



## OI INSPIRATIONAL CASES



### FROM LAB TO MARKET: A PATHWAY MATCHING MARKET OPPORTUNITY RECOGNITION WITH LEADING TECHNICAL EXPERTISE

Having matured their capacity to provide R&D services to large companies within an academic environment – traditionally the strength of their value proposition – this Swiss spin-off became a serial founder of new companies for niche markets, moving from a one-client business based on service delivery to a multi-client activity based on high-quality products. The hallmark of this evolutionary pathway was a positive attitude towards collaboration with third parties.

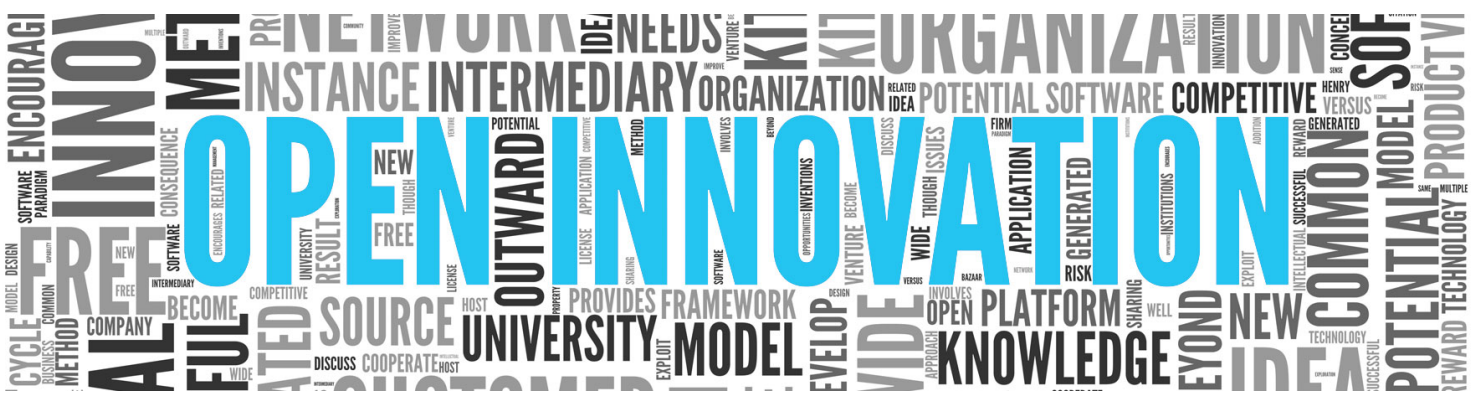
- Sensima Inspection was founded in 2009 as a spin-off from EPFL (Ecole Polytechnique Fédérale de Lausanne, Swiss Federal Institute of Technology in Lausanne).
- The founders had previous spin-out experience with a company acquired by a big player in 2014 for a value close to \$12 million.
- In recent years the company has been operating as a small-scale incubator; two companies have been spun out so far.
- Between them, Sensima and its two spin-outs register an annual turnover of around \$2.5 million and provide employment for 16 FTE.
- Five patents are held by two of the companies.

#### The Origin of the Open Innovation

This is the case of a research team from a Swiss Technology Institute made up of scientists and engineers from the microsystems group which was known for its leading role in the development of Hall effect sensors and probes. They decided to follow up on their long-standing R&D collaboration with a leading market player, in which they developed high-end solutions for non-destructive testing in the field of power generation, by creating a spin-off company to exploit their highly reputed expertise in other ways.

The success which they enjoyed with their first entrepreneurial experience, when the company was acquired by a large multinational player for around \$12 million and capital was raised from two venture capitalists to finance the diversification strategy, raised the team's awareness of the value that can be generated by combining high-end technical expertise with a market-pull approach. Sensima Inspection is the second company founded by the team to extract value from a patent which was deployed, thanks to their recognized expertise, in a market which was completely new to them.





A semi-public organization (an airport management company) which was looking for a technology provider capable of solving an issue relating to their operational capacity, awarded the team an R&D contract to design a new solution for “an effective passenger control detection device”. This represented a promising opportunity for both parties: a prospect for the newco to take advantage of the word-of-mouth that can provide recommendations to other organizations potentially interested in adopting a new device and for the customer to raise its visibility as an early adopter of an innovative detection system.

## Open Innovation Journey

From the R&D assignment a win-win collaboration was born; the team was granted full ownership of the technology (a new patent, currently in PCT phase) while the client received benefits in terms of price reduction, a share of profits in the case of sales or the right of use in the event that the company failed, as well as international reputation. Given the technical complexity of the solution that implied a multidisciplinary approach and a high level of expertise, collaboration with several actors in the supply chain played a key role throughout the



development process (from the concept phase up to industrialization).

Understanding customer needs is crucial for developing new high-tech products so the involvement of their potential customer was crucial in defining the correct product specifications and its input and continuous feedback contributed to developing a user-friendly concept and preparing for market release. “The engagement of potential customers,” said Bernard Revaz, CEO of Sensima Inspection, “ensures the development of a solution which fits real needs and offers continuous feedback on each iteration of the product and for carrying out testing.”

During the development phase, up to small-scale production, external suppliers were engaged to perform specific technical tasks (e.g. certification, quality control, technical viability) while the commercialization was entrusted to a spin-out company founded by the Sensima team in 2016. The industrialization tasks are being outsourced to manufacturers who are able to produce high volumes at reasonable prices. As far as the spin-out company in charge of commercializing the innovative metal detector is concerned, it is planning to improve its market position by enlarging its product portfolio with new solutions to be developed for the same target customer group and strengthening its marketing department by naming an account manager and hiring an experienced sales manager to develop and implement a clear commercialization plan and select the right sales channels (direct sales vs third-party dealers vs commercial partnerships).

Following the experience matured with the first company, the Sensima management decided to diversify its business and ensure sustainability by searching for new solutions. “In our first business venture,” confirmed Bernard, “we recognized the importance of not depending on a single client by diversifying our offer and enlarging the customer base. This experience has influenced our entrepreneurial behaviour and we decided to adopt the same model for Sensima Inspection.”

External technical know-how and networking capacity will also be relevant for enhancing market uptake and for acquiring the necessary certifications and legal requirements for accessing the market and promoting the device among potential customers via acknowledged professional and sectoral organizations.

## Impact of the OI Collaboration

The lessons learned from their past experience and the new knowledge gained from their recent business venture have been taken into account by Sensima's management to improve the company's business model. Given the need of industry (especially large private/public players) to collaborate on innovation projects with SME R&D performers with the right skills, the Sensima team has started to act as a small-scale incubator by developing new concepts with a view to exploiting other mature and promising technologies. To date the company has created two spin-outs for the purpose of commercializing new technologies.

In addition to its move from a technology-push approach, typical of research-oriented SMEs, to a market-driven logic, the company is planning to establish a technology fund fed by revenues from its own company exits to finance new innovation projects. To manage the innovation process effectively, the company has re-engineered its internal organization by assigning a project manager to each new innovation activity to take charge of coordinating the development process and engaging all the necessary skills, including any external capabilities and marketing expertise, to transform the users' needs and expectations into a viable product.

In January 2017 Sensima received a loan of CHF 3 million from SGS, the world's leading inspection, verification, testing and certification company, as part of a new partnership. The collaboration covers the development and implementation of permanent, sensor-based asset integrity management solutions for industrial applications, in particular for infrastructures. In this context, Sensima provides testing services and equipment using its proprietary core technology based on electromagnetic response measurements (Eddy Currents), for non-destructive testing applications.

**BERNARDREVAZ  
CEO**



## MARKET PULL APPROACH

R&D performing SMEs have more chance of succeeding in the market if they move from a technology-push to a market-pull approach.

## CO-CREATION IS A WINNING STRATEGY IN NICHE MARKETS

When developing knowledge-intensive solutions, the engagement of potential customers ensures the development of a product which fits real needs.

## FROM TECHNOLOGY SUPPLIER TO INNOVATIVE COMPANY

Frequently spin-out generation is pushed by a private business partner with a specific interest in ensuring high-tech services. Academic spin-offs often need to diversify their business by enlarging their customer base and leaving behind their initial one-client business.

## OPEN INNOVATION IS A MUST IN HIGH-TECH DOMAINS

Open innovation collaborations throughout the whole industrial process are vital for bringing high-tech products to market.

## CONTACT DETAILS

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