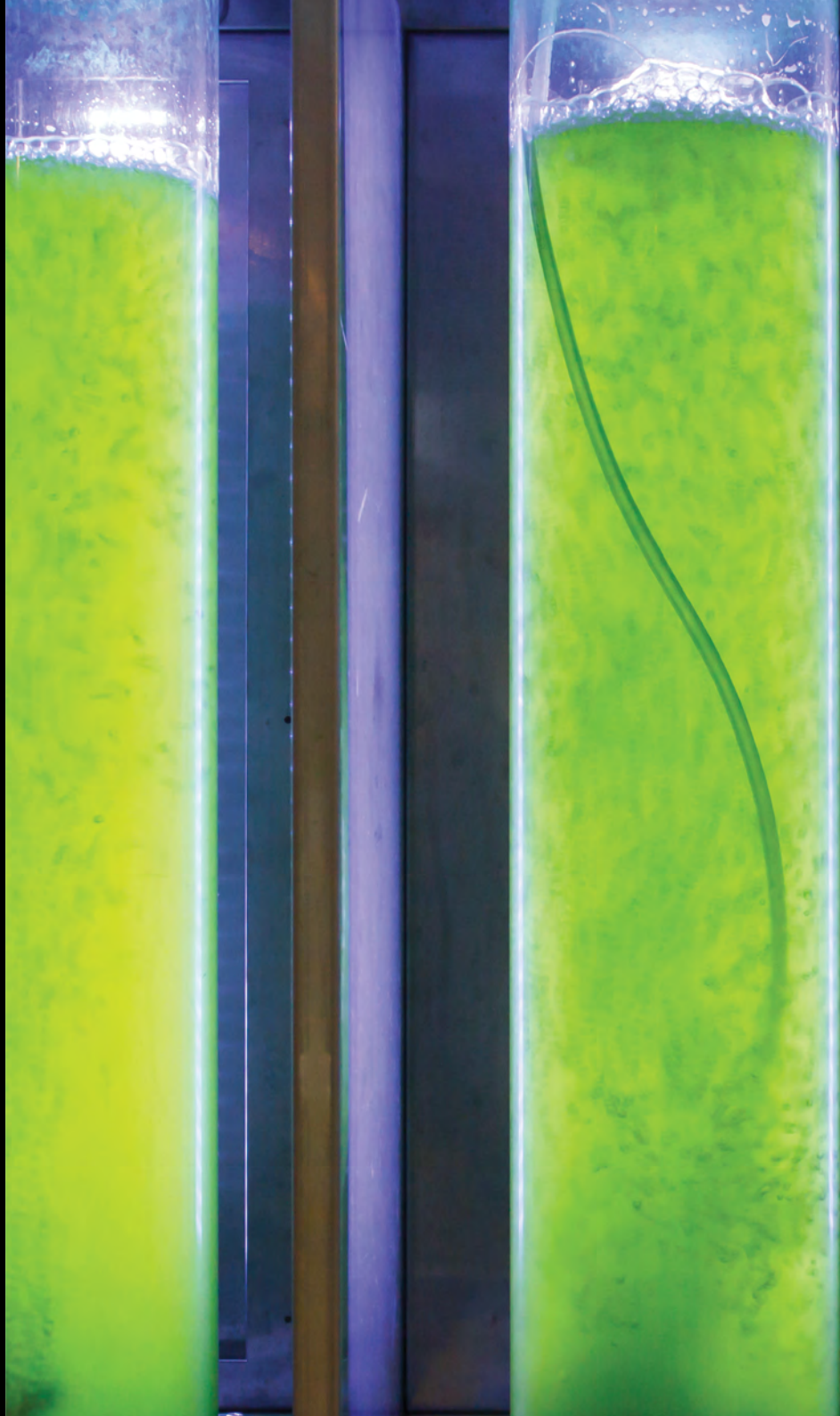




Deep Green
Biotech Hub

UTS Deep Green Biotech Hub
Annual Report 2024

DCBH





Our vision is to bridge the gap for innovation, solutions and opportunities between industry leaders, academics, government and startups in the Australian Algae Ecosystems.

Acknowledgement to country

Deep Green Biotech Hub acknowledges the Gadigal People of the Eora Nation, the Boorooberongal people of the Dharug Nation, the Bidiagal people and the Gamaygal people upon whose ancestral land the University works across. We would also like to extend our acknowledgements to the land and sea countries where our team conducts research work. We recognise these peoples continuing connection to land, sea and community and pay our respects to the Elders – past, present, and emerging – as the traditional custodians of knowledge, language, and culture.



About DGBH



The New South Wales Deep Green Biotech Hub (DGBH) connects NSW-based businesses and community members with cutting-edge algae biotechnologies and innovation support.

We are driving NSW to the forefront of algae-based biotechnology innovation and fostering a diverse, resilient, and connected algae bioeconomy in Australia. This work is currently made possible thanks to the support of the NSW Government.



Innovation

Facilitating innovation in the algae biotech space across NSW and Australia

How we do it: Green Light Accelerator Program, Future-Proofing Workshops.



Engagement

Connecting with industry and the public to increase algae awareness and promote knowledge transfer

How we do it: Industry-focused events, broader community events, online learning modules.



Advancement

Driving the progression of the algae biotechnology industry and technology in NSW and Australia

How we do it: Algae Business Summit, White Paper.



Algae startups are unlocking the potential of Australia's bioeconomy by integrating cutting-edge research with entrepreneurial vision and creating sustainable biomanufacturing businesses to support our society's needs.

Distinguished Professor Peter Ralph, Founder

Highlights

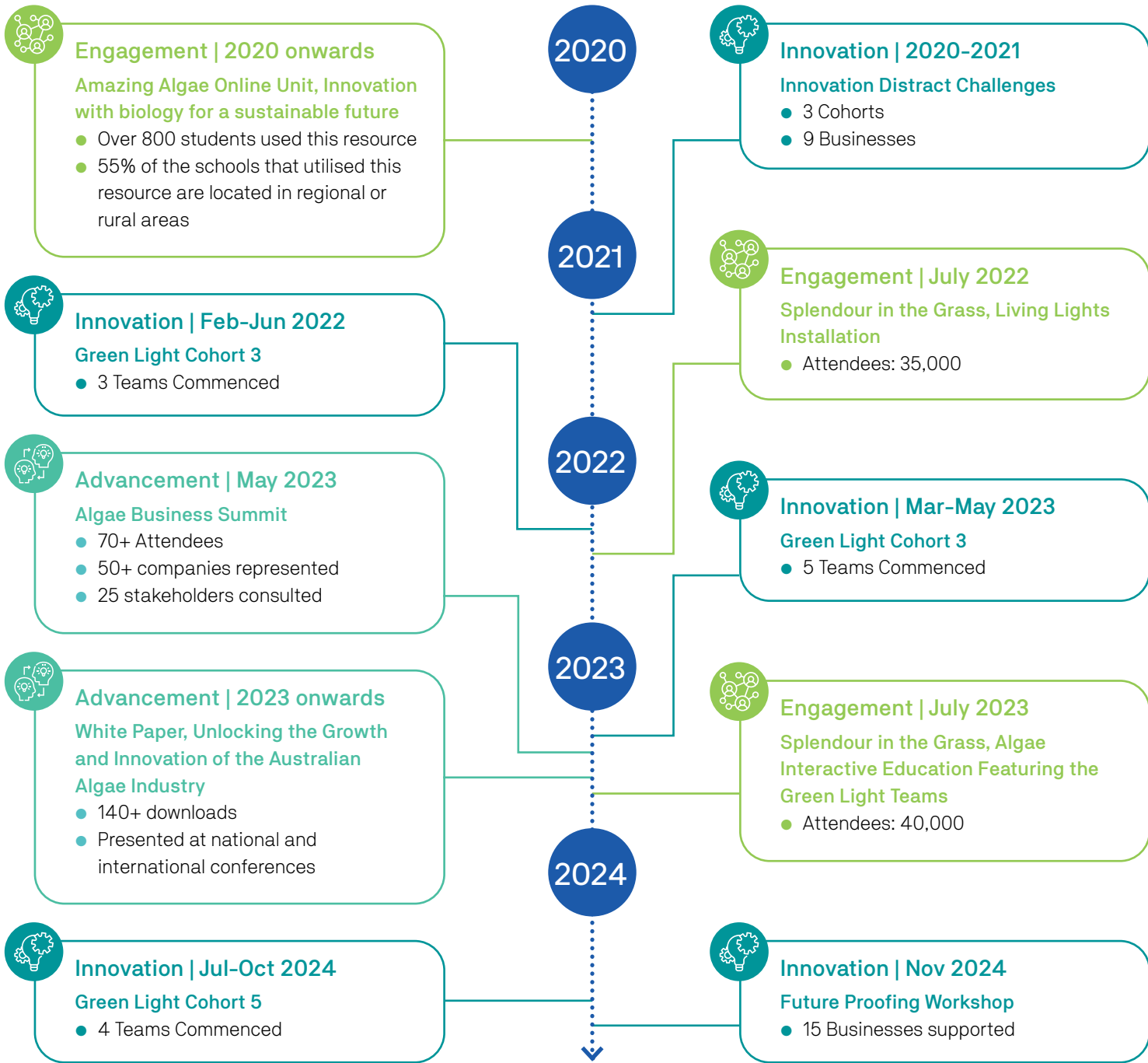


20%

of Australian Algae
businesses have worked
with or been supported
by DGBH

Over the past five years, the DGBH has played an important role in advancing algae innovation, industry, and technology in NSW, strengthening Australia's position in the global algae market.

In 2023, the DGBH hosted the inaugural Australian Algae Industry Summit, culminating in the publication of a White Paper that highlights key insights and recommendations for the future of the Australian algae industry. Among these initiatives is the Green Light Accelerator Program, which has supported 12 algae-based businesses in developing climate solutions.





Innovation



Following the success of the 2019 cohorts, DGBH ran the Green Light Accelerator in 2020, 2023, and 2024, with the vision of supporting small businesses and startups in algae.

As the world's first algae biotech accelerator program, Green Light strives to connect SMEs and startups to industry leaders with dedicated and individualised support from research leaders, entrepreneurial mentorship, seed funding, and wider connections to the NSW startup community.

From cosmetic products, nutraceuticals, bioreactor technology and wastewater treatment, the innovations of our Green Light teams have continued to grow with the ever-changing algae market while addressing pressing sustainable challenges of the modern world.

After completing the program, the Green Light teams presented their innovation and growth at the Pitch Showcase, with full rooms of algae researchers, industry leaders, and the wider startup community.

Green Light Accelerator Program:

12 Green Light Teams

3 Green Light Cohort

3 Pitch Showcases



Mentorship from an algae researcher in the UTS Climate Change Cluster:

“Green Light’s mentorship has provided valuable expertise in both technical algae and business development aspects of our venture, helping us address specific challenges in scaling the algae biofuel production.”



Curated entrepreneurial support from a dedicated Green Light facilitator:

“The resources, workshops and presentations involved in each sprint on marketing, financial modelling, go-to-market strategy and scaling an algae business have been essential in enabling our start-up to succeed long-term.”



Connection to workshops and networking with businesses, researchers, sustainability and innovation leaders:

“The pitch night at the end of the program was an invaluable experience for speaking to a crowd and communicating our company in just a few minutes.”





Engagement



75,000

total people attended
Splendour in the
Grass over 2022
and 2023

Splendour in the Grass

DGBH showcased algae at Splendour in the Grass, a three-day music and arts festival in the Byron Bay region that drew over 75,000 attendees in 2022 and 2023. These installations inspired festival-goers to reflect on environmental sustainability, raising awareness about climate change and

highlighting algae's potential role in a greener future.

Visitors were encouraged to explore the potential of creativity and innovation combined with algae to cutting-edge sustainable solutions for modern problems.

A total of 4 installations at Splendour in the Grass in 2022 and 2023

650+ Engaged

8 UTS staff attended

3 Green Light Teams



UTS Confessions with Dr Alex: all about Algae

From sustainable biofuels to eco-friendly packaging and beyond, algae is emerging as a powerhouse in the quest for environmental sustainability. DGBH Lead and Advisor Dr Alex Thomson shared the cutting-edge research and entrepreneurial opportunities that algae present at UTS Startups Friday Confessions.

85

Attendees (online and in person)

“*The impact of algae across various industries in driving sustainability and innovation is a testament to its versatility and potential. Over the past five years, we’ve witnessed significant growth and innovation in Australia fuelled by algae. Australia is emerging as a strong competitor in this field, with DGBH playing a crucial role in supporting and expanding the sector.*

Dr Alex Thomson | Lead and Advisor

Amazing Algae Online Unit

Innovation with biology for a sustainable future

DGBH has curated a syllabus focused on the future of sustainability for stage 4–5 science students. This unit aims to give students an appreciation of the natural world and the ways in which biological organisms, like algae, played an important role in the development of the Earth as we know it today.

800+

Students used the resource

55%

Schools from regional or rural areas

Phenomix Launch

DGBH, with the Climate Change Cluster at the University of Technology Sydney, celebrated World Algae by launching the Phenomix Facility in 2022. The Algal Phenomix Facility is a world-first lab featuring a fully automated robotic system that can screen thousands of types of algae per day, supporting the future of biotechnology and sustainability.

85

attendees including the Minister for the Environment and Water, The Hon Tanya Plibersek MP





Advancement



Algae Business Summit

Identifying key opportunities and roadblocks is essential to ensure the Australian algae industry grows and applies learnings from large international markets currently established in Europe, Asia and the US.

Presented by the NSW Deep Green Biotech Hub in collaboration with the Marine Bioproducts Cooperative Research Centre and the Climate Change Cluster, the Algae Business Summit is an opportunity for stakeholders in industry, government and academia to share knowledge and identify key issues and opportunities surrounding the development of the algae industry within Australia.

70+ Attendees

54 Companies

12 Speakers

2023 White Paper

Unlocking the Growth and Innovation of the Australian Algae Industry: Insights from the 2023 Australian Algae Business Summit.

The White Paper thoroughly examines the Australian algae industry, documenting key challenges, opportunities, and stakeholder recommendations. It outlines economic and policy levers crucial for the industry's advancement, providing actionable insights for stakeholders across sectors. Launched in April, the findings were presented at national and international conferences.

Developed from Algae Business Summit:

70+ Attendees

25 Responses from stakeholders

140+ Downloads of the report



Algae Biomass Organisation | Summit

Unlocking the Potential of the Australian Algae Industry

In 2024, Dr Alex Thomson, DGBH's Lead and Advisor, was invited to present the findings from the Algae Business Summit White Paper at the International Algae Biomass Summit. This event was an opportunity to present the White Paper on an international scale, showcasing the potential of the Australian Algae Industry as an emerging player globally.

Dr Thomson spoke on the panel "Bioproducts-Novel Targets Products-Presentation of emerging algal target products and their industrial application," presenting on; "Unlocking the Potential of the Australian Algae Industry: Insights from the 2023 Algae Business Summit."

2025 & beyond



Meet the team

Founder

Prof. Peter Ralph

Lead and Advisor

Dr Alex Thomson

Manager

Gemma Gillette

Operations and Communications

Emma Fineran

Splendour Engagement Team/ Algae Crew

Rachael Scott, Gemma Gillette, Taine Leyshon, Justin Tierney, Emma Fineran and East Coast Algae, Bryon Bioreactors and Phycologic

Alumni

Emma Earley, Nicole Phelan, Rachael Scott, Dr. Lucy Buxton

Algae has the potential to play a pivotal role in building a sustainable bioeconomy in Australia, and the DGBH is dedicated to advancing this vision by positioning algae at the forefront of sustainability solutions and driving the growth of the bioeconomy in NSW.

In 2025, DGBH will continue its efforts in knowledge transfer, industry development, and engagement, including hosting the 6th cohort of the Green Light Accelerator Program. Building on the success of 2023, the DGBH will also host the Australian Algae Business Summit midyear. With a continued emphasis on nurturing startups, driving innovative and sustainable solutions, the DGBH is steadfast in its commitment to supporting the growth and diversification of the Australian algae industry.



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