

Research Wales Innovation Fund Strategy 2023/24 – 2027/28

Institution:	Bangor University
RWIF strategy lead:	Professor Paul Spencer
Email:	p.spencer@bangor.ac.uk

Section A: Overview

1. Strategic ambitions

Please provide an overview of your institution's five year approach to supporting knowledge exchange activities and how these will be supported by RWIF. You may wish to highlight broad areas which you are targeting, and how these align with your institutional mission and internal strategies. [max 250 words].

Bangor's Research and Impact Strategy (2021-2028) aims to link our research excellence with our local environment, generating impacts to drive economic and social regeneration and contributing to transformational change at a local and international scale. RWIF funding provides the resource to help us deliver on this ambition as well as the objectives in our related Employability Strategy, Civic Engagement Strategy, and Business Enterprise and Engagement Strategy.

Our first RWIF strategy coincided with a significant period of change for the University. The initial funding allocated was deployed to build staff capacity and increase expertise to realise our research and innovation, civic mission, and regional economic regeneration ambitions. This second strategy period is focused on realising the benefits of that additional capacity and expertise.

Our vision for this RWIF strategy period builds from the previous strategy by focusing resource to support staff, students, and partners by realising our ambitions through:

- Developing clearer pathways and greater incentivisation for innovation and commercialisation
- Diversifying our portfolio of opportunities in line with industry and regional innovation needs
- Enhancing routes for staff and students to develop commercially and entrepreneurially
- Supporting external partners to develop their skills and expertise
- Realising our civic mission ambitions by working with the local community

These ambitions are associated with the following aims:

- Increase Research and Innovation income
- Extend Bangor's commercialisation, IP and consultancy portfolio
- Increase the level of Graduate start-ups and anchor them in the region as part of Innovation and Enterprise ecosystem
- Provide innovative skills for the regional economy

- Work with stakeholders
 - to identify and address societal challenge
 - to ensure economic growth and sustainability
- Improve the quality of life through social and cultural engagement.

2. Capacity Grant

Provide some narrative on how your institution plans to make use of the £250k capacity grant included within RWIF. How will this be used to support and enhance capacity and incentivise and improve performance in knowledge exchange? [max 250 words]

The Capacity Building Grant will continue to support core activity and capacity to meet the needs of our external partners and develop in line with National Innovation & Engagement (I&E) Measures.

We will target the Capacity Grant to meet specific areas of need **to shape clearer pathways for knowledge exchange and commercialisation**, including:

- People: Embed leadership and strategies for growth of our research base through knowledge exchange, impact, skills and commercialisation.
- Resources: Support knowledge exchange and commercialisation non-pay costs, to finance growth of the IP portfolio, embed collaboration with regional initiatives including the North Wales Growth Deal, and ensure successful training and participation in regional initiatives and funding schemes.

We will fund these areas in two ways:

Capacity Building Grant	Impact RWIF Round 2
1. Cover salary costs of the core R&I management roles in research and impact support services, to support academic delivery.	Integrate the knowledge and capacity provided by core posts to ensure that enhanced activity is embedded in “business as usual” at the University
2. Eligible Knowledge Exchange & Commercialisation non-pay costs in including subscriptions such as North Wales Economic Ambition Board, as well as IP protection and exploitation, conferences & events.	Continue to embed Bangor into the innovation ecosystem, and leverage knowledge to improve process and procedure

Section B: Specific content

3. Commercialisation / income generating activity

RWIF has been designed to incentivise and reward performance, particularly in terms of external income capture.

Provide details of how RWIF will be used to enable your institution to grow its external income as measured by HE-BCI. What are the key areas of investment and growth? How will funding be used to build on previous RWIF investments? What new activity will be supported? Further guidance on this section is available in Circular WXX/XXHE. Your response should be framed in terms of the impact of RWIF on the social and economic prosperity for Wales. [500 words max]

Please highlight centres of research excellence that already operate as innovation hubs.

We will grow our income from external sources, developing a **clearer pathway and greater incentivisation for innovation, diversifying our portfolio of opportunities in line with industry and regional innovation needs and the new policy and funding landscape.**

Aims for Commercialisation and Income Generating Activities

1. Win more competitive Research and Innovation income
2. Develop and extend our commercialisation, IP and consultancy portfolio

We will target RWIF support to meet these aims, across three areas:

Enhancing our institutional Knowledge Exchange and Commercialisation performance

Commercialisation for the University encompasses both exploitation of research and becoming a more commercial organisation, attuned to industry needs and increasing the number of long-term sustainable commercial relationships beyond project-led opportunities. Identifying the most appropriate commercialisation pathways will allow us to focus on approaches and activities that move our IP up the Technology Readiness Levels, adding value and increasing investor confidence. We will remove barriers to consultancy-based work and reward staff active in this area by the appropriate allocation of overheads. We will also pursue other KE opportunities such as licensing and engagement with third sector organisations.

M-SParc – the University’s Science Park - is our key innovation hub. It forms an important part of our commercialisation pipeline, with other important enablers such as Pontio Arts and Innovation Centre. The establishment of a Freeport on Anglesey will see M-SParc designated as one area which will benefit from tax and capital investment. Whilst details are still emerging, this has the potential to significantly enhance the attractiveness for inward investors to our region. The Advanced Manufacturing Research Centre (AMRC) and the potential development of the Advanced Technology Research Centre at DECA, provide other potential commercialisation routes and partners in certain sectors (e.g. aerospace and defence, agritech (BioComposites Centre) and low carbon energy).

Realising a Place-based Innovation Agenda

Bangor University has a portfolio of place-based innovation projects supported through the North Wales Growth Deal. Building on previous WEFO and Sêr Cymru investments, the Digital Signal Processing Centre (equipment), Egni (a new low carbon energy centre at M-SParc) and the Centre for Environmental Biotechnology (industrial scale-up facilities) represent significant capital investments (circa £18m) in regional innovation assets. Legacy facilities from other WEFO projects (SEACAMS, SEECS, CALIN) and a network of contacts and partners can also feed into new projects. A key area of interest is the energy sector, with the potential to link across into the North Wales Medical School (NWMS) development via research into nuclear medicine and Medical Isotope production, using the expertise within the Nuclear Futures Institute (NFI).

During the next RWIF period the NWMS will have its first intake of students. When fully implemented the school will train 140 doctors per annum via NHS supported foundation programmes. We are collaborating with the local Health Board to grow life sciences research and develop this sector across the region.

Embedding our research and innovation infrastructure

We will utilise pump-priming funds to accelerate activity in areas with exploitation potential, via the internal Bangor University Innovation and Impact Accelerator (BU-IIA) Award, and increased participation in the Welsh Innovation Network (WIN) and Shared Prosperity Fund. Integrating participation in the WIN will scale up our research and innovation on a regional and pan-Wales level, growing cross UK and international collaborations, leading to greater collaborative research grants from funders such as UKRI and Innovate UK.

3.1 Provide details of your institution's strategic KPIs for commercialisation and income generating activity:

National I&E Measures:

- Collaborative Research: Total Income
- Contract Research: Total Income
- Consultancy Contracts: Total Income
- Facilities and Equipment Related Services: Total Income
- Regeneration and Development: Total Income (excl. Capital income)
- Intellectual Property: Total revenue (incl. sale of shares in spin-outs)

Additional University KPIs:

- % of seed corn BU-IIA Awards that lead to additional research and innovation related income

4. New business growth and skills support

Outline the support you intend to provide for new start-ups, spin-offs, and meeting the targets of schemes such as the WG's Youth Entrepreneurship Programme. Provide information on where RWIF will add value to existing activities, and where it allows you to invest in further growth. Outline how RWIF will be used to develop a culture of entrepreneurship and innovation for students, graduates and members of staff. Further guidance on this section is available in Circular WXX/XXHE. Your response should be framed in terms of social and economic prosperity for Wales. [500 words max]

We will use RWIF funding to **develop routes for our staff and students to develop commercially and entrepreneurially, as well as pathways for external partners to develop their skills and expertise.** This will support businesses to grow and prosper, creating job opportunities and retaining talent in the region to drive economic growth.

Our Employability Strategy drives the University's vision for skills, and in this RWIF period we will build on our ambition to be an anchor for inward investment into the region. We will align our support to our local civic partners, and key regional developments such as the

Anglesey Freeport, so that businesses can access appropriate skills and expertise to maximise their capacity to benefit from long term core economic drivers.

Aims for New Business Growth and Skills Support

3. Increase the level of Graduate start-ups and anchor them in the region as part of Innovation and Enterprise eco-system.
4. Provide innovative skills provision for the regional economy

We will target support to meet these aims across three areas:

Further Education collaboration

We will build on our extensive track record of collaborating with FE partners to support the growth of the regional economy. Bangor is well embedded into the Regional Skills landscape, through the North Wales Regional Skills Partnership. The North Wales Skills and Employment Plan (2023-2025) highlights the role the University has in meeting current and future skills demands and sustaining growth of high performing sectors.

The University delivers Degree Apprenticeship provision in North Wales jointly with Grŵp Llandrillo Menai and Coleg Cambria and worked with Coleg Cambria and the Open University in Wales (OUinW) on the Medru project delivering high value unaccredited skills to the advanced manufacturing sector in North East Wales and piloting new modes of co-working and delivery. In this next phase of RWIF we will further augment activities with initiatives, such as the industry lead Deeside Decarbonisation Forum, where Bangor and Coleg Cambria lead on the STEM and Skills theme for the cluster.

Access to lifelong learning

We have enhanced our internal processes for developing short courses (e.g. CPD, lifelong learning, accredited and unaccredited courses, micro-credits and flexible learning). We will continue to develop a portfolio of options for our partners, embedding a lifelong learning approach that enhances pathways for development for retraining as well as retaining staff. Building on the success of KESS2, we will support an agile approach to industry funded PGRs by ensuring existing relationships are maintained, new ones developed, and contractual and financial matters are handled efficiently.

Entrepreneurial activity

The University's B-Enterprising team will grow entrepreneurial activity, including support and training for individual academics, developing enterprising teaching and assessment methods as well as enterprising activities for students. The team will also provide increased support for student start-ups through one-to-one mentoring, funding opportunities and self-employment placements.

M-SParc provides a unique facility to support start-ups in the region and attract investment, and we will continue to integrate this into our core activity for start-ups and spinouts. B-Enterprising's offer will also include an online start-up resource as well as an enterprise pathway through Target Connect, linked to the Bangor Employability Award.

4.1 Provide details of your institution's strategic KPIs for new business growth and skills support

National I&E Measures:

- CPD courses and CE: Total Revenue (£000s)
- Spin-outs (with some HEP ownership and those not HEP owned), number still active which have survived 3 years
- Student Start-ups: number still active which have survived at least 3 years
- CPD courses and CE: Total Learner Days

Additional University KPIs:

- Increased nos. of Graduate Start-ups

5. Civic Mission and Public Engagement

Outline how RWIF will support continued or new activity across your communities. Place-based civic mission is broad, incorporating a vast range of activities including support within the community to meet the skills needs of industry, HE-FE partnerships in skills, innovation and engagement, public engagement through research, and helping to address societal challenges. Support for the community within university premises for e.g. events, lectures etc, would also be a means of supporting civic mission. Further guidance on this section is available in Circular WXX/XXHE. Your response should be framed in terms of social and economic prosperity for Wales. [500 words max]

Our civic mission is driven by our [Civic Engagement strategy](#), launched in October 2022. The strategy is rooted in the wellbeing pillars as set out in the Future Generations Act.

Aims for Civic Mission and Public Engagement

5. Working with stakeholders to:
 - identify and address societal challenges (e.g., public health, climate change, Welsh language, housing, poverty, ageing population)
 - to ensure economic growth and sustainability
6. Improving the quality of life through social and cultural engagement

The Civic Engagement Strategy includes three main themes that guides our work and meets these aims:

Identifying and addressing 'big challenges' (e.g., health, climate, Welsh language, housing, poverty, ageing population)

We will continue to work with our public and voluntary sector partners to address these key challenges. Our University [Community Board](#), established in 2022, provides a platform to bring diverse partners together e.g., Community Councils, Grŵp Llandrillo Menai, Betsi Cadwaladr UHB, local authorities and schools etc. to address these societal issues. We contribute to the regeneration work in Bangor via the Bangor Strategic Partnership, whilst our presence on the Gwynedd/Anglesey Public Services Board enables us to share our research and contribute to the wellbeing objectives for the region via the new Wellbeing

Plan 2023-28. The [Children's University scheme](#) enables collaborative partnerships across north Wales, including Wrexham Glyndŵr University, Grŵp Llandrillo Menai, Coleg Cambria and local authorities, with the focus on raising aspirations and addressing the wellbeing of children and young people.

Enabling innovation and economic opportunities

We will build on our work with private sector partners and others for job creation, business support, retaining young people in the area and providing our students with help, advice and opportunities via our employability programmes and placements, building sustainable relationships with local and regional partners.

Improving quality of life and sharing knowledge through social and public engagement

Our university assets, including M-SParc, Pontio Arts and Innovation Centre, Brailsford Sports Centre and Treborth Botanic Garden contribute to people's lives in different ways and address individual and community wellbeing needs. Our assets provide people with education, entertainment, enterprise, and support. We will build on the current offer and engage with our communities through a range of events, exhibitions, conferences, public lectures, and workshops. We also support the wide-ranging projects undertaken by Student Volunteering Bangor in the community, and the expansion of the M-SParc 'On Tour' project to additional towns in North Wales, building on the successful implementation of the initiative in Bangor and Colwyn Bay.

We will extend the success of our Community Fund into this Strategy period, supporting projects which boost collaboration and engagement. Supporting connections with the Community through important regional and pan-Wales events, we will host our first Community Day in 2023 opening the University's doors to the public, providing enjoyable, informative and educational activities for all ages and backgrounds.

5.1 Provide details of your institution's strategic KPIs for civic mission and public engagement

- Increase the percentage of University public facing and civic engagement events by 5% (2021/22 baseline = 147) (objective 1,2,3,4,5)
- Increase the percentage of attendees at public facing and civic engagement badged events by 5% (pre-Covid 2018/19 baseline = 27,062) (objective 1,2,3,4,5)
- Increase the percentage of research projects/grant applications that engage with societal change themes by 5% (objective 4)
- Increase the percentage of open access resources (free MOOCs, podcasts, web materials, blogs, archives etc) by 5% (objective 4,5)
- Increase the percentage of links with local employers and organisations by 5% (objective 3,4)
- Increase the percentage of local companies supported via procurement by 5% (objective 4)
- Increase the percentage of students and staff who volunteer by 5% (objective 2,4)
- Increase the number of external stakeholders engaging with the Community Board (2022/23 baseline = 25) (objective 1,2,3,4,5)

Section C: Alignment to policy and priorities

6. Alignment to Welsh and UK Policy

Describe how your RWIF strategy aligns with relevant place based regional, Welsh, and UK policies such as e.g. local city region / regional growth deals. (See Circular WXX/XXHE, paragraph 30) [500 words max]

Polices and Strategies

Regional

- **The Growth Vision for North Wales (2016)** provides a shared vision for North Wales to be a confident, cohesive region with sustainable economic growth, capitalising on the success of high value economic sectors and connecting to the economies of the Northern Powerhouse & Ireland. The University's portfolio of Growth Deal projects makes an important contribution to delivering this vision.
- **The Regional Economic Framework (2022)** promotes collaborative regional planning and delivery amongst public, private and third sector partners. It includes priorities for Research, Innovation and Entrepreneurship, Skills, Supply Chain and Climate Change. The roles the North Wales Medical School (NWMS) and Medical Isotope development has in delivering the Social and Community Wellbeing Economy, and M-SParc in delivering a Low Carbon and Low Emission Economy for the region are shared visions.
- **The North Wales RSP: North Wales Skills and Employment Plan 2019-22** highlights the role the University has in meeting current and future skills demands and sustaining growth of high performing sectors.

Wales

- **The Programme for Government 2021 to 2026** focuses on building a sustainable economy and the industries of the future, making rapid progress towards decarbonisation. It is committed to establishing the NWMS aligning with our RWIF Strategy.
- **The Innovation Strategy (2023)** outlines Welsh Government's approach to RD&I landscape post EU Structural Funds. Constructed around four innovation missions (Economy, Education, Climate & Nature and Health & Wellbeing). Universities can make an important contribution via R,D&I activities and skills development. M-SParc is highlighted as an exemplar for skills academy and business support, innovating in agri-tech and low carbon energy and is a critical enabler in the delivery of our RWIF Strategy.
- **The Five priorities for Research, Development and Innovation (2021)** states the importance of RD&I activities in delivering the Welsh Government's ambition to decarbonize and reach net zero by 2050. Supporting the delivery of its *Programme for Government* aligns with Bangor's RWIF strategy and wider ambition for a greener economy.

UK

- **The UK Science & Technology Framework (2023)** sets out ten key actions with outcomes to be achieved by 2030, including investment in R&D and signalling UK strengths and ambitions globally. It also identifies critical technologies including AI, Engineering Biology, Future Telecommunications which are of direct interest to

Bangor and are addressed by the flagship innovation projects such as CEB and DSP.

- **The UK Innovation Strategy (2021)** flagship policy rests on four pillars: Unleashing Business, People, Institutions and Places and Mission & Technologies. This strategy is supportive to aspirations contained in the RWIF strategy particularly our focus on place-based innovation and associated key technologies.
- **The UK Research and Development Roadmap (2020)** aligns with our RWIF Strategy via the key themes, e.g., R&D investment, Innovation, Entrepreneurs and start-up, Place and levelling up.
- **The UKRI Strategy 2022 – 2027: transforming tomorrow together** goal to build a dynamic research and innovation system is central to our RWIF Strategy. For the UK to deliver a more agile response to social, environmental, technological and economic change, UKRI identify four necessary shifts, which are central to our RWIF Strategy:
 - Diversity
 - Connectivity
 - Resilience
 - Engagement

7. Well-being of Future Generations Act 2015

Provide specific information on how the RWIF strategy will support the seven goals, and five ways of working in the Well-being of Future Generations Act 2015;
[250 words max]

Bangor supports the **one** sustainable development principle, and institutional activities will demonstrate how they meet the needs of the current generation without compromising the ability of future generations to meet their own needs. To achieve this, our activities and planning will be delivered and guided in line with the **four** pillars, guided by the **five** ways of working, with the **seven** well-being goals as embedded across the University Strategy portfolio including the University's Strategy 2030.

This strategy also aligns to the **four** pillars – economic, social, environmental and cultural. The Welsh Government's consultation 'Regional Investment in Wales' identifies four priority areas – and these are supported by Bangor's response, see below with examples given (not exhaustive):

1. **Productive and competitive businesses (Economy)**. For example:
 - a. Further Develop key I&E infrastructure such as the M-SParc, Pontio Arts and Innovation Centre and the BioComposites Centre.
 - b. Support through KE programmes through competitive Innovate UK funding, Santander SME support etc.
2. **Reducing the factors that lead to income inequality (Society)**:
 - a. Skills support through our Degree Apprenticeships portfolio and FE partners.
 - b. Develop Community Outreach through key initiatives such as Pontio Arts and Innovation Centre, M-SParc, school activities
3. **Supporting the transition to a zero-carbon economy (Environment)**:
 - a. Commitment as an institution to the highest standards of environmental performance (ISO14001).
 - b. Supporting collaborative research in Low Carbon domains.
4. **Healthier, fairer, more sustainable communities (society/culture)**:

- a. Promotion of Active Citizenship and Community cohesion via Student volunteering and widening access.
- b. Founding of Mindfulness Network Charity and the Food Dude programme
- c. Support for Welsh Language learning using Cysgliad tools via Canolfan Bedwyr.

8. Impact on Welsh Language

Outline the positive impact RWIF investment will have on opportunities to use and support the Welsh language. Where appropriate you may wish to refer to the themes in the [Cymraeg 2050](#) action plan.

[250 words max]

Bangor University embraces the vision presented in **Cymraeg 2050**, and our Welsh language strategy '**Bangor 2050**' sets out how the institution will contribute to the target of a million Welsh speakers by 2050. Bangor's unique institutional context as the largest provider of Welsh medium Higher Education in the world and the most bilingual workforce in the UK means it can make a significant contribution. Our Strategy 2030 has its own cross-cutting pillar for the Welsh-language, underpinning all our aspirations including those in research, innovation and enterprise. In the I&E context specifically RWIF will help us to grow and solidify the following developments:

- Technological assets such as globally recognized translation and grammar checking tools and speech recognition software.
- Establishment of the North Wales Medical School targeting growth in Welsh medium participation in medical education.
- Support of cultural activities; from creative writing to public lectures to support for the development of innovative Welsh language performing arts through the Pontio Arts and Innovation Centre
- Contributing to adult Welsh language training, skills and resources.
- Extensive portfolio of research in the fields of history, literature, culture, sociology, law, business, neuropsychology of bilingualism, speech and languages technology and healthcare.
- Community outreach initiatives
- The ethos of 'Welsh is for everyone' and normalising experience of living in a multi-lingual environment.
- Support for home-grown entrepreneurs boosting the local economy through language and culture.

Section D: Use of Research Wales Innovation Funding

How is your RWIF allocation 2023/24 being used to deliver the strategy set out in Section B, and what are your anticipated priorities for the use of RWIF funds in future years? [250 words max – or append a table outlining broad investment areas]

Section	Aims	Priorities 23/24 Period	Longer term Investment Priorities
Commercialisation/ research income	1. Winning more competitive Research and Innovation income	<ul style="list-style-type: none"> • Embed resource dedicated to support UKRI applications • Embed the resource to deliver KEC in terms of business development and aligned support. • Support resource for North Wales Growth Deal with a focus on sustaining and growing the trajectory. • Scope new regionally significant initiatives. 	<ul style="list-style-type: none"> • Widening the institutional base for UKRI activities with strong emphasis on Innovate UK. • NW Growth Deal - support implementation, delivery and monitoring • Further developing and expanding recognise research strengths for a place-based context.
	2. Developing and extending our commercialisation portfolio.	<ul style="list-style-type: none"> • Examine different commercial routes for delivering Consultancy and Commercial Work • Deliver KEC training and networking opportunities for the academic base • Strengthen resources required to expand and develop our IP portfolio. • Better integration of existing I&E infrastructure (including, M-SParc, Pontio Arts and Innovation Centre, Bio-Composites Centre and our R&I core). 	<ul style="list-style-type: none"> • More agile and creative approach to the exploitation of the University's IP. • Access additional exploitation routes and funds. • New vehicles for Consultancy / Commercial Work. • Expanded KEC active academic base.
Business growth/ skills support	3. Increasing the level Graduate start-ups and anchoring them in the region as part of Innovation and Enterprise eco-system.	<ul style="list-style-type: none"> • Embed the resource to support Graduate start-ups and continue to grow this cohort. • Strengthen the pathway to entrepreneurship for our students • Better integrated incubation facilities and start up programmes 	<ul style="list-style-type: none"> • New support initiatives to further grow start-ups, improve survival rates and anchor in the region.

	4. Innovative skills provision for the regional economy	<ul style="list-style-type: none"> Embed support and improve access for regional important skills provision. 	<ul style="list-style-type: none"> Enhanced and expanded regional skills offer
Civic Mission/ Public Engagement	5. Identifying and addressing big challenges (e.g., public health, climate change, Welsh language, housing, poverty, ageing population)	<ul style="list-style-type: none"> Work with public and voluntary sector to address key challenges 	<ul style="list-style-type: none"> Bring forward longer term proposals to support social and economic development
	6. Enabling innovation and economic opportunities	<ul style="list-style-type: none"> Working with private sector partners and others for job creation, business support, retaining young people in the area and providing our students with help, advice and opportunities via our employability programmes and placements 	<ul style="list-style-type: none"> New initiatives including regional public understanding of science projects (e.g. Welsh Mountain Zoo, Mon Geo Park and Earth Project). Support for the creation of new Social Enterprises both based on Bangor IP and by student start-ups.
	7. Improving quality of life and sharing knowledge through social and public engagement	<ul style="list-style-type: none"> Better integration of existing community outreach initiatives - build on the current offer and engage with our communities post-Covid through a range of events, exhibitions, conferences, public lectures and workshops. 	<ul style="list-style-type: none"> Further strategic development e.g., Treborth Botanical Gardens, I&E related School Outreach programmes. Further expanded community outreach activities to include new initiatives.

i) Welsh Language Standards (2018) [Use the drop down menu]	This strategy complies with Welsh Language Standards 2018
ii) Equality Impact Assessment [Use the drop down menu]	This strategy has been Equality Impact Assessed
iii) Well-being of Future Generations Act (2015) [Use the drop down menu]	This strategy will contribute towards the aims of the WFG Act 2015

I confirm that the University is committed to the principles of the Knowledge Exchange Concordat and is fully committed to its eight guiding principles.

Signature: Vice Chancellor	
Date	Click or tap to enter a date.