

# ANONYMOUS

Switzerland

From open innovation to open mindedness: an opportunity for SMEs to widen their horizons

## Executive Summary

The company is an established player, founded more than 30 years ago by an orthopaedist who started to produce prostheses for disabled people and later branched out into the production of wheelchairs.

Thanks to the innovation strategy implemented over the last 15 years (when the founder's son joined the management team) the firm started with the prototyping of the first innovative indoor/outdoor power wheelchair. The company is now well-known at international level in the wheelchair market and has a portfolio of 8 international patents and 3 licensing agreements.

To achieve its goals the company is used to entering into joint R&D collaborations and strong strategic partnerships. The company is currently present in different EU markets and intends to continue to innovate to grow its market share.



CASE N° : SD09

SECTOR: MANUFACTURING

TECH INTENSITY: LOW-MEDIUM TECH

LIFE CYCLE STAGE: RENEWAL

INNOVATION VECTORS: PRODUCT,

01 PARTNERS: PSR, OTHER SME

KEYWORDS: Power wheelchair, licensing out agreements, mass market

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

## BACKGROUND

This is the story of a family company founded in 1994 by an orthopaedist (father of the current CEO) who decided to commercialize at first prostheses for disabled people and then wheelchairs. The company began by selling for different brands/players and later went into manufacturing its own products. Today it is a respected player in the international wheelchair sector leading some niche markets.

The turning point for their business growth was the development of a new concept for an indoor/outdoor power wheelchair, a technology platform which they used for developing their current product portfolio. Starting from this new concept, they have also been able to develop an innovative model for the paraplegic sports market (in particular for hockey) and have become the leading player in this market segment. During its pathway to growth, the company was supported by professionals in re-engineering its internal organization.

The company already has in the pipeline several innovation projects which they intend to carry out in the near future:

- New product development;
- Revision of the manufacturing process to reduce the costs for high quality products via the outsourcing to international partners of the components production and their assembly (via licensing agreements);
- Creation of a new company with a "light structure", working mainly via partnerships.

In the future the company intends to focus mainly on low-cost, high-quality products that can also address price-sensitive regions outside the European Union.

## INNOVATION CHALLENGE & MARKET OPPORTUNITIES

The growth of the wheelchair market is driven by the ageing of the world's population and the demand for automated wheelchairs, mainly in high-income countries. The market is quite concentrated in the hands of a few players, although there are also several SMEs offering new solutions.

Product innovation is the key driver for all players in order to respond as much as possible to the demand of individual customers. However, while users are demanding improvements in terms of user-friendliness and technical progress (i.e. systems for improving accessibility and control), on the other hand they are also becoming more and more sensitive to price, making cost reductions in the power wheelchair segment also quite crucial.

Despite the complexity of the technical development of the new solution for safety reasons and the risk of incurring high costs, the company agreed to be a partner in a European R&D project to develop advanced hardware/software technologies for integration into power wheelchairs. The management was motivated by the opportunity to gain visibility in the international arena and to get in touch with key R&D players in this field.

The wheelchair sector is characterized by intensive product innovation; in fact, in this domain competitiveness relies on the capability to innovate on the offer in order to satisfy growing customer needs.

The development of a new hi-tech product was considered by the CEO as an opportunity to increase the firm's visibility in the sector (the company already occupies a leading position in the sports market segment with some specific wheelchair designs, but it needs to invest more in better positioning its other products), to enlarge its market (move from niche to mass market) and to gain new know-how to design its future new products.

## OPEN INNOVATION TRAJECTORY

### Concept development

Over the last decades the company has made significant investments in enlarging and modernizing its product line. More recently, they were looking for opportunities to add low-cost, hi-tech systems to their devices for the purpose of improving the wellbeing of their customers (disabled/elderly people). It was therefore in their capacity as a recognized player in the wheelchair market that they were invited to join a consortium which was bidding for an innovation project under an EU funding scheme.

The initial concept, which was proposed by the R&D consortium partners of the EU project (the

consortium consisted of 3 universities based in Germany, Italy and Switzerland, 2 high-tech SMEs from Italy and the UK and 2 end users), went exactly in this direction: the idea was to enhance the power wheelchairs with hi-tech electronic features (a set of navigation, localization, planning, monitoring, and interfacing modules to be configured according to different needs and budgets) to produce a modular, low-cost, integrated system to support autonomous mobility and orientation for the elderly/disabled.

The innovation was in line with the requirements of customer demand which was on the look-out for innovative devices but sensitive to price.

## The development process, IPR and competition strategy

During the development process, it became clear that the balance between the integration of high-tech components and cost efficiency was crucial. The development of the electronic parts was expensive and therefore not aligned with the market pressure on pricing, and longer than expected, thereby running the risk of not respecting the project milestones.

The cooperation among the project partners and the contribution of the company were fundamental to solving these issues. Thanks to its know-how and knowledge of the market, the company helped the consortium to revise the initial concept into a device which was more user-friendly, simpler but more innovative compared with the current market offer and not complex in terms of development, while costing less (cost efficient).

The company has a solid experience in managing IP: so far their portfolio includes 8 international patents and 3 signed licensing agreements. The joint research project allowed the company to file a national patent application with a view to going on to PCT.

To grow on this competitive market, the company decided to adopt a mainstream strategy by investing in significantly improving their offer while maintaining their prices at a level that the market would accept. The feature of the new product, which is still under development, should allow the company to strengthen its position and enter into the mass market for wheelchairs.

## Commercialization and follow-up

Given that the final output of the EU project (which ended in October 2016) was a prototype, the

company is now moving into the development of the final product to be launched on the market.

Their strategy for scaling up will be based mainly on the contribution of external partners (via licensing agreements) who will be in charge of manufacturing as well as the commercialization process (dealers).

The CEO expects to face the following challenges:

- The transition from a niche to the mass market, something new for the company;
- Lack of familiarity with the dynamics of the mass market;
- Fight against the re-engineering of the product or the deployment of alternative solutions by their competitors (tangible risk);
- Identification of the right partners/ establishment of good relations with them;
- Access to the necessary financial resources to speed up the industrialization phase and market uptake.

The company intends to create a subsidiary newco with a light, flexible structure which will be located outside Switzerland. Activities, such as manufacturing and sales, will be outsourced to external partners, with whom new relationships will have to be established and managed.

The product launch is expected in the last quarter of 2017. Since manufacturing will no longer be a core activity, the company intends to license the production to reliable third parties and to use external dealers for commercializing the product on the mass market. Different sales partners have already been identified in 5-10 target countries. After this first pilot, other geographical regions will be addressed.

After the end of the project in October 2016, the company has moved from the prototype stage to the development of the industrial product. The key activities to be carried out in the next months include:

- Preparing an industrial product;
- Finalizing the agreements for CE testing;
- Developing a full business plan/feasibility study;
- Engaging financial partners.

## BUSINESS IMPACT

The main outcome for the company has been the opportunity to find solutions for a mass market that they have never approached before (their efforts having been focused on delivering bespoke

products to niche markets). Their experience of contributing to a joint research project gave the company the opportunity to consider possibly refocusing their business, to check their their assumptions and to scale up in preparation for this new market.

Thanks to this project the company acquired the know-how for improving its product portfolio and for accessing the mass market which was previously not known to them, while taking care of cost-price efficiency. In addition, the company gained good contacts with relevant R&D players and improved its visibility. On the other hand, the impact on the business bottom-line is still to be estimated.

## LESSONS LEARNED

This case shows how joint R&D projects also offer the possibility to SMEs to open/widen their horizons. Taking a break from the operational day-to-day activities and cooperating with international players offered the company the opportunity to consider new market opportunities.

Open-mindedness is a key aptitude of fast-growing companies that enhances the recognition of the value of close partnerships to speed up market uptake and identify new ideas/opportunities to accelerate their business growth.

### Main lessons learned:

1. Open-mindedness is a key characteristic of SME managers who scout opportunities and discover partnership opportunities.
2. Innovation projects with a PSR can require a substantial effort to convince them to revise the concept in order take on board important market considerations.
3. A network of reliable suppliers/partners is a significant asset when moving into international mass markets.
4. Intense networking aimed at creating personal relationships helps to build trust and a strong spirit of collaboration.
5. Proof-of-concept funding is needed to support companies when moving from the lab (prototype) to the market.