

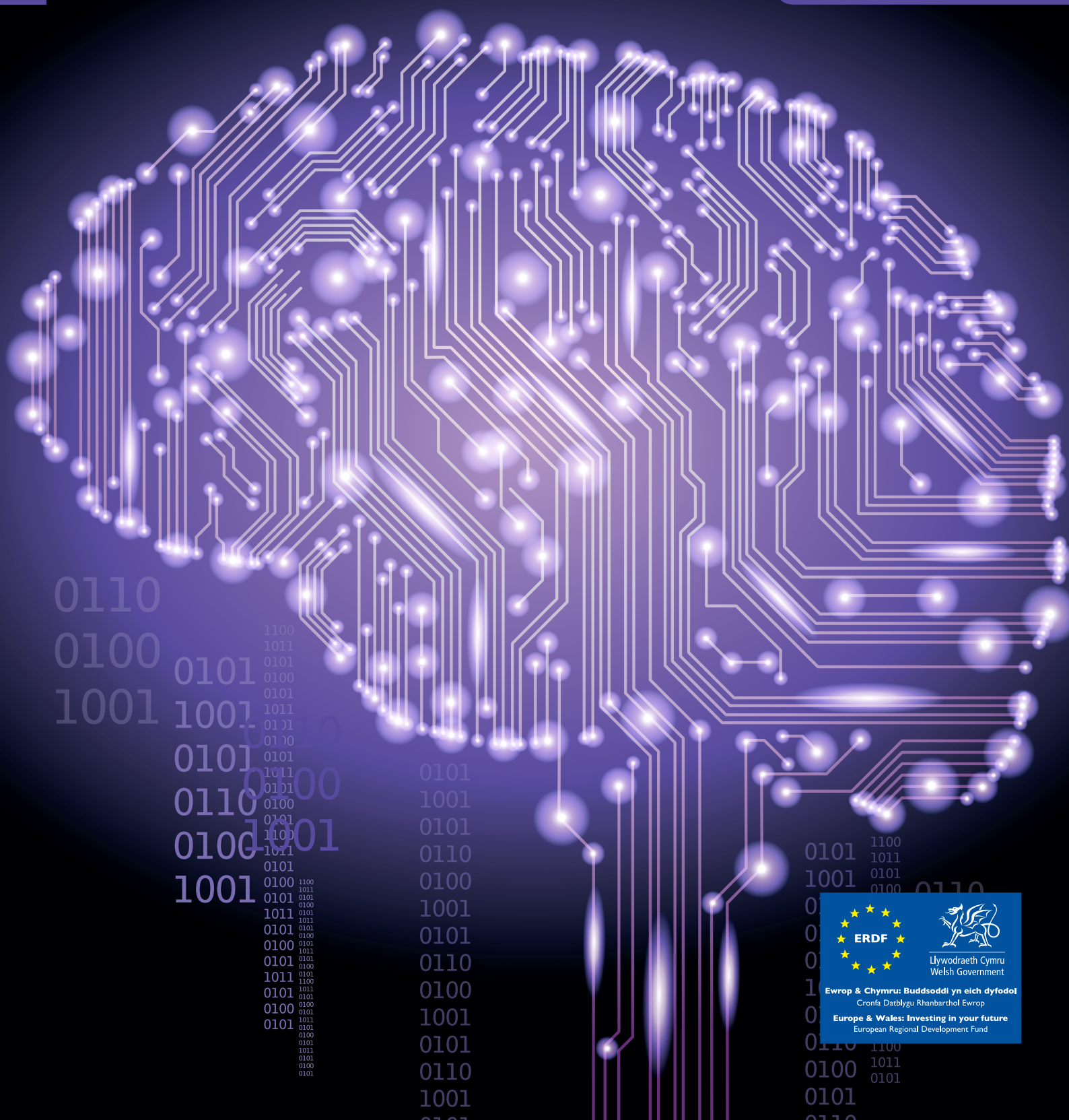
# Collaborating for Success

## Working with Universities and Colleges



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# why collaborate?

Working with universities and colleges provides businesses of all sizes and at all stages of development with access to expertise, skills and facilities to help drive innovation and significantly enhance their competitive edge. Here are some reasons to consider collaboration:

- Provides a flexible extension to your R&D resources
- Enables you to access specialist equipment and facilities that are not otherwise readily available
- Reduces costs through short term use of skills, knowledge and expertise
- Offsets risk by sharing the development journey
- Helps to leverage further research funding
- Reduces the time it takes to get a product to market
- Provides opportunities to develop and extend networks with academics and like-minded businesses
- Brings new perspectives and broadens your business horizons
- Helps to generate a skilled workforce and improve the quality of in-house R&D
- Raises the profile of your business.

# smarter solutions

Innovation is at the heart of successful businesses. No matter what the size or scope of your company, innovation plays a vital role in making your business more productive, more efficient and more competitive.

Our universities and colleges are powerhouses of innovation.

Tapping into the good ideas, research outputs, skills and facilities that reside in academic institutions can help to boost your business. It can help you develop new and innovative products or enhance existing ones. It can help you make improvements to processes and systems to increase productivity and reduce time to market. And it can help you access high level skills and extend your knowledge base way beyond your current capabilities.


There are a number of different ways your business can engage with universities and colleges, including;

- Contract research and consultancy
- Collaborative Research and Development
- Specialist expertise and access to high level skills
- People and information exchange
- Access to specialist equipment and facilities
- Access to academic IP for commercialisation and development

The Welsh Government's Innovation team has eased the way for businesses in Wales to engage with universities and colleges, across the UK and further afield, providing support, funding and advice through a range of different support mechanisms.



# Research Partnership Attracts European Funding



Cardiff based media production company, Machine Productions, is employing a wide range of writers, directors and talent from Wales and the UK as a result of research collaboration with Moving Image Wales, a Knowledge Transfer Project based at the Creative Industries Research and Innovation Centre (CIRIC) at Swansea Metropolitan University.

Keen to capitalise on the success of their first live-action series, Tati's Hotel, Machine Productions tapped into the research expertise at Moving Image Wales to identify how to take advantage of opportunities to maximise the potential of digital content across multiple distribution platforms such as mobile, games, TV and film.

With support from Moving Image Wales at the development stage of proposals, Machine Productions persuaded financiers that their media ideas were worth investing in and secured a unique European media development grant.

# expanding resources

The rewards of successful research and development can be significant, and having the right resources is a critical element in that success. For many businesses being able to access the right equipment or facilities at the right time is a problem. Investing in specialist facilities such as laboratories or test chambers for the limited time you need them is not something you can justify. Specialist equipment can be either too expensive to buy or not readily available in the marketplace and often needs specific technical expertise to use and operate it effectively.

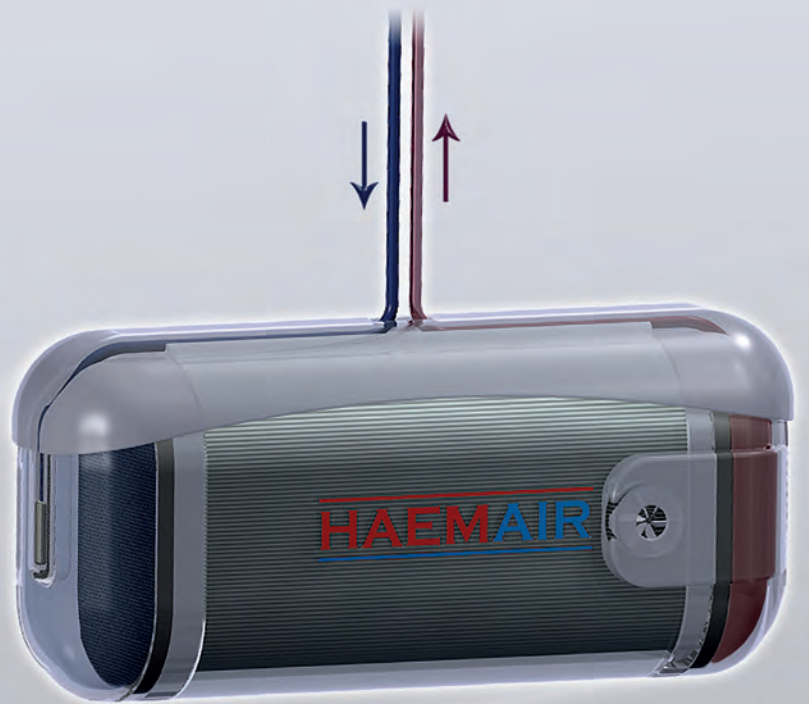
Universities and colleges have invested millions of pounds in facilities, equipment and specialist staff, and businesses can tap into this rich resource.

You may need specialist equipment to trial and test a new product. Maybe you need to use a specific piece of software or to produce a prototype. You may need a clean room, a specialist research laboratory or test chamber. Universities and colleges can provide all of these and more.

Depending on the nature of your project, you can use the facilities and equipment on a one-off or regular basis. Training can be provided for you to run it yourself or, more typically, expert technician support is on hand to ensure you maximise your involvement.

Tapping into this resource is an effective way to add to your business's capabilities and achieve your objectives.





HAEMAIR

## Potential For Real Impact On People's Lives

A collaborative two-year project between Swansea University's College of Engineering and industry is helping to develop respiratory aids which mimic the performance of healthy lungs. This highly innovative project, which will also ensure that blood clots do not form in the devices, will allow currently immobile patients with lung disease to enjoy a better quality of life.

Swansea-based Haemair Ltd, Haemaflow Ltd and DTR Medical Ltd have joined forces with Swansea University to work on the project which builds on five years of fruitful collaboration between Haemair, Swansea University and Morriston Hospital.

A successful outcome will ensure the safety and effectiveness of the artificial lung and will lead to a wide range of potential applications in Medicine and Sports and Exercise Science.

Through this collaboration, the businesses have gained access to equipment and expertise they would not otherwise have had. This has helped to reduce the technical risk associated with this stage of the project. An added benefit for several of the business partners is that they are now in a stronger position to secure further investment.



# punching above your weight

Businesses often need extra support to develop a new project and take it to market, and working with those at the cutting edge of research can really help you to punch above your weight. Collaborative research is when a business and a university or college work together on a shared problem. Academic researchers and scientists provide their knowledge and expertise to work alongside their industry counterparts throughout the research project.

Your business benefits by being in close contact with the most up-to-date knowledge on a subject. University teams are constantly refreshed with new talent and bring new perspectives to problems. They have different ideas and approaches and are not bounded by an industry mind-set. Together you can explore ideas and test the potential of various options to focus on the most feasible and also avoid possible dead-ends.

Research projects are generally co-funded by the business and university or college, and often attract government funding and support from a public sector body.

Projects can range from basic collaboration between two partners – a business and an academic institution – through to complex research projects involving multiple partners on both the business and academic sides.





## Helping Make A Commercial Success

With help from a number of Welsh universities, entrepreneur Frank Edwards has developed an 'intelligent' mattress cover that prevents patients from developing pressure ulcers or bed sores. The Synidor system consists of a disposable mattress cover with a unique sensor linked to a visual and audio alarm unit that alerts medical staff if a patient is not moving regularly. With around 20% of patients in hospitals suffering from bed sores, it is estimated that 4% of NHS expenditure is spent on this problem costing more than £1 billion each year.

Mr Edwards' company is based at the Institute of Life Science at Swansea University where he is able to access specialist facilities and expertise. In developing the Synidor system, he tapped into a range of expertise from a number of universities. He worked closely with experts in this field at the Welsh Wound Network. He accessed the expertise at PDR, the National Centre for Product Design and Development Research, to develop the casing for the alarm unit. He also called on the assistance of the University of Glamorgan in designing the electronic circuit board. This has resulted in the first pre-production versions being produced and the product has taken an enormous leap forward on its development journey.



# boosting your brain power

Universities and colleges have a wealth of knowledge, expertise and skills that is both deep and broad. Businesses can benefit from this rich resource to update internal knowledge, to fill a skills gap or to bring new and fresh ideas to a project.

Whether you are working on a short term tactical project or longer term strategic project, there are a variety of ways that businesses can engage with this knowledge base – from placements and secondments to sponsored positions or through advisory boards.

A number of programmes provide access to highly qualified people to work within your company on a specific project. They may help you by spearheading a new project, solving a technological problem or increasing your research capability and extending your knowledge.

This direct and directed transfer of knowledge enables you to develop innovative solutions to grow the business, improve business performance and embed innovation. It also provides a direct link to other complementary projects within the university or college.



An abstract, glowing orange and yellow fiber-like structure, resembling a complex network or a biological structure, is set against a black background. The structure is composed of numerous thin, interconnected lines that form a large, irregular circular shape in the center. The lines are more densely packed and brighter in some areas, creating a sense of depth and movement. The overall effect is that of a complex, organic, and futuristic design.

# Specialist Support Produces Profitable Results

Half a million bottles of barbecue gel produced by a Welsh company and sold in supermarkets every year will be safer for consumers to use thanks to scientists at two universities.

Mold-based Tiger Tim Products Ltd, the largest manufacturer of barbecue gels, barbecue cubes and firelighters in the world, has been working with the Industrial Biopolymer Knowledge Transfer Centre to make their products safer and more environmentally friendly. The Industrial Biopolymer Knowledge Transfer Centre is a collaboration between the Centre for Water

Soluble Polymers at Glyndŵr University and the Biocomposites Centre at Bangor University.

The results of the project are significant. Tiger Tim are now able to repackage their flagship barbecue gel product as it no longer requires R65 classification – which means the product poses no risk to consumers if accidentally swallowed. In addition to the re-classification, a major UK retailer has listed the product and further profitable results are expected.



# solving tough problems

The traditional route for businesses to engage with universities and colleges is through contract research and consultancy.

This is when the business pays the university researchers to undertake a specific piece of research on its behalf. The business will receive the results of the research but is not actively involved in the work other than in commissioning it. Companies often use contract research for specific pieces of near-market research and testing, and universities will tend to charge the full economic cost for this work.

In addition to this formal engagement, the power of less formal connections should not be under-estimated. Networking with other businesses and academics at events, meetings and special interest groups is an important activity for innovative businesses.

Universities provide a range of networks and opportunities to bring people together from various organisations, businesses and universities to promote innovation in research and development and knowledge sharing. These networks also offer invaluable opportunities to make contacts and exchange information with organisations in completely different sectors where ideas can be reapplied.





# next steps

Whether you are looking for additional knowledge and expertise, access to specialist skills, equipment or resources, or a collaboration partner for a research project, universities and colleges across Wales are ready to help you with your business problems.

The first step is to visit Expertise Wales – [www.expertisewales.com](http://www.expertisewales.com).

Expertise Wales is a web-based portal supported by the Welsh Government's European funded Academic Expertise for Business programme\*. It offers a central point of access to the expertise and facilities available in universities and colleges in Wales.

In addition, the Welsh Government offers a range of funding and support for collaboration to both businesses and academic institutions through Innovation Specialists. Based throughout Wales, our Innovation Specialists can identify how your business can become more innovative, helping you to:

- Create and commercialise new products and processes
- Increase efficiency in manufacturing through technology and process improvement
- Introduce design for new product development and manufacture
- Identify, protect and exploit your intellectual property
- Access SMARTCymru RD&I funding and other UK and European schemes.



To discuss your innovation needs please call Business Wales on **03000 6 03000** or visit [business.wales.gov.uk](http://business.wales.gov.uk)

The advice we offer is available to businesses in Wales, and eligibility criteria will apply.

## Working with Universities and Colleges Collaborating for Success.

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yn llywio cychweithio ac arloesi  
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