# Undaunted Tackling climate change with innovation

A partnership between

Imperial College London



The Royal Institution Science Lives Here

In the face of climate

we are



Time is running out to halt the climate crisis. Today, we are standing on a precipice between total climate collapse and the hope of a greener, more sustainable future for the planet and humanity.

Without urgent action, the window of opportunity will close. We know what needs to be done, but change is not happening quickly enough. We need practical climate innovations that can make a real difference urgently, and at a scale never achieved before.

Undaunted is a home for creative, proactive people exploring how innovation can help humans to adapt to and overcome the climate crisis. We are fostering a climate innovation ecosystem to enable the creation and scale-up of solutions to the climate challenge.

Undaunted encompasses our long-running climate innovation accelerator programme, The Greenhouse; the world's first Master's in Climate Innovation; and a year-round programme of community building, education, policy and public engagement activity. With close to 150 successful climate businesses graduating from Undaunted to date, we are creating the blueprint for a successful climate innovation ecosystem.

Grown in Imperial's Grantham Institute for Climate Change and the Environment, we have climate expertise, science and passion for the planet in our DNA.

"From clean and renewable energy storage to sustainable farming, climate innovation is giving us hope and helping ensure the survival of both people and planet. At Undaunted, we are fostering a community in which the most promising green solutions can become a reality, faster and more effectively than ever before."

Alyssa Gilbert, Director of Undaunted







# Leading the world in climate

Undaunted is a partnership between two world-renowned scientific institutions: Imperial College London – ranked the top university for research in the UK and the Royal Institution. Our home is in the heart of London, a global destination for climate innovation, which has seen investment in climate tech increase ten-fold over the last five years. Undaunted has played, and will continue to play, a leading role in the growth of this new, green economy.

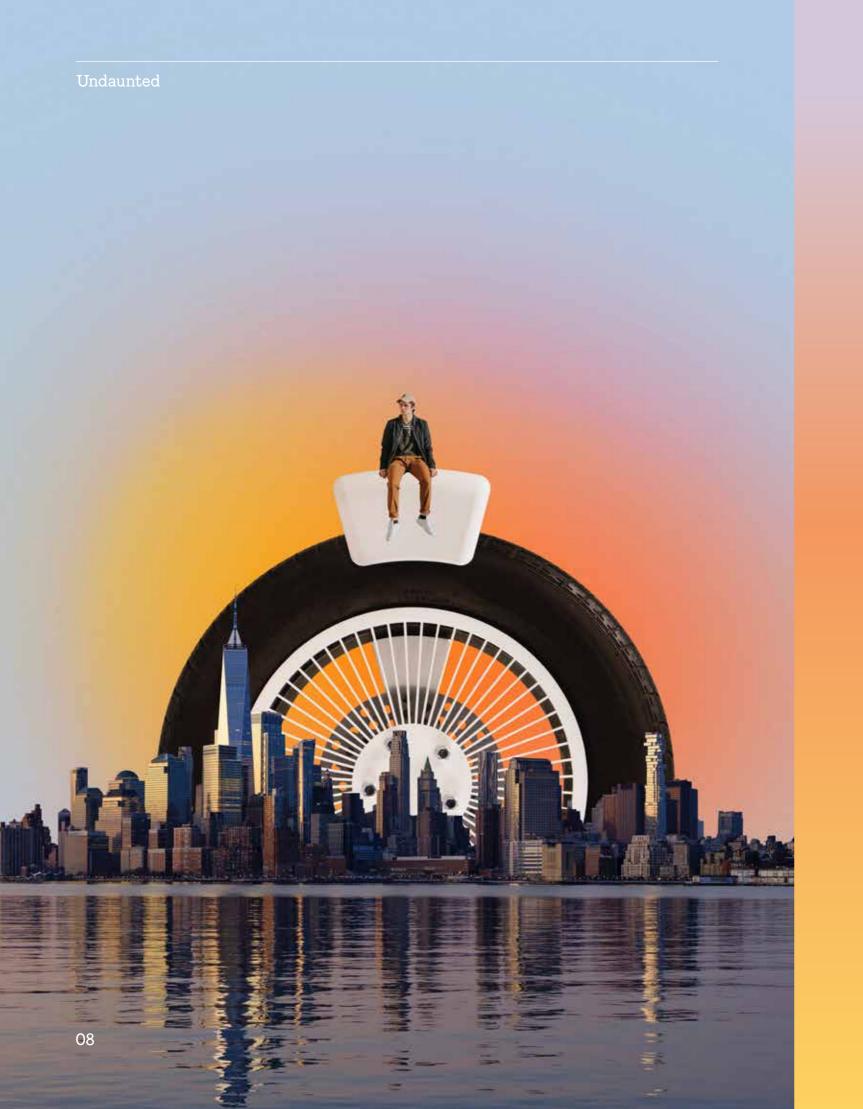
"Imperial is globally renowned for invention and innovation and Undaunted is a pivotal part of our climate innovation activity. We are excited to partner with the Royal Institution to lead the way to a zero-carbon, climate-resilient world."

Professor Mary Ryan, Vice-Provost (Research and Enterprise), Imperial College London

### Undaunted

We are pioneers in nurturing climate innovators and are one of the most established specialist climate accelerators in the world. Undaunted startups have raised more than \$1 billion in investment since 2012 and created over 1,500 jobs in 30 countries.

Imperial is recognised as the UK's most innovative university by *Reuters* and the best university in Europe for student entrepreneurs by Forbes. Over the past decade, Imperial has produced more climate change innovation startups than any other UK university. The College has created an entire ecosystem to support startups at its campus in White City, London's newest innovation district. There, academics and startups alike have access to state-of-the-art lab facilities set within collaborative, co-working spaces that encourage interaction between the College and the wider research and innovation ecosystem.



# The Undaunted model

Across all industries, the survival rate of new startups is 10 per cent. For startups graduating from Undaunted, the survival rate is over 93 per cent.

Over the past 12 years, we have developed and refined our model for accelerating applicable, practical and adaptable solutions that make a difference on a global scale. We take the planet's point of view at every stage of climate entrepreneurship and because of that, we do things differently.

### **Building a pipeline**

Creating new routes into climate entrepreneurship and nurturing the green leaders of the future

Incubating innovators Doing accelerators differently and putting the planet first with The Greenhouse

Undaunted builds a bridge from the experimentation and discovery stage of climate technology, nurturing innovation until it is ready to be scaled up. Our activities stimulate the commercial sector to follow and develop a wider ecosystem where green solutions can flourish.

An ecosystem that empowers impact Harnessing excellence in research, facilities and talent for climate impact

### Bridging the gap

Setting businesses up for success and creating a landscape where climate innovation can flourish

# Creating a pipeline

The next great idea to change the green economy may already exist in the mind of a student, scientist or schoolchild. At Undaunted, we are working to find and cultivate those ideas.

In 2024, we launch the world's first Climate Innovation MSc, a hands-on, practical course for innovators who want to make an impact for the planet, delivered in partnership with Imperial's Dyson School of Design Engineering.

Our online executive programmes equip workers across all sectors with the skills to develop new initiatives that drive business value and create a carbon-neutral world. Through our programme of public engagement, we're capturing the imagination of the next generation and connecting with people of all ages and backgrounds to make climate innovation everyone's business.

Undaunted collaborate closely with researchers to explore how new breakthroughs can be applied to effect positive climate outcomes.

We share our extensive practical knowledge and experience in climate innovation to maximise impact and are directly shaping the research agenda for the good of the planet. Identifying the most promising future technologies is crucial if we are to address strategic climate innovation gaps and our pre-innovation science support programme is designed to assess the potential of early discoveries and accelerate their commercialisation.

We encourage budding entrepreneurs to apply their expertise to green challenges through our programme of hackathons, bootcamps and competitions, including the UK arm of Climate Launchpad, which is now in its tenth year. We also provide practical support and advice to student-led climate innovation competitions and clubs to further widen and diversify the pool of future climate innovators.

Across all our programmes, we are creating new routes into climate entrepreneurship and nurturing the environmental leaders of tomorrow.



### Undaunted

Seratech has redesigned cement, making it one hundred per cent carbon neutral. The brainchild of two Imperial PhD students, this novel technology could decarbonise the construction sector and mitigate 2 to 3 billion tonnes of CO<sub>2</sub> per year.

# An ecosystem that powers impact

When entrepreneurs join Undaunted, they become part of a buzzing environment that is designed to grow ideas into impact. Here, they can experiment, test and refine their ideas in a hands-on way; work with experts in the fields of climate science and engineering; and plug into cuttingedge research developments as they unfold, from day one. This setting is unique to Undaunted and strengthens the science behind startups' solutions, setting them up for future success.

As trusted, independent research institutions, Imperial and the Royal Institution act as a base to convene ideas and encourage curiosity, while providing a ready-made pipeline of talent and pool of applicants from students to researchers. Undaunted startups benefit from both institutions' national and international partnerships, which help them to undertake international research and development, recruit world-class talent and work with global policy makers and industry.

Physical space is a catalyst for innovation and Undaunted provides a forum where people can come together, work side by side on solutions, network, hold events and invite policy makers, businesses, investors and the public to engage with new ideas. Undaunted entrepreneurs have dedicated office space within the Royal Institution, in the centre of London, as well as access to purpose-built labs and R&D space at Imperial's innovation campus in White City, set within a hub of interdisciplinary research and local industry.

Undaunted's year-round programme of climate-specific enterprise activity directly integrates with the wider research and entrepreneurship landscape at Imperial, where students and researchers alike are actively encouraged and supported to explore entrepreneurship. About a guarter of all Imperial students tap into the Enterprise Lab, and the College provides spaces for discovery and prototyping, as well as mentoring and practical support for entrepreneurial staff. This synergic partnership stimulates talent and ideas in the field of climate innovation – around 30 per cent of Undaunted's The Greenhouse participants are made up of Imperial staff, students and alumni, with many innovators joining The Greenhouse after 'graduating' from other Imperial enterprise programmes.



### Undaunted

Recent winners of the Prince of Wales' Earthshot Prize, startup Notpla uses seaweed as a sustainable packaging alternative, directly replacing millions of single-use plastic items and reducing pollution around the world.

"Notpla wouldn't exist without the support of Undaunted. They were the first ones to believe in us and the idea, and provided the guidance and connections to start the journey."

# Incubating innovators

Undaunted has a unique approach to nurturing innovators through our flagship climate accelerator, The Greenhouse. We take the view that greater success for startups means greater success for our planet.

Unlike many climate accelerator programmes, The Greenhouse is fully independent and wholly motivated by public good. We don't demand equity from our founders – helping us attract top calibre candidates - and we provide a holistic programme of support over twelve months, far longer than the industry average of three months. Through our years of experience, we've found that doing things differently works, with 80 per cent of our startups going on to raise more than £100,000 in funding. Our approach makes the most of public and philanthropic money, applying it and amplifying it where it can have the most impact.

At The Greenhouse, teams receive all of the support and resources they need to grow a successful business, including coaching with experienced professionals, masterclasses to accelerate their business acumen and deepen their market-fit, technical assistance from deep tech entrepreneurship experts, and demo days to match innovators with investors and industry.

The support we provide extends far beyond products and services alone. Teams benefit from the unique opportunity to navigate the – often isolating – experience of launching a startup with peers from their cohort as well as alumni of The Greenhouse. We empower innovators to become climate leaders through our leadership networking programme and mentoring from top climate entrepreneurs in diverse fields, equipping them with the skills, confidence and experience to evolve the sector of climate innovation.



### Undaunted

To sustainably feed a growing planet, we need to rethink conventional livestock farming. Multus Biotechnology have developed the key ingredient – the growth media – to make affordable, animal-free cultivated meat a reality.

# Bridging the gap

Climate innovation has the power to transform the planet, but needs support to realise its full potential. For the most ambitious deep technology solutions – which will be vital in the fight against climate change – the route to commercialisation is often even longer and more complex. Undaunted is dismantling barriers for climate businesses of all sizes and working to get game-changing solutions out into the world so they can make a difference.

As our community of alumni startups grows, we are increasing our scale-up support service to help companies flourish during the next, crucial stages of their development. We work closely with Imperial's Institute for Deep Tech Entrepreneurship – which aims to understand and address key barriers to the successful commercialisation of fundamental science and engineering innovations – to translate their groundbreaking research in this area into practical support for climate startups.

A strong and healthy regulatory and policy environment will play a vital role in supporting investment in, and scale-up, of climate startups, but climate tech is evolving so rapidly that legislation cannot keep pace. We engage thoughtfully with our startups and wider community to understand the barriers they face and amplify these in wider political and industrial arenas, and we are founding members of Cleantech for UK, a new initiative to supercharge UK innovation.

Undaunted is energising the UK's green economy by placing postgraduate students as interns in nascent startups, where they can provide technical support while simultaneously gaining business training and experience. We are also pairing mature businesses searching for climate solutions with researchers who can create them.

Climate innovation cannot exist in a vacuum. Undaunted brings together the many moving parts which need to work together in harmony to ensure a new venture can flourish. We are convening and strengthening the UK's climate tech ecosystem and accelerating the route to commercialisation for many more climate startups, now and in the future.

# Naked

### Undaunted

Naked Energy are decarbonising heat on a global scale through their revolutionary solar technology, which produces more energy in less space, enabling businesses and communities to save energy and carbon.

# Philanthropic opportunities at Undaunted

We have laid a strong foundation to catalyse the next generation of climate solutions and build a new path to a low-carbon, climateresilient world. Philanthropy will help us to realise these solutions faster, on a wider scale and with even greater impact.

Scholarships for a more equitable green future We want more people, from all walks of life, to feel empowered to build careers in the field of climate innovation and to help confront the climate crisis. By supporting dedicated scholarships for the Climate Innovation MSc, you will help us to attract the very best students - regardless of their financial circumstances - and build a diverse pipeline of talent in the climate sector.

### **Mission focus**

Our startups are taking on varied environmental challenges, from feeding a growing world to decarbonising transport. You may wish to support a team, competition or activity focused on a particular challenge theme within Undaunted to help accelerate the change that resonates with you most.

Support at every stage Philanthropy helps us to empower innovators at each stage of the entrepreneurial journey to unlock their full potential and make a difference for the planet. You can support promising innovators to take the first step towards entrepreneurship by establishing new competitions, skills bootcamps or funding student-led activity, or accelerate the scaling of successful young businesses through support for a dedicated scale-up programme.

**Growing our ambitions** 

With philanthropic support for new roles, we can grow our climate innovation ecosystem and deliver more impact, faster. Appointing a climate tech community facilitator will enable us to grow our networks on a global scale and engage wider audiences to join our mission. A dedicated policy role will enable us to bridge the gap between entrepreneurs and policy makers, and advocate for legislation that keeps pace with innovation.



### Undaunted

### Powering **The Greenhouse**

Our flagship climate innovation accelerator is unique because it puts the planet first. With philanthropic support, we can strengthen our programme and continue to nurture generations of climate innovators through The Greenhouse; independently, equitably and with public good as our priority.

### Blue sky innovation

Philanthropy gives us the freedom to respond with agility to the changing landscape of climate tech and pursue our vision for a healthy, well-funded global climate innovation ecosystem without compromise. Unrestricted gifts to Undaunted will enable us to stay at the forefront of climate innovation and prioritise the most promising areas for major impact as and when they arise.

There are many areas where philanthropic support can have transformational impact on Undaunted and on our mission to grow a healthy innovation ecosystem tackling the climate challenge.

We welcome the opportunity to speak with potential supporters about how our priorities may align.

To learn more about making a gift to Undaunted, please get in touch.

### Alyssa Gilbert

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### imperial.ac.uk/climate-change-innovation

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