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BEAMIT: EXPANDING FROM PRODUCER TO PARTNER IN ADDITIVE MANUFACTURING

Knowledge Dimension: Business Model Development

Basic Teaching Case 08 2018

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Implementing advanced manufacturing technologies and, more precisely, additive manufacturing solutions is not only zeitgeisty, but can also lead to considerable improvements in efficiency. However, many firms struggle to effectively implement additive manufacturing technologies in their production processes because they lack the knowledge and competences to do so. Who could be more suitable to adequately cover this demand than the owner of Europe's biggest additive manufacturing machine park – BEAMIT? In complementing their existing offerings with a unique and individualised technology transfer service that aims at providing manufacturing firms with consultation and support regarding additive manufacturing, BEAMIT killed two birds with one stone: not only are they able to serve a promising market niche, but also do they reinvent their existing business model by adding a new service.

BEAMIT - Background note

BEAMIT S.p.A., situated in the province of Parma in Emilia Romagna, is a manufacturer of mechanical components via metal additive manufacturing on the basis of the requests coming from manufacturing companies. The company was established in 2016 and emerged from the firm "Protoservice" that was founded in 1997. Since then, BEAMIT has become a major player in the growing sector of additive manufacturing within Italy, also owing to the fact that BEAMIT holds Europe's largest machine park for additive manufacturing with regard to the last generation of laser and electron beam additive manufacturing machines[1]. BEAMIT's customers come from a wide range of industries including motorsport (35% of total turnover), the biomedical industry (30% of total turnover), aviation (15% of total turnover), energy - independent gas transporters (10% of total turnover) and automotive & other mechanical productions (10% of total turnover).

In 2017, BEAMIT counted 38 employees who are distributed between two production plants that are both located in the province of Parma. Besides that, the company has established an R&D-division in Rome that is specifically dedicated to work with clients who are active in the aerospace industry. Additionally, the company maintains important partnerships with universities and research institutions to strengthen their position in research and development. In 2017, BEAMIT's revenues amounted to 6 million euros, of which 15% originated from exports. In the same year, BEAMIT invested approximately 5 million euros in order to strengthen its capacities with regard to growth and innovation.

Sensing the need for additive manufacturing consulting

The rise of advanced manufacturing, and particularly additive manufacturing technologies, in industrial sectors has prompted firms to adapt their production processes to this trend. Working as a supplier of metal components for several industrial sectors, BEAMIT recognised that Italian manufacturing firms race to buy

[1] Effective in 2018.

additive manufacturing machines but, on the downside, the manufacturing companies that invested in such technologies were struggling to effectively integrate them in their production processes. BEAMIT noted that this problem arose from the fact that the additive manufacturing machine producers solely focused on selling their machines, but not on supporting their clients in learning how to effectively exploit the machines within their specific production processes.

Seizing the opportunity of additive manufacturing consulting

Determined to counteract these deficiencies of manufacturing firms, BEAMIT decided to implement a 'technology transfer service' for the more effective use of additive manufacturing technologies in early 2017. In order to provide such a technology transfer service, BEAMIT established a new division, the 'Additive Manufacturing Competence Centre' (AMCC). The goal thereby was to build an interorganisational tool that is activated each time there was the necessity of gathering a team of experts within BEAMIT in order to deliver a specific service ordered by a customer.

The decision of establishing the AMCC service was primarily driven by the owners and the top management of BEAMIT after a thorough analysis of the clients' needs. Until June 2017, the firm was subsequently engaged in designing the set-up of the service and the AMCC. Thereby, the Sales Manager and the R&D Manager of BEAMIT were involved in designing and developing the specific features of service. The R&D Manager was assigned the operative coordination of the service. In the same month of finalising the design phase, the new service was first commercially announced within the frame of a conference organised at BEAMIT's premises. Attended by more than 200 representatives of potential clients and partners, the conference was an ideal platform to introduce the new service to a broad range of possible customers. Soon afterwards, in October 2017, the AMCC service was officially launched. In order to further increase the awareness of the new service, BEAMIT published a press release in a sector magazine and set up various ad-hoc commercial activities focusing on specific clients.

The AMCC technology transfer service

To offer the service, the AMCC exploits the core competences that BEAMIT has developed in all phases that compose the additive manufacturing production process. Precisely, BEAMIT gathers internal personnel from optimisation, additive manufacturing fabrication, post-processing and quality controls in order to set up the project-based AMCC teams. On average, the team delivering the technology transfer service is composed by: 1 to 2 persons that teach component design for additive manufacturing, 2 to 3 persons dealing with the translation of CAD-based blueprints in the file formats readable for the additive manufacturing machines, 1 to 2 persons giving advice with regard to additive manufacturing production, 1 person focusing on heat treatments, 1 to 2 persons working on the finishing, 1 person being responsible for the issues of surface and mechanical treatments and 1 expert in quality control and laboratory. This means that for each client

project, an AMCC team composing of 8 to 12 people is arranged. Overall, the support can last up to one year according to the specific needs, problems and demands of the individual client.

The service should help manufacturing firms in:

1. Building an internal team dedicated to master additive manufacturing processes;
2. Analysing production costs;
3. Selecting the additive manufacturing technologies to be installed, customised on the basis of BEAMIT's indications;
4. Implementing production processes based on parameters already validated by BEAMIT;
5. Developing ad-hoc production processes for customised alloys;
6. Selecting the supplier of basic resources for production (i.e. powders);
7. Training all staff involved in the process (from designers to engineers to operators, etc.);
8. Support clients in the production start-up.

Transforming the business

Since the full implementation of the technology transfer service in October 2017, the new operating domain is run side by side with BEAMIT's core activities which include the production of metal components. Through its technology transfer service, BEAMIT was able to provide an overall offer with regard to innovation and production management support to manufacturing companies that are interested in adopting additive manufacturing, but lack the internal competences to implement new manufacturing technologies which – unlike a traditional machinery – implies the mastering of a special production process. Thus, BEAMIT has effectively made use of the difficulty experienced by the manufacturing firms in mastering additive manufacturing as an opportunity to strengthen its relationship with its potential clients. Consequently, BEAMIT has not only renewed, but also extended its existing business model to exploit a promising new niche in the market. Precisely, through the AMCC service, BEAMIT has transitioned itself from a traditional manufacturing company into a more complex firm that is simultaneously able to act as a consulting firm. In this sense, BEAMIT has started to deliver not only products but, also knowledge and competences in the area of additive manufacturing. The business model connected to this new service not only has its own sustainability but is also functional in parallel to the traditional one. Through the AMCC service, BEAMIT is able to develop strong and long-lasting collaborations with their clients: On the one hand, the firm not only becomes a simple supplier, but also an innovation partner; On the other hand, the service enables BEAMIT and their clients to sign long-lasting production contracts connected to the new additive manufacturing capacity acquired by the supported manufacturing companies.

Questions for discussion

1. Changing the business model is far away from an easy task. Many firms fail to do so even if they are in severe crisis (e.g. Kodak). How did BEAMIT come up with the idea to establish the service unit? What do you think about the timing of this move? What were the next steps in the process of developing this new service?
2. Producing goods is completely different from offering a service. What are the key success factors in manufacturing? What are the key success factors in the technical consulting business? What are the key success factors for developing hybrid offerings (i.e. combinations of goods and services)?
3. Which capabilities did BEAMIT have to develop in order to offer the new service? Which capabilities did BEAMIT have to develop in order to handle the two businesses in parallel?
4. Adding a service unit to a manufacturing firm can be considered as a reinvention of an existing business model. Use one concept (e.g. business model canvas) to describe the change from the existing to the new business model.
5. What are the synergies between the two businesses? How can they be exploited further?
6. BEAMIT seems to be strong in engaging in innovation cooperation. How could BEAMIT use existing partnerships for the new business field? Which new partnerships are worthwhile exploring?
7. BEAMIT changed its business model by adding a new business. Which other forms of business model change can you think of? Give examples of firms engaging in these different types of business model change.