



## **University of Strathclyde Response**

### **1. Introduction**

We welcome the opportunity to contribute to the European and External Relations committee inquiry – our response is focused on the issues most immediately relevant to the University of Strathclyde and the higher education (HE) sector in Scotland and is intended to complement that of Universities Scotland (US). We particularly support US' statements in relation to the value of Scotland's membership of the EU to Scotland's HE sector and the importance of:

- Maintaining access to EU funding
- Maintaining access to collaborative arrangements – including shared research facilities
- Ensuring ongoing influence in determining key research themes for EU funding schemes, as well as in shaping the content, budget distribution and parameters of future funding programmes
- Freedom of movement and confirmation of EU citizen status – for both students and staff
- Mobility and post study work visas

Underlying these specific post-exit issues for universities, it remains that the single biggest and most immediate impact on the University will result from the broad economic and fiscal impact of the referendum vote and the knock on effect on public sector finances and hence potentially for recurrent and capital funding for universities.

Fundamentally, the negotiation and realisation of a UK exit from the EU will impact on and present risks to the underlying financial health, reputation and sustainability of the UK HE sector and to individual institutions in Scotland, including Strathclyde. Whilst institutions and the sector can seek to provide reassurance to our staff and students, and influence the longer-term future in relation to funding access and status of EU citizens living in and coming to the UK, a period of ongoing uncertainty will have a clear bearing on our ability to mitigate the varying immediate and longer-term impacts and risks. Although some of the immediate issues have been ameliorated this is likely to be only temporary with greater risks and implications likely to become clear in coming weeks, months and years.

In 2015-16, Strathclyde welcomed over 3,000 EU students (8% of our undergraduates; 10% of our postgraduate taught students and over 20% of our postgraduate research students – more than one in three of those fundable by the Scottish Funding Council) and employed over 300 staff of EU nationality (20% of our academic staff), with over 300 students and staff participating in Erasmus+ exchanges with institutions in 20 different countries. In addition, via success in applying for competitive grants, our academic staff secured £9M in research income from the EU in 2014-15 (around 15% of our total research income). Since 2007, we have received support to undertake 127 FP7 and 58 Horizon 2020 projects, with associated award value to Strathclyde of EUR€50M and EUR€20M, respectively.

Our EU students and staff contribute significantly to the diversity and vibrancy of our University community and our access to EU research funding is not only an important source of income but a cornerstone of our strategy to build our research collaborations with leading academic partners, business, government and the third sector, thereby increasing our research intensity and impact. Our FP7 portfolio of 127 projects involved partnerships with over 900 organisations across Europe

and the world, and our H2020 portfolio of 58 projects to date has involved over 430 organisations. Our Horizon 2020 portfolio has enabled us to fund 151 Full Time Equivalent researchers (or 62 people for an average of 2.4yrs each). The importance of EU membership, in terms of the benefits derived from people, investment, and our research profile and international reputation goes well beyond those which are directly measurable as impacts on the University – they have a real and irreplaceable social and economic impact on Glasgow, Scotland and beyond. Given this, we believe it is essential that the Scottish HE sector has a seat at the negotiation table for EU exit discussions, to ensure there is appropriate prominence of issues affecting Scotland's universities and which have a knock-on impact on the Scottish economy.

## **2. The alternatives to EU membership and the implications of these alternatives for Scotland**

In terms of alternatives to EU membership, there are a number of key elements which we feel are core to the ongoing success of Strathclyde and other universities in Scotland.

### Free movement of people

If alternatives resulted in restricted movement of people there would be an inevitable impact on:

- EU student recruitment and we would need to consider implications for EU applicants in terms of fee eligibility, with necessary implications for the Scottish Government in terms of existing fee-related legislation
- Staff retention/recruitment, with consequent impact on quality and reduced ability to contribute to research impact and the economy.

### Collaboration and access to shared funding

Any restrictions on free movement of people, coupled with the question of the UK's future negotiated status, would bring foreseeable risks in relation to:

- Access to Horizon 2020 (H2020) and wider EU research, innovation and infrastructure funding schemes – the direct consequences and risks to funding arising from restrictions on free movement have been widely reported in relation to Switzerland (see below)

In addition to seeking a way for Scottish universities to continue collaborating with European partners (accessing shared funding and shared research facilities), we would suggest alternatives to EU membership should also consider models which increase our potential to pursue opportunities to create new research 'alliances' (and associated funding programmes, to complement existing funding programmes) with non-European partners.

### Alternative models

Alternative models to EU membership which could facilitate some of the above elements:

- Associated country status - Norway model or FP7 Swiss model of accessing H2020 funding.
- Non-associated third country status – significantly more constrained than Associated country status, with funding awarded only in 'exceptional cases' and with no reimbursement for co-ordination costs, leading to much more uncertainty from potential partners – reduced participation in H2020 compared with FP7 illustrates this.
- Free movement of specific well defined groups of people (as highlighted by [Times Higher Education](#), and requiring relevant justification).
- Establishment of an in-country 'Swiss-type' fund to ensure all successful research collaboration proposals can be funded. This could be combined with taking forward the UK

Treasury's recently confirmed commitment to underwriting H2020 funding won before the UK exits the EU. However, if this was to enable fully-funded UK participation at levels equivalent of those achieved to date, with no detrimental impact on other funding for HE such as that via RCUK, significant additional budget would be required.

If alternatives resulted in no/limited access to large-scale research funding:

- The University would need to find alternative sources of funding to replace that currently gained from Horizon 2020/FP9 projects. Although all opportunities would be pursued, there is clearly a risk that funding could not be found on the same scale. In addition, there are huge benefits brought from established and, in some cases, long-standing relationships with high quality collaborators which are not easily nor quickly replaced. Therefore there would be a significant risk to the overall quality of research, publications, and externally measured quality (via the Research Excellence Framework (REF) exercise and via citation metrics noting that international collaborative publications are cited at much higher rates), as a result of decreased European research collaboration, decreased income, and staff retention, but perhaps most notably to the benefits gained from research impact and downstream knowledge exchange and innovation activities, with associated economic impact.
- There would also be:
  - A potential additional hurdle of UK evaluation in addition to Horizon 2020 / FP9 evaluation process
  - Reduced/no influence on Horizon 2020 or FP9 programme content or structure, or budget decisions – the UK has traditionally played a key role and ensured distribution of research funds has been excellence-driven rather than, for example, geographically-based.
  - Reduced portfolio of research activity with knock-on implications for impact, including economic impact
  - An impact on staff retention and recruitment (not limited to EU staff or those funded via EU grants) as noted above – uncertainty alone can impact on behaviour

Finally, although significantly mitigated by the recent Treasury announcement about underwriting, there is still a potential risk that funding issues could be incurred mid-project, impacting on our ability to fulfil contractual obligations, meet salary/employment commitments, possible repayments to sponsor etc – this will depend on the detail of the UK Government 'guarantee' and of any arrangements put in place post-exit. Of particular interest are the potential future arrangements for sought after (and highly portable) ERC grants which can only be hosted in a Member State or Associated Country. Similar issues hold true for Marie Skłodowska-Curie Actions (MSCA) Individual Fellowships, and projects on particular themes such as security, where a UK government guarantee of funding alone would not overcome existing barriers to participation by non-Member States.

### **3. Positions likely to be taken by other Member States in the negotiations**

The Swiss experience will be highly influential in terms of other Member States views on the UK's negotiations in relation to access to research funding and free movement of people. As widely reported, following the Swiss referendum in relation to mass immigration in 2014, negotiations in relation to Switzerland's ongoing participation in Horizon 2020 were immediately suspended with Switzerland's status amended to 'third country'. Although this was subsequently negotiated back, on a short-term basis and with limited scope, to '[partially associated country](#)', Swiss academics' influence has been impacted, and perhaps most importantly, potential collaborators' willingness to collaborate with the Swiss universities has been negatively affected. Switzerland remains unable to

access funding for some key elements of Horizon 2020, a large scale fund was required to be set up to support continued participation in other elements, and the percentage of projects co-ordinated by Switzerland was reported to have dropped from around 4% to under 1%.

#### **4. The impact on Scotland's economy of termination of ESIF support and access to the Horizon 2020 programme**

Access to ESIF support and the Horizon 2020 programme, more than any other issue arising from withdrawal from the EU, underpins the retention and recruitment of academic staff within Scottish universities and hence directly impacts on the health of the HE sector and the potential for innovation with local and wider economic impacts. Whilst universities are adept at seeking funding from a wide range of sources, the prospect of becoming ineligible for a major source of funding will have a cascade effect stemming from the reputational impact.

The Treasury's assurances that it will guarantee funding streams including H2020 provided some welcome short-term certainty and we would wish to build on this by securing a clear position for the medium and longer term. Regardless of the long-term arrangements, it is already clear that there have been issues with regards academic staff in Scottish HEIs signing up to, and applying for, Horizon 2020 funding for projects stretching beyond 2 years and the Treasury's guarantee has yet to be tested.

##### **Positive impact of Strathclyde's EU-funded research**

At Strathclyde, our success in terms of winning competitive research funding from EU sources has been a key strategic focus in recent years, enabling participation in large-scale research projects. In 2014-15 around £9M (15%) of our research income was from EU sources and this has enabled us to undertake impact-focused research projects in collaboration with world-leading partner institutions. A few examples are set out here:

##### Fisheries policy

In 2012, cod stocks in the North Sea were assessed as having recovered almost to a level at which their viability is considered to be safe. This recovery followed 3 decades of progressive depletion to only 50% of the safety threshold of abundance. Achieving this recovery required the EU to abandon an earlier 'closed area' policy banning fishing in selected areas of the North Sea, and instead enforce drastic cuts in overall activity on national fishing fleets. The policy change was prompted in part by predictions from mathematical modelling of cod populations by researchers at Strathclyde – funded in part by EU research funding - showing that the 'closed area' policy was unlikely to be an effective strategy for recovery. The recovery has so far restored £17 million in annual value to the fishery industry.

##### Improved productivity and growth

Research into Performance Measurement Systems conducted by the Strathclyde Institute for Operations Management (SIOM) led to new knowledge which in turn was applied in companies. These new insights resulted in significant economic impacts for companies both large and small. The reach has been significant, with economic and social improvements in approximately 170 companies, and indirectly to over 1000 companies through intermediaries such as Scottish

Enterprise and the Manufacturing Advisory Service. In addition, the European wide FP7 FutureSME project led by the Strathclyde team developed and delivered a €6M programme to improve the competitive capabilities of European Manufacturing SMEs. The research, and particularly the maturity models, team performance tools and visual performance measurement approaches, formed the foundations of the project. Over the duration of the project, it delivered detailed longitudinal interventions with 13 European SMEs and also involving performance measurement and management maturity diagnostic with 63 manufacturing SMEs across Turkey, Italy, Czech Republic, Poland, Spain, Slovakia, UK and Ireland. The training programme developed was awarded the European Training Programme of the Year Medal by the Polish Chamber of Commerce. The impact of these changes began to be evident between 2008 and 2013 in the form of improved productivity and growth within the collaborating organisations, which included Highland Spring and Babcock International Group.

#### Refugee teachers

Research by Strathclyde academics into diversification of the teaching profession resulted in the formation of Refugees Into Teaching in Scotland (RITeS) funded initially by the European Refugee Fund and then the Scottish Government. RITeS has enabled professionals who were teachers in their country of origin and arrived in the UK seeking asylum to maintain their professional identity and revitalise their professional skills in a new education system, leading to employment opportunities through identification as teachers rather than refugees. The project provided information on the specific needs of 387 refugee teachers to the General Teaching Council for Scotland and to employing local authorities. RITeS has been used as a model for similar projects with teachers in England and other refugee professionals in Scotland.

#### Factories of the Future

In October 2015, Strathclyde was pleased to announce that spin-out company, [Smarter Grid Solutions](#), won its second Horizon 2020 EU Funded Project as part of a consortium comprising 10 partners from the United Kingdom, Germany, France, The Netherlands and Spain. The project, OPTIMISED, with a total budget of €7M, is focused on the 'Development of Factories of the Future' and will develop the Strathclyde start-up's experience of demand-side response solutions. Formed in 2008, Smarter Grid Solutions originated from the Strathclyde's Institute for Energy and Environment. The promising spin-out quickly set up office in New York and London, and is now an active contributor in many parts of North America.

## **5. The position of EU citizens in Scotland in the event of withdrawal from the EU**

### Current University Staff and Staff Recruitment

The retention and wellbeing of our current staff who are EU citizens is a key concern. Whilst it is apparent that there will be no immediate changes to the immigration status of EU staff currently employed by the University, further reassurance on this for the medium to long term would be welcome and would allow us to strengthen our message that Scottish HE represents a good choice for all new and existing academic staff (from the UK, EU and beyond) pursuing research and innovation, with minimal barriers to international collaborative partnerships and the ability to secure large-scale funding.

### **Positive impact of Strathclyde's EU staff**

At Strathclyde, our success in terms of research impact, innovation and teaching quality is underpinned by attracting the highest quality staff and working with world-leading collaborators. External measures of universities often focus on the proportion of academic staff who are international as it has been demonstrated that a diverse grouping of staff correlates with strong academic performance. At Strathclyde one in five of our academic staff is of EU nationality, with additional staff coming from beyond the EU. As with students, it is notable that the areas with highest growth in EU staff numbers and proportion are in subject areas with the greatest opportunities for industrial partnerships and innovation, and highest direct economic impact flowing from their research and the graduates they produce – Engineering & Technology, and Business. In some specific subject areas, EU and non-EU staff make up the majority of academic staff; providing reassurance to those staff has been a key focus for the University.

Science departments in particular provide truly international research environments. An example is our Physics Department, which was ranked number one in the UK for research in the Research Excellence Framework 2014, with 93% of submissions rated world-leading or internationally excellent – an achievement supported by the ability to attract the best research teams internationally. One third (32%) of our academic staff in Physics have been attracted to join us from the EU and a further 12% from outwith the EU – these staff have brought with them connections that now enable us to attract the best students and early-career researchers internationally as well as benefit from key international research collaborations. Our Quantum Optics group, for instance, has a leading role in the International Max Planck Partnership in Measurement and Observation at the Quantum Limit, where five Scottish physics departments collaborate with five Max Planck institutes in Germany. In addition, several of our Physics groups are integrated in the University's [Technology & Innovation Centre](#), which was established to accelerate the way in which researchers in academia and industry collaborate and innovate together, and which was funded in part by the European Regional Development Fund.

For the HE sector and the Government, the following staff issues are of key concern during the period of UK/EU negotiations:

- The comparatively higher level of mobility amongst academic staff (particularly doctoral and postdoctoral researchers), whose existing research grants are portable, and the likelihood that international/EU competitor institutions will maximise the opportunities arising from a period of instability in UK universities.
- The ability to continue to access EU research funding and the impact this may have on retention and recruitment of top talent, particularly those whose work is closely linked to EU funding or collaboration.
- The impact on individuals or programmes that are currently funded by the EU. In particular, where funding is due to end during the negotiation period and the potential implications on the likelihood of funding renewal in these areas.
- The potential for an immediate negative impact on international staff recruitment because of perceptions of the UK amongst international candidates and uncertainty over future visa requirements.

- The potential for a higher than normal level of turnover amongst non-UK research staff and more generally in the academic professional population with associated impact on research output quality and volume.

To date, concerns raised by our staff following the EU referendum vote have focused principally on the uncertainty, but beyond that on the immediate ‘deceleration’ effect in terms of prospective applications for research funding with EU collaborators, recruitment of new staff.

### Students and Recruitment

The future fee status of EU students will be dependent on the nature of the UK’s future relationship with the EU and perceptions amongst prospective non-EU international entrants and applicants may also be negatively impacted. Whilst the joint Scottish Government / Universities Scotland statement – confirming EU nationals already in the higher education system, and those entering in August 2016 will be eligible to receive tuition support from SAAS for the duration of their course – was helpful in reinforcing messages to our students and applicants for entry in 2016-17, there remains a concern that despite assurances, these applicants could still withdraw, to avoid any uncertainty/risk in taking up a place at a UK institution. EU students make up around 8% of the Strathclyde undergraduate population, and our proportion of postgraduate taught and postgraduate research students from the EU is even higher at 10% and over 20%, respectively. Over recent years we have benefited from growth in numbers of postgraduates from the EU in particular, for whom competition from other parts of the EU is particularly significant.

#### **Positive impact of Strathclyde’s EU students**

At Strathclyde, by attracting increasing numbers and proportions of students from the EU, most particularly at postgraduate level, we have been able to increase the diversity of our student population bringing cultural, social and academic benefits to the whole University and surrounding community. Whilst studying, these students also bring significant economic benefits to Glasgow and Scotland, flowing from their direct spending on accommodation, food, leisure and other activities; the impact of any part-time employment and volunteering they undertake; and, additionally, the tourism impacts of visiting friends and family (Source: [BiGGAR Economics, 2013](#)).

In terms of graduate productivity, it is notable that the majority of recent growth in EU students at Strathclyde has been to subject areas with the highest ‘graduate earnings premium’ – specifically STEM subjects and Business. To date, concerns raised by our students following the EU referendum vote have focused not on their fees or future fees status, but on their *likelihood of being able to work in Scotland* or the wider UK on completion of their studies.

Focusing specifically on Strathclyde’s Postgraduate Taught provision, two areas which have proven particularly attractive to students from the EU are Naval Architecture, Ocean and Marine Engineering (NAOME) and Management Science – more than one in four of our PGT students in each of these Departments is from the EU, with greater numbers coming from outwith the EU.

In NAOME our PGT offerings encompass Marine Engineering, Ship & Offshore Structures and Technology, Subsea & Pipeline Engineering, and Offshore Renewable Energy. Our graduates take up



exciting and challenging careers to contribute to the maritime, oil & gas and offshore renewables industries worldwide and our researchers in this Department also participate in:

- research bodies such as: the EU Research and Development Co-ordination Group
- regulatory bodies such as the International Maritime Organisation (IMO) which sets worldwide standards for ship safety
- international standard-setting bodies such as the International Towing Tank Conference (ITTC) and International Ship and Offshore Structures Congress (ISSC).

This means our students are learning from top-class researchers who are actively involved in industry and key international organisations.

In Management Science our PGT offerings cover Business Analysis & Consulting, and Operational Research, and enable students to study (via a range of flexible routes) in one of the leading Management Science/Operational Research departments in the UK, learning from staff who are internationally-known both through their academic output and applied work with government and business organisations. Our Management Science PGT students typically have first degrees in business, economics, mathematics, engineering and the natural and social sciences. A vital component of both MScs are Apprenticeship schemes, through which our Masters students spend time working on an analytical project, often embedded in the analytical function of an external host organisation, thereby greatly enhancing the students' business awareness and employability.

For the upcoming recruitment cycle it is essential that we get reassurance, or as a minimum, a timeframe for a statement, with regards EU students applying for entry from 2017-18. To date, the [UK Minister of State for Universities and Science](#) stated (28 June) that future funding arrangements for EU students and continued participation in EU programmes such as Erasmus+ 'will be determined as part of the UK's discussions on its membership'. A more immediate timeline is needed to allow universities to provide prospective applicants with the necessary certainty if we are to avoid an impact on recruitment and to mitigate the risk that student mobility may be negatively affected. These issues are clearly tied to the question of free movement.

It is also important to also highlight that perceptions of the Scottish HE sector amongst prospective UK and international entrants and applicants may also be affected, particularly if the possibilities for mobility during their studies is affected. Over 300 students and staff currently participate in Erasmus+ exchanges and the continuation of these opportunities is another element of the sector's attractiveness bringing benefits both to individual participants and the wider community.

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