



## RESEARCH AND INNOVATION STRATEGY 2015–2020

### WELCOME

Delivering new opportunities through globally significant research and innovation excellence

The Research and Innovation Strategy is the result of significant consultation with faculty staff, research leads and professional services departments. Our research and innovation culture is dynamic, externally focused and responsive. It is aimed at harnessing the expansive resources we have, from our student body to our excellent academic staff. We are developing capacity that has great potential to deal with global challenges and ensures our research and innovation has wide-ranging impact.

Building on our existing strengths, this strategy sets out our aspirations and provides a framework to deliver our mission, in which 'we delight in creating, sharing and applying knowledge to make a difference to individuals and society'. Our recent performance in the Research Excellence Framework has demonstrated the strength and breadth of our existing research. This strategy provides a framework that allows us to build upon those core strengths and to expand our research and innovation footprint. In addition, it maps out how we will deliver interdisciplinary research across five key thematic areas. We wish to pursue bold ideas, be creative and work to the highest standards, and in doing so, undertake research that acts as a driver for economic growth. We will endeavour to elevate our position within the top 500 universities in the world. The University has set ambitious targets for the coming years. Research and innovation activity will play a major role in helping the institution meet those targets. Our five thematic areas are designed to galvanise existing and new research avenues across the University and to add value through establishing new collaborative partners, both within and outside the institution. Together, we will look for new funding opportunities, create and test new ideas, explore alternative applications of our existing ideas and deliver economic growth through innovation.

This strategy represents a strong statement from the organisation, committing its resources, people and passion to the pursuit of internationally significant research and innovation. We can achieve a great deal if we work together and I hope that, like me, you see a bright and prosperous future exploring these new ideas to help deliver a better world to live in, both now and in the years to come.

Please read and share; this is your strategy.

Pal Ahluwalia

Pro Vice-Chancellor (Research and Innovation)

## OUR MISSION

WE DELIGHT IN CREATING, SHARING AND APPLYING KNOWLEDGE TO MAKE A DIFFERENCE TO INDIVIDUALS AND SOCIETY.

## OUR VALUES

### **Ambitious**

- We pursue bold ideas in an environment where creativity, innovation and success is encouraged and celebrated.
- We nurture and value relationships and partnerships that foster a global outlook.
- We inspire and support staff and students to achieve their potential and meet the challenges of society.
- We never settle for second best.

### **Responsible**

- We act with integrity for the greater good.
- We insist on upholding the highest academic and professional standards.
- We respect and celebrate diversity and equal opportunity through an inclusive culture.
- We aim for sustainability across all our activities.

### **Open**

- We work consultatively and collaboratively to benefit from new perspectives.
- We share ideas and maintain transparency.
- We are trustworthy and do what we say we will do.
- We listen and respond to the needs of our students and staff.

## OUR KEY AMBITIONS

Our excellent results in the Research Excellence Framework (REF) 2014 have cemented our status as an institution that delivers strong benefits to society across the spectrum of activities that make up research and innovation.

We now have a solid basis of recognised achievement on which to build as we move towards even greater future success. This strategy aligns our research and innovation activities with our new mission, vision and values, which have been defined through an extensive consultation process, Shaping our Future. It takes inspiration from these commitments, placing research and innovation at the core of the University's future ambitions:

- We will engage in creating, sharing and applying globally-significant research and innovation that delivers impact and makes a difference to individuals and society.
- We will be a key driver for economic growth and prosperity in our region, as well as establishing strategic international partnerships that will make our research and innovation truly global.
- Our research and innovation excellence will improve our national and international profile and ranking. We will seek to elevate our position amongst the world's top 500 universities (Times

Higher Education World Rankings) and top 150 under 50 years of age (Times Higher Education Rankings).

We will deliver excellence in research and innovation, as set out in the University of Portsmouth Strategy, 2015–2020, by:

- building on our financial strength and increasing the contribution to income that comes from research and commercial activities
- establishing nationally and internationally recognised cross-disciplinary thematic areas that address key issues facing society
- creating a network of strategic global partnerships to support internationalisation
- recognising and sustaining our strengths in undergraduate education and growing our provision in the areas of postgraduate, part-time, continuing professional development (CPD) and flexible modes of study

To do this requires continued enhancement of the capacity, quality and contribution of research and innovation activities to the University's portfolio, and a sustained effort to ensure accountability through a high return on investment. We are committed to identifying and solving real-world problems as well as working intensively with our key stakeholders to enrich society and shape a better future. We will respond to key societal demands that expect not only exceptional performance, but also high impact.

## **OUR KEY PRINCIPLES**

Conducting ourselves with the highest standards of academic, professional and research integrity, we will:

- Foster an institutional culture which recognises and supports the development of the widest possible range of high-quality research and innovation activities to which staff and students contribute.
- Develop a number of overarching themes across our existing and emergent research and innovation strengths, drawing together expertise from different disciplines to enhance our capacity and profile in areas with potentially transformative impacts.
- Establish ourselves as a key partner of choice for research and innovation collaborations at a local, national and international level.
- Continuously improve our research and innovation profile, as measured by key national and international benchmarks, and strive to deliver maximum benefit to society from our activities.
- Expand our postgraduate research student numbers, enhancing their contribution to our research community and preparing them for rewarding careers.

## **STRATEGIC OBJECTIVES BY 2020**

### **Objective 1:**

To develop an embedded research and innovation culture across all our activities.

#### **Strategic actions**

- 1.1. Adopt clear principles outlining how we define research – and innovation – active staff across the University, and integrate these principles into workload allocation, performance development reviews, promotion criteria, and future strategic investment planning.
- 1.2. Direct significant levels of funding to drive strategic initiatives, with effective prioritisation, support and monitoring to ensure an appropriate return on investment.
- 1.3. Provide an infrastructure that improves the capacity and capability of our researchers to seek competitive research and innovation grants and engage with end users of research, both nationally and internationally.
- 1.4. Ensure staff research and innovation interaction with external organisations enhances the experience of our students by building partnerships in sectors of prime relevance to students' programmes of study and future careers.
- 1.5. Embed research and innovation expertise within undergraduate and taught postgraduate curricula wherever appropriate, and develop channels for student input into research and innovation activities and culture.
- 1.6. Improve our postgraduate research culture and enhance our supervision capacity to support increased numbers of postgraduate researchers.
- 1.7. Introduce new excellence awards for staff, celebrating success in bringing together teaching, research and innovation.

### **Objective 2:**

To attract and develop internationally recognized research and innovation staff.

#### **Strategic actions**

- 2.1. Ensure that all early career researchers and research staff are integrated into the research and innovation culture of departments and schools.
- 2.2. Strengthen existing and emergent areas of research and innovation excellence through a targeted recruitment, retention and succession strategy.
- 2.3. Provide the support, mentoring and opportunities needed for researchers in postdoctoral or early academic positions to develop their careers effectively.
- 2.4. Promote opportunities and develop skills for early and mid-career researchers to be competitive in winning grants, and be successful in producing high-quality publications, securing innovation income and generating impact.
- 2.5. Increase the number of externally funded research and innovation fellowship appointments throughout the University, supported by appropriate resources.
- 2.6. Implement means for staff at all career stages to benefit from international networking, collaboration and exchange opportunities that will extend the reach and profile of their work, and enhance its further progress.

### **Objective 3:**

Deliver innovative solutions to our partners in industry, the public sector and the wider community – regionally, nationally and internationally.

### **Strategic actions**

- 3.1. Raise the profile of the University and extend our influence, both nationally and internationally, through targeted innovation forums for key stakeholders in government, industry and the third sector.
- 3.2. Maximise our engagement with the regional community through effective partnerships with our Local Enterprise Partnerships, councils, universities and business support organisations.
- 3.3. Establish collaborative spaces where industry and members of the University community can collaborate to drive the local economy.
- 3.4. Develop a comprehensive portfolio of CPD programmes for government, industry and third sector partners in response to emerging workforce needs, with innovative tailored delivery for local, national and global markets.
- 3.5. Engage with our global alumni across all sectors of society to expand our connections and share our expertise.
- 3.6. Support knowledge exchange activities that ensure our best innovations are readily translated for the economic, cultural and social benefit of users worldwide.
- 3.7. Build synergies between our research and innovation strengths, expanding our profile in collaborative and contract research, consultancy and income-generating use of facilities, and creating the conditions for maximum research impact.

### **Objective 4:**

Establish nationally and internationally leading research and innovation cross-discipline thematic areas that address key issues facing society.

### **Strategic actions**

- 4.1. Establish and support internationally relevant cross-disciplinary research and innovation themes directed by distinguished research and innovation leaders in consultation with key external stakeholders.
- 4.2. Foster interdisciplinary research and innovation that leads to increases in the volume, quality and impact of our publications, greater diversity of income streams and enhanced postgraduate research experience.
- 4.3. Engage with national and international networks that align with our thematic areas.
- 4.4. Ensure that existing and new research centres and institutes work to align appropriate elements of their work with our research and innovation themes at every opportunity.
- 4.5. Make effective use of our research and innovation themes to coordinate and enhance staff and student engagement with the end users of research and innovation locally, nationally and globally.

### **Objective 5:**

Strengthen our world-leading research and innovation capabilities in areas of current and potential excellence across all faculties.

### **Strategic actions**

- 5.1. Develop continuing and emergent areas of disciplinary research and innovation excellence across the full breadth of our academic profile.
- 5.2. Build on our demonstrated excellence by investing in those areas most likely to deliver world-leading capacity, and to raise the international reputation of the University as a whole.

- 5.3. Facilitate research and innovation collaborations with the best partners nationally and internationally, especially where these can lead to funding opportunities and advance our broader goals and ambitions.
- 5.4. Align our international strategy to foster collaborations between our staff and students and world-leading research and innovation concentrations.
- 5.5. Implement a programme of distinguished visiting scholars between key partner institutions that will lead to the best research and innovation outcomes, especially by enhancing early career researcher participation.

### **Objective 6:**

Nurture our postgraduate researchers to become the next generation of research and innovation leaders.

#### **Strategic actions**

- 6.1. Develop structures and programmes that encourage high achieving undergraduates to pursue postgraduate research degrees at the University of Portsmouth.
- 6.2. Implement a flexible and responsive portfolio of bursaries and studentship policies that allow us to recruit the best postgraduate researchers nationally and internationally.
- 6.3. Introduce a University-wide, recruitment strategy for both home/EU and international postgraduate research students.
- 6.4. Direct strategic funding for postgraduate researchers towards projects and areas most likely to support and sustain our thematic focus and research strengths, and to provide preparation for postdoctoral careers.
- 6.5. Ensure that postgraduate researchers work in an environment that integrates them into the wider University research culture, provides opportunities to enhance their developing career profile and facilitates timely project completion.
- 6.6. Create opportunities for collaborative supervision and other engagements with key research and innovation partners nationally and internationally, to provide postgraduate researchers with the best experience possible.

## **CROSS-DISCIPLINARY THEMES**

### **OVERVIEW**

The University of Portsmouth has research and innovation excellence in a rich variety of areas. We will broaden our areas of excellence by being bold, agile, flexible and responsive to external needs, while remaining ethical, professional and socially responsible. To raise our profile internationally we will give a clear message to potential collaborators that we are committed to addressing major issues in a coordinated fashion. By doing so, we open up opportunities ranging from the local to the global level. These themes represent our commitment as an institution to act as a global citizen, to identify and solve key problems afflicting the world and to enrich the lives of its people. They embrace and expound the importance of working together across all disciplines to provide innovative approaches to global issues, meeting current and future needs of the planet, society and economy. The themes set out here do not displace any of our disciplinary strengths, nor do they stand alone, or function in a vacuum. They will be reviewed to ensure that they meet our strategic ambitions, our evolving capabilities and the changing nature of the world.

## **DEMOCRATIC CITIZENSHIP**

Only active, informed and engaged citizens can fully safeguard democratic and sustainable societies against their many challenges. We will develop critical, multidisciplinary insights on past, present and potential future conditions, generating richer and more robust understandings of contemporary global societies and their cultural heritage. In communicating these to a variety of audiences, we will build greater awareness of the impact of change and the consequences of conflict over identities and resources. Exploring the development and potential futures of social and institutional structures as well as their implications for human wellbeing and justice, we will work to foster positive cultural and social exchange and engagement.

## **FUTURE AND EMERGING TECHNOLOGIES**

Working to enhance growth and competitiveness across economic sectors, we will explore and develop multidisciplinary collaborations, inspired by emerging technologies to foster new ways of thinking, designing, evaluating and creating products and services for a sustainable future. We will harness advances in scientific and technology trends to enhance the quality of our lives and transform future industries.

Technologies and systems that make more efficient and effective use of resources and materials are a key factor in continued and sustainable economic development. We will develop and create new products, services and processes that address and create solution pathways to global societal challenges with minimal cost and environmental damage.

## **HEALTH AND WELLBEING**

Managing and maintaining health and meeting the challenges of disease and disability require innovative and cost-effective solutions that draw on technological, creative and scientific developments. We will focus our contribution on the whole life experience of individuals, and on people's potential for active contribution to their own wellbeing. We will endeavour to develop and test new models and tools for health and social care delivery, disease prevention, treatment and management. We will create more effective interventions and engagements for improved individual and collective wellbeing, working at levels from an understanding of the fundamental mechanisms underlying health and disease, to the multiple impacts of social and physical environmental damage.

## **SECURITY AND RISK**

Security is an inescapable issue facing society. The security of individuals and societies worldwide is threatened by natural disasters and climate change, by political and criminal violence, conflict, fraud and other issues, all requiring analysis and interventions to secure peace, prosperity and justice.

Our activities will address the challenges of achieving and safeguarding the physical and electronic security of individuals, organisations and societies, and exploring and understanding the tensions and conflicts arising in an interconnected world. We will work to chart responses to unpredictable change, develop strategic decision-making and leadership capabilities, and build understanding of the mechanisms and approaches required for effective, efficient and equitable collective security.

## **SUSTAINABILITY AND THE ENVIRONMENT**

Understanding environmental change demands a historical perspective, including the more recent impact of human activity. Grasp of the interactions between the environment (natural, managed and built) and human populations is a global priority. We are faced with a growing set of challenges relating to sustainable use and habitation. We will take a significant role in promoting

environmental awareness, and in developing techniques for evaluating and improving existing and potential damage to land and marine ecosystems. We will deploy a range of approaches to developing innovative solutions to protect resources and overcome the challenges of sustainability for landscapes, buildings and communities.