a full stack service including launch facility with access to prototyping and R&D.

Don't over regulate

No compromise on safety but accept risk

2. Skills & Capability

Growth in the Aerospace & Future Transport Supernode requires deep foundational knowledge in specialist areas across Science, Technology, Engineering and Maths.

Key Takeaways:

- Talent with practical vocational skills are needed especially in areas of high-value fabrication, electronics, mechatronics and additive manufacturing
- A common theme running through all Supernodes, is that data literacy should be considered as important as learning a second language.

#1

Computer and Data Science

More expertise in applied data science and analysis, machine learning and firmware development has potential to unlock multiple niche business opportunities.

#2

Manufacturing - Industry 4.0 Skills

More capability require to transform current manufacturing industry and enable a pivot towards AFT. Additive manufacturing, automation, IoT, mechatronics.

#3

A dedicated tech lab/hub facility

Creating a central AFT tech lab that provides platform for talent and entrepreneurs to hone their skills, experiment and prototype.

#4

Global future mindset

Improve mindset - non-competitive, make it Christchurch vs the World. Create and attract future orientated, collaborative talent and shift thinking from our current small town mindset.

Other Insights

Ability to work in complex teams

Most space opportunities require collaboration within a multi-disciplined teams.

Start aspirations young

Start educating people about aerospace earlier (age 12-13). There are number of well established STEM programmes to inspire youth.

Get them on the Job Faster

Through Mid-tertiary internships, work focused projects, sponsorship, graduate programmes.

2. Skills & Capability

Ideas & Insights

An active and resourced hub or space to capture and share the network of knowledge is a common thread amongst many comments.

- Creating a collaborative Prototyping and Innovation Hub, that embodies the needs of the wider AFT community.
- The perception is that UC is the go-to place for engineering and science, however industry need Ara to generate more, practical, hands-on technicians to fill their talent gaps.

More Technicians

Vocational training needs to lift their game to get more experienced technicians in the pipeline

Prototyping Lab

Trial Lab based on Gym Model

Grow Community

Sense of community, through meet-ups, hackathons for innovation - A Hub

The multiplier effect

Each aerospace tech job requires 10-20 other jobs to be created

Foster Lateral Thinking

Entrepreneurs, lateral thinking, and implementation

Streamline compliance

A streamlined regulation process to assess and practice community assurance

3. Learning Pathways

The AFT Supernode has established a strong network to encourage informal knowledge flows, the next stage is to formalise requirements into curriculum, work integrated learning, industry & tertiary partnerships and STEM pathways.

Key Takeaways:

- The interface between Industry and Tertiaries needs to be more fluid and transparent in order to adapt more rapidly.
- Pathways need to be reflective of various cultural lenses to foster inclusion and diversity.

#1

Learning integrated with industry

More opportunities for industry to communicate their needs and problems, so education can create programmes that explore relevant solutions.

#2

Create Internship Opportunities

Rather than internship opportunities happening towards the end of study, make them an integrated throughout all study. Industry focused activity, sponsorship, graduate programmes.

#3

Vocational training - more hands on

Qualified technicians are in high demand. The perception of vocational training needs a lift in order to create a wider pipeline to fill the skills shortage.

#4

Cultural and gender inclusion

In order for Christchurch to work more effectively in a connected global community like aerospace, inclusion and diversity is a fundamental.

Other Insights

Pathways to Data Science

Across all Supernodes, pathways to Data Science is a key growth area. Data is the new currency.

Transition Facilitators

With the right stimulus, many existing businesses and workers could pivot towards AFT fields. Dedicated transition partners could help lower the perceived risks.

3. Learning Pathways

Ideas & Insights

Many of the pathways suggested led to the concept of a Space Centre or Hub that promote multi-disciplinary collaboration. It also has potential to showcase the industry acting as an engagement platform.

- Creating opportunity to collaborate and learn, with high-end equipment and technologies.
- Playing the long game and engaging with students young with STEM needs an upskilling of careers advisors and influencers.

STEM Centre

Tertiaries need to collaborate around dedicated STEM centres eg. science & research centre

Innovation Hub

Aerospace Hub - Data, engineering, robotics, health, business prototyping

Collaborative Culture

Break anti-collaborative environment - we should not compete amongst ourselves

Promote International Collaborations

International collaborations - university, industry, student exchange

Education & Industry

More integration of industry needs in this area with tertiary education, and earlier.

Work on Careers Advisors

Improve school level careers guidance into tertiary education

4. Attraction Channels

It has been established that the AFT Supernode has growth potential. But how do we tell this to the world when it's currently in an emergent state?

Key Takeaways:

- Need to communicate to outside companies how easy it is to do business, process and startup activities in Christchurch.
- A strong AFT proposition can position Christchurch as a forward thinking city - shaping the future.
- Being small and new can be an advantage – especially for disruptive technologies

#1

Tell our story

Even in its current emergent state, AFT has many stories to tell. Publicity channels need creating and managing to put Christchurch AFT innovation on the global radar.

#2

Industry focused VISA / Scholarship

The AFT Supernode has the opportunity to package up competitive scholarships that attract the best global talent into key focus areas. Model on EHF.

#3

Small is Good

Our small size reduces the degrees of separation when it comes to finding the expertise or advice. A small networked community working on global opportunities.

#4

Focus on Niche

By establishing global strengths in a small number of niche areas, Christchurch can create a reputation as a specialised place to study or create business.

Other Insights

Spaceport - Unified Approach

By aligning tertiary courses, industry activity and government incentives all channels can communicate a common purpose

Greenfield - being part of something new

The AFT opportunity is relatively new for Christchurch and Canterbury. This greenfields opportunity may be attractive to entrepreneurs.

4. Attraction Channels

Ideas & Insights

An integrated communication, attraction and conversion plan between all stakeholder – Industry, Education and Government.

- By aligning immigration, employment opportunity, lifestyle and R&D funding, the AFT Supernode package has potential to be a strong global attraction channel for high-value human capital.
- Initiatives, such as funding collaborative projects will help bridge gaps and be a more efficient use of limited resources

Get on the same page

A coordinated policy rather than isolated development (universities)

Fund collaborations

Project funding for students, innovators, researchers

Align Immigration

Sort immigration policy that supports this development

International Student Employment

Universities - Career path, demonstrate an employment outcome

Build on Global leaders

Environment scan: Who are our globally leading tech companies? How can we leverage

Unmatched Lifestyle

Ease of access to a diverse range of activities - mountains beaches, forests, plains

Supernode Canvas

Exploring preferred futures with the Supernode Canvas

The Supernode initiative has been based on six key growth criteria. This criteria forms the base of the Supernode Canvas.

1. **Ultimate Opportunity**
2. **Global Growth Potential**
3. **Current Local Capability**
4. **Natural Local Advantage**
5. **Regulatory Support**
6. **Pragmatic Future**

Six groups explored the potential of an Ultimate Opportunity based on a global need. By focusing on a perceived opportunity, the insights are more practical and tangible. Groups were asked to then create action points along a timeline to prioritise the interventions needed to stimulate activity.

Why Christchurch?

Christchurch represents the ultimate mix of environment, regulations, expertise and attitude to be a world-class player in high-volume, small payload launches.

Ultimate Opportunity

Small payload applications and launch capability and data analysis.

Global Opportunity

Best geographic position, best regulatory environment, best engineering and innovation, best problems solving capability on the planet.

Which makes us the best place in the world for small payload applications and launch capability

Local Advantage

- Speedy regulatory environment
- Attractive location
- Cadence of Launch - clear airspace
- Testing opportunities
- Good problem solvers

Catalysts

- **Attract skills in:** Engineering (Mechanical, Electrical, software), Robotics, Data Science.
- **Incubator/Tech Lab** to develop market niches
- An **attractive immigration** policy
- **Education:** Aerospace engineers degrees / collaboration with Industry
- Grants for collaboration
- Collaboration with Universities in NZ and Overseas

Supernode Business Case

From launch facility to Spaceport

ULTIMATE OPPORTUNITY

Small payload applications and launch capability and data analysis

SHORT-TERM (1-4 YEARS)	MEDIUM-TERM (5-8 YEARS)	LONG-TERM (8-10 YEARS
Create a full package of support for companies / startups coming to Chch ie. database of contractors, local businesses, accommodation, facilities, shared offices, warehouses, liaison support with govt and local services, and universities	Hub: Shared facilities with warehouses, offices, CNC Machinery, plasma etc - Fabrication Machinery	**Christchurch Integrated Spaceport Offering**
Build / Develop small/medium test facilities with Air Space, launch site, facilities, office, power supply etc.	Large scale testing facility - expand	
Help with developing and funding intern / industrial experience between industry and tertiary institutions	Graduation for aerospace qualifications	
Start promoting Canterbury as a test destination, collecting the success stories and promote them		

Why Christchurch?

Depth of Manufacturing and Engineering resource

High-end niche service offering for mission critical innovation

Ultimate Opportunity

High-value manufacturing and services in aerospace.

Global Opportunity

Christchurch has an established hi-value engineering services sector and strong academic and research institutions can be repackaged to attract niche manufacturing and AFT R&D.

Local Advantage

Established Industry, Christchurch Engineering Centre, Unmatched engineering education (Graduating 1/3 of NZ's engineering students), Massive Tech Sector, NZ Brand – Security & Integrity, Strong academic and Research Institutions - UC, Ara, Lincoln

Catalysts

- Vocational and trades training and incentives and development
- Multi-cultural communication skills
- Trade Skills
- Capital availability - specifically larger investments

Supernode Business Case

From fragmented industries to integrated global offering.

ULTIMATE OPPORTUNITY

High-value manufacturing and services in aerospace.

SHORT-TERM (1-4 YEARS)	MEDIUM-TERM (5-8 YEARS)	LONG-TERM (8-10 YEARS
Engagement with education / Industry Networks	Establishing training needs and provide training opportunities	**Global space manufacturing and engineering hub.**
Snowballing of connecting industries	Internships, international and national	
Ensuring there are employment opportunities for graduates	Break mindset barrier	
Bolt onto existing engineering qualifications • Short Specific courses • Legal framesworks • Space engineering		
Funding and Partnerships with existing organisations		
Work experience for secondary students		
Engaging with agri-business to solve issues eg. climate change, droughts, drones to check pasture		

Why Christchurch?

Flat grid city, with open spaces and open air.
Easy regulatory environment
Access to institutions and manufacturing capability

Ultimate Opportunity

The global test environment for new transport and aerospace development.

Global Opportunity

A developed, safe country with supportive regulations and ease of set-up. Making the world know that Canterbury is the ideal and welcoming environment for aerospace/transport testing

Local Advantage

Supportive government regulatory bodies, open areas (eg redzone), variety of terrain close to the city, language, welcoming culture, close to 'Big City' facilities - university / polytech, first world support, manufacturing skills base.

Catalysts

- **R&D:** fund industry to develop intern projects and programmes with tertiaries
- **Inclusion:** Employment agencies need to accept 'non-Canterbury' candidates - Wellington does this well.
- **Promote** the success stories, not only rocket labs (ie Zephyr etc)

Supernode Business Case

From integrated land / air management to R&D test bed

ULTIMATE OPPORTUNITY

The Global test environment for new transport and aerospace development.

SHORT-TERM (1-4 YEARS)

Give Bexley Redzone to SHPG (Proving Ground)

Integrated land / air traffic management

Industry directory collaborating with training and education centres to connect with graduates

Full ride engineering scholarships regionally

Regional zero fees Polytech following Southland Model to encourage more vocational skills.

MEDIUM-TERM (5-8 YEARS)

Interface air & land UAV / CAV trials

Improve propulsion companies / technology

Attract a Giga Factory to Canterbury

LONG-TERM (8-10 YEARS

Spaceport Christchurch

Why Christchurch?

Christchurch's access to clean hydro electricity positions us as a green choice for electric mobility innovation, supporting to exponential electric vehicle industry.

Ultimate Opportunity

Develop a hub for electric engineering design, prototyping, and testing.

Global Opportunity

Meeting carbon credit targets internationally (sustainable SDG UN) by electrification of transport by 2030. Improving battery technology Create marketplace for low carbon energy storage tech etc. Development of carbon negative products

Local Advantage

- Cheap available, accessible clean green electricity
- Testing environment in extreme temperatures and with low population
- Space to expand - low population density.

Catalysts

- **STEM:** Mathematics, physics, project based learning. Effective vertical pathways from STEM courses to NZDE to BEngTech to BE
- **STEM projects** and competitions - electrical engineering - solar challenge. and other approaches to foster industry & Education collaboration.
- Develop skills for services charging and supply of electric vehicles
- Develop a **register of skills** for electric innovation startups
- Providing incentives for companies to fleet electrically

Supernode Business Case

From EV community to commercialised carbon neutral economy.

ULTIMATE OPPORTUNITY

Develop a hub for electric engineering design, prototyping, and testing.

SHORT-TERM (1-4 YEARS)

- Designing research around energy density / power
- Supportive competitions in the EV Space, eg EVolocity, drones, electric rockets
- Current audit of capacity in electrification industry
- Education business about UN SDG / 2030, to develop niches
- PR Campaign around engineering pathways into electrical engineering
- Start-up incubator on electric transport
- Develop modules in electrical engineering
- Package together industry and education with work integrated learning
- Positioning NZ as a place to prototype new electric transport tech

MEDIUM-TERM (5-8 YEARS)

- Measuring research around energy density / power
- Graduate outcomes need to be linked to skills needed for EV industry
- R&D support grants for innovative electric technologies in niches sectors
- Showcase industries that are achieving in the space and network / mentoring for business achieving outcomes
- Attract more foreign talent to Canterbury and integrating them into ecosystem
- Provide legal support for start-up ventures to commercialise their research.

LONG-TERM (8-10 YEARS

Meeting the needs of the carbon economy by 2030 commericalising research done on energy density

Why Christchurch?

Combining our international airport with an integrated launch facility, Christchurchurch could host space flights, coupled with star gazing and the Matariki narrative.

Ultimate Opportunity

Space Tourism for the wealthy

Global Opportunity

Action: Who is playing in this space and what are the challenges? How big is the opportunity? And what is the timeframe for it to mature?

Attract anchor partner.

Local Advantage

- Trusted International reputation - Not Corrupted, Safe
- Launch Capability / regulations
- Chch Airport
- Dark Skies
- Cultural: Matariki - sail the sea following the stars
- NGai Tahu Tourism
- Already a bucket list visitor attraction
- NZ = non-military = friendly

Catalysts

- Establish rocket launch control & skill base
- Security - International Law
- Established maintenance and servicing expertise
- Chemical Engineering to de-risk climate change - carbon neutral. Benzene alternative.
- Neutral, friendly, do good, social good, 100% pure and clean
- NASA SOFIA already in operation

Supernode Business Case

From gateway to the South to gateway to the Stars

ULTIMATE OPPORTUNITY

Space Tourism for the wealthy

SHORT-TERM (1-4 YEARS)

Market Research
Existing Stakeholders
Check Licensing
Validate opportunity and required investment

Full package opportunity:
Space Exploration
Observatories
Dark Skies
Flight
Matariki

Space Travel
Industry Hackathons Attract Youth

MEDIUM-TERM (5-8 YEARS)

Sign Deal with One Player

Space X, Virgin Alantic, Rocket Lab?

Build Infrastructure

Connect flights per flight path:
China, US, Europe

Sell Tickets

LONG-TERM (8-10 YEARS

Launch Christchurch Space Tourism

Other Opportunities

Global Opportunities

- Cube Sats: comms, internet, location, imagery
- Spacecraft data products
- Spacecraft debris monitoring
- Link education with pilot training
- Space data solutions for agritech
- Commercialise low-carbon / environmental goals
- Agriculture sector (customer / collaborations)
- High Inclination orbits

Why Christchurch?

- Applied problem solving (leverage Mindset & Collaboration)
- International Collaboration - for world market access (eg ESA)
- CAA & Performance based regulations
- Chch NZ / Location / Free Airspace / Low Population density / Climate and Local weather

SHORT-TERM (1-4 YEARS)

Market validation of the opportunity - what does the market actually need?

Assess local capability and collate

Incentives to attract business

Develop Space Industry attraction package

Test Site

Chch Space Strategy

MEDIUM-TERM (5-8 YEARS)

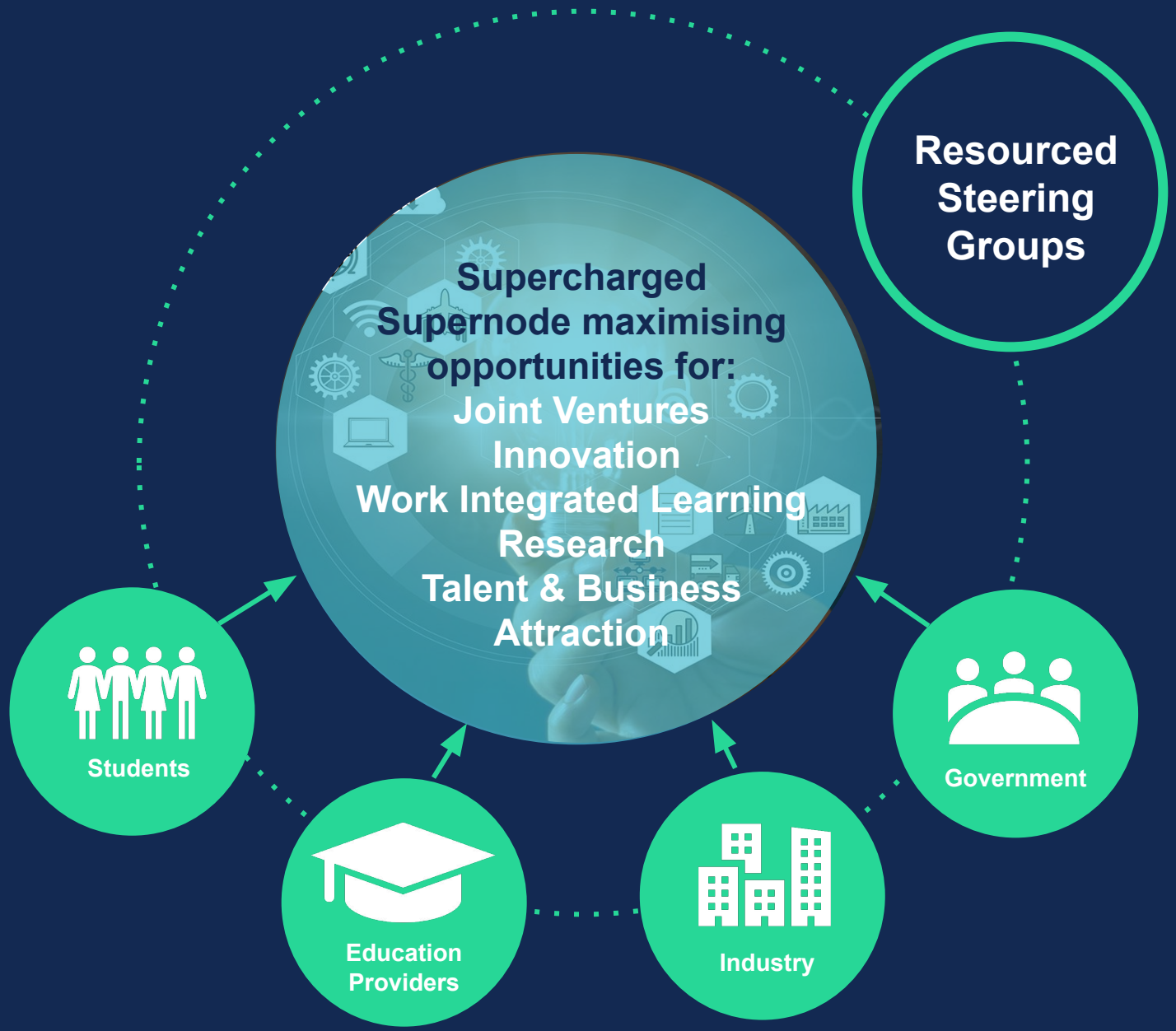
Continue building aerospace eco-system / network

Aerospace Incubator + Tech Lab (co-sharing)

100x aerospace businesses in chch

The Goal

An accessible and networked ecosystem to maximise opportunity for Christchurch & Canterbury



Next Steps

1 Insight & Definition

Supernode Workshops
Completed
Hi-tech Services
Food, Fibre & Agritech
Health Tech & resilient Communities
Aerospace & Future Transport

2 Cohesion & Connection

Educational Pathways
September -
Aligning education to the needs of industry

Steering Groups
September -
Establishing and supporting existing Supernode groups

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