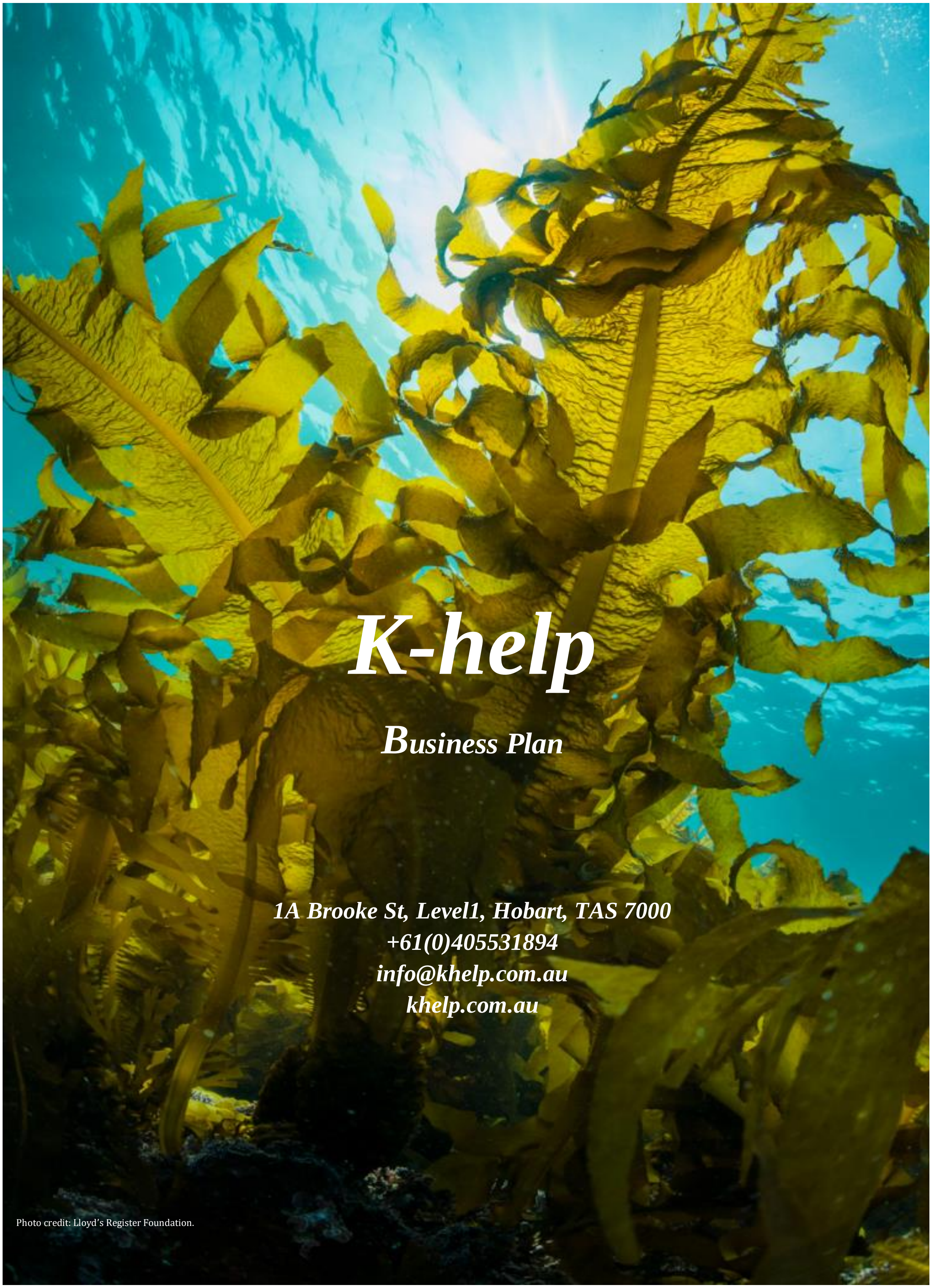

K-help

Business Plan

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Photo credit: Lloyd's Register Foundation.

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Executive Summary

Problem and Solution

Humans annually emit 51 billion tons of CO_2 (Gates 2021, 3-17), which are the primary driver of climate change. To avoid the worst impacts of climate change and global warming, companies and governments are finally committing to reduce CO_2 emissions (Paris Agreement 2015).
If we want to slow down, arrest and ultimately reverse climate change, we also need effective technologies to remove CO_2 from the atmosphere (IPCC 2022).
K-help offers a natural solution for Carbon Direct Removal (hereinafter abbreviated as: CDR), by cultivating macro algae, in particular Kelps (*Laminariales*), and sinking them to the deep ocean. Algae can, in this way, capture CO_2 and can permanently store it at the seafloor without allowing carbon dioxide to circulate back into the atmosphere.
K-help will be profitable by selling carbon emission reduction certificates, known as 'carbon credits', to our main customers that will be both countries and companies willing to reduce their carbon footprint and/or to offset their own carbon emissions in their journey to 'net zero' emissions.

Management

K-help is founded by Andrea Binda and Alfonso Amendola. Our management team has a well-round experience in the Energy, Commodity and Venture Capital sectors.
We already selected top-notch Universities to have the exclusive license for the commercial development of their patented scientific breakthroughs in macro algae and related matters. From the University of Tasmania, we will hire as Chief Technology Officer Associate Professor Jeff Wright.
Additionally, in the early stages of K-Help we will need to fill three critical positions in Business Development, Sea Operations and Monitoring & Sensing.

Market

Our Start-Up aims to position itself as a leader in the blue ocean market of Carbon Direct Removal. As per our estimates, the total addressable market for Carbon Direct Removal technologies will be as huge as ~$4 trillion in 2050. We think that the target market of K-help technology will be $10 billion in 2050 and by 2030, i.e., our 8th year of operations, we will become the leader in the Carbon Direct Removal through macro algae.

Competition

K-help has significant advantages over the main reliable competitors in the Blue Ocean arena of Carbon Direct Removal:

- Forestry-based technologies: K-help requires no land in comparison to forestry-based technologies; in addition, algae will grow and offset CO_2 emissions in months, while forests need decades to grow and capture CO_2 out of the atmosphere; moreover, K-help is much cheaper to install, maintain and operate.
- Direct Air Capture: K-help will have CAPEX and OPEX that are one to two orders of magnitude lower than the best available Direct Air Capture technologies; in addition, K-help is very easy and affordable to scale in comparison with Direct Air Capture technologies, which require huge sources of power, heat and water to be properly managed.

Other competitors might arise in the Carbon Direct Removal field but are largely unproven from a scientific and technological standpoint.

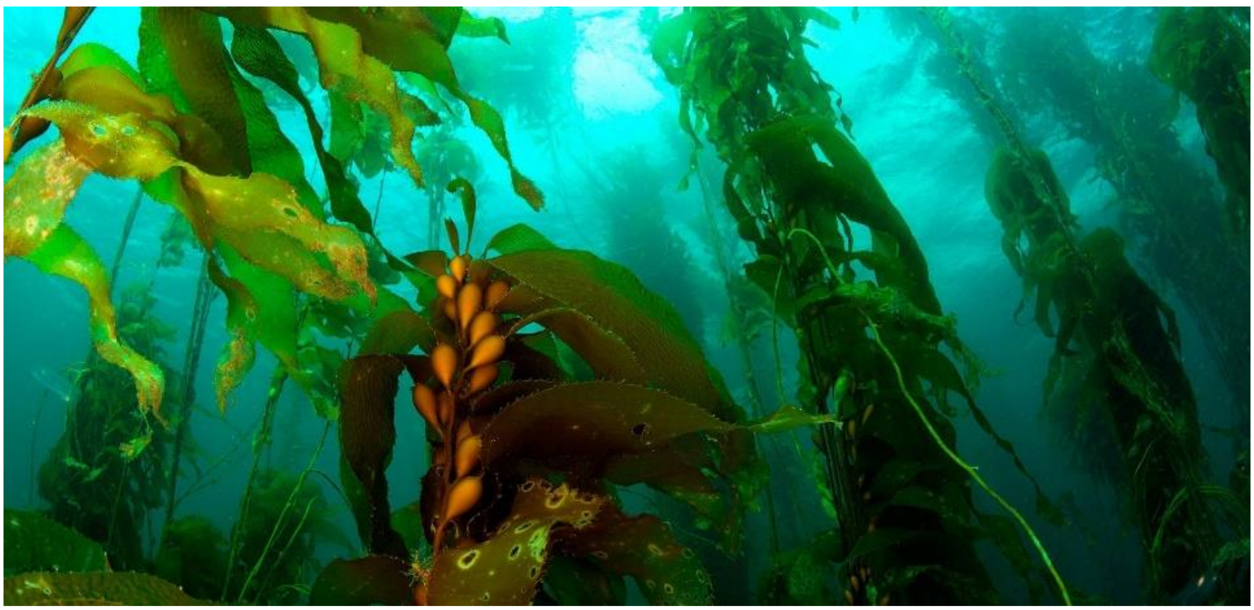

Figure 1: Kelp Forest, Photo Credit: Matthew Doggett.

Financial Summary and Capital Requirements

In the year 0 of the company, we will incorporate K-help with our private capital (and the money coming from family and friends) and prove the validity of our idea, by growing algae samples in a controlled environment ('Pre-Seed' phase). Then, we aim to raise a Seed round of $7M USD with the main goals of having a fully functional lab by year 2 and deploying our 1Km^2 Concept in a chosen location offshore Tasmania. This period is what we call 'Concept', where we show that our idea works in operating conditions.

At the beginning of year 3, Series A will follow, raising $25 million with the main goals of developing, engineering and conducting our 50Km^2 first Pilot Test at sea by the end of year 5. Part of the Series A funding will also go to the development of an improved 50Km^2 second Pilot Test in a different location and with different macro algae types as a contingency plan. We might consider to split the Series A in two fundraising tranches (as indicated in Fig. 2), depending on a possible geographical expansion required by prospective investors/customers. We call 'Pilot' this development phase of our start-up. Starting from year 0, we also plan to start generating revenues by selling the carbon credits generated by our macro algae plants. Starting from year 1, we plan to start providing feasibility studies (namely, consulting services) to several companies and governments on Blue Carbon strategies for CO_2 offsetting.

In year 6 we will be ready for scaling up with a $130 million Series B and with the aim of developing our 1000Km^2 Demo Plant, i.e., our first full field farm that will be able to remove 1 million tons of CO_2 per year and that will be ready by the end of year 7. This development phase will be referred as 'Demo'.

From year 8, we plan to become a Carbon Direct Removal company for carbon emissions offsetting strategies, whose 2 main sources of revenues will come from the sale of yearly carbon credits from our Demo Plant and from the feasibility studies we will provide to our customers for Carbon Blue offsetting strategies. This phase will be referred to as 'Growth'. The revenues from carbon credits and from engineering services will allow us to be financially independent and cash-flow positive by year 8. We foresee K-help possible IPO (for example through SPAC) from year 8 and afterwards; in the meantime, we will follow the market evolution and evaluate an exit strategy by being bought by a larger company, likely belonging to the Energy sector (Oil and Gas or Utility). Our GANTT chart with all the different phases of development of our company is shown in Figure 2.

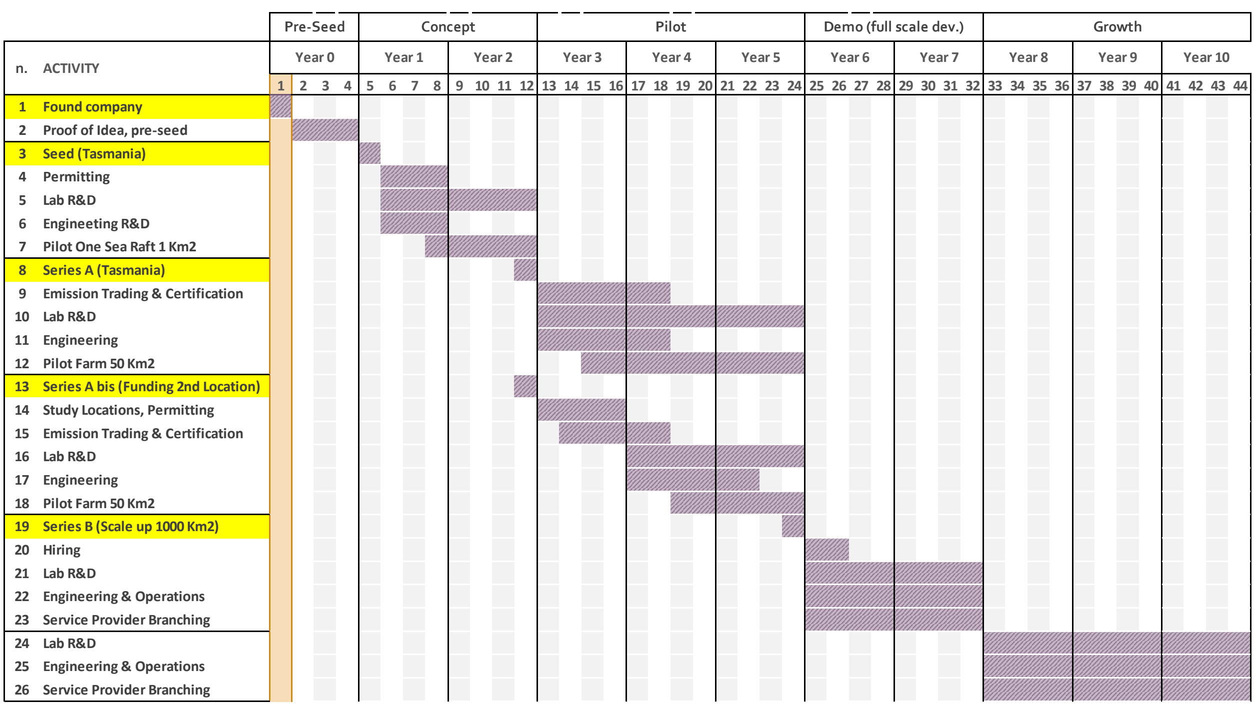

Figure 2: GANTT chart and Start-up development timeline

Company Description

K-help wants to be a Carbon Direct Removal technology inspired by Nature, and Nature preserving.

We are the first to propose a solution which is fully integrated with nature and which benefits will last for centuries:

- We are using nature to fix anthropogenic disasters: our brown algae naturally convert CO_2 into biomass (photosynthesis), simply repeating what nature usually does and eliminating from the atmosphere millions of tons of greenhouse gases.
- Our solution is cost effective: once the seeds are set on the rafts, they grow by themselves, with no human intervention. Once the algae are mature, the rafts are towed to the open ocean by vessels powered by biofuels or alternative energies. Then the rafts are stripped from the Kelps, which naturally sink, while the rafts are reused. This whole process has CAPEX of ~15$/ton CO_2, which is risible when compared to any other CDR technology.
- Our solution strongly outlasts any other green solution: algae will be sunk in the open ocean at a depth of 3’000 – 4’000 meters. Here they will be out of the Carbon Cycle for centuries if not millennia. This timeline is greatly more appealing than other green solutions like forestry-based technologies, where carbon is back in the cycle after only tens of years.

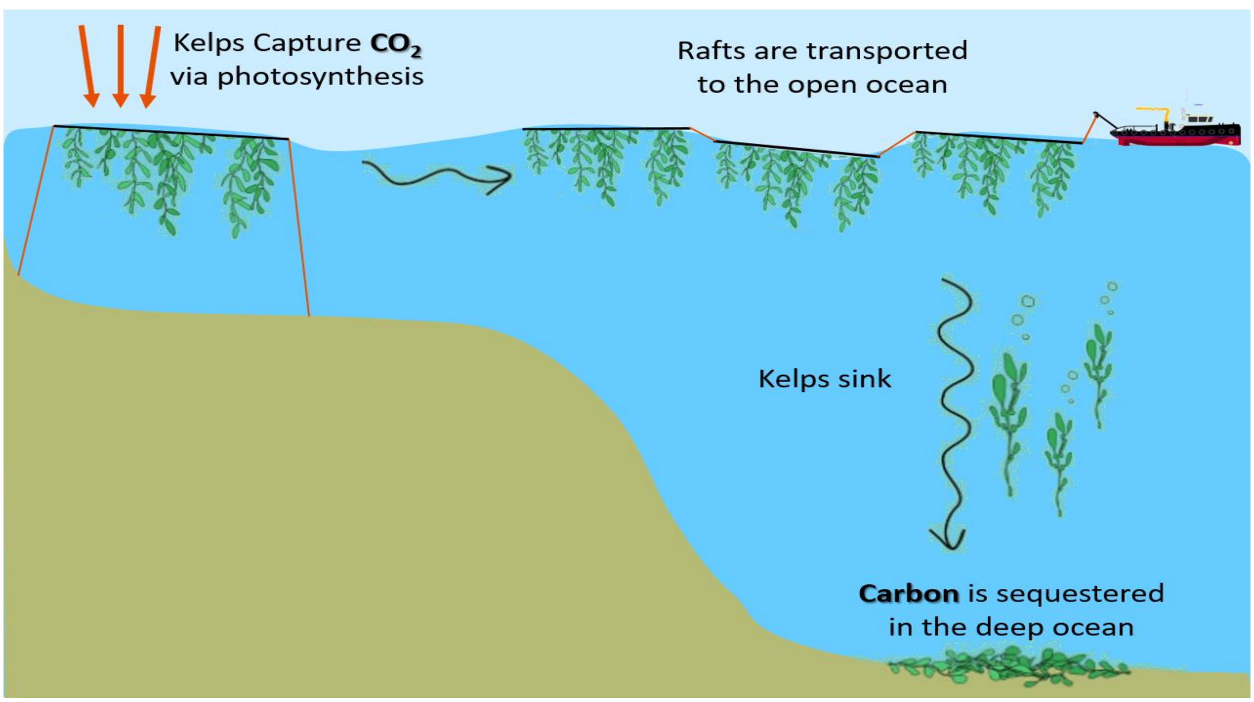

Figure 3: K-help Concept (A. Binda, adapted from Krause-Jensen and Duarte, 2016)

Our concept is based on simplicity and synergy with nature; it is summarised in Figure 3. CO_2 is naturally captured by Algae, via photosynthesis. Once the seeds are deposited on the rafts, Kelp grows with no human intervention and very fast (up to 24 inches or 64cm, in ideal conditions), maturing within a few months. At this point, the rafts are towed to the open ocean by vessels powered by biofuels or alternative energies. Then the rafts are stripped from the Kelps, which naturally sink, while the rafts are reused. Once sunk to the deep ocean, the Kelps and their CO_2 is effectively out of the Carbon Cycle for centuries.

Our Mission

K-help seeks to lead the future CDR industry with its natural, scalable and cost-effective solution. K-help is a clean-tech start-up aiming at helping companies and governments willing to solve the world's CO_2 problem. K-help will accomplish its mission by:

- Selling carbon credits from its own demo plant (up to 1 million ton CO_2/year at year 8 and growing 5% yearly thereafter).
- Providing feasibility studies, i.e., project engineering services of plants for our customers.
- Selling Kelp seeds to customers that want to set up and operate their own plants (this stream of revenues will be investigated at a future stage, in our Growth phase).

Figure 4: Image of farmed kelps showing natural sinking properties. Photo credit: Getty Images.

Our Vision

K-help aims to be the most sought-after solution for carbon dioxide emission reduction by both companies and governments.

Our Values

- Sustainability: offering a solution that does not harm, but fix Earth's problems.
- Innovation: being bold and thinking differently.
- People: developing a culture of passion where people can thrive in their desire to make the world a better place.
- Community: economically supporting local communities of sea farmers and Aboriginal communities.
- Accountability: being responsible in using nature to fix anthropogenic problems.

Partners

Our partners are divided in the main categories of R&D, Operations and Investors.
R&D:

- University of Tasmania: exclusive license for the commercial development of their patented scientific breakthroughs. It is also the University of our CTO and will be a valuable source of Lab Technicians.
- Marine Bioproducts Cooperative Research Institute (MB-CRC): the Institute will help us developing connections to better develop our R&D and technology.

Operations:

- Wire Rope Australia: for the manufacturing of the 1000s Kilometers needed for our rafts, 100% Australian company.
- Australian Sustainable Seaweed Alliance (ASSA) and Australian Seaweed Institute (ASI): they will help us developing our business contacts and will help us growing our visibility.

Prospective Investors:

- Major Oil&Gas (e.g., Eni, Shell): a company that is actively looking at reducing their emissions and which also has offshore facilities (for example, decommissioned platforms) that could be leveraged as locations for our ocean farms.
- Major Minerals (e.g., BHP, Rio Tinto): a company with a big "image" problem, major producer of coal or iron ore, which wants to demonstrate that is actively working to reduce its huge CO_2 footprint.

Management Summary

Our Organization

Our Company will be based in Hobart, Australia. We may evaluate the possibility of expansion to different locations for our business outside Australia (for example USA and/or Europe) depending on the economic interests of our future shareholders in Series A/Series B and through the cash flow generated by year 8.

Our Team

Andrea Binda, CEO and Co-Founder

Energy and Resources engineer with 15+ years' experience in Operations and New Projects. Leader in the Oil&Gas, Resources and Environment sectors with experience in both technical and managerial roles for consultants, operators and major companies in over six countries. Advocate and facilitator of the Energy Transition in Australia.

Alfonso Amendola, COO and Co-Founder

Energy professional with 10+ years' experience in Research and Development in the Upstream and Renewable sectors. Investor in many Clean-tech start-ups active in Nuclear Fusion, CCUS, Energy Storage, Hydrogen. Inventor of several technologies patented in the Digital domain and currently used by Energy companies.

Skills Concerns

Marine Biology, CTO, Lab Director

We will need to hire a marine biologist to lead the technical development of our lab. The ideal candidate is Professor Jeff Wright (University of Tasmania), whose areas of expertise are in the Ecology of seaweed and seagrass and Seaweed Aquaculture. University of Tasmania has a very well developed marine biology department with strong focus on Kelps and other algae, so it is the ideal pool to hire future technicians amongst the PhDs or Postdoc fellows studying scientific breakthroughs in algae and related matters. The position ideally will grow to Chief Technology Officer.

Head of Business Development and Marketing, CMO
We will need to hire a person responsible to market our product and develop a portfolio of clients. The position ideally will grow to Chief Marketing Officer.

Sea Operations, Commodore
We will need to hire a person with experience in fishery and life at sea. She/He will ideally be skilled in operating the first vessel to install and monitor the status of the first rafts in our Concept phase. The position ideally will grow to Commodore, responsible for the fleet of vessels necessary to install and monitor the farms once scaled up (100s of Km^2).

Head of Monitoring and Sensing
We will need to hire an engineer or scientist expert in creating, deploying and maintaining the equipment necessary to monitor and acquire data on CO_2 sequestration, growth and health of the Kelps. She/He will also coordinate the follow up and data gathering of the Kelps once sunk, especially during the sinking tests in our Concept and Pilot phases.


Figure 5: Image of farmed kelps. Photo credit: Getty Images.

Strategic Plan

Mid Term Strategy (from year 1 to year 8)

In the Mid Term, K-help wants to fully establish its presence as a leader in the space of CDR. The competitive advantage will be reached via cost leadership. Our aim is to penetrate the market offering carbon credits at very low cost per ton of CO_2 removed. This is achieved by:

- Keeping the operational costs low, thanks to our operations exploiting off-the-shelf technologies.
- Adopting an economy of scale once the business and farms size grow to a total of 1 million ton CO_2 per year at year 8 and following growth of 5% yearly thereafter.

The main business will be to grow, operate and maintain the kelp farms. Additionally we will develop from the very beginning an engineering department that will be able to offer services like feasibility studies and design of farms for third party customers. In the following pages we are showing K-help SWOT analysis (Figure 6), Porter's five forces (Figure 7), PEST analysis (Figure 8) and our Business Model Canvas (Figure 9).

Figure 6: SWOT Analysis

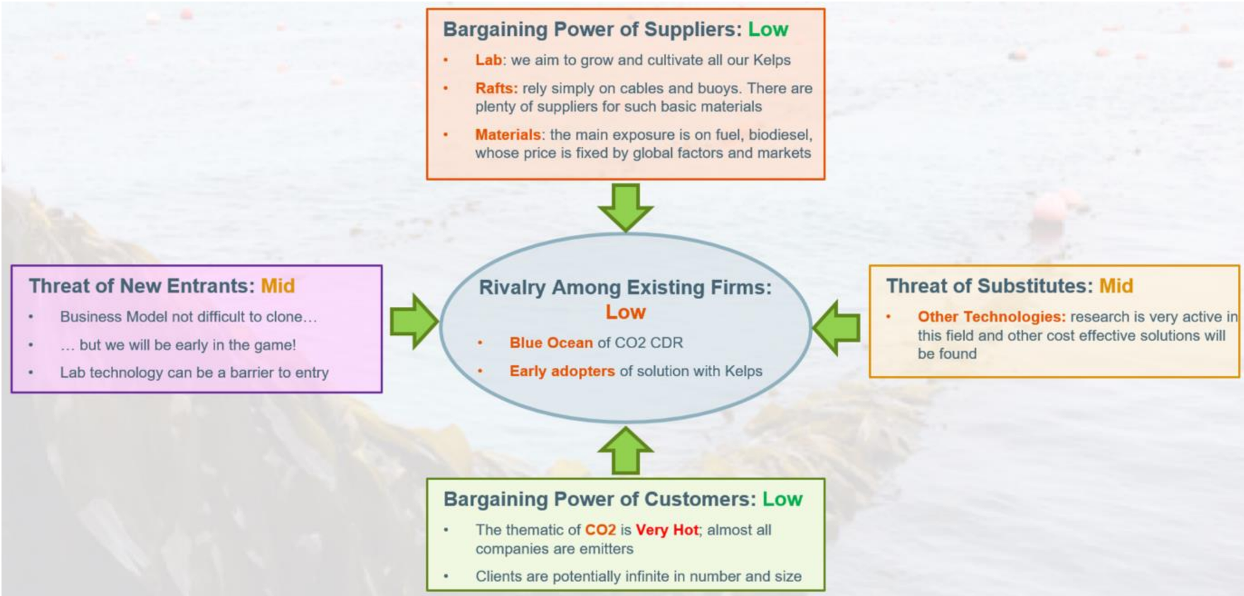

Figure 7: Porter's Five Forces Analysis

Figure 8: PEST Analysis

Figure 9: K-help Business Model Canvas

Long Term Strategy (year 9 and beyond)

In the long term, K-help wants to maintain its operations of farms for a total of 1 million tons of CO_2 per year and growing 5% this amount every year from year. While we look to grow modestly in this space (~5% per year), two other areas of the business will expand:

- Feasibility studies: by year 6 we will be a globally established DCR company, with a recognised know-how in design, operations and maintenance of seaweed farms for CO_2 capture.
- Seaweed Seeds Sales: by year 8 our R&D will have selected the best seaweed to grow fast, be resistant to biological hazards and harsh weather and able to remove more CO_2 per farmed area. These will be highly sought after by any company that will desire to grow their own seaweed farms for CO_2 removal. To ensure a stream of revenue from these sales, we will patent our seaweed species and investigate the possibility to use Genetic Use Restriction Technology (GURT, 2022), also known as terminator technology which causes the second generation seeds to be infertile.

Industry Background

CO_2 capture, utilization and storage (hereinafter abbreviated as: CCUS) is one of the most promising solutions to reach carbonic neutrality in most of today's industry sectors and for the containment of future emissions in line with the decarbonisation efforts of both private companies and countries.
In 2020, CO_2 emissions are ~51 billion tons/year: these emissions come from electricity & heat, industry, transport, buildings and other sectors (IEA 2021).
Currently the CCUS industry is not yet well developed; the CCUS initiatives as of 2021 are many (65 active projects in construction or in development) but the commercial-scale operational projects are capturing a very small amount (~40Mt CO_2/year) of the total ~51 billion tons emitted every year. As a matter of fact, an enormous opportunity is present for companies such as K-help that have the potential to collectively capture between 0.1 and 1 billion ton/ CO_2 every year.

Figure 10: Algae grown in Lab. Photo credit: RIRDC.

The demo projects are mainly in the US (~20 million tons of CO_2 captured annually), Canada (~4 million tons), Asia (~5 million tons), Middle East (~4 million tons), Europe (~2 million tons), South America (5 million tons).
Noteworthy examples of commercial technologies are developed by Mitsubishi, Shell, Aker, Baker Hughes, Saipem.
Our solution is not a purely CCUS-based technology, since we don't aim at capturing the emissions directly at the source points, i.e., when these emissions are concentrated and/or generated.
Being able to capture CO_2 emissions in a dilute way, hence directly from the atmosphere, K-help technology comes under the umbrella of the so-called Carbon Direct Removal technologies, i.e., a set of solutions that research centers are studying nowadays in academic labs in order to cope with the capturing of the CO_2 emissions in every part of the world, without any specific constraint or

closeness to the industrial polluting sites that are usually responsible for CO_2 production. As a matter of fact, Carbon Removal is currently a subcategory of CCUS, but has the potential to become in the medium-long term the main technology for CO_2 containment and abatement. As 2022, no commercial or pre-commercial technological solutions are available for Carbon Removal apart from forestry practices. For this reason, Carbon Removal can be considered a 'Blue Ocean' market that in the following years will have strong development and deployment phases in line with governmental and industrial decarbonisation efforts.

Competition in the Carbon Removal space is so far limited to the following set of pre-commercial and under-development technologies (A.T. Kearney Energy Transition Institute 2019):

- Forestry-based technologies, such as afforestation (i.e., plantation of trees on lands that historically have not contained forests), reforestation (i.e., plantation of trees on lands initially forested but containing less than 10% of forest cover) and CROPS (i.e., storing biomass such as crop waste underwater to prevent re-emission into the atmosphere of carbon through burning or decomposition).
- Soil-based technologies, such as enhanced weathering (i.e., rock decomposition through which CO_2 is spontaneously consumed or converted to solid or dissolved alkaline bicarbonate and/or carbonate) and soil carbon sequestration (i.e., when soil carbon content is enhanced through addition of CO_2 in different forms).
- Ocean-based technologies, such as ocean fertilization (i.e., adding nutrients that are able to boost phytoplankton activity in oceans and consequently move to the deep ocean the carbon concentration), artificial upwelling (i.e., pumping nutrient-rich water from the subsurface ocean to the surface through salinity or temperature differences) and ocean alkalinity enhancement (i.e., the addition of alkaline materials to sea water to fight against ocean acidification that helps drawing CO_2 from the atmosphere).
- Bioenergy, such as biochar (i.e. the idea of burning organic waste in an oxygen-free chamber and then burying it or using it for agriculture or bioenergy with CCS).
- Direct Air Capture technologies, i.e. the utilization of adsorbent and/or absorbent materials in order to capture directly from the air the CO_2 emissions with a sensitivity up to some ppm (main start-ups/scale-ups active in the sector: Climeworks, Carbon Engineering, Verdox, Svante, Global Thermostat);

As can be seen in Figure 11, K-help technology is the only cost-effective technology that can be implemented at scale in 2050 at a very reasonable cost (10 \$/ton CO_2): as a matter of fact, the other technologies (among these, especially Direct Air Capture) require huge investments upfront and are at least one order of magnitude more expensive. Moreover, K-help might provide a huge potential in terms of captured CO_2 that can be only challenged by technologies such as Ocean Fertilization and Ocean Alkalinity Enhancement, but these technologies are largely unexplored and debated from even a scientific point of view. In addition, K-help technology doesn't have requirements in terms of OPEX and CAPEX for electrical, heat and water consumptions and this is an unparalleled advantage in comparison to all their direct competitors, particularly to natively onshore technologies such as Direct Air Capture.

	Cost@ 2050 ($/ton CO_2)	Potential (Gton CO_2/year)	Water Consumption (km^3/Gton CO_2)	Reliability	Thermal Energy (GJ/ton CO_2)	Eletrical Energy (KWh/ton CO_2)	Land Use (m^2/ton CO_2/year)
K-Help Technology	10	0.1-1	0	Y	0	0	0
Reforestation and Afforestation	5-50	0.5-3.6	92	Y	0	0	~800
Crop Residue Ocean Permanent Sequestration	50-94	0.7-1	0	TBA	TBA	0	0
Soil-based technologies	45-100	2.3-5	0	N	0	0	0
Ocean fertilization	23-111	2.6-6.2	0	TBA	TBA	0	0
Artificial upwelling	>200	0-0.9	0	TBA	TBA	TBA	0
Ocean Alkalinity Enhancement	10-600	2-20	0	TBA	3.2-5.9	~119	0
Bioenergy	100-200	0.5-5	60	Y	<0	<0	310-580
Biochar	30-120	0.3-2	0	TBA	<0	0	160-1000
Direct Air Capture	>200	1	0	Y	>4	>200	Up to ~30

Figure 11: Benchmark of K-help technology with other possible technological solutions for Carbon Direct Removal. Readapted from (A.T. Kearney Energy Transition Institute 2019).

Currently there are no particular barriers to entry this ‘blue ocean’ market because Carbon Direct Removal market is fully unexplored, but the fact that many people are developing prototypes is a clear sign that things are heating up and we have to be ready to hit the market due to the long development timelines usually needed for this type of technology. Rather than barriers, as of 2022 there are a lot of incentives to enter the Carbon Direct Removal arena: for example, online-payments company Stripe teamed with Alphabet and Meta to commit ~$1B to acquire carbon credits coming from CDR technologies, and this is an unprecedented opportunity for start-ups like K-Help (Clifford 2022).

Competitive Analysis

A panorama of the main competing technologies for Carbon Removal was presented in the Industry Background section above. Here we will focus more specifically on competitors that aim to use technologies like the one proposed by K-help, namely the sea cultivation and following sink of algae. A comparison of these competitors can be found in Figure 13.

Running tide

The company was founded in 2017, with a first pilot in Maine, US, in 2018. Currently they are well developed in the USA and are starting to branch globally (Running Tide 2022). Running Tide grows micro forests on cables that are free-floating in open-ocean currents. The micro forests use carbon-containing waste products as growth substrates which are a flotation designed to lose buoyancy after the predefined growth interval. After buoyancy loss, micro forests and growth substrates sink to the bottom of the ocean. This was originally the same operational model adopted by K-help, but we pivoted to reusable rafts after the cost analysis indicated that sinking the rafts could not be a sustainable business model once we scale up volumes. They are currently growing in the aquaculture space, signaling a possible departure from the business of CO_2 sequestration. They also aim to use a very low workforce by automatising their activities with drones.

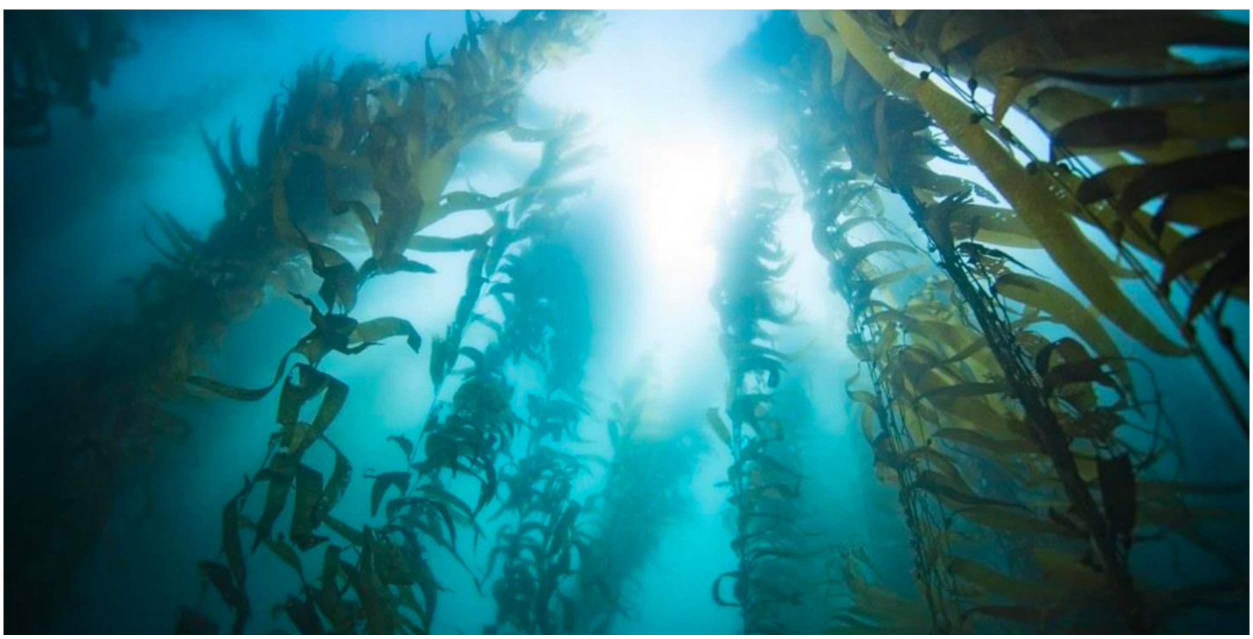

Figure 12: K-help forest. Photo credit: Getty Images.

Greenwave

This non-profit company based in Connecticut, US, is co-founded by Bren Smith, celebrity Time's 25 Best Inventions of 2017 and writer of "Eat Like A Fish". It offers training and support to ocean farmers in the era of climate change, working with coastal communities around the world to create a blue economy built and led by farmers (Greenwave 2022). It helps develop 3D ocean farms for small scale, family run enterprises. It currently sees CO_2 removal as an added benefit, for which the farmers can get Tax-credits. The algae are sold on the market rather than sunk to the ocean and removed from the CO_2 cycle. They see CO_2 removal as a possible benefit for tax relief, but not as a main business.

Marine BioEnergy inc.

The company aims to develop open ocean farming of Kelps with the use of underwater drones (Marine BioEnergy 2022). They are currently collaborating for proof-of-concept testing with the University of Southern California and funded by the U.S. Department of Energy, Advanced Research Projects Agency – Energy (ARPA-E), within the MARINER Program. This program is aimed at developing biofuels from algae, rather than CO_2 sequestration.

Seaweed Solutions

Based in Trondheim, Norway and founded in 2009 with a vision to enable large scale ocean farming of seaweed (Seaweed Solutions 2022). They focus on Seaweed growing, seeds supply and partnership for commercial solutions and R&D. Although they do not represent a direct competitor for CO_2 removal, they have a well-established Lab and R&D program, and they commercialise seeds.

Climate Foundation

Charitable organization funded in 2013, based on Marine Permaculture (Climate Foundation 2022). It aims to develop Floating, open-ocean kelp ecosystems placed in the oceanic deserts around the world, but the financials published online for the years 2013-2020 show a company that is mostly focused on rising public awareness and struggles to raise more than 1’000’000$ a year in donations.

Oceans 2050

From their website: "Through a ground-breaking study, we will deliver evidence and the methodology to validate and monetize the carbon sequestration impact of ocean farming. The 15-month study will quantify carbon sequestration by seaweed in sediment across seaweed farms on five continents, advancing the science and ultimately creating market incentives for seaweed aquaculture as a solution to helping address the climate crisis while contributing to ocean restoration" (Oceans 2050 2022). The strength of the company is in the person of Dr. Carlos M. Duarte (Ph.D. McGill University, 1987) who published more than 900 scientific papers and is considered amongst world's top marine biologists and 12th most influential climate scientist by Thomson Reuters. Their studies seem to be focused on the ocean ecosystems that store carbon—mangroves, salt marshes, seagrass, ocean forests and seaweed farms, rather than on CO_2 removal by sinking.

K-help Advantage

Our business relies on the utilisation of very simple farming technologies (our core R&D and technology is in the Lab space) and Operation workflows that are engineered to minimise costs once scaled up. In particular the use of rafts made of metallic cables and reusable items allows us to consider the rafts as CAPEX and minimise their cost. Our main competitor, Running Tide, develops degradable sinking rafts that are actually OPEX and need constant replacement. Our cost analysis indicates that upon scaling up the farms to a size of 1 million tons of CO_2 removed per year, the OPEX of non-reusable rafts would be unsustainable in the long run and in the order of 120 $/ton CO_2 removed, compared to our current cost of only ~20 $/ton.

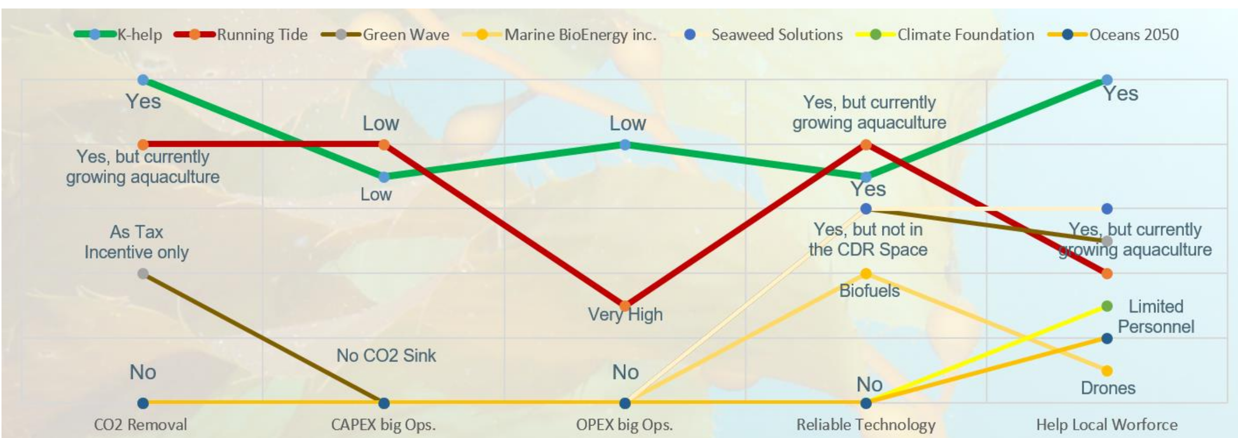

Figure 13: K-help Blue Ocean Canvas Comparison.

Market Analysis

Market Size

The global carbon capture, utilization and storage (CCUS) technologies market should reach $5.2 billion by 2026 from $2.6 billion in 2021 at a compound annual growth rate (CAGR) of 15.0% for the forecast period of 2021 to 2026 (BCC research 2022). K-help is not fitting into this market for two reasons:

- Direct Air Removal technologies will not be commercial-ready, proven and widely accepted by 2026.
- The availability of Carbon Direct Removal industrial technologies will open a completely new Blue Ocean market with unprecedented opportunities.

In other words, after 2026, regulators and industries will have great convenience to apply Direct Air Removal technologies (once fully developed) rather than expensive and low-efficiency CCS technologies. Looking at Figure 11, if for all technologies we multiply the upper limit potential as captured CO_2 per year by the projected cost in 2050, we get that the total addressable market for CDR technologies in 2050 will be more than ~$4Trillion dollars. We note that this value is an upper limit, since CDR technologies need a lot of R&D and development in order to be fully proven and commercial.

Target Market

As can be seen in Figure 11, the possible target market for K-help technology can be in 2050 as large as $10 billion. This number is a rough estimate based on the projected cost in 2050 of the technology ($10/ton CO_2) multiplied by the future projected upper limit of the potential of K-help technology (1 billion tons CO_2 / year). Another way to estimate the possible Target Market size is to look at the plan for CO_2 reduction of big companies. As of December 2021, The Institute for Carbon Removal and Law and Policy collected an astonishing number of 133 companies which announced plans to go 'net zero' typically by 2040; this ambitious pool of companies includes sectors of Agriculture, Architecture and Design, Automotive, Aviation, Construction, Consulting, Education, Energy, Finance, Food and Beverage, Heavy Industries, Insurance, Hospitality, Manufacturing, Pharma, Power and Gas, Real Estate, Retail, Shipping, Red Meat, Tech, Waste & Recycling. (Institute for Carbon Removal Law and Policy 2021).

If we focus, for instance, on the Oil & Gas sector alone, it accounts directly and indirectly for ~42% of global emissions or ~21 billion ton of CO_2 (Beck, Rashidbeigi, Roelofsen and Speelman 2020); helping this sector, by 2050, to remove from the air 1 billion tons of CO_2 emissions at a very competitive cost of $10/ton CO_2, we end up with the same Target Market Size estimate as above (with the remaining 21 billion tons of CO_2 emissions being offset by other technologies rather than by the incremental energy efficiency improvement of their current operations).

Marketing Plan

Unique Selling Proposition

Our planet urges us to find effective, zero carbon solutions to climate change caused by greenhouse gases. And as such, companies and governments need to commit their capitals and efforts to offset their own emission.

K-help is the definitive answer to get to net zero for companies and governments. K-help exploits the availability of oceans and the off-the-shelf technology represented by different algae families to provide Carbon Blue offsetting strategies at an incomparable, affordable cost if compared with existing technologies for both Carbon Capture Utilization and Storage as well as Carbon Direct Removal. Companies and governments may either buy their carbon credits from K-help to offset their own carbon dioxide emissions or using K-help consulting services to own and operate their offshore algae plants.

Pricing and Positioning Strategy

Position Statement

K-help is an affordable, zero carbon, nature-preserving solution to offset CO_2 emissions for governments and companies.

General pricing structure

Throughout the 5 phases of our growth plan, we expect to have three sources of revenues:

1) Consulting, Feasibility Studies and Project Engineering of plants for clients;
2) Sales of carbon credits from our own plant (up to 1 million tons CO_2/year at year 8);
3) Sales of Kelp seeds to customers that want to set up and operate their own plants.

As for point 1), we will charge $200.000 per feasibility study for the years 1 and 2 of operations (so called 'Concept Phase'), then we will increase this fee up to $300.000 per feasibility study. The feasibility study typically will entail basic engineering design of the algae rafts, numerical simulation of algae-seawater interaction and how algae will sink and finally a biological study to select the best algae for the problem at hand, taking into account water salinity, latitude and marine currents.

As for point 2), we will start selling carbon credits from year 0 throughout the life of our company. In particular, we envisage that a correct pricing for carbon credits for our Idea and Concept Phases will be $200 / ton CO_2, which is 20% less than the price our main competitor Running Tide is currently selling its own carbon credits (Stripe, 2021); subsequently, we plan to sell our carbon credits at $100/ton CO_2 during Pilot Phase since we forecast that the market will have new actors selling their own credits, which will lead to a stronger price competition; subsequently, during Demo Phase and during Growth Phase, we plan to sell our carbon credits at $70 /ton CO_2. In the very long haul, our pricing follows quite closely a forecast made by BloombergNEF (BloombergNEF 2022), that forecasts a boom of the carbon credit market someday around the end of this decade (as seen in Figure 14, Removal Scenario forecasts a jump in the price of carbon credit in 2028 from ~50$ up to ~220$, while the so called Hybrid Scenario moves the peak ahead to 2032, and to ~200$).

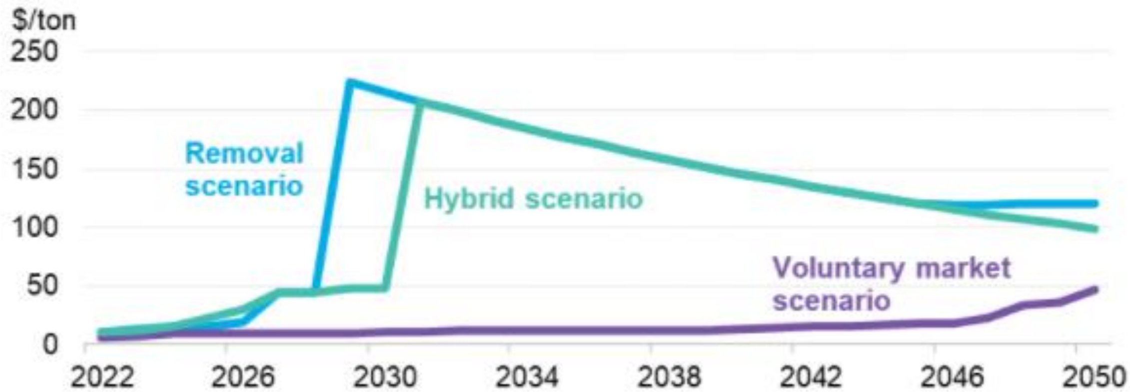

Figure 14: Snapshot taken from (BloombergNEF 2022) about current forecasts of carbon credits price.

As for point 3), this stream of revenues is to be investigated in our Growth phase, to be eventually profitable after year 10; by year 8 our R&D will have selected the best seaweed for commercial use in the CO_2 sequestration business. To ensure a stream of revenue from these sales, we will patent our seaweed species and investigate the possibility to use Genetic Use Restriction Technology (GURT), also known as terminator technology, which causes the second generation seeds to be infertile.

Marketing Strategy

Our marketing strategy can be divided on the basis of the maturity of our technology, namely the different phases that we envisage for the development of our technology.

During Idea/Concept phases, since we are not fully operational to sell carbon credits and to sell feasibilities studies to prospective clients and since the technology is not well known to a large audience, our marketing strategy will follow a double approach. On one side, we will give visibility to what we are trying to accomplish, for example by applying to accelerators and incubators active in the Green Economy. Among the different accelerators/incubators that we are scouting right now, we selected an accelerator that fits our growth strategy and at the same time can allow us to have access to engineering firms that might help us in the scale-up phase.

This accelerator is called ‘Carbon 2 Value Initiative’ (Carbon to Value Initiative 2022) and is promoted by top-notch companies that are very interested to reduce their own carbon dioxide emissions. Interestingly, Carbon 2 Value Initiative explicitly mentions ‘seaweed farming’ amongst the technological opportunities that are for carbon direct removal, and this is a direct endorsement of the type of technology we chose for out start-up. In particular, Carbon 2 Value initiative aims at letting start-up collaborate with big energy players, governments and engineering firms in order to help to scale-up team and operations.

We expect that the sponsors of Carbon 2 Value Initiative will also fund our first feasibility studies and possibly even be part of our $7M Seed fundraising.

During Pilot Phase, we will basically create two different but intercommunicating marketing departments:

- The first one will be devoted to find prospective clients for our engineering feasibility studies. More specifically, this marketing team will touch base with O&G companies, Utilities companies and IT companies that are potentially interested to build their own macro algae farms in synergy with their own operations. Actually, we do think that O&G companies might exploit synergies with their offshore platforms, Utilities companies might exploit synergies with their offshore wind farms and finally IT companies might exploit their own offshore servers, so we do see these 3 types of industrial customers as the beachhead markets for selling our engineering services. In other words, O&G, Utilities and IT companies are projected to be 'early movers' in K-help business, by either investing in us, either providing us the locations for our concept/pilot/demos.
- The second marketing team will have a much larger scope, since the sale of carbon credits will involve not only customers in O&G, Utility and IT sectors, but also all the other sectors that are committing to 'net zero' emissions as specified in (Institute for Carbon Removal Law and Policy. 2021). In particular, we will aim for one of the main players in O&G or Utility or IT sector to lead our $25 Series A, because this will increase our global visibility and eventually will offer a geographical location where to install our pilot plants. In addition, our marketing team will keep in touch with organizations such as the recently launched Frontier (Clifford 2022), that committed ~1B$ to acquire carbon credits coming from CDR companies like K-Help.

Figure 15: Ocean Farm. Photo credit: Australian Seaweed Institute.

Operations Plan

Location

Our Company will be based in Hobart, Australia. The two main elements of our business will be located here:

- Seaweed Farm: the East coast of Tasmania offers a natural environment for growing Brown Algae and it also has very low marine international traffic, while the local economy strongly relies on fishery and sea activities. It also has the ideal marine currents to facilitate the transportation of the rafts to the open ocean, and guarantee that a minimum amount of kelps will be dragged back to shore during the sinking process.
- Lab: it needs to be located in the proximity of the farms for optimal deployment of the algae "seeds". The local University has a very well developed marine biology curriculum.

Figure 16: views of Hobart. Credits: Internet, Alamy

Future Locations

Possible Future Locations are islands with a marine environment that allows for fast algae growth. They also have to support technological development and are in optimal locations for a low cost implementation of the business. Possible candidates are Fiji, New Zealand and Hawaii. A study to select the optimal future locations will be funded through the Series A.

Day to day Ops and K-help engineering cycle

Kelp's life cycle consists of an alternation of generations (Figure 17). This means kelp has different forms at different periods of its life cycle: macroscopic sporophytes produce spores by meiosis, which grow into gametophytes, which then produce gametes by mitosis. Only at this stage (the second generation) the gametes unite into zygote, which grow again into sporophytes. With biotechnology used in our Lab, we will be able to select spores and guide them to the generation of young healthy seedlings that can provide fast growth and high Carbon use in the waters around Hobart.

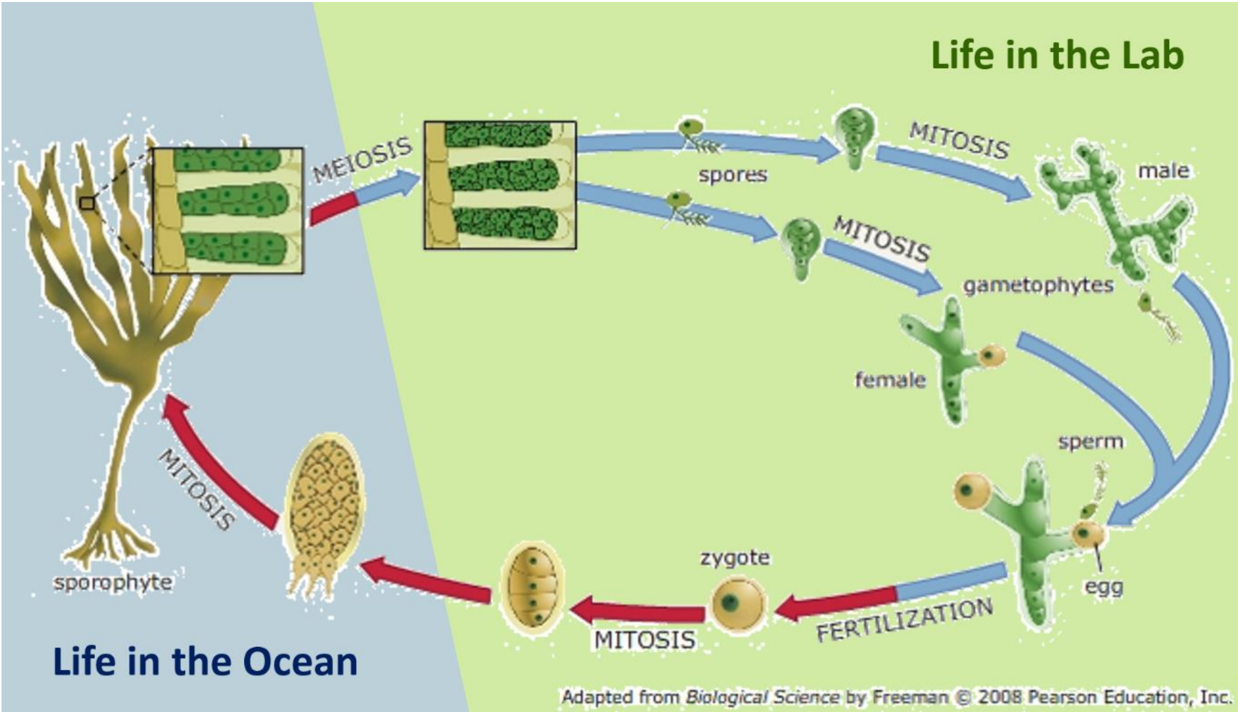

Figure 17: Kelp life cycle

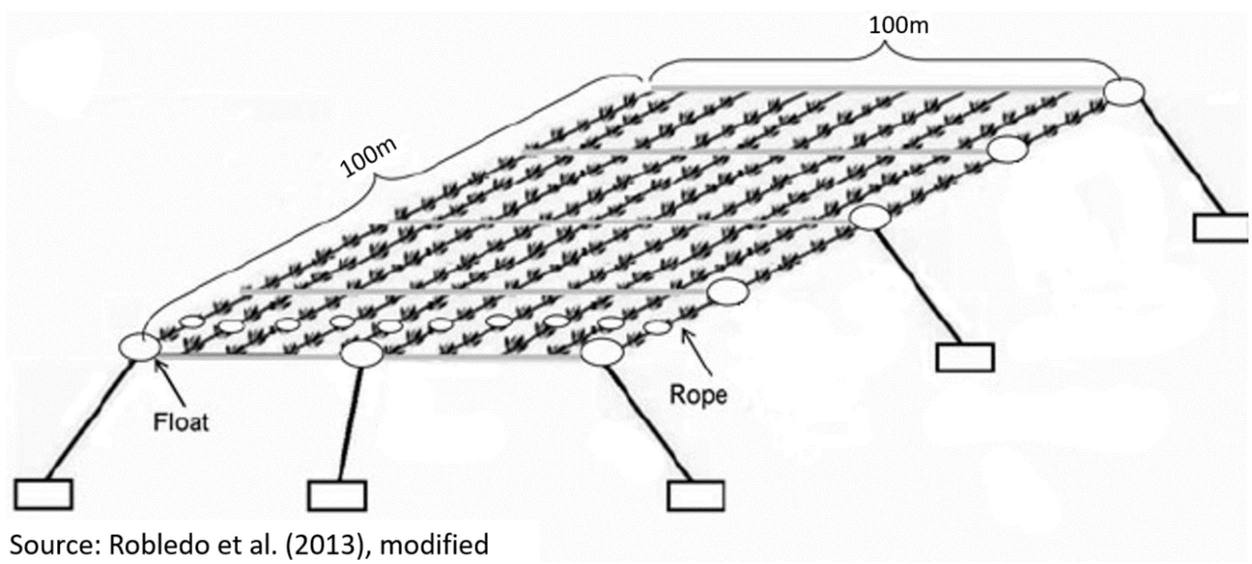

Figure 18: Schematics of raft for kelp cultivation.

The Lab will also develop workflow and equipment to scale up the spores production to commercial use.

The last operation before our Kelps can leave the Lab is to apply the seedlings to coiled cables, ready for transportation.

The cables are sent to the sea farms where they are un-winded and assembled in rafts of 100m x 100m (Figure 18). These rafts are very simple and made of a reticulate of cables (or lines) and buoys to keep the whole structure afloat. The rafts are anchored in predetermined locations within the sea farm, where they remain in place for the time necessary for the seedlings to grow in adult kelps. This natural process requires minimum human intervention, mostly related to surveillance and measurements.

This is where the importance of Tasmania as location for the first farm becomes evident. The East coast of Tasmania, in fact, sees the joint effect of two Surface Currents: the East Australian Current and the Antarctic Circumpolar Current (Figure 19 *a*). The effect of these currents is to ensure that a minimal part of the kelps are transported back to shallow waters during the sinking process. Additionally, these currents help the marine vessels to tow the rafts to the open oceans (effectively reducing drag and, ultimately, fuel consumption). The general direction of these combined currents is East South-East and the speed with which the raft moves will be predicted by mathematical models and also followed with GPS when deemed necessary.

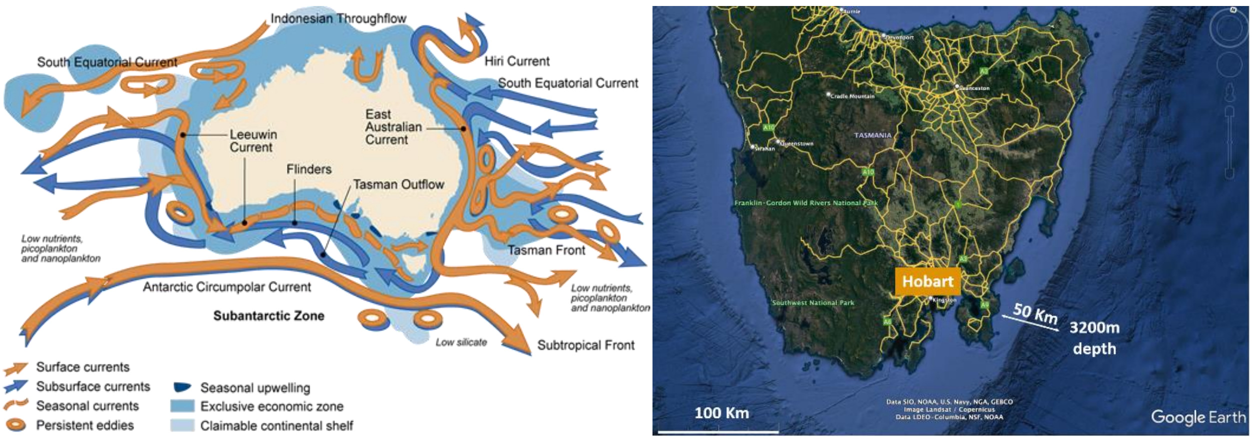

Figure 19: a) Ocean Currents of Australia (Wikipedia) and b) Satellite image of Tasmania (Google Earth) with the location for sinking the kelps 50Km East of Tasmanian coast.

Thanks to the local bathymetry, the rafts will reach waters with a depth of 3200m+ after travelling only 50 Km (Figure 19 *b*).

At this point, the lines are stripped from the algae and are spooled back on reels to be reused. Also the buoys will be recollected for reuse. At this point the kelps will start their descent to the bottom floor. Part of the funding will be dedicated to study the sinking speed of the Kelp, but existing literature (Wernberg and Karen Filbee-Dexter 2018) shows that whole plants sink at a speed greater than 0.1 m/s, suggesting that they can reach the ocean floor within a day.

At depths of 3000m+ the ocean is mostly anoxic (with very limited Oxygen) and there is minimal interaction with any biological cycle that could put the Captured Carbon back into contact with the biosphere. Another part of the funding will be dedicated to study and model the timescale that the Kelps will be effectively removed, but existing literature suggest that 90% of the mass will be removed for at least 150 years (Siegel, De Vries, Doney, and Bell 2021).

Inventory and Supplies

Cables and Buoys for the Rafts

K-help will have to work at two completely different scales:

- Lab Scale: to run the Lab, we will need to select the right suppliers for chemicals, equipment and other lab needs. University of Tasmania has a well-developed bio marine lab, so we will be able to leverage existing local suppliers or established supply chains outside of Tasmania, if needed.
- Macro Scale: to develop the sea farms and to be able to scale up in acreage, we will need 1000s of Kilometers of cables and 1000s of buoys. We selected suppliers like Wire Rope Australia (a 100% Australian company) and we aim to leverage on the size of our huge needs in order to obtain competitive prices and favorable contract conditions (manufacturing times, fast cheap delivery, etc.)

Vehicles and Marine Warehouse

We will need different vehicles (estimated numbers for Demo phase):

- 50 Boats, 10-15 meters long, to install and operate the farms
- 100 Inflatables, 2 per boat, to monitor the rafts and collect data
- 50 Tugs, 15-20 meters long, to transport the rafts to the open ocean
- 20 Vans and Trucks to transport materials for the rafts from the Lab to the marine vessels

We will also need a warehouse to store cables and buoys (although we aim to utilise most of our inventory, we will need some spare to fix eventual broken rafts) and boats supplies and spare parts. The location of the warehouse will be at the Hobart harbor or in the shore proximity of our sea farm.

Monitoring of Kelp Growth and CO_2 removal

Our monitoring team will have a very busy and stimulating job.

- Creation of sensors to monitor and acquire data on weather, air and sea conditions, CO_2 sequestration.
- Visual data of growth and health of the Kelps.
- Variety of surface and underwater sensors.
- The possibility to automatise the processes, collect data via remote sensing or with mini subsea robots.
- GPS and tracking of rafts position at sea (also to integrate with the Australian Maritime Safety Authority, AMSA, to ensure the rafts are not a hazard to the marine commercial traffic);
- Coordinate with external vendors to monitor the sinking process during early operations.
- Implementation and management of all the data gathered in Databases.
- Data Analytics and AI to make sense and have the best use of all the data.

Figure 20: Image showing extensive sea use for seaweed farming.

Monitoring of sinking process and Kelp remaining at sea floor

In the early stages of our operations, we will monitor the effective sinking of the first Kelps to the bottom of the ocean; to achieve this, we will use sensors that can record movement and position, directly attached to the Kelps. The sensors will be recovered by AOVs, Automated Operating Vehicles, which can operate independently from support vessels, resulting in huge cost reduction if compared to ROVs. Early sunken Kelps will also have positioning devices to communicate with the AOVs. This allows to have scheduled checks to:

- monitor the position of the Kelps remaining (in case the kelps move due to unforeseen deep currents)
- send the AOVs to collect visual information of the Kelps remaining (decomposition status) as well as samples of the Kelps and surrounding waters for chemical analysis

This early monitoring will work as a proof of concept that the Kelps are able to remain on the ocean floor for a long time, effectively confirming that their CO_2 is removed from the Carbon Cycle. Once proved, there will not be the necessity for further deep-water monitoring. Given the early stage needs, the relatively high costs of AOVs and the low utilisation for them, we will outsource this part of the monitoring to companies like DOF subsea (www.dofsubsea.com).

Figure 21: Kelp Forest. Photo credit: Climate Foundation.

Sea Farm Permitting

Unlike common land farming, where the company usually owns the land where they operate, in sea farming the waters are leased. We will need to set up all the legal documentation and permitting to operate on the specific areas at sea where we will develop our farms.

Certification (VERRA)

Verified Carbon Standard, or VERRA, is a company that internationally defines carbon accounting standards. It ensures that companies that want to claim carbon certificates follow strict workflows and operations to ensure that the quantities claimed are removed. VERRA is currently developing standards and workflows for CO_2 sequestration with seaweed. We intend to cooperate and help developing these standards in Australia, to facilitate the implementation of these standards and to develop important know-how.

Employees and Personnel Plan

Once founded by CEO and COO co-Founders, the company will immediately hire a Sea Operations Manager, in charge of piloting marine vessels and set up the first raft / farm, to run the first tests at sea. Immediately after, we will hire a CTO for the Lab and a Head of Business Development to market our product and develop a portfolio of clients.

Finance and Accounting will be initially very basic, with a dedicated CFO role created from year three and a growing team in the forthcoming years.

The second year the company will hire a Monitoring Engineer, a Legal Expertise in charge of accreditation and CO_2 certificates, and a secretary.

The following years the company will staff technicians for the Lab (ideally PhDs, Post-Docs or 1-3 years' experience in similar roles), and a rising number of Modelling Engineers, to increase our Services department and Sea Operators to manage the growing number of rafts (hired amongst the best fishermen in the Tasmanian sea); these new employees will be trained on the job by the more senior staff. Truck drivers to transport cables to from the Lab to the warehouse and back will be hired form year 3, while before the transportation will be managed by Lab personnel. Table 1 shows the overall headcount.

Table 1: Headcount and expected cost of personnel

	Idea	Concept		Pilot			Demo		Growth		
Role	**Year 0**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
CEO	0	1	1	1	1	1	1	1	1	1	1
COO	0	1	1	1	1	1	1	1	1	1	1
CFO				1	1	1	1	1	1	1	1
CMO		1	1	1	1	1	1	1	1	1	1
CTO, Lab Director		1	1	1	1	1	1	1	1	1	1
Lab Technicians				1	3	5	10	10	10	11	11
Modelling Eng.		1	1	2	3	5	7	10	20	22	24
Sea Operations	1	1	3	20	20	20	200	200	200	220	230
Monitoring Eng.			1	2	3	5	7	10	10	11	11
Legal			1	1	1	1	1	1	3	3	3
Secretary			1	1	1	1	1	1	1	1	1
Finance				2	2	3	3	3	5	5	5
Marketing & Business Developers			3	5	5	5	10	10	15	20	25
Truck Drivers				5	5	5	20	20	20	22	23
Total Head Count	**1**	**6**	**14**	**44**	**48**	**55**	**264**	**270**	**289**	**320**	**338**

Financial Plan

Capital Requirements

As per many companies developing deep-tech technologies able to fight against climate change and positively impact our planet (Palmer 2022), we will need substantial time and capital to develop K-help business.
We envisage 4 main fundraising rounds through equity:

1) Pre-Seed Round: $0.6M for ‘Idea Phase’ Phase in year 0.
2) Seed Round: $7M for ‘Concept Phase’ in years 1, 2.
3) Series A Round: $25M for ‘Pilot Phase’ in years 3, 4, 5.
4) Series B Round: $130M for ‘Demo Phase’ in years 6, 7.

At the end of ‘Demo Phase’, K-Help will not need any more financing through equity, as we will enter the ‘Growth Phase’ of our start-up.

The majority of the initial capital requirements will be spent in:

- **R&D**: development of a lab to cultivate the required quantity and quality of algae’s “seeds”.
- **Engineering**: development of the right tools for monitoring & sensing and to build cost-effective and easily deployable rafts.
- **Testing**: development of the first rafts at sea and following their lifecycle from farming to sinking to the deep ocean. Particularly relevant and cost intensive will be the monitoring of the kelps when sinking (speed and where they migrate during the sinking process) and following the movement and the biodegradable status of the algae once on the ocean floor.

Assumptions

Our financial assumptions are based on varying OPEX and CAPEX for our macro algae plants as well as varying cost of goods sold which are subdivided on different project phases (respectively, ‘idea’, ‘concept’, ‘pilot’, ‘demo’ and finally ‘growth’ phase).

Cost of Goods Sold include:

- Fuel for vehicles, i.e., gasoline used by our marine vehicle for our plants.
- Storage facility, i.e., the onshore deposit where our equipment is safely stored.
- Modelling engineers, i.e., engineers that will be responsible for the feasibility studies that will be one of our sources of income.
- Operators for operations.

OPEX include:

- People, i.e., our human capital as has been described in table 1.
- IP & legal, comprising:
  - New patents applications fee.
  - Extension of our patents' licenses.
  - Cost of certification of our carbon credits through Verra certification system.
  - Legal fee for our 4 fundraising rounds (Term Sheet, Shareholder Agreements, Insurance for Key People);
- Marketing, comprising the money to enter the Carbon 2 Value Initiative and the cost of setting up the two marketing teams.
- Rent of offices.
- R&D expenses as illustrated above.

CAPEX include:

- Vehicles.
- Rafts.
- Lab set-up and upgrading.

Summary Financial Projections

As can be seen in Table 2, K-Help will get to positive net margin in year 8, so after 9 years of operations. Net income will be positive at year 8 as well and expected to grow at very good pace in the following years (10% the first year, 26% the second year).

Table 2: Summary of financials projections.

	Year 0	***Year 1***	***Year 2***	***Year 3***	***Year 4***	***Year 5***	***Year 6***	***Year 7***	***Year 8***	***Year 9***	***Year 10***
Revenue [$]	2,000	300,000	500,000	4,900,000	4,500,000	5,100,000	38,000,000	41,000,000	76,600,000	82,080,000	89,870,000
Gross Profit [$]	(78,820)	122,500	164,475	3,139,400	2,524,028	2,567,904	17,728,996	21,511,924	51,433,395	54,924,328	61,257,387
Operating Profit [$]	(220,180)	(1,423,260)	(1,862,035)	(2,174,860)	(4,080,369)	(4,972,288)	(7,883,781)	(7,787,324)	16,968,018	18,734,177	23,543,634
Operating Margin	-11009%	-474%	-372%	-44.4%	-90.7%	-97.5%	-20.7%	-19.0%	22.2%	22.8%	26.2%
Net Income [$]	(220,180)	(1,423,260)	(1,862,035)	(2,174,860)	(4,080,369)	(4,972,288)	(7,883,781)	(7,787,324)	11,877,612	13,113,924	16,480,544
Net Margin	-11009%	-474%	-372%	-44.4%	-90.7%	-97.5%	-20.7%	-19.0%	15.5%	16.0%	18.3%

Break-Even Analysis

Table 3: Summary of financials projections.

	Year 8	Year 9	Year 10
Fixed expenses	39555783	41810404	44776843
Contribution margin ratio	0.67	0.67	0.68
Breakeven point in sales	58910615	62482293	65691586

We computed break-even analysis starting from year 8, so our first year of Growth Phase. Our breakeven points in sales for year 8, 9 and 10 are well below our revenues for the same years.

Figure 22: Lab Sampling and testing. Photo credit: CSIRO.

Exit Strategy

Starting from year 8, our exit strategy will closely monitor 2 different paths.

1) In our Growth Phase, we will evaluate the opportunity to go public through classical IPO process or through SPAC. We don't expect SPAC to be the preferential path to go public in the year 2030s, since after SPAC hit ~$160B peak in 2021, during 2022 they are losing momentum; additionally, the companies that went public in 2020 and 2021 through SPAC lost part of their value on average, mostly due to optimistic financial projections (Somerville and Brown 2022). On the other hand, the classical IPO process might take too much time and resources to be accomplished and this option will need to be seriously weighted.
2) We will keep discussions open with our many shareholders in Series A round and other prospective big companies to understand if they might be interested in buying our company. Particularly O&G, Utilities and Big IT companies might be interested to buy K-help due to the many synergies they might have with K-help. For instance, a typical medium to large O&G company might be interested in K-help as a way to offset their own emissions and hence to pose itself as a CAAS company (Carbon As A Service Company). Additionally it could use installed ocean farms as a way to do effective decommissioning to their own offshore

platforms. Moreover, a medium-to-large Utility Company might consider buying K-help since they usually have GW-scale offshore wind plants that can be easily retrofitted with our macro algae plants. Finally, even medium-to-large IT companies might consider buying K-help in order to retrofit their offshore data servers with our macro algae plants.

Financial Statements

Income Statement

Income Statement											
Account	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	2,000	300,000	500,000	4,900,000	4,500,000	5,100,000	38,000,000	41,000,000	76,600,000	82,080,000	89,870,000
COGS	80,820	177,500	335,525	1,760,600	1,975,972	2,532,096	20,271,004	19,488,076	25,166,605	27,155,672	28,612,613
Gross Profit	**(78,820)**	**122,500**	**164,475**	**3,139,400**	**2,524,028**	**2,567,904**	**17,728,996**	**21,511,924**	**51,433,395**	**54,924,328**	**61,257,387**
Operating Expenses	105,000	1,375,000	1,793,750	3,561,500	4,751,638	5,637,432	10,260,017	13,796,488	18,762,617	20,287,391	21,647,353
EBITDA	**(183,820)**	**(1,252,500)**	**(1,629,275)**	**(422,100)**	**(2,227,609)**	**(3,069,528)**	**7,468,979**	**7,715,436**	**32,670,778**	**34,636,937**	**39,610,034**
Depreciation Expense	36,360	170,760	232,760	1,752,760	1,852,760	1,902,760	15,352,760	15,502,760	15,702,760	15,902,760	16,066,400
EBIT	**(220,180)**	**(1,423,260)**	**(1,862,035)**	**(2,174,860)**	**(4,080,369)**	**(4,972,288)**	**(7,883,781)**	**(7,787,324)**	**16,968,018**	**18,734,177**	**23,543,634**
Taxes									**5,090,405**	**5,620,253**	**7,063,090**
Net Income	**(220,180)**	**(1,423,260)**	**(1,862,035)**	**(2,174,860)**	**(4,080,369)**	**(4,972,288)**	**(7,883,781)**	**(7,787,324)**	**11,877,612**	**13,113,924**	**16,480,544**

Balance Sheet

Balance Sheet											
Account	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Assets											
Cash	52,580	4,456,080	2,206,805	11,584,705	8,357,096	4,787,567	7,756,546	13,971,982	39,552,354	66,569,039	97,115,982
Inventory		-	-	-	-	-	-	-	-	-	-
PP&E	363,600	1,707,600	2,327,600	17,527,600	18,527,600	19,027,600	153,527,600	155,027,600	157,027,600	159,027,600	161,027,600
Accumulated Depreciation	(36,360)	(207,120)	(439,880)	(2,192,640)	(4,045,400)	(5,948,160)	(21,300,920)	(36,803,680)	(52,506,440)	(68,409,200)	(84,475,600)
Total Assets	**379,820**	**5,956,560**	**4,094,525**	**26,919,665**	**22,839,296**	**17,867,007**	**139,983,226**	**132,195,902**	**144,073,514**	**157,187,439**	**173,667,982**
Liabilities & Equity											
Paid-in Capital	600,000	7,600,000	7,600,000	32,600,000	32,600,000	32,600,000	162,600,000	162,600,000	162,600,000	162,600,000	162,600,000
Retained Earnings	(220,180)	(1,643,440)	(3,505,475)	(5,680,335)	(9,760,704)	(14,732,993)	(22,616,774)	(30,404,098)	(18,526,486)	(5,412,561)	11,067,982
Total Liabilities & Equity	**379,820**	**5,956,560**	**4,094,525**	**26,919,665**	**22,839,296**	**17,867,007**	**139,983,226**	**132,195,902**	**144,073,514**	**157,187,439**	**173,667,982**

Cash Flow Statement

Cash Flow Statement											
Account	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Net Income	(220,180)	(1,423,260)	(1,862,035)	(2,174,860)	(4,080,369)	(4,972,288)	(7,883,781)	(7,787,324)	11,877,612	13,113,924	16,480,544
Depreciation	36,360	170,760	232,760	1,752,760	1,852,760	1,902,760	15,352,760	15,502,760	15,702,760	15,902,760	16,066,400
Change in Inventory		-	-	-	-	-	-	-	-	-	-
Total Operating Cash Flows	**(183,820)**	**(1,252,500)**	**(1,629,275)**	**(422,100)**	**(2,227,609)**	**(3,069,528)**	**7,468,979**	**7,715,436**	**27,580,372**	**29,016,684**	**32,546,944**
Purchase of PP&E	(363,600)	(1,344,000)	(620,000)	(15,200,000)	(1,000,000)	(500,000)	(134,500,000)	(1,500,000)	(2,000,000)	(2,000,000)	(2,000,000)
Total Investing Cash Flows	**(363,600)**	**(1,344,000)**	**(620,000)**	**(15,200,000)**	**(1,000,000)**	**(500,000)**	**(134,500,000)**	**(1,500,000)**	**(2,000,000)**	**(2,000,000)**	**(2,000,000)**
Increase in Paid in Capital	600,000	7,000,000	-	25,000,000	-	-	130,000,000	-	-	-	-
Total Financing Cash Flows	**600,000**	**7,000,000**	**-**	**25,000,000**	**-**	**-**	**130,000,000**	**-**	**-**	**-**	**-**
Total Cash Flows	**52,580**	**4,403,500**	**(2,249,275)**	**9,377,900**	**(3,227,609)**	**(3,569,528)**	**2,968,979**	**6,215,436**	**25,580,372**	**27,016,684**	**30,546,944**
Beginning Cash	-	52,580	4,456,080	2,206,805	11,584,705	8,357,096	4,787,567	7,756,546	13,971,982	39,552,354	66,569,039
Ending Cash	**52,580**	**4,456,080**	**2,206,805**	**11,584,705**	**8,357,096**	**4,787,567**	**7,756,546**	**13,971,982**	**39,552,354**	**66,569,039**	**97,115,982**

Note: we plan to sell all the inventory bought during the year.

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