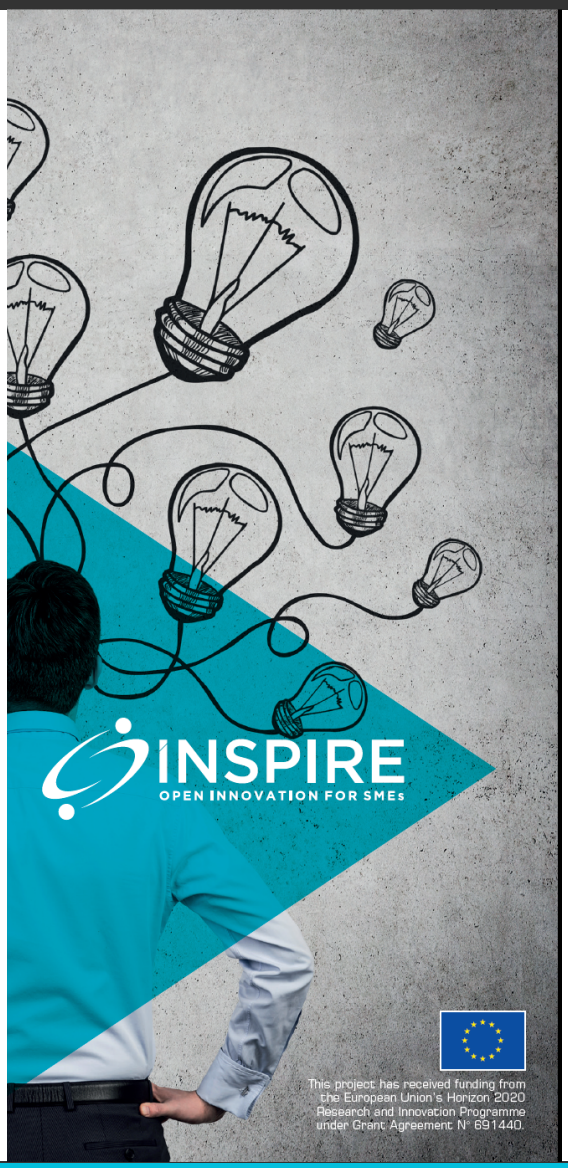

FIXSUS

Belgium, www.fixsus.be

A collaboration between an SME (software) and a large corporation (hardware) creates a new business model for the start-up and a win-win deal for both parties

Executive Summary

A group of entrepreneurs started a company in 2009, called FixSus, with the intention to develop open systems for HVAC (heating-ventilation-air conditioning). While in the process of setting up their business they found a large-scale strategic partner with a hardware product offering (Beckhoff) that helped accelerate their go-to-market. The start-up's collaboration with the hardware provider was driven by a number of aims, in particular to fine-tune their product development (software technology and algorithms of the total offering) and to expand their customer base.

CASE N°: SD45

SECTOR: HVAC/MANUFACTURING/ INFORMATION TECHNOLOGY

TECH INTENSITY: LOW-MEDIUM TECH

LIFE CYCLE STAGE: SCALE-UP

INNOVATION VECTORS: PRODUCT, SERVICE

OI PARTNERS: LARGE CORPORATION, INDIVIDUAL EXPERTS

KEYWORDS: HVAC, engineering, open-end technology, self-learning, co-development

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

FIXSUS

BACKGROUND

The CEO of FixSus started as an engineer at Siemens. He became interested in the concept of a building as a closed system (an 'energy factory', as he likes to call it). Since he could not pursue this opportunity as an employee of a large company, he decided to start a business of his own. He received support from some ex-colleagues and friends with knowledge in engineering, software development and entrepreneurship who acted as informal 'experts/consultants' while he set up his business. One of these friends joined the company from the beginning in 2009. They invested their own capital to avoid any influence of external stakeholders.

Nowadays he works with 8 freelance colleagues and develops open-end HVAC systems for (institutional) buildings. They recently completed the system installation at a university campus in Antwerp where students can programme the settings themselves. The CEO did not receive any external help from business support agencies, be that financial, business development or coaching.

The founder/CEO intends to stick to his current approach to carrying out projects. IT-systems that regulate building energy management, HVAC and domotics keep innovating and getting more complex. The complexity of future projects will therefore remain challenging for his team. He also envisages possible collaboration with academics who are interested in the collection of data and the self-learning algorithms that they are developing.

INNOVATION CHALLENGE & MARKET OPPORTUNITIES

The major strategic challenge was to start a business (and move from being an employee at a large company) and to become profitable. The trigger arose from the entrepreneur's personal interest in open-end technology and the opportunities this technology could create to reduce the carbon footprint of buildings through their HVAC systems.

Customers (infrastructure and building managers) want to reduce the operational costs associated with heating, ventilation and air-conditioning (HVAC) in their buildings and in the process also their carbon footprint. This represents a constant challenge to optimize results. The IT system that FixSus is offering aims to tackle this challenge by introducing a self-learning system to coordinate HVAC devices.

OPEN INNOVATION TRAJECTORY

Concept development

Before starting the company, the CEO developed the concept and researched online for existing systems. During his search, he came across a potential global partner - Beckhoff. This hardware supplier is an international trendsetter and provider of components in building information & automation software technology (industrial PC's, I/O & fieldbus components, actuation technology and automation software) and shared the CEO's interest in open-end systems. The company is a mature, large player with global reach, with +3 000 employees and +€670 million revenue in 2016.

The two parties had many meetings to discuss opportunities and decided to cooperate by working as 'preferred partners' without setting up a joint business. The director of Beckhoff in Belgium was very interested in a collaboration. As FixSus became more successful, Beckhoff would sell more hardware. And vice versa, if Beckhoff shared their best practices, FixSus could grow based on these insights. Beckhoff's automation products are used as the hardware building blocks without any adjustments.

The development process, IPR and competition strategy

During this start-up period (2009-2010), the two parties did not discuss commercial aspects (only technological). No contracts or non-disclosure agreements (NDA)'s were signed. The Fixsus software system was built jointly and is programmed in an open-source environment (TwinCat). The User Interface (UI) is built in line with the Human Machine Interface (HMI) normalization. FixSus took the lead in software programming. Regular meetings were set up to discuss progress, debug the system and optimize the added value of the system.

Beckhoff assisted the SME with understanding the opportunities and specific details of the open-source platform they set up to communicate with the hardware system. Nowadays the two parties still work together closely (one selling hardware, the other one integrating the software,

while both market each other's products as preferred partners).

IP on hardware protocols (DIOC) was co-developed by Beckhoff and FixSus. They agreed that only FixSus would file the IP; Beckhoff were not interested in sharing rights on the software since they are a dedicated hardware company. They did not need to formalize their collaboration in contracts or NDAs. The CEO of FixSus claims that this was a very strong foundation to start collaborating. He even claims that the lack of a contract led to a strengthened bond and trust between them.

Only five similar providers exist worldwide who also deliver (and install) open-end IT systems for HVAC automation. The success of this concept lies in the combination of a mature hardware supplier (Beckhoff), a compatible platform and a user-friendly user interface. This is topped off with pre-programmed self-learning algorithms. It gives FixSus a competitive edge with clients who have an interest in this kind of open-end solution. (If a client has a technical department with basic programming skills, they can adjust the settings of the HVAC system).

FixSus uses Beckhoff systems exclusively not only because of the open platform aspect (PC-based automation solutions), but also on account of the availability of support tools in the Dutch language, as well as criteria such as the system's robustness and value for money.

Commercialization and follow-up

The system continues to be improved. Business development is steadily growing. The CEO is not interested in scaling up too quickly, although he is wondering whether he could monetize the collected data somehow (as a side business).

The CEO works frequently with freelance staff to assist him in peak periods and when the equipment is being installed. This model allows him to secure full-time work for the core team at all times. As FixSus grows, the information and learnings from projects are still being shared between the two companies. An additional benefit of this sharing is that employees from Beckhoff can support or back-up FixSus on installation work if ever FixSus falls short in their project delivery due to unexpected events (e.g. illness, work peaks).

The company manages to receive free press from time to time (from awards, etc.). This generates sufficient exposure to keep orders coming in. The CEO spends little time actively searching for new clients. As far as marketing and sales benefits are concerned, the SME is convinced about the value of continuing its strong relationship with Beckhoff, which often generates leads and suggests FixSus as their preferred partner.

New products are being developed (TIBA2) and new types of projects are being sold (e.g. enabling students to manage the energy needs of their building at the University of Antwerp). Data intelligence and processing is probably a new topic to be addressed in future. In a more recent project (development of a new self-learning system, called 'TIBA2') the SME received IWT funding (Flemish Institute for Science and Technology) to invest in its development.

BUSINESS IMPACT

The CEO of FixSus became an experienced engineer in this kind of open-end system thanks to his learnings while developing the core product and the many challenging projects at FixSus. These systems are self-learning by applying self-learning algorithms. This opened up a whole new area of knowledge creation. The data which has been collected across the different systems will also lead to new insights, if FixSus can manage to process big data clouds. Collaboration with an academic partner could possibly increase the 'thought leadership' role of FixSus as a unique player in this business area.

The OI collaboration with Beckhoff taught the SME lean and progress-based project management. Over eight years FixSus grew to a team of 9 people (consisting partly of freelancers) and completed over 32 projects. The CEO claims that this was made possible thanks to the close collaboration with his co-founder and the win-win relationship with Beckhoff.

LESSONS LEARNED

This case demonstrates how open innovation helped an aspiring entrepreneur to start a company, build a strong offering and access the market.

Main lessons learned:

1. In some cases trust is facilitated by having no NDAs and strict partnership contracts.
2. Having clear and shared benefits (win-win relationship) are important for creating mutual trust among partners.
3. Open innovation is possibly one of the most important means for single entrepreneurs to start up their own business and succeed.