

UNIVERSITY OF ABERDEEN

STRATEGY FOR RESEARCH AND KNOWLEDGE EXCHANGE 2013 – 2015

1. INTRODUCTION

World class universities are about creating and using knowledge to make a difference within academia and wider society. Important characteristics of such universities are:

- A culture of excellence
- A community of intellectually rigorous staff, students and alumni answering important questions, individually or in groups
- An outward looking perspective, engaged with a wide variety of partners and stakeholders.
- An environment that develops and supports staff to achieve their personal goals
- Flexibility to respond quickly and imaginatively to different challenges.

Since its establishment in 1495 to meet a local need for teachers, doctors and clergy, the University of Aberdeen has developed a strong national and international reputation for being a research-intensive university. Over the centuries, our academia have pioneered many developments in medicine, science, social sciences and humanities: shaping ideas, products and services around the world. Our current research portfolio includes world-leading research, impacting at an international level to make a difference. It is upon this strong base that we can enhance our influence.

In its 2011-2015 Strategic Plan the University set two Strategic Objectives for its research and knowledge exchange activities:

- Improve our competitiveness as an international research-driven university, and to be at the forefront of setting and delivering the research agenda nationally and internationally (*University Strategic Plan Objective II*).
- As well as encouraging blue sky investigator-led research, to use our broad disciplinary base to focus on a small number of multidisciplinary themes in which Aberdeen is, or as the potential to be, a world leader or global partner of choice, and which fits with our institutional values and characteristics (*University Strategic Plan Objective III*).

In an increasingly competitive and complex world we need clarity about how best we use our resources to ensure that the University of Aberdeen remains a world class research-driven university. We also need to maintain a focus on research excellence.

2. WHAT IS RESEARCH EXCELLENCE?

Research excellence is the delivery of robust answers to important questions. The questions may be relevant at local, national or international level, and academic and/or non-academic constituencies. The research may be fundamental with no obvious immediate application of the findings, or it may be applied, addressing an urgent question of an external end user. Delivery may be by individuals working alone or by groups working together within one discipline, or across disciplines. Regardless of where, why and by whom it is conducted, the research has to be of the highest standards, often using new methods or approaches.

Delivery of research excellence requires a culture where staff have the space, time and facilities to be creative, to generate new ideas and produce high quality outputs. It also requires efficient mechanisms to disseminate the findings, often to a variety of audiences.

Indicators of research excellence include: the production of high quality research outputs that are widely used; sustained support from external, prestigious funders; and contribution to the shaping of the research agenda. Although the relative importance of these indicators may vary within disciplines, each are useful indicators of success.

3. DELIVERING RESEARCH EXCELLENCE

Our current research portfolio contains a number of examples of world-leading research, but there remains scope within our overall performance to improve. It is our ambition to deliver this improvement so that research excellence is uniform throughout the institution. If we are to achieve our ambitions we need to:

- Focus on research excellence
- Maximise the impact of our research
- Optimise access to our research
- Support the development of our staff and students
- Expand our postgraduate student numbers
- Provide excellent infrastructure and support systems
- Monitor our research performance

3.1 Focus on research excellence

The University will continue to focus its resources on identifiable areas of research excellence, whether involving individuals or groups. Investments are made through a strategy of expanding current research strengths, filling known gaps in provision, and (more exceptionally) exploiting a new opportunity to develop excellence.

Expanding our cadre of world-class scholars. The University will continue its policy of trying to attract and retain world class scholars who enhance the quality and breadth of its research portfolio, and who add to its research culture. This includes attracting first class, ambitious researchers at an early stage of their career as well as senior professors with a track record of leading and delivering excellent research. Many of our current achievements result from our previous success in deploying this policy.

Institutional interdisciplinary themes. The University has established four institutional interdisciplinary themes: Environment and Food Security, Energy, Pathways to a Healthy Life, The North. The four themes were chosen on the basis of current academic strengths and/or major opportunity to be a world player. The themes seek to: address some key challenges of contemporary society; articulate where we think Aberdeen can contribute to those challenges; identify our niche in the market/unique selling points; consolidate some research strengths at Aberdeen; identify cross-university and external collaborations; identify gaps in current academia or facilities where strategic investment will produce enhanced return for the University; build upon opportunities for funding. Resources have now been provided to support the development of the themes and there are already signs of enhanced collaboration across the University. We will review progress of this initiative after two years. We will also be alert to other opportunities to develop collaborations within and across the Colleges.

Supporting research excellence everywhere. It is important to recognise that our institutional interdisciplinary themes do not include all of our excellent research activity. The University is committed to supporting and expanding research excellence wherever it occurs within the institution. Examples of this commitment are its strategic investment in new posts and infrastructure. World class research often involves a range of strategic skills or resources. Some of these skills and resources already exist, albeit sometimes in a dispersed fashion; others need new investment or development. The University has a multitude of research institutes, centres, units and groups. These will be reviewed on a regular basis, to see that they continue to provide the best mechanism for facilitating research excellence.

Enabling Competitively Awarded Grant Success. Excellent research is impossible without adequate funding. Currently most funding for research is from the Scottish Funding Council's Research Excellence Grant or external funders. Volume and source of research income are important indicators of research quality and sustainability. A balanced portfolio of research income, with sufficient indirect cost contribution, is vital for the financial health of the institution.

The University will enhance the portfolio of pump-priming funds designed to position researchers for competitively awarded grant success. There will be a call for proposals for the different schemes during each academic year. The University will regularly review the outcome of this funding to assess its success.

- i. **Pump-priming fund for non-commercial grants.** When applying for funding it is often important to provide proof of concept type data, or information about feasibility. Obtaining such data usually involves a modest amount of investment, which can lever a large return if the application is successful. It is also important to recognise that developing and writing a large grant application, especially one involving multiple partners in different institutions and countries, sometimes needs support. The University will establish a University wide pump-priming fund which supports the development of applications to external funders. Applicants to the fund will need to provide details of how the funding positions them to obtain further external funding. Individuals wishing to use the fund to support the writing of an application will need to be applying for a substantial grant to a major funder. The work will also need to fit within the strategic priorities of the University.
- ii. **Pump-priming for commercial activities.** The University will continue to provide early stage support for the commercialisation of research through the *SFC Innovation Voucher Scheme*, *Kick Start Award* and commercialisation funding for early stage initiatives.
- iii. **The Principal's Interdisciplinary Fund** provides seed corn support to academic staff to develop interdisciplinary research opportunities. Provision of this modest support has already led to substantial grant success. The University will continue to provide this fund.

Developing partnerships. Much of the University's work involves collaborations with academics in other universities or research institutions, and with users of research. It is often important to have networks of collaborators developed before a call for funding is announced (often the interval between announcement of funding and deadline for application is short). We will support the development of such networks through the Principal's Interdisciplinary Fund (see above). We will also review whether we have appropriate mechanisms in place to maintain these partnerships in a sustainable way.

Visiting scholars are important for the development of a strong research culture. We will examine whether we can establish a visiting scholar fund to support this activity.

Increasingly funders are expecting users of research to be involved in all stages of the research process; from conception of the research idea, through research design and delivery, to interpretation and implementation of research findings. We need to ensure that we have the best support mechanisms in place to facilitate user involvement in research. This work needs to recognise that users of our research come with a wide range of perspectives and needs.

Whilst it is important that academics are able to foster partnerships with the individuals, organisations and institutions needed to advance their academic interests, limited resources mean that the University has to be selective when establishing strategic institutional alliances. The University is developing a separate internationalisation strategy. Synergy with our research activities will be a key consideration when choosing whom we wish to develop an institutional strategic alliance with.

3.2 Maximise the impact of our research

The University has a strong tradition of using the new knowledge created by its research to make a difference. This is a strong base from which we can meet the increasing demands of funders and wider society to demonstrate impact or benefit from our research activities. Beyond academia, our research currently impacts positively on: culture, the economy, public policy and public services, health and the environment.

The University will continue to support knowledge exchange between academia and wider society. It will use its Research Council-funded *Public Engagement with Research Catalyst* award (the only one in Scotland) to expand the training and development of research students and staff in public engagement activities. Participation in public engagement and other knowledge exchange activities is valued as an important academic contribution in discussions

about the Framework of Academic Expectations, during appraisals and in promotion applications.

It is important that we optimise the commercial potential of our Intellectual Property. We will continue to provide a wide range of support for commercialisation, including: membership of the North of Scotland Knowledge Transfer Partnership Centre; participation in *Interface*, *Encompass* and the *SFC Innovation Voucher Scheme*; provision of the *Kick Start Award* pump-priming fund; awareness-raising activities within Colleges; provision of resource for visiting lecturers; making full use of student and staff placements and exchanges, and the continual review (by research leaders, College Research Directors and business development officers) of research within the Colleges for new knowledge exchange opportunities.

3.3 Optimise access to our research

The University of Aberdeen wants to make its research outputs as freely available as possible, with the minimum of delay. It embraces, therefore, the principles of open access publishing, based on the belief that most research data and research findings are a public good. Universities and their academic staff benefit from open access publishing by raising their research profiles and increasing the number of times that their research is cited. In the UK, Governmental, Research Council and other funding agency (notably Wellcome Trust) policies are accelerating the pace of the open access publication of UK-based research. Although the UK is leading this effort, initiatives elsewhere in Europe, the USA and other parts of the world are likely to increase momentum in the near future.

In the academic year 2012/13, the University will develop and disseminate its strategy for open access publishing. This work will include how we best support the archiving of our research outputs, for example through our institutional repository, AURA. We will also develop a strategy for supporting (where appropriate) open access to research data.

3.4 Support the development of our staff and students

Without excellent research staff and students it is impossible to undertake world-leading research. The University needs a cadre of intellectually rigorous, critically-thinking individuals who are able to communicate their ideas and findings effectively to audiences with different levels of understanding. Increasingly, researchers in many areas need to work in teams of individuals from a wide range of disciplines and with differing perspectives. The University of Aberdeen has an excellent track record of supporting the development of its research staff. Indicators of the University's commitment include achievement of: *Investors in People*, *HR Research Excellence Award*, institutional *Bronze Athena Swan*, implementation of the *Concordat to Support the Career Development of Early Career Researchers*, and provision of different Principal Investigator and leadership courses.

Through its Researcher Development Unit, the University will continue to deliver a comprehensive programme of career development activities for staff across the entire academic life-cycle, from postgraduate student to senior researcher. This will enable individuals to achieve their personal ambitions, and the institution to expand its research capacity and reputation.

3.5 Expand our postgraduate student numbers

A large cadre of postgraduate research students is an important indicator of a vibrant research culture, reflecting the quality and sustainability of an institution's research. In some disciplines, postgraduate students are a major conduit for the research. Postgraduate students are also an important source of income for the University.

Currently, our postgraduate numbers are not as high as comparator institutions. We need to address this, partly through our internationalisation strategy. There will be major challenges to expanding our postgraduate numbers, including reduced funding opportunities, and Government policies towards overseas students. This means we have to optimise opportunities for studentships through Research Council doctoral training schemes, pooling

initiatives, grants and donors. There is an expectation that each FTE research active academic supervises at least 2 doctoral students.

3.6 Provide excellent infrastructure and support systems

Infrastructure. World class research buildings, facilities and equipment are essential for the delivery of world-class research and the cultivation of a strong research culture. Over the past decade the University has invested approximately £270 million in building state-of-the-art buildings and facilities, to provide its academia with a physical environment appropriate for their work. The University will continue to invest in the development of world-class facilities and infrastructure. By the end of 2014 it will have built the new Rowett Institute of Nutrition and Health and the University's 10-year Estates Capital Plan includes a number of new developments in Old Aberdeen, including a new building to house the Aberdeen Energy Institute. The University will regularly review its estate to determine whether it continues to meet the needs of its researchers.

During discussions about our strategy there were a number of requests to consider providing more social space within schools and on the wider Old Aberdeen campus. Such space provides an opportunity for informal discussions between colleagues, which help collaborations to flourish. Senior management will review again the provision of such space; whilst aware that the previous senior common room was underused and lost the University money.

For some disciplines, it can be argued that books, archives and other collections are more important than buildings. The University has invested heavily in its library facilities and associated collections. We need, however, to review the content of our libraries, to ascertain whether they remain adequate for our scholars.

Through Information Technology Services (IT Services), the University has established a capital investment plan to support the efficient delivery of information technology for research. This includes the development of specialist computer facilities, such as high performance computing systems and large data storage. The University will monitor this initiative to determine whether it is meeting the expected outcomes of both researchers and managers.

Support structures. The University recognises that adhering to the highest standards of research ethics and governance is an essential part of delivering high quality research. The University expects its researchers to conduct research that is ethical, legal, safe and efficient. Through its *Framework for Research Governance* and internal support systems, the University seeks to maintain the highest possible standards of good research practice and research integrity. It will review regularly its policies and procedures to ensure that its researchers are provided with the support needed to meet the requirements of external bodies.

There is a specific need to enhance our training in research ethics and governance. The University will begin delivering such training to research staff and students in Spring 2013. This will supplement research ethics and governance training already provided in some parts of the institution.

3.7 Monitor our research performance

It is essential that individuals, research groups and the University are able to assess their research performance. Having access to wide-ranging, comprehensive and accurate information about research performance allows different groups to identify strengths and weaknesses, and plan for the future. Research metrics also enable benchmarking against our competitors.

In order to assess research performance at different levels within the organisation, the institution will develop a series of research metrics, in collaboration with staff, leaders of research and support staff.