IMPERIAL

Science for humanity
How we shape the future

Since our founding in 1907, Imperial has sought to be not only a world-leading university, but a world-changing one. We have combined our tremendous strength in science, engineering, medicine and business (STEMB) with scientific discovery, innovation and entrepreneurship, to create real-world impact.

Every day our students, staff and partners come together to interrogate the forces that shape our world. We do it so we can use that understanding to tackle the biggest challenges facing humanity and shape a better future. Sometimes, and this is one of those times, this means interrogating the forces that shape the future of our own university. That is why, one year ago, we came together to ask ourselves a question: “How do we maximise our potential as a force for good in the world?”

This document addresses that question; an actionable plan that unlocks more of the power of science to serve humanity. This is how we shape the future – for our students, our community, our planet and everyone who calls it home.

The strategy reflects the purpose and priorities of our staff, students and global Imperial community. It is the result of an engaging and inspiring consultation both within and outside Imperial. We thank everyone who contributed their big ideas and bold ambition to this process.

I hope you will be as inspired as I am by what we have achieved so far and all we will achieve together.

President Hugh Brady

All we have achieved, and all we can imagine

Our strategy, *Science for Humanity*, is unashamedly ambitious in seeking to maximise Imperial's potential as a force for good in the world.

It builds on the university's strong disciplinary foundations, highly collaborative and collegial culture, passion for innovation, proven convening power, extensive global partnerships, incredible network of alumni, friends and supporters and world top ten ranking.

Our strategy highlights a number of cross-institutional initiatives that will consolidate our position among the world's leading institutions tackling global grand challenges.

The **Imperial Class of 2030** is an ambitious multi-pronged programme to nurture the most talented, the most enterprising and the most diverse graduating class we have ever had the privilege to serve. This will be in part driven by new investments in our **Imperial Inspires Scholarship Programme**, our digital and virtual learning environment and our campuses, including the next phase of our **White City Deep Tech Campus**.

We will launch a major recruitment drive, the **Imperial Future Leaders Campaign** and we will invest in leadership development and skills for our diverse community, including a new **Imperial Future Leaders Academy** for early-career staff.

We will introduce the new **Imperial Institute of Extended Learning**, which will help future-proof careers, businesses and communities by providing the advanced skills training and values-driven leadership needed to thrive in a tech-enabled world.

We will create four new cross-institutional **Schools of Convergence Science** to bring intense focus, interrogation and research impact to the emergent forces shaping our future at unprecedented scale: (1) climate, energy and sustainability; (2) human and artificial intelligence (AI); (3) health, medtech and robotics; (4) space, security science and telecommunications.

And through our new **Imperial Global** network we will achieve greater global collaboration to meet global grand challenges.

To further energise our vibrant enterprise ecosystem, we are creating a new venture fund, **Science Capital Imperial**. And we will deepen our partnerships with government, industry, our NHS partners, local communities and other stakeholders to establish the **Imperial WestTech Corridor**, to maximise our collective potential as a powerful engine for innovation, job creation and inclusive growth.

And underpinning everything that we do will be **Sustainable Imperial** – our university-wide commitment to play a leading role in the global fight against climate change, biodiversity loss and pollution.

Our founding mission was 'to be useful'; an understated precis of all that our exceptional teaching, research and innovation have made and continue to make possible.

But before we can usefully change the world, we must first seek to understand it. Our strategy engages with, and animates, this foundational idea: that Imperial's shared purpose is one of inquiry and action. A scientific mindset that encourages imagination, celebrates precision, demands patience, insists on humility, rewards accidents, steels our backs and makes us brave.

In science, as in strategy, there is no easy prophecy and no shortcut to progress. An understanding – sharpened, deepened, or totally new – is the first and only precondition.

While much of our direction in this document will feel new, our destination remains unchanged: to become a global home for everyone who believes in the power of science to discover, to create, to explain and to transform. To understand more of the universe and improve the lives of more people in it.

Imagine that.

Right: Sir Michael Uren Hub for Biomedical Engineering at the White City Deep Tech Campus.

Imperial today

Leading science
We are a science-based university with a difference. Our enduring STEMB focus, and the exceptional disciplinary foundations that underpin it, are the reason for our continued high-impact trajectory and place among the top ten universities in the world.

Interdisciplinary research
We are an ecosystem that thrives on connection and collaboration. The complexity of the challenges before us demands a truly integrated interdisciplinary approach. At Imperial, we forge links between faculties, departments, disciplines, industries, governments and more because we know that greater possibility for advancement is found at those intersections.

Inspiring students
We are a welcoming home for scientific imagination; a place where exceptional minds are enabled with inspiration, resource and freedom so that they might look deeper, dream further and ask bigger questions.

Meaningful impact
We have the spirit of a 117-year-old startup with an agility and orientation to the future that belies our age and heritage. Here you will find a culture of discovery, innovation and entrepreneurial thinking, where breakthrough science is chased, translated and applied at incredible speed and with transformative impact.

A trusted partner
We are an ally of progress, seen by many of the world's leading knowledge and technology-driven organisations as a cultivator of exceptional talent and future leaders, and trusted as the partner of choice for research, innovation and impact.

The legacy of London
We are a global hub in a global city. Our work shapes the world and our community reflects it, brought together by the undeniable gravitational pull of London's energy, creativity, diversity, economy and opportunity.

Imperial tomorrow

This strategy imagines a path through an unpredictable world that is facing unprecedented challenges. It is a blueprint to ensure we continue to maximise our potential as a force for good in the world, to deepen our rare and specific competencies, and to serve students and society in the uncertainty of tomorrow.

After all, as one of the world's leading research universities, we are purpose-built to engage with uncertainty, and to summon our strengths against it.

This is how we prepare for the expected and the unexpected. This is how we rigorously fulfil our educational mission and our research potential. It is how we shape the future. And it begins with three core aims.

1. Enabling talent
Our strategy will develop the people and skills the world needs now and into the future. We will work to attract, nurture and champion the best local, national and global talent wherever they are, and to empower them with everything they need to make a meaningful difference.

2. Powering research
Our strategy is a plan to strengthen Imperial's enabling environment for discovery, innovation and impact. We will create an even more deeply connected knowledge community and interdisciplinary research powerhouse that will meet the scale and urgency of the moment and respond with intelligence, responsibility and agility to everything that comes next.

3. Amplifying impact
Our strategy will help to accelerate Imperial towards, and scale the impact of, new discoveries, inventions and ideas, and position us as a trusted convenor and partner for knowledge and tech organisations across the globe. We will look beyond our London campuses to our wider network and wider responsibility, honouring our social and civic purpose, in London for the world.

Imperial together

To ensure our strategy will have a meaningful and enduring impact, we know we must create opportunities for everyone in our community to fulfil their potential – always guided by our values and behaviours: Respect, Collaboration, Excellence, Innovation and Integrity.

Great people
We will continue to attract, nurture and support world-class talent from everywhere. Our strength comes from celebrating and harnessing the diversity of our community where everyone contributes their own perspective, experience and skills so that together we can excel in the delivery of our shared mission.

We will champion an inclusive culture and invest in people so that they are inspired and equipped to unleash their potential. We will build and maintain a culture centred on the wellbeing, growth and belonging of our community. We will create a diverse and vibrant community where our values are evident to all, and we are recognised as innovators in every aspect of our work.

Great environment
We will create an integrated human, physical and digital ecosystem that fosters and facilitates collaboration and community and promotes discovery, learning and innovation. And we will deliver sustainable campuses to meet our 2040 Net Zero Carbon commitments.

The pace of technological change has never been faster. We will leverage the digital landscape and increased digital innovation to grasp new opportunities that are essential to the achievement of our world-class research and education. We will create a world-class digital experience for students. Our staff will have the tools and facilities they need to undertake world-changing research.

Great support
A world-leading academic endeavour must provide everyone with the opportunities and tools they need to thrive. We will support our staff to deliver an inspirational education and to take the inception of a research idea through to publication and translation into real-world application.

We will give our students a consistently inspiring, tailored and supportive experience from application through to their lifelong interactions with Imperial as part of our alumni community. We will foster a culture of innovation and practice of continuous improvement where colleagues are empowered to combine their strengths collectively to turn great ideas into an even better service.

Imperial numbers

1907

Royal College of Science, Royal School of Mines and City & Guilds College combined to form Imperial College London

1997

Imperial College School of Medicine formed, the product of a series of mergers with leading London medical schools. It was to become the Faculty of Medicine.

2003

Imperial Business School was given Faculty status

192

Countries Imperial researchers have collaborators in

250,000

Alumni in 213 countries

23,000

Students
12,000 Undergraduates and 11,000 Postgraduates

8,000

Staff

9

Campuses
Silwood Park
South Kensington
White City
Hammersmith Hospital
Charing Cross Hospital
Chelsea and Westminster Hospital
North West London Hospitals
Royal Brompton Hospital
St Mary's Hospital

2040

All Imperial campuses to be Net Zero

4

Faculties
Engineering
Natural Sciences
Medicine
Business School

6th

in the world QS World University Rankings 2024

8th

in the world Times Higher Education World University Rankings 2024

284

startups over the past five years

£800m

investment raised over the past five years

14

Nobel Laureates

3

Fields Medallists

Queen's Anniversary Prize 2021
University of the Year (The Times and Sunday Times Good University Guide) 2022
UK TEF Gold Award 2023
Athena Swan Silver Award

£1.3bn

University income: nearly £1.3bn

£500m

Research income: more than £500m

4* REF

Greater proportion of world-leading research than any other UK university

Imperial Inspires

Sparking the spirit of discovery early
Imperial Inspires Scholarship Programme

Our goal: We strive to be a world leader in attracting young minds to STEMB and supporting them on their STEMB journey through life.

Now: Imperial has a proud record of innovative, inclusive and impactful approaches to engage young people and underserved communities in STEMB. We have been relentless in our efforts to remove barriers to STEMB education and careers, sparking the spirit of scientific discovery earlier and helping people realise their ambitions.

Beyond our support for aspiring scientists, engineers, and medics, our extensive public engagement activities bring the wider public closer to the scientific imagination central to our work. The flagship annual Great Exhibition Road Festival welcomes over 50,000 visitors as Imperial staff, students and partners showcase the potential of science to shape a better future.

Next: We are acutely aware that there remain students across the UK and around the world who still face barriers in accessing an Imperial education.

Our new **Imperial Inspires Scholarship Programme** will transform our ability to support underrepresented groups, here in the UK and abroad, to enter into and excel in our STEMB degree programmes.

We will take Imperial medical education beyond our London campuses with the opening of the new **Pears Cumbria School of Medicine**, our partnership with the University of Cumbria – training more doctors in an underserved region of the UK.

And we will capitalise on the potential of **Imperial Global's** network of international hubs to broaden our outreach programmes and engage underrepresented communities all over the world (page 24).

The result of these initiatives will see us bring the brightest minds to the questions we ask at Imperial, no matter who they are, where they come from or their financial resources. Because that is how we will get the best answers. As any scientist knows, the most creative ecosystems are the most diverse.

Right: A budding scientist at the Saturday Science Club at the White City Deep Tech Campus.

"It is our ambition to inspire, build and nurture the world's most diverse STEMB student body, and to bring more of the world to STEMB and STEMB to more of the world."

***Professor Maggie Dallman**,*
Associate-Provost (Academic Partnerships) and Vice-President (International)

Sharing scientific imagination with everyone

The Invention Rooms at our White City Deep Tech Campus are where the local community, Imperial staff and students come together to imagine, innovate and create. With cutting-edge facilities and plenty of inspiration and guidance, the Invention Rooms inspire the next generation of inventors, entrepreneurs and makers from the local area and beyond.

Imperial's Mathematics School, in partnership with Woodhouse College in London, encourages and supports school students to pursue fulfilling careers in science. The School is focused on increasing diversity in STEMB, making a significant contribution towards reversing underrepresentation of specific groups in academia and the workplace. It seeks to raise numeracy skills among school students in collaboration with partner organisations in London, bringing lifelong benefits to young people, their families and their communities.

Imperial Class of 2030

From those with great expertise, to those with great potential
Imperial Class of 2030

Our goal: The **Imperial Class of 2030** will be the most talented, the most enterprising and the most diverse we have ever had the privilege to serve.

Now: We are proud to host talented, high-performing and ambitious students from across the globe, often from backgrounds where the path to academic excellence has not been straightforward. Our teaching is founded in strong, core disciplines and is research-rich and intellectually stretching. Our taught Master's programmes delivers specialist education at the leading edge of STEMB. And we encourage all students to broaden their educational experience by exploring other interests such as modern languages, art and music.

Imperial has a strong track record of digital innovation – including our swift transition to online learning at the onset of the COVID-19 pandemic. And because our work doesn't finish when students graduate, we ensure employability and the advanced skills they need for a tech-enabled future are embedded across our curricula. Because of these qualities and many more, Imperial is proud to have recently been awarded the Queen's Anniversary Prize, the Times and Sunday Times University of the Year and a Gold Award in the national Teaching Excellence Framework.

Next: The **Imperial Class of 2030** will be educated in a welcoming, supportive and appropriately challenging environment where disciplinary excellence, interdisciplinary working and entrepreneurship training are seamlessly integrated and supported by state-of-the-art digital and physical infrastructure and an engaging extracurricular experience.

Students will be able explore opportunities for greater interdisciplinarity through further development of Imperial's I-Explore Programme and through new advanced skills and leadership modules offered by the **Imperial Institute of Extended Learning** (page 14). We will expand the **Imperial Enterprise Lab** to meet increasing student demand, and the launch of Imperial's four **Schools of Convergence Science** will boost our portfolio of taught Master's programmes.

We will transform Imperial's digital education infrastructure, including our **Digital Media Lab** and Virtual Learning Environment, and build on new initiatives such as ViRSE to incorporate virtual reality and other digital technologies into our teaching.

We will make major investments in our physical infrastructure, including the development of the Sherfield Student Hub, upgrades at our **Silwood Park eco-campus** and our London NHS clinical campuses.

We will deliver the next phase of our **White City Deep Tech Campus**, including a major new interdisciplinary centre co-locating mathematical, data and computer sciences, AI and machine learning, and business education, with new state-of-the-art research facilities for convergence science and co-created industry research and partnerships.

We will review and further invest in our student residential, sports and recreation portfolio, and roll out our new whole-institution **Mental Health and Wellbeing Strategy**.

Together, these plans will ensure that the **Imperial Class of 2030** has the freedom to imagine, the encouragement to challenge and an environment to flourish in.

"Every year, our talented and highly-skilled graduates move around the world into careers in and beyond STEMB – this is the principal means by which Imperial makes its global impact."

***Professor Peter Haynes**, Vice-Provost (Education and Student Experience)*

Right: Imperial alumnus and health tech entrepreneur Stilliyana Minkovska is the founder of Matrix, the self-use cervical assessment tool that took the top prize at WE Innovate in 2023.

Opportunities for student entrepreneurs

Our **Enterprise Lab** supports more than 2,000 students each year with mentoring, access to experts in residence, development workshops and more. The goal is to develop their entrepreneurial mindset, skills and networks, help them test new ideas and launch products, services and ventures that address real-world problems.

The **Venture Catalyst Challenge** is our most prestigious entrepreneurship prize, each year supporting 25 student and postdoc ventures under five themes: Health and Wellbeing, Energy and Environment, Creative and Consumer, AI and Robotics, and Digital and Finance. The programme sees student teams pitch their ideas to a panel of industry leaders for a chance to win a share of the £100,000 prize fund – the biggest such fund of any UK-based university entrepreneurship competition. Previous participants have gone on to gain global recognition and raise significant funding, including the founders of Notpla who won the Earthshot prize for their seaweed-based biodegradable alternative to plastic. Notpla was co-founded by Imperial students who met while studying Innovation Design Engineering, a joint course by Imperial and the Royal College of Art.

The **WE Innovate** programme recognises up to 25 outstanding women-led startups from Imperial every year. It is the first university programme of its type in the UK. The programme has an annual prize fund, with many teams going on to raise significant venture funding post-competition, including Matrix, the startup developing a self-use cervical screening tool and diagnosis device supported by AI.

Dr Johan Pauwels, Research Fellow in Immersive Audio, working on Audio Experience Design in the Thunderdome Lab at the South Kensington Campus.

Imperial Empowers

Advanced skills for a tech-enabled future
Imperial Institute of Extended Learning

Our goal: We will help to future-proof careers, businesses and communities by providing the advanced skills training and values-driven leadership needed to thrive in a tech-enabled world.

Now: For more than a century, Imperial's evolving research-rich educational programmes have inspired, stretched and encouraged many of the world's STEMB leaders. In the last ten years, they have grown to include many exciting new interdisciplinary programmes in response to scientific advances, the emergence of new global challenges and changing workplace skills needs. Our graduates have long been sought after for their talent, solution-focused mindset and track record of creating innovations of real significance.

Next: If humanity is to thrive in a science- and tech-driven world, places of higher learning must act with speed, agility and foresight. That is why we will expand beyond degree programmes to offer flexible and lifelong advanced STEMB training through the establishment of a new **Imperial Institute of Extended Learning**. The Institute will leverage the disciplinary excellence within our academic departments and the unparalleled interdisciplinary capacity within our new **Schools of Convergence Science** (page 28), to provide advanced skills training for individuals, businesses, governments and other knowledge organisations.

For individual learners, Imperial's cutting edge short courses will be used to unlock new career opportunities or stacked over time to achieve a formal degree award. For knowledge organisations, we will work with them to customise STEMB-led short courses and leadership programmes to meet their skills and business development needs. For both individuals and businesses, the **Imperial Institute of Extended Learning** will build on our position at the forefront of STEMB to ensure participants are equipped with the knowledge, skills and leadership capability to grasp new opportunities in rapidly advancing fields such as AI, cleantech, deep tech, quantum, engineering biology and climate science.

The **Imperial Institute of Extended Learning** will reinforce Imperial's role as a world-changing university that's as future-ready as our learners.

"The **Imperial Institute of Extended Learning** is our response to the rapid pace of global change and will equip people everywhere and at every life stage with the agility, knowledge and insight to first prepare for the future, and then shape it."

***Leila Guerra**, Associate Provost (Digital Lifelong Learning)*

Custom Sustainability Programme with Bain & Company

Imperial partnered with consulting firm Bain & Company to roll out an Environmental, Social and Governance (ESG) training programme across the company's global network. It was thoughtfully designed by academic experts from **Imperial's Business School**, **Grantham Institute** and **Centre for Environmental Policy** together with leaders from Bain's own sustainability practice. Aligning with the firm's commitment to integrate and elevate ESG in all client work, the partnership highlights the urgency of ESG competence in business leadership and equips professionals with the training they need to steer clients towards a more sustainable future.

Right: Jim McCloskey presenting the Global Skills Development programme at Imperial's Business School at the South Kensington Campus.

Imperial Innovates

Deep tech entrepreneurship for next generation businesses
Science Capital Imperial

Our goal: We will scale up our world-class innovation ecosystem for world-changing impact.

Now: We pride ourselves on our startup culture at Imperial, nurturing the supportive and interdisciplinary environment that science entrepreneurs need to thrive. That enabling environment includes Imperial's Enterprise Lab, our Institute for Deep Tech Entrepreneurship and our network of hackspaces, incubators and accelerators. Our network of business angels supports our students and staff as they turn their ideas into prototypes, their prototypes into startups, their startups into scaleups, and their scaleups into world-changing businesses.

Next: We have reshaped our spinout formation process, **Imperial Founders Choice**, which offers both entrepreneurs and investors clear, fair and competitive rewards.

The next phase of our **White City Deep Tech Campus** will allow us to increase our capacity to host more startups, scaleups, and industry partners and co-locate with other knowledge organisations. The development of the **Imperial WestTech Corridor** (page 32), in partnership with local and national government, our NHS partners and business community, will create the kind of vibrant innovation ecosystem required to compete for major international investment.

With support from alumni and investors, we will establish **Science Capital Imperial**, a new venture fund to provide Imperial's entrepreneurs access to capital and proof-of-concept funding to realise the full potential of their businesses. And through our new **Imperial Global** network, we will access and engage other innovation ecosystems around the world (page 24).

Together, these complementary efforts will see Imperial grow more high-impact enterprises, serve as a trusted partner for industry, and act as a powerful catalyst for UK economic growth.

"Science Capital Imperial is a natural next step in our work to make Imperial a global centre of gravity for scientific innovation and entrepreneurship. It will fuel experimentation and enable Imperial's visionaries to turn their big ideas into trailblazing companies that will drive progress."

***Professor Ian Walmsley**, Provost*

Startup success at Imperial

→ Co-founded by an Imperial student, **Improbable** pioneers new ways to connect, play, create and build value across interconnected virtual worlds.

→ Co-founded by an Imperial student, **Tractable** uses computer vision and deep learning to speed up the time taken to process motor insurance claims, by automating the appraisal of visual damage.

→ Co-founded by an Imperial academic, **PsiQuantum** is a quantum computer company aiming to build the world's first commercially viable one million qubit quantum computer.

→ Founded by Imperial academics, **Ceres Power** grew from an Imperial spinout founded to develop fuel cell research and was named the UK's most valuable clean technology company.

→ Founded by Imperial students, **Magic Pony Technology** was an AI startup using machine learning to build improved systems for visual processing. It was acquired by X, formerly Twitter, to enhance the social media company's live and video offerings.

→ Imperial spinout **Nexeon** is a global leader in silicon anode material development for lithium-ion batteries, and is set to make a major contribution to the future of rechargeable battery technology.

→ Founded by an Imperial Master's student, **Koalaa** has developed a range of soft prosthetic limbs that are light, comfortable and suitable even for very young children.

Innovation network

Enterprise Lab is a dedicated support service for thousands of students, staff and alumni who have an idea they believe in, and the drive to turn it into a reality.

Advanced Hackspace brings together inventive minds from all backgrounds, disciplines and levels of expertise to collaborate, experiment and prototype the future.

Imperial White City Incubator is a state-of-the-art wet lab incubation space and training facility to help startup companies. It welcomes spinouts and non-Imperial ventures in order to maximise innovation and collaboration. Since 2006, Imperial's incubator companies have raised over £1bn in investment and grant funding.

Undaunted is a partnership between Imperial and the Royal Institution to create new routes into climate entrepreneurship. It is a founding member of Cleantech for UK, a coalition of investors and venture builders launched at Imperial by Bill Gates and Rishi Sunak in February 2023.

DTPrime is backed by the Institute for Deep Tech Entrepreneurship and helps Imperial staff take their science- and engineering-intensive commercial ideas to 'cross the chasm' from commercial concepts to high-value, investable propositions.

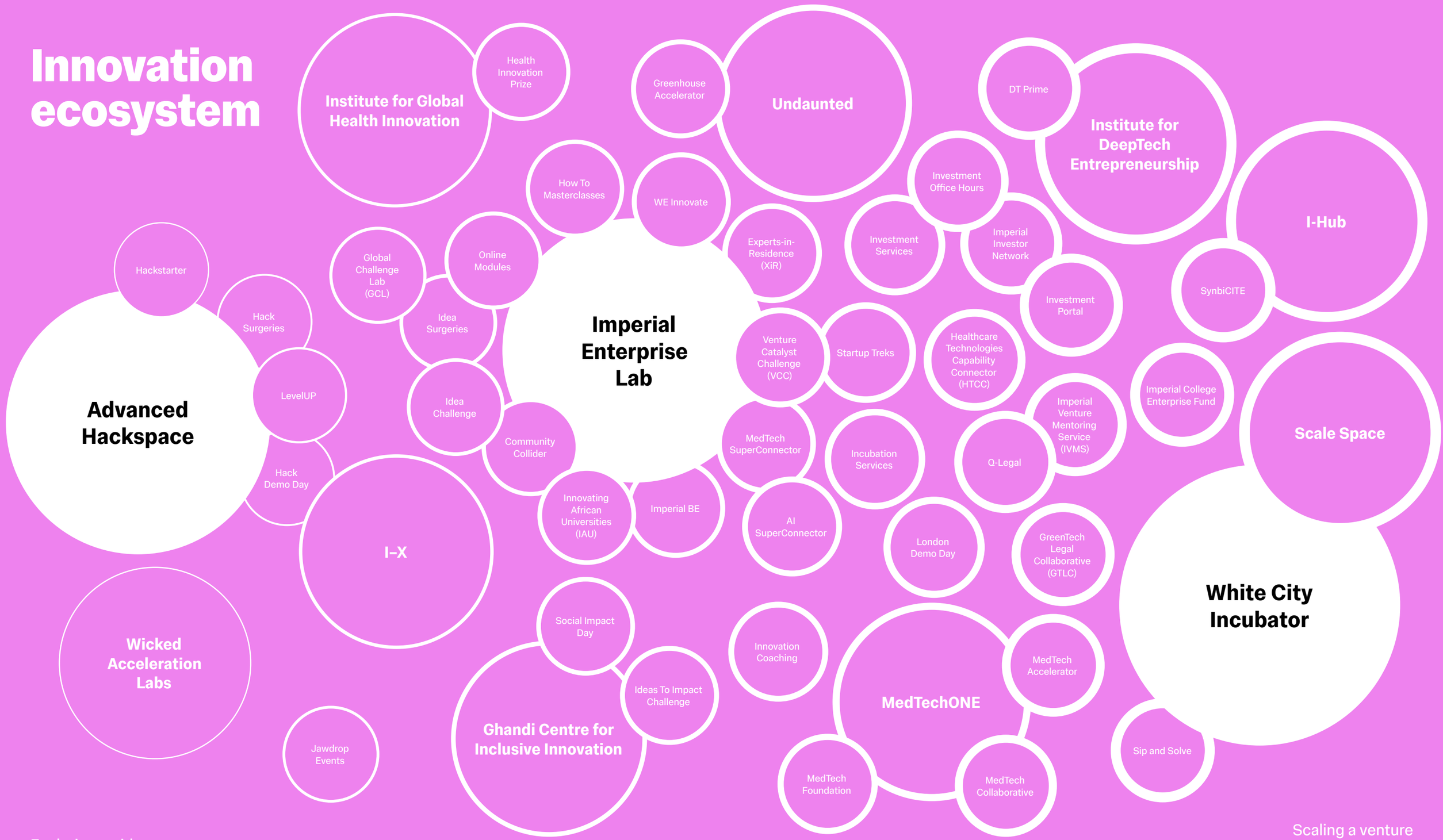
MedtechONE is a centre of excellence to support MedTech entrepreneurs across Imperial.

MedTech SuperConnector empowers early-career researchers to translate academic insights from the arts and sciences into early-stage medical technologies.

AI SuperConnector is here to find and support the next generation of UK-based AI startups.

See Imperial's innovation ecosystem on the next page.

Innovation ecosystem



Exploring an idea

Scaling a venture

Imperial Talent

Attracting and nurturing the next generation of leaders
Imperial Future Leaders Academy

Our goal: Imperial will provide sector-leading opportunities for early-career STEMB staff, from first year PhD students and postdoctoral fellows to those taking on their first position in academia, industry or policy.

Now: We prioritise the career development of all our staff through a number of initiatives, including the Technician Commitment, the Postdoc and Fellows Development Centre, the Career Development Skills offer, the People and Organisational Development Team, and the Academic Leadership Development Programme. Our academic, professional, technical and operational leaders work in partnership to create and sustain an environment of high-quality teaching, research and impact.

Today, the pace of change in our workplaces and our world is driving changes in how Imperial supports and develops people in their careers here. Some of the most notable developments we're responding to include hybrid working, the mainstreaming of new technologies and AI, the importance of interdisciplinarity and multiprofessional teamwork to leading science, the increasing internationalisation of scientific research, and the need to promote and support non-linear career paths with movement between academia, industry and other knowledge sectors.

Next: The new **Imperial Future Leaders Academy** will bring together Imperial's skilled organisational development professionals with academic and external experts to create a new suite of innovative academic management and leadership development programmes for our early-career staff. They will receive training in how to lead high-performing, and increasingly multi-site and multinational teams, as well as operational, finance and risk management skills. Core to its mission, the **Imperial Future Leaders Academy** will foster a dynamic, supportive and stretching environment that spans disciplines, fosters teamwork and encourages personal and professional growth.

The **Imperial Future Leaders Academy** will integrate the development opportunities we provide PhD students through to postdoctoral fellows and increase their awareness of the full range of fulfilling career options available to STEMB talent, including academic, policy, advisory, industry, media and regulatory.

Imperial will begin a major recruitment drive, the **Imperial Future Leaders Campaign**, to further boost our capabilities in priority research areas. Working with our academic departments and linked to our four new **Schools of Convergence Science**, we will collaborate with partners to develop new opportunities for top early-career talent to do more to address the grand challenges facing humanity and our planet.

Top: A second year Ecology student on an Ecosystem Boundaries field course at the Silwood Park eco-Campus.

"People make this place. Our focus is on inviting the brightest minds and most exciting researchers to the Imperial family, and ensuring they find a supportive culture of belonging and development when they get here."

***Harbhajan Brar**, Director of Human Resources*

Supporting early-career researchers

Imperial's **Centre for Quantum Engineering, Science and Technology (QuEST)** is collaborating with central specialist support teams including the **Postdoctoral Fellows Development Centre**, **Imperial Policy Forum** and **Enterprise Division** to bring new approaches to upskilling its early-career researchers. From Imperial Policy Forum Workshops and visits to Parliament to better understand how to inform policy making, to entrepreneurship masterclasses to move ideas to the scale up phase for a quantum-enabled economy, and seed funding and support to enable early-career researchers to make competitive independent funding proposals. These new approaches have inspired us to be even more ambitious in our work to raise the quality of career development support for all those researchers who are just starting out.

Left: Imperial Enterprise Lab at the South Kensington Campus.
Right: Carbon Capture Pilot Plant at the South Kensington Campus.

Imperial Global

Greater global collaboration to meet global grand challenges
Imperial Global

Our goal: We will be a convenor, collaborator and partner of choice to facilitate the flow of ideas, talent and innovation to tackle grand global challenges.

Now: We are proud to be one of the world's most international universities. Our global collaborations, discoveries and networks are transforming lives and creating opportunity in the UK and around the world. Our global community brings people together to contribute diverse perspectives, new ideas and fresh approaches to solving complex problems. Our global network of alumni, friends and collaborators amplify our reach and impact.

International collaboration is in Imperial's DNA and at the core of our research: our academics have forged research collaborations in over 190 countries. We enjoy strong bilateral research partnerships with universities and institutes including Technical University of Munich, Nanyang Technological University, Massachusetts Institute of Technology, African Institute for Mathematical Sciences, Indian Institute of Science Bangalore, Tsinghua University and Centre National de la Recherche Scientifique.

Next: Imperial Global will bring even more of our work to the world, and more of the world to our work, amplifying our impact through a network of hubs in strategic global cities. This network will demonstrate our commitment to building long-term collaborations with a diverse range of partners and stakeholders, foster new high-impact partnerships with industry, government and knowledge organisations, and give us the opportunity to develop deeper links with our alumni.

Our first hubs will be in Singapore, Ghana, the USA and India. They will share characteristics that draw on Imperial's unique strengths but have different activity profiles that build on existing partnerships and local needs and opportunities.

Imperial Global Singapore is a new presence on Singapore's CREATE campus initially exploring the cyber security of medical devices. It will allow us to develop significant new research and translation programmes with partners across South East Asia, and support recruitment and career development activities.

Imperial Global Ghana builds on established partnerships in medical diagnostics, sustainable cities and entrepreneurship training. It will be a knowledge hub that develops major programmes across West Africa to increase the number, quality and impact of equitable STEMB partnerships with African stakeholders. It underlines our commitment to building long-term, equitable partnerships on the Continent.

Imperial Global USA will strengthen our research partnerships with US academic and industrial partners and support our growing US alumni network and student recruitment opportunities.

Imperial Global India will build Imperial's profile and partnerships in an emerging scientific and industrial superpower. The hub will strengthen the important UK-India knowledge bridge to enable STEMB talent to drive forward research, education and innovation in key areas including clean technology, fintech and biosciences.

Imperial Global will enhance our academic partnerships, access to talent, enterprise and engagement. Most importantly, it will become a core part of our efforts to apply science for the good of humanity.

Right: Professor Robin Shattock, Chair in Mucosal Infection and Immunity at the St Mary's Hospital Campus.

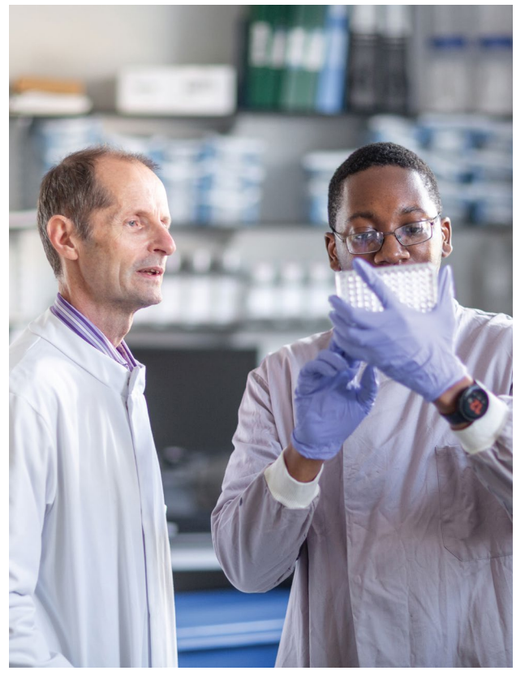
"There is a critical need for local capacity to rapidly respond to known and unknown threats in key areas like infectious disease. The **Imperial Global** network will bring us closer to the people, partners and potential solutions. This includes the critical area of vaccine access where a Ghana centre can support our major Africa-led Chanjo Hub to accelerate global access to vaccinations and treatments."

***Professor Faith Osier**, Chair, Immunology and Vaccinology*

Equitable vaccine access and development

Nearly one in five infants across the world does not have access to vaccines, and almost one third of deaths among children under five could be prevented through the use of vaccines. Imperial is leading two major vaccine manufacturing hubs to develop new technologies that can be quickly, easily and affordably manufactured in the places most vulnerable to infectious disease.

The **Chanjo Hub** is an African-led collaboration designed to catalyze local research and innovation ecosystems in Kenya and Ghana in order to deliver vaccines for endemic and epidemic diseases in the region. The **Future Vaccine Manufacturing Research Hub** is focused on disruptive technology that allows developing countries to produce tailored vaccines within 100 days of an identified outbreak or threat. Novel manufacturing programmes are currently being developed with partners in Vietnam, Bangladesh and South Africa.



Imperial Global

Imperial is proud to work with over 10,000 partner institutions across 192 countries. The partners highlighted are examples of where we have cross-faculty strategic collaboration agreements in place. The Imperial Global Network will facilitate the development of more and deeper partnerships across the world.

London

Centre National de la Recherche Scientifique (CNRS)

Technical University of Munich (TUM)

Massachusetts Institute of Technology (MIT)

USA

Ghana

University of Sao Paolo

African Institute of Mathematical Sciences (AIMS)

University of Ghana

Tsinghua University

University of Tokyo

Tokyo Institute of Technology

India

Indian Institute of Science (Bangalore)

Singapore

Nanyang Technological University (NTU)

Imperial Futures

Convergence science of unprecedented scale for unprecedented 21st century challenges

Four new Schools of Convergence Science

Our goal: To create a new paradigm for scientific exploration where the integration of disciplines, convening of cross-sectoral partnerships and harnessing of new models of research stimulate innovation and lead to scientific progress.

Now: Imperial's multidisciplinary Centres and Networks of Excellence galvanise a critical mass of researchers across disciplines to answer a challenge. Our Global Challenge Institutes have driven multidisciplinary approaches, engaged our external partners and strengthened the impact of our research. Our newest Centre for Sectoral Economic Performance – a joint initiative between Imperial's Faculty of Engineering and Business School – will focus on productivity within the UK's existing and emerging high-value industries across engineering, life sciences, and data science.

Imperial has a long history of pioneering interdisciplinary research in new fields. Our Department for Biomedical Engineering in the Sir Michael Uren Hub at our White City Campus integrates engineering and biomedical sciences with clinical practice to improve human health. The Dyson School of Design Engineering fuses design thinking and engineering knowledge and practice within a culture of innovation to help solve global problems with an emphasis on sustainability, entrepreneurship and societal impact.

Next: Over the next two years, Imperial will launch four cross-cutting **Schools of Convergence Science** that build on our disciplinary strengths and interdisciplinary culture to create deeply integrated research communities at unprecedented scale to deliver societal impact in key areas:

- → Human and artificial intelligence;
- → Health, MedTech and robotics;
- → Climate, energy and sustainability; and
- → Space, security and telecommunications.

These **Schools of Convergence Science** will provide a new portal for external partners, supporters and stakeholders, including more effective routes to Imperial's research, education and innovation. They will amplify Imperial's convening power, advisory and thought leadership – boosting our capacity to serve as a trusted partner for local and national governments, industry, third sector organisations and civil society. They will provide a sandpit for brainstorming, co-creation and hosting large interdisciplinary research programmes. They will adapt, develop and trial new models of scientific exploration.

The new Schools will provide our PhD students with unparalleled opportunities for convergence science to complement the support they receive in their host departments. And they will act as a useful lens through which to horizon-scan the educational landscape for new opportunities for future skills and training needs.

Building deep collaborations with internal and external stakeholders, each new School will work closely with industry and other knowledge partners, and with university and private sector accelerators, to build high-velocity, high-impact pathways from the lab to the real world.

"Imperial Futures will enable breakthroughs by convergence and systems approaches – imagining and creating the kind of world that future global citizens need: sustainable, resilient, healthy, equitable."

***Professor Mary Ryan**, Vice-Provost (Research and Enterprise)*

AI at Imperial

Artificial intelligence (AI) technologies are ushering in a transformative era, offering unparalleled potential to reshape industries and society. Imperial has the combined power of over 1,000 researchers across all our faculties and disciplines working to accelerate the safe and productive development and deployment of AI.

Imperial's **Data Science Institute** provides foundational expertise in data science and engineering. Our new digital foundry **I-X** is driving transformations in AI, data science and digital technologies to address interdisciplinary challenges and support novel industrial collaborations, and is part of the Schmidt Futures Fellowship programme supporting the next generation of leaders in AI.

Imperial is leading the development of the next generation of AI skills through our two **Centres for Doctoral Training (AI for Health; and AI for Digital Healthcare)** and half the Directors of Science and Innovation at the UK's national institute for data science and AI, the Alan Turing Institute, will be from Imperial.

Our AI ecosystem is strengthened by research collaborations with industry leaders such as GSK, Thomson Reuters and Amazon Web Services and supports AI-based startups across a range of sectors including healthcare and drug discovery, energy systems, autonomous vehicles, financial services and education technologies.

Additionally, our **Science Policy Fellowship** scheme brings policy makers working on AI across government together with the deep technical and regulatory expertise of our researchers.

Left: Michelle Kostin, fourth year Mechanical Engineering student, working on tyre particle capture research at the South Kensington Campus.
Right: Undergraduate students on an expedition to trek unsupported across Crete.

Imperial WestTech Corridor

Become a catalyst for investment, jobs and inclusive growth
Imperial WestTech Corridor

Our goal: We will convene a unique set of innovation assets to create a vibrant new ecosystem of globally competitive scale that is a powerful engine for investment, inclusive economic growth and job creation.

Now: Our South Kensington Campus is home to world-leading Faculties of Engineering and Natural Sciences, and a magnet for top global research talent. Imperial's Faculty of Medicine, created just 26 years ago, has brought together some of London's world-renowned medical institutions and NHS campuses to create a global powerhouse ranked amongst the best in the world for medical and public health research. Imperial's Business School has strategically positioned itself at the interface of STEM and business education and research, challenging old paradigms to imagine a thriving, equitable and sustainable business future. And our Silwood Park eco-campus is at the forefront of biodiversity science and policy.

With the rapid development of our new **White City Deep Tech Campus**, we have been able to create interdisciplinary research programmes of scale in areas such as AI, molecular sciences, medtech, engineering biology and climate science located alongside a growing ecosystem of incubators, accelerators, startups, scaleups, and industry partnerships. The next phase of development will see further expansion in mathematics, data and computer sciences, AI and machine learning and business. It is the anchor of a larger regeneration project and innovation ecosystem in the London Borough of Hammersmith and Fulham – the White City Innovation District – demonstrating how a university can work in partnership with its surrounding community.

Next: The **Imperial WestTech Corridor** will position Imperial as the engine at the heart of a thriving innovation ecosystem. It represents a shared goal to create both a world-leading hub for innovation, entrepreneurship and technological advancement, and a global beacon of scientific imagination.

And West London has all the characteristics needed to deliver a globally competitive innovation ecosystem. These include exceptional anchor research institutions, a diverse and productive population, access to investment capital, high-quality existing and planned infrastructure including major transport links, and a political environment that supports planned urban development and inclusive growth.

Unlocking the potential of the **Imperial WestTech Corridor** will require a collective strategy involving the widest range of stakeholders. And its success will be a model for urban transformation and economic growth all over the world.

This defining opportunity will not be realised by Imperial alone. Collaboration of this scale requires an ambitious convener to demonstrate commitment and impact – and that convener is Imperial.

The Corridor will capitalise on five major innovation assets:

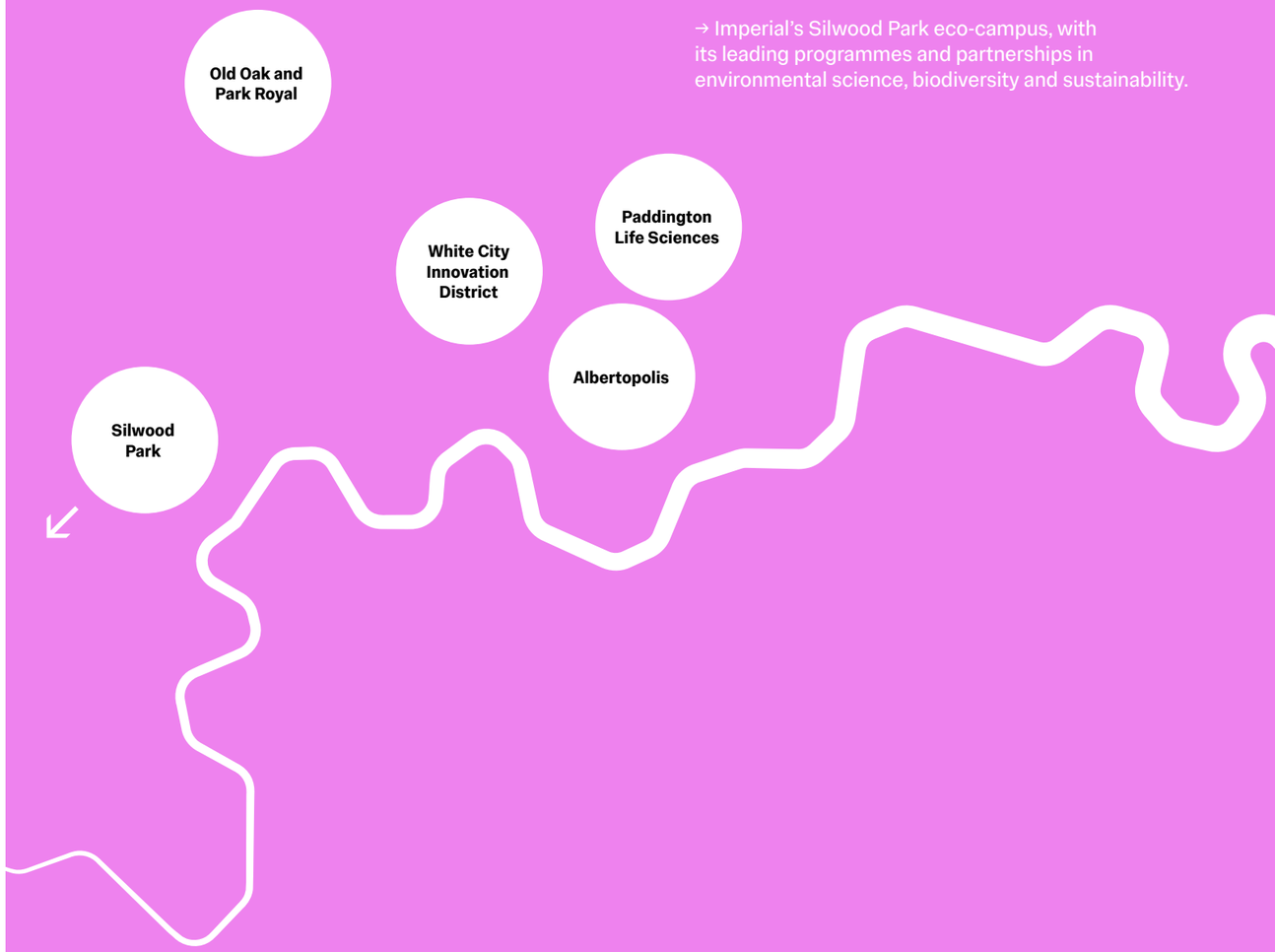
→ Albertopolis, home to Imperial's South Kensington Campus and many of London's leading arts, cultural and scientific institutions, museums and galleries.

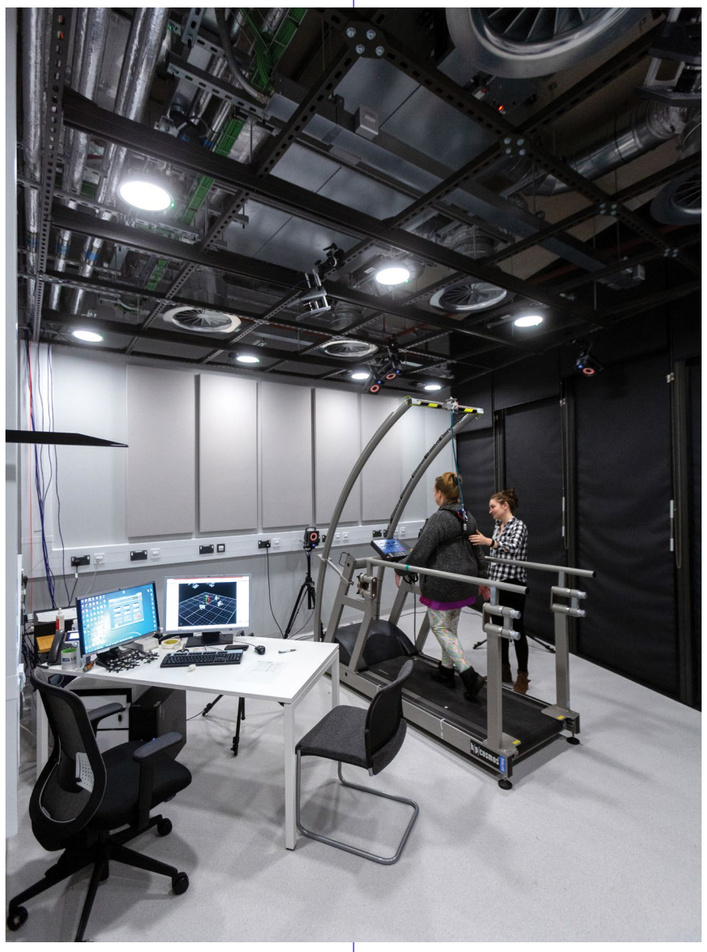
→ The rapidly growing Paddington Life Sciences innovation cluster centred around Imperial's St Mary's Hospital Campus.

→ The White City Innovation District, host to Imperial's White City Deep Tech Campus and Hammersmith Hospital Health Sciences Campus.

→ Old Oak and Park Royal, designated as one of London's largest development zones and the planned home to London's largest rail and tube transport hub.

→ Imperial's Silwood Park eco-campus, with its leading programmes and partnerships in environmental science, biodiversity and sustainability.





Left: Dr Amy Masilvec, Research Associate, in the Musculoskeletal Lab (MSk Lab) at the White City Deep Tech Campus.
Right: Dianna Nguyen, Technician, in the Agilent Measurement Suite at the Molecular Sciences Research Hub at the White City Deep Tech Campus.

Sustainable Imperial

Towards net zero and further
Sustainable Imperial

Our goal: We will set a global benchmark for university sustainability, nurturing graduates who understand and advocate for climate science, supporting our researchers to investigate and respond to planetary challenges and leading by example in our activities and on our campuses.

Now: Few issues unite our Imperial community with such determination and urgency as our desire to address the interlinked existential challenges of climate change, biodiversity loss and pollution.

Imperial offers a wide variety of education programmes in climate-related science, finance, technologies and policy. Our research portfolio is among the strongest in the world. Through our partnerships, including the Rio Tinto Centre for Future Materials, the Tata Steel Centre for Innovation in Sustainable Design and Manufacturing and the Hitachi Centre for Decarbonisation and Natural Climate Solutions, we are using our expertise and research to accelerate a sustainable transformation for industry and society.

Imperial experts are working with governments, industry and civil society to advocate for urgent change, including Professor Jim Skea, Professor in Sustainable Energy at Imperial and the current chair of the UN's Intergovernmental Panel on Climate Change.

Next: By 2025, **Sustainable Imperial** will be established as an Imperial-wide strategy to deliver evidence-based solutions, embrace new technologies, challenge conventional thinking and open new debate in our efforts to solve this growing global crisis.

The **Imperial Class of 2030** programme (page 10) will equip all our graduates with the climate science literacy to advocate, influence and lead in the fight against climate change and its impacts. The **Imperial Institute of Extended Learning** will equip individuals and businesses with the skills and business models needed to deploy new technologies towards a net zero future.

With a focus on climate, sustainability and resilience, one of our new **Schools of Convergence Science** (page 28) will create a new portal to Imperial expertise and a research community of formidable scale to imagine and test new approaches, technologies and solutions. And we will make our climate expertise accessible to a wider community of global policy makers by providing on-campus deep-dive climate Science Policy Fellowships.

The new **Imperial Zero Index**, along with our Socially Responsible Investment Policy, will allow us to pursue an 'engagement for change' ethos with fossil fuel companies – only engaging where our research is strongly aligned to decarbonisation and if our partner demonstrates a credible strategic commitment to achieving net zero by 2050.

We will make huge investments to transform our campuses and working practices. The university's **Decarbonisation Plan** is a comprehensive roadmap to reach net zero for Scope 1 and 2 emissions by 2040 at the latest. Alongside this our **Sustainable Procurement Policy** will enable us to minimise our Scope 3 emissions in collaboration with our suppliers.

Sustainable Imperial is a remarkable opportunity for the university to live its commitment to environmental sustainability and responsible climate governance within, and far beyond, our campus.

Right: Dr Cristina Banks-Leite, Senior Lecturer in the Faculty of Natural Sciences at Silwood Park, Imperial's eco-campus.

Grantham Institute

Supported by the Grantham Foundation for the Protection of the Environment, the Grantham Institute at Imperial is a leading authority on climate and environmental science, and a global centre of excellence for research and education on climate change. The Grantham Institute moves the world towards effective action on climate change and the environment by advancing discovery, converting innovations into applications, training future leaders and communicating academic knowledge to businesses, industry and policymakers.

"We will deliver evidence-based solutions, embrace new technologies, challenge conventional thinking and open new debate, driven by our commitment to solving the urgent and complex challenges facing our planet."

***Professor Nigel Brandon**, Chair, Imperial Sustainability Committee*

Left: Dr Shelly Conroy working on the Spectra 300 Scanning Transmission Electron Microscope at the South Kensington Campus.

"This strategy harnesses Imperial's mission to understand the natural world and to use that understanding to improve the world. It builds on our academic excellence to accelerate toward new discoveries, invent new technologies, develop new skills, bridge even more widely across disciplines and expand access to everyone.

It positions us to address the challenges of realising a sustainable, healthy, intelligent, and resilient future for humanity. We will continue to engage people across the world, inspiring their imagination with the possibilities that science offers, and we will seek to drive new ideas into transformative impact. This is our great opportunity, and Imperial's great strength."

***Professor Ian Walmsley**, Provost*

Thank you
The plans laid out here are the result of a comprehensive consultation period, and together reflect the purpose and priorities of staff, students, alumni and many other valued members of the Imperial community. We thank everyone who contributed their energy, ideas and ambition to this process. We look forward to the journey to 2030 and beyond.

www.imperial.ac.uk

Left: An aerial view of the South Kensington Campus.

Imperial College London