

PRO EARTH

United Kingdom, www.pro-earth.co.uk

Thanks to their licensing agreement with an American company, a British SME was able to develop its own product line and together with a large customer co-developed an entirely new product which helped boost its sales

Executive Summary

Pro Earth is a small company that develops a number of products for the containment, prevention, and absorption of hydrocarbons, oils and other toxins in water. All their products are based on the SaveSorb technology for which they have an exclusive licensing and distribution agreement. There are three people working in the company and they have a wide range of agreements and links with other organizations for other services such as product engineering and marketing. This case shows that Pro Earth makes extensive use of their partners and customers through most stages of the innovation process, from generating the idea to rolling it out.



CASE N° : UK128

SECTOR: MANUFACTURING

TECH INTENSITY: LOW-MEDIUM TECH

LIFE CYCLE STAGE: START-UP

INNOVATION VECTORS: PRODUCT, PROCESS

01 PARTNERS: PSR, LARGE CORPORATION, OTHER SME, LEAD CUSTOMERS & USERS

KEYWORDS: Pollution control, hydrocarbons, dredging, licensing agreement, marine boom

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BACKGROUND

The SME was established by a husband and wife team in 2014 and started trading in 2015, selling a product called "SaveSorb" to a number of building contractors. SaveSorb was developed by a large American firm of the same name and consists of a technology that can soak up hydrocarbons, oils, and other toxins from water. Pro Earth obtained the rights to distribute SaveSorb in Europe and the UAE, and has since developed various other products based on this technology.

Future plans include entering into new markets and fully exploiting their licensing agreement. As they are currently trading only in the UK, they wish to expand their operations to the rest of the EU and the UAE as allowed by their licensing agreement.

Another future project involves distributing filters for kitchen sinks, which they believe can be distributed free-of-charge to consumers by getting commercial sponsorship from supermarkets and other companies.

INNOVATION CHALLENGE & MARKET OPPORTUNITIES

There were no specific business challenges being faced when the open innovation project arose. Instead, the project was triggered by feedback from one of the SME's clients which led to the initial idea of developing a floating device that would remove chemicals from the water using the SaveSorb technology. Pro Earth decided to take this project on because they anticipated that other clients would also have the need for a similar product.

The market opportunity was already there, as their client was willing to invest in the solution being developed by Pro Earth, and other clients were likely to buy the product at a later stage.

OPEN INNOVATION TRAJECTORY

Concept development

The concept that was developed is a Marine Boom,

i.e. a floating device with a curtain that can soak up contaminants in flowing water. The actual product can be used in rivers, and it is designed so that there is a weighted waterproof curtain with certain sections floating just above the water, and the rest dropping below the waterline. This design lets the water flow through it but as it incorporates SaveSorb, the device catches and captures the contaminants as the water passes through. The product is designed to last at least 12 months, so it is durable and resistant to sun and salt water. In addition, the curtains are modular so that the booms can be attached together to vary the distance being covered.

The original idea for the product was suggested by a Dutch company called Van Oard, a large contracting company that carries out a wide range of marine services such as dredging (scooping out mud), building off-shore wind farms and offshore oil and gas platforms. Van Oard created a joint venture with the Kier Group, Mackley, and Royal Haskoning DHV to create the company Team Van Oard (TVO). This group began working with the UK Environmental Agency in 1996 to deliver flood and coastal defence projects across the UK. It was through their work with TVO in the UK that Van Oard began to use SaveSorb and therefore came into contact with Pro Earth.

The development process, IPR and competition strategy

Pro Earth had been selling SaveSorb to TVO for some time. After a while, TVO identified an issue with protecting fast moving water in their projects from hydrocarbon and chemical spills. If you spill a litre of oil into a river, it can potentially contaminate a million litres of water. The good thing is that the oil and hydrocarbons float on the water's surface, so cleaning the contaminated water can be done by cleaning the surface of the flowing water.

This can be done by placing a flotation device containing absorbents on the river, which will therefore collect the contamination as the water flows. The first issue encountered was that the river water may flow too quickly and the contaminants may go underneath the flotation device. This led to the development of the Marine Boom curtain which hangs down from the flotation device and is capable of trapping and absorbing the contaminants.

Once the specifications were worked out with TVO, Pro Earth carried out all the R&D work for the new product. A small company in California was hired to manufacture the boom and to help test it through several iterations before it was ready to

be commercialized.

The core technology in the innovation "SaveSorb" was licensed by Pro Earth from an American company of the same name. Pro Earth has exclusive rights to the distribution and sale of SaveSorb in the European Union and the United Arab Emirates. Pro Earth retains all intellectual property rights to the Marine Boom. In the case of client testing to determine the efficiency of the product, the results of these tests are kept by the client in accordance with any non-disclosure agreement they might have with environmental agencies.

As far as competition is concerned, Pro Earth's product is much cheaper to deploy and is more cost-effective to maintain. There are two main reasons for this: first, the materials that are used, particularly SaveSorb, are more effective as absorbents than their competitors' products. Second, the competing products do not absorb the contaminants, but instead they attach themselves to the contaminants.

This has an effect in terms of maintenance, as the absorption of chemicals allows for their disposal in a more cost-effective way. Once the contaminants have been captured, the contaminated SaveSorb material can be disposed of easily and replaced quickly. As the contaminated SaveSorb does not absorb water (only the contaminants), it does not add extra weight which has to be transported to a waste disposal facility.

Commercialization and follow-up

Pro Earth retains all IPR to the design of the Marine Boom. This was an innovation designed specifically with a client in mind (TVO), so it was marketed and sold directly to them. Also, the design is based on the environmental properties of UK and EU rivers, meaning that there is a restriction on where this product can be sold. Through some testing it was found that rivers in the UK acted differently than those in the USA, in that the intensity of the water flow has a greater variation. The planned roll-out includes the EU and the UAE under the terms of Pro Earth's licensing agreement with SaveSorb.

The company markets their new product to environmental agencies and to their client companies which are already using the SaveSorb material. In addition to targeting the EU and UAE markets, they are reaching out to new customers in the petrochemical, marine, and textile industries (contaminants when dyeing textiles). Their sales pitch is primarily based on the savings that companies will make when disposing of contaminants from water.

A number of follow-up innovations have resulted from this first concept, most of them utilizing the same technology or principle of the boom and incorporating SaveSorb as its core technology. The idea behind many of the follow-up innovations also emerged from the specific needs of their clients and the innovation process follows a very similar path as described above.

BUSINESS IMPACT

One of the outcomes of the project was an improvement in the company's communication skills, particularly on a technical level. By regularly engaging with engineers and chemical scientists, they have developed new ways in which to put their message across. One of them is by showing and marketing their solutions so that a wide range of people can understand the product at both the scientific and non-scientific level. It goes without saying that good communication is crucial when working with partners in new product development.

The company has also become much better at listening in a lot more detail to their partners and their customers. This includes asking all sorts of questions. Trying to understand specific needs that the clients may have and also assessing different ways in which to answer these needs, means not just focusing on one solution (that may not pay off in the long-term).

Pro Earth has still to make a profit on their innovation. Their new product has turned out to be so resilient that those who have bought it do not yet have the need to replace it.

LESSONS LEARNED

The case is interesting as it shows how a small company can license their core technology from an overseas company and then extend their product portfolio by creating their own new products based on this technology, while working in close collaboration with their clients to satisfy their specific needs.

Main lessons learned:

1. Most of the innovative ideas come from their customers, who can also provide a ready market for the products once they have been developed.

2. Most of the innovations come as a result of interaction with their customers. Pro Earth invested a lot in improving their communication skills in order to understand how to address the needs of their consumers.
3. Pro-Earth based their business on a license which gave them the freedom to integrate the SaveSorb material in new products, therefore allowing the SME to diversify its product line.