The official assessment of research across all of the country’s universities, the Research Excellence Framework (REF), announced in December 2014, has shown Oxford to be the leading university in world-class research.

The research of more than 52,000 academic staff from 154 UK universities was peer-reviewed by a series of panels comprising UK and international experts. Oxford submitted 2,409 staff and 31 departments for review, with 48% of the University’s research in the top 4* (world-leading) category while 39% more was rated 3* (internationally excellent).

The University also performed strongly in the new impact category, reflecting the wide-ranging benefits of Oxford’s research. Examples included a new malaria treatment which has saved more than a million lives globally, and miniature chemical reactors created by Oxford chemists which can convert low-value and waste gas into high-grade liquid fuels.

‘It is pleasing to be ranked in first place, but even more pleasing to see recognition of the fantastic contribution Oxford researchers make to knowledge across a huge range of subjects – and of the real impact they have on health, prosperity, policy formation and culture around the world,’ said Andrew Hamilton, Vice-Chancellor. ‘However, it is vital – if the full economic, social and cultural benefits of this research excellence at Oxford, and elsewhere in the higher education sector, are to be realised – that strong and sustained public investment in leading university research is maintained and indeed increased.’

The REF results will be used to allocate funding of around £2 billion per year to universities between 2015 and 2021.
Reflecting upon the University’s achievements over the past year, and its ambitious plans for the future, I am struck by the many ways in which Oxford contributes to society and the economy – locally, nationally and internationally.

As the largest employer in the county, with an annual turnover in excess of £2 billion, the collegiate University’s contribution to the regional economy is significant, and set to grow. Oxford helped to frame two major economic announcements during the year. Firstly, the City Deal will unleash an estimated £1.2 billion of investment in infrastructure and innovation, including the Oxford Bioescalator and the Begbroke Innovation Accelerator. Secondly, the Oxfordshire Growth Deal sets out an inspiring vision of interconnected knowledge industries running from Bicester to Harwell. £100 million will be invested in transport, homes and more than 5,700 new jobs.

However, perhaps the single most important foundation stone of any regional economy is the quality of its education. Since November 2013, the Oxford Education Deanery has put the University’s resources and expertise at the disposal of schools in the city. Led by our Department of Education, the Deanery provides teacher training and seeks to raise the aspirations of secondary school students.

As well as our own students and local schools benefiting from Oxford’s expertise and resources, the University’s digitisation programme is improving access to our museum and library collections – bringing thousands of books, historical artefacts and cultural objects to millions of people worldwide.

During July the University hosted its annual UNIQ summer school, attended by 1,000 state school students. Generously funded by the Helsington Foundation for the past five years, this programme has been phenomenally successful, with an undergraduate application success rate more than double that of applicants who have not attended the summer school. The University will continue to fund the programme. Further details on this life-changing scheme can be found within the review.

Oxford is educating the leaders of the future, but to fulfil their potential they need to be global citizens. This review provides an insight into students’ experiences of the benefits of studying and carrying out internships overseas.

Alongside Oxford Brookes University we have created the Oxfordshire Social Enterprise Partnership to support local enterprises with a social mission, and the University’s small community grants scheme is helping support local community projects.

An excellent example of the impact of Oxford’s scientific research in improving people’s lives is the trial of smart glasses for the registered blind, led by Dr Stephen Hicks of the Nuffield Department of Clinical Neurosciences. The glasses assist with spatial awareness rather than replacing lost vision. Using a video camera mounted on the frame of the glasses, software enables transparent electronic displays in the eyepieces to provide a simple image of nearby obstacles. The aim is to develop a product that will look like an ordinary pair of glasses and cost no more than a few hundred pounds.

The University’s medical sciences research has delivered global benefits for many decades. Oxford’s researchers are in the front line of the fight against malaria, HIV-AIDS, tuberculosis and many other diseases. New threats emerge all the time, as the devastating outbreak of the Ebola virus in West Africa has shown. During the year two global alliances formed to address this growing tragedy, with Oxford in the vanguard of both. Trials of potential new treatments for Ebola, led by Dr Peter Horby of the Centre for Tropical Medicine and Global Health, were fast-tracked in West Africa. Meanwhile the Jenner Institute, under the directorship of Professor Adrian Hill, has been spearheading the effort to find a safe and reliable vaccine to guard against the disease.

Oxford’s researchers also make an invaluable contribution towards public policy and political discourse. The research of Professor Robert Walker from the Department of Social Policy and Intervention has demonstrated that stigmatising the poor is an ineffective and counterproductive policy.

Professor Andrew Hamilton, FRS

The most significant endorsement of the outstanding quality and importance of Oxford research came, as this review was going to press, in the form of the results of the Research Excellence Framework (see facing page).

These results provide a fitting and eloquent basis on which to express the hope that this annual review, enhanced once again by the inclusion of videos as well as text, provides you with an inspiring insight into Oxford’s extraordinary contribution to the global community.'
THE SHAME OF POVERTY

Is shame linked to poverty in different cultures across the world? That is the question that an international team led by Oxford University researchers has tried to answer. They interviewed over 600 people about poverty in societies as diverse as Norway, Uganda, Britain, India, China, South Korea and Pakistan.

As well as asking low-income families to talk about their daily experiences, the researchers conducted focus group discussions with people from richer backgrounds. People in poverty revealed they often felt ashamed of being unable to fulfil their personal aspirations or to live up to society’s expectations due to their lack of income and other resources. This sense of shame was reinforced by their dealings with other people and with officialdom in each country; those living in poverty were typically considered to be ‘undeserving’ or ‘lazy’.

‘The challenge is to build a degree of collective responsibility and collective understanding.’

The research, which was jointly funded by the ESRC and the Department For International Development, concludes that policies need to be framed and delivered in ways that do not undermine the people they should be helping. Professor Robert Walker from the Department of Social Policy and Intervention at Oxford University, who led the research, explains that the shame and stigma imposed on people in poverty lowers their self-esteem and undermines the confidence they need to cope with their present circumstances and to make the most of future opportunities. The research suggests that policymakers need to be more aware of the risks of treating such people without respect as this adds to the pain felt by low-income families and may even perpetuate the problem of poverty.

THE HEALTHY PROPERTIES OF THE SPIDER

In all cultures worldwide, people with a wound will often cover it with spider webs to promote healing. This works, explains Professor Fritz Vollrath of the Department of Zoology, because webs are often sticky as well as hygroscopic, which means that they bind even bleeding skin together very well. Their small silk fibres are good for blood clotting and contract when wet, pulling the wound together. Plus they have antibacterial properties which stop bacteria and fungi growing in the web and eating up the silk proteins – and they’re also biodegradable, so you don’t have to pull your ‘sticking plaster’ off.

The use of silk from spiders and silkworms in biomedical devices is one of many applications of this light, strong and highly elastic natural material being investigated by Professor Vollrath and the Oxford Silk Group. ‘We can dissolve silkworm cocoons and cast them into a shape,’ he says. ‘In one project we cast them into a meniscus – the cushion that sits between the joints in the knee.’ Conventional knee replacement technology requires bone to be cut away, making further replacements increasingly difficult, and uses a plastic or titanium implant. ‘We’re looking at repairing, not replacing, with a biological material that will be integrated into the body by the cells, and hopefully last a lifetime,’ he emphasises. Trials in humans are to start shortly.

Slum units on high-rise apartments, home to many of the urban poor of China

Professor Vollrath and Araneus diadematus, the garden cross spider

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Building for an artistic future

2014 was an incredibly exciting year for the Ruskin School of Art,’ explains the new Head of School, Hanneke Grootenboer. ‘We have set up a new Master of Fine Art course, which is now recruiting students, and building work is underway on the complete redevelopment of the studio complex on Bullingdon Road.’

The new building, which will open in autumn 2015, will offer flexible studio space for BFA, MFA and DPhil students and will have a purpose-built project and public exhibition space, facing the street so as to make direct access with the Cowley Road area. It will have a media lab and various editing suites in addition to a screen-printing area and a room for casting and resin so that students can carry out their various projects. ‘People here do make such vastly different work and it’s very interesting to see how 20 people in a year can go off in completely different directions,’ said Rebecca Ajulu-Bushell, a third-year student in Fine Art.

The MFA programme, said Corin. ‘In the process of making the course it has been really interesting listening to everyone talk about the things they have enjoyed most in education themselves, things they would like to produce, and their hopes.’

The programme, which starts in October, will provide an intensive course of one-to-one tutorials and weekly studio seminars, and focuses on the students’ own art-making. ‘Your tutors are more of a sounding board, almost like a critical friend, and it really pushes your work forwards,’ said Rebecca Ajulu-Bushell. ‘I remember producing my first film and at the same time Elizabeth Price had just won the Turner Prize for a film that she had produced. It is bizarre having such close access to people of that magnitude. It makes everything that you are doing feel a little bit more important.’

Aiding sight

Smart glasses developed at Oxford University could help many people who are registered blind to get around more easily and avoid walking into obstacles.

The smart glasses use a video camera and computer software to project a simple image of nearby people and obstacles onto transparent displays in the eyepieces of the glasses. People wearing the glasses look through the lenses as normal, but see extra images in their line of sight showing what is in front of them. The glasses don’t replace lost vision but assist with spatial awareness.

In the last year, Dr Stephen Hicks and his team at the Nuffield Department of Clinical Neurosciences have reached a point where they are going out and about with their latest prototypes, and seeing whether the glasses can help people navigate in busy public spaces. The scientists are aiming for a product that will look like an ordinary pair of glasses and cost no more than a few hundred pounds – about the same as a smart phone.

At the very end of the academic year, on 31 July, the project was announced as one of the winners of the Google Impact Challenge. The team, working with the Royal National Institute of Blind People, will now use the £500,000 prize to provide up to 100 pairs of smart glasses on loan to people with poor vision. The aim is to learn a lot more about how people use the glasses in everyday life.
The University’s Community Fund, established as a pilot scheme in autumn 2013, supports activities and local projects in the city of Oxford. Applications from community groups for funding grants are considered three times a year. The latest grants were awarded in support of Oxford’s folk weekend; the benefits and employment advice service in Blackbird Leys; and Rosehill TV, a youth film project.

Margaret Ounsley, Head of Government and Community Relations at the University, said: ‘The city and the University have been closely intertwined for the past 800 years and we are pleased to be able to support community-led projects which have real benefit to Oxford residents, many of whom are also our students and staff.’

Previous recipients of funding have included Oxford Open Doors, Christmas Light Night, Pegasus Theatre, the Cowley Road Carnival, Cowley News, Alice’s Day 2014, the Oxfordshire Play Association and the Osney Lock Hydro Scheme.

Saskya Huggins of the Osney Lock Hydro scheme said: ‘Osney Lock Hydro is an entirely voluntary organisation which will generate renewable energy in the heart of Oxford. We’re really grateful that the University and several other bodies have come forward and are helping us with our aim to realise the potential for the site and deliver that broader message about sustainability.’

Alice’s Day in Christ Church Cathedral gardens, one of many projects supported by the Community Fund
In 2010, Simone Webb was one of 500 students to attend the first UNIQ summer school at Oxford. Five years on she has completed an undergraduate degree in Politics, Philosophy and Economics at the University and is starting a masters’ course in Women’s Studies with a full scholarship. UNIQ, she says, ‘helped me realise that Oxford really was where I wanted to go to university, and also gave me the best support in getting here.’

In those five years of existence UNIQ has become the University’s flagship access scheme – and one that is undeniably having an impact on Oxford’s student intake. Since the first summer school, 2,000 UNIQ students have applied to Oxford – a full 66% of those who have attended the programme. More than 750 have won places, giving them a success rate of more than 40%: more than double the success rate for all applicants. Selection criteria for UNIQ prioritise students in state schools showing low performance and low progression rates to Oxford. The programme’s format is designed to introduce them to the kind of in-depth subject study that characterises the Oxford experience: sixth-form students spend a week at Oxford experiencing tutorial-style learning in a single subject, with information about the admissions process included.

UNIQ has evolved from around 500 participating students and 20 subject strands to 1,000 students and virtually every undergraduate academic course offered at Oxford. And after five years of funding from the Helsington Foundation, the University has committed to sustaining UNIQ for a further two years while seeking additional philanthropic support.

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The UNIQ scheme allows academically able students from state schools to experience student life at a top research-led university.
Experiences don’t come much more life-changing than social enterprise in Cambodia – one of some 1,650 opportunities for work or study abroad provided to Oxford students in the past year.

Materials scientist Cameron Brookhouse spent ten weeks with WaterSHED, an NGO developing products that can be manufactured and sold independently and sustainably by local entrepreneurs in the developing world. Oxford secured the funding from the Alex Scott and Stone Family Foundation.

‘I’d wanted to do something entrepreneurial in product design and hadn’t considered social enterprise,’ he says. In Phnom Penh, he researched and designed toilet shelters as a public health aid – materials testing, surveying views of potential users, and constructing a prototype. For his fourth-year research Cameron is working on a cheap plastic semiconductor to check water potability.

Modern Linguists still enjoy a mandatory year abroad, but there are opportunities too for students of Jurisprudence with Law Studies in Europe, biochemists, historians, engineers and others. In 2014–15 around £900,000 will fund trips overseas from a few days to a year, including for postgraduates. Erasmus money from the British Council funds 300 traineeships and study exchanges from Oxford. With Oxford’s help students can transplant themselves for a time into rich new soil.
It will not surprise anyone to learn that many students of classics, archaeology and history handle objects in the Ashmolean Museum. But since 2012 a new programme has brought medical students, volcanologists and business executives into contact with the museum’s unrivalled collections.

The University Engagement Programme (UEP) aims to further the partnership between the museum and the University’s faculties, and to enhance the impact of cross-disciplinary teaching and learning through objects. In the last two years more than 25 academic departments have taken part in the UEP. The programme’s teaching curators have welcomed more than 4,000 participants to teaching sessions in the Ashmolean, encouraging Oxford students to consider what insights the objects can give them about their own field of study.

‘Close study of objects also requires students to develop their analytical skills in unexpected ways,’ explains Dr Giovanna Vitelli, Director of the UEP. ‘As my colleagues have observed, comparing physical details in a series of portraits, for example, challenges medical students to detect possible illness through observation as well as testing.’

Pegram Harrison, a lecturer at the Said Business School, teaches MBA students and undergraduates studying management and economics, as well as executives who visit the University on short courses. He says the UEP has added to his students’ understanding of business. ‘You can learn a lot more about business from the museum than you would ever have thought possible,’ he said. ‘Students always feed back that it was one of the most valuable parts of the programme. Most other business schools can’t offer anything comparable.’

‘...it can revitalise the way you write about things or the way that you think about things.’

To view the full article, visit: www.ox.ac.uk/annual-review
Graduate scholarships: opening the doors of opportunity

In a typical year, around 21,000 prospective students from all over the world apply to the University of Oxford for 4,500 places on postgraduate courses. But for some, the joy of being offered a place at Oxford is swiftly punctured by the realisation that taking it up will mean a huge financial struggle – and may even be impossible.

Firm in the belief that the leaders of tomorrow should have the very best education, the University launched a new fundraising initiative in 2012 to increase the number of full scholarships for graduate students of the highest calibre. The Oxford Graduate Scholarship Matched Fund allows donors to maximise the potential of their gift by matching it with University funds in a ratio of 60:40 (donor: University). This highly successful scheme has attracted endowed donations from sources worldwide, including individuals, companies and charitable trusts.

Scholarships cover University and college fees plus a grant for living costs for the expected duration of a course. They can be awarded in perpetuity to applicants across the globe who have demonstrated excellent academic ability. Louise Hill, the Oxford–Sylva Foundation Graduate Scholar, is studying for her DPhil in Plant Sciences. ‘I was in Borneo with a very patchy internet when I received an email informing me I’d won the scholarship,’ she says. ‘It was brilliant – all my hopes were resting on it. In this current challenging funding environment, it was a lifeline.’

‘The scholarship has enabled me to fulfil my dream to come to Oxford to study water management. It has also enabled me to pursue new innovative research ideas in the field of water and agricultural development in India.’

Ranu Sinha, Oxford–Indira Gandhi Graduate Scholar via the Oxford India Centre, Somerville College

Left: The Vice-Chancellor hosted a reception at the Divinity School for the first intake of Oxford Graduate Scholars
Right: Current recipients of Oxford Graduate Scholarships (left to right), Ranu Sinha, Claire Peacock and Jacob Katuva
Bottom: Louise Hill is studying for a DPhil in Plant Sciences

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Honours and awards

Oxford academics were recognised in both the New Year Honours and The Queen’s Birthday Honours. In addition, six academics were elected Fellows of the Royal Society and a further nine were made Fellows of the British Academy. Leading figures from the worlds of science, the arts, law and sport received honours at Encaenia, the University’s annual honorary degree ceremony, and 14 new members were admitted to the Chancellor’s Court of Benefactors (CCB) in recognition of their generosity to the University.

New appointments

Eighteen academics from around the world were appointed to professorships, visiting professorships and senior administrative posts. Four new heads of house were appointed.
**Financial Review**

The University made a surplus of £38.9m in 2013/14 and income continued to grow, increasing by 8.1%. Of this, £33.6m related to the University’s profit from the sale of its stake in the games and technology company Natural Motion. After excluding this one-off item and the value of donated heritage assets (£0.9m), the net surplus for the year was £4.4m (2012/13 £32.2m before donated heritage assets). The upward pressure on costs and the need to invest for the future continue to be significant and are being closely managed.

Income to the University rose by 8.1% to £1,174.4m. Research grants and contracts continued to be the largest source of income to the University and increased by 9.5% to £478.3m, most of which was matched by related expenditure. Grants from the Higher Education Funding Council for England (HEFCE) amounted to £182.2m, a decrease of 6.0%, reflecting the further reduction of HEFCE grants following the increase in the maximum permissible UK and EU undergraduate fee to £9,000. Academic fees and support grants totalled £235.9m, up £12.5m on the previous year. Net tangible fixed assets increased by £80m, reflecting the continued building programme to support the University’s expanding research base.

Completed projects included the Mathematical Institute (Andrew Wiles Building) on the Radcliffe Observatory Quarter (ROQ) and the Old Indian Institute for the Oxford Martin Institute (Andrew Wiles Building) on the south-west corner of the ROQ and scheduled to open in September 2015. Other projects included the completion of the Mathematical Institute (Andrew Wiles Building) and the continued building programme to support the University’s expanding research base.

The balance sheet position remains strong, with net assets at 31 July 2014 of £153.1m but this was offset by capital and endowments resulting in an overall increase in cash for the year of £4.4m.

The scale of the University’s research activity is substantial: more than 70 departments, over 1,600 academic and 4,100 research and research support staff and 5,500 postgraduate research students are involved. They collaborate with other universities and research organisations, health-care providers (especially the Oxford University Hospitals NHS Trust), businesses, community groups, charities and government agencies.

Much of this activity is underpinned by research grants and contracts with third parties: the University currently has approximately 4,700 active research awards worth a total of around £2.6bn.

The largest funders of competitive research at Oxford are the UK Research Councils and UK charities, primarily the Wellcome Trust, Cancer Research UK, the British Heart Foundation and the Leverhulme Trust, as well as a large number of smaller charities. The other major sources include the Department of Health (including the National Institutes of Health Research), the European Commission, through Framework Programme 7 (FP7) and from next year also Horizon 2020 (the successor to FP7), and the Royal Society. Their financial support facilitates a wide range of projects, major research programmes, interdisciplinary initiatives, research training and international collaboration.

Quality Research (QR) funding and knowledge-exchange funding from HEFCE are also crucial to delivering world-class research and maximising societal benefits.

The University warmly acknowledges the role of all its funders and collaborators in supporting its research efforts.

**External Research Funding**

The University is committed to disciplinary excellence in research across the spectrum of the sciences, medicine, the social sciences and the humanities. It seeks to maximise the benefits and beneficiaries of research by advancing fundamental knowledge and contributing to better public policy, improved health outcomes, economic prosperity, social cohesion, international development, community identity and the arts and culture.

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For further information please contact:
The University of Oxford
Public Affairs Directorate
University Offices
Wellington Square
Oxford OX1 2JD

Telephone: +44 (0)1865 270010
Email: information.office@admin.ox.ac.uk
Website: www.ox.ac.uk/publicaffairs

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Front cover: A matriculating student captures a photograph of her fellow
freshers before the ceremony

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