

# ELINTA

Lithuania, [www.elinvision.com](http://www.elinvision.com)

Faced by a need to innovate caused by the bankruptcy of its main customer, a Lithuanian SME developed a new product but then found that the home market was too small. It entered into a collaboration with a multinational company which offered its support both on the technical side and in sales & marketing

## Executive Summary

Elinta is an engineering company with its main business in factory automation solutions and trading in automation related components. Elinta's division dealing with image recognition, Elinvision, was established in 1996 and business flourished for 10 years until their largest customer went bankrupt. This was caused by the rapid advance and falling prices of LCD flat panel technology, which overtook CRT display technology. The first challenge for the SME was to find and develop a new business line. They found 3D scanning to be a potential business opportunity, but it meant changing the company (or rather part of it) from a service company to a production company. In addition to developing manufacturing capabilities it meant developing a supply chain and especially a worldwide marketing and sales organization.



**CASE N°: EE39**

**SECTOR: MANUFACTURING**

**TECH INTENSITY: HIGH-TECH**

**LIFE CYCLE STAGE: ESTABLISHED**

**INNOVATION VECTORS: PRODUCT, CUSTOMERS & MARKETING, DISTRIBUTION CHANNELS**

**OI PARTNERS: PSR, LARGE CORPORATION, OTHER SME**

**KEYWORDS: Image recognition, 3D scanner, orthopaedics, MNC**

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



# BACKGROUND

Elinta was established in 1991 by two employees of Kaunas University of Technology as a provider of factory automation solutions. It still remains the core business of the company although Elinta went on to establish other businesses (in fact it is a group of companies). They are involved in complementary activities, such as trading in automation components and measuring and testing equipment, and ventures, such as electric and hybrid vehicles, charging points and electric drives for bicycles. Elinta now employs some 80 people and has a turnover of around €6 million.

Elinta's division dealing with image recognition, Elinvision, (at first it was called 'Elintos prietaisai') was established in 1996. Elinvision designs, produces and implements visual data processing solutions. The main activities are computer vision, 3D image processing, laser scanning and industrial quality control solutions. The company focuses on three main areas: healthcare, industry and software. The first scanner was produced in 2005. In 2016 Elinvision presented RS SCAN powered by an HP model.

Elinta's core business – factory automation – is in the process of turning to robotics. Some of the ventures are about to hit the market (for example, ipHEV standing for Intelligent Plug-in Hybrid Electric Vehicle which received SME Instrument funding, or Rubbee, an electric drive for conventional bicycles, which attracted venture capital and is preparing for mass production). Elinvision's 3D scanner division is looking forward to expanding its manufacturing (about 10 times the current volume).

## INNOVATION CHALLENGE & MARKET OPPORTUNITIES

The image recognition business went well till 2006, when their largest customer (electronic cathode ray tube manufacturer) went bankrupt. The key factor for the disaster was the rapid advance and falling prices of LCD flat panel technology, which overtook CRT display technology. All contracts came to a stop. This development severely affected the bottom line of the business and suddenly they found themselves at a crossroads. The first challenge was to find and develop new business. Second, as they found 3D scanning to be a potential business opportunity, it meant changing the

company (or rather part of it) from a service company to a production company. In addition to developing manufacturing capabilities it meant developing a supply chain and especially a worldwide marketing and sales organization. At that time, they were operating mainly in Lithuania.

When they found themselves at the crossroads in 2006, Elinta researched the image recognition technology trends and it seemed that 3D image capture would be the next big thing. They were already using 2D image recognition for tuning cathode ray tube electron beam deflection systems. They just had to add the third dimension.

Elinta was in contact with an orthopaedic company (located in the same city), and it seemed that foot scanning as an orthopaedics application could be the first move in that direction. They could serve the orthopaedic market as well as specialized footwear makers such as ski boot manufacturers. This technology could also be used for making other 3D images.

## OPEN INNOVATION TRAJECTORY

### Concept development

The concept of the foot scanner was developed together with the partner company, Baltic Orthoservice. The aim was to develop a cost-effective, high resolution 3D body foot scanning technology to be used to drive the development of customized orthopaedic footwear and orthoses, to improve the quality of the overall patient service and to make services more accessible.

The foot scanner concept evolved. First, Delcam, their marketing & sales partner, offered to develop a compact mobile scanner. In 2014, the multinational suggested developing a scanner for the mass market.

### The development process, IPR and competition strategy

The scanner was developed in the joint project with Baltic Orthoservice and partly financed by a public programme supporting research & development activities in SMEs. Public funding was important, otherwise the development process would have taken much longer.

The company prefers to keep their intellectual property as secret know-how. No external IPR was sourced (except for partners' user requirements know-how).

The foot scanner which was developed has several distinctive features. First, it uses special algorithms that eliminate the need to adjust the equipment (it has a complex optical system, including 4 lasers and 8 detectors) which is usually required before using it, especially after transportation. Second, the scanner does not need a dark room to operate properly. Third, the scanned images are very accurate. The combination of these features was quite unique at that time, thereby ensuring a competitive edge. Elinvision intended to sell the scanners worldwide, as the market in Lithuania was too small. As they did not have any sales channels they looked for partners, i.e. equipment sellers or OEMs.

## Commercialization and follow-up

As long as the sales levels were manageable, the SME had no difficulty in organizing their manufacturing activity. However, with the prospect of increasing manufacturing capacity by up to 10 times, the game may change. For this stage of their development they are receiving help from their new OEM partner (a multinational), including their best programmers and advice.

No significant changes have been made to the company's organization, although with their future expansion, this is likely to change as production capacity grows.

In 2006 Elinta sold four scanners in Lithuania. It was obvious that they had to expand abroad. First, the 3D scanner producer changed the name of the company from the meaningless for non-Lithuanian speakers 'Elintos Prietaisai' to Elinvision. Second, they started looking for international sales partners. It was not an easy task for a company run by engineers. Elinta identified Delcam (acquired by Autodesk in 2014), a supplier of advanced CAD-CAM solutions. It had a health-care division which developed and marketed computer-aided 3D design and manufacturing systems for orthopaedic footwear, dental and other medical solutions that used scanners.

However, entering into an agreement was not easy. It was necessary to make a clear demonstration of their product's advantages if they were going to convince Delcam who already had competing solutions. The presentation to Delcam was very successful. They came for a half an hour and spent a whole day talking to different people. Eventually, they entered into an agreement

with them and obtained access to their sales network, under Delcam's brand name.

The company also entered into OEM agreements with other companies (more than 20 partners).

Delcam offered Elinta the opportunity to develop a mobile orthotic scanner for making customized insoles. The scanners, now known as iQube and iQube mini, were developed in less than six months.

## BUSINESS IMPACT

The open innovation collaboration allowed the company to develop in-house the specialized image camera design and image processor. These core products can be and are re-used for different solutions.

Elinta gained a lot of experience from cooperating with Delcam and the relationship with the multinational has been extremely advantageous in different respects. According to Mr Jokužis, despite the fact that the IT giant is slow to take decisions, his company can now benefit from working with the most talented developers in the US.

## LESSONS LEARNED

The case shows how technology-driven SMEs explore opportunities and develop new business. Usually, as in Elinta's case, they venture into new technology territory (and they love it, because they are engineers) when they find a customer who is interested in a new solution (e.g. Baltic Orthoservice). Then they test the market - and find their limitations. After delivering scanners to Baltic Orthoservice, Elinta found out that the market was for four scanners in Lithuania. At that point, they started looking at how to build sales overseas. As they had limited marketing capabilities, they looked for sales partners and often now sell under other brands. They also found that customer requirements are different from what they thought (e.g. they were invited to develop iQube, which is compact but less accurate than the previous model.). Technology advantage may help, but Elinta failed to capture the full value.

The SME thinks that serendipity is the key (the MNC found them by chance) but the truth is that small companies often fail to act to increase their chances of being found by potential partners. The key insight is that technology-driven SMEs need

external help in downstream activities, as well as capacity building in that area. Elinta evolved in many areas, including concept, development and marketing, and discovered that one partnership can be good for the company and another less so.

### Main lessons learned:

1. Valuable new ideas can come out of discussions with companies which are not currently clients but potential lead users. It is good to involve a wider network which expands beyond your immediate stakeholders.
2. Often the first user is not the most profitable so it is important to be open and flexible. The company has to show persistence as well.
3. Cooperation negotiations may take a longer time than expected.
4. Small technology-driven companies have weaknesses in marketing & sales and often need and seek partners in this area.
5. Some real, distinctive advantage is needed to attract interest from partners.