

**Senedd Cymru**  
**Pwyllgor yr Economi, Masnach a Materion Gwledig**  
**Ymchwil a Datblygu**  
**RD10**  
**Ymateb gan: Prifysgol Bangor**

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**Welsh Parliament**  
**Economy, Trade, and Rural Affairs Committee**  
**Research and Development**  
**RD10**  
**Evidence from: Bangor University**



Economy, Trade, and Rural Affairs Committee  
Welsh Parliament  
Cardiff Bay  
Cardiff  
CF99 1SN

15<sup>th</sup> November 2023

**Re: Research and Development Consultation**

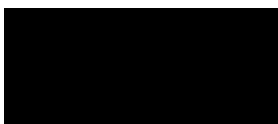
To whom it may concern,

On behalf of Bangor University, I am pleased to submit our written response to the Senedd's Economy, Trade and Rural Affairs Committee's one day 'snap-shot' inquiry to assess the current position of the research, development and innovation landscape in Wales.

This has been structured around the six questions outlined in the consultation documentation and I would be very happy to expand on any of the points raise in our response if that would be helpful.

We welcome the inquiry, as this is an important matter for Wales and look forward to the Committee's report in due course.

Yours sincerely



Yr Athro / Professor Paul S Spencer

## **Bangor University's written evidence to the R&D Consultation by the Senedd's Economy, Trade and Rural Affairs Committee**

### **1. What challenges are Welsh businesses facing in terms of awareness of, and access to, public research and development funding?**

The withdrawal of EU Structural Funds has had a significant impact on the ability of businesses in Wales to access university expertise and facilities. Previously there were focussed programmes such as [SEACAMS](#) in Bangor which actively sought to support the 'blue' marine economy. These programmes brought Universities together to offer SME's access to vital knowledge, skills and facilities. This activity facilitated longer term collaborations which could be integrated into skills development and knowledge transfer, for example through the [KESS](#) PhD and Research Masters programme. These WEFO programmes were pan-Wales, which avoided a postcode lottery in terms of eligibility, which is evident in some of the replacement funding such as the UK Shared Prosperity Fund (UK-SPF).

Additionally, the county level focus of SPF funding hinders supporting wider Research and Innovation (R&I) activities as these often are not covered in county-level strategic plans (although they do feature as part of the 50-plus SPF interventions). In North Wales we have been successful in gaining support from three out of the six county councils for our new Skills and Innovation Scheme, which illustrates the previous point about a postcode lottery. R&I is too important a matter for the Welsh Economy to depend on ad hoc approaches, and we call for ring-fenced funding to ensure Wales's businesses have the same opportunity to access support for R&I.

Another challenge is the short-term nature of some of the funding available. For example, Bangor University has pioneered and led an innovative skills programme – [MEDRU](#), in collaboration with Coleg Cambria and the OU in Wales and funded by HEFCW, which has sought to provide bespoke and industry commissioned skills interventions that are aimed at upskilling and reskilling employee digital skills. The approach is based on improving competency and thereby the efficiency of staff and seeks to help companies become aware of and adopt new technology to improve their competitiveness and Research & Development (R&D) capacity. The skills cover both FE and HE and the programmes do not adhere to traditional educational designation of levels, as a qualification is not the end goal. The key challenge is the lack of sustainable funding mechanisms in Wales that support this work. The current programme has supported Airbus and its supply chain.

### **2. What differences are there between funding for universities and funding for industry innovation? Are there regional disparities in the allocation of funding?**

The funding available to universities for innovation is normally focussed on the early-stage development of new knowledge and understanding, whilst industry innovation funding tends to be for development programmes much closer to the market. The gap between the two can be problematic in terms of accessing funding, therefore hindering knowledge transfer. Key to having a successful R&D capacity is an appropriate level of funding across the full spectrum of

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technology readiness. Fundamental research today is the pipeline of future innovation and societal impact, and the failure to invest across the spectrum will cause structural weakness in our research capacity and future wider economy.

There is significant regional disparity, which reflects the urban/rural composition in Wales with industrial clustering reflective of this. The number of and scale of companies in North-East Wales are very different to that in North-West Wales and the local perceived value ascribed to research is very different when engaging with Airbus than with a small SME in Parc Menai.

Regional differences across Wales are further amplified by the varied approaches to supporting innovation within the programmes and projects of the different City and Growth Deals in Wales. Supporting regional strengths and pockets of excellence are key pillars in the overarching approach to innovation. However, in the current climate of diminished financial support, the risk of further fragmentation of the approach across Wales is increasing, as are the unintended consequences. We support a continued place-based approach to consolidate progress and ensure that the diversity of Wales's regions is reflected.

**3. Do the research interests of universities and industry differ and, if so, what actions can be taken and by who to ensure the interests of both sectors are catered for?**

The fundamental goal of university research is to discover new knowledge and understanding. The broad scope of university research was invaluable in managing the COVID-19 crisis when Universities were able to call on the breadth and depth of their expertise to address a wide range of challenges of the pandemic. In Bangor's case that meant applying our long-standing expertise in soil and catchment science, virology and genetics to develop a world leading, national scale surveillance scheme for COVID-19 based on monitoring wastewater. This programme is still in operation and has expanded to track the fate of other pathogens, but it would not have been possible without the core research funding – Quality Research (QR) - funding allocated annually by HEFCW that underpins University research. Furthermore, the Senedd Cross Party Group on Medical Research (CPGMR) recently completed an inquiry on 'How medical Research benefits the people of Wales'. One of the CPGMR recommendations was "To prioritise medical research within economic development, Welsh universities desperately need to see an uplift to QR funding provided by Welsh Government. Without the same support as the rest of the UK, Welsh universities and Welsh researchers will be unable to compete for UK-wide funding. Welsh Government must address these funding inequalities to allow research in Wales to drive a thriving economy." This point is equally applicable a number of other key sectors in Wales.

In a Welsh context the size of the companies means that their R&D is generally more focussed on new products and services and increasing efficiencies or ensuring regulatory compliance. Wales does not have a critical mass of major companies with a significant R&D focus and interest in fundamental research that may take years to achieve a commercial return. Wales's SME base

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often has additional challenges in resource and absorptive capacity to benefit from research. Targeted funding schemes designed to bridge the gap, and which are attractive to SMEs (as well as major companies) such as collaborative PhDs and Master's (such as KESS), KTPs and collaborative DTPs work well but need to be expanded into other sectors and further optimised to ensure they meet needs of Wales's SME base.

Wales needs to develop an ecosystem which supports research and innovation across all the TRL levels ensuring early-stage ideas can be taken right through to commercialisation. Universities and Industry have differing but complementary roles to play in that process which can be further enhanced by an integrated Research and Innovation funding framework.

#### **4. How can universities and businesses better interact and collaborate with each other?**

The funding that does support this type of collaboration can be bureaucratic and the terminology can be a barrier to collaboration. As can the pace of the process and decision making. The transparency in terms of reporting detail does not always sit well with companies and is not always well calibrated to the risk, or the scale of the funding sought. It can additionally be prohibitively risk adverse. For example, the University has been working with partners to develop a new product, the funding offer we had from Welsh Government had a clause that insisted on unlimited liabilities, this resulted in delays as the partners, which were all commercial companies, were unwilling to accept the risk and ultimately this led to the project not going ahead. We would welcome further reflection on whether contractual arrangements could be reviewed to ensure risk is managed appropriately and to avoid hampering innovation.

A new Subsidy Control regulatory framework (replacing State Aid) presents an opportunity for change. This needs to be underpinned by a support system that encourages dynamic collaborations and rewards growth and success with further support. This should include an inbuilt ability to work on riskier propositions inherent in innovative approaches meaning that fast failure is possible, and lessons can be learnt and built upon.

The pan-Wales EU funded KESS PhD and Research Masters programme is a good example of a scheme which was affordable and accessible to SMEs, meaning they could collaborate in R & I projects with a University. These projects frequently represented a stepping-stone to more significant collaborations.

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### **5. How effective is Welsh Government's [Innovation Strategy](#) likely to be in supporting research, development and innovation in Wales?**

We welcome the recent publication of the [Wales Innovates Delivery Plan](#) and are currently in the process of mapping our activities and specialisms to identify where we can support delivery across the four missions (Education, Economy, Health & Wellbeing and Climate & Nature). The delivery plan will be key in assessing the effectiveness of the Innovation Strategy by providing actions, milestones and measures to deliver identified goals. However, we are operating in very different circumstances where there are no longer adequate levels of funding to incentivise activity and deliver on the ambition contained in the strategy. We welcome developments such as the new SMART FIS programme but note that it is a shadow of the support that was previously available when Wales had access to European Structural Funds. If we are to be serious about delivering for Wales on the ambitions it contains, this needs to be matched by appropriate level of R& I funding to incentivise collaborations between Universities, Industry and the Public Sector.

### **6. Progress made in respect of the [Welsh Government response](#) to the Fifth Senedd report on 'Research and Innovation in Wales'.**

Since its publication in 2019 there have been a number of key developments that have affected how the eleven recommendations in the report have been addressed by the Welsh Government. These include:

- BREXIT – the implications of which have become clearer.
- The reintroduction of Innovation and Engagement Funding through HEFCW's Research Wales Innovation Funding (RWIF),
- Publication of [REF2021](#) (Research Excellence Framework)
- The decision by Welsh Government not to fully implement the recommendations of the initial [Reid Review](#) (particularly the Future of Wales and St David's Fund),
- Establishment of the Commission for Tertiary Education and Research (CETR),
- Establishment of Wales Innovation Network (WIN) following Professor Graeme Reid's 2020 report, '[Strength in Diversity](#)'.

Collectively this means that many of the original recommendations have been superseded by events and how they have impacted on Wales's R& I support system. The challenge for Wales to grow and develop this has become harder and this is acknowledged in the Wales Innovates Strategy. As we move to CETR becoming operational later in 2024, it is less clear how the research element of its responsibilities will be covered. However, it does provide the opportunity for a renewed focus on this critical area. The OECD report in 2020, The Future of Regional Development and Public Investment in Wales, identified that investing in R&D and Innovation (as well as skills) would play an important role in boosting productivity in Wales. In closing, we would like to take this opportunity to echo previous calls from the sector for ring-fenced R&I funding to ensure that the successes of our WEFO project are built upon whilst providing strong foundations for Wales to improve its competitiveness in UKRI funding.