

Christchurch's Antarctic Gateway Strategy



ANTARCTICA

Christchurch is one of only 5 green cities in the world of Antarctica. It has an important role in supporting and leading research on critical issues such as climate change, ozone protection and illegal fishing.

Both New Zealand and China are signatories to the Antarctic Treaty.

This festival was produced by the Antarctic Office, supporting Christchurch and New Zealand's role in protecting Antarctica and the Southern Ocean.



Scott Base (77.849°S 166.768°E) at Pram Point on Ross Island and Mt Erebus in the background. Photo: Fiona Shanhun 2017-18



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Cover photo: The Antarctica lantern, as part of the city's annual Chinese Lantern Festival, celebrates Christchurch as an Antarctic Gateway City and recognises New Zealand's and China's interests in Antarctica

Our vision is for **Christchurch to be an Antarctic city where we celebrate and realise the value of our gateway status** for the benefit of the city and the nation, for current and future generations.



USAF C-17 Globemaster III aircraft and LC-130 Hercules on the 'ramp' at Christchurch International Airport enroute to Antarctica. Photo: Peter McCarthy

Executive summary

The purpose of Christchurch's Antarctic Gateway strategy is to identify what it means to be one of only five Antarctic Gateway cities in the world, specifically:

- Opportunities for the city to realise greater economic, community, cultural, scientific and environmental value;
- The city's custodial responsibilities as a supporter of New Zealand's national Antarctic priorities; and a host and logistics hub for New Zealand's national Antarctic programme, Antarctica New Zealand;
- The city's additional custodial responsibilities particularly to the American, Italian and Korean national Antarctic programmes and also to other programmes which may use Christchurch as their gateway for Antarctic activities;
- The city's privileged position as the host of the International Council of Managers of National Antarctic Programs (COMNAP); and,
- Our city's vision, narrative and priorities.

The Christchurch Antarctic Gateway Strategy sits squarely within the context of New Zealand's Antarctic scientific, conservation and diplomatic priorities. An effective gateway city is an important asset in support of New Zealand's objectives, and realising the economic, environmental and community opportunities associated with the Antarctic region¹ at a city level can deliver wider benefits for the country as a whole.

Christchurch's strong manufacturing and technology industry base and rich tertiary offering means it is well placed to realise the education, research and business opportunities associated with the Antarctic region.

Our deep and authentic Antarctic heritage connection and current Antarctic relationships provide potential for far greater engagement by residents and visitors in Christchurch's Antarctic connection – from the history of exploration, through to current interests in science, ecology and climate change.

Our vision is for **Christchurch to be an Antarctic city where we celebrate and realise the value of our gateway status** for the benefit of the city and the nation, for current and future generations.

Christchurch's Antarctic Gateway Strategy recognises the global importance and opportunity of the Antarctic region to advance understanding of climate change and the potential of disruptive technology to create new opportunities for science and environmental conservation.

The strategy is underpinned by three themes, which provide the foundation for all Christchurch's activities and priorities associated with the Antarctic region:

- 1. Kaitiakitanga** – our involvement in the Antarctic region will always be underpinned by care and respect for the environment.
- 2. Manaakitanga** – we are a welcoming host city for national and international agencies, partners and visitors.
- 3. Exploration** – exploration is synonymous with the Antarctic region and Christchurch; from a history of exploring new lands through to the modern exploration of science, knowledge and experiences.

Christchurch's Antarctic Gateway strategy is structured around four priorities which build on our foundations with a strong focus on the future:

- 1. Welcome and Deliver Excellence** – Christchurch is recognised for being a welcoming host and excellent provider of logistic and business support to Antarctic programmes and agencies. We are a valued contributor and asset supporting New Zealand's interests in the Antarctic region.
- 2. Connect and Excite** – Christchurch celebrates and engages all people in its Antarctic connection in an exciting, informative, interactive and meaningful way.
- 3. Advance Knowledge** – Christchurch supports the development of Antarctic knowledge, scientific endeavour and solving Antarctic challenges through technology and innovation.
- 4. Champion Sustainability** – Christchurch takes a leadership role in sustainable actions for the benefit of the Antarctic region, our city and the world.

The strategy is supported by a clear action plan, which is led by the Antarctic Office in partnership with ChristchurchNZ, the Christchurch City Council and Antarctica New Zealand, working closely with local and national partners.

¹For the purposes of this strategy, the 'Antarctic region' refers to Antarctica and the Southern Ocean south of 60 degrees south.

Why a strategy for Christchurch?



IBRV Araon (Korea) and MV Italica (Italy) loading at Lyttelton Port before sailing to their respective Antarctic bases at Terra Nova Bay in the Ross Sea. Photo: Pam Carmichael

The strategic context for the city's Antarctic Gateway

Christchurch is one of five “Antarctic gateway cities” globally and one of two which provide access to the Ross Sea area.

The five Antarctic gateway cities are as follows:

- Christchurch, New Zealand
- Hobart, Australia
- Ushuaia, Argentina
- Punta Arenas, Chile
- Cape Town, South Africa

Christchurch has been operating as a gateway to the Antarctic region since the early 20th century. The city has a role in supporting international and New Zealand Antarctic priorities as articulated through the Antarctic Treaty System and New Zealand's responsibilities regarding the Ross Dependency.

Christchurch is home to New Zealand's national Antarctic programme, Antarctica New Zealand, other national and international Antarctic agencies and COMNAP and has a wealth of Antarctic-related history, a significant depth and breadth of Antarctic expertise in its people, and hosts and provides logistic support to a range of national Antarctic programmes.

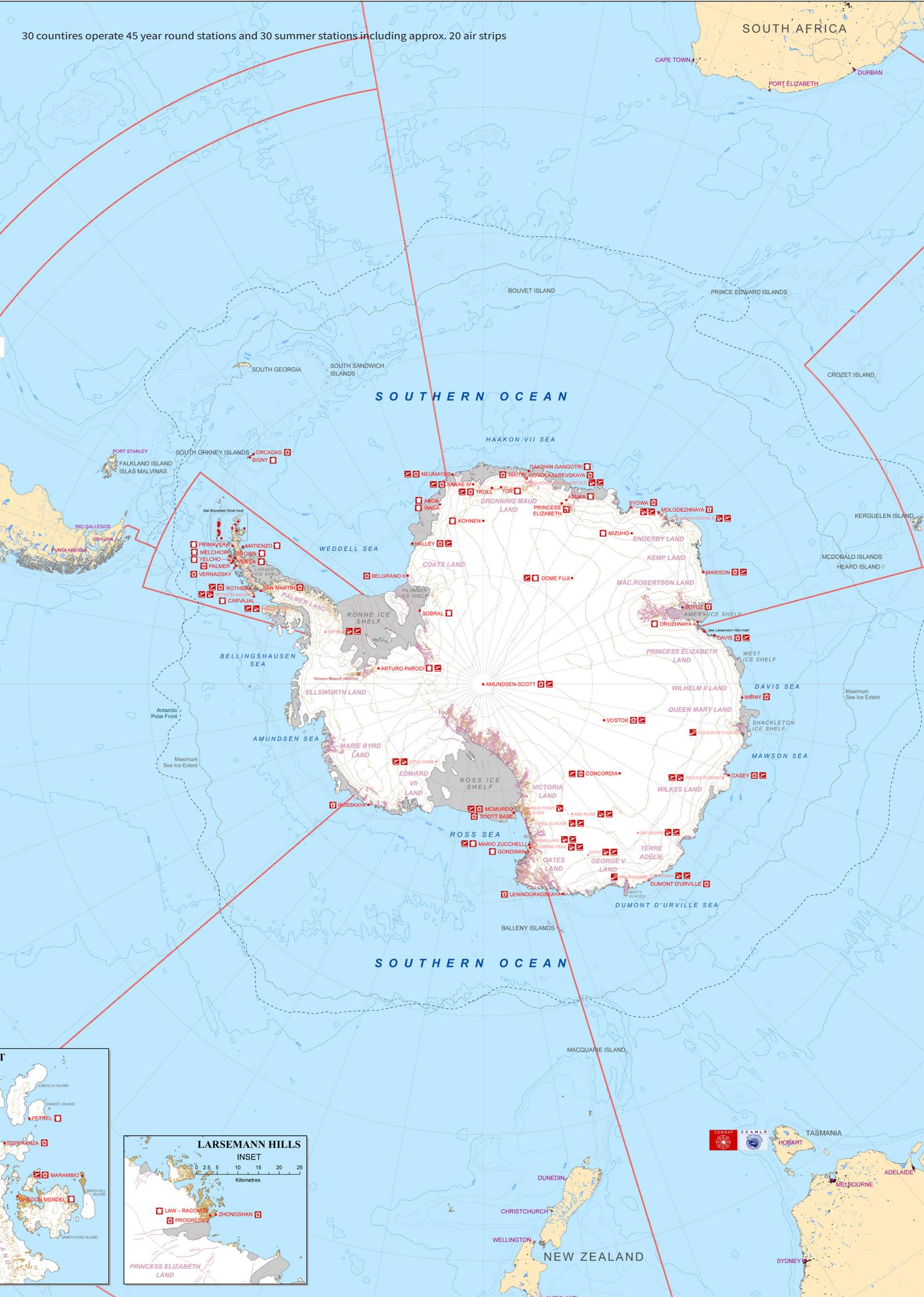
Christchurch's involvement with Antarctica and the Southern Ocean is an important source of revenue into the local economy² – supporting logistic suppliers, the visitor economy, education and research activity. Our Council-owned air and sea ports are important logistics hubs for the Antarctic region.

As such, this strategy will support Christchurch to:

- **Deliver on its responsibilities** as a gateway city in the context of New Zealand's Antarctic priorities and international relations; and,
- **Leverage the opportunity** of being a gateway city to enhance Christchurch's identity, support its strategic priorities, create economic and learning opportunities and enable community engagement and pride.

²The Contribution of Antarctic-Related Activities to the Canterbury NZ Economy Report” (AERU) estimated the economic impact to the region in 2016 was \$235m and 3,675 jobs and \$432m and 6,838 jobs nationally.

30 countries operate 45 year round stations and 30 summer stations including approx. 20 air strips



SOUTH AFRICA

CAPE TOWN
PORT ELIZABETH
DURBAN

SOUTHERN OCEAN

BOUVET ISLAND
PRINCE EDWARD ISLANDS

CROZET ISLAND

SOUTH GEORGIA
SOUTH SANDWICH ISLANDS

HAARON VII SEA

PORT STANLEY
FALKLAND ISLAND
ISLAS MALVINAS

SOUTH ORKNEY ISLANDS
ORCADAS
SIGNY

NEUMAYER
SARAE IV
TROLL
TOR
DOKSHIN GANGOTRI
MATRI NOVOLAZAREVSKAYA
SUKA

ABRA
WAGA
KOHNNEN
DORNING MAUD
PRINCESS ELIZABETH

SYOWA
MOLODEZHNYA
MIZUHO
ENDERBY LAND

PRIMAVERA
MELCHIOR
YELCHO
PALMER
VERNADSKY

ROTHERA
SAN MARTIN
CARVALIN

BELGRANO III
COATS LAND

DOME FUJI
KEMP LAND

MAWSON SEA
MAC ROBERTSON LAND

BELLINGSHAUSEN SEA

RONNE ICE SHELF
FILIPINER ICE SHELF

SOBRAL
AMUNDSEN-SCOTT

SOYUZ
AMERICA ICE SHELF
DRUZHNYA
DAVIS

AMUNDSEN SEA

ELLSWORTH LAND
Vinson Massif (4897m)

VOSTOK

PRINCESS ELIZABETH LAND
WILHELM II LAND
MIRNY

Antarctic Polar Front
Maximum Sea Ice Extent

AMUNDSEN SEA

MARIE BYRD LAND
EDWARD VII LAND

ROSS ICE SHELF
ROSS SEA
SCOTT BASE

SHACKLETON ICE SHELF
DAVIS SEA
MIRNY

ROSS SEA

VICTORIA LAND
CONCORDIA
MCMURDO
GONDWANA

WILKES LAND
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WICKS RUNWAY

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The opportunity of the Antarctic region

The Antarctic region is truly the world's laboratory

Antarctica and the Southern Ocean has a unique place in the world. It includes the coldest, driest, highest, windiest and most remote continent on Earth surrounded by the Southern Ocean, described as “the lungs” of the deep sea.

People first set foot on Antarctica just over 100 years ago to explore this vast, challenging and dramatic landscape. The Antarctic region is now valued for its wilderness and its intrinsic scientific and environmental qualities which are in the care of those countries which have agreed to the principles enshrined in the Antarctic Treaty and the Environmental Protocol.

The Antarctic region is critical to understanding the world's climate and ocean systems and contains important records of Earth's climate. The ability to research the interaction of oceans, ice and natural ecosystems provides valuable insights into how the world's climate is changing and helps inform predictions of how it may change in the future.

In support of research, 30 national Antarctic programmes maintain and operate approximately 70 research stations located across the continent, operate dozens of research vessels in the Southern Ocean and maintain monitoring systems which provide critical data into climate models.

Antarctica also offers an environment for space research. Satellite data supports the study of climatic and other changes to the environment on earth. Many of the conditions and challenges facing people and technology operating in Antarctica can be applied to the challenges of exploration to and on other planets – remoteness and isolation and a cold and dry climate.

An exemplar of international peace and co-operation

The Antarctic Treaty is a true example of how diverse nations can cooperate to share and protect the environment for current and future generations. The Antarctic Treaty signed by an initial twelve nations in 1959 states that the purpose of Antarctica is dedicated to “peaceful purposes only” and “freedom of scientific investigation.” This Treaty is supported by a comprehensive international Antarctic management and collaboration system called the Antarctic Treaty System within which 53 nations participate.

A natural opportunity for New Zealand

New Zealand's role in the Antarctic region is disproportionately significant relative to our scale and influence in an international context. When considering New Zealand's geographical sphere of influence, the land mass of New Zealand represents only two percent of the area for which the country has responsibilities. The remaining 98 percent includes New Zealand's exclusive economic zone, territorial waters and as well as the Ross Dependency.

New Zealand has been an active participant in scientific and exploration expeditions to the Antarctic region since the mid-19th century. William Timaru Joss³ (from Stewart Island and of Ngāi Tahu descent) is believed to be the first New Zealander to set foot on Antarctica, travelling on a Norwegian whaler and successfully landing on the continent on January 24, 1895.

New Zealand has been at the forefront of international involvement and collaboration around the Antarctic region. From recognising the Ross Dependency in 1923, to being one of the original 12 signatories to the Antarctic Treaty in 1959, New Zealand has taken an active role in the management and preservation of the Antarctic region. Most recently, New Zealand was instrumental in the establishment of a Marine Protected Area in the Ross Sea region in 2017.

New Zealand began its own scientific research activity in 1957 with the establishment of Scott Base. New Zealand invests more than \$13m per annum directly into Antarctic scientific research, including \$7m per annum targeted explicitly through the Antarctic Science platform. Antarctica New Zealand's budget to support science and operate Scott Base is approximately \$20m p.a.

The 2002 Revised New Zealand Statement of Strategic Interest confirms New Zealand's commitment to Antarctica and the Southern Ocean, “for the benefit of every country, and for present and future generations of New Zealanders”. This commitment is reflected in the way in which New Zealand engages, through the Antarctic Treaty System, to promote New Zealand's interests. These interests include peace and security and environmental protection for Antarctica; New Zealand retaining a central, influential role in the governance of Antarctica; protection, promotion and management of the unique biodiversity; conservation and sustainable management of marine environments; supporting and leading scientific research; and demonstrating and advocating best practice in environmental stewardship. New Zealand's influence is reliant on a credible and effective research programme.

³ www.canterbury.ac.nz/news/2016/ngi-tahu-scholarship-takes-uc-student-to-the-ice

The opportunity of the Antarctic region *continued*

The New Zealand Policy Statement on Tourism and Other Non-Governmental Activities in Antarctica states that New Zealand will work within the Antarctic Treaty System to limit tourism and other non-governmental activities in Antarctica and to ensure that where they do occur, they are conducted in a safe and environmentally responsible manner.

Christchurch - a deep connection built on rich heritage

From long ago...

As Sir Edmund Hillary noted “much of the history of Antarctic exploration has flowed through Christchurch” – starting in 1901 with the arrival of Scott’s ship Discovery in Lyttelton Harbour to begin its National Antarctic Expedition.

Christchurch has a long history of involvement with the Antarctic region, from the early days of Southern Ocean exploration, as a vital port during the heroic era expeditions of discovery and through the last 60 years of New Zealand’s Antarctic research activity, to today as a hub of Antarctic research and logistics.

Christchurch has hosted and been home to some of the most influential figures in Southern Ocean and Antarctic history, including Cook, Scott, Shackleton and Hillary. Our connection with the Antarctic region is embedded in the fabric of our city, our landscape and our stories.

To prosperous recent times...

An economic impact study undertaken in March 2016 by Lincoln University estimated that Antarctic related activities make an annual contribution of \$235 million to the Canterbury economy and \$423 million to the New Zealand economy. This is an increase of 25 percent in annual contribution to the Canterbury economy compared with 2013.

New Zealand is well placed to undertake and support Antarctica and Southern Ocean science. Many countries are placing increased importance on a better understanding of climate change and its key influences through significant investments in science.

Christchurch specifically is in a good position – through its experience hosting existing national Antarctic science programmes, its geographical position relative to the Ross area, and Ross Sea Marine Protected Area and its quality air and sea port infrastructure – to be an excellent logistics hub for a larger number of national Antarctic science programmes.

Christchurch has been home to the COMNAP Secretariat (the Council of Managers of National Antarctic Programs) since 2009. As an international association formed in 1988, COMNAP Members are the 30 National Antarctic Programs that together strive to “develop and promote best practice in managing the support of scientific research in Antarctica”.

The recent COMNAP Antarctic Roadmap Challenges (ARC) project identified opportunities to link New Zealand’s innovation sector to support the more efficient and effective delivery of Antarctic science. This link, in turn, creates opportunities to translate the technology-based science support in remote sensors, power generation and satellites into potential commercial opportunities elsewhere creating further positive outcomes for Christchurch and New Zealand.



The Opportunity for Christchurch

Being an exemplary gateway city

All gateway cities host national Antarctic programmes with research stations and other facilities in the region of Antarctica that the gateway can easily service.

Christchurch supports the US Antarctic Program, which operates the largest research station in Antarctica, McMurdo Station in the Ross Sea area. It also hosts the Korean and Italian programmes and provides services in support of other programmes. China, for example, is establishing a research presence in the Ross Sea area and often uses the Lyttelton Port facilities. Other countries, such as Germany, use the sea and airport facilities on their way to and from the Antarctic region.

The Ross Sea Marine Protected Area may result in a greater number of national programmes and their research vessels travelling through Lyttelton to undertake marine research.

Being a gateway city carries both opportunities and responsibilities. As a gateway city, Christchurch has an important custodial responsibility to the Antarctic region – to uphold the values of the Antarctic Treaty to retain the Antarctic region for peace and science.

Christchurch's Gateway Strengths

An independent review⁴ identified the attributes necessary to be a leading or exemplary Antarctic gateway city. This research concluded that Christchurch has strong foundations of an exemplar gateway city in place:

- Location – we are one of two gateways providing access into the Ross Sea region (the other being Hobart).
- International airport and deep-water sea port – Christchurch has high-quality air and sea port infrastructure, with facilities to support Antarctic programmes.
- Strong industry base, with expertise and experience supporting Antarctic programmes – Christchurch's strong manufacturing, air services and wider logistic support capabilities provide significant support for existing national Antarctic programmes and is recognised as a competitive strength of Christchurch's gateway offering.
- Many relevant agencies and a strong Antarctic community – Christchurch is home to New Zealand's Antarctic programme (Antarctica New Zealand), a number of national Antarctic programmes, and is host to one of only four Antarctic-related

Secretariats – COMNAP. Christchurch is also home to the world's first full time postgraduate Antarctic qualification (PCAS) through the University of Canterbury's Gateway Antarctica programme.

- A rich and authentic Antarctic heritage connection – Christchurch has a rich connection with the Antarctic region – it has a large concentration of 'Antarcticists'⁵ who possess a depth and breadth of knowledge of the Antarctic region. Its Antarctic heritage connection is represented through the International Antarctic Centre, Canterbury Museum, and the Antarctic Heritage Trust, as well as other exhibitions, museums and public installations.

Christchurch's strong manufacturing and technology industry base and rich tertiary offering means it is well placed to realise research and business opportunities associated with the Antarctic region.

There is potential for far greater engagement by residents and visitors in Christchurch's Antarctic connection – from the history of exploration, through to current interests in science, ecology and climate change. This potential also exists for the business community and educators to engage more actively with the opportunities provided by Christchurch's connection with the Antarctic region – from logistics support through to the development of new technology to support science on the ice. The importance of the Antarctic region in exploring global issues provides a rich context for education – whether its the development of globally aware citizens or science and technology graduates.

Christchurch's role as an Antarctic Gateway can also be more strongly embedded into the city's story and identity. The story of exploration, adventure and seeking new knowledge in the Antarctic region reflect many of the values which underpin Christchurch's identity.

Some stakeholders have identified the opportunity for Christchurch to take a stronger leadership role in supporting New Zealand's Antarctic interests and upholding the values of the Antarctic Treaty. Some stakeholders also identified the potential for Christchurch to become a hub for New Zealand and international scientific research and collaboration. These opportunities need to be considered within the context of New Zealand's Antarctic Strategy and central government's role regarding international diplomacy, scientific funding and priorities, and the resources available to the city to invest in significant infrastructure.

⁴ More details of this assessment are provided in Appendix 1, "Antarctic Gateway Cities", a report completed for the Antarctic Office in July 2016 by Gabriela Roldan.

⁵ People who have visited or worked in Antarctica.

How it all fits together



Loading wind turbine blades onto MV American Tern at Lyttelton. Meridian and Antarctica NZ built the three tower wind farm with support and logistics from USAP. Renewable energy now supplements Scott Base and McMurdo Station, cutting fuel consumption by ~463,000 litres and saving 1,242 tonnes of CO² annually. Photo: Scott Bennett

Our Strategic Framework

A city strategy in a national context

Christchurch's Antarctic Gateway strategy sits squarely within the context of New Zealand's Antarctic priorities.

An effective gateway city is an important asset in support of New Zealand's Antarctic objectives. Realising the economic, environmental, scientific, cultural and community opportunities associated with the Antarctic region at a city level can deliver wider benefits for the country as a whole.

The New Zealand government's ongoing support of Antarctic scientific endeavour and its active contribution into the international Antarctic community mean it is important to frame this strategy by the New Zealand context. Through this strategic framework, the city will work in close collaboration with its New Zealand government partners to maximise the value of Christchurch's Antarctic gateway status for the city, region and nation.

Three essential foundations for the Christchurch Antarctic Gateway strategy

Christchurch's involvement in the Antarctic region is underpinned by three important themes. These themes form the basis through which Christchurch views all its priorities and activities in association with the Antarctic region.

- 1. Kaitiakitanga** (*guardianship and protection of the environment*) – our involvement in the Antarctic region will always be underpinned by care and respect for the environment. This reflects our important custodial responsibilities upholding the values of the Antarctic Treaty to maintain the Antarctic region for “peace and science”.
- 2. Manaakitanga** (*the process of showing respect, generosity and care for others*) – we are a host city for both national and international agencies and partners. We will be an excellent and welcoming host and will take seriously our contribution to New Zealand's Antarctic strategy, international relationships and diplomacy. We desire to be an exemplary gateway for national Antarctic programmes.
- 3. Exploration** – our city has a strong history of exploration from early Maori and more recent waves of migration, through to our current profile as a city that is open to and keen to explore new ideas, ways of doing things and experiences.

Exploration is synonymous with the Antarctic region – whether it's physical exploration of a hostile and remote environment, or exploring ideas and seeking new knowledge through science and innovation.

A strong focus on the future

Christchurch's Antarctic Gateway Strategy is strongly influenced by global trends, opportunities and challenges impacting both Christchurch and the Antarctic region. This strategy recognises the importance of:

- Climate change and the need to reduce our carbon footprint;
- Disruptive technology, which creates new opportunities for Antarctic science and environmental conservation; and,
- Engaging current and future generations in the opportunities and responsibilities of Christchurch's connection with the Antarctic region.

Our city vision

Our vision is for **Christchurch to be an Antarctic city where we celebrate and realise the value of our gateway status** for the benefit of the city and the nation, for current and future generations

How it all fits together *continued*

Strategic priorities

Christchurch's Antarctic Gateway strategy is structured around four priorities which build on our foundations with a strong focus on the future:

Welcome and Deliver Excellence – Christchurch is recognised for being a welcoming host and for service excellence as a gateway city

Christchurch will have clear, accountable and visible Antarctic gateway leadership to ensure the city is making the most of the economic, community, cultural, scientific and environmental opportunities associated with its gateway status and is a valued contributor and asset supporting New Zealand's interests in the Antarctic region.

We will be a welcoming host to national and international partners.

We will make the most of the business opportunities of being a gateway city and provide excellent service through the provision of our air and sea port facilities and our wider business support and services.

Connect and Excite – Christchurch celebrates and engages all people in its Antarctic connection

Christchurch will celebrate Christchurch's connection with the Antarctic region as part of Christchurch's city story.

We will engage people – both residents and visitors – in an exciting, informative, interactive and meaningful way by integrating and showcasing the Antarctic region through our arts, culture, events and visitor experiences.

We will enable people of all ages to engage with the Antarctic region through education.

Advance Knowledge – Christchurch supports the development of Antarctic knowledge

Christchurch will support New Zealand's Antarctic research endeavor and create opportunities for greater international research collaboration (including science, technology, law, policy, humanities, social science, history and the arts).

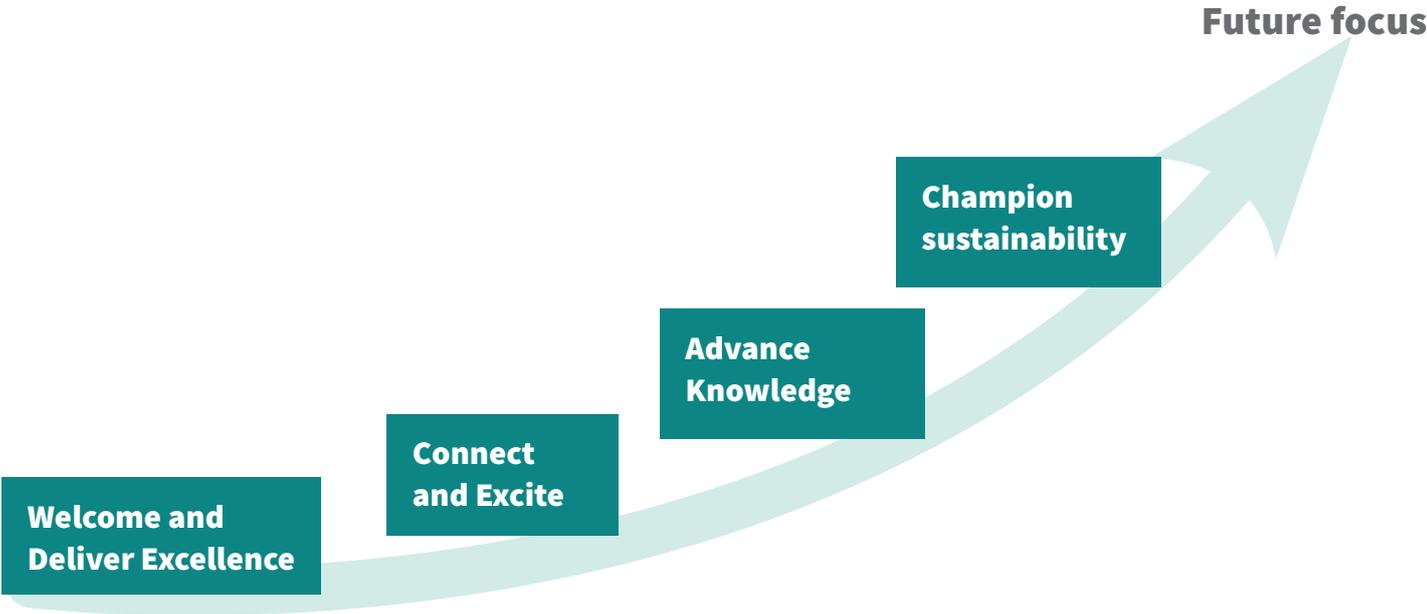
We will support our business and entrepreneurial communities to solve Antarctic challenges and support Antarctic research.

Champion Sustainability – Christchurch takes a leadership role in environmental sustainability

Christchurch will progress the city's strategic priorities of climate change leadership and the target of being carbon neutral by 2030 through its support of Antarctic climate change research and developing innovative solutions to reduce environmental footprint.

We will undertake civic scale action which tackles issues of environmental sustainability, reducing carbon emissions and addressing climate change.

Our vision is for **Christchurch to be an Antarctic City where we celebrate and realise the value of our gateway status** for the benefit of the city and the nation, for current and future generations.



Strategy Foundations	Kaitiakitanga	Maanakitanga	Exploration
New Zealand Context	Environmental stewardship	International diplomacy	Scientific research

Action



NZ Defence Force Harewood Terminal Team assist USAP with cargo from a ski equipped LC-130 Hercules outside the Air National Guard (ANG) HQ and Maintenance Centre at Christchurch International Airport. Photo: NZDF

Priority 1 – Welcome and Deliver Excellence

Year 1 – 3 Actions	Lead Agency ⁶	Year 1 Outcomes (2018/19)	Year 4 – 10 actions	10 Year and Beyond Outcomes
<p>Gateway Leadership and Partnership</p> <p>Establish a gateway leadership group of national and local partners to provide clear, accountable and visible leadership to make the most of the economic, community, cultural, scientific and environmental opportunities of its gateway status and is a valued contributor and asset supporting New Zealand's interests in the Antarctic region.</p> <p>Work with MFAT to secure permanent home of COMNAP in Christchurch (2021).</p> <p>Collaborate with other gateway cities on areas of shared interest.</p>	Antarctic Office	<p>Leadership group established.</p> <p>Measurement framework for this strategy established.</p> <p>Christchurch retention of COMNAP positioning paper completed and submitted to COMNAP Executive.</p>	<p>The gateway leadership group provide effective leadership and oversight of the implementation of Christchurch's Antarctic Gateway Strategy.</p> <p>Christchurch has an effective and trusted partnership with central government to progress New Zealand's interests in the Antarctic region.</p>	<p>Christchurch has a clear, accountable and visible group of partners inputting into leadership around Antarctic activities.</p> <p>Christchurch has enhanced its role as a contributor to New Zealand's interests in the Antarctic region.</p>
<p>Welcoming host</p> <p>Develop a plan to enhance the Season Opening experience and opportunities year on year.</p> <p>Provide a world-class welcome with the support of MFAT, Antarctica New Zealand and other partners with a view to deepening international relations in an Antarctic context, including the retention and potential expansion of national Antarctic programmes basing themselves in or being supplied through Christchurch.</p> <p>Develop an international civic plan in support of Christchurch's Antarctic gateway status.</p> <p>Identify ways for the Antarctic community to provide additional opportunities to welcome and connect Antarctic visitors with each other and the local community.</p>	Antarctic Office / Christchurch City Council	<p>2018 Season Opening is better than 2017 and a plan for future years is in place.</p> <p>Civic engagement supports national strategy and is appropriate to city's sphere of influence.</p> <p>Antarctic visitors are welcomed and connected with Christchurch's Antarctic community.</p>	<p>Season opening attracts national and international media interest – showcasing New Zealand and its international host programmes.</p>	<p>Enhanced civic engagement supports national strategy and is appropriate to city's sphere of influence.</p> <p>Christchurch retains and grows national Antarctic programmes basing themselves or being supplied through Christchurch where there is value to Christchurch.</p>
<p>Business excellence and opportunities</p> <p>Recognise the importance of supporting Antarctic programmes through the Council's expectations of the Council-owned air and sea ports.</p> <p>Review Christchurch's current business support to Antarctic programmes, identify gaps / new business opportunities and work with the business and supply community to enhance / expand offering and realise these opportunities e.g. McMurdo/Scott Base redevelopment.</p> <p>Raise the profile of business opportunities and facilitate engagement between Christchurch business and national Antarctic programmes.</p> <p>Develop mechanisms to support collaboration between Christchurch businesses with Antarctic expertise and experience. This may include development of an Antarctic business network.</p>	Antarctic Office / ChristchurchNZ / Christchurch City Council	<p>Christchurch International Airport and Lyttelton Port Company recognise in their Statement of Intent the key role they play in supporting the Christchurch Antarctic Gateway Strategy.</p>	<p>Enhance air-side and sea-side facilities.</p> <p>Continue to develop world-class local supply chain and support network.</p> <p>Develop mechanisms to stimulate collaboration amongst Christchurch suppliers and business interests to improve business excellence and realise opportunities.</p>	<p>Christchurch is an exemplar gateway and logistics hub with world class facilities, local supply chain and support network.</p> <p>Christchurch businesses realise the economic opportunities of being an Antarctic gateway.</p>

⁶ The "Lead Agency" works with other national and local partners and leverages Christchurch's rich Antarctic community to deliver the actions. The role of the Lead Agency is to lead, coordinate, facilitate and support.

Priority 2 – Connect and Excite

Year 1 – 3 Actions	Lead Agency	Year 1 Outcomes (2018/19)	Year 4 – 10 Actions	10 Year and Beyond Outcomes
<p>Celebrate Christchurch’s connection with the Antarctic region as part of Christchurch’s city story</p> <p>Profile and promote Christchurch’s involvement with the Antarctic region in a way which aligns with the Christchurch story and priorities. Encourage and promote opportunities for the public to engage with the Antarctic region (e.g. ship visits, art exhibitions, heritage tours, profile current science and scientists).</p> <p>Develop more visible mechanisms to acknowledge our Antarctic connection and welcome visitors, including at the airport, seaport and in the central city.</p> <p>Profile and highlight ways in which Christchurch people can learn about the Antarctic region.</p> <p>Use Antarctic content to tell the Christchurch story.</p> <p>Create a partnership plan with key partners to position and promote the Christchurch-Antarctic story.</p>	<p>Antarctic Office / ChristchurchNZ</p>	<p>Christchurch’s existing Antarctic relationship has higher profile in Christchurch, nationally and internationally.</p> <p>Linkage between the Antarctic region and Christchurch story is evidenced through content developed and promoted.</p> <p>A partnership plan is developed and two innovative partnerships are in place.</p>	<p>Continue to promote current and new activities, stories and opportunities.</p> <p>Continue to build on key partnerships and attract new ones.</p>	<p>The Antarctic region is embedded in Christchurch’s story and identity.</p> <p>People understand the opportunities (cultural, economic, learning) associated with Christchurch’s Antarctic connection.</p> <p>Christchurch’s Antarctic connection is visible to visitors on arrival and in the city.</p> <p>Long term deep partnerships promote the Christchurch Antarctic story.</p>
<p>Encourage people to engage with the Antarctic region in an exciting, informative, interactive and meaningful way</p> <p>Establish an “experience” city group (attractions, arts, culture) to support development of a plan to coordinate, curate and expand Christchurch’s Antarctic offering.</p> <p>Review Christchurch’s current Antarctic experience offering and develop a plan to enhance the Antarctic experience within Christchurch, including investigation for new and/or enhanced attractions and offerings e.g. city tour.</p> <p>Embed the Antarctic region into key Christchurch events and/or permanent or regular art installations.</p> <p>Work with Ngāi Tahu and other arts and culture partners to identify thematic approach to incorporating aspects of the Antarctic region into art / culture activities and installations.</p>	<p>Antarctic Office / ChristchurchNZ</p>	<p>Experience group established.</p> <p>Visitor and community engagement plans developed.</p> <p>Opportunities to coordinate, curate and expand are identified and “low hanging fruit” progressed.</p> <p>The Antarctic story is profiled through 2-3 high-profile events and/or permanent or regular art installations.</p>	<p>New and enhanced attractions are developed which utilise technology to tell a rich story of the Antarctic’s history, present and future.</p> <p>Establish the Antarctic region as a permanent and prominent feature of events / art installation in Christchurch.</p> <p>Export Antarctic / Christchurch arts exhibitions overseas.</p>	<p>The Antarctic region is showcased through Christchurch attractions that link the story of past-current-future.</p> <p>Attractions are “must do” on visitor / residents list – they are central to the Christchurch experience.</p> <p>Christchurch’s art / culture regularly showcases Antarctic-related themes.</p> <p>Antarctic theme is embedded in major and large community events.</p>

Year 1 – 3 Actions	Lead Agency	Year 1 Outcomes (2018/19)	Year 4 – 10 Actions	10 Year and Beyond Outcomes
<p>Enable people of all ages to engage with the Antarctic region and related opportunities through education</p> <p>Map current Antarctic education offering from pre-school to tertiary and identify opportunities to integrate an Antarctic education offering into the New Zealand curriculum.</p> <p>Develop an education forum to share, align, promote and develop Antarctic-related education offering.</p> <p>Explore how to encourage/support educators and students to participate in Antarctic educational opportunities offered by University of Canterbury, including courses in the Postgraduate Certificate in Antarctic Studies.</p> <p>Identify the opportunities the Antarctic region provides for talent development and learning aligned with future employment opportunities in Antarctic and related subjects, and how it might inspire people into education, new business and employment opportunities.</p>	<p>Antarctica New Zealand / Antarctic Office / University of Canterbury</p>	<p>Education forum has been established and a plan for multi-organisation outreach/ education activities has been developed.</p> <p>Mapping completed and opportunities identified to increase access to learning opportunities and improve resources.</p> <p>Ways to encourage educators and students to participate in educational opportunities at UC have been identified.</p>	<p>Support linkages between technology/ innovation and education/outreach organisations that lead to the development of improved educational experiences including online education products and the utilisation of AR/VR in outreach.</p>	<p>Teaching resources are developed that lead to Antarctic elements being included in curricula between pre-school and tertiary.</p> <p>All Christchurch children are able to participate in meaningful education experience associated with the Antarctic region.</p> <p>Antarctic focused tertiary offerings are higher profile and open to more people.</p>

Priority 3 – Advance Knowledge

Year 1 – 3 Actions	Lead Agency	Year 1 Outcomes (2018/19)	Year 4 – 10 Actions	10 Year and Beyond Outcomes
<p>Support New Zealand’s Antarctic scientific endeavor and create opportunities for greater international scientific collaboration and conversations through Christchurch</p> <p>Evaluate opportunities for increasing and building upon Christchurch’s existing research capacity and capability to support New Zealand’s Antarctic research activities and international collaboration.</p> <p>Connect Antarctic research with other city objectives including Resilient City, Smart City and Climate Change Leadership.</p> <p>Target international conferences related to the Antarctic region, extreme environments, ecology e.g. SCAR Biology Symposium 2021 (The Science Committee on Antarctic Research).</p> <p>Provide opportunities through events and activities in Christchurch for the science community to develop and leverage national and international research partnerships to increase the amount and profile of scientific activity.</p>	<p>Antarctica New Zealand / Antarctic Office / ChristchurchNZ / University of Canterbury</p>	<p>Evaluate Christchurch’s current research capacity and develop an action plan to build on this foundation.</p> <p>A plan to enhance Christchurch’s support of and involvement in Antarctic research is developed.</p> <p>Potential activities might include support for conferences/workshops and international collaboration.</p>	<p>Implement the action plan to expand Christchurch’s contribution to Antarctic research and international collaboration and increase Christchurch’s Antarctic research capacity.</p> <p>Host SCAR Biology Symposium 2021. Leverage the opportunity for wider city engagement and benefit.</p>	<p>Christchurch (as part of NZ Inc) based organisations are known for scientific excellence in a range of Antarctic research activities and is a leader in key areas relevant to stakeholders. This attracts conferences, research partnerships and funding to the region.</p> <p>Christchurch’s scientific community is larger and is at the forefront of New Zealand Antarctic efforts.</p>
<p>Support our business and entrepreneurial communities to solve Antarctic challenges, support Antarctic research</p> <p>Identify opportunities for Christchurch (and New Zealand) business and entrepreneurial communities to develop innovative solutions to address challenges facing Antarctic research and activity on the ice. Build on research completed by SCAR and COMNAP.</p> <p>Develop challenges / forums to engage Christchurch business in solving Antarctic related problems e.g. the “tyranny of distance”, advancing science.</p> <p>Promote Christchurch’s tech and innovation strengths, and facilitate engagement with national Antarctic programmes.</p>	<p>Antarctic Office / ChristchurchNZ</p>	<p>1 Forum delivered.</p> <p>Christchurch’s business community understands and actively explores business opportunities to solve Antarctic challenges and support Antarctic research.</p> <p>Increase in the business partnerships between Christchurch business and national Antarctic programmes.</p>	<p>Investigate potential to develop industry scale and reputation around innovation / technology solutions for the Antarctic region.</p>	<p>Christchurch’s tech/high-tech manufacturing sector delivering and developing solutions related to the Antarctic region.</p> <p>Opportunity of the Antarctic region well understood by business community.</p>

Priority 4 – Champion Sustainability

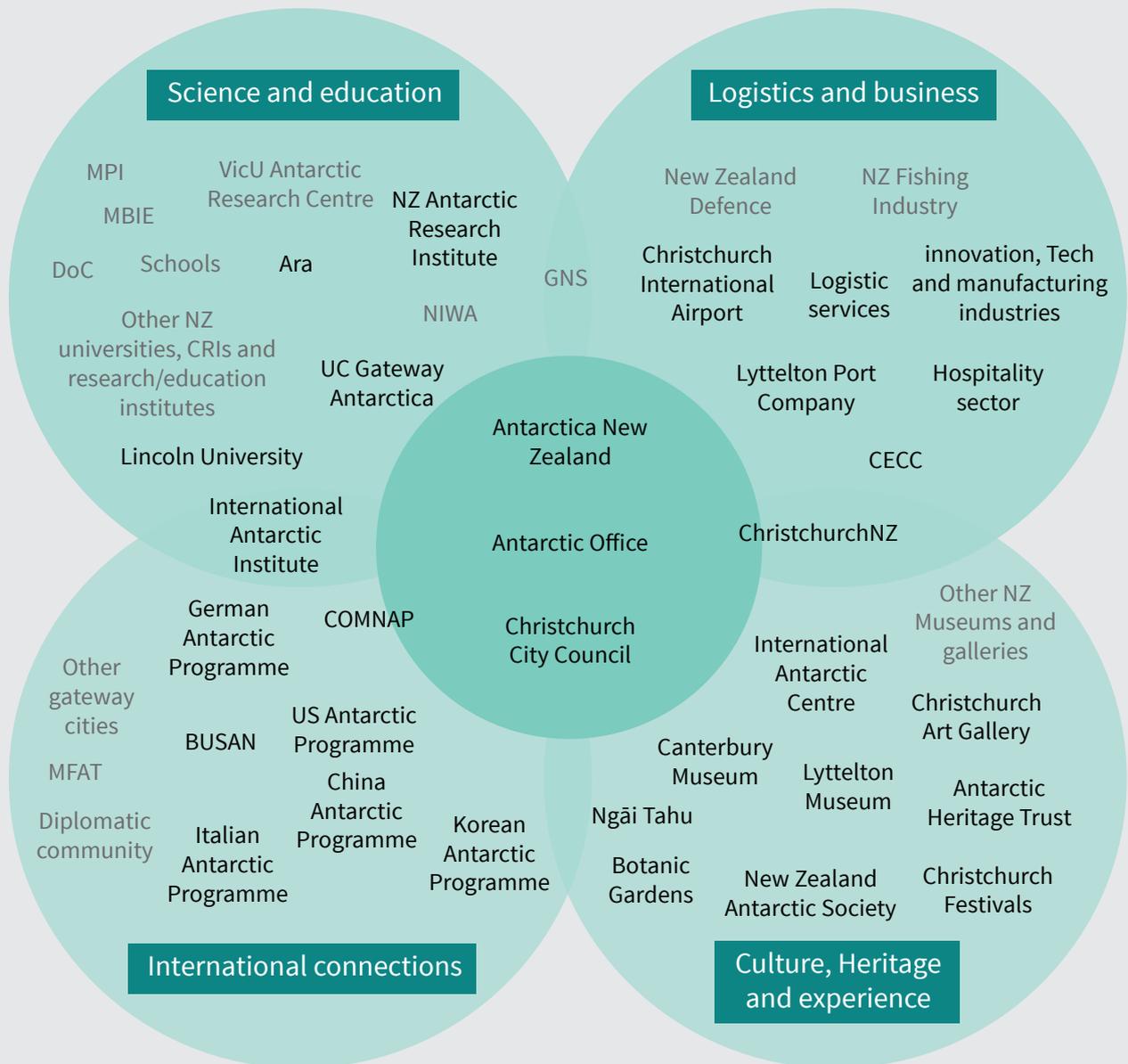
Year 1 – 3 Actions	Lead Agency	Year 1 Outcomes (2018/19)	Year 4 – 10 Actions	10 Year and Beyond Outcomes
<p>Progress the city’s strategic priorities of climate change leadership and the target of being carbon neutral by 2030</p> <p>Target international conferences related to climate change, environmental sustainability and carbon reduction.</p> <p>Develop challenge / forums to engage the Christchurch community in solving environmental problems e.g. minimising the environmental footprint.</p>	<p>Antarctic Office / ChristchurchNZ / Christchurch City Council</p>	<p>1 forum delivered.</p> <p>Plan is developed to target international conferences.</p>	<p>International conferences secured.</p> <p>Investigate the potential to develop innovative solutions and opportunities for Christchurch to contribute to climate change leadership and carbon reduction.</p>	<p>Christchurch is developing and delivering solutions related to climate change and carbon emission.</p>
<p>Undertake civic scale sustainability action aligned with Christchurch and Antarctic priorities</p> <p>Develop a “city scale” action which links to Antarctic and city priorities / focus e.g. pollution; reducing carbon (in city and on ice).</p>	<p>Antarctic Office / Christchurch NZ / Christchurch City Council</p>	<p>Civic scale actions are identified and planned.</p> <p>A strong PR plan and campaign tells this story – a city that embraces the values of environmental sustainability in line with its commitment as a gateway to the Antarctic region.</p>	<p>Civic scale actions are implemented, supported by a strong PR plan and campaign.</p>	<p>Christchurch residents participate in sustainability actions which are linked to Christchurch’s Antarctic connection.</p> <p>Antarctic-related civic scale action enables Christchurch to realise its strategic priorities.</p>

Appendix 1 – Christchurch’s performance as a Gateway City

Custodian attribute required	How does Christchurch and NZ fare?	Status
Foundations in place – logistics, relevant agencies		
A beneficial geographic location accessible to the Antarctic region and to other Antarctic Parties	Fully met	Strong
A comprehensive transport network	Airport – Fully met Port – Mostly met	Strong – potential for more
Adequate infrastructure for logistics support	Provided at Antarctica New Zealand facilities	Strong
The headquarters of the institutional agencies with Antarctic interests	Antarctica New Zealand based in Christchurch Other countries NZ presence headquartered in Christchurch	Strong
An established network of scientific and technical knowledge to support and assist Antarctic Parties	Antarctica New Zealand network University of Canterbury Research Centre	Strong
Special agreements to facilitate the transport of goods and equipment from overseas to the Antarctic region	Some special trade, GST and transit visa arrangements	Moderate
A strategic plan, political will and financial support to perform the role of an Antarctic gateway city	Strategic plan - under development Political will – good at local level Financial support – Council has established Antarctic Office	Moderate – evolving
Wider city offering and engagement		
First class information communications and technology, innovation and engineering businesses	Good local business support	Strong
Skilled local workforce	Currently met	Strong
A community engaged and identified with the Antarctic Gateway role	Limited community engagement. Primarily focused around International Antarctic Centre	Weak
A strong city profile alignment with the Antarctic region that supports growth in other business sectors such as tourism	Christchurch’s profile does not explicitly link with Antarctic gateway	Weak

Appendix 2 – A rich Antarctic community

There is a rich community of national and local agencies and organisations with Antarctic interests. Critically important to success of this strategy is the ability to collaborate, coordinate, activate, align activities and priorities across this community. The diagram below maps the key agencies and organisations.



Key

Black - based in Christchurch

Grey - based elsewhere / throughout New Zealand or internationally

Appendix 3 – Stakeholders engaged during the strategy development process⁷

<p>Central and Local Government</p>	<p>Christchurch City Council Ministry of Foreign Affairs (MFAT) Ministry for Primary Industries (MPI) NIWA</p>
<p>National Antarctic Programmes and Agencies</p>	<p>Italian Antarctic Programme Antarctica New Zealand BAS (UK) BGR (Germany) KOPRI (Korea) NASA –SOFIA (US) NASA –AtoM (US) SPRI (UK) USAP/ NSF (National Science Foundation) Michelle Rogan-Finnemore (COMNAP)</p>
<p>Tourism/ Visitor Economy</p>	<p>Canterbury Museum CCT CIAL Heritage Expeditions Ltd International Antarctic Centre Real Journeys Sudima Hotel</p>
<p>Industry/Economic Development</p>	<p>Agricultural Economic and Research Unit (AERU), Lincoln University ATEED (Auckland) Callaghan Innovation CECC (Canterbury Employers Chambers of Commerce) Development Christchurch Ltd Independent Provedoring Lyttelton Engineering LPC (Lyttelton Port Company) NEC (Wellington) TeamTalk (Wellington) Trimble Sanford Fishing (Auckland) Skellerup Stark Bros Engineering WREDA (Wellington Regional Economic Development Agency) NZTE</p>

⁷ This engagement was primarily undertaken by the Antarctic Office over the last two years and captured in background documents which have fed into this final version of the strategy.

<p>Education / Science</p>	<p>ARA Institute Lincoln University (AERU) University of Canterbury Gateway Antarctica Victoria University Antarctic Research Centre</p>
<p>Others</p>	<p>Margaret Austin Antarctic Heritage Trust (AHT) Hillary Institute NZ Antarctic Society (Canterbury Branch) Brendan Killick (RSA) Will McLellan (EPIC) Stuart Prior Prof. Phillip Yock (Auckland University) John Clemens, Curator, Christchurch Botanic Gardens Rafael Kargren, CSSST</p>
<p>Diplomatic Representatives</p>	<p>HE Ambassador for Argentina HE Ambassador for Canada, HE High Commissioner of Canada HE Ambassador for Chile Consul-General for the People’s Republic of China, Christchurch HE Ambassador for Finland HE Ambassador for France HE Ambassador for Germany HE Ambassador for Italy Hon. Consul for Italy (Canterbury) Cultural Director for Italy HE Ambassador Republic of Korea HE Ambassador for South Africa HE Ambassador for the United Kingdom United States Embassy</p>

Note that in many cases more than one individual from an agency was involved in the strategy development process

A lead vehicle uses ground penetrating radar to detect crevasses during a 15 day traverse across the Ross Ice Shelf to the Siple Coast 2017/2018 season.
Photo: Neil Silverwood.



