

## **EU research programmes and Welsh universities**

[Universities Wales](#), the representative body for universities in Wales, has submitted a response to the consultation on EU research and innovation programmes. This position paper has been submitted alongside the consultation response to provide some further information on Wales' engagement with the programmes and Wales' approach to research and innovation. The development of the position paper has been supported by Welsh Higher Education Brussels (WHEB) which supports Welsh universities in their European engagement.

The consultation response reflects the position of Welsh universities as active participants in European research and innovation activities funded by European research and innovation programmes across a wide range of research domains. Welsh universities place a high value on EU research and innovation programmes as the programmes are unique in the scale of networks and collaborations that can be built and funded through their support. There are no other research programmes at a regional, national or international level with the breadth of European research and innovation programmes.

The contribution of the research activities of Welsh universities to European research and innovation programmes has been important and we have also benefited from sharing and gaining knowledge and expertise from partners across Europe through our participation in the programmes. We participated extensively in FP7; in Horizon 2020; and we are participating in Horizon Europe and we look forward to continuing to be active in the Horizon Europe programme in 2025-27. Research and innovation is diminished if we do not work collaboratively across borders and Welsh universities are committed to continued European and international collaboration to deliver the greatest impact for our research and to contribute to tackling the challenges facing the world.

### **Challenges**

In common with the rest of Europe Wales faces a range of profound and wide-ranging challenges over the next few years and the role of universities in tackling these challenges through their roles in research, innovation and education will be vital. These include economic and social recovery from the pandemic, the need to address climate change, dealing with the cost of living crisis, demographic shifts, increasing challenges in reducing relative disadvantage, and structural changes in the skills and labour markets including the impact of technology.

### **Welsh universities research and innovation**

Universities bring tangible benefits to people's lives through their research and innovation and Welsh universities' research and innovation has consistently delivered high impact as measured through the UK's Research Excellence Framework assessments. In the most recent exercise in 2021, Welsh universities led the UK for the proportion of research whose impact is considered internationally excellent or world-leading.

The work of the [Wales Innovation Network](#) (WIN) will facilitate greater collaboration across Welsh universities while also providing a co-ordinated voice for Welsh universities with partners and funders in Wales and beyond including with European partners and funders. It is focused on

identifying projects that provide the best opportunities for collaboration in areas of strength and of social and economic importance to Wales. Its five key priority areas include Green Futures Wales with a focus on Net Zero and Healthy Wales, all areas where Wales, Europe and the world are facing common challenges. In addition, the [Global Wales](#) programme which provides a strategic and collaborative approach to international higher and further education in Wales has a key objective for the 2022-26 period to work across Europe to maintain and grow partnerships including research activities.

## **EU research programmes and Welsh universities**

Welsh universities have engaged with and participated in EU research and innovation programmes since they began. Our universities are valuable partners and innovators in many European research and innovation collaborations across the sciences, technology, health, and social sciences with transformational benefits for Wales, the rest of the UK, for Europe and the wider world.

In Framework Programme 7 organisations from Wales achieved 462 participations with a net EU contribution of €147.8m. Welsh universities accounted for 69% or 320 of Welsh participations and received 80% or €117.9m of the total net EU contribution to Wales.

In Horizon 2020 organisations from Wales achieved 434 participations and a net EU contribution of €152m, of which Welsh universities accounted for 65% or 280 of Welsh participations and received 66% or €100.7m of the total net EU contribution. Despite the uncertainties since June 2016, Wales' participation in [Horizon 2020](#) included involvement in projects with over 6000 partners from around the world and involvement in projects worth over €2.5 billion euros.

## **Horizon Europe and Welsh universities**

Notwithstanding wider uncertainties Welsh universities are engaging with and participating in the Horizon Europe programme with successful applications across Pillar 1 and Pillar 2 of the programme including European Research Council awards (supported by UKRI through the UK Guarantee which has enabled UK-based applicants to engage with the programme and provides some certainty for partners) and projects across a number of the Clusters in Pillar 2. To date in Horizon Europe ([data to 31/12/22](#)) organisations from Wales have achieved 33 participations, of which Welsh universities have accounted for 73% or 24 of these participations.

Universities Wales is very conscious of the changed environment for researchers based in the UK in relation to European research and innovation programmes with the uncertainties around association to Horizon Europe likely to pose challenges to full engagement in areas such as the Missions, Partnerships and Pillar 3 of the programme. However, we remain committed to engaging as fully as possible with the programme to maintain our connections and develop new relationships to deliver innovative research with impact that contributes to tackling global challenges and contributes to the Sustainable Development Goals (SDGs). The themes identified as priorities in Horizon Europe are also shared to a significant extent by the priorities set out by the Welsh Government in relation to its [research and innovation goals](#).

## **Linking R&I funding and Structural Funds**

Wales has received proportionally greater investment through European Structural Funds than other parts of the UK. A significant proportion of these funds has been invested in research and innovation activities that have enabled our universities to compete successfully for competitive European funding through EU R&I programmes. This investment and the springboard it has provided has brought tangible benefits to people and places across Wales. Universities were the

second largest recipients of [EU Structural Funds in Wales](#) in the most recent programme, being awarded over £300m as lead partners since 2014.

A number of major infrastructure projects at our universities have been supported by Structural Funds including:

- Cardiff University's [Brain Research and Imaging Centre](#);
- the [Computational Foundry](#) at Swansea University;
- the [Aber Innovation Campus](#) linked to Aberystwyth University;
- the [Pontio Centre](#) at Bangor University.

Capacity building projects with collaborative and innovative work across a number of Welsh universities have also been supported by Structural Funds including the [FLEXIS](#) project in energy systems technology involving Cardiff University, Swansea University and the University of South Wales; the [ASTUTE](#) project linking research and manufacturing involving Aberystwyth University, the University of South Wales, Swansea University, Cardiff University and the University of Wales Trinity St David; and the [BEACON](#) project involving Aberystwyth University, Bangor University, Swansea University and the University of South Wales which links research and bio-based businesses among many others. [KESS 2](#) is a project led by Bangor University in partnership with all universities in Wales that aims to increase the research capacity of SMEs across Wales by linking partners with a PhD or research Master's project.

Wales is keen to continue schemes that were initiated through EU funding such as [Sêr Cymru](#). This research funding programme has existed for just under a decade and has facilitated impactful, interdisciplinary research in areas such as life sciences, environment, engineering and Coronavirus (COVID-19). It has successfully built research capacity and capability in Wales, generating over £191 million in research income through linking together different funding from a range of sources including European funding.

The first phase of Sêr Cymru launched in 2012 and focused on increasing capability. It included support for Research Chairs and [National Research Networks](#) (NRNs) in key thematic areas. Following the success of phase 1, phase 2 focused on increasing research capacity which included more Research Chairs, Rising Stars and Fellowships. Sêr Cymru phase 2 included a range of schemes part funded by the European Commission through the Horizon 2020 Marie Skłodowska-Curie Actions (MSCA) COFUND scheme as well as through the European Regional Development Fund (ERDF) together with funding from the Welsh Government, the Higher Education Funding Council for Wales (HEFCW) and Welsh universities. The programme has focused on opportunities to further develop Wales' academic and industrial partnerships, both in the UK and globally, to support continued research excellence. In addition, the Capacity Building Awards helped to ensure Wales built continued strength and resilience in research and innovation to meet future challenges.

Phase 2+ also focused on increasing capacity of the programme. It included Accelerator Infrastructure Awards, Accelerator Strategic Partnership Awards, National Research Network (NRNs) management costs, Industrial Fellowships and Accelerator Capacity Building Awards. Phase 3 of Sêr Cymru focused on enhancing competitiveness infrastructure awards and tackling coronavirus (COVID-19). As outlined later in this paper one of the Welsh Government's five priorities for research, development and innovation is to launch the next phase of Sêr Cymru. There has been a recent [consultation](#) on Sêr Cymru and a decision on the next phase from the Welsh Government is due later this year.

Interreg programmes supporting cross-border territorial co-operation have also been valuable for Welsh universities with participation in a number of programmes including North West Europe, Atlantic Area and in particular the Ireland Wales programme. The [Ireland Wales](#) programme funds

collaborative work across a range of themes between organisations in Ireland and Wales including universities, local authorities and businesses. Welsh universities are involved in all the thematic areas covering cross-border innovation, climate change adaptation and cultural and natural resources and heritage with a wide range of research and innovation activities supported by the programme. Wales is actively exploring ways to maintain these important cross-border regional relationships outside the Interreg framework. A number of priority relationships across Europe have been identified for focused engagement including with Flanders, Basque Country, Baden-Württemberg and Silesia.

## **Wider context for research and innovation in Wales**

The Welsh Government is committed to working towards the UN's Sustainable Development Goals and in 2015 this commitment was put into law with the [Well-being of Future Generations \(Wales\) Act 2015](#) (WFG Act). This Act aims to improve the social, economic, environmental and cultural well-being of Wales. It aims to make the public bodies listed in the WFG Act think more about the long term, work better with people and communities and each other, look to prevent problems and take a more joined-up approach. It has a specific goal around 'A Globally Responsible Wales' and links to the SDGs.

In '[Research and Innovation: The Vision for Wales](#)' published by the Higher Education Funding Council for Wales (HEFCW) in 2019 a long term ambition for research in Wales is strengthened participation in national, European and international research programmes developed through outward-looking collaboration and drawing on European and international networks.

In 2021 the First Minister for Wales outlined [five priorities](#) for research, development and innovation in Wales.

- *'Ensure Wales has a fair share of available research, development and innovation funding and we will work to secure funding levels at least equivalent to those we received historically, via the European Union. We will also work to address historic underfunding from both competitive and non-competitive UK investment sources.'*
- *Deploy research, development and innovation capacity to support our Programme for Government focus on climate change, environmental recovery and decarbonisation, including support for local government decarbonisation plans.*
- *Build our research, development and innovation capacity in health and life sciences while ensuring Wales is a full partner in delivering the UK Life Sciences Vision.*
- *Develop a new cross-Welsh Government innovation strategy, with a particular focus on driving impact.*
- *Continue to grow Wales' capacity for excellent research by launching the next phase of Sêr Cymru.'*

## **Welsh universities and global challenges**

Welsh research is making a significant contribution to the United Nations Sustainable Development Goals with a [report](#) published in 2021 demonstrating Wales' leadership in this field and highlighting the depth and breadth of research activities happening across Welsh universities. This report, published by the Chief Scientific Adviser for Wales, indicated that the share of published research from researchers based at Welsh universities dedicated to tackling global issues was among the highest when analysed across comparator countries including other nations within the UK, France, Germany, Italy, Ireland and China. The citation impact of Welsh SDG research was the highest of all comparators, highlighting the contribution and quality of its research publications. Although small, Wales plays a strong role in global SDG-related research.

The citation impact for SDG-related research for Wales was 130% above world average. While Wales overall research output performs well across all United Nations SDGs, the main focus for Welsh researchers are those SDGs relevant to the Planet (SDG 6, 12, 13, 14, 15). Research publications in this theme captured the highest share in the UK and produced a citation impact more than double the global average, placing Wales in the leading position among comparators.

The report on Wales' contribution to research on SDGs as well as the experience of collaboration developed through participation in European programmes indicates that an important factor in Wales's success is the extent to which researchers collaborate extensively across borders and sectors. Welsh research showed the highest impact for those areas where Welsh researchers worked collaboratively with others, regardless of geographies and sectors, demonstrating the productive outcome of years of international networking which has been supported to a considerable extent by European research and innovation programmes. Welsh universities look forward to continuing to collaborate and continuing to undertake research with significant impact across borders through engagement in European research and innovation programmes.