



CYMDEITHAS DDYSGEDIG CYMRU  
THE LEARNED SOCIETY OF WALES



**DYFODOL ADDYSG  
DRYDYDDOL YNG NGHYMURU**

**THE FUTURE OF TERTIARY  
EDUCATION IN WALES**



# **The Learned Society of Wales Response to Welsh Government's Call for Submission on the Future of Tertiary Education in Wales**

## **Executive Summary**

All research and innovation – in the Sciences, Social Sciences, Arts, and Humanities – is vitally important for the people, the economy, and the future generations of Wales. However, research and innovation is currently underutilised both as an integral part of the tertiary education system *and* as a national asset that extends far beyond the remit of education, where world-class research underpins economic growth, sustains the NHS, and drives social and cultural progress.

The Learned Society of Wales recognises the complex challenges facing tertiary education and believes that research and innovation is a crucial element to solving these challenges. Given this integral role within the tertiary sector, in addition to its foundational role for economic and social progress, research must be seen as a lever for the future, not an optional extra. A shrinking research sector in Wales will have a seismic impact across government and public priorities.

This paper presents evidence from a wide range of sources demonstrating that research and innovation at higher education institutions is central to success across Welsh Government portfolios. It also evidences public support for public investment into research in Wales and sustained public trust in scientists in Wales. It outlines the following recommendations:

### ➤ **Prioritise the critical research and innovation sector**

It is vital that Welsh Government, across all portfolios, understands and champions the importance of research for the social and economic future of Wales. Crucially, this recognition must extend across the full, complex, and inter-related system which impacts across all government responsibilities. The research and innovation sector encompasses early-stage fundamental research that leads on to innovative new services and products, as well as Arts and Humanities research that shapes our understanding of who we are, and our context in Wales, as well as supporting the economy.

### ➤ **Appoint a Minister for Research and Innovation**

Wales needs a Minister for Research and Innovation to seize the opportunity for growth through research, and to enable cross-governmental join-up as research impacts on many portfolios. This role would ensure that both the research that drives the economy, and also the significant challenges facing tertiary education, have an advocate and a champion.

### ➤ **Invest in research, and review the university funding model**

At a time of economic transition and fiscal constraint, investment in research is an opportunity for Wales to harness one of its most powerful assets and generate a significant return on investment (at UK level, every £1 of public research and innovation funding generates £7 in economic benefits). An ambitious research culture cannot flourish without solid financial underpinning of the university sector as a whole, with wider income pressures undermining Wales' ability to compete for external research funding. A re-examination of the wider funding model, including core funding for excellent research (QR) and innovation, is urgently needed.

### ➤ **Utilise Wales' National Academy**

The Learned Society of Wales is a fellowship of Wales' leading minds. As an independent national institution connected with the global science and research system, the Learned Society of Wales is uniquely placed to raise the profile of Welsh excellence in the UK and internationally. We stand ready to support the government in realising the benefits of research for Wales, including any review of higher education funding in Wales.

## Introduction

The Learned Society of Wales welcomes this open call from the Welsh Government for submissions on the future of tertiary education in Wales.

The value of research has been significantly underestimated in Wales for a long time – as evidenced by its stark lack of representation in *The future of tertiary education in Wales: five challenges and calls for submission*. Research is fundamental to the role of a university. It informs teaching and ensures students learn within an environment shaped by current knowledge and active enquiry. Furthermore, it equips universities to contribute directly to Wales' economic development, public service improvement and wider social wellbeing through evidence generation, innovation and partnership. University research is translated into practical solutions, supporting productivity, improving health outcomes and strengthening the quality of public policy at a local, national and international level.

**At a time of economic transition and fiscal constraint, investment in research is an opportunity for Wales to harness one of its most powerful assets.**

Despite this, research has not been positioned by Welsh Government as a central strategic lever within Wales' tertiary education policy. Its capacity to drive long-term prosperity through economic growth, social progress and improved wellbeing, is still not fully embedded within national planning and investment frameworks. Indeed, the Wellbeing of Future Generations Act demands that Wales employs such long-term thinking. At a time of economic transition and fiscal constraint, this represents a missed opportunity for Wales to harness one of its most powerful assets.

We have therefore focussed this submission on explaining the integral nature of research to the tertiary education system and outlining the current impact of research on Wales' prosperity to demonstrate the future potential research can make.

This submission is presented as follows:

1. [Research in an integrated tertiary education system](#)
2. [An overview of public opinion on research](#)
3. [Tangible examples of how Wales benefits from research:](#)
  - [Economy](#)
  - [Health](#)
  - [Education](#)
  - [Agriculture](#)
  - [Housing and Social Progress](#)
  - [Welsh Language and Culture](#)
  - [Climate Change and Sustainable Energy](#)
  - [Fundamental Research and the Research Environment](#)
4. [Skills for the future and the role of research](#)
5. [The current position of the Welsh research sector](#)
6. [Recommendations](#)

## 1. Research in an integrated tertiary education system

Graduates cannot exist without research: a university education is defined by research-led teaching, and this proximity to the cutting edge is what attracts students and shapes the graduate workforce. However, universities are not just producers of graduates. They are also producers of science, research and knowledge: a significant responsibility that extends far beyond the scope of education. University research is the Welsh Government's best asset for economic growth

and social progress. And unlike a company, universities do not move or sell to another country; the innovation and progress made on campus is rooted in Wales. Universities are anchor institutions whose local contributions extend into every part of the Welsh economy and society through their civic mission.

**Universities are not just producers of graduates. They are trusted producers of science, research and knowledge.**

These three interlinked roles of a university are underpinned by its research base. It is for that reason research should be considered in all five challenges of the future for the tertiary sector:

**Participation and equality of opportunity** remain persistent, despite significant Welsh Government attention and investment. Inequity exists throughout the system, and indeed becomes more acute higher up in the system (postgraduates; staff; senior staff). We need a higher education system that reflects the diversity of Wales at all levels, not only as role models but also to produce the most excellent research ([Science benefits from diversity - Nature](#)). The Learned Society of Wales plays a crucial role here by redressing systematically entrenched inequities in how excellence in research is recognised through fellowship, grants, and medals.

This complex problem is also intertwined with the financial sustainability crisis, which risks disproportionate impacts on institutions that recruit the most disadvantaged students, as well as civic-engaged research activities that benefit Wales' most disadvantaged communities.

Wales needs home-grown research attuned to the Welsh context to solve complex problems like this; however, this kind of problem-solving research cannot be commissioned without baseline capacity within a strong and sustainable system.

**Demographic change and lifelong learning:** Demographic change is expected to have an increasing impact on university finances. Its impact could be offset by increased overall participation, especially at different life stages. As the tertiary education sector increases focus on flexible, work-based learning for all ages, there is an opportunity to build on existing partnerships with employers formed through research and innovation activity. Integrating knowledge transfer and upskilling has the potential to bring greater benefits.

**Collaboration and competition:** The shift to student fees as the primary income for universities has driven market competition, and is already starting to create cold spots in provision, impacting Wales' already least-served communities most acutely. Provision in Wales is therefore being driven by the individual preferences of students, as well as UK Government priorities through increasingly targeted UKRI funding, neither of which can be expected to consider Wales' needs as a nation. When facing a financial crisis point, decisions about staffing and areas of expertise to meet student demand and be financially sustainable are short-term, and rarely align with the research expertise needed for Wales' prosperity, or the research strength that will mean Welsh institutions can win competitive research funding from outside of Wales.

**Financial sustainability:** The financial sustainability of the tertiary sector is complex, and many causes have been identified in the call for evidence as well as the recognition that the outputs; graduates, research and innovation and civic contributions, are not linearly linked to one source of income, whether that be from public funds, student fees or other sources. It is therefore very important to note that Welsh universities have also had proportionally less funding for research from the Welsh Government for well over a decade. This is a grave issue for the sector, and the ramifications of an underfunded and shrinking research base extend both throughout the tertiary system and far beyond the remit of the Department for Education.

**Delivering for the economy** is a vastly underestimated benefit from investment in tertiary education. In addition to higher-level qualifications and raising aspirations, the research and innovation from the higher education sector is foundational to the Welsh economy, both directly through transformational business growth and indirectly through the multitude of improvements and world-leading innovations it brings to every sector from health to education, and from culture to agriculture.

## 2. Public opinion

The public in Wales understands the value of research, and wants to see more public investment. [A Public First study in 2024](#) found that:

- People in Wales are among the most keen of all UK regions to see politicians pay more attention to science and innovation (61%).
- Most people (71%) think it is important for Wales to carry out a lot of R&D, and most (70%) would support a new research lab in their area.
- Only 29% of people in Wales said they could think of very few or no ways R&D investment benefits their lives (UK average 37%).
- Only 23% agreed with the statement “R&D should not be funded by taxpayers” (UK average 24%).

**77% of people in Wales expressed trust in scientists**

Indeed, at a time when trust in politicians is decreasing, trust in research remains high: in 2025 [More in Common's "Shattered Britain"](#) found that 77% of people in Wales expressed trust in scientists. This indicates that beyond the functional value of research for economic growth, people in Wales also recognise the importance of trustworthy voices in a global knowledge landscape that is becoming increasingly saturated with misinformation and disinformation.

## 3. How Welsh Research Benefits Wales

Research is crucial for progress: scientific, social and economic. To tackle the challenges facing Wales today – economic growth, the climate emergency, persistent inequalities – we need research, entrepreneurship and innovation to find and test new solutions.

[70% of assessed Welsh university research has a direct impact in Wales](#), improving lives through healthcare, education and public services. For this reason, research is not a matter that should be considered only by the Welsh Government's Education department; it underpins progress across every national priority.

Universities account for a disproportionately high portion of R&D spend in Wales compared to the UK ([Research and Innovation in Wales Factsheet](#)); according to Arup Economist Ieuan Best, “this signals that higher education in Wales is performing at or above UK levels and somewhat compensating for lower levels of business and government activity” ([Does Wales under-invest in R&D?](#)).

**University research is the Welsh Government’s best asset for economic growth and social progress.**

## Economy

**Research is the keystone of economic growth.**

Research is the keystone of economic growth. Economic growth is achieved through an innovation pipeline, which starts with applied and fundamental research, most commonly conducted in universities, followed by applied research (also conducted in universities, though not exclusively), then commercialisation and inward investment. If the foundations of this system are removed or weakened, the system as a whole is damaged, with major and slow-to-reverse consequences for the Welsh economy.

The [total economic impact](#) of Welsh universities is £10.97 billion. Examples of major economic impacts from Welsh university research include:

- South Wales’ Compound Semiconductor Cluster [CSconnected](#) supports over 2,700 high-value jobs, attracts major inward investment, and contributes £366 million in GVA annually to the Welsh economy. The cluster originated from a Cardiff University research centre, which together with Swansea University remains core to the cluster’s operation. This is a model that can be replicated in other industries with long-term investment into research.
- Wales’ Creative Industries are thriving, with targeted support from Cardiff University, Cardiff Metropolitan University, and University of South Wales creating an estimated £236 million GVA uplift. Through its Innovation Pipeline funding, [Media Cymru](#) accelerates research and development that supports companies to adapt, scale, and compete internationally.
- The North Wales AI Growth Zone is predicted to create over 3,400 new jobs. Bangor University plays a key role in the consortium, offering both scientific expertise and infrastructure through M-Sparc.
- Swansea is home to one of the UK’s most advanced centres for steel innovation. With partners including Tata Steel, Network Rail, and Nissan, and a GDV of £85m, the centre at [Swansea University](#) is bringing forward cleaner production methods, circular manufacturing, and strengthened supply chains.
- The new Small Modular Reactor investment in Wylfa was made following groundwork laid by the [Nuclear Futures Institute](#) at Bangor University, which has anchored nuclear expertise in North Wales with facilities used by leading industry stakeholders.

It’s not only about big business and new technologies. Welsh university research also helps smaller local economies in areas where profit-driven actors are less likely to invest, directly addressing regional inequalities in Wales. Universities therefore serve as hubs for local economic growth across the whole of Wales.

To give just a few examples:

- According to HESA data, Wales has the highest proportion of student start-ups per capita in the UK, and the highest rate of growth of student start-ups in the UK.
- AberInnovation has supported businesses in raising £12.7 million in grants and £10.6 million in equity investment. Products on the market include low-carbon Tetrim Teas, and ARCITEKBio Ltd which creates sweetener from up-cycled agricultural waste.
- Archaeologists at University of Wales Trinity St Davids have been instrumental in transforming Strata Florida Abbey into a thriving tourist hub, boosting the local rural economy by an estimated £4.42m GVA.
- Cardiff University helped independent local high-street businesses in Treorchy to digitise, supporting post-pandemic recovery.
- M-Sparc is supports and hosts a wide range of innovative small businesses in North Wales, from a single-use plastic alternative made from seaweed, to an app streamlining health and safety for a local construction firm.
- Cardiff Metropolitan University is supporting Welsh Food SMEs to upskill and optimise processes, generating £303 million in economic impact between 2023 and 2025.
- Engineers at Wrexham University are developing “Fast-Fans” for more energy-efficient aircraft, with industry partners including Motor Design Ltd, Invertek UK Ltd, Geola Technologies Ltd, and Ad-Manum UAS Technologies Ltd.

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*“As programmes such as the new Local Innovation Partnership Fund demonstrate, the conversion of university-led research excellence into tangible products, services or technologies that deliver impact in the UK city regions, are critical to increased productivity, harnessing greater investment and creating high-skill, high-value jobs.*

*In a rapidly de-globalising world and with new geopolitical tensions and forces, this concept of sovereign capability is becoming increasingly important for enhanced national economic security. Without a clear approach to place based innovation and investment anchored around our globally important HEIs – we will run the risk of failing to support our places to increase their competitive advantage.”*

– Kellie Beirne, CEO, Cardiff Capital Region

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## Health

It is vital that policymakers understand the interdependencies between Wales’ higher education research ecosystem and our National Health Service.

The Welsh NHS relies on university research for drug discovery, technological development, disease modelling, genomics, understanding of illness, automation, and innovation in preventative methods. There is a huge amount of health research across a wide range of disciplines in Wales – here are just a few examples:

**From prevention to cure, the Welsh NHS relies on university research.**

- Wales is at the forefront of Neuroscience research, with world-leading research into understanding, preventing and treating Dementia at Cardiff University resulting in major advances including at-home testing and AI solutions.
- Swansea University established Wales’ first [Breast Milk Donation Hub](#) to help ill and premature babies locally.
- In public health, sports researchers at Cardiff Metropolitan University and UWTSD are testing a wide range of new ways to get Wales moving, crucial for a preventative

healthcare approach. Researchers at Wrexham University are working on environmental improvements for residents living in the Caia Park and Plas Madoc areas of Wrexham.

- Cardiff University is currently testing a [pioneering virus technology](#) to treat cancer.

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*“I can say just how important it was that the hub was part of Swansea University. [My husband] and I knew as a result, the project would have been rigorously scrutinised, would have to have had ethics approval, and standards would have been really high. In a time of huge stress and worry, we didn’t need to give a second thought as to whether using the Hub was safe or not.”*

– Service user of the Breast Milk Donation Hub.

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## Education

Teaching at all levels is propped up by Welsh research, from the pedagogical techniques employed in primary schools, to the content of textbooks in every secondary school classroom. The knowledge we teach in schools at all levels is based on discoveries, experiments, and thinking from universities.

In particular, knowledge about Wales – Welsh history, Welsh literature, Welsh language, Welsh geography, and more – comes nearly exclusively from Welsh universities. Educational research from the Social Sciences that is specific to the Welsh context is needed to ensure responsible investment in policy interventions that work, from data on apprenticeships, and early-years interventions, to understanding entrenched inequities in the system.

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*“Pupils could see a clear pathway from primary school through to further education, college and then on to University. This matters particularly in the local context that I’m talking to from Merthyr College, where 62% of Merthyr College students choose to study at universities in Wales, and of those 25% stay locally within the area. By investing in different communities working across educational boundaries, we can raise aspirations in ways that have a positive impact on students’ lives and improve social mobility.”*

– Alexandra Strong, Lecturer, The College Merthyr, on collaboration with University of South Wales

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The tertiary education system is interrelated, with many students attending tertiary education with the aim of progressing to university. Students choose to go to university because of its proximity to research, and the opportunity to be taught by the very people who are driving forward the cutting edge in their chosen field. Research and tertiary education are therefore inextricably linked, with any changes to the research landscape impacting the quality of the undergraduate and postgraduate student experience.

## Agriculture

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*“The change of attitude has been the biggest thing, the mental change towards the disease and the fact that we’re now believing that we can do something about it rather than just letting it wash over us and have a huge effect.”*

– Michael Williams, Farmer, on Aberystwyth University’s Centre for Excellence in Bovine TB.

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Universities are supporting innovation in agriculture to support farmers and rural communities to modernise and continue sustainably into the future. From protecting livestock from bovine tuberculosis, to rapid soil health diagnostics, and robotic harvesting, research from university departments like the Institute of Biological, Environmental and Rural Sciences (IBERS) is putting Wales at the forefront of global agricultural innovation, attracting attention from countries like Ireland.

## Housing and Social Progress

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*“Research undertaken within Welsh universities makes a significant contribution to advancing equality and anti-racism across Wales. From our perspective as Race Council Cymru, university-led research provides a **rigorous and independent evidence base** that strengthens policy development, informs service delivery, and supports accountability in public life.*

*Academic partnerships have enabled us to draw upon high-quality data, robust analysis, and long-term research insight to better understand structural inequalities and the lived experiences of Black, Asian and Minority Ethnic communities. This collaboration **enhances the credibility and impact** of our engagement with public bodies and policymakers, ensuring that anti-racist commitments are underpinned by sound evidence rather than aspiration alone.”*

– Uzo Iwobi, CEO Race Council Cymru

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Research is supporting Wales to combat the housing crisis. For example, researchers at the Welsh School of Architecture have been trialling [retrofitting in homes](#) suffering from fuel poverty, damp and mould in Swansea, Neath Port Talbot, and Bridgend, in collaboration with local authorities and further education colleges (Cardiff University).

Smart data linkage from top social scientists is improving homelessness prevention interventions by Welsh charities ([WISERD](#)).

Researchers in Linguistics have been instrumental in the development of the Wales British Sign Language Act ([Deaf Health Wales](#), Bangor University and Swansea University).

Performance and storytelling research is [helping survivors of Violence Against Women, Domestic Abuse and Sexual Violence](#) to tell their own stories, supporting public services and police to be more strategic, targeted and effective (University of South Wales).

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*“I do believe that other people in roles like mine should work with Arts and Humanities researchers. I think it’s really important to get people’s experience, and to humanise people’s stories in this area.”*

– Elinor Spiers Morgan, South Wales Police Stalking Coordinator

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## Welsh Language and Culture

Researchers have been the backbone of Wales’ success in increasing numbers of Welsh speakers. From navigating the practicalities of bilingualism across diverse sectors, to providing a home for Welsh language classes for adult learners across Wales, universities have been core to this national effort. The Learned Society of Wales provides support for Welsh-language scholarship to thrive, from lectures to early-career training.

The Coleg Cymraeg Cenedlaethol plays a vital role in promoting and facilitating the Welsh language by creating opportunities to train, study, and conduct research in many disciplines in Welsh, both at postgraduate and at staff level. This pipeline of Welsh-speaking research capacity is invaluable not only for the language itself, but also for the intellectual future of Wales.

Arts and Humanities research conducted across Wales' universities, museums, archives, libraries, heritage buildings, festivals, theatres, galleries, and film studios are fundamental to our nation's culture. The Future Generations Commissioner explains, "Culture is not just about performances and institutions; it is the stories, places and traditions that bind us together as a nation and shape how future generations understand what it means to be Welsh. Seven in ten people in Wales take part in arts and cultural activities. This is not a niche issue; it is integral to our daily lives, our mental and physical wellbeing, and our sense of belonging." ([Future Generations Commissioner for Wales](#)).

Wales' Galleries, Libraries, Archives and Museums (GLAM) are important sites for research and innovation. For example, the National Library of Wales holds Wales' largest research collection, and it is free for anyone to access. Underfunding in GLAM therefore has knock-on effects not only for research and teaching, but for equitable access to knowledge about our nation.

Culture is also deeply intertwined with the Welsh economy. As many of the UK's most successful start-ups are founded by history graduates as by engineering graduates ([SHAPE Skills at Work](#)). The role of the Creative Industries for economic growth in Wales is well documented, and of course historical and archaeological research is crucial for Wales' tourism industry. Wales has a strong history of punching above its weight in the arts: investment that pushes forward the cutting edge through research can create outsized economic growth for Wales.

Although often used as a scapegoat in politically-motivated discourse, research and teaching in Media Studies is crucial in an age of misinformation and disinformation. In a globalised media landscape supercharged by generative AI, cutting-edge media literacy driven by excellent research helps to protect Wales' democracy. Home to an internationally reputable School of Journalism, and recognised through competitive funding from UKRI as the right place for investment in a media R&D cluster (now Media Cymru), this is another area where Wales has established excellence and can be a leader in the UK.

The Learned Society of Wales' [Wales Studies Network](#) encourages research that focuses on Wales by providing an international forum for researchers and experts to connect, collaborate, and promote Wales Studies.

### **Climate Change and Sustainable Energy**

Over the last century, temperatures have increased, sea levels have risen, and weather patterns have drastically changed. The Climate Emergency is impacting communities across Wales, from flooding in the South Wales Valleys to coastal erosion in North West Wales, and the public is becoming increasingly concerned.

**Research is a source of hope, and can offer new solutions.**

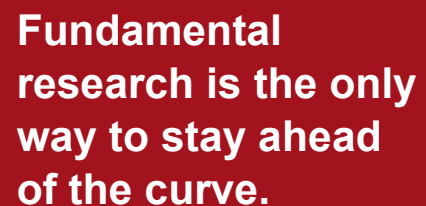
Research is a source of hope, and can offer new solutions to this existential threat. Universities are driving forward the development of renewable energy, circular economy innovation, flood mitigation, and green transport.

Researchers across all disciplines are putting their minds to this challenge. [UKRI-AHRC funding](#) is turning Swansea's Biome – the first-in-UK retrofitted "living building" – into a Made-in-Wales proof of concept for the rest of the world, with experts in design, literature, architecture, history, law, anthropology, psychology, and ecology at Swansea University and UWTSD. This is one of AHRC's largest ever responsive mode investments.

Wales is second in the world for recycling, and the Welsh Government has sought to maintain this momentum through investment in the circular economy. A consortium of researchers has been fundamental to this work, spanning across institutions (Swansea, Cardiff Met, Aberystwyth, UWTSD, Cardiff, USW, Bangor) and disciplines (Design, Engineering, Chemistry, Business, and more). In these areas where Wales excels, a strong and stable Welsh university sector can ensure that Wales strengthens its position at the cutting edge.

### **Fundamental Research and the Research Environment**

All of the examples above demonstrate the application of research and innovation, which creates benefits for Wales across every sector. This applied research, and the benefits it creates, are built upon fundamental research. The innovation ecosystem cannot survive without these esoteric and speculative beginnings, which allow us to understand how and whether new things work. Every blockbuster film traces back to a theory of narrative; every tourist site relies on historical research conducted in archives and libraries; every digital technology uses Mathematics.



**Fundamental research is the only way to stay ahead of the curve.**

Fundamental research is the only way to stay ahead of the curve: strategic investments into applied research are also important, but they necessarily seek to follow trends and expand on existing innovations, whereas the discovery of truly new and groundbreaking solutions requires core funding for experimentation, exploration and discovery. For example, university researchers in South Wales were working on Compound Semiconductors for over thirty years before the industrial applications became sufficiently clear to attract targeted investment from government and industry.

A good illustration of the importance of funding bottom-up, exploratory research is [Cancer Research UK](#), which recognises the value of fundamental research as a first step towards beating cancer, investing millions in fundamental research because it serves their charitable mission of beating cancer. This principle can be applied to other economic and social challenges.

Where previously the sector may have been an ivory tower, research culture is now more transparent and inclusive, especially in Wales. The Learned Society of Wales is playing a central role in furthering this positive change, through information-sharing with Scotland and Ireland, and [Research Culture Grants](#) for grassroots networks to effect local change.

This is the pipeline through which innovation emerges: without strong foundations, the innovation ecosystem is at risk of crumbling.

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*“Mathematics and data science are at the heart of modern business. At Admiral, we rely on mathematical modelling to deliver better products, manage risk, and create value for our customers. Continued investment in maths education and research is essential for Wales to remain competitive and foster the next generation of talent to power the Welsh economy.”*

– Rhodri Charles, Motor Pricing Director, Admiral (in [Academy for the Mathematical Sciences](#))

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## 4. Skills for the future

More than [400,000 extra graduates](#) will be needed in Wales by 2035 in order to respond to skills gaps and workforce challenges of the future. By 2035, 95% of new jobs in Wales will be at graduate level, with 88% of UK jobs set to be at graduate level.

**A high proportion of graduates will give Wales a sustainable, future-proofed, and resilient workforce.**

Consider that today’s graduates will be retiring in nearly fifty years; how accurately might policymakers in 1979 have made precise plans for the workforce of 2026? Technological developments are accelerating, meaning that vocations are becoming obsolete at a faster pace than ever before. Wales has a painful history of mass redundancy as industrial priorities change and new innovations take over. A workforce with a high proportion of graduates with agile, transferrable skills from higher-

level understanding of the science and concepts behind their work will give Wales a sustainable, future-proofed, and resilient workforce. A workforce for future generations that includes a strong cohort of graduate-level skills such as higher-level critical thinking, analytical skills, the ability to learn quickly, and fundamental science and mathematics, is able to adapt to these global changes, remaining productive and employed in a future that none of us is currently able to imagine. This should not only sit alongside, but be intertwined with a further education cohort treated with parity of esteem.

[WonkHE](#) notes that “The graduate wage premium has declined over time in most UK regions as supply increased – but not in London, and not in Wales. **In Wales, there aren’t enough graduates.**” Indeed, it is important to consider this fact alongside the problem that Graduate Outcomes data only collects data 15 months after graduation, long before most graduates start to see the long-term salary benefits from higher education. This means that claims made about the ‘value’ of degrees for graduate earnings is usually based on significantly flawed data that ignores the long-term career progression potential for graduates, as well as ‘ceilings’ in progression for less-qualified candidates. [This data problem affects Arts and Humanities graduates most acutely](#), who are less likely to work in technical vocations, therefore more likely to enter professions at a junior level, but be promoted to a higher-paid managerial role after two years.

The overuse of this data also ignores other kinds of irreplaceable value that graduates on comparatively lower salaries like teachers, nurses, and third sector professionals bring to Wales. Graduates also contribute to the economy by typically drawing less on taxpayer-funded public services such as the NHS and benefits ([Does higher education matter for health in the UK? - PMC](#)).

Postgraduate training is the foundation of the research sector, serving as the beginning of a pipeline that produces the benefits outlined above. Postgraduate training is rapidly modernising in today's sector, with options to work in partnership with industry and cultural organisations, and emerging practice-based assessment formats. Recently, PhD training has been a success story for pan-Wales collaboration bringing funding in from outside of Wales, especially in Arts and Humanities disciplines ([€3m from Europe](#); [£1.5m from UKRI](#)).

After establishing the value of graduates for the Welsh economy, it is important to remember that graduates cannot exist without research: a university education is defined by research-led teaching, and this proximity to the cutting edge is what attracts students, and shapes the graduate workforce.

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*“Sir James Dyson was a huge supporter of young graduates saying ‘they have all the ideas because they have no fear, no experience... and they're really enthusiastic. And they want to change the world’. This philosophy led Dyson to being one of the most innovative and successful companies world-wide. We can do this in Wales!”*

– Professor Rob Deaves FLSW FREng, Senior Principal Engineer, Dyson (2014 - 2024)

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## 5. The current position of the Welsh research sector

The knowledge we use every day – for evidence-based decision-making, or understanding the world around us – doesn't come from nowhere. It comes from laboratories, libraries, and great minds, many of which are found in universities.

Today, funding for universities is in an unsustainable position. Some universities have taken a managed approach to cuts, opting to close entire departments and narrow their institutional focus. Because the funding structure is currently weighted heavily towards student fees, this reduction in national capabilities is based primarily on decisions made by students, rather than national need. Other institutions have taken a voluntary approach, meaning that a wider range of national capabilities are slowly eroded, more or less at random. It is crucially important that Wales retains national research capacity across the country, while retaining regional institutional diversity, to drive economic growth across Wales rather than entrenching existing inequalities, and to ensure that teaching at universities remains research-led: a core principle of higher education.

Due to the cuts, and the environment it has created, Wales' universities are now losing star academics, and the teams that form around them. This has been exacerbated by the termination in 2023 of the Sêr Cymru funding managed by Welsh Government, which attracted a number of leading research chairs, 'rising stars' and PhD students. For those that remain, research time is increasingly diverted to teaching and administration. All of this results in a reduction in the critical mass in research, required for success in large funding bids from outside of Wales, which increasingly require a localised cluster of excellence.

The crisis is felt most acutely by researchers at an early stage in their careers. Comparatively low pay following typically 8-10 years of training, alongside precarious contracts (such as 9 months 0.8FTE), fewer options for collaboration and development through travel, and low job availability means that the best talent is leaving Wales, or turning to other sectors for employment. PhD training is also falling through the gaps in the current system, where candidates find themselves under-supported in a grey area between student and staff. The long-term impacts of this damage to the talent pipeline in Wales will be catastrophic for the future of the research sector, which brings Wales all of the major benefits covered above.

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*“From the perspective of an early-career researcher, the current funding pressures affect not only immediate opportunities but also expectations about future career stability. This can create a ‘self-fulfilling prophecy’, where uncertainty discourages investment in long-term research plans and pushes talented researchers to leave or scale back ambitions, further weakening the research and education environment.”*

– Dr Yipeng Qin, Senior Lecturer, Cardiff University

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### **Why is it happening?**

The reasons behind the funding crisis are multiple, and sit across numerous jurisdictions. At UK Government level, visa costs are a significant barrier for attracting talent in an inherently international sector. Other countries like China are lowering visa costs and bureaucracy to attract research talent in recognition of its power to drive economic growth. Moreover, National Insurance and pension contributions have had a severe impact on university finances. The loss of EU structural funds such as the ERDF, with no meaningful equivalent offered by UK or Welsh Government, was another significant cut to university research funding, especially in Wales where success for this EU funding was high.

Welsh universities receive a proportionately low level of government-funded research funding (called Quality-Related - “QR” funding) compared to Scotland and England. As it is not possible for universities to survive on project funding alone, this core QR funding is vital to support the work leading up to large research funding bids, and indeed to cover the shortfall in full economic costing. It also helps to support fundamental research, which provides a necessary foundation for applied research that directly addresses economic and societal challenges. For example, [UKRI grants currently only cover 69% of project costs](#), and recipients of charity funding report similarly poor cost recovery (“[for every £1 of charity income we receive, we must find 43p from other sources](#)”).

Student income (set by Welsh Government) does not cover the costs of teaching, and the lifting of student caps has made recruitment particularly difficult for institutions outside of major cities, and those serving Wales’ most disadvantaged communities. Universities across the UK with elite reputations can now recruit disproportionate numbers of students, often by recruiting below their previous entry requirements.

There are blockers in Welsh Government policy decisions that have exacerbated issues in the system, for example preventing the promised delivery of recommendations from the [Diamond](#) and [Reid](#) Reviews.

## 6. Recommendations

### Prioritise the critical research and innovation system

It is vital that Welsh Government understands and champions the importance of research for the social and economic future of Wales. Crucially, this recognition must extend across the full, complex, and inter-related system.

In particular, the inter-governmental connections must be better understood: matters that currently sit within the jurisdiction of the Education Department, such as Medr's research budget, directly impacts progress for other Welsh Government departments – from innovation for the NHS, to driving growth for the economy at national and local level. Likewise, other departments across Welsh Government need to understand how progress in their areas is linked to Higher Education funding. Stronger join-up with UK Government, especially DSIT, is also required to make the case for attracting large R&D investments into Wales.

Early-stage fundamental research must be recognised as a foundational first step before innovative new services and products can be developed. The current crisis is being felt most acutely within Arts and Humanities disciplines due to a lack of recognition for how they contribute to public and economic priorities. Arts and Humanities provide the knowledge that shapes our understanding of Wales, from history and politics to culture and media. They also provide a much-needed evidence base for topical debates that are important to the public, including AI ethics, social media, reproductive rights, freedom of speech, freedom of the press, the health of our democracy, and more. The Arts and Humanities research also forms the backbone of Wales' creative economy, an area where Wales has the potential to be world-leading.

We urge the government to recognise that the research sector is modernising, fast. Policy and political discourse must reflect current reality, rather than impressions formed when policymakers were undergraduates themselves. Where current evidence still points to shortcomings, it is more effective to incentivise positive change, rather than rule out solutions based on assumptions.

### Invest in research, and review the funding model

Research is an investment, not a cost. In times of hardship it is tempting to make cuts, but the challenges facing Wales' economy necessitate increased investment in research to drive growth.

**Every £1 of public research and innovation funding generates £2 in private investment, and £7 in economic benefits.**

This response shows that research is making an enormous contribution to Wales' prosperity, both through and in addition to the tertiary sector. It also shows that these benefits come in spite of persistently low funding and adverse conditions. At UK level, every £1 of public research and innovation funding generates £2 in private investment, and £7 in economic benefits ([UKRI](#)). Wales sees lower returns, due to lower levels of investment.

This presents an opportunity. Because research is the foundation upon which so much of Wales' success is built – from innovation to education – it is vital that core funding for research (QR) and innovation through Medr is properly supported, at least in line with the investment made by the Scottish Research Council, as recommended by the Diamond and Reid Reviews.

Moreover, postgraduate research is the start of a vital research talent pipeline, but is under-supported.

There are wider systemic issues holding Wales back from achieving its full potential through research. The funding model must be re-examined in its full complexity, with a bold approach that allows Wales to maximise opportunities for growth.

### **Utilise Wales' National Academy**

The Learned Society of Wales is a fellowship formed of Wales' leading minds, from across academia, industry, the public sector, and the third sector. As an independent national institution, the Learned Society of Wales stands ready to support a review of higher education funding in Wales. The Society also runs an Early Career Researcher Network so is best placed to bring in evidence and viewpoints from all career stages, all disciplines, and across the whole of Wales. As a National Academy, the Society is uniquely connected with the global science and research system and is therefore also best placed to promote Welsh excellence in the UK and internationally.

The Learned Society of Wales is significantly underfunded in comparison to its equivalents. The Royal Society of Edinburgh receives £2.7m per year from the Scottish Government's Scottish Funding Council; by population, the equivalent amount for Wales would be £1.56m. The Diamond Review recommended that funding for the Learned Society of Wales should be in line with its equivalent in Scotland; however, Medr currently awards £357k per year to the Learned Society of Wales, less than a quarter of the recommended level.

The Learned Society of Wales is already delivering significant benefits for Wales through support for early-career researchers, promoting Wales in the global science sector, providing expert advice on Welsh issues, providing a platform for Welsh-language research and debate, and encouraging researchers to direct their attention to Wales. Further funding could have outsized benefits, such as resources to fully support the next government with solutions to Wales' pressing challenges, including but not limited to the tertiary education system. We would be able to increase our efforts to promote Welsh excellence in the UK and internationally, to attract inward investment and increase opportunities to develop Welsh talent. We could also reach the young people and communities that need the benefits of science and knowledge the most, promoting engagement in lifelong learning and critical thinking for long-term social and economic benefits.

### **Appoint a Minister for Research and Innovation**

The Learned Society of Wales recommends that the next government appoints a cross-departmental Minister for Research and Innovation to help address the need for join-up. The proposed role would primarily sit between the Education and Economy briefs, and provide strategic direction to the Office for Science, but with answerability to all Government departments, given the cross-cutting nature of research as established in the examples given above.

A ministerial appointment would ensure that both the research that drives the economy, and also the significant challenges facing tertiary education, are given adequate attention.

The role would provide a voice and a point of contact for the research sector in Wales, bringing together the full pipeline from fundamental research through to commercialisation: universities, businesses, the NHS, museums, libraries, and the third sector. The position could also function as a key point of contact for UKRI and DSIT, as well as international investors and funders, making a strong and consistent case for inward investment.

We recommend that a representative body such as an Advisory Council be established to support this Minister. The Learned Society of Wales stands ready to support the next Government in designing and maintaining a structure for this new position that best serves Wales.

## **Further Evidence Published by the Learned Society of Wales**

[Research and Innovation in Wales Factsheet – The Learned Society of Wales & the Royal Society](#) (February 2026)

[Inclusive Innovation for Wales – Learned Society of Wales](#) (October 2024)

[Changing the narrative: Valuing Arts and Humanities degrees – The Learned Society of Wales](#) (August 2024)

[The Impacts of Research from Welsh Universities – The Learned Society of Wales](#) (November 2023)

[The Impacts of Research from Welsh Universities: Executive Summary – The Learned Society of Wales](#) (November 2023)

[Wales and the World: Global Partnerships, Local Benefits – The Learned Society of Wales](#) (January 2021)

[Curiosity-driven Research: a threatened vital activity? – The Learned Society of Wales](#) (June 2014)