

### **OI INSPIRATIONAL CASES**



## INNOVATING ITS WAY OUT OF THE FINANCIAL CRISIS THANKS TO MULTIPLE EXTERNAL COLLABORATIONS

To overcome the financial crisis of 2009-2010, a Danish engineering company turned to a national technology institute to assist with developing a new prototype for a CNC machine tool and changed its business model thanks to collaboration with a university economics department. Today it has spun off its new business with the help of investors and is addressing foreign markets through a new network of agents and distributors.

- A mechanical engineer and blacksmith by profession, Palle Hannemann decided in 2007 to establish his own company, Hannemann Engineering as a spinoff from his employer Lachenmeir to supply specialized equipment and conveyor systems, in particular handling and lifting equipment.
- During the early years, the company grew organically as they established their own manufacturing, hired employees and increased turnover.
- However, the economic crisis in 2009-2010 impacted negatively on the company's turnover, forcing them to revise their business model and seek new opportunities.
- Today, the company's business model involves their customers as partners by offering a unique set of tailor-made solutions for each one.

### The Origin of the Open Innovation

In 2012, Hannemann Engineering was working on a project for one of its customers who needed a concept to fill and empty a CNC (Computer Numeric Control) machine. Palle believed that such a solution already existed on the market, but it turned out not to be the case. With the prospect of scaling up the product, the company



envisioned a standardized solution that could suit all classes of CNC machines. The objective of this solution was to increase productivity and efficiency levels by using an automated robotic arm, which the process freed in production operators from repetitive and consuming tasks and instead, allowed them to engage in more value-added activities. In this way the concept for the ProFeeder machine was born.



At the same time, Palle and his colleagues realized that there was significant commercial advantage to be gained if instead of making generalized product offerings for the market, the company focused their business model on the needs of individual customers - and then commercialized the product to customers with similar needs for their production facilities. To help them innovate on both their technology offering and their business model, Hannemann identified two strategic collaboration partners, including Danish Technological Institute (DTI) to assist them with their robotics development, and the University of Southern Denmark (SDU) to analyze the market and assist with revising the business model. All that remained was to identify some sources of funding to support their project. For this, the company started to search for investors and collaborated with the Danish investment company - Syddansk Innovation - that expertise and loans provides to Danish companies.

The main challenges that the company discovered were not related to the collaboration with their external partners, which went quite smoothly. Rather they were linked to a lack of financial resources to develop the prototype and bring it to market, as well as the allocation of personnel and time to the development of the project at the expense of day-to-day operations. Thanks to a research project in collaboration with SDU and a number of other Danish companies, Hannemann secured a small amount of funding which helped pay for work on the ProFeeder prototype.

Hannemann Engineering

#### **Open Innovation Journey**

Owing to the diverse nature of production world. Hannemann facilities across the Engineering wanted to develop multidimensional capabilities that would allow easy integration in a variety of production setups. Apart from developing a user-friendly interface that required little or no initial training, the company also wanted to ensure maximum compatibility with industrial robotic solutions like KUKA, ABB, Fanuc and Motoman. One of the challenges in this type of model is the proof of concept of the product before it is even introduced to the market. Apart from bearing the risk of failure, there is also an inherent risk of specifications and details competitors in the market when the client approaches other competing companies for a quote on the concept with specifications that Hannemann Engineering invested time and resources to develop.

With the help of their open innovation partners and some external financial support, colleagues Palle Hannemann and Per Lachenmeier came up with the ProFeeder concept: a mobile and compact automated robot cell that can be mounted on a robot, enabling parts to be fed in and out of fully automatic CNC lathes and milling machines. The cross platform and universal compatibility with robotic systems meant that the ProFeeder concept was appealing to customers who are comfortable with their existing systems and do not wish to invest in new and complex solutions. The support that Danish Technological Institute provided with their knowledge of robotics and their collaboration in developing the prototype proved to be critical to the project and plays a key role to this day.

In order to create a clear corporate identity for the new development, Palle transferred the rights of the concept from Hannemann Engineering to the spin-off company Easy Robotics.

### KEYLESSONS

The company was able to take advantage of the first mover strategy and their unique product offering meant that there were no other competitors in the Scandinavian market at that time. Even to this day, Hannemann's price and flexibility differentiates them from other solutions that have made their way onto the market.

#### Impact of the OI Collaboration

Palle decided to diversify Pro-Feeder by offering three distinct options for customers based on their different requirements. The ProFeeder Light is suitable for small series production and, with increased need for automation and efficiency of production, it can be extended to either ProFeeder or ProFeeder Multi solutions. The modular concept is an affordable and fast way to get their customers started with robotic automation. The ProFeeder has also been patented to prevent other companies from replicating it. The University of Southern Denmark continues to be involved in the further development of ProFeeder and is addressing issues like data logging and smart sensors to align the product with the trend towards Industry 4.0.

While the main part of Hannemann's customer base is Danish and the company does not engage in direct exports, they "piggyback" through their customer's exports to other countries. On the other hand Easy Robotics is expanding its target customer base by engaging in direct exports with distributors in other countries, such as Finland, Norway, the UK and the Netherlands. Recently, it started collaborating with Blue Ocean Robotics as a partner for its worldwide marketing efforts and the company is looking to recruit professional and experienced sales expertise with a view to establishing direct exports for ProFeeder in the future.

Hannemann's experience demonstrates the use of strategic partnerships in order to address technological, business and even capital requirements which were required for developing and launching a new product. This collaboration not only resulted in a novel solution for the market, but it also helped the company to establish a long-term relationship with its open innovation partners.



PALLE HANNEMANN FOUNDER & CEO

### CUSTOMERS HOLD THE KEY TO INNOVATION

Focusing on individual customer needs can help a company to identify novel ideas for new products.

# LEARNING FROM CLIENTS CAN OFFER ECONOMY OF SCALE

The strategy of learning from clients and applying these solutions to new customers with similar needs is a good way to achieve economy of scale.

### DIVERSITY AMONG INVESTORS REDUCES RISK

Having diversity among investors and stakeholders can help to overcome capital requirements and reduce the risk of launching a new product.

## CORE SKILLS + STRATEGIC PARTNERS = VISION

It is important to identify your core skills and involve strategic partners in order to achieve your vision.

#### SPIN-OFF = CLARITY

Spinning off into a new company focuses on the development and sales of the new product.

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