

Australian Government



AUSTRALIAN INSTITUTE
OF MARINE SCIENCE

CORPORATE PLAN

2021-2022

AIMS Corporate Plan 2021-22

The Australian Institute of Marine Science is Australia's tropical marine research agency. We provide world-class research that helps governments, industry and the community make informed decisions about the management of Australia's marine estate.

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Opening message

On behalf of the Council of the Australian Institute of Marine Science, we are pleased to present the AIMS 2021-22 Corporate Plan, as required under paragraph 35(1)(b) of the Public Governance, Performance and Accountability Act 2013. This Plan is prepared for 2021-22 and covers the five years to 2025-26, as per s. 16E(1) of the PGPA Rule 2014 and the Corporate Plan for Commonwealth Entities: Resource Management Guide No. 132.

In 2022 AIMS will celebrate 50 years of *science for tomorrow's oceans*. It is a time for celebration, a time to reflect on our achievements and a time to look forward to the role that our science will play in shaping the next 50 years (and beyond). AIMS uses a broad set of scientific capabilities to develop solutions that drive better outcomes for all stakeholders. Our diverse capabilities are the result of an organic growth from inception to our current state, driven by technological advances and increased prioritisation of reef ecosystem health. Our history can be categorised into three distinct phases; discovery, understanding and solutions. At our inception 50 years ago, Australia's marine environment was largely unknown and AIMS' primary role was to explore, discover and describe. This was a period of establishing monitoring systems and recording data, which would become the basis for future studies. The understanding phase represents the period when AIMS had captured sufficient data and information to enable scientists to determine the trends and key variables for Australia's marine assets. This period provided the evidence to understand natural processes, to identify pressures and to define the impact that human activity was having on marine ecosystems. The solutions phase is the current period of AIMS' activities where the priority is to transform understanding into action, working with both scientists and industry to mitigate present and future threats, and to support Australia's marine industries.

Australia's 'blue economy' adds significant economic value and employs many Australians across many sectors. Our marine estate is the third largest on Earth, with an exclusive economic zone of 10 million square kilometres. This massive area is home to some of the most diverse and iconic marine ecosystems and species on the planet. Eighty-five per cent of Australians live on or near the coast, and the oceans have a special place in our national psyche.

According to the eighth edition of the Australian Institute of Marine Science (AIMS) Index of Marine Industry, published in 2021, the output of Australia's blue economy was valued at \$81.2 billion in 2017-18 - a four-fold increase over the last two decades. The Index of Marine Industry is the primary authority for understanding the value of Australia's marine industries, which provide jobs for hundreds of thousands of people and contribute \$62.9 billion of economic value to the economy.¹ While this analysis does not include environmental and social values, it demonstrates clearly the economic importance of Australia's marine estate. We believe that growth in the sustainable use of our oceans is vital to Australia's future prosperity. This Corporate Plan outlines how AIMS will support this growth over the next five years, in ways that will also preserve and protect our ocean's unique ecosystems now and in the future.

AIMS' research plays a crucial role in supporting government, industry and all who value and derive benefit from our marine estate to realise the opportunities and manage the challenges associated with its sustainable growth. By enabling evidence-based decisions by the public and private sectors and providing trusted advice to the community at large about the state of our unique tropical marine ecosystems, we help safeguard the marine estate as a significant and growing source of wealth for all Australians. Managing a healthy blue economy is not just about protecting species and habitats. It is also about maintaining nature's capacity to deliver goods, services and livelihoods needed by the community.

The COVID-19 pandemic has brought unprecedented disruption to many areas of the economy and Australia's marine industry is no exception. It is too early to be able to quantify the economic impact on the blue economy – sufficient data does not yet exist. However, it is expected that the key impacts, particularly for the period from 2020 to mid-2021, will be due to:

- Border closures and stay-at-home restrictions forcing many tourist operators to partially, or fully suspend operations, depending on where in Australia they are located.
- Significant reduction in oil and gas prices resulting from broad global economic recession caused by the pandemic.
- Demand-side disruptions to domestic and international markets and supply-side disruptions from social distancing measures across fishing and aquaculture activities and issues in crewing vessels and sourcing inputs in some sectors.

¹ <https://www.aims.gov.au/aims-index-of-marine-industry>

COVID-19 has also disrupted the business of AIMS. During the height of the pandemic many of our traditional sources of external revenue – particularly from the industry sector – were heavily affected. AIMS also implemented stringent COVID-19 controls to keep our people safe. These required some difficult decisions, temporarily suspending our field program and, upon recommencing field work, reducing team sizes to enable physical distancing and better hygiene practices. These controls reduced our ability to deliver the field work required to support our external revenue. Despite the pandemic, our pipeline of external work is healthy, delivery of our work remains at risk due to localised infection clusters and snap lockdowns. AIMS' response is to focus on what we do best – deliver the excellent research that has become our hallmark and upon which our stakeholders rely.

The AIMS Strategy 2025 outlines how our key research and development priorities support Australia's blue economy and contribute to national prosperity, while improving tropical marine health and protecting coral reefs and other ecosystems from climate change. This Corporate Plan outlines how we will deliver on the long-term targets set out in the AIMS Strategy 2025. The Plan focuses on maximising and quantifying the environmental, economic and social benefits that AIMS delivers. Three major areas of focus over the next five years will be:

- Reef restoration and adaptation.
- Embedding new technologies and the latest data science into our core capabilities to transform the way we undertake marine science.
- Strengthening our Indigenous partnerships to bring together traditional Indigenous knowledge and contemporary science to create new insights into the management of Australia's marine systems.

Our research will continue to deliver the evidence that allows stakeholders to make informed decisions and meet regulatory requirements while we focus on developing real-world solutions to the threats and opportunities within Australia's marine estate.

AIMS Council

The Council (as at 31 August 2021) comprises the Hon. Penelope Wensley AC (Chairman), Dr Thomas Barlow, Professor Sandra Harding AO (JCU Representative), Dr Paul Hardisty (AIMS CEO), Ms Anna Matysek, Ms Jeanette Roberts and Professor Erika Techera.

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Corporate structure

The Australian Institute of Marine Science is a corporate Commonwealth entity established by the Australian Institute of Marine Science Act 1972 (AIMS Act).

AIMS is accountable to the Minister for Industry, Science and Technology and is governed by a Council that reports to the Minister. The Council, which meets quarterly, sets our strategic directions and oversees management of the Institute. The CEO is responsible for the day-to-day operations of the Institute.

AIMS’ enabling legislation is the Australian Institute of Marine Science Act 1972 (AIMS Act) and the Public Governance, Performance and Accountability Act 2013 (PGPA Act).

Purpose

AIMS’ purpose is defined by its mission:

To provide the research and knowledge of Australia’s tropical marine estate required to support growth in its sustainable use, effective environmental management and protection of its unique ecosystems.

Strategic objectives

AIMS strives to achieve three **key impacts** for the nation, measured by **two impact targets** (Table 1), as outlined in the AIMS Strategy 2025. Our research portfolio is encapsulated in **nine research outcomes** (Table 2), as outlined in the Portfolio Budget Statements 2021-22.

Table 1 – Our key impacts and targets

Key Impacts	Impact Targets
Improve the health and resilience of marine and coastal ecosystems across northern Australia	At least \$100 million per annum in environmental, social and economic net benefits for tropical Australia A net improvement in the health of marine ecosystems in northern Australia
Create economic, social and environmental net benefits for marine industries and coastal communities	
Protect coral reefs and other tropical marine environments from the effects of climate change	

Table 2 – Our desired research outcomes

Research Outcomes		
AIMS' baseline, status and trend data are the trusted information base for stakeholder decisions	More information for stakeholders produced through autonomous and automated technologies and processes	AIMS science underpins conservation and management of threatened and endangered marine species
AIMS models of environmental condition and function are used to manage tropical marine ecosystems	Tropical marine ecosystem health improved by AIMS solutions mitigating local, regional and cumulative pressures	Stakeholders informed by future coral reef condition forecasts based on knowledge of recovery, acclimatisation and adaptation
Restoration science and scalable technologies help coral reefs resist, adapt to, and recover from climate change impacts	Advanced data analysis workflows and knowledge delivery systems improve stakeholder use of AIMS information	Management decisions and policies of stakeholders use AIMS-led decision support tools

Values and behaviours

AIMS has a set of values for achieving our mission and improving our stakeholders' experience (see Figure 1). These values inspire our employees' best efforts and guide their actions. They reinforce our role as a provider of impartial, trusted and authoritative advice on the opportunities and challenges facing Australia's marine estate.

Figure 1: Our values



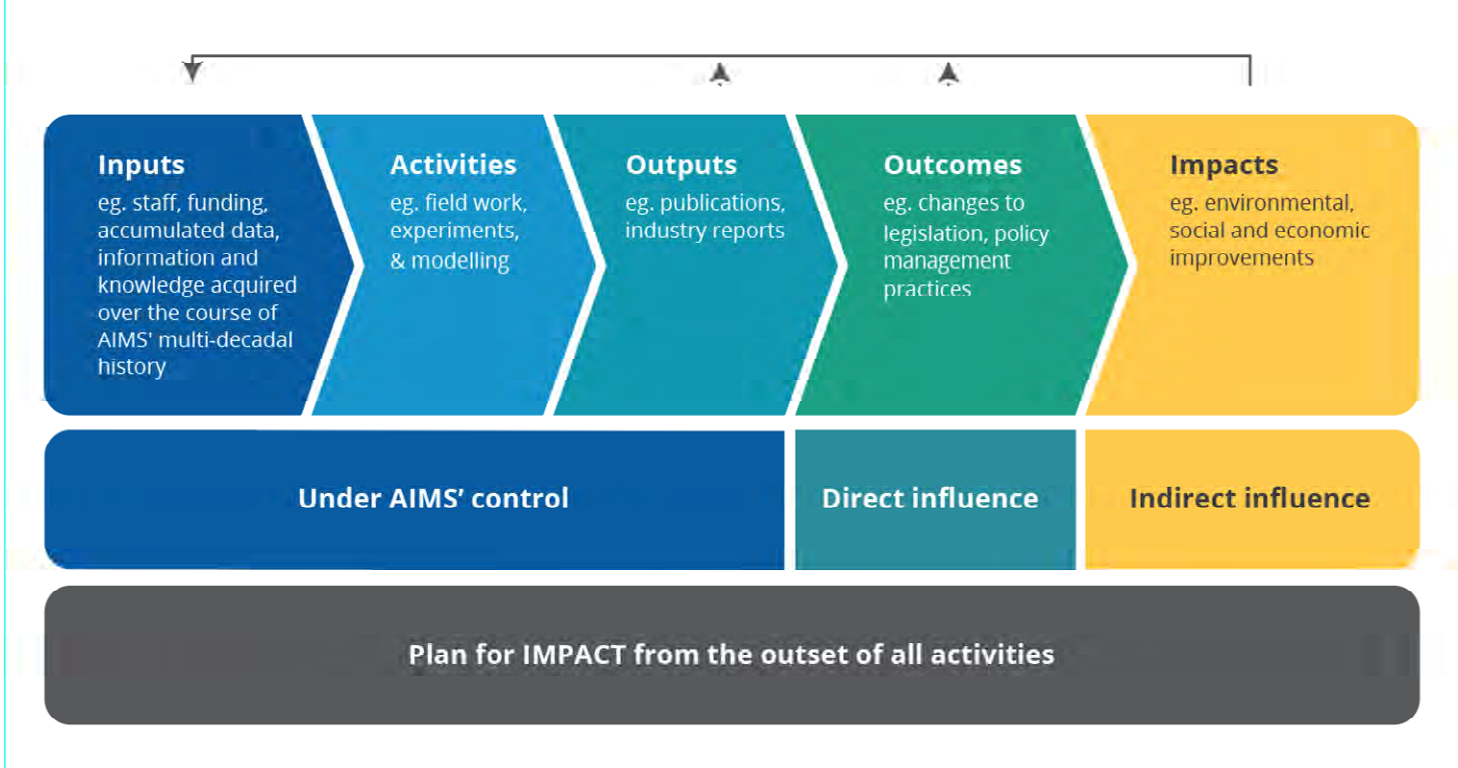
Delivering impact

Everything that AIMS does is about improving outcomes and delivering benefits for government and the community. Measuring our impact is fundamental to this. Figure 2 shows how we apply our impact framework. Our measures align with our strategic objectives and, by extension, with our purpose – to contribute to the economic and environmental wellbeing of Australians by delivering the science and research needed to support the conservation and sustainable use of our tropical marine estate.

While the full impacts of our research become apparent only over time, we aim to ensure continuous positive impacts for people, industries and ecosystems. Understanding and measuring these benefits requires us to remain engaged with our partners long after our research outputs have been delivered. This in turn, enables us to understand better the future needs of government, industry and the wider community. A recent study, undertaken on AIMS’ behalf by The Centre for International Economics, estimates that AIMS delivers more than \$356 million of economic, environmental and social benefits to Australia each year.²

A key focus throughout the period of this Corporate Plan is maximizing the impact that our science underpins. This will require closer relationships with our stakeholders – the decision makers – to better understand their needs and challenges and to ensure that these are accounted for at the outset of every project we undertake.

Figure 2: How we apply our impact framework



² The Centre for International Economics (2021) *The impact of AIMS research: Marine science and the Blue Economy*, pp. 54

Operating environment

The marine research environment is complex, globally connected and affected by climate change and emerging technologies.

Regulatory factors

In addition to obligations under AIMS' enabling legislation, its operations are governed by a range of other Australian Government, state and territory legislation including:

- Health, safety and environment obligations under the Work Health and Safety Act 2011 (Cwlth).
- Environmental obligations under the Environmental Protection and Biodiversity Conservation Act 1999 (Cwlth), the Great Barrier Reef Marine Park Act 1975 (Cwlth) and the Fisheries Act 1994 (Qld).
- Information services obligations under the Archives Act 1983 (Cwlth) and the Freedom of Information Act 1982 (Cwlth).

Our primary obligations under the AIMS Act are:

- To carry out research and development (R&D) in relation to marine science and marine technology.
- To encourage and facilitate the non-commercial and commercial application of the results arising from such activities.

We provide fundamental knowledge of the marine environment that enables regulators and marine industries to make informed decisions and meet their regulatory requirements.

Meeting expectations

Regulators and managers that rely on AIMS' information, services and tools include:

- National Offshore Petroleum Safety and Environmental Management Authority
- Australian Maritime Safety Authority
- Great Barrier Reef Marine Park Authority
- Department of Industry, Science, Energy and Resources
- Department of Foreign Affairs and Trade
- Department of Defence
- National Indigenous Australians Agency
- Department of Agriculture, Water and the Environment
- Torres Strait Regional Authority
- Western Australian Environmental Protection Authority
- Queensland Department of Environment and Science
- Queensland Parks and Wildlife Service
- Northern Territory Government.

In most cases, AIMS has been providing information and services to these stakeholders for many years and it is expected that this will continue. Relationships with the Department of Foreign Affairs and Trade, and the National Indigenous Australians Authority are more recent and expected to deepen further during this Plan. With a growing government focus on northern Australia, which intersects with our footprint and scientific focus, we expect to also develop a closer relationship with the Office of Northern Australia and the Department of Infrastructure, Transport, Regional Development and Communications.

Marine science priorities

Science and research are central to driving innovation and technology development and for enhancing productivity and ensuring a strong future for Australian industry.

AIMS has a strategy in place to align with and support Australia's marine science priorities. Building on the AIMS Strategy 2025, this Corporate Plan ensures resources are allocated to research priorities in order to optimise performance.

AIMS consults on an ongoing basis with its key stakeholders in government, industry and the community. It also conducts regular surveys of the marine science and research needs of a broad range of Australian and international organisations. These inform ongoing review of Strategy 2025 and updates of our research priorities.

The following table provides information on guidance documents and how we approach activities that deliver outcomes for government, industry and community.

Table 3: Guidance documents for delivering outcomes to government, industry and community

Guidance documents	Requirement
Statement of Expectations	<p>As a publicly funded research agency, AIMS is required by its Act to respond to its Portfolio Minister.</p> <p><i>Our obligations are set out in a Statement of Expectations issued periodically by the Minister. The AIMS Council responded to the Minister with a Statement of Intent confirming AIMS' commitment to the Australian Government's policy agenda and the strong connections between this and the AIMS Strategy 2025.</i></p>
National science and research priorities	<p>The nine science and research priorities of the Australian Government are: (1) Food; (2) Soil and water (including marine); (3) Transport; (4) Cybersecurity; (5) Energy; (6) Resources; (7) Advanced manufacturing; (8) Environmental change; and (9) Health.</p> <p><i>Our core capability and research programs contribute strongly to the soil and water, energy, and environmental change priorities.</i></p>
National science agenda and strategies	<p>We support the Australian Government's National Innovation and Science Agenda, the National Science Statement and the Innovation and Science Australia strategy document – Australia 2030: Prosperity Through Innovation.</p> <p><i>We particularly focus on fostering a strong national science and research base as the foundation for a competitive Australia.</i></p>
National Marine Science Plan	<p>AIMS has been a leader and core member of the National Marine Science Committee since its inception and is a strong advocate of the National Plan.</p> <p><i>From individual member contributions emerges a common perspective with an explicit focus on the blue economy throughout the marine science system.</i></p>
Sustainable Development Goals (SDGs)	<p>We support the SDGs of the United Nations: (1) No poverty; (2) Zero hunger; (5) Gender equality; (8) Decent work and economic growth; (13) Climate action; and most notably (14) Life below water.</p> <p><i>Our partnerships deliver breakthrough scientific solutions to support the SDGs and help secure the future of fisheries, and protect ecosystems and wildlife.</i></p>

The AIMS Strategy 2025 is reviewed every three years to ensure that the long-term vision, high-level directions, objectives and targets remain relevant. The first of these reviews will be completed in 2021, with any changes implemented from the beginning of 2022. The next review will be due in 2024, which falls within the scope of this Plan and will likely extend the strategy to 2030 or beyond.

The impacts and uncertainty created by COVID-19

COVID-19 has not had a significant impact on AIMS' science deliverables, but it did affect negatively our external revenue earnings in both 2019-20 and 2020-21. Expected projects were deferred or cancelled, and COVID-19 controls to ensure the safety of AIMS staff and collaborators resulted in a reduced field program, which meant that some contracted work could not be delivered, and the associated planned external revenue could not be realised. The COVID-19 controls also resulted in lower utilisation of AIMS major research assets – the National Sea Simulator and the two large research vessels, *RV Cape Ferguson* and the *RV Solander*.

Consistent with the overall economic recovery experienced in Australia, and as a result of ongoing stakeholder focus, our external revenue pipeline for 2021-22 and beyond is healthy. However, we expect COVID-related delivery risks, due to localised outbreaks and associated lockdowns and restrictions, to remain in 2021-22. We expect that these risks will diminish significantly in 2022-23 and beyond.

Key relationships with government

Australian Government

In response to the Minister's expectations³, the Institute's Statement of Intent expresses its commitment to the government's legislated requirements, broad policy framework and key priorities. AIMS fulfills its responsibilities through the delivery of world-class R&D in relation to marine science and marine technology and the provision of impartial and accurate advice to inform decision making.

Great Barrier Reef Marine Park Authority, and Department of Agriculture, Water and the Environment

AIMS provides significant support to the Great Barrier Reef Marine Park Authority and the Department of Agriculture, Water and the Environment, to assist with the implementation of the Reef 2050 Long Term Sustainability Plan (Reef 2050 Plan). This plan is Australia's overarching long-term strategy for protecting and managing the Reef to support its health and resilience in the future. AIMS is also a formal partner in the implementation and delivery of the Reef 2050 Integrated Monitoring and Reporting Program.

We monitor, research, report and provide advice on:

- condition of water quality and coral reefs in the inshore Great Barrier Reef (GBRMPA Marine Monitoring Program)
- tropical water quality and biodiversity within the National Environmental Science Program (NESP)
- habitat conditions of marine parks (status, dynamics and vulnerability) and have established a formal partnership with Parks Australia.

National Offshore Petroleum Safety and Environment Management Authority (NOPSEMA)

NOPSEMA regulates occupational health and safety, environmental management and well integrity for all offshore petroleum operations in Commonwealth waters. AIMS engages and works collaboratively with the Authority to provide advice on environmental information needs, including the appropriate scale and scope of environmental baseline studies and impact assessment of oil and gas activities such as seismic testing and decommissioning.

³ <https://www.aims.gov.au/docs/about/corporate/corporate-profile-governance/statement-of-expectations>

AIMS works closely with the Department of Foreign Affairs and Trade, and the Department of Industry, Science, Energy and Resources to help advance Australia's trade and investment interests, particularly in marine science. We contribute research and advice on the blue economy, including coral reefs, fisheries and sustainable development. We support the strengthening of Australia's bilateral relations and regional and international cooperation through our contribution to selected projects and the global exchange of information and knowledge.

State and territory governments

AIMS undertakes monitoring, research and reporting and provides advice to state and territory governments addressing the information needs of the Reef 2050 Long-Term Sustainability Plan, the impacts of the development and operations of specific ports and the impacts of contaminants introduced into marine systems through shipping, processing facilities and other sources adjacent to coastal ecosystems. Consistent with our focus on tropical waters, we work most closely with the governments of Queensland, Western Australia and the Northern Territory.

Industry partnerships

Many industries in Australia and around the world have been severely affected by COVID-19 and are at various stages of recovery. The impact on oil, gas and chemicals companies was particularly severe, with some of the most challenging market conditions ever experienced⁴. Similarly, the tourism and fisheries industries were heavily affected by the closing of international and state borders and strict quarantine measures introduced by the Australian Government and state and territory governments. Evidence-based research from AIMS and other scientific bodies, is required to help these industries to recover and to facilitate the growth and investment that will stimulate local economies, create new job opportunities and generate government revenue. This Corporate Plan shows how AIMS will work with its industry partners over the next five years to grow marine-based industries and to maintain healthy coastal and ocean resources.

Offshore oil and gas (and other resources) sector

The offshore oil and gas industry underpins about 80,000 direct and indirect jobs with hundreds of thousands of Australian jobs relying on the reliable, affordable and sustainable supply of oil and gas. AIMS provides essential research that allows this sustainable development of energy, minerals and other valuable resources in and under Australia's oceans. The offshore oil and gas sector is now both a major end user of our research and an important contributor to its strategic directions.

This is an evolving relationship in which AIMS has played a progressively value-adding role. We work with the sector to provide timely and relevant information on environmental status and risk, baseline habitat mapping, monitoring and research to underpin project proposals and environmental management plans required by regulators. Targeted studies investigate the impacts of known and emerging contaminants introduced into marine systems through shipping, extraction and processing facilities and other sources, impacts of seismic surveys on marine species and the provision of environmental information to inform decommissioning decisions.

Ports and maritime industries

Around 98 per cent of Australia's trade travels by sea and economic growth is the driving force for the port sector⁵. With the continued development of major ports across northern Australia, AIMS has become an important source of advice on sustainable port development and operations. AIMS works with the port operators, maritime industries and state and federal regulators to fill knowledge gaps related to potential impacts of port operations across Australia's tropical marine estate, and to assist with understanding and minimising potential environmental risk associated with operational and development activities, including dredging, reclamation and infrastructure works.

⁴ <https://www.appea.com.au/wp-content/uploads/2020/05/APPEA-ECONOMIC-AGENDA.pdf>

⁵ <https://www.portsaustralia.com.au/value-of-ports/economy>

The AIMS Index of Marine Industry 2020 show that tourism contributed \$30.7 billion to the Australian economy in 2017-18.

It is estimated that tourism activity associated with the Great Barrier Reef generates \$5.7 billion per annum⁶ and supports most of the 64,000 jobs depending on the reef. Considering this, AIMS' research is critical to supporting economic activity and jobs in the region. It provides opportunities for coastal communities to improve their livelihoods and protect their way of life.

AIMS is a key provider of research to develop solutions that will help the reef survive the pressures of climate change and other environmental impacts. We conduct targeted projects focused on monitoring marine health, controlling the spread of the predatory crown-of-thorns starfish and providing strategic advice for managing the marine estate. This supports viable tourism and fishing industries for the future, as well as contributing powerfully to the protection of the natural asset that is a key element of Australia's global brand.

Coral reef ecosystems support important commercial, recreational and subsistence fishery resources in northern Australia. Fishing also plays a central social and cultural role in many island and coastal communities, where it is often a critical source of food and income. AIMS compares fish diversity and abundance across tropical Australia, through the combination of its east coast surveys and its comprehensive assessment of coastal, nearshore, oceanic atolls and shoals from Ningaloo to Darwin. Our findings will help policy makers, regulators and fishers determine how much catch to take and how much to leave behind in order for the reefs to remain productive in the face of increasing stress from climate change and other pressures.

Traditional Owner partnerships

AIMS is working to build stronger partnerships with Traditional Owner groups and individuals across northern Australia to achieve a strong and productive shared future in marine science and knowledge exchange. The goal is to protect and manage the sea country interests of Traditional Owners, by developing a better understanding of each other and our marine environments.

AIMS, through its collaboration with Traditional Owners over many years, recognises that greater research impact and value can be created, and new insights gained, if our science is interwoven with the knowledge, perspectives, capacity and capability of the Traditional Owners of sea country. These projects also support the aspirations of Traditional Owners for greater capacity and empowerment in sea country monitoring, research and decision making, and science partnerships.

Our commitment and approach to engagement is outlined in the AIMS Strategy 2025 and in the AIMS Indigenous Partnerships Policy. Recognising the enduring spiritual and cultural connections to, and inherent responsibilities for their land and sea country, AIMS acknowledges that Traditional Owners have a central role in deciding which activities can be conducted in their sea country. AIMS is committed to seeking free prior and informed consent (FPIC) for all projects that have a strong intersection with sea country or Traditional Owner interests.

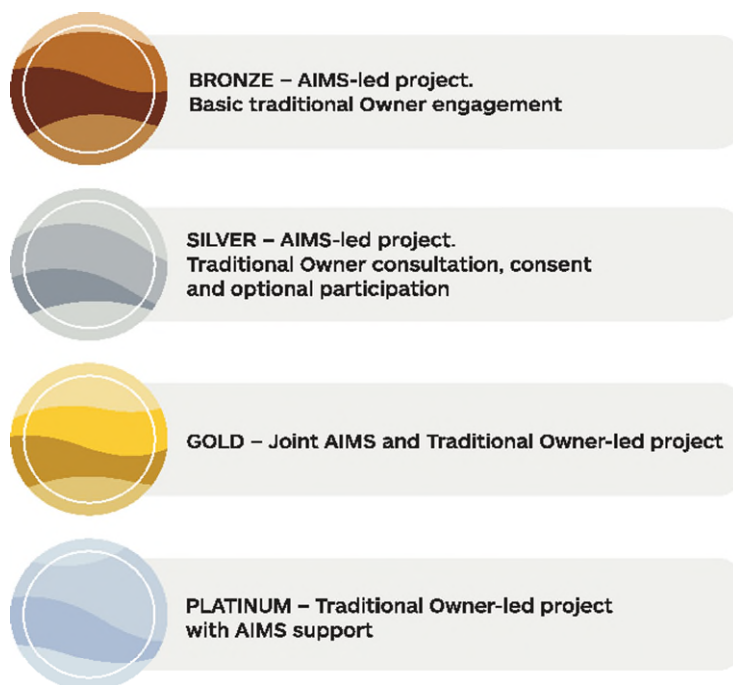
We have further developed our approach to engagement, leading to science partnerships that deliver mutual benefit under the AIMS Indigenous Partnerships Plan. The key purpose of this plan is to facilitate meaningful partnerships with Traditional Owners of sea country in northern Australia to benefit both Indigenous and non-Indigenous Australians.

As part of the plan, a four-tiered system has been developed to define the appropriate level of Traditional Owner engagement by characterising all of AIMS' research projects as either bronze, silver, gold or platinum depending first on the strength of the intersection between the project and Traditional Owner interests and their sea country, and second, on the level of Indigenous leadership of the project (see Figure 3). Over the life of this Corporate Plan, we will implement fully the Indigenous Partnerships Plan, further strengthen our relationships with Traditional Owners and increase the proportion of higher-tier projects in our portfolio.

AIMS commenced its first gold status project in 2019–20, a five-year program of work with significant Traditional Owner participation, knowledge exchange and training outcomes that inform the Reef Restoration and Adaptation Program (RRAP) projects, and planning and management of sea country for the Woppaburra Traditional Owners of the study area.

⁶ <https://www2.deloitte.com/content/dam/Deloitte/au/Documents/Economics/deloitte-au-economics-great-barrier-reef-230617.pdf>

Figure 3: Levels of Traditional Owner engagement for projects



Not-for-profit sector partnerships

AIMS works with the not-for-profit sector, including the Great Barrier Reef Foundation (GBRF), and several international philanthropic organisations such as Vulcan Inc. and the Bertarelli Foundation as well as Australia’s Menderoo Foundation. The GBRF is a leading charity that brings together business, science, government and philanthropy for the benefit of the reef. AIMS works in close association with the GBRF in a number of fora and advisory bodies, including the Reef 2050 Plan Advisory Committee, and has a representative on the GBRF’s International Science Advisory Panel.

Seattle-based Vulcan Inc. is the engine behind philanthropist and Microsoft co-founder Paul G. Allen’s network of organisations and initiatives working to catalyse scientific and technological breakthroughs. AIMS’ contribution to the Global FinPrint project and our pioneering work on human-assisted evolution of corals are examples of shared initiatives.

The Bertarelli Foundation promotes global marine conservation and science. The Bertarelli Programme in Marine Science is a collaborative program bringing together scientists from around the world to work in the British Indian Ocean Territory (BIOT) on a range of issues. For AIMS, the partnership has enabled greater integration of our Australian-based research with the Indian Ocean rim states.

The Menderoo Foundation launched its Flourishing Oceans Arm in 2018. Since 2020, AIMS has worked with the Menderoo Foundation in support of a shared vision to ensure that Western Australia continues to be a hub for world class marine conservation research. This includes support for growing marine research infrastructure and science in the Exmouth and Ningaloo area. In 2021, AIMS entered a strategic partnership with the Menderoo Foundation via a Memorandum of Understanding. We are also assisting the Foundation with the development of a research aquarium facility based in Exmouth. During the course of this Corporate Plan, we aim to develop specific joint research projects with the Menderoo Foundation, particularly targeted toward our mutual scientific interests in the north western parts of Australia’s marine estate.

The philanthropic sector is evolving and we continue to explore and develop opportunities to work with philanthropic organisations with a focus on marine science or issues that affect the health and status of the marine environment. We are expecting growth in external revenue from this sector over the next five years, particularly via the GBRF and the Reef Trust Partnership⁷. However, we also anticipate that opportunities for leverage in other parts of the sector may contract in the foreseeable future due to COVID-19.

⁷ <https://www.barrierreef.org/what-we-do/reef-trust-partnership>

Supporting the blue economy

Originally commissioned and developed for AIMS by Deloitte in 2008, the AIMS Index of Marine Industry⁸ assesses the contribution of Australia's blue economy to the nation's economic bottom line. It shows the value of Australia's blue economy was estimated to be \$81.2 billion in 2017-18, an increase of \$13.1 billion (19.2%) over the previous two years.

The industries making up this sector include water-based transport, domestic and international tourism, marinas and boating infrastructure, boatbuilding and repair, ship building and repair, marine equipment retailing, oil exploration, oil production, liquefied petroleum gas (LPG) production, natural gas production, marine-based aquaculture, commercial fishing, and recreational fishing.

We have a responsibility to assist the sustainable development of this highly valuable sector. A recent report by The Centre for International Economics (CIE) estimates that AIMS' scientific outputs underpinned more than \$222 million dollars of direct market benefits and a further \$134 million in non-market value in 2019-20.² AIMS provides research services focused on supporting the sustainable development of Australia's marine estate by industry, while ensuring the protection of high-value marine and coastal ecosystems through effective environmental management.

In line with the National Marine Science Plan⁹, AIMS and its collaborators continue to focus on seeking solutions to three of the seven 'grand challenges' identified in the Plan:

- Biodiversity, conservation and ecosystem health.
- Urban coastal environments.
- Climate variability and change.

Biodiversity, conservation and ecosystem health

Human activities and climate change threaten marine diversity, the natural functioning of marine ecosystems and their sustainable use by present and future generations. Marine diversity is challenged by multiple pressures that are rarely appreciated until their cumulative impact becomes evident. Understanding the cumulative impacts of these multiple stressors on warming marine ecosystems is drawn from AIMS' long term and large-scale monitoring of the Reef for more than 35 years. This knowledge has become increasingly important for the development of effective responses to conserve biodiversity and ecosystem health. Long-term ecological research and monitoring is also required to inform marine managers about the status and trends of key assets and values in ecosystems under management.

Urban coastal environments

More than 85 per cent of Australians live within 50 kilometres of the coast. As the location of most of our transport, commercial, residential and defence infrastructure, this urban coastal environment is critical to Australia's strategic and economic security and fulfils important cultural, recreational and aesthetic needs. In addition, it has intrinsic biological diversity values and provides essential ecosystem functions such as primary productivity, nutrient cycling and water filtration. In a sustained period of pronounced economic development with a focus on resource extraction and infrastructure development – much of it centred on coastal hubs – the challenge for coastal managers and policy makers is to balance these multiple competing uses and their impacts. AIMS' scientific knowledge is fundamental to informing actions required to protect and conserve the marine estate.

Climate variability and change

Climate variability and change affects all aspects of society and both the marine and terrestrial environment. Heat, water, carbon and nutrients are the fundamental elements of the climate system and the ocean is the dominant reservoir for all four constituents. To understand the climate system and its impact on society and the natural environment, we must be able to observe and model its oceanic branch including the storage and transport of heat, fresh water, nutrients and carbon in the ocean, and their exchange to the atmosphere and marine and terrestrial ecosystems, at global, regional and local scales. AIMS is the managing entity and a major research provider for the Reef Restoration and Adaptation Program (RRAP), which brings together Australia's leading experts to create an innovative suite of safe, acceptable interventions to help the Great Barrier Reef resist, adapt to and recover from the impacts of climate change.

⁸ <https://www.aims.gov.au/aims-index-of-marine-industry>

⁹ <http://www.marinescience.net.au/national-marine-science-plan/>

Research environment

Reef Trust partnership

In 2018, the Australian Government announced the largest ever single investment in reef protection. This included a \$443.3 million partnership with the Great Barrier Reef Foundation for delivery of outcomes over the following six years (inclusive of 2023–24). In line with the government's Reef 2050 Long Term Sustainability Plan for the Great Barrier Reef, the overarching framework for protecting and managing the reef to 2050, we will put our efforts into:

- Improving management of the Great Barrier Reef World Heritage Area and relevant activities in adjacent catchments.
- Protecting species, habitats and Indigenous values.
- Managing key threats, including poor water quality and crown of thorns starfish (CoTS) outbreaks.

This partnership significantly changed the research environment compared with previous years, making the GBRF a significant stakeholder of the work we undertake. The areas of relevance to AIMS being:

- \$100m investment in the Reef Restoration and Adaptation Program (RRAP) R&D Program.
- \$40m to complement activities implemented under the Reef 2050 Integrated Monitoring and Reporting Program (RIMReP).
- \$9.8m for R&D into new at-scale methods of controlling the CoTS.

AIMS has established partnerships with the GBRF in all three areas, is part of governance arrangements and the delivery of associated R&D.

Geographic scope

AIMS operates across the tropical north of Australia, from the North West Cape in Western Australia to Gladstone in Queensland. This geographic specialisation is a result of focusing efforts on key tropical marine issues and opportunities.

We recognise the competitive advantage gained from the geographic location of our various centres – our Townsville headquarters is adjacent to the Great Barrier Reef; Perth is the corporate hub for marine-based industries that operate on the Western Australian coast and Timor Sea; and Darwin is close to neighbouring countries and development activities in the Arafura and Timor seas. It is also the centre for many Traditional Owner agencies and organisations operating across northern Australia.

In addition, AIMS extends its geographic reach internationally through long-established agreements and mature partnership and collaborative arrangements with other international marine science institutes, universities, research organisations and government agencies. These strategic relationships enable AIMS to augment its own capability to address national priorities and to enhance Australia's contribution to tackling global challenges. In recent years, AIMS has built on strong relationships with the Commonwealth Departments of Industry, Science, Energy and Resources, Agriculture, Water and the Environment and, in particular, Foreign Affairs and Trade to deliver through international frameworks such as the International Coral Reef Initiative, the Global Coral Reef Monitoring Network and the Commonwealth Blue Charter, coral reef monitoring, management, conservation and restoration solutions that are mutually beneficial for both Australia and Australia's international partners. Furthermore, AIMS' active engagement provides opportunities to grow external investment in research that addresses priority marine issues that affect both Australia and our international neighbours and partners.

Scientific scope

Supporting our stakeholders' needs is a primary focus of AIMS. Our expertise in molecular and microbiology, mathematical modelling, ocean monitoring (from microbes to regional ecosystems), marine noise, and decision support capability align with these evolving needs – from the ocean to the laboratory, from data analysis and models, to the ultimate development of products for direct use by end users. Examples of our expertise in field and experimental research include:



Long-term ocean
monitoring



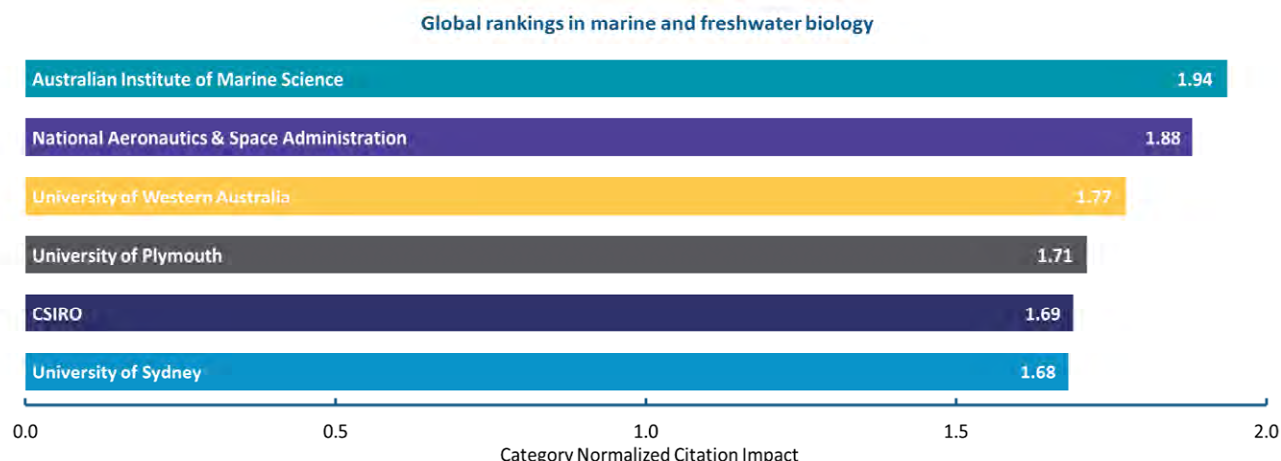
Risk assessments
of pollution



Predictions of
ecosystem function

AIMS' success is demonstrated by our consistently high position in relevant international rankings based on science publication metrics. AIMS has maintained its position as one of the three top-ranked research organisations in the world in the field of marine and freshwater biology (Clarivate Analytics InCites, Figure 4). We are committed to excellence in science and will strive to maintain this ranking throughout the Corporate Plan period.

Figure 4: Top six organisations globally in the field of marine and freshwater biology ranked by citation impact, 2016-2020 (InCites April 2021).



Collaboration

The opportunities and challenges facing our marine systems are so complex that no single research organisation can provide all the scientific capability and capacity required to address them. AIMS plays a leadership role where it can and brings partners into projects and programs as required. In other contexts, we provide specialised capability for projects led by others.

Organisations and centres that have complementary capability in tropical marine science include:

- Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES).
- Australian Nuclear Science and Technology Organisation (ANSTO).
- Australian Research Council Centres of Excellence (e.g. Coral Reef Studies; Mathematical and Statistical Frontiers).
- CSIRO.
- Geoscience Australia.
- Universities (including James Cook University, Australian National University, the University of Melbourne, Curtin University, Charles Darwin University, The University of Western Australia, The University of Queensland, Queensland University of Technology, The University of Tasmania and Griffith University).
- State-based agencies (e.g. departments of environment, primary industries and fisheries, and natural resource management agencies).

Over the next five years, our key national research partners are expected to continue to include the CSIRO, Charles Darwin University, James Cook University, Queensland University of Technology, The University of Queensland, The University of Western Australia, Curtin University and University of Tasmania.

Internationally, AIMS has formal research agreements with several universities and research institutes including Institute of Oceanology, Chinese Academy of Sciences (China), the National Oceanic and Atmospheric Administration (US), King Abdullah University of Science and Technology (Saudi Arabia), Institut Océanographique (Monaco), the Okinawa Institute of Science and Technology (Japan), the University of South Pacific (Fiji) and the Palau International Coral Reef Center.

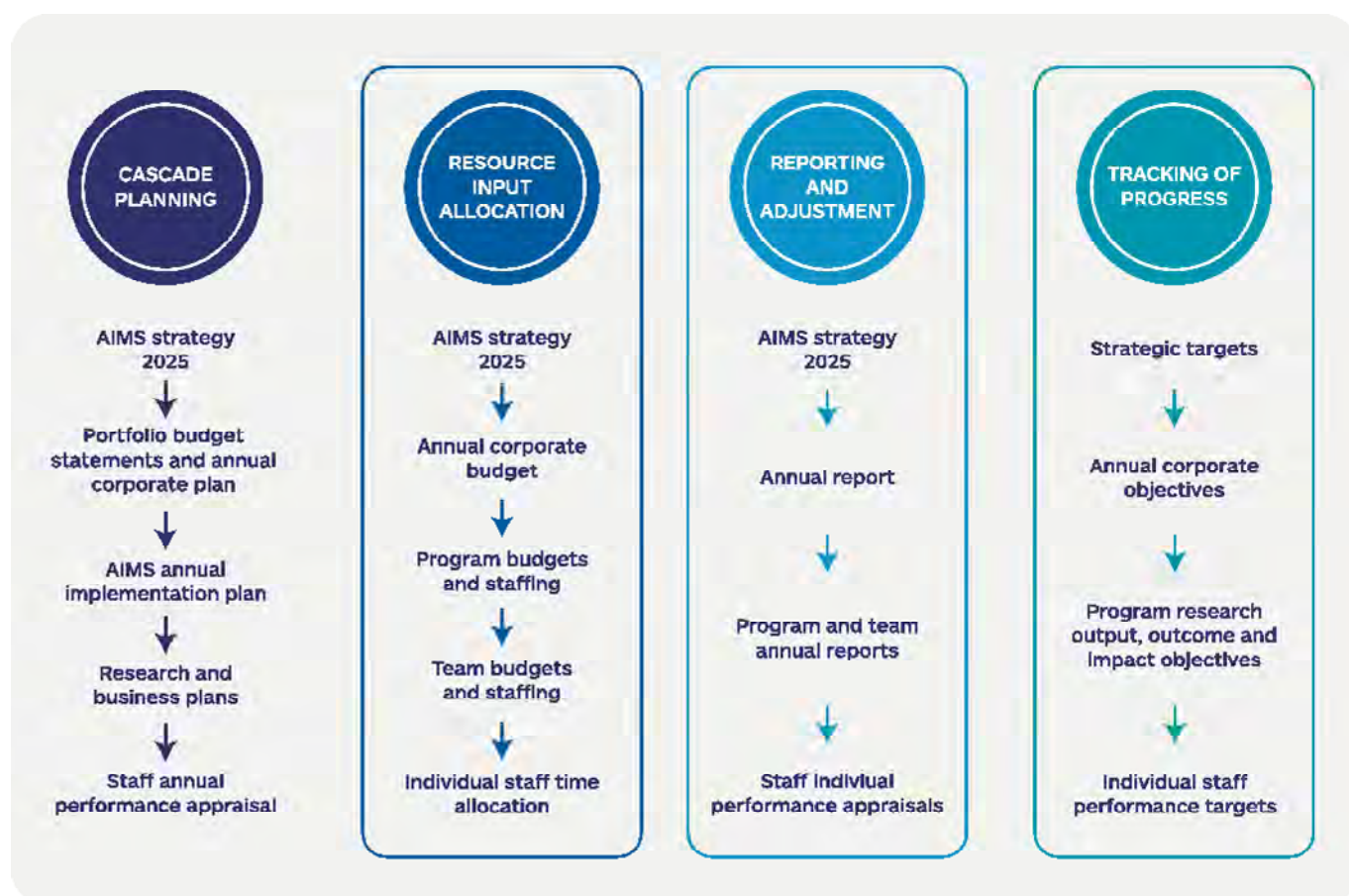
A key aspect of our international partnering is its expression of Australia's strategic interests in marine science and technology. This underpins our ever-growing relationship with the Department of Foreign Affairs and Trade. Initially built around our joint support of the International Coral Reef Initiative, which Australia jointly chaired with Monaco until mid-2021, it has expanded to encompass development and transfer of user-friendly tools for our Pacific neighbours to manage their marine territories more easily. This benefits our neighbours and ourselves as our coral reefs are globally connected.

Implementing strategy

We are a strategy-led organisation. The AIMS Strategy 2025 sets out the future direction of our research and advice to government, industry and the community and articulates the long-term vision as to how AIMS will fulfil its remit under the guiding legislative and financial frameworks. The high-level directions and objectives set out in the Strategy link directly to the Institute's Corporate Plan and the over-arching budget statements, cascade down into detailed implementation plans and form the basis for our research and investment decisions (see Figure 5).

The AIMS Strategy 2025 is reviewed every three years to ensure it is up to date and relevant, and progress towards targets and key performance indicators are reported yearly in AIMS' annual reports. The first of these reviews will be completed in 2021, with any changes implemented from the beginning of 2022.

Figure 5: How the elements of our research interrelate



Research activities

To achieve the impact targets identified in the AIMS Strategy 2025, AIMS will focus on delivering the following nine research outcomes over the five-year period encompassed by the 2021-22 AIMS Corporate Plan. Delivery of longer-term research outcomes will be achieved through the implementation of a number of shorter-term activities described in Table 4.

Table 4: Outcomes and deliverables of research priorities, 2021-22 to 2025-26

Five Year Research Outcomes	Key Activities	2021-22	2022-23	2023-24	2024-25	2025-26
AIMS' baseline, status and trend data are the trusted information base for stakeholder decisions	Continue to deliver long-term coral reef and physico-chemical monitoring programs.					
	Continue to be the major Integrated Marine Observing System (IMOS) operational partner for northern Australia and the Great Barrier Reef					
	Deliver specific monitoring and baseline assessments in response to external demand. Work with Australian Government and state agencies and other research organisations to implement the Reef Integrated Monitoring and Reporting Program (RIMReP)					
	Investigate and implement technology to improve the efficiency and capability for marine observing and assessment methods, including continuous development of reporting indices and operationalizing an innovative cloud-based analyses tool					
More information for stakeholders produced through autonomous and automated technologies and processes	Complete high impact projects already underway (e.g. agile underwater vehicle development, autonomous image analysis)					
	Advance development and testing of automated data and image analysis pathways to enhance operational efficiencies					
AIMS science underpins conservation and management of threatened and endangered marine species	Determine the status, movement and habitat use of key megafauna species, the influence exerted by coastal development and industry activities, and implications for conservation and management					
	Explore movement and population connectivity of threatened species in northern Australia					
	Develop cumulative threat maps for threatened and exploited species in the tropics					
AIMS models of environmental condition and function are used to manage tropical marine ecosystems	Maintain and improve models describing the functioning of coastal areas to support ecosystem-scale management decisions					
	Continue to develop and deliver specific models and regional assessments, in response to industry and stakeholder client needs					
	Continue to develop, validate and apply predictive benthic habitat models based on geomorphological, biophysical and environmental attributes for priority regions across northern Australia					

Five Year Research Outcomes	Key Activity	2021-22	2022-23	2023-24	2024-25	2025-26
Tropical marine ecosystem health improved by AIMS solutions mitigating local, regional and cumulative pressures	Improve understanding of coastal and ocean acidification in the GBR and its impacts on benthic communities					
	Increase certainty in our understanding of the potential causes of crown-of-thorns starfish (CoTS) population outbreaks and inform actions and strategies to manage and mitigate current and future outbreaks					
	Develop protocols for sampling and analyses of microplastics in marine environments, and collect baselines of contamination across northern Australia					
	Improve understanding of the sensitivity of tropical marine organisms to priority contaminants, including assessing external influencing factors relevant to the tropical environment (e.g. temperature, light)					
Stakeholders informed by future coral reef condition forecasts based on knowledge of recovery, acclimatisation and adaptation	Improve understanding of drivers and limitations of coral reef recovery, coral growth and reef accretion rates					
	Continue optimisation of coral propagation, settlement and post-settlement survival in the National Sea Simulator (SeaSim) to support coral reef recovery and restoration R&D					
	Understand risks and scope for enhancement of coral tolerances for future applications to support coral reef recovery and restoration by further developing approaches such as hybridisation, selective breeding, assisted gene flow and gene editing technologies					
Restoration science and scalable technologies help coral reefs resist, adapt to, and recover from climate change impacts	In conjunction with consortium partners, deliver the Reef Restoration and Adaptation Program, which will develop and test an innovative suite of interventions to help the Great Barrier Reef resist, adapt to, and recover from the impacts of climate change					
Advanced data analysis workflows and knowledge delivery systems improve stakeholder use of AIMS information	Modernise data systems into a coherent research data platform					
	Continue to maintain a nationally recognised repository of research data					
	Expand the platform for web-delivery of environmental information					
	Integrate the eAtlas ¹⁰ into national data portals					
Management decisions and policies of stakeholders use AIMS-led decision support tools	Advise on solutions to advance the development of decision support capability within the Reef Integrated Monitoring and Reporting Program (RIMReP)					
	Develop a spatial database that maps Traditional Owner sea country over tropical Australia					

¹⁰ <https://eatlas.org.au/content/about-e-atlas>

Intervening to help build reef resilience

In the past, our research and monitoring has focused on understanding and measuring natural recovery and adaptation. However, more recently it has been recognised that active interventions need to be considered as additional management strategies. Active intervention on the reef will help it adapt, recover and survive warming ocean conditions. Such intervention targets the retention of the reef's key ecological, economic and social values. This work, together with national and global efforts to reduce greenhouse gas emissions and other management strategies to ease pressure on the Reef, aims at building its resilience and capacity to adapt to the escalating effects of climate change.

The Great Barrier Reef is indisputably one of the world's most important natural assets. Climate change is recognized as the greatest threat to coral reef ecosystems around the world¹¹ including Australia's iconic reefs such as the Great Barrier Reef, especially due to globally increasing impacts from marine heatwaves^{12,13}. We work with others to protect and restore the reef, which is under severe pressure from climate change and other stressors. Cumulative impacts include rising sea temperatures, ocean acidification, pollution, declining water quality and outbreaks of the destructive crown-of-thorns starfish (CoTS).

Between 2017 and 2019 AIMS led a study to assess the need, the feasibility of developing and benefits of deploying additional new reef interventions to help maintain and build reefs' resistance to climate change. Called the Reef Restoration and Adaptation Program (RRAP) it concluded that interventions would likely be needed, were possible and could provide positive net benefits, but that all of the interventions would require R&D to develop. These outcomes were supported by the Australian Government and the decision was made to invest \$100 million of the Great Barrier Reef Foundation (GBRF) – Reef Trust Partnership (RTP) funds into the first four years of research and development. This funding was to be supplemented by \$100 million of in-kind investment by research providers and \$100 million in funds raised by the GBRF.

During 2020 an unincorporated joint venture partnership was formed between seven partners, with the GBRF as the principal funder and AIMS as the managing entity. In parallel the RRAP research and development program was reduced to fit the available funding and the process of contracting projects was commenced. The first \$165 million of research and development has now been contracted and has commenced. AIMS, as the managing entity, has led the process of developing and contracting the research program.

The reef restoration and adaptation program is developing new interventions that cover the spectrum of protection (retaining the corals we have), adaptation (helping corals to adapt and reducing the need for ongoing interventions) and restoration (restoring smaller high value, but degraded areas). Key to the program is an extensive engagement and partnering program with stakeholders and Traditional Owners. Agreement will be required to deploy these new interventions and new industries established. Full details can be found at www.GBRRestoration.org.

Technology transformation

Critical functions such as environmental monitoring require continuous advances in technology if costs are to be kept manageable and stakeholder expectations in relation to data-led insights are to be met. These expectations are increasing rapidly, driven by requirements that include field work in locations that are unsuited for divers, a desire from Traditional Owner and citizen-science groups to deliver high quality data, and access to near-real time data.

AIMS needs to acquire a comprehensive suite of new technologies across the whole pipeline, from data acquisition to analysis to knowledge delivery if it is to remain efficient and competitive.

In response we established the AIMS Technology Transformation Program in 2019 to test ideas, design whole of pipeline technology solutions and move these into operational use. To benchmark progress we set a target to deliver *twice the knowledge in half the time at half the cost*. To achieve this target will require extensive data collection and analysis automation.

¹¹ Arias et al. 2021. Technical Summary. In: *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Masson-Delmotte et al. (eds.)]. Cambridge University Press. In Press.

¹² Oliver, E. C. J., M. T. Burrows, M. G. Donat, A. Sen Gupta, L. V. Alexander, S. E. Perkins-Kirkpatrick, J. A. Benthuyssen, A. J. Hobday, N. J. Holbrook, P. J. Moore, M. S. Thomsen, T. Wernberg, and D. A. Smale. 2019. *Projected Marine Heatwaves in the 21st Century and the Potential for Ecological Impact*. *Frontiers in Marine Science*

¹³ Great Barrier Reef Marine Park Authority 2019, *Great Barrier Reef Outlook Report 2019*, GBRMPA, Townsville (<https://elibrary.gbrmpa.gov.au/jspui/handle/11017/3474>)

During the 2020/21 period the program has made significant progress with the ReefScan family of monitoring solutions designed and now being delivered. In parallel a new cloud-based data science platform was developed to streamline workflows and enable the use of artificial intelligence based automated data analysis.

The transformation is beyond AIMS ability to self-fund, and so AIMS has formed partnerships with organisations which have similar needs. An example being the Joint Field Management Program (JFMP) which undertakes operational and management activities on the GBR. It has invested in the AIMS development program in return for access to the technology as it becomes operational. These arrangements and partnerships are expected to grow over the next few years.

The strategy requires that the autonomous platforms can be certified for trusted operational use. Currently this is not possible and so AIMS has formed a partnership with the Queensland Government, the Australian Maritime Safety Authority (AMSA), the Department of Defence and several other organisations to create a marine autonomous systems development, testing and certification range at our Townsville site. Called ReefWorks, the capability will be developed progressively and made operational and comprise three areas:

- Digital Test Range – a virtual environment for developing and testing autonomous systems.
- Sensor and Autonomous Platform test tanks – to allow controlled and repeatable in-water testing.
- Sea Test Ranges – several testing areas adjacent to AIMS facilities and testing corridors that extend out though the reef.

This capability does not currently exist in Australia and will allow AIMS to certify its own systems. Importantly, it is filling a critical gap in the Australian innovation sector. There is a strong demand to develop sovereign technology and currently the Defence Department, large and small industry do not have a means to test and certify these systems.

Full details can be found at [Technological Solutions | AIMS](#)

Decision criteria

Decision making in marine science can be complex and seemingly intractable, principally due to the inherent existence of trade-offs between sociopolitical, environmental and economic factors. In addition to being driven by our overarching Strategy 2025, the following key decision criteria help us to evaluate alternatives and determine priorities:

- Project development is informed by engagement with users and stakeholders to maximise the likelihood that the resulting science will be taken up and deliver economic, environmental and social benefits.
- Projects will fill knowledge gaps that are actionable by stakeholders.
- Projects are discrete in time and scope and progress can be measured.
- A programmatic approach is taken where the suite of projects combine to achieve large scientific outcomes with some projects directly feeding into others.
- Capability is leveraged by collaborating where appropriate. Opportunities for collaboration and longer-term strategic alignment are preferred.
- Projects with potential to deliver tangible benefits to indigenous peoples are identified and developed in partnership with Sea Country traditional owners.

Excellence and assurance

Science and research, including marine science and research, plays a fundamental role in Australia's economy and society. Our data is useful not only to scientists but provides the scientific knowledge for government, industry and the community to make decisions that contribute to better environmental, social and economic outcomes. We are very conscious of our international reputation for scientific excellence and for ensuring consistent, outstanding returns on investment. Peer review gives confidence that our research is valid, significant and original.

Accordingly, we measure our impact both by the quality of our work and by the effective use of our data, information and expertise by end users. These wider effects drive the targets set out in the AIMS Strategy 2025.

Rigorous quality assurance and quality control procedures ensure we deliver high-quality and timely research. Our research is peer reviewed at multiple stages through the research pipeline using internal and external reviewers.

The AIMS Quality Management Policy, approved by the AIMS Council, establishes the expectations for the delivery of quality scientific research and services. It forms an integral part of our governance framework and promotes ethical research behaviour, providing a foundation for high-quality research, credibility and stakeholder trust.

In 2020-21, AIMS implemented a new Quality Policy that establishes clear standards and expectations for the delivery of quality scientific research and services in line with the Australian Code for the Responsible Conduct of Research 2018 and underpins our commitment to achieving ISO 9001:2015 accreditation. We also implemented the AIMS Responsible Conduct of Research Framework, which sets out AIMS' expectations for the conduct of all persons engaged in research under the auspices of the Institute. It articulates - in conjunction with AIMS strategy 2025 – the broad principles that characterise an ambitious, honest, ethical and conscientious research culture and establishes a framework that provides a foundation for high quality research, credibility and community trust in our research outputs.

During 2021-22, AIMS will continue the review of its quality systems as part of our commitment to continuous improvement to ensure that we remain one of the best and most trusted marine research organisations in the world. We may seek formal accreditation against ISO9001 during the outyears of this Corporate Plan.

Our multi-layer quality control systems approach includes the AIMS Framework for Responsible Conduct of Research, internal and external peer review of publications and reports, rigorous data collection procedures, quality assurance and data curation. In 2019, we introduced team-based peer reviews of our research. The concept is based on the US military red-on-blue exercises and involves setting up two teams that challenge each other on a particular research issue (e.g. water quality on the Great Barrier Reef). One team puts together a case based on the currently available evidence, while the other team tries to find flaws and weaknesses in the arguments. This process drives continuous improvement, highlights and eliminates any subconscious bias, and helps to identify critical questions that remain unanswered and require additional research. We will build on the success of this process by formalising it within our quality management system.

We are committed to the principle of open access in our research publications as the best means to support maximum uptake and application that benefits as wide a user base as possible. All research conducted by AIMS using public funding is made publicly available, although AIMS retains the right to use intellectual property generated through its commercial research partnerships for research purposes and to publish and represent publicly all research findings.

AIMS remains the number one ranked marine science research institute in the world, based on science citation impact in the fields of marine and freshwater biology.¹⁴

Engagement and communication

With public engagement influencing environmental performance as a whole, and biodiversity conservation in particular, our engagement with stakeholders, key policy sectors and the public must be enhanced at the highest level. In particular, the translation of research to benefit government, industry and the wider community is crucial.

We communicate the role AIMS plays in the communities in which we operate. This involves publishing detailed information on our website, leveraging exposure from social media channels, engaging with stakeholders, and using media outlets to foster community understanding of marine issues.

Further afield, we engage with government and industry stakeholders, demonstrate our impact and value, and promote our expertise in reef science and the maintenance of quality standards in science to build positive sentiment and commentary among audiences and in the media.

In 2021-22, we will continue to communicate AIMS' purpose and value to the nation by strengthening public awareness and interest in AIMS. We will reinforce our corporate branding and enhance our website to present our public image, promote our research and strengthen our reputation.

To maximise return on investment, we make our research results widely available. All our research has clearly defined impact pathways for delivery to end users, including data provision, published findings, knowledge synthesis reports, data visualisation, risk assessment, decision support tools and direct engagement.

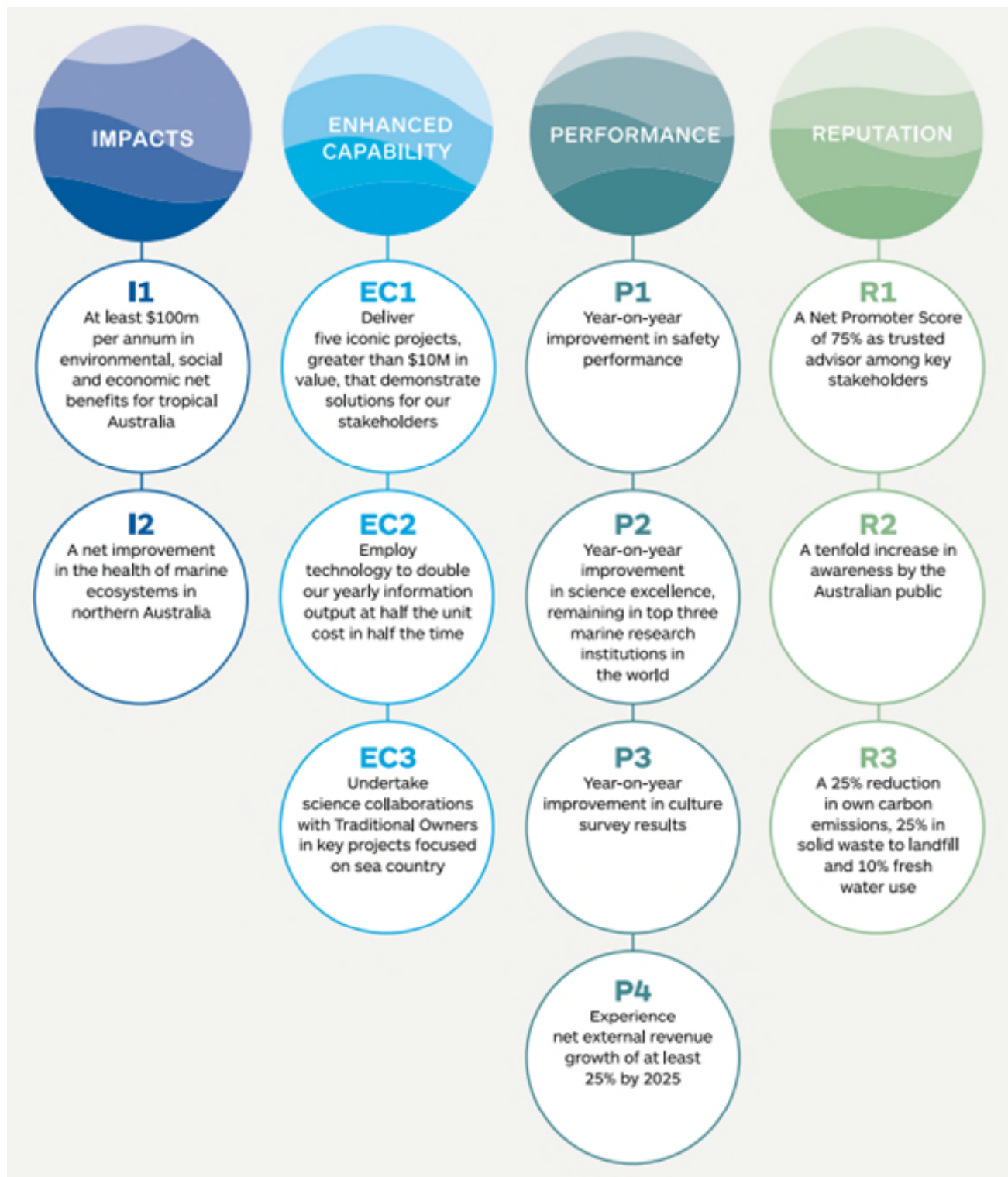
While we work on ways to increase our visibility, we will continue to maintain our role as an independent trusted adviser, providing expert advice to government, industry and the community through formal and informal mechanisms, including participation on expert panels, advisory committees, boards, national and international delegations, and the media.

¹⁴ Ranking based on category normalised citation impact of articles published by AIMS in journals included within the Web of Science, between 2016 and 2020, within the field of Marine and Freshwater Biology (InCites April 2021). The analysis only included research institutes that had published more than 250 papers during that period in order to benchmark AIMS against institutes with sufficiently similar publication rates.

Performance measurement

AIMS is a strategy-led organisation. The high-level directions and objectives set out in the AIMS Strategy 2025 cascade down into detailed implementation plans, as outlined in the Portfolio Budget Statements and Corporate Plan. These form the basis for our research and investment decisions. The AIMS Strategy 2025 has 12 strategic targets to be achieved by 2025 (see Figure 6).

Figure 6: AIMS Strategy 2025



To ensure our progress against these long-term goals, this Corporate Plan contains eight key performance indicators (see Table 5) against which we measure our performance on an annual basis.

Table 5: Key Performance Indicators

Performance Criteria	Portfolio Budget Statements performance targets	2021-22	2022-23	2023-24	2024-25	2025-26
AIMS research creates a positive triple bottom line contribution (impact value) to Australia	Minimum 2 case studies	≥ 2 new triple bottom line case studies published per year (pa)				
		AIMS research:				
		Demonstrate ≥ \$20m pa total impact value	Demonstrate ≥ \$40m pa total impact value	Demonstrate ≥ \$60m pa total impact value	Demonstrate ≥ \$80m pa total impact value	Demonstrate ≥ \$100m pa total impact value
Deliver strategic and applied research and monitoring that addresses national research priorities and stakeholder needs	Maintain or increase amount of research commissioned by stakeholders	Achieve revenue budget from stakeholder commissioned research				
Maintain or increase current standings for scientific excellence, innovation and impact	Maintain acknowledged domestic and global high standing in relevant fields of research, and confidence of key stakeholders in research outputs	Maintain Top 3 global ranking in the field of freshwater and marine biology				
		Maintain high stakeholder confidence in our scientific outputs gauged using a net promoter score				
Deliver research advice and scientific products that are critical for stakeholders to assess the impacts of natural and human pressures on sensitive marine ecosystems	Maintain or increase the number of peer-reviewed publications and other knowledge products and make datasets or data products publicly available	Maintain annual journal publication rates > 200 papers per annum				
		100% of datasets collected using public monies are made publicly available within one year of collection				
Increase research capability, capacity, impact and science diplomacy through participation in formal national and international collaborations, joint ventures, partnerships and strategic alliances	Maintain or increase number and scale of domestic and international research partnerships, collaborations, joint ventures and strategic alliances	Maintain proportion of projects involving collaborators (≥ 70%)				
		Maintain proportion of published papers and reports that include collaborators (≥ 80%)				
	Maintain or increase participation by AIMS on advisory panels and committees	Representation on key relevant advisory committees				

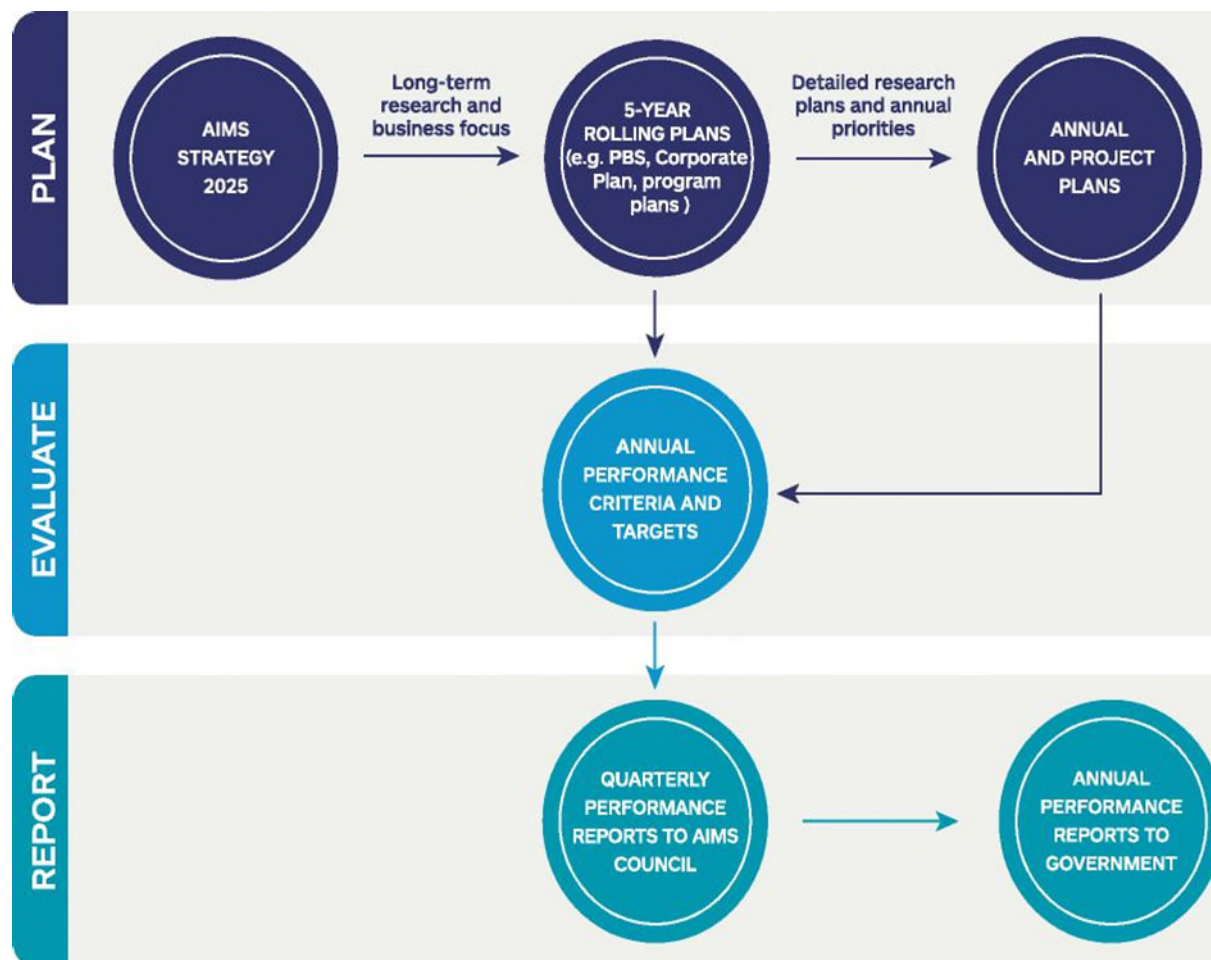
Performance Criteria	Portfolio Budget Statements performance targets	2021-22	2022-23	2023-24	2024-25	2025-26
Improve research outcomes and impact through increased Traditional Owner engagement in the planning and delivery of coastal research and development	Increase the percentage of projects with Indigenous engagement in the planning and delivery phases	≥ 70% of new projects meet Bronze criteria ¹⁵ ;	≥ 80% of new projects meet Bronze criteria	100% of new projects meet Bronze criteria	100% of all projects meet Bronze criteria	100% of all projects meet Bronze criteria
		And	And	And	And	And
		At least one Gold Status project	≥5% of the total value of AIMS research portfolio is delivered through Gold or Platinum partnerships	≥7% of the total value of AIMS research portfolio is delivered through Gold or Platinum partnerships	≥10% of the total value of AIMS research portfolio is delivered through Gold or Platinum partnerships	≥15% of the total value of AIMS research portfolio is delivered through Gold or Platinum partnerships
Reduce AIMS’ environmental footprint	10% reduction in AIMS’ carbon emissions compared with 2017–18	Carbon emission reduction ≥ 20% compared with 2017–18	Carbon emission reduction ≥ 20% compared with 2017–18	Carbon emission reduction ≥ 20% compared with 2017–18	Carbon emission reduction ≥ 25% compared with 2017–18	Carbon emission reduction ≥ 25% compared with 2017–18
	15% reduction in AIMS’ waste to landfill compared with 2018-19	Solid waste to landfill from normal operations reduced by 15% compared with 2018-19	Solid waste to landfill from normal operations reduced by 20% compared with 2018-19	Solid waste to landfill from normal operations reduced by 20% compared with 2018-19	Solid waste to landfill from normal operations reduced by 25% compared with 2018-19	
Optimise use of research infrastructure assets	Maintain or increase use of research infrastructure	≥ 90% use of major research assets				

¹⁵ Refer to the Traditional Owners section of the Corporate Plan for information on the AIMS Indigenous Partnerships Plan and project ratings (page 14).

The AIMS Annual Report 2020–21 will provide a comprehensive assessment of our performance for the financial year. Overall performance and performance against research goals will be reported in detail. This report will be available on the AIMS website¹⁶ in late October 2021.

The links between our planning process and performance are shown in Figure 7.

Figure 7: AIMS planning, evaluation and reporting process



¹⁶ <http://www.aims.gov.au/>

Corporate capability

Health, safety and the environment

The health and safety of our people is paramount. AIMS is committed to reducing workplace risks and to sustaining a positive and active safety culture.

AIMS has a comprehensive health and safety and environmental management system that is audited every two years against the requirements of ISO 45001 Occupational Health and Safety Management Systems and AS/NZS ISO 14001 Environmental Management Systems.

Our programs support a safe workplace and elimination or minimization of health and safety risks. Over the last three years, AIMS has reduced its number of recordable injuries¹⁷ by two thirds and halved its injury severity rate¹⁸. The AIMS Strategy 2025 commits us to year-on-year improvement in safety performance. By the end of this Corporate Plan, we will achieve a total recordable injury frequency rate (TRIFR¹⁹) of less than five. The target is ambitious, equating to no more than two recordable injuries in a 12 month period.

Financial

Core funding

Core funding for AIMS is provided through Australian Government annual appropriations. These are identified in the 2021-22 Portfolio Budget Statements²⁰, Budget Related Paper no. 1.9, Industry, Science, Energy and Resources Portfolio, pp. 79-100.

External revenue

External revenue comes from industry, philanthropy and a range of state and Australian Government agencies (Figure 8). This external revenue stream provides essential support to maintain AIMS' current capability and augment its science excellence and deliver impactful outcomes. Based on 2019–20 data, external revenue contributes about 30 per cent of our operational budget.

The economic impacts of COVID-19 to AIMS have to date been mild with small losses of revenue earnings directly attributable to the pandemic but with some investments in projects by business partners deferred. Vessel-based field work has resumed and delivery of planned science milestones is largely on track. AIMS business development activities in recent years have focused increasingly on developing large-scale, long-term partnerships in preference to small-scale transactional projects. Further bolstered by increased stakeholder management efforts, and a continued focus on quality and delivery, AIMS' external revenue pipeline of opportunities is healthy, comprising a large complement of larger strategic programs of work. Approximately 75% of the 2021-22 external revenue budget is already contracted and the balance is in advance stages of development. Over 75% and 50% of the work required to deliver the 2022-23 and 2023-24 external revenue budgets has been identified, respectively.

While the pipeline of external work is healthy, delivery of project milestones remains at risk due operational impacts associated with localized COVID-19 clusters and snap lockdowns. Milestone delays affect our ability to recognise external revenue, placing the external revenue budget at risk. This risk is expected to continue in 2021-22 and ease in the outyears of the plan.

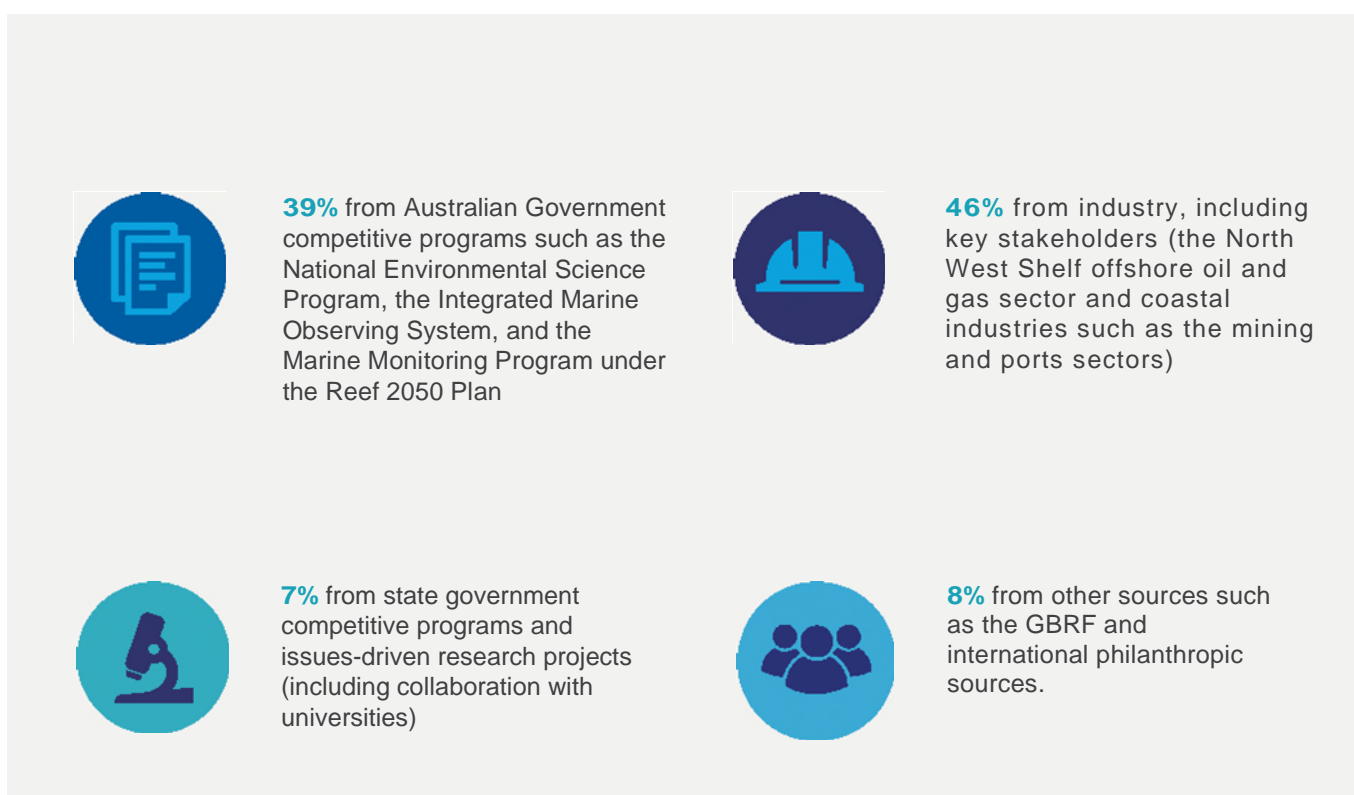
¹⁷ A recordable injury is any work-related injury or illness that requires medical treatment, or results in restricted duties or lost time.

¹⁸ Injury severity rate is the number of lost days or days of restricted duties per million hours worked.

¹⁹ TRIFR equals the number of recordable injuries per million worked hours, where recordable injuries include medical treatment cases, restricted work cases and lost time injuries.

²⁰ <https://www.industry.gov.au/about-us/finance-reporting/budget-statements>

Figure 8: Sources of external revenue



To maintain existing capabilities, AIMS will need to increase the amount of net external revenue it earns in the next five years, despite the financial uncertainties created by COVID-19. Appropriations funding provides approximately 70 per cent of our base costs of operations. External revenue has become essential to support the level and capability of science that we provide to support Australia's marine estate. A significant decrease in external revenue over the longer term could require AIMS to reduce its research infrastructure, breadth of scientific disciplines or number of staff. Any such move will reduce our effectiveness and the economic, environmental and social benefits for the nation that are underpinned by our science and research.

AIMS extends the breadth and impact of its research through co-investment with stakeholders. These collaborative arrangements are typically mandated for government-funded programs, including the National Environmental Science Program (NESP) and the Integrated Marine Observing System (IMOS). We take care to ensure the arrangements, whether through commercial contracts or co-funding, align with national science priorities and result in transfers and benefits back to the nation. A step-change in data-gathering and processing capability will make direct access to data products by all potential users a practical possibility.

Our long-term approach to delivering improved research outcomes through external funding includes the following criteria:

- The research must contribute to future impact (i.e. net economic, environmental or social benefit for Australia).
- The research must advance strategic government objectives as reflected in the AIMS Strategy 2025, in addition to meeting customer needs.
- The quality of research is appropriate to achieve robust outcomes.
- AIMS retains intellectual property access.
- AIMS is not inappropriately restrained from presenting the findings to government or correcting any misrepresentation of its findings.

We charge commercial rates and decline co-investment opportunities when the research is for the direct commercial gain of an organisation or company.

Operating result forecast

AIMS is forecasting an operating loss in each of the four years of the Corporate Plan. The key drivers of this loss are:

- Higher overall costs partially mitigated by higher external revenue.
- Continuation of funding for depreciation expenses being less than the expected depreciation expense.

Capital investment

All major assets of AIMS are subject to a capital replacement program to ensure lowest life-cycle cost, maximum return on investment and tight alignment with our current and future research needs. The program comprises:

- Routine replacements (e.g. motor vehicles, computers and science equipment).
- Ongoing facility maintenance and refurbishment.
- Technological development associated with new autonomous monitoring equipment.
- Upgrades to the enterprise resource planning (ERP) system.

Three significant capital projects are currently planned:

- The *RV Cape Ferguson* (commissioned in 2000) is at end-of-life and needs replacement. While in continued operation, the vessel incurs increased maintenance that requires increased time out of the water, which, in turn, results in fewer days available for undertaking marine research in the field, and higher costs of operation overall. Our goal is to replace the *Cape Ferguson*, within the period of this Plan, with a vessel that fully integrates next-generation technology platforms to maximise the return from scientific field programs and contribute to Australia's global leadership in marine science. A concept design has been completed for a vessel, which would be built in Australia, that incorporates platforms for an integrated data collection capability (habitat mapping, real-time monitoring, autonomous technologies), and hybrid propulsion for reduced operating costs and a lower carbon footprint. The project is currently unfunded.
- Our original headquarters building near Townsville is over 40 years old and requires significant investment to ensure ongoing operability. Some of the mechanical plant has reached the end of its life. Some areas of the building have been abandoned due to the inability to maintain air turnover and quality, leading to mould in office and laboratory spaces. Parts of the building are subject to water ingress during torrential rain. The project is currently unfunded.
- The October 2020 federal budget included funding from the National Research Infrastructure Investment Plan for expansion of the SeaSim and to establish merit-based access for external researchers. Construction will commence in 2021-22 and is scheduled for completion in about June 2023.

People

We take pride in the professionalism, capability and productivity of our people. AIMS employs approximately 265 science and support staff and another 60 in outsourced functions. Our scientists are on the ground and in the water, mapping, monitoring and collecting information on Australia's marine estate. They are in our labs, analysing data, modelling and pushing the boundaries of tropical marine science. Many of our scientists are international leaders in their field.

We also maintain a strong educational program, particularly through co-funded postdoctoral fellowships (up to 20 at any one time) and PhD scholarships and supervision (about 80) in partnership with some of Australia's leading universities. Core scientific expertise is supported by operational expertise. While focused on the delivery of scientific outcomes, we aim to raise foundation skills such as leadership, project management, stakeholder engagement and research communication.

Our workforce initiatives support the wider Australia Public Service undertakings on diversity and gender equity and Indigenous employment. AIMS has established an Equity, Diversity and Gender (EDGE) Working Group to integrate gender equity and diversity within the AIMS culture. AIMS was awarded Athena Swan Bronze status in 2020 by the Science in Australia Gender Equity (SAGE) program. This award recognises AIMS' commitment to improving gender equity, diversity and inclusion in STEM disciplines. The key element is the Action Plan that AIMS staff and leadership have committed to complete over the four years of SAGE accreditation, coordinated by the EDGE Working group and the Human Resources Team. The four key themes of the AIMS Action Plan are:

- Equity considerations in AIMS policy.
- Workforce gender balance.
- Diversity culture.
- Training and communication.

Research partnerships

AIMS partners for two reasons: to increase the capability and capacity that can be focused on the scientific challenges we need to tackle, and to involve stakeholders and users in the design and conduct of the science which will ultimately increase its adoption and eventual impact. We engage with both national and global marine science capability, offering joint ventures and strategic alliances to increase the number and scale of collaborative research projects.

We adopt a collaborative approach to R&D at the national level, engaging early with well-respected partners also able to deliver science at the required scale and relevance. These include partnerships and programs like the Western Australian Marine Science Institution, the National Environmental Science Program, the Integrated Marine Observing System, the Indian Ocean Marine Research Centre, AIMS@JCU and the newly formed AIMS@UWA. The latter two focus on early career researchers (ECR's) to produce the next generation of marine scientists.

We also have memorandums of understanding with James Cook University, Queensland University of Technology, Monash University and a number of international institutes, including the Institute of Oceanology, Chinese Academy of Sciences (China), the National Oceanic and Atmospheric Administration (US), King Abdullah University of Science and Technology (Saudi Arabia), Institut Océanographique (Monaco), the Okinawa Institute of Science and Technology (Japan), the University of South Pacific (Fiji) and the Palau International Coral Reef Center. Such partnerships promote effective and adaptable solutions to improve the protection of coral reefs and other reef-dependent biodiversity which underpin substantial socioeconomic benefits.

In 2021-22, AIMS will expand initiatives under its new Indigenous Partnerships Plan to build Indigenous capability and capacity (through mutually beneficial research) that will support the sustainable management of land and sea country for future generations.

Australia is a founding signatory of the International Coral Reef Initiative (ICRI) and, in partnership with Monaco and Indonesia, hosted the ICRI Secretariat from mid-2018 until mid-2021. ICRI's operational network (the Global Coral Reef Monitoring Network) comprises a mechanism to advance its objectives. AIMS is currently global coordinator of the network.

The ICRI Secretariat's Plan of Action describes activities within four broad themes:

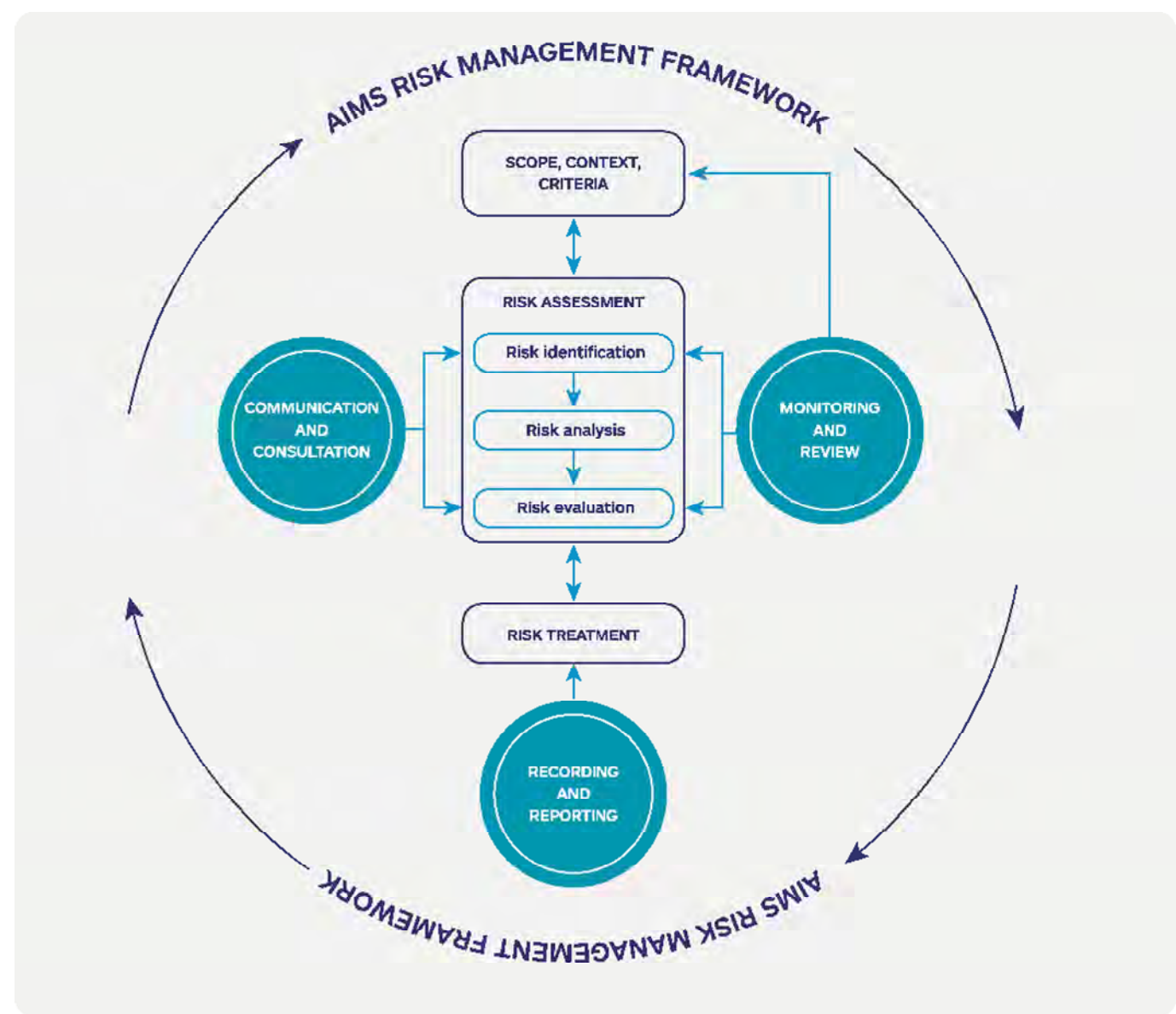
1. Promote effective and adaptable solutions to improve the protection of coral reefs.
2. Understand trends in coral reefs.
3. Fix the poor record of sustainability and transparency in the live reef fish food trade.
4. Reduce anthropogenic threats to coral reefs, particularly those that occur at global or regional scales.

AIMS is making significant contributions to themes 1, 2 and 4 above. Our reef restoration activities will be a key contribution to delivering actions within Theme 1. As part of the delivery of this element of the plan, ICRI members have established a virtual working group, chaired by AIMS, to examine how we can coordinate activities and set priorities for R&D on reef restoration and adaptation. AIMS is also the global coordinator of the Global Coral Reef Monitoring Network (GCRMN) which is an operational network of ICRI. The GCRMN is a worldwide group of coral reef scientists, managers and organisations that monitor the health of the world's coral reefs. Delivering against Theme 2 of ICRI's Plan of Action, the release of the GCRMN Status of Coral Reefs of the World report in 2021 will be a key milestone.

Risk management

To fulfil our purpose and achieve our strategic targets, we need to engage with risk, manage uncertainty and exploit opportunity. Our comprehensive corporate risk management system includes processes to identify and assess new risks, together with the refinement of existing control measures. It is based on an organisational risk management framework and an associated corporate risk register and control framework. This risk framework (shown in Figure 9) aligns with ISO 31000 Risk Management and complies with the Australian Government’s risk management policy.

Figure 9: AIMS Risk Management System



The control framework, which includes the AIMS Audit Committee and AIMS Remuneration and Nominations Committee (both subcommittees of the AIMS Council), helps AIMS discharge its responsibilities under the *Australian Institute of Marine Science Act 1972* and the *Public Governance, Performance and Accountability Act 2013* in respect of financial reporting, performance reporting, risk oversight and management, internal control and compliance with relevant laws and policies.

The control framework is designed to ensure the following outcomes:

- **Strategies and goals** – our strategic targets are aligned with national priorities and the needs of stakeholders.
- **Plans** – our plans offer viable solutions for achieving goals and objectives.
- **Resources** – our financial and non-financial resources are sufficient to complete the research and other activities required to achieve our goals.
- **Delivery** – our systems and processes deliver research and other activities within our annual plans in a safe and efficient manner.
- **Communication** – our research outcomes are communicated in a manner that maximises user uptake and value.
- **Values** – all our activities are undertaken in a manner consistent with our organisational values.

Risk culture

Organisations with a strong risk culture are more resilient, make better and more timely business decisions and are better equipped to enhance and protect their reputation. Over the last several years, AIMS has deliberately matured its risk culture from both a top-down and bottom-up approach.

At the corporate level, AIMS has very mature risk systems that include a risk policy and risk appetite statements that are approved by the AIMS Council, a risk management framework and a comprehensive corporate risk register. Risk is integrated into all reporting to the AIMS Council and within the AIMS Leadership Team.

AIMS also has a proven track record of risk management with respect to workplace health and safety. Our risk profile includes remote field work, diving, laboratories, hazardous chemicals and biohazards. Our staff have embraced our operational risk management processes to ensure that the risks associated with their work are managed to be as low as reasonably practicable.

During the Plan period, our key area of focus will be developing the risk culture with respect to delivering our project portfolio. The AIMS Project Management Framework includes approval workflows and support tools to help assess and manage project risks and opportunities. This is further supported by the AIMS Project Risk Procedure, which assists project leaders to manage all foreseeable risks (both opportunities and threats) in a manner that is proactive, effective, and appropriate, to maximise the likelihood of the project achieving its objectives, while maintaining risk exposure at an acceptable level. The framework and procedures are an important step in formalizing our approach to project risk management. The next significant step is to drive the maturity of our risk management culture in this important area of our business. This will be achieved through direct coaching and support from the Project Management Office, and formalized performance review and feedback by the AIMS Leadership Team.

Risk summary

Table 6 summarises the risks associated with each outcome and proposed controls. AIMS reviews its corporate risk register every three months to ensure that risks and controls remain current. For the life of this Corporate Plan, a continuous improvement approach will be applied to ensure that all risks continue to be as low as reasonably practicable.

The risks associated with COVID-19 have diminished since the last Corporate Plan. However, multiple risk areas remain (workplace health and safety, strategic targets and outcomes, plans, resources, delivery and communication). Like all other risks, the risks associated with COVID-19 are being managed – and will continue to be managed – within the AIMS Risk Management Framework.

Table 6: Outcomes and controls associated with each risk

Risk area	Description	Controls
Workplace health and safety	Ensure the health and wellbeing of our staff, collaborators, volunteers and visitors. We operate in challenging environments and undertake activities where active care is required to manage the safety of our people.	AIMS has a comprehensive safety management system to ensure that hazards are identified, and risks are assessed in line with the AIMS' Risk Management Framework and established operational risk management procedures. This allows effective management of the complexities of our research work and supporting functions. AIMS fosters a reporting and learning culture, working to ensure that all personnel feel obligated to delay or stop work where an unacceptable risk is identified and to report hazards and incidents. AIMS holds that 'good science must be safe science' and that safety is a shared value embedded in everything we do.
Strategic targets and outcomes	Ensuring that research is aligned with national priorities and stakeholder needs and targeting the highest priority areas.	Targets are defined in the AIMS Strategy 2025, the Portfolio Budget Statements and the Corporate Plan. In developing these plans, AIMS completed a comprehensive assessment of current and future stakeholder needs. These were integrated with the knowledge of our peers as to current and emerging environmental threats and challenges to develop a set of organisational goals and objectives.
Plans	Ensuring that all aspects required to achieve our strategic targets are considered and detailed in an appropriate set of plans. This includes research planning (which research projects are required to create the knowledge to achieve the research impacts and outcomes), capability planning, delivery and communication planning.	AIMS has a comprehensive and adaptive process to develop research programs aligned with information needs. At the highest level, targets are set within our Strategic Plan. These targets cascade down, through the Portfolio Budget Statements and Corporate Plan, to five-year and annual research plans. Internal assessment, approval and tracking processes then ensure that only research aligned with these plans is undertaken. Capability and communication plans support the research plans. These plans are articulated to key stakeholders via the Portfolio Budget Statements and the Corporate Plan.

Risk area	Description	Controls
Resources	Understanding that the research outcomes articulated in this Plan rely on our maintaining capabilities underpinned by achieving revenue targets. This requires government funding at current forecast levels, achieving budgeted external revenue, and the ability to manage multi-year external revenue variability.	<p>AIMS has developed a strong business development framework to maximise the likelihood of achieving external revenue targets, along with a quantitative risk-based methodology to assess potential external revenue volatility. It uses this assessment to design and implement management strategies where feasible.</p> <p>Additionally, if AIMS is to respond to emerging pressures and opportunities as detailed in this Corporate Plan, then capability growth will be required.</p>
Delivery	Additionally, if AIMS is to respond to emerging pressures and opportunities as detailed in this Corporate Plan, then capability growth will be required.	<p>AIMS has experienced research, operational and corporate staff and well-established fit-for-purpose systems and processes. The actions detailed within the plans are within AIMS' demonstrated capabilities. AIMS has a comprehensive and high-performing safety management system and a strong organisational safety culture.</p>
Communication	Ensuring research outputs and advice are in a form relevant and useable by stakeholders, readily available and clearly communicated.	<p>AIMS has a whole-of-business communication plan, which aligns with and supports the AIMS Strategy 2025. The plan adopts a four component approach:</p> <ul style="list-style-type: none"> • Build the capacity of staff to communicate our new strategic intent, and to project and align with our brand. • Promote the value that AIMS provides, through proactive and coordinated marketing and communications. • Measure the effectiveness of communication, consistent with our impact framework, to ensure our communications support organisational objectives. • Protect AIMS from reputational risk. <p>The Communication Plan includes several action items to be developed during the life of this Corporate Plan.</p>
Principles and values	Adherence to our values.	<p>AIMS' reputation is built on a set of values. Over time, these values have become embedded in the fabric of the organisation. They are continually discussed and incorporated into systems and process where appropriate, as AIMS works to express these values in all our actions.</p>

Infrastructure

AIMS operates out of four locations across Australia with a research base of 300 staff (including 60 outsourced functions), two major research vessels and several significant research facilities, including the world-class National Sea Simulator (SeaSim). This enables us to deploy our marine research capability across northern Australia and in selected international engagements.

AIMS' headquarters is at Cape Ferguson, about 50 kilometres from Townsville in Queensland. Our Darwin office is located at the Arafura Timor Research Facility (ATRF) adjacent to the Charles Darwin University campus. AIMS in Perth is co-located within the Indian Ocean Marine Research Centre (IOMRC) at The University of Western Australia's Crawley campus. A small liaison office in Canberra facilitates, enables and promotes interaction with the Department of Industry, Science, Energy and Resources, and other government departments and agencies.

A specialised research fleet, unique aquaria, sophisticated laboratories, operational workshops, extensive collections, analytical technology and an array of marine observing equipment enable our scientists to examine subjects ranging from microbiology through to broad-scale ecology and coastal oceanography, both in the laboratory and in the field. Below is a summary of our national research infrastructure:

The SeaSim

The SeaSim is a world-class aquarium for tropical marine organisms where scientists can conduct cutting-edge research not previously possible. With a reliable, consistent supply of sea water, the SeaSim provides fine control over many environmental variables including light, temperature, acidity/CO₂, salinity, sedimentation and contaminants.

In 2018, the government released a \$1.9 billion National Research Infrastructure Investment Plan, which included SeaSim funding for expansion of the large tank experimental areas, capital life cycle replacements and merit based open access to 35% of the facility under a national facility model. The funding was due to commence in 2024. The 2020-21 Budget included \$36.3M over three years from 2020–21 for the early implementation of the Sea Simulator project to support the Great Barrier Reef Restoration and Adaption Program (RRAP), effectively bringing the Investment Plan funding forward by bridging the gap between now and the original commencement time of 2023-24.

There are two major components to the project:

- Operation of 35% of the existing infrastructure under a National Facility model, which provides merit-based access for the best national and international researchers to undertake their work in the facility.
- Expansion of the facility to almost double its existing capacity.

The expansion project is the most time critical of the two components, having long lead times for approvals, procurement and construction. The detailed design phase of the project is currently underway and construction is expected to commence in the first half of 2021-22, concluding in about June 2023.

Operation as a national facility is less time critical, although still requires a significant lead time to establish the required resourcing and governance and administrative processes. It is expected that the first call for submissions for merit-based access will occur in 2022, with the first projects commencing in 2023.

The AIMS research fleet

Two large purpose-built ships (the research vessel *RV Cape Ferguson* and the *RV Solander*) and several smaller vessels provide unique capacity for researchers to travel and conduct research in diverse tropical marine habitats. The major vessels are equipped with specialist oceanographic equipment, winches, onboard laboratories, flow-through aquaria and computing facilities. These allow scientists to sample the physical and biological characteristics of various habitats and conduct experiments at sea. Inflatable tenders and onboard compressors support diving operations from the major vessels.

Other key scientific infrastructure includes:



Analytical laboratories

more than 20 specialised laboratories across Australia including physical containment, quarantine and radiation laboratories



Engineering workshops

constructing specialised equipment such as underwater sensors, data loggers, sediment traps, weather towers, coral corers and many other devices



Field-deployed observing and remote-sensing equipment

including weather stations and oceanographic instrument moorings



Coral core collection

Australia's largest and most significant coral core collection

AIMS will continue to focus on ways to maintain and, where necessary, replace ageing infrastructure to ensure safe, fit-for-purpose platforms for conducting marine science.

As well as maximising value derived from our diverse research infrastructure for ourselves, we will ensure its high use by external collaborators in industry, universities and other research institutions.

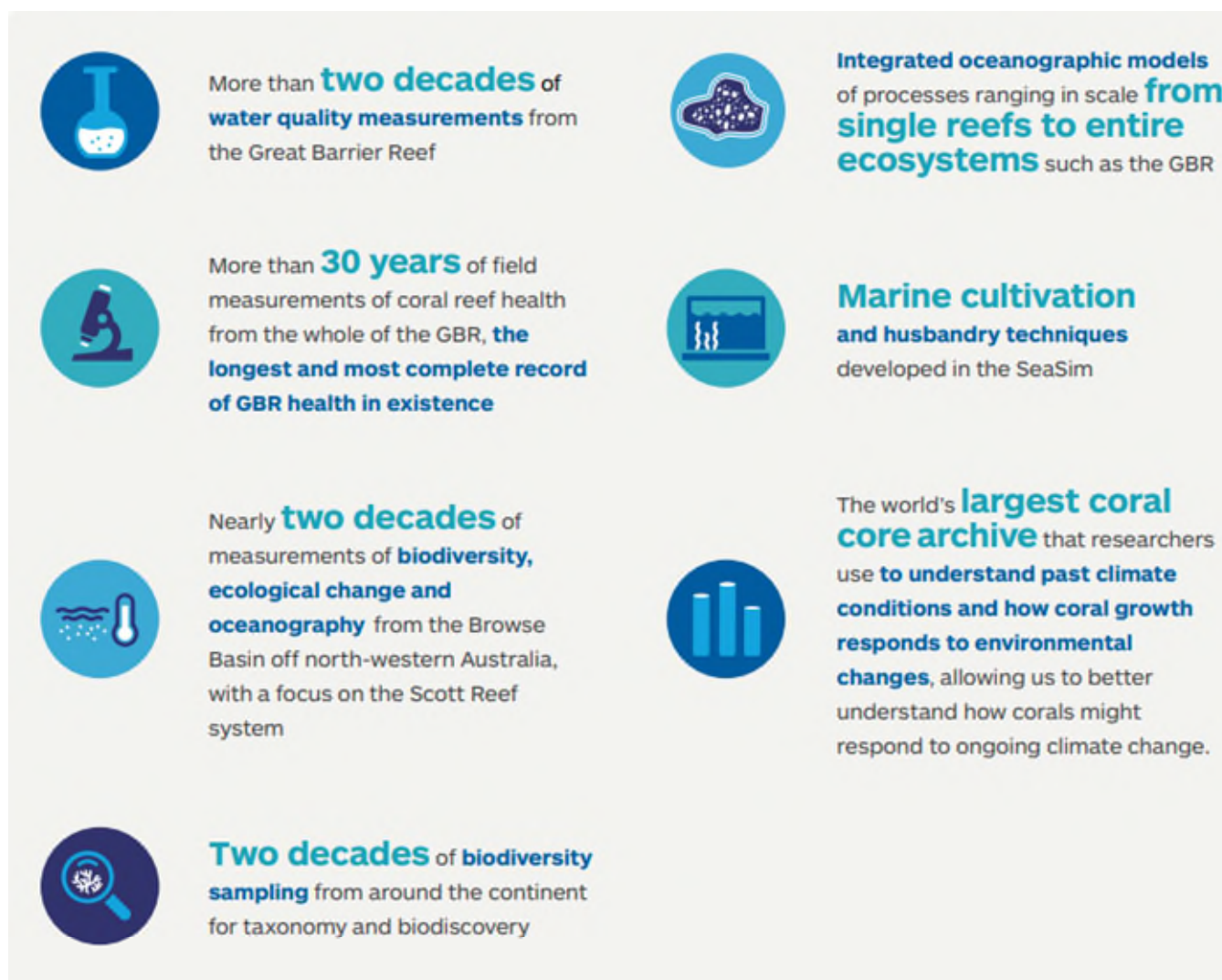
Systems and processes

Our physical capabilities are supported by an array of corporate and operational systems and processes. Over the last two years, AIMS implemented a new project management framework and supporting systems, which include Microsoft Project Online and TechnologyOne CiAnywhere. 2021-22 will be a year of consolidating these new systems, with a focus on improving project management, accessibility to critical business information and corporate performance reporting.

Intellectual assets

AIMS possesses unique collections, observations and measurements containing decades' worth of information about Australia's tropical marine ecosystems, extending from the Great Barrier Reef to north-western Australia. This collection includes the assets described in Figure 10.

These assets are unparalleled in Australia. The continuity of long-term and broad-scale geographic collections and information enables critical long-term analysis of natural and human-induced trends in ecosystem change. Over the life of this Corporate Plan, we will leverage and develop these intellectual assets to support our research activities and plans.





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