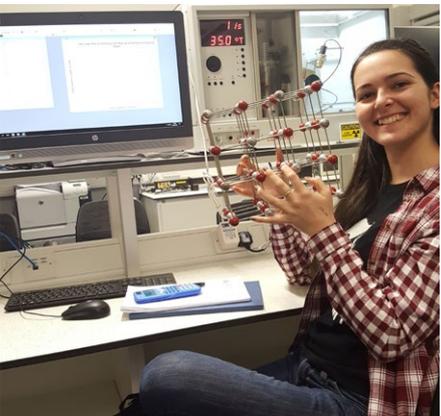
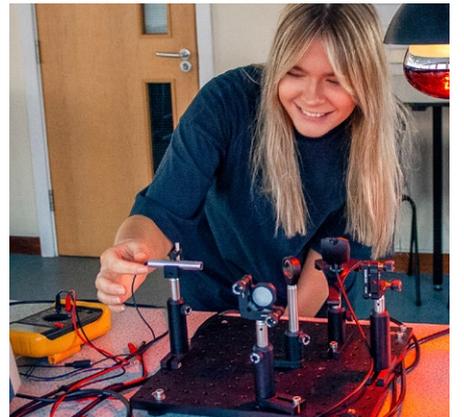
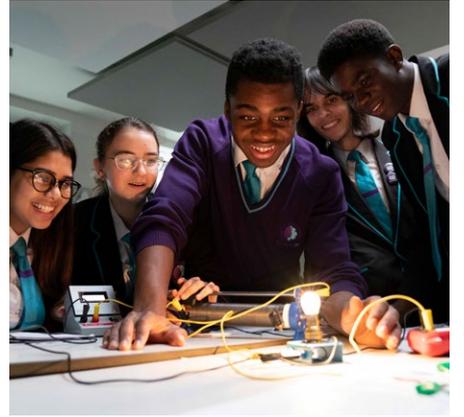




# Annual Report 2020



# **Trustees' Annual Report and Financial Statements for the year ending 31 December 2020**

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## **Contents**

**Objectives and Activities,  
Achievements and Performance 01**

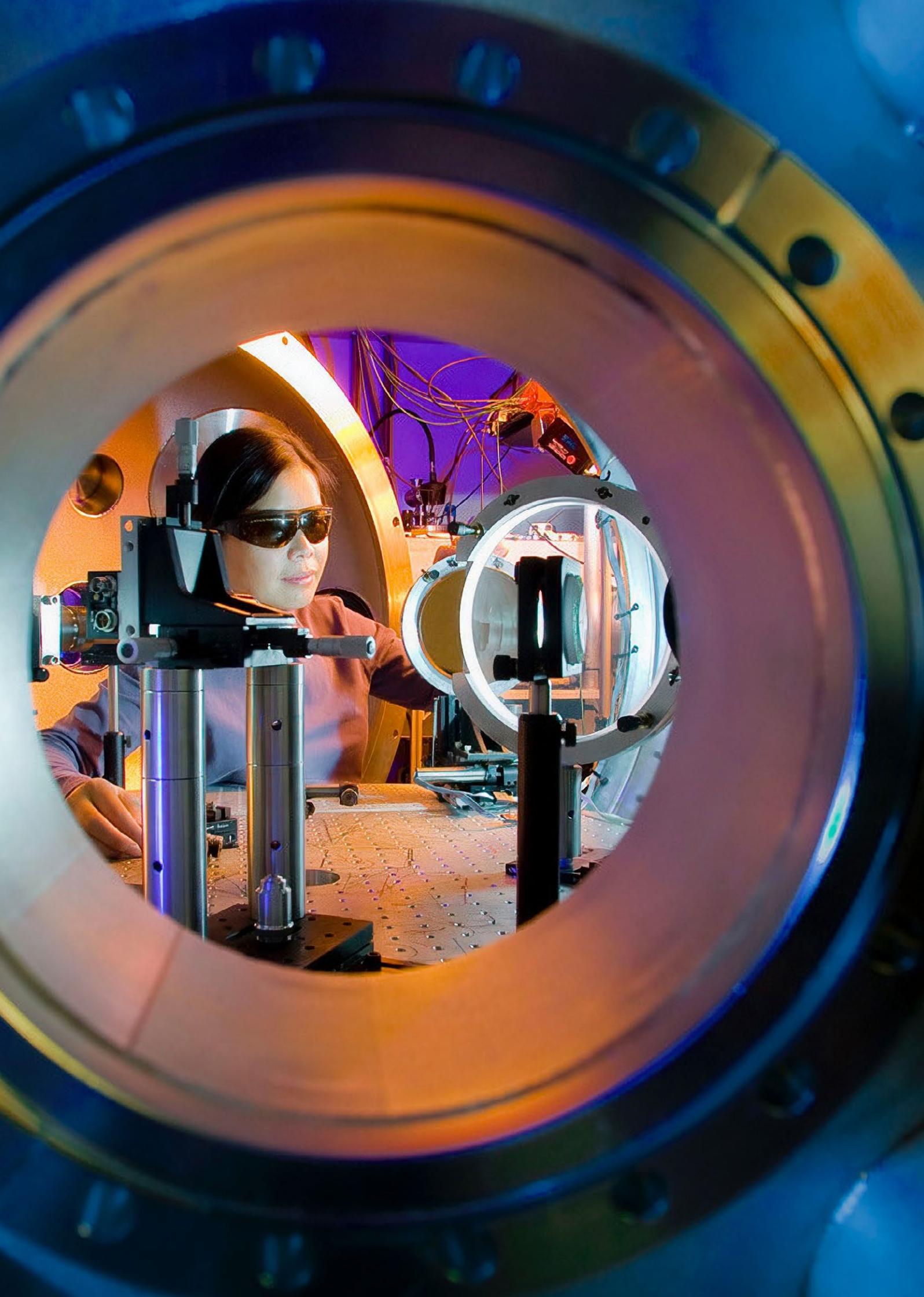
**Beginning to deliver  
on our new strategy 04**

**Structure, Governance and  
Management Constitution 15**

**Financial Review 30**

**Independent Auditors' Report 33**

**Financial Statements and Notes 37**



# Objectives and Activities, Achievements and Performance

**The Institute of Physics (IOP) is the national physical society for the UK and Ireland. The objective of the IOP, as stated in our Royal Charter, is to promote the advancement and dissemination of knowledge and education in the science of physics, pure and applied, for the benefit of the public and the members of the IOP.**

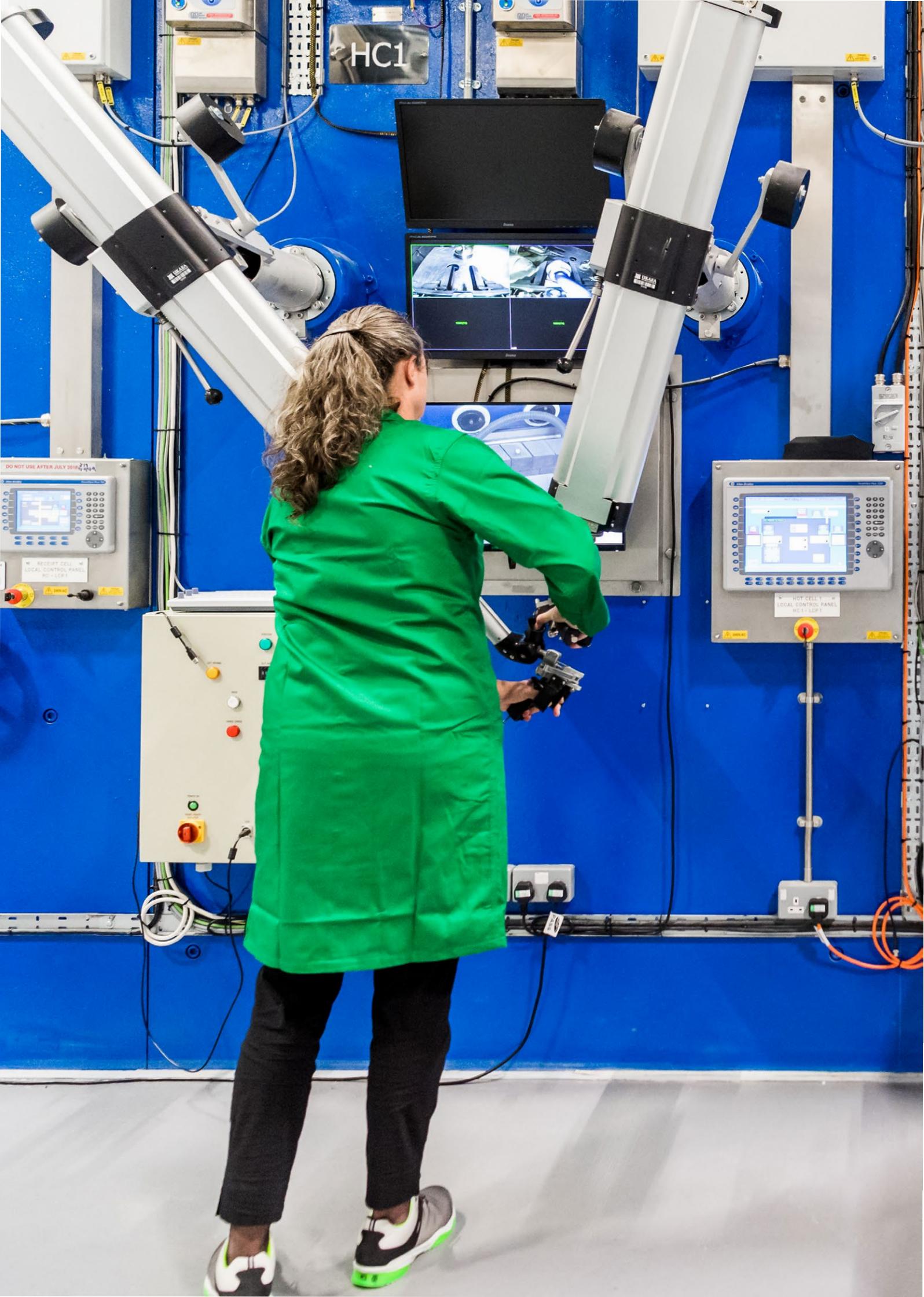
The trustees confirm that they have referred to the Charity Commission and the Office of the Scottish Charity Regulator (OSCR)'s guidance on public benefit when reviewing the IOP's aims and objectives and in planning future activities. The IOP meets the public benefit test in the following ways:

- advancement of education;
  - advancement of science;
  - advancement of community development; and
  - the promotion of equality and diversity.
- The IOP works to advance physics research, application and education, and engages with policymakers and the public, to develop awareness and understanding of physics. The public benefit, which our many and varied activities provide, can be summarised as follows:
- Our support for teachers and curriculum development, by improving the continuing professional development (CPD) of teachers in order to support continued improvements in the quality of physics teaching in schools.
  - Our focus on building a more diverse, inclusive and vibrant physics community. We actively seek to encourage students from under-represented groups to study physics beyond the age of 16, and work relentlessly to break down barriers so all pupils can have a high-quality physics education.
  - Our publication of physics journals, books, magazines and websites, and the scientific meetings and conferences we arrange. These bring high-quality physics research to a wide audience, ensuring the latest physics developments are seen, shared and built upon. IOP Publishing continues to develop an [Open Physics initiative](#) which is intended to support greater access, transparency and inclusivity across physics research.
  - Our efforts to connect physicists working in all sectors, to drive innovation and support the delivery of groundbreaking technologies that will help shape the economies of the UK and Ireland.
  - Our work to raise public awareness of the value of physics. By showing how physics affects all of our lives, we spark interest in the subject and encourage more people to get involved in it.

- Our events and conferences support a thriving physics ecosystem, bringing together the community from across the UK, Ireland and internationally, to share knowledge about the discipline and its applications, explore collaborations and provide networking opportunities.
- Our work to continually increase professional and ethical standards across the physics community, driving excellence and supporting inclusive workplaces.

It's vital that financial concerns do not stop people from engaging in physics. With that in mind, we offer concessionary IOP membership rates for anyone earning less than £21,000 a year (from 1 January 2021). Undergraduates, trainees and apprentices can join the IOP for £15. Our Benevolent Fund provides financial support for IOP members. During 2020 we ensured that the Benevolent Fund was able to offer assistance to members who were financially impacted by COVID-19. And, as part of our commitment to support scientific research globally, researchers in many lower income countries can access our subscription journals or publish in our open access journals at discounted or no cost.

**The IOP works to advance physics research, application and education, and engages with policymakers and the public, to develop awareness and understanding of physics.**



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# Beginning to deliver on our new strategy

## Unlocking the Future

2020 marked the first year of our new strategy, Unlocking the Future. As a society we face unprecedented challenges. Globally, we need to address a changing climate and a growing population, to decarbonise economies, improve healthcare and ensure water, food and energy supplies. Domestically, we need to develop the next generation of industries to create jobs and improve productivity to safeguard citizens' futures.

Physics has a vital role to play in tackling these issues and making the UK and Ireland fit for a new industrial era of science, technology and engineering. Our strategy sets out our aim to develop and support a thriving physics ecosystem, unlocking the future for UK and Irish physicists and their work at home and around the world.

Soon after the launch of the strategy, however, a further worldwide challenge emerged – the COVID-19 pandemic – with unprecedented and lasting impacts in the UK, Ireland and across the globe. In this context, 2020 was a year in which we reacted decisively to extraordinary external change while continuing to lay the foundations for achieving our strategic goals. We were able to remain strong and effective, provide support to our own staff team, and to invest significant funds and resources into helping the physics community adapt to new ways of working.

### Unlocking the Future: in summary

Our strategy identifies three key challenges that present the greatest barriers to unlocking the potential of physics and its impact in society:

- **Diversity and skills:** We want to build a thriving, diverse physics community so everyone, regardless of background, has

access to world-class physics education and training.

- **Unlocking capability:** We want to ensure the UK and Ireland are able to realise the full societal and economic benefits of the new industrial era.
- **Public dialogue:** We want to show the impact of physics on people's lives, to enable informed public debate on funding and policy.

To meet these challenges, we have six aspirations for the changed world we want to see at the end of the strategy period. This is a broad and ambitious strategy and our aspirations are also ambitious.

1. Every secondary school pupil in the UK and Ireland will have access to a specialist physics teacher.
2. Girls will make up at least 30% of those taking physics at age 16–19 and there will be double the current number of young people from black and minority ethnic and lower socio-economic backgrounds.
3. There will be clear roadmaps and funding commitments from the UK and Irish Governments that propel research and development investment towards the Organisation for Economic Co-operation and Development average of 2.4% of gross domestic product.
4. Double the current number of people will be employed in technical roles in physics-based and engineering businesses and the number of those on physics-based science apprenticeships will have increased by a factor of 100.

5. Our publishing services to the worldwide physics community will have further improved such that the number of scientists publishing their research in our journals will grow by 25%.
6. 10% of the population will have a meaningful engagement with a physics-based public event and 1% will have sustained contact with physics.

Throughout 2020, we established four interlinked programmes of work to implement the strategy: our ecosystem, productivity and transformation programmes and a new public facing influencing campaign.

We also embedded our values more deeply across the IOP in 2020. These are:

- Be objective, led by evidence
- Be rewarding, open and engaging to partner with
- Confront barriers to inclusiveness and participation wherever we encounter them

- Exemplify the very highest standards in all that we do.

Below, we explore how these new programmes, combined with greater emphasis on our values, helped us to increase our impact in 2020. We also detail how we urgently reacted to the impact of COVID-19 on the physics community.

### Responding to our community

As a professional body and membership organisation, we support our members, recognise their achievements and work with them towards shared goals. Together, we aim to create a bright future for physics, with a sector that is well funded, genuinely diverse, appreciated by society and ready to face our defining challenges.

In 2020, as the COVID-19 pandemic began to spread, we moved rapidly to deliver immediate support and to understand what mattered most to our members. To help our student members increase their skills and prepare for the workplace, we ran online workshops and webinars on subjects ranging

## 100th anniversary of the IOP

2020 marked the 100th anniversary of the IOP. Throughout our centenary year, we celebrated the role of physics and physicists in the UK and Ireland over the past 100 years, highlighting their importance in today's society as well as their immense potential for the future.

In November, we hosted a joint lecture on climate change policy with the German Physical Society who were celebrating their 175th year. We also hosted an online talk from NASA Chief Technologist Dr Douglas Terrier to discuss the landing of the first woman, and next man, on the Moon. And to consider how physics has changed over the last 100 years, we invited six of our members to give us their personal view of the changing landscape, looking at the physicists who inspired them and the discoveries and innovations that have helped shape our lives.

We launched several initiatives that will help us create a legacy that will last well beyond our anniversary year. Our new [careers hub](#) is an important and growing resource to support anyone considering a future with physics. As part of our continuing commitment to highlight the importance of technical roles and apprenticeships in physics, we widened our Awards to include technicians, employers and apprentices, with two technicians awarded Honorary Fellowships in 2020. And we launched [Looking Glass](#), a major new series of podcasts. Designed to appeal to a wide audience, it explores some of the most pressing challenges society faces today, asking what role physics has in solving them. The series also takes a timely look at the purpose of a scientific institution in the 21st century, to help us understand how we must evolve to be part of a modern society, and to help shape it.



from the Python programming language to tailoring CVs. We published guidance on continuing professional development throughout the year, and launched a range of new resources on our career development hub. And to support universities through the crisis, we published detailed guidance on continuing to award IOP-accredited qualifications remotely.

We also froze membership fees for 2021 and increased the financial help available to members through the Benevolent Fund.

On the publishing side, IOP Publishing's technology, sales and customer services supported libraries around the world to provide remote access to content for their users, and we also made any COVID-19-related articles free to read to support the response effort.

Focusing on the longer-term impact of the crisis, we then launched a consultation with our members and other leaders in the physics community to understand people's changing needs and priorities. Through online meetings and interviews with individuals spanning research, business, policy and government, we defined 10 key focus areas:

- Supporting physicists' careers, especially in light of the pandemic
- Working with the Treasury to ensure that research funding is protected and attracted
- Highlighting physics' contribution to the fight against COVID-19
- Supporting examining bodies to develop effective assessments
- Supporting teachers with remote working
- Building partnerships and networks to accelerate the pace of innovation
- Ensuring physics businesses can access funding, facilities and the best support and advice
- Ensuring the supply of physics teachers was not disrupted by the pandemic

- Ensuring students' physics prospects were not permanently damaged by the pandemic
- Exploring how to engage with the IOP community virtually, as well as through physical events, in the long term.

These themes aligned closely with our strategy. As such, the strategy remained both relevant and robust enough to meet the immediate and ongoing impacts of COVID-19. Our commitment to delivering on it also grew stronger than ever.

## **Our ecosystem programme**

### **Building a diverse, thriving and effective physics community**

Our 2020 work to nurture the physics ecosystem was wide-ranging, with our Giving Voice to Inclusion programme a central focus of our efforts to foster a more representative physics community. This project looks beyond diversity to inclusion – the sense of belonging, of being treated with fairness and of feeling trust in those around you. A diverse workforce does not guarantee inclusion, so we want to understand people's experiences of feeling included and excluded, wherever they are in the physics landscape. With that knowledge, we can take action that will help break through the barriers that keep people out of physics.

In November 2020, we launched an interactive discussion to introduce the Giving Voice to Inclusion programme to the physics community. Our focus in this work is on listening, so we then spoke with Equality, Diversity and Inclusion experts and held focus groups with a diverse cross section of members and non-members. These conversations highlighted themes that were then explored in a survey sent to all members and to the wider physics community. The survey results will guide our future work, as we seek to tackle the challenges that can prevent an inclusive environment in places where physicists are educated, trained and work.

In October, we also published our latest [IOP member diversity survey](#). This is a crucial piece of research as we seek to ensure the physics community becomes more representative of society. The survey showed that our progress

has been too slow as a community, underlining the need for our greater emphasis on diversity and inclusion.

In December 2020, we published [Subjects Matter](#), a major report recommending a UK-wide system of subject-specific CPD for all teachers to help increase the quality of teaching in our schools, improve educational outcomes for all students, and boost economic growth and prosperity across the UK. To develop the report, we drew on the evidence, our own experience of managing the Stimulating Physics Network for the last 14 years, and the input of subject organisations across all subjects.

We also broadened our efforts to make sure young people can access a quality physics education. Much of this work was inevitably affected by the impact of COVID-19, but we responded swiftly and in ways that proved welcome and effective. For example, by moving much of the work of our Stimulating Physics Network online, we delivered more than 10,000 hours of physics-specific (CPD) to teachers from nearly 500 schools, as well as developing a range of CPD video resources for teachers to watch and discuss with IOP experts. We have also worked with governments and regulators to ensure that their proposals for alternatives to examinations are equitable and workable, and do not adversely affect any groups – especially those that are currently under-represented in physics.

Similarly, we developed video and text resources to enable physics teachers to teach imaginative and inspiring lessons while working remotely. We saw a fourfold increase in visits to [IOPspark](#), our online resource for teachers. In October to November 2020 alone, the site had more than one million page views. And we continued to partner with the Department for Education (DfE) to award 150 scholarships to the IOP Teacher Training programme for high-achieving graduates. The application process for these scholarships was again swiftly moved online, as we maintained our focus on addressing the serious shortage of physics teachers. As well as working to maintain the supply of teachers, we initiated new projects to improve retention in teachers' first years and, during the

## The IOP Challenge Fund

To underline our own commitment to help resolve some of the world's most acute challenges through physics, we launched our £10m [IOP Challenge Fund](#) in 2020. Through this significant commitment, we want to identify and support plans and initiatives with partners who share our ambition and sense of urgency. Formed using part of our operating budget that has now been turned into a competitive funding stream, the initiative will enable the IOP to offer grants, award contracts, work with partners and invest in organisations ready to accelerate large-scale change.

pandemic, worked with governments to ensure that trainee teachers have had as much teaching experience as possible in preparation for their first jobs in 2021.

Stimulating and supporting a high-performing physics sector is another central strand of our ecosystem programme, and our Special Interest Groups, Nations and Branches went to inspiring lengths in this regard. Collectively these member-led groups delivered more than 40 online conferences, events and talks to help the physics community stay connected and keep learning, with over 6,000 people registered in total. [Photon 2020](#), a major optics and photonics conference organised within months of the first lockdown, showed the level of the Groups' ambition, with 200 speakers sharing their knowledge over a four-day virtual conference.

We also recognised excellence in our [Institute of Physics Awards](#) and [Business Awards](#) programme, and welcomed six new Honorary Fellows to the IOP. These included the first technicians to be recognised by the award of an honorary fellowship: [Rachael Buckley](#) and [Paul Cook](#).

We took another step towards ensuring physics is accessible to all with a new Irish Sign Language (ISL) project that is being delivered by Dublin City University. We will create an ISL



Glossary of 75 physics and astronomy signs – the first dedicated set of signs for physics and astronomy that has been produced anywhere.

### **Our productivity programme**

#### **Unlocking the full value of physics to society and the economy**

Following extensive input to government consultations and reviews throughout the year, we welcomed two landmark developments in 2020. Firstly, the UK government renewed its commitment to increase public investment in research and development (R&D) to 2.4% of GDP. Secondly, the Brexit agreement ensured that UK-based researchers will remain eligible for research funding, despite the UK leaving the European Union.

The R&D commitment was rumoured to be at risk due to the economic devastation caused by COVID-19. But, together with a range of like-minded organisations, we successfully worked with the Treasury, submitting multiple consultation responses. These outlined the need for a continued focus on innovation as part of efforts to rebuild the economy after the pandemic and to improve livelihoods over the long term.

Similarly, throughout 2020 it frequently looked as though a Brexit deal that would protect UK research funding was out of reach. Adding our voice to a chorus of concern, we made clear that leaving the EU without a deal would risk the UK being left behind in science, technology and engineering. In December, we welcomed the announcement that the UK can continue to participate in the Horizon 2020 and Horizon Europe EU research frameworks. We also immediately began preparing guidance on the Brexit agreement's impact for students, businesses and researchers in the UK and Ireland.

Our own work to tackle the issues that inspired our strategy included collaborating with the Henry Royce Institute. Royce selected the IOP to help convene a research community to explore novel materials and processes that could help to deliver affordable green energy. We undertook a technical road-mapping exercise as part of this work in 2020 and look

forward to ongoing collaboration towards this critical challenge.

Looking to the future, we began developing major new pieces of research last year on workplace skills and innovation within physics-based businesses. Both will launch in 2021 and will combine novel research with data and analysis gleaned from Physics Insight, our in-house data visualisation capability. Physics Insight tracks trends and developments in physics funding, research, publications and patents to build a picture of the physics landscape. Our objective for these new research projects is to understand what skills and knowledge employers value most, so we can most effectively support pioneering applications of physics.

### **Our influencing campaign**

#### **Supporting young people to change the world by doing physics post-16**

Limit Less, our first public influencing campaign, launched in October 2020. Our staff and members developed Limit Less together, and through the campaign we want to support young people to change the world and fulfil their potential by studying physics beyond the age of 16.

Limit Less is built on the experiences and insights of young people, those who care for them, and our members. When we were developing the campaign, we surveyed thousands of 14- to 21-year-olds, parents and carers to understand their perceptions of physics and physicists. We also asked members to share experiences of when they had been discouraged from pursuing physics.

Two clear themes emerged from this research. Firstly, some young people are put off by misconceptions about physics. It is seen as too difficult, not creative or just plain boring. Secondly, prejudices persist about who can be a physicist. Girls are told physics is for boys. Young people are told physics is not for them because of their ethnicity, sexual orientation, disability or social background.

Through this campaign, we want to dispel these fallacies. The campaign is not aimed directly

at young people, but at the people – from teachers to parents to politicians – who shape their decisions and opinions.

Since Limit Less launched, we have begun working to shift perceptions in families, communities, nurseries and schools, and in the media and on social media. We are also building relationships with organisations and individuals focused on disability, LGBTQ+ rights, poverty and more to build our understanding and to help build a more diverse physics community.

We have published a range of online stories from physicists who have experienced and overcome the obstacles we are challenging in the campaign. And we have linked with YouTube to curate content on the site's physics learning area in order to challenge misconceptions about physicists in the media. We also promoted the campaign to MPs during Sense About Science's Evidence Week and contacted all members of the Scottish Parliament and the Assemblies in Wales and Northern Ireland. And to show that physics is anything but boring, we have published a series of online science experiments for parents to do with their children – [Do Try This At Home](#). Working in all of these ways, we want to limit young people less and support them more.

### **Our transformation programme** **Becoming a stronger organisation to deliver on our strategy**

The level of ambition in our new strategy requires us not only to work with more partners more effectively than ever, but to transform how we work ourselves. This goes beyond our systems and processes to the values and culture that define who we are.

In 2020, we focused on progress in four areas: leadership and management; organisational planning and performance; knowledge and decisions; and effectiveness and efficiency. Alongside our efforts to embed our values across the IOP, this multifaceted approach should empower all staff to be part of a higher performing organisation.

### **Working through COVID-19**

The wellbeing of our staff has been a critical priority throughout the COVID-19 pandemic. From the earliest days of the crisis we encouraged flexible working for staff who needed to care for others, and we moved fast to ensure all IOP employees had the technology they needed to work effectively from home. We have also sought to strengthen communications with staff through what has been a difficult time for everyone, with senior leadership briefings and staff-led meetings online. No staff have been furloughed during the pandemic, and our focus throughout has been on maintaining a sense of community among IOP employees, even when we have not been able to work together physically.

To improve the level of knowledge and decision making across the IOP, we created new cross-organisational groups of senior staff. To enhance organisational effectiveness, we reviewed staff performance competencies. To boost efficiency and effectiveness, we moved swiftly to remote working tools – a switch accelerated by the COVID-19 pandemic – and improved our customer relationship management and data systems. And to improve organisational planning, we created a single centralised business plan. All of these shifts will strengthen our ability to deliver on our strategy in the coming years.

At the same time, a team of staff from across the IOP led a process to create behaviours linked to our values. Close to 90% of staff took part in consultations run by the team, with the resulting behaviours now guiding the way we work together.

We also took another step on our digital transformation journey, taking our website out of beta, migrating content and decommissioning old sites. Our new website is more accessible and mobile-friendly. This move marked a milestone in our journey towards transforming our digital platforms.

## **IOP Publishing (IOPP)**

### **Driving physics research forward**

IOPP is a subsidiary of the IOP and a leading international scientific publisher. Its commitment to fostering physics excellence and diversity could be seen throughout 2020.

IOPP launched the world's first peer review certification programme tailored for the physical sciences, with the aim of creating a future generation of outstanding peer reviewers. It also became the first physics publisher to move to double-anonymous peer review, a shift that should make the review process more diverse and representative. And it continued the roll out of transparent peer review across more publications, showing the full process from initial review to final decision.

Open access was another key focus, with IOPP launching a further three new fully open access journals over the course of the year and announcing its Open Physics initiative in February 2020. This initiative sets out IOPP's commitment to promote and support open science practices across the physical sciences through wider and faster research access, greater transparency and broader inclusivity.

Putting this commitment into action, IOPP joined the Research4Life partnership, which makes research information available in low- and middle-income countries. And it linked with 16 other major physics societies to publish a joint statement in support of open access publishing, calling for a pragmatic, inclusive and financially sustainable approach. IOPP has also been working with the IOP to inform the current review of UK Research and Innovation's open access policy, highlighting the need for a smooth and inclusive transition which preserves researcher choice and the sustainability of high-quality publishing services.

In addition, IOPP continued running pioneering conferences and events despite the pandemic, looking to increase international cooperation between physicists. Its first Twitter poster conference saw a stream of people sharing research with peers and experts on the social network, while Quantum 2020,

IOPP's first virtual quantum conference, brought together nearly 4,500 researchers worldwide. Quantum 2020 was organised with the IOP in partnership with the Chinese Physical Society and the University of Science and Technology of China.

### **Plans for 2021**

During 2021 we will continue to work towards the aspirations set out in our strategy, *Unlocking the Future*. Here we outline some of the projects, programmes and initiatives planned for the coming year.

Diversity and inclusion continue to be at the heart of our work and we remain determined to make the physics community a more welcoming and supportive place for people from all backgrounds. This year we are reviewing our flagship Juno programme to support inclusive practice in university and college departments. We will take forward what we have learned through our Giving Voice to Inclusion consultation, in which we invited members of the physics community to share their insights and experiences, to help us better understand the barriers to inclusion in physics and how we can address them.

We will continue to grow our groundbreaking influencing campaign, *Limit Less*, which seeks to increase the number of young people from underrepresented groups who do physics from age 16. We will also develop work with universities to provide academic and pastoral support at Year 12. Outcomes from a pilot phase during 2021 will be closely monitored and lessons learned about how this support can drive greater participation among under-represented people.

As part of our work to improve access to specialist physics teaching, we will work with stakeholders across all subjects to call on UK governments to invest in creating a more confident, engaged teaching profession, through a sustained, world-class system of subject-specific CPD for all teachers. This will be complemented with a community-led initiative to bring together teacher support with professional development.



As we work to increase technical roles in physics-based and engineering businesses, we will lead work to increase our understanding of the need for physics skills in the workforce, and build on this with a new initiative working with small and medium sized enterprises on technician roles.

Our public engagement will continue through our ongoing events programmes, which we will make more inclusive. We will continue to produce our Looking Glass podcast series, and we will engage more with the wider community through a series of conversations.

Much of our work through the life of the strategy will be catalysed by the IOP Challenge Fund. For example, our aspiration for clear roadmaps and funding commitments from governments to support research and development will be advanced through a new Physics Leadership Commission, initiated through the Fund.

During 2021, new funding streams will be brought online through calls for proposals from the physics community and beyond, leveraging resources and building partnerships to speed our progress. This includes a strand to support the physics community to recover from the damage suffered through the COVID-19 pandemic – an essential component in addressing the challenges identified in our strategy.

Finally, a continuing process of organisational transformation will ensure we are equipped to deliver this ambitious work. This will include the continued development of our digital programme, a major review of our governance and an enhanced presence in Ireland, with a new office in Dublin and our application for registration as a charity in the Republic of Ireland.

# Structure, Governance and Management Constitution

## Constitution and Governing Document

Tracing its roots back to 1874 and the Physical Society of London, but originally incorporated in 1920, the IOP as currently constituted was established by Royal Charter on 30 September 1970 (as subsequently amended). This Royal Charter, which is supplemented by Bylaws and Regulations, is the IOP's governing document.

## Registered Details

The IOP's registered name is the Institute of Physics. Its principal office address is 37 Caledonian Road, London N1 9BU.

The IOP is a charity registered in both England and Wales (no. 293851) and in Scotland (no. SC040092), and is therefore regulated by both the Charity Commission for England and Wales (CCEW) and the Office of the Scottish Charity Regulator (OSCR). The CCEW is the IOP's lead regulator.

The IOP has also applied for registration as a charity in the Republic of Ireland and has submitted an Expression of Intent for Registration as a Charity in Northern Ireland.

## Professional Advisers

Details of the IOP's professional advisers are as follows:

### Independent Auditors

PricewaterhouseCoopers LLP, 2 Glass Wharf, Bristol BS2 0FR

### Investment Advisers

Lane Clark & Peacock LLP, 95 Wigmore Street, London W1U 1DQ

### Tax advisers

Deloitte LLP, 3 Rivergate, Temple Quay BS1 6GD

## Solicitors

Eversheds, 1 Callaghan Square, Cardiff CF10 5BT

The IOP does not however have a sole appointed solicitor or formal panel of solicitors.

## Annual General Meeting

Each year the IOP holds an Annual General Meeting, the rules of which are set out in the Bylaws and Regulations, at which all members are entitled to attend and vote. Membership fees, any changes to the Bylaws and the appointment of the auditors are approved by the membership at the Annual General Meeting.

## The Council (Board of Trustees)

As set out in the Royal Charter, the IOP is governed by its Council. This consists of trustees elected from, and by, the membership, and up to three co-opted trustees who are appointed by the Council itself.

All members of the Council are also the trustees of the IOP. The Council has the ultimate responsibility for directing the affairs of the IOP, ensuring that it is solvent, well-run and delivering the charitable outcomes for the benefit of the public for which it has been set up. The Council sets and monitors the IOP's strategy which delivers these charitable outcomes.

Of the elected Council members, there are four senior officers and currently four Vice-Presidents. The senior officers are the President, President-elect, Honorary Secretary and Honorary Treasurer. The current four Vice-Presidents are for Business, Education, Membership, and Science and Innovation. There are ten additional elected Council members.

Certain Council members have lead responsibilities for important cross-cutting areas such as equality, diversity and inclusion, and the IOP's international programme.

Co-opted Council members are appointed as required.

There are currently 19 members of the IOP Council (including one co-opted member).

The Council currently meets four times per year. All Council members give their time voluntarily and are not remunerated for their work on behalf of the IOP beyond the reimbursement of reasonable expenses.

### **Elections to Council**

The rules governing the election of Council members are set out in the Bylaws. At the start of each calendar year, the number of vacancies that will arise that year is identified. With delegated powers from the Council, the Nominations Committee then evaluates the balance of skills, knowledge, experience and diversity of Council members and, in the light of that evaluation, prepares a description of the role and capabilities required for each particular vacancy on the Council. A notice of vacancies, along with role descriptions, is published and all members are eligible to nominate themselves.

The Nominations Committee then assesses the nominations received from members to confirm eligibility and that candidates meet the requirements laid out in the role descriptions. Where there is more than one nomination for any vacancy, a ballot takes place. Where there is only one nomination for any vacancy, that nominee is deemed elected assuming they meet the eligibility and role description requirements.

Council members generally serve one four-year term. Exceptions to this are the President who serves a two-year term plus two years immediately preceding that as President-elect, and the Honorary Treasurer and Honorary Secretary who are eligible for election for a second four-year term. Co-opted members are appointed annually for a maximum term of three years.

### **Induction and Training of Trustees**

Formal induction is given to all new trustees who are invited to attend meetings with IOP staff and advisers as part of the induction process. Trustees are also able to attend external training courses for charity trustees.

### **Conflicts of Interest**

Trustees have a duty to declare conflicts of interest so they can ensure that at all times they are taking decisions that are in the best interests of the IOP.

The IOP maintains a register of trustees' interests, which is updated annually by trustees and as any changes are reported.

Procedures are in place for managing conflicts of interest that may arise during Council meetings.

## Details of Trustees

Details of the trustees at the date of this report are as follows. There are no corporate trustees or trustees holding property for the IOP.

Role	Name	Term From	Term End
President	Jonathan Flint CBE FEng FInstP	1 October 2019	30 September 2021 <sup>1</sup>
President-elect	Professor Sheila Rowan CBE FRS FRSE Hon. FInstP	1 October 2019	30 September 2021 <sup>2</sup>
Honorary Secretary	Professor Brian Fulton FInstP CPhys	1 October 2017	30 September 2021 <sup>3</sup>
Honorary Treasurer	Professor David Delpy CBE FRS FEng FMedSci FInstP CPhys	1 October 2019	30 September 2023 <sup>4</sup>
Vice-President for Business	Dr John Bagshaw FRAeS FInstP CEng CPhys	1 October 2020	30 September 2024
Vice-President for Education	Dr Lisa Jardine-Wright FInstP CPhys	1 October 2020	30 September 2024
Vice-President for Membership	Dr Mark Telling FInstP CPhys	1 October 2017	30 September 2021
Vice-President for Science & Innovation	Professor Martin Freer FInstP	1 October 2019	30 September 2023
Ordinary Member	Dr Tariq Ali FInstP FRAS CPhys	1 October 2018	30 September 2022
Ordinary Member	Dr David Boyce FInstP CPhys	1 October 2018	30 September 2022
Ordinary Member	Dr Gayle Jodine Calverley-Miles MInstP MBCS MIScT CSci CPhys	1 October 2019	30 September 2023
Ordinary Member	Dr Tamara Cleford FInstP CEng CPhys	1 October 2018	30 September 2022
Ordinary Member	Professor Claudia Eberlein DiplPhys DPhil FInstP CPhys	1 October 2020	30 September 2024
Ordinary Member	Professor Wendy Flavell FInstP CPhys	1 October 2017	30 September 2021
Ordinary Member	Professor Martin Hendry MBE FRSE FInstP	1 October 2019	30 September 2023
Ordinary Member	Dr June McCombie MBE FInstP FRAS FRSC CPhys	1 October 2017	30 September 2021
Ordinary Member	Dr Alix Pryde FInstP	1 October 2019	30 September 2023
Ordinary Member	Professor Anne Tropper FInstP FOSA CPhys	1 October 2017	30 September 2021
Co-opted Member	Dr Peter van der Burgt FInstP CPhys	2 May 2019	30 September 2021

1 Was President-elect from 1 October 2017 to 30 September 2019

2 To be President from 1 October 2021 to 30 September 2023

3 Eligible to stand for election for second term

4 Eligible to stand for election for second term

Details of the trustees during the reporting period but who have now retired are as follows:

Role	Name	Appointment Date	Retirement Date
Vice-President for Business	Dr James McKenzie FInstP CEng CPhys	1 October 2016	30 September 2020
Vice-President for Education	Dr Carol Davenport FInstP CPhys CSciTeach	1 October 2016	30 September 2020
Ordinary Member	Professor Becky Parker MBE Hon.FInstP CPhys	1 October 2016	30 September 2020
Co-opted Member	Professor Jim Al-Khalili OBE FRS FInstP	1 October 2017	30 September 2020

### Decision-making and delegations

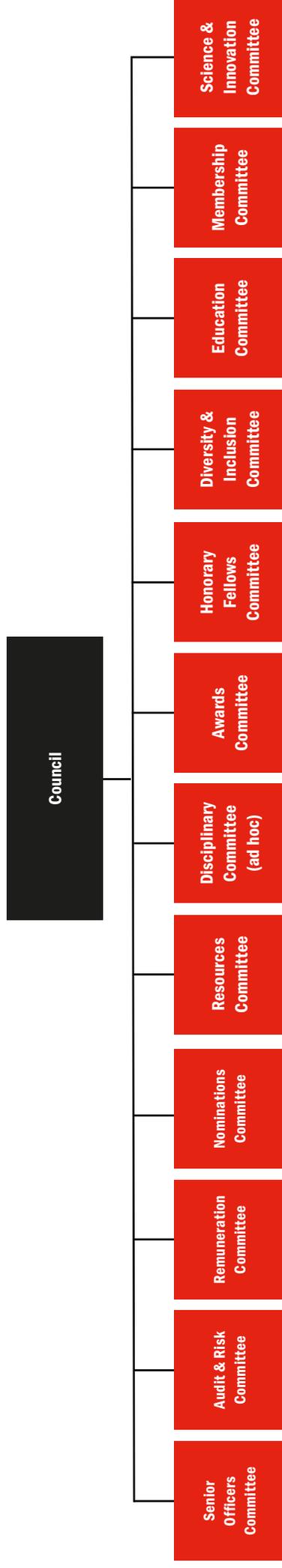
Key strategic decisions affecting the IOP are made by Council but, in the interests of good governance and efficient management, it delegates consideration of matters in specialist areas to its standing committees under agreed terms of reference for those committees. It also delegates powers to take executive and management decisions to the Group Chief Executive Officer through the Regulations, agreed Annual Budget and Delegations of Authority Matrix.

### Committees

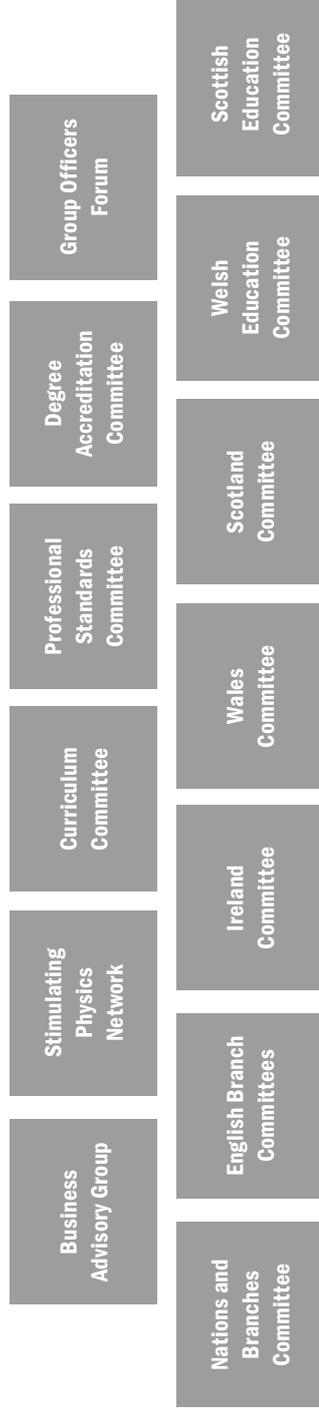
The Council has a number of standing committees with delegated powers, thus ensuring that the required time and attention is applied to overseeing specific areas of interest. The terms of reference and delegated power of these committees are set by the Council. Committee membership is not limited to Council members, thus allowing for both wider representation from the membership and receipt of specialist external advice where appropriate.

The standing committees as at 31 December 2020 are set out on the following page and are marked in red.

# IOP Council and Committee Structure



## Other committees and groups that advise IOP and its Council



## Executive and senior management

The day-to-day management of the IOP Group and its activities is delegated to the Group Chief Executive Officer, supported by an executive management team.

The day-to-day management of publishing activities is delegated to the Chief Executive of IOP Publishing Limited (prior to 8 March 2021 this role was titled Managing Director of IOP Publishing Limited). IOP Publishing Limited has its own board of directors and a number of subsidiary undertakings that support the delivery of the publishing programme.

The IOP Group senior management team in 2020 and to the date of this report was:

Role	Name
Group Chief Executive Officer	Professor Paul Hardaker FInstP FRMetS CMet
Group Chief Financial Officer	Michael Bray FCMA (until 31 December 2020) Sukhraj Dhadwar FCCA (commences August 2021)
Deputy Chief Executive, IOP	Rachel Youngman
Director of Policy & Public Affairs, IOP	Tony McBride
Director of Physics Programmes, IOP	Philip Evans (until 31 December 2020)
Director of Science, Innovation and Skills, IOP	Louis Barson (from 5 April 2021)
Managing Director, IOP Publishing Limited	Steven Hall (retired 5 March 2021)
Chief Executive, IOP Publishing Limited	Antonia Seymour (from 8 March 2021, previously Publishing Director)

## Remuneration of the senior team

The pay and remuneration of the group senior management team is set and monitored on behalf of Council by the Remuneration Committee. The Committee comprises the President, President-elect, Honorary Secretary and Honorary Treasurer, and is supported by several separately appointed external advisors. The Committee commissions, each year, relevant external benchmarking information from both the publishing and charity sector to support its decision-making, and, when necessary, takes additional advice from specialist organisations.

Please see note 10 to the Financial Statements for further information.

## Governance Review

In 2020 and 2021, the IOP undertook a comprehensive review and consultation with its members and the wider physics community of its governance and membership engagement arrangements. This was with a view to ensuring that, as it moves into its second century, it is, and remains, a modern, well-governed and responsive organisation which continues to serve the public and satisfy its charitable objectives as well as being one of which its members can be proud and where they can be engaged and have a voice on its future direction.

This has led to some proposed changes to its governance and committee structures which will be reported in more detail in the Annual Report for the year ending 31 December 2021, but includes the dissolution of the Senior Officers Committee and, from 1 October 2021, the development of new terms of reference for key committees, the establishment of a Finance & Investment Committee in substitution for the Resources Committee and the clearer separation of Council governance committees from those focused on member engagement.

## Impact of COVID-19 on IOP Governance

The IOP has coped well with the imposition of social-distancing measures arising from the COVID-19 pandemic. The full governance cycle of Council and core governance committee meetings has continued uninterrupted, with all Council and core governance committee meetings being held virtually by video conference. There has been no significant impact on the IOP's governance or controls as a result of the COVID-19 pandemic and at each of its meetings the Council has reviewed a COVID-19 financial and risk management plan. This has kept under close review people; finances; contract liability; and organisational cashflow.

## Group Corporate Structure

The IOP has a number of subsidiary undertakings, as outlined below and in the structure chart on the following page.

To ensure clarity and appropriate governance, there are a number of agreements in place that define and describe the provision of intra-group services.

The main trading subsidiary undertaking of the IOP is IOP Publishing Limited (commonly known as IOPP).

IOPP is a wholly owned subsidiary of the IOP and is incorporated in England and Wales. Its principal activity is the publication and distribution of high-quality scientific journals, books, conference proceedings and magazines.

IOP Publishing Limited has a number of further trading subsidiary undertakings as follows:

### **IOP Publishing Consultants (Beijing) Co. Limited**

IOP Publishing Consultants (Beijing) Co. Limited is a wholly owned subsidiary of IOP Publishing Limited and is incorporated in China as a wholly foreign-owned enterprise (WFOE). Its principal activity is to provide services to IOP Publishing Limited, including publishing consulting, electronic technology consulting, business consulting, market information consulting and corporate management consulting.

### **IOP Marketing and Promotion Services Private Limited**

IOP Marketing and Promotion Services Private Limited is 99.99% owned by IOP Publishing Limited with the remaining 0.01% of share capital owned by the IOP.

It is incorporated in India. Its principal activity is promotion and marketing services for IOP Publishing Limited.

### **Turpion Limited**

Turpion Limited is a wholly owned subsidiary of IOP Publishing Limited and is incorporated in England and Wales. The principal activity of the company throughout the year was the publication of English-language translations of Russian journals.

### **Turpion-Moscow Limited**

Turpion-Moscow Limited is incorporated in Russia and is a wholly owned subsidiary of Turpion Limited.

IOPP also has a branch in Japan which is non-incorporated.

The IOP also has the following trading subsidiary undertakings:

### **IOP Publishing Inc.**

IOP Publishing Inc. is a not-for-profit corporation of which the IOP is the sole corporate member. It is incorporated in the USA. Its principal activity is to provide publishing services to IOP Publishing Limited. All such services are provided solely in support of the IOP's charitable and educational activities.

### **IOP Business Publishing Inc.**

IOP Business Publishing Inc. is a wholly owned subsidiary of IOP Publishing Inc. It is incorporated in the USA. Its principal activity is to provide advertising-sales services.

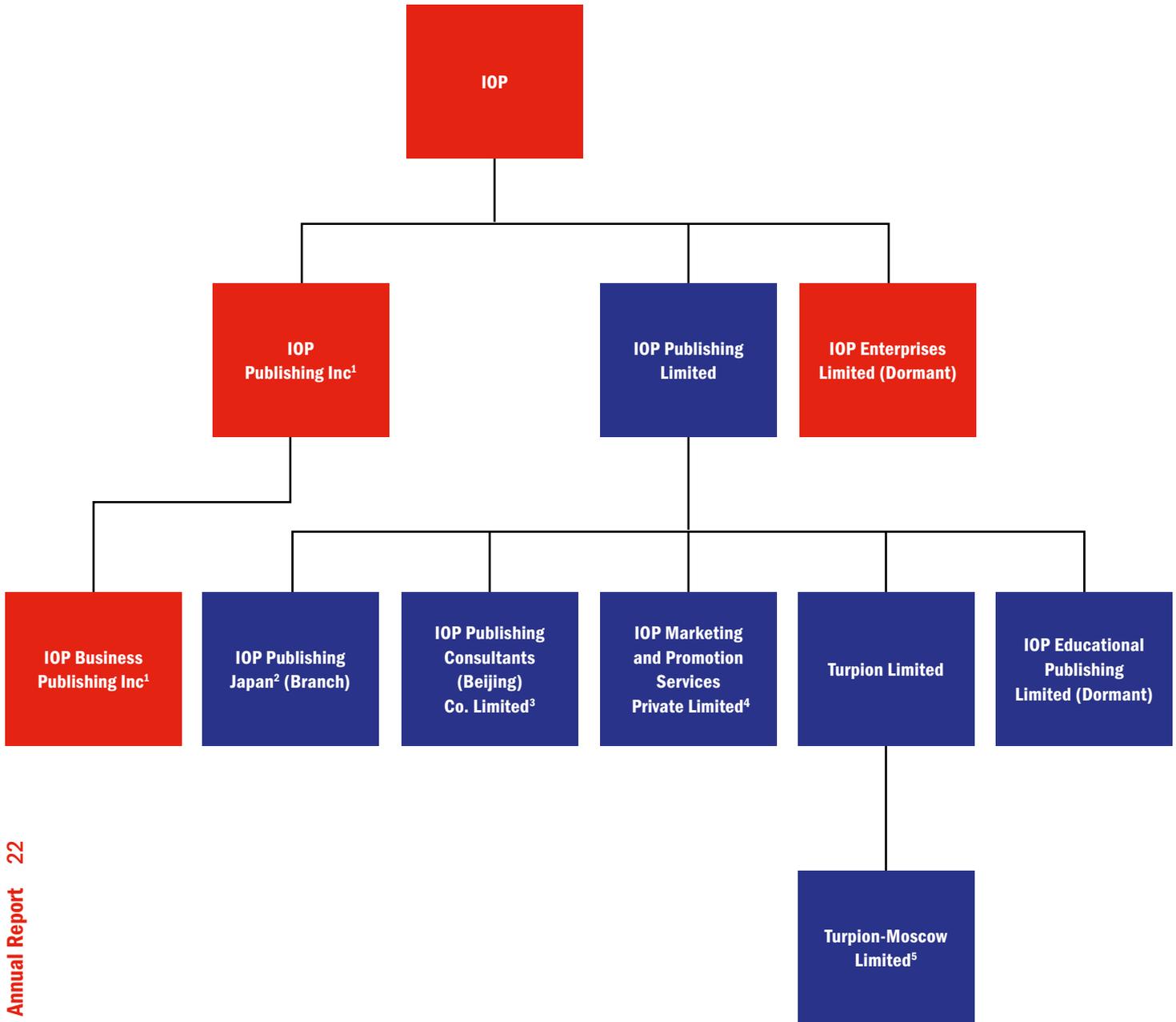
With the exception of IOP Marketing and Promotion Services Private Limited, all companies are wholly owned subsidiaries of their immediate holding company.

There are two further Group subsidiary undertakings, both of which are currently dormant.

These are:

### **IOP Educational Publishing Limited** **IOP Enterprises Limited**

# IOP Group Corporate Structure



1 Incorporated in USA  
 2 Japanese Branch (non-incorporated)  
 3 Incorporated in China  
 4 Incorporated in India (99.99% owned by IOPP and 0.01% by IOP)  
 5 Incorporated in Russia

## Risk management

The Executive Team is responsible for ensuring that proper arrangements are in place for adequate risk management and control.

The Audit & Risk Committee provides an assurance role to Council on these matters and has a remit to:

- review and help identify major areas of risk for the IOP and the Group and to ensure processes exist to manage risk in these areas;
- give oversight to risk management and internal audit;
- bring to the attention of Council any areas of high risk and/or any anomalies brought to light through the audit process;
- review the risk registers and the plans and processes in place to manage and mitigate major risks;
- from time to time investigate certain processes or risks in more detail; and
- review the procedures for handling allegations from whistle-blowers and act as the ultimate destination for whistle-blowers who are not satisfied by the response through the normal channels.

The IOP maintains a register of significant risks and maintains systems to control and manage them. The Audit & Risk Committee reviews the risk register along with the plans and processes in place to manage and mitigate major risks. The Council then receives reports from the Audit & Risk Committee.

During the period of the pandemic, the Council and its relevant Committees (Audit & Risk and Resources) have received reports from the Group Chief Executive Officer on the impact of the pandemic on the IOP and the wider Group, its staff, cashflows and five-year cash plan, and contractual liabilities. 'Reasonable Best Case' and 'Reasonable Worst Case' scenario planning has been undertaken to assess potential impacts on forecast risk envelopes.

The trustees are satisfied that, whilst the pandemic has inevitably had, and will have, an impact on its activities and financial resources, the IOP remains in a strong financial position.

Specifically, Council and the Executive, supported by the IOP's COVID-19 Management Team, continue to maintain a key focus on ensuring:

- the safety and wellbeing of the staff team and also that all key roles remain staffed, with a number of additional staff support measures having been introduced in the period including working from home DSE assessments, the provision of equipment to staff working from home where needed including chairs, desks and monitors, and an enhanced Employee Assistance Programme;
- that at all times contractual liability is mitigated, especially in relation to outstanding contracts for conferences, meetings and events;
- that at all times the IOP remains within agreed reserves limits for the investment portfolio and continues to hold a strong covenant for the defined benefit pension scheme; and
- that impacts on Gift Aid income and future cash flows are monitored on a regular basis.

It is not considered that a change to the reserves policy is required.

Brexit, and the end of the transition period, has posed, and will continue to pose, challenges to the physics and wider science community. However, whilst the situation continues to be monitored closely, particularly the impact on the international operations of its publishing businesses, Brexit is not considered a significant risk to the IOP itself, or its programmes of work across the Group.

In assessing the key risks identified below, the impacts of the COVID-19 pandemic and Brexit have been fully taken into account.

Risk Description	Risk Consequence	Controls, Action, Mitigation
A model of open access mandate is imposed in a manner which is financially unsustainable for learned society publishers.	This would threaten the role and viability of learned society publishers including IOP's own publishing business.	Established IOP position; continued IOPP OA innovation; collaborations (and shared positions) with other UK society/academy publishers; collaborations and joint statements with other national physical societies; and representations to UK policymakers/funders.
The IOP is unable to achieve funding requirements to deliver its strategy and operational business.	The IOP would be unable to support its full strategy as there would be a potential funding shortfall.	Regular review of performance of funding pipeline against target and review of range of funders and suitability of income; fundraising programme in place focusing on individual giving, trusts and foundations, competitive contracts and legacies; investments restructured to generate more of an annual income and growth from reserves; and launch of the Challenge Fund to support strategy delivery.
There is a material IT security breach or critical IT system failure (including breach of digital systems).	Loss or corruption of data, unavailability of business critical applications, reputational damage, contractual breach, legal/regulatory fines, system restoration costs, productivity loss.	Firewall in place with anti-virus, anti-malware and spam filters; daily backups at co-location and restoration tests for files and systems; internet, email and password policies; segregated network for staff and public; regular network audits; specialist staff appointed; and internal audits undertaken.
There is a significant reduction in the value of savings and investments.	IOP would need to take funds from operational budgets in order to meet the reserves policy and the commitments to the DB Pension recovery plan.	Use of specialist investment advisers; investment approach regularly reviewed; and risk-based diversified investment approach adopted.
There is a loss/corruption of employee/member or other personal data or other breach of data protection laws.	Significant regulatory fine, reputational damage.	Training of all staff undertaken; organisational policies and procedures in place; internal audit completed; internal staff expertise; strong IT controls implemented including firewalls, anti-virus, anti-malware and spam filters; and regular network audits and automatic network monitoring applied.
There are changes to accounting policy which removes or replaces the Gift Aid model.	Adverse impact on revenues.	Manage through reserves policy and financial modelling.

## Our commitment to Equality, Diversity and Inclusion

Integrity and openness are at the heart of everything that we do. We believe firmly in equality of opportunity for all, confronting barriers to inclusiveness and participation wherever we encounter them. These core values are an expression of what we believe in and how we behave as an organisation. Our programmes are founded on the principles of Equality, Diversity and Inclusion (EDI), from our organisational values and strategy, to our work in schools, with the public and in our policy initiatives. From the Council and the senior leadership through the organisation, there is a deep-seated commitment to ensuring our physics community reflects the wider diversity we see in society and the significant value that brings to physics and to the workplace.

Our EDI focus continues to grow and develop, and has gone from strength to strength, covering a range of strands including but not limited to gender equality, sexual orientation, disability, ethnicity and socio-economic background. The IOP was amongst the first signatories of the Royal Academy of Engineering Diversity Concordat and the Science Council Declaration on Diversity, Equality and Inclusion and we continue to take a visible role in delivering on our commitments. We have delivered projects and publications that continue to lead the way in spreading good practice and making a significant contribution to the body of research available to the STEM community. We recognise that we need to continue to work to remove barriers to participation in any of our activities and that we ensure the principles of EDI are embedded within them. We build partnerships to work with colleagues, members, and the wider physics community to ensure that all that we deliver is truly inclusive.

We keep all of this under regular review and evaluate how we implement our diversity initiatives through our member-led Diversity and Inclusion Committee. We are also committed to demonstrating best practice, sharing our experiences, and that we undergo the same scrutiny and standards that we would expect of others through programmes such as Project Juno. Project Juno is our gender

equality awards scheme that recognises physics departments and organisations that can demonstrate action taken to address gender equality in physics. Our internal Equality and Diversity Action Group has begun the process of submitting the IOP to the Juno principles, with the target of becoming recognised as a Juno Champion by the end of our strategy.

## Environmental Responsibility

The IOP recognises its environmental responsibilities and commitment to reducing environmental damage locally, nationally and globally. We are focused on four main areas of compliance: waste and energy reduction; personal responsibility; the role of physics to provide solutions; and meeting emission targets.

We are also raising awareness of how activities and choices of individuals and other organisations carry an impact to the environment. We advise and support what they might consider doing to mitigate this impact. We want to lead the way and highlight what physics can do to help make buildings more efficient. Data captured on our own energy usage is shared through our education partners to help future planning and development in this field. We work with our stakeholder organisations to influence positive environmental change and support organisations which are proactively being sustainable.

Our Environmental Statement can be found [here](#).

## Gender Pay Gap Reporting

The IOP has made a commitment to addressing diversity within the physics community and we recognise that the success of our work relies on our ability to recruit, nurture and retain the richest mix of talent.

There are a number of internal mechanisms the IOP uses to support the achievement of balance in the workforce. All jobs are evaluated through a bias-free non-gender influenced job evaluation process by a group of trained in-house assessors.

The IOP does not have a statutory requirement to report on gender pay but, as part of its commitment to gender equality, it has undertaken the assessment. The average hourly rate in April 2020 was 16.86% lower for women based on mean hourly earnings and 6.45% lower based on median hourly earnings.

The median pay gap for full-time employees in the UK is 7.4% (Office for National Statistics, 2020).

IOP	Lower	Lower Middle	Upper Middle	Upper	Across all quartiles
<b>Female</b>					
Mean	£13.72	£18.47	£22.02	£30.47	£20.42
Median	£13.74	£18.46	£21.97	£27.07	£20.35
Number of staff	29	28	30	20	107
<b>Male</b>					
Mean	£14.68	£18.74	£22.31	£35.74	£24.56
Median	£14.83	£18.83	£22.28	£28.76	£21.75
Number of staff	13	14	11	21	59
<b>Pay gap</b>					
Mean	6.52%	1.45%	1.32%	14.75%	16.86%
Median	7.34%	1.99%	1.42%	5.89%	6.45%
Percentage of female employees	69%	67%	73%	49%	64%
Percentage of male employees	31%	33%	27%	51%	36%

We recognise that further steps are needed to address this gap.

Actions already implemented to address the previously seen imbalance in the recruitment across grades include:

- strengthening the recruitment process to more consistently use structured interviews
- standardising advertised salaries
- anonymising applications received through our recruitment systems

- briefing agencies for a more diverse candidate pool.

Our priority action areas for 2021 are:

- completing the review of recruitment policy and practice and rolling out the use of competencies for selection
- broadening out the existing pay and reward policy for Executive pay to staff pay to ensure there are clear, fair and transparent processes for setting and increasing salaries
- a review of flexible working.

Within the IOP Group there is a statutory requirement for IOP Publishing Limited to make a gender pay gap declaration. In IOP Publishing,

women's mean hourly wage was 15.91% lower than men's while women's median hourly wage was 17.30% lower than men's.

IOP Publishing	Lower	Lower Middle	Upper Middle	Upper	Across all quartiles
<b>Female</b>					
Mean	£11.45	£14.92	£19.14	£32.85	£17.97
Median	£11.61	£14.72	£18.79	£29.57	£15.73
Number of staff	54	49	45	30	178
<b>Male</b>					
Mean	£12.05	£14.66	£19.70	£33.72	£21.37
Median	£12.22	£14.31	£19.82	£28.63	£19.02
Number of staff	31	37	41	54	163
<b>Pay Gap</b>					
Mean	4.98%	-1.77%	2.84%	2.58%	15.91%
Median	4.99%	-2.87%	5.20%	-3.28%	17.30%
Percentage of female employees	64%	57%	52%	35%	52%
Percentage of male employees	36%	43%	48%	65%	48%

### Anti-Slavery and Human Trafficking

The IOP is committed to prohibiting modern slavery and human trafficking in any part of its business, including in all supply chains. The IOP has a diverse supply chain, including suppliers of IT, print and editorial services, office equipment, catering services, building services, temporary recruitment services, and accommodation and venue facilities.

Our Anti-Slavery and Human Trafficking Policy reflects a commitment to acting ethically and with integrity in all business relationships, and to implement and enforce effective systems and controls to prohibit slavery and human trafficking in supply chains and business. To ensure that all companies in the supply chain comply with all obligations on anti-slavery and human trafficking, all relevant suppliers are issued with, and agree to comply with, the Anti-Slavery

and Human Trafficking Policy, and appropriate obligations are included in contracts with them. Those obligations allow the IOP to secure assurances that those suppliers have appropriate measures in place in relation to their own business and supply chains, and commit to complying with all relevant legislation and codes of practice.

### Anti-Bribery and Corruption

We support and have an ongoing commitment to carrying out our business fairly, honestly and openly. We maintain policies and procedures to prevent bribery and would take disciplinary action against any member of staff who engaged in bribery. We also maintain whistleblowing procedures for staff to report any allegations of wrongdoing.

## Statement of Trustees' Responsibilities

Members of Council (who are the trustees of the IOP) are responsible for preparing the Trustees' Annual Report and the Financial Statements in accordance with applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

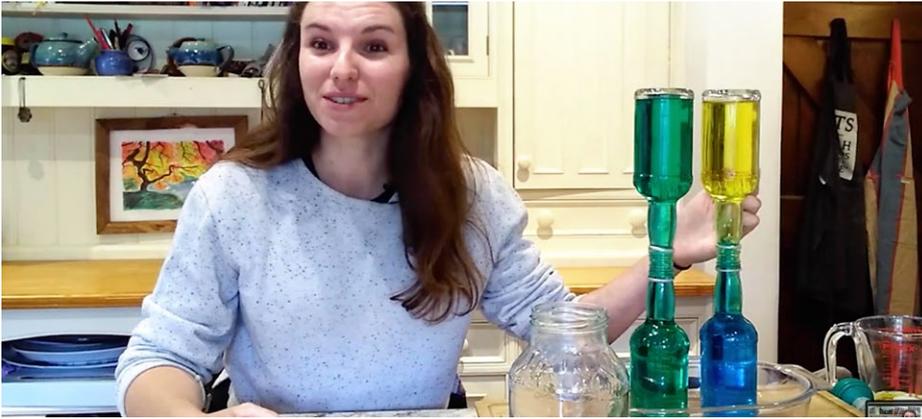
The law applicable to charities in England and Wales and in Scotland requires the trustees to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the charity and the Group, and of the incoming resources and application of resources of the charity and the Group for that period.

In preparing these financial statements, the trustees are required to:

- select suitable accounting policies and then apply them consistently;
- observe the methods and principles in the Charities SORP;
- make judgments and estimates that are reasonable and prudent;
- state whether applicable accounting standards, comprising FRS 102, have been followed, subject to any material departures disclosed and explained in the financial statements; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the charity will continue in business.

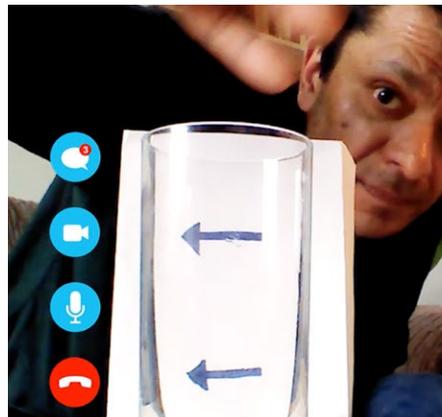
The trustees are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the charity and enable them to ensure that the financial statements comply with the Charities Act 2011 and the Charity (Accounts and Reports) Regulations 2008. They are also responsible for safeguarding the assets of the charity and the Group, and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

The trustees are responsible for the maintenance and integrity of the charity and financial information included on the charity's website. Legislation in the United Kingdom governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.



# Do Try This at Home

From the **Institute of Physics**



# Financial Review

## Financial Statements

The financial statements for the year ended 31 December 2020 are set out on pages 37 to 69. They were prepared applying accounting policies in accordance with UK Generally Accepted Accounting Practice, and comply with the Statement of Recommended Practice, Accounting and Reporting by Charities SORP (FRS 102).

## Financial Review

Some 91% (2019: 90%) of the group's incoming resources are generated from the activities of its trading subsidiary, IOP Publishing Limited. In 2020 78% of the IOP's income was generated from gift aid from its publishing subsidiaries (2019: 64%). This gift aid income is shown within income from scientific publications in the charity's Statement of Financial Activities. Other sources of income include income from members either as membership fees or for additional services and grants from government and other grant-awarding bodies.

Total incoming resources in the year for the group increased by £2.1m to £76.7m (2019: £74.6m). Income from scientific publications increased by £5.4m on 2019 to £69.7m, with a strong year for IOP Publishing Limited despite the challenges presented by the COVID-19 pandemic. Income from other charitable activities dropped by £2.4m to £5.0m primarily due to a vastly reduced conference programme in 2020 due to the restrictions implemented due to the pandemic.

Further commentary on the activities of IOP Publishing Limited is shown below.

Total resources expended have decreased in the year, due to savings made on travel costs and the reduction in costs on conferences. Total expenditure for the group was £66.8m (2019: £68.3m), a decrease of £1.5m or 2%.

Further details are included in the Consolidated Statement of Financial Activities on page 37.

The IOP's balance sheet is included on page 39. The IOP considers incoming resources, Gift Aid remitted from its subsidiaries and expenditure to be key performance indicators.

Debtors have decreased from £17.7m to £16.6m at 31 December 2020, primarily due to the decrease in debtors within IOP Publishing Limited. During the year, all billing was brought in-house which resulted in the earlier invoicing and receipt of cash from customers in comparison to prior years.

Deferred revenue remains a key balance and has increased by £2.1m to £15.8m (2019: £13.7m), driven by the earlier invoicing in comparison to prior years. Deferred membership renewals for 2020 have fallen slightly within the IOP compared to 2019 due to the change to a one-time start date for membership renewals.

The cash and short-term investment position remains strong, with an increase from £19.1m at 31 December 2019 to £28.6m at 31 December 2020 representing a healthy cash balance considering the investment the IOP has made in the new building in Dublin this year. Further details on capital additions are given in note 15. The value of investments has increased by £1.2m to £23.0m at 31 December 2020 and the IOP's portfolio has performed well through the market reactions to global events.

Purchases of fixed assets made during the year totalled £4.5m including the purchase of the IOP's new building in central Dublin. We continue to use our operating surplus, alongside careful cash management, to meet the ongoing liabilities of the IOP.

The IOP's defined benefit pension deficit increased by £7.6m to £10.9m (2019: £3.3m), as growth in the liabilities of the Institute of Physics Retirement Benefit Plan (1975) of £18.9m exceeded the growth in the present value of assets of £11.3m due to the impact of corporate bond yields during 2020.

The scheme published its triennial revaluation of 31 December 2019 during the year. The triennial valuation, updated to the end of 2020, showed a deficit of £7.5m due to a difference in the methodology used. A deficit elimination plan was agreed with the scheme's trustees. Further details are given in note 23 of the financial statements. The trustees have concluded that the Group is a going concern and these financial statements have therefore been prepared on that basis. The strong performance of the Group in 2020 and the positive net asset position at the end of 2020 support the trustees' conclusion.

### **IOP Publishing Limited (IOP Publishing)**

In a challenging year that has been dominated by the COVID-19 pandemic, IOP Publishing generated turnover for 2020 of £70.4m (2019: £64.9m) which reflects an 8.5% increase on 2019 driven by growth across the different business areas. The current year gross profit margin has increased to 92.5% (2019: 91.5%) with an improved operating margin for the current year of 29.5% (2019: 25.9%). The COVID-19 pandemic has imposed significant restrictions on both national and international travel, which has resulted in significant cost savings that have contributed to the improved operating margin in 2020. IOP Publishing pays all of its taxable profits for the reporting period to the IOP under the gift aid scheme.

As mentioned above, all billing was brought in-house during the year, which resulted in the earlier invoicing and receipt of cash from customers in comparison to prior years.

### **Reserves and investment**

The Charter and Bylaws confer power on the IOP to maintain income reserves. Council reviews at least annually both the IOP's continuing need for reserves and their appropriate level. The reserves policy set out below is based on, and is consistent with, guidelines on the subject issued by the Charity Commission.

The strategic reasons for the IOP to retain reserves, rather than simply spend all of its income as it arises, are, as stated in its Investment Policy:

- to be able to make short and medium-term expenditure commitments without the risk of short-term fluctuations in income forcing reduction in, or cancellation of, planned activity;
- to reduce the level of dependence on income from publishing; and
- in the event of a material and sustained fall in income from other sources, to provide sufficient reserves to enable the IOP to make the changes in its organisation and activities necessary to respond to this in an orderly and planned way.

The overall investment objectives of the IOP are to achieve a minimum net total return of 12 month LIBOR (London Interbank Offered Rate) +3.5%, after payment of fees over rolling three-year periods, using a diversified strategic asset allocation approach to minimise the risk for this level of return.

During the year the investment portfolio held by the IOP generated an unrealised gain to the group of £1.2m (2019: gain of £1.2m). The IOP actively manages its investment portfolio.

After a review in 2014, Council has considered the level of reserves appropriate to meet the above purposes and has determined that total free reserves should ideally be of the order of one and a half to two years of planned expenditure, excluding projects funded by external grants or fees (on the basis that fee based activities such as conferences would not continue if no attendees were attracted). Free reserves are the carrying balance of the additional sums set aside from the operational surplus of the group each year as an investment of cash in a balanced portfolio of assets balancing risk and reward in accordance with the requirements of the IOP.

The required level of reserves on 31 December 2020 based on the current long-term plan, as modified by the 2021 budget, is between approximately £18.5m–£24.6m (2019: £17.3m–£23.1m). The current level of free reserves as represented by the IOP’s investments is £23.0m (£20.3m unrestricted, £2.7m restricted) (2019: £21.8m (£19.1m unrestricted, £2.7m restricted)), which is deemed appropriate given the IOP’s commitments over the following 12 months.

The balances on the individual funds of the IOP at 31 December 2020 are considered adequate to meet their respective commitments.

### **Ethical Investment Policy**

The IOP is a charity established with the objective of promoting the advancement and dissemination of a knowledge of and education in the science of physics, pure and applied.

The trustees delegate the responsibility of managing the investment portfolio and ensuring compliance with the objectives of the Investment Policy to the Group Chief Executive Officer, Group Chief Financial Officer and Honorary Treasurer. Those persons then despatch this duty with the support of IOP’s professional advisors and the committee responsible for finance and investment. They are guided by the Investment Policy which is reviewed at the commencement of each new strategic planning period, typically five years.

### **Independent Auditors**

All of the current trustees have taken all of the steps necessary to make themselves aware of any information needed by the charity’s auditors for the purpose of their audit and to establish that the auditors are aware of that information. The trustees are not aware of any relevant audit information of which the auditors are unaware.

### **By order of Council**

**Brian Fulton**

**Professor Brian Fulton FInstP CPhys**

Honorary Secretary  
21 May 2021

**David Delpy**

**Professor David Delpy CBE FRS FREng  
FMedSci FInstP CPhys**

Honorary Treasurer  
21 May 2021

# Independent auditors' report to the trustees of the Institute of Physics

## Report on the audit of the financial statements

### Opinion

In our opinion, the Institute of Physics' group financial statements and parent charity financial statements (the "financial statements"):

- give a true and fair view of the state of the group's and of the parent charity's affairs as at 31 December 2020 and of the group's and parent charity's incoming resources and application of resources, 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 prepared in accordance with the requirements of the Charities Act 2011 and Regulation 15 of The Charities (Accounts and Reports) Regulations 2008).

We have audited the financial statements, included within the Annual Report (the "Annual Report"), which comprise: the group and parent charity Balance Sheets as at 31 December 2020; the Consolidated Statement of Financial Activities incorporating a consolidated income and expenditure account, the Charity Statement of Financial Activities incorporating an income and expenditure account for the year then ended, the Consolidated Statement of Cash Flows for the year then ended; and the notes to the

financial statements which include a summary of the significant accounting policies.

### 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

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the group and parent charity's ability to continue as a going concern for a period of at least twelve months from the date on which the financial statements are authorised for issue.

In auditing the financial statements, we have concluded that the trustees' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

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

Our responsibilities and the responsibilities of the trustees with respect to going concern are described in the relevant sections of this report.

### **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 trustees are 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.

Based on the responsibilities described above and our work undertaken in the course of the audit, ISAs (UK) require us also to report certain opinions and matters as described below.

### **Trustees' Report**

Under the Charities Act 2011 we are required to report to you if, in our opinion the information given in the Trustees' Annual Report is inconsistent in any material respect with the financial statements. We have no exceptions to report arising from this responsibility.

## **Responsibilities for the financial statements and the audit**

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

As explained more fully in the Statement of Trustees' Responsibilities, the trustees are 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 trustees are 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 trustees are responsible for assessing the group's and parent charity'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 trustees either intend to liquidate the group and parent charity or to cease operations, or have no realistic alternative but to do so.

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

We are eligible to act and have been appointed as auditors under section 144 of the Charities Act 2011 and report in accordance with the Act and relevant regulations made or having effect thereunder.

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.

## Independent auditors' report to the trustees of the Institute of Physics (continued)

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below.

Based on our understanding of the group and parent charity/industry, we identified that the principal risks of non-compliance with laws and regulations related to financial reporting and related charities legislation and tax legislation, and we considered the extent to which non-compliance might have a material effect on the financial statements. We also considered those laws and regulations that have a direct impact on the financial statements such as the Charities Act 2011 and Regulation 15 of The Charities (Accounts and Reports) Regulations 2008. We evaluated the trustees' incentives and opportunities for fraudulent manipulation of the financial statements (including the risk of override of controls), and determined that the principal risks were related to posting inappropriate journal entries to increase revenue or reduce expenditure, and applying management bias in accounting estimates. Audit procedures performed included:

- Discussions with management and the trustees, including consideration of known or suspected instances of non-compliance with laws and regulation and fraud;
- Reviewing relevant meeting minutes including those of the Council and subsidiary board minutes;
- Evaluation of management's controls designed to prevent and detect irregularities, in particular the whistleblowing policy and employee code of conduct;

- Challenging assumptions and judgements made by management in their significant accounting estimates, in particular in relation to the valuation of partner accruals and the valuation of defined benefit pension liabilities; and
- Identifying and testing journal entries, in particular any journal entries posted with unusual account combinations.

There are inherent limitations in the audit procedures described above. We are less likely to become aware of instances of non-compliance with laws and regulations that are not closely related to events and transactions reflected in the financial statements. Also, the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error, as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations, or through collusion.

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 charity's trustees as a body in accordance with section 151 of the Charities Act 2011 and regulations made under section 154 of that Act (Part 4 of The Charities (Accounts and Reports) Regulations 2008) 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

### Charities Act 2011 exception reporting

Under the Charities Act 2011 we are required to report to you if, in our opinion:

- we have not received all the information and explanations we require for our audit; or
- sufficient accounting records have not been kept by the parent charity; or
- the parent charity financial statements are not in agreement with the accounting records and returns.

We have no exceptions to report arising from this responsibility.

## PricewaterhouseCoopers LLP

### PricewaterhouseCoopers LLP

Chartered Accountants and Statutory Auditors  
Bristol  
21 May 2021

## Consolidated Statement of Financial Activities incorporating a consolidated income and expenditure account for the year ended 31 December 2020

		2020	2020	2020	2019
	Note	Restricted	Unrestricted	Total	Total
		£'000	£'000	£'000	£'000
<b>Income from:</b>					
Donations and legacies	3	-	9	9	471
Charitable activities:					
Membership		-	1,646	1,646	1,723
Programmes		380	2,963	3,343	5,672
Scientific Publications		-	69,707	69,707	64,252
Other trading activities		-	1,659	1,659	1,980
Investments	6	-	220	220	497
Other		-	106	106	-
<b>Total income</b>	<b>3 &amp; 5</b>	<b>380</b>	<b>76,310</b>	<b>76,690</b>	<b>74,595</b>
<b>Expenditure on:</b>					
Raising funds		-	(64)	(64)	(71)
Charitable activities:					
Scientific Publications	7	-	(48,895)	(48,895)	(47,977)
Ecosystem	7	(392)	(4,362)	(4,754)	(5,228)
Productivity	7	-	(12)	(12)	(80)
Campaign	7	-	(498)	(498)	(591)
Public Dialogue	7	-	(212)	(212)	-
Transformation	7	-	(154)	(154)	-
Membership	7	-	(643)	(643)	(3,533)
Business operations	7	(40)	(10,359)	(10,399)	(9,881)
Other		-	(1,209)	(1,209)	(911)
<b>Total expenditure</b>	<b>7</b>	<b>(432)</b>	<b>(66,408)</b>	<b>(66,840)</b>	<b>(68,272)</b>
Net gains on investments	17	-	1,154	1,154	1,189
<b>Net (expenditure)/income</b>		<b>(52)</b>	<b>11,056</b>	<b>11,004</b>	<b>7,512</b>
<b>Other recognised (losses)/gains</b>					
Actuarial (losses)/ gains on defined benefit pension scheme	23	-	(8,502)	(8,502)	1,104
Exchange difference on retranslation of net assets of subsidiary undertakings		-	45	45	(130)
<b>Net movement in funds</b>		<b>(52)</b>	<b>2,599</b>	<b>2,547</b>	<b>8,486</b>
Fund balances brought forward		3,355	61,208	64,563	56,077
<b>Fund balances carried forward</b>	<b>22</b>	<b>3,303</b>	<b>63,807</b>	<b>67,110</b>	<b>64,563</b>

The Statement of Financial Activities includes all gains and losses recognised in the year. All amounts relate to continuing activities. The notes on pages 41 to 69 form part of these financial statements.

## Charity Statement of Financial Activities incorporating an income and expenditure account for the year ended 31 December 2020

		2020	2020	2020	2019
	Note	Restricted	Unrestricted	Total	Total
		£'000	£'000	£'000	£'000
<b>Income from:</b>					
Donations and legacies	<b>3</b>	-	9	<b>9</b>	471
Charitable activities:					
Membership		-	1,646	<b>1,646</b>	1,723
Programmes		380	2,963	<b>3,343</b>	5,672
Scientific Publications		-	21,469	<b>21,469</b>	16,122
Investments		-	1,065	<b>1,065</b>	1,343
Other		-	106	<b>106</b>	-
<b>Total income</b>		<b>380</b>	<b>27,258</b>	<b>27,638</b>	<b>25,331</b>
<b>Expenditure on:</b>					
Raising funds		-	(64)	<b>(64)</b>	(71)
Charitable activities:					
Ecosystem		(392)	(4,417)	<b>(4,809)</b>	(5,228)
Productivity		-	(12)	<b>(12)</b>	(80)
Campaign		-	(498)	<b>(498)</b>	(591)
Public Dialogue		-	(212)	<b>(212)</b>	-
Transformation		-	(154)	<b>(154)</b>	-
Membership		-	(893)	<b>(893)</b>	(3,533)
Business operations		(40)	(10,359)	<b>(10,399)</b>	(9,881)
Other		-	(1,209)	<b>(1,209)</b>	(911)
<b>Total expenditure</b>		<b>(432)</b>	<b>(17,818)</b>	<b>(18,250)</b>	<b>(20,295)</b>
Net gains on investments	<b>17</b>	-	1,154	<b>1,154</b>	1,189
<b>Net (expenditure)/ income</b>		<b>(52)</b>	<b>10,594</b>	<b>10,542</b>	<b>6,225</b>
<b>Other recognised (losses)/ gains</b>					
Actuarial (losses)/ gains on defined benefit pension scheme	<b>23</b>	-	(8,502)	<b>(8,502)</b>	1,104
<b>Net movement in funds</b>		<b>(52)</b>	<b>2,092</b>	<b>2,040</b>	<b>7,329</b>
Fund balances brought forward		3,355	42,799	<b>46,154</b>	38,825
<b>Fund balances carried forward</b>	<b>22</b>	<b>3,303</b>	<b>44,891</b>	<b>48,194</b>	<b>46,154</b>

## Balance Sheet at 31 December 2020

	Note	Group 2020	Group 2019	Charity 2020	Charity 2019
		£'000	£'000	£'000	£'000
<b>Fixed assets</b>					
Intangible assets	14	3,894	3,372	-	-
Tangible assets	15	34,885	32,378	34,185	31,429
Investments in subsidiary undertakings	16	-	-	3,001	3,001
Investments	17	22,953	21,799	22,953	21,799
		61,732	57,549	60,139	56,229
<b>Current assets</b>					
Debtors	18	16,577	17,661	1,414	1,302
Cash at bank and in hand		28,637	19,118	579	10,050
		45,214	36,779	1,993	11,352
<b>Creditors: amounts falling due within one year</b>	19	(28,147)	(25,637)	(2,249)	(17,299)
<b>Net current assets/(liabilities)</b>		17,067	11,142	(256)	(5,947)
<b>Provisions for liabilities</b>	21	(806)	(806)	(806)	(806)
<b>Defined Benefit Pension scheme deficit</b>	23	(10,883)	(3,322)	(10,883)	(3,322)
<b>Net Assets</b>		67,110	64,563	48,194	46,154
<b>Restricted funds</b>					
Restricted funds	22	3,303	3,355	3,303	3,355
<b>Unrestricted funds</b>					
General fund	22	74,690	64,530	55,774	46,121
Pension reserve	23	(10,883)	(3,322)	(10,883)	(3,322)
Total unrestricted funds		63,807	61,208	44,891	42,799
<b>Total funds</b>		67,110	64,563	48,194	46,154

These financial statements were approved by Council and authorised for issue on 20 May 2021 and were signed on its behalf by

**Jonathan Flint**

**Mr Jonathan Flint CBE FREng FInstP**  
President  
21 May 2021

**David Delpy**

**Professor David Delpy CBE FRS FREng**  
**FMedSci FInstP CPhys**  
Honorary Treasurer  
21 May 2021

The notes on pages 41 to 69 form part of these financial statements.

## Consolidated Statement of Cash Flows for the year ended 31 December 2020

	2020	2019
	£'000	£'000
<b>Cash flows from operating activities</b>		
<b>Net income for the year</b>	<b>11,004</b>	7,512
Adjustments for:		
Depreciation and amortisation of fixed assets and intangible assets	3,435	3,134
Loss on disposal of fixed assets	1	41
Gains on investments	(1,154)	(1,189)
Net interest receivable	(8)	(13)
Dividend income from fixed and current investments	(212)	(484)
Difference between net pension expense and cash contribution	(941)	(929)
Decrease/ (increase) in trade and other debtors	1,084	(2,481)
Increase in trade and other creditors	2,510	307
Increase in provisions	-	23
<b>Net cash provided by operating activities</b>	<b>15,719</b>	5,921
<b>Cash flows from investing activities</b>		
Purchases of fixed assets and intangible assets	(6,465)	(2,302)
Interest received	8	13
Dividends received on fixed and current asset investments	212	483
Purchase of investments	(7,221)	(6,966)
Sale of investments	7,221	6,966
<b>Net cash used in investing activities</b>	<b>(6,245)</b>	(1,806)
<b>Net increase in cash and cash equivalents</b>	<b>9,474</b>	4,115
Cash and cash equivalents at beginning of year	19,118	15,133
Foreign exchange gains/(losses)	45	(130)
<b>Cash and cash equivalents at end of year</b>	<b>28,637</b>	19,118
<b>Cash and cash equivalents comprise:</b>		
Cash at bank and in hand	28,637	19,118
	<b>28,637</b>	19,118

The notes on pages 41 to 69 form part of these financial statements.

# Notes forming part of the financial statements for the year ended 31 December 2020

## 1. Accounting policies

The Institute of Physics (IOP) is a corporate body governed by a Royal Charter, which is supplemented by bylaws and regulations. It was established in its current form by Royal Charter dated 30 September 1970.

The IOP is a charity registered in both England & Wales (no. 293851) and in Scotland (no. SC040092). The IOP has also applied for registration as a charity in the Republic of Ireland. The members of Council are the trustees of the Charity. The IOP's registered office is 37 Caledonian Road, London N1 9BU.

The Institute of Physics is a Public Benefit Entity under FRS 102. The financial statements have been prepared in accordance with applicable charity law and in accordance with FRS 102 "The Financial Reporting Standard applicable in the United Kingdom and Republic of Ireland" ("FRS 102"), with Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their financial statements in accordance with FRS 102 (effective 1 January 2015) ("Charities SORP FRS 102"), and in accordance with the requirements of the Charities Act 2011 and Regulation 15 of The Charities (Accounts and Reports) Regulations 2008.

The financial statements have been prepared on the historical cost basis except for the modification to a fair value basis for certain investments and financial instruments as specified in the accounting policies below.

The preparation of financial statements in compliance with FRS 102 requires the use of certain critical accounting estimates. It also

requires the Group's management to exercise judgement in applying the Group's accounting policies (see note 2).

### Going concern

Trustees continue to monitor the principal markets in which it operates and they have prepared forecasts and projections for the charity. These projections demonstrate the charity's ability to meet its obligations as they fall due. The trustees therefore consider it appropriate to prepare the financial statements on a going concern basis.

### Parent entity disclosure exemptions

In preparing the individual financial statements of the IOP advantage has been taken of the following disclosure exemption available in FRS 102:

- No cash flow statement has been prepared for the parent charity; and
- No disclosure has been given for the aggregate remuneration of the key management personnel of the parent charity because their remuneration is included in the totals for the group as a whole.

## 1. Accounting policies (continued)

### Basis of consolidation

The consolidated financial statements incorporate the results of the Institute of Physics and all its subsidiary undertakings as at 31 December 2020 using the acquisition method of accounting. Under this method, the results of subsidiary undertakings acquired or disposed of during the year are included in the consolidated Statement of Financial Activities from the effective date of acquisition or up to the effective date of disposal. All intra-group transactions, balances, income and expenses are eliminated in full on consolidation.

The consolidated financial statements incorporate the results of business combinations using the purchase method. In the Balance Sheet, the acquiree's identifiable assets and liabilities are initially recognised at their fair values at the acquisition date. The results of acquired operations are included in the consolidated Statement of Financial Activities from the date on which control is gained.

### Business combinations

Acquisitions of subsidiaries and businesses are accounted for using the purchase method. The cost of the business combination is measured at the aggregate of the fair values at the date of exchange of assets given, liabilities incurred or assumed, and equity instruments issued by the group in exchange for control of the acquiree plus costs directly attributable to the business combination. Any excess of the cost of the business combination over the fair value of the identifiable assets and liabilities is recognised as goodwill.

### Analysis of income and expenditure

2020 marked the first year of the IOP's new strategy Unlocking the Future. The analysis of income and expenditure by fund reflects the programmes of this new strategy, including membership and business operations (business as usual activities) and those of the IOP's publishing subsidiaries (scientific publications).

### Income

Membership income is recognised when received and attributed to the financial years to which it relates. Sundry income is recognised when received. Income from production of in-house and external partner journals with a majority of the income received in advance is recognised in line with the fair value of content delivered. Other income streams include fees received for publishing articles, ebooks and advertising recognised upon publication, sales of access to historic archives recognised upon invoice, when permanent access is granted and contract management fees recognised on invoice.

### Gift aid income

The Institute of Physics receives payments from its subsidiaries under the gift aid scheme. Gift aid income is recognised income from scientific publications in the charity's Statement of Financial Activities when the subsidiary has made an irrevocable commitment to pay the taxable profits to the charity. The charity previously had a gift aid covenant in place with IOP Publishing Limited (IOP Publishing). At the reporting date there was no legal obligation in place for IOP Publishing to make this payment. The payment is, however, expected to be made within nine months of the end of the reporting date.

### Government grants receivable

Grants are accounted for under the accruals model as permitted by FRS 102. Grants of a revenue nature are recognised in the Statement of Financial Activities in the same period as the related expenditure.

### Resources expended

All expenditure is accounted for on an accruals basis and has been classified under headings that aggregate all costs related to the relevant category. Where costs cannot be directly attributed to particular headings they have been allocated to activities on a basis consistent with use of the resources.

## 1. Accounting policies (continued)

Support costs are those functions that assist the work of the charity but do not directly undertake charitable activities. Support costs include general management, payroll administration, information technology, human resources, financing and governance costs. These costs are allocated across the expenditure on charitable activities. The basis of the cost allocation has been explained in note 8 to the financial statements.

### Intangible fixed assets – goodwill

Goodwill represents the excess of the cost of a business combination over the fair value of the Group's share of the net identifiable assets of the acquired subsidiary at the date of acquisition. Goodwill on acquisition of subsidiaries is included in Intangible assets. Goodwill is carried at cost less accumulated amortisation and accumulated impairment losses. Goodwill amortisation is calculated by applying the straight-line method to its estimated useful life as follows:

- Goodwill on acquisition of subsidiaries: 5 years

### Intangible fixed assets – software

Internally generated software assets are stated at cost and depreciated over four years.

### Tangible fixed assets

Tangible fixed assets are stated at cost or valuation, net of depreciation and any provision for impairment.

Assets with a value of less than £500 are not capitalised.

### Depreciation

Depreciation is provided to write off the cost or valuation less the estimated residual value of tangible fixed assets by equal instalments over their estimated useful economic lives as follows:

- Freehold property: 25 years
- Office machinery: 4 years
- Fixtures and fittings: 10 years
- Computers: 3–4 years

The value of leasehold property is amortised over the remaining periods of the relevant leases. The IOP holds an operating lease for Temple Circus, Bristol which currently expires in 2021.

### Valuation of investments

Investments in subsidiaries are measured at cost less accumulated impairment in the individual charity financial statements.

Other investments in listed company shares are included in the Balance Sheet at the market value of the individual unitised holdings. Gains and losses are recognised in profit or loss, within 'Net income/expenditure' in the Statement of Financial Activities.

### Debtors

Trade and other debtors are recognised at transaction price, less any impairment. Prepayments are valued at the amount prepaid net of any trade discounts due.

### Liquid resources

For the purposes of the cash flow statement, liquid resources are defined as current asset investments, which is cash held in short term deposit accounts for investment purposes. These are not considered to be cash because they are not accessible penalty free within one working day.

## 1. Accounting policies (continued)

### Cash

Cash includes cash in hand and deposits repayable on demand with any qualifying institution less overdrafts from any qualifying financial institution repayable on demand. Deposits are repayable on demand if they can be withdrawn at any time without notice and without penalty, or if a maturity or period of notice of not more than 24 hours or one working day has been agreed. Cash includes deposits denominated in foreign currencies.

### Creditors

Short-term trade creditors are measured at the transaction price. Other financial liabilities are measured initially at amortised cost and subsequently at amortised cost less impairment.

### Provisions

Provisions are recognised when the group has a present obligation, legal or constructive, as a result of a past event, it is probable that the group will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

The group recognises a provision for annual leave accrued by employees as a result of services rendered in the current period, and which employees are entitled to carry forward and use in the following financial year. The provision is measured at the undiscounted salary cost payable for the period of absence that has been accrued.

The group recognises a provision for the expected value of dilapidations for costs relating to the exit of leasehold premises which are not expected to crystallise before Q3 2021. The amount payable will be agreed through future negotiation at such point that an exit occurs.

### Financial instruments

Financial instruments are classified and accounted for according to the substance of the contractual arrangement, as financial assets, financial liabilities or equity instruments. An equity instrument is any contract that evidences a residual interest in an asset of the company after deducting all of its liabilities. Financial instruments are measured at amortised cost or fair value depending on the nature of the underlying arrangement.

### Derivative financial instruments

Derivative financial instruments are recognised at fair value with any gains or losses being recognised in profit or loss, within 'Net income/expenditure' in the Statement of Financial Activities.

### Fund accounting

General funds are unrestricted funds which are available for use at the discretion of the trustees in furtherance of the objectives of the charity and which have not been designated for other purposes.

Restricted funds are funds which are to be used in accordance with specific restrictions imposed by the donors.

## 1. Accounting policies (continued)

### Pension costs – Institute of Physics Retirement Benefits Plan 1975

The IOP operates the Institute of Physics Retirement Benefits Plan 1975 providing pension benefits based on final pensionable pay. This scheme was closed to new members on 31 December 2001. The assets of the scheme are held separately from those of the group in an independently administered fund. This defined benefit scheme is accounted for in accordance with FRS 102. The service cost of pension provision relating to the year, together with the cost of any benefits relating to past service if the benefits have vested, is charged to the Statement of Financial Activities. A charge equal to the increase in the present value of the scheme liabilities (because the benefits are closer to settlement) and a credit equivalent to the group's long-term expected return on assets (based on the market value of the scheme assets at the start of the year), are also included in the Statement of Financial Activities.

The difference between the market value of the assets of the scheme and the present value of the accrued pension liabilities is shown as an asset or liability on the balance sheet. Any differences between the actual and expected return on assets during the year are recognised in the Statement of Financial Activities along with differences arising from experience or assumption changes. The defined benefit pension expense recognised in the Statement of Financial Activities is allocated to expenditure on charitable activities in proportion with the expenditure on these activities. The defined benefit pension expense is recognised in unrestricted funds.

### Pension costs – Institute of Physics Group Personal Pension Schemes

The group operates two group personal pension schemes. They are both defined contribution pension schemes with assets held in the names of the individual members.

The first was established from 1 January 2002 and is managed by Aviva. This scheme closed to new members on 31 January 2014. For those members of staff who are members of this scheme, the IOP contributes 2–18% of basic salary.

The second was established from 1 February 2014 and is managed by Aviva. For those members of staff who choose to join the scheme the IOP contributes 2–12% of basic salary.

Contributions to the group's defined contribution pension schemes are charged to the Statement of Financial Activities in the year in which they become payable.

### Foreign currencies

#### *Functional currency and presentation currency*

The individual financial statements of each group entity are presented in the currency of the primary economic environment in which the entity operates (the functional currency). The consolidated financial statements are presented in Sterling, which is the charity's and the group's presentation currency.

#### *Transactions and balances*

In preparing the financial statements of the individual entities, transactions in currencies other than the functional currency of the individual entity are recognised at the spot rate at the dates of the transactions or at an average rate where this rate approximates the actual rate at the date of the transaction. At the end of each reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated. Foreign exchange differences that arise are recognised in profit or loss, within 'Net income/expenditure' in the Statement of Financial Activities.

## 1. Accounting policies (continued)

### *Translation of group companies*

For the purpose of presenting consolidated financial statements, the assets and liabilities of the group's foreign operations are translated from their functional currency to Sterling using the exchange rate ruling on the Balance Sheet date. Income and expenses are translated using an average rate for the period, unless exchange rates fluctuated significantly during that period, in which case the exchange rates at the dates of the transactions are used. Exchange differences arising on translation of group companies are recognised within 'Other recognised gains/losses' in the Statement of Financial Activities.

### **Operating leases**

Rentals payable under operating leases are charged to the Statement of Financial Activities on a straight-line basis over the terms of the leases.

Rental income receivable under operating leases with a third party is recognised in the Statement of Financial Activities on a straight-line basis over the terms of the leases.

The group has taken advantage of the transitional relief available for lease incentives, such that where a lease commenced before the date of transition to FRS 102, the remaining benefit of the lease incentive may continue to be recognised in accordance with previous UK GAAP.

## 2. Significant judgements and estimates

Preparation of the financial statements requires the Executive Board and Senior Management Team to make significant judgements and estimates.

### **Significant estimates**

The items in the financial statements where significant estimates have been made include:

### **Revenue recognition**

Income from production of in-house and external partner journals with a majority of the income received in advance is recognised in line with the fair value of content delivered. An estimate is required in the recognition of revenue where contracts with customers span multiple years.

### **Defined benefit pension scheme valuation**

Valuation of the assets and liabilities of the group defined benefit pension scheme are performed by a professional actuary. This requires estimates to be made around the range of assumptions used and the value used for each assumption.

### **Partner accruals**

Indirect costs of IOP Publishing Limited are allocated to partners in the calculation of partner payments. An estimate is required in this allocation.

### **Dilapidations**

A provision is included for the value of dilapidations for costs relating to the exit of leasehold premises which are not expected to crystallise before Q3 2021. An estimate is required to determine this value. The amount payable will be agreed through future negotiation at such point that an exit occurs.

### **Significant judgements**

The items in the financial statements where significant judgements have been made are:

### **Partner agreements**

When agreements are entered into with partners, judgement is required as to whether the company is acting as the agent or the principal in the arrangement and therefore how revenue should be recognised. The following factors are taken into consideration when making this judgement: which party to the agreement establishes the sales prices; which party bears the credit risk on the sale; and which party is responsible for providing the goods or services to the customer. The contractual terms set out in the agreement and the substance of the arrangement are also taken into consideration.

Notes forming part of the financial statements for the year ended 31 December 2020 (continued)

### 3. Income: analysis by fund

2020 marked the first year of the IOP's new strategy Unlocking the Future. The analysis of income and expenditure by fund reflects the programmes of this new strategy, including membership and business operations (business as usual activities) and those of the IOP's publishing subsidiaries (scientific publications). Please see the Objectives and Activities, Achievements and Performance section of the Trustees' Annual Report for more information on our ecosystem, productivity and transformation programmes, as well as our influencing campaign Limit Less, and the Looking Glass podcast series, key elements of our public dialogue programme.

		2020	2020	2020	2019	2019	2019
	Note	Restricted	Unrestricted	Total	Restricted	Unrestricted	Total
		£'000	£'000	£'000	£'000	£'000	£'000
<b>Income from:</b>							
Donations and legacies		-	9	9	400	71	471
Charitable activities:							
Membership		-	1,646	1,646	-	1,723	1,723
Programmes		380	2,963	3,343	627	5,045	5,672
Scientific Publications		-	69,707	69,707	-	64,252	64,252
Other trading activities		-	1,659	1,659	-	1,980	1,980
Investments	6	-	220	220	-	497	497
Other		-	106	106	-	-	-
<b>Total income</b>	<b>5</b>	<b>380</b>	<b>76,310</b>	<b>76,690</b>	<b>1,027</b>	<b>73,568</b>	<b>74,595</b>

### 4. Expenditure: analysis by fund

		2020	2020	2020	2019	2019	2019
	Note	Restricted	Unrestricted	Total	Restricted	Unrestricted	Total
		£'000	£'000	£'000	£'000	£'000	£'000
<b>Expenditure on:</b>							
Raising funds		-	(64)	(64)	-	(71)	(71)
Charitable activities:							
Scientific Publications	7	-	(48,895)	(48,895)	-	(47,977)	(47,977)
Ecosystem	7	(392)	(4,362)	(4,754)	(515)	(4,713)	(5,228)
Productivity	7	-	(12)	(12)	-	(80)	(80)
Campaign	7	-	(498)	(498)	-	(591)	(591)
Public dialogue	7	-	(212)	(212)	-	-	-
Transformation	7	-	(154)	(154)	-	-	-
Membership	7	-	(643)	(643)	-	(3,533)	(3,533)
Business operations	7	(40)	(10,359)	(10,399)	-	(9,881)	(9,881)
Other		-	(1,209)	(1,209)	-	(911)	(911)
<b>Total expenditure</b>		<b>(432)</b>	<b>(66,408)</b>	<b>(66,840)</b>	<b>(515)</b>	<b>(67,757)</b>	<b>(68,272)</b>

## 5. Analysis of incoming resources

By geographical market	2020	2019
	£'000	£'000
Europe, Middle East and Africa	27,583	30,891
The Americas	29,780	27,348
Asia Pacific	19,327	16,356
<b>Total</b>	<b>76,690</b>	74,595

By class of business	2020	2019
	£'000	£'000
Publishing operations	71,366	66,232
Charitable activities	3,343	6,238
Membership income	1,646	1,558
Other	335	567
<b>Total</b>	<b>76,690</b>	74,595

## 6. Investment income

	2020	2019
	£'000	£'000
Dividends and interest from listed investments	212	484
Interest from cash and short term investments	8	13
<b>Total</b>	<b>220</b>	497

Group investment income of £220k is lower than the charity's investment income due to the elimination of intercompany rent recharged in respect of Temple Circus.

## 7. Analysis of expenditure

2020 marked the first year of the IOP's new strategy Unlocking the Future. The analysis of expenditure reflects the programmes of this new strategy, including membership and business operations (business as usual activities) and those of the IOP's publishing subsidiaries (scientific publications). Please see the Objectives and Activities, Achievements and Performance section of the Trustees' Annual Report for more information on our ecosystem, productivity and transformation programmes, as well as our influencing campaign Limit Less and Looking Glass podcast series, key elements of our public dialogue programme.

### 7a. Analysis of expenditure by type

	Activities undertaken directly	Grant funding activities	Support costs	2020	2019
	£'000	£'000	£'000	£'000	£'000
Raising funds	-	-	64	64	71
Charitable activities:					
Scientific Publications	48,895	-	-	48,895	47,977
Ecosystem	3,642	60	1,052	4,754	5,228
Productivity	5	-	7	12	80
Campaign	205	-	293	498	591
Public dialogue	88	-	124	212	-
Transformation	64	-	90	154	-
Membership	117	-	526	643	3,533
Business operations	1,742	-	8,657	10,399	9,881
Other	-	-	1,209	1,209	911
<b>Total</b>	<b>54,748</b>	<b>60</b>	<b>12,022</b>	<b>66,840</b>	<b>68,272</b>

Activities undertaken directly are costs directly attributable to the activity. Support costs are those costs that support the activity. Grant funding represents 107 (2019: 102) STFC grants made to schools to help them run physics and astronomy related activities.

### 7b. Analysis of expenditure on business operations

Included within expenditure on charitable activities are costs for business operations amounting to £10,399k (2019: £9,881k). These are analysed as:

	2020	2020	2020	2019
	Restricted	Unrestricted	Total	Total
	£'000	£'000	£'000	£'000
Awards	17	284	301	413
Support	-	2,783	2,783	3,337
Membership	-	1,295	1,295	1,295
Technology	-	3,049	3,049	2,081
Facilities	-	2,070	2,070	1,837
Outreach	23	878	901	918
<b>Total business operations expense</b>	<b>40</b>	<b>10,359</b>	<b>10,399</b>	<b>9,881</b>

## 8. Analysis of governance and support costs

Included within expenditure on charitable activities are governance and support costs amounting to £10,749k (2019: £10,829k). These are analysed as:

	Management Costs (Directorate and Staff)	Central Costs (IT, HR, Facilities)	Finance Costs	2020	2019
	£'000	£'000	£'000	£'000	£'000
Ecosystem	872	180	-	<b>1,052</b>	832
Productivity	6	1	-	<b>7</b>	41
Campaign	243	50	-	<b>293</b>	303
Public dialogue	103	21	-	<b>124</b>	-
Transformation	75	15	-	<b>90</b>	-
Membership	436	90	-	<b>526</b>	1,813
Business operations	5,255	2,854	548	<b>8,657</b>	7,840
<b>Total</b>	<b>6,990</b>	<b>3,211</b>	<b>548</b>	<b>10,749</b>	10,829

### Auditors fees:

	2020	2019
	£'000	£'000
Fees payable to the charity's auditors for the audit of the charity's annual financial statements	<b>38</b>	35
Fees payable to the charity's auditors for other services:		
The audit of the charity's subsidiaries pursuant to legislation	<b>84</b>	82
Other services	<b>301</b>	22
Other taxation services	<b>11</b>	43
<b>Total</b>	<b>434</b>	181

Non audit fees include work by PwC's Inclusion and Diversity practice on the Giving Voice to Inclusion programme, a central focus of the IOP's efforts to foster a more representative physics community looking beyond diversity to inclusion.

Notes forming part of the financial statements for the year ended 31 December 2020 (continued)

## 9. Staff

	2020	2019
	£'000	£'000
Wages and salaries	25,375	24,022
Social security costs	2,298	2,166
Pension costs	2,450	2,459
Redundancy and severance costs	244	434
<b>Total</b>	<b>30,367</b>	29,081

The number of employees earning more than £60,000 including bonuses (excluding employer pension contributions) per year can be analysed in the following bands:

	2020	2019
£60,000–£69,999	26	22
£70,000–£79,999	23	16
£80,000–£89,999	11	13
£90,000–£99,999	4	2
£100,000–£109,999	5	2
£110,000–£119,999	1	2
£120,000–£129,999	2	1
£130,000–£139,999	-	1
£140,000–£149,999	1	-
£150,000–£159,999	1	-
£160,000–£169,999	2	2
£170,000–£179,999*	3	1
£180,000–£189,999	-	1
£190,000–£199,999	-	-
£200,000–£209,999	1	-
£210,000–£219,999	-	-
£220,000–£229,999	1	-
£230,000–£239,999	-	1
£240,000–£249,999	-	1
£330,000–£339,000	-	-
£390,000–£399,999	-	1
£400,000–£410,000	1	-

\* This banding includes the remuneration of the Group Chief Executive Officer.

The above banding includes 50 (2019: 38) staff for whom retirement benefits are accruing under defined contribution schemes and 9 (2019: 5) staff for whom retirement benefits are accruing under defined benefit schemes. Contributions by the group for the year for the above employees to defined contribution schemes amounted to £482k (2019: £387k). 24 staff included above (2019: 24) are paid in foreign currencies and their earnings are subject to foreign exchange fluctuations when translating from the base currency to Sterling.

## 9. Staff (continued)

Additional information on the total remuneration package of employees earning over £60,000 per year is shown below.

### Institute of Physics – Charity

Salary and compensation	Bonus and commission	Non pensionable allowances and other benefits	Employer pension contribution	2020	2019
£60,000–£69,999	-	-	£5,000–£14,999	4	5
£70,000–£79,999	-	-	£5,000–£14,999	7	3
£80,000–£89,999	-	-	£5,000–£14,999	1	-
£100,000–£109,999	-	-	£5,000–£14,999	2	-
£140,000–£149,999	-	-	£0–£5,000	1	-
£170,000–£179,999*	-	-	£30,000–£34,999	1	1

\* This banding includes the remuneration of the Group Chief Executive Officer.

### Institute of Physics – Group

Within the trading subsidiaries of the Institute of Physics group (IOP Enterprises Limited, IOP Publishing Limited, Turpion Limited, Turpion–Moscow Limited, IOP Publishing Inc., IOP Business Publishing Inc., IOP Publishing Consultants (Beijing) Co Limited, IOP Marketing and Promotion Services Private Limited), some staff, dependant on role, have contractual performance based incentives linked to the subsidiaries revenue or profit growth. Staff may also receive non pensionable allowances and medical benefits in addition to employer pension contributions.

UK employer pension contributions are made at a maximum of 18% of pensionable salary.

The average number of employees during the year was:

	2020	2019
Charitable work:		
Institute of Physics	136	114
Business operations:		
IOP Publishing Limited	224	247
IOP Publishing Inc.	32	32
IOP Business Publishing Inc.	2	2
Turpion–Moscow Limited	3	3
IOP Publishing Consultants (Beijing) Co Limited	14	12
IOP Marketing and Promotion Services Private Limited	4	4
Management and administration:		
Institute of Physics	35	28
IOP Publishing Limited	135	111
<b>Total</b>	<b>585</b>	<b>553</b>

The number of full-time equivalent employees as at 31 December 2020 was 595 (2019: 547).

## 10. Key management personnel remuneration

Key management personnel include all members of Council. The President, honorary officers and members of Council give their time to the IOP on a voluntary basis and are paid no remuneration for this work. They are reimbursed the actual costs of travel and subsistence necessarily incurred on the official business of the IOP and/or its subsidiaries. In the year to 31 December 2020 total expenses incurred and reimbursed to 14 trustees (2019: 22) were £12k (2019: £32k).

Remunerated key management personnel include the members of the IOP's senior management team and directors of the IOP's subsidiary companies. The Group Chief Executive Officer performs a group role across all entities within the IOP Group. The Group Chief Executive Officer is part of the IOP's senior management team which also includes the Deputy Chief Executive; Chief Financial Officer; the Director of Policy and Public Affairs; and Chief Executive, IOP Publishing Limited. All members of the senior management team are remunerated by the Institute of Physics with the exception of the Chief Executive of IOP Publishing Limited.

In addition to the members of the IOP's senior management team, remunerated key management personnel comprise:

### IOP Publishing Limited

Commercial Director  
Finance Director  
Technology Director  
Publishing Director

The pay and remuneration of the group senior management team is set and monitored on behalf of Council by the Remuneration Committee. The Committee comprises the President, President-elect, Honorary Secretary and Honorary Treasurer, and is supported by several separately appointed external advisors. The Committee commissions, each year, relevant external benchmarking information from both the publishing and charity sector to support its decision-making, and when

necessary takes additional advice from specialist organisations.

The total compensation paid to key management personnel for services provided to the group was £1,732k (2019: £1,743k). This includes all remuneration, salary, benefits, bonuses and commission, employer's pension contributions, employer's national insurance contributions and any compensation payments made.

## 11. Physics World

During the year the IOP contributed £266k (2019: £266k) to IOP Publishing Limited towards the cost of copies of Physics World supplied to members, and £40k (2019: £68k) towards the cost of copies of Physics Education supplied to the IOP's affiliated schools programme.

## 12. Taxation

As a registered charity, the IOP is potentially exempt from taxation of its income and gains received within categories covered by Chapter 3 Part 11 of the Corporation Tax Act 2010 or Section 256 of the Taxation of Chargeable Gains Act 1992, to the extent that such income or gains are applied exclusively to charitable purposes.

The subsidiary companies make qualifying donations of taxable profit to the Institute of Physics.

## 13. Irrecoverable VAT

There is a group VAT registration for the Institute of Physics and its UK subsidiaries. The VAT group is partly exempt and, because of this, there are restrictions on the amount of VAT recoverable.

## 14. Intangible assets

Institute of Physics – Group	Software	Goodwill on consolidation	Trademarks	Assets in course of construction	Total
	£'000	£'000	£'000	£'000	£'000
<i>Cost or valuation</i>					
At 1 January 2020	10,293	126	180	776	11,375
Additions	1,957	-	37	-	1,994
Transfer from assets in course of construction	164	-	-	(164)	-
<b>At 31 December 2020</b>	<b>12,414</b>	<b>126</b>	<b>217</b>	<b>612</b>	<b>13,369</b>
<i>Accumulated amortisation</i>					
At 1 January 2020	(7,856)	(75)	(72)	-	(8,003)
Provision for the year	(1,378)	(51)	(43)	-	(1,472)
<b>At 31 December 2020</b>	<b>(9,234)</b>	<b>(126)</b>	<b>(115)</b>	<b>-</b>	<b>(9,475)</b>
<i>Net book value</i>					
<b>At 31 December 2020</b>	<b>3,180</b>	<b>-</b>	<b>102</b>	<b>612</b>	<b>3,894</b>
At 31 December 2019	2,437	51	108	776	3,372

### Assets in course of construction

Assets in course of construction relate to elements of the implementation of new software systems which are ongoing. These assets are not being depreciated. These assets will begin to be depreciated upon being brought into use.

### Intangible assets – Charity

The charity does not hold any intangible assets (2019: £nil).

Notes forming part of the financial statements for the year ended 31 December 2020 (continued)

**15. Tangible assets**

Institute of Physics – Group	Unoccupied property	Freehold property	Short leasehold property	Fixtures and fittings	Total
	£'000	£'000	£'000	£'000	£'000
<i>Cost</i>					
At 1 January 2020	2,617	29,781	2,431	4,191	<b>39,020</b>
Additions	46	4,187	-	238	<b>4,471</b>
Disposals	-	-	-	(72)	<b>(72)</b>
<b>At 31 December 2020</b>	<b>2,663</b>	<b>33,968</b>	<b>2,431</b>	<b>4,357</b>	<b>43,419</b>
<i>Accumulated depreciation</i>					
At 1 January 2020	-	(1,396)	(2,124)	(3,122)	<b>(6,642)</b>
Charge for the year	-	(1,233)	(238)	(492)	<b>(1,963)</b>
Disposals	-	-	-	71	<b>71</b>
<b>At 31 December 2020</b>	<b>-</b>	<b>(2,629)</b>	<b>(2,362)</b>	<b>(3,543)</b>	<b>(8,534)</b>
<i>Net book value</i>					
<b>At 31 December 2020</b>	<b>2,663</b>	<b>31,339</b>	<b>69</b>	<b>814</b>	<b>34,885</b>
At 31 December 2019	2,617	28,385	307	1,069	32,378

Institute of Physics – Charity	Unoccupied property	Freehold property	Short leasehold property	Fixtures and equipment	Total
	£'000	£'000	£'000	£'000	£'000
<i>Cost</i>					
At 1 January 2020	2,617	29,781	2,362	222	<b>34,982</b>
Additions	46	4,187	-	41	<b>4,274</b>
<b>At 31 December 2020</b>	<b>2,663</b>	<b>33,968</b>	<b>2,362</b>	<b>263</b>	<b>39,256</b>
<i>Accumulated depreciation</i>					
At 1 January 2020	-	(1,396)	(2,073)	(84)	<b>(3,553)</b>
Charge for the year	-	(1,233)	(236)	(49)	<b>(1,518)</b>
<b>At 31 December 2020</b>	<b>-</b>	<b>(2,629)</b>	<b>(2,309)</b>	<b>(133)</b>	<b>(5,071)</b>
<i>Net book value</i>					
<b>At 31 December 2020</b>	<b>2,663</b>	<b>31,339</b>	<b>53</b>	<b>130</b>	<b>34,185</b>
At 31 December 2019	2,617	28,385	289	138	31,429

Included in freehold property is a new property that is not yet in use due to the COVID-19 pandemic. The property is therefore not yet being depreciated. There was no equivalent property in 2019.

**16. Investments in subsidiary undertakings**

Institute of Physics – Charity	Subsidiary undertakings
	<b>£'000</b>
<i>Cost and net book value</i>	
At 1 January 2020 and 31 December 2020	<b>3,001</b>

The IOP's subsidiary undertakings at 31 December 2020 were as follows:

Name	Country of incorporation/ registration	Class of shares held	Percentage held	Nature of business	Year end
<i>Subsidiary undertakings</i>					
IOP Publishing Limited	UK	Ordinary	100%	Publishing	31 Dec 2020
IOP Enterprises Limited	UK	Ordinary	100%	Non trading	31 Dec 2020
IOP Educational Publishing Limited	UK	Ordinary	100%*	Dormant	31 Dec 2020
IOP Publishing Inc.	USA	Ordinary	100%	Publishing	31 Dec 2020
IOP Business Publishing Inc.	USA	Ordinary	100%^	Publishing	31 Dec 2020
IOP Publishing Consultants (Beijing) Co Limited	China	Ordinary	100%*	Publishing consulting	31 Dec 2020
Turpion Limited	UK	Ordinary	100%*	Publishing	31 Dec 2020
Turpion-Moscow Limited	Russia	Ordinary	100%+	Publishing	31 Dec 2020
IOP Marketing and Promotion Services Private Limited	India	Ordinary	100%-	Publishing	31 Mar 2021

\* The investments in IOP Educational Publishing Limited, IOP Publishing Consultants (Beijing) Co Limited and Turpion Limited are held directly by IOP Publishing Limited.

^ The investment in IOP Business Publishing Inc. is held directly by IOP Publishing Inc.

+ The investment in Turpion-Moscow Limited is held directly by Turpion Limited.

- The investment in IOP Marketing and Promotion Services Private Limited is 0.01% owned by IOP and 99.99% by IOP Publishing Limited.

Address of IOP Publishing Limited is Temple Circus House, Temple Way, Bristol BS1 6HG.

Address of IOP Enterprises Limited is 37 Caledonian Road, London N1 9BU.

Address of IOP Educational Publishing Limited is Temple Circus House, Temple Way, Bristol BS1 6HG.

Address of IOP Publishing Inc. is 190 N. Independence Mall West Suite 601 Philadelphia, PA 19106, USA.

Address of IOP Business Publishing Inc. is 190 N. Independence Mall West Suite 601 Philadelphia, PA 19106, USA.

Address of IOP Publishing Consultants (Beijing) Co Limited is Room 608, Building A, Raycom Info Tech Park, No.2 Kexueyuan South Road, Beijing China 100190.

Address of Turpion Limited is Temple Circus House, Temple Way, Bristol BS1 6HG.

Address of Turpion-Moscow Limited is MIAN, 8 Gubkina Street, Room 915, Moscow 119991, Russia.

Address of IOP Marketing and Promotion Services Private Limited is SF-6, Golden Enclave, 184 PH Road, Chennai, India.

Notes forming part of the financial statements for the year ended 31 December 2020 (continued)

## 16. Investments in subsidiary undertakings (continued)

Details of the net assets, turnover, expenditure and profit for the year of IOP Publishing Limited, IOP Enterprises Limited, IOP Publishing Inc., IOP Business Publishing Inc., IOP Publishing Consultants (Beijing) Co Limited, Turpion Limited and IOP Marketing and Promotion Services Private Limited are as follows:

	Company number	Net assets/ (liabilities)	Turnover	Expenditure	Profit
		<b>2020</b>	<b>2020</b>	<b>2020</b>	<b>2020</b>
		<b>£'000</b>	<b>£'000</b>	<b>£'000</b>	<b>£'000</b>
IOP Publishing Limited	00467514	20,760	70,434	(49,650)	20,784
IOP Enterprises Limited	03471563	4	-	-	-
IOP Publishing Inc.	26-2659520	1,468	4,251	(3,679)	572
IOP Business Publishing Inc.	26-2301131	(912)	218	(213)	4
IOP Publishing Consultants (Beijing) Co Limited	No.05292	231	1,078	(1,045)	33
Turpion Limited	02463452	341	1,975	(1,883)	92
IOP Marketing and Promotion Services Private Limited	U74999TN201 6FTC103739	72	250	(228)	22

## 17. Investments

Group and charity	2020	2019
	<b>£'000</b>	<b>£'000</b>
Market value at beginning of the year	<b>21,799</b>	20,609
Purchases in year	<b>7,221</b>	6,966
Disposal proceeds in year	<b>(7,221)</b>	(6,966)
Realised gains	<b>27</b>	172
Unrealised gains	<b>1,127</b>	1,018
Market value at end of the year	<b>22,953</b>	21,799
Historical cost	<b>21,739</b>	21,712

No investment management cost was incurred in 2020 or 2019.

## 17. Investments (continued)

The analysis of investments by class is as follows:

Group and charity	2020	2019
	£'000	£'000
Vanguard FTSE Global All Cap Index Fund	9,425	6,961
BNY Mellon Real Return Fund Newton Institutional	6,097	-
CCLA COIF Charities Property Fund	4,468	5,220
Invesco Global Targeted Returns Fund (UK)	2,963	9,618
Market value of investments	22,953	21,799

## 18. Debtors

	Group	Group	Charity	Charity
	2020	2019	2020	2019
	£'000	£'000	£'000	£'000
Trade debtors	12,364	5,924	4	31
Other debtors	982	1,215	749	683
Prepayments and accrued income	3,231	10,522	661	588
<b>Total</b>	<b>16,577</b>	<b>17,661</b>	<b>1,414</b>	<b>1,302</b>

An impairment loss of £105k (2019: £35k) was recognised in the consolidated Statement of Financial Activities for the year in respect of bad and doubtful trade debtors. A write back of £71k for 2020 was recognised in the Charity Statement of Financial Activities for the year in respect of bad and doubtful trade debtors (2019: impairment loss of £32k).

Included within Other debtors is an amount of £48k (2019: £209k) relating to recoverable Indian withholding tax that is expected to fall due for payment in greater than one year.

Notes forming part of the financial statements for the year ended 31 December 2020 (continued)

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

	Group	Group	Charity	Charity
	2020	2019	2020	2019
	£'000	£'000	£'000	£'000
Trade creditors	1,973	1,064	515	384
Amounts owed to group undertakings	-	-	675	14,928
Other creditors	5,736	5,298	119	274
Other taxes and social security	178	334	178	-
Accruals	4,505	5,193	321	823
Deferred income	15,755	13,748	441	890
<b>Total</b>	<b>28,147</b>	<b>25,637</b>	<b>2,249</b>	<b>17,299</b>

Deferred income represents income received in advance:

	Group	Group	Charity	Charity
	2020	2019	2020	2019
	£'000	£'000	£'000	£'000
Journals subscriptions	14,374	12,770	-	-
Membership income	191	387	191	387
Other	1,190	591	250	503
<b>Total</b>	<b>15,755</b>	<b>13,748</b>	<b>441</b>	<b>890</b>

Amounts due to group undertakings are interest free and repayable on demand.

## 20. Financial instruments

The group's and charity's financial instruments may be analysed as follows:

	Group	Group	Charity	Charity
	2020	2019	2020	2019
	£'000	£'000	£'000	£'000
<b>Financial assets</b>				
Financial assets measured at fair value through profit or loss	<b>22,953</b>	21,799	<b>22,953</b>	21,799
Financial assets measured at amortised cost	<b>42,684</b>	34,001	<b>1,626</b>	10,986
<b>Financial liabilities</b>				
Financial liabilities measured at amortised cost	<b>(12,214)</b>	(11,555)	<b>(1,630)</b>	(16,409)

Financial assets measured at fair value through profit or loss comprise fixed asset investments in a trading portfolio of listed company shares.

Financial assets measured at amortised cost comprise trade debtors, other debtors, amounts owed by group undertakings, current asset investments and cash at bank.

Financial liabilities measured at amortised cost comprise trade creditors, other creditors, accruals and amounts owed to group undertakings.

## 21. Provisions for liabilities

	Group	Group	Charity	Charity
	2020	2019	2020	2019
	£'000	£'000	£'000	£'000
Dilapidations provision	<b>806</b>	806	<b>806</b>	806

Included within provisions is a provision of £806k (2019: £806k) for costs relating to the exit of leasehold premises which are not expected to crystallise before Q3 2021. The amount payable will be agreed through future negotiation at such point that an exit occurs.

**22. Movement on reserves**

<b>Institute of Physics – Group</b>	<b>General fund</b>	<b>Restricted funds</b>	<b>Pension deficit</b>	<b>Total</b>
	£'000	£'000	£'000	£'000
At 1 January 2020	64,530	3,355	(3,322)	<b>64,563</b>
Net income / (expenditure)	10,115	(52)	941	<b>11,004</b>
Exchange adjustments	45	-	-	<b>45</b>
Actuarial losses	-	-	(8,502)	<b>(8,502)</b>
Balances carried forward as at 31 December 2020	<b>74,690</b>	<b>3,303</b>	<b>(10,883)</b>	<b>67,110</b>

<b>Institute of Physics – Charity</b>	<b>General fund</b>	<b>Restricted funds</b>	<b>Pension deficit</b>	<b>Total</b>
	£'000	£'000	£'000	£'000
At 1 January 2020	46,121	3,355	(3,322)	<b>46,154</b>
Net income / (expenditure)	9,653	(52)	941	<b>10,542</b>
Actuarial losses	-	-	(8,502)	<b>(8,502)</b>
Balances carried forward as at 31 December 2020	<b>55,774</b>	<b>3,303</b>	<b>(10,883)</b>	<b>48,194</b>

**22. Movement on reserves (continued)**

<b>Group and charity</b>	<b>Prize funds</b>	<b>Other funds</b>	<b>Total</b>
	<b>£'000</b>	<b>£'000</b>	<b>£'000</b>
Restricted funds			
Balance at 1 January 2020	52	3,303	<b>3,355</b>
Incoming resources	-	380	<b>380</b>
Resources expended	(2)	(430)	<b>(432)</b>
Balance at 31 December 2020	50	3,253	<b>3,303</b>

Restricted funds are held by the IOP and were given to the IOP to spend towards specific projects and purposes. Prize funds are held by the IOP to give out as awards to individuals for their exceptional contribution towards physics. Other funds are to be spent on specific projects.

**Analysis of Net Assets by Fund**

<b>Institute of Physics – Group</b>	<b>General fund</b>	<b>Restricted funds</b>	<b>Pension deficit</b>	<b>Total</b>
	<b>£'000</b>	<b>£'000</b>	<b>£'000</b>	<b>£'000</b>
Intangible Fixed Assets	3,894	-	-	<b>3,894</b>
Tangible Fixed Assets	34,885	-	-	<b>34,885</b>
Investments	22,953	-	-	<b>22,953</b>
Current Assets	41,911	3,303	-	<b>45,214</b>
Current Liabilities	(28,147)	-	-	<b>(28,147)</b>
Non-Current Liabilities	(806)	-	(10,883)	<b>(11,689)</b>
Balances carried forward	74,690	3,303	(10,883)	<b>67,110</b>

## 23. Pensions

The Group operates three pension schemes.

### Defined benefit pension scheme

The Institute of Physics Retirement Benefits Plan 1975 was closed to new members on 31 December 2001. The IOP continues to support the scheme for those who were members on the effective date of closure.

The Defined Benefits scheme is overseen by its own independent Trustee Board and supported by the scheme actuaries XPS Pensions. The chair is a pension specialist and the trustee group has both employee and employer representatives on it. The Pension Trustees and the IOP have set out a jointly agreed Integrated Risk Management strategy which has a target of bringing the scheme firstly out of deficit by 2025 and then to self-sufficiency by 2029. The scheme is assessed as having a strong employer covenant.

A group personal pension scheme was established to replace the defined benefit scheme with effect from 1 January 2002. This scheme closed to new members on 31 January 2014 and a new Group personal pension scheme was established from 1 February 2014. The IOP has also designated a stakeholder pension scheme in compliance with the Pensions Act 1995.

The most recent FRS 102 valuation of the Institute of Physics Retirement Benefits Plan 1975 dated 31 December 2020 showed that the value of the scheme's assets as at that date was £108,739k (2019: £97,365k) and that the actuarial value of those assets represented 91% (2019: 96%) of the benefits that had accrued to members, after allowing for expected future increases in earnings. No changes to the funding arrangements of the scheme are considered to be required as a result of the most recent FRS 102 valuation of the scheme.

The scheme published its triennial revaluation of 31 December 2019 in 2020. The triennial valuation, updated to the end of 2020, showed a deficit of £7.5m due to a difference in methodology.

The principal actuarial assumptions used by the actuary at the Balance Sheet date were:

	2020	2019
	%	%
Discount rate	1.35	2.10
Aggregate long-term expected rate of return on assets (net of expenses)		
Inflation (RPI)	2.95	3.05
Inflation (CPI)	2.30	2.15
Future increases in deferred pensions		
Rate of increase in salaries	2.95	3.05
Rate of increase to pensions in payment:		
Pre 2001 pension	5.00	5.00
2001-2006 pension	2.95	3.05
Post 2006 pension	2.10	2.05
Mortality assumptions:	Years	Years
Life expectancy of male aged 65 now	22.3	22.0
Life expectancy of male aged 65 in 20 years	23.6	23.3
Life expectancy of female aged 65 now	24.6	24.0
Life expectancy of female aged 65 in 20 years	26.0	25.5

**23. Pensions (continued)**

Cash commutation:

- 2020: Members take 75% of their max allowable pension commencement lump sum on current terms
- 2019: Members take 75% of their max allowable pension commencement lump sum on current terms

Reconciliation of fair value of plan liabilities:

	2020	2019
	£'000	£'000
At the beginning of the year	100,687	89,780
Interest cost	2,086	2,576
Remeasurement losses/(gains)		
Actuarial losses	19,568	10,348
Benefits paid	(2,719)	(2,017)
At the end of the year	119,622	100,687

Changes in the fair value of plan assets:

	2020	2019
	£'000	£'000
At the beginning of the year	97,365	84,425
Interest income	2,027	2,437
Remeasurement gains/(losses):		
Return on scheme assets excluding interest	11,066	11,452
Contributions by employer	1,000	1,068
Benefits paid including expenses	(2,719)	(2,017)
At the end of the year	108,739	97,365
Actual return on plan assets	13,093	13,889

	2020	2019
	£'000	£'000
Fair value of plan assets	108,739	97,365
Actuarial value of plan liabilities	(119,622)	(100,687)
Net pension scheme liability	(10,883)	(3,322)

Group and charity	2020	2019
	£'000	£'000
Pension liability recognised on the balance sheet	10,883	3,322

Notes forming part of the financial statements for the year ended 31 December 2020 (continued)

### 23. Pensions (continued)

Amounts recognised in profit or loss are as follows:

Group and charity	2020	2019
	£'000	£'000
Net interest cost	59	139
<b>Total</b>	<b>59</b>	139

#### Analysis of actuarial (loss)/gain recognised within the Statement of Financial Activities gains and losses category

Group and charity	2020	2019
	£'000	£'000
Actual return less interest income included in net interest income	11,066	11,452
Changes in assumptions underlying the present value of the scheme liabilities	(19,568)	(10,348)
Actuarial (loss) /gain on defined benefit pension scheme	<b>(8,502)</b>	1,104

#### Composition of plan assets

	2020	2019
	£'000	£'000
Equities	19,913	18,739
Diversified growth funds	34,052	33,511
Annuities	9,110	8,957
Liability Driven Investment funds	35,839	26,897
Partners Fund	9,930	9,178
Cash	(105)	83
<b>Total plan assets</b>	<b>108,739</b>	97,365

#### Defined contribution pension schemes

The amount recognised in the Statement of Financial Activities as an expense in relation to the group's defined contribution pension schemes is £2,258k (2019: £2,220k). There was no outstanding payable to the schemes at the year end of 2020 and 2019.

## 24. Analysis of changes in net funds

	2020	2019
	£'000	£'000
Decrease in cash and cash equivalents	9,474	4,115
Exchange translation	45	(130)
<b>Movement in net funds in the year</b>	<b>9,519</b>	3,985
Net funds brought forward	19,118	15,133
<b>Net funds carried forward</b>	<b>28,637</b>	19,118

## 25. Commitments under operating leases

### Group

The group has minimum lease payments under non-cancellable operating leases as set out below:

	Land and buildings 2020	Land and buildings 2019
	£'000	£'000
Not later than 1 year	727	1,087
Later than 1 year and not later than 5 years	347	661
Later than 5 years	-	21
<b>Total</b>	<b>1,074</b>	1,769

### Charity

The charity has minimum lease payments under non-cancellable operating leases as set out below:

	Land and buildings 2020	Land and buildings 2019
	£'000	£'000
Not later than 1 year	564	676
Later than 1 year and not later than 5 years	-	133
<b>Total</b>	<b>564</b>	809

The Temple Circus lease, which expires in 2021, is being renegotiated with a view to extension.

## 26. Amounts receivable under operating leases

The charity has minimum lease payments receivable under non-cancellable operating leases as set out below:

	Land and buildings 2020	Land and buildings 2019
	£'000	£'000
Not later than 1 year	704	845
Later than 1 year and not later than 5 years	-	167
<b>Total</b>	<b>704</b>	<b>1,012</b>

## 27. Related parties

The transactions noted below are all reported due to the individuals being trustees, directors or key management personnel. The transactions were entered into by the organisations listed below:

Individual	Related organisation	Role within related organisation	Description of transaction	Amount (£) Sales by IOPP	Amount (£) outstanding at year end
Martin Freer	University of Birmingham	Director of the Birmingham Energy Institute	Article charges & subscriptions	63,039	1,860
Tariq Ali		Deputy Pro-Vice Chancellor	Advertising	3,895	3,480
Brian Fulton	University of York	Dean of faculty of Sciences & member of University Executive Board	Article charges, ebooks & subscriptions	62,625	-
			Advertising	1,495	-
Jim Al-Khalili	University of Surrey	Distinguished Chair	Article charges & subscriptions	45,099	51,941
			Advertising	295	-
Wendy Flavell	University of Manchester	Vice Dean for Research in Faculty of Science and Engineering and Deputy Head of School in Department of Physics and Astronomy	Article charges offsetting	66,149	80,523
Alix Pryde	Queen Mary University of London	Council Member	Article charges	3,192	-
Martin Hendry	University of Glasgow	Head of Physics and Astronomy	Article charges & subscriptions	48,842	-
Sheila Rowan		Director of Institute for Gravitational Research			
Claudia Eberlein	Loughborough University	Dean of Science, Professor of Theoretical Physics & Member of Council	Article charges	1,550	-
Tariq Ali		Member of the Board – Industrial Policy Research Centre UK at University of Loughborough/MTC			
Mark Telling	Science and Technology Facilities Council (STFC)	Associate Director	Article charges	750	-

**27. Related parties (continued)**

Individual	Related organisation	Role within related organisation	Description of transaction	Amount (£) Purchases by IOP
Martin Freer	University of Birmingham	Director of the Birmingham Energy Institute	Grants & scholarship sponsorship	23,844
Tariq Ali		Deputy Pro-Vice Chancellor		
Brian Fulton	University of York	Dean of faculty of Sciences & member of University Executive Board	Conference support & exhibition costs	19,000
Paul Hardaker	Sense about Science	Trustee	IOP annual partnership grant – not involved in any decision making related to the Sense about Science Partnership Grant	16,100
Claudia Eberlein	Loughborough University	Dean of Science, Professor of Theoretical Physics & Member of Council	Workshop & lecture programmes	1,583
Tariq Ali		Member of the Board – Industrial Policy Research Centre UK at University of Loughborough/ MTC		
Martin Hendry	University of Glasgow	Head of Physics and Astronomy	Grants & bursaries	328
Sheila Rowan		Director of Institute for Gravitational Research		

Individual	Related organisation	Role within related organisation	Description of transaction	Amount (£) Invoiced by IOP
Mark Telling	Science and Technology Facilities Council (STFC)	Associate Director	Project Income	20,000
			Catering income	487

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