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Fabricomp AB: developing a collaboration strategy for a newly started university spin-off company in Sweden[1]

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INTRODUCTION

This case deals with a young university spin-off company, here called Fabricomp. It is commercializing a radically new technology for making carbon fibre composites (CFCs). This is an advanced and versatile material that is typically used when there are simultaneously high demands on mechanical strength, stiffness, low weight, and thinness. CFCs have applications in many different industries, where they are used as a substitute for more conventional materials such as steel, aluminium, plastics, wood, and concrete.

CFCs emerged as an important category of materials during the second half of the 20th century. They consist of a reinforcement fabric made of carbon fibre which is embedded in a polymer-based resin. The shape of the composite is determined by the design of the final product; for example, it can be a golf club shaft or an entire tennis racket frame. CFCs can also be used for making various types of automotive components, such as engine and body parts. Appendix 19.1 explains how CFCs are manufactured and what types of companies make up the supply chain. Important abbreviations and some special terms and names used in this case are explained in Appendix 19.2.

The case describes the company's prehistory, how it was founded and started up, and some basic facts about the composite industry. The task is to propose, 1 year after the foundation, a strategy for the company's external collaborations during the product development.

SETTING THE SCENE

It was a cold and gloomy day mid-January 2004 when the board of directors for Fabricomp AB gathered in a small meeting room belonging to a business incubator linked to the Technical University of Western Sweden ('Western'). The company had been founded 1 year earlier for the purpose of commercializing a unique weaving technology for making a reinforcement fabric to be used in the manufacture of composites mainly based on carbon fibre. The inventor, Neil Cooke, had developed the technology as part of his doctoral thesis at Western's Department of Textiles and had founded Fabricomp in 2003, together with two students from Western's School of Entrepreneurship and an experienced businessperson. These four persons constitute the board of directors.

The company was renting some premises at the incubator and had, immediately after the founding, embarked on the challenging work of developing a full-scale manufacturing process, a commercial product, and customer applications. The board meeting began by dealing with some formal and organizational matters. This was followed by an intensive discussion on Fabricomp's need to involve external actors in the upcoming development activities. The board members understood that this was crucial for Fabricomp's chances to reach the market and become a high-growth company. The two student founders, who had become responsible for managing the company, had learned during their studies that in business-to-business (B2B) markets, the interplay among firms and other types of industrial actors is a central element in technological innovation. In particular, collaborative business relationships between sellers and buyers constitute a valuable resource for innovating companies. This holds true for established firms as well as for young start-ups, including university spin-offs such as Fabricomp. But how should this be done?

The board members came to the conclusion that Fabricomp needed a collaboration strategy. It had to be sustainable and guide the company's acting. The invention was radical, and effective use of the fabric would require significant changes in the composite manufacturing. It was therefore expected that developing the product and establishing it in the market would take quite a long time, maybe 10 years or more, and it would require substantial research and development (R&D) efforts. It was decided to give Anders Mattsson, one of the student founders and vice president for marketing and sales, the task of coming up with a proposal for a collaboration strategy. It should be presented and discussed at the next board meeting to be held 3 months later.

Anders Mattsson was excited about the task and back in his office he immediately began to reflect on how to work out an appropriate collaboration strategy. He thought that Fabricomp was already on the right track and had made several promising contacts with potential customers. But there were, at the same time, important questions to be addressed. For example, what kind of partners should Fabricomp establish collaboration with? This included the type of counterpart as well as the selection of individual partners. Furthermore, what were the benefits to be gained? And what should the collaborative relationships look like? Another question was at which point in time different partners should be involved. Anders also wondered what demands the strategy would put on Fabricomp's capabilities and organization. He realized that before answering these questions, he needed to reflect upon what he and his co-founders had

learned about the composite industry through previous studies and research at Western and from the contacts that Fabricomp had had with various companies and organizations during the first year. These insights would help him to better understand what kind of industries and application areas Fabricomp should focus on. He would also get ideas about how to get potential customers interested in collaboration and helping Fabricomp in the development work. He decided to put the collaboration strategy aside for the moment, but the next day he would already start putting together and analysing the available knowledge.

THE INVENTION

Neil Cooke presented his PhD thesis in 1997 after several years of research carried out at Western's Department of Textiles. It combined traditional textile technology with new concepts for the purpose of developing new fabric-forming techniques. These were intended to be used for making composites rather than conventional textile products. The dissertation resulted in seven inventions building on different technical solutions intended for different types of composites. For the purpose of commercializing all these inventions, Neil, together with his businessperson friend, founded a company.

The contact with Western had faded since Neil had left the university after having received his PhD degree and since no one else continued the research. In fact, in 1997 Western decided to close the whole department because of the decline of the Swedish textile industry.

One of the inventions was a novel weaving technology for making reinforcement fabric sheets to be used in the manufacture of polymer composites based on, for example, carbon fibre. This invention was radical since the fabric was based on tape instead of yarn, which was the traditional raw material. The invented fabric was more expensive to make and use. However, it had unique and promising properties that could enable the manufacture of thinner composites with lower weight, higher strength, and a smoother surface. It was expected that the demand for such composites would increase in the future.

A BUSINESS DEVELOPMENT PROJECT AT WESTERN

After a few years' work on the seven inventions, Neil spoke about the above-mentioned product idea to a Western professor engaged in commercializing academic research. This meeting resulted in a decision to take the idea together with an existing demo unit as a starting point for a business development project at the Western School of Entrepreneurship. The project was run by a group of four MSc students who collaborated closely with Neil and the businessperson. The students carried out a market investigation, leading to the identification of suitable products. The students participated in a regional business idea competition, which they won.

Based on the result of the student project, the idea to start a separate company for commercializing the invention and turning it into an innovation was born. For cost reasons, the main focus would be on a new class of high-performing CFCs that were beginning to emerge. The

size of the potential market was big—some USD2 billion globally only for CFCs. If other types of composites were included, the potential market was at least twice as large.

To verify the conclusions, a leading Swedish composite researcher, Lennart Ahlquist, was asked to evaluate the invention and the proposed products and applications. He was research manager at the Swedish Institute for Research on Composites (SIRC) and adjunct professor at one of the Swedish technical universities. Lennart said that he was cautiously optimistic about the idea and believed that the unique properties of Fabricomp's tape-based fabric had a good chance of bringing value to composite manufacturers—especially thanks to its favourable strength–weight ratio compared to existing CFCs. The benefits would vary among individual applications. To find out whether the cost–benefit ratio was good enough, further studies had to be conducted, preferably in collaboration with composite manufacturers.

THE FOUNDING OF THE COMPANY

In early 2003, given the promising result of the business development project and the positive evaluation of Lennart Ahlquist, it was decided to spin out the invention from the existing company and start a separate firm named Fabricomp. There were four founders: Neil Cooke, the businessperson, and two of the students. The latter, Hans Bohlin and Anders Mattsson, became responsible for managing the company, acting as chief executive officer and vice president for marketing and sales, respectively. Neil took up the position of R&D manager. In parallel, he continued to work on the commercialization of the other six inventions.

Besides the investments made by the four founders, the initial funding came from Western Invest, a venture capital (VC) firm linked to the incubator, and a group of business angels. They realized that more money would be needed in the near future, and the plan was to invite other VC firms to invest. In connection to the founding, the ownership of the technology and the patents were transferred to the new company.

Initially, Fabricomp operated from the business incubator. To start up production, a prototype weaving machine was built and placed there. However, it soon became apparent that this location was not ideal since it was difficult to expand production. Fabricomp therefore began to look for a better solution.

To support future brand-building activities, Fabricomp registered the trademark Hipercom® for its fabric. Inspired by Gore-Tex, one idea was to offer end customers the opportunity to put the logotype Hipercom on their product. As Anders Mattsson explains, 'We hoped that this could be seen as a quality mark and add value to our customers.'

EARLY DEVELOPMENT ACTIVITIES AT FABRICOMP

Immediately after the foundation, intensive work to develop the manufacturing process, the product, and the applications began. When developing and scaling up the manufacturing process, it was soon discovered that the purchased carbon fibre tape was not good enough. This led Fabricomp to start developing its own proprietary technology and machines (step

1 in the supply chain; see Appendix 19.1). The process development work also motivated Fabricomp to seek contact with potential equipment suppliers that could be involved.

Other development activities were more directly related to the product and its applications. For example, how should the new tape-based weaving technology be used to make fabrics with the right properties? The goal was to develop a wide range of composite solutions optimized for different end products. Initially, much of this development work was done by students from two different universities who carried out their MSc theses on behalf of Fabricomp. These students, supervised by experienced composite researchers, thus became a valuable resource before Fabricomp had built up its own in-house R&D organization. One of the first students was recruited as product development manager (working in parallel with Neil Cooke, who focused on the process development). It became apparent that applications development would be important since there was a demand in many industries for tailor-made solutions. This necessitated a high degree of flexibility with regard to product properties and how to use the fabric in the manufacturing of customized composites. Another goal was to get a 'proof of concept'—that is, a collection of data showing that Hipercom delivered the expected benefits and had commercial viability.

The managers realized that as an input to the product development, it was imperative to learn more about the potential customers' needs and wishes and how these could possibly be met by using Hipercom. For this purpose, Hans Bohlin and Anders Mattsson travelled extensively during the first year and visited a large number of potential buyers in Europe, North America, and Asia. At this point, Fabricomp did not yet have a final product to show but could supply specimens made in its prototype machine. Nonetheless, the discussions were fruitful and showed that there was a high level of interest in Hipercom among composite manufacturers. One of the car makers even placed an order. However, Fabricomp could not yet deliver.

Racing cars were identified as an interesting application area, since many parts are made of CFCs. Manufacturers of such cars—for example, the Formula 1 teams—are constantly searching for new materials and solutions that lead to higher strength and lower weight. The Formula 1 teams were perceived to be very innovative but also demanding and secretive.

All these visits made during the first year led to a deepening of Fabricomp's market knowledge, adding to what had been learned previously. There were new insights, not only about the technical issues—the two managers also got a better understanding of how the composite industry worked. For example, they saw that business relationships could differ between industries and among individual manufacturers—in terms of, for instance, willingness to share information and to engage in joint R&D activities. This meant that the nature of Fabricomp's future customer relationships would vary depending on the application area.

Research Contacts

The previous contact with Lennart Ahlquist had been rewarding. He was research manager at SIRC, a state-owned trade research institute. It had three sites, one of which was located near Fabricomp. The contact had also been appreciated by SIRC. Lennart says:

> Hans and Anders were openminded and receptive to new knowledge and new ideas. Fabricomp was an interesting company from our point of view. They had a unique and promising technology that seemed to be useful in the development of the new ultralight and high-performing composites that were under way in many parts of the world.

Fabricomp's managers thought that SIRC could become a valuable resource. It had good laboratory facilities and skilled engineers. Being a trade research institute, it conducted contract research for industrial companies. SIRC also participated in publicly funded national and international cooperative research projects.

It was concluded that SIRC could support Fabricomp's product development by carrying out advanced materials testing and by helping Fabricomp to become part of cooperative research projects. Besides financial support, this would give Fabricomp access to new scientific knowledge and provide opportunities to establish new contacts and collaborations with universities and firms.

Business Model

Another important conclusion concerned the choice of business model. Although being a weaver of fabrics, Fabricomp decided not to operate at the converter level (i.e. step 2 in the supply chain; see Appendix 19.1). The world market was dominated by 10 to 15 converters. Instead of competing directly with them, Fabricomp's plan was to operate on the next level (prepreg) where the fabric is pre-impregnated. That would bring Fabricomp closer to the composite manufacturers and make it easier to influence them. As explained by Anders Mattsson, 'It was crucial for us to get in direct contact with the end users and make them interested in testing Hipercom and prepared to make modifications to their own products—so that the superior properties of Hipercom could be taken advantage of.' This choice did not mean that Fabricomp would start up impregnating operations. These should instead be outsourced. It could be either to a prepregger selected by the customer or a prepregger with whom Fabricomp had established a long-term partnership.

It turned out that all prepreggers were not happy about Fabricomp's intention to go all the way to the end customer. One of them, in an attempt to prevent Fabricomp from contacting its customers in the racing car industry, offered these buyers exclusivity deals.

THE CFC INDUSTRY AND ITS APPLICATIONS

As mentioned, Fabricomp's founders had learned a great deal about the CFC industry through their previous research and studies and their experiences during the first year. Here follows in a condensed form some information that was available to Anders Mattsson when he started to develop the collaboration strategy.

The Automotive Industry

The automotive industry had been an early adopter of CFCs. Already in 1971, a rally car had been equipped with CFC wheels. In the following decades, CFC components became increasingly used in the manufacture of high-performance racing vehicles, especially Formula 1 cars. There were approximately 10 teams participating in the Formula 1 World Championship series. This included firms such as Mercedes, Ferrari, and McLaren. The extreme demands on high strength, rigidity, and low weight mitigated the high cost. CFCs have, over the years, been used to make an increasing number of components in the chassis, body, and engine. The competition was extremely fierce and to a large extent driven by the technological development. The teams invested large resources in R&D and were quick to adopt technical improvements. Copying of new solutions introduced by competitors was common. To keep their rivals behind, the teams were very restrictive in disseminating information about their development activities. This behaviour affected not only the degree of openness between the teams but also the nature of supplier relationships.

CFC-based components have also been developed by manufacturers of passenger cars, trucks, and buses—for example, in Germany, where several pioneering companies have their home.

The Aerospace Industry

Manufacturers of aerospace products adopted CFCs early. These were used, for example, in the aircraft industry to make structural components in wings and fuselages. These were applications where high strength and low weight were desirable properties. CFCs were also used in seats and other interior components.

The aircraft industry was dominated by two giant original equipment manufacturers (OEMs)—Airbus and Boeing. But there were also other manufacturers specializing in small-size or special-purpose aircrafts and many small and large component suppliers using CFCs. The development and implementation of a new structural component was always—not least for safety reasons—a complex undertaking that tended to be costly and time-consuming. The material suppliers often had to be involved. The testing of a new component could take 1 to 2 years to complete.

Besides using CFCs in product development projects (e.g. a new airliner), the large OEMs carried out research projects aiming to develop new basic technologies. External actors from industry and/or academia were often involved. Both OEMs and component suppliers some-

times participated in cooperative research projects, co-funded, for example, by the European Union.

Another characteristic of the aircraft industry was that the product life cycle was long in general. New aircraft models were often used over many years, and changing the material in structural parts was difficult and seldom occurred. Consequently, the supplier relationships were often characterized by high-order sums and long-lasting contracts. These traits were different from how it worked, for example, in the racing car industry, where the life of a certain component could be quite short.

These characteristics of the industry made it particularly difficult for small and young companies to become suppliers to the big players. The latter were often suspicious about new companies that had scarce resources and lacked a track record. Many of them preferred to do business with larger and more established suppliers. Furthermore, if given a chance to qualify as a supplier, the company must be prepared to participate in long-lasting projects and invest its own resources in joint R&D activities. Then, if it succeeds in becoming a certified supplier, it has to make commitments to deliver the required volumes over a long period of time.

The Construction Industry

In civil engineering, CFCs have been used primarily for retrofitting purposes. Despite high cost, using CFCs to repair existing structures (e.g. a bridge) made of other materials could sometimes be economical.

CFCs were also sometimes used in new projects as a means to strengthen other reinforced materials. However, the high price of CFCs could be a barrier to usage in such cases.

The Sporting Goods Industry

The favourable strength-to-weight properties made CFCs attractive to producers of sports equipment—especially in high-end products. Thus, CFCs were used in a broad range of sporting goods, including rackets for tennis, squash, and badminton, golf club shafts, surfboards, skis, canoes, and bicycle frames. For many of these products, CFCs offered superior properties compared to alternative materials such as steel and aluminium. The product life cycle was often relatively short, and material changes frequently took place.

The actual manufacturing of the composite was often outsourced by the OEM/brand owner to a sub-contractor typically located in Asia. These companies usually had deep knowledge about how to design and make different types of composites.

The sporting goods industry was fragmented in the sense that it comprised many different product categories with differing demands on the material. The optimization of properties meant that the technical solutions had to be adapted to the application. However, many products belonging to the same category (e.g. tennis rackets) were similar. To distinguish themselves and build their brand, the OEMs therefore tried to differentiate their products through their choices of material, shape, and appearance. This was an important means to strengthen competitiveness and increase sales.

For the fabric (or prepreg) suppliers, organizing the composite manufacturing meant that besides the OEMs (the actual buyers), the suppliers in many cases had to interact directly with the sub-contractors. These firms had detailed knowledge about how to make the CFC product. They could have strong opinions on the properties of the fabric. To make an optimal solution, there could be a need for the supplier to provide specific information on the fabric and carry out calculations and simulations in support of the design process.

Other Industries and Applications

CFCs are to varying degrees used in many other industries where certain products could benefit from CFC properties. Typical examples are pleasure boats, musical instruments, fire-arms, fishing rods, train bogies, and laptop shells.

THE SWEDISH ENVIRONMENT

Sweden was relatively weak in CFC manufacturing. There were several technologically advanced companies in the automotive and aerospace industries such as AB Volvo, Scania, Volvo Cars, Saab Automobile, Saab AB, and Volvo Aero. These firms were not at the forefront of CFC development from a global perspective. But some of them were important end users. Since 1994, there has been one small producer of advanced sports cars—namely, Koenigsegg Automotive.

The production of sporting goods was very limited. In the past, Sweden had several producers of, for instance, ice-hockey equipment and skis, but these firms had been outperformed by foreign rivals. One exception was STIGA Sports, which was a world-leading manufacturer of table tennis blades. To support its brand, it was important for STIGA to be able to supply professional players with high-performing blades that helped them to win medals in championships.

There were several exporting manufacturers of sailboats and motorboats. However, none of them focused on boats specifically intended for racing. This is despite the fact that Sweden has historically been a successful sailing nation. Swedish teams have participated in prestigious competitions such as the America's Cup and Volvo Around the Ocean Race.

As to research, SIRC was a key player with considerable human and physical resources. It also had a vast international contact network both in industry and academia. There were a couple of technical universities (not including Western) that conducted CFC research.

DEVELOPING THE COLLABORATION STRATEGY: SOME THEORETICAL INSIGHTS

When Anders Mattsson started to think about the collaboration strategy, he recalled certain things he had learned during his studies at Western. Academic research shows that, especially in B2B markets, technological development tends to take place as an interplay among different actors who interact with each other. In particular, business relationships between

selling and buying firms are often important as a locus of collaborative R&D activities. Inter-organizational networking in the context of technological innovation is a multifaceted phenomenon, though, and the character of the interaction varies depending on the context. In some situations, the R&D-related interaction is intensive and leads to co-development. In other situations, it can be rather superficial and limited in time and scope but still be beneficial. The division of power, responsibility, and work tasks may also differ. The same goes for the amount and form of communication and the degree of formalization—both organizationally and legally. While some collaborations are dyadic, other projects involve multiple actors who perform different roles. The kind of interaction required and that leads to success for an individual firm depends on external and internal factors.

For a selling firm, the development of a new product usually requires interaction with and involvement of customers (users)—existing or new ones. There are several good reasons for doing so. One is to gain a deeper understanding of customer needs, whether or not the aim is to develop a customized solution or a more standardized product. Normally, this kind of knowledge is difficult to obtain at arm's length and requires the establishment of collaborative relationships that allow open and fruitful communication. Correspondingly, the customer gains a better understanding of what the seller can offer.

Another reason for involving customers relates to sharing and combining tangible and intangible resources. This takes place through joint R&D activities where both parties contribute and benefit. It is, for example, common that customers carry out tests in a real-use setting. It can be a concept, a prototype, an almost-finished product, or a new application.

Another possible advantage is that some customers—so-called 'lead users'—may be useful as a source of novel ideas and solutions. They are ahead of their competitors and actively develop their own technical solutions before these are available in the market. Identifying and interacting with such firms can help to speed up the development and save costs.

In addition to these benefits, customer involvement can lead to early sales (i.e. revenues), customer loyalty, references, and legitimacy (e.g. in relation to financiers and potential partners). In many situations, customer collaboration is a necessary precondition for commercial success.

As to the timing, it is particularly important to involve future buyers and users in the early phase of an innovation process—that is, when the needs are mapped and the product is specified. While the detailed designing can often be carried out internally without involving customers, the subsequent testing usually requires interaction with potential customers for validation and fine-tuning of the design. An exception from this common pattern is when developing highly customized products. Here, it can be suitable to have the customer involved throughout the entire process. Another timing issue concerns which application areas (market segments) should be targeted and prioritized during different periods. This choice is affected by the market (network) characteristics and the innovating company's own needs.

Firms interact with customers in different ways. There are a multitude of methods used such as special needs-mapping techniques, surveys, workshops, and user testing. Depending on the situation, different types of collaborative relationships are required or desirable—for example, in terms of communication, resource sharing, and duration.

Needless to say, the selection of partner is important. It depends, among other things, on what the innovating company wants to gain from the collaboration and availability of suitable partners. As to the type of partner, it is often natural to work with the immediate customer (the buyer). However, sometimes there can be other actors who are more important from a development point of view, such as end users or other suppliers to the customer. While lead users can make valuable contributions at an early stage, it may be preferable to work with more ordinary and representative customers in the validation phase. Furthermore, what features should the ideal partner have? Given the mutuality of collaborative relationships, the partner choice is never unilateral but builds upon both partners' goals and wishes.

Anders Mattsson had also learned that joint development of radically new products often takes place in collaboration between companies from the same country. For the innovating company, it is easier and less costly to work with domestic partners since the distance is shorter—geographically, culturally, and language-wise. Having domestic partners is particularly valuable to small and young companies. Unlike large and internationally operating corporations, it is more difficult for such firms to collaborate with foreign partners. At the same time, Sweden, like the other Nordic nations, is a small country. This means that firms commercializing new products for niche markets often have to enter foreign markets early. There are many Swedish firms that have succeeded in doing so, and this includes several high-tech start-ups. Some of them have become 'born globals'. The smallness of the domestic market also means that it can sometimes be difficult to find suitable partners in the home country. Then, the only chance is to seek collaboration with potential customers located abroad.

Anders understood that all these lessons had relevance for Fabricomp and was something that he had to take into consideration. He had to suggest with whom Fabricomp should collaborate. And he had to clarify the purpose of the collaborations, when these should take place, and what kinds of relationships Fabricomp should have with its partners.

BOARD MEETING 3 MONTHS LATER

The development of a collaboration strategy for the product development was the key issue on the agenda, and all board members were curious to hear about the proposal. During the past 3 months Anders had spent a great deal of time thinking about the strategy. He had compiled and systematized knowledge residing within the company and collected some new information.

Anders felt that he had a good picture of what the strategy should look like. But even if he was pretty sure that his ideas and propositions would be well received, he realized that there was a need for a critical discussion—for example, regarding key assumptions and the possibilities of successfully implementing different parts of the proposed strategy.

One thing he had decided to leave outside the agenda was the involvement of equipment suppliers in the process development. This was an important issue, but it would be better to deal with that in a later meeting.

Anders's presentation had the following headings:

1. Need for a collaboration strategy
2. Content of the collaboration strategy and expected results
3. Internal prerequisites for a successful implementation of the strategy.

After the presentation, the board was expected to discuss the proposal and make decisions on how to proceed.

TASK

Prepare Anders Mattsson's presentation in the form of PowerPoint slides. Be prepared to discuss the strategy in the following board meeting.

NOTE

1. The names of the company, other organizational units, and persons have been disguised. The descriptions of certain events have been modified for educational purposes.

APPENDIX 19A.1 MANUFACTURE OF CFCS

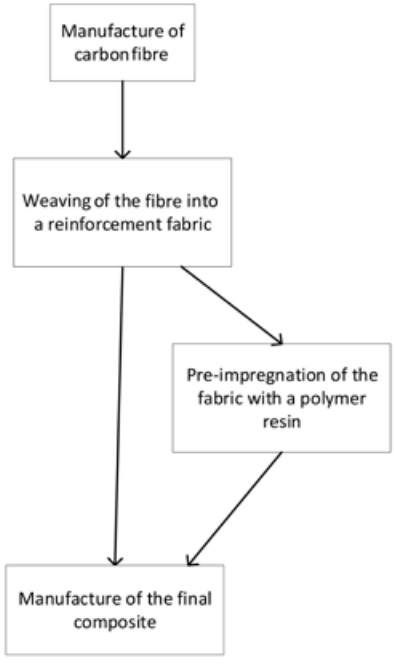

Figure 19A.1 Manufacture of CFCs

There are a multitude of alternative techniques and raw materials used in the manufacture of CFCs. The choice of production method depends on, for example, the shape of the end product, the number of units to be produced, and not least the material properties aimed at. Figure 19A.1 illustrates a commonly used manufacturing process that consists of four main steps representing different levels in the supply chain.

The first three steps are normally carried out by specialized firms. The carbon fibre commonly consists of yarn, and it is used in the second step to make a woven fabric, which can have varying properties depending on its intended use. The firms manufacturing the fabric are called converters. In many cases, in the next step the fabric is pre-impregnated with a polymer resin. This intermediary product, called 'prepreg', is then used to make the final composite by curing it in a mould or tool.

The finished composite is made by either an OEM—for example, an automotive company or a producer of sporting goods—or a component supplier. However, the actual manufacturing operation is often outsourced to a sub-contractor.

APPENDIX 19A.2 ABBREVIATIONS, NAMES, AND SPECIAL TERMS

B2B market:	business-to-business market (a market where a firm sells its product or service to an organizational buyer)
CFC:	carbon fibre composite
composite:	a material that is produced by merging two or more constituent materials with distinctly dissimilar properties
composite industry:	the companies involved in the composite manufacturing supply chain
composite manufacturer:	the company (e.g. an automaker or its supplier) that manufactures the finished composite
converter:	the company that makes the woven reinforcement fabric
fabric:	the reinforcement textile in polymer composites
Hipercom®:	the registered trademark for Fabricomp's fabric
intellectual property rights:	immaterial assets such as patents and trademarks
logotype:	a graphic mark, emblem, or symbol used by firms in their marketing
OEM:	original equipment manufacturer (brand owner)
prepreg:	fabric pre-impregnated before the manufacture of the finished composite
prepregger:	the company that makes the prepreg
SIRC:	The Swedish Institute for Research on Composites
VC:	venture capital
Western:	The Technical University of Western Sweden