

# Food safety management and technical innovation in Welsh food-sector SMEs: impact of Project HELIX.

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## Introduction

In order to facilitate business innovation, growth and sustainability<sup>1</sup>, Welsh Food and Drink Manufacturers and Processors (WFDMPs) (98% Small to Medium Enterprises (SMEs)) need to be technically competent and compliant with food safety regulation and engaged in 3<sup>rd</sup> party accreditations. The implementation of a Knowledge Transfer feasibility study evidenced that SMEs had difficulty in accessing support for gaining certifications such as SALSA/BRC to ensure food safety compliance; moreover 45% of WFDMP SMEs were not certified<sup>2</sup>. Furthermore there was a need for upskilling operational staff, greater market intelligence, business and new product development.

In 2016, a Triple Helix project (2016-2021) was launched as a collaborative partnership between Welsh Government/European Union, WFDMP SME partners and Food Innovation Wales (a strategic Pan Wales consortium consisting of The Food Technology Centre (North Wales), The Food Centre Wales (Mid to West Wales) and ZERO2FIVE (South Wales)). The Project HELIX partnership was formed to enable knowledge transfer of necessary technical and food safety/science skills to the Welsh Food and Drink Manufacturing and Processing sector. The eighteen knowledge transfer activities were ternary grouped as 'Food Innovation', 'Food Efficiency' and 'Food Strategy'. Two years from inception the project was evaluated to identify the potential impact on the sector (Figure 1).

## Purpose

This study aimed to determine the ZERO2FIVE impact of Project HELIX on the Welsh Food and Drink sector from evaluation of cumulative project outputs/outcomes and key-performance-indicators (KPIs); to include management support and technical innovation after two years of implementation.

## Methods

A mixed methods research approach was used to facilitate this study:

- Project HELIX's processes and output data bases compiled from SME participation (n=60), in product delivery programmes (n=89), were quantitatively analysed to determine outputs and activities.
- The qualitative study examined Welsh Government and Project HELIX documentation (N=125 reports and media articles) to determine project outcomes and key performance indicators (KPIs).

## Results and Discussion

### Project HELIX as a strategy for Welsh Food and Drink sector SME Growth

Table 1: Project HELIX Action Activities

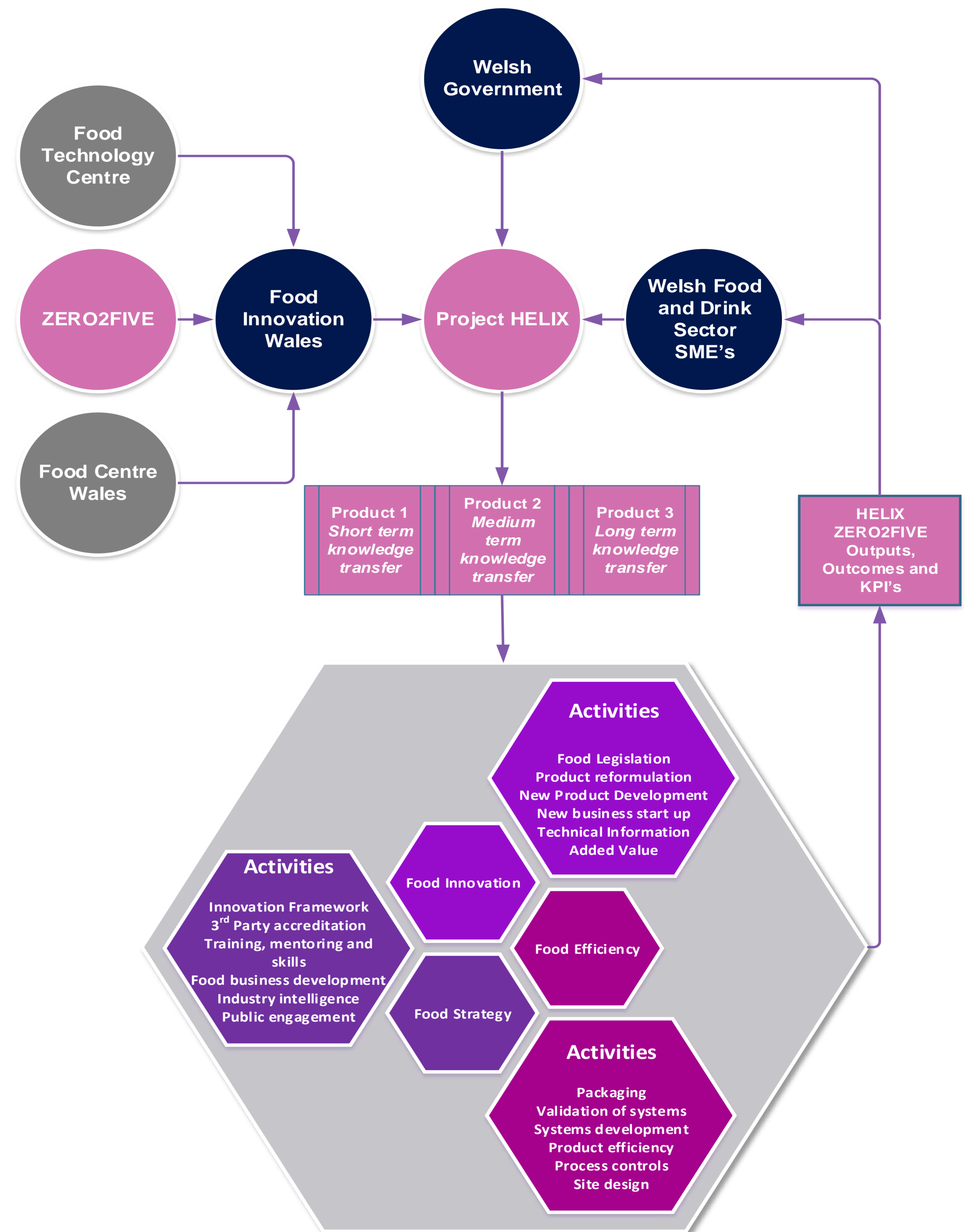
Number of Action Activities	2016 - 18
<b>Food Innovation</b>	
New Product Development	36
Technical Information	85
New Business Start Up	10
Added Value	2
Food Legislation	27
Product Reformulation	7
<b>Food Efficiency</b>	
Systems Development	89
Process Controls	21
Site Design	12
Product Efficiency	0
Packaging	3
Validation of Systems	35
<b>Food Strategy</b>	
Innovation Framework	0
3 <sup>rd</sup> Party Accreditation	32
Public Engagement	3
Industry Intelligence	3
Food Business Development	1
Training, Mentoring & Skills	42

Table 2: Project HELIX impacts

Outputs and outcomes	2016 - 18
Increased sales	£44.9m
New jobs created	166
Training days	173
Participants in training days	217
New markets accessed	110
Activities achieved	16
<b>Most Frequent Activities</b>	
Quality systems development	(n=89)
Provision of technical information	(n=85)
Training/mentoring/skills	(n=42)
Validation of systems	(n=42)
<b>KPIs detailed</b>	
New products created	206
Jobs in the food sector safeguarded	912
New businesses supported	92

The Welsh Government's 2014-2020 strategic economic and environmental needs for the Welsh Food and Drink sector were met by the implementation of innovative technical processes through the application of the HELIX project. To date, Project HELIX has facilitated improved food-safety and technical compliance in WFDMP SMEs impacting on the security of food supply.

Figure 1. Pan Wales Triple HELIX knowledge transfer structure



### HELIX Impact: Welsh FDMP SME quotes

Managing Directors from partner FDMPs have indicated considerable satisfaction in joining Project HELIX, having found it a positive experience and a beneficial partnership.

"The excellent support of ZERO2FIVE in delivering the two Project Helix partnership programmes has helped us successfully maintain our BRC Storage and Distribution certification which is essential for our business to achieve continued growth." (October 2018)

"As a result of the knowledge & expertise of the ZERO2FIVE technical team, we have been able to adapt and strengthen our quality management systems; resulting in maintaining our BRC and Red Tractor accreditation. The support we have received from ZERO2FIVE has been invaluable and we look forward to continuing to work with them." (March 2019)

## Conclusions

The approach of using a Triple HELIX partnership strategy, as a medium for knowledge transfer, impacted positively for Welsh Food and Drink sector growth by contributing increased sales of >£44m with a 166 new jobs created.

WFDMPs SME implementation of Project HELIX, aided company growth through improved food safety management and technical innovation skills as prerequisites for gaining certification with 3<sup>rd</sup> party accreditors (n=32).

## Acknowledgements

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- The European Union
- The Welsh Government
- ZERO2FIVE Technical Delivery Team

## References

- <sup>1</sup>The European Agricultural Fund for Rural Development, United Kingdom – Rural development Programme (Regional) – Wales, p165 <https://gov.wales/sites/default/files/publications/2019-07/rural-development-programme-document-2014-to-2020.pdf>
- <sup>2</sup>Redmond E. C., Mayho S., Mumford D., Ellis L. and Lloyd D. C. (2017), Development, implementation and management of knowledge transfer to food sector small and medium sized enterprises (SMEs) in Wales: Project HELIX. Presented at EFFOST Conference November 2017.