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Regional Triple Helix Food Sector Small to Medium Enterprise initiatives in Wales, United Kingdom: The transition from the KITE project to Project HELIX. 2008 - 2020

22nd September 2022

**ZERO2FIVE Food
Industry Centre**

Sharon Mayho

Leanne Ellis

Prof. David Lloyd

Darren Mumford

Prof. Elizabeth Redmond

Cardiff School of Management

Prof. Nick Clifton

Food Industry Centre
Cardiff Metropolitan University

ZERO2FIVE

Canolfan Diwydiant Bwyd
Prifysgol Metropolitan Caerdydd



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- Literature review.
- Research aim and approach.
- Research findings.
- Conclusions.
- Publication development.



Background

Welsh food and drink industry

- Wales is a devolved country within the UK.
- Welsh Food and drink is an important sector:
 - “Significant contribution to the Welsh economy”.
- Majority of businesses are SMEs.
- Welsh Government is a strong supporter of the food and drink sector.



Background cont.

ZERO2Five Food Industry Centre

- Technical, new product development and operational support for food industry.
- Cardiff Met University expertise includes:
 - Food Science;
 - Nutrition and Dietetics;
 - Environmental Health;
 - Trading Standards;
 - Biomedical Sciences.



Background cont.

Intervention drivers included:

2005

- Largest outbreak of E. coli O157 in Wales and the second largest in the UK.

2007

- EU veterinary sanitary and food safety law extensive revisions in 2007.
- Gap in technical and food safety skills.

2013

- Horsemeat scandal- found in prepared frozen food products labelled as beef.
- Traceability systems.

2015

- New BRCGS standard 7 released.
- Technical knowledge gap packaging and shelf life legislation.
- BREXIT uncertainty.

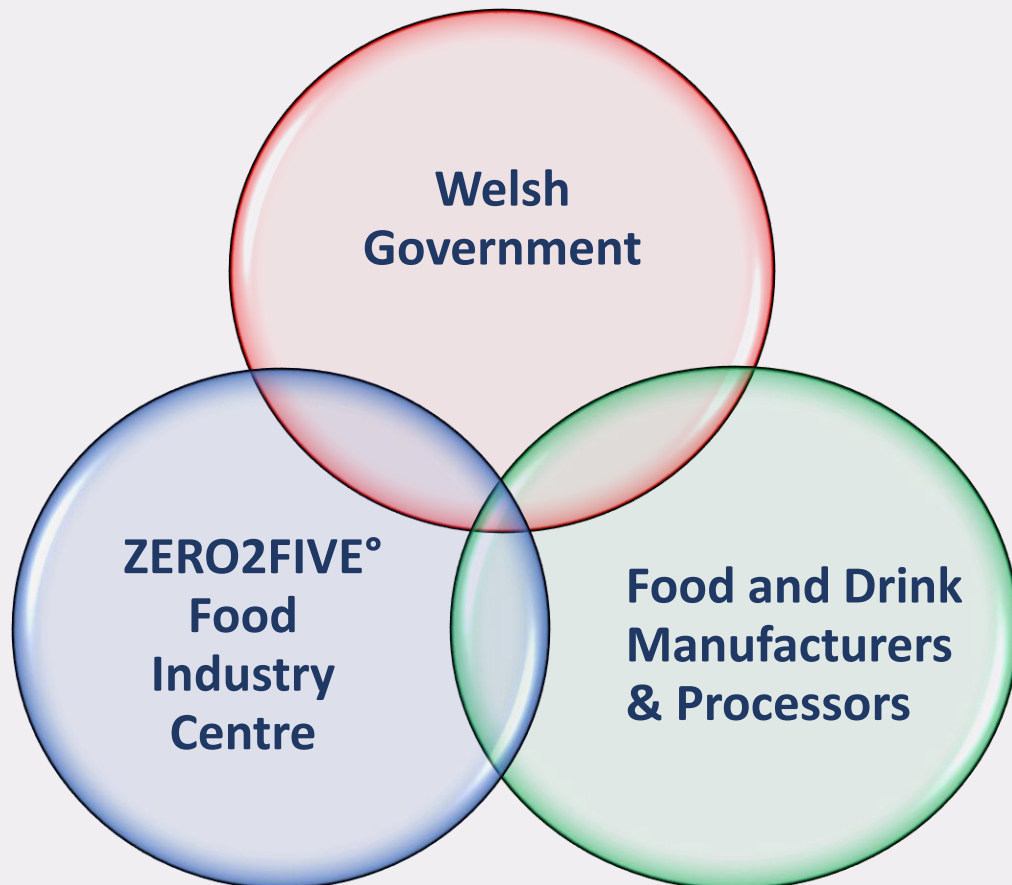
2016

- Death caused by reaction to an allergy (Natasha's Law 2021).

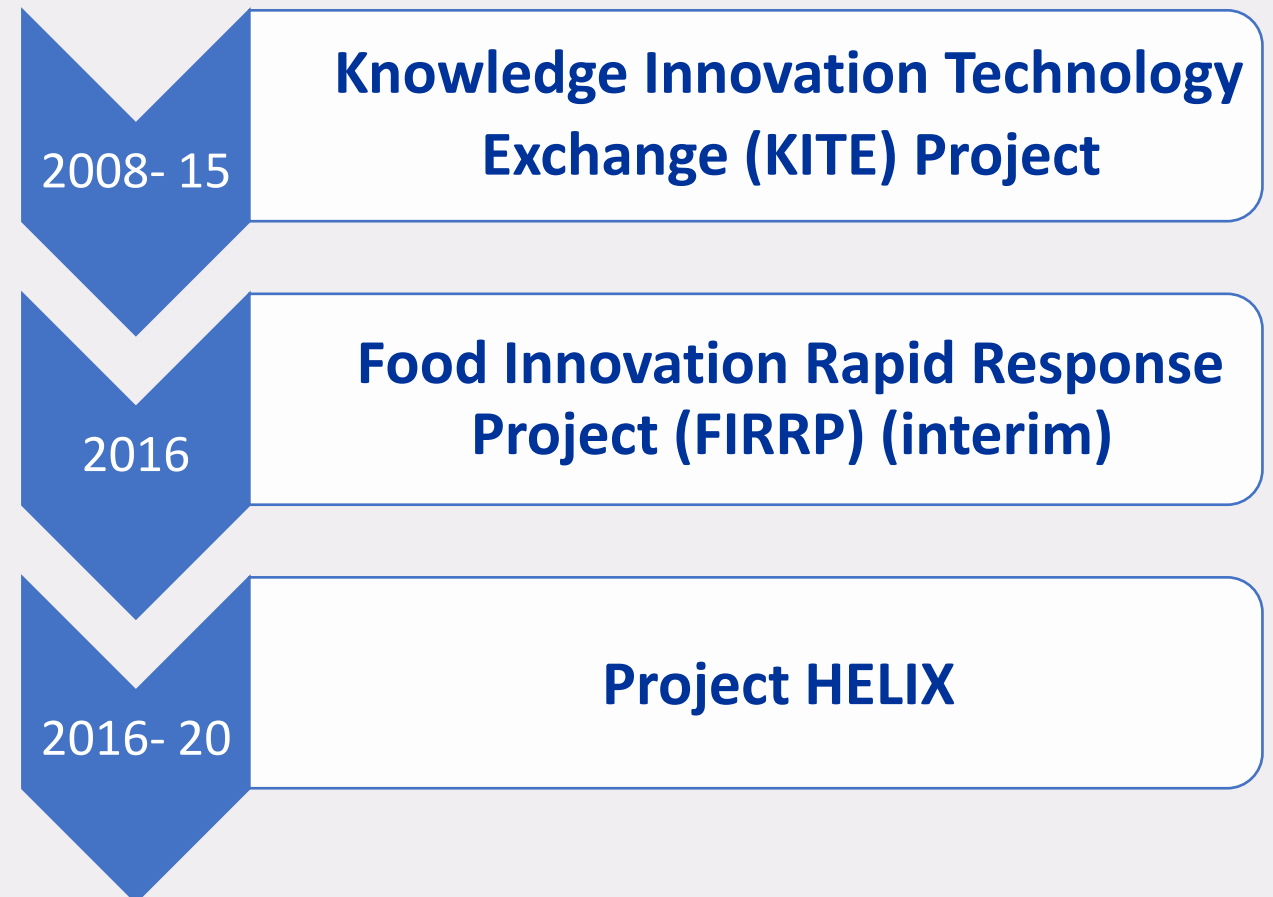
Background cont.

Welsh Government support from 2008

Triple Helix Approach



Three Projects since 2008



SME Growth Inhibitors

- Raising debt finance, economic recession, shortage of finance.
- Skills shortage, increased costs.

Jones-Evans (2015); Harrison and Baldock (2015); Ellis *et al.*, (2020); ACOST (1990); DTI (1991); Smallbourne *et al.*, (1995); O’Gorman (2001); Collinson and Quinn (2002).

Additional growth constraints for food manufacturing SMEs

- Power of leading retailers, competition for shelf space, moves towards traceability, increasingly stringent food quality and safety controls.
- Lack of technically proficient staff.

Mather (2005).

Innovation in food manufacturing

- ‘Product innovation’, ‘Process innovation’.
- Requires valuable new knowledge – capacity to move forward.
- Radical and incremental.

Muscio *et al.*, (2010); Aalbers and Dolfsma, (2013); Baregheh *et al.*, (2014).

Role of university

- Key stimulants and foci of strategies for a knowledge-based economy.
- Active role in economic development - matched local economy demands.
- Triple helix between local firms, universities and government institutions enhances innovation-related activities - joint resources/priorities/solutions.

Pugh (2017); Drucker & Goldstein (2007); Smith (2007); Goddard, Coombes, Kempton, & Vallance (2014); Brem and Radziwon (2017); Etzkowitz and Leydesdorff (2000); Lundberg (2013); Cai and Etzhowitz (2020).

Graduate placements

- Nurtured the relationship between the university and the company.
- Placement in new surroundings acts as a catalyst for knowledge transfer.
- Facilitates knowledge application to improve performance, problem-solve, gain competitive advantage.

Gertner et al., (2011); Nielsen and Cappelen (2014); Cheng (2020); Wynn and Jones (2017).

Food industry sector importance

- The largest manufacturing sector in the EU, numerous challenges.
- Constantly improve offering to maintain consumer interest.

Baregheh et al., (2014); Saguy and Sirotinskaya (2014); Neilsen and Cappelen (2014).

Research aim: To examine the need for the transition from the KITE project to Project Helix.

Triangulated mixed methods approach.

Quantitative analysis

Programme and project documents, reports, minutes and evaluations.

Qualitative analysis

Semi-structured interviews, letters to ministers, government reports, media reports and case studies.

Research findings

Policy context includes

2007

One Wales - A progressive agenda for the government of Wales

Creating jobs, business growth, and skills for jobs.

2009

One Planet, One Wales -The Sustainable Development Scheme of the Welsh Assembly Government

Healthy and just society, sustainable economy, good governance, use sound science responsibly.

2014

Innovation Wales

Greater wealth and wellbeing.

2015

Well-being of future Generations (Wales) Act

Improve our social, cultural, environmental and economic well-being.

Research findings cont.

2008- 15

Knowledge Innovation Technology Exchange (KITE) Project

To exploit the knowledge base in food technology for commercial gain.

2016

Food Innovation Rapid Response Project (FIRRP) (interim)

Support for Welsh food and drink industry to meet technical (eg: food safety, NPD) challenges.

2016- 20

Project HELIX

Deliver technical and operational knowledge transfer in food production to promote strong, sustainable rural economic growth and improve the environment.

Research findings cont.

Case study

primafoods
UK Limited

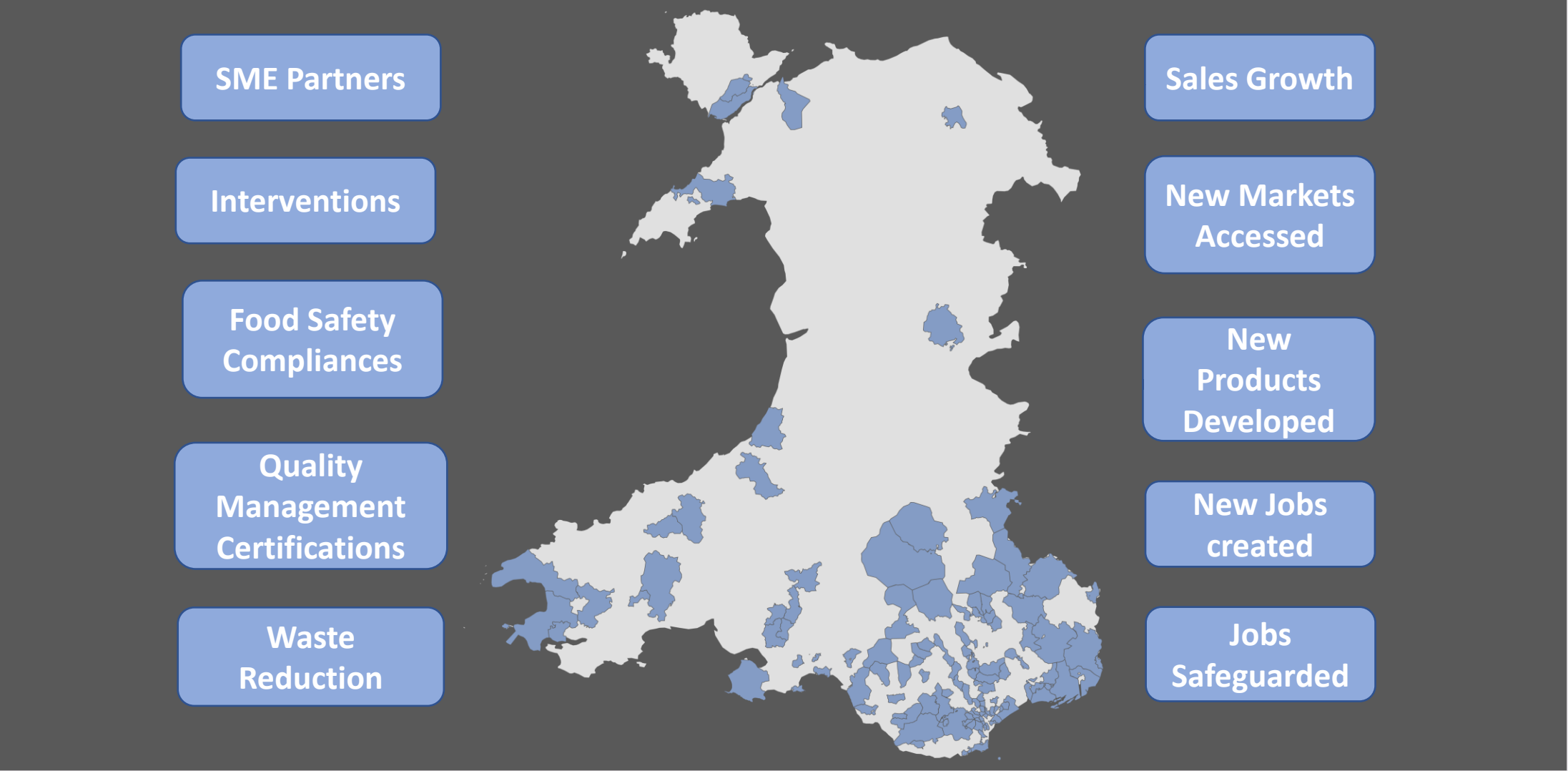


Peter Rice, Managing Director, Prima Foods:

“ZERO2FIVE has been the backbone of Prima Food’s technical development since 2011. Without their support, the business would have taken so much longer to fulfil the demands of becoming a second-tier supplier to multiple retailers and blue-chip businesses”

Research findings cont.

Key metrics achieved 2008 - 2020



Research findings cont.

Contribution to Welsh Government's objectives

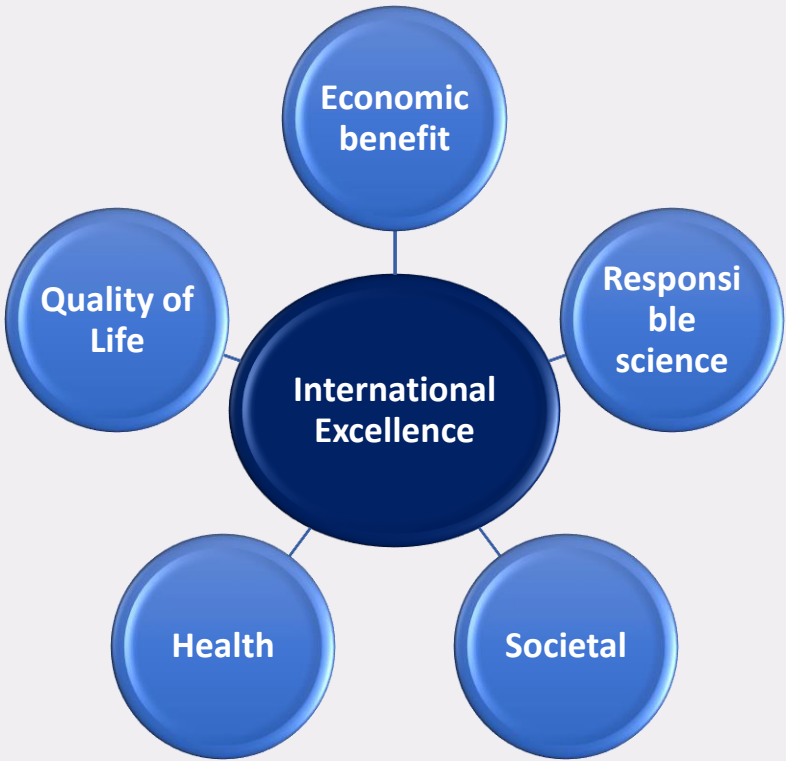
Welsh Food and Drink Sector Turnover £m

	2014	2016	2018	2020
Bakery	£435	£502	£507	£472
Dairy	£479	£665	£451	£441
Drinks	£832	£801	£902	£896
Food Manufacturing	£3,889	£4,830	£4,843	£4,851
Food Supply Chain	£20,166	£21,118	£21,350	£22,382
Food Wholesale	£2,192	£1,932	£1,897	£2,113
Meat & Meat Products	£901	£1,067	£621	£1,134
Turnover is rounded to the nearest £million	£65,778	£69,367	£69,674	£72,212



Source: Welsh Government Analysis of the Inter-Departmental Business Register (IDBR) (2020)

Contribution to Cardiff Met University's research assessment



Source: REF2021 Results (2022)

Conclusion

- Triple helix approach has been successful.
- Importance of aligning interventions with policy.
- Interventions are valued by industry because they deliver results.
- On-going review and refinement of interventions.

Welsh Government's EU's Rural Development Programme (RDP) Awards 2022

Project HELIX awarded:

- Food and Tourism category
- Overall best project



Publication Development

The working paper from this study will be submitted to an appropriate Regional Studies journal.

Acknowledgements

The authors would like to thank the Welsh Government / European Union for providing financial support for the development and implementation of the KITE feasibility project, the Food Innovation Rapid Response programme and Project HELIX for the Food and Drink Sector in Wales.



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