

Written evidence in support of the Enterprise and Business Committee session with Welsh universities 21/10/15

This paper outlines the engagement of Welsh universities in the first year (2014) of the Horizon2020 programme. A separate paper on engagement in the Erasmus+ programme will follow.

Successful projects in Welsh universities

For the first year of Horizon2020 Welsh organisations were involved in 47 successful applications of which 36 involved Welsh universities. There were notable successes in applications to the European Research Council (ERC) at Cardiff University and three of the Welsh universities were awarded funding for Marie Skłodowska-Curie Actions (MSCA). There have also been successes in the Societal Challenge part of the programme in Energy, Blue Growth and Climate Action.

From the data released in July, Welsh universities have captured just under €18m of EU contributions for these 36 projects out of a total income to Wales of just over €20m. This represents an overall success rate of 15.9% of applications submitted by HE. The overall success rate across the EU for the first 100 projects was 14% which represents a significant decrease from the 20% overall success rate for FP7. Though it is too early to draw significant conclusions in making comparisons with FP7 at this stage, the amount awarded in 2014 (€18m) was approximately the average amount awarded annually to Welsh HE over the FP7 period. It should be noted that the budget available for this first year of Horizon2020 was lower than the annual budget for the final years of FP7. The statistics for Wales do not include the successful COFUND grant which will add another €10m to the overall figure. The COFUND grant aims to address the shortfall in the number of researchers in Wales as identified in the recent Leadership Foundation report¹. This shortfall, which the report estimates at around 600 researchers, will have a bearing on the volume of competitive applications that can be submitted to Horizon2020.

The Commission has repeatedly stated that the programme is oversubscribed. The Commission has received over 65,000 proposals and are aware that they are turning down too many excellent proposals².

¹ For a summary of the report: http://www.lfhe.ac.uk/en/research-resources/published-research/research-by-theme/the-uk-he-system/the-case-for-growing-stemm-research-capacity-in-wales.cfm?utm_source=research&utm_campaign=halligan

² <http://www.sciencebusiness.net/news/77206/Horizon-2020-low-success-rates-a-%E2%80%98very-sad-story%E2%80%99%2c-says-top-research-administrator>

Novel features of the Horizon2020 programme

The Welsh Higher Education European Liaison Officers have provided WHEB with feedback on the experiences of participating in the application procedure for the first year. There were a number of new processes set up for the beginning of the programme, including a new participant portal and the introduction of a two year work programme. Though there were some glitches with the participant portal in the first year the application and submission system is very efficient, the guidance is clear and the help services well sign-posted. As a result the European Liaison officers have to deal with fewer basic procedural questions from the academics. However, it is still somewhat overwhelming for a new user to navigate through the volume of information. The two year work programme helps to plan activities and activate networks and enables the research and innovation services in the universities to better plan, alert and support the development of applications. In most cases Welsh academics are invited to join consortia as partners which are being coordinated from other countries and so are not responsible for the application process.

With the aim of reducing the time to grant, the Commission has eliminated the negotiation phase between the evaluation of the proposal and awarding of the grant. The main effect on the application process has been the need to provide more details of the financial aspects of the proposal as well as the central management arrangements. This additional responsibility at the pre-submission stage has been criticised by academics as time and resource wasteful when the success rates are very low. However, taking the negotiation phase out of the process has speeded up the time from notification of award to the grants being signed off and projects starting.

The evaluation reports continue to be of variable quality. Some offer helpful and focused feedback which enable researchers to address areas of project weaknesses, whereas others are too generalised and lacking in detail for researchers to identify the areas of concern to the evaluator. The lack of detailed feedback could be attributed in part to the huge over-subscription of bids to some calls e.g. in Health which has meant that the Commission has struggled at times to deal with the volume. The Evaluation Summary Reports receive the greatest criticism where the feedback suggest only limited understanding of the subject area or where key section of the application appears to have been overlooked or where the comments appear to be inconsistent.

With the exception of the European Research Council, most calls are evaluated according to the scientific excellence, implementation and impact criteria. Many researchers report that they score well on scientific excellence which researchers commonly regard as the primary focus of the action. However, under Horizon2020 the Impact criterion is equally important and provides the main focus for projects in the Societal Challenges pillar. Achieving the required standard and appropriate activities in Impact is proving challenging to address as the Commission expects projects to be on higher Technology Readiness Levels (TRLs) and thus requires greater involvement from non-academic sectors.

This strong emphasis on innovation in the new programme and for a more multidisciplinary approach to the challenges identified in many of the calls requires academics to work with new partners, including from SME and industry, even though academics still prefer to work with known collaborators where they are able to build on the trust developed with colleagues over time. Although the new areas included in Horizon2020 allow a wider range of Welsh academics to participate, conflicting academic responsibilities including teaching, undertaking research already funded, bid development and administration continue to limit the time available to researchers for Horizon2020 engagement.

In recognising these major changes to calls in Horizon2020, Cardiff University has joined the Vision2020: The Horizon Network³, which is a pan-European network of universities, research organisations, large companies and SMEs. The network includes organisations, from universities and industry which have been very successful in Framework Programme funding in the past. Cardiff University leads the Energy Cluster within the network, organising a large two day event in July and securing industry participation from Wales in the network. Cardiff has also signed a strategic partnership with Leuven University which has a very strong track record in European research funding projects.

Support for engagement in the programme

- Institutional support

Most universities have well established European support departments providing policy and administration guidance to academics. In many cases they are part of the institution-wide research engagement and innovation departments. The European liaison officers are the main point of contact for researchers and conduct one to one and faculty wide meetings to encourage research collaborations and to identify and target key Horizon2020 funding opportunities. They coordinate the UK Research Office (UKRO) annual visits and have coordinated workshops led by EU experts such as the Hyperion Bid Consultancy seminars.

- National Contact Points (NCPs)

UKRO continues to provide professional and proactive support and guidance for the ERC and the MSCAs. They have led tailored training and advice workshops for researchers as well as hosting national training seminars. Researchers and research managers are able to directly contact UKRO staff with call specific queries and receive efficient, timely responses. Due to resource limitations however, UKRO is unable to offer draft bid evaluation or scientific feedback support.

Very useful scientific and policy feedback has been received from the Health and Energy NCPs who have been particularly helpful in offering initial evaluation feedback on application drafts, to confirm an appropriate fit between a project and a specific call and for EU general policy feedback. On 16 November Swansea University will be hosting an NCP-led information day on Societal Challenge 6 (Europe in a Changing World – Inclusive, Innovative and

³ For more information: <http://2020visionnetwork.eu/>

Reflective Societies). The NCP for Challenge 2 (Food, Agriculture, Aquaculture and the Bio economy) has attended the WHEB European Funding Coordinating group meeting in June and ran an information seminar at Bangor University in July. The NCP for Challenge 3 (Energy) attended the Vision2020 Energy information conference at Cardiff University in July as mentioned above.

Some universities have stated that the level of assistance from the NCPs has been mixed and there are instances where requests for guidance have not been answered. However, the general view from the European officers is that the NCPs are providing better support as they are now full-time appointments, contracted by InnovateUK.

- SCoRE Cymru Scheme

The SCoRE Cymru initiative has provided useful funding to facilitate research and industrial partner travel to enhance networking, and establish future project collaborations. Swansea University for example has received 15 travel awards, with at least two of these resulting in successful Horizon2020 grant awards. The team at WEFO has been able to respond fairly quickly to requests. However, limiting factors have been that funding cannot be claimed retrospectively and applications need to be submitted a number of weeks in advance before the planned travel. Some universities feel that the administration involved in requesting fairly small amounts of funding could be reduced.

- WEFO Horizon2020 unit

The WEFO Horizon2020 unit provides helpful policy and briefing information via email and circulars. Some of the communications duplicate correspondence from other support agencies or information has been forwarded on events that have already taken place. At its inception, the WEFO Horizon2020 unit suggested it would like to host training events to support sector upskilling, and encourage increased participation in Horizon2020. The unit provided support through the SCoRE Cymru scheme to hold joint MSCA fellowship two-day workshop for prospective fellows and supervisors at Bangor and Aberystwyth Universities.

Going forward, a more targeted use of resources could be achieved if the remit of the WEFO Horizon2020 unit within the Welsh research sector could be clarified, to avoid duplications. The unit could undertake to provide specific training opportunities for businesses in Wales. Cardiff University has been in discussion with the Unit regarding using its membership of the Vision2020 network to facilitate greater Welsh SME awareness and participation. It has also been suggested that the Unit should establish a database of Welsh Horizon2020 evaluators.

- WHEB

The WHEB office in Brussels has also been assisting the sector in engaging with the programme by organising study visits and promotional events. As part of its remit to support a wider pool of researchers in participating in European projects, WHEB recently organised an introduction to Horizon2020 and EU policy making visit for 15 researchers involved in the Welsh Crucible scheme from six Welsh universities. The researchers were briefed by their European officers in advance of the meeting and will be meeting with them to discuss their plans for participating in future calls. Initial feedback from the researchers was very positive

with 14 out of the 15 researchers stating that the visit provided valuable insight into EU policy and funding and which will inform their engagement with Horizon2020 over the coming years.

WHEB continues to play an active role in the ERRIN network in Brussels, co-chairing the Opening Science working group. The work programme for this group includes the integration of social sciences and humanities into the Horizon2020 proposals. This is a key objective of the Commission. The office is also supporting Welsh academics in participating in the Vanguard regions initiative. This new initiative, currently chaired by the Tampere region in Finland, aims to foster greater collaboration between regions which have advanced manufacturing as part of their Smart Specialisation Strategies and also aims to submit applications to Horizon2020 in future. One of the key priority areas is 3D printing which is also a priority area for Swansea University and WHEB was able to broker the participation of Swansea University at the most recent network meeting in Brussels.

The European Funding Coordinating groups set up by WHEB have most recently focused on the draft work programmes for the 2016-17 calls. In Advanced Manufacturing, for example, Prof Rossi Setchi (Cardiff University) and Prof Hefin Rowlands (University of South Wales) have been put forward to be part of the expert group to manage a project within the Factories of the Future call.

The last meeting of the Biosciences group welcomed Ian Holmes, the National Contact Point for Food Security, Sustainable Agriculture and Forestry, Marine and Maritime and Inland Water Research and the Bio economy as well as WEFO. The group discussed draft work programme for the 2016-17 calls with academics interested in specific areas of Blue Growth and agriculture.

Similar meetings have been held for the Health and the Low Carbon groups with WHEB supporting the academics by providing updated information on EU policies which directly inform the calls, such as the development of the Strategic Energy and Technology Plan.

WHEB also enables the universities to raise their profile in Brussels. Over the last six months it assisted in organising the promotion of the Swansea Bay Campus and the Aberystwyth Enterprise and Innovation Campus, identifying the most appropriate officials and decision makers to invite to these events from the European institutions and other regions.

Impact of the Science for Wales strategy on Horizon2020 engagement

- COFUND

The Welsh universities are preparing to engage with the successful COFUND application led by Welsh Government. This scheme promises to address in part the shortfall in the number of researchers in Wales. There is already a steady stream of inquiries from staff and it has aroused interest within the institutions. A data base of experts at Swansea University has been developed and leading academics are engaging with their networks to identify expert researchers to encourage bids for fellowship positions. Cardiff University's recruitment will be strategically aligned with ongoing investments including the nine University Research Institutes. Growth in capacity in other key areas will also be prioritised for COFUND, e.g. in

relation to major operations which are currently in business planning with WEFO (FLEXIS, HPC Wales II). The sector is waiting for further information from Welsh Government on the timetable, call openings, deadlines and the marketing activities planned. Once this information is provided, the sector plans to organise initial training events. WHEB and Welsh Government are working together on a profile raising launch of the scheme in the European Parliament in November.

- Ser Cymru Chairs and National Research Networks

The Science for Wales strategy has provided a clear indication of priority research sector for Wales, enabling researchers to target these key areas and channel resources effectively. In addition, the Ser Cymru chairs and the NRN initiatives have enabled universities to develop critical mass in the three focus areas. At Cardiff University one of the new senior lecturers attracted as part of the Prof Yves Barde research chair support package made it through to the last stages of an ERC Starting Grant though this proposal was ultimately unsuccessful due to the intense competition for this funding stream. The appointment of Prof Diana Huffaker by Cardiff University aligns with other investments in compound semiconductor research and innovation (i.e. the new Compound Semiconductor Institute and Compound Semiconductor Centre JV Company). This significant collaborative activity with IQE, a global company with its headquarters in St Mellons, has already led to at least one major proposal submitted to the European Commission and Horizon 2020 bids are a future priority.

These initiatives complement major strategic developments within the universities such as the research institutes at Cardiff University and campus developments at Aberystwyth, Bangor and Swansea Universities. These key investments, supported by ESIF, EIB, government and industry will provide the infrastructure to facilitate increased participation in Horizon2020 and capitalise on grant capture.

The Life Sciences NRN organised a Hyperion Bid Consultancy session for researchers from across Wales at the Life Sciences Hub in May. The NRNs are also integrated in the WHEB European Funding Coordinating groups and the office is organising the first visit to Brussels in November of two of the Low Carbon Energy and Environment NRN - Plants and Architecture cluster (Cardiff, Aberystwyth and Bangor Universities) and the Quotient Marine Energy cluster (Swansea Cardiff and Bangor Universities). The aim of this visit is to discuss the alignment of the research agendas of the clusters with EU policy and funding priorities with a focus in particular on the 2017 work programme. As well as meetings with policy makers, the academics will meet with relevant European Technology Platforms and European associations, such as the Ocean Energy Forum, which provide input into the drafting of future calls. Participation in these platforms means that applicants can be better placed to secure funding.

The university sector looks forward to discussing these issues with members of the Enterprise and Business Committee.

Engagement in the Erasmus+ Programme in Welsh Universities 2014-15

WHEB is grateful to the international offices in the universities for providing information for this paper which focuses on the Enterprise and Business Committee's recommendations to Welsh Government outlined in its report of July 2014 following its inquiry into EU funding opportunities 2014-2020.

University participation in Erasmus+ programme in 2014-15

All Welsh universities have been involved in at least one Erasmus project during the first two years of the programme. All universities have received grants for the HE Students and Staff Mobility within the Programme Countries strand during the two years and were awarded a total of over €2.5m in 2014 and a further €2.4m for the same strand in 2015. In the first year there were 350 participants at Cardiff University as study placements, traineeships and teaching mobility for staff. In addition three universities were awarded a total of over €450,000 for the HE Students and Staff Mobility with Third Countries strand in 2015. Countries included Brazil, China, Egypt, India, Indonesia, Lebanon, Morocco, Macao, United States and New Zealand.

Furthermore in 2015 two universities were successful in Key Action 2 of the programme which involves strategic partnerships. A total of over €490,000 was awarded to USW for a project entitled '*Developing Entrepreneurial Women – Changing Horizons*' and to UWTSD for '*ECO-SystemApp*'.

There have been applications from Welsh universities to the Knowledge Alliances strand in Key Action 2 which focusses on university business partnerships. Unfortunately, none has yet been successful as this is a very competitive call with a success rate of around 3% of applications.

The total funds awarded to Welsh universities from the Erasmus+ programme has therefore increased from €2.5m in 2014 to over €3.35m in 2015.

Engaging with UK strategy for outward student mobility

Many of the universities have their own internationalisation strategies which cover student mobility. Bangor University has had a strategy for the 2011-15 period where it has exceeded its target of outgoing students and will be starting to implement a new strategy for the 2015-20 period. Similarly, Swansea University has exceeded its targets every year for the past three years and the percentage of students undertaking a mobility element during their studies has doubled from 2008 to 2011.

Cardiff University is working towards its target of 17% of home students having studied abroad by 2017 with the Erasmus+ programme a key instrument for achieving this target.

Academic schools in the universities are allowing increased flexibility in their degree programmes to allow for periods of study abroad. Staff are also encouraged to promote the benefits of studying abroad to undergraduates and a wider range of departments and faculties are involved in the programme.

Mobility schemes are also being encouraged as part of the strategic partnerships being forged between Swansea University and Grenoble University in France and between Cardiff University and Leuven University in Belgium.

The universities are aware that the UUK International Unit is promoting student mobility on a UK level. For example, the IU is currently investigating the possibility of working with the UK Government's Science and Innovation Network to deliver an outbound mission for Directors of International and Pro-Vice Chancellors International to Poland and the Czech Republic in March 2016 and are interested in feedback from institutions on the usefulness of such a mission and the priority areas (teaming and twinning/student recruitment/teaching partnerships).

The IU is also organising the first European Higher Education Area workshops on Joint Degrees and Bologna tools with the Welsh event taking place in Cardiff on 4 November. The aim of these workshops is to help attendees gain a detailed understanding of how to develop high-quality applications under Erasmus+. The workshops will cover all the key elements of an integrated, successful joint programme and will have a very practical focus. They will include an in-depth review of the key components of a Joint Master or Doctorate, an overview of current relevant EU policy and recommendations as well as information on how to underpin Joint Masters or Doctorates with the Bologna Process tool. In addition there will be a seminar on Mobility and Employability in Cardiff on 3 December 2015.

The IU recently launched a website promoting the benefits of outward student mobility and has information for students on the support available in Wales:

<http://www.go.international.ac.uk/content/wales-201415>

There is no regional initiative in Wales for engagement with Erasmus+ mobility actions. Through the Global Wales initiative, universities through Universities Wales are working with British Council Wales, Welsh Government (including DfES, European and External Affairs Division, Trade and Invest) and HEFCW on a three year work plan to promote international activities in target markets including the US. There is potential for new partnership opportunities to emerge from this scheme which could lead to Erasmus+ programme applications with third countries.

Creating a Wales-wide alumni network for international students including Erasmus+ students to maximise international impact

Universities have not been aware of any initiatives to create a Wales-wide alumni network but would be interested in participating in such a scheme. Cardiff University has active alumni associations in Hong Kong, China, South Africa and India.

Universities Wales are in discussion with Welsh Government on plans to set up an Alumni network in the US and this could involve students who have links with Wales through Erasmus+

Develop synergies and share best practice with British Council, Ecorys and ECTARC and build links to access separate strands of funding and engage with the centrally run programmes within the European Commission

The Global Opportunity Centre at Cardiff University worked closely with ECTARC to publicise opportunities for recent graduates to take part in Erasmus+ Traineeships. Despite interest from students the university was advised that ECTARC were no longer able to offer Traineeships through the programme.

Due to the very low success rate for the Knowledge Alliances call WHEB, as Chair of the ERRIN Innovation Funding Group, organised a seminar on engaging with the Knowledge Alliances call in July. The event included the desk officer from the Commission and a representative from a successful project who outlined the key success factors which contributed towards the bid. This led to a discussion on recommendations for participants who wish to get involved in the programme which was circulated to the participants and to the Commission. Swansea University also attended this event as they are exploring submitting a proposal for the 2016 call.

The European Commission is organising an Information day on the Knowledge Alliances and Sector Skills Alliances 2016 call on 23 November in Brussels. WHEB is promoting this to the sector and will be attending the sessions and feeding back relevant information to colleagues in Wales.