



**Good Practices on Regional Research and  
Innovation Strategies for Smart Specialisation**  
**Scotland Food and Drink,  
Food and Health Innovation Service**

**Scotland**

**December 2012**

## Table of Contents

1	Basic Data of the Practice .....	3
2	Introduction: Regional Smart Specialisation Background .....	4
3	Description of the Practice.....	5
4	Monitoring and Evaluation .....	11
5	Lessons Learnt.....	12

## 1 Basic Data of the Practice

### 1.1 Title of the practice

#### **Scotland Food and Drink, Food and Health Innovation Service**

A market driven innovation mechanism to provide a range of practical support to help businesses realise growth opportunities in the healthy food and drink products marketplace.

### 1.2 Precise theme/issue/policy tackled by the practice

- ✓ Clusters
- ✓ Innovation friendly business environments for SMEs
- Research infrastructures, centres of competence and science parks
- ✓ Universities
- Digital Agenda for Europe
- Key enabling technologies
- Cultural and creative industries
- ✓ Internationalisation
- Financial engineering instruments
- Innovative public procurement
- Green growth
- Social innovation

In particular:

- Open innovation
- ✓ User driven innovation

Process of regional change initiated:

- ✓ Transition
- Modernisation
- Diversification
- Radical foundation of a new domain

### 1.3 Geographical range of the practice

The project has national coverage across Scotland.

### 1.4 Contact details

Jamie Rankin, Scottish Enterprise. [Jamie.rankin@scotent.co.uk](mailto:Jamie.rankin@scotent.co.uk), Tel: 01224 252012

### 1.5 Sources of information

- Scotland Food & Drink Industry Strategy:  
<http://www.scotlandfoodanddrink.org/about-us/our-vision-mission-and-strategy/strategy-refresh.aspx#>
- Scotland Food and Drink Industry Leadership Organisation website:  
<http://www.scotlandfoodanddrink.org/>
- Food and Health Innovation Service Project Website:  
<http://www.foodhealthinnovation.com/>

## 2 Introduction: Regional Smart Specialisation Background

The overarching direction for Scotland's future prosperity is articulated in the Government Economic Strategy (GES), which was 'refreshed' in September 2011, to take account of current global trends and Scotland's relative performance. The core objectives of Smart Specialisation' in Europe 2020 of 'smart, sustainable and inclusive growth' fit well with the GES. The GES highlights innovation as a key economic driver, affecting the growth of productivity, companies and sectors. It also recognises that innovation is broader than the traditional focus on technology and R&D, requiring "input from numerous sources customers, competitors, academia and other business.

The delivery of Scottish Innovation policy is articulated in the business plans of Scottish Enterprise, Highlands and Islands Enterprise and the Scottish Funding Council. Scottish Enterprise's Innovation approach is predominantly through our key sectors and working directly with growth potential businesses. The goal is to expand the community of innovative companies and quicken the commercialisation process leading to faster market-ready products and services. Scottish Enterprise has various support mechanisms for the delivery of innovation support direct to Scottish businesses. There are also a number of key sector projects which prioritise innovation through sectorally targeted and delivered activity and there are a number of other funded organisations and trade bodies that support the innovation system.

A key strand of Scotland's economic development objectives has always been focussed on the development of key industry strengths. The main growth sectors in Scotland are Creative Industries; Energy; Financial Services; Food & Drink; Life Sciences; Technologies & Engineering and Tourism. These sectors account for 46% of total Scottish GVA in 2010, with energy (including North Sea oil & gas revenues) accounting for almost 20%. In employment terms, the growth sectors account for 30% of jobs, with tourism the largest sector. Life sciences and digital media account for a small proportion of the economy on both measures. These sectors all have industry lead strategies outlining their aims and objectives, along with the innovation aspirations they plan to achieve during the period of the strategy. All the sectors have Industry Leadership Groups which contain industry, academia and public sector experts who determine the vision, strategic direction, and ambitions for the sector.

The rationale for applying a sector specialisation approach to economic development is well proven especially in current turbulent economic conditions. These specialisms are expected to outperform the average and to provide a disproportionate impact on the economy.

Scotland is supportive and engaged in the European Commission's Regional Innovation and Smart Specialisation agenda (RIS3) but has not registered on the "Smart Specialisation Platform". Instead, Scotland is one of a few regions, that have been asked by the Commission to work' directly with it to develop their Smart Specialisation Strategy.

With a strong and diverse business base of 1,200 companies, including large-scale indigenous players, global inward investors and many smaller firms with a strong heritage, innovative products and the potential to grow, Scotland's Food & Drink industry generates £11.1 bn (£13.3bn) turnover and £4.8bn (£5.8bn) GVA. It employs 118,000 in terms through world-class research including land use, animal health & genetics, brewing & distilling, life-sciences and nutrition & health.

## 3 Description of the Practice

### 3.1 Executive summary

Food and Drink is one of the key sectors for growth in Scotland. A refreshed strategy was launched in December 2009 with the ambition to grow turnover from £10 billion to £12.5 billion by 2017 and to build Scotland's reputation as a "Land of Food and Drink", thereby increasing exports by £1.4 billion to £5.1 billion. Scottish Enterprise works with partners under the leadership of the Industry leadership group Scotland Food and Drink to bring about a step change in industry performance.

The Food and Drink Industry Strategy identifies **Health** as one of the 3 growth markets from which a £2.5bn turnover target will be achieved, and estimates it is worth an additional £0.7bn by 2017. The strategy has stretching KPIs for GVA (+£2bn) and R&D spend as a % of GVA (from 0.25% to 0.75%). The strategy also identifies **Innovation** as one of the key capabilities which the industry in Scotland needs to strengthen if it is to fully exploit the growth market opportunities.

A key area of development and service offering is in the area of healthy foods – estimated to be worth £20 billion in the UK and more than £300 billion globally. The Food and Health Innovation Service provides a range of practical support to help businesses realise growth opportunities in the healthy food and drink products marketplace. The service provides support to help businesses:

- Identify and understand market opportunities in food and health
- Scope new product ideas, including where to find solutions and resolve technical issues associated with pursuing new opportunities
- Identify appropriate sources of funding to help and scope up new projects

The project provides an understanding of key themes in terms of ingredients, manufacturing, reformulation, performance and ageing. The service is active across all sub-sectors of the food sector in Scotland.

Since the project was formally launched in February 2010, over 250 companies have been in touch requesting further information on food and health opportunities. The project provided direct, one to one assistance to over 110 of those companies, and a further 50 companies have gone on to receive intensive support to develop a new healthy product.

The Food and Health Innovation Service project provides specialist support to Scottish Food and Drink companies, covering the **whole** process of innovation, including

- Researching, translating and disseminating key technical information
- Identifying Product Development Projects
- Scoping Product Development
- Marketing, legislation and regulation.

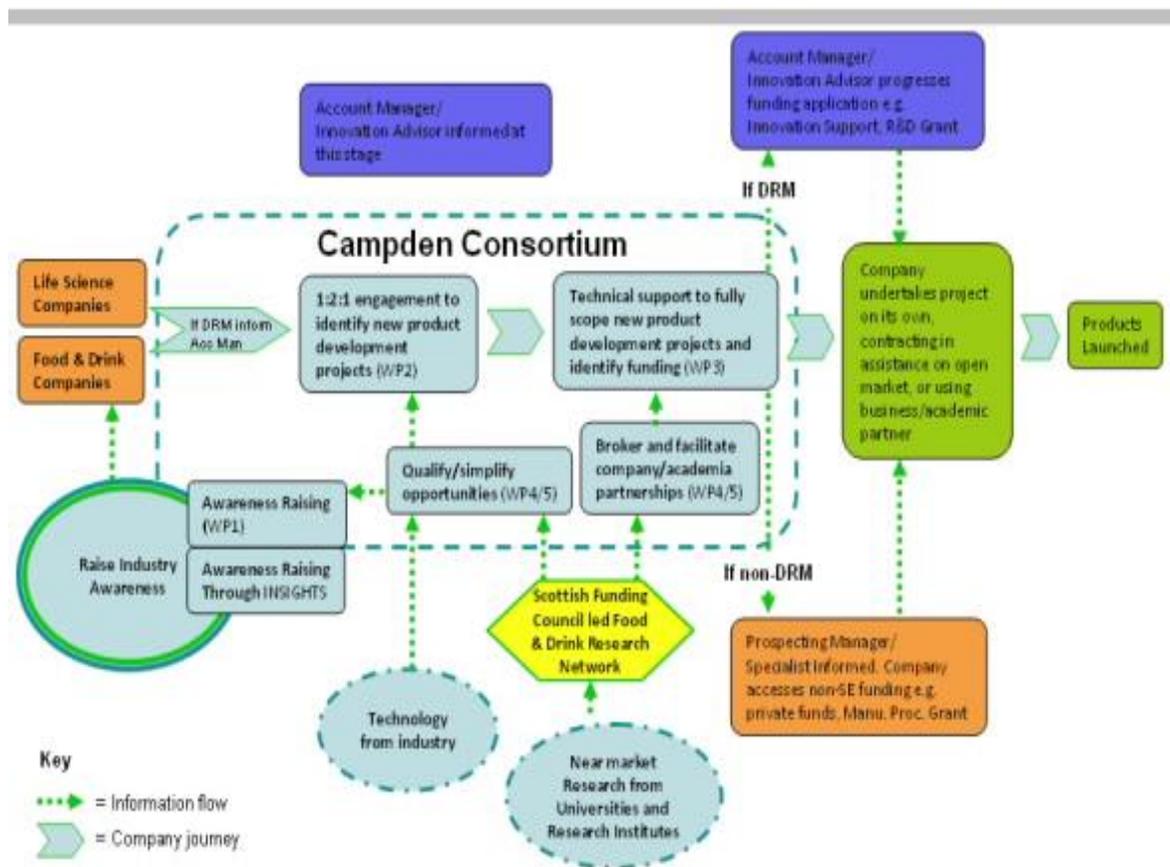
Scotland is renowned world-wide for naturally healthy food and drink products with our fish, salmon and seafood, soft fruit, fruit juices, bottled water, vegetables, high fibre cereals, oat based products, chicken, lean red meat and bread all finding ready markets both at home and abroad. We also have plenty of successful products that are 'better for you' because of reduced fat, salt or sugar. These include some dairy and bakery products, ready meals, soft drinks, soups and other chilled processed foods.

Scotland has significant research strengths in animal health and genetics; human nutrition and health; and life sciences. This positions Scotland as a world class location for food and health research that attracts global investment. However, there is an important opportunity to do more – in particular, to use this research to support new and existing companies more effectively to make a significant impact on the global health market. There is a significant prize to be won from addressing this development area with Scotland Food and Drink (the industry leadership organisation for Food and Drink in Scotland) estimating that growth in sales within the health market could be worth an additional £685m for Scotland by 2017

### 3.2 Detailed content of the practice

A diagram outlining the structure of the project is presented below:

Key features of the practice



Funded by Scottish Enterprise and delivered as a strategic activity of Scotland Food and Drink, the Food and Health Innovation Service is a unique project that provides practical support to Scottish Food & Drink companies to help them exploit this growing market.

It has been designed to create a step change in the innovative output of Scottish Food and Drink companies, resulting in accelerated new product development in the commercially lucrative area of food and health, to drive GVA growth for Scotland. It will do this by taking near-market research and translating

this into tangible opportunities for Scottish SMEs, and then working intensively with those SMEs to provide technical and commercial support leading to a new or improved product. In doing so, the project addresses key challenges for companies in Scotland relating to capabilities in innovation, including technology translation, market foresighting and company innovation skills, identified as key constraints, as follows:

- Skills gaps – Scotland does not lack academic skills in food technology as demonstrated by research strengths. However, Scotland has lacked commercially focussed food technology skills because there are very few companies conducting R&D with no specialist Contract Research Organisation operating in the country.
- Gap in ‘technology translation’ – there has been no mechanism for bridging the gap between pure research and near to market applications. The industry in particular has had limited knowledge of the research capability within Scotland.
- Limited access to market intelligence/foresighting – there has been a lack of knowledge of potential markets and demand trends particularly outwith Scotland. Additionally, there has been a lack of awareness in both domestic and international regulatory requirements
- Lack of investment – there has also been a lack of financial capacity for undertaking investment in new product development, often due to the high cost and high risk associated with such activity.

The project provides support for Scottish food and drink companies with growth potential who are currently in, or are seeking to enter the food and health market by:

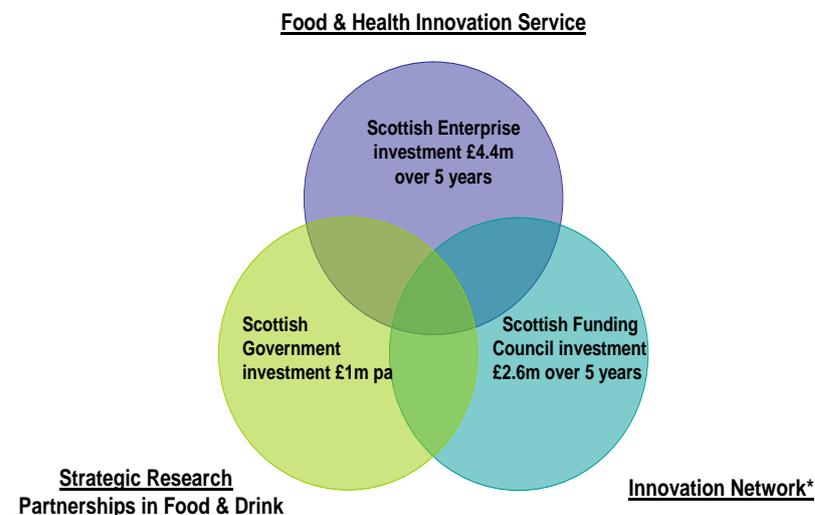
- Reformulating existing products for health - including reduction of fat, sugar and salt
- Exploiting naturally healthy food and drink products
- Developing leading edge functional food and drink products

A range of bespoke support mechanisms are in place to help companies to maximise the market opportunity in food and health, including:

- Identifying and understanding market opportunities in food and health that are relevant to their business and how these may be successfully exploited
- Resolving technical issues associated with pursuing new opportunities in food and health
- Scoping out new project ideas in detail including where to find new solutions and identifying the best partners to work with. This scoping will result in detailed, fully costed action plan.
- Identifying appropriate sources of funding to help support scoped up projects and help companies access this funding.

The project also provides an important link for companies across related strategic activity in innovation, including the Scottish Funding Council funded Food & Drink Research Network, Scotland Food & Drink’s INSIGHTS market intelligence programme and Scottish Enterprise’s innovation support services. Collectively Scottish Enterprise, Scottish Government and Scottish Funding Council are investing over £12m over the next 5 years to support innovation and R&D within food and drink in an **integrated** way as shown below. The Food and Health Innovation Service is a critical part of this newly integrated approach.

## INTEGRATED APPROACH TO SUPPORTING INNOVATION AND R&D



\*Innovation Network is properly titled :  
Scottish Universities Industry Innovation Network for Food & Drink

This is a transformational project for the Food and Drink industry in Scotland, designed to bring about a step-change in the industry's ability to turn Scotland's leading-edge health and nutrition research into commercial opportunities, enabling Scottish companies and university spin-outs to exploit this growth market (potentially worth an additional £0.7bn for the Scottish economy by 2017) and contribute to the industry KPI of increased R&D spend as a % of GVA (from 0.25% to 0.75%).

The strategic objectives of the Food and Health Innovation Service project are to:

- Provide commercially focussed food technologists to serve the Scottish food and drink market resulting in the identification and detailed scoping of product development projects
- Promote investment in R&D by SMEs to take product development projects through to the delivery phase to launch new products in the food and health market.
- Bridge the gap in 'technology translation' by liaising with academia to convey industry and company issues and help identify research which may be commercialised through partnerships with companies
- As a result of services provided through the project, increase the level of business expenditure in R&D for the food and drink sector
- As a consequence of this project target global food & drink R&D to Scotland

Summary case studies describing examples of how the Food & Health Innovation Service has provided practical support to help Scottish food and drink companies to successfully develop and launch new products are provided below. Further detail on these can be found here:

<http://www.foodhealthinnovation.com/case-studies/>

### ***Project Case Study 1 – IQ Ingredients***

iQ Ingredients Ltd is a start up company, planning to manufacture foods that are both good for you, and taste good. The company is currently Scotland’s only “bean to bar” chocolate manufacturer. The positioning of their launch product as a premium, healthy chocolate represents an innovative addition to the Scottish, UK and global market.

The Food & Health Innovation Service was able to help the company meet the key challenges it faced. These were to: retain the powerful health benefits of the cocoa bean by avoiding the high temperatures typically used in the chocolate making process; identify the precise temperature required to maximize the antioxidant potential of the chocolate; and finally to ensure that health messages inferred on the packaging complied with new European legislation.

They are now actively working with University of Aberdeen and Robert Gordon University with SE Innovation Support to conclude the development of the product to launch into the high end foodservice and food retail markets.

### ***Project Case Study 2 – Celtic Sea Spice***

Celtic Sea Spice Co. is a healthy gourmet food business that has developed a range of seasonings, snacks and other value-added foods using seaweed sustainably harvested from the coasts of Scotland and Ireland.

The Food & Health Innovation Service was able to provide a unique combination, mixing vital market insights together with technical advice, to assist them with their product developments. Technical information was provided to help the company understand what it needed to consider in terms of shelf life, drying methods and packaging, together with options for how the flavour retention and new product development could be investigated. An introduction was made to the University of Abertay who helped them implement the recommendations and guided them through the process of product testing.

With assistance from Scotland Food & Drink, Celtic Sea Spice are now pursuing the market opportunities these new products have opened up both in the foodservice and food retail markets.

### **3.3 Bodies and stakeholders involved**

‘**Scotland Food and Drink**’ is the industry leadership organisation for Food and Drink in Scotland. The Food and Health Innovation Service was originally conceived as part of Scotland Food & Drink’s Innovation working group. An overview of the Scotland Food and Drink partnership, including key partners, can be found here: (<http://www.scotlandfoodanddrink.org/about-us/our-partners.aspx>)

**Scottish Enterprise** took the lead role for the design, implementation and operation of the project. After a thorough development phase, the project was approved by the Scottish Enterprise Board in June 2010 and the procurement process concluded in November 2010.

The project is now in implementation and is being delivered by a consortium, led by world leading food technology company **Campden BRI** in partnership with Scottish based partners **Scottish Agricultural Organisation Society, Interface** and **Rowett Institute of Nutrition and Health**.

### 3.4 Timescale and maturity

The project began operation in January 2011 and was formally launched in February 2011. It has now completed a successful first year of operations, with the key performance targets being met, and strong demand for the services from industry carrying over into year 2.

On completion of the first year of operations, the project undertook a review that confirmed the positive progress to date and informed the development plan for year 2.

### 3.5 Legal framework

The project was competitively tendered via an OJEU Competitive Dialogue procedure. The successful bidder has been contracted with for the 5 year duration of the project to supply the services to companies on behalf of Scottish Enterprise. No separate company or subsidiary was required.

### 3.6 Financial framework

The project is free to companies. Therefore, Scottish Enterprise reimburses Campden Consortium for 100% of the costs of the time spent delivering the service. The contract is structured so that payment is only made upon the achievement of predetermined Key Performance Indicators as agreed in the contract.

Scottish Enterprise has committed £4.5m investment in the project over 5 years.

## 4 Monitoring and Evaluation

The Food & Health Innovation Service project has put in place a Performance Monitoring Framework. This framework is set around a clear set of data outlining: INPUTS - ACTIVITIES - OUTPUTS - OUTCOMES - IMPACTS.

A system has been put in place to try and gather (gross) monitoring data in line with stated Outputs and Outcomes e.g. Number of businesses completing projects (innovation & R&D support); Business to academia collaborative projects; Increase in Turnover.

In addition - further systems have been put in place to identify the range of Scottish Enterprise interventions accessed by each of the companies in order to understand more holistically the range of support supplied in addition to the Food & Health Innovation Service.

The project has completed its first year of operations. In the first year of the operating contract, the year 1 targets were exceeded, the highlights of these are:

- 37 Companies have received intensive support to develop new healthy products (5yr Target – 200)
- 70 companies have received light touch support to innovate (5yr target – 400)
- 7 companies developing products in collaboration with academia (5yr target – 60)
- Forecasted £40m GVA impact by 2016.

The first key challenge for the project was to stimulate interest and demand by Scottish companies to innovate in food and health. A comprehensive marketing and event programme has been undertaken to identify specific opportunities and relay them on to appropriate businesses. This has been highly successful with full attendance at the previous 3 events and almost 250 companies having made contact with FHIS in some capacity.

So far, 37 of those companies have worked intensively with FHIS to develop new products and there are examples of companies moving forward with pace (see below for case study examples). Furthermore, there have been 4 recent examples of companies securing further innovation funding to take the projects forward to completion and launch. Also, the integration of FHIS with other projects such as the INSIGHTS that provide vital market information, Interface - Food and Drink, that ensures easy access to academic partners and funding, ensures companies have access to the all available resources to help them reach a commercial result

A mid-term evaluation of the project is due in 2013 and the final review in 2016.

## 5 Lessons Learnt

In the initial stages, to promote the service, the project engaged in general marketing to large numbers of food and drink companies alerting them to the presence of and the benefits of the service. However, during year 2 of operations, the project has tended to provide specific pieces of information that are relevant to a small group of companies in a given sub-sector of food and drink. This has proved to be much more effective in stimulating ideas for innovation from the companies and hence demand for the service.

The Food and Health Innovation Service was launched to complement various existing food and drink initiatives, such as the Interface Food and Drink, Scottish Food and Drink Reformulation Service and Scottish Enterprises' own Innovation support mechanisms. The project engaged in extensive upfront consultation with these partners and continued to work alongside them during the implementation to ensure any synergies were maximised.

Some of the smallest companies that the service initially worked with were not able to take the projects forward due to a lack of resources and access to finance. The smaller companies are now assessed upfront and if they are deemed as unlikely to be able to take forward any significant food and health related new product development, they are instead offered a lighter touch support workshop. This workshop is designed to help them move their business and ideas along so that, if they come back in a subsequent year to apply for full support, they will be in a better position to access it.