The Institute of Physics Annual Report 2015

Trustees' report and financial statements
for the year ended 31 December 2015

Contents **Page**

This is the trustees' annual report and financial statements for the year ended 31 December 2015 for the Institute of Physics. The trustees have prepared this report in accordance with the Institute's Royal Charter and Bylaws, the Charities Act 2011 and the Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with FRS 102.

HONORARY SECRETARY'S FOREWORD

2015 was the first year of our new strategy and we are delighted with the progress that we have already made in delivering it. Our activities have focused on five themes – Education, Economy, Society, Discovery and Community – and show the breadth of the impact we have been able to have for physics, for the economy and for society.

Our members are at the heart of all that we do and, by the end of 2015, overall membership stood at 51,809. We continue to rely heavily on our committed and engaged membership, as well as looking to grow and develop our strategic partnerships with those who share our goals and can help us deliver our ambitions.

IOP Publishing Ltd remains a vital part of the Institute and plays a significant role in our mission through the dissemination of leading-edge scientific research. IOPP had another successful year of growth across its publishing portfolio, in particular the new book publishing programme, as well as launching three new journals.

Architects' drawing of the Institute's new building in King's Cross.

In late 2013 we purchased a new building in the King's Cross regeneration area and in 2015 we finalised planning permission for our proposed redevelopment. This work will start in spring 2016 with the Institute planning to move into its new home at the end of 2017. The new building will be refurbished with members in mind, but will also be much more public-facing, with the space to showcase physics from academia, industry and our community outreach programmes with the arts and humanities. We are looking forward to playing an important role in the local community, working closely with Islington Borough Council, local schools and community groups.

Just after New Year the IOP received the sad news of the deaths of Brian Manley (President from 1996 to 1998), who died on 20 December 2014, and Sir John Mason (President from 1976 to 1978), who died on 6 January 2015.

On behalf of Council I would like to thank all the members and staff who continued to provide such excellent service to the Institute as well as to physics generally. We are very much looking forward to building on this success in 2016.

Professor Stuart Palmer FREng CPhys FInstP
Honorary Secretary

STRUCTURE, GOVERNANCE AND MANAGEMENT

The Institute of Physics is a corporate body governed by a Royal Charter and bylaws. It was established in its current form by Royal Charter dated 17 September 1970. The Royal Charter is supplemented by bylaws and regulations.

The Institute is a charity registered in both England & Wales (no. 293851) and in Scotland (no. SC040092). The members of Council are the trustees of the charity. The Institute's registered office is 76 Portland Place London, W1B 1NT.

Council (board of trustees)

As set out in the Royal Charter, the Institute is governed by Council, which consists of 18 trustees elected from, and by, the corporate membership; and up to three co-opted trustees who are appointed by Council itself. The Institute's Council is its board of trustees and Council members are the trustees of the charity.

Council has the ultimate responsibility for directing the affairs of the Institute, 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. Council sets and monitors the Institute's strategy which delivers these charitable outcomes.

Of the elected Council members, there are four senior officers and four vice-presidents. The senior officers are the president, president-elect, honorary secretary and honorary treasurer. There are currently four vice-presidents, for business, education, membership, and science and innovation. There are ten ordinary Council members each of whom will normally serve on or chair one of the Institute's committees. Certain Council members have lead responsibilities for important cross-cutting areas such as diversity, audit and risk, and our international programmes. Co-opted Council members are appointed as required to cover areas of specific expertise.

Council currently meets four times a year, normally in January, April, July and November. All Council members give their time voluntarily and are not remunerated for their work on behalf of the Institute 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, Council confirms the number of vacancies that will arise that year. With delegated powers from Council, the Nominations Committee then evaluates the balance of skills, knowledge, experience and diversity of Council, and, in the light of this evaluation, prepares a description of the role and capabilities required for each particular vacancy on Council. A notice of vacancies along with role descriptions is published and all corporate members are eligible to nominate themselves.

The Nominations Committee then assesses the nominations received from members and draws up a shortlist of those who meet the necessary skills and expertise for each vacancy. Where there is more than one nomination for any vacancy then a ballot takes place. Where there is only one nomination for any vacancy then a ballot is not required and that nominee is deemed elected.

Council members serve four year terms, with the exception of co-opted members who are appointed annually for a maximum of three years. The president serves a two-year term plus two years immediately preceding that as president-elect. The honorary treasurer and the honorary secretary are eligible for election to a second four-year term.

Induction and training of Council members

Formal induction is given to all new Council members who are invited to attend meetings with Institute staff and advisers as part of the induction process. Council members are encouraged to attend recommended external training courses for charity trustees.

Trustees have a legal duty to avoid conflicts of interest so that they can focus exclusively on the best interests of the Institute. The Institute maintains a register of 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.

Council Members in 2015

President	Professor Roy Sambles FRS CPhys FInstP	From 1 Oct 2015
	Dr Frances Saunders CB CPhys CEng FInstP FREng	Until 30 Sep 2015
President-elect	Professor Dame Julia Higgins DBE FRS CPhys Hon.FInstP FREng	From 1 Oct 2015
	Professor Roy Sambles FRS CPhys FInstP	Until 30 Sep 2015
Honorary Secretary	Professor Stuart Palmer FREng CPhys FInstP	
Honorary Treasurer	Professor Julian Jones OBE FRSE CPhys FInstP	
Vice President, Science & Innovation	Professor Sarah Thompson MBE CPhys FInstP	From 1 Oct 2015
	Professor Tom McLeish FRS CPhys FInstP	Until 30 Sep 2015
Vice President, Education	Philip Britton MBE CPhys FInstP	
Vice President, Business	Professor Alison McMillan CPhys FInstP	
Vice President, Membership	Dr Mike Worboys CEng CPhys FInstP	
Ordinary Members	Dr Trevor Cross FInstP	
	Professor Michael Duncan FInstP	
	Dr Barbara Gabrys CPhys FInstP	
	Professor James Hough OBE FRS FRSE CPhys FInstP	Until 30 Sep 2015
	Dr Lisa Jardine-Wright CPhys MInstP	
	Professor Kevin McGuigan FRSC FInstP	
	Professor Angela Newing FInstP	
	Deborah Phelps MInstP	From 1 Oct 2015
	Neil Thomson CPhys FInstP	From 1 Oct 2015
	Mary Whitehouse CPhys FInstP	Until 30 Sep 2015
	Mark Wrigley MInstP	
	Professor John Zarnecki CPhys FInstP	
Co-opted Member	Professor Geoff McFarland MInstP	Until 30 Sep 2015

Committees

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, delegated powers and membership of these committees are set by 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.

Standing committees are also empowered to set up sub-committees or their own mechanisms for wider consultation. The terms of reference, delegated powers and membership of sub-committees are normally set by the parent committee. The standing committees as of 31 December 2015 were:

- Senior Officers' Committee
- Resources Committee
- Audit & Risk Committee
- Remuneration Committee
- Nominations Committee
- Awards Committee
- Honorary Fellows Committee
- Membership Committee
- Science & Innovation Committee
- Education Committee
- Diversity & Inclusion Committee

Annual General Meeting

Each year the Institute holds an Annual General Meeting, the rules of which are set out in the bylaws and regulations, and which all corporate members are entitled to attend. Corporate members are those individual members of the Institute who have voting rights at general meetings and for the election of Council members and are composed of honorary fellows (Hon.FInstP), fellows (FInstP) and members (MInstP). Membership fees and any changes to the bylaws are approved by the membership at the Annual General Meeting.

Management and staffing

The day-to-day management of the Institute and its activities is delegated to the group's chief executive officer, supported by a senior management team known as the Executive Board and the managing directors of the Institute's subsidiary companies. Overall, across the group, the chief executive leads a staff that at 31 December 2015 totalled 560 people (524 FTE).

The day-to-day management of publishing activities is delegated to the managing director of IOP Publishing Ltd, one of the Institute's subsidiary companies. IOP Publishing Ltd has its own board of directors and several international subsidiary companies that support the delivery of the Institute's publishing programme. The day-to-day management of IOP Enterprises Ltd is delegated to the managing director of IOP Enterprises. IOP Enterprises Ltd also has its own board of directors.

The IOP's senior management team in 2015 was:

Professor Paul Hardaker CMet FInstP FRMetS	Group chief executive officer
Michael Bray FCMA	Group finance director (Chief finance officer from 1 January 2016)
Rachel Youngman	Chief operating officer
Philip Diamond CPhys Hon.FInstP	Associate director, policy, programmes & performance
Steven Hall	Managing director, IOP Publishing Ltd

Statement of trustees' responsibilities

Council members (who are the trustees of the Institute) 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).

Charity law requires the Council to prepare financial statements for each financial year (which for IOP is the calendar year), which show a true and fair view of the state of affairs of the group and the Institute at the end of the year and of the financial activities of the group during the year. In preparing those financial statements, Council is required to:

- Select suitable accounting policies and then apply them consistently
- Make judgements and estimates that are reasonable and prudent
- State whether applicable accounting standards and statements of recommended practice have been followed, subject to any material departures disclosed and explained in the financial statements
- Prepare the financial statements on the going-concern basis unless it is inappropriate to presume that the charity and the group will continue in operation

Council is required to act in accordance with the Royal Charter and bylaws of the Institute of Physics within the framework of charity and trust law. It is responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the group and the Institute and that enable them to ensure that the financial statements comply with the Charities Act 2011 and accord with applicable accounting standards, including Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with FRS 102. It is also responsible for safeguarding the assets of the group and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Risk management

Council is responsible for ensuring that proper arrangements are in place for adequate risk management and control. The Audit and Risk Committee advises Council on these matters and has the following remit, to:

- Review major areas of risk for the Institute and its subsidiary companies and to ensure processes exist to manage risk in these areas
- Ensure risk management, internal audit and external audit processes are administered effectively
- Highlight any areas of high risk and/or any anomalies brought to light through the audit process
- Be available to whistleblowers regarding risk areas or audit anomalies who are not satisfied with the outcomes of the normal management processes

The Institute employs a group compliance manager, who reports to the chief finance officer, with operational responsibility for the management of risk, compliance with legislation, data protection, business continuity, insurance, internal controls and managing the in-house internal audit process.

The Institute 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. Council receives a report from the Audit & Risk Committee after each of its meetings along with a risk management report. Council also has an annual review of risk as a standing agenda item.

Main risks, potential consequences and mitigations

Risk:	IOP Publishing Ltd suffers a material and prolonged decline in net profit with a knock-on reduction in gift aid to the Institute – resulting in a potential reduction or cessation of some IOP activities.
Mitigation:	An expanded business-development team has been created to focus on diversifying income streams. There is a centralised contingency to manage the impact of any year-to-year reduction in gift aid on IOP's programmes of work.
Risk:	Delays to the property relocation project result in potential project overspend and a failure to achieve occupation of the new premises in King's Cross within the planned timeline.
Mitigation:	A Relocation Project Board has governance and oversight of the property project and closely monitors the timeline, budget, cash flow and property risk register.
Risk:	Failure to achieve the required level of income/funding from diversification activities (such as fundraising) results in an inability to support the full ambition of strategy.
Mitigation:	An experienced head of development has been recruited to lead on diversifying income. A pipeline plan is being developed to match IOP programmes and projects with potential donors and funders over the lifetime of the strategy. A new customer relationship management system has been implemented to assist with strengthening stakeholder and funder relations.
Risk:	Adverse market conditions could lead to a reduction in the value of the general investment fund with an impact on the Institute's ability to deliver its longer-term strategic plans.
Mitigation:	A new investment and reserves policy has been introduced, which has been built bottom-up and is driven more closely by the needs and risks of the strategic plan.
Risk:	An inability to meet potential increased liabilities for the defined benefit pension fund from operational budgets could result in a possible requirement to call upon the reserves.
Mitigation:	The DB pension fund has been closed to new entrants since 2002 and was closed to future accruals from June 2015. A plan to achieve self-sufficiency was agreed with the pension fund trustees in 2015.
Risk:	Member or staff personal details are lost because of human error or cyber-attack, resulting in an Information Commissioner's Office investigation, reputational damage and financial penalties.
Mitigation:	Staff are provided with data -protection advice and training by the legal and compliance team and notified of any potential threats as they arise. IT security controls have been put in place and were reviewed in 2015 by the Audit & Risk Committee.
Risk:	Reputational damage and financial penalties arising from litigation or breach of legislation.
Mitigation:	Staff are provided with advice and training by the legal and compliance team on areas such as health and safety, data protection, and bribery and corruption. The guidance and processes in place to support staff and volunteers delivering IOP events are reviewed regularly.

Our members

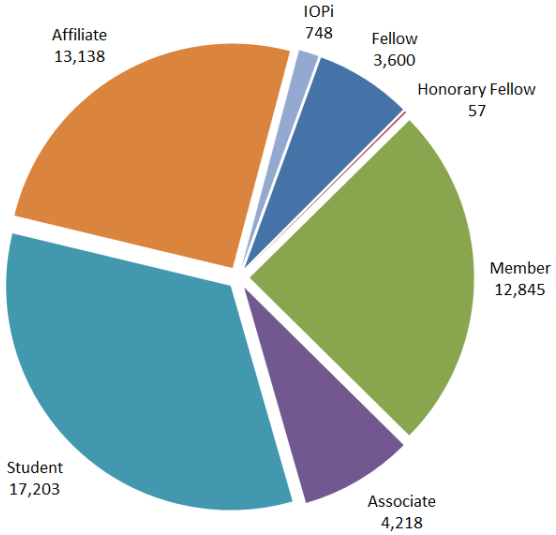
We continue to rely heavily on our committed and engaged membership. Membership of the Institute is for everyone with an interest in physics and its future. Our members are diverse and follow all kinds of different careers from academic research to high-value manufacturing and engineering, and from finance to nuclear new-build and decommissioning.

By joining, members become an integral part of the community working for physics. On an individual level, membership expands knowledge, develops networks and enhances professional reputation.

The Institute offers a variety of membership options ranging from school age students to experienced professionals, as well as for those without a formal background in physics who want to support the Institute's objectives. We offer free membership for 16- to 19-year-olds studying physics pre-university and for undergraduates enrolled on a full-time physics or related undergraduate course at university level.

Further information about our membership categories and benefits can be found at iop.org/membership.

All IOP members have the opportunity to get involved in the Institute's activities through their local nation or branch or through specialist subject-interest groups.



Membership at the end of 2015 totalled 51,809

The Institute could not achieve its charitable objectives without the commitment and hard work of our members, many of whom give freely of their time to act as committee members and volunteers to support our events and activities. The Institute wishes to thank all those who have supported it over the past year.

Principal addresses

Registered address	**The Institute of Physics**	76 Portland Place London, W1B 1NT
Bankers	**HSBC Bank Plc**	62 George White Street, Bristol, BS1 3BA
Legal adviser	**Eversheds LLP**	1 Callaghan Square, Cardiff, CF10 5BT
Auditor	**BDO LLP**	2 City Place, Beehive Ring Road, Gatwick, RH6 0PA
Investment advisers	**Ruffer LLP**	80 Victoria Street, London, SW1E 5JL

ACHIEVEMENTS AND PERFORMANCE

Our purpose

We are a membership organisation for all of those who share our passion for physics, and a trusted and valued voice of the physics community.

We inspire people to develop their interest in physics, whether in the classroom, in colleges and universities, in businesses, or at home. We encourage and support the development of a world-class physics education that is available to all; we open up opportunities to choose a career using physics, and we enhance the level and quality of continuing professional development in the workplace, setting the standards that physics professionals should attain.

We bring together the physics community to share its knowledge and advance their thinking, and to play our part in ensuring the strength of the core discipline. We help to create a stimulating environment that encourages physicists to work across traditional boundaries and in which innovation can thrive.

We recognise and celebrate members of the physics community who have made a real difference through their work and showcase the contribution that physics makes to our economy, to our everyday lives and towards tackling some of the biggest challenges we face in society.

Our values

Our values are an expression of what we believe in and how we behave as an organisation.

- We do what we do with integrity, openness and with a respect for others
- We are objective and informed by evidence. We strive to continually improve quality, and excellence underpins all that we do
- We look for opportunities to exploit the talent we have within our organisation. We are supportive to each other in all that we do and we foster team-working across the organisation
- Strategic partnerships are central to our success, and we celebrate the opportunities that come from working together with other organisations
- We are approachable, easy and rewarding to work with, and always open to new ideas and new ways of working
- We believe in the equality of opportunity for all and we will confront barriers to inclusiveness and participation wherever we encounter them

A new strategy for 2015–2019

Following more than a year of consultation with members, stakeholders and partner organisations, in 2015 the Institute launched a new strategy for 2015–2019. The new strategy is the focus for the Institute of Physics in order to have the greatest impact for physics, for the economy and for society.

The new strategy, through which we strive to achieve our goals over the five years, divides our activities into five themes:

- **Education**: Make access to high-quality physics education open to all
- **Economy**: Position businesses to actively exploit new physics-based research
- **Society**: Engage people's interest in physics and showcase its value to society
- **Discovery**: Strengthen our core discipline while breaking traditional boundaries
- **Community**: Increase member participation in delivering our programme of activities

The themes we have chosen reflect our belief that we can make substantive and measurable change over that time period. Each theme has three outcomes with which we expect to deliver a step change. These themes and outcomes will drive the focus of our business plan and the framework through which we will measure our performance.

Public benefit

The object of the Institute as stated in the Royal Charter is **to promote the advancement and dissemination of a knowledge of and education in the science of physics, pure and applied, for the benefit of the public and the members of the Institute.**

As a charity the Institute must have purposes all of which are exclusively charitable (as defined by the Charities Act 2011) and are for the public benefit. The Institute meets the public benefit test in the following ways:

- Advancement of education
- Advancement of science
- Advancement of community development

The trustees confirm that they have referred to the Charity Commission's guidance on public benefit when reviewing the Institute's aims and objectives and in planning future activities. The Institute works to advance physics research, application and education, and engages with policy makers 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:

- Through our support for teachers and curriculum development, by improving the quality of teaching of physics in schools and the diversity of students who are able to access the many benefits of a high-quality physics education
- Through the publication of journals, ebooks, magazines and websites, and the organisation of scientific meetings and conferences, by enabling the dissemination of high-quality physics research, so that researchers and research organisations are able to reach the widest possible audience and benefit from the latest developments in physics research
- By connecting physicists across all sectors to promote the application of physics and drive innovation and development of new technologies for the benefit of the economy and wider society
- By organising an exciting programme of activities and events to engage the public and raise awareness of physics, its impact on society and addressing the big challenges and the opportunities it provides for everyone.
- By ensuring the competence and ethical commitment of those practising as physicists and engineers (with a physics background) through the regulation of professional standards and support for continuing professional development
- Through our diversity programme, which aims to cultivate an inclusive, sustainable, diverse and vibrant physics community; promoting best practice that breaks down barriers to inclusion regardless of gender, ethnicity, disability and socioeconomic status

Provisions are in place for those on low incomes. Our membership fees are reduced or waived for students and for those from developing countries. As part of our commitment to supporting scientific research globally, we participate in a number of programmes that offer several ways for researchers in developing countries to gain access to our journals for little or no cost. Private benefits, where they occur, are incidental and mainly consist of prizes for exceptional scientific or education achievements.

More details of many of the specific activities undertaken by the Institute to carry out its charitable purposes for the public benefit are set out in the following section on achievements and performance during the year.

Education

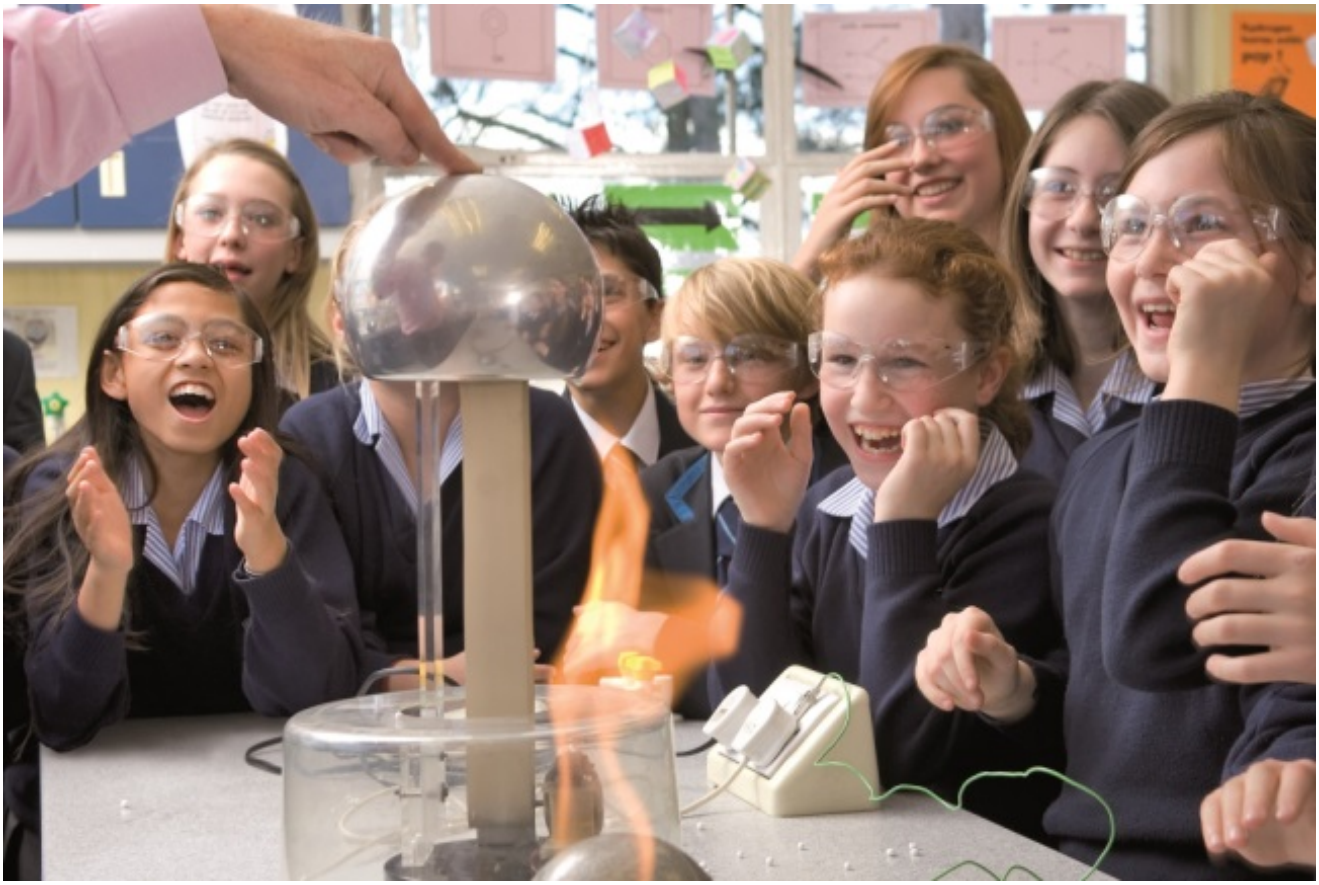
Everyone will have the opportunity to choose to study physics and those that do will have access to high-quality education and well-informed choices about future careers.

To achieve this we will:

Increase the proportion of 16- to 19-year olds studying physics, and, within that, increase the proportion of girls

We are working to address the under-representation of girls in physics at post-16. Our research has looked at the causes of this and action has now started through a range of programmes to better engage girls with physics in the classroom and beyond. In October we launched a report highlighting that gender still has a major influence on the subjects young people choose to study, particularly physics, but such stereotyping is not insurmountable.

High quality teaching is important in addressing the shortage of students (especially girls and pupils those from low socio-economic status backgrounds) choosing to study physics beyond the age of 16. The common theme for our initiatives is that improving teachers' subject knowledge and pedagogical content knowledge is the most effective and long-lasting way to improve the educational experience that students have of physics in school.



The Institute has a range of programmes to better engage girls with physics in the classroom.

We administer teacher-training scholarships, run recruitment events to promote the teaching profession, and support new teachers through mentoring, but the longstanding shortage of specialist physics teachers remains a significant challenge. We will continue to improve recruitment and retention of specialist physics teachers until the recognised shortage is overcome and the targets set by the government have been reached.

We support the professional development of physics teachers through a number of initiatives at different levels and in different areas, e.g. the Stimulating Physics Network, Capital Physics and the Teacher Network. We have also run a series of

projects aimed specifically at addressing the gender imbalance in physics, e.g. Improving Gender Balance and the Drayson Project.

In 2015 we awarded 111 scholarships, on a competitive basis, to trainee teachers, each worth £25,000, funded by the Department for Education. Alongside the scholarships, we provide mentoring and support to the scholars during their training year. We were delighted that the government decided to renew this programme for another year with an increased award of £30,000 and we were pleased to see an upturn in overall physics teachers recruited into the profession in England, from 661 to 746. However this is still short of the required target, so there is more to do.

In 2016 we will:

- Increase the number of suitable applicants to physics initial teacher education courses and continue to build links with physics teachers through the scholarship initiative
- Establish a process to obtain better data on the career progression of teachers
- Produce and disseminate resources to raise awareness among teachers, parents and students of the desirability of physics qualifications to employers
- Use and disseminate, through a report and continuing professional development (CPD), our growing understanding of the factors that affect girls' decisions to take physics
- Develop a coherent offer to teachers that provides support on-line and through in-school CPD in order to improve the quality of physics teaching across the nations

Develop a community-led, evidence-informed curriculum and assessment framework for all age-groups

We have produced an A-level curriculum document through our community-led Curriculum Committee, which aims to inspire students by structuring content around the big ideas of physics. Work has started on a GCSE document, and content and assessment working groups have been formed to facilitate this.

In 2016 we will:

- Publish and launch an evidence-informed curriculum document for A-level and for GCSE that becomes regarded as the national guideline for the development of curricula and specifications

Be recognised for having fostered an environment where research into pedagogy in further and higher education can thrive and for our leadership in best practice

To support excellent teaching in higher education we established a project partner group of more than 30 university physics departments. They are investigating how we can assess students' conceptual understanding of physics and thereby work to improve it. We also established networks of admissions tutors and directors of teaching and learning from across the UK and Ireland. The groups had their first network meeting in May 2015 and will continue to meet annually, building links across the community. In order to address the lack of funding opportunities for those in physics departments researching pedagogy in higher education, we offered seed funding of up to £10,000 to aid groups collaborating across universities to develop educational research proposals.

In 2016 we will:

- Support the submission to the Engineering and Physical Sciences Research Council of at least three research projects investigating physics teaching in higher education so as to open up a funding stream for education research in higher education
- Run a pilot with physics departments to investigate ways of improving the conceptual understanding of basic physics ideas by physics graduates

Economy

Physics will be recognised for the contribution it makes to the economy, and businesses will have access to a highly qualified and skilled workforce and, whether large or small, have an understanding of how they can actively exploit new and emerging physics-based research.

To achieve this we will:

Enable businesses to increase their information exchange on both key foundation areas of physics and in new and emerging physics-based research and technologies by providing a recognised and valued link between businesses and the research base

Physics has been at the heart of innovations from the lightbulb to the Large Hadron Collider. Today, physics and physicists drive the success of the best and brightest companies.

To build innovation partnerships between academia and business, we launched our Open Innovation programme in June at a pilot event run in partnership with the University of Durham and its Biophysical Sciences Institute. Business leaders from 14 companies came together to look to physics for solutions to business problems, with half of them committing to working up two industry–academic collaborative projects as a result. Companies that took part included medium-scale businesses as well as global giants such as PepsiCo and Fujifilm.

A demonstration from Jonathan Malcolm of M Squared Lasers at the Innovation Awards parliamentary reception.

Our Innovation Awards celebrate companies in the UK and Ireland that have built success on the innovative application of physics. The 2015 IOP Innovation Award winners were M Squared Lasers, Tracerco, Hallmarq Veterinary Imaging, Metrasens, and Silixa, all of which received their awards at a parliamentary reception.

In 2016, we will:

- Run an open innovation project in the food-manufacturing sector that will bring together large, medium and small businesses and world leading academics

- Increase recognition of companies in the UK and Ireland that have built success on the innovative application of Physics, through our Innovation Awards scheme

Ensure that government has relevant and focused evidence on the value of physics, and more widely STEM, to the economy in order for them to make informed funding decisions

Science and technology have an essential part to play in meeting the policy challenges that the UK faces over the next five years, from threats to national security to improving economic productivity to securing our energy supply. The Institute worked alongside its sister societies to publish a series of case-studies, Inspirational Physics for a Modern Economy, drawn from the funding councils' Research Excellence Framework exercise to highlight the contribution physicists make to these societal challenges, and to continue to make the case for UK investment in science and research. We also met with representatives of the Irish government and its consultants to discuss new facilities and the Innovation2020 strategy and ensure that science funding was kept high on the agenda.

We worked to ensure that university physics departments, essential for training future generations in STEM skills, enabling social mobility and undertaking much of the research that drives innovation and knowledge transfer are properly funded to do this successfully. In 2015 we published the latest report in a series of analyses of the finances of physics and chemistry departments to provide evidence for the need for greater funding and support.

In 2016, we will:

- Publish studies of the economic contributions of physics-based business to the UK and Irish economies
- Present information during and after the national election campaigns in Northern Ireland, Scotland and Wales on the value of physics and physics-trained workers, and the steps needed to preserve and increase that value
- Provide evidence to ensure that increasing funding for physics research and teaching is part of discussions on economic-growth programmes in Ireland during and after the election campaign

Ensure that schools and universities have resources that showcase the benefits that studying physics offers for future careers, and that focus on breaking down barriers to inclusivity and opportunity

The underrepresentation of women in physics and astronomy holds back a significant cohort from using their talent and potential in physics. We published a report, Gazing at the Future: The experiences of male and female physics and astronomy doctoral students in the UK, which presents the findings of a survey of doctoral students in physics and astronomy exploring their experiences, and providing a number of recommendations for universities, funders and professional societies.

We worked with our 1,700 affiliated schools to ensure that our updated careers advice booklet is available to 14- to 16-year old students in England. Our website providing comprehensive information on university physics courses, MyPhysicsCourse, continued to be popular with prospective physics students and we also produced a new guide to physics courses in Ireland.

In 2016, we will:

- Produce and disseminate new careers literature to support the careers decisions of students at 18
- Produce and trial new transferable-skills careers resources for the classroom

Society

We will work to widen participation and enjoyment of physics, and to raise the appreciation of the important role that physics plays in our culture and society. We will be respected as a trusted and influential voice in evidence-based policy-making on issues of importance to society.

To achieve this we will:

Establish respected and trusted advocacy groups to deliver a more focused and rounded policy programme that is strongly connected with our target audiences

To create strong connection between physics and government, we refreshed our UK parliamentary engagement programme and we took the opportunity during the UK general election year, with the help of our members, to develop further our connections with MPs. In Scotland, we launched a buddying scheme between early-career physicists and Scottish civil servants to create connections and further develop members as advocates for physics.

We have consolidated our data about physics and physicists in the UK and Ireland into an online resource where, we, our members and other interested groups can access information. We made formal submissions to more than 30 inquiries and consultations in the UK and Ireland, covering topics from schools education through further education, higher education, innovation, and research funding and governance.

In 2016, we will:

- Provide a strong voice for physics in government through the creation of new connections with parliamentarians in the UK and Ireland
- Ensure that policymaking in the UK and Ireland is informed at the highest level by physics knowledge and expertise through the publication of a programme of reports on major national challenges

Establish a sustainable, externally funded international programme of capacity building in those developing countries where there are clear partnership opportunities

In 2015 we focused our work in Tanzania and sponsored the Mathematical, Chemical and Physical Sciences Award at the 2015 Young Scientists Competition. Participation at Young Scientists Tanzania allowed us to build links with organisations such as the African Institute for Mathematical Sciences in Tanzania.

We have been running an entrepreneurial workshop programme since 2006 and last year organised a workshop for the first time in Arusha, Tanzania with the Nelson Mandela African Institute for Science and Technology.

In 2016, we will:

- Continue to develop relationships in sub-Saharan Africa, with a particular focus on Tanzania, to offer solutions to the teaching of practical science subjects and the provision of entrepreneurial and vocational skills training to students
- Work with international partners to deliver entrepreneurial training programmes in developing and emerging economies that provide tools for local scientists to make positive contributions to their country's economy

Increase participation in our outreach activities, with a greater focus on building science capital and in showcasing the value of physics to society

2015 was the International Year of Light (IYOL) and the Institute of Physics acted as the coordinating centre for the activities happening within the UK during the year. This included forging new collaborations spanning the scientific, artistic and cultural professional communities and leading on an ambitious programme of outreach and education projects. The Institute also represented the UK on the IYOL global platform and our work has been featured at events in Paris, Berlin, Sicily and at the global closing ceremony in Mexico.

Light and Dark Matters was a series of events organised collaboratively with Tate Modern for the International Year of Light. We were keen to collaborate with Tate Modern in order to reach new audiences who do not traditionally attend science events and to allow them to engage with physics through the lens of art. The events took place over two days in November. A total of 650 people attended in person, and a further 2,500 were engaged online.

Professor Tara Shears gave the first of our 2015 public lectures in May.

We launched public lectures in public spaces with an inaugural event on the canal steps at Granary Square in King's Cross. CERN scientist Professor Tara Shears engaged an open-air audience with a talk on the Large Hadron Collider that attracted more than 250 people.

In 2016, we will:

- Develop an outreach toolkit for our branches to build capacity and enable participation in and delivery of outreach activities
- Engage non-expert public audiences with physics in unexpected public venues and through collaborations
- Run four high-profile public lectures, as part of our IOP Summer Sessions

Discovery

We will recognise excellence in research; we will support physicists, particularly those in their early-career, to help them achieve their full potential, and we will have a world class reputation for our work in publishing research. We will work to strengthen our core discipline and promote the international nature of physics, and we will encourage and support those who look to collaborate with others across traditional boundaries.

To deliver this we will:

Focus more on supporting and championing careers for physicists by providing opportunities for them to broaden their professional development and maximise their potential

In 2015 we supported 125 PhD students to attend academic conferences in 21 countries through our Research Student Conference Fund and the CR Barber bursary scheme. As part of our commitment to the International Year of Light we awarded additional grants to enable postgraduate students to attend the Light in Science, Light in Life summer school for young researchers held in Mexico in August.

In 2016, we will:

- Continue to support graduate students to attend overseas conferences through our travel bursary schemes
- Launch a new bursary to support early career researchers in industry and academia and, in the first year, support 20 researchers to attend overseas conferences or visit international facilities
- Provide researchers the opportunity to present and network at major pan-scientific events and though bilateral exchange programmes, with national physical societies
- Through our Juno scheme, increase to five the number of major physics-based research institutions committed to gender equality

Work with IOP groups to deliver a programme that is strongly focused on developing the core discipline, and that involves collaborations across discipline boundaries and in new emerging areas of discovery

With our subject groups we organised a total of 14 one-day meetings and 19 multi-day conferences; a total of 2,266 participants attended these events, which included a European Physical Society Conference and a joint collaborative meeting between the Institute and Imperial College London for the International Year of Light. From the meetings, there were three publications in the Journal of Physics: Conference Series.

As part of our commitment to the health of the discipline we worked with the interdisciplinary Astroparticle Physics Group and the Science and Technology Facilities Council to deliver a review of astroparticle physics research in the UK.

In 2016, we will:

- Work with our groups to ensure delivery of their programme of meetings and conferences in support of the core discipline and emerging areas at the discipline boundaries
- Develop a new resource, Physics 2020, a comprehensive data-set of physics research and powerful analysis tools to provide evidenced-based advocacy to research funders on behalf of our community

Deliver a broad-ranging programme of journals, books, magazines and conference proceedings that provides outstanding service to authors and readers, and value for money to libraries and publishing partners

In 2015 IOP Publishing published 73 journals, launching three new titles during the year: Convergent Science: Physical Oncology, Biomedical Physics & Engineering Express, and Flexible and Printed Electronics.

IOP Publishing's new book-publishing programme grew further in 2015, publishing 50 titles in total. During the course of the year, IOPP took an average of just 11 weeks to produce new books, from acceptance of the final manuscript to web publication. This is an industry-leading standard for such complex, multimedia-rich books.

IOP Publishing continued to develop the three journals in materials science launched in 2014 and one of those, 2DM, published 137 articles in 2015, up from 49 in 2014, and will gain its first Impact Factor in 2016, an outstanding achievement for a newly launched journal.

In total IOPP published more than 1,450 articles in its fully open-access journals and almost 1,000 under the hybrid model in its subscription journals. A full report from IOP Publishing can be found on page 21.

In 2016, we will:

- Further develop our services to authors, readers, librarians and publishing partners
- Build on the initial success of our books programme, expanding it with more titles and new partners
- Continue to grow our open access publishing

Groups

The Institute has 49 member-led groups covering a wide variety of subjects and specialist areas across physics and in our profession. Groups' activities are driven by their members and include organising conferences, granting bursaries, and awarding prizes in their area of physics. Groups promote interaction between physicists working in industry and research, providing opportunities for networking and a forum for meeting and discussion. The groups are listed at iop.org/activity/groups together with information on their programmes of activity.

IOP grants support early career researchers attending international meetings and visit international facilities.

Community

Our membership will be engaged and inspired by what we do and we will be an organisation that people want to join and to collaborate with.

To achieve this we will:

Increase the number of members, from across the demographic, who are participating in an Institute activity, strongly supported by representatives in the nations and from our branches and subject groups

The solar eclipse on 20 March sent eclipse enthusiasts on a chase to the far north, encouraged some citizen science, and inspired a host of activities around the UK and Ireland. We worked with staff from Cardiff University's physics department and the National Museum of Wales to host a highly popular event hosted from the steps of the Cardiff Museum. The eclipse viewing attracted far bigger crowds than had been expected, with people queuing around the block to try out solar glasses, solar telescopes and a variety of pinhole projectors.

The Institute's branches were central to the first ever Northern Ireland Science Festival, which included the launch of the International Year of Light in Northern Ireland as well as more than 130 events, exhibitions, workshops and talks. A street was named after the influential Belfast-born physicist John Bell and his theorem, which revolutionised our understanding of quantum theory. The IOP in Ireland put together 11 events for the festival.

In 2016, we will:

- Improve support to our branches and groups, and provide clearer communication to members in order to enhance member engagement and participation in our activities

Increase both early career and teacher membership, and have a fellowship that more closely reflects the wider membership demographic

We have successfully applied to the Science Council for a licence to award Registered Science Technician (RSciTech) and Registered Scientist (RSci) and developed the procedures to deal with applications from eligible technicians.

In 2016, we will:

- Engage with the top five physics-based industries to offer them accreditation of their employees
- Work towards having a membership structure in place (by end of 2017) that recognises the important role of technicians within the physics community and supports their career development

Establish a professional accreditation process for technicians with a strong basis in physics, and for those from further education who provide physics-based training and development programmes

2015 was a year of preparation and data-gathering in order for us to better understand our members' and potential members' career aspirations and perceptions of the Institute. We have planned focus groups with a range of physicists in different careers and in different stages within their careers. These will take place in 2016 and we will report our findings and planned activity in response to these findings in subsequent annual reports.

In 2016, we will:

- Explore physicists' perceptions of the IOP membership, by running a series of focus groups and qualitative surveys as part of a process to revise our categories of membership to reflect better the evolving career paths of our community

Nations and branches

The Institute operates locally throughout the UK and Ireland through a very active network of member-led nations and branches. There are 11 branches in England, some of which have local centres, as well as our nations: IOP in Ireland, IOP

in Scotland and IOP in Wales. Nations and branches organise programmes of physics-related events such as lectures, meetings and conferences for members and also work locally to promote physics, physics education and public understanding of physics. Our nations are also involved in work with national governments and devolved administrations. The Institute also currently has two international branches, known as chapters, in Finland and in the south-eastern United States.

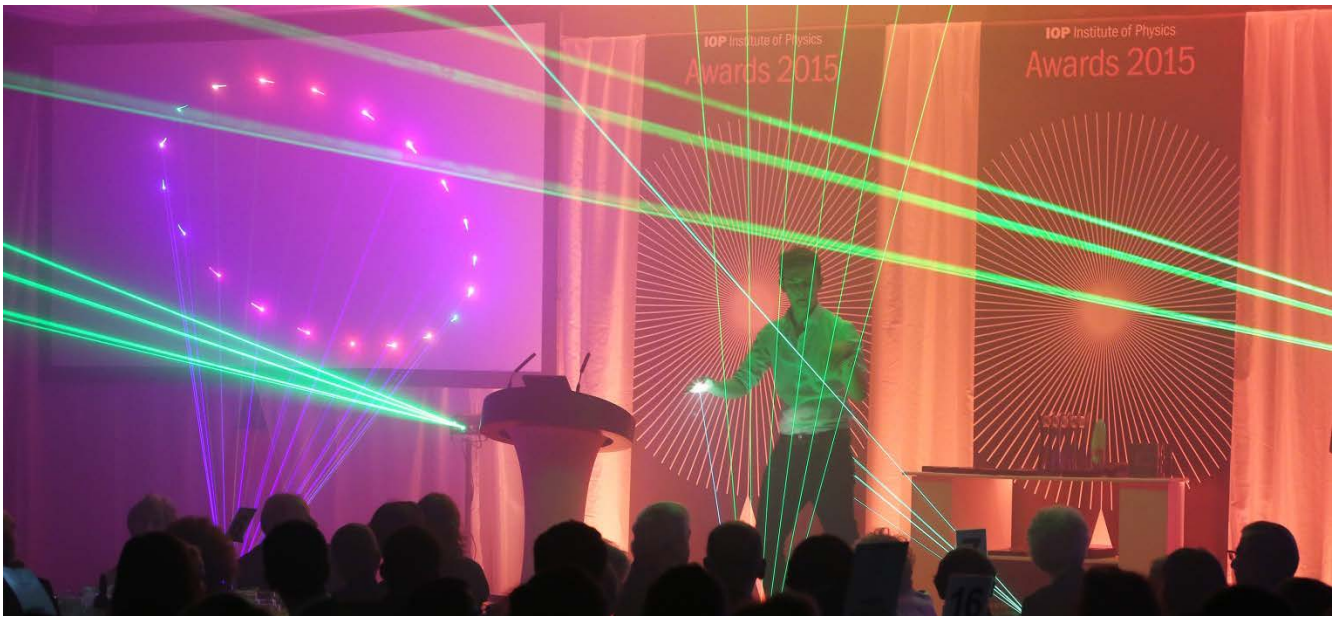
The nations and branches are listed at iop.org/activity/branches together with information on their programmes of activity.

Institute of Physics in Ireland at the BT Young Scientist Exhibition in January 2015.

IOP AWARDS

IOP Awards recognise teams and individuals who have made a substantial contribution to the development or reputation of physics in the UK or Ireland. It is our aim to identify and honour people and teams who are making remarkable contributions to physics, and to encourage younger members of our community to greater success in the future. Our medal portfolio spans all areas of physics, as well as contributions made to physics outreach, physics education, the application of physics and physics-based technologies.

Our Innovation Awards celebrate companies in the UK and Ireland that have built success on the innovative application of physics – companies that have generated profit, secured jobs and improved efficiency across a range of sectors, from oil and gas to renewable energy, medical technologies to high-tech manufacturing.



2015 winners

Newton Medal	Professor Eli Yablonovitch (University of California, Berkeley)
Dirac Medal	Professor John David Barrow (University of Cambridge)
Faraday Medal	Professor Henning Sirringhaus (University of Cambridge)
Glazebrook Medal	Professor Sir Tejinder Virdee (Imperial College London)
Swan Medal	Professor Iain Baikie (KP Technology Ltd)
Maxwell Medal	Dr Clare Burrage (University of Nottingham)
Moseley Medal	Dr Rahul Raveendran-Nair (University of Manchester)
Paterson Medal	Dr Edmund Kelleher (Imperial College London)
Bragg Medal	Professor Paula Chadwick (University of Durham)
Kelvin Medal	Professor Christopher Lintott (University of Oxford)
Chadwick Medal	Professor Amanda Cooper Sarkar (University of Oxford)
Joule Medal	Professor Judith Driscoll (University of Cambridge)
Mott Medal	Professor John Saunders (Royal Holloway, University of London)
Payne-Gaposchkin Medal	Professor Valery Nakariakov (University of Warwick)
Rayleigh Medal	Professor Christopher Pickard (University College London)
Tabor Medal	Professor Geoffrey Thornton (University College London)
Young Medal	Professor Nikolay Zheludev (University of Southampton)
Phillips Award	Professor James Hough (University of Glasgow) and Professor Julian Jones (Heriot-Watt University)
Innovation Award winners	Hallmarq Veterinary Imaging, M Squared Lasers, Metrasens, Silixa and Tracerc

SUBSIDIARY COMPANIES

The Institute has eight subsidiary companies of which seven currently carry out trading on its behalf. To ensure clarity and appropriate governance, there are a number of agreements in place that define and describe the provision of inter-group services.

There are three main subsidiary companies:

- **IOP Publishing Ltd** (commonly known as IOPP)
  IOPP is a wholly owned subsidiary of the Institute and has its registered office at Temple Circus in Bristol. The principal activity of IOP Publishing Ltd is the publication and distribution of high-quality scientific journals and magazines.

- **IOP Publishing Inc.**
  IOP Publishing Inc. is a not-for-profit corporation of which the Institute is the sole corporate member. It is incorporated in the USA with its principal place of business at 150 South Independence Mall West, Suite 929, Philadelphia. The principal activity of IOP Publishing Inc. is the sale and distribution of scientific journals and magazines.

- **IOP Enterprises Ltd** (commonly known as IOPE)
  IOPE is a wholly owned subsidiary of the Institute and has its registered office at the Institute's headquarters in London. Its principal activity is to promote the use of the events, catering and room hire facilities at the Institute's headquarters, and to organise exhibitions, courses and conferences.

Two of these companies have second-tier subsidiary companies of their own:

- **IOP Business Publishing Inc.** (a subsidiary of IOP Publishing Inc.)
  IOP Business Publishing Inc. is a wholly owned subsidiary of IOP Publishing Inc. It is incorporated in the USA with its principal place of business at 150 South Independence Mall West, Suite 929, Philadelphia. The principal activity of IOP Business Publishing Inc. is to provide advertising-sales services.

- **IOP Educational Publishing Ltd** (a subsidiary of IOP Publishing Ltd)
  IOP Educational Publishing Ltd is a wholly owned subsidiary of IOP Publishing Limited and has its registered office at Temple Circus in Bristol. The company is currently dormant and is not trading.

- **IOP Publishing Consultants (Beijing) Co. Ltd** (a subsidiary of IOP Publishing Ltd)
  IOP Publishing Consultants (Beijing) Co. Ltd is a wholly owned subsidiary of IOP Publishing Limited with its registered office at Room 1804, The Exchange Beijing, B-118 Jianguo Road, Chaoyang District, Beijing 100022, China. The principal activity of IOP Publishing Consultants (Beijing) Co. Ltd is to provide services to IOP Publishing Ltd, including publishing consulting, electronic technology consulting, business consulting, market information consulting and corporate management consulting.

- **Tur-pion Ltd** (a subsidiary of IOP Publishing Ltd)
  In December 2015 IOP Publishing acquired the 50% share held by its partner Pion. Tur-pion Ltd is now a wholly owned subsidiary of IOP Publishing Limited with its registered office at Temple Circus in Bristol. The principal activity of Tur-pion Ltd is publishing English translations of leading Russian scientific journals.

- **IOP Marketing and Promotion Services Private Ltd** (a subsidiary of IOP Publishing Ltd)
  IOP Marketing and Promotion Services Private Ltd is a wholly owned subsidiary of IOP Publishing Limited, incorporated in India in January 2016, with its registered office at SF-6, Golden Enclave, 184 P H Road, Chennai, India. The principal activity of the company is promotion and marketing services to IOP Publishing Ltd.

IOP Publishing Ltd – activities in 2015

IOP Publishing is a leading publisher in physics, astronomy and mathematics, providing publishing services to the worldwide scientific community through its journals, books, magazines and web sites and its services to other scientific societies and research organisations.

2015 was a challenging year for IOPP and other scientific publishers, following the bankruptcy of the major subscription agent Swets in late 2014 and with a good deal of volatility in its markets, in particular in Southern Europe, North Africa, the Middle East and Latin America. Nonetheless, through careful management of its costs IOPP was able to achieve its budget for net profit which it will transfer in its entirety to the Institute as Gift Aid.

Journals
During 2015 IOPP published 73 journals, launching three new titles during the year: Convergent Science: Physical Oncology, Biomedical Physics & Engineering Express, and Flexible and Printed Electronics.

It continued to develop the three journals in materials science that it launched in 2014 and one of those, 2DM, published 137 articles in 2015, up from 49 in 2014, and will gain its first Impact Factor in 2016, an outstanding achievement for a newly launched journal.

Overall, IOPP published 27,230 articles in 2015 and 5,627 conference papers in its Proceedings programme.

In December 2015 IOPP took full control of the Tur-pion business, in which it publishes six leading Russian scientific journals in English translation, acquiring the 50% share held by its partner Pion.

Books
IOPP's new book publishing programme grew further in 2015, publishing 50 titles in total. IOPP also signed a co-publishing agreement with the Institute of Physics and Engineering in Medicine (IPEM), with which it also co-publishes two journals. The first titles under the new partnership will be published in 2018. IPEM is the second society partner in IOPP's books programme after the American Astronomical Society.

During the course of the year IOPP took an average of just eleven weeks to produce new books, from acceptance of the final manuscript to web publication. This is an industry-leading standard for such complex, multimedia-rich books.

Technology
2015 saw the completion of two major technical projects which will add resilience to IOPP's infrastructure and improve services further still to authors and readers. These were the move to a cloud of all IOPP's customer-facing services, a major undertaking which was completed on time and on budget without any negative impacts on customers; and the replacement of its production system.

Open access
2015 was the second year for IOPP's two offsetting pilots in the UK and Austria. The UK pilot, in which 22 universities are participating, saw growth of 20% on the prior year in the number of articles by UK authors published on an open-access basis in IOPP's subscription journals (under the so-called hybrid model), with the great majority of publication charges being offset against the participants' subscription and licence fees. IOPP's offsetting model has been described by several UK institutions as the best on offer to UK universities. The Austrian offsetting agreement also saw good growth.

In total IOPP published more than 1,450 articles in its fully open-access journals, including a record number in Environmental Research Letters, and almost 1,000 under the hybrid model in its subscription journals.

During 2015 IOPP also implemented CHORUS, the repository solution chosen by most US federal agencies to comply with the US government's public-access policy.

IOP Enterprises Ltd – activities in 2015

As a result of the Institute vacating 76 Portland Place in March 2014 ahead of a move to new premises in King's Cross the trading activities of IOPE remained significantly scaled back in 2015.

As the meeting rooms in 80 Portland Place are required by the Institute to conduct its own business, a venue-referral service for previous clients has been put in place with neighbouring venues.

Throughout 2015, the IOPE Board has continued to identify opportunities associated with the purchase and development of the Institute's new home, including a new venue business and ways in which IOPE can help the Institute achieve its charitable objectives through the delivery of educational, public engagement and physics-based business innovation programmes.

FINANCIAL REVIEW

Financial statements

The financial statements for the year ended 31 December 2015 are set out on pages 27 to 51. 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).

The group and the charity have adopted FRS 102 for the year ended 31 December 2015 and have restated the comparative prior-year amounts. An explanation to the changes to previously reported surplus and equity is included in note 30 of the financial statements.

Financial review

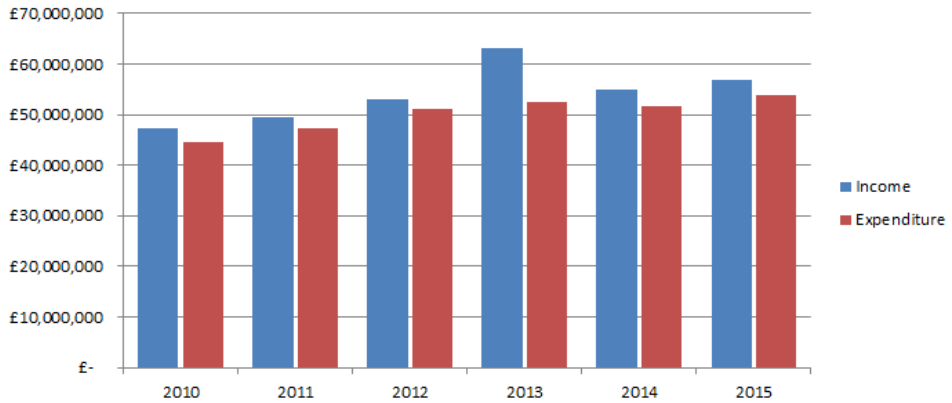
Some 88% (2014: 88%) of the group's incoming resources are generated from the activities of its trading subsidiary, IOP Publishing Limited. Other sources of income include income from members either as membership fees or for additional services, grants from government and other grant-awarding bodies, and from IOP Enterprises Ltd, another trading subsidiary. The group previously had an investment in a joint venture, Tur-pion Limited which was held directly by IOP Publishing Limited. On 1 December 2015, IOP Publishing Limited purchased the remaining 50% of Tur-pion Limited bringing IOP Publishing Limited's shareholding to 100%.

Total incoming resources in the year for the group were £56.9m (2014: £53.2m), an increase of £3.7m or 6.8% on 2014. Discovery income increased by £3.5m on 2014 to £49.2m due to the growth of IOP Publishing Ltd's new book programme. Education income increased by £0.7m to £3.7m due to additional grant funding received for the Institute Educational programmes described on page 10. This was offset by a reduction in other trading activities of £0.4m. Further commentary on the activities of IOP Publishing Limited is shown below.

Amounts to be remitted to the Institute by Gift Aid from its subsidiaries in respect of 2015 are £9.7m (2014: £6.4m).

Total resources expended in the year have increased due to increased expenditure within charitable activities, specifically Discovery and Education. Total expenditure for the group was £53.8m (2014: £51.1m), an increase of £2.7m or 5.2%.

Further details are included in the Consolidated Statement of Financial Activities on page 27. The group and Institute balance sheet is included on page 29. The Institute considers incoming resources, Gift Aid remitted from its subsidiaries, and expenditure to be key performance indicators.



Financial summary: consolidated income and expenditure from 2010–15

Debtors have increased from £10.8 m to £11.4m at 31 December 2015. The relative increase is due to an increase in accrued revenue within IOP Publishing Limited as a result of an increased volume of sales in late 2015, partly offset by a reduction in trade and other debtors.

Deferred revenue remains a key balance and has increased by £1.3m to £14.2m (2014: £12.9m). This reflects a change in the cash-collection profile due to cash receipts from subscription agents and the introduction of new scientific

communications subscription packages within IOP Publishing Limited. There is also an increase in deferred membership renewals for 2016 within the Institute where payment has been received in 2015.

While the cash and short-term investment position remains strong, it has decreased from £22.8m at 31 December 2014 to £19.8m at 31 December 2015. The decreased balance reflects additional payments made by the group into the Institute's defined benefit pension scheme on its closure to future accrual as part of a deficit reduction plan and capital additions during the year of £2.3 m. Further details on capital additions are given in note 15.

The Institute's defined-benefit pension deficit decreased by £5.5m to £17.7m (2014: £23.2m). The assets in the Institute of Physics Retirement Benefit Plan (1975) grew by £4.7m and the estimated present value of liabilities decreased by £0.8m to £80.9m. Additional contributions made by the Institute during the year have improved the deficit position as have changes in assumptions used in the actuarial valuation. These have been partly offset by asset returns being lower than expected.

The scheme's last triennial revaluation was at 1 January 2014 and a deficit elimination plan agreed at that time with the scheme's trustees. The next triennial revaluation will be undertaken on 1 January 2017. Further details are given in note 24 of the financial statements.

The trustees have concluded that the group is a going concern and these financial statements have therefore been prepared on the going concern basis. The strong performance of the group in 2015 and the improved net asset position at the end of 2015, as highlighted above, support the trustees' conclusion.

Trading subsidiaries

IOP Publishing Limited (IOPP)
The turnover for the year to 31 December 2015 was £49.9m (2014: £47.1 m) an increase of 5.8% on 2014 due to the growth of the new book programme as described above. The current year gross profit margin remains largely consistent at 90.7% (2014: 88.4%) with an operating margin for the current year of 19.1% which has increased slightly from the previous year (2014: 18.9%). The company will remit to the Institute of Physics, by Gift Aid, the sum of £9.7 m in respect of 2015 (2014: £6.4 m).

As the publishing arm of the Institute, IOPP's role is to provide high-quality publishing services to the global scientific community, helping researchers to communicate their work effectively. IOPP also gift-aids its net distributable profit to the Institute, enabling the latter to fulfil its wider mission.

IOP Enterprises Ltd (IOPE)
The turnover for the year to 31 December 2015 was £118 k (2014: £321 k). The company will remit to the Institute of Physics, by gift aid, the sum of £48 k (2014: £11 k). As a result of the Institute vacating 76 Portland Place in March 2014 ahead of a move to new premises in 2017 the trading activities of IOPE have been scaled back.

Reserves and investment

The Charter and Bylaws confer power on the Institute to maintain income reserves. Council reviews at least annually both the Institute'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 Institute 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
- In the event of a material and sustained fall in income from other sources, to provide sufficient reserves to enable the Institute 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 Institute 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 investments held by the Institute generated unrealised losses for the group of £0.4m (2014: unrealised gain of £0.7m). As a result of a purchase of investments of £3.4m (2014: £3k) offset by the unrealised loss, the total market value of investments held by the Group increased from £19.1m as at 31 December 2014 to £22.1m as at 31 December 2015.

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 Institute.

The required level of reserves on 31 December 2015 based on the current long-term plan, as modified by the 2016 budget, is between approximately £20m–27m (2014: £19m–26m). The current level of free reserves as represented by the Institute's investments is £22.1m (2014: £19.1m). On this basis, current reserves are within the required range as defined in the Institute's policy.

Ethical investment policy

The Institute 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 would not want the investment decisions of the Institute to result in activities that compromise this objective. In the event that the trustees consider that any particular classes of investment choices conflict with this objective, they will provide a written list of such classes, or specific investments, to the investment managers and will require them to take such steps as are practicable and cost-effective so as not to invest in these areas.

Funds

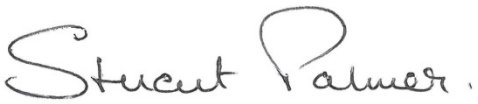
The balances on the individual funds of the Institute at 31 December 2015 are considered adequate to meet their respective commitments.

Auditors

A resolution to reappoint BDO LLP as auditors will be proposed at the next annual general meeting.

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



Professor Stuart Palmer FREng CPhys FInstP
Honorary Secretary

76 Portland Place
London
W1B 1NT

INDEPENDENT AUDITOR'S REPORT TO THE TRUSTEES OF THE INSTITUTE OF PHYSICS

We have audited the financial statements of The Institute of Physics for the year ended 31 December 2015 which comprise the consolidated and Parent Charity Statement of Financial Activities, the Group and Parent Charity Balance Sheets, the consolidated Cash Flow Statement and the related notes. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards (United Kingdom Generally Accepted Accounting Practice).

This report is made solely to the charity's trustees, as a body, in accordance with the Charities Act 2011 and the Charities and Trustee Investment (Scotland) Act 2005. Our audit work has been undertaken so that we might state to the charity's trustees those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the charity and the charity's trustees as a body, for our audit work, for this report, or for the opinions we have formed.

Respective responsibilities of trustees and auditor
As explained more fully in the Statement of Trustees' Responsibilities, the trustees are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view.

We have been appointed as auditor under section 44(1)(c) of the Charities and Trustee Investment (Scotland) Act 2005 and under section 144 of the Charities Act 2011 and report in accordance with regulations made under those Acts. Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). Those standards require us to comply with the Financial Reporting Council's (FRC's) Ethical Standards for Auditors.

Scope of the audit of the financial statements
A description of the scope of an audit of financial statements is provided on the FRC's website at www.frc.org.uk/auditscopeukprivate.

Opinion on financial statements
In our opinion the financial statements:

- give a true and fair view of the state of the group's and the parent charity's affairs as at 31 December 2015 and of the group's incoming resources and application of resources for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Charities Act 2011, the Charities and Trustee Investment (Scotland) Act 2005 and regulations 6 and 8 of the Charities Accounts (Scotland) Regulations 2006 (as amended).

Matters on which we are required to report by exception
We have nothing to report in respect of the following matters where the Charities Act 2011 and the Charities Accounts (Scotland) Regulations 2006 (as amended) requires us 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; or
- proper and sufficient accounting records have not been kept; or
- the parent charity financial statements are not in agreement with the accounting records or returns; or
- we have not received all the information and explanations we require for our audit.

BDO LLP

BDO LLP
Statutory Auditor
Gatwick
United Kingdom
Date: 21.06.16

BDO LLP is eligible to act as an auditor in terms of section 1212 of the Companies Act 2006.

BDO LLP is a limited liability partnership registered in England and Wales (with registered number OC305127).

CONSOLIDATED STATEMENT OF FINANCIAL ACTIVITIES INCORPORATING A CONSOLIDATED INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 2015

	Note	2015 Restricted £'000	2015 Unrestricted £'000	2015 Total £'000	2014 Total £'000
Income from:					
Donations and legacies		28	-	**28**	101
Charitable activities:					
Community		-	1,683	**1,683**	1,768
Discovery		90	49,114	**49,204**	45,702
Economy		-	24	**24**	25
Education		683	2,992	**3,675**	2,967
Society		-	111	**111**	124
Other trading activities		-	1,689	**1,689**	2,045
Investments	**6**	-	447	**447**	475
Other		-	-	**-**	20
Total income	**5**	801	56,060	**56,861**	53,227
Expenditure on:					
Raising funds		-	(70)	**(70)**	(155)
Charitable activities:					
Community	**7**	-	(2,843)	**(2,843)**	(3,132)
Discovery	**7**	(154)	(42,351)	**(42,505)**	(40,658)
Economy	**7**	-	(455)	**(455)**	(383)
Education	**7**	(704)	(6,315)	**(7,019)**	(5,756)
Society	**7**	-	(826)	**(826)**	(962)
Other		-	(99)	**(99)**	(72)
Total expenditure		(858)	(52,959)	**(53,817)**	(51,118)
Net gains/(losses) on investments	**17**	-	(422)	**(422)**	697
Net interest in results for the year of joint venture	**16**	-	51	**51**	71
Net income / (expenditure)		(57)	2,730	**2,673**	2,877
Other recognised gains/losses					
Actuarial (losses)/gains on defined benefit pension scheme	**24**	-	1,387	**1,387**	(14,538)
Exchange difference on retranslation of net assets of subsidiary undertakings		-	153	**153**	99
Net movement in funds		(57)	4,270	**4,213**	(11,562)
Fund balances brought forward		773	24,954	**25,727**	37,289
Fund balances carried forward	**23**	716	29,224	**29,940**	25,727

The Statement of Financial Activities includes all gains and losses recognised in the year. All amounts relate to continuing activities.

The notes on pages 31 to 51 form part of these financial statements.

CHARITY STATEMENT OF FINANCIAL ACTIVITIES INCORPORATING AN INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 DECEMBER 2015

	Note	2015 Restricted £'000	2015 Unrestricted £'000	2015 Total £'000	2014 Total £'000
Income from:					
Donations and legacies		28	-	**28**	101
Charitable activities:					
Community		-	1,683	**1,683**	1,768
Discovery		90	10,511	**10,601**	7,400
Economy		-	24	**24**	25
Education		683	2,992	**3,675**	2,967
Society		-	111	**111**	124
Other trading activities		-	48	**48**	32
Investments		-	1,231	**1,231**	1,295
Other		-	-	**-**	-
Total income		801	16,600	**17,401**	13,712
Expenditure on:					
Raising funds		-	-	**-**	
Charitable activities:					
Community		-	(2,946)	**(2,946)**	(3,216)
Discovery		(154)	(3,414)	**(3,568)**	(3,793)
Economy		-	(472)	**(472)**	(489)
Education		(704)	(6,545)	**(7,249)**	(5,995)
Society		-	(856)	**(856)**	(965)
Other		-	(118)	**(118)**	(101)
Total expenditure		(858)	(14,351)	**(15,209)**	(14,559)
Net gains / (losses) on investments	**17**	-	(422)	**(422)**	697
Net income / (expenditure)		(57)	1,827	**1,770**	(150)
Other recognised gains/losses					
Actuarial (losses)/gains on defined benefit pension scheme	**24**	-	1,387	**1,387**	(14,538)
Net movement in funds		(57)	3,214	**3,157**	(14,688)
Fund balances brought forward		773	22,608	**23,381**	38,069
Fund balances carried forward	**23**	716	25,822	**26,538**	23,381

BALANCE SHEET AT 31 DECEMBER 2015

	Note	Group 2015 £'000	Group 2014 £'000	Charity 2015 £'000	Charity 2014 £'000
Fixed assets					
Intangible assets	14	126	-	-	-
Tangible assets	15	19,463	19,257	15,745	14,679
Investments in subsidiary undertakings	16	-	-	3,001	3,001
Investments in joint ventures	16	-	174	-	-
Investments	17	22,056	19,078	22,056	19,078
		41,645	38,509	40,802	36,758
Current assets					
Stocks and work in progress	18	-	3	-	-
Debtors	19	11,408	10,844	1,457	4,903
Current asset investments		4,508	11,893	2,000	5,800
Cash at bank and in hand		15,309	10,865	6,377	2,179
		31,225	33,605	9,834	12,882
Creditors: amounts falling due within one year	20	(24,530)	(22,340)	(5,698)	(2,212)
Net current assets		6,695	11,265	4,136	10,670
Provisions	22	(716)	(880)	(716)	(880)
Pension scheme funding deficit	24	(17,684)	(23,167)	(17,684)	(23,167)
Net Assets		29,940	25,727	26,538	23,381
Restricted funds					
Restricted funds	23	716	773	716	773
Unrestricted funds					
General fund	23	46,908	48,121	43,506	45,775
Pension reserve	24	(17,684)	(23,167)	(17,684)	(23,167)
Total unrestricted funds		29,224	24,954	25,822	22,608
Total charity funds		29,940	25,727	26,538	23,381

These financial statements were approved by Council and authorised for issue on 15/6/2016 and were signed on its behalf by

Professor Roy Sambles FRS CPhys FInstP
President

Professor Julian Jones OBE FRSE CPhys FInstP
Honorary Treasurer

The notes on pages 31 to 51 form part of these financial statements.

CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 DECEMBER 2015

	2015 £'000	2014 £'000
Cash flows from operating activities		
Net income (expenditure) for the year	**2,673**	**2,877**
Adjustments for:		
Depreciation and amortisation of fixed assets	2,078	1,984
(Profit) / loss on disposal of fixed assets	50	-
Share of profit for the year of equity accounted investments	(51)	(71)
Net fair value (gains) / losses recognised in profit or loss	122	541
(Gains) / losses on investments	422	(697)
Net interest payable / (receivable)	(36)	(91)
Dividend income from fixed and current investments	(268)	(309)
Difference between net pension expense and cash contribution	(4,095)	(34)
Decrease / (increase) in trade and other debtors	51	(1,769)
Decrease / (increase) in stocks	3	2
Increase / (decrease) in trade and other creditors	(492)	(781)
Increase / (decrease) in provisions	(164)	(162)
Net cash generated from operating activities	**293**	**1,490**
Cash flows from investing activities		
Proceeds from sale of tangible fixed assets	-	12,202
Purchases of tangible fixed assets	(2,330)	(4,869)
Interest received	36	91
Dividends received on fixed and current asset investments	317	466
Purchase of subsidiary undertaking	(302)	-
Cash acquired with subsidiary undertaking	2,292	-
Purchase of investments	(3,400)	(3)
Sale of investments	-	2
Net cash provided by (used in) investing activities	**(3,387)**	7,889
Net increase / (decrease) in cash and cash equivalents	(3,094)	9,379
Cash and cash equivalents at beginning of year	22,758	13,387
Foreign exchange gains and losses	153	(8)
Cash and cash equivalents at end of year	**19,817**	**22,758**
Cash and cash equivalents comprise:		
Cash at bank and in hand	15,309	10,865
Current asset investments	4,508	11,893
	19,817	**22,758**

The notes on pages 31 to 51 form part of these financial statements.

NOTES FORMING PART OF THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2015

1. Accounting policies

The financial statements have been prepared in accordance with FRS 102 "The Financial Reporting Standard applicable in the United Kingdom and Republic of Ireland" ("FRS 102"), and with Accounting and Reporting by Charities: Statement of Recommended Practice applicable to charities preparing their accounts in accordance with FRS 102 (effective 1 January 2015) ("Charities SORP FRS 102").

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

This is the first year in which the financial statements have been prepared under FRS 102. Please refer to note 30 for an explanation of the transition.

During the year ended 31 December 2015, the Institute of Physics launched a new strategy for 2015 to 2019. The new strategy divides the activities of the Institute into five themes: Education, Economy, Society, Discovery and Community. As a result, it was necessary to re-present the comparative results for the year ended 31 December 2014 in line with the new strategy.

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).

Parent entity disclosure exemptions
In preparing the individual financial statements of the Institute of Physics advantage has been taken of the following disclosure exemptions 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.

Basis of consolidation
The consolidated financial statements incorporate the results of the Institute of Physics and all its subsidiary undertakings as at 31 December 2015 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 Statement of Financial Position, 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.

The Institute of Physics has a network of member-led branches. The income and expenditure of these branches is accounted for as part of the charity's own accounts.

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.

Joint ventures
An entity is treated as a joint venture where the group holds a long term interest and shares control under a contractual agreement.

In the consolidated financial statements, interests in joint ventures are accounted for using the equity method of accounting. Under this method, an equity investment is initially recognised as the transaction price including transaction costs, and is subsequently adjusted to reflect the investor's share of the profit or loss, other comprehensive income and equity of the joint venture. The consolidated Statement of Financial Activities includes the group's share of the joint venture's operating results, interest, pre-tax results and attributable taxation of such undertakings. In the consolidated balance sheet, the interests in joint venture undertakings are shown as the group's share of the identifiable net assets including any unamortised premium paid on acquisition.

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 recognised upon publication, and sales of access to historic archives recognised upon invoice, when permanent access is granted.

1. Accounting policies (cont.)

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.

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 accounts.

Government grants
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.

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

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:

- Office machinery - 4 - 5 years
- Fixtures and fittings - 4 - 10 years
- Computers - 3 - 4 years

The value of leasehold property is amortised over the remaining periods of the relevant leases.

- Temple Circus, Bristol (expires 2021)

The freehold property which was purchased during the year ended 31 December 2013 has not yet been brought into use and is therefore not currently being depreciated.

Investment properties
Investment properties owned by the group are held at fair value, which is determined annually and is derived from current market rents, investment property yields and published capital value growth indices of comparable real estate. Changes in fair value of investment properties are recognised in profit or loss, within 'Other recognised gains/losses' in the Statement of Financial Activities.

No depreciation is provided on investment properties.

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.

Stocks
Consumable stock is valued at cost. Specific provision has been made, where necessary, to reduce the value of work in progress and publications to net realisable value.

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.

1. Accounting policies (cont.)

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.

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.

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.

Pension costs – Institute of Physics Retirement Benefits Plan 1975
The Institute 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 Standard Life Assurance Co Ltd. This scheme closed to new members on 31 January 2014. For those members of staff who are members of this scheme, the Institute contributes 10-18% 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 Institute contributes 3-20% 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.

1. Accounting policies (cont.)

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.

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. The items in the financial statements where these judgements and estimates have been made include:

Leases

The key judgement is whether leases entered into by the group either as lessor or lessee are operating leases or finance leases. The conclusion depends on an assessment of whether the risks and rewards of ownership have been transferred from the lessor to the lessee on a lease by lease basis.

Investment property

The investment property is revalued annually. The valuation uses market rental values and yields, but as each property is unique, a certain degree of judgement is required and the value can only reliably be tested in the market itself.

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. Judgement is required in the recognition of revenue where contracts with customers span multiple years.

3. Income: comparatives by fund

	2015 Restricted £'000	2015 Unrestricted £'000	2015 Total £'000	2014 Restricted £'000	2014 Unrestricted £'000	2014 Total £'000
Income from:						
Donations and legacies	28	-	**28**	101	-	**101**
Charitable activities:						
Community	-	1,683	**1,683**	82	1,686	**1,768**
Discovery	90	49,114	**49,204**	-	45,702	**45,702**
Economy	-	24	**24**	-	25	**25**
Education	683	2,992	**3,675**	512	2,455	**2,967**
Society	-	111	**111**	-	124	**124**
Other trading activities	-	1,689	**1,689**	-	2,045	**2,045**
Investments	-	447	**447**	-	475	**475**
Other	-	-	**-**	-	20	**20**
Total income	801	56,060	**56,861**	695	52,532	**53,227**

4. Expenditure: comparatives by fund

	Note	2015 Restricted £'000	2015 Unrestricted £'000	2015 Total £'000	2014 Restricted £'000	2014 Unrestricted £'000	2014 Total £'000
Expenditure on:							
Raising funds		-	(70)	**(70)**	-	(155)	**(155)**
Charitable activities:							
Community	**7**	-	(2,843)	**(2,843)**	(32)	(3,100)	**(3,132)**
Discovery	**7**	(154)	(42,351)	**(42,505)**	-	(40,658)	**(40,658)**
Economy	**7**	-	(455)	**(455)**	-	(383)	**(383)**
Education	**7**	(704)	(6,315)	**(7,019)**	(477)	(5,279)	**(5,756)**
Society	**7**	-	(826)	**(826)**	-	(962)	**(962)**
Other		-	(99)	**(99)**	-	(72)	**(72)**
Total expenditure		(858)	(52,959)	**(53,817)**	(509)	(50,609)	**(51,118)**

5. Geographical analysis of incoming resources

	2015 £'000	2014 £'000
Europe, Middle East and Africa	**23,334**	26,813
The Americas	**22,092**	17,466
Asia Pacific	**11,435**	8,948
Total	**56,861**	53,227

6. Investment income

	2015 £'000	2014 £'000
Interest from listed investments	**268**	309
Property rental income	**95**	29
Interest from cash and short term investments	**35**	137
Other	**49**	-
Total	**447**	475

7. Expenditure on charitable activities

	Activities undertaken directly	Grant funding activities	Support costs	2015	2014
	£'000	£'000	£'000	£'000	£'000
Community	1,124	-	1,719	**2,843**	3,132
Discovery	41,413	-	1,092	**42,505**	40,658
Economy	115	-	340	**455**	383
Education	4,115	104	2,800	**7,019**	5,756
Society	250	-	576	**826**	962
Total	**47,017**	**104**	**6,527**	**53,648**	50,891

Grant funding represents 228 (2014: 107) STFC grants made to schools to help them run physics and astronomy related activities.

8. Analysis of governance and support costs

Included within expenditure on charitable activities are governance and support costs amounting to £6,527k (2014: £6,540k). These are analysed as:

	Management Costs (Directorate + Staff)	Central Costs (IT, HR, Facilities)	Finance Costs	Total
	£'000	£'000	£'000	£'000
Community	716	935	68	**1,719**
Discovery	401	644	47	**1,092**
Economy	179	150	11	**340**
Education	566	2,083	151	**2,800**
Society	285	272	19	**576**
Total	**2,147**	**4,084**	**296**	**6,527**

Basis of allocation

Management costs (directorate + staff)	IOP charity staff time spent on activity
Central costs (IT, HR, Facilities)	IOP charity staff time spent on activity
Finance costs	IOP charity total costs in the activity

Analysis of governance costs:

	2015	2014
Fees payable to the charity's auditor for the audit of the charity's annual accounts	**31**	31
Fees payable to the charity's auditor for other services:		
The audit of the charity's subsidiaries pursuant to legislation	**32**	34
Other services	**43**	16
Other taxation services	**41**	29
	147	110

9. Staff

	2015	2014
	£'000	£'000
Wages and salaries	**19,836**	18,452
Social security costs	**1,834**	1,669
Pension costs	**2,362**	2,394
	24,032	22,515

The number of employees earning more than £60,000 per year can be analysed in the following bands:

	2015	2014
£60,000 - £69,999	**17**	10
£70,000 - £79,999	**13**	9
£80,000 - £89,999	**6**	6
£90,000 - £99,999	**-**	2
£100,000 - £109,999	**2**	2
£110,000 - £119,999	**3**	1
£120,000 - £129,999 *	**2**	1
£130,000 - £139,999	**2**	1
£150,000 - £159,999	**2**	2
£160,000 - £169,999	**1**	-
£170,000 - £179,999	**-**	3
£180,000 - £189,999	**1**	1
£190,000 - £199,999	**-**	-
£200,000 - £209,999	**-**	1
£270,000 - £279,999	**1**	-
£300,000 - £309,999	**-**	1

* This banding includes the remuneration of the chief executive (2015 and 2014).

The above banding includes 48 (2014: 21) staff for whom retirement benefits are accruing under defined contribution schemes and 18 (2014: 9) 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 £490k (2014: £314k).

The average number of full time equivalent employees was:		**2015**	2014
Charitable work:	- Institute of Physics	**119**	97
Business operations:	- IOP Publishing Limited	**230**	223
	- IOP Publishing Inc.	**40**	36
	- IOP Enterprises Limited	**-**	1
	- Turpion-Moscow Limited	**8**	-
Management and administration:	- Institute of Physics	**24**	33
	- IOP Publishing Limited	**103**	96
		524	486

10. Key management personnel remuneration

Key management personnel include all members of Council, the Institute's senior management team as set out in the Annual Report, and the directors of the subsidiary companies.

The President of the Institute, honorary officers and members of Council give their time to the Institute 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 Institute and/or its subsidiaries. In the year to 31 December 2015 total expenses incurred and reimbursed to 24 trustees (2014: 24) were £31k (2014: £55k).

The total compensation paid to key management personnel for services provided to the group was £1,729k (2014: £1,904k).

11. Physics World

During the year the Institute contributed £266k (2014: £366k) to IOP Publishing Limited towards the cost of copies of Physics World supplied to members, and £70k (2014: £66k) towards the cost of copies of Physics Education supplied to the Institute's affiliated schools programme.

12. Taxation

As a registered charity, the Institute is not liable to taxation on the net revenue from its charitable activities.

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 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	**Goodwill on consolidation £'000**
Cost or valuation	
At 1 January 2015	-
Additions	-
On acquisition of subsidiary	126
At 31 December 2015	**126**
Amortisation	
At 1 January 2015	-
Provision for the year	-
At 31 December 2015	**-**
Net book value	
At 31 December 2015	**126**
At 31 December 2014	-

The group previously had an investment in a joint venture, Tur-pion Ltd, which was held directly by IOP Publishing Ltd, itself a wholly owned subsidiary of the Institute of Physics. On 1 December 2015, IOP Publishing Ltd purchased the remaining 50% of Tur-pion Ltd bringing IOP Publishing Ltd's shareholding to 100%. The balance stated above represents the goodwill arising on this acquisition.

Further information can be found in note 26.

15. Tangible fixed assets

Institute of Physics - Group	Investment property £'000	Freehold property £'000	Short leasehold property £'000	Fixtures and equipment £'000	Total £'000
Cost or valuation					
At 1 January 2015	2,385	10,311	2,400	12,007	**27,103**
Additions	12	1,427	2	889	**2,330**
Acquisition of subsidiary	-	-	-	4	**4**
Disposals	-	-	(10)	(284)	**(294)**
At 31 December 2015	**2,397**	**11,738**	**2,392**	**12,616**	**29,143**
Depreciation					
At 1 January 2015	-	-	(916)	(6,930)	**(7,846)**
Charge for the year	-	-	(237)	(1,841)	**(2,078)**
Disposals	-	-	8	236	**244**
At 31 December 2015	**-**	**-**	**(1,145)**	**(8,535)**	**(9,680)**
Net book value at 31 December 2015	**2,397**	**11,738**	**1,247**	**4,081**	**19,463**
Net book value at 31 December 2014	2,385	10,311	1,484	5,077	19,257

Institute of Physics - Charity	Investment property £'000	Freehold property £'000	Short leasehold property £'000	Fixtures and equipment £'000	Total £'000
Cost or valuation					
At 1 January 2015	2,385	10,311	2,362	1,662	**16,720**
Additions	12	1,427	-	124	**1,563**
Disposals	-	-	-	(144)	**(144)**
At 31 December 2015	**2,397**	**11,738**	**2,362**	**1,642**	**18,139**
Depreciation					
At 1 January 2015	-	-	(893)	(1,148)	**(2,041)**
Charge for the year	-	-	(236)	(250)	**(486)**
Disposals	-	-	-	133	**133**
At 31 December 2015	**-**	**-**	**(1,129)**	**(1,265)**	**(2,394)**
Net book value at 31 December 2015	**2,397**	**11,738**	**1,233**	**377**	**15,745**
Net book value at 31 December 2014	2,385	10,311	1,469	514	14,679

Investment property

During the year ended 31 December 2014, the Institute purchased a new freehold property. This property is currently being held for its investment potential and it has therefore been classified as an investment property. The investment property forms part of an integrated plan for the use of the new site in London, therefore it has been included within tangible fixed assets in the financial statements.

The investment property is valued annually on 31 December at fair value. As permitted by FRS 102, the valuation as at 31 December 2015 was undertaken internally by the trustees based on capital value growth indices published by commercial real estate services firms. The outcome of the internal valuation concluded that there had been no material movement in the value of the investment property and therefore no revaluation adjustment has been recognised in the financial statements for the year ended 31 December 2015.

In the prior year, no surplus or deficit on revaluation was recognised because the property was purchased in November 2014 at open market value and as the trustees were not aware of any material change in value of the property between the date of acquisition and the balance sheet date, the trustees considered that the valuation as at the acquisition date was a reasonable representation of the fair value as at the balance sheet date.

15. Tangible fixed assets (cont.)

Assets in the course of construction
During the year ended 31 December 2013, the Institute purchased a new freehold property. The property has not yet been brought into use, therefore freehold property assets of £11.738m (2014: £10.311m) are in the course of construction and are not being depreciated.

Included in fixtures and equipment of the group are £388k (2014: £1.425m) and of the Charity are £nil (2014: £65k) of assets in the course of construction which relate to the elements of the implementation of new IT systems which are ongoing. These assets are not being depreciated. These assets will begin to be depreciated upon being brought into use.

16. Fixed asset investments

Institute of Physics - Group	**Joint ventures £'000**
Cost	
At 1 January 2015	244
Disposals (see below)	(176)
At 31 December 2015	**68**
Share of retained profits	
At 1 January 2015	(70)
Result for the year	51
Dividends paid	(49)
At 31 December 2015	**(68)**
Net book value at 31 December 2015	**-**
Net book value at 31 December 2014	174

The group previously had an investment in a joint venture, Tur-pion Ltd, which was held directly by IOP Publishing Ltd, itself a wholly owned subsidiary of the Institute of Physics. On 1 December 2015, IOP Publishing Ltd purchased the remaining 50% of Tur-pion Ltd bringing IOP Publishing Ltd's shareholding to 100%.

The results of Tur-pion Ltd for the period 1 January 2015 to 30 November 2015 have been included in the Statement of Financial Activities using the equity method of accounting. The results of Tur-pion Ltd have been included in the financial statements from 1 December 2015 using the acquisition method of accounting.

As a result of this change in ownership, the investment in Tur-pion Ltd is classified as a subsidiary undertaking as at 31 December 2015.

Institute of Physics - Charity	**Subsidiary undertakings £'000**
Cost	
At 1 January 2015 and 31 December 2015	**3,001**

16. Fixed asset investments (cont.)

The Institute's subsidiary undertakings at 31 December 2015 were as follows:

Name	Country of incorporation / registration	Class of shares held	Percent-age held	Nature of business	Year end
Subsidiary undertakings					
IOP Publishing Ltd	UK	Ordinary	100%	Publishing	31 Dec 2015
IOP Enterprises Ltd	UK	Ordinary	100%	Conference venue	31 Dec 2015
IOP Educational Publishing Ltd	UK	Ordinary	100% *	Dormant	31 Dec 2015
IOP Publishing Inc.	USA	Ordinary	100%	Publishing	31 Dec 2015
IOP Business Publishing Inc.	USA	Ordinary	100% ^	Publishing	31 Dec 2015
IOP Publishing Consultants (Beijing) Co Ltd	China	Ordinary	100% *	Publishing consulting	31 Dec 2015
Tur-pion Ltd	UK	Ordinary	100% *	Publishing	31 Dec 2015
Turpion-Moscow Ltd	Russia	Ordinary	100% +	Publishing	31 Dec 2015

* The investments in IOP Educational Publishing Ltd, IOP Publishing Consultants (Beijing) Co Ltd and Tur-pion Ltd are held directly by IOP Publishing Ltd. In the prior year Tur-pion Ltd was held as a joint venture. See note 26.
^ The investment in IOP Business Publishing Inc. is held directly by IOP Publishing Inc.
+ The investment in Turpion-Moscow Ltd is held directly by Tur-pion Ltd.

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 Ltd and Tur-pion Ltd are as follows:

	Company Number	Net assets/ (liabilities)	Turnover	Expenditure	Profit / loss
		2015 £'000	2015 £'000	2015 £'000	2015 £'000
IOP Publishing Limited	00467514	3,000	49,910	(49,910)	-
IOP Enterprises Limited	03471563	1	118	(118)	-
IOP Publishing Inc.	26-2659520	3,541	3,765	(3,260)	505
IOP Business Publishing Inc.	26-2301131	(884)	191	(179)	12
IOP Publishing Consultants (Beijing) Co Ltd	No.05292	98	544	(528)	16
Tur-pion Ltd	02463452	435	394*	(311)*	83

* The results of Tur-pion Ltd relate to the period 1 December 2015 - 31 December 2015, being the period that the entity was a subsidiary of IOP Publishing Ltd.

17. Investments

	Group and charity	
	2015	2014
	£'000	£'000
Market value at beginning of the year	**19,078**	18,380
Purchases in year	**3,400**	3
Disposal proceeds in year	**-**	(2)
Realised / unrealised (losses) / gains	**(422)**	697
Market value at end of the year	**22,056**	19,078
Historical cost	**-**	17,301

No investment management cost was incurred in 2015 or 2014.

The analysis of investments by class is as follows:	Group and charity	
	2015	2014
	£'000	£'000
CR Ruffer Absolute Return Fund	**22,056**	19,077
Market value of investments	**22,056**	19,077
Ruffer cash	**-**	1
Total value of investments and cash	**22,056**	19,078

18. Stock

	Group	Group	**Charity**	Charity
	2015	2014	**2015**	2014
	£'000	£'000	**£'000**	£'000
Raw materials	**-**	2	**-**	-
Publications	**-**	1	**-**	-
	-	3	**-**	-

19 Debtors

	Group	Group	**Charity**	Charity
	2015	2014	**2015**	2014
	£'000	£'000	**£'000**	£'000
Trade debtors	**3,573**	4,501	**159**	204
Amounts owed by group undertakings	**-**	-	**-**	3,588
Other debtors	**3,427**	2,648	**797**	704
Amounts owed by joint ventures	**-**	211	**-**	-
Prepayments and accrued income	**4,408**	3,484	**501**	407
	11,408	10,844	**1,457**	4,903

An impairment loss of £548k (2014: £628k) was recognised in the consolidated Statement of Financial Activities for the period in respect of bad and doubtful trade debtors. An impairment loss of £14k (2014: £55k) was recognised in the Charity Statement of Financial Activities for the period in respect of bad and doubtful trade debtors.

Included within Other debtors is an amount of £110k (2014: £nil) relating to recoverable Indian withholding tax that is expected to fall due for payment in greater than one year.

20. Creditors: amounts falling due within one year

	Group 2015 £'000	Group 2014 £'000	**Charity 2015 £'000**	Charity 2014 £'000
Trade creditors	**863**	1,098	**269**	247
Amounts owed to group undertakings	**-**	-	**3,041**	-
Amounts owed to joint ventures	**-**	1,064	**-**	-
Other creditors	**4,394**	2,409	**106**	176
Loss in fair value of derivatives	**403**	281	**-**	-
Other taxes and social security	**463**	396	**-**	-
Accruals	**4,187**	4,198	**1,145**	1,331
Deferred income	**14,220**	12,894	**1,137**	458
	24,530	22,340	**5,698**	2,212

Deferred income represents income received in advance:

	Group 2015 £'000	Group 2014 £'000	**Charity 2015 £'000**	Charity 2014 £'000
Journals subscriptions	**12,814**	12,194	**-**	-
Membership subscriptions	**956**	418	**956**	418
Other	**450**	282	**181**	40
	14,220	12,894	**1,137**	458

21. Financial instruments

The Group's and Charity's financial instruments may be analysed as follows:

	Group 2015 £'000	Group 2014 £'000	**Charity 2015 £'000**	Charity 2014 £'000
Financial assets				
Financial assets measured at fair value through profit or loss	**22,056**	19,078	**22,056**	19,078
Financial assets measured at amortised cost	**26,817**	30,121	**9,333**	12,475
Financial liabilities				
Financial liabilities measured at fair value through profit or loss	**(403)**	(281)	**-**	-
Financial liabilities measured at amortised cost	**(9,444)**	(8,769)	**(4,561)**	(1,754)

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 stocks, trade debtors, other debtors, amounts owed by joint ventures and group undertakings, current asset investments and cash at bank.

Financial liabilities measured at fair value through profit or loss comprise the loss in fair value of foreign currency exchange contracts.

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

22. Provisions

	Group 2015 £'000	Group 2014 £'000	**Charity 2015 £'000**	Charity 2014 £'000
Provisions	**716**	880	**716**	880

Included within provisions is a provision of £716k (2014: £695k) for costs relating to the exit of leasehold premises which are not expected to crystalise before 2021. The amount payable will be agreed through future negotiation at such point that an exit occurs.

23. Movement on reserves

Group and charity	**Balance at 1 Jan 2015 £'000**	**Incoming resources £'000**	**Resources expended £'000**	**Balance at 31 Dec 2015 £'000**
Restricted funds				
Prize funds	58	1	(20)	**39**
Other funds	715	800	(838)	**677**
	773	801	(858)	**716**

Restricted funds are held by the Institute and were given to the Institute to spend towards specific projects and purposes. Prize funds are held by the Institute 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

	General fund £'000	**Restricted funds £'000**	**Pension reserve (Deficit) £'000**	**Total £'000**
Institute of Physics Group				
Intangible Fixed Assets	126	-	-	**126**
Tangible Fixed Assets	19,463	-	-	**19,463**
Investments	22,056	-	-	**22,056**
Current Assets	30,509	716	-	**31,225**
Current Liabilities	(24,530)	-	-	**(24,530)**
Non-Current Liabilities	(716)	-	(17,684)	**(18,400)**
Balances carried forward	46,908	716	(17,684)	**29,940**

24. 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 Institute continues to support the scheme for those who were members on the effective date of closure.

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 person pension scheme was established from 1 February 2014. The Institute 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 2015 showed that the value of the scheme's assets as at that date was £63,245k (2014: £58,560k) and that the actuarial value of those assets represented 78% (2014: 72%) of the benefits that had accrued to members, after allowing for expected future increases in earnings.

In the restatement of the defined benefit pension scheme under FRS 102, the actuary identified a required prior year adjustment. The impact of this adjustment was to increase the pension scheme deficit on the balance sheet by £1,630k with a corresponding increase to the actuarial loss recognised in 'Other recognised gains and losses' in the Statement of Financial Activities.

The Institute's and employees' contributions are 18% and 7% respectively.

The next triennial valuation is due on 1 January 2017.

The principal actuarial assumptions used by the actuary at the balance sheet date were:

	2015	2014
	%	%
Discount rate	**3.85**	3.60
Aggregate long-term expected rate of return on assets (net of expenses)	**3.85**	3.60
Inflation (RPI)	**3.35**	3.20
Inflation (CPI)	**2.35**	2.20
Future increases in deferred pensions	**2.35**	2.20
Rate of increase in salaries	**3.35**	3.20
Rate of increase to pensions in payment:		
LPI (max 6.5%) based on RPI	**3.35**	3.20
LPI (max 2.5%) based on RPI	**2.15**	2.10
Mortality assumptions:		
Life expectancy of male aged 65 now	22.4 ('light' 23.9)	22.2 ('light' 23.8)
Life expectancy of male aged 65 in 20 years	24.1 ('light' 25.5)	23.9 ('light' 25.4)
Life expectancy of female aged 65 now	24.8 ('light' 25.2)	24.6 ('light' 25.0)
Life expectancy of female aged 65 in 20 years	26.7 ('light' 27.1)	26.6 ('light' 26.9)
Cash commutation:		

2015: Members take 75% of their max allowable pension commencement lump sum, with current commutation factors.

2014: Members take 75% of their max allowable pension commencement lump sum, with commutation factors changing over time in line with improving mortality.

24. Pensions (cont.)

Reconciliation of fair value of plan liabilities:

	2015	2014
	£'000	£'000
At the beginning of the year	**81,727**	63,681
Current service cost	**543**	1,142
Interest cost	**2,907**	2,896
Remeasurement (gains) / losses:		
Actuarial (gains) and losses	**(2,309)**	15,443
Benefits paid	**(1,939)**	(1,435)
At the end of the year	**80,929**	81,727

Changes in the fair value of plan assets:

	2015	2014
	£'000	£'000
At the beginning of the year	**58,560**	55,018
Interest income	**2,169**	2,533
Remeasurement (losses) / gains:		
Return on scheme assets excluding interest income	**(922)**	905
Contributions by employer	**5,377**	1,539
Benefits paid including expenses	**(1,939)**	(1,435)
At the end of the year	**63,245**	58,560
Actual return on plan assets	**1,247**	3,438

	2015	2014
	£'000	£'000
Fair value of plan assets	**63,245**	58,560
Actuarial value of plan liabilities	**(80,929)**	(81,727)
Net pension scheme liability	**(17,684)**	(23,167)

	Group and charity	
	2015	2014
	£'000	£'000
Pension liability recognised on the balance sheet	**17,684**	23,167

Amounts recognised in the Statement of Financial Activities are as follows:

	Group and charity	
	2015	2014
	£'000	£'000
Current service cost	**543**	1,142
Net interest cost	**738**	363
Total	**1,281**	1,505

24. Pensions (cont.)

Analysis of actuarial loss recognised within the Statement of Financial Activities gains and losses category

	Group and charity	
	2015	2014
	£'000	£'000
Actual return less interest income included in net interest income	**(922)**	905
Changes in assumptions underlying the present value of the scheme liabilities	**2,309**	(15,443)
Actuarial (loss)/gain on defined benefit pension scheme	**1,387**	(14,538)

Composition of plan assets	**2015**	2014
	£'000	£'000
Equities	**37,062**	36,249
Annuities	**10,119**	10,892
Corporate bonds	**6,577**	6,032
Property	**5,439**	5,036
Cash	**4,048**	351
Total plan assets	**63,245**	58,560

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 £1,976k (2014: £1,625k). An amount of £257k (2014: £185k) was payable to the schemes at the year end.

25. Analysis of changes in net funds

	2015	2014
	£'000	£'000
(Decrease) / increase in cash and cash equivalents	**(3,094)**	9,379
Exchange translation	**153**	(8)
Movement in net funds in the year	**(2,941)**	9,371
Net funds brought forward	**22,758**	13,387
Net funds carried forward	**19,817**	22,758

26. Business combinations

Acquisition of Tur-pion Ltd

The group previously had an investment in a joint venture, Tur-pion Ltd, which was held directly by IOP Publishing Ltd, itself a wholly owned subsidiary of the Institute of Physics. On 1 December 2015, IOP Publishing Ltd purchased the remaining 50% of Tur-pion Ltd bringing IOP Publishing Ltd's shareholding to 100%.

The results of Tur-pion Ltd for the period 1 January 2015 to 30 November 2015 have been included in the Statement of Financial Activities using the equity method of accounting. The results of Tur-pion Ltd have been included in the financial statements from 1 December 2015 using the acquisition method of accounting.

In calculating the goodwill arising on acquisition, the fair value of the net assets of Tur-pion Ltd have been assessed and adjustments from book value have been made where necessary.

26. Business combinations (cont.)

	Fair value £'000
Fixed assets	4
Current assets	
Debtors	307
Cash at bank and in hand	1,146
Total assets	1,457
Creditors Due within one year	(1,281)
Fair value of net assets	**176**
Goodwill	126
Total purchase consideration	**302**
Purchase consideration settled in cash, as above	(302)
Cash and cash equivalents in subsidiary acquired	1,146
Cash inflow on acquisition	**844**

There were no acquisitions in the year ended 31 December 2014.

The results of Tur-pion Ltd since its acquisition are as follows:

	Current period since acquisition £'000
Turnover	394
Profit for the period	83

27. Commitments under operating leases

Group

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

	Land and buildings 2015 £'000	**Other 2015 £'000**	Land and buildings 2014 £'000	Other 2014 £'000
Not later than 1 year	**1,015**	-	987	1
Later than 1 year and not later than 5 years	**3,737**	-	3,699	-
Later than 5 years	**133**	-	1,050	-
	4,885	**-**	5,736	1

The group has also planned to undertake capital development work over the next 2 years on the freehold property that was purchased in 2013.

Charity

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

	Land and buildings 2015 £'000	Land and buildings 2014 £'000
Not later than 1 year	**916**	916
Later than 1 year and not later than 5 years	**3,666**	3,666
Later than 5 years	**133**	1,050
	4,715	5,632

28. Amounts receivable under operating leases

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

	Land and buildings 2015 £'000	Land and buildings 2014 £'000
Not later than 1 year	**845**	**845**
Later than 1 year and not later than 5 years	**3,381**	**3,381**
Later than 5 years	**167**	**1,012**
	4,393	**5,238**

29. Related parties

The charity has taken advantage of the exemption available to not disclose transactions with its wholly owned subsidiaries.

The charity did not receive any donations without conditions from the trustees or any other related party (2014: nil).

30. First time adoption of FRS 102

The group and the charity have adopted FRS 102 for the year ended 31 December 2015 and have restated the comparative prior year amounts.

Explanation of changes to previously reported surplus and equity
Changes for FRS 102 adoption:

1. FRS 102 requires there to be objective evidence of impairment for a bad debt provision to be recognised. Included in the 2014 bad debt provision was a general bad debt provision which would not meet the recognition criteria under FRS 102. As such, this general bad debt provision has been released.

2. Recognition of staff holiday pay accrual in respect of 2013. A staff holiday pay accrual was recognised in the financial statements for the year ended 31 December 2014, therefore no restatement is required in respect of 2014.

3. Foreign exchange forward contracts are now recognised at fair value at the end of the year with changes in fair value recognised in profit or loss. Previously changes in fair value of foreign exchange contracts were not recognised in the financial statements.

4. Under the requirements of FRS 102, income and expenditure in foreign currency is recorded at the rate of exchange at the date of the transaction, and the year end closing rate is used to translate assets and liabilities. Previously, the group used forward contracts to determine the exchange rate for the translation of transactions and assets / liabilities in US dollars.

5. Under the new Charity SORP, governance costs are considered to be akin to support costs. As such, the governance costs have been allocated and apportioned across other categories of expenditure.

6. FRS 102 requires the recognition in profit or loss of a net interest cost (or income) on defined benefit pension schemes. The effect of this has been to reduce the reported net income for the year ended 31 December 2014 by £1,151k. This decrease in reported net income is mirrored by an increase in actuarial gains which are reported in Other recognised gains/losses in the Statement of Financial Activities, resulting in no overall change to the net movement in funds for the year ended 31 December 2014. There has been no impact on reported funds because the measurement of the defined pension scheme liability has not changed under FRS 102.

7. In the restatement of the defined benefit pension scheme under FRS 102, the actuary identified a required prior year adjustment. The impact of this adjustment was to increase the pension scheme deficit on the balance sheet by £1,630k with a corresponding increase to the actuarial loss recognised in 'Other recognised gains and losses' in the Statement of Financial Activities.

Restated consolidated Statement of Financial Position		**31 December 2014 £'000**	**1 January 2014 £'000**
Consolidated fund balances as previously stated under old UK GAAP		27,519	37,514
Release of general bad debt provision not permitted under FRS 102	**1**	63	-
Holiday pay accrual	**2**	-	(178)
Financial instruments at fair value	**3**	(281)	260
Foreign currency translation	**4**	56	(307)
Adjustment to defined benefit pension scheme liability	**7**	(1,630)	-
Consolidated fund balances as stated under FRS 102		25,727	37,289

Restated charity Statement of Financial Position		**31 December 2014 £'000**	**1 January 2014 £'000**
Charity fund balances as previously stated under old UK GAAP		25,011	38,129
Holiday pay accrual	**2**	-	(60)
Adjustment to defined benefit pension scheme liability	**7**	(1,630)	
Charity fund balances as stated under FRS 102		23,381	38,069

30. First time adoption of FRS 102 (cont.)

Restated consolidated Statement of Financial Activities for the year ended 31 December 2015		**31 December 2014 £'000**
Net movement in funds stated under old UK GAAP		(9,995)
Release of general bad debt provision not permitted under FRS 102	**1**	63
Holiday pay accrual	**2**	178
Financial instruments at fair value	**3**	(541)
Foreign currency translation	**4**	363
Reallocation of governance costs	**5**	-
Impact of revised method for determining interest cost on defined benefit pension scheme	**6**	-
Net movement in funds as stated under FRS 102		(9,932)

31. Subsequent events

On 20 January 2016, IOP Marketing and Promotion Services Private Limited was incorporated in Chennai, India. This entity is a 99.99% subsidiary of IOP Publishing Limited. The other 0.01% is held by the Institute of Physics.