

unreasonable impact

Created with
 BARCLAYS

Our story so far



One of Greenlight Planet's Sun King solar lanterns powers an artisan's workspace. To date, Greenlight Planet has sold more than 7 million solar-powered lanterns and home systems, has more than 27 million daily users and has offset more than 1.3 million metric tonnes of CO₂.



Meet Unreasonable Impact

94 COMPANIES



34,368 JOBS SUPPORTED



\$2 bn IN FUNDING



**20,067 NET NEW JOBS
SINCE JOINING FELLOWSHIP**



\$1.9 bn IN REVENUE



**187 MILLION LIVES
POSITIVELY IMPACTED**



**OF THE 94 COMPANIES
98% ARE STILL ACTIVE**



Co-founded in 2016 by Barclays and Unreasonable Group, Unreasonable Impact is the world's first international network of accelerators **dedicated to scaling growth-stage entrepreneurs** whose ventures have the potential to employ thousands worldwide while **solving some of our most pressing societal and environmental challenges.**

Run in the Americas, UK and Europe and Asia Pacific, this partnership is exploring the **leading edges of technology for the benefit of society at large** and connecting entrepreneurs to a global community of world-class mentors and industry specialists, including experts from across Barclays.

In 2019, following the first three transformative years of Unreasonable Impact, Barclays committed to support more than 250 high impact businesses through the programme by the end of 2022.



28,809,607 TONNES in total
greenhouse gas emission reduction
(CO₂ equivalent)

13 companies
reporting, since
company inception



142,281,585 PEOPLE have
gained access to affordable, reliable
and modern energy services

11 companies
reporting, since
company inception



3,283,350 PRODUCTS sold
with improved use of natural resources
and/or sustainable sourcing and production

8 companies
reporting, since
company inception



275,099,648 KILOGRAMMES
of waste diverted by prevention, reduction,
recycling and/or reuse

11 companies
reporting, since
company inception

A photograph showing a man with a beard and short hair, wearing a grey zip-up jacket over a dark plaid shirt, standing and speaking to a group of people seated around tables. He is gesturing with his right hand. The setting is a room with wooden walls and large windows in the background. The audience members are seen from behind, looking towards the speaker.

After building the world's largest carbon credit company at the time and taking it public in 2009, Bruce Usher became a professor at Columbia University. He joined Unreasonable Impact in 2016 as a mentor in our inaugural Americas programme.

Today, entrepreneurs are taking it upon themselves to address many of society's greatest environmental and social challenges. In doing so, these growing businesses are generating critical employment opportunities and actively creating the jobs of tomorrow. Entrepreneurs need resources, mentorship and a global network of support. Unreasonable Impact was created to do just that, at scale.

The dramatic growth in business as a force for good has been underpinned with three important developments among customers, employees and investors. Customers have shown a preference to purchase goods and services from responsible companies. Data analytics firm Nielsen finds that 66% of consumers are willing to pay more for sustainable products.¹ Employees are willing to work harder for purpose-driven companies that are considered socially responsible.² Investors are backing these trends with capital. Since 2010, impact investing has grown to over \$228 billion USD in dedicated capital for mission-driven businesses.³ Taken together, these three mutually reinforcing developments are creating opportunities for entrepreneurs to build thriving ventures that create shareholder value and societal impact.

Entrepreneurs pushing the boundaries with new technologies and breakthrough business models will eventually unlock trillions of dollars annually and ensure we solve long-standing challenges like off-grid access to energy in emerging markets and clean energy storage in developed ones.⁴ This kind of entrepreneurship is now widely accepted and understood, but there is much work to be done to share best practices, mentor leaders and replicate successes. Unreasonable Impact fills a large and growing need. For businesses to thrive in the future, they must align their business models with their mission. Starting and running a business is hard, as is solving societal and environmental challenges. Doing both at the same time is even harder. But when done right, it works. And today, more than ever, it is needed. I commend Barclays on their leadership in co-founding Unreasonable Impact.

1 2015 Nielsen Global Corporate Sustainability Report

2 Social Responsibility Messages and Worker Wage Requirements: Field Experimental Evidence from Online Labor Marketplaces by Vanessa Burbano, Columbia Business School

3 The Global Impact Investing Network's 2018 Annual Impact Investor Survey

4 Bloomberg New Energy Finance Report, Clean Energy Investment Trends, 1Q 2018



BRUCE USHER

Unreasonable Impact Mentor

*Clean Energy
Investor and Advisor*

Serial Entrepreneur

*Faculty Director at
Columbia Business School*



Joe McGrath, Global Head of Banking
at Barclays, talking at the second
annual Unreasonable Impact World
Forum at the Royal Institution of
Great Britain in London.

At Barclays, we are proud to call ourselves the co-founders of Unreasonable Impact, a partnership that convenes and supports an inspirational community of growth-stage entrepreneurs at the forefront of innovation in their sectors. As a bank with more than 325 years of experience, we have a history of innovation spanning three industrial revolutions, from funding the first steam railway to launching the world's first ATM.

Now, through Unreasonable Impact, we aim to bring together the collective expertise, reach and connections of our global business to support these entrepreneurs as they grow. We are committed to supporting today's

fastest growing companies by providing a range of services at every stage of development – from start-up all the way to IPO.

But we can't do it alone. In Unreasonable Group, we have found a partner with a deep understanding of the entrepreneurial journey and unparalleled expertise in developing communities and tools that can support their growth. By forging this unique partnership, we hope to help these ventures create lasting relationships, foster an extensive network of supporters and ultimately achieve real breakthroughs that take their businesses to the next level.

Like all successful innovators that have gone before them, these entrepreneurs are challenging the status quo and imagining new possibilities. What makes this portfolio stand out from others though, goes beyond the innovation they bring to their businesses. Not only are these entrepreneurs harnessing new technologies and creating the jobs of tomorrow, they are also delivering real societal and environmental impact around the world – from reducing greenhouse gas emissions to ensuring millions of people now have access to reliable, clean and affordable electricity.

By building successful companies at the intersection of business and social impact, these entrepreneurs represent the greatest opportunity we have for tackling societal challenges at scale. Furthermore, they are giving us a window into the future of employment. With over a third of work activities that exist today estimated to be displaced by 2030¹, it is critical that we support the next generation of job creators. We can't think of a better way to do that than through our work with Unreasonable Impact.

We are continuously inspired by the entrepreneurs in this partnership and proud that our colleagues around the world continue to support the companies as they deliver real impact in communities every single day. We are privileged to be on this journey with our partners at Unreasonable Group and look forward to growing this community into the future.

¹ McKinsey Global Institute Report, [Jobs lost, jobs gained: Workforce transitions in a time of automation.](#)



JOE MCGRATH

*Global Head of Banking,
Barclays*

A peek inside the programme

Unreasonable Impact supports high-growth entrepreneurs throughout the life cycle of their ventures, with the goal of ensuring that their impactful solutions reach new markets, transform even more lives and create hundreds of thousands of jobs in the process.

The daily structure of a two-week Unreasonable Impact programme is designed to help each of the participating entrepreneurs quickly solve the key challenges facing their businesses in order to overcome obstacles to scale. This is achieved by bringing the entrepreneurs together with a curated group of mentors, funders and industry experts in a carefully designed environment that removes typical day-to-day distractions. Every session is intended to forge a strong sense of community. Daily life at a programme is centred around a belief that business is fundamentally about people, partnerships and relationships.

Core components of a typical day



MORNING BRAINSTORMS

Every entrepreneur gets to have at least one fast-paced, rapid ideation brainstorming session with a group of mentors and specialists surrounding the key challenges facing their business.



AFTERNOON ONE-TO-ONES

The entrepreneurs have the afternoons to schedule one-to-one meetings with select mentors and specialists on site to receive targeted feedback and build long-lasting relationships.



EVENING CONVERSATIONS

During dinners, we host curated conversations around a single topic with the goal of inspiring meaningful dialogue and connections. After dinner, we host fireside chats with entrepreneurs and mentors to share insights and stories.

How we select our ventures

FOR-PROFIT: We only work with for-profit business models that can leverage the scale and financial sustainability characteristic of operating in a market economy.



GROWTH STAGE: We seek ventures that have generated between \$10 million and \$500 million USD, whether in revenue, financing or a combination of both.



GEOGRAPHY: Unreasonable Impact takes place in three key markets: the Americas, UK and Europe, and Asia Pacific. For each programme, we source the top 10-15 most impactful businesses that fit the Unreasonable Impact criteria and invite them to attend the programme in their respective region.



DIVERSITY: It is critical that our cohort be a diverse mix of gender, ethnicity, geography, life experience and industry.



Programme objectives

SCALING IMPACT

Unreasonable Impact strives to support the most effective companies solving key social and environmental challenges. Success is determined by tracking their impact on the specific problem they set out to address.

SCALING FASTER

The programme monitors participating companies' scale and growth in revenue, profits, customer/user reach, financing, team size and geographic expansion.

JOB CREATION

The programme supports companies positioned to create at least 500 jobs each over the next five years.

Ampere Vehicles: Clean mobility for India

Based in India, Ampere Vehicles develops affordable, clean and efficient battery-operated electric vehicles (EVs). They were the first company in India to indigenously manufacture the key components of EVs, and they integrated an intelligent chip into their batteries – providing double the life of regular batteries with minimal maintenance. Their products range from two-wheelers, three-wheelers and even custom-built vehicles that are efficient, rugged, affordable and suited to Indian road, power and grid conditions.



ENTREPRENEUR

Hemalatha Annamalai, *Founder & CEO*

SECTOR

Electric Vehicles



REGION

Asia Pacific

35k+
vehicles sold
across India

33.2m
gallons of
petrol saved

150
dealers in
14 states
across India

Impact

To date, Ampere has produced and sold more than 35,000 electric vehicles, providing cost savings, freedom and convenience to the aspiring middle class across India. Not only that, but their vehicles have collectively saved 33.2 million gallons of petrol, reducing carbon emissions by a total of 17,810 tonnes. Ampere has developed a network of 150 dealers in 14 states. The company employs more than 170 people and has provided more than 150 internships and more than 500 indirect jobs. Their workforce is approximately 30% female, a rare opportunity for women in manufacturing. Within two months of joining the Unreasonable Impact community, Ampere announced its acquisition by Greaves Cotton, a diversified engineering company. Currently, Greaves Cotton provides transportation to almost 10 million people every day and intends to leverage its distribution network to help Ampere scale even more rapidly.



"Unreasonable Impact was a phenomenal opportunity, and it came into my life at the right time. I must confess that the conversations I shared there gave me the clarity to plunge into partnering with a larger organisation, which led to our successful acquisition just months after the programme."

HEMALATHA ANNAMALAI

Founder & CEO, Ampere Vehicles



AMPERE

AMPERE
W60

AMPERE

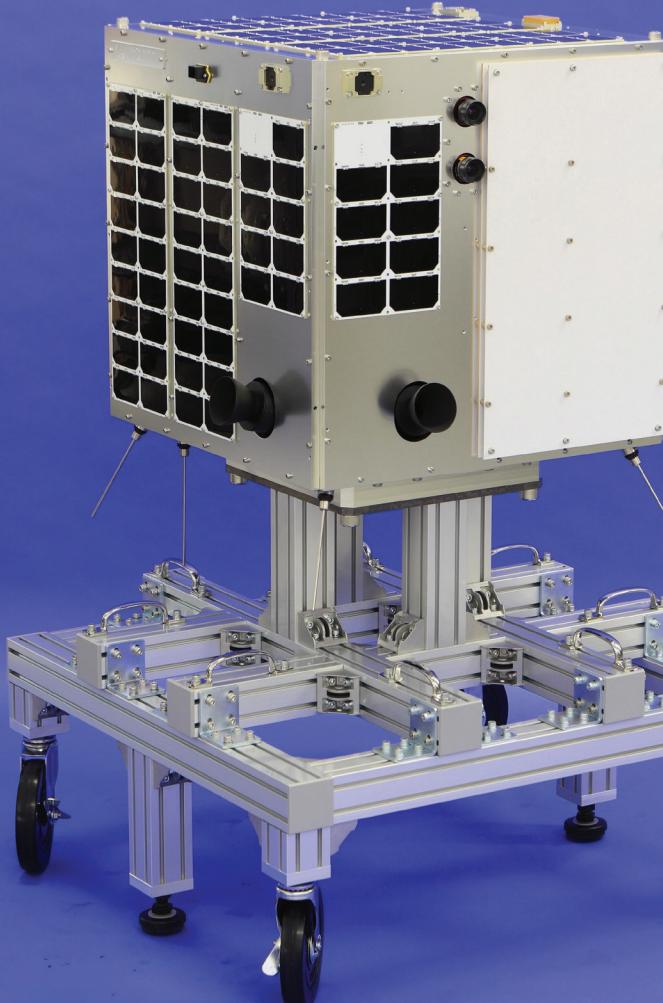
Axelspace: Making space accessible

While at university in 2003, Yuya got involved with a team developing and launching microsatellites into orbit. Enthralled by the possibilities of this new technology, he wanted to continue working in this industry once he graduated. However, he couldn't find any companies doing this work. In 2008, he founded Axelspace with the mission of making access to space, and especially its data, an everyday reality. Until recently, high-resolution satellite imagery has been an expensive and infrequent service, often available only to national governments. With the flexibility and low cost of microsatellite technology, it's now possible for private companies and research institutions to get into the space game and generate new value through high-frequency coverage of the Earth. Axelspace's primary project, AxelGlobe, plans to launch a constellation of 50 microsatellites into orbit, each satellite weighing just 100kg.



ENTREPRENEUR

Yuya Nakamura, *President & CEO*



SECTOR

Microsatellites



REGION

Asia Pacific

50
microsatellites
orbiting
Earth every
day by 2022

World's
FIRST
commercially
traded satellite

1/10th
the cost of
traditional
satellites

HEADQUARTERS
JAPAN



Impact

Before being able to make responsible decisions that protect our world and its people, we need to understand what's happening on the planet. The AxelGlobe infrastructure will be able to obtain imagery of the entire world every single day with a resolution of 2.5 metres – close enough to distinguish cars. This unprecedented quality and consistency of imaging enables access to critical environmental information, such as detection of illegal logging in rainforests and accurate forecasts of the best harvest times. Closing a \$17 million USD Series A financing round in 2015 allowed Axelspace to really scale up its operations and prepare to start deploying its constellation. In 2018, three satellites started monitoring select areas of the planet. Axelspace expects to launch over 10 satellites in orbit by 2020 and to complete the 50-unit formation by 2022.



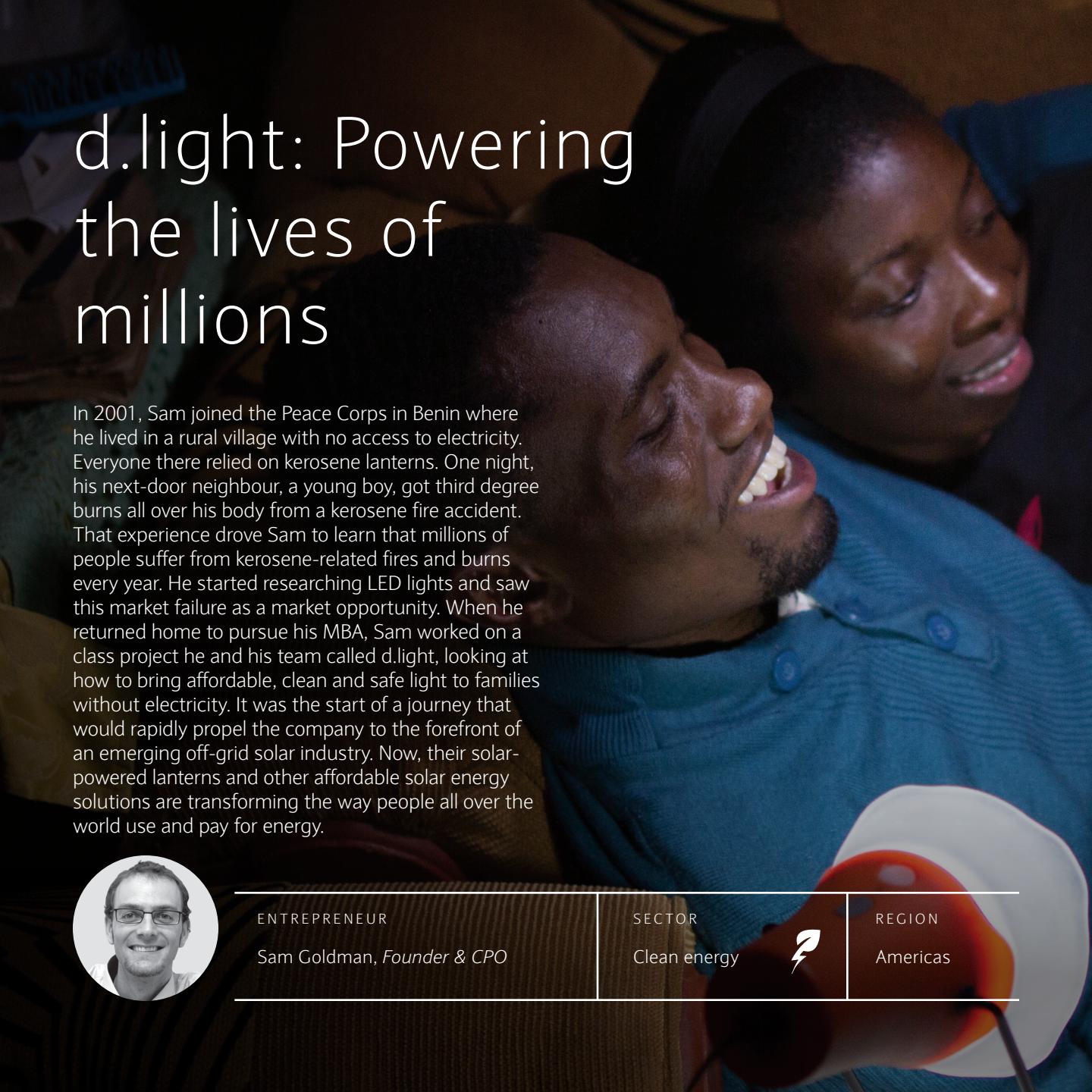


The background of the entire page is a high-angle aerial photograph of agricultural land. The fields are organized into long, narrow, light-colored rectangles separated by dark, winding paths or irrigation canals. This pattern repeats across the entire frame, creating a sense of order and geometric beauty.

"Unreasonable Impact was one of the most exciting and eye-opening experiences for me as an entrepreneur. Advice from a variety of participants and expertise from the Barclays investment bankers helped me to widen my perspective. Moreover, the bond among the fellow entrepreneurs is the most important treasure that I gained through this programme."

YUYA NAKAMURA
President & CEO, Axelspace

d.light: Powering the lives of millions



In 2001, Sam joined the Peace Corps in Benin where he lived in a rural village with no access to electricity. Everyone there relied on kerosene lanterns. One night, his next-door neighbour, a young boy, got third degree burns all over his body from a kerosene fire accident. That experience drove Sam to learn that millions of people suffer from kerosene-related fires and burns every year. He started researching LED lights and saw this market failure as a market opportunity. When he returned home to pursue his MBA, Sam worked on a class project he and his team called d.light, looking at how to bring affordable, clean and safe light to families without electricity. It was the start of a journey that would rapidly propel the company to the forefront of an emerging off-grid solar industry. Now, their solar-powered lanterns and other affordable solar energy solutions are transforming the way people all over the world use and pay for energy.



ENTREPRENEUR

Sam Goldman, *Founder & CPO*

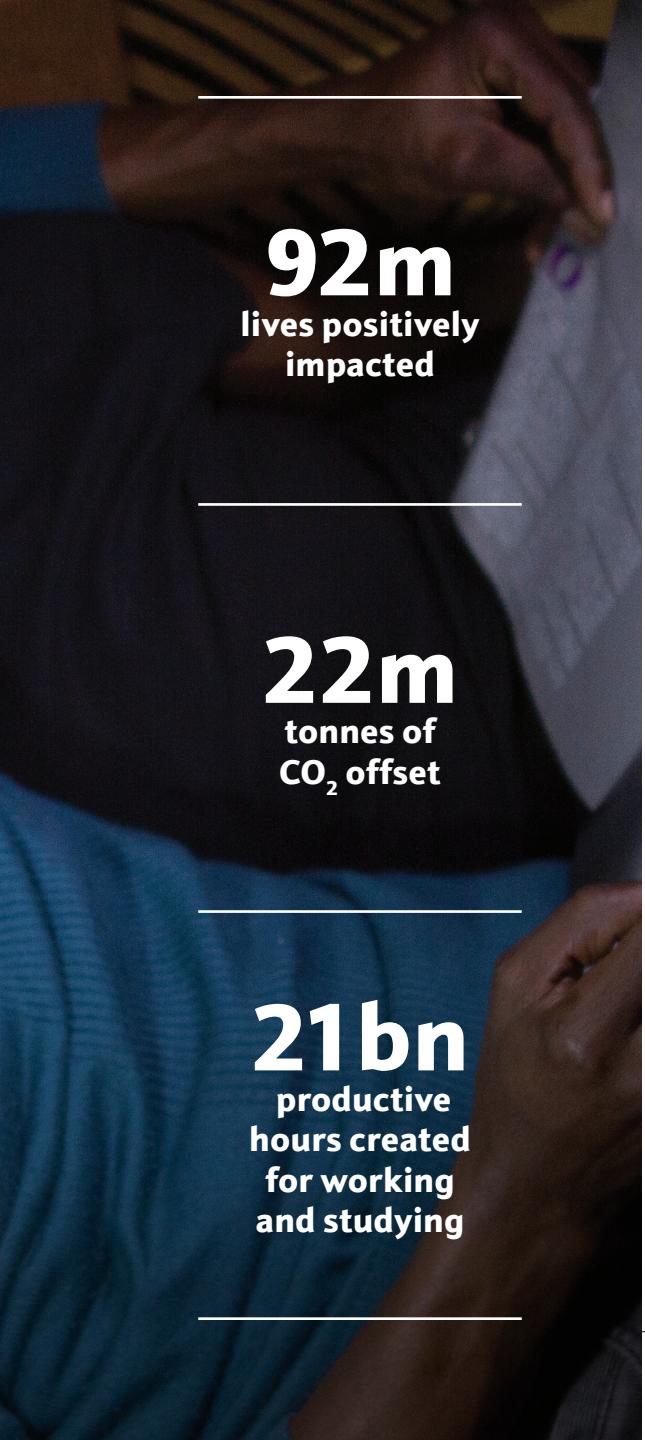
SECTOR

Clean energy



REGION

Americas



HEADQUARTERS

USA

92m
lives positively
impacted

22m
tonnes of
CO₂ offset

21bn
productive
hours created
for working
and studying

Impact

By 2022, the off-grid solar sector is expected to provide improved energy access to 740 million people, compared to 360 million in 2017 – and grow into a market worth \$8 billion USD*. d.light is a major player in making this a reality. Through hubs in Africa, China, South Asia and the United States, d.light has sold more than 20 million solar light and power products in 62 countries, improving the lives of more than 92 million people. Most of d.light's hundreds of employees are from the rural areas they serve, earning income as entrepreneurs by bringing energy to their communities and improving their livelihoods. d.light is dedicated to providing the most reliable, affordable and accessible solar lighting and power systems for the developing world, with the goal of reaching 100 million people by 2020.



* The 2018 Global Off-Grid Solar Market Trends Report



"The Unreasonable Impact programme was an amazing opportunity to meet with a range of entrepreneurs, mentors and specialists all focused on making the world a better place. I gained a treasure chest of resources, contacts and inspiration which will help d.light accelerate its growth."

SAM GOLDMAN
Founder & CPO, d.light

Growing Underground: From WWII bunker to table

Tired of late-night conversations about climate change, the future of cities and sustainability, Steven decided to stop talking and start doing. Two years of market research and one lease for a former WWII underground bomb shelter later, Growing Underground was born. Growing Underground uses vertically stacked hydroponic systems to maximise efficiency and minimise impact, sustainably growing produce 10 stories beneath London year-round. The 65,000 square ft tunnels, which were designed to shelter upwards of 8,000 people, now play host to LED-bathed trays sprouting pesticide-free greens and herbs, including rocket, pea shoots, red mustard and fennel.



ENTREPRENEUR

Steven Dring, *Co-Founder & CEO*

SECTOR

Urban Agriculture



REGION

UK & Europe



4
hours for
produce to
travel from
farm to table

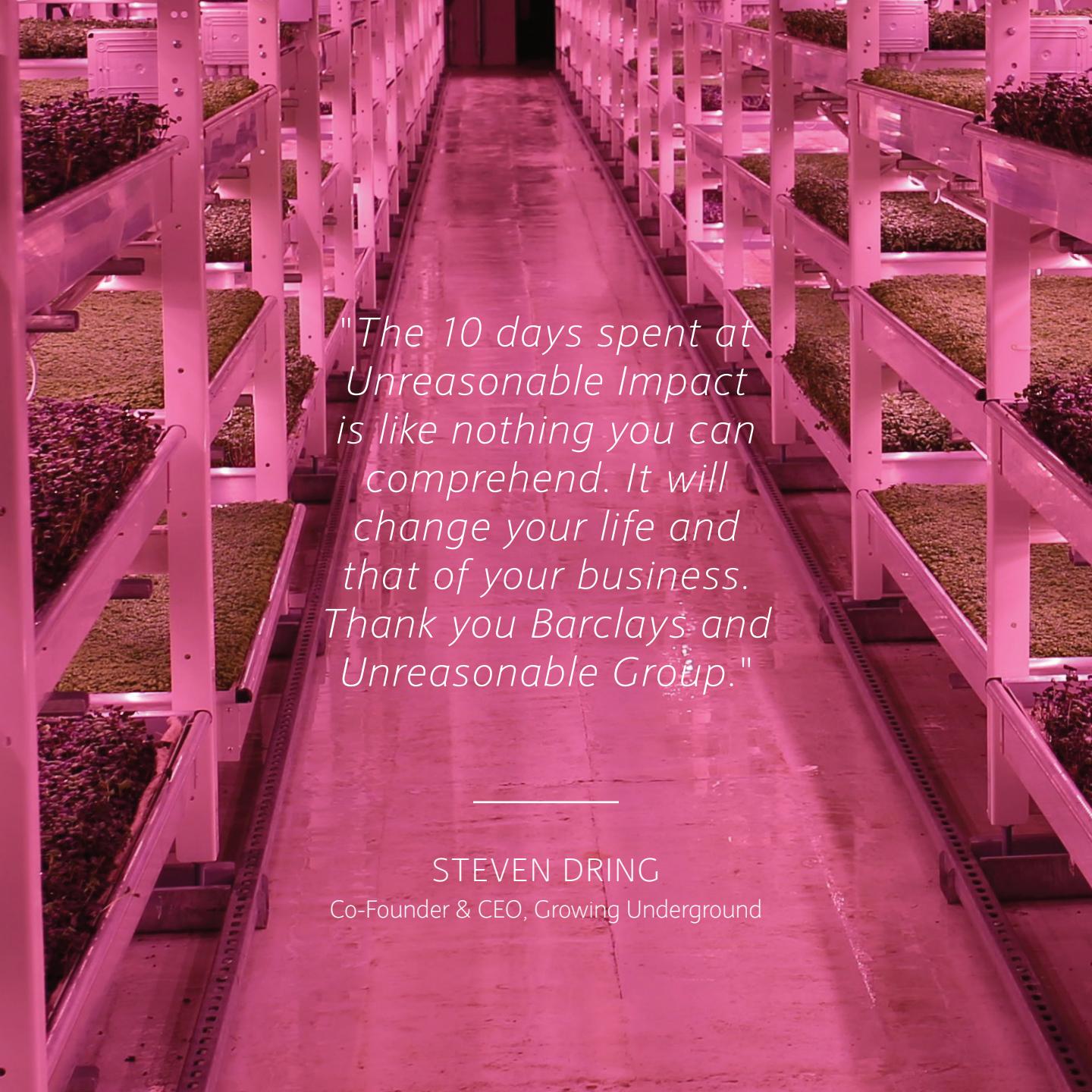
70%
less water
used than
traditional
farming
methods

Growing
Underground
farms their
produce
365
days per year

Impact

By growing hydroponically and operating solely on renewable energy sources, Growing Underground uses 70% less water than traditional farming practices and 90% of the water used to nourish the greens is cleaned and recycled. Growing Underground also dramatically reduces the need to import crops – and therefore energy wasted in food transport – by supplying local food service, retail and farmers' markets with a consistent source of fresh produce. Since Growing Underground limits food miles and keeps their produce local, their greens can be in-kitchen within four hours of being picked and packed. London's best have taken note: within the last year, Growing Underground's customers now range from major retailers like Marks & Spencer, Tesco, Waitrose and Whole Foods to Michelin-starred restaurant Le Gavroche.





"The 10 days spent at Unreasonable Impact is like nothing you can comprehend. It will change your life and that of your business. Thank you Barclays and Unreasonable Group."

STEVEN DRING

Co-Founder & CEO, Growing Underground



LanzaTech: Creating value from waste

LanzaTech is revolutionising the way the world values carbon by recycling it. Founded in 2005, the team developed a proprietary anaerobic bacteria that transforms waste gas into ethanol. This technology fits in almost any steel mill or oil refinery, capturing carbon emissions before they enter the atmosphere and turning them into fuel that can power cars or airplanes. After five years of developing the science in a lab and proving it with a pilot plant, in 2010, LanzaTech invited Dr. Jennifer Holmgren to step in as CEO to commercialise the technology. With 50 U.S. patents and 20 years in the energy sector, she has since scaled the company to launch the world's first commercial facility converting industrial emissions to sustainable ethanol in China.



ENTREPRENEUR

Dr. Jennifer Holmgren, *CEO*

SECTOR

Clean energy



REGION

Americas



Up to 80%
greenhouse
gas reduction

**One LanzaTech
plant is equivalent
to removing
80k
cars off the
road annually**



FIRST
transatlantic flight
powered by LanzaTech
jet fuel took place
in October 2018



HEADQUARTERS

USA

Impact

LanzaTech is actively developing the circular economy of the future, with massive potential for scale. Their first commercial facility in China has a capacity of 16 million gallons (60 million litres) per annum of ethanol. By 2020, they expect to be producing 61 million gallons (230 million litres) of ethanol. They also recycle 50% of the water used at the facility. For each of their plants, LanzaTech estimates that they create around 250 jobs during construction and around 1,000 direct and indirect jobs during operations. Furthermore, if their technology were implemented around the world using all available waste and residues as feedstocks, it would be the equivalent of taking 800 million cars off the road each year – or 7% of global CO₂ emissions. In 2011, Jennifer forged a partnership with Virgin Atlantic to produce the world's first jet fuel derived from waste industrial gases. On 3rd October 2018, they powered the first transatlantic flight using LanzaTech's jet fuel.

LanzaTech 

"Unreasonable Impact offers a world-class programme that is filled with some of the most inspiring people I've ever met, from the mentors and financial experts from Barclays to all of the entrepreneurs taking part! It has been three years since my first encounter with Unreasonable Impact, and the LanzaTech team has benefited immensely from the very deliberate opportunities for support and collaboration that have arisen from this partnership."

DR. JENNIFER HOLMGREN
CEO, LanzaTech



OLIO: Leading the food sharing revolution



More than one-third of all food produced goes to waste every year, which represents more than \$1 trillion USD in lost value. Meanwhile, more than 800 million people around the world suffer from chronic hunger and malnourishment. That's approximately 1 in 9 people on the planet who go hungry every day. Growing up on a dairy farm in North Yorkshire, UK, Tessa has always valued the hard work that goes into food production. She and her co-founder realised this massive market inefficiency, environmental catastrophe and social injustice, and they decided they had to do something about it. OLIO is a free app to tackle the problem of food waste by connecting users who have unwanted food with neighbours and local shops nearby who would like it.



ENTREPRENEUR

Tessa Clarke, *Co-Founder & CEO*

SECTOR

Food Waste



REGION

UK & Europe

Over 1m
users have
downloaded
the app

1.5m
portions
of food have
been shared

People in
49
countries have
shared food
with OLIO

HEADQUARTERS

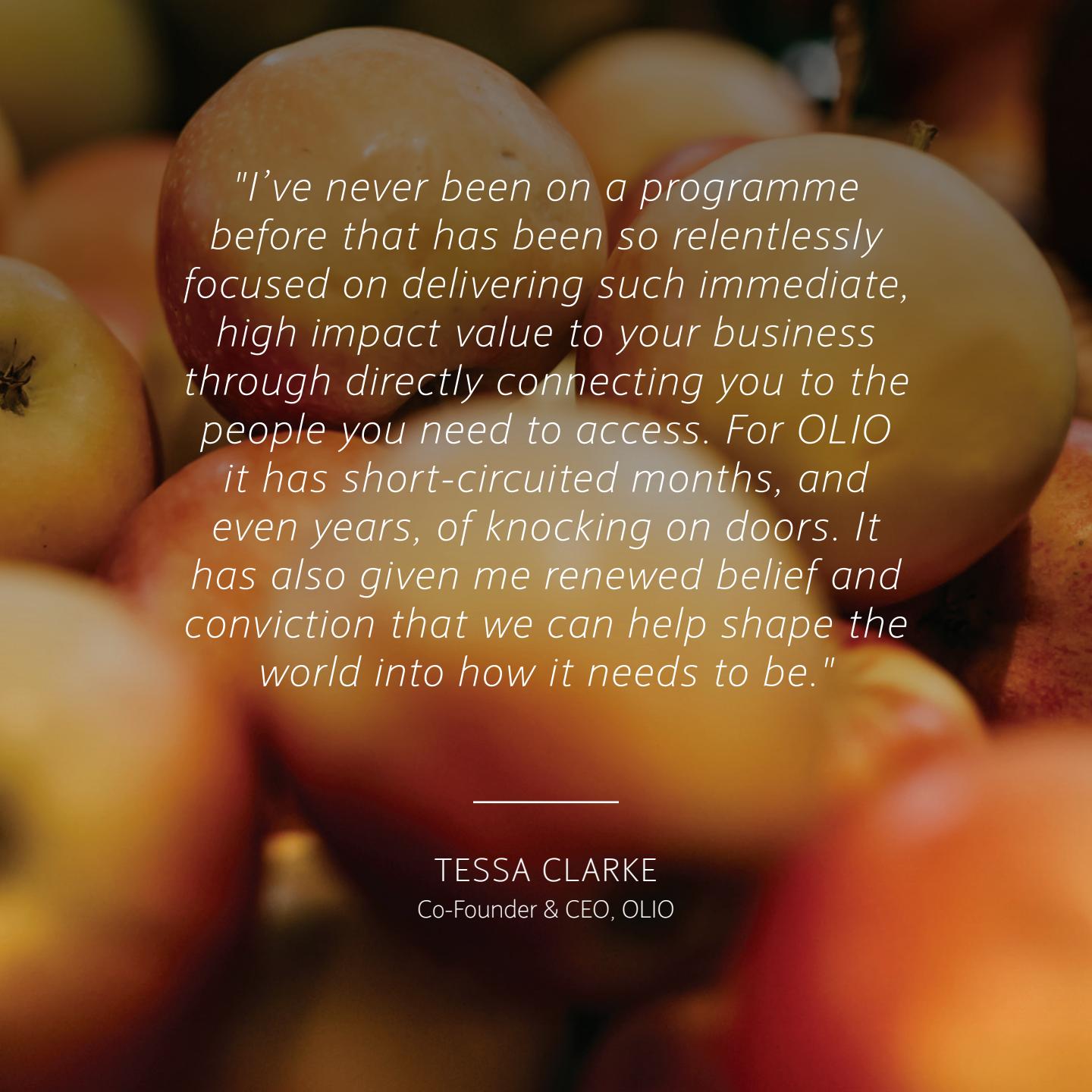
UK

Impact

In the developed world, more than 50% of food waste takes place in our homes. OLIO is sparking the food sharing revolution by empowering all of us with a simple platform to flip that paradigm and become the solution. Launched in the UK in January 2016, OLIO now has more than 1 million users who have together shared more than 1.5 million portions of food, which is the environmental equivalent of preventing 3.9 million car miles. This has been achieved in large part due to over 32,000 volunteers ('ambassadors') who not only spread the word about OLIO in their local communities, but they also collect and redistribute unsold food from local retailers. OLIO is the world's only neighbour-to-neighbour food sharing app, and food has been successfully shared in 49 countries to date. Now, the company is expanding to incorporate non-food household items as well.







"I've never been on a programme before that has been so relentlessly focused on delivering such immediate, high impact value to your business through directly connecting you to the people you need to access. For OLIO it has short-circuited months, and even years, of knocking on doors. It has also given me renewed belief and conviction that we can help shape the world into how it needs to be."

TESSA CLARKE
Co-Founder & CEO, OLIO

Demonstrating momentum



In 2017, **MEMPHIS MEATS** raised a **\$17 million USD** Series A round led by DFJ. In 2018, their team spearheaded a milestone agreement between the USDA and FDA for joint jurisdiction over cell-based meats, which will ensure safe and truthfully-labelled products are brought to market.



In 2018,
RECYCLING TECHNOLOGIES secured contracts worth more than **£65 million** to transform plastic that is currently unrecyclable into recyclable plastic.



At the end of 2017, **GREENLIGHT PLANET** raised **\$60 million USD** in financing, sold their **600,000th** solar home system and reached a rate of over 1,000 solar home systems sold per day.



In early 2018, **ZOLA ELECTRIC** secured **\$55 million USD** in Series D financing. This investment will fund an expansion into Ghana, continuing a partnership with French utility company, EDF Energy, in the Ivory Coast.

Since joining Unreasonable Impact's global network, many ventures have achieved key business milestones. Here are a few that demonstrate the scale and traction of this portfolio.



RE:3D and **ANDIAMO** won the 2018 WeWork Creator Awards. re:3D won the grand prize of **\$1 million USD** and Andiamo won the runner up prize of **\$500,000 USD**.



In 2017, **THREAD** supported **3,895 EMPLOYMENT OPPORTUNITIES** for Haitian plastic waste collectors. The plastic they collected ultimately became fabric that Thread sold to major retailers such as Reebok and Timberland. In the past year, Thread has also developed their own line of handmade bags from this fabric that is assembled in the Homewood neighborhood of Pittsburgh, PA, where Thread is finding new ways to support jobs for local people.



In 2018, **JEPLAN** closed **\$10 million USD** in Series B financing and formed partnerships with H&M, Zara, Adidas and Patagonia to place collection points in their stores for old clothes to be gathered and recycled into new products. JEPLAN is now eyeing expansion into Western manufacturing centers such as Lyon, France, and North Carolina, USA.

Key insights

EFFECTIVELY CONNECTING A GLOBAL ECOSYSTEM

The vision of Unreasonable Impact has always been to support a diverse array of growth-stage ventures operating across the Americas, UK and Europe, and Asia Pacific. Our programmes excel at creating the conditions to forge strong relationships, and given the global nature of the portfolio, we quickly recognised the value of connecting this community across geographies. With the support of Barclays, Unreasonable built a new custom platform with the goal of leveraging the power of technology to encourage entrepreneurs, mentors, specialists and funders to connect and drive support to one another. It also allows us to track the entrepreneurs' impact and progress over time.

TAPPING INTO THE TALENT OF BARCLAYS' EMPLOYEES

This programme is unlike any other we have seen on the market to date and it ties closely to the core business of Barclays. Unreasonable Impact has already engaged more than 2,500 Barclays employees in the first three years of the programme. To sustain engagement in the long run, we have developed a way for employees to track the progress of the ventures and offer their skills to help solve key challenges. We continue to run brainstorming sessions and host meetings between Barclays employees and the entrepreneurs to support this community over the long-term.

COMMITTING TO IMPROVE GENDER DYNAMICS OF GROWTH EQUITY COMPANIES

Today, less than 5% of CEOs leading Fortune 500 companies are women. Across all the Unreasonable Impact cohorts, we have worked with 28 female entrepreneurs – comprising nearly 30% of the portfolio. In the UK specifically, around 1 in 3 entrepreneurs are female so we are proud that our UK and Europe 2018 cohort was over 50% female. Barclays and Unreasonable Group remain committed to working towards gender parity in the Unreasonable Impact portfolio and see this partnership playing a key role in building the ecosystem and being a proactive voice for women-led companies.

MAKING IT EASY TO FOLLOW UP

During an Unreasonable Impact programme, we focus on creating the conditions for ideas to surface and connections to happen that could lead to the rapid scale of the entrepreneurs' businesses. In any given programme, we have found that each entrepreneur might receive as many as 100 commitments from the various mentors, specialists and investors they met. To date, more than 3,000 commitments have been captured. Our custom-built online platform is designed to make it much easier for the entrepreneurs to follow up.

Recycle carbon in space

Photo: Visual Hunt / CC0



Dr. Lisa Dyson, CEO of Kiverdi, delivers a talk at Demo Day during the second annual Americas programme. Kiverdi recycles carbon dioxide and other gases into protein, high-value oils and bio-based products such as plastic – supporting a circular economy.

PROVIDING A GLOBAL STAGE

We know that entrepreneurship is a difficult journey, so anything we can do to enhance the profile of the entrepreneurs' work and feature them on a global platform can be helpful. With its history and reach, Barclays has the unique ability to convene people from around the world and provide the entrepreneurs with access to speaking or networking opportunities that would otherwise be hard to secure. This visibility also supports the entrepreneurs in connecting with new strategic partners, investors or customers.

Mentors and specialists

Unreasonable Impact continues to build a talented and influential network of mentors and specialists, who are specifically invited to programmes to offer their expertise and experience to the entrepreneurs with the goal of scaling their impact. From TIME Magazine Heroes of the Planet and successful serial entrepreneurs to leaders from across Barclays, we are privileged to welcome them into the Unreasonable Impact community.



**HUNTER
LOVINS**

TIME Magazine Hero of the Planet, speaker, founder of Natural Capitalism Solutions and author of 15 books.



**TOM
CHI**

Inventor, coach, speaker, and former head of product experience at Google X, where he developed technologies such as Google Glass and Google's self-driving cars.



**SETH
GODIN**

Serial entrepreneur, speaker, best-selling author of 18 books and recently inducted into the Marketing Hall of Fame.



**SIR STEPHEN
O'BRIEN**

British politician, diplomat, former United Nations Under-Secretary-General for Humanitarian Affairs and Emergency Relief Coordinator.

"Our colleagues are uniquely positioned with the skills, networks and knowledge to help these companies scale up and grow. They also take a huge amount away from the experience themselves, in terms of energy, inspiration and insight into some of the pioneering innovations of the future."



– ALISDAIR GAYNE, Head of UK Investment Banking, Barclays

"The industries in which these entrepreneurs work are incredibly relevant to Barclays' clients, with many increasingly eager to combine financial returns with social and environmental benefits. We're seeing a growing number of corporations and institutional investors backing impact ventures as a way to access new markets."



– LARS AAGAARD, Head of M&A and Financial Sponsors Group, Asia Pacific, Barclays

"By leveraging the global reach of Barclays' clients and supply chain, we're making a significant contribution toward the growth of these high-impact ventures. We've also found that by spending time with some of these entrepreneurs, at the leading edge of innovation, our clients also benefit. Like Barclays, they're building a better understanding of the future trends and technologies which are directly relevant to them."



– TRAVIS BARNES, Global Head of Debt Capital Markets and Risk Solutions Group, Barclays

"Unreasonable Impact has created and placed Barclays at the centre of a global community that contains some of the most exciting and high profile businesses on the planet. Impacting millions of people worldwide, the entrepreneurs are implementing groundbreaking, and importantly scalable, solutions to some of our greatest challenges – shaping a sustainable future for us all."



– DEBORAH GOLDFARB, Global Head of Citizenship for Barclays Bank PLC

– STEPHEN DOHERTY, Group Head of Corporate Relations, Barclays



"Unreasonable Impact is proof, if proof were needed, that companies can do good while simultaneously pursuing their business objectives. We're incredibly honoured to partner with the Unreasonable Impact entrepreneurs and proud to be able to play a supporting role as they scale their ventures."

Meet the ventures

Food, water and agriculture >



Transforming agriculture by operating the world's largest indoor vertical farm that's 390x more efficient than a traditional field farm.



Improving agricultural productivity through a GPS tractor operation assistance app.



Allowing farmers to make data-driven decisions about the way food is produced, increasing productivity and profitability, reaching farmers in more than 160 countries.



Enabling indoor commercial-scale farming of safe, fresh, and healthy produce using up to 50x less water and 50x less land compared to traditional practices.

Food, water and agriculture >



Transforming the waste water treatment process with its patented technology, making water safe to reuse or discharge responsibly.



Making edible cutlery to provide an effective alternative to disposable plastic cutlery.



Combating stress on the global food system by producing delicious foods made with high-protein cricket flour.



Creating the world's first animal-free egg white and other performance protein products to promote health, preserve the environment and alleviate animal suffering.

Food, water and agriculture >



Solving the global water crisis by providing families with the ability to turn salt water and contaminated water into pure drinking water.



ECO SOLUTIONS FOR TOMORROW—TODAY™

Leading the decentralised and integrated management of water for residential and commercial purposes, recycling and reusing up to 80% of waste water.



Creating the future of aquaculture with an Internet of Things smart feeding technology to help hundreds of millions of farmers at the bottom of the pyramid.



Fundamentally changing the way we feed the planet through sustainable insect farming.

Food, water and agriculture >



Growing fresh herbs and salad greens year-round with 70% less water in an underground urban farm located in a converted WWII air raid shelter.



Producing fresh fish and baby-leaf salads year-round in a controlled growing environment using no pesticides, herbicides or fungicides.



Creating a different and more sustainable kind of supermarket by putting customers, suppliers and employees first.



Building reliable, solar-powered irrigation systems for millions of small-scale farmers across India.

Food, water and agriculture >



Improving nutrition and increasing farmer income through the world's leading moringa superfood brand, with products in over 7,000 stores across the U.S.



Transforming the near trillion-dollar global meat market by producing real meat without raising and slaughtering animals.



Reducing food waste and improving safety with its groundbreaking food expiry label that allows consumers to monitor freshness with a simple touch.



Tackling the problem of food waste by connecting users with unwanted food to neighbours nearby who want it, with more than 1 million users to date.

Food, water and agriculture >



Fighting food waste by making delicious snacks from unwanted or surplus food produce, saving over 100 tonnes of food from going to waste. In 2018, SNACT was acquired.



Making drinking water an unlimited resource for people everywhere through panels that combine sunlight and air to make water, with installations across five continents.



Turbine-free wind energy systems that harvest off-shore wind power. This company is no longer in operation.



Revolutionising access to low cost energy storage by transforming end-of-life lithium batteries and reusing them in renewable energy applications.

Clean energy >



Developing state-of-the-art lithium-ion energy storage systems to provide clean, affordable and dependable electricity to the billions of people who need it.



Delivering cleaner and more efficient energy systems by specialising in hydrogen and fuel cell technologies.



Combating global energy poverty with 20 products across cooking, charging and lighting that reach consumers at scale in 70 countries.



Providing mobile power and internet in the off-grid world to help the next billion people get and stay connected.

Clean energy >



Delivering affordable solar solutions to those in the developing world without reliable energy, impacting more than 92 million lives.



TURNING CO₂ INTO ENDLESS POTENTIAL

Creating new value from waste CO₂ for the plastics industry and building a future where greenhouse gas can be transformed for commercial and environmental gain.



Delivering cost-effective electricity without emissions by converting low-grade waste heat from water into power.



Converting waste oil into renewable biofuels that feed into the existing petroleum infrastructure, saving more than 45 million kg of carbon to date.

Clean energy >



Leading the development of India's distributed solar solutions, completing more than 1,500 grid-connected and off-grid installations across 22 states.



Harnessing the sun to develop fusion energy: a safe, limitless, clean, emission-free and cost-effective alternative for power generation.



The world's leading supplier of biodiesel processors, producing more than 400 million litres of sustainable fuel every year in more than 50 countries.



Developing and manufacturing reliable solar products for millions of people living off the electric grid, offsetting over 1.3 million metric tons of CO₂.

Clean energy >



Fostering electrical democratisation worldwide through its next-generation power semiconductors, with designs 1/10 the size of current devices.



Delivering low-cost, long duration bulk energy storage with a proprietary technology that is one-third the cost of lithium ion batteries and 5x the lifespan.



Powering rural communities with 100% renewable energy through one of the world's lowest-cost hybrid power plant and distribution networks.



Building a CO₂ marketplace using second-generation carbon capture technology at half the cost of solvent-based systems.

Clean energy >



Profitably recycling carbon by transforming pollution into ethanol at an industrial scale.



Turning millions of miles of gravity-fed water pipelines around the world into generators of clean, environmentally-friendly, renewable energy using in-pipe hydropower technology. This company is no longer in operation.



Enabling a market of 1.3 billion people to replace hazardous and expensive kerosene generators and lanterns with modern, clean and affordable solar electricity.



Reducing the environmental impact of oceanic shipping by more efficiently harnessing the wind for maximum propulsion, saving vessels up to 50% in fuel costs.

Clean energy >



Enabling climate resilient hydropower while maintaining the health of watershed ecosystems and the communities of people who surround them.



Democratising the use of energy in urban and rural areas around the world with simple, reliable and affordable wind turbines.



Providing effective, recyclable energy storage to enable the transformation towards 100% renewable energy.



Developing affordable, maintenance-free generators that offer clean power in the 1-10kW range, notably reducing methane emissions.

Clean energy >



ZincFive

Creating and deploying the world's first nickel-zinc rechargeable battery technology, which provides safe, reliable and uninterrupted power for critical applications.

**ZOLA
ELECTRIC**

Providing clean, transformative solar energy to more than 50,000 people's homes per month that suffer from expensive, unreliable grids or those with no grid access at all.

Airlabs

Transforming polluted cities into clean air zones by removing over 95% of nitrogen dioxide along with all other pollutants from the air.

WAMPERE

Developing affordable, clean and efficient electric vehicles, with approximately 35,000 vehicles produced and sold to date.

Sustainable living >

abundance.

Developing a leading direct investment platform that makes it possible for everyone to invest in things they care about and earn an attractive return.



**BioCarbon
Engineering**

Countering industrial-scale deforestation using drones to plant a billion trees each year at 15% the cost of current methods.



BreezoMeter
Because Breathing Matters

Providing accurate and localised air quality data using machine learning and big data analytics.

**CAMBRIAN
INNOVATION**

Closing resource loops by affordably and efficiently extracting clean water and clean energy from waste water streams.

Sustainable living >

CHIRON X

Democratising healthcare with an AI-powered software that rapidly, affordably and reliably diagnoses critical health conditions from medical images.

**Cleverciti
Systems**

Developing comprehensive, high-tech solutions for on-street and open air parking detection, monitoring and guidance to reduce search traffic and CO₂ emissions.

glowee
enlightened by the sea

Redesigning the way we produce, consume and illuminate our world by harnessing the natural power of bio-luminescence.



Revolutionising how the world heats its water with a patented technology that is 99% energy efficient, conserving time and water in the process.

Sustainable living >

**天泉鼎豐
Hot Spring Energy Harvest**

Utilising solar power and renewable energy to harvest safe drinking water from the air in an efficient, low-carbon, eco-friendly way.

**KELDA
TECHNOLOGY**

Reinventing the shower experience with a patented technology that cuts water use and heating costs in half, saving 180,000 litres of water per shower per year.

Lithium
Tomorrow's Transportation.Today.

Providing India's first 100% zero-emission, electric solution for corporate transport.



**ONE EARTH
DESIGNS**

Providing 100% solar-powered clean cookstoves for off-grid communities in 68 countries across six continents.

Sustainable living >



The first prefabricated home factory in the US dedicated to sustainability, making it easy, fast and affordable for people in urban areas to build custom, high-quality homes.



Nothing wasted. Everything gained®

Reversing the environmental harm from the industrial age by making performance-driven, stylish, 100% recycled and compostable household products.



Transforming plastic that is currently unrecyclable into a valuable oil from which more plastic can be produced.



Using biotechnology to develop animal-free proteins that replace animal-derived components used in medicines.

Sustainable living >



Developing hydrogen fuel cell cars to systematically eliminate the environmental impact of personal transport.



Disrupting the entire cooling industry with a new technology that does not need a constant power source, enabling refrigeration of food products, life-saving vaccines and more.



Replacing conventional chemical pesticides with safer, healthier and more effective plant-based products for agriculture, pest control and consumer products.



Revolutionising the way our planet deals with organic waste through on-site decentralised energy and nutrient hubs for hotels, harbours, shopping malls and more.

Sustainable living >



Reinventing disinfection to safely and continuously kill germs, mould and fungi with the flip of a light switch through advanced LED technology.



Using biotechnology instead of animals to pioneer the field of safety testing technology for products like cosmetics, food and beverage.



Developing healthcare solutions for children with disabilities using big data, machine learning and 3D printing.



Leveraging an IoT/SaaS platform to help manufacturers save time, money and resources in the form of significant material, energy and waste reduction.

Manufacturing and supply chains >



Banyan Nation

Building India's first vertically integrated formal recycling business, having recycled more than 500 tonnes of plastic and reduced more than 750 tonnes of CO₂.



Changing the way India handles its perishables by building the country's first-ever solar cold storage chain and by providing intelligent solar pumping technology.



Accessories made from reclaimed materials

Producing luxury lifestyle accessories made from reclaimed materials, such as fire hoses and leather scraps.



Transforming old clothing into high quality, new, raw materials through a unique fibre technology, eliminating 80% of typical pollutant emissions.

Manufacturing and supply chains >



Creating the world's largest reuse marketplace that connects corporates to charities and people to redistribute unwanted items.



Developing the circular economy by recycling used polyester and cotton clothing into their original state and selling them as new products.



Recycling carbon dioxide and other gases into protein, high-value oils and bio-based products to feed and power a rapidly growing global population.



Transforming plant biomass into sustainable products, utilising a technology with the potential to replace virtually all petroleum-derived materials.

Manufacturing and supply chains >



Enabling industrial strength, human-scale 3D-printing at an affordable price point in more than 50 countries.



Creating safe and reliable bio-based textile dyes to bring sustainability to farmers while empowering fashion brands with transparency.



Transforming the global apparel supply chain by building the world's largest transparent sourcing technology and platform.



Transforming plastic bottles from the developing world into the most responsible products on the planet, creating thousands of dignified jobs.

Infrastructure >



Delivering the next generation of infrastructure to rural and isolated communities in emerging markets.



Building the world's most advanced machine learning platform for Earth-observing satellite data and geospatial information.



Democratising space with a constellation of 50 microsatellites to monitor the world every day and make the data accessible to everyone.



Transforming streetlights into resource-efficient platforms with proprietary IoT sensors, saving cities millions of dollars in electricity and maintenance.

Infrastructure >



Delivering innovative liquid cooling technology for data centre and edge computing, saving the IT industry energy, space and money.



Treating infectious biomedical waste safely with its revolutionary, environmentally friendly, non-incineration technology.

Our global reach



This map highlights the headquarters of all active companies in the global network and the incredible reach of their solutions.

**Our entrepreneurs
impact people in
180+
countries**





*This is the Rasa – a **hydrogen fuel cell car** developed by Riversimple, a venture from the first UK & Europe cohort in 2016. The Rasa gets the equivalent of 250 miles to the gallon with a range of 300 miles and produces **zero emissions**.*



The power of an unlikely partnership

Our team at Unreasonable Group is relentlessly dedicated to driving value for entrepreneurs positioned to positively shape the course of history. Yet what we have learned over time is that without the international scale and intellectual prowess of major corporations like Barclays, especially ones that can tap into centuries of experience, our vision would never reach its full potential. As one of the world's largest financial institutions, Barclays has an unmatched ability to support the next generation of business titans – and through this partnership, they are doing exactly that.

Unreasonable Impact represents one of the fastest growing portfolios of sustainable ventures in the world. Every participating entrepreneur was selected based on a clear line of logic for their business to create at least 500 jobs within the next 5 years. If successful, this portfolio will actively create more than 25,000 new jobs by 2022 by leveraging technologies capable of solving some of the most pressing social and environmental challenges of the 21st century. It's this collective impact that we believe future generations will remember as having helped define progress in our time.

Yes, business is business. But more than anything, business is people. We hold a belief that the strength of any partnership rests in the quality of the relationships between the parties; furthermore, it must be rooted in shared values and an aligned trajectory. After having worked with thousands of team members across Barclays, I can say with confidence that our entire team at Unreasonable feels motivated by a sense of genuine collaboration. We are grateful to the entire team at Barclays for the foresight in forging this partnership as true co-founders, and we look forward to advancing our global partnership into the years to come.

If we are convinced of anything it is that together, we will bend history in the right direction to create a lasting impact. On behalf of all of us, we humbly thank you for joining us on this journey.



DANIEL EPSTEIN
CEO, Unreasonable Group



Over the past three years, the partnership has been recognised for its work and impact. We're proud and humbled to have received several awards.

PARTNERSHIP AWARDS

BETTER SOCIETY AWARDS

Celebrate the efforts that commercial organisations make to create a better society.

WINNER: *Innovation Award 2018*

CORPORATE ENGAGEMENT AWARDS

Recognise the most successful and innovative corporate partnerships and sponsorships, and the communication strategies around those collaborations.

GOLD: *Partnerships: Best Environmental or Sustainable Programme*

SILVER: *CSR: Most Innovative Collaboration 2018*

THE PEER AWARDS FOR EXCELLENCE

Celebrate innovation in business. Judging is not by a panel of experts but by the finalists themselves.

WINNER: *CSR Sustainability Award 2018*

WINNER: *CSR Awareness of Business 2018*

Learn more by visiting **unreasonableimpact.com**

 @unreasonable  @unreasonable #UnreasonableImpact

"The reasonable man adapts himself to the world; the unreasonable one persists in trying to adapt the world to himself. Therefore, all progress depends on the unreasonable man [and woman]."

GEORGE BERNARD SHAW

{ We > I }

With your commitments*, we will together scale the efforts of ventures positioned to bend history in the right direction. On behalf of this partnership and the impactful entrepreneurs we are here to support, we humbly thank you.

*You have done your part by writing down commitments you can make. Now the entrepreneurs will do their part and follow up with you on the commitments that most matter to them.

Send a battery pack to one of our partners

→ Licence to other manufacturers
→ Multiple hubs in multiple geo's

Get active on social.

Say

Give product away to be a thought leader. Get out there @ events. Teach to the world

To be clear on what will come

Get yourself

Access network
Network
Shop
Input
Market



unreasonable impact

Created with

