

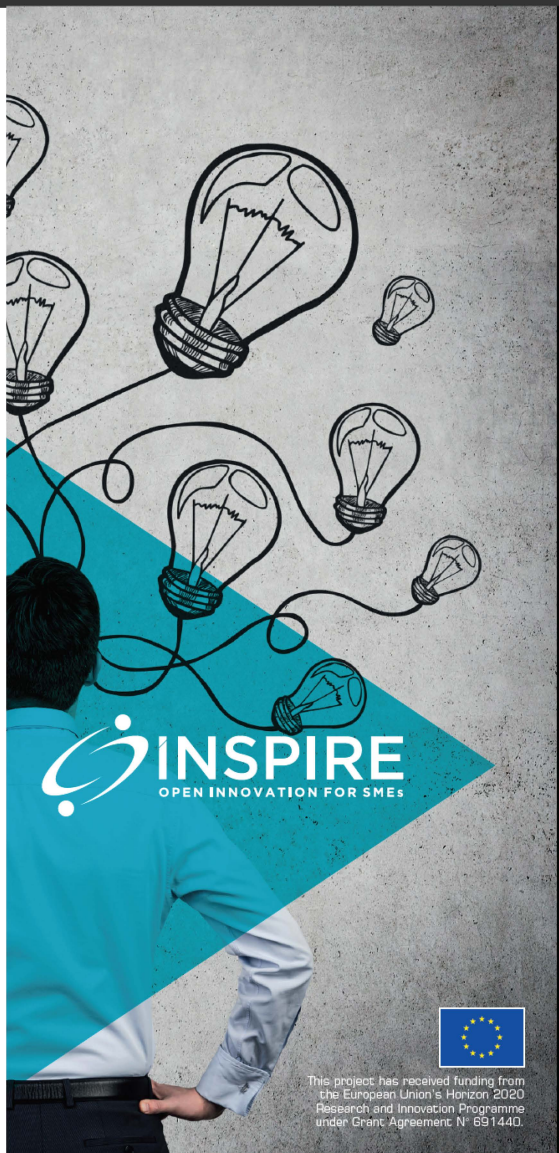
# MARA SEAWEED

United Kingdom, [www.maraseaweed.com](http://www.maraseaweed.com)

A Scottish entrepreneur set about developing a range of food products from the hitherto untapped natural supply of seaweed. To assist her with developing the start-up's own in-house production expertise and skills and to ensure compliance with food safety regulations, she turned to a university department with the necessary specialization

## Executive Summary

This case study describes the experience of the company Mara Seaweed and its founder Fiona Houston. The company has had several joint research projects with academia and other companies developing both product and supply chain. In particular, Mara Seaweed worked with the University of Abertay in Dundee on product development and food safety processes and licensing.



CASE N° : UK118

SECTOR: FOOD & DRINK

TECH INTENSITY: LOW-MEDIUM TECH

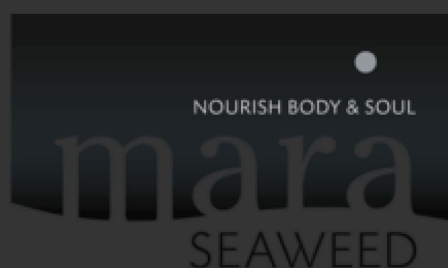
LIFE CYCLE STAGE: ESTABLISHED

INNOVATION VECTORS: PRODUCT

01 PARTNERS: PSR, LARGE CORPORATION, OTHERSME

KEYWORDS: University partnership, product development, food safety

- BACKGROUND FRAMEWORK
- INNOVATION CHALLENGE & MARKET OPPORTUNITIES
- OI TRAJECTORY
- BUSINESS IMPACT
- LESSONS LEARNED



## BACKGROUND

The company was started in 2011. Previously to this, Fiona had written a book about wild foods and consumer trends around wild products. Whilst doing this she had identified two key opportunities: firstly no one was utilizing Scottish seaweed as a food product and secondly the health, provenance and taste of Scottish seaweed was of high quality. This combination gave a USP which no one was currently exploiting. Prior to this Fiona had no food industry experience.

In 2011 /12 she spent time to plan the concept, write a business plan and look at product development. In 2013 by using a friends and family funding model, the company was able to set up a sea-to-shelf production facility. The company has gone through two further funding rounds since then and moved into their current facility in 2014.

The vision for the company was to develop seaweed producers and use them as a supply chain, thereby supporting coastal communities and micro businesses. This was not viable as the level of expertise in these communities did not exist and it soon became apparent that Mara Seaweed needed to develop in-house expertise and capability both for production and to ensure compliance with food safety regulations.

The initial engagement with Abertay University came in 2012 at a very early stage in the company's development. In 2016 the company gained full SALSA accreditation (Safe And Local Supplier Approval, a food safety standard created by a joint venture between the National Farmers Union, the Food and Drink Federation, the British Hospitality Association and the British Retail Consortium). The company is now selling products to large supermarkets in the UK and more than half of its turnover is with the USA.

Currently Mara has stepped away from research. The company is concentrating on organic growth and the development of current product lines.

## INNOVATION CHALLENGE & MARKET OPPORTUNITIES

The key challenge was to develop a product in an area which had not been previously exploited. This presented multiple challenges: having a product which had a great taste and was appealing in a culinary sense; taking this product through food

safety regulations and licensing for human consumption; how to take a very immature artisanal product and turn it into a mainstream product; creating a brand which was marketable and recognizable; securing a sustainable supply chain.

Underlying this was the problem that there was no prior knowledge of seaweed production available (or what there was at a very artisan level) so turning artisan knowledge into a more commercial proposition was one of the main challenges for the company.

This product was essentially creating a new market based around the perceived desire for high quality food products, quality in this sense representing a combination of taste, health benefits and provenance.

## OPEN INNOVATION TRAJECTORY

### Concept development

Seaweed is a very artisan-scale product, so developing a larger-scale proposition from previously artisan-level skills is the key challenge. At the most basic level the company needed a product that was legal to sell; however they also had multiple product ideas and needed help to take these ideas into production. Packaging, labelling, testing, safety and all of the technical aspects of food safety were areas on which the company needed advice.

### The development process, IPR and competition strategy

One of the key challenges was finding the knowledge required to move the product to being licensed for human consumption. Via the local Business Gateway they were signposted to Interface which put them in touch with Abertay University. The partnership with Abertay University was helpful in this regard. In Fiona's words the university was good at what they knew about (i.e. what makes a food legal) and an enthusiastic and positive partner. However, a lack of facilities hampered further development of products beyond this stage. Although some early-stage work was done on product development, moving it on from there would have needed further facilities and partners to develop to market. Some work was done at Glasgow Technical College, which had facilities around drying, but these were in the

process of closing down (and have since been removed). At that point the company was operating from an office, rather than having the production facility that they currently run from.

The company now has a number of partners with which they do co-manufacturing. This is done on a contract basis rather than a shared development basis. IP around the products remains the property of Mara Seaweed, and takes the form of branding and brand recognition, recipe knowledge and process knowledge developed through the company's development history.

Their competition strategy relies on the uniqueness of the product and developing the brand name in a new product space. Sales channels have been developed with large commercial partners, e.g. Morrisons supermarkets and Marks and Spencer, as well as overseas sales.

## **Commercialization and follow-up**

In 2013, the company moved to being an account managed company by Scottish Enterprise (NB this means that SE, the regional development agency, viewed the company as a potential high growth company). The company had significant challenges scaling up production, in particular finding production facilities to dry, mill and process the seaweed. Some co-production agreements have been entered into, particularly for more recent products which combine seaweed with other ingredients and flavours. However, the small amounts of product that Mara Seaweed was dealing with made it difficult to find partners with production facilities.

The company had to invest in its own drying, milling and packing facility. There was no facility they could use when they were initially starting out, and there is no company in Scotland that would do packing for them. In fact, it was very difficult to find any organization to do packing for them as the scale of their operation was not significant enough for larger companies to enter into a partnership with them. The initial product was packed by a Welsh company but this was eventually brought in-house.

The company now does some co-manufacturing with other companies. Mara's expertise is in seaweed production. They now dry, mill and pack all of their own seaweed products. One of these products is a blend of multiple ingredients including allergens, so they cannot blend and pack the product themselves. One company blends the product then another company does the packing before it is sent back to Mara Seaweed for distribution. These blends are seen as a significant future market. Although some recipes were

developed with University of Abertay, none of these have yet been taken to market.

The company has worked on other open innovation projects, in particular an effort with the Scottish Association of Marine Science (SAMS) in Oban and another SME to examine the potential for farming seaweed in tanks, in an effort to form a more reliable supply chain. Although the technical concept was proved to work, it was also shown to be uneconomical at this stage. Some work continues on this at SAMS but Mara Seaweed is not currently involved.

## **BUSINESS IMPACT**

The company now has an in-house technical expert to work on new product development. This recruitment has taken place out of necessity as the company has learned there is no external resource they can turn to for assistance.

The company has learnt that they had to develop nearly all of the technical expertise and facilities in-house rather than being able to depend on external facilities. Fiona would happily use the universities more, but struggles to find expertise and facilities they can use. Speed of reaction is an issue as well; in this particular industry sector speed of development is key in order to gain market advantage.

The project helped the company to understand the requirements and food safety certification processes which they needed to go through, which are essential for doing business. However, the product development was done by the company itself. So although the education and information provided by the external collaboration were critical to starting the business, there was little or no impact on the development of actual products.

## **LESSONS LEARNED**

This case demonstrates a number of aspects about the availability of infrastructure and facilities to micro companies. As can be seen from the case, it is easier to find production partners when a company is established rather than when it is a start-up, due to the scale of requirements being of little interest to private companies with facilities. The team at Mara Seaweed have done an exceptional job in developing all of the aspects of their production process internally, a significant challenge given the many aspects involved.

### Main lessons learned:

1. With regard to stimulating food industry innovation amongst micro companies and start-ups, there is little suitable infrastructure to help develop new product lines.
2. There may have been more benefit from working with one of the agricultural colleges, particularly in the area of drying and milling; however Fiona did not have this knowledge at the time and the alternative was not presented to her by Interface or SE. (NB this is in no way a criticism of the Abertay team who were enthusiastic and knowledgeable in the particular areas described above, and did put Mara Seaweed in touch with some other known industry contacts).
3. Although there are facilities which are described as Innovation Centres in the Food and Drink sector in Scotland, Mara Seaweed, one of the most innovative food companies in Scotland, is not using them as they do not meet their needs.