UNIVERSITY *of* GREENWICH

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RESEARCH & ENTERPRISE STRATEGY 2016-2021

Introduction

The University of Greenwich, through the implementation of its strategic plan 2012-2017[1], has enhanced its capability as a research informed and enterprising institution which produces international-quality research and knowledge exchange. The strength and breadth of our research and enterprise activities are not only a key component of our reputation, but they also significantly enrich the value of our educational programmes. Measures of research excellence are included in most of the league tables widely consulted by prospective students and staff when choosing a university. Many universities in our sector, for instance partners in the University Alliance, have ambitious plans to improve their research standing and a strong track record of recent advances.

The goal of this strategy for the period 2016-2021 is to significantly improve our position as leading UK University undertaking distinctive research and enterprise work of rigour and significance which benefits society and is in many areas world-leading. This will require a cultural change in the university whereby research and enterprise activities gain in prominence across the institution and are more closely embedded within our educational offerings.

Vision

The University of Greenwich is a global university[2] with a significant international outlook that ranks 101 worldwide in list of 200 most international universities according to the Times Higher Education analysis[3]. It has a tradition of research and enterprise with a clear and direct focus on its benefits to society. Its cutting-edge work and facilities have attracted partners from over 50 countries including international agencies, government departments and global corporations[4]. It also has very strong local roots, with a long and proud history of service to the local community and region through education, research and enterprise.

Recognising the above strengths and the future aspirations of the university, the vison of this strategy is to undertake high quality research and enterprise that:

- **is driven by its beneficial impact in society;**
- **extends the global reach of our reputation;**
- **strengthens our local roots in the region;**
- **and enriches the contents of our educational programmes**.

The University recognises that the innovative, creative, enterprising and entrepreneurial qualities of its staff, students, and partners are key to achieving this vision. In order to accomplish the step changes necessary to deliver the ambitions of this strategy, it will be necessary train, support and develop our community of researchers across all career stages.

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[1] "University of Greenwich Strategic Plan 2012-2017 - Making Greenwich Great"
[2] "Global Greenwich – Internationalisation Strategy 2014/15 – 2018/19"
[3] www.timeshighereducation.com/features/200-most-international-universities-world-2016
[4] "University of Greenwich: Transforming Research – Making and Impact"

Aims

The vision will be articulated through four key aims listed below. Each aim will in turn be broken down into a number of more specific objectives to be achieved by implementing a series of actions. Success will be measured in terms of clear performance indicators that will determine progress towards the stated aim.

The key aims of the R&E strategy are:

1. Enhancing our research culture by increasing impactful research activity and promoting international research excellence across the institution.

2. Maximising the societal impact of our research and expertise through fostering a culture of enterprise and external engagement.

3. Developing effective and comprehensive research training mechanisms to support the research community across all career stages.

4. Embedding Research and Enterprise activities into the Learning and Teaching culture across the programmes.

Aim 1: Enhancing our research culture by increasing impactful research activity and promoting international research excellence across the institution.

In order to achieve our ambition of becoming a leading research informed university, our research culture and environment must be continuously enhanced. A healthy research environment requires growing amounts of external funding which provides the necessary resources to carry out high quality research. It also implies that a growing majority of academic staff should be research active, in the sense of producing novel work that merits publication or open dissemination and has a benefit to society or to our educational programmes. In addition, an increasing proportion of our work should reach the highest levels of international excellence for its originality, rigour and significance.

Research quality is assessed in terms of the national Research Excellence Framework (REF)[5], where, 1* and 2* levels are used to describe research that is of national or international significance, respectively, and 3* and 4* levels refer to research that is internationally excellent or world leading. Increasing levels of international excellence are often accompanied by increasing levels of international collaborative work and publication in the highest ranked journals. Whilst several journal ranking methodologies exist at present, the "Scimago Journal Rankings" (SJR)[6] will be used as one of the possible reliable indicators of journal quality and impact as described in the "snowball Metrics" project.[7]

This aim has been broken down into a number of specific objectives and associated measures of success and targets listed below.

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[5] www.ref.ac.uk
[6] www.scimagojr.com
[7] www.snowballmetrics.com

Specific Objectives:

O1.1: To develop an effective research environment across the university pro-actively supported by professional services and Faculties.

O1.2: To attract growing levels of research income from external sources and increase the size our Post Graduate Research and Post-Doctoral community.

O1.3: To increase the volume and spread of international research excellence (REF 3*/4*) across the institution.

O1.4: To increase the levels of impactful research activity (REF 1*/2*) across all academic staff.

O1.5: To improve our international standing and reputation for research.

O1.6: To improve our standing in REF2021.

Measures of success and targets:

T1.1: Research income growing from £18M to £30M per year.

T1.2: Numbers of research students enrolled in the institution increasing from 540 to 700.

T1.3: Proportion of academic staff with at least one internationally excellent (3*/4*) output per year on average increasing from 21% to 35%.

T1.4: Proportion of staff with independently peer reviewed outputs (at least one 1* per year on average) increasing from 43% to 75%.

T1.5: Proportion of UoG publications co-authored with international or external national collaborators and published in leading journals (defined as those in the first quarter according to the ScImago Journal Rank) growing from 38% to 50%.

T1.6: Our REF "research excellence power" (3*/4* staff FTE's) increasing from 84 in 2014 to 126 in REF2021 whilst increasing the proportion of international quality research (2* or higher) from 85% to 100% and achieving a GPA of 3 or higher in at least three Units of Assessment with significant critical mass.

Several of the above measures correspond to indicators already in use in the Strategic Plan. Targets T1.5 and T1.6 have been highlighted as being both new and particularly relevant to achieving the overall ambitions of the strategy. Both existing and new targets will be reported and monitored by the Research & Enterprise Committee on at least an annual basis. Interim assessment of research quality will be made via the GREAT-Cycles through internal and external reviews. In order to meet the objectives under this aim and achieve the associated targets, the following actions will be implemented during the 2016-2021

Aim 2: Maximising the societal impact of our research and expertise through enterprise and external engagement.

Effective enterprise and external engagement activities are essential mechanisms to ensure that our research and expertise has a real beneficial impact not just in academia but also in the wider community. These activities are often key to improving our links with the region but can also have a global impact in, for instance, the developing world. At present the University of Greenwich has several "Centres of Excellence" achieving global impact such as the NRI, the Centre for Numerical Modelling and Process Analysis and the Wolfson Centre. Often, enterprise and research activities are closely associated with each other in a mutually beneficial relationship. In other instances, enterprise work may be more strongly aligned with our educational programmes and the professional expertise of our staff.

In common with research activities, enterprise work requires external financial resources but can also generate additional income for the institution though, for instance, Continued Professional Development (CPD) or the exploitation of Intellectual Property (IP). The total amount of financial income generated though enterprise and engagement activities is typically measured via the Higher Education Business and Community Interaction Survey (HEBCIS) carried out by HEFCE[8]. Since enterprise and business interaction is often associated with prior or on-going research, there is an element of commonality between the figures reported as research income in the previous aim and those included here. However, this is common practice in the sector.

Robust measures of quality for enterprise and engagement activities are less well established than those used for research. REF2014 introduced an Impact section with well-defined guidelines and quality ratings which measure societal impact on the basis of its reach and significance, rating it from unclassified (not recognised), 1* (modest), 2* (considerable), 3* (very considerable) to 4* (outstanding). However these ratings only apply to impact resulting from international quality research in a very determined period and many valuable enterprise and engagement activities do not fall within the scope of REF Impact.

Specific Objectives:

O2.1:   To maximise our income generation through innovation and enterprise.

O2.2:   To stimulate and support a vibrant pipeline of enterprise and engagement activities across the institution leading to innovative products, processes and services.

O2.3:   To maximise the global impact achieved by recognised Centres of Excellence such as the NRI in the area of food security, sustainable development and poverty reduction.

O2.4:   To become a prominent UK university for social enterprise and entrepreneurship.

O2.5:   To make UoG an innovation partner of choice both in the region and worldwide with corporates, SME's, the public sector and civil society.

O2.6:   To improve our standing in the Impact component of REF.

Measures of success and targets:

T2.1:   Enterprise and related income (as reported to HEBCIS), including, consultancies, CPD, Knowledge Transfer Partnerships, and IP, increasing from £15M to £25M per annum.

T2.2:   Number of enterprise partnerships growing from 350 to 500.

T2.3:   Number of global "Centres of Excellence" with a turnover of £500K or above growing from 3 to 5.

T2.4:   Number of registered social enterprises created reaching 10 per year.

T2.5:   Number of successful consortium bids where UoG is the lead academic partner increasing from 12 to 20 per year.

T2.6:   REF Impact Grade Point Average (GPA) improving from 2.5 in 2014 to 2.8 in 2021.

As in Aim 1, several of these measures are already incorporated in the Strategic Plan of the university, others are new and will be monitored by the Research & Enterprise Committee. Special relevance has been given to the creation of local enterprises, particularly social enterprises. The following actions will be implemented during the period 2016-2021 in order to meet the objectives under this aim and achieve the associated targets.

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[8] www.hefce.ac.uk/kess/hebci

Actions:

A2.1:   Review and enhance the support for business and enterprise services provided by Greenwich Research and Enterprise (GRE) to the Faculties.

A2.2:   Create or strengthen effective partnerships at senior and operational level with regional public sector authorities such as Local Enterprise Partnerships, Chambers of Commerce, NHS Boards, Local Authorities and others to promote the anchor role of UoG in the region.

A2.3:   Develop an Enterprise academic career pathway that provides adequate recognition for these activities through well designed criteria that reflect the enterprise strategy.

A2.4:   Create or strengthen strategic partnerships with innovation or commercial institutions that play a leading role in our research themes.

A2.5:   Promote and support the development of Centres of Excellence with global impact though targeted investment.

A2.6:   Develop a strategic allocation mechanism for Higher Education Innovation Funding (HEIF) funds that is aligned to this achieving the objectives and targets of this aim.

Aim 3: Delivering effective and comprehensive research & enterprise training to support the research community across all career stages.

This strategy is clearly aspirational and aims to deliver a significant step change in the research and enterprise culture at the University of Greenwich. In order to achieve this, it is essential that appropriate training and support is available to the academic and research community. At present, research training at different career stages is provided by a variety of internal and external sources, often lacking coordination. It is important that appropriate oversight, coordination and planning is given to meeting the training needs of researchers from their initial steps as doctoral students through their progression to early career academics all the way to becoming senior professors. Institutions such as VITAE[9] provide generic guidelines and frameworks from which more detailed comprehensive plans can be developed. In addition to good training, effective mentoring and leadership play a central role in developing both researchers and the research environment in the institution. Finally, we must ensure that all diversity groups benefit equally from existing and new opportunities to develop their research and enterprise potential.

Assessing the success of research and enterprise training is measured though the progression of research students and staff through the different stages of their career, e.g., doctoral completion or academic promotion to higher grades of seniority. In addition, surveys are carried out bi-annually to determine the quality of research student experience (Postgraduate Research Student Survey, PRES). Finally, research training, staffing and doctoral completions play a significant role in the REF section dedicated to the Environment. This is measured on the basis of its sustainability and vitality and scores range from 4* (an environment conducive to producing world-leading research), 3* (an environment conducive to producing internationally excellent research), 2* (an environment conducive to producing research of internationally recognised quality),), 1* (an environment conducive to producing research of nationally recognised quality) and Unclassified (an environment not conducive to producing research of nationally recognised quality).

Specific Objectives:

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[9] www.vitae.ac.uk

O3.1: To increase the visibility of research training and embed it in the culture of the institution.

O3.2: To support staff at all stages of their careers through comprehensive research training programmes, helpful mentoring and effective leadership across the institution in a manner that meets the principles and expectations of Athena-Swan, EU-HR Excellence Badge or similarly recognised equality and diversity initiatives.

O3.3: To provide a comprehensive training programme and supportive environment for our community of research students.

O3.4: To ensure that our research students successfully engage with training opportunities and complete their studies in a timely manner.

O3.5: To develop a growing portfolio of international research degree activities through joint doctoral programmes or transnational educational (TNE) research initiatives.

O3.6: To improve our standing in the Environment component of REF.

Measures of success and targets:

T3.1: Proportion of academic staff in supervisory teams increasing from 45% to 75%.

T3.2: Proportion of academic staff being promoted through research & enterprise career routes reaching 5% per year.

T3.3: Overall satisfaction rate in PRES surveys increasing from 76% to 85%.

T3.4: Doctoral completion rate in 4 years for FT students and 6 years for PT students increasing from 55% to 80%.

T3.5: Number of research students engaged in trans-national or collaborative doctoral degree initiatives reaching 35 FTE's.

T3.6: Number of doctoral awards per year growing from 50 to 100 leading to a total submitted to REF increasing from 210 in 2014 to 400 in 2021.

T3.7: Improved REF Environment GPA from 1.88 in 2014 to 2.5 in 2021.

Several of the above measures correspond to Indicators already being monitored by the R&E Committee (PRES and completion rates) and others are new. Two targets have been highlighted as being highly significant and will be monitored more closely. In order to meet the objectives under this aim and achieve the associated targets, the following actions will be implemented during the 2016-2021 period.

Actions:

A3.1: Design, invest in and implement a Research & Enterprise Training Institute that integrates training across all career stages and Faculties.

A3.2: Develop, commission and deliver a comprehensive programme of training aligned to the Research Development Framework for staff and research students provided by the R&E Training Institute.

A3.3: Design and implement programmes of advanced and specialist research training for research students and early career academics to be delivered by Faculties but fully coordinated with the activities of the Research & Enterprise Training Institute.

A3.4: Develop and implement a mentoring training programme and establish processes for quality assurance of mentee-mentor pairings.

A3.5:   Carry out a comprehensive review of the academic regulations, policies and procedures supporting research degrees, including the development of regulations and procedures required to support collaborative and TNE research activities.

A3.6:   Put in place effective and embedded management information systems supporting all stages of research training across the institution.

Aim 4: Embedding Research & Enterprise into the Learning & Teaching culture across our programmes.

A key critical component of enhancing our status as a leading research informed university is ensuring that research & enterprise activities are fully embedded in our educational programmes. This implies both that our programmes must be aligned to the expertise and research interests of our academic staff and that research and enterprise skills are fully embedded in our curricula. An important element in order to achieve this is to ensure that those leading our academic activities, typically Programme Leaders and Heads of Department, are predominantly part of the research active community. It is also important that pedagogic research is encouraged, fully recognised and appropriately rewarded. Finally, the participation of research students in our educational activities is another important element linking R&E and L&T. It also provides research students with valuable skills, particularly for those aspiring to academic careers.

Specific Objectives:

O4.1:   To increase the levels of pedagogic research activity across the institution.

O4.2:   To maximise the alignment of our taught programmes with our R&E interests so that that students are predominantly taught by staff engaged in R&E activities and that programmes and departments are increasing led by research active staff.

O4.3:   To ensure that students in taught programmes are provided with effective research and enterprise skills as part of their curriculum.

O4.4:   To facilitate the progression of graduates from taught degrees into our R&E programmes and activities across all diversity groups.

O4.5:   To become a prominent institution for student enterprise and entrepreneurial activities.

O4.6:   To maximising the engagement of PGR students in L&T activities.

Measures of success and targets:

T4.1:   Number of pedagogic research outputs authored or co-authored by staff reaching 20 per year.

T4.2:   Percentage Programme Leaders and HoDs with at least one peer reviewed output (1*) per year on average or equivalent enterprise outcomes reaching 75%.

T4.3:   Percentage Programme Leaders and HoDs with 3*/4* outputs or contributing to REF impact case studies reaching 25%.

T4.4:   Number of external publications or outputs authored or co-authored by students in UG or PG taught courses reaching 100 per year.

T4.5:   Number of students or alumni engaged in enterprise or entrepreneurial activities reaching 1000 per year.

T4.6:   Proportion of FT PGR students engaged in L&T activities for at least 25 hours per year reaching 80%.

None of the above measures is currently being monitored. It would be helpful if a future L&T strategy incorporated some of these targets as part of a reciprocal aim of ensuring that L&T is aligned to our research. In the meantime the R&E Committee will monitor the above targets. Target T4.2 plays a crucial role in ensuring the alignment of R&E and L&T activities. The actions planned in order to achieve the above objects are listed below.

Actions:

A4.1: Support staff to engage in high quality pedagogic research through workshops, in-house seminars, and interest groups led by our network of National Teaching Fellows.

A4.2: Introduce a teaching and scholarship career pathway that adequately recognises and rewards pedagogic research.

A4.3: Review academic staff workloads to ensure that R&E allocations are commensurate with outcomes and expectations.

A4.4: Enhance our approval, review and annual monitoring processes such that R&E skills are appropriately embedded in all programme curricula.

A4.5: Devise and implement a scheme that encourages and supports taught students to publish their work in external media or present it at open conferences.

A4.6: Provide enterprise support for students and alumni through advice services, facilities and incubation space.

A4.7: Develop and implement a formally recognised role of 'Postgraduate Research Teaching Assistant' to facilitate Research Students engaging in supporting the university's teaching endeavour.