IMPACT REPORT

Practical Hope in Action

CITIZENS OF THE REEF

“... the most important place on Earth is not on land, but at sea.”

Sir David Attenborough
“Ocean” 2025


Powered by community.
Backed by science.
Built for reefs.
LOCALLY LED
GLOBALLY SCALABLE
CITIZENS
OF THE REEF

A word from our CEO ...

From day one, we've tried things others said couldn't be done.

Citizens of the Reef was born from this idea: anyone, anywhere could help shape the future of coral reefs, powered by emerging technology, grounded in science.

From classrooms to coastlines to labs and servers, thousands of people and organisations are demonstrating that conservation can be fast, scalable, and powered by both community and AI, guided by world leading science.

We're not here to preserve the status quo. We're here to bring people, science and technology together to protect what still has a chance — where today's surviving reefs become the foundation for tomorrow's recovery.

Andy Ridley
CEO
Citizens of the Reef

What's inside ...

The work starts here →

OUR MISSION

1

Coral reefs are at their most critical point.

Between 2023 and 2025, reefs across the world have faced the most extensive bleaching in recorded history, affecting more than 80% of coral ecosystems. Yet reefs that survive today hold the blueprint for recovery – if we act fast enough.

Coral reefs cover less than 1% of the ocean, yet support a quarter of all marine life and half a billion people with food, income and coastal protection.

Our mission is to restore and protect reefs by scaling a people-powered model that unites communities, Traditional Owners, scientists, industry and AI, generating the data and action needed for reef survival.

> **When people take responsibility for what they love, change becomes possible in a way nothing else can.**

OUR IMPACT ON SDGs

2

Our work sits within a global effort - 17 goals that recognise the link between people, planet and prosperity.

The UN Sustainable Development Goals call for action across every system that sustains life on Earth. Among them, SDG 14 - Life Below Water, speaks directly to what we do.

Citizens of the Reef turns that goal into practice: data, culture and collaboration driving measurable change in the water, where global intent becomes local action.

	14 LIFE BELOW WATER	13 CLIMATE ACTION	2 ZERO HUNGER	8 DECENT WORK AND ECONOMIC GROWTH	11 SUSTAINABLE CITIES AND COMMUNITIES	17 PARTNERSHIPS FOR THE GOALS
CITIZENS OF THE REEF	Protecting and restoring coral reef ecosystems.	Building resilience against climate impacts.	Informing fisheries management that feed 500M people.	Creating local jobs and reef-based economies.	Reefs shield coasts from storms and erosion.	Uniting communities, science, industry & technology.

"SDG 14 is one of the most data-poor goals – gaps in monitoring and reporting make it impossible to fully assess progress on ocean and reef health."

UN SDG Report 2024

Closing the Gap.

Citizens helps close this reporting gap by generating real-time reef data through communities, science and AI - turning local action into global insight and linking every image to conservation outcomes.

IMPACT HIGHLIGHTS

3

Data Proven

Peer-reviewed science (Lawson et al. 2025) confirmed Great Reef Census data can estimate key coral groups with ~99% accuracy compared to expert scientists.

PEOPLE POWERED

15,000+ volunteers worldwide have completed nearly 500,000 image analyses across schools, companies, and everyday citizen scientists.

SCALE OF COVERAGE

729 reefs surveyed to date – including 424 not monitored by others in the past 3 years.

EDUCATION IMPACT

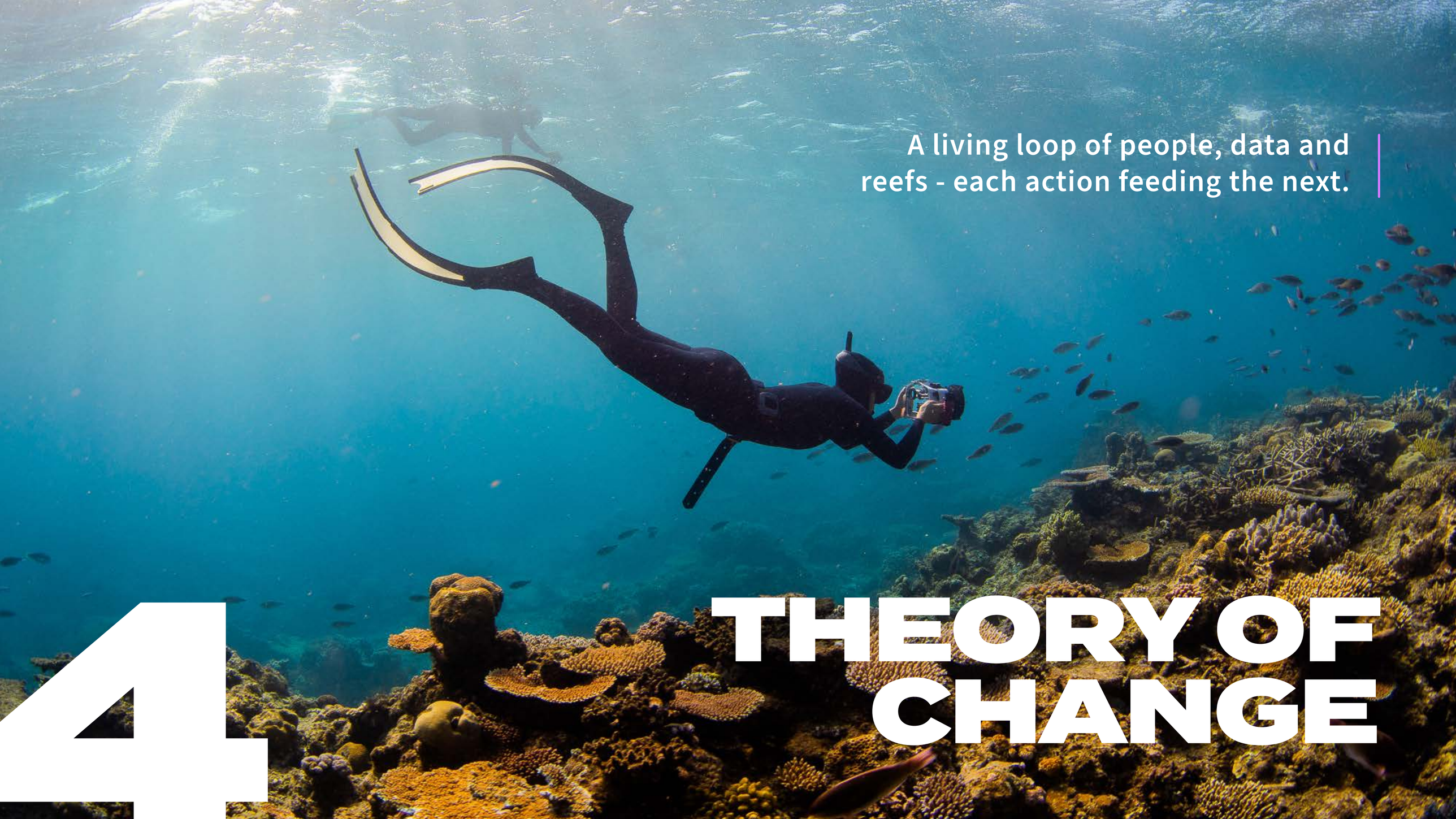
60+ schools and 5,000+ students are turning concern into action, becoming some of the most accurate citizen scientists on the reef.

DRIVING CONSERVATION

Census data identified 30 high-value source reefs, including 8 in the top 2% of importance, and now informs Crown-of-Thorns control program.

GLOBAL REACH

Pilots in Hawai‘i and the Red Sea show that Census is a sought after, scalable, low-cost model for reef conservation worldwide.



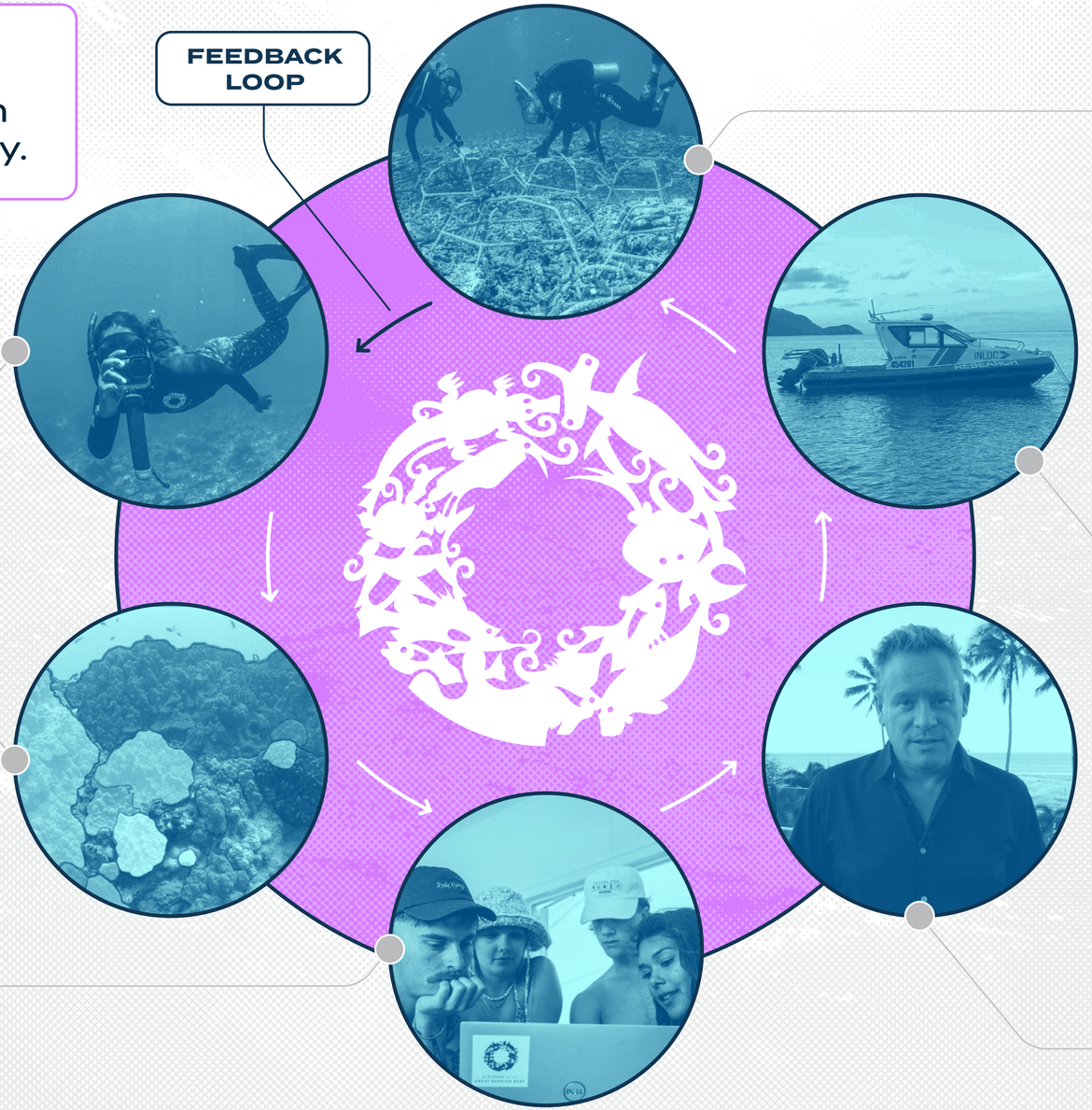
A living loop of people, data and reefs - each action feeding the next.

4 THEORY OF CHANGE

OUR NORTH STAR

Reefs that survive today can become tomorrow's recovery.

FEEDBACK LOOP



1 | CITIZEN CAPTURE & UPLOAD

Reef images collected in the water and uploaded to the Census.

2 | AI ANALYSIS

AI pre-processes images, segmenting coral for categorisation.

3 | CITIZEN ANALYSIS

Thousands worldwide verify and classify images, achieving 97–99% accuracy vs experts for key coral types.

4 | SCIENTIST VERIFICATION

World leading scientists validate findings for reliability (Lawson et al. 2025).

5 | MANAGEMENT ACTION

Data guides reef managers to prioritise reefs, control CoTS, and inform interventions.

6 | ON-GROUND RESTORATION

The Reef Co-op and RITP build skills and stewardship, applying Census insights to inform restoration.

REEF COOPERATIVE | REEF INTERVENTION TRAINING PROGRAM

THE GREAT REEF CENSUS

A people-powered science movement mapping the future of reefs.

Where knowledge became the catalyst for action.

In 2017, following back-to-back bleaching, a hard truth was revealed: we had only fragments of data on which reefs were surviving. What was missing was broad-scale data.

That gap gave rise to the Great Reef Census.

With startup support from the Australian Government's Reef Trust, Dell Technologies, and the Prior Family Foundation, Citizens of the Reef built the concept in collaboration with the Great Barrier Reef Marine Park Authority, University of Queensland, James Cook University, and the tourism industry.

Since then, the Census has grown into one of the world's largest marine citizen science programs. It is powered not just by world-class partners, but by thousands of people. Divers and snorkellers capture images on the reef alongside Traditional Owners, tourism operators, tug and dive crews, ranger groups and scientists. Around the world, virtual volunteers, schools and corporate teams analyse those images online.

Connecting people, data and technology into one living system of care for reef recovery.

Supported by the Australian and Queensland Governments, Cotton On Foundation, The Walt Disney Company, Prior Family Foundation, Sahaj Software and Dell Technologies, and validated by UQ and JCU at 97–99% accuracy for key coral groups, the Great Reef Census provides data that guides reef protection, CoTS control and restoration across the GBR.

IMPACT IN NUMBERS

6

The numbers behind collective action.

FROM WHEN THE GREAT REEF CENSUS BEGAN IN 2020 – UNTIL 2025

REEFS SURVEYED 740+

25% OF THE GREAT BARRIER REEF SURVEYED

MARINE VESSELS ENGAGED 100+

15K+ CITIZEN SCIENTISTS ANALYSING IMAGES

IN-WATER SURVEYS COMPLETE 5567

97-99% ACCURACY VS EXPERTS FOR KEY CORAL TYPES

IMAGES UPLOADED 187K

431K IMAGES ANALYSED

PEOPLE & AI

Technology that learns from people learns to serve the planet.

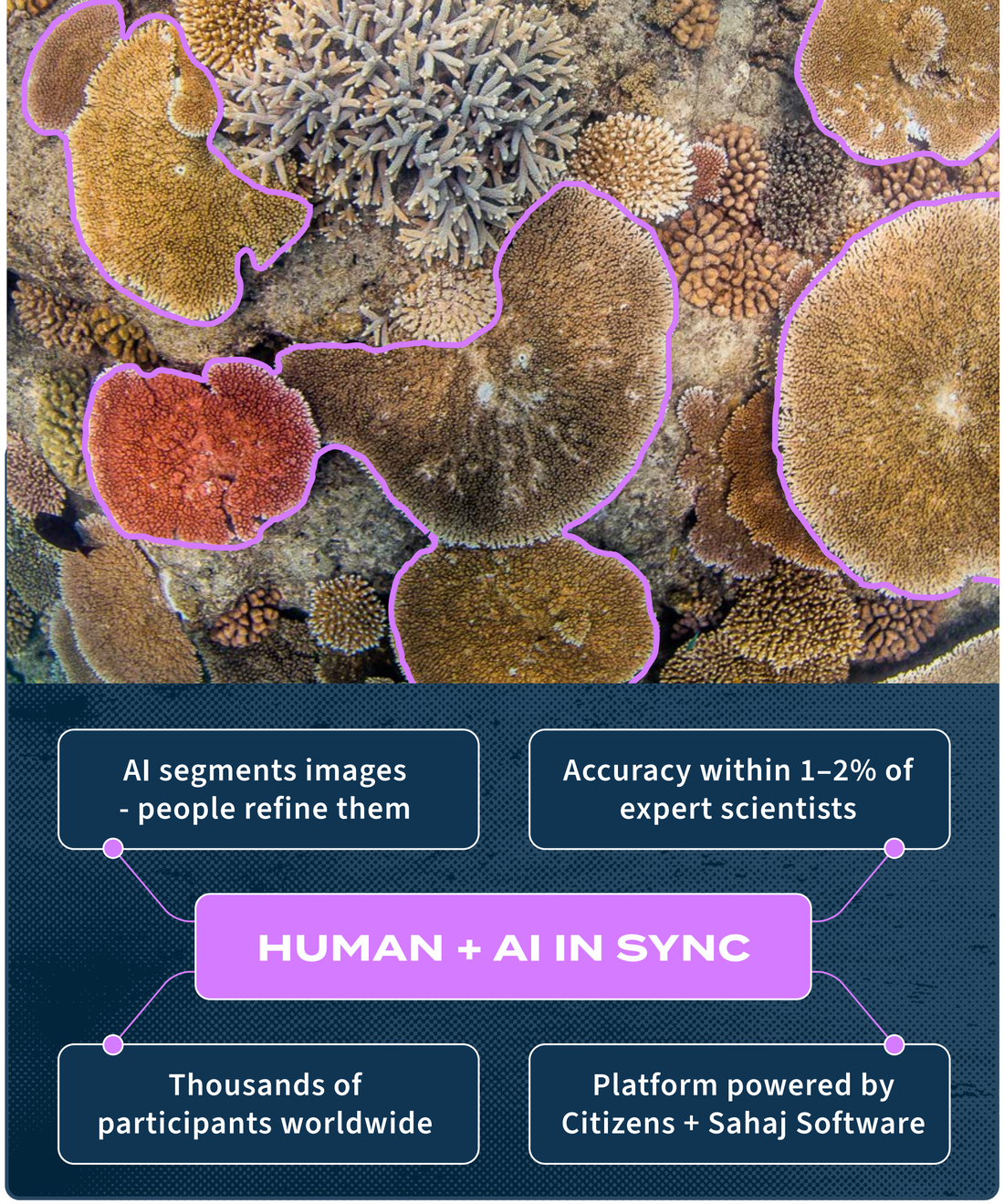
People Power + AI = Scale

AI doesn’t replace people - it unlocks what we can achieve together.

AI pre-processes each reef image, drawing boundaries around coral, rubble and other features. Thousands of citizens worldwide then step in to refine those boundaries, helping achieve analysis accuracy within 1–2 percent of expert scientists for key coral groups.

In the Great Reef Census, people and AI form a living loop. Communities capture images, AI accelerates analysis, and insights return to guide action. This is democratised science – fast, accurate and collaborative.

Behind the scenes, the Census platform is engineered with Sahaj Software, whose partnership keeps the system running at global scale, ensuring every image, refinement and contribution feeds a seamless platform for reef survival.



“This study shows citizen scientists can deliver data of comparable accuracy to expert scientists - at the scale needed to protect reefs globally.”

Dr Chris Lawson,
University of Queensland

SCIENCE VALIDATED

Validated by leading scientists. Informed by thousands of citizens.

COMPLEMENTING MONITORING

Census filled gaps on 428 reefs not covered by other monitoring programs in the last three years.

KEY SOURCE REEFS

In 2024, Census identified around 30 key source reefs critical for conservation recovery. Last year, 8 ranked within the top 2% of importance scores across the GBR.

CLIMATE REFUGIA

After the 2024 mass bleaching, Census was recognised as a fast, cost-effective tool to locate reefs that resisted heat stress; vital “refugia” to prioritise for resilience.

NATIONAL & GLOBAL RECOGNITION

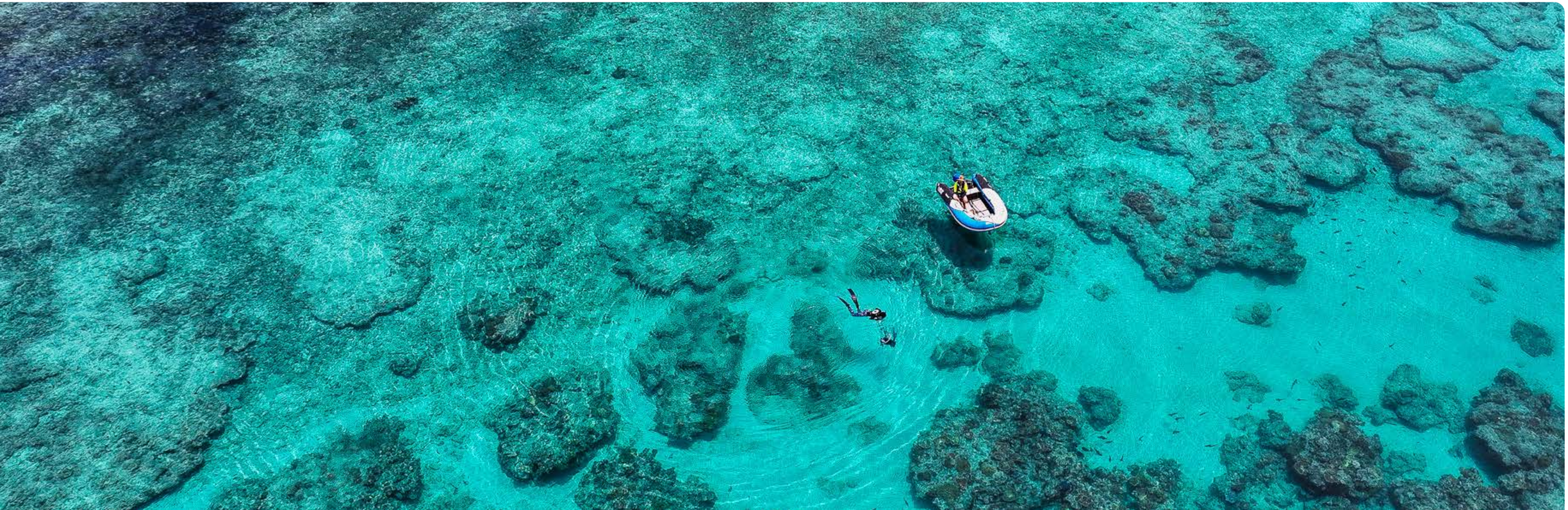
Census data is now embedded in global and national reporting, accepted into the Global Coral Reef Monitoring Network (pending 2026), acknowledged in the 2024 Great Barrier Reef Outlook Report, and presented at leading scientific conferences worldwide.

“The Census has demonstrated its ability to deliver accurate estimates of key coral groups, answering one of the most critical questions for reef managers worldwide.”

Professor Peter Mumby,
University of Queensland

Take a deeper dive

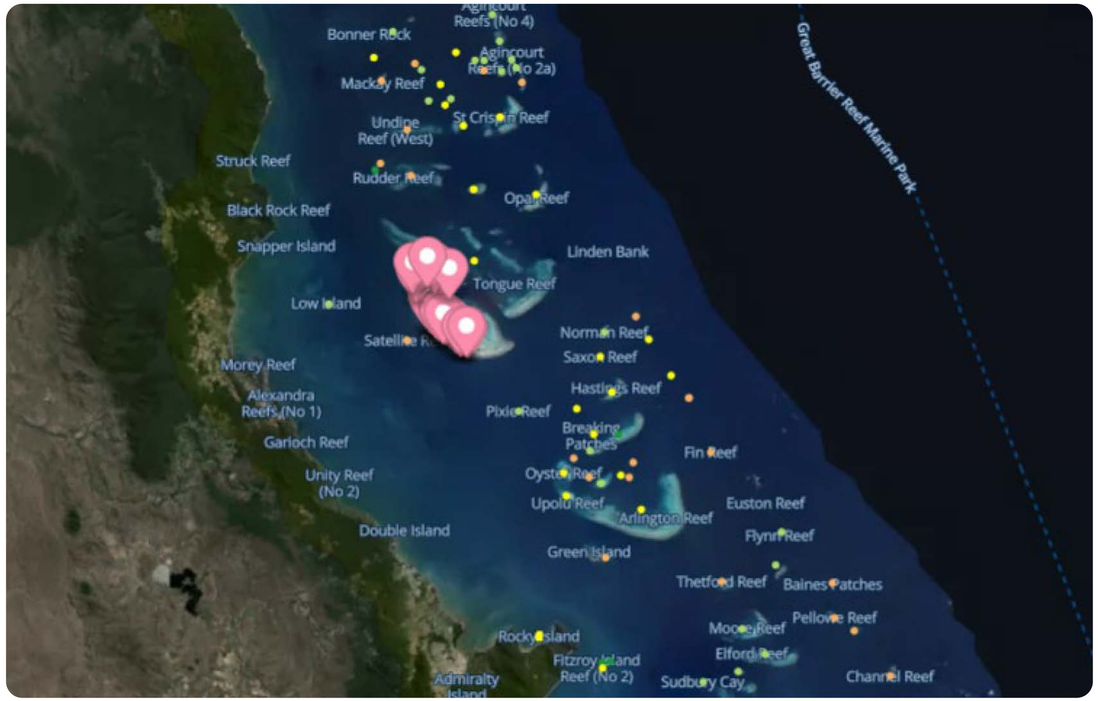
Explore the full Science Impact Report **here**



MAPPING RESILIENCE

Census data is being used in a NESP-funded project that is mapping reef resilience across the GBR - guiding protection of the reefs that matter most.

By providing up-to-date coral cover data at scale, the Census fills critical gaps where managers once relied on outdated or modelled estimates. This enables scientists to more accurately identify key source reefs for coral regeneration - and ultimately secure stronger protection for the reefs that matter most.

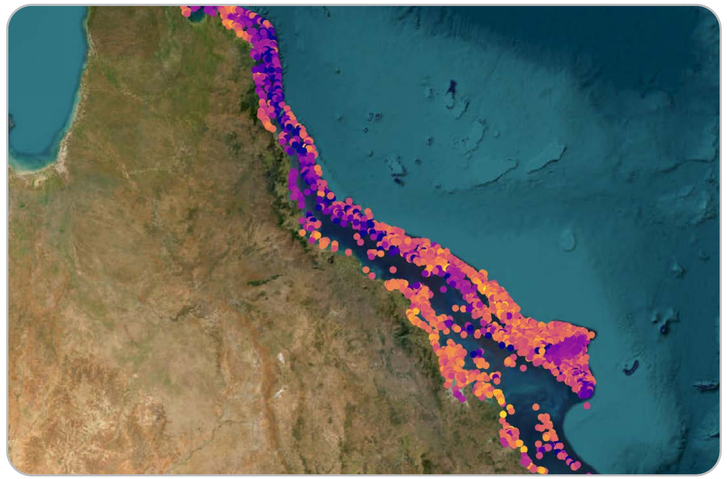


How the Census turns reconnaissance into targeted resilience action.

Open Maps For All

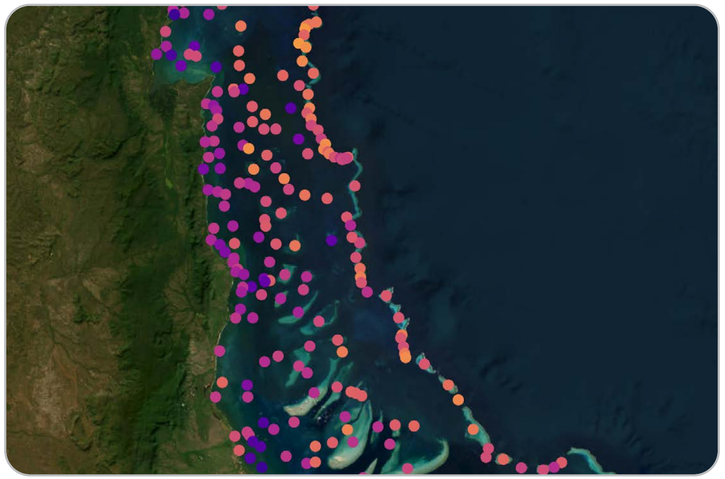
The Census platform now hosts interactive maps used by schools, researchers, and reef managers, making reef health and resilience visible, connected, and actionable for all.

Explore the maps here



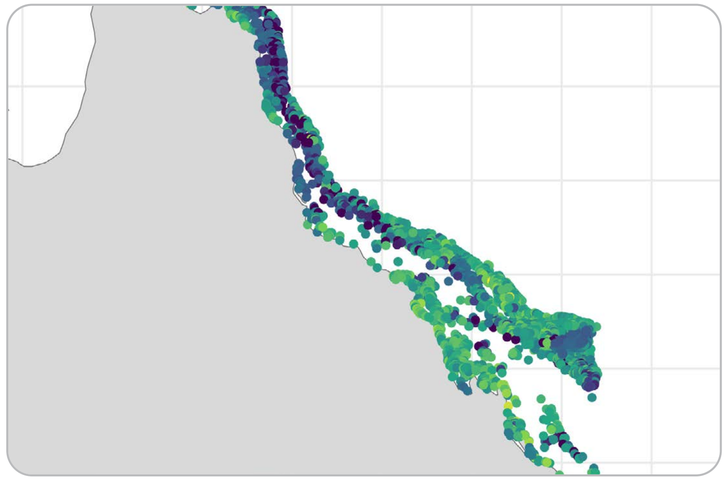
Map Uncertainty

New maps reveal where critical data gaps remain - guiding targeted revisits after bleaching or cyclones, and ensuring no reef is left unseen.



Map Rubble Beds

In collaboration with Mars Sustainable Solutions and Dell Technologies, new AI tools trained on 60,000 Census images identify degraded rubble beds, pinpointing areas which may benefit from restoration activities.



Direct Decisions

Census data helps reef managers prioritise sites for in-water surveys — with the results guiding real-world actions like CoTS control and reef interventions.

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RESTORING ECOSYSTEMS

CROWN OF THORN STARFISH (COTS) CONTROL

CoTS are responsible for 42% of the coral loss on the Great Barrier Reef.

Great Reef Census data is used by the CoTS control program as part of their annual reef reprioritisation process.

> **“Programs like the Great Reef Census have directly contributed to management.”**
>
> Great Barrier Reef Outlook Report 2024

FROM RUBBLE TO REEF

The Mars Assisted Reef Restoration System (MARRS) uses hexagonal steel structures called Reef Stars to stabilise rubble fields and create a foundation for coral growth.

At their most effective, these structures transform degraded seabeds into vibrant, coral-rich ecosystems within just a few years.

861 REEF STARS INSTALLED

As part of the Reef Cooperative.

RESTORATION SITES ACROSS THE GBR

Hastings, Norman and Moore Reefs on Gunggandji and Yirrganydji sea country

A TEST OF RESILIENCE

Proof that innovation and partnership can drive natural recovery.

> “Through this partnership, the Mars team and its collaborators can focus restoration efforts where they will have the greatest impact. Citizen science enables large-scale data collection, guiding us to high-value sites with the most long-term potential, giving reefs the best chance to rebound and biodiversity to flourish.”

Prof David J Smith PhD
Senior Director
Mars Sustainable Solutions

LEADING RECOVERY, TOGETHER

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REEF COOPERATIVE

The Reef Cooperative is not only restoring coral reefs – it is building pathways of leadership, skills and stewardship on Sea Country.

This is social impact woven into conservation.

Co-developed and managed by Citizens of the Reef, the Co-op was established with founding funder the Cotton On Foundation, bringing together Yirrganydji and Gunggandji Sea Rangers, GBR Biology and Mars Sustainable Solutions. The Co-op demonstrates how collective action can deliver meaningful outcomes for both communities and the Reef.

Each partner contributes a unique strength: Traditional Owner leadership and ecological knowledge, scientific expertise, industry resources, community stewardship and world-class conservation. Together, we are building restoration programs that none of us could achieve alone.

> “Born from a shared desire to work together for the reef, the Reef Cooperative integrates Traditional Knowledge, applied marine science, and industry innovation to monitor and restore coral ecosystems, building resilience in a changing climate.”

Alicia McArdle
Head of Conservation - Citizens of the Reef

Since launching in 2022, the Cooperative has:

- Installed 861 reef stars across Hastings, Norman and Moore reefs, stabilising rubble and creating new habitat for coral growth.
- Trained 17 Yirrganydji and Gunggandji Rangers through the Reef Intervention Training program (RITP), building on cultural knowledge with new skills in diving, surveying and restoration.
- Expanded shared infrastructure, vessels, operations and training, to maximise sea time and conservation reach.

The Reef Cooperative shows what's possible when Traditional Owners, conservationists, scientists and industry work together - giving vulnerable reefs a fighting chance and empowering the next generation on Sea Country.

As Dr Eric Fisher, GBR Biology Manager, explains:

"GBR Biology/Reef Unlimited are at the forefront of conservation on the Great Barrier Reef as we combine Academic and Traditional Owner Ecological Knowledge to drive connection, action and promotion of World Heritage Values."

CUSTODIANS LEADING RECOVERY

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For Traditional Owners, conservation is not new.

It is the continuation of responsibilities that stretch back thousands of years. What's changing is how these responsibilities are resourced, recognised and connected to broader scientific and industry systems.

Through the Reef Intervention Training Program (RITP), Yirrganydji and Gunggandji Rangers are building skills in diving, reef surveys and reef restoration, opening pathways into conservation careers that complement and extend cultural stewardship on Sea Country.

"As Traditional custodians, programs such as RITP allow us the opportunity to connect, see, feel, and continue our cultural responsibilities, traditions, and relationship with the Great Barrier Reef. We are the eyes and ears of our ancestors, elders and community and this means so much to us - being involved in conservation, training and working in collaboration with partnering organisations to do this important work."

Gavin Singleton
Yirrganydji Land and Sea Ranger – Partner of the Reef Cooperative

COLLABORATION ON THE REEF

Traditional Owners are shaping reef recovery across emerging programs.

Through the Reef Cooperative and the Reef Intervention Training Program, opportunities are emerging for Traditional Owners to expand their leadership in reef monitoring, management and recovery.

Leadership in interventions

Frederick LeFoe, Cultural Officer for the Reef Cooperative, is leading reef-recovery efforts as part of his journey to become a certified MARRS trainer - a pathway that blends cultural knowledge with technical restoration skills.

CoTS control voyages

In partnership with DETSI, land and sea rangers are gaining sea time and leading Great Reef Census surveys while Crown-of-Thorns starfish control is undertaken across the Great Barrier Reef. These experiences strengthen local capacity and connect Traditional Owners with large-scale management operations.

Building knowledge, strengthening capacity

On GMY Sea Country, rangers return to the same reefs year after year, generating data that strengthens both local stewardship and government surveys.

PATHWAYS FOR THE NEXT GENERATION

Under the Queensland Government's Skilling Queenslanders for Work initiative, the Reef Intervention Training Program has evolved into a 22-week intensive for Indigenous youth. With support from the Cotton On Foundation, King's Trust Australia, and Mars, trainees gain hands-on experience in conservation while earning qualifications such as SCUBA diving and a Certificate I in Workplace Skills. Alongside cultural mentorship, this on-the-job learning builds skills, confidence, and connection to Sea Country, creating lasting pathways into conservation and tourism.

> **Launched in 2023, the pilot Reef Intervention Training Program (RITP) has already provided opportunities for young rangers to gain dive certification, survey skills and experience in MARRS Reef Star deployment.**
>
> Each graduate carries not just new technical knowledge but a renewed mandate - to safeguard their Sea Country while stepping into roles of leadership across the wider reef-conservation sector.

SOCIAL IMPACT WOVEN INTO CONSERVATION

Custodian-led monitoring, data collection and restoration show that cultural continuity and cutting-edge science are not parallel paths - they are strongest when walked together.

The Reef's recovery is supported by restoring coral, alongside restoring the rightful place of Traditional Owners at the centre of its care.

“This experience not only makes their learning deeply meaningful but also gives them a powerful sense of achievement, knowing they are contributing to the real-world conservation of one of the most spectacular ecosystems on the planet. “

Dr Deb Geronimi
Camden Haven High School (NSW)

EDUCATING THE NEXT GENERATION

5000+ STUDENTS

FROM 88+ LOCATIONS

ANALYSING 50,000+ IMAGES

In classrooms across the world, students are becoming citizen scientists - turning concern into action and building knowledge through a shared program that connects them beyond their own generation.

By contributing real data, students turn climate concern into action, building both knowledge and confidence as future custodians of the reef.

From First Nations communities, to classrooms in Finland, Indonesia and the UAE, and now extending to regions such as the USA, the UK and the Pacific, students of all backgrounds are contributing to reef protection. And as the Census expands globally, schools in new regions will join the network, connecting young people worldwide through shared conservation.

“My Marine Studies students have proudly participated in The Great Reef Census every year since 2021.

Together, they have analysed thousands of images of the Great Barrier Reef using Artificial Intelligence technology, directly supporting scientists in their research. This experience not only makes their learning deeply meaningful but also gives them a powerful sense of achievement, knowing they are contributing to the real-world conservation of one of the most spectacular ecosystems on the planet. Thank you for enabling us to be part of this program — we look forward to continuing our contributions in the years ahead. I strongly encourage every school to get involved so their students too can play a role in collecting valuable data to support reef health monitoring, research, and management.”

Dr Deb Geronimi

Camden Haven High School (NSW)

COMPANIES DRIVING CHANGE

Companies that unite behind science for conservation help scale impact from employees to ecosystems.

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The Great Reef Census shows how companies can become part of the solution, not just supporters of it.

Through employee programs, innovation, and funding, global partners are embedding reef recovery into their operations.

In its first year, the Census became Disney's largest virtual volunteering initiative. VoluntEARS across 81 locations have since analysed over 18,000 images and have joined in-water surveys for our pilot in Hawai'i.

Companies including Cotton On, Disney, Mars, Dell, Ernst & Young, Atlassian, Salesforce and others support reef conservation through virtual volunteering. Together, they've supplied nearly one-third of the global volunteer workforce, turning staff hours into conservation impact.

> But partnerships go far beyond image analysis.
> They bring long-term funding, skills-based volunteering, and innovation - transforming reef conservation into part of global business infrastructure.

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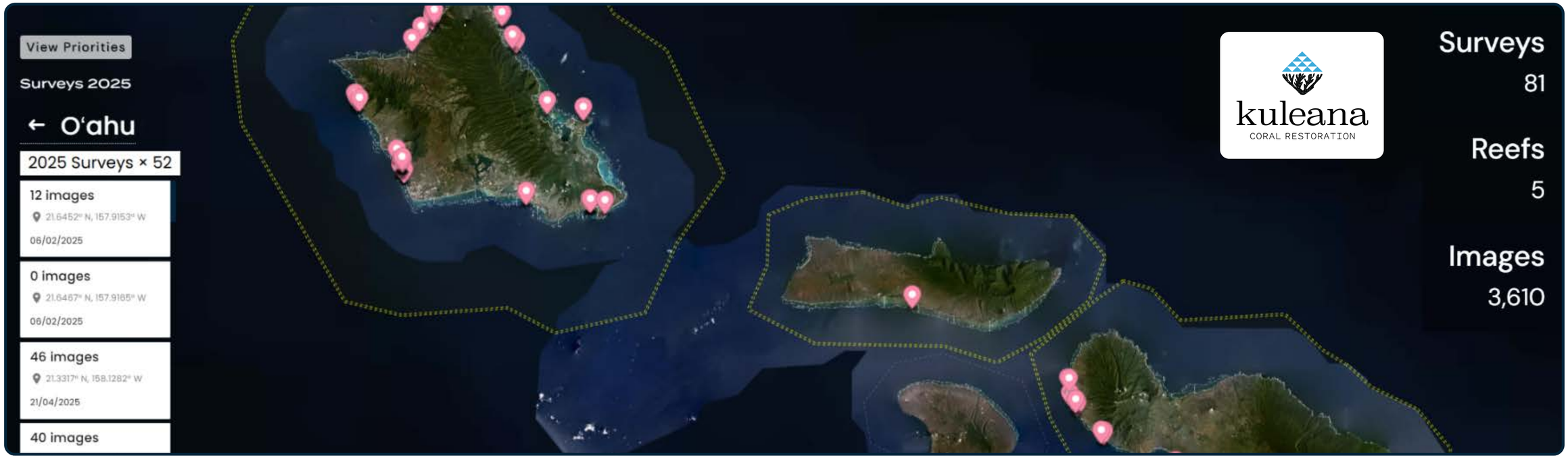
GLOBAL SCALE

The ocean connects us all, and so does the Great Reef Census. What began on the Great Barrier Reef is now rippling across the planet.



The ocean doesn't stop at borders. And, neither does the Great Reef Census.

What began on the Great Barrier Reef is now becoming a global movement for reef survival, uniting communities across oceans at the exact moment conservation needs it most.

HAWAI'I PILOT

Hawai'i is the first site outside the Great Barrier Reef to join the Great Reef Census. In partnership with Kuleana Coral Restoration, divers and boats have captured thousands of images across O'ahu, Maui, Kaua'i and Moloka'i. These images are now being analysed by schools, citizens, and businesses, showing how local knowledge and global technology can work together to protect reefs. This pilot is helping adapt the Census model to new geographies, creating lessons that can be shared across the Pacific and beyond.

RED SEA

We aim to pilot the Census across 15–20 reefs in one of the most historically heat-resilient coral systems on Earth — the Red Sea.

The program will engage local communities, including dive clubs and schools, in monitoring these important reefs, while adapting the model to new cultures and environments.

With support from the Disney Conservation Fund ...

we've transformed the Census into a multi-region digital platform, where communities worldwide can upload, analyse, and share data in real time. This isn't just science. It's a global platform for ocean recovery - connecting rangers, researchers and reef people across the globe.

THE CHALLENGE

Reefs are changing faster than the systems built to protect them.

Climate stress is accelerating - the 2023–2025 bleaching event shows how quickly reefs are being lost - while management and funding still move at the pace of decades.

Across the world, conservation is under strain. Aid is stalling, budgets are shrinking, and the ecosystems most at risk are losing support just when they need it most.

OUR RESPONSE

Born of necessity, we built a new model - powered by people and intelligence.

Lean, community-driven, and AI-assisted, it unites Traditional Owners, rangers, volunteers, scientists, and partners to turn images into insight and insight into action.

This is conservation accelerated: a low-cost, high-return model that makes reef recovery scalable, proving what's possible here on the Great Barrier Reef can work across the world's oceans.

But we can’t do this alone.

The future of reefs
depends on the choices
we make together.

THE RIPPLE EFFECT

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Every minute donated strengthens the system we all rely on.
Every image analysed, every reef revisited - each act of connection rebuilds resilience across coasts and communities.

Local actions create global change.
When people show up, the ripple carries far beyond the reef.


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TAKE ACTION
FOR THE REEF

We will keep pushing boundaries.

Showing how people and data can protect what remains and build what's next.

CITIZENS OF THE REEF

Reef recovery takes all of us.

Whether you're a student, scientist, ranger, company, or community - there's a way to take part.

Together, we're building a living network of people powering the ocean's recovery.

Join the Great Reef Census.

Help analyse images, contribute data, and turn science into action.

→ greatreefcensus.org

SUPPORT SCIENCE, CONSERVATION AND RESTORATION

Help scale new tools, technologies, and coral innovation.

Alicia – alicia@citizensgbr.org

BRING THE CENSUS TO YOUR CLASSROOM OR COMMUNITY

Engage students in real conservation science and connect to reef recovery worldwide.

Kelly – kelly@citizensgbr.org

GET INVOLVED IN THE FIELD

Join our in-water Census and expeditions.

Sean – sean@citizensgbr.org

PARTNER THROUGH YOUR BUSINESS

Join companies leading global restoration through employee programs, innovation, and support.

Kelly – kelly@citizensgbr.org

PARTNER FOR GLOBAL IMPACT

Fund the next stage of ocean recovery with long-term investment in scalable reef solutions.

Andy – andy@citizensgbr.org

The future of reefs depends on what we do together.

→ Become a Citizen of the Reef **here**

MADE POSSIBLE

BY PARTNERSHIPS

This work is made possible by partnerships that believe in a new model for reef conservation - one built on collaboration, technology, and community.

Australian Government
Department of Climate Change, Energy, the Environment and Water

Reef Authority

Marine and Coastal
National Environmental Science Program

Australian Institute of Marine Science

Queensland Government

The University Of Queensland
AUSTRALIA

PFF
PRIOR FAMILY
FOUNDATION

COTTON:ON FOUNDATION

Disney

sahaj
software

MARS

UBS Optimus Foundation
UBS

SPECIAL

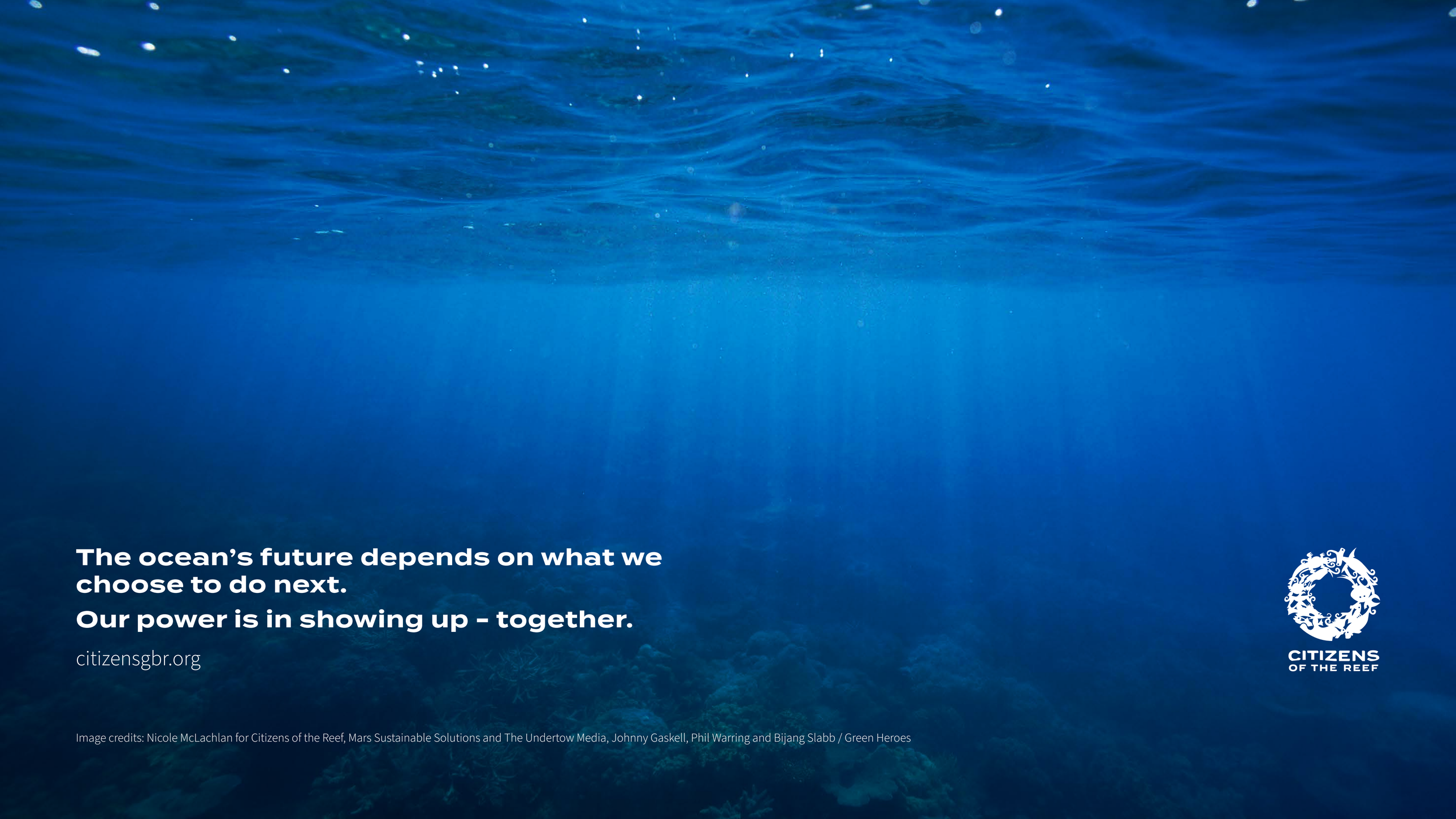
Reef & Rainforest
RESEARCH CENTRE

James Cook University
AUSTRALIA

DELL Technologies

MINDSHARE

A member of Australian Citizen Science Association



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