

Imperial College  
London



ANNUAL REPORT  
AND ACCOUNTS

2017-18

# OUR STRATEGY

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## FOUNDATIONS

- We will continue to specialise in science, engineering, medicine and business. This is the foundation on which we build our future.
- We will maintain world class core academic disciplines. All research and education must be underpinned by a deep understanding of the fundamentals.
- We will encourage multidisciplinary research. Only by bringing together expertise from different disciplines can we solve today's global challenges.
- We will embed our educational experience in a vibrant, research-led, entrepreneurial environment. By learning alongside researchers who are experts in their fields our students gain the practical, entrepreneurial and intellectual skills to tackle societal problems.

## PEOPLE

- We will build a supportive, inclusive and highly motivated staff community across all disciplines, functions and activities. This will help us to attract and retain the talented and diverse staff we need to achieve our mission.
- We will enrich the student experience. Providing a broad range of activities, services and support for our students beyond their studies helps them to develop wider talents and to be successful.
- We will build strong relationships with our alumni and friends. This lifelong exchange of ideas and support benefits all of us.

## PARTNERS

- We will strengthen collaboration with business, academia, and non-profit, healthcare and government institutions across the globe. No university can achieve excellence or realise the full benefits of its work by itself.
- We will inform decision makers to influence policy. Our excellence, breadth of knowledge, connections and London location allow us to bring together and inform key decision makers in governments and industries for the benefit of society.
- We will share the wonder and importance of what we do. Collaboration with the public, schools and our local communities fosters a shared passion for and understanding of our work.

## ENABLERS

- We will strengthen and diversify our revenues. Delivering our mission requires investment in our staff, students and facilities.
- We will provide professional support, consistent processes and appropriate technology for all of our staff and students. The pursuit of excellence in research and education requires excellence in all that we do.
- We will act courageously and innovatively when pursuing new opportunities. We need to take academic and financial risks to sustain excellence in research and education.

On the cover: Undergraduate students from the Department of Mechanical Engineering working on their entry for the Shell Eco-Marathon, a global competition that encourages engineering students from around the world to build the most energy-efficient vehicles possible.

**Imperial College London's mission** is to achieve enduring excellence in research and education in science, engineering, medicine and business for the benefit of society.

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Students Xiaoqun Zhou and Tomas Juergensen working in the Song Research Group laboratory in the Department of Chemical Engineering. Xiaoqun and Tomas are researching new generation batteries for energy storage as part of Imperial's Undergraduate Research Opportunities Programme.

A photograph of two scientists in a laboratory. A woman on the left is wearing safety glasses and a white lab coat with 'Imperial College London' on it. A man on the right is also wearing safety glasses and a white lab coat. They are looking at something off-camera. The background is a blurred laboratory setting.

# IMPERIAL IN 2017–18

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We will maintain world class  
core academic disciplines

IMPERIAL COLLEGE LONDON STRATEGY 2015–20

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# PRESIDENT'S WELCOME



**PROFESSOR  
ALICE P. GAST**  
PRESIDENT OF  
IMPERIAL COLLEGE  
LONDON

Imperial College London continues to achieve enduring excellence in education and in research for the benefit of society. Our achievements this year reflect our 2015–20 Strategy and demonstrate our ability to seize new opportunities not foreseen three years ago.

### **We continue to work towards a better Imperial**

We are making significant advances through our Learning and Teaching Strategy. This includes an investment of £1.8 million in the renovation of teaching spaces. We initiated a comprehensive curriculum review in every department and launched our first global Massive Open Online Courses in artificial intelligence and creative thinking.

We are proud of the excellence of our academics and leaders. Colleagues were welcomed into the Royal Society, the Royal Academy of Engineering and the Academy of Medical Sciences; and we celebrated the transformational contribution of Professor James Stirling, our first Provost, as he retired.

Our research achievements include new knowledge about Saturn from the Cassini mission, improving results for kidney dialysis patients with 3D imagery and using machine learning to make prosthetic limbs move more naturally. Our enterprising activity expanded with new programmes such as the Imperial Venture Mentoring Service to connect our innovators with business mentors.

We were the first to call for a Joint Expert Panel to help find a way forward with the USS pension scheme. We worked together on our Pay and Benefits Review. We are supporting our technician community with a new Technicians' Portal.

The Dyson School of Design Engineering, our newest engineering department, moved into renovated space and will graduate its first cohort this year. Our ambitious vision for the South Kensington Campus was developed with the College community and set out in a new Masterplan.

We have expanded our engagement with our alumni. Thousands of our alumni have used our services, participated in events, talked to our students, volunteered and donated. A record £59 million in donations has been pledged to support our vision.

### **The developments in White City are impressive**

The White City Campus is creating an exciting and rich environment for innovation, exploration, experimentation, risk-taking and growth. Our colleagues are currently moving into the Molecular Sciences Research Hub and utilising its state-of-the-art facilities to conduct transformative research and address global challenges.

The White City community is an integral part of the campus. The makerspaces, hackspaces, The Invention Rooms and other convening places provide opportunities for the public to be a part of – and benefit from – our community. We are grateful for the generous philanthropic support from the Mohn Westlake, Battcock, Berkeley, Garfield Weston, J.P. Morgan Chase and Elsevier Foundations.

In June 2018 we launched an ambitious campaign to raise £100 million to bring our world leading School of Public Health to White City. A transformative donation from alumnus Marit Mohn will create the Mohn Centre for Children's Health and Wellbeing at Imperial's School of Public Health in White City and will be a new state-of-the-art hub for health and wellbeing research, education and community engagement. It will support pioneering research, education, and community engagement that will improve the diagnosis, prevention and treatment of childhood illness on both a local and global scale.

### **We are resolutely international**

Imperial is a global European university and we continually advocate for support for international collaboration and talent mobility. We continue to develop collaborations in our academic programme and recently established a partnership in mathematics with France's National Center for Scientific Research (CNRS) and another partnership with Technical University of Munich.

In 2018, the first cohort of students graduated from Imperial's joint medical school in Singapore, in collaboration with Nanyang Technological University, the Lee Kong Chian School of Medicine. This programme is at the forefront of a revolution in medical education with its team-based-learning and technology driven education.

In collaboration with MIT, we are exploring ways to collaborate with universities and non-profit research institutions in Africa. Imperial and MIT share a commitment to build partnerships with African institutions to address common challenges.

Imperial College London will continue to innovate, to invest in our people and facilities and take risks consistent with our financial sustainability to ensure our continued excellence.

These are but a sampling of the activities reflected throughout this Annual Report.

**Professor Alice P. Gast**  
President of Imperial College London



Evolution: A Design Engineering Showcase was the first major event held in the newly opened Dyson Building of Design Engineering. The showcase included work produced over the past year by undergraduates, Master's and PhD students, and research groups from the Dyson School of Design Engineering.

# PUBLIC BENEFIT

By educating some of the world’s brightest students, fostering a climate where researchers and staff can thrive, and building deep and lasting ties with our community and partners, Imperial adds value and delivers public benefit on a local, national and global scale.

## Imperial’s objects, mission and strategy

When Imperial College London was established in 1907, its Royal Charter defined its objects, or guiding principles. These are to provide the highest specialised instruction and the most advanced training, education, research and scholarship in science, technology and medicine, especially in their application to industry; and in pursuit of these objects to act in co-operation with other bodies. These objects continue to underpin the College’s mission, which is “to achieve enduring excellence in research and education in science, engineering, medicine and business for the benefit of society.”

The College’s Strategy 2015–2020 guides Imperial’s work towards achieving its mission. The foundations of the College’s work are defined as its specialisation in science, engineering, medicine and business; its world class core academic disciplines; its emphasis on multidisciplinary research; and its vibrant, research-led, entrepreneurial environment. In its focus on Imperial people, the College commits to building a supportive, inclusive and highly motivated staff community; enriching the student experience; and building strong relationships with our alumni and friends.

Partners are critical to achieving our goals, and we commit to strengthening collaborations across the globe; working with industry to translate our innovative ideas into real-world benefits; informing decision makers to influence policy; and sharing the wonder and importance of what we do with the public, schools and our local communities. The enablers that underpin our success are the strengthening and diversification of our revenue; professional support, consistent processes and appropriate technology for staff and students; and a commitment to acting courageously and innovatively when pursuing new opportunities.

## Our impact in 2017–18

Delivering benefit for society is at the heart of all Imperial does. That benefit is often clear to see: our highly-skilled graduates become outstanding global citizens and leaders in their fields, while our researchers discover new treatments for some of the world’s most devastating diseases, unlock the

mysteries of the planets in our solar system, and drive forward advances in artificial intelligence (AI) that could transform our daily lives. But sometimes Imperial’s impact is less visible: our support for teachers helps them to instil a love of science in their classrooms, or a nascent entrepreneur from our local community brings her idea to life with the help of our students, staff and facilities. The pages that follow explore the ways in which Imperial has delivered benefit for society in 2017–18.

### About public benefit

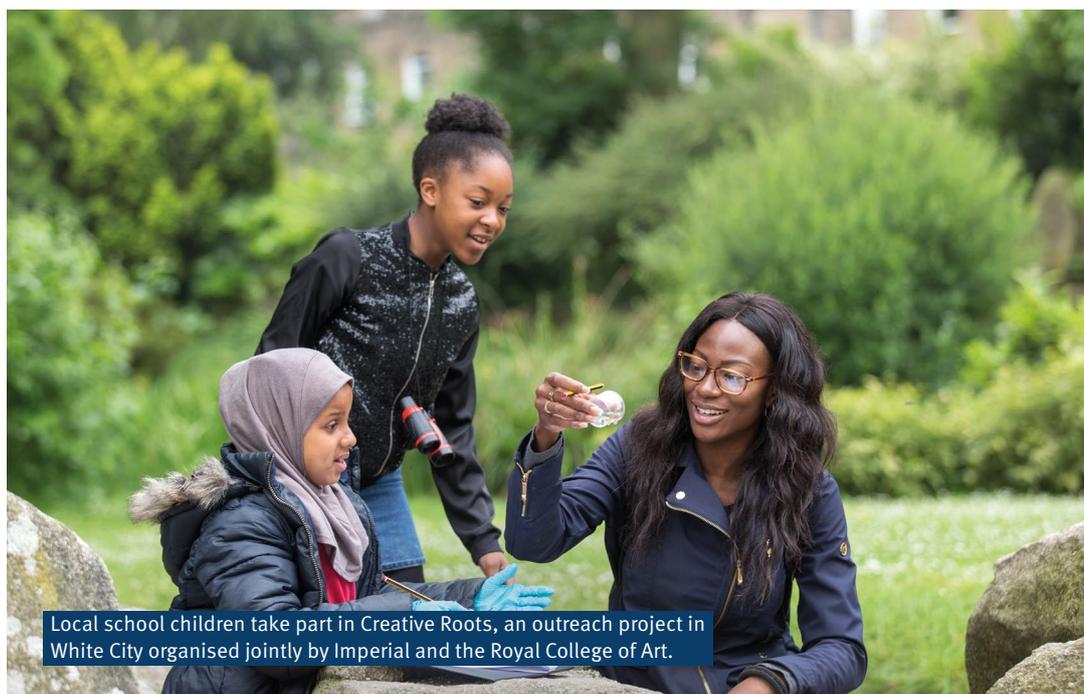
As an exempt charity under the laws of England and Wales, by virtue of the Exempt Charities Order 1962 and the Third Schedule to the Charities Act 2011, each of Imperial’s purposes must be for the public benefit. The Office for Students regulates universities as charities on behalf of the Charity Commission. The Council, as the College’s Trustee, sets and reviews its objects and activities, with due regard to the Charity Commission’s guidance on the reporting of public benefit, particularly in relation to the advancement of education and fee charging.

### Impact in education

Education in science, engineering, medicine and business is central to the College’s mission to benefit society. We deliver that benefit through our efforts to ensure that all students with academic ability and potential, regardless of background, can access an Imperial education. We are committed to the success of our students during their time at Imperial, and as such the educational experience we offer is world leading, rigorous, inclusive and embedded in a vibrant research and entrepreneurial environment. This experience means that when our students graduate, and as they progress in their careers, they are equipped to work effectively in diverse environments, solve problems with independence and creativity, and become leaders in their chosen fields.

### Widening participation and access

During 2017–18, we ran programmes aimed at raising aspirations, improving attainment, and widening access to Imperial among students under-represented in higher education. Our established relationships with over 300 schools and colleges in London and south east England allows us to offer sustained collaborative outreach



Local school children take part in Creative Roots, an outreach project in White City organised jointly by Imperial and the Royal College of Art.

activities including summer schools, mentoring and tutoring, and academic enrichment programmes. Individual participants in outreach programmes are selected based on a range of criteria which measure disadvantage, while schools are selected for outreach activities based on examination performance and/or the proportion of students in receipt of free school meals. Continuous monitoring and in-depth research into the efficacy of our outreach activity helps us to make regular informed improvements to our programmes to increase the benefit they deliver.

Examples of outreach programmes during 2017–18 included:

- The Pimlico Connection, which placed Imperial student volunteers in primary and secondary schools to tutor and mentor students in science, while providing positive role models for university and science, technology, engineering and medicine (STEM) careers.
- STEM Potential, which worked with approximately 400 Year 10 – Year 13 students to provide tailored subject-specific and soft-skill support designed to raise attainment and widen access to STEM degrees.
- Pathways to Medicine, which supported three cohorts of disadvantaged students (from Years 11, 12 and 13) to make strong and informed applications to study medicine at university. Activities included talks from admissions tutors and medicine students, subject and skills-based summer schools, and guaranteed work experience placements in healthcare settings.

Our on-campus facilities for outreach activity include the Reach Out Makerspace at The Invention Rooms, which provides a space in White City for the outreach team to support young people to develop

hands on technical skills in design and making, together with business and soft skills. The Wohl Reach Out Lab at South Kensington Campus gives pupils aged six to eighteen, who are at schools without access to laboratories, the opportunity to experience hands-on STEM education. The space is also used for targeted master-classes and revision sessions.

As in previous years, Imperial continued to offer a range of scholarships and bursaries to support students with the cost of tuition fees and living in London. Scholarships, awarded to students with the highest academic excellence and potential, were provided to home, EU and international students at undergraduate and postgraduate level. The Imperial Bursary scheme is available to all home undergraduate students, and it provides financial support on a sliding scale for Imperial students with annual household incomes of up to £60,000. The scheme is one of the most generous overall student financial support schemes in the UK.

In 2017–18, the College's regulator for access and participation changed, as the Office for Fair Access became part of the Office for Students. Our access and participation plan for 2019–20, which was submitted in July 2018, outlines an ambitious plan to expand our outreach activity to achieve higher impact and widen access to Imperial for students from particular under-represented backgrounds.

#### *Learning and teaching*

In early 2017, the College launched its Learning and Teaching Strategy, with a focus on reviewing and improving curricula and assessment; making teaching more interactive; the fostering of an inclusive and diverse culture; and the development of digital tools to enhance curricula, pedagogy and community. During 2017–18, staff (often working in



Dr Wayne Mitchell (far left) with delegates on Mastering Laboratory Skills, an intensive training programme for students and medical staff offered by the Department of Medicine.

partnership with students) have been working to deliver the Strategy’s vision for an Imperial education.

We recognise that more needs to be done to improve our students’ experience. In support of this, the College launched a number of initiatives in 2017–18, including:

- StudentShapers, an innovative programme which provides students with the opportunity to participate in educational development and research projects with staff.
- £1.8 million of new investment to renovate teaching spaces across the South Kensington Campus.
- A new Digital Learning Hub to develop the ‘classroom of the future’ utilising digital technologies and interactive teaching tools.
- Educational Research Methods, a series of resources designed to help guide researchers undertaking educational research and evaluation.

During 2017–18, Imperial expanded its teaching through the launch of our first Massive Open Online Courses (MOOCs) with the global online education platforms Coursera and EdX. The new MOOCs in AI and creative thinking involve experts from across the fields of Materials, Design Engineering, Computing and Physics and allow learners from across the world to access Imperial teaching.

#### *Imperial graduates*

In the College’s Learning and Teaching Strategy, we commit to ensuring that Imperial graduates will:

- Demonstrate deep conceptual understanding of their chosen discipline.
- Work effectively in multi-cultural, international teams and across disciplinary boundaries.
- Approach challenges with curiosity, critical thinking and creativity.
- Innovatively apply their skills to tackling complex real-world problems.
- Understand and value different cultures and perspectives.
- Have developed into independent learners with high self-efficacy.
- Display a strong sense of personal and professional identity.

The work to embed these skills, characteristics and values in all our graduates continued in 2017–18, with highlights including the roll out to all students of the Imperial Award, a scheme which recognises the development of skills in self-reflection and critical thinking, and our continued ranking among the top universities in the UK for graduate employability.

The impact of our alumni community on the wider world is testament to the value of an Imperial degree. Alumni achievements in 2017–18 included:

- Alumni startup Skipping Rocks Lab created Ooho, an alternative to plastic packaging made from seaweed. The company has recently partnered with the online food ordering company Just Eat to provide plastic-free ketchup sachets to customers ordering through the platform.

- Dr Melanie Windridge (PhD Plasma Physics 2009) climbed Everest in 2018. Dr Windridge, who is an Academic Visitor in the Department of Physics, created the ‘Science of the Summit’ outreach project, comprising a stage-by-stage live blog of her progress and the science of mountain climbing.
- In November 2017, alumnus Pae Natwilai won Innovate UK’s 2017 Design in Innovation Award for harnessing the potential of drones to improve structural inspection of buildings and infrastructure. Her startup, TRIK, uses automated drones to check for damage or defects to large structures, such as oil rigs and bridges. TRIK started life as a project developed for WE Innovate, Imperial’s flagship entrepreneurial programme for women.
- Ten Imperial alumni were named in the 2017 *Forbes* 30 Under 30 list, which features 300 young innovators, entrepreneurs and leaders from across Europe.
- Dr Robin Sham (PhD Civil Engineering 1989) received a CBE in the 2018 New Year’s Honours List for services to the civil engineering profession. Dr Sham is Global Long Span and Speciality Bridges Director for the multinational engineering firm, AECOM, and has contributed to a number of major bridge projects, including one of the longest sea crossings built in recent history, the Second Penang Bridge.
- Dr Dalya Al Muthanna (PhD Environmental Research 2015) was named as the 12th most powerful Arab Businesswoman by *Forbes* in 2018. Dr Al Muthanna is the President and CEO of GE Gulf, and is the first Emirati and the first woman to ever hold the post.
- Alumnus Professor Ian Walmsley (Physics 1980) was appointed as the Provost of Imperial from 1 September 2018.

### Impact in research and enterprise

The public benefit that Imperial delivers through its research and enterprise activity can have truly transformative potential: our expertise in science, engineering, medicine and business means that our researchers work on problems of exceptional importance, frequently contributing to global efforts to address humanity’s most pressing challenges.

### Research

The College’s strong commitment to research integrity, support for researchers and outstanding facilities underpins the impact that Imperial research has on the world. We are signatories to the UK Research Integrity Concordat, which means that we are committed to maintaining the highest standards of rigour and integrity in all aspects of research, and have established appropriate ethical, legal and professional frameworks to support this. In supporting our researchers, we provide guidance for preparing research proposals, managing research projects and disseminating findings. We continually invest in research facilities and partnerships to ensure academic staff and doctoral researchers have the resources needed to pursue ideas, undertake research and transfer knowledge.

Partnership, multidisciplinary and courage play a critical part in Imperial’s delivery of public benefit through research. Our partners – in sectors including business, healthcare, non-profit and academia – broaden the scope of what we can achieve, and enable us to integrate a global and multi-faceted perspective into all that we do. This spirit of collaboration also informs the way our researchers work across disciplinary boundaries, drawing on the expertise of others to develop novel solutions to intractable problems. Courage in research comes in many forms, from frontier

Alumnus Brahmal Vasudevan at the opening of the Brahmal Vasudevan Multi Terrain Aerial Robotics Arena. His £1.25 million gift to support the development of the arena enables Imperial engineers to test the next generation of aerial robotics for urban environments and extreme conditions.



research which pushes the boundaries of a discipline, to ground-breaking collaboration that can shape an entirely new area of inquiry.

In 2017–18, the College launched or expanded several initiatives designed to maximise the impact and societal benefit of our research:

- At our newest campus in White City, researchers moved into the Molecular Sciences Research Hub. The Hub brings together almost 800 scientists, clinicians, engineers and business partners in a space dedicated to collaborative working, with state-of-the-art equipment and infrastructure.
- The College unveiled its first Networks and Centres of Excellence, which join our existing Global Challenge Institutes in providing a structure and support system for multidisciplinary, problem-oriented research. The first cohort included the Nutrition and Food Network, involving researchers from the Departments of Medicine, Design Engineering, Chemistry and the Business School, and the Centre for Quantum Engineering, Science and Technology, which explores new quantum technologies.
- The Excellence Fund for Frontier Research awarded College research funding to new potential breakthrough projects, including a project that will engineer specialised immune cells to induce a potential cure for Human Immunodeficiency Virus (HIV) infection.

Every day, Imperial researchers publish new findings with the potential for significant benefit to society. In 2017–18, research impact highlights included:

- Imperial celebrated the new knowledge about Saturn that the Cassini mission has delivered to researchers. The magnetometer on board the spacecraft, which was developed by Professor Michele Dougherty and colleagues from the Department of Physics, has provided data that could help us understand exploding stars and the possibility of life in the solar system.
- Researchers have developed a prosthetic hand which interprets muscular signals from brain activity, using machine learning, to make movements more natural. The bionic limb, developed by Professor Dario Farina and colleagues from the Department of Bioengineering and the University of Gottingen, provides more natural, fluid movements for amputees than currently available technology.
- Imperial experts from the Department of Computing informed government debate on AI. The responses of Professor Chris Hankin and Professor Maja Pantic were included in a House of Lords report on AI in the UK, addressing challenges including the use of AI to benefit humanity, and the potential for AI in the field of cybersecurity. At the start of 2018, Science and Universities Minister Sam Gyimah visited Imperial to learn more about Professor Pantic's use of robotics to improve learning and emotional understanding in children with autism.

- A cross-disciplinary team, led by Professor Franco Sassi of Imperial College Business School, launched the STOP (Science and Technology in childhood Obesity Policy) project, to test the efficacy of policy and public health interventions in the prevention and treatment of obesity among younger children. The Imperial team are part of Europe's largest research project to tackle obesity in children, which is associated with several chronic conditions, including heart disease and diabetes in later life.
- Researchers from the Department of Aeronautics have joined forces with bioengineers and medics to predict and improve results for kidney dialysis patients. A study on patients at the Imperial College NHS Trust suggests that creating 3D images of blood vessel structures prior to dialysis can help clinicians understand the likelihood that dialysis will be successful in removing waste products and excess fluid from the blood.
- A new antibiotic could offer an alternative treatment to an antibiotic-resistant infectious disease, according to new research from Imperial and the London School of Hygiene and Tropical Medicine. Some strains of gonorrhoea, a sexually transmitted disease, are currently untreatable due to the overuse and misuse of existing antimicrobials. The new antibiotic, closthioamide, proved effective against gonorrhoea samples in the laboratory, suggesting that it could help in the fight against antimicrobial resistance.

### *Enterprise*

Imperial's Royal Charter calls for the College to carry out research and education with particular regard to their application to industry. The commitment to getting our knowledge out of the laboratory and into the world is as critical to Imperial's impact on the world today as it was in 1907 when the College was founded.

Enterprising activity can take many forms, for example, academics might work in partnership with industry to address a particular challenge; students may wish to develop their entrepreneurial skills for the future, or students and researchers may establish their own startups to bring their research to market. Our focus on science, technology, medicine and business, together with a comprehensive ecosystem that can support student and staff entrepreneurs from the earliest stages of an idea through to a sale or initial public offering, means that Imperial has been ranked the most innovative university in the United Kingdom. In 2017–18, the College continued to strengthen and expand its entrepreneurship ecosystem:

- Following its establishment in the Translation & Innovation Hub in 2016, the White City Incubator reached capacity in its first year, providing office, laboratory space and support for science and technology startups to grow and take advantage of the research and innovation clusters at White City Campus. Also located in



Students Nate Macabuag and Josh Chidwick in Imperial's Enterprise Lab. Nate and Josh won the Student Challenges Competition and came second in the Venture Catalyst Challenge during Enterprise Week 2018 for their startup, Mitt Prosthesis, which aims to provide comfortable, functional and affordable prosthetic limbs.

the Hub, the Research England-funded MedTech SuperConnector, provides facilities for early career researchers to turn their discoveries into new diagnostic tools, medical devices and digital healthcare solutions.

- Elsewhere at White City Campus, the Imperial College Advanced Hackspace's new flagship space at The Invention Rooms became a hub for the College's makers, hackers, inventors and entrepreneurs. The Advanced Hackspace's prototyping equipment and professional experts support students and academic staff at all stages of the entrepreneurial journey.
- The College launched new programmes to encourage entrepreneurial activity. The Imperial Venture Mentoring Service connects Imperial innovators with a pool of highly qualified volunteer business mentors, for impartial advice on helping them develop their product or service, identify markets, build businesses and secure funding. The Techcelerate programme offers postdoctoral students specific training and support to fast-track the commercial development of their ideas and strengthen their entrepreneurial skills.
- Existing programmes to support entrepreneurship and innovation continued to thrive and generate exciting student-led initiatives. The winner of the 2018 WE Innovate final, Saujanya Vrudhula, will use her prize money to drive forward her initiative to use blockchain technology in the fight against counterfeit drugs, while the winners of the 2017 Faculty of Natural Sciences Make a Difference programme will develop their idea to use infrared spectroscopy to identify different types of plastic at a low-cost.

Enterprise successes celebrated by the Imperial community during 2017–18 span the full range of the College's disciplinary expertise:

- MINA Therapeutics became the first 'graduate' of the White City Incubator, as it moved to new and bigger facilities at White City Campus. The company, co-founded by Professor Nagy Habib of the Department of Surgery and Cancer, pioneers 'small activating RNA', a new class of medicines which restore normal function to cells of patients with diseases including cancer and ischaemia. One drug candidate is currently in clinical trials for the treatment of advanced liver cancer.
- CustoMem, an Imperial startup founded by Imperial students, has received a €1.4 million grant from the EU's Horizon 2020 programme to bring its water filtration system to market. The new biomaterial developed by the company can capture and recycle hazardous micro pollutants found in industrial water, offering the promise of addressing the global scarcity of clean, accessible water. The grant enabled the company to become one of the first early startups to graduate from the shared lab space in the I-HUB to the White City Incubator.
- Kopernio, an AI-powered tool which provides researchers with quick access to millions of journals across the world, was acquired by Clarivate Analytics. The tool, developed by alumnus Dr Ben Kaube, detects what individual or institutional subscriptions a user already has and sources the most appropriate paper for them instantly, or suggests free, alternative legal versions of the content that might already exist on open-access platforms.

- Gyrogear, founded by Imperial alumnus Dr Faii Ong, develops wearable technology that can improve quality of life for people who suffer from hand tremors, such as those with Parkinson’s disease. The company’s first product, the Gyroglove, uses gyroscopes to counteract hand tremors, making it easier to perform everyday tasks including eating, drinking and writing. In July 2018, Gyrogear received €1.8 million from the EU’s Horizon 2020 programme for small and medium enterprises, in recognition of its potential to create an entirely new market or revolutionise an existing one.
- Imperial announced a joint venture with digital venture builder Blenheim Chalcot to develop Scale Space, a 200,000 sq ft new technology and innovation centre on the south site of the College’s White City Campus, which will provide space for high-growth technology companies to co-locate with Imperial researchers.
- Dedicated leadership and development programmes for College staff, including Calibre, a programme for staff working with a disability, and IMPACT, which supports BAME staff. In 2018, the College’s Technicians’ Network launched the Technicians’ Portal, an online resource which supports their professional development opportunities.
- Construction of a new hall of residence for 700 first-year students in North Acton. The new hall is due to be completed by the summer of 2020 and will include a dedicated common room and outdoor space, as well as a wardening support system and 24-hour concierge.
- Mental Health First Aider training, which has been undertaken by over 300 members of staff. The training equips staff with the skills and knowledge to help someone experiencing a mental health problem before professional help is obtained and to spot the early signs of mental health problems.

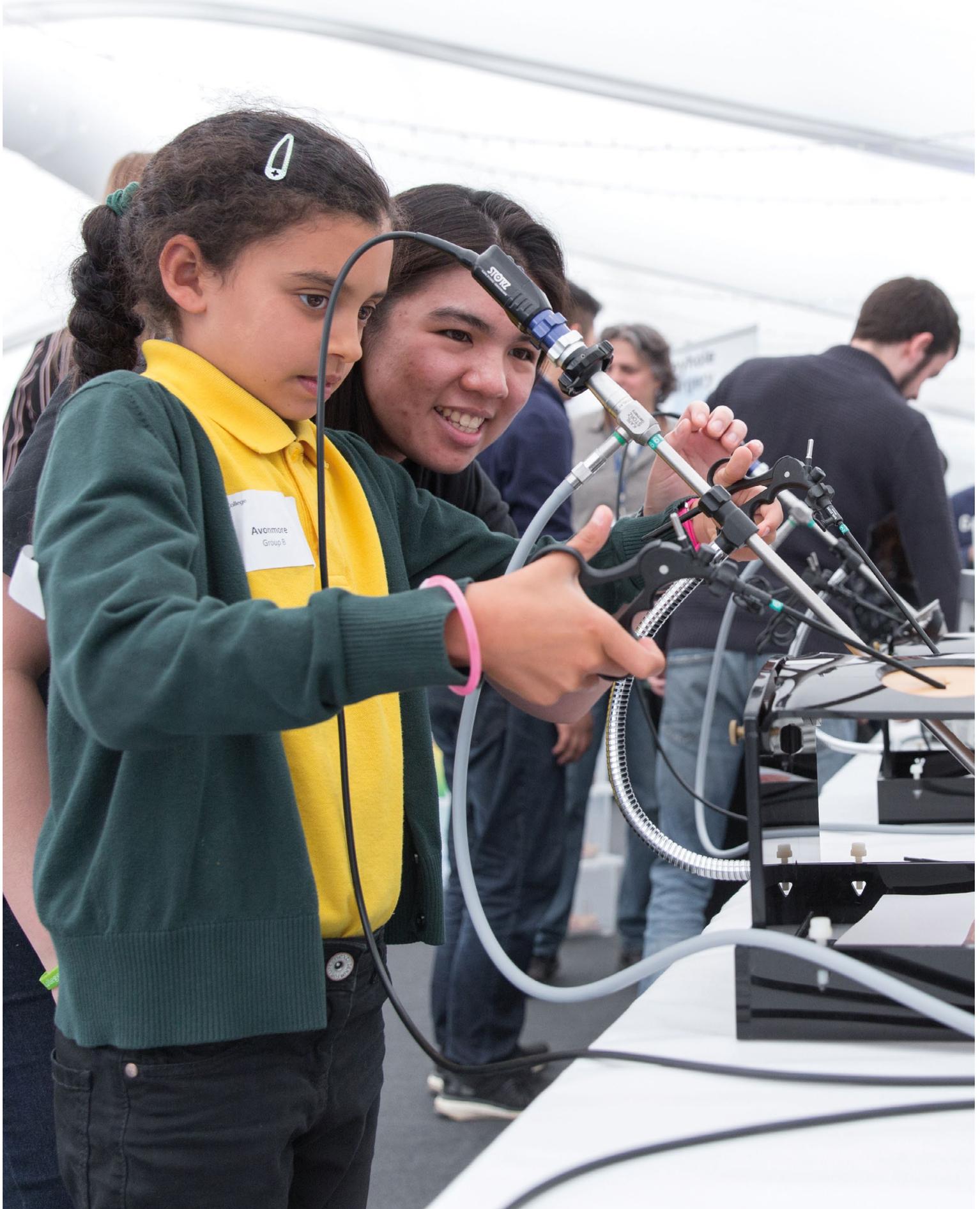
### Impact in our community

The benefit that Imperial brings to its community is central to its work towards its mission. The breadth of the ‘Imperial community’ is a reflection of the varied nature of our public benefit in this area. Our community of learning and research encompasses our staff and students who live, study and work at the College. We are also part of our local communities in West London and south east England more generally: our neighbours offer us important insights that shape our research and education, and in return we open our doors to them to share our passion for science, engineering, medicine and business.

During 2017–18, notable College initiatives for its staff and student community included:

- Key community initiatives, such as Greening Imperial, a project dedicated to improving environmental sustainability at the College; the appointment of Professor Stephen Curry, Imperial’s first Assistant Provost for Equality, Diversity and Inclusion; and the creation of Imperial’s Student Support Strategy, which aims to foster positive wellbeing for all of our students.
  - Publication of the 2017 Gender Pay Gap Report and the introduction of new activities to address pay imbalance at the College, including the ‘Know Your Pool’ initiative, which seeks to identify appropriately qualified women and encourage their application for roles at all levels.
  - The Imperial Garden Party, an annual celebration for over 300 students and members of staff who have demonstrated exceptional work and commitment to the College over the previous 12 months.
- In our neighbouring communities and beyond, a varied programme of events and activities this year helped to bring the work of Imperial to life for thousands:
- In 2017 the College launched its pioneering innovation and community space, The Invention Rooms at our new White City Campus, with a free open day, which offered activities and workshops designed for people of all ages to get creative. The Invention Rooms have also hosted the College’s Maker Challenge Programme for young people in White City, which enables participants to develop a range of practical and soft skills through the creation of a new product from an initial idea to prototype.
  - Sounds of Space, a joint project between Imperial and the Royal Albert Hall, brought students from four secondary schools from across London together with Imperial students and a musical scientist to learn about physics and space through music and sound.
  - Over 20,000 members of the public visited the Imperial Festival in 2018. The Festival included over 150 exhibits, along with spotlight talks, interactive activities, workshops and live experiments. The Imperial Fringe, now known as Imperial Lates, attracted over 2,500 visitors to four free events in 2017–18 exploring topics including space, invention, AI and air quality.
  - Through our news website, social media channels and publications, the College reaches thousands of people around the world each month. In 2017–18, the College took part in its first Ask Me Anything sessions on the global social news and discussion platform, Reddit, where researchers answered questions from members of the public about their work and its impact. Imperial researchers have hosted Ask Me Anything sessions on global energy, multiple sclerosis, batteries, respiratory diseases and palm oil.

A local school pupil tries out surgical technology at the Imperial Festival Schools Day in April 2018.



# THE DUAL LEADERSHIP MODEL

In 2018, Imperial marked five years since the introduction of the College’s President and Provost leadership model. This model enables the President to oversee all functions at Imperial, with a particular focus on external affairs at a national and international level, while the Provost advances and delivers the College’s core academic mission.

Council’s decision to implement the dual leadership model in 2013 was driven by a recognition that the higher education environment is increasingly complex, global, and competitive. Safeguarding Imperial’s excellence required a fresh but proven approach that would meet the new demands on university leaders, who now require an array of skills to support and encourage students and staff, inspire alumni and friends, foster local government and community relations, and navigate an ever shifting political environment.

While some UK universities have since evolved to similar leadership structures and larger leadership teams, Imperial was the first in the UK to create a dual leadership structure like that at other great universities such as Stanford, Princeton and MIT.

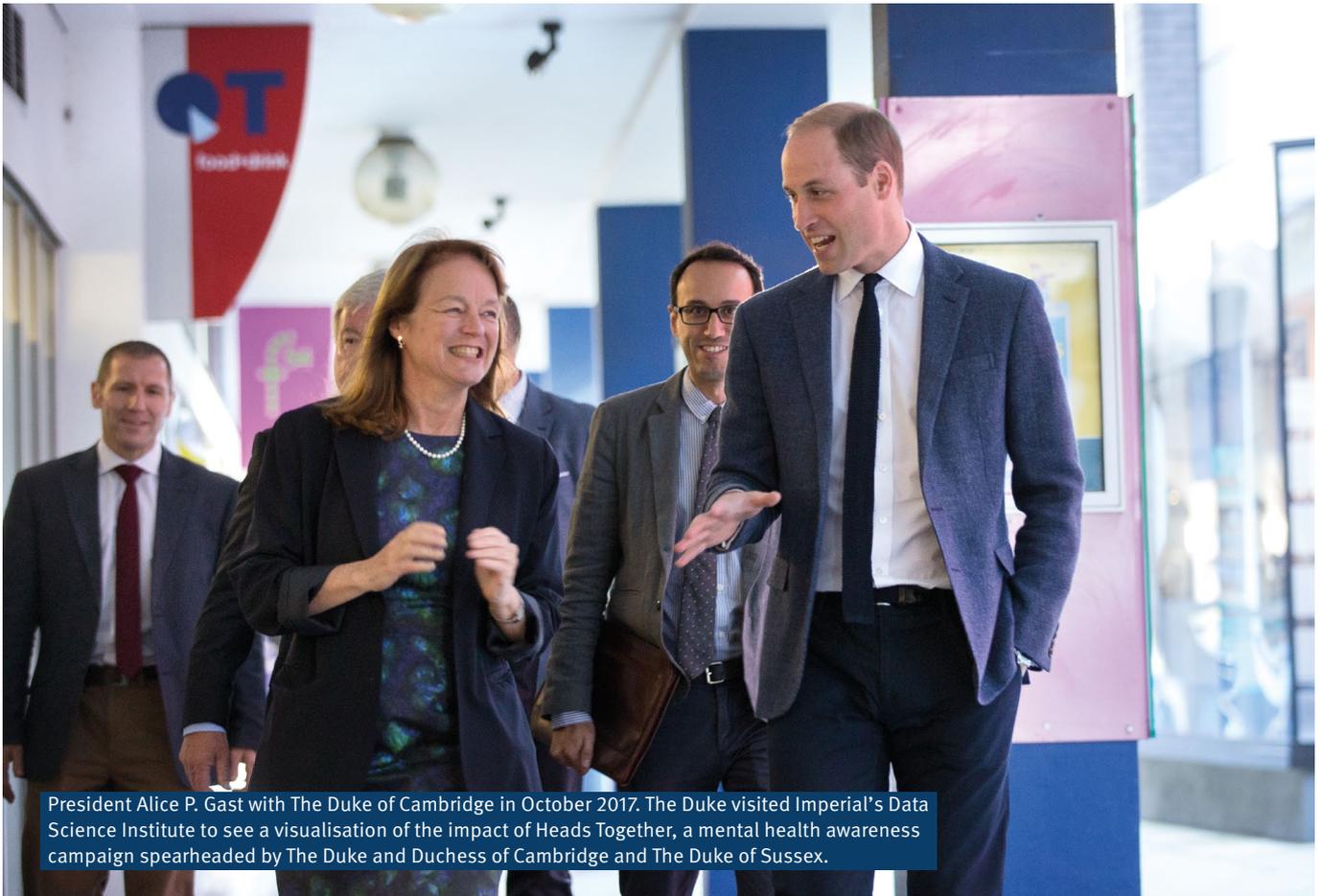
Imperial’s first Provost, Professor James Stirling, retired in August 2018. The President, Professor Alice P. Gast, noted that Professor Stirling “defined the role of Provost, not only for Imperial, but for the world.” His work on institutional culture, gender equality, animal research processes, reforming tech transfer and enhancing research grant mechanisms was transformational for Imperial. As the College welcomes its new Provost, Professor Ian Walmsley, and Professor Gast embarks on a new term as President, it is timely to review the impact of the dual leadership model over the last five years.

## About the President

The President is Imperial’s top executive, with the ultimate responsibility for the College’s performance, reputation and success. She oversees key parts of Imperial’s strategic trajectory, including the White City Campus. The President is a chief strategist, communicator, fundraiser, collaborator, with financial and operational acumen, and is an academic and intellectual leader.

## Select Presidential contributions

- **Strategy 2015–20.** The President and Provost worked closely with the Deans and academic leaders to develop the Strategy. It refocused Imperial’s priorities around excellent foundations, people, partners and enablers. It positions Imperial as a world leading source of discoveries, an educational leader and a trusted partner. Imperial is delivering on this strategic vision, performing ground-breaking multidisciplinary research, building a supportive and inclusive community, strengthening ties with policymakers, industry, philanthropists and alumni, and diversifying revenues while bringing the new White City Campus to life.
- **Professional approach to Advancement.** Major gifts and legacy pledges have grown significantly as a result of the President’s Advancement strategy. Creating new opportunities and developing major philanthropic prospects are a significant focus of the President’s work including her travel.
- **Transformative philanthropy.** The President led the development of Imperial’s £100 million campaign for a new School of Public Health in White City to pioneer new approaches to society’s most pressing healthcare challenges. Working with academic leaders and the Dean of Medicine, she shaped the campaign and conceived of its four pillars of World Health, Food and Nutrition, Community Health and Policy, and Children’s Health and Wellbeing.



President Alice P. Gast with The Duke of Cambridge in October 2017. The Duke visited Imperial's Data Science Institute to see a visualisation of the impact of Heads Together, a mental health awareness campaign spearheaded by The Duke and Duchess of Cambridge and The Duke of Sussex.

- Improved governance.** Effective governance has been one of the President's priorities. Working with the Chair of Council, each meeting has included discussions of important strategic topics and an annual away day has been institutionalised. Court has been reconstituted as an effective group of interested and invested advocates for Imperial. President's Board and Heads of Department lunches have provided opportunities for fulsome discussions on strategic matters.
- Enhanced alumni relations.** The President and the alumni relations team have revived and created new ties with Imperial's 200,000 alumni, through hundreds of events including Presidential visits, Dean's presentations and volunteer alumni leadership. This has raised the profile of Imperial in key markets around the world.
- Broader collaboration.** Collaboration has been championed and supported by the President. This support has expanded new opportunities in research and education in partnership with corporations like Dyson, Google DeepMind, Agilent, Blenheim Chalcot, Solvay, Aramco, Argos and Goldman Sachs.
- Stronger societal engagement.** Societal engagement was one of the President's primary areas of focus. In her 2017 Autumn Message, she pledged that Imperial would work harder to inspire "hope, confidence and opportunity" in our community, bringing the benefits of research and discovery to all corners of society through outreach, public engagement and work with patients.
- Increased entrepreneurship and innovation.** The President and Provost put entrepreneurship and innovation at the heart of Imperial's student and staff experience, as well as the institution's brand. This has been made possible by an excellent team and strong support from the Deans and Vice-Provosts. The Enterprise Lab supports thousands of students with mentorship needed to turn innovative ideas into viable companies. Imperial has expanded its business incubation facilities, helping academic and student startups to attract hundreds of millions of pounds of investment.



- Strengthened international presence.** The President has made internationalism a defining characteristic of Imperial, which has been named as the UK’s most international university for three years in a row. This strategy has been supported by her backing for international collaborations and her engagement with UK and foreign governments, which has positioned Imperial as a partner of choice for international VIP visits.
- Close working relations with government.** At a time when universities face exceptional political challenges, Imperial has grown its influence with policymakers. In 2017, the President and Provost provided written and oral evidence to parliamentary committees, they met more than a dozen UK ministers, and Imperial was mentioned nearly 50 times in Parliament. The President and Provost have made the case for additional support for excellent research, an industrial strategy that supports world class research and innovation, visa policies for talent mobility, and a funding environment that safeguards first-rate education.
- More input into policy.** The President has also influenced policy by serving on the board of UK Research and Innovation (UKRI), the Mayor of London’s Brexit Advisory Group and the League of European Research Universities. She is also helping to select the next European Research Council (ERC) President. In the wake of the vote to leave the European Union, the President, Provost and senior leaders have supported College staff while engaging European leaders, including the ERC President, the European Commissioner for Research and Innovation,
- and making the case in Westminster, Brussels and throughout Europe for UK access to European research programmes and for talent mobility.
- Greater visibility for the College.** The President has raised Imperial’s global profile in the face of political challenges through a series of international media interventions. This thought leadership has included interviews, comment pieces and letters in some of the most influential media, such as the *New York Times*, *Wall Street Journal*, *BBC*, *The Economist*, *Financial Times*, *Le Monde*, World Economic Forum, *South China Morning Post* and Xinhua.
- Encouraging excellence.** The President’s Awards for Excellence, Garden Parties and Honours Dinners have championed staff and student innovators, pioneers and those who do outstanding work for the College and its community. The President invested in Excellence Fund for Frontier Research and the Excellence Fund for Learning and Teaching Innovation which are seeding ground-breaking new research and pedagogical advances.

## Select Provostial contributions

- **A strong senior leadership team.** The Provost has recruited and led a high performing senior academic leadership team. This has ensured the sustained excellence of Imperial in its core academic mission of research, education and innovation.
- **Innovative teaching for world class learning.** The Provost led the development and approval of Imperial's Learning and Teaching Strategy, with £8 million of funding to enable improvement of Imperial's education curriculum, student experience, and online education provision. This contributed to the award last year of an institutional Gold in the first Teaching Excellence Framework.
- **Interdisciplinarity.** The Provost has renewed focus on multi-disciplinary research, with a review of Imperial's cross-faculty Institutes, Networks and Centres, and a new process for coordinating large cross-College research bids.
- **Supportive student services.** The Provost has overhauled student support services, including the appointment of the College's first Director of Student Services, who has overall responsibility for the provision of Student Services.
- **Improved financial planning.** The Provost has provided strong academic oversight and leadership in close partnership with the Chief Financial Officer for the annual financial planning round. Meetings with each Dean, Vice-Provost and support service budget-holder align the budget with the core academic mission of College, and the strategic vision of the President.
- **Promoting gender equality.** The Provost has been a tireless champion of gender equality at Imperial, and in STEM more generally, since arriving at the College. This credible, senior academic leadership for gender equality at Imperial has been pivotal, along with a revised governance structure led by the Provost. All departments are now required to be recognised, or applying to be recognised, by the Athena SWAN charter, with 18 of our 21 departments now achieving at least Bronze accreditation. The Provost led the successful renewal of our institutional Silver award in 2017.
- **New approach to animal research.** The Provost led the transformation of animal research at Imperial, creating the College's 2014 Action Plan for Animal Research. The change in culture, renewed spirit of collaboration between academic and technical staff, revised governance structure, cultivation of productive working relationships with the Home Office (our regulator), and investment in facilities have made the College a nationally recognised exemplar in quality animal research.
- **Valuing all staff.** The Provost championed the development and wellbeing of a number of cohorts of Imperial's staff community, including post-doctoral researchers and technicians.
- **Making mental health and wellbeing a priority.** Following the 2014 Staff Survey, the Provost led a series of initiatives creating a step-change in the promotion of mental health and wellbeing of our staff. The College now has a network of over 300 trained Mental Health First Aiders in addition to 45 Staff Supporters, to highlight and signpost the support offered by the College for those suffering mental ill-health. The College also runs a series of events during National Mental Health Awareness Week.

### About the Provost

The Provost is the chief academic officer. Like the President, the Provost is a distinguished academic who upholds Imperial's very high standards for the core academic mission. He has direct responsibility for the major academic units (via the Faculty Deans) and the teaching and research mission via the Vice-Provosts (Education and Research and Innovation). The Provost also has responsibility for human – as well as intellectual – resources, with responsibility for promoting an inclusive and excellent staff and student community.

# MANAGING RISKS

The Office for Students, our regulator, identifies risk as “the threat or possibility that an action or event will adversely or beneficially affect an organisation’s ability to achieve its objectives.” Our goal is to ensure that we are focused on the risks that could impact our ability to deliver Imperial’s strategy, and we have a Risk Management framework in place to support identification of risks in departments and at faculty and College level.

The College risk profile is reviewed annually by the President’s Board, the Audit and Risk Committee and Council, with frequent discussions on specific risks throughout the year. We reviewed our College risk profile during 2018 to support strategic alignment and we have worked with departments across the College to understand our significant strategic and operational risks. We use standard best practice Risk Management methodology and our College risks are ranked based on likelihood over a three to five year rolling period, and impact on the delivery of strategic and financial objectives for the College. The risks related to staff and estates are the highest rated given their importance and potential impact; three new risks were added to our risk profile this year. Controls are identified for all of our College risks and we regularly review mitigation strategies in line with changes to our operating environment.

Our approach to risk management is evolving and we are embarking on a three-year strategy in early 2019 to support continuous improvement, agility and responsiveness to our changing operating environment. Our priorities for Risk Management will include:

1. Strategic support and managing our risks within appetite
2. Increased alignment of governance, risk and compliance
3. Developing and improving risk engagement
4. Strengthening our control environment
5. Improving transparency and communication of risk insights
6. Building our organisational resilience.

We will continue to develop mitigations and controls for College risks as we deliver our plans for 2019.

RISK	RISK MANAGEMENT APPROACH
<p><b>STAFF RECRUITMENT AND RETENTION</b> Inability to attract and retain sufficient staff due to pay and benefits provision, the high cost of living in London, dissatisfaction associated with pensions, and uncertainty related to Brexit.</p>	<p>Extensive communication and direct engagement with staff helps us to manage this risk, supported by initiatives on pay and benefits, rental and housing schemes and consultation on pensions.</p>
<p><b>SPACE AND INFRASTRUCTURE</b> If the College is unable to optimise financial and resource investment in space and infrastructure, staff and student expectations of the facilities and equipment may not be met.</p>	<p>An Estates Strategy Group and the Imperial White City Syndicate are critical in navigating our space and infrastructure risks and ensuring we optimise and manage our approach to planning, investment and compliance for capital programmes across our campuses.</p>
<p><b>OPERATIONAL EXCELLENCE AND TRANSFORMATION</b> Our transformation investment programme does not deliver the scale of change required to improve the effectiveness and efficiency of College processes.</p>	<p>Transformation of our operating model involves a number of projects overseen by a Transformation Investment Board and closely monitored to ensure agreed milestones are delivered whilst ensuring consideration of the impact of future technology disruption on existing plans.</p>

RISK	RISK MANAGEMENT APPROACH
<p><b>LEGAL, REGULATORY AND COMPLIANCE</b> Failure to follow College policies and procedures, or to develop global College policies and processes adequately, leads to failure to comply with legal and regulatory requirements.</p>	<p>The College requires sufficient policies and processes to be in place, and sufficient resource available, to provide confidence that legal and regulatory compliance requirements are met and impacts to our operations and reputation are minimised.</p>
<p><b>STRATEGIC DELIVERY AND LEADERSHIP</b> Significant changes to the higher education operating context threaten long term growth, our reputation for excellence and future financial sustainability.</p>	<p>Our College Strategy is supported by robust oversight and strategic performance monitoring.</p>
<p><b>EDUCATION</b> Insufficient progress in improving the student experience and innovating our educational model.</p>	<p>Implementation of the Teaching and Learning Strategy and initiatives across student experience, student services, equality diversity and inclusion, outreach and space optimisation will deliver evidence based transformation.</p>
<p><b>RESEARCH</b> Our research quality and/or impact does not stay at its current level or fails to keep pace with our peer group.</p>	<p>A clear Research Strategy ensures we are active in developing collaborative research engagement and partnerships in the UK and internationally whilst continuing to focus on our research success rates.</p>
<p><b>BREXIT</b> Continued uncertainty related to Brexit and political challenges, linked to global activities and partnerships, impacts research and industry funding, staff retention and student recruitment.</p>	<p>A Brexit Group actively monitors developments related to Brexit from an internal and external perspective, operating collaboratively across College to develop risk controls and contingency planning for multiple scenarios.</p>
<p><b>STUDENT RECRUITMENT</b> Our student diversity is compromised due to immigration conditions and an increasingly competitive and uncertain international context.</p>	<p>Focus on widening participation in the UK and our International Student Recruitment Strategy, and engagement with alumni, university partnering and the Government enables us to actively manage this risk.</p>
<p><b>BUSINESS INTERRUPTION (NEW RISK)</b> A serious incident causes harm or loss of life to people/ animals or physical and/or reputational damage to the College.</p>	<p>Development of Business Continuity Plans across the College and frequent Crisis Management and Scenario exercises help us to balance pre-emptive and reactive risk based planning.</p>
<p><b>PARTNERSHIPS (NEW RISK)</b> Insufficient operational readiness for the scale up of growth in global research, academic and commercial partnerships to innovate and deliver future income and growth results in reputational risk for Imperial.</p>	<p>Our Partnering Strategy is supported by a number of teams including Academic Partnerships, the Research Office and Enterprise with due diligence and operational support in place.</p>
<p><b>STAFF AND STUDENT WELFARE (NEW RISK)</b> Failure to protect the safety, security and wellbeing of our staff and students, in the UK and overseas, leads to possible harm, injury or loss of life.</p>	<p>Extensive safety, security and wellbeing policies and procedures are in place across College to protect and support our staff and student community, with appropriate governance to ensure we continually review our resilience and legislative compliance.</p>
<p><b>TRANSLATION AND IMPACT</b> Failure to provide the technology transfer mechanisms to manage and exploit the College's intellectual property or facilitate academics and students to engage sufficiently in entrepreneurial activities.</p>	<p>A new strategy and technology transfer mechanism is supported by continued development of innovative approaches to translation and impact and development of our incubator, accelerator and corporate engagement spaces at White City.</p>
<p><b>INCOME DIVERSIFICATION</b> Failure to grow income from Ventures, commercial activities and Advancement means insufficient fund contribution to support achievement of our capital growth ambitions and to grow our core activities.</p>	<p>Regular Management Review and Executive oversight supports development of strategies to diversify our income and to balance opportunities and risks successfully, monitoring against our financial targets.</p>

# PRINCIPLES OF REMUNERATION

Imperial’s pay and benefits package is a critical factor in our ability to attract and retain an outstanding and diverse staff community. We are committed to offering all staff a pay and benefits package that is equitable, fair and appropriately reflects the College’s standing as a world leading university.

## Rates of pay

The College regularly benchmarks rates of pay against internal and appropriate external comparators. The College aims to pay mid to upper quartile rates of pay for all its staff against appropriate external comparators wherever possible within financial constraints.

## Annual cost of living pay review

The College’s annual cost of living pay review for all staff on local pay bargaining terms and conditions is jointly negotiated with the College Trades Unions (the University and College Union, Unite and Unison). The review considers all elements of reward that impact on staff costs. The College sets the award, taking into account affordability as the principal requirement but assessed against staff demands based on inflationary pressures.

On 1 August 2017, the College implemented a pay increase of 2% for salaries up to £67,110 plus 0.5% for staff earning above that amount. This was the second consecutive year that we adopted a tapered approach to provide an increased benefit for lower and middle grades. This pay offer was accepted by the recognised joint Trades Unions.

The contractor minimum rate for those employed primarily on College activities was also set at £10.00 per hour, which was 2.5% above the London Living Wage at that time.

## Senior staff pay review

Each year, the Remuneration Committee undertake a senior staff pay review, comparing the salaries of all staff earning more than £100,000 with benchmark data from the University Council for Education Administration (UCEA) Senior Staff Remuneration Survey and the Russell Group Salary Surveys for Non Academic Management, Professors and Readers. In addition, the President’s salary is benchmarked against the Committee of University Chairs Survey.

## Income derived from external activities

Many of the College’s academic and professional staff collaborate with and contribute to industry, professional bodies, commerce, charities and government. This work can include personal directorships, partnerships, consultancies (including private clinical practice), trusteeships, trade engagements, memberships of official committees and intellectual property licensing and involvement in spinout companies. This paid and unpaid work is integral to the delivery of the College’s mission, strengthening our collaboration with partners and helping us inform decision makers to influence policy.

Members of the College must request approval for external activity. They must disclose the number of days that will be committed to the activity, and senior officers of the College must also disclose any personal remuneration that will be received from the activity. In reviewing requests, the College considers whether the activity could compromise the full performance of the College member’s duties, and how the activity could serve the interest of the College and the College member.

Retention of the income is part of the approval process for new interests where this is proportionate, in line with the College’s external interest policy and practice applied to all staff.

## The gender pay gap

In 2017–18, the College published details of its gender pay gap. This shows that the gap between the median hourly pay of men and women at Imperial is 9.4%. This gender pay gap is not the same as equal pay; Imperial pays men and women the same for work of equal value.

The main reason for our gender pay gap is that we have more men than women in our senior, more well-paid roles. The lower three quartiles have nearly a 50–50 split between men and women, but the top quartile is 70.1% men and 29.9% women.

Our gender pay gap is broadly in line with the national average. While we have a slightly bigger gap than the higher education sector as a whole, we have a smaller gap compared to other universities in the research-intensive Russell Group.

We are committed to addressing the imbalance by tackling barriers to progression by providing personalised development, rolling out unconscious bias training, and further developing our award-winning family friendly initiatives. In terms of recruitment, we introduced a ‘Know Your Pool’ as detailed on page 12. We are also seeking to tackle the gender imbalance in STEM generally through outreach work with schools.

## Pensions

The College offers three pension schemes to staff and casual workers; the Universities Superannuation Scheme (USS), the Superannuation Arrangement of the University of London (SAUL) and the NHS Pension Scheme. Each scheme has different eligibility criteria, which are related to job roles and pay grades.

USS is a national scheme for universities, research and educational bodies, and it is open at Imperial to all staff in academic or comparable posts. It is a hybrid scheme, meaning that it is partly a defined benefit scheme and partly a defined contribution scheme. Members currently earn a defined benefit pension on salary up to £57,216.50 per annum, and defined contribution benefits on salaries above this threshold at a cost of 8% of salary. The College pays 18% of pensionable pay into the scheme each year for each member.

Every three years, the USS carries out a valuation to ensure that the assets it holds can be expected to pay the benefits that members have already built up in the scheme, and to determine how much is needed to continue to provide the current benefits in the future for members who continue to contribute.

The consultation on the March 2017 valuation issued by USS in September 2017 indicated that the aggregate contribution from employers and members needed to rise from 26% to 32.6% of pensionable salaries unless the benefit structure were to change. The USS’s Joint Negotiating Committee (JNC) proposed a reform package to address the deficit; this triggered industrial action across the sector with the University and College Union (UCU) announcing 14 strike dates at 61 universities, including Imperial.

In March 2018, Universities UK (UUK) and the UCU put benefit reform discussions on hold while a Joint Expert Panel (JEP) examined the 2017 valuation and agreed key principles to underpin a future joint approach. In September 2018 the JEP issued their first report undertaking a retrospective review of the 2017 valuation and exploring the scope of possible adjustments to the methodology which would allow the valuation to be concluded. The initial reaction to the report from UUK and UCU was positive. The College requested that USS gives full consideration to the outputs of the JEP work prior to making any changes to contributions in 2019 and beyond. However, at this stage USS has concluded that it is legally required to continue to run a consultation on the original basis until any new approach might be agreed. This 2018 consultation proposed increasing the aggregate combined contribution from members and employers to 37.4%, although this would reduce to 36.6% with a proposed change to the matching contribution currently in the scheme. Under the cost sharing rules, the increase in total contributions would be split 35:65 between members and employers respectively. The consultation proposes phasing in the increase in contributions from 1 April 2019 to 1 April 2020. The consultation ended on 2 November 2018 and the results of the consultation are expected in December 2018.

In response to the USS pension dispute, the College undertook a comprehensive Pay and Benefits Review which involved sharing demographic, pay and benefits information and a supplementary pack of financial information with the College community. Several hundred members of staff responded and the high-level summary of the themes and issues arising from the consultation were and have been the focus of much of the work undertaken since May.

SAUL is open to colleges and other institutions with links to the University of London. It is a defined benefit career average revalued earnings scheme whereby a member’s pension is based on their pensionable pay right across their career. The College currently contributes 16% of pensionable salary into the scheme year for each member. The scheme is also valued every three years with the last valuation carried out as at 31 March 2017.

Staff who have pension rights in the NHS Pension Scheme, on taking up a post within the

College, may remain members of the scheme. The scheme rules preclude the College from offering the scheme to anyone who would be joining the scheme as a new member. It is a nationally administered scheme that covers NHS employers, General Practices and other bodies, allowed under the direction of the Secretary of State in England and Wales. It is a defined benefit scheme into which the College currently contributes 14.38% of pensionable salary each year.

### Remuneration Committee

The Remuneration Committee is normally chaired by the Chair of the Council and comprises external members of the Council. The Provost and President are invited to participate in discussions of specified agenda items, but never participate in discussion of their own salary. The parts of Remuneration Committee proceedings that address the President's remuneration are chaired by the Deputy Chair of the Council, rather than by the Chair of the Council. The Committee meets at least twice a year, to review and approve the remuneration of the President and the Provost, their senior staff direct reports and members of the Provost's and President's Boards. It also reviews the College's overall reward strategy to ensure that its remuneration practices are being managed in a fair and equitable way.

The Committee met in November 2017 to receive information on the College's remuneration strategy, pay and pension benefits, and also to review and approve the salary and emoluments for the President and the staff members of Council.

The Committee reviewed the salary information for the members of Council reporting to the Provost and President. Staff members of Council had received the 2017 pay award applied to all staff so the review was to consider whether any adjustments to pay were appropriate. There was one recommendation for a further adjustment to pay for a staff member of Council based on the exceptional contribution of the individual and the external market benchmark.

The 2017 pay award also applied to the President whose salary was also reviewed by the Remuneration Committee. The review considered comparable data on pay and benefits from UK higher education institutions, including information on income for comparable size of the institution, expenditure and THE World University rankings; the President's progress in meeting her performance objectives; and benchmarks including the University Council for Education Administration (UCEA) Senior Staff Remuneration Survey and the Committee of University Chairs Survey.

After reviewing this information and the President's contribution to the College, examples of which are given in the Dual Leadership Model section of this report, the Committee expressed confidence that the President's salary was appropriate given the size, profile and impact of the work of the College. The President took no part in this review. Further details of the President's remuneration are included in Note 7 to the Financial Statements.

The College recognises that staff engaging in external activities such as directorships is integral to the delivery of its mission, enhances collaboration with partners and creates opportunities to influence and inform policy. In keeping with the College policy on external activities, the President was granted permission to serve on the Board of Trustees for KAUST University, the Singapore Academic Research Council and the Board of Directors of Chevron Corporation, as agreed upon in her acceptance of the offer to serve as Imperial College London President. In 2017 the President was selected to join the newly created UK Research and Innovation (UKRI) Board. These memberships benefit the College by fostering international collaboration, enhancing its global reputation and strengthening ties with industry.

The President's annual compensation from Chevron, which is deferred until retirement from the board, was \$375,000 in the year ended 31 December 2017, comprising \$225,000 in shares of Chevron stock and \$150,000 cash. She donates the entirety of her remuneration from UKRI (£9,180 per year plus £459 per day for additional service) to the university. She receives \$10,000 a year for her work with the Singapore Academic Research to cover incidental expenses. Her position with KAUST is not remunerated.



The Societal Engagement Celebration event in May 2018 recognised the generosity and dedication of staff who had supported societal engagement at Imperial over the past year.

Given the changing landscape and guidance for the governance of remuneration committees, the committee's terms of reference were reviewed and Council approved changes to these terms of reference to reflect this revised guidance in February 2018.

The updated terms of reference are:

- To review and approve the application of the College's pay relativity criteria for the President and the Provost, their senior staff direct reports and members of the Provost's and President's Boards;
- To agree, in advance, remuneration packages outside the norm and to consider and decide any severance payments proposed for the staff specified above;
- To review the application of the College's reward strategy on an annual basis to ensure that remuneration practices are being managed in a fair and equitable way. This review to be informed by the following supporting data:
  - Details of the across the board local pay award and any variation to benefits for all staff;
  - Summary information on the application of discretionary pay adjustments for all staff;
  - The annual equal pay audit;
  - The annual gender pay audit (and other specific protected pay audits as published);
  - Pay ratios and relevant comparator information;
  - Information on numbers of staff earning a total salary of more than £100,000, with trend data on average increases for the previous five years compared to average increases for all staff over five years; and
  - Detail of the individuals earning over £150,000 and the justification for any variation to pay (above the College across the board increase) reported on an individual basis and with reference to the College's pay relativity criteria applied to all staff.

The Committee produces an annual report to Council covering the areas it reviews. The list of post holders within the remit of the Remuneration Committee as at 31 July 2018 was:

**Professor Neil Alford**, Associate Provost (Academic Planning)

**Mr Luke Blair**, Vice-President (Communications and Public Affairs)

**Professor Nigel Brandon**, Dean, Faculty of Engineering (from 1 Oct 2017)

**Professor Simone Buitendijk**, Vice-Provost (Education)

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

**Professor David Gann**, Vice-President (Development and Innovation)

**Professor Alice P. Gast**, President

**Dr Simon Hepworth**, Director of Enterprise

**Professor Nick Jennings**, Vice-Provost (Research and Enterprise)

**Mrs Louise Lindsay**, Director of Human Resources and Organisational Change

**Mr John Neilson**, College Secretary

**Mr Muir Sanderson**, Chief Financial Officer

**Professor James Stirling**, Provost (to 31 July 2018)

**Professor Francisco Veloso**, Dean, Imperial College Business School

**Mrs Sarah P Waterbury**, Vice-President (Advancement)

**Professor Ian Walmsley**, Provost (from 1 Sept 2018)

**Professor Jonathan Weber**, Dean, Faculty of Medicine (from 1 Oct 2017)

**Professor Tom Welton**, Dean, Faculty of Natural Sciences

“  
We will share the wonder  
of what we do

IMPERIAL COLLEGE LONDON STRATEGY 2015–20  
”



Ramona Williams demonstrates the Smart Baby Buggy at the Imperial Festival Schools Day in 2018. Ramona's idea for a smart buggy to help visually-impaired people was made a reality by a team of student engineers from the Department of Bioengineering.

# FINANCIAL REVIEW

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# FIVE-YEAR SUMMARY OF KEY STATISTICS

	FRS 102				UK GAAP	
	2018 £m	2017 £m	2016 £m	2015 £m	2015 £m	2014 £m
<b>Income and expenditure</b>						
Tuition fees and education contracts	296	265	244	223	223	197
Funding Council grants	150	143	154	159	155	161
Research grants and contracts	364	361	351	436	428	351
Other income	151	152	177	136	154	138
Investment income	8	8	9	9	9	8
Donations and endowments	64	62	33	36	-	-
<b>Total income</b>	<b>1,033</b>	<b>991</b>	<b>968</b>	<b>999</b>	<b>969</b>	<b>855</b>
<b>Total expenditure</b>	<b>944</b>	<b>909</b>	<b>901</b>	<b>856</b>	<b>835</b>	<b>794</b>
<b>Surplus before other gains and share of results of JVs and associates</b>	<b>89</b>	<b>82</b>	<b>67</b>	<b>143</b>	<b>134</b>	<b>61</b>
Gain/(loss) on investments and disposals of non-current assets	(6)	26	17	21	14	-
Gain on disposal of interest in associates	16	5	4	-	-	-
Share of results in joint ventures and associates	(19)	6	(10)	(4)	(9)	(1)
Taxation	-	-	-	(13)	(13)	-
<b>Surplus before exceptional items</b>	<b>80</b>	<b>119</b>	<b>78</b>	<b>147</b>	<b>126</b>	<b>60</b>
<b>Surplus for the year</b>	<b>80</b>	<b>119</b>	<b>78</b>	<b>147</b>	<b>130</b>	<b>86</b>
<b>Balance sheet</b>						
Non-current assets/endowment assets	2,188	2,078	1,840	1,707	1,714	1,422
Net current assets/(liabilities)	54	105	(28)	14	(25)	(53)
Long term creditors and provisions	(629)	(649)	(397)	(385)	(325)	(271)
<b>Net assets</b>	<b>1,613</b>	<b>1,534</b>	<b>1,415</b>	<b>1,336</b>	<b>1,364</b>	<b>1,098</b>
<b>Capital expenditure</b>						
Externally funded	52	50	29	74	74	28
Internally funded	135	160	157	162	162	178
<b>Total in-year fixed asset additions</b>	<b>187</b>	<b>210</b>	<b>186</b>	<b>236</b>	<b>236</b>	<b>206</b>
<b>Liquidity</b>						
Cash, cash equivalents and current asset investments	311	345	193	239	239	275
Loans	(465)	(471)	(207)	(212)	(212)	(148)
Finance leases	(90)	(90)	(91)	(92)	(92)	(93)
<b>Net funds</b>	<b>(244)</b>	<b>(216)</b>	<b>(105)</b>	<b>(65)</b>	<b>(65)</b>	<b>34</b>
<b>Cash flow from operating activities</b>	<b>112</b>	<b>111</b>	<b>96</b>	<b>89</b>	<b>88</b>	<b>120</b>
<b>Student numbers (headcount)</b>						
Full-time students – undergraduates (UG)	9,767	9,583	9,320	9,054	9,054	8,931
Full-time students – postgraduates (PG)	7,287	6,709	6,414	6,236	6,236	5,804
Part-time students (PG)	1,361	1,274	1,148	1,057	1,057	1,196
<b>Total</b>	<b>18,415</b>	<b>17,566</b>	<b>16,882</b>	<b>16,347</b>	<b>16,347</b>	<b>15,931</b>
Number of full-time equivalent staff	7,608	7,600	7,626	7,516	7,516	7,240
Staff costs as a percentage of expenditure	53%	53%	54%	55%	54%	53%

Years 2015 onwards have been presented under FRS 102. All prior years are reported under old UK GAAP.

# FINANCIAL REVIEW



**MR MUIR SANDERSON**  
CHIEF FINANCIAL OFFICER

This year’s results show Imperial’s financial resilience during turbulent times as we stay focused on our mission to achieve enduring excellence in research and education in science, engineering, medicine and business for the benefit of society. In the last year we have navigated the introduction of a new government regulatory regime, uncertainty and concern over the funding of the Universities Superannuation Scheme (USS) pension scheme and the threat of Brexit to both staff and student mobility, as well as research funding and collaboration. We see no signs of this external turbulence reducing, and we know that we will face difficult trade-offs around investment priorities in the coming years. Continued financial resilience will be essential.

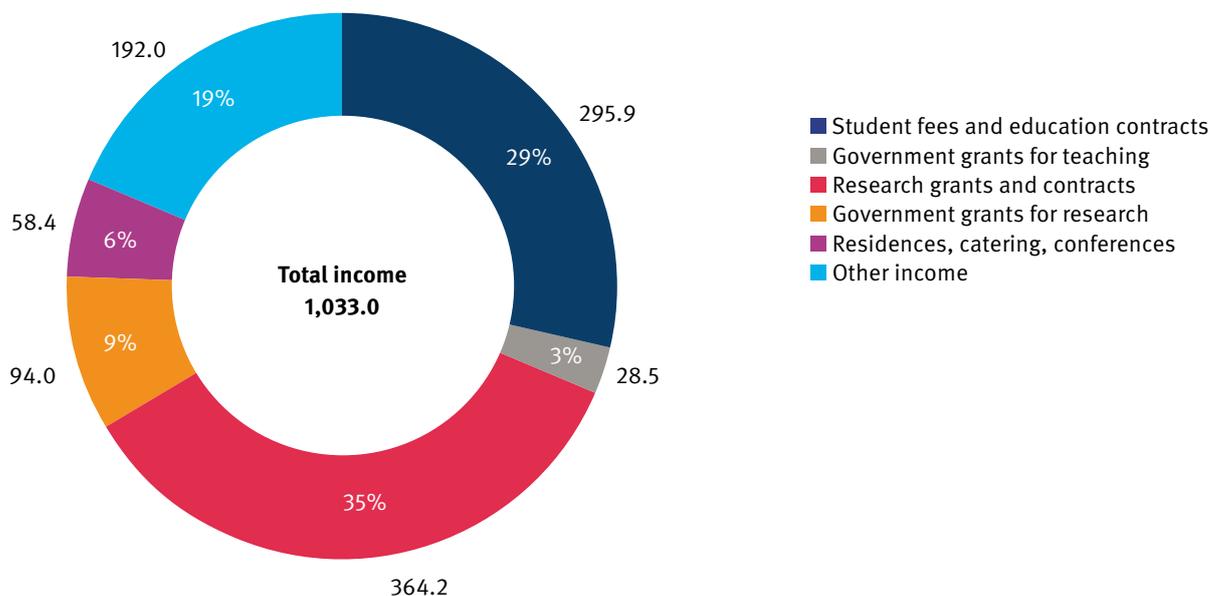
Despite these challenges, the cash Imperial generated from operations in 2017–18 remained relatively steady at £111.9 million and annual income exceeded £1 billion for the first time. Our surplus before other gains and losses improved by 8.2% to £88.9 million, as costs grew slower than revenues. The overall surplus for the year was reduced to £79.7 million due to volatility in the value of our investments and the absence of gain from asset disposals seen in the previous year.

Not all of this surplus is available for the College to invest at its discretion; £11.9 million is restricted and £15.4 million is endowed to fund specific activities.

### Income

Our total income in 2017–18 was £1.03 billion, up 4.2% on 2016–17.

2017–18 Income by source (£ million)

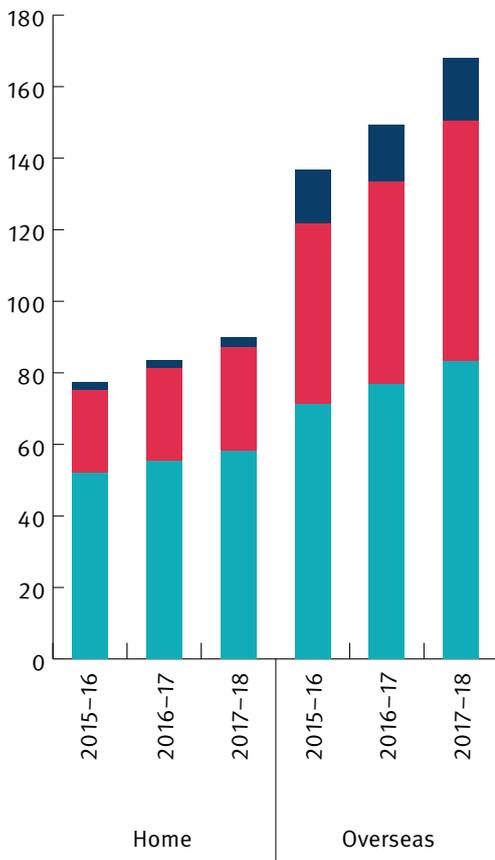


**Income from education**

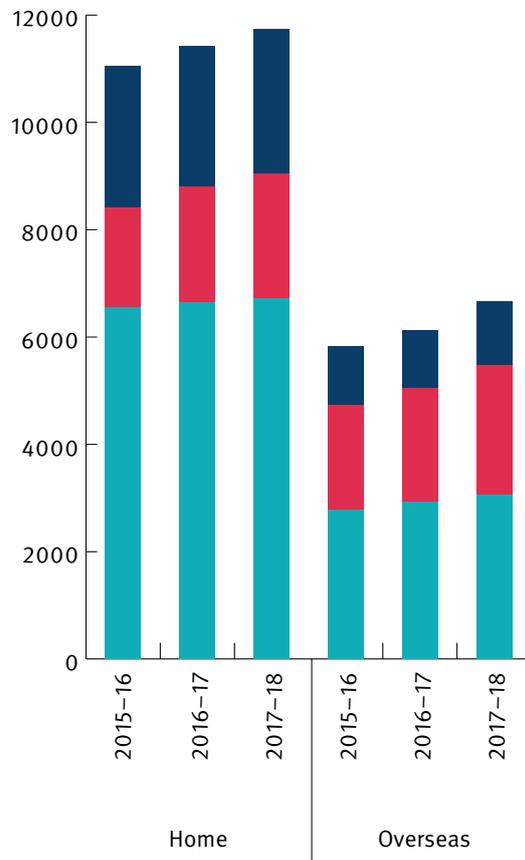
Income from tuition fees and education contracts continues to grow steadily, by £30.8 million (11.6%) this year to £295.9 million. Overall registered student numbers increased by 849 (4.8%) to 18,415, with almost two-thirds of the increase being from international students who now make up 36% of the student body. The College continues to be heavily oversubscribed with on average over seven applicants for every undergraduate place and over six for every postgraduate slot.

Our reliance on students from a small number of countries outside the EU reduces the diversity of our funding sources and our student mix, bringing risks to our financial robustness and the quality of our educational experience respectively. A review of the College’s strategy for international student recruitment is underway with targeted initiatives in new markets to address these risks. To date, the number of student applications from the EU has continued to grow, albeit at a slightly slower rate than before the referendum. Whilst press coverage has centred on concerns around EU research funding, we consider talent mobility to be an equally important issue.

**Growth in tuition fee income (£ million)**

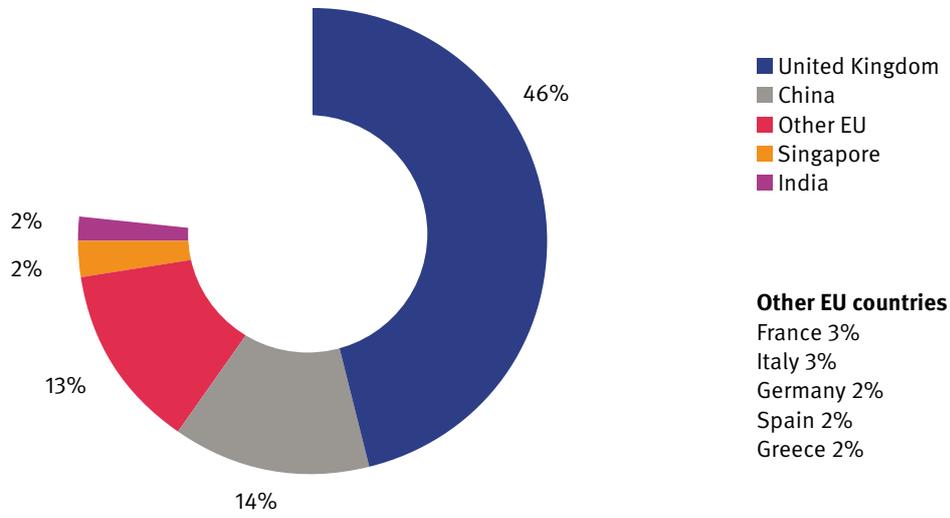


**Growth in student headcount**

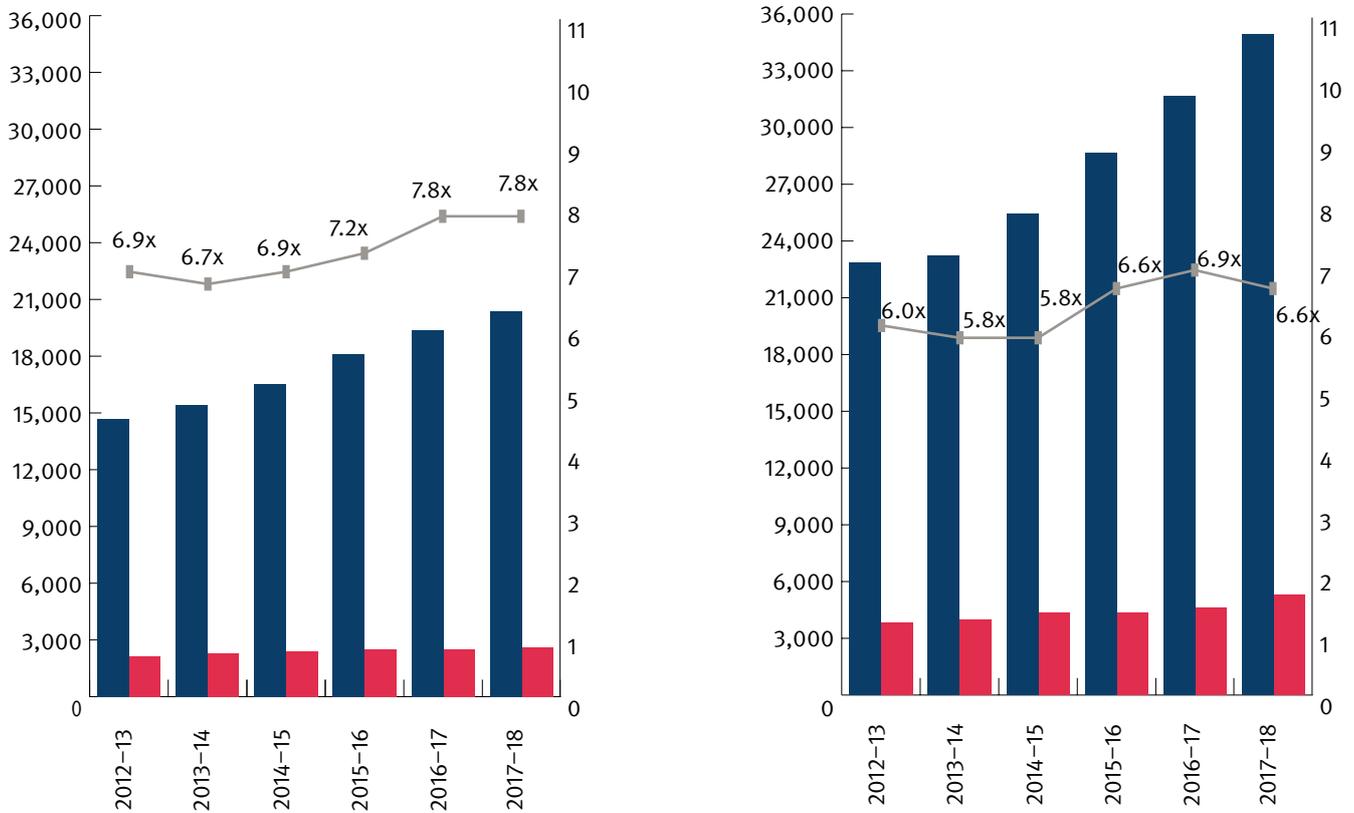


■ Undergraduate (UG) ■ Postgraduate taught (PGT) ■ Postgraduate Research

Student headcount by nationality 2017–18



Ratio of applications to enrolled student numbers



Undergraduate

Postgraduate

■ Total Applications ■ Enrolled ◆ Applications to enrolled

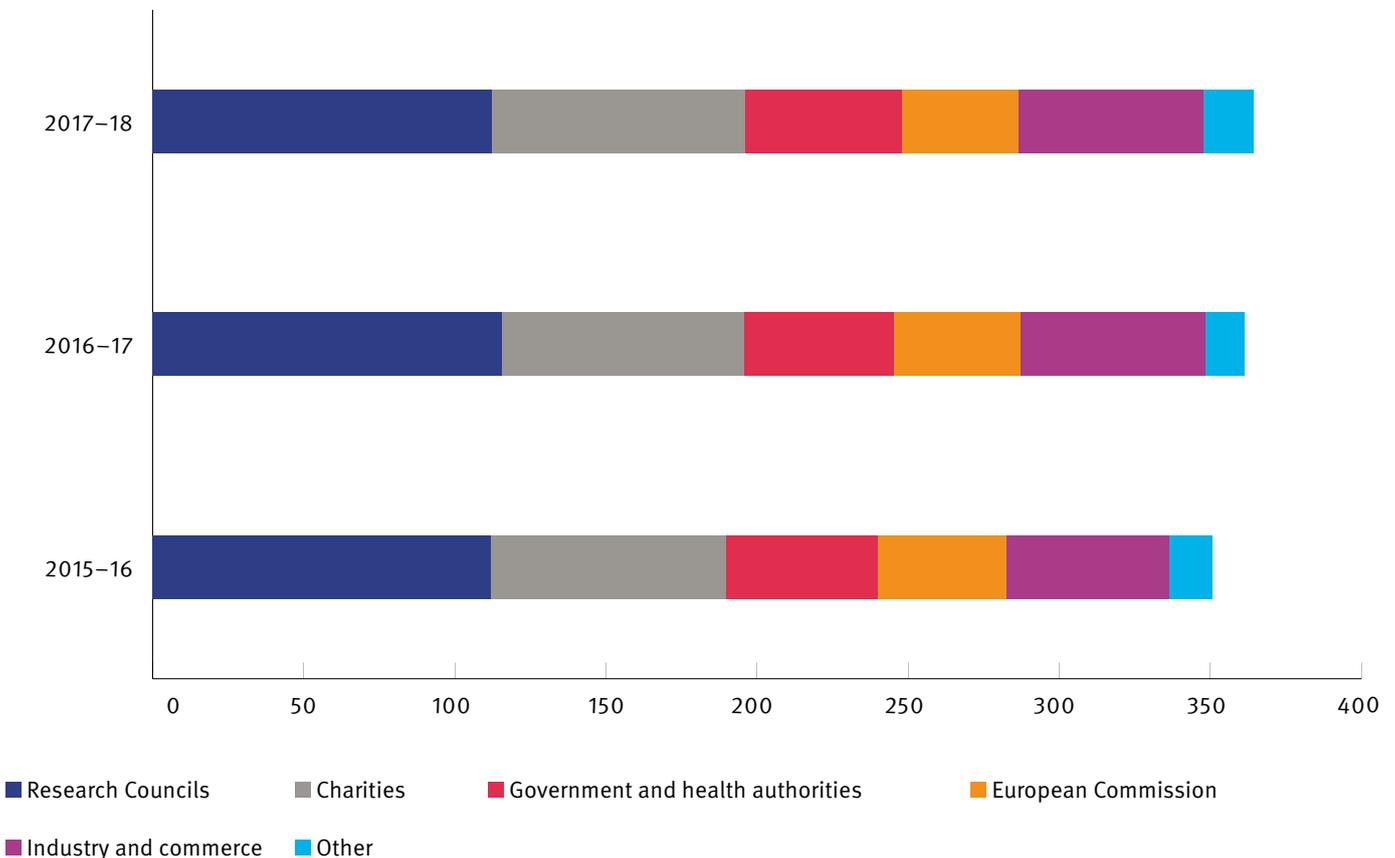
**Income from funding bodies**

Funding council income of £150.5 million is £7.4 million (5.2%) higher than last year, the first time this funding stream has seen a year-on-year increase since 2011–12. This is mainly due to the receipt of a capital payment of £9.2 million from the government towards the construction costs for the Michael Uren Biomedical Engineering Research Hub at our White City Campus. This funding, £20 million in total, had to be won via competition and required 2:1 matched funding from the private sector. At the same time, the government teaching and recurrent research grants have remained flat in cash terms.

**Income from research**

Research grant and contract income remained broadly flat at £364.2 million this year. Although income from both Research Councils and the European Commission fell (by £3.2 million and £3.6 million respectively), this was more than offset by a £3.3 million increase from charities and a £6.4 million increase from all other sources. Research funding from industry remained flat for the year, however there was a £17.5 million increase in new research awards for future activity won from industry in 2017–18, a 38% increase compared to the average over the previous three years.

Sources of research grant income (£ million)



### Diversifying our income

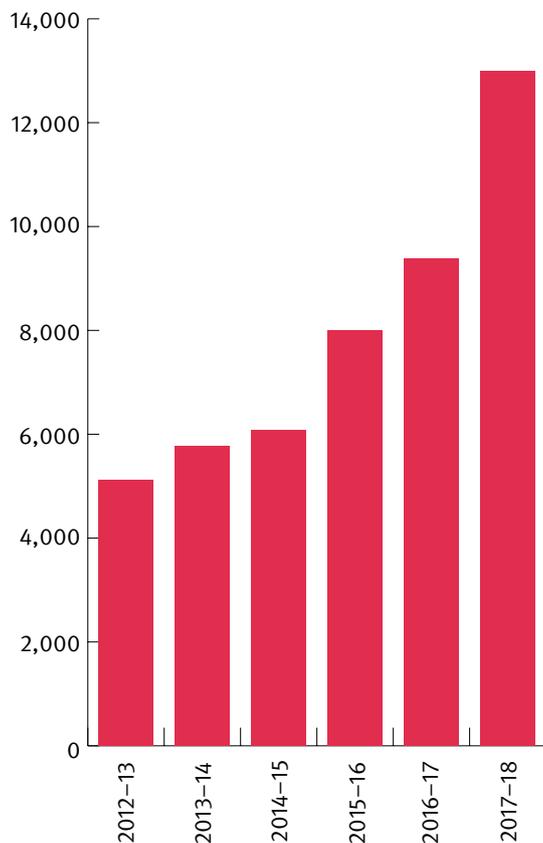
The College continues to focus on strengthening and diversifying its revenues in line with its 2015–20 Strategy. Increases of £3.8 million (39.2%) in rents receivable from commercial tenants; £3.9 million (7.2%) in income from residences, catering and conferences; and £1.7 million (10.6%) from consultancies and scientific services allowed us to more than offset a planned £2.1 million reduction in income from our joint medical school in Singapore. This means that Other Income remained broadly flat year on year, despite last year's results being increased by a £4.1 million equity sale.

Income reported from donations and endowments is only recognised in the accounts once the College becomes entitled to the income; there can therefore be a timing difference between when a donor pledges a donation and when it is recognised. This year, for example, income recognised was £63.7 million, a slight rise of £1.6 million (2.6%) on last year. However, income pledged was £59.3 million, well ahead of the £51.5 million secured last year and an almost four-fold

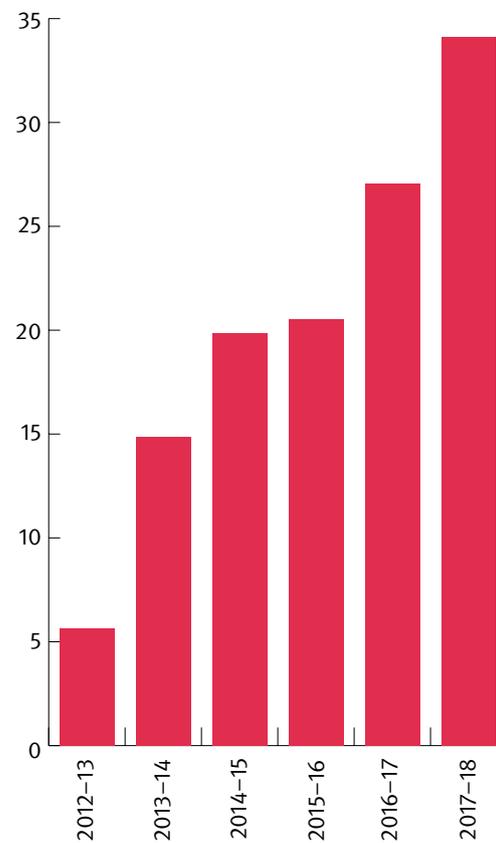
increase on the annual average of £17 million in the years 2004–14. Pledges of donations under £10 million have increased from £5.6 million in 2012–13 to £34.1 million in 2017–18, with the number of donors increasing by almost 8,000 in the corresponding period.

The largest donation recognised this year was £17.2 million from the Imperial College Trust, an independent charity set up to further the purposes of the College. This year's largest pledge was a landmark gift of £25 million from alumnus Marit Mohn in support of our fundraising campaign for the School of Public Health. The campaign seeks to raise £100 million to fund a state-of-the-art hub for health and wellbeing research, outstanding education and community engagement at the College's White City Campus. This gift will establish the Mohn Centre for Children's Health and Wellbeing within the School, which will advance pioneering research, education and community engagement that will improve the diagnosis, prevention and treatment of childhood illness on both a local and global scale.

#### Number of donors



#### Total value of donations pledged under £10 million (£ million)



## Expenditure

Our total expenditure in 2017–18 was £944.1 million, up 3.9% from last year.

Our staff costs are our largest, at 53% of total spend, and most important item of expenditure. Failure to retain staff is one of the key risks that we are addressing in terms of both likelihood and impact.

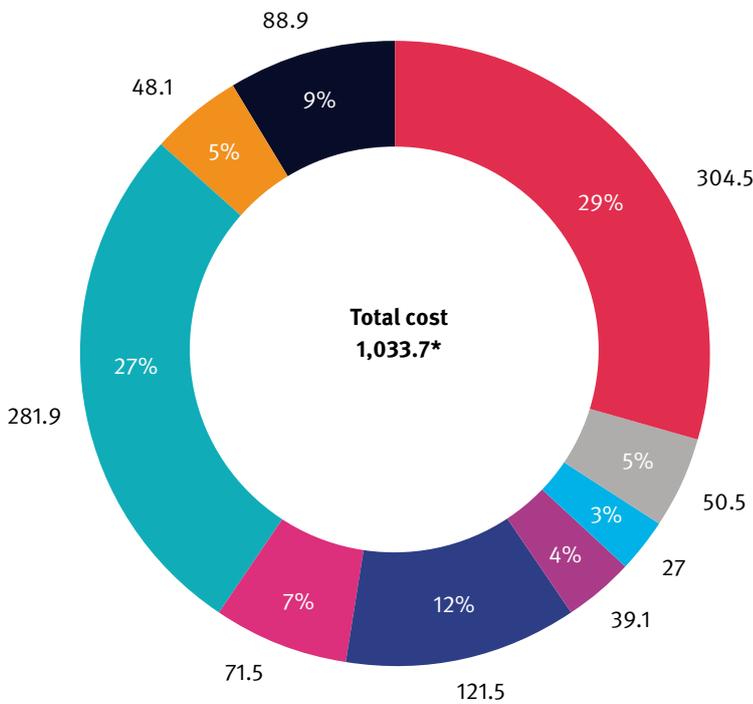
In recent years there has been targeted staff investment in key strategic areas – enriching the student experience, building stronger relationships with alumni and friends and strengthening collaboration with partners. For example, the Advancement team has grown by the equivalent of 50 full-time members of staff in recent years and, as demonstrated above, is starting to make a material difference to the College’s revenue diversification efforts.

Academic and research staff numbers stayed flat this year. Despite growth in academic staff numbers in key areas with, for example, the completion of the Dyson School of Design Engineering and new hires in anticipation of the Michael Uren Biomedical

Engineering Research Hub being completed in 2019, these increases have been offset slightly by reductions in Chemistry, as activity levels dropped in the course of the Department’s move to its new White City home in the Molecular Sciences Research Hub.

Other operating costs increased by £13.8 million (4.0%) to £357.6 million. The College aims to selectively manage its spend with external suppliers to ensure that there are no real term increases. This is challenging given the uncertain external environment and in particular sterling’s decline since the referendum. The College’s procurement strategy divides its supply chain by procurement category and complexity. This enables both strategic suppliers and the ‘long tail’ of lower volume and value suppliers to be actively managed and the targeting of resources to capture opportunity and leverage scale. In 2017–18 several new agreements have been established which has enabled the College to meet its £10 million procurement saving target for the year, up from a successfully met £7.5 million saving target in 2016–17.

### Total cost by category (£ million)



#### Academic departments

Delivery and support of research-led student learning and teaching and student research projects. Includes academic and support staff salary costs and resources.

#### IT, library and academic services

Includes IT expenditure, library and e-learning resources provided by the College.

#### Student support

Includes counselling services, careers advice, external examiner fees and health services.

#### Scholarships and bursaries

#### Estate

Cost of maintaining and running College buildings, student teaching spaces, research laboratories, student support premises and sports buildings.

#### Running the university

Cost of running the College and central functions like admissions, finance, human resources, public relations and administrative systems.

#### Direct research expenditure

#### Residences, catering, conferences

#### Surplus for reinvestment

Reinvested to enhance teaching, research, facilities and the student experience.

\*including surplus required to fund future commitments and the capital programme.

Although no new debt was raised in the year, interest and other finance costs increased by 9.1% as the full-year impact of the additional drawdowns in the previous year kicked in.

### Other gains and losses

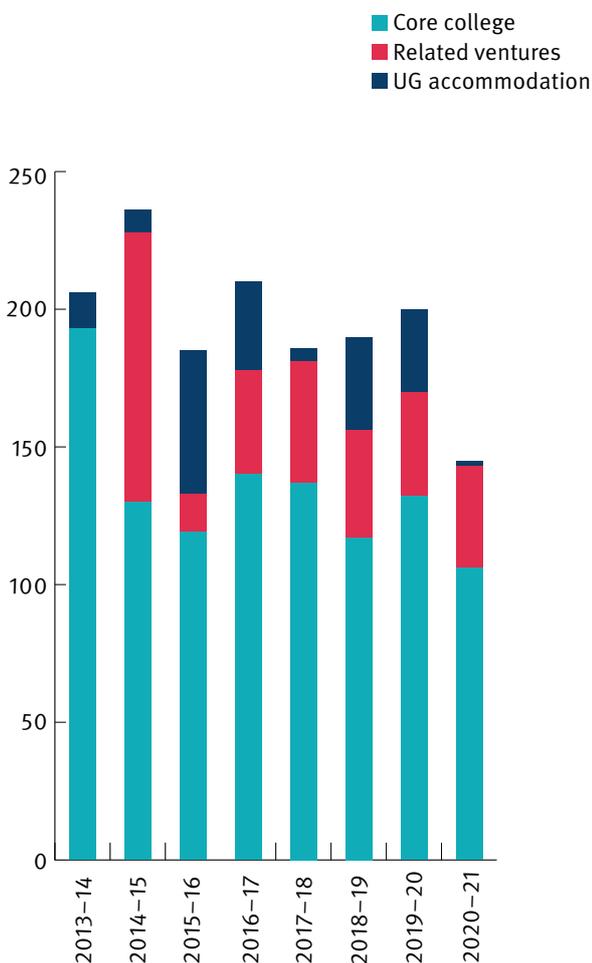
There has been a £6.0 million loss on investments this year, comprising a £19.9 million gain from marketable investments, offset by a £17.1 million loss in market value in the College's investment property portfolio as the Central London property market continued to soften, and a £8.8 million drop in value of the College's shareholding in IP Group plc. This is the first year in which the market value of the shareholding has impacted the College's net comprehensive income, as prior to IP Group's acquisition of Touchstone Innovations in October 2017 the College's equity interest in the latter was treated as an associate. In comparison, last year's surplus benefitted from £10.8 million gain from asset disposals and £15.0 million from market gains on investments.

### Capital projects

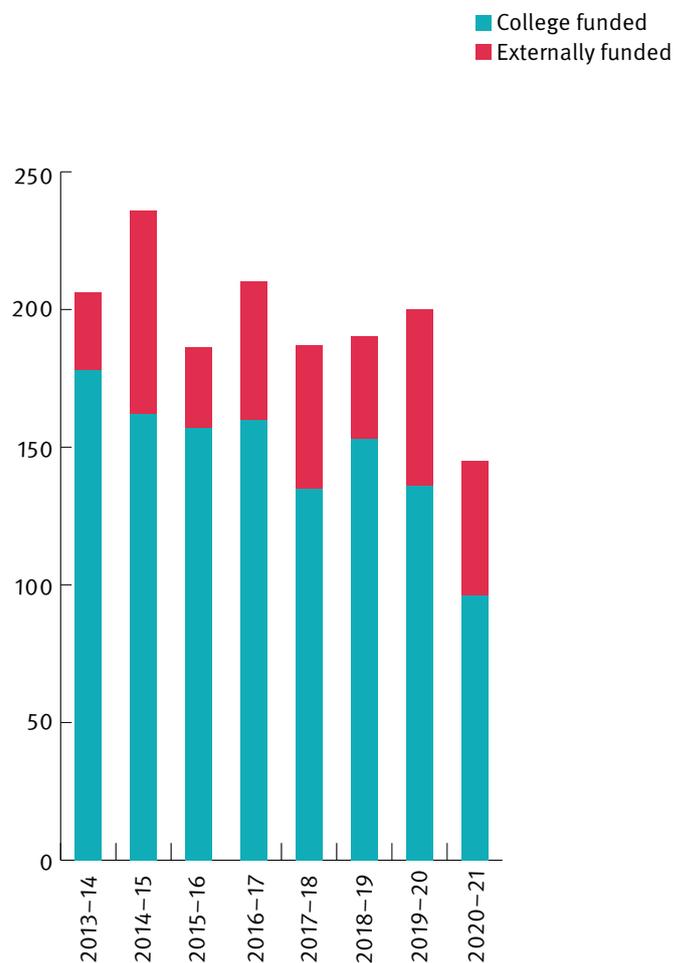
Another key risk for the College is an inability to provide appropriate infrastructure to support our academic mission and our position as one of the world's great science and technology-focused universities. In partial mitigation of this risk, the College incurred costs of £186.6 million on fixed assets this financial year, down from £210.3 million last year. This compares well with our immediate peers in the UK, though less well with our global peers, especially in the United States.

Significant capital projects that were completed in 2017–18 include: the Molecular Sciences Research Hub at the White City Campus, at a total estimated cost of £165.2 million; the City and Guilds Building at the South Kensington Campus, a new home for the Departments of Aeronautics and Mechanical Engineering, completed in January 2018 at an estimated total cost of £89.6 million; the initial phase of the refurbishment of the former Post Office building at the South Kensington Campus, for use by the

Capital expenditure by category (£ million)



Capital expenditure by funding type (£ million)



Dyson School of Design Engineering, with a second phase due for completion in March 2019, at an estimated total cost of purchase and refurbishment of £56.8 million.

Major capital projects currently under construction include a residential tower and the Michael Uren Biomedical Engineering Research Hub, both at the White City Campus, due for completion in January and September 2019 respectively. The residential tower will deliver 192 residential units, of which 59 will be key worker units reserved for College staff.

### Looking Ahead

Going forward, the level of reported surplus is expected to decline due to these investments leading to an increase in depreciation and added pressure on staff costs. This should be partially offset by an increase in student-related income, especially from overseas students,

as the College's new facilities become available. The College also expects growth in donations and endowments reflecting the progress that has been made in Advancement and the increasing size of the Endowment. In addition to this the College continues to diversify its revenue base and generate new sources of cash as well as adopt a new support service operating model to control costs.

These results show that the College continues to be resilient in the short-term whilst the challenging external environment reinforces that discipline and long-term perspective are needed to ensure the College's sustainability.

**Mr Muir Sanderson**  
Chief Financial Officer



Construction work continues on the College's new campus at White City. The new home for the Department of Chemistry, the Molecular Sciences Research Hub, opened in the summer of 2018, while the Michael Uren Biomedical Engineering Research Hub is expected to be completed in 2019.

Undergraduate students Felix de Courcy-Ireland and Sophia Griggs using a UV-Vis spectrometer in the instrument room in the Molecular Sciences Research Hub at the White City Campus.





Students on expedition in the Samaria Gorge in Crete. The trip was funded by Imperial's Expedition Board, which has been supporting student explorers at the College since 1956.



# CORPORATE GOVERNANCE

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The stone lions at the base of the Queen's Tower on the South Kensington Campus were originally part of the Imperial Institute, a scientific research institution established in 1887 to celebrate Queen Victoria's Jubilee.

# OUR GOVERNANCE STRUCTURE

The College's President has ultimate responsibility for Imperial College London's strategic direction, functions and activities. She is supported in this by the Provost, who has direct responsibility for the delivery of the College's core mission in education and research. Three separate bodies – the Council, the Court and the Senate – each oversee different elements of the College's activities.

## Principles

The College is committed to exhibiting best practice in all aspects of corporate governance. It endeavours to conduct its business in accordance with the seven Principles identified by the Committee on Standards in Public Life (selflessness, integrity, objectivity, accountability, openness, honesty and leadership), and with the guidance to universities from the Committee of University Chairmen in its Higher Education Code of Governance, which was published in 2014 and revised in June 2018.

## Legal Status

The College is an independent corporation whose legal status derives from a Royal Charter granted under Letters Patent in 1907. Its objects, powers and framework of governance are set out in its Charter and Statutes, which were granted by Her Majesty The Queen in 1998. On 4 April 2007 a Supplemental Charter and Statutes were granted by Her Majesty. This Supplemental Charter, which came into force on the date of the College's Centenary, 8 July 2007, established the College as a university with the name and style of "The Imperial College of Science, Technology and Medicine".

## Governance

The Charter and Statutes require the College to have three separate bodies, each with clearly defined functions and responsibilities, to oversee and manage its activities as follows:

**The Council** is 'the governing and executive body of the College', and is responsible for the finance, property, investments and general business of the College, and for setting its general strategic direction. There are up to 23 members of the Council, the majority of whom are external members, including the Chair and Deputy Chair. Also included in its membership are representatives

of the staff of the College and of the student body. None of the external members receive any payment, apart from the reimbursement of expenses, for the work they do for the College.

**The Court** brings together alumni and neighbourhood organisations as key stakeholders, to help the College further the implementation of its Strategy. Alumni members are drawn widely from amongst those who are actively engaged with the College and College activities. Local organisation members come from those organisations with a close link to College life. Its membership also includes representatives from the Council and from the College's senior management. The Court has 34 Members in total. In addition to its active engagement in the evolving implementation of the College Strategy, changes to the College's Charter require the approval of the Court before they can be submitted to the Privy Council. The Court normally meets once a year.

In 2015, a review of the Court's remit and composition suggested that it could best support the implementation of the College strategy if its membership was more closely aligned with elements of the strategy, and it was decided to reconfigure the Court to focus on two stakeholder groups – alumni and local organisations. The reconfigured Court came into effect in 2016.

**The Senate** is the academic authority of the College and draws its membership entirely from the staff and students of the College. Its role is to direct and regulate the teaching work of the College.

The principal academic and administrative officer of the College is the President who has responsibility to the Council for maintaining and promoting the efficiency and good order of the College. Under the terms of the Office for Students' Regulatory Framework for Higher Education in England, the President is the designated 'accountable officer' as Head of the Institution. In that capacity she can be summoned to appear before the Public Accounts Committee of the House of Commons. The financial management of the College is prescribed in the Financial Ordinance approved by the Council and conducted in accordance with the terms of registration with the Office for Students, as set out in the Regulatory Framework for Higher Education in England.

The President has ultimate responsibility for all of the College's functions and activities, but gives greater emphasis to Imperial's external relationships, development and fundraising. The President is supported in this by the Provost, who has direct responsibility for the delivery of the College's core mission: education, research and translation. The Provost reports directly to the President and together they have responsibility for the strategic direction of the College.

As Chief Executive of the College, the President exercises considerable influence upon the development of institutional strategy, the identification and planning of new developments, and the shaping of the institutional ethos. She is supported in this by a President's Board whose primary function is to plan for and address issues of broad, strategic, and College-wide significance.

The Provost is supported and advised by the Provost's Board. The Provost's Board is responsible for the delivery of the College's core academic mission, including oversight of the quality and efficacy of education and research; recruitment, development and retention of academic and research staff; and student life and wellbeing. It also has responsibility for delegated budgets and their financial control. It receives reports setting out key performance and risk indicators and considers possible control issues brought to its attention by early warning mechanisms which are embedded within the operational units.

The Council is responsible for the College's system of internal control and for reviewing its effectiveness. Its approach is risk-based and includes an evaluation of the likelihood and impact of risks becoming a reality and also ensures that risk assessment and internal control procedures are embedded in the College's ongoing operations. The reviews included in the College's risk-based Strategic Audit Plan cover business, operational and compliance issues as well as financial risk. Such a system of internal control is designed to manage rather than eliminate the risk of failure to achieve business objectives and can only provide reasonable, and not absolute, assurance against material misstatement or loss.

The Council's view is that there is an ongoing process for identifying, evaluating and managing the College's significant risks that has been in place for the year ended 31 July 2018 and up to the date of approval of the annual reports and financial statements, that it is regularly reviewed by the Council and that it accords with the internal control guidance for directors in the Combined Code as deemed appropriate for higher education. The Council meets at least four times a year.

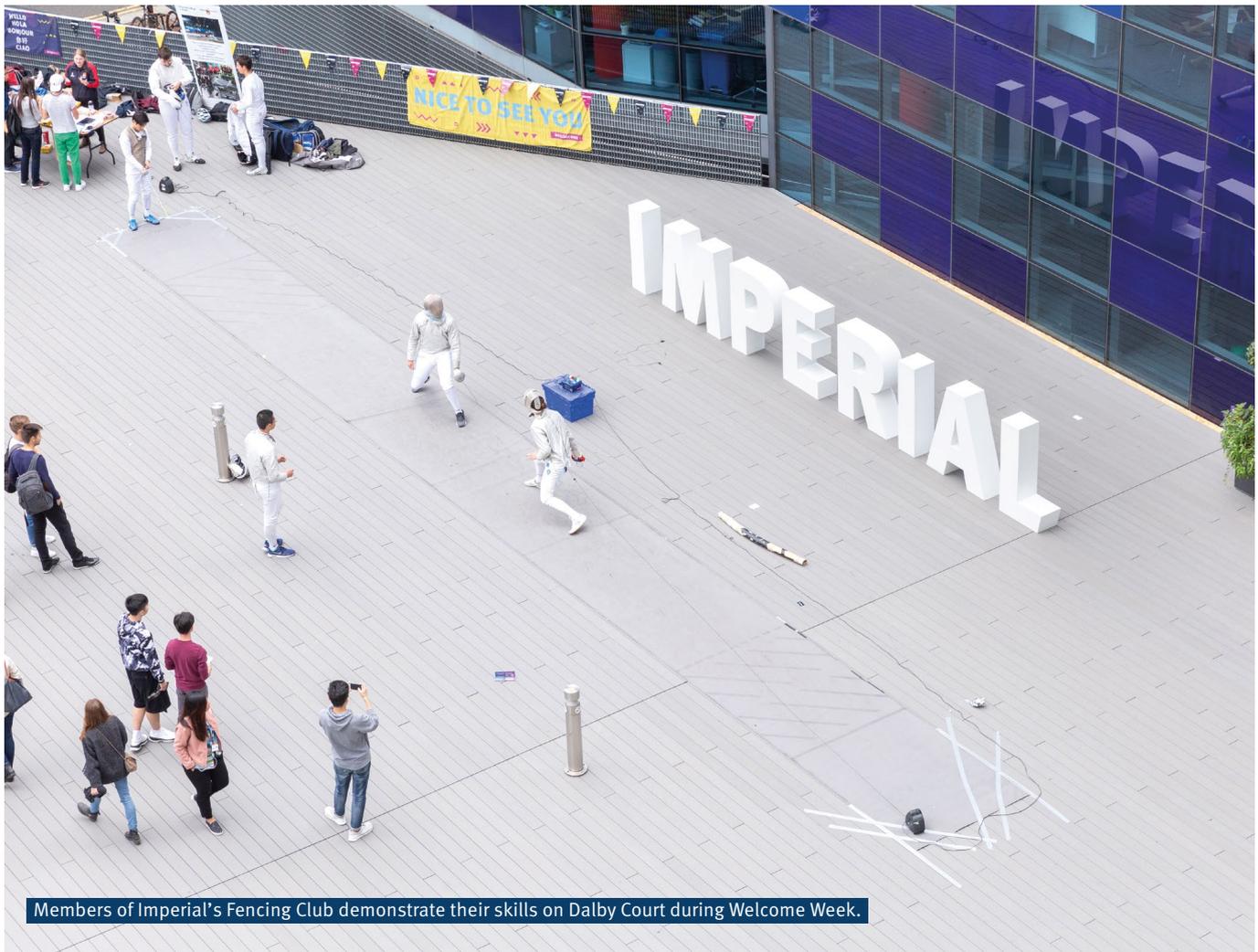
Following discussion of the recommendations from an effectiveness review conducted in 2016, the Council agreed to revise its committee structure in 2017. The principal revisions were the merger of the Audit and Risk Committees and the creation of a new Finance Committee. With effect from July 2017, it has had the following six committees: the Audit and Risk Committee, the Endowment Board, the Finance Committee, the Imperial White City Syndicate, the Nominations Committee and the Remuneration Committee. These are formally constituted as committees of the Council

with written terms of reference and specified membership, including a significant proportion of external members. With the exception of the Endowment Board (which is chaired by an external member with considerable investment expertise), all are chaired by external members of the Council. The decisions of these committees are reported formally to the Council.

The **Audit and Risk Committee** meets four times a year with the College's internal and external auditors in attendance. It considers detailed reports together with recommendations for the improvement of the College's systems of internal control and management's responses and implementation plans. It also receives and considers reports from the Office for Students as they affect the College's business and monitors adherence to regulatory requirements. It reviews the College's Risk Register each year, and will also devote time to the in-depth consideration of the College's long term strategic risks. The Committee reports directly to the Council and has the authority to call for any information from the College officers, from internal and external auditors and from others whom it considers necessary to consult in order to discharge its responsibilities effectively. Whilst senior officers attend meetings of the Committee, they are not members of it. At least once a year the Committee meets separately with the internal and external auditors on their own for independent discussions. The Audit and Risk Committee receives regular reports from Internal Audit, as well as commissioning reports from senior management. Its role in this area is confined to a high level review of the arrangements for internal control, value for money, risk management and the arrangements for the management and quality assurance of data submitted to formal funding bodies at the College. The emphasis is on obtaining the relevant degree of assurance and not merely reporting by exception.

The **Endowment Board** manages those College assets that are not essential to the core academic mission of the College and that can therefore be managed with a pure investment focus. Its Terms of Reference include an obligation to maintain a diversified portfolio of investments, to have regard to the suitability of the investments within this portfolio and to manage the investments in a way that is appropriate to achieve the Investment Objective set by the Council. The Investment Objective necessitates growth in value of the non-core assets in line with inflation whilst also providing a regular distribution for the core academic mission of the College. Within these restrictions, the Endowment Board is authorised to make such investments as it sees fit.

The **Finance Committee** is responsible for providing the Council with a strategic overview



of the College's finances, with a focus on the longer-term financial plan and the actions taken to achieve it. It also monitors financial risks related to liquidity, debt, resource allocation and financial contingencies, and reviews various financial measures at each meeting. The Finance Committee is also responsible for approving capital projects with a value of between £10 million and £30 million. Its membership includes one member with cross membership of the Audit and Risk Committee.

The **Imperial White City Syndicate's** primary role is to advise Council on recommendations made to it by the President's Board regarding all aspects of the development of the Imperial White City Campus: masterplanning, commercial strategy, and financial strategy. It also provides advice and guidance to the President's Board on the execution of Council decisions.

The **Nominations Committee** considers nominations for membership of the Court and Council and for the latter's Committees.

The **Remuneration Committee** reviews and approves the remuneration of the President and the Provost, their senior staff direct reports and members of the Provost's and President's Boards.

It also reviews the College's overall reward strategy to ensure that its remuneration practices are being managed in a fair and equitable way. The Remuneration Committee is normally chaired by the Chair of the Council, except for proceedings addressing the President's remuneration, which are chaired by the Deputy Chair of the Council.

The College maintains a Register of Interests of members of the Council and of Senior Officers which may be consulted by arrangement with the Clerk to the Court and Council.

The College Secretary is the Clerk to the Court and Council. Any enquiries about the constitution and governance of the College should be addressed to him.

# RESPONSIBILITIES OF THE COUNCIL

The Council has adopted the Higher Education Code of Governance published by the Committee of University Chairmen, and accordingly has approved the following Statement of Primary Responsibilities:

1. To approve the mission and strategic vision of the College, its long-term academic and business plans and key performance indicators, and to ensure that these meet the interests of the College's stakeholders.
2. To safeguard the good name and values of the College.
3. To appoint the President as the College's chief executive, and to put in place suitable arrangements for monitoring his/her performance.
4. To appoint other executive members of the Council as specified in the Statutes.
5. To delegate authority to the President, as chief executive, as advised by the President's Board, for the academic, corporate, financial, estate and human resource management of the College. And to establish and keep under regular review the policies, procedures and limits within such management functions as shall be undertaken by and under the authority of the President.
6. To assess risk to the College and to position its management and mitigation.
7. To ensure the establishment and monitoring of systems of control and accountability, including financial and operational controls, risk assessment, and procedures for handling internal grievances and for managing conflicts of interest.
8. To ensure that processes are in place for regular monitoring and evaluation of the performance and effectiveness of the College against its approved plans and key performance indicators, and that where possible and appropriate, these are benchmarked against other comparable institutions.
9. To conduct its business in accordance with best practice in higher education corporate governance and with the principles of public life drawn up by the Committee on Standards in Public Life.
10. To be the principal financial and business authority of the College, to ensure that proper books of account are kept, to approve the annual budget and financial statements, and to have overall responsibility for the College's assets, property and estate.
11. To be the College's legal authority and, as such, to ensure that systems are in place for meeting all the College's legal obligations, including those arising from contracts and other legal commitments made in the College's name.
12. In accordance with the College's Charter and Statutes, to act as trustee for any property, legacy, endowment, bequest or gift in support of the work and welfare of the College.
13. To ensure that the College's Charter and Statutes are adhered to at all times, with appropriate advice available to enable this to happen.
14. To be the employing authority for all staff in the institution and to be responsible for establishing the College's human resources strategy.
15. To establish processes to monitor and evaluate the performance and effectiveness of the Council itself.
16. To appoint a Clerk to the Council and ensure that, if the person appointed has managerial responsibilities in the institution, there is an appropriate separation in the lines of accountability.

In accordance with the College's Charter and Statutes, the Council is responsible for the efficient management and good conduct of all aspects of the affairs of the College (including its finances and property). It is required to present audited financial statements for each financial year. As such it is responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the College and enable it to ensure that the financial statements are prepared in accordance with the Charter of Incorporation, the Statement of Recommended Practice (SORP) on Accounting in Higher Education Institutions and other relevant accounting standards. In addition, and in accordance with the Office for Students' Regulatory Framework for Higher Education in England, the Council is required to ensure that the College complies with the Office for Students' conditions of registration, and with its and HEFCE accounts direction.



Members of Imperial College London's 2017–18 Council, who attended the November 2018 meeting.  
**Back row, from left:** Ms Alison Nimmo; Professor Tom Welton; Mr Rob Tomkies; Sir Philip Dilley; Professor Nigel Brandon; Mr John Cullen; Professor Ian Walmsley; Mr Muir Sanderson; Mr Toby Courtauld; Mr John Neilson. **Front row, from left:** Professor Francisco Veloso; Ms Sara Murray; Mr Iain Conn; Professor Alice Gast; Mr Chris Williams; Dr Mahnaz Safa; Professor Jonathan Weber; Professor Susan Eisenbach; Mr Christopher Brinsmead; Professor Jeremy Sanders.

In causing the financial statements to be prepared, the Council has ensured that:

- suitable accounting policies are selected and applied consistently;
- judgements and estimates are made that are reasonable and prudent;
- the SORP, applicable accounting standards, and the Office for Students' and HEFCE accounts direction have been followed, subject to any material departures being disclosed and explained in the financial statements;
- the College has adequate resources to continue in operation for the foreseeable future and for this reason the financial statements are prepared on a going concern basis.

The Council has taken reasonable steps to:

- ensure that funds from the Office for Students are used only for the purposes for which they have been given and in accordance with any other conditions which the Office for Students may from time to time prescribe;
- ensure that there are appropriate financial and management controls in place to safeguard public funds and funds from other sources;
- safeguard the assets of the College and prevent and detect fraud;
- secure the economical, efficient and effective management of the College's resources and expenditure.

The key elements of the College's system of internal control, which is designed to discharge the responsibilities set out above, include the following:

- clear definitions of the authority delegated to Deans of faculties and heads of academic and

administrative departments and divisions as set out in the College's approved Levels of Authority;

- approval by Council each year of a College budget and a five year rolling College plan which, whilst driven from the academic standpoint, are based on detailed financial projections of all College budget centres;
- a comprehensive monthly review of the financial performance of all budget centres and update of forecast outturns with regular financial reports to the President and senior College staff, to the President's Board and to the Finance Committee;
- clearly defined and formalised requirements for approval and control of expenditure, with investment decisions involving capital or revenue expenditure being subject to formal detailed appraisal and review according to approval levels set by the Council;
- a comprehensive Financial Ordinance, detailing financial controls and procedures, approved by the Audit and Risk Committee and the Council;
- Independent internal auditors, whose risk-based Strategic Audit Plan of work (based upon the College's Risk Register) is approved by, and conclusions subsequently reviewed by, the Audit and Risk Committee.

The Audit and Risk Committee, on behalf of the Council, regularly reviews the effectiveness of the internal controls in the College and its subsidiaries. Any system of internal control can, however, only provide reasonable, but not absolute, assurance against material misstatement or loss.

# COUNCIL AND COUNCIL COMMITTEES

The members of the Council are the charity trustees of the College and are listed for the period from 1 August 2017 to 23 November 2018, the date that the Annual Report and Accounts have been approved.

## The Council

### Chair:

Sir Philip Dilley

### Co-opted External Members:

Mr C.D. Brinsmead  
 Mr I.C. Conn  
 Mr T. Courtauld  
 Mr J. Cullen (Deputy Chair)  
 Ms J.R. Lomax  
*(to 30 September 2017)*  
 Sir Jonathan Michael  
*(from 1 November 2017)*  
 Ms S.E. Murray  
 Ms A. Nimmo  
 Dr M. Safa  
 Professor J.K.M. Sanders  
 Mr C.G. Williams

### Ex-Officio:

President: Professor A. P. Gast  
 Provost: Professor W. J. Stirling  
*(to 31 August 2018)*  
 Provost: Professor I.A. Walmsley  
*(from 1 September 2018)*  
 Chief Financial Officer:  
 Mr M. Sanderson

### Senior Staff Representatives:

Professor N. Brandon  
*(from 1 October 2017)*  
 Professor J. Magee  
*(to 30 September 2017)*  
 Professor G. Sreaton  
*(to 30 September 2017)*  
 Professor F. Veloso  
 Professor J.N. Weber  
*(from 1 October 2017)*  
 Professor T. Welton

### Elected Staff Member:

Professor S. Eisenbach

### President, Imperial College Union:

Ms A. Compton  
*(to 31 July 2017)*  
 Mr R. Tomkies  
*(from 1 August 2017)*

### Clerk to the Court and Council:

Mr J.S. Neilson

## Audit and Risk Committee

### Audit and Risk

**Committee Chair:**  
 Mr J. Cullen

### Membership:

Professor J.K.M. Sanders  
 Mr C. Williams

### Secretary:

Mr J.B. Hancock

## Endowment Board

### Chair:

Mr N. Moakes

### Membership:

Professor D.K.H. Begg  
 Professor A.P. Gast  
 Mr J. Newsum  
 The Hon. R. Rayne  
*(to February 2018)*  
 Ms A. Rudebeck  
 Mr M. Sanderson  
 Mr F. Varoqui  
*(From February 2018)*  
 Mr C. Williams

### Secretary:

Ms J. Soulieux

## Finance Committee

### Chair:

Mr C.D. Brinsmead

### Membership:

Professor A.P. Gast  
 Ms A. Rudebeck  
 Dr M. Safa  
 Mr M. Sanderson  
 Mr C. Williams

### Secretary:

Mr T. Galer

## Imperial White City Syndicate

### Chair:

Ms A. Nimmo

### Membership:

Professor N. Alford  
 Sir John Armit  
 Mr T. Courtauld  
 Dr R. Easton  
*(to 30 September 2017)*  
 Professor A.P. Gast  
 Ms J.R. Lomax  
*(to 30 September 2017)*  
 Ms S.E. Murray  
*(from 18 May 2018)*  
 Mr M. Sanderson  
 Professor W.J. Stirling  
*(to 31 August 2018)*

### Secretary:

Mr J.B. Hancock

## Nominations Committee

### Chair:

Sir Philip Dilley

### Membership:

Mr J. Cullen  
 Professor A.P. Gast  
 Dr M. Safa  
 Mr M. Sanderson  
 Professor W.J. Stirling  
*(to 31 August 2018)*  
 Professor I.A. Walmsley  
*(from 1 September 2018)*

### Secretary:

Mr J. Neilson

## Remuneration Committee

### Chair:

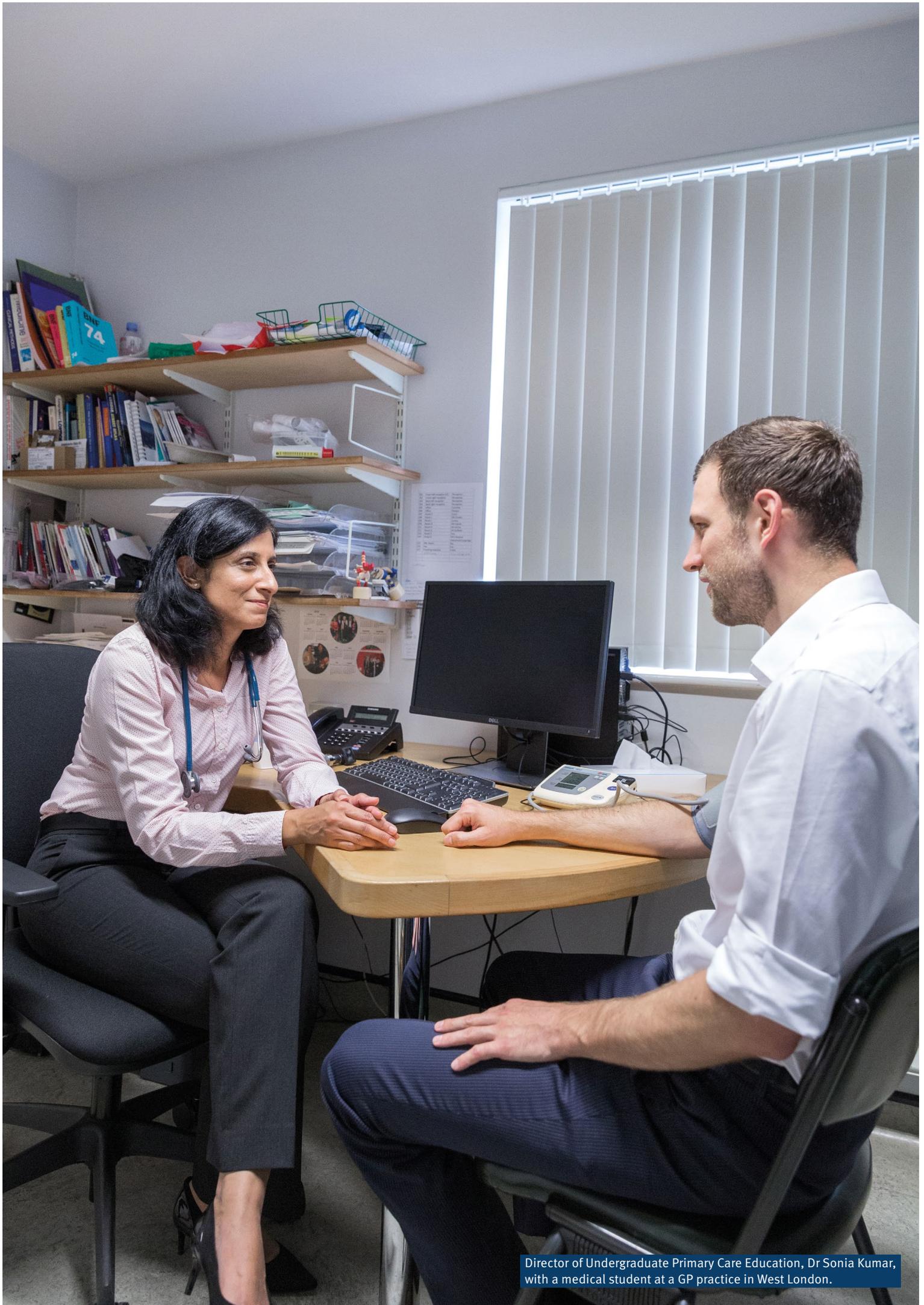
Sir Philip Dilley

### Membership:

Mr C.D. Brinsmead  
 Mr J. Cullen  
 Ms J.R. Lomax  
*(to 30 September 2017)*  
 Dr M. Safa  
*(from 1 October 2017)*

### Secretary:

Mrs L. Lindsay



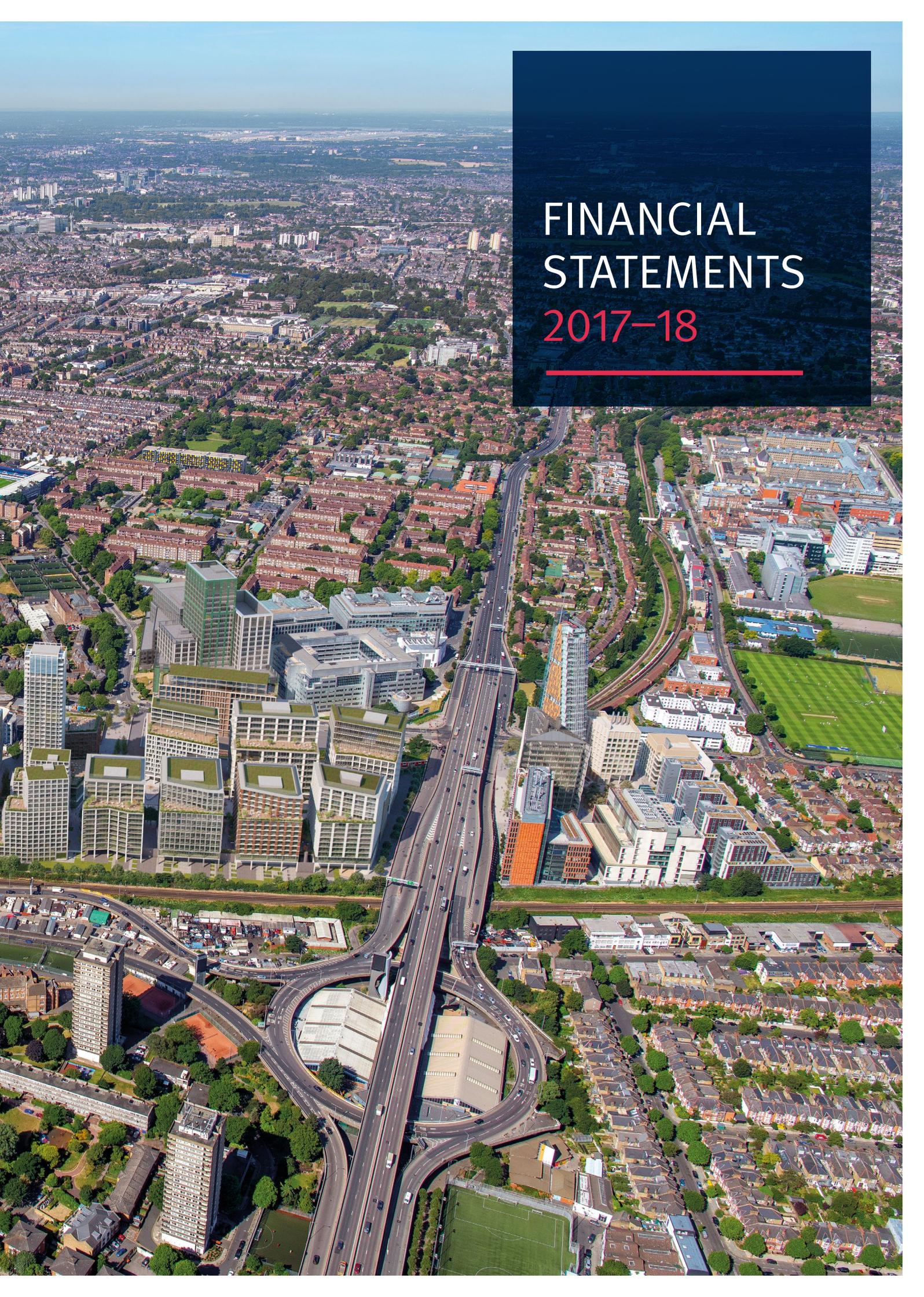
Director of Undergraduate Primary Care Education, Dr Sonia Kumar, with a medical student at a GP practice in West London.



“  
We will act courageously and innovatively  
when pursuing new opportunities

”  
IMPERIAL COLLEGE LONDON STRATEGY 2015–20

The White City Opportunity Area in West London will encompass new homes, green spaces, local facilities and research hubs within and beyond Imperial's White City Campus. This indicative visualisation (subject to planning approval) shows the projected development of the area for the next 25 years.

An aerial photograph of a city, likely London, showing a complex highway interchange with multiple lanes and overpasses. The surrounding area is densely packed with residential buildings, including terraced houses and modern apartment blocks. A large green field, possibly a sports field, is visible on the right side. The sky is clear and blue.

# FINANCIAL STATEMENTS

2017–18

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# Independent auditors' report

Year ended 31 July 2018

Independent auditors' report to the Council of Imperial College of Science, Technology and Medicine ("Imperial College London" or the "College")

## Report on the audit of the financial statements

### Opinion

In our opinion, Imperial College London's group financial statements and College financial statements (the "financial statements"):

- give a true and fair view of the state of the group's and of the College's affairs as at 31 July 2018, and of the group's and of the College's income and expenditure, gains and losses and changes in reserves, and of the group's cash flows for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards, comprising FRS 102 "The Financial Reporting Standard applicable in the UK and Republic of Ireland", and applicable law); and
- have been properly prepared in accordance with the requirements of the Statement of Recommended Practice – Accounting for Further and Higher Education and the requirements of the Office for Students' OfS's Accounts direction (OfS 2018.26).

We have audited the financial statements, included within the Annual Report and Accounts (the "Annual Report"), which comprise the consolidated and College statement of financial position as at 31 July 2018; the consolidated and College statement of comprehensive income and expenditure, the consolidated and College statement of changes in reserves, and the consolidated statement of cash flows for the year then ended; the statement of principal accounting policies; and the notes to the financial statements, which include other explanatory information.

### Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities under ISAs (UK) are further described in the Auditors' responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

### Independence

We remained independent of the group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, which includes the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

### Conclusions relating to going concern

We have nothing to report in respect of the following matters in relation to which ISAs (UK) require us to report to you when:

- the Council's use of the going concern basis of accounting in the preparation of the financial statements is not appropriate; or
- the Council has not disclosed in the financial statements any identified material uncertainties that may cast significant doubt about the group's and the College's ability to continue to adopt the going concern basis of accounting for a period of at least twelve months from the date when the financial statements are authorised for issue.

However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the group's and the College's ability to continue as a going concern.

### Reporting on other information

The other information comprises all of the information in the Annual Report other than the financial statements and our auditors' report thereon. The Council is responsible for the other information. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or any form of assurance thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If we identify an apparent material inconsistency or material misstatement, we are required to perform procedures to conclude whether there is a material misstatement of the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report based on these responsibilities.

## Responsibilities for the financial statements and the audit

### *Responsibilities of the Council for the financial statements*

As explained more fully in the Responsibilities of the Council set out on pages 42 and 43, the Council is responsible for the preparation of the financial statements in accordance with the applicable framework and for being satisfied that they give a true and fair view. The Council is also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Council is responsible for assessing the group's and the College's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless the Council either intends to liquidate the group and the College or to cease operations, or has no realistic alternative but to do so.

### *Auditors' responsibilities for the audit of the financial statements*

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council's website at: [www.frc.org.uk/auditorsresponsibilities](http://www.frc.org.uk/auditorsresponsibilities). This description forms part of our auditors' report.

### *Use of this report*

This report, including the opinions, has been prepared for and only for the Council as a body in accordance with Statute 11 of the Charters and Statutes of the College and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

## Other required reporting

### **Opinions on other matters prescribed in the OfS and Research England Audit Code of Practice issued under the Further and Higher Education Act 1992 (as amended)**

In our opinion, in all material respects:

- funds from whatever source administered by the College for specific purposes have been properly applied to those purposes and, if relevant, managed in accordance with relevant legislation; and
- funds provided by the Higher Education Funding Council for England, the OfS and Research England have been applied in accordance with the relevant terms and conditions, and any other terms and conditions attached to them.

### **PricewaterhouseCoopers LLP**

Chartered Accountants and Statutory Auditors  
London

Date: 30 November 2018

# Statement of comprehensive income and expenditure

Year ended 31 July 2018

	Notes	Consolidated		College	
		Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
<b>Income</b>					
Tuition fees and education contracts	1	295.9	265.1	295.9	265.1
Funding Council grants	2	150.5	143.1	150.5	143.1
Research grants and contracts	3	364.2	361.3	364.2	361.0
Other income	4	150.9	151.7	142.2	143.8
Investment income	5	7.8	7.9	7.9	8.1
Donations and endowments	6	63.7	62.1	66.3	62.1
<b>Total income</b>		<b>1,033.0</b>	<b>991.2</b>	<b>1,027.0</b>	<b>983.2</b>
<b>Expenditure</b>					
Staff costs	7, 9	498.3	481.2	491.5	473.4
Other operating expenses	9	357.6	343.8	347.7	337.7
Depreciation	9, 10	67.8	65.3	66.3	64.1
Interest and other finance costs	8, 9	20.4	18.7	20.5	18.7
<b>Total expenditure</b>		<b>944.1</b>	<b>909.0</b>	<b>926.0</b>	<b>893.9</b>
<b>Surplus before other gains/(losses) and share of operating results of joint ventures and associates</b>		<b>88.9</b>	<b>82.2</b>	<b>101.0</b>	<b>89.3</b>
Gain/(loss) on disposal of non-current assets		(0.6)	10.8	(0.6)	10.8
Gain/(loss) on investments	11	(6.0)	15.0	(6.0)	15.0
Gain on disposal of interest in associates	13	16.3	4.5	71.3	12.1
Share of operating surplus/(deficit) in associates	13	(18.6)	6.4	-	-
<b>Surplus before tax</b>		<b>80.0</b>	<b>118.9</b>	<b>165.7</b>	<b>127.2</b>
Taxation		(0.3)	0.1	(0.3)	-
<b>Surplus for the year</b>		<b>79.7</b>	<b>119.0</b>	<b>165.4</b>	<b>127.2</b>
<b>Total net comprehensive income for the year</b>		<b>79.7</b>	<b>119.0</b>	<b>165.4</b>	<b>127.2</b>
Represented by:					
Endowment comprehensive income for the year		15.4	15.5	15.4	15.5
Restricted comprehensive income for the year		11.9	8.4	13.9	10.4
Unrestricted comprehensive income for the year		52.4	95.1	136.1	101.3
		<b>79.7</b>	<b>119.0</b>	<b>165.4</b>	<b>127.2</b>

All items of income and expenditure relate to continuing activities. There are no additional items recognised in other comprehensive income.

# Statement of financial position

Year ended 31 July 2018

	Notes	Consolidated		College	
		Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
<b>Non-current assets</b>					
Fixed assets	10	1,630.1	1,511.7	1,611.0	1,477.7
Investments	11	555.8	484.8	603.7	516.4
Investments in associates	13	2.5	81.6	3.5	9.0
		<b>2,188.4</b>	<b>2,078.1</b>	<b>2,218.2</b>	<b>2,003.1</b>
<b>Current assets</b>					
Stock		0.4	0.5	0.2	0.2
Trade and other receivables	15	220.0	246.6	222.5	256.3
Investments	16	24.4	58.1	24.4	58.1
Cash and cash equivalents		287.0	286.8	264.3	269.9
		<b>531.8</b>	<b>592.0</b>	<b>511.4</b>	<b>584.5</b>
Creditors: amounts falling due within one year	17	(478.0)	(487.1)	(472.8)	(475.8)
<b>Net current assets/(liabilities)</b>		<b>53.8</b>	<b>104.9</b>	<b>38.6</b>	<b>108.7</b>
<b>Total assets less current liabilities</b>		<b>2,242.2</b>	<b>2,183.0</b>	<b>2,256.8</b>	<b>2,111.8</b>
Creditors: amounts falling due after more than one year	18	(557.0)	(566.8)	(557.0)	(566.8)
<b>Provisions</b>					
Pension provisions	19	(64.9)	(74.0)	(64.8)	(73.8)
Other provisions	19	(6.8)	(8.4)	(6.8)	(8.4)
<b>Total net assets</b>		<b>1,613.5</b>	<b>1,533.8</b>	<b>1,628.2</b>	<b>1,462.8</b>
<b>Restricted Reserves</b>					
Endowment income and expenditure reserve	20	157.1	141.7	157.1	141.7
Restricted income and expenditure reserve	21	72.3	60.4	72.4	58.5
<b>Unrestricted Reserves</b>					
Unrestricted income and expenditure reserve		1,384.1	1,331.7	1,398.7	1,262.6
<b>Total Reserves</b>		<b>1,613.5</b>	<b>1,533.8</b>	<b>1,628.2</b>	<b>1,462.8</b>

The financial statements were approved by the Council on 23 November 2018 and were signed on its behalf on that date by:

Sir Philip Dilley, Chair of Council

Professor Alice Gast, President

Mr Muir Sanderson, Chief Financial Officer

## Statement of changes in reserves

Year ended 31 July 2018

	Income and expenditure account			Total
	Endowment £m	Restricted £m	Unrestricted £m	£m
<b>Consolidated</b>				
<b>Balance at 1 August 2016</b>	<b>126.2</b>	<b>52.0</b>	<b>1,236.6</b>	<b>1,414.8</b>
Surplus from the income and expenditure statement	15.5	47.7	55.8	119.0
Release of restricted funds spent in year	-	(39.3)	39.3	-
<b>Total comprehensive income for the year ended 31 July 2017</b>	<b>15.5</b>	<b>8.4</b>	<b>95.1</b>	<b>119.0</b>
<b>Balance at 31 July 2017</b>	<b>141.7</b>	<b>60.4</b>	<b>1,331.7</b>	<b>1,533.8</b>
Surplus from the income and expenditure statement	15.4	55.2	9.1	79.7
Release of restricted funds spent in year	-	(43.3)	43.3	-
<b>Total comprehensive income for the year 31 July 2018</b>	<b>15.4</b>	<b>11.9</b>	<b>52.4</b>	<b>79.7</b>
<b>Balance at 31 July 2018</b>	<b>157.1</b>	<b>72.3</b>	<b>1,384.1</b>	<b>1,613.5</b>
<b>College</b>				
<b>Balance at 1 August 2016</b>	<b>126.2</b>	<b>48.1</b>	<b>1,161.3</b>	<b>1,335.6</b>
Surplus from the income and expenditure statement	15.5	49.7	62.0	127.2
Release of restricted funds spent in year	-	(39.3)	39.3	-
<b>Total comprehensive income for the year ended 31 July 2017</b>	<b>15.5</b>	<b>10.4</b>	<b>101.3</b>	<b>127.2</b>
<b>Balance at 31 July 2017</b>	<b>141.7</b>	<b>58.5</b>	<b>1,262.6</b>	<b>1,462.8</b>
Surplus from the income and expenditure statement	15.4	57.2	92.8	165.4
Release of restricted funds spent in year	-	(43.3)	43.3	-
<b>Total comprehensive income for the year 31 July 2018</b>	<b>15.4</b>	<b>13.9</b>	<b>136.1</b>	<b>165.4</b>
<b>Balance at 31 July 2018</b>	<b>157.1</b>	<b>72.4</b>	<b>1,398.7</b>	<b>1,628.2</b>

# Consolidated statement of cash flows

Year ended 31 July 2018

	Note	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
<b>Cash flow from operating activities</b>			
Surplus for the year		79.7	119.0
<b>Adjustment for non-cash items</b>			
Depreciation	10	67.8	65.3
(Gain)/loss on investments	11	6.0	(15.0)
Gain on disposal/deemed disposal of interest in an associate		(16.3)	(4.5)
Decrease/(increase) in debtors		26.2	17.8
Increase/(decrease) in creditors		(13.5)	(4.3)
Increase/(decrease) in pension provisions		(10.4)	(8.9)
Increase/(decrease) in other provisions		(2.0)	(3.6)
Share of operating (surplus)/deficit in associate		18.6	(6.4)
Unrealised foreign currency (gains)/losses		0.2	(0.4)
Other non-cash items		1.4	0.6
Taxation		0.3	(0.1)
<b>Adjustment for investing or financing activities</b>			
Investment income	5	(7.8)	(7.9)
Interest payable	8	20.4	18.7
Endowment income		(10.9)	(12.1)
Loss/(profit) on the sale of non-current assets		0.6	(10.8)
Capital grant income		(48.4)	(36.2)
		111.9	111.2
<b>Cash flow from investing activities</b>			
Capital grants receipts		47.9	36.2
Proceeds from sales of investment property		13.6	6.0
Disposal of other non-current assets		11.4	54.8
Investment income		4.5	3.7
Payments made to acquire fixed assets		(185.5)	(199.1)
New non-current investments		(22.9)	(114.3)
Movement in current asset investments		33.7	(45.0)
		(97.3)	(257.7)
<b>Cash flow from financing activities</b>			
Interest paid		(14.0)	(10.7)
Interest element of finance lease payments		(4.8)	(5.7)
New endowments		11.1	6.6
New unsecured loans		-	270.0
Repayments of amounts borrowed		(5.8)	(5.8)
Capital element of finance lease payments		(0.7)	(0.7)
		(14.2)	253.7
<b>Increase/(decrease) in cash and cash equivalents in the year</b>		<b>0.4</b>	<b>107.2</b>
Cash and cash equivalents at beginning of the year		286.8	180.0
(Decrease)/increase in cash and cash equivalents in the year		0.4	107.2
Exchange gains/(losses) on cash and cash equivalents		(0.2)	(0.4)
Cash and cash equivalents at end of the year		287.0	286.8

# Statement of principal accounting policies

## 1. Basis of preparation

These financial statements have been prepared in accordance with the Statement of Recommended Practice (SORP): Accounting for Further and Higher Education (2015), United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards, comprising FRS 102 “The Financial Reporting Standard applicable in the UK and Republic of Ireland”, and applicable law), and the OFS and HEFCE Accounts Direction. The College is a public benefit entity and therefore has applied the relevant public benefit requirements of the United Kingdom Generally Accepted Accounting Practice. The financial statements are prepared under the historical cost convention (modified by the revaluation of endowment and listed non-current asset investments and investment properties). The accounting policies have been applied consistently year on year.

The College’s and consolidated forecasts and projections, taking account of reasonably possible changes in performance, show that the College should be able to operate within the level of its current facilities. Council have a reasonable expectation that the College has adequate resources to continue in operational existence for the foreseeable future. The College therefore continues to adopt the going concern basis in preparing its financial statements.

## 2. Basis of consolidation

The consolidated financial statements include the College and all its subsidiaries, including the Imperial College Union, for the financial year to 31 July. The results of subsidiaries acquired or disposed of during the period are included in the consolidated statement of income and expenditure from the date of acquisition, or up to the date of disposal. Intragroup transactions are eliminated on consolidation. The College has taken advantage of the exemption within FRS 102 Section 33.1A and has not disclosed transactions with other group entities where it holds 100% of the voting rights.

Associated companies and joint ventures are accounted for using the equity method. Associated companies are those in which the College has a significant, but not dominant, influence over their commercial and financial policy decisions. Joint ventures represent investments in which the College has joint control.

## 3. Income recognition

Income from the sale of goods or services is credited to the consolidated statement of comprehensive income and expenditure when the goods or services are supplied to the external customers or the terms of the contract have been satisfied.

Tuition fee income is stated gross of any expenditure which is not a discount and credited to the consolidated statement of comprehensive income and expenditure over the period in which students are studying. Where the amount of the tuition fee is reduced, income receivable is shown net of the discount. Bursaries and scholarships are accounted for gross as expenditure and not deducted from income.

Government grants are credited to the consolidated statement of comprehensive income and expenditure when the College is entitled to the income and any performance related conditions have been met.

Income from research grants and contracts is credited to the consolidated statement of comprehensive income and expenditure when the College is entitled to the income and any performance related conditions have been met. Income received before performance-related conditions have been met is deferred on the statement of financial position and released to the consolidated statement of comprehensive income and expenditure in line with such conditions being met.

Funds the College receives and disburses as paying agent on behalf of a funding body are excluded from the consolidated statement of comprehensive income and expenditure where the College is exposed to minimal risk or enjoys minimal economic benefit related to the transaction.

Donations and endowments (a form of charitable trust retained for the benefit of the College) with donor imposed restrictions are credited to the consolidated statement of comprehensive income and expenditure when the College is entitled to the income. This income is retained within the restricted reserve, with additional disclosures provided within the notes to the accounts, until such time that it is utilised in line with such restrictions at which point the income is released to general reserves through a reserve transfer. There are four main types of donations and endowments identified within reserves:

1. Restricted donations – the donor has specified that the donation must be used for a particular objective.
2. Restricted permanent endowments – the donor has specified that the fund is to be permanently invested to generate an income stream to be applied to a particular objective.
3. Unrestricted permanent endowments – the donor has specified that the fund is to be permanently invested to generate an income stream for the general benefit of the College.
4. Expendable endowments – the donor has specified a particular objective and the College has the power to use the capital.

Donations with no restrictions are recognised in the consolidated statement of comprehensive income and expenditure when the College is entitled to the income.

All investment income from deposits and endowments is recorded in income in the period in which it is earned and as either restricted or unrestricted income according to the terms of the restriction applied to the individual endowment fund. Investment income from endowments not expended in accordance with the restrictions of the endowment is held within the temporarily or permanently restricted reserve as appropriate until such time that it is utilised in line with such restrictions.

#### 4. Pension schemes

The College participates in three active pension schemes, the Universities Superannuation Scheme (USS), the Superannuation Arrangements of the University of London (SAUL) and the NHS Pension Scheme. The College also participates in the legacy Federated Pension Scheme 1634 (FPS) on behalf of retired members.

The USS, SAUL and NHS schemes are multi-employer schemes and, given the mutual nature of the schemes, it is not possible to identify the College's share of the underlying assets and liabilities. Consequently, the College cannot apply defined benefit accounting and, according to section 28 FRS 102, the schemes are accounted for as defined contribution schemes. The FPS scheme is a defined benefit scheme and accounted for as such. Each scheme is valued every three years, apart from the NHS scheme which is valued every four years, by professionally qualified independent actuaries.

The College has entered into agreements with regards to the USS and SAUL schemes that determines how each employer within each scheme will fund the overall deficits of these schemes. The College recognises a liability for the contributions payable that arise from each agreement (to the extent that they relate to the deficit) and therefore an expense is recognised in the consolidated statement of comprehensive income and expenditure.

#### Defined contribution plan

A defined contribution plan is a post-employment benefit plan under which the organisation pays fixed contributions into a separate entity and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution pension plans are recognised as an expense in the consolidated statement of comprehensive income and expenditure in the periods during which services are rendered by employees and as they become payable in accordance with the rules of the scheme.

#### Defined benefit plan

A defined benefit plan is a post-employment benefit plan that promises a specified pension payment, lump-sum (or combination thereof) on retirement that is predetermined by a formula based on the employee's earnings history, tenure of service and age, rather than depending directly on individual investment returns. The net obligation in respect of defined benefit pension plans are calculated by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value, and the fair value of any plan assets (at bid price) and any unrecognised past service costs are deducted. The liability discount rate is the yield at the balance sheet date on AA credit rated bonds denominated in the currency of, and having maturity dates approximating to the terms of the College's obligations. The calculation is performed by a qualified actuary using the projected unit credit method.

When the calculation results in a benefit to the College, the recognised asset is limited to the total of any unrecognised past service costs and the present value of benefits available in the form of any future refunds from the plan, reductions in future contributions to the plan or on settlement of the plan and takes into account the adverse effect of any minimum funding requirements.

## Statement of principal accounting policies *(continued)*

### 5. Short-term employment benefits

Short-term employment benefits such as salaries and compensated absences are recognised as an expense in the year in which the employees render service to the College. Any unused benefits, such as holiday entitlements earned not taken at the reporting date, are recognised as a liability by the College at the undiscounted additional amount the College would expect to pay as a result. Termination benefits are recognised as an expense in the consolidated statement of comprehensive income and expenditure when incurred.

### 6. Foreign currencies

Transactions denominated in foreign currencies are translated to the respective functional currencies of Group entities at the rate of exchange ruling at the dates of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated to the functional currency at the foreign exchange rate at the reporting date. The resulting exchange differences are recognised in the consolidated statement of comprehensive income and expenditure.

### 7. Finance leases

Leases which transfer substantially all of the risks and rewards of ownership of the leased asset are classified as finance leases. Leased assets acquired under finance leases, together with the related lease liability, are recorded in the consolidated statement of financial position at the inception of the lease at the lower of their fair value and the present value of the minimum lease payments.

Minimum lease payments are apportioned between the finance charge and the reduction of the outstanding liability. The finance charge is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

Assets leased from the College under finance leases are removed from the consolidated statement of financial position and replaced with a receivable at an amount equal to the present value of the sum of the minimum lease payments due and any residual value at the end of the lease term.

### 8. Operating leases

Leases which do not transfer substantially all of the risks and rewards of ownership of the leased asset are classified as operating leases. Operating

lease costs and income are recognised in the consolidated statement of comprehensive income and expenditure on a straight line basis over the relevant lease term. Any lease premiums or incentives are spread over the minimum lease term.

### 9. Land and buildings

Purchased land and purchased or constructed buildings are stated at cost. Freehold land is not depreciated as it is considered to have an indefinite useful life. Leasehold land is depreciated over the life of the lease. Buildings, including service plant, are depreciated over their expected useful lives as follows:

Building works	50 years
Service plant	20 years
Building infrastructure	20 years
IT infrastructure	10 years

Costs incurred in relation to buildings after their initial acquisition or construction are capitalised only to the extent that they increase the expected future benefits beyond those originally assessed. The cost of such works are depreciated over 20 years.

Assets under construction are capitalised at cost and not depreciated.

### 10. Fixtures, fittings and equipment

Fixtures, fittings and equipment, including computers and software, costing less than £50,000 per individual item or group of related items are written off in the year of acquisition. All other items are capitalised.

Capitalised equipment is stated at cost and, once in service, depreciated over their useful economic lives as follows:

Fixture, fittings and infrastructure	20 years
Equipment and IT	5 years

Equipment acquired for specific research projects is depreciated over the remaining life of the project (generally three years up to a maximum of five years).

Where fixtures, fittings and equipment are acquired with the aid of specific grants they are capitalised and depreciated as above. The related grant is recognised in income on entitlement.

## 11. Reserves

The reserves reflect the accumulated net comprehensive income of the College. This accumulated net comprehensive income is classified as either restricted or unrestricted depending on whether restrictions were placed on how it was to be spent. Income with such restrictions remains in the restricted reserves until it is spent in line with the restriction, at which point it is transferred to the unrestricted reserve via a reserve transfer.

Endowment funds are a form of charitable trust retained for the benefit of the College. Where the donor prohibits the conversion of the capital into income, these funds are held in a permanent restricted reserve. Otherwise these are held temporarily in restricted reserves.

## 12. Investment properties

Investment properties are those land and building assets which are held for either their rental income, capital appreciation or both. Investment properties are initially recognised at cost in the statement of financial position and subsequently at their fair value on the basis of an independent valuation at each statement of financial position date. Changes in the fair value of investment properties are recognised within the consolidated statement of comprehensive income and expenditure.

Property held primarily for the provision of social benefit is not classified as investment property, in accordance with the FRS 102.

## 13. Financial Instruments

A financial instrument is a contract that gives rise to a financial asset in one entity and a financial liability or equity instrument in another. Financial assets and financial liabilities are recognised when the College becomes a party to the contractual provisions of the instrument.

The non-current investment assets held by the College are not expected to realise their value within the next twelve months from the date of the consolidated statement of financial position. These assets, together with their corresponding treatments, are as follows:

- Endowment funds assets comprise of those endowments which have been placed with external fund managers for investment over the long-term. These assets are included in the consolidated statement of financial position at their market value;

- Listed non-current investments comprise of unfettered funds which have been placed with external fund managers for investment over the long-term and other shares in listed companies. These assets are included in the consolidated statement of financial position at their market value;
- Investments in shares that are not listed on a recognised stock exchange are recognised in the consolidated statement of financial position at their cost less any provision for impairment in their value; and
- Other non-current investments comprise of non-current investments that do not fall into any of the above categories. These are held at amortised cost.

The current investment assets held by the College are deposits with banks and building societies with maturity between three and twelve months at the date of the consolidated statement of financial position. These are held at their cost less any provision for impairment in their value.

Cash includes cash in hand, deposits repayable on demand and overdrafts. Deposits are repayable on demand if they are available within twenty four hours without penalty. Cash equivalents are highly liquid investments due within three months, that are readily convertible to known amounts of cash and that are subject to insignificant risk of changes in value.

Unsecured loans are liabilities with fixed or determinable payments that are not secured against specific assets. These are held at amortised cost. They are apportioned between 'Creditors: amounts falling due within one year' and 'Creditors: amounts falling due after more than one year'.

Derivatives are contracts whose value is dependent on the value of an underlying asset, such as a commodity or currency. The College has not taken up the option to apply hedge accounting to its derivatives and, instead, recognises the fair value of the outstanding derivatives in the consolidated statement of financial position.

Trade receivables and trade payables are recognised at their transaction price in the statements of consolidated financial position and subsequently measured at amortised cost. A provision for bad debts is estimated on the basis that as debts become older, a higher percentage become irrecoverable.

Investments in joint ventures, associated companies and subsidiaries are recognised at cost less any provision for impairment in the College's individual statement of financial position.

Amortised cost is a method used to measure the value of certain financial assets and liabilities after

## Statement of principal accounting policies *(continued)*

they have been initially recognised. The amortised cost of a financial instrument is the net of the amount the instrument was initially recognised at, less any repayment of the principal, plus or minus the cumulative amortisation of any difference between the amount at initial recognition and the maturity amount, minus – in the case of financial assets – any reduction for impairment or uncollectability.

Any changes in market value, fair value or resulting from impairment are recognised immediately in the consolidated statement of comprehensive income and expenditure.

### 14. Taxation status

The College is an exempt charity within the meaning of Schedule 3 of the Charities Act 2011 and as such is a charity within the meaning of Para 1 of Schedule 6 to the Finance Act 2010. Accordingly, the College is potentially exempt from taxation in respect of income or capital gains received within categories covered by Sections 478-488 of the Corporation Taxes Act 2010 (CTA 2010) (formerly enacted in Section 505 of the Income and Corporation Taxes Act 1988 (ICTA)) or Section 256 of the Taxation of Chargeable Gains Act 1992 to the extent that such income or gains are applied to exclusively charitable purposes. The College receives no similar exemption in respect of Value Added Tax (VAT).

The College's subsidiary companies are subject to corporation tax and VAT in the same way as any commercial organisation. The charge for taxation is based on the profit or loss for the year after charging the cost of any Gift Aid payment payable to the College. The charge for taxation also takes into account taxation deferred because of timing differences between the treatment of certain items for taxation and accounting purposes.

### 15. Heritage assets

Heritage assets are tangible and intangible assets with historic, artistic, scientific, technological, geophysical or environmental qualities that are held and maintained principally for their contribution to knowledge and culture.

Heritage assets are not depreciated as their long economic life and high residual value mean that any depreciation would not be material.

### 16. Provisions and contingent liabilities

Provisions are liabilities of either uncertain timing or amount.

Provisions are recognised in the consolidated statement of financial position when:

- (a) the College has a present obligation (legal or constructive) as a result of a past event;
- (b) it is probable that an outflow of economic benefits will be required to settle the obligation; and
- (c) a reliable estimate can be made of the amount of the obligation.

The amount recognised as a provision is determined by discounting the expected future cash flows at a pre-tax rate that reflects risks specific to the liability.

A contingent liability arises from a past event that gives the College a possible obligation whose existence will only be confirmed by the occurrence or non-occurrence of uncertain future events not wholly within the control of the College. Contingent liabilities also arise in circumstances where a provision would otherwise be made but either it is not probable that an outflow of resources will be required or the amount of the obligation cannot be measured reliably. Contingent liabilities are not recognised in the consolidated statement of financial position as a liability, however disclosure is made unless the possibility of an outflow of resources is remote.

### 17. Accounting estimates and judgements

The preparation of financial statements requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements, are below:

#### Critical accounting judgement

On 17 October 2017, IP Group plc ("IP Group") completed its acquisition of 100% of the ordinary shares in Touchstone Innovations plc ("Innovations"), which the College held as an associate up to 31 July 2017 (Note 13). As a result, the College now holds a 5.2% share in IP Group. Given the lapse in time between the date of the last audited financial statements of Innovations, being 31 July 2017, and the date of the acquisition by IP Group, judgement has been required in determining the appropriate fair value of Innovations' net assets

upon acquisition. The IP Group audited financial statements as at 31 December 2017 indicated a decline in the net asset value of Innovations on acquisition. Management judge that IP Group's valuation of Innovation's net assets as at 17 October 2017 is the most appropriate basis for valuation on the date of acquisition. Management judged that this fall in value should be accounted for as an operating loss of the associate. Upon completion of the transaction, the College owned 5.2% of the IP Group and so reclassified this holding from an associate to a listed non-current investment, to be held at fair value with reference to the investment's published share price (Note 11). The investment was therefore revalued through the gain/(loss) on investments line of the consolidated statement of comprehensive income and expenditure.

#### Key sources of estimation uncertainty

**Investment property** – The valuation of the College's investment property portfolio is inherently subjective due to, among other factors, the individual nature of each property, its location and the expected future rental revenues from that particular property. As a result, the valuations the College places on its investment property portfolio are subject to a degree of uncertainty and are made on the basis of assumptions which may not prove to be accurate, particularly in periods of volatility or low transaction flow in the property market. The investment property valuation contains a number of assumptions upon which the College's independent professional valuer has based its valuation of the portfolio. The assumptions on which the property valuation reports have been based include, but are not limited to, matters such as the tenure and tenancy details for the properties, ground conditions at the properties, the structural condition of the properties, prevailing market yields and comparable market transactions. These assumptions are market standard and accord with the Royal Institution of Chartered Surveyors (RICS) Valuation – Professional Standards UK 2014 (revised April 2015).

**Pension schemes** – Assumptions used in the calculation of the USS and SAUL pension deficit provisions represent a source of material uncertainty. Future membership changes have been incorporated into the calculation using budget and forecast data for the next five years. Future salary changes have been based on publicly available CPI inflation data.

**USS pensions provision** – A provision is recognised in the financial statements for future contributions payable to the USS pension scheme that relate to the deficit in the scheme and arise from the agreement with scheme employers as to how

the deficit is funded. The carrying amount of this liability is £64.9 million (see Note 19) and a key factor used to calculate the provision is the element future contribution rate that relates to funding the existing deficit. This is finalised once the triennial valuation of the scheme has been completed.

The 2017 actuarial valuation of the scheme has been undertaken but has not yet been formally completed. Based on this valuation, the scheme has set out the challenges it is facing and is currently consulting on a significant increase in contributions to address these challenges. In the judgment of the College, although the scheme is in the process of consulting on amendments to future contribution rates under the agreement to fund the deficit in the scheme, there remains uncertainty over the length of the proposed recovery plan and the future contribution structure, as this remains under consultation. Therefore, the College continues to calculate the provision in accordance with the plan agreed after the 2014 actuarial valuation. However, there is a significant risk that the year-end provision will be materially adjusted once the future funding structure based on the 2017 actuarial valuation has been completed, and this is expected to take place during the year-ending 31 July 2019.

Based on the inputs to the provision calculation, the following sensitivity analysis outlines the potential impact on the existing liability (assuming the same discount rate of 2.16%):

- The impact of a 1% increase in deficit contributions would be an increase in provision of £29.1 million to £94.2 million;
- The impact of a 3.9% increase in deficit contributions (to take total deficit contribution level to 6%) would be an increase in provision of £107.8 million to £179.5 million;
- The impact of a three year extension to the recovery plan period would be an increase in provision of £17.4 million to £82.3 million.

**Annual holiday accrual** – An accrual is recognised in the financial statements for holiday leave that has been accrued for by employees but not yet taken as at 31 July 2018. The carrying amount of this liability is £7.8 million and this is calculated based on extrapolating the leave records of a sample of the staff population.

# Notes to the accounts

For the year ended 31 July 2018

## 1. Tuition fees and education contracts

	Registered student numbers		Consolidated		College	
	31 December 2017	31 December 2016	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
<b>Full-time home and EU students</b>						
Undergraduate	6,710	6,650	58.3	55.3	58.3	55.3
Postgraduate	3,965	3,775	26.8	23.7	26.8	23.7
<b>Full-time international students</b>						
Undergraduate	3,057	2,933	83.3	76.7	83.3	76.7
Postgraduate	3,322	2,934	80.1	68.2	80.1	68.2
<b>Part-time home and EU students</b>	1,068	1,003	5.3	4.8	5.3	4.8
<b>Part-time international students</b>	293	271	4.6	4.3	4.6	4.3
<b>Research Training Support Grants</b>			29.2	25.0	29.2	25.0
<b>Short course fees</b>			8.3	7.1	8.3	7.1
			<b>295.9</b>	<b>265.1</b>	<b>295.9</b>	<b>265.1</b>

Fee income is shown net of discounts and fees remitted.

Research training support grants include £5.0 million (2017: £3.9 million) of tuition fees paid in respect of full-time home and European Union students. The remainder represents grants made by Research Councils and other bodies in support of the training of research students.

Total numbers of full-time and part-time students are 18,415 in 2018 and 17,566 in 2017 (excluding those on research training support grants and short courses).

## 2. Funding Council grants

	Consolidated		College	
	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Recurrent – teaching	28.5	29.0	28.5	29.0
Recurrent – research	94.0	94.2	94.0	94.2
Capital grants	23.4	16.2	23.4	16.2
Higher Education Innovation Fund	4.1	3.2	4.1	3.2
Other	0.5	0.5	0.5	0.5
	<b>150.5</b>	<b>143.1</b>	<b>150.5</b>	<b>143.1</b>

Funding Council grants have been received from HEFCE until 31 March 2018, and from the Office for Students (OfS) and UK Research and Innovation (UKRI) from 1 April 2018 to 31 July 2018.

**3. Research grants and contracts**

	Consolidated		College	
	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Research Councils	112.3	115.5	112.3	115.5
Charities	83.5	80.2	83.5	80.2
Government (UK and EU) and health authorities	52.0	49.3	52.0	49.0
European Commission	38.6	42.2	38.6	42.2
Industry and commerce	61.4	61.0	61.4	61.0
Other	16.4	13.1	16.4	13.1
	<b>364.2</b>	<b>361.3</b>	<b>364.2</b>	<b>361.0</b>

Other research grants and contracts include a grant from the Big Lottery Fund (BLF). The total amount of funding awarded for projects ongoing in 2018 was £4.2 million (2017: £4.2 million) to fund a UK-wide expansion of an interdisciplinary study of the natural environment. Of this total awarded, £4.0 million (2017: £3.2 million) has been spent to date and £0.9 million (2017: £1 million) has been recognised in the year, £0.3 million by the College and £0.6 million by unrelated third party partners.

UK Government grants and contracts include a new grant from the Department for International Development (DFID) to fund key strategic issues around agricultural transformation, growth, and food and nutrition security. The total amount of funding awarded for this project in 2018 was £1.2 million, with £0.1 million spent to date and recognised in the year.

**4. Other income**

	Consolidated		College	
	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Residences, catering and conferences	58.4	54.5	56.1	53.5
Consultancies and scientific services	17.8	16.1	3.4	3.5
Health and hospital authorities	24.8	24.1	24.8	24.1
Rents receivable from commercial property	13.5	9.7	9.8	8.4
Other revenue grants	5.3	6.8	5.5	6.8
Other income	31.1	40.5	42.6	47.5
	<b>150.9</b>	<b>151.7</b>	<b>142.2</b>	<b>143.8</b>

**5. Investment income**

	Consolidated		College	
	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Interest and investment income on endowments	2.2	1.8	2.2	1.8
Other investment income	4.2	3.9	4.3	4.1
Interest on cash, cash equivalents and current investments	1.4	2.2	1.4	2.2
	<b>7.8</b>	<b>7.9</b>	<b>7.9</b>	<b>8.1</b>

## Notes to the accounts

For the year ended 31 July 2018

### 6. Donations and endowments

	Consolidated		College	
	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
New endowments	10.9	12.1	10.9	12.1
Donations with performance related conditions	1.5	1.6	1.5	1.6
Research donations	21.8	20.2	21.8	20.2
Capital donations	8.4	9.6	8.4	9.6
Other donations with restrictions	9.6	15.8	9.6	15.8
Unrestricted donations	11.5	2.8	14.1	2.8
	<b>63.7</b>	<b>62.1</b>	<b>66.3</b>	<b>62.1</b>

### 7. Staff costs

	Note	Consolidated		College	
		Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
<b>Staff costs</b>					
Salaries		405.4	391.7	398.7	384.1
Social security costs		44.2	41.0	44.1	40.9
Pension provisions					
USS	19	(4.2)	(2.0)	(4.2)	(2.0)
SAUL	19	0.1	0.1	0.1	0.1
Other pension costs	28	50.9	49.0	50.9	48.9
		<b>496.4</b>	<b>479.8</b>	<b>489.6</b>	<b>472.0</b>
Restructuring costs		1.9	1.4	1.9	1.4
		<b>498.3</b>	<b>481.2</b>	<b>491.5</b>	<b>473.4</b>

	Full-time equivalent (FTE)		Headcount	
	31 July 2018	31 July 2017	31 July 2018	31 July 2017
<b>Staff numbers by major category</b>				
Academic and research	3,666	3,687	3,994	3,977
Professional services	2,879	2,798	3,153	3,047
Technical services	485	476	510	491
Operational services	376	478	495	595
Learning and teaching	202	161	250	209
	<b>7,608</b>	<b>7,600</b>	<b>8,402</b>	<b>8,319</b>

The FTE number is based on the headcount but adjusted to include only the pro rata element of part-time staff. The numbers include staff employed by the subsidiary companies and the Imperial College Union.

	Year ended 31 July 2018 £'000	Year ended 31 July 2017 £'000
<b>Remuneration of the President</b>		
Basic salary	357.6	354.8
Salary sacrifice arrangements	(19.1)	(28.4)
Payments in lieu of pension contributions	15.5	-
Pension contributions to USS	64.5	92.3
Taxable benefits	14.2	14.1
<b>Total</b>	<b>432.7</b>	<b>432.8</b>

The President contributes to the USS pension scheme through the College's standard method of salary sacrifice, PensionSMART. Under PensionSMART, the member of staff does not make any direct payments to the pension scheme and their basic salary (and other elements of pensionable income) is reduced by the percentage they are eligible to contribute. The College contributes both the employer and employee percentage (26% in total) directly to the scheme. From April 2018 the President has elected to cease the accrual of further pension benefits in USS but maintains life assurance and incapacity coverage in the scheme. In order to maintain the same overall remuneration, the salary component has been increased to compensate for the reduction in employer pension contributions. This is at no additional cost to the College.

Taxable benefits in kind include utilities, cleaning and furnishings in respect of the President's official residence. The estimated market rent of the official residence, being the opportunity cost to the College of providing the accommodation, is £120,000. The College incurred costs of £23,062 (2017: £5,269) maintaining the property; this amount varies year-by-year based on the level of repairs required. These non-taxable benefits have been disclosed as required by the OfS Accounts Direction. They are not included in the table above, or considered when assessing the President's remuneration, since the accommodation is necessary for the performance of her duties and is used regularly for the College's official functions.

The College is committed to offering all staff, including the President, a pay and benefits package that is equitable, fair and appropriately reflects the College's standing as a world leading university. The President's salary is subject to the same pay award applied to all staff and is reviewed annually by the College's Remuneration Committee. Further details on matters considered by the Remuneration Committee in determining the President's salary can be found in the Principles of Remuneration section of this report.

	Year ended 31 July 2018	Year ended 31 July 2017
<b>President's remuneration as multiple of the median pay for all other employees (on a FTE basis)</b>		
Multiple based on basic salary	8.56	8.86
Multiple based on total remuneration	9.03	9.32

The equivalent total remuneration multiple including the non-taxable benefits is 12.02 (2017: 12.02)

Agency staff have been excluded from total remuneration because the College does not record amounts paid to agencies for agency staff in a manner which allows the inclusion of individual agency staff in the calculation of pay ratios. In addition casual staff have been excluded due to the difficulty in assigning a full-time equivalent value to these flexible employees.

## Notes to the accounts

For the year ended 31 July 2018

### 7. Staff costs (continued)

#### Compensation for loss of office

Payments in respect of loss of office comprise termination payments paid directly to individuals in respect of loss of office, plus contributions made towards legal expenses. All compensation in respect of loss of office has been internally funded by the College.

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
<b>Compensation payable recorded within staff costs</b>	<b>1.8</b>	<b>1.8</b>

Payments for compensation for loss of office were payable to 290 employees in 2018 (337 in 2017). Of this, a total £54,230 was paid in severance payments to staff that earned in excess of £100,000 per annum (one in 2018, Nil in 2017).

#### Key management personnel

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the College. Staff costs include compensation paid to key management personnel.

Key management personnel comprises members of the President's Board and the Provost's Board. The increase in compensation in 2017–18 reflects changes in the composition of the Boards and represents 21 FTE (2017: 20 FTE).

	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
<b>Key management personnel compensation</b>	<b>6.1</b>	<b>5.6</b>

#### Trade Union (Facility Time Publication Requirements) Regulations 2017

Facility Time is the provision of paid or unpaid time off from an employee's normal role to undertake Trade Union duties and activities as a Trade Union representative. There is a statutory entitlement to reasonable paid time off for undertaking union duties.

The number of College employees who were Trade Union officials during the period 1 April 2017 to 31 March 2018 was 15, who were all full-time College employees. The percentage of time spent by them on Facility Time fell in the 1–50% band. The cost of this activity amounts to £134,000 representing 0.03% of the total pay bill in the relevant period. Of the total paid Facility Time, the proportion of hours spent on paid Trade Union activities was 9.8%.

	Year ended 31 July 2018 FTE	Year ended 31 July 2017 FTE
<b>Remuneration of higher paid staff:</b>		
£100,000–£104,999	79.6	78.2
£105,000–£109,999	37.4	39.3
£110,000–£114,999	25.5	20.9
£115,000–£119,999	22.4	25.9
£120,000–£124,999	21.6	13.3
£125,000–£129,999	17.3	7.3
£130,000–£134,999	11.0	12.9
£135,000–£139,999	13.2	15.5
£140,000–£144,999	7.3	7.3
£145,000–£149,999	5.3	5.0
£150,000–£154,999	8.0	5.4
£155,000–£159,999	9.4	4.9
£160,000–£164,999	5.2	4.4
£165,000–£169,999	2.8	4.5
£170,000–£174,999	2.1	2.1
£175,000–£179,999	3.2	2.1
£180,000–£184,999	6.2	5.7
£185,000–£189,999	4.0	1.0
£190,000–£194,999	3.7	2.0
£195,000–£199,999	-	0.2
£200,000–£204,999	0.1	1.9
£205,000–£209,999	0.3	2.0
£210,000–£214,999	1.0	-
£215,000–£219,999	1.0	-
£220,000–£224,999	0.2	-
£225,000–£229,999	2.4	1.0
£230,000–£234,999	3.0	-
£235,000–£239,999	-	1.0
£240,000–£244,999	0.1	2.1
£245,000–£249,999	1.1	-
£250,000–£254,999	0.1	0.2
£255,000–£259,999	-	1.2
£260,000–£264,999	0.2	-
£265,000–£269,999	-	1.0
£270,000–£274,999	1.0	1.0
£280,000–£284,999	1.0	-
£295,000–£299,999	-	1.0
£300,000–£304,999	1.0	1.0
£305,000–£309,999	1.0	0.6
£315,000–£319,999	2.0	2.0
£320,000–£324,999	0.7	-
£350,000–£354,999	1.0	1.0
£355,000–£359,999	1.0	-
£395,000–£399,999	-	1.0
£405,000–£409,999	1.0	-
£430,000–£434,999	1.0	-
	305.4	275.9

## Notes to the accounts

For the year ended 31 July 2018

### 7. Staff costs (continued)

All staff members are disclosed on a full-time equivalent basis and in salary bands that reflect full-time equivalent basic salary, prior to any adjustment for salary sacrifice. However no adjustment has been made for those staff who joined or left part-way through the year to reflect the annual salary they would have received had they been employed throughout the year. Where a proportion of the salary is reimbursed by the NHS, only the portion paid by the College is disclosed.

### 8. Interest and other finance costs

	Consolidated		College	
	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Loan interest	14.0	11.4	14.1	11.4
Finance lease interest	4.8	5.7	4.8	5.7
Other financing costs	1.6	1.6	1.6	1.6
	20.4	18.7	20.5	18.7

**9. Analysis of total expenditure by activity**

	Staff costs £m	Depreciation £m	Other operating expenses £m	Interest £m	Consolidated	College
					Total £m	Total £m
<b>2018</b>						
Academic departments	231.6	2.7	70.0	0.2	304.5	304.9
Research grants and contracts	158.4	10.9	112.6	-	281.9	282.2
Academic services	28.6	0.4	21.5	-	50.5	50.6
Bursaries and scholarships	-	-	39.1	-	39.1	39.2
Administration and central services	45.8	0.2	25.2	-	71.2	67.4
Premises	15.6	42.9	63.1	-	121.6	113.2
Residences, catering and conferences	9.8	10.7	22.8	4.8	48.1	46.1
Other expenditure	8.5	-	3.3	15.4	27.2	22.4
<b>Total</b>	<b>498.3</b>	<b>67.8</b>	<b>357.6</b>	<b>20.4</b>	<b>944.1</b>	<b>926.0</b>
<b>2017</b>						
Academic departments	219.7	3.2	60.4	0.2	283.5	284.0
Research grants and contracts	158.5	12.4	117.2	-	288.1	288.1
Academic services	27.9	0.5	18.8	-	47.2	47.2
Bursaries and scholarships	-	-	38.1	-	38.1	38.1
Administration and central services	40.7	0.1	28.3	-	69.1	65.1
Premises	16.1	37.6	58.5	-	112.2	104.6
Residences, catering and conferences	10.7	11.5	23.0	5.7	50.9	49.3
Other expenditure	7.6	-	(0.5)	12.8	19.9	17.5
<b>Total</b>	<b>481.2</b>	<b>65.3</b>	<b>343.8</b>	<b>18.7</b>	<b>909.0</b>	<b>893.9</b>
					Year ended 31 July 2018 £'000	Year ended 31 July 2017 £'000
<b>Other operating expenses include:</b>						
External auditors remuneration in respect of audit services					220.9	261.8
External auditors remuneration in respect of non-audit services					42.0	42.7

## Notes to the accounts

For the year ended 31 July 2018

### 10. Fixed assets

<b>Consolidated</b>	Freehold land and buildings £m	Leasehold land and buildings £m	Fixtures, fittings and equipment £m	Assets in the course of construction £m	Total £m
<b>Cost</b>					
At 1 August 2017	847.9	751.4	274.7	327.1	2,201.1
Additions	7.7	4.4	8.1	166.4	186.6
Transfers between classes	222.6	50.0	26.8	(299.4)	-
Disposals	-	-	(7.0)	(0.4)	(7.4)
<b>At 31 July 2018</b>	<b>1,078.2</b>	<b>805.8</b>	<b>302.6</b>	<b>193.7</b>	<b>2,380.3</b>
<b>Accumulated depreciation</b>					
At 1 August 2017	177.4	279.8	232.2	-	689.4
Charge for the period	21.0	28.8	18.0	-	67.8
Disposals	-	-	(7.0)	-	(7.0)
<b>At 31 July 2018</b>	<b>198.4</b>	<b>308.6</b>	<b>243.2</b>	<b>-</b>	<b>750.2</b>
<b>Net book value</b>					
<b>At 31 July 2018</b>	<b>879.8</b>	<b>497.2</b>	<b>59.4</b>	<b>193.7</b>	<b>1,630.1</b>
At 31 July 2017	670.5	471.6	42.5	327.1	1,511.7
<b>College</b>					
<b>Cost</b>					
At 1 August 2017	836.1	736.1	272.0	312.9	2,157.1
Additions	16.5	7.2	8.0	168.3	200.0
Transfers between classes	221.8	34.6	26.8	(283.2)	-
Disposals	-	-	(6.9)	(0.4)	(7.3)
<b>At 31 July 2018</b>	<b>1,074.4</b>	<b>777.9</b>	<b>299.9</b>	<b>197.6</b>	<b>2,349.8</b>
<b>Accumulated depreciation</b>					
At 1 August 2017	175.5	273.7	230.2	-	679.4
Charge for the period	21.2	27.3	17.8	-	66.3
Disposals	-	-	(6.9)	-	(6.9)
<b>At 31 July 2018</b>	<b>196.7</b>	<b>301.0</b>	<b>241.1</b>	<b>-</b>	<b>738.8</b>
<b>Net book value</b>					
<b>At 31 July 2018</b>	<b>877.7</b>	<b>476.9</b>	<b>58.8</b>	<b>197.6</b>	<b>1,611.0</b>
At 31 July 2017	660.6	462.4	41.8	312.9	1,477.7

At 31 July 2018, freehold land and buildings included £218.3 million (2017: £191.1 million) in respect of freehold land which is not depreciated.

Griffon Studios, the 566 postgraduate student apartment block, is held under a 45 year finance lease following its sale to and leaseback from Legal and General Pensions Ltd in 2012. Included in land and buildings under finance leases is also the land belonging to the Trustees of the Charitable Funds for the Charing Cross, Hammersmith and Queen Charlotte's Hospitals. The Trustees have leased the land to the College on a 125 year lease which is held at a value of £1.7 million.

**10. Fixed assets (continued)**

Consolidated leasehold land and buildings include assets held under finance leases as follows:	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Cost	95.6	95.6
Accumulated depreciation	(12.0)	(9.9)
Charge for year	(2.1)	(2.1)
<b>Net book value</b>	<b>81.5</b>	<b>83.6</b>

Included at cost within land and buildings for the College and Group as at 31 July 2018 is a heritage asset, being the nineteenth-century built Queen's Tower, currently insured at a value of £13.2 million (2017: £11.4 million).

**11. Non-current investments**

<b>Consolidated</b>	Subsidiary companies £m	Investment property £m	Other £m	Total £m
At 1 August 2017	-	179.1	305.7	484.8
Additions	-	1.1	102.6	103.7
Disposals	-	(14.5)	(11.4)	(25.9)
(Loss)/gain on market movements	-	(17.1)	11.1	(6.0)
Impairment	-	-	(0.8)	(0.8)
<b>At 31 July 2018</b>	<b>-</b>	<b>148.6</b>	<b>407.2</b>	<b>555.8</b>
<b>College</b>				
At 1 August 2017	31.8	179.1	305.5	516.4
Additions	21.8	1.1	102.6	125.5
Disposals	(5.5)	(14.5)	(11.4)	(31.4)
(Loss)/gain on market movements	-	(17.1)	11.1	(6.0)
Impairment	-	-	(0.8)	(0.8)
<b>At 31 July 2018</b>	<b>48.1</b>	<b>148.6</b>	<b>407.0</b>	<b>603.7</b>

	<b>Consolidated</b>		<b>College</b>	
	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
<b>Other consists of:</b>				
Listed non-current investments	238.4	146.3	238.4	146.3
Endowment funds assets	125.1	114.7	125.1	114.7
Shares not listed on a recognised stock exchange	40.0	40.9	40.0	40.9
Other non-current investments	3.7	3.8	3.5	3.6
	<b>407.2</b>	<b>305.7</b>	<b>407.0</b>	<b>305.5</b>

## Notes to the accounts

For the year ended 31 July 2018

### 12. Investments in joint ventures

The College had an investment of 49.9% in Imperial West Developments LLP in 2016–17, which was a dormant entity. This was dissolved on 28 March 2017, ceasing to be a joint venture as at that date.

### 13. Investments in associates

Associates are consolidated using the equity method.

As at 31 July 2017, the College held an associate investment in Touchstone Innovations plc (formerly Imperial Innovations Group plc), ('Innovations'), with carrying and fair values at that date of £77.2 million and £73.0 million respectively. On 17 October 2017, IP Group plc acquired Innovations and as a result, the College now holds a 5.2% share in IP Group plc. Equity accounting continued up to the date of acquisition, with the Group recording a £17.1 million share of the loss for the period (2017: £7.3 million share of the profit). The carrying value of Innovations was derecognised as at 17 October 2017 and a deemed gain on disposal of £16.6 million recognised, the disposal value calculated by reference to the market value of the shares received in IP Group plc. The cost of the investment of £4.3 million was also derecognised in the College accounts, with a deemed gain on sale of £72.5 million.

The College has a 23% share in Twig Rights Limited, the holding company of a trading entity which creates digital educational resources. The carrying amount of this associate at 31 July 2018 was £2.6 million (31 July 2017: £4.1 million), with a £1.5 million share of the loss for the year ended 31 July 2018 recognised in the SOCI&E (2017: £0.3 million loss). The cost recognised for the College at 31 July 2018 was £3.5 million (31 July 2017: £3.5 million). In 2016–17, the College entered into an agreement to provide the company with a convertible loan of £0.95 million, with a further contribution of £4.0 million provided in 2017–18. This loan is held at fair value, with a £0.18 million gain from change in fair value recognised in 2017–18 (2016–17: £0.01 million gain).

As at 31 July 2017, the College also had a 25% holding in Imanova Ltd which offers environmental consultancy and scientific services. The carrying amount of this associate at 31 July 2017 was £0.3 million. The corresponding cost in College books was £1.2 million. This holding was sold in August 2017, at which point the carrying values were derecognised.

### 14. Subsidiary undertakings

As at 31 July the subsidiary companies (all of which are registered in England), wholly-owned or effectively controlled by the College, were as follows:

Company	Principal activity	Holding %
Burlington Danes Construction Ltd	Construction and property services	100
IC Consultants Ltd	Consultancy and scientific services	100
Extracalm Company Ltd	Administrative services	100
Extracalm Cleaning LLP	Cleaning services partnership	partnership
Imperial Activities Ltd	Commercial property services	100
Imperial College Developments Ltd	Development of building projects	100
Imperial College London Ltd	Dormant	100
Imperial College Projects Ltd	Provision of scientific services	100
Imperial College ThinkSpace Ltd	Provision of facilities to spinout companies	100
Imperial College Union	Student activities	
Imperial (Forest House) Ltd	Commercial property services	100
Imperial MBA Ltd	Dormant	100
Imperial White City Incubator Ltd	Provision of facilities to spinout companies	100
Private Patient Healthcare Ltd	Private patient healthcare services	100
Wye Foundation Trust	Charitable Trust	100

Imperial College Union is an unincorporated charitable association fully consolidated by the College.

**15. Trade and other receivables**

	Consolidated		College	
	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Research grants and contracts – receivables	23.6	22.9	23.6	22.9
Research grants and contracts – work in progress	63.4	54.5	63.4	54.5
Other trade receivables	76.1	124.7	71.5	120.0
Prepayments and accrued income	48.4	40.5	44.4	38.0
Derivatives	3.4	2.1	3.4	2.1
Amounts due from subsidiary companies	-	-	11.1	16.9
Amounts due from associate companies	5.1	1.9	5.1	1.9
	<b>220.0</b>	<b>246.6</b>	<b>222.5</b>	<b>256.3</b>
<b>Amounts due after more than one year included above</b>	<b>14.1</b>	<b>13.4</b>	<b>15.6</b>	<b>15.0</b>

The derivatives relate to forward contracts for gas and electricity entered into to mitigate the effect of adverse market energy prices. These are held at fair value using quoted market energy rates as at the year-end. The fair value at 31 July 2018 of those maturing within one year is £3.4 million and £nil for those maturing after one year (31 July 2017: £1.2 million and £0.9 million respectively), with a £2.4 million gain from change in fair value recognised in 2017–18 (2016–17: £0.4 million gain), which includes both realised and unrealised gains.

Included within Other trade receivables are invoices totalling £55.8 million (£75.2 million in 2017) in respect of tuition fees for courses starting in the next financial year with the income deferred on the balance sheet until the start of the course.

**16. Current investments**

	Consolidated		College	
	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
<b>Deposits</b>	<b>24.4</b>	<b>58.1</b>	<b>24.4</b>	<b>58.1</b>

Deposits included here are those held with banks and building societies with more than three months maturity at the balance sheet date.

At 31 July 2018 the weighted average interest rate of these fixed rate deposits was 0.65% per annum and the average period for which the interest rate is earned on these deposits was 96 days. The fair value of these deposits was not materially different from the book value.

## Notes to the accounts

For the year ended 31 July 2018

### 17. Creditors : amounts falling due within one year

	Consolidated		College	
	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Bank overdraft	-	-	3.1	-
Unsecured loans	9.0	5.8	9.0	5.8
Obligations under finance leases	0.8	0.7	0.8	0.7
Deferred lease premiums	0.3	0.3	0.3	0.3
Research payments received on account	209.7	197.4	209.7	197.4
Trade payables	23.8	18.5	22.1	18.1
Social security and other taxation payable	11.5	15.6	11.5	15.4
Accruals, deferred income and other creditors	222.9	248.5	210.6	235.1
Amounts due to subsidiary companies	-	-	5.7	2.7
Derivatives	-	0.3	-	0.3
	<b>478.0</b>	<b>487.1</b>	<b>472.8</b>	<b>475.8</b>

The derivatives balance in 2016–17 related to foreign currency swaps entered into in that year. The College purchased Euros in May 2017, agreeing to sell these back in February 2018 at a pre-agreed exchange rate. These were held at fair value, determined by reference to the prevailing EUR:GBP exchange rate. Upon settlement in February 2018 the swaps were derecognised, with a £0.07 million loss from change in fair value recognised in 2017–18 (2016–17: £0.26 million loss).

### Deferred income

Included with accruals and deferred income are the following items of income which have been deferred.

	Consolidated		College	
	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Income with performance related conditions	17.0	6.5	17.0	6.5
Other income	117.1	161.1	113.1	159.1
	<b>134.1</b>	<b>167.6</b>	<b>130.1</b>	<b>165.6</b>

Included within other income are deferred tuition fees totalling £80.5 million (£115.5 million in 2017) in respect of courses starting in the next financial year.

**18. Creditors : amounts falling due after more than one year**

	Consolidated		College	
	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m	Year ended 31 July 2018 £m	Year ended 31 July 2017 £m
Obligations under finance lease	89.3	89.7	89.3	89.7
Deferred lease premiums	11.7	12.1	11.7	12.1
Unsecured loans	456.0	465.0	456.0	465.0
	<b>557.0</b>	<b>566.8</b>	<b>557.0</b>	<b>566.8</b>

The maturity profile of the carrying amount of the Group's liabilities, at 31 July was as follows:

	Lease premiums £m	Bank loans £m	Finance leases £m	2018 £m	2017 £m
Due within one year or on demand (Note 17)	0.3	9.0	0.8	10.1	6.8
In more than one year but no more than two years	0.3	9.0	0.8	10.1	10.1
In more than two years but no more than five years	1.0	32.6	2.7	36.3	34.8
In more than five years	10.4	414.4	85.8	510.6	521.9
<b>Total unsecured loans and finance lease obligations</b>	12.0	465.0	90.1	567.1	573.6
Less than one year	(0.3)	(9.0)	(0.8)	(10.1)	(6.8)
<b>Due after more than one year</b>	11.7	456.0	89.3	557.0	566.8

The bank loans comprise the following unsecured sterling borrowing facilities:

	Outstanding amount drawn £m	Original amount £m	Interest rate %	Date drawn	Term Years
<b>Lender</b>					
Private Placement	50.0	50.0	5.39	Mar-03	30
EIB	5.8	23.2	floating	Dec-05	15
Private Placement	50.0	50.0	4.84	Jul-06	50
EIB	19.2	50.0	floating	May-08	15
EIB	70.0	70.0	2.87	Dec-14	25
EIB	70.0	70.0	2.50	Nov-16	25
Private Placement	30.0	30.0	2.47	Jan-17	33
Private Placement	71.0	71.0	2.47	Jan-17	35
Private Placement	99.0	99.0	2.44	Jan-17	40
	<b>465.0</b>	<b>513.2</b>			

## Notes to the accounts

For the year ended 31 July 2018

<b>19. Provisions for liabilities</b>	Obligation to fund deficit on USS pension £m	Obligation to fund deficit on SAUL pension £m	Total pensions provisions £m	Corporate £m	Decommissioning of engineering facility £m	Total other £m
<b>Consolidated</b>						
At 1 August 2017	72.4	1.6	74.0	0.5	7.9	8.4
Utilised in period	(4.6)	(1.7)	(6.3)	(0.1)	(3.2)	(3.3)
Movement in period	(2.9)	0.1	(2.8)	1.0	1.0	2.0
Unused amounts reversed in period	-	-	-	(0.3)	-	(0.3)
<b>At 31 July 2018</b>	<b>64.9</b>	<b>-</b>	<b>64.9</b>	<b>1.1</b>	<b>5.7</b>	<b>6.8</b>
<b>College</b>						
At 1 August 2017	72.2	1.6	73.8	0.5	7.9	8.4
Utilised in period	(4.5)	(1.7)	(6.2)	(0.1)	(3.2)	(3.3)
Movement in period	(2.9)	0.1	(2.8)	1.0	1.0	2.0
Unused amounts reversed in year	-	-	-	(0.3)	-	(0.3)
<b>At 31 July 2018</b>	<b>64.8</b>	<b>-</b>	<b>64.8</b>	<b>1.1</b>	<b>5.7</b>	<b>6.8</b>

### USS deficit

The obligation to fund the past deficit on the USS pension scheme arises from the contractual obligation with the pension scheme for total payments relating to benefits arising from past performance. Management has re-assessed future employee membership within the USS scheme and salary increases over the period of the contracted obligation in assessing the value of this liability. These, along with a change in discount rate applied, have resulted in a decrease of £4.2 million in the year. The movement in the year also includes a finance charge of £1.3 million, relating to the unwind of the provision.

### SAUL deficit

The obligation to fund the past deficit on the SAUL pension scheme arose from the contractual obligation with the pension scheme, agreed in 2015–16, for total payments relating to benefits arising from past performance. The deficit period was agreed to expire on 31 March 2018 and therefore the provision has been fully unwound in 2017–18, this movement including a finance charge of £0.02 million in the year.

### Other

The Corporate provision relates to a number of restructuring programmes which are currently underway within the College with the aim of reducing costs, as well as potential liabilities relating to overseas employees. In addition, £0.4 million was provided for in 2016–17 relating to a legal claim concerning an incident at premises leased to the College at the Chelsea & Westminster Hospital in 2011 in which both the College and the Chelsea & Westminster Trust were being prosecuted by The Health and Safety Executive for breaches of health and safety legislation. The case was settled in 2017–18 for £0.1 million and the remainder of the provision was released.

## 20. Endowment reserves

Restricted net assets relating to endowments are as follows:

					2018	2017
	Restricted permanent endowments £m	Unrestricted permanent endowments £m	Total permanent endowments £m	Expendable endowments £m	Total endowments £m	Total endowments £m
<b>Balances at 1 August</b>						
Capital	76.2	12.6	88.8	72.2	161.0	141.0
Accumulated income	(1.9)	(0.1)	(2.0)	(17.3)	(19.3)	(14.8)
	74.3	12.5	86.8	54.9	141.7	126.2
New endowments	7.9	-	7.9	3.0	10.9	12.1
Reclassification – capital	-	-	-	-	-	(0.1)
Reclassification – accumulated income	-	-	-	-	-	0.1
Investment income	1.1	0.2	1.3	0.9	2.2	1.9
Expenditure	(2.0)	(0.2)	(2.2)	(3.6)	(5.8)	(6.5)
	(0.9)	-	(0.9)	(2.7)	(3.6)	(4.6)
Increase in market value of investments	5.0	0.6	5.6	2.5	8.1	8.0
<b>At 31 July</b>	<b>86.3</b>	<b>13.1</b>	<b>99.4</b>	<b>57.7</b>	<b>157.1</b>	<b>141.7</b>
Represented by:						
Capital	89.1	13.2	102.3	77.7	180.0	161.0
Accumulated income	(2.8)	(0.1)	(2.9)	(20.0)	(22.9)	(19.3)
	86.3	13.1	99.4	57.7	157.1	141.7
					2018	2017
					Total £m	Total £m
<b>Analysis by asset</b>						
Non-current assets					125.1	114.7
Accrued income					5.4	5.5
Current liabilities					(0.2)	(0.4)
Cash and cash equivalents					26.8	21.9
					157.1	141.7

Included within endowments are a number of permanent funds with a deficit of accumulated income as at 31 July 2018. Within unrestricted permanent endowments there are four funds with a combined deficit balance of £0.2 million (2017: four funds with a deficit totalling £0.1 million). Within restricted permanent endowments there are 76 individual funds with a total combined deficit of £6.1 million (2017: 72 funds with a total combined deficit of £4.6 million). The College monitors funds in a deficit position and takes corrective action to ensure that these funds return to surplus in the medium term.

## Notes to the accounts

For the year ended 31 July 2018

### 21. Restricted reserves

Reserves with restrictions are as follows:

				2018	2017
<b>Consolidated</b>	Capital £m	Research £m	Other £m	Total £m	Total £m
Balances at 1 August	15.5	18.0	26.9	60.4	52.0
New Funding Council grants	23.4	-	-	23.4	16.2
New income/donations	15.7	23.7	16.2	55.6	51.3
Expenditure	(44.5)	(14.2)	(8.4)	(67.1)	(59.1)
	(5.4)	9.5	7.8	11.9	8.4
<b>At 31 July</b>	10.1	27.5	34.7	72.3	60.4

				2018	2017
<b>College</b>	Capital £m	Research £m	Other £m	Total £m	Total £m
Balances at 1 August	12.6	18.0	27.9	58.5	48.1
New Funding Council grants	23.4	-	-	23.4	16.2
New income/donations	15.7	23.7	15.4	54.8	50.5
Expenditure	(44.2)	(14.2)	(5.9)	(64.3)	(56.3)
	(5.1)	9.5	9.5	13.9	10.4
<b>At 31 July</b>	7.5	27.5	37.4	72.4	58.5

### 22. Capital and other commitments

Provision has not been made for the following capital commitments at 31 July:

	Consolidated		College	
	2018 £m	2017 £m	2018 £m	2017 £m
Capital commitments for major building projects contracted at 31 July	168.6	179.3	168.0	178.5

### 23. Contingent liabilities

The College is subject to a number of overage clauses and other matters for which the outcomes are uncertain. In addition, the funding level of the Universities Superannuation Scheme (USS), which the College participates in, is currently under review. The current schedule of contributions which determines the contractual liability the College recognises in relation to the USS deficit could therefore change as a result of this review. It is therefore disclosed as a contingent liability for the year ended 31 July 2018. Potential impact of changes in deficit contributions and length of recovery period is disclosed in Statement of principal accounting policies – Key sources of estimation uncertainty. No other material financial liabilities are anticipated.

**24. Lease payables**

Total rentals payable under operating leases:	<b>2018</b>	<b>2017</b>
	<b>£m</b>	<b>£m</b>
Future minimum lease payments due:		
Not later than one year	6.0	6.5
Later than one year and not later than five years	23.0	22.3
Later than five years	131.6	128.5
Total lease payments due	160.6	157.3

Lease payments recognised as an expense in the year totalled £6.5 million (2017: £6.4 million).

**25. Lease receivables**

Total rentals receivable under operating leases:	<b>2018</b>	<b>2017</b>
	<b>£m</b>	<b>£m</b>
Future minimum lease payments due:		
Not later than one year	11.8	8.4
Later than one year and not later than five years	38.7	28.4
Later than five years	66.0	53.2
Total lease payments due	116.5	90.0

The increase in amounts receivable is largely due to the operations of Imperial College Thinkspace Limited, which has experienced growth in occupancy levels across the properties in its portfolio.

## Notes to the accounts

For the year ended 31 July 2018

### 26. Related party transactions

For some years the College has maintained a Register of Interests of all Governors, academic and professional services staff. Policies incorporated within the College's Financial Regulations require an individual to declare an interest and withdraw from any commercial discussions should a conflict of interest potentially arise. Written assurances have been obtained from all Governors and senior officers of the College in respect of themselves and their close family that for the year to 31 July 2018 they have not unduly influenced any transaction between the College and a related party, as defined by FRS 102.

Commercial relationships with companies or other organisations that might be regarded as related parties have been reviewed. Transactions of a similar nature are aggregated unless, in the opinion of the College, separate disclosure is necessary to understand the effect of the transactions on the financial statements. The College has taken advantage of the exemption given by FRS 102, Related Party Disclosures, from disclosing transactions with its wholly owned subsidiaries. During the year, the College purchased goods and services amounting to £47.6 million and invoiced receivables amounting to £22.3 million from related parties. At the year end £0.3 million was outstanding and included in debtors. Purchases of £1.5 million and invoiced receivables of £0.8 million relate to the transactions with companies in which the key management personnel declared interest. Purchased goods and services include £43.7 million from Voreda Developments (Block F) Limited in connection with the construction of the Residential Tower in White City. The Hon Robert Rayne, who was a member of Endowment Board until February 2018, is a member of Voreda LLP Management Board. Invoiced receivables include £20.8 million from the Wellcome Trust where Mr Nick Moakes, Chair of Endowment Board, is a Managing Partner of Investments and Chief Investment Officer. The Wellcome Trust has detailed guidelines and controls which require that Governors withdraw from any discussion or decision making on the award of grants where there may be a conflict of interest.

A number of College employees hold positions in the Imperial College Healthcare NHS Trust. In common with many universities, senior members of the College sit on Research Councils, other NHS Trust boards and other grant awarding bodies which have their own internal procedures to avoid potential conflicts of interest. Louise Lindsay, Director of Human Resources and Organisational Change, has been a director of the SAUL pension scheme from January 2015. Transactions with these entities are not included in the aggregate numbers above but are included in notes 3, 4 and 28.

A number of College employees own ordinary shares in IP Group plc, which acquired College associate company, Touchstone Innovations plc, (formerly Imperial Innovations plc), on 17 October 2017 at which point it ceased to be equity accounted. Aggregate transactions with Touchstone Innovations plc are disclosed up to the date of acquisition. The College also entered into an agreement with its associate company Twig Rights Limited to provide the company with a convertible loan disclosed in Note 13.

The College has close relationships with a number of West London NHS Trusts with whom the College shares sites and facilities. College staff work closely with those Trusts particularly in the clinical service areas.

No trustee has received any remuneration or waived payments from the College during the year in respect of their services as a trustee (2017: Nil).

The total expenses paid to or on behalf of three trustees were £10,531 (2017: £3,374 to two trustees). This represents travel and subsistence expenses incurred in attending Council, Committee meetings and charity events in their official capacity.

### 27. Connected charitable institutions

A number of charitable institutions are administered by, or on behalf of, the College and have been established for its general or special purposes. As a result, under paragraph 28 of Schedule 3 to the Charities Act 2011, these connected institutions are exempt from registration with the Charity Commission. The College has no connected charities with income of £100,000 and above to disclose. Aggregate figures for connected charities with income below this threshold are disclosed below.

<b>Funds where individual income for the year was under £100,000</b>	<b>Opening reserves £'000</b>	<b>Income and donations received £'000</b>	<b>Expenditure and outgoing resources £'000</b>	<b>Capital growth/ diminution £'000</b>	<b>Closing reserves £'000</b>
<b>Consolidated</b>					
Prize funds (two funds)	354	5	(8)	22	373
Research support (two funds)	2,051	30	(14)	143	2,210
Student support (one fund)	3,253	46	(106)	200	3,393
	<b>5,658</b>	<b>81</b>	<b>(128)</b>	<b>365</b>	<b>5,976</b>

## 28. Pension schemes

The College participates in four separate, independently managed, defined benefit occupational pension schemes, which were contracted out of the State Second Pension (S2P) until 31 March 2016. Each is valued triennially by professionally qualified and independent actuaries, except the NHS Scheme which is valued quadrennially. The Universities Superannuation Scheme (USS), the Superannuation Arrangements of the University of London (SAUL) and NHS pension schemes are multi-employer schemes and it is not possible to identify the College's share of the underlying assets and liabilities of the schemes on a consistent and reasonable basis. Hence, as required by Section 28 of FRS 102, contributions to the schemes are accounted for as if they were defined contribution schemes. This means the amounts charged to the statement of comprehensive income and expenditure represent the contributions payable to the schemes in respect of the accounting period. For both USS and SAUL, in the event of the insolvency of any of the participating employers, the amount of any pension funding shortfall (which cannot otherwise be recovered) in respect of that employer may be spread across the remaining participant employers and reflected in the next actuarial valuation. The College also participates in the Federated Pension Scheme 1634 (FPS).

Imperial Consultants Ltd, a subsidiary of the College, operated a defined contribution pension scheme for some of its employees with contributions being charged to the income and expenditure account in the period to which they relate up to October 2017. In addition, Imperial Consultants Ltd formally joined the SAUL pension scheme in September 2016.

### USS

Staff paid on academic and academic-related scales (who are otherwise eligible), can acquire pension rights through USS, which is a national scheme administered centrally for UK universities. With effect from 1 October 2016, the scheme changed from a defined benefit only pension scheme to a hybrid pension scheme, providing defined benefits (for all members) as well as defined contribution benefits. The assets of the scheme are held in a separate fund administered by the Trustee.

At 31 March 2018, USS had over 198,000 active members and the College had 4,026 active members participating in the scheme (31 March 2017: 190,000 and 4,137 members respectively). The total pension cost for the College for the year ended 31 July 2018 was £39.0 million (2017: £38.9 million). Since the institution cannot identify its share of scheme assets and liabilities, the following disclosures reflect those relevant for the scheme as a whole.

The latest available full actuarial valuation of the scheme was at 31 March 2014 (“the valuation date”), which was carried out using the projected unit method (the valuation as at 31 March 2017 is underway but not yet completed).

At the valuation date, the value of the assets of the scheme was £41.6 billion and the value of the scheme's technical provisions was £46.9 billion, indicating a shortfall of £5.3 billion. The assets were therefore sufficient to cover 89% of the benefits which had accrued to members, after allowing for expected future increases in earnings.

Following the 2011 triennial valuation, in 2012 employers had agreed a deficit recovery plan for the period 1 April 2012 to 31 March 2021 to pay off the scheme shortfall. This recovery plan was subsequently revised in July 2015 to end on 31 March 2031. From 1 April 2016 employer contributions have increased to 18% of salaries (2015: 16%), providing a deficit contribution of 2.1% per annum. Member contributions have increased to 8% of salaries (2015: Final Salary – 7.5%, Career Revalued Benefits – 6.5%).

The defined benefit liability to be recognised by the College in respect of the deficit contributions due to USS is £64.9 million as at 31 July 2018 (£72.4 million as at 31 July 2017). Management has assessed future employee membership within the USS scheme and salary increases over the period of the contracted obligation in assessing the value of this liability (Note 19).

Informal reviews, reflecting changes in market conditions, cash flow information and new accrual of benefits, are carried out between formal valuations.

The defined benefit liability numbers for the scheme have been produced using the following assumptions:

	31 March 2018	31 March 2017
Discount rate	2.6%	2.6%
Price inflation (CPI)	2.0%	2.4%
Life expectancy:		
Males (females) currently aged 65 (years)	24.5 (26.0)	24.4 (26.6)
Males (females) currently aged 45 (years)	26.5 (27.8)	26.5 (29.0)

# Notes to the accounts

For the year ended 31 July 2018

## 28. Pension schemes (continued)

	31 March 2018	31 March 2017
<b>Existing scheme's benefits:</b>		
Scheme assets	£63.6bn	£60.0bn
FRS 102 liabilities	£72.0bn	£77.5bn
FRS 102 deficit	£8.4bn	£17.5bn
FRS 102 funding level	88%	77%

Note that the FRS 102 funding level is based on accounting rules. This is not the driver for the benefit and contribution decisions for the scheme.

### SAUL

The College participates in SAUL, which is an independently-managed pension scheme for the non-academic staff of over 50 colleges and institutions with links to higher education in London

Pension benefits accrued within SAUL currently build up on a Career Average Revalued Earnings ("CARE") basis.

The last actuarial valuation was carried out with an effective date of 31 March 2017. Informal reviews of SAUL's position, reflecting changes in market conditions, cash flow information and new accrual of benefits, are carried out between formal valuations.

The funding principles were agreed by the Trustee and employers in June 2018 and are due to be reviewed at SAUL's next formal valuation in 2020. At the 31 March 2017 valuation SAUL was fully funded on its Technical Provisions basis so no deficit contributions were required. The Trustee and the employers have agreed that the ongoing employer's contributions will continue at a rate of 16% of CARE Salaries.

The defined benefit liability of £1.6 million as at 31 July 2017 (Note 19) was recognised by the College in respect of the deficit contributions due to SAUL. The deficit period was agreed to expire on 31 March 2018 and therefore the provision has been fully unwound in 2017–18.

### NHS

Staff who have pension rights in the NHS Pension Scheme, on taking up a post within the College, may remain in membership of that scheme which is the nationally administered scheme for the NHS. The NHS Pension Scheme is an unfunded defined benefit scheme that covers NHS employers, General Practices and other bodies, allowed under the direction of the Secretary of State in England and Wales.

The Scheme is subject to a full valuation every four years. The last published actuarial valuation undertaken for the NHS Pension Scheme was completed for the year ending 31 March 2012. A valuation of the scheme liability is carried out annually by the scheme actuary (currently the Government Actuary's Department) as at the end of the reporting period. Actuarial assessments are undertaken in intervening years between formal valuations using updated membership and financial data and are accepted as providing suitably robust figures for financial reporting purposes. The Scheme Regulations allow contribution rates to be set by the Secretary of State for Health, with consent of HM Treasury, and consideration of the advice of the Scheme Actuary and appropriate employee and employer representatives as deemed appropriate.

The next actuarial valuation (currently being prepared) is to be carried out as at 31 March 2016 and will set the employer contribution rate payable from April 2019. There are provisions in the Public Service Pension Act 2013 to adjust member benefits or contribution rates if the cost of the Scheme changes by more than 2% of pay. Subject to this 'employer cost cap' assessment, any required revisions to member benefits or contribution rates will be determined by the Secretary of State for Health after consultation with the relevant stakeholders. Current employer contributions are set at 14.38%, with member contributions ranging between 5.0% and 14.5% depending on salary.

### FPS defined benefit scheme

FPS is the scheme of St Mary's Hospital Medical School, operated for non-academic staff prior to 1 August 1988 when it was closed to new entrants. Two-thirds of the membership elected to transfer into SAUL at that time and there are now no contributing members. A full actuarial valuation was carried out as at 31 March 2016 by a qualified independent actuary.

The liabilities set out in this note have been calculated based on the results of the full Scheme Funding Assessment as at 31 March 2016. The present value of the defined benefit obligation was measured using the projected unit credit method. Imperial College London has agreed a funding plan with the Trustee body following the 31 March 2016 funding assessment, whereby it was expected that no contributions would be required for the five year period commencing 15 May 2017. The disclosures set out below are based on calculations carried out as at 31 July 2018 by an independent qualified actuary.

The results of the calculations and the assumptions adopted are shown below:

	2018	2017
	£m	£m
<b>Changes in the present value of the defined benefit obligation</b>		
Opening defined benefit obligation	(4.5)	(4.6)
Interest cost on obligation	(0.1)	(0.2)
Administration costs	(0.2)	(0.2)
Remeasurement gains and (losses) – Actuarial gains and (losses)	0.1	-
Benefits paid including expenses	0.3	0.5
<b>Closing defined benefit obligation</b>	<b>(4.4)</b>	<b>(4.5)</b>
	2018	2017
	£m	£m
<b>Changes in the fair value of scheme assets</b>		
Opening fair value of assets	6.9	7.1
Interest income	0.2	0.2
Remeasurement gains and (losses) – Return on scheme assets excluding interest income	(0.1)	-
Benefits paid including expenses	(0.4)	(0.4)
<b>Closing fair value of scheme assets</b>	<b>6.6</b>	<b>6.9</b>
	2018	2017
	£m	£m
<b>Total expense recognised in Income and Expenditure</b>		
Administration expenses	0.2	0.2
	2018	2017
	%	%
<b>Major categories of scheme assets as a percentage of total scheme assets</b>		
Gilts	64%	63%
Corporate bonds	16%	16%
Insured annuity contracts	1%	1%
Cash	19%	20%
<b>Total</b>	<b>100%</b>	<b>100%</b>

The pension scheme has not invested in any of Imperial College London's own financial instruments, nor in properties or other assets used by Imperial College London. The assets are all quoted in an active market with the exception of the insured annuity contracts.

## Notes to the accounts

For the year ended 31 July 2018

### 28. Pension schemes (continued)

	2018	2017
	£m	£m
<b>Reconciliation of the present value of scheme liabilities and fair value of assets to the asset recognised in the Balance Sheet</b>		
Fair value of assets	6.6	6.9
Value of liabilities	(4.4)	(4.5)
Funded status	2.2	2.4
Unrecognised pension asset	2.2	2.4
	<b>2018</b>	<b>2017</b>
	<b>£m</b>	<b>£m</b>
<b>Total amounts recognised in Other Comprehensive Income</b>		
Actual return on scheme assets – gains and (losses)	0.1	0.2
less: amounts included in net interest on the net defined benefit liability	(0.2)	(0.2)
Remeasurement gains and (losses) – Return on scheme assets excluding interest income	(0.1)	-
Remeasurement gains and (losses) - Actuarial gains and (losses)	0.1	-
<b>Other Comprehensive Income gains/(losses)</b>	<b>-</b>	<b>-</b>

<b>Assumptions</b>	<b>2018</b>	<b>2017</b>
Discount rate	2.7%	2.5%
Aggregate long-term expected rate of return on assets (net of expenses)	2.7%	2.5%
Retail Prices Index (RPI) Inflation	3.2%	3.2%
Consumer Prices Index (CPI) Inflation	2.2%	2.2%
Future statutory revaluation of pensions in deferment	2.2%	2.2%
Pensions in payment, increasing by CPI capped at 5% p.a.	2.2%	2.2%
Post retirement mortality assumption	90% OF S2PXA	90% OF S2PXA

### Scheme contributions

		2018	2017
		£m	£m
<b>The pension costs for the College and its subsidiaries under FRS 102 were:</b>			
Contributions to USS	Note	39.0	38.9
Contributions to SAUL		14.1	12.9
Contributions to NHS		4.1	4.3
<b>Total contributions payable</b>		<b>57.2</b>	<b>56.1</b>
Contributions towards USS deficit	19	(4.6)	(4.7)
Contributions towards SAUL deficit	19	(1.7)	(2.4)
<b>Total contributions recognised in staff costs</b>		<b>50.9</b>	<b>49.0</b>

## 29. Financial instruments

The consolidated Group has the following financial instruments:

		2018	2017
	Note	£m	£m
<b>Financial assets measured at fair value through profit or loss</b>			
Listed non-current investments	11	238.4	146.3
Endowment funds assets	11	125.1	114.7
Derivatives	15	3.4	2.1
		<b>366.9</b>	<b>263.1</b>
<b>Financial assets measured at amortised cost</b>			
Other non-current investments	11	3.7	3.8
Other trade receivables	15	76.1	124.7
Research grants and contracts – receivables	15	23.6	22.9
Research grants and contracts – work in progress	15	63.4	54.5
Accrued income		41.4	35.6
Amounts due from associate companies	15	5.1	1.9
Current investments	16	24.4	58.1
Cash and cash equivalents		287.0	286.8
		<b>524.7</b>	<b>588.3</b>
<b>Financial assets measured at cost less impairment</b>			
Shares not listed on a recognised stock exchange	11	40.0	40.9
		<b>40.0</b>	<b>40.9</b>
<b>Financial liabilities measured at fair value through profit or loss</b>			
Derivatives	17	-	(0.3)
		-	(0.3)
<b>Financial liabilities measured at amortised cost</b>			
Unsecured loans	17, 18	(465.0)	(470.8)
Obligations under finance leases	17, 18	(90.1)	(90.4)
Trade payables	17	(23.8)	(18.5)
Accruals and other creditors		(88.8)	(80.9)
		<b>(667.7)</b>	<b>(660.6)</b>



Students on the Queen's Lawn at South Kensington Campus during Welcome Week.



