

Technegol, ymarferol,
yn gyson arloesol
Technical, practical
and always innovative

Arloesi Bwyd
Cymru
Food Innovation
Wales



Food Innovation Wales Report 2021

Foreword

The last eighteen months have presented the Welsh food and drink industry with significant challenges and opportunities.

Brexit and the COVID-19 pandemic have raised important questions over food security and skills availability. An increasing awareness of the climate crisis our planet is facing and the strain of diet-related disease on our communities has also made us take greater notice of the food we eat and where it comes from.

Whilst these questions pose fundamental challenges for Welsh food and drink manufacturing, they can also provide opportunities for Wales to be at the forefront of positive change. We can lead the way with sustainability, skill-development, a focus on local produce and the promotion of healthier diets.

This is where Food Innovation Wales can provide a key role. With our range of pan-Wales technical,

operational and commercial expertise, we can support Welsh food and drink manufacturers to innovate and be more resilient to the challenges ahead of us.

Over the last eighteen months, Food Innovation Wales has helped upskill Wales's workforce through one-to-one remote mentoring, webinars, and conferences; we've helped companies to secure globally recognised third-party certifications; we've supported the development of plant-based and healthier new products; and we've helped put companies on a more sustainable footing with waste reduction, improved process efficiencies and sustainable new product development.

If your company requires support in any of these areas, whether you're a micro-business or large manufacturer based in Wales, we encourage you to get in touch to discuss how we can help.

Arwyn Davies
Food Centre Wales

Martin Jardine
Food Technology Centre

Prof. David Lloyd
ZERO2FIVE Food Industry Centre

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Who are Food Innovation Wales?

Based at three food centres across Wales, our team of internationally recognised industry experts help food and drink companies grow, innovate, compete and reach new markets. From new start-ups to established companies, Food Innovation Wales is on hand to provide technical and commercial support.

Food Centre Wales, Ceredigion, Mid-West Wales

Food Centre Wales provides technical services to business start-ups, SMEs and national food manufacturers. The Centre's suite of modern facilities includes an innovation and manufacturing hub designed and equipped to accommodate small scale product and process development and commercial manufacturing.

The Centre also manages four specially designed incubator units to give start-ups industry standard premises and a supportive environment in which to establish a foothold in the food and drink industry.

Food Technology Centre, Grŵp Llandrillo Menai, North Wales

Food Technology Centre is equipped with a range of modern pilot and industrial scale equipment to undertake all aspects of new product development through to a successful product launch. This allows the client to manufacture products on a pilot scale to secure sales from retailers before investing in

equipment. The Centre also benefits from a sensory analysis suite and a fully equipped laboratory.

Food Technology Centre also works with a broad range of businesses from start-ups to national companies wanting support with third party certification.

ZERO2FIVE Food Industry Centre, Cardiff, South Wales

ZERO2FIVE Food Industry Centre at Cardiff Metropolitan University is purpose built to support the food and drink industry. We employ professional, experienced food and drink technologists, business specialists and academics who specialise in all aspects of food and drink innovation, research, manufacturing, commercial, operational and technical issues.

ZERO2FIVE's facilities include bakery and confectionary suites as well as a new product development kitchen, sensory analysis suite and a state-of-the-art perceptual experience laboratory.



CASE STUDY

Llaeth Medra Milk

Anglesey sheep farmer, Huw Jones, recently established his new sheep milk drinks company Llaeth Medra Milk with the help of the Food Technology Centre. Huw, who farms in Llanerchymedd, Anglesey saw a gap in the market to produce sheep milk in North Wales and decided to develop a range of new sheep milk drinks.



Finally, Huw was supported to gain health mark approval from the local authority and trained at Food Technology Centre to enable him to use the facilities on site.

Huw is now producing chocolate and strawberry sheep milk drinks on site in Llangefni to supply local retailers, gyms, farm shops, delis, and more.

Benefits of the support

With funding from Project HELIX Llaeth Medra Milk has been able to develop an idea into a product for consumers.

Huw Jones, owner and producer of Llaeth Medra Milk said: “From beginning to the end, the help I have received from the Food Technology Centre has been invaluable. They have helped me every step of the way and without them I would never have been able to launch the sheep milk drinks.”

Support from Food Innovation Wales

Food Technology Centre provided a range of new product development support, including undertaking market analysis and considering the equipment needed for processing and the legislation relevant to the product.

Food Technology Centre also helped the company to look at different flavours and ingredients, microbiological testing to validate the production process and determine the product shelf life, packaging format and required label information.

“Using the expertise of the Food Technology Centre and being able to hire the equipment at the dairy on site in Llangefni has been life changing. If it wasn’t for their help and practical support Llaeth Medra Milk would not be here today.”

What is Project HELIX?

Through Project HELIX, eligible companies based in Wales have access to a range of funded technical and commercial support from Food Innovation Wales.

Project HELIX delivers practical knowledge transfer activity, supporting Welsh companies to develop and reformulate **innovative** products from concept, design, development and manufacture, through to the consumer's shopping basket.

Project HELIX works with Welsh companies to forensically analyse each step of the manufacturing process, identifying ways of introducing **efficiencies** across process controls, site design and systems development.

Project HELIX's **strategic** approach enables food producers in Wales to benefit from best practice and industry intelligence from across the world. For example, companies can receive help to achieve third party certification such as BRCGS and SALSA which open up new markets for their products.

Project HELIX is funded through the Welsh Government Rural Communities – Rural Development Programme 2014-2020, which is funded by the European Agricultural Fund for Rural Development and the Welsh Government.

New Product Development	Systems Development	3rd Party Accreditation
Technical Information	Process Controls	Training, Mentoring & Skills
New Business Start-Up	Product Efficiency	Industry Intelligence
Added Value	Site Design	Food Business Development
Food Legislation	Packaging	Public Engagement
Product Reformulation	Validation of Systems	Innovation Framework



Project HELIX outputs to 31st August 2021

Reaching every corner of the country



Creating a skilled workforce that's able to meet tomorrow's challenges



Helping the sector grow sustainably



new businesses supported



new markets accessed

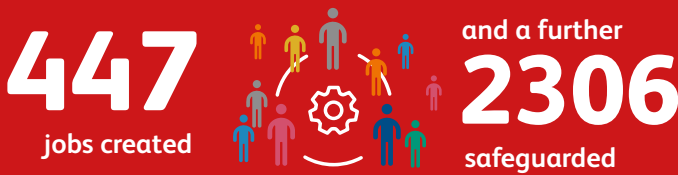


new products developed



companies gaining third party certification¹

Playing a key economic role in our local communities



Sharing our expertise through knowledge transfer



Having a positive impact on our vibrant food and drink industry and helping it play a leading role in the future wellbeing of our nation and planet

OVER £185 MILLION

impact to the Welsh food and drink industry

Combined Outputs from 09/06/2016 – 31/08/2021

1. Third party certification since 1st April 2020

2. Actions refer to the 18 key strategic priorities within Food Strategy, Food Innovation and Food Efficiency, outlined in the table on page 5



CASE STUDY

Authentic Curries and World Foods



Authentic Curries and World Foods produce a variety of ready-made meals using home style cooking methods for retail, restaurants, pubs, local authorities and major supermarket chain cafes. The company's 30 employees manufacture over 100 different products at their BRCGS Food Safety, Grade AA certified factory in Rhondda Cynon Taff.

David Smith and Paul Trotman founded the company in 1996 after Paul stayed at David's Pembrokeshire motel and saw how customers travelled far and wide to sample David's curries. The two saw the potential in a joint business venture and decided to set up The Authentic Curry Company.

Support from Food Innovation Wales

ZERO2FIVE Food Industry Centre has a long history of providing Authentic Curries and World Foods with technical support in areas such as internal auditing against BRCGS Food Safety standards and training in HACCP and basic food safety.

Due to new working practices resulting from COVID-19, a ZERO2FIVE technologist delivered internal auditing remotely against BRCGS. This helped the company to prepare for their first

remote BRCGS audit in May 2021, which the company successfully passed with a Grade AA.

Instead of delivering the usual face-to-face food safety training for members of staff, a ZERO2FIVE technologist developed training booklets which the technical manager at The Authentic Curry Company was able to use directly with staff members on site.

Finally, Authentic Curries made good use of Food Innovation Wales's COVID-19 tool kit to ensure they followed best practice with regards to pandemic guidelines and restrictions.

Benefits of the support

As a result of the company maintaining their BRCGS Food Safety certification they have been able to secure two additional customers, launch 15 new products and retain sales of over half a million pounds. This includes a range of low-calorie meals for a local health authority and low carbohydrate meals for a Welsh online business who help their customers follow reduced carbohydrate diets.

Paul Trotman, Managing Director of Authentic Curries said:

"The support we've received from ZERO2FIVE has benefited us no end. It's been invaluable to have expertise from outside, coming in and auditing us in preparation for BRCGS. All of the involvement we have had with Cardiff Metropolitan University has been amazing and it helps things run a lot more smoothly."

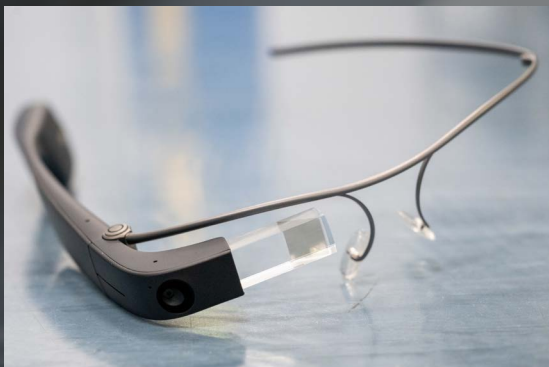
Supporting Innovation

Food Innovation Wales provides the Welsh food and drink sector with support in key strategic areas which have been identified by the Welsh Government and Food and Drink Wales Industry Board. A summary of our most recent work is provided below:

Technology & innovation

228 new businesses supported, 778 new markets accessed,
1240 new products developed

- **Innovative new product development** – Food Innovation Wales’s approach to new product development follows a best practice stage-gate process. This ensures a customer focused approach and maximises the potential of launching commercially viable products. Food Innovation Wales has recently helped clients to develop innovative products, which include survival ration bars, ambient meal kits, plant-based ready meals, kefir waters, honey energy gels and high protein pastas.
- **New routes to market** – As a result of the COVID-19 pandemic, many client companies found their traditional routes to market were severely hindered. We supported companies to identify alternative sales channels, such as direct-to-consumer, and provided technical support to reconfigure products accordingly.
- **Farm diversification** – We provide technical assistance to dairy producers across Wales to help them add value to their products. This work ranges from on farm milk vending machines, to retail products including cheese and milkshakes. We are currently at the feasibility stage of a collaborative project with the Advanced Manufacturing Research Centre (AMRC) to develop specialist equipment for on farm milk vendors.
- **Smart glasses** – We are piloting the use of ‘smart glasses’ with four large Welsh manufacturers. This technology will enable our technical professionals to enter food and drink processing rooms ‘virtually’, with audio and video capability. This will allow us to support companies remotely more easily and gain a better understanding of what is happening on the factory floor in real time.



Skills

861 training days given for 943 participants

- Remote learning** – With the safety requirements of COVID-19, we shifted our training activity from face-to-face to virtual. This allowed us to continue to support Welsh food and drink companies to upskill their workforce at a time when it was most in demand. We launched a webinar and online workshop programme in response to specific challenges resulting from the pandemic, Brexit and changes to supply chains. Topics covered included Allergen Management, Online Selling, Food Safety Culture, Audit Preparation and Good Manufacturing Practices.
- Face-to-face training** – We continue to organise COVID-secure face-to-face training where the learning of hands-on practical skills is required. We recently led a meat butchery workshop for a client who was looking to add value to their meat range by developing sausages, burgers and meatballs. We trained the client to look at different techniques and recipes as well as labelling, packaging and HACCP.
- Collaboration** – We have collaborated with other organisations to deliver online learning, including An Introduction to SALSA with Cywain and a four-day Welsh Food and Drink Insight Conference with speakers from across the UK including Kantar, Menter a Busnes and the Food People. As a partner in the Seafood Training Network Wales we have influenced the content of training. This year's virtual annual UK Association for Food Protection Conference, which we hosted in collaboration with Food and Drink Wales, welcomed speakers from academic institutions across the globe to discuss Global Food Safety in the COVID-19 Era.
- Food Industry Careers** – We strongly believe in highlighting the range of career opportunities available in the Welsh food and drink manufacturing sector. We are administrators of the Food and Drink Wales Industry Board's Welsh food and drink workforce collaboration Facebook page, which helps food and drink businesses across Wales to advertise job opportunities. Also, we have supported Food Skills Cymru to promote their Jobs Notice Board. In partnership with Pembrokeshire College, we have developed and delivered an annual Technical Challenge project which helps Year 8 pupils to develop their understanding of food technology through developing their own new food product. Our annual IGD Food Science Summer School for Year 10-13 students provided an opportunity for prospective Food Science students to gain an insight into the range of careers available in industry.

Sustainability

18 actions supported including product reformulation and efficiency, process controls and site design

- Waste reduction and process efficiency** – We work with companies to help them identify waste control points in their manufacturing processes and implement tools to measure and reduce waste. We also assist them to map and model process efficiencies so they can put in place control measures to reduce losses and improve yields.
- Sustainable new product development** – We support companies to create sustainable new food and drink products, from plant-based meals and protein shakes to oat milk alternatives and meat substitutes. We also work with companies to ensure their supply chains are sustainable, enabling them to adopt robust supplier approval, selection, risk assessment and monitoring processes.
- 'Sustainability for your Business'** – This year, we have developed a 'Sustainability for your Business' guide which offers a tool kit of information for Welsh food and drink companies. It sets out practical steps for how companies can work in a different way, including looking for sustainable packaging solutions, reducing food waste and lowering their carbon footprint.

Profitability

Over £185 million impact to the Welsh food and drink industry with 26 companies gaining third party certification

- **Third-party certification** – We support companies to achieve and maintain SALSA, BRCGS, Organic, Halal, Red Tractor and STS certifications, a key requirement to secure and maintain listings in major multiple retailers. We work closely with companies to deliver remote and on site audits which identify areas of potential non-compliance and provide mentoring to implement or adapt compliant processes and procedures.
- **COVID-19 Tool Kit** – To minimise disruption to the Welsh food and drink supply chain during the COVID-19 pandemic, we worked with manufacturers to help them incorporate the practical controls required to meet pandemic guidelines and restrictions, without compromising product quality or safety. We summarised the key considerations into a tool kit, which has been viewed over 5500 times. It includes a series of useful templates such as factory restart checklists, contingency planning guidance and operational resilience reviews.
- **COVID-19 Resilience Group** – We are members of the Welsh Government backed COVID-19 Resilience Group, which brings together a range of specialist support organisations from across Wales to help food and drink manufacturers through the challenges of COVID-19. As part of the Resilience Group, we established hotlines which enabled manufacturers from across Wales to quickly and easily obtain targeted support. We also produced a resilience self-assessment which supported companies to determine their preparedness to deal with current and future economic challenges.
- **Brexit support** – With the uncertainty of Brexit on the horizon at the end of 2020, we researched and developed an understanding of the emerging new procedures required to enable the continued export of products of animal origin (POAO) to Europe, and assisted clients to implement them to ensure there was no interruption of supply. We compiled some of these key changes into an EU Exit toolkit to support companies.
- **Clusters** – We continue to lead the CEO cluster, part of the Welsh Government's cluster development programme. The CEO Cluster engages with senior leaders in food and drink SMEs in Wales to stimulate the exchange of ideas and expertise and encourage business to business development. This year we organised the first in a series of CEO Cluster virtual breakfast meetings in collaboration with Category Insights. We were joined by Kantar Worldpanel who discussed changes in shopping and consumption habits and the challenges and opportunities they present for food and drink manufacturers.

Welshness

382 pan-Wales businesses assisted, 447 jobs created and a further 2306 safeguarded

- **Made in Wales** – With an increasing understanding of the value of Welshness in a product's positioning, more start-ups are turning towards local ingredients. We provide guidance to help companies validate their 'made in Wales' status and claims such as 'traditional Welsh'.
- **Sensory testing** – We support companies to demonstrate that Welsh products taste great too. From Welsh gin to lobster, our state-of-the-art sensory booths are available for companies to obtain quantitative data which evidences their taste credentials. We're also currently supporting a company to develop a robust case for their application for a new UK protected geographical indication (PGI).
- **Supporting our communities** – When responsibility for the supply of food and drink to those shielding transferred to local government during COVID-19, we were involved in contacting suppliers and identifying suitable Welsh products for inclusion in a Shielded Box Scheme pilot. We also supported the establishment of Neges, a food delivery service which ensured vulnerable people in our communities and hospital staff were fed during the COVID-19 outbreak.



CASE STUDY

Milk Vending Diversification

With consumers searching for more environmentally friendly, ethical and local produce, milk vending machines are the latest trend to sweep across Welsh farms.



Food Centre Wales has supported more than 20 farms with their new milk vending business ventures and demand for support has been so high that they have even introduced webinars for milk vending businesses covering topics like food safety, sourcing equipment and HACCP plans.

Support from Food Innovation Wales

Food Centre Wales have assisted with site layout on farms to ensure facilities for pasteurising and vending machines are located appropriately. Advice has been provided for sourcing suitable equipment – achieving the right set up from day one helps save money and time by ensuring processes are as efficient as they can be. Centre staff have also advised on microbiological testing and helped identify causes and solutions for any problems.

For many farms, this is their first step into food manufacturing and often have had no previous experience of food safety regulations. The training and guidance provided by Food Centre Wales ensures that all the new milk vending machines are operated to the standards required to achieve approval from the Food Standards Agency.

Benefits of the support

The support from Food Centre Wales has led to 24 new milk vending businesses being established on farms throughout the mid-west Wales area.

Morfa Milk, Fishguard said:

“The team at Food Centre Wales were invaluable when we were starting up Morfa Milk. They worked with us on our HACCP until we got it just right and they guided us through microbiological testing. We basically couldn’t have started our business without their help and support. They are so knowledgeable in their field and they are always available to help.”

Llaeth Jenkins, Aberystwyth said:

“Without the support from Food Centre Wales, the process of establishing the enterprise would have been much more difficult, in fact, we may have been too daunted to even start. We know of many other enterprises similar to ours in other areas of the UK who are in awe of the support businesses like ours receive. The support has meant that we have been able to generate an additional source income for our family farm and have generated two new jobs.”

The success of milk vending has also led to many of the farms adding further value to their products to increase their product range. Morfa Milk now bottle their milk and have launched a flavoured milkshake range, which they are selling in supermarkets across Wales.