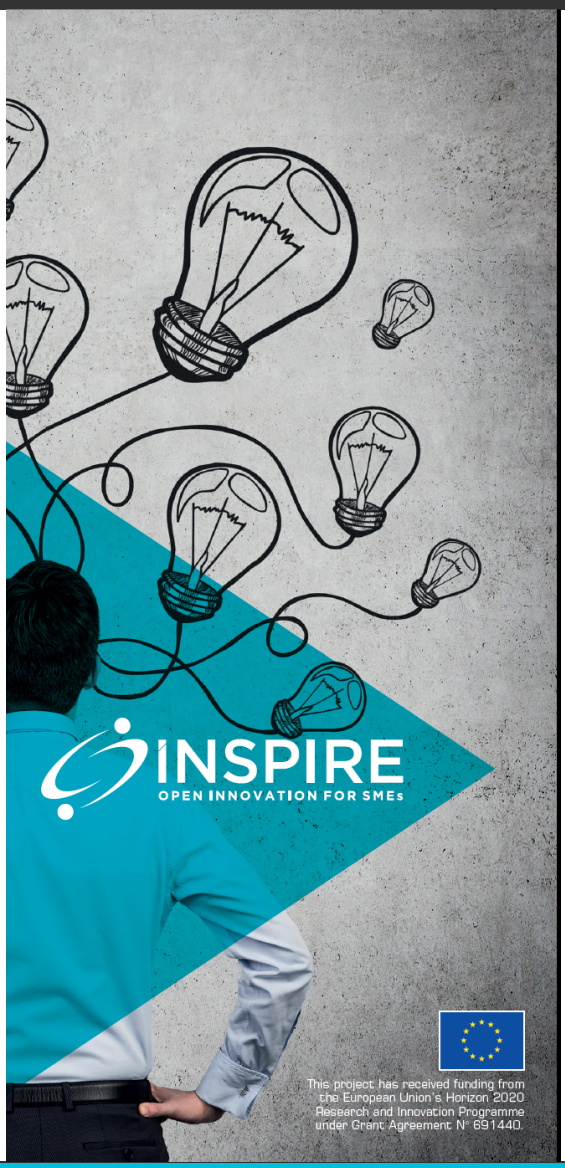

PARAMOUNT ADVANCED TECHNOLOGIES

France, www.paramountgroup.com

As a way to beat the competition and be the first to market, an SME in the defence sector has found it important to form research and development collaborations with large and small companies to integrate their expertise into global solutions

Executive Summary

Paramount Advanced Technology SAS (PAT) is a continuation of a small company established as a spin-off in 1995 under the name ATIS, specialized in developing hyperspectronomy camera technologies which they applied initially to the car industry. In 2004, ATIS was bought out by another French company for which it continued to act as the R&D unit developing sensors for analytics for reconnaissance and surveillance missions with contracts mainly with the defence industry. However in 2013, that company collapsed, and the SME was taken on as a subsidiary of the Paramount Group due to its existing contracts. Since this time, PAT has been working hard to re-establish itself in terms of technological offer and expertise through different OI partnerships and practices with a view to gaining its independence from the Paramount Group.

CASE N°: FG47

SECTOR: AVIATION, AEROSPACE

TECH INTENSITY: HIGH-TECH

LIFE CYCLE STAGE: ESTABLISHED

INNOVATION VECTORS: PRODUCT, PROCESS

OI PARTNERS: LARGE CORPORATION, OTHER SMEs, MINISTRY OF DEFENCE

KEYWORDS: Defence, aerospace, energy sensors, surveillance, security

BACKGROUND

The company started life in 1995 as ATIS, a spin-off from a French technological company. It was established to develop a cutting-edge hyperspectral camera technology for cars. Over time from 1995 to 2004, the company advanced its R&D work to become very specialized in hyperspectral imaging technologies. In 2004, it was bought by another French company, ATE, which had many connections with African countries, especially South Africa, for defence and surveillance contracts. The strategy was to work on integration programmes for developing sensors for imaging analytics and to carry out R&D for the group. It developed some specific sensors for surveillance missions.

However, in 2013 ATE collapsed and in the financial and contractual fallout and subsequent agreements, ATIS was taken on as a subsidiary of Paramount Group, under the new name Paramount Advanced Technologies SAS. Its expertise and commitments to ongoing military contracts were of strategic interest to the Paramount Group. Since then the SME has made significant progress in developing some specific sensors and optronics technologies for the Paramount Group providing important developments in the fields of intelligence and surveillance for the military market. It is using OI practices in order to support its strategy to become independent from the Group and move away from the defence market into other markets.

INNOVATION CHALLENGE & MARKET OPPORTUNITIES

The company specializes in optronics, image processing, and making infrared and EO cameras. Its turbulent history and desire to be independent again are key triggers for the SME to keep innovating and gain market share through strategic OI collaborations. To keep an edge over competitors the time to market is crucial. Slow progress can take away this competitive advantage, and in order to develop full solutions the companies have to become faster and more innovative in collaboration with their partners. The company is presently focusing on the military market due to its current subsidiary link to the Paramount Group. This military market is highly lucrative but also very competitive. In order to differentiate itself from competitors and with a view to breaking with its present status as a subsidiary, PAT now wishes to switch its focus to the civilian market, which also has a huge potential.

PAT is currently working for the defence and aviation market, where there is a clear need for the technologies and expertise they possess, but also a high level of competition. Time to market with quality products is very crucial. PAT has skills in developing specific parts, e.g. cameras for surveillance but lacks the ability to offer complete solutions, thus the need for collaboration with others. They have therefore looked to collaborate on technological innovations with both small and large companies and pool their skills and technological assets to reach the market faster.

OPEN INNOVATION TRAJECTORY

Concept development

PAT specializes in the research and development of optronics systems with applications particularly in the aerospace and defence sectors. The main concept is to attach intelligence systems for surveillance and reconnaissance with the various components. For example, its cameras for drones can automatically detect moving targets, track them and process real-time, high-quality imaging, etc.

The development process, IPR and competition strategy

PAT has expertise in optronics, image processing, electronics and spectronomy. They use their R&D know-how to embed real-time technological features in cameras that already exist on the market. These can be included in components in drones, for example. The company is working with both large and small companies to offer complete integrated solutions to the end user. It is therefore looking for partners at both ends of the value chain – the research and development side and as well as the commercialization side.

The SME works with large companies by pitching its technical expertise and offering them the ability to develop the final product in a quick and innovative manner. On the other hand, while working with SMEs, PAT's strategy is to develop some additional skills to integrate their solutions into their own products and to able to offer a

global solution at the end.

PAT works with various partners on the R&D side, but the core technology and expertise are built in-house.

In order to oust growing competition, PAT's strategy is to be first to market with innovative offerings. For this purpose, it is collaborating with large companies and SMEs at both ends of the value chain. PAT has a competitive edge due to its cutting-edge technology and enhanced features but since competition is increasing, the company believes that reaching the market first is crucial for success.

Commercialization and follow-up

PAT is mainly focusing on the military market. However, in order to scale-up the process with a view to gaining independence from the group, the company is now preparing to enter into the civilian market more aggressively. It is therefore looking for more partners and investors to scale-up sales and operations.

Since PAT does not develop complete solutions for its customers, it has to work with various partners to integrate its offering into their products to sell in the market. This is being done under various agreements with partners.

The company is looking to re-orient its business model. It aims to expand its operations and products, but limited resources and lack of support from the main group is a hurdle. The company is planning to become autonomous and find new investors to pursue their expansion plans, which include widening their market and developing complete solutions for their customers.

The company tries to pitch to larger manufacturers on the strength of its own technical skills. The company has collaborations with several large and small companies to integrate their expertise into final offerings for a global solution destined to the final user.

PAT is now working on becoming independent and increasing its skills to develop in-house some of its offerings as a final solution for the end user.

BUSINESS IMPACT

The result of wanting to become independent from the Paramount Group has meant that the mother company does not invest in the SME, and PAT has had to find alternatives to getting their R&D projects financed and brought to market.

The company has learned the art of dealing with various partners, for both research and commercialization. This helps to make continuous technology improvements and grow their network, which in turn is also beneficial for sales. For example, they have collaborated with a large defence manufacturer on smart cameras operated in real time. The SME was able to bring their skills offering and technological assets which interested the large company, and which enabled them to go to market faster. The reputation effect of working with large companies is beneficial to the SME, particularly to support their drive to become independent from the group.

PAT has also collaborated with other SMEs; for example in their work on gimbal technology for drones they collaborated with an SME specialized in transmission systems in order to offer a global solution. Jointly, the SMEs could apply their skills to supply the market with new solutions. The outcome was increased performance on both sides and the ability to reduce development costs and risks.

The company has learned a number of skills over time, in particular how to negotiate with potential partners. The company has learned that in order to beat the competition and be the first to market it is important to form research and development collaborations. PAT has seen the benefits of OI collaborations during the development stages; whereas externalizing development work can be costly and slow, a joint collaborative approach with companies with existing complementary skills helps to generate learning on both sides, as well as reduce costs and share risks.

Nevertheless, small companies such as PAT face a number of problems while negotiating with large companies. Big companies tend to treat SMEs as simple suppliers without recognizing their contribution to innovation and with little respect for their IPR. PAT admits that these collaborations need to be explored carefully and as openly as possible in order to achieve a good solution for both parties. It is also important to have someone who knows the market well and recognizes the potential offered by the innovation in order to negotiate with the big player.

PAT has specialized in a number of related fields, e.g. optronics, hyperspectral imaging, gas detection by infrared imaging, Head Mounted Sights, image processing, and infrared imaging. The continuous improvements to their technology offerings and their conversion to a sellable product have only been possible thanks to open innovation practices. The company has gained significantly both financially and in other ways; however, in order to change its business model and become autonomous, it will require more suitable

partnerships and investors.

LESSONS LEARNED

The case illustrates that a company which collapsed and was bought a few times still can make its way in the market through open innovation practices. The company capitalized on its core skills and is now involved in a number of collaborations. On another level, the company is still in a development phase, as it wishes to be independent from Paramount Group and is looking for investors to expand its operations. This change in management and business model may have a significant effect and improve the long-term potential of PAT. It will be interesting to see in a few years how open innovation worked for the company, which at first sight looks very promising.

Main lessons learned:

1. Negotiations with large companies and investors should be done with due diligence as large companies may try to squeeze in on the small firm's technology and market.
2. A manager with experience of working with large partners and commercial activities is essential for shaping the business model and streamlining further revenues.
3. In the process of attracting partners, it is very important to negotiate a deal to protect the firm's core technology.
4. Being affiliated with a large group can bring benefits, but if large groups lose interest in the subsidiary it is better to look for outside options.
5. Catering to big customers in the commercialization phase can create greater word-of-mouth reputation among potential clients.