



# BETELGEUX

Spain, [www.betelgeux.es/en/projects/](http://www.betelgeux.es/en/projects/)

Through a smart combination of internal market knowledge and the development of an innovative product with the support of a university and a research centre, a Spanish SME managed successfully to leverage sales of other products in its portfolio

## Executive Summary

Betelgeux manufactures detergents and disinfectants mainly for the food industry in Spain. To differentiate itself from its competitors (mainly multinational companies) the SME customizes and personalizes its support to clients according to their needs. Innovation is one of the core values of the company and they are constantly combining knowledge from different fields, such as microbiology, chemistry, engineering, etc. in order to offer their clients innovative solutions.

The company entered into an open innovation project with a university professor and an applied research centre in order to develop a solution to a common problem that had previously gone unaddressed. The outcome helped the SME to acquire around 100 new customers and allowed it to leverage increased sales of its existing product lines in the process.

CASE N° : SE07

SECTOR: CHEMICALS

TECH INTENSITY: HIGH-TECH

LIFE CYCLE STAGE: RENEWAL

INNOVATION VECTORS: PRODUCT, PROCESS

01 PARTNERS: PSR, OTHER SME, LEAD USERS/CUSTOMERS

KEYWORDS: Hygiene control, food Industry, biofilms, knowledge combination

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## BACKGROUND

The company was founded in 1986. It started as a family-owned company as a manufacturer of detergents and disinfectants for the salt industry. Their main business activity remains manufacturing detergents and disinfectants, but they also provide a strong level of service and technical support to their customers in order to promote their products and to differentiate themselves from their competitors.

First, as their competitors are mainly multinational companies and the SME cannot compete with them in terms of price and range of products, Betelgeux tries to provide their customers with better support. Second, their field is quite technical because they are dealing with hygiene in the food industry and their clients require higher standards of cleaning and disinfection. Many factors are involved in this field, such as microbiology, chemical and engineering factors; they must all be in place in order to provide a good hygiene process.

The company's strategy is to alleviate any worry that their clients may have about hygiene issues. Their clients are in particular directors of quality control in the food industry where hygiene regulations are extremely strict. Betelgeux therefore aims to provide their clients with a complete solution package to tackle hygiene issues. One aspect of the company's strategy is to customize and personalize its support to clients according to their needs, an area in which their competitors are less efficient.

Nowadays, the company covers the whole of Spain with some 500 clients in different food sectors. The company has also had a subsidiary in Portugal for the last 6 years, and two years ago they started a company in Chile as part of their effort to expand to South America. Their subsidiaries in Chile and Portugal represent around 5% of the company's total turnover. The company has 48 employees and total revenue is around €8 million. Annual growth has measured 6–7% for the last 10 years, apart from in 2012 and 2013.

Part of the company's philosophy since the beginning has been to have access to as much knowledge as possible and to convert that knowledge to innovation. Innovation is one of the core values of the company and they always try to offer innovative solutions to their clients. The company is trying to combine knowledge from different fields, such as microbiology, chemistry, engineering, etc. in order to offer their clients innovative solutions.

Betelgeux dedicates 10% of its revenues and staff

to R&D activities. The company's ideas for new products and solutions are a mix of internal and external sources. The external source is mainly clients with whom the company has established long-standing relations. Internal sources can be divided into two categories: the R&D department and the sales force, people who through their work in the field can identify the potential needs of customers or potential solutions to their clients' problems.

The company plans to continue growing, having set a milestone for 2020 of €10 million in revenue. Furthermore, the company is looking to expand in South America, not only supporting their current growth in Chile but also in other countries.

In terms of technology, the company wants to keep investing in optimizing hygiene processes and introducing new methodologies and technologies to achieve a better level of hygiene.

## INNOVATION CHALLENGE & MARKET OPPORTUNITIES

The company identified a need that had not been previously addressed in the food industry. Up until then hygiene control had been focused on removing microbiology culture contaminations and the problem of biofilms was left unaddressed.

At the time the company identified the opportunity, no other product existed that could address the problem of biofilms. The company therefore set its sights on becoming the first to offer a solution to this problem, thereby becoming a technological leader in addressing this specific need of customers. Furthermore, it was envisaged that this product could be complementary to other products made by the company by offering it as part of a global solution. The market opportunity was identified by the company without the assistance of external partners.

## OPEN INNOVATION TRAJECTORY

### Concept development

The main concept/idea was to develop products for detecting and removing biofilms from surfaces.

From the beginning, a scientist –a professor in the food technology department at the Universidad Complutense de Madrid –was involved in the project on account of her expertise in this field and also because she had collaborated previously with the company on other projects. Initially, it took the form of a brainstorming session between the two sides. The professor provided scientific input to the project whereas the company dealt with the market side. The new solution that they identified could be divided into two products: the first was a disinfectant, a chemical that can remove the biofilm, and the second, which was a more innovative and challenging product, was a detector of biofilms.

As far as the disinfectant part was concerned, the company already had the initial knowledge to develop it in-house and the assistance of the external scientist was not so important. On the other hand, another external partner – the AINIA research centre –took part in the development of the disinfectant product. This partner contributed to assessing the efficiency of the disinfectant in laboratory-produced biofilms.

The development of the product for detecting the biofilms was more challenging. The company provided the specifications of what was needed by the industry. The role of the external scientist was very crucial in this part of the project because she had more expertise in the field of microbiology and proposed the use of the basic material that was to be used.

A number of challenges had to be faced during the early concept development phase. First, the R&D team had to identify the best formula for the product that could be applied in the food industry. Second, another challenge was to find the appropriate application of the product. The first trials were performed in a hospital where biofilms were grown in catheters. However, the hospital environment was not ideal for the trials. In order to overcome this difficulty, the trials were transferred to the university's laboratory. The firm went on to develop different formulas that were tested in the university lab. This environment was much more suited to scientific trials. After the completion of the lab trials, the firm continued to implement the industrial trials at their clients' premises.

## **The development process, IPR and competition strategy**

In the actual development process, 2-3 clients took part in testing the final solution that would be marketed. The laboratory trials that had taken

place turned out to be very important for the development phase as they demonstrated the efficiency of the product. The industry trials that took place during the actual development process were intended to determine which form the final product would take. At this stage, the research was led primarily by the university which was producing the growth models of the biofilms so that the product could be tested for its reaction to the biofilms.

The project began as an informal collaboration between the university and the company, but in 2008 the nature of the project changed and it received funding from the Spanish Ministry of Industry. At that point a collaboration agreement was signed between the university and the company, declaring that all the IPR relating to the project would be assigned to the company with the university acting as a subcontractor to perform specific tasks.

The USP of the new solution was that it was unique on the market when it was first launched. No other disinfectant was specifically formulated to remove biofilms in a highly efficient manner. Other techniques existed to remove biofilms by using combinations of other products, but they were lengthy processes. In recent years other similar products have been created to rival Betelgeux's product. As far as the detector of biofilms was concerned, it was the only product on the market that could identify biofilms easily without the use of specialized equipment.

After the launch of a similar product by one competitor, the company decided to change its competition strategy. They decided to address the market by promoting their products as an established solution. This shift in their competition strategy was an effort to gain stronger acceptance for their products in the market. From then on they were marketed as high-end products and a differentiation strategy was favoured specially in the case of the biofilm detector.

## **Commercialization and follow-up**

As far as the disinfectants were concerned, the company did not face any challenges during the scaling-up phase. On the other hand, the main issue in the scaling-up of the biofilm detector was to find a company that could put the product in a pressurized can. The specific challenge related to the fact that such companies work with very large orders, and at that time the SME did not have the number of clients that justified such a large quantity. In the end, Betelgeux found a small Spanish company that agreed to produce a small series of products. The main challenge for scaling

up further is that the company must expand its clientele, in order to be sure that there is a large market for increasing their production.

The company developed a marketing strategy to promote the outcome of the project. They focused more on the Chilean market through their subsidiary and how they will expand to the rest of South America. To address the Chilean and South American market, they use external distributors to promote and sell their products.

## BUSINESS IMPACT

In business terms, the main impact was new revenue and access to new clients. In total the SME acquired around 100 new customers thanks to their new products.

This was the first ambitious project that the company undertook and the first active collaboration with the university. Moreover, this project was their first attempt to obtain external funding and their first attempt to file a patent.

The lessons that the company learned from this project are:

- How to collaborate with a university.
- How to write a project proposal and how to report the progress of a project.
- How to organize their strategy towards a collaborative project.

After the completion of the project, they learned how to create a solid marketing campaign for a new product. As already mentioned, the firm learned how to file a patent application. This experience helped the company to become more confident and to develop new skills in the area of new product development and marketing new products.

Through this project, the company learned how to improve the way in which it managed scientific research and its collaboration with universities and research centres in order to transform the outputs into a viable industrial solution.

For Betelgeux the business bottom-line impact of this open innovation project was not so much reflected in the figures on its balance sheet. Thanks to the launch of its new flagship product the company was able to promote more easily other complementary products from its product range to its clients.

## LESSONS LEARNED

This case demonstrates how the smart combination of internal market knowledge and the development of an innovative product can leverage sales of other products in a company's portfolio.

Previous collaboration with a researcher from the university was crucial for developing the new solution.

Finding a small company that accepted a small order was crucial for scaling up their more innovative product, the biofilm detector.

### Main lessons learned:

1. Partnerships can allow an SME to establish its position in a market niche, where the competitors are multinational firms, by having a clear differentiation strategy with regard to its products/solutions.
2. Strong internal knowledge helped the SME to identify the external inputs required at each phase of the implementation of the product/solution.
3. Open innovation was the basis for the exploration of the idea, the development of the concept and the commercialization of the product.