

An underwater photograph showing a diver in a black wetsuit and yellow fins swimming over a diverse coral reef. The water is clear and blue. The coral is in various stages of bleaching, appearing mostly white and yellow, with some patches of pink and purple. Several small fish are visible swimming around the coral.

Reef 2050 Integrated Monitoring and Reporting Program

Annual Business Plan
2022–23



Australian Government

Great Barrier Reef
Marine Park Authority



Australian Government



Queensland
Government



AUSTRALIAN INSTITUTE
OF MARINE SCIENCE

TRADITIONAL OWNERS
LAND AND SEA COUNTRY
GREAT BARRIER REEF



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Aboriginal and Torres Strait Islander readers are advised this publication may contain names and images of deceased persons.

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The Reef 2050 Integrated Monitoring and Reporting Program (RIMReP) acknowledges the remarkable world views, unique wisdom and enduring connections that have informed the guardianship of the Reef for millennia.

We pay our respects to the Traditional Owners as the first scientists of this land and sea, and value their traditional knowledge which continues to inform the current management and stewardship of the Reef for future generations.



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Executive summary

A key component of the Reef 2050 Long-Term Sustainability Plan (the Reef 2050 Plan) is the establishment of the Reef 2050 Integrated Monitoring and Reporting Program (RIMReP or the Program).

This coordinated monitoring, modelling and reporting program for the Great Barrier Reef (the Reef) and its adjacent catchment will help track progress towards the Reef 2050 Plan's objectives and drive adaptive management of this world heritage property.

The Program has completed its design phase and is progressing the implementation phase.

A dedicated group of partners are working together to improve collection and sharing of information about the Reef and deliver practical tools to support decision-making.

Further engagement with Governance bodies and Traditional Owners will progress in 2022–23.

This third Annual Business Plan (this plan) offers a snapshot of progress made in 2021–22 and outlines key activities for the year ahead.

The governance groups have prioritised activities for 2022-23 based on the Five Year Business Strategy.

This plan presents a program of core activities, which will continue to move the Program forward. Activities may be added or adjusted as the year progresses to reflect emerging priorities and progress to date.

PRIORITIES FOR THE 2022–23 YEAR AHEAD

- Communication outreach to increase understanding and visibility of the Program, what it enables and its value.
- Engage with Traditional Owner groups to co-develop communication products relevant to the Program and identify opportunities for Traditional Owners to be involved in the Program activities.
- Update and build on the initial release version of the Reef Knowledge System and communicate what the system will do and for whom.
- Design and commence build of a fit for purpose federated Data Management System to enable the integration, analysis, and presentation of data through the Reef Knowledge System.
- Determine the operational and resource requirements for delivery of a spatial decision support system tool, to be incorporated into the Reef Knowledge System.
- Define the scope, user needs and overarching design of the future Reef 2050 Plan reporting platform.



Background

This Annual Business Plan (ABP) details the priority projects for the 2022–23 period (1 July 2022 to 30 June 2023) to enable the delivery of activities required to progress the RIMReP.

The plan sets out the estimated project budgets and performance indicators that have ‘line of sight’ to the five-year Business Strategy. The Program’s partners will deliver the Annual Business Plan together and maintain momentum to achieve the Program’s vision.

The Program’s vision is to develop a knowledge system that enables resilience-based management of the Great Barrier Reef and provides managers with a comprehensive understanding of how the **Reef 2050 Plan** is progressing.

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REEF 2050 INTEGRATED MONITORING AND REPORTING PROGRAM

- RIMReP is a partnership involving Australian and Queensland government entities, together with Traditional Owners.
- The partners include the Great Barrier Reef Marine Park Authority (the Reef Authority), Department of Climate Change, Energy, the Environment and Water (DCCEEW), Australian Institute of Marine Science (AIMS), Integrated Marine Observing System (IMOS), CSIRO and the Queensland Government. Four Traditional Owner members also form a key part of the Program's governance.
- The Program covers the Great Barrier Reef World Heritage Area and is coordinated by the Reef Authority. The Program will provide a window into this complex and globally significant ecosystem and will provide a comprehensive and up-to-date ecological, social and cultural understanding of the Reef.
- The Program's primary purpose is to drive resilience-based management and track progress against the objectives and goals outlined in the Reef 2050 Plan. Resilience-based management builds on foundational management programs. It places a strong emphasis on using the best available information and forecasting tools to adjust management actions to improve Reef health and recovery.
- A centrepiece of the Program is the interactive online Reef Knowledge System — the 'first stop shop' for up-to-date information about the Reef to guide effective management decisions in a rapidly changing world.
- The Program enables the five-yearly Outlook Report and the five-yearly review of the Reef 2050 Plan.
- The Reef Knowledge System is being continuously improved, and over time it will show monitoring and modelling data from a wide range of sources in useful and interactive ways.

KEY OUTCOMES OF THE PROGRAM INCLUDE:

1. More accessible, timely and interactive information about the Reef and the communities it supports.
2. Strong, collaborative partnership, supported by good governance.
3. Empowered Reef managers, Traditional Owners and stakeholders — better informed and responsive.
4. Systems and tools that are engaging, interactive and fit for purpose.
5. Reef 2050 reporting that is informative, robust and provides evidence-based insight into progress.
6. Greater collaboration and interoperability.
7. Information and monitoring that meets best practice standards, is integrated and evolves to meet emerging needs and technology advances.

Achievements 2021–22

During 2021–22, the Program continued to make significant progress toward delivery:



Finalising **the 5-year Business Strategy (2020–25)**. This Strategy sets the outcomes and objectives required to achieve the overarching RIMReP vision. The outcomes and objectives will guide development and prioritisation of the annual business plans.



In order to achieve the purpose and aims of RIMReP, key governance partners signed a **Statement of Collaboration** to formalize the governance and management framework.



Eleven projects addressing **priority monitoring gaps** were funded in 2021 by the Reef Trust Partnership (RTP), coordinated by the Great Barrier Reef Foundation (\$13.1M). The projects cover the biophysical, cultural and socio-economic contexts of the Reef, including inshore dolphins, seabirds, island habitats, including invasive species and seabirds and Reef fish.

They utilise a suite of cross-cutting innovative methodologies and engagement tools to transform Reef monitoring approaches. Examples range from utilising drones to measure a range of Reef indicators, machine learning to analyse the vast amount of generated data, a dedicated integration resource to facilitate Traditional Owner participation in monitoring activities and the piloting of a co-designed cultural heritage mapping approach with Traditional Owner groups.



A fit for purpose **Data Management System (DMS)** is critical infrastructure to underpin the successful delivery of RIMReP and related reporting activities, management systems and decision support tools.

The scoping phase of the DMS (also funded by RTP) identified the size, scale and maturity of data sets critical for initial inclusion in RIMReP. It also defined the infrastructure requirements and environments and the best estimate of ongoing operational requirements. A total of 153 unique data sets from 73 organisations or programs were identified.

The architecture of the DMS is conceived as a FAIR (findable, accessible, interoperable and reusable) compliant, data-agnostic, scalable ‘future-proof’ and service-oriented system that will collect data and metadata from data providers, store/cache data collections, apply transformations and provide a delivery mechanism through a rich API interface. It will include an interoperable metadata sub-system: an open and easily accessible catalogue, based on standards, of all datasets relevant to RIMReP.

Achievements 2021–22 (CONTINUED)



Some engaging new resources were added to the **Reef Knowledge System** to boost visibility of monitoring partners and give Reef managers access to new analysis and reporting tools. These include:

- an interactive dashboard to showcase the effort tourism operators put into helping monitor the Reef
- the Core monitoring page, which showcases 12 programs contributing to RIMReP
- a set of Land and Sea Country pages - providing easy access to some relevant Traditional Owner resources
- new spatial data layers that combine satellite imagery and underwater mapping to create the most detailed biological terrain maps of the Reef to date.



A number of internal **decision support tools** are being developed, which will be accessible by Reef managers through the online Reef Knowledge System.

In 2021–22, significant work was completed on the Compliance Planning Tool for the Reef Joint Field Management Program. This decision support tool will provide planners and field staff with a spatial view of historic compliance data and includes a capability for modelling poaching risk in no-take areas. This interactive dashboard will allow Reef managers to identify gaps and assess compliance effort as well as predict poaching risk in support of targeted compliance strategies and education campaigns.

Additionally, the RIMReP Decision Landscape Mapping project was delivered, identifying the requirements for key areas of Reef management to inform the two-year build plan for decision support. The build plan proposes the development of a Spatial Decision Support System that supports fit for purpose tactical and operational decision support tools for Reef managers.



Future continuity and evolution

NEW INVESTMENT SECURED

- The existing funding over the next two years supports the development of a DMS, online dashboards to help Reef managers make informed decisions, design of a Reef 2050 reporting framework and engagement with Traditional Owners and data providers.
- Funding gaps have been identified in relation to work to coordinate data sharing agreements, support large data downloads (through the cloud), ongoing system maintenance and development, and data science and visualisation expertise to create engaging, fit for purpose online content and tools. As a result, from 2022–2023 an additional contribution has been secured from the Reef Authority for the next eight years.
- Additional funding will support the ongoing development and functioning of the interactive online Reef Knowledge System to inform and guide effective management decisions and progress towards achieving the Reef 2050 targets and outcomes.
- Four essential services will be procured, outsourced and coordinated over the eight years:
 1. Reef Knowledge System maintenance
 2. Ongoing system management and development
 3. Visualisation services
 4. Technology and data.

CRITICAL MONITORING – FUTURE INVESTMENTS

- Maintaining core, long-term monitoring programs and identifying emerging gaps which underpin the Reef 2050 Plan is critical to the success of the Program.
- Support through the RTP will continue to deliver project outcomes that fill critical monitoring gaps identified during the Program design phase.
- Significant funding is still required to address priority gaps identified and maintain monitoring activities into the future.
- In 2022–23, Program partners will continue to work together to seek and identify future funding needs and opportunities.

CONTINUAL IMPROVEMENT

- Active investment in continuous improvement will remain a priority and will allow the Program to adapt to changes in the operating environment, user needs, emerging technologies and knowledge systems sources.
- RIMReP as a whole is a critical enabler of continuous improvement through the Reef 2050 Plan, policies and stewardship actions.
- Key objectives around continual improvement include:
 1. Deliver improvements across the Program that adapt to changes in the operating environment and incorporate new ways of working with emerging technologies and knowledge sources.
 2. Establish and operationalise quantitative and qualitative measures across Program delivery and operationalise to enable reliable and effective improvements to be made.
 3. Deliver quality assurance and quality control capabilities across the Program.
 4. Involve partners, stakeholders and users in regular evaluation of the Program.



Focus for 2022–23

- The design phase of RIMReP was completed in 2019. It delivered the structure, program and monitoring design, an implementation roadmap, and an initial release of the Reef Knowledge System.
- Program implementation is designed around a delivery framework of seven Program Priorities (Figure 1 below). Driven by Management Needs, each priority contributes in turn to Effective Management Responses. Annual Business Plan projects are structured to deliver against different aspects of the framework.
- Eleven projects addressing priority monitoring gaps identified by RIMReP will continue in 2022 and will be monitored as part of business-as-usual activities for the Program. This important work is supported through funding from the RTP (coordinated by the Great Barrier Reef Foundation).
- In 2022–23, project activities will focus on Management Needs, Access and Show, with the greatest effort directed toward continuing the scoping and implementation of a fit for purpose DMS, progressing the Reef 2050 Plan reporting framework, enhancing decision support capability, upgrading the Reef Knowledge System and Traditional Owner engagement.
- Information from these projects will fill critical knowledge gaps and improve the capacity of RIMReP to deliver progress reporting against the Reef 2050 Plan and support resilience-based management.
- Existing key monitoring activities that contribute to the Program will also continue, supported by Program partners.

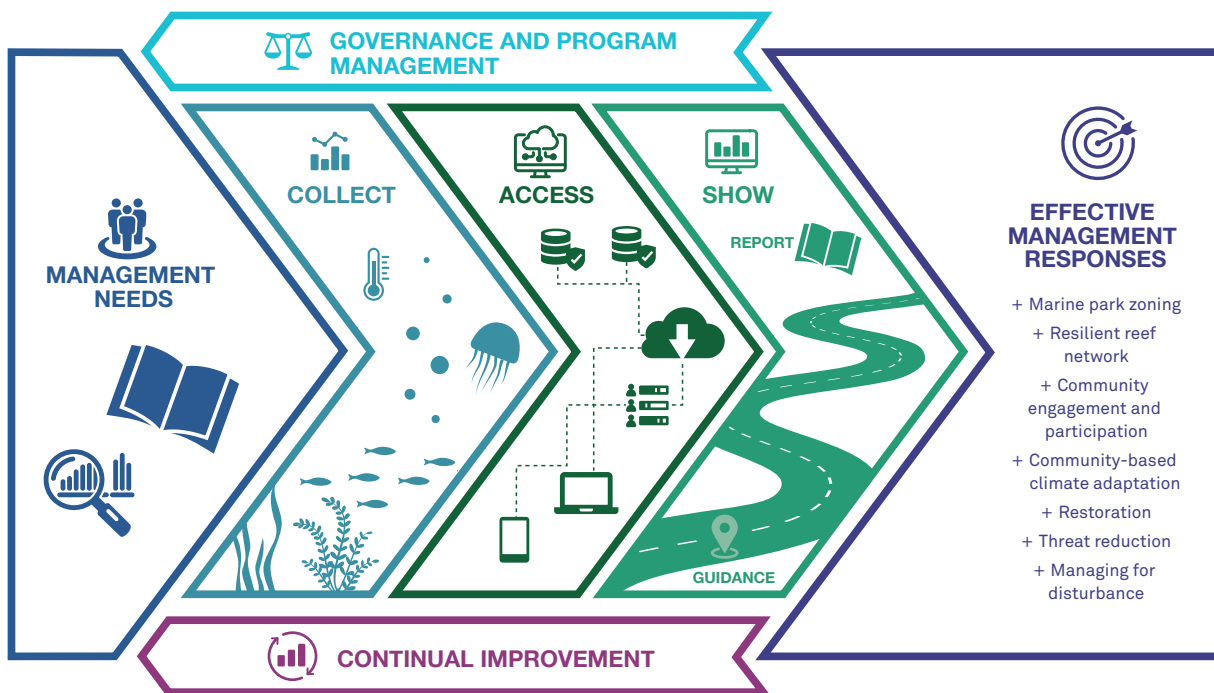


Figure 1: Program Priorities

Priority projects for 2022-23

The portfolio of projects for the 2022–23 financial year builds on the achievements of the previous year and reflects a review (in May 2022) of progress to date and alignment with the five-year business strategy.



Communication and outreach priorities
Traditional Owner communications and engagement



Data Management System (DMS) Implementation – Phase 2



Design of the Reef 2050 Plan reporting framework
Reef Knowledge System
Spatial Decision Support System scoping assessment

The following sections of this Plan detail each of the six projects and their alignment to the RIMReP framework.



Governance and program management

Effective, clear and transparent governance and program management is essential for the successful delivery of the Program and collaboration between partners.

A dedicated and experienced Program Management Office will continue to be operated by the Reef Authority. As part of a business-as-usual activity for the Program, the Program Management Office will coordinate the required governance mechanisms and provide program support to those responsible for shaping and delivering on this Plan and the five-year business strategy.

GOVERNANCE AND PROGRAM MANGEMENT PRIORITY PROJECTS FOR 2022–23

Activities to be undertaken under the Governance and Program Management priority area have been incorporated into the Program from 2022–23 as business-as-usual activities and are therefore not categorised as a priority project. However, activities will continue to be monitored and performance indicators applied.

PROGRAM MANAGEMENT OFFICE

A dedicated and experienced Program Management Office (PMO), operated by the Reef Authority, will coordinate the required governance mechanisms and provide program support.

The PMO supports the operational delivery of the Program’s Annual Business Plan and reports to the Executive Group.

The PMO mission is to:

- establish an effective approach to program and project management.
- develop a strong and adopted project management culture.
- work to ensure administration of projects does not materially impact on delivery.

KEY OUTPUTS:

- Program Management Office practice across the program.
- 2023–2024 Annual Business Plan.

GOVERNANCE ARRANGEMENTS

Strong and collaborative partnerships, providing a coordinated platform for achievement and effective management of risk, is critical to the success of the Program.

The purpose of the Program governance structure is to:

- govern the relationship, roles and responsibilities of all parties
- support the effective delivery of the Program, including implementation transition.

The Program’s governance structure comprises the Executive Group and Operations Group, with governance meetings held regularly to help guide oversight and implementation of the Program.

In 2021–22, partner agencies entered into a non-binding agreement via a collaboration statement that formalised the governance and management framework under which they will co-operate and collaborate to achieve the purpose and aims of the Program.

KEY OUTPUTS:

- Continued operation of Executive and Operations governance groups.



Management needs

Management needs are the fundamental driver of the Program, informing all Program priorities. Priorities stem from legislative obligations, the Reef 2050 Plan and significant work over many years with experts to identify critical information gaps and management effectiveness improvements.

Primary Program management needs supported include:

- Reporting progress against the Reef 2050 Plan (and future Outlook Reports)
- Identification and prioritisation of key science and knowledge gaps
- Enabling early detection of trends and changes in the Reef's environment, informing the assessment of threats and risks, to drive resilience-based management.

MANAGEMENT NEEDS PRIORITY PROJECTS FOR 2022–23



PROJECT 2D – COMMUNICATION AND OUTREACH PRIORITIES

This project focuses on priority communication outreach deliverables to increase understanding and visibility of the Program, its outputs and its value.

PROJECT DEFINITION

Name	Communication and Outreach Priorities		
Project code	2D	Lead agency	The Reef Authority
Planned start	1 July 2022	Planned finish	30 June 2023
Budget estimate	\$81,353 (incl. GST)	Funding source	The Reef Authority
Description	The project will deliver priority communication outreach deliverables to increase understanding and visibility of the Program, what it enables and its value. The primary audiences will include science and management partners, Traditional Owners and key data providers.		

PROJECT OUTPUTS

RIMReP communiques	Articulating the RIMReP narrative, where it is up to, the plan for 2022–23 and what people can access and use now. Plan for three communiques per year.
Partnership forum	Bringing together the RIMReP Executive Group members and Operations Group members once a year to celebrate prior achievements, acknowledge challenges and undertake strategic planning for RIMReP.
Promotional events	Arming RIMReP partners with useful communication collateral (slides, infographics, talking points) to expand the promotion of RIMReP at meetings and events (e.g. conferences, workshops).
Social media outreach	Promoting linkages to RIMReP through a 'Powered by RIMReP' campaign as external products come online.
Insights report	Showcasing highlights/key achievements from projects undertaken under the 2022–23 Annual Business Plan and outlining the high-level priorities for 2023–24.



Management needs

Management needs are the fundamental driver of the Program, informing all Program priorities. Priorities stem from legislative obligations, the Reef 2050 Plan and significant work over many years with experts to identify critical information gaps and management effectiveness improvements.

Primary Program management needs supported include:

- Reporting progress against the Reef 2050 Plan (and future Outlook Reports).
- Identification and prioritisation of key science and knowledge gaps.
- Enabling early detection of trends and changes in the Reef’s environment, informing the assessment of threats and risks, to drive resilience-based management.



PROJECT 2E – TRADITIONAL OWNER COMMUNICATIONS AND ENGAGEMENT

The project builds on works delivered in 2021–22 and will deliver a co-designed process for Program engagement, communication and participation.

PROJECT DEFINITION

Name	Traditional Owner Communications and Engagement		
Project code	2E	Lead agency	The Reef Authority
Planned start	1 July 2022	Planned finish	30 June 2023
Budget estimate	\$218,260 (incl. GST)	Funding source	The Reef Authority
Description	<p>The project will develop and implement a RIMReP Traditional Owner Communications and Engagement Plan for 2022–23. The focus for 2022–23 will be raising the profile of RIMReP, identifying Traditional Owners and Indigenous groups with Indigenous data sets and exploring opportunities for data sharing through the Reef Knowledge System.</p> <p>The project will also allow for oversight of Traditional Owner engagement activities across the broader Program.</p>		

PROJECT OUTPUTS

Partnership	Convening meetings with the RIMReP Traditional Owner governance members with the aim of co-designing communication products and appropriate methods to raise the profile of RIMReP, showcasing the Reef Knowledge System and identifying Traditional Owner user needs.
Communication and Outreach	Implementing the RIMReP Traditional Owner Communications and Engagement Plan for 2022–23. Co-design, co-develop and co-deliver Traditional Owner communication products to showcase RIMReP and identify Traditional Owners and Indigenous groups interested in future RIMReP engagement and partnerships.



Collect information

Management actions and reporting are reliant on robust data from critical monitoring programs, emerging science and knowledge.

The Collect aspect of RIMReP will continue to support Reef managers in their planning and day-to-day decision-making, underpinning reporting and provision of Reef information to the public.

Maintaining existing long-term monitoring programs and developing and supporting new monitoring activities and technologies is critical for the delivery of improved information.

COLLECT PRIORITY PROJECT FOR 2022–23

Although there is not a dedicated project focused on the Collect program priority area this financial year, partner agencies continue to deliver their core monitoring programs, which are fundamental to RIMReP.



PARTNER – CORE MONITORING PROGRAMS

Maintaining core, long-term monitoring programs and identifying emerging gaps that underpin the Reef 2050 Plan is critical to the success of the Program. RIMReP partners will focus on sharing information and knowledge and drive interoperability across monitoring programs to support decision-making and reporting to deliver real outcomes for the Reef. This will require an adaptive approach and identification of emerging knowledge gaps and technologies.

Currently, 12 monitoring and modelling programs operating in Australian waters (and the adjacent catchment) are fundamental to RIMReP. As new needs are identified, priorities may change, and as new data streams become available these will be updated. Linkages and alignment to the Paddock to Reef Program will continue to be explored over the next five years.

Examples of the current monitoring Programs continuing to be delivered by partner agencies during 2022–23 include:

- **Great Barrier Reef Marine Monitoring Program (MMP):** Surveying and reporting on the health of inshore coral, seagrass and water quality every year, for over 15 years.
- **Long-term Monitoring Program – Australian Institute of Marine Science (LTMP):** The most comprehensive record of reef condition through time, surveying the Reef for over 30 years.
- **Social and Economic Long-term Monitoring Program (SELTMP):** Understanding the human dimension of the Reef.
- **Autonomous ocean gliders – Integrated Marine Observing System (IMOS):** Autonomous underwater vehicles for ocean data collection.

Further information regarding each program can be obtained through the continuing page on the Reef Knowledge System.



MONITORING GAPS – PHASE 2 PROJECTS

The first phase of RIMReP systematically identified critical monitoring activities needed to support an integrated program.

Through Phase 2 of the RTP Program, funding was available to make a significant contribution to address priority gaps. A total of \$13.1 million for 11 projects was approved.

The Program partners will continue to work with the Great Barrier Reef Foundation to monitor and receive updates regarding progress of these critical monitoring gaps projects and how the critical data will be delivered in time for the Outlook 2024 Report.



Access information

Given the challenges facing the Reef, we need to be more informed, responsive and able to make considered and efficient decisions to support resilience-based management. This requires improved systems that make data and information easier to locate and more accessible, interoperable and usable by decision-makers.

ACCESS PRIORITY PROJECTS FOR 2022–23



PROJECT 4C – DATA MANAGEMENT SYSTEM

This project will build on Phase 1 and deliver the design and build of a fit for purpose DMS for RIMReP. This multi-year project will gradually integrate priority datasets to support requirements of the Program.

PROJECT DEFINITION

Name	Data Management System (DMS) Implementation – Phase 2		
Project code	4C	Lead agency	IMOS
Planned start	1 July 2022	Planned finish	30 June 2024
Budget estimate	\$3,992,654 (incl. GST) Estimate only ¹	Funding source	RTP/Partner agencies
Description	<p>A key component of the Reef 2050 Plan is the establishment of RIMReP. A fit for purpose DMS is a critical piece of infrastructure to underpin the successful delivery of RIMReP and related reporting activities, management systems and decision support tools.</p> <p>The project will deliver a data-agnostic, scalable (future-proof) system for data and metadata relevant to the Reef, with services to allow the integration with the RIMReP Management Information System (MIS) and Decision Support System (DSS), including the discovery of the existing data.</p>		

PROJECT OUTPUT

Planning	Delivering a detailed project delivery and support plan.
Build	Building and implementing a fit for purpose DMS (January 2022 to June 2023), with upgrades and increased data integration over 2023–24.
Support	Providing operational support and enhancements to the DMS through to June 2024.

¹ This is a two year project. \$1,925,251 (GST inclusive) estimated for 2022–23 expenditure.



Show — guide and report

This priority relates to synthesising, integrating and presenting information in useful forms to better facilitate evidence-based reporting and provide guidance to decision-makers.

The Show priority includes continuous improvements to the Reef Knowledge System, the development and implementation of a reporting framework for the Reef 2050 Plan and the identification of priority decision support needs with the vision to build decision support tools.

SHOW PRIORITY PROJECTS FOR 2022–23



PROJECT 5D — REEF 2050 REPORTING FRAMEWORK

The Reef 2050 Plan update for 2021 identified goals, targets and indicators for Reef management. Building on the framework development of 2021–22, the project will determine the business requirements for the design of an online Reef 2050 reporting platform.

PROJECT DEFINITION

Name	Design of the Reef 2050 Reporting Framework		
Project code	5D	Lead agency	The Reef Authority
Planned start	1 July 2022	Planned finish	30 June 2023
Budget estimate	\$159,386 (incl. GST)	Funding source	The Reef Authority
Description	This project will be the first phase of defining the scope, user needs and overarching design of the future reporting platform for the Reef 2050 Plan. An online progress report that provides an indication of whether the Reef 2050 Plan is tracking towards its objective and targets is needed.		

PROJECT OUTPUTS

Reporting Framework	Updating and developing new content (e.g. page text, additional dataset links). Includes some work carried forward from 2020–21).
Business Requirements	Developing business requirements for the design of an online Reef 2050 reporting platform.



Show — guide and report

This priority relates to synthesising, integrating and presenting information in useful forms to better facilitate evidence-based reporting and provide guidance to decision-makers.

The ‘Show’ priority includes continuous improvements to the RKS, the development and implementation of a reporting framework for the Reef 2050 Plan and the identification of priority decision support needs with the vision to build decision support tools.



PROJECT 5F — REEF KNOWLEDGE SYSTEM

This project will build on the initial release of the Reef Knowledge System to review and update the content and user experience, upgrade the software platform, deliver additional functionality and develop a forward build plan.

PROJECT DEFINITION

Name	Reef Knowledge System		
Project code	5F	Lead agency	The Reef Authority
Planned start	1 July 2022	Planned finish	30 June 2023
Budget estimate	\$385,877 (incl. GST)	Funding source	The Reef Authority
Description	<p>This project will complete the move of the Reef Knowledge System (RKS) website to the new GovCMS platform and improve the experience of users with improved functionality, design and content.</p> <p>Compilation of practical supporting documentation and business processes is also part of the project, to ensure the RKS’s use, maintenance and future evolution is effective and efficient. Progressively, and in accordance with available resources, additional content/tools will be incorporated into the website. The website’s functionality and user experience will also evolve further over time.</p>		

PROJECT OUTPUTS

Platform upgrade	Migrating the RKS to the new content management system platform (GovCMS).
Content	Improving the user experience with updated and new content (e.g. page wording, dataset links and visualisations).
Documentation	Developing supporting documentation such as maintenance plan, content strategy, business requirements description, business process guidance materials and forward build plan.



Show — guide and report

This priority relates to synthesising, integrating and presenting information in useful forms to better facilitate evidence-based reporting and provide guidance to decision-makers.

The 'Show' priority includes continuous improvements to the RKS, the development and implementation of a reporting framework for the Reef 2050 Plan and the identification of priority decision support needs with the vision to build decision support tools.



PROJECT 5G — DECISION SUPPORT SYSTEM SCOPING ASSESSMENT

The primary objective of this project is to provide a clear definition of the operational and resource requirements (e.g. labour, storage, server services and architecture) for delivery of a fit for purpose spatial decision support system and tools.

PROJECT DEFINITION

Name	Decision Support System Scoping Assessment		
Project code	5G	Lead agency	The Reef Authority
Planned start	1 July 2022	Planned finish	30 June 2023
Budget estimate	\$412,500 (incl. GST)	Funding source	The Reef Authority
Description	This project will scope and design spatial decision support systems and tools that improve decision-making through the integration of data. with an emphasis on providing an evidence base for supporting management decisions and assessing management effectiveness and progress against the Reef 2050 Plan.		

PROJECT OUTPUTS

Scoping Assessment	Delivering a report on the design of a fit for purpose decisions support system with appropriate social, economic, cultural and ecological values for spatial units encompassing the Reef with data modelling and visualisation.
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Glossary

ACRONYMS

Term	Definition
AIMS	Australian Institute of Marine Science
CMS	Content Management System
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DES	Queensland Government Department of Environment and Science
DMS	Data Management System
DSS	Decision Support System
GBRF	Great Barrier Reef Foundation
GBRMPA	Great Barrier Reef Marine Park Authority
RKS	Reef Knowledge System
IEP	Reef 2050 Independent Expert Panel
IMOS	Integrated Marine Observing System
LTMP	Long Term Monitoring Program — Australian Institute of Marine Science
MIS	Management Information System
MMP	Great Barrier Reef Marine Monitoring Program
PMO	Program Management Office
QPWS	Queensland Parks and Wildlife Service
RAC	Reef 2050 Advisory Committee
RIMReP	Reef 2050 Integrated Monitoring and Reporting Program
RKS	Reef Knowledge System
RMP	Requirements Management Plan
RRAP	Reef Restoration and Adaptation Program
RTM	Requirements Traceability Matrix
RTP	Reef Trust Partnership
SELTMP	Social and Economic Long-term Monitoring Program
SDSS	Spatial Decision Support System
TO	Traditional Owner

DEFINITIONS

Term	Definition
Internal (use)	Primarily Reef Authority staff, but may also include use by other government partners including QPWS, Australian and Queensland government entities
Program	Reef 2050 Integrated Monitoring and Reporting Program
Reef Authority	Great Barrier Reef Marine Park Authority

Appendix 1 – Budget estimates

The majority of funding for the 2022–23 Annual Business Plan activities will be sourced from the Reef Authority's internal budget and externally through the RTP (Integrated Monitoring and Reporting component) administered by the Great Barrier Reef Foundation. In addition, partners will contribute in-kind resources through dedicated staff time and equipment/technology to assist with Program delivery.

2022–23 BUDGET ESTIMATES

The 2022–23 Program budget of \$3,443,562² includes funding by the Reef Authority of \$1,754,189³ and a contribution from the RTP of \$1,244,496 toward delivery of the 2022–23 project portfolio. All figures are inclusive of GST.

ANNUAL BUSINESS PLAN 2022–23

#	Project	Budget	Funding source
GOVERNANCE AND PROGRAM MANAGEMENT			
-	Program Management Office operations	\$260,937	RIMReP Partners ⁴
Sub-total		\$260,937	
MANAGEMENT NEEDS			
2D	Communication and Outreach Priorities	\$81,353	RIMReP Partners
2E	Traditional Owner Communications and Engagement	\$218,260	RIMReP Partners
Sub-total		\$299,613	
COLLECT			
Nil			
Sub-total		\$0	
ACCESS			
4C	Data Management System Implementation – Phase 2 ⁵	\$1,925,251 ⁶	RIMReP Partners and Reef Trust Partnership ⁷
Sub-total		\$1,925,251	
SHOW – GUIDE AND REPORT			
5D	Design of the Reef 2050 Plan reporting framework ⁸	\$159,386	RIMReP Partners
5F	Reef Knowledge System	\$385,877	RIMReP Partners
5G	Decision Support System Scoping Assessment	\$412,500	RIMReP Partners
Sub-total		\$957,762	
TOTAL		\$3,443,562	

² Continuation of existing monitoring activities is not included in these budget estimates.

³ Reef Authority contribution figure does not include the future investment secured as outlined under the Future Continuity and Evolution section of this Annual Business Plan.

⁴ RIMReP Partners denotes Reef Authority funding with costed 'in kind' contributions from partner agencies.

⁵ Project carried over from 2021–22 Annual Business Plan.

⁶ \$3,992,654 (GST inclusive) allocated to the two year project for the period to 30 June 2024. \$1,925,251 (GST inclusive) estimated for 2022–23 expenditure.

⁷ Reef Trust Partnership denotes funding from the Reef Trust Partnership, coordinated by the Great Barrier Reef Foundation.

⁸ Project carried over from 2021–22 Annual Business Plan.

Appendix 2 – Performance measures

ANNUAL BUSINESS PLAN 2022–23

OUTPUTS

PERFORMANCE INDICATORS

Governance and Program Management

Implementation of Program Management Office practice across the program.

- Implementation of project reporting framework for the Program, reporting on outcomes and performance measures.

2023–24 Annual Business Plan.

- Publication of the 2023–24 Annual Business Plan.

Continued operation of Executive and Operations governance groups.

- Governance boards meet regularly with documented proceedings, delivering a reduction in program risk.

Management Needs

Program communication activities documented and delivered.

- Identified and delivered priority communication products and outreach (communiques, insights reports, partnerships forums and presentations).
Widespread use of a common narrative that yields a broad understanding of the Program.

Traditional Owner Partnership: Convene meetings with the RIMReP Traditional Owner governance members.

- Co-designed communication products, showcasing the Reef Knowledge System and identifying Traditional Owner user needs.

Traditional Owner Communication and Outreach — Implement a RIMReP Traditional Owner Communications and Engagement Plan for 2022–23.

- Co-designed Traditional Owner communication products to showcase RIMReP and identify Traditional Owners and Indigenous groups interested in future RIMReP engagement and partnerships.

Collect

Nil

FIVE-YEAR BUSINESS STRATEGY

OUTCOMES

PERFORMANCE INDICATORS

Business Strategy 2020–25 provides clear direction, accountability and support to deliver the Program’s vision.

- Delivery of all Program outcomes and performance measures.
- The Program partnership remains strong and committed, and continues to work towards a shared purpose.
- Sustainable funding and commitment across the partnership to support ongoing maintenance and relevance.

The Program has empowered Reef managers, Traditional Owners and other stakeholders with information and tools that measurably provide for improved Reef management and reporting, in priority order and within the approved scope.

- Measurable efficiencies in Reef management operations.
- Improved decision-making guided by more integrated information and support tools.
- The Program meets management priorities and needs.
- Adoption of the RKS by internal users, measured by analytics and surveys.
- Widespread awareness of the Program, its capabilities and limitations.
- Ongoing delivery of updated and improved Reef information.
- Alignment with RTP projects with reduced confusion and improved visibility.

More accessible, timely and interactive information about the Reef and the communities it supports.

Required data is available and supportable for Guide, Show and Report priorities.

- High quality data defined, collected and accessible.
- Priority gaps monitoring is operational and accessible to the program.
- Ongoing monitoring service and support capability is defined, in place and funded.
- All data sharing agreements in place (as required).

Appendix 2 – Performance measures

ANNUAL BUSINESS PLAN 2022–23

OUTPUTS

PERFORMANCE INDICATORS

Access

Build and implement a fit for purpose Data Management System (January 2022 to June 2023), with upgrades and increased data integration over 2023–24.

- Information technology backend infrastructure is set at 100 per cent.
- At least 50 per cent of all high priority datasets and 25 per cent of all medium priority datasets have been harvested with their corresponding metadata records.
- Required data sharing agreements for ingested high and medium priority datasets signed.
- At least two governance workshops and two metadata training workshops completed.

Show – Guide and Report

Migration of the Reef Knowledge System (RKS) to new technology platform (SHOW).

- RKS website live on new platform.
- Regular Google analytics reports established.
- Maintenance program established and being implemented.

Decision Support System Scoping Assessment Completed (GUIDE).

- Delivery of analysis report on availability and access to priority data layers for Spatial Decision Support System (SDSS).
- Delivery of report on best practice approaches for SDSS in environmental management.
- Delivery of RIMReP Technology Strategy and Governance Framework for Decision Support System.
- Delivery of design report for the RIMReP SDSS.

Report delivered to show business requirements for the design of an online Reef 2050 Reporting platform (REPORT).

- Sufficient information available to guide development of a minimum viable product version of the online platform.

FIVE-YEAR BUSINESS STRATEGY

OUTCOMES

PERFORMANCE INDICATORS

An operational fit for purpose Data Management System servicing Program requirements, that is sustainable over time.

Greater collaboration and interoperability between monitoring programs.

- A Data Management System that is operational and services Program requirements.
- Enabled access to federated information sources.
- Minimised duplication or overlap of information resources.
- Ongoing support defined, planned and funded.
- Reef and catchment monitoring, modelling and adaptation programs benefit from the data management system and learnings are shared across programs.

People using the Reef Knowledge System and related tools find them relevant, engaging, interactive and easy-to-use.

- Measurable web analytics that demonstrates a high-level of adoption and usage as a gateway portal.
- User survey information reflecting user satisfaction and a feedback loop for further development.
- Defined and met service levels and supportable maintenance costs, with easy update capability for content managers.

Reef managers are better informed by robust information, more responsive and able to make considered, effective and efficient decisions.

- Measureable use of decision support tools in operational Reef management.
- Management decisions more swiftly informed with greater access to information to inform decisions.

Reef 2050 reporting is informative, robust and provides an objective picture of the values and their trends.

Reporting is influential in driving adaptive management and investment.

- Measurable efficiency gain in delivery of Reef 2050 Plan progress and other reports.
- Feedback from key Reef 2050 Plan stakeholders is positive.
- Defined usage of reporting information in management decisions and other information queries.







Australian Government

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