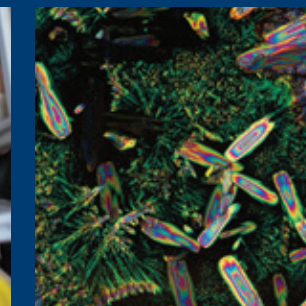


Imperial College
London



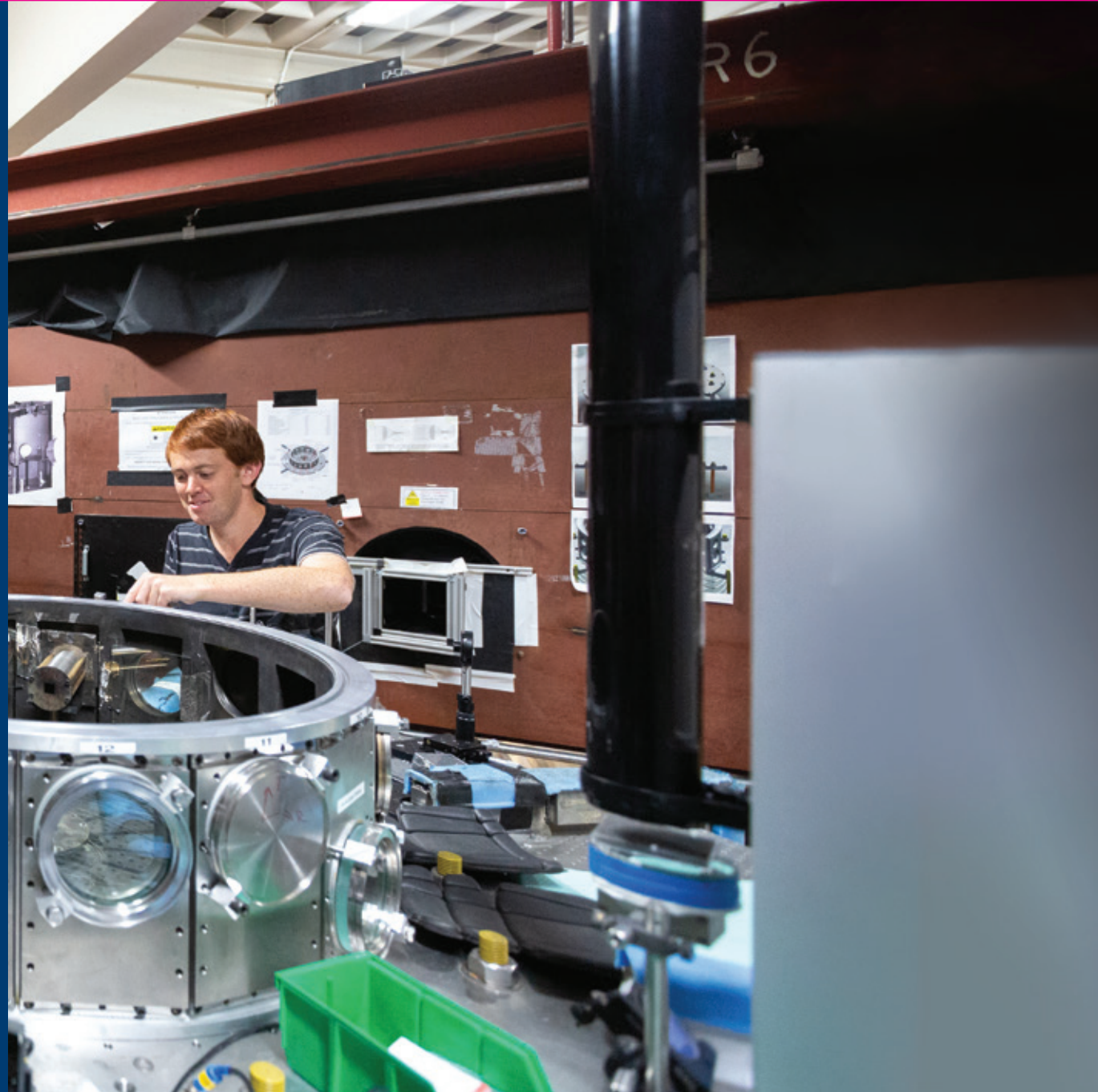
ACADEMIC STRATEGY

2020–2025

For more information:

www.imperial.ac.uk/academic-strategy
academicstrategy@imperial.ac.uk

www.imperial.ac.uk/academic-strategy



FOREWORD

Imperial College London continues to push the frontiers in world leading research, life changing education and transformative innovation. Our community works collaboratively to solve the big scientific questions of our time.

Imperial's mission is to discover new knowledge and to make use of it. We use our deep understanding of the world to address some of its most pressing challenges and identify new opportunities to improve it.

Our Academic Strategy will help us realise our ambition to deliver transformative impact for societal benefit on a global scale. It draws on our ground-breaking fundamental research and ability to develop new insights to enable sustainable change and improve our world. It sets out our vision for an improved student experience that will prepare our students to be leaders, to innovate and drive change.

Imperial is, and will continue to be, the place for authoritative thinking, innovative teaching, creative ideas and bold action. We seek to collaborate with external partners, whose expertise, skills, advice and resources complement our own. Together we can realise the full potential of our distinctive capabilities and the impact that they can have on the world.

Professor Ian Walmsley FRS,
Provost, Imperial College London



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We seek to understand the world and to use that understanding to help meet global challenges. Imperial can drive this agenda with its own community's research and by educating future generations of creative and knowledgeable scientists, engineers and medics.



OUR VISION

Our Academic Strategy identifies areas which are fruitful for new discovery and new impact. These could open doors to new technologies and enable applications that could have major impact and societal benefit, or offer new educational experiences at the same time improving the environment for learning, in its broadest sense, for our students.

It is based on themes that have emerged as common strengths and areas of interest across the College as well as capabilities that will enable our approach. These will drive research, education and innovation that both respond to new opportunities to discover more about the natural world, and address clear societal challenges, with human, physical and economic impact. It identifies areas of strategic priority for our immediate attention, whilst we continue to deliver and invest in core college activities.

This shared College vision will enable us to work together at scale across disciplines, departments and faculties, providing a cohesive direction for the College to focus its activity, build partnerships and uncover new opportunities, and drive discovery and impact. We will foster a supportive, collaborative and inclusive community for our staff and students to achieve our ambitions.

Realising our vision will require partnerships beyond the College itself. We want to contribute to making the world a better place through our research, education and innovation and we want you to join us to help make that happen.



Imperial College has the country's largest carbon capture and storage (CCS) research programme. The college-wide research effort aims at an integrated approach to carbon capture, transport and geological storage

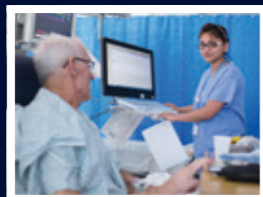
OUR THEMES

We have identified four themes which bring together research, education and translation activity across our faculties. These themes identify areas of current excellence and emerging intellectual focus, as well as areas of opportunity to build new strengths.



Sustainable Society

We are helping society to become more sustainable by transforming manufacturing, attitudes to consumption and economic practices.



Healthy Society

We are innovating new technologies and strategies to improve health services and support the prevention, diagnosis and treatment of disease by converging science disciplines and integrating them with clinical and public health practices.



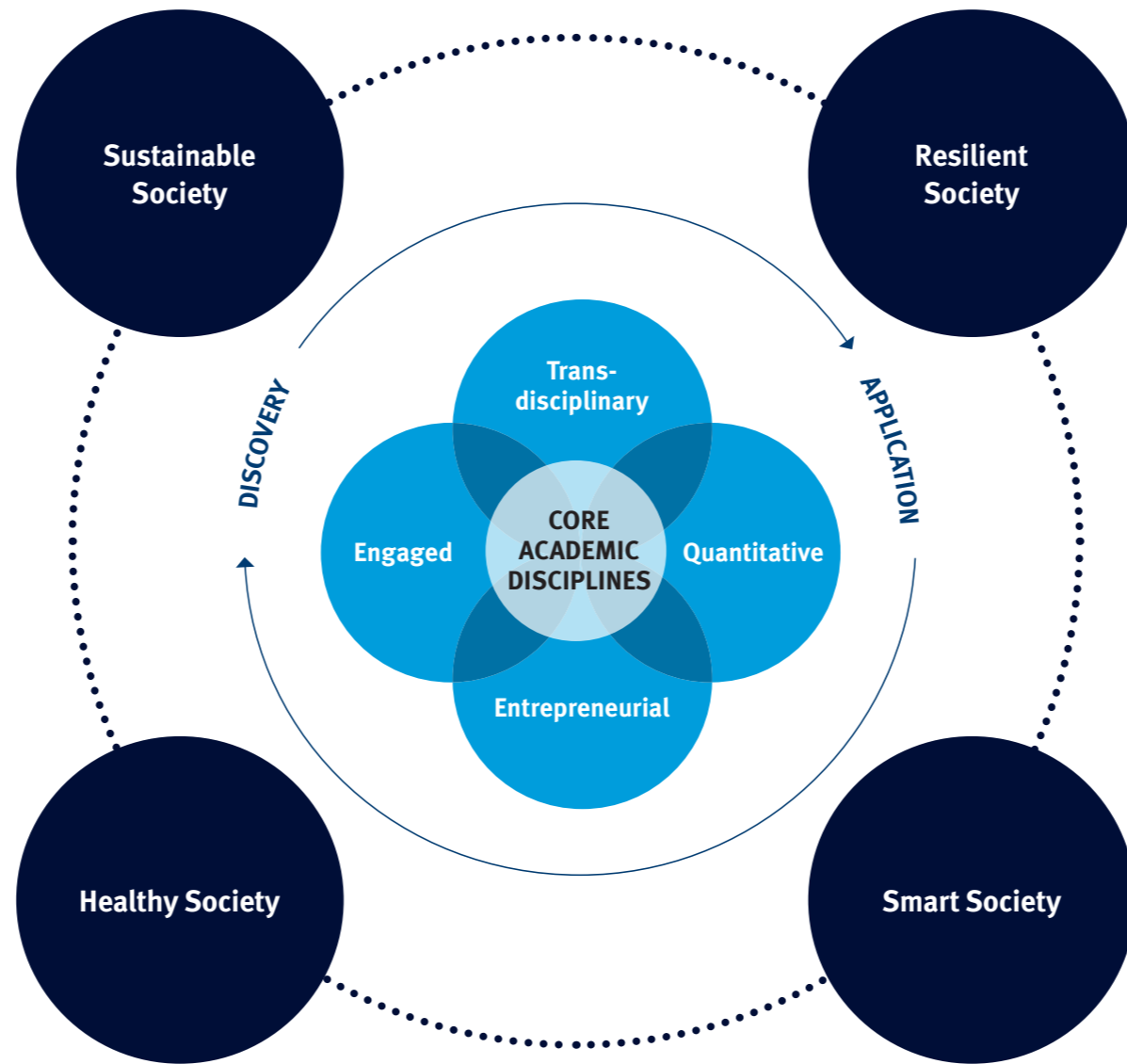
Smart Society

We are enabling discoveries and developing new technologies in artificial intelligence, machine learning, statistics, data sciences and robotics, and helping to better understand how they will transform lives, environments and present new challenges to the world of work.



Resilient Society

We are developing understanding and technologies to enable stable and robust infrastructures that underpin the delivery of services – from water, fuel and power, to data, communications and the banking system – to make our society resilient.



Our four themes intersect and build upon our core academic disciplines and capabilities

OUR CAPABILITIES

Our capabilities reflect particular strengths that enable our excellence in research, education and translation. Together, our four capabilities make us unique within the UK and position us to be able to make a distinctive contribution to the strategic themes which we have chosen to focus on. Whilst our strategic themes may change over time, our capabilities reflect the distinctive characteristics that are the enduring bedrock of what we do.



Transdisciplinary

We work across disciplines, sharing ideas and expertise, to understand and change the world. Many of today's scientific questions demand a range of perspectives and skills from multiple different areas.



Quantitative

We bring a quantitative approach to our work, embracing the possibilities of data and sophisticated statistical approaches. Our expertise in quantitative approaches is used together with qualitative inquiry to inform a holistic approach to discovery and application.



Entrepreneurial

We translate ideas into new products, services and companies, including contributing to industry and the economy.



Engaged

We collaborate with communities, stakeholders, governments and industry locally, nationally and internationally to ensure that our work is relevant, timely, and accessible.

Dr Wayne Mitchell (Senior Teaching Fellow) runs the Mastering laboratory skills programme that offers a two-week intensive opportunity to train and learn essential molecular and cellular biological laboratory techniques in world class facilities within the Faculty of Medicine at Imperial



STUDENT EXPERIENCE

Our focus on science, engineering, medicine and business provides an educational environment which is unique in the UK. Our students learn alongside leading experts, actively engaging with research and discovery in their chosen field.

Our education offering is research and evidence based, enabling students to become independent learners, developing highly applicable skills and attributes, with the curiosity and drive to continue learning throughout their lives. The education experience is enhanced by technology and provides opportunities for multidisciplinary working as well as collaboration in research, education, enterprise, engagement and outreach.

We aim to provide students with a high-quality experience that is inclusive, outward looking and responsive to a diverse student body, where all students can thrive. Our students are part of our academic community and collaborations with staff lead to an exchange of ideas and engagement that lasts a lifetime.

ENGAGING



We will be welcoming and inclusive to attract a diverse body of excellent students from all around the world.

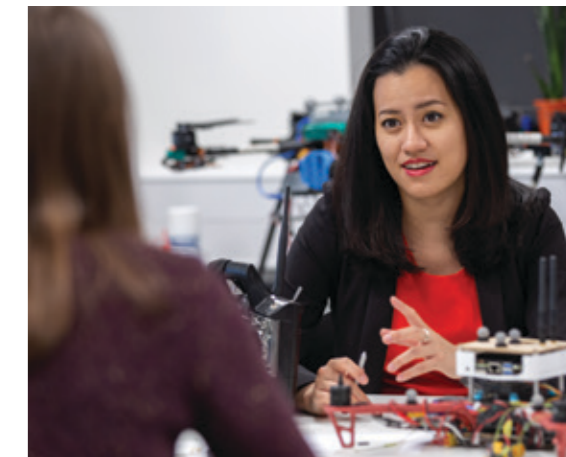
LEARNING



Students and staff will work as partners to create a student-centred experience with parity for all.

Our Academic Strategy incorporates a holistic approach to the student experience, to ensure that learning and teaching innovations and developments are being implemented in connection with the broader student experience, in response to changing needs in areas such as curricular and extra-curricular, wellbeing, community and provision of services and support.

SUCCEEDING



We will nurture a lifelong exchange of ideas and support across a global alumni network.

We will build strengths and invest in opportunities for the full lifecycle of the student experience, from before they begin their studies, while they are Imperial students, and following graduation, as members of our global alumni community.

DELIVERING THE STRATEGY

Through our Academic Strategy, we will identify new priorities and opportunities that the College is uniquely placed to exploit, which we will invest in and place more focus upon.

These opportunities may include developing new programmes, centres or research focus, investing in people, space and infrastructure, building new partnerships and communities, or responding to external challenges.

We will work across our faculties, departments and Global Challenge Institutes to identify key actions that will help our community to drive this agenda.

Over the next few years, we will prioritise a number of College level projects to implement through investment of people, time, space and money. We will invest College resource, but also build partnerships and engage our external stakeholders to help us deliver our priorities and achieve our ambition.

Postdocs in the MAGPIE lab transform solid materials into liquids and plasmas. Plasma physics underpins many broad research areas such as astrophysics, space physics, laboratory ionised gases and controlled thermonuclear fusion

