Interaction between Firms in New Product Development

Marco Pierantonelli
Università Politecnica delle Marche
m.pierantonelli@univpm.it

Andrea Perna
Università Politecnica delle Marche
a.perna@univpm.it

Gian Luca Gregori
Università Politecnica delle Marche
g.gregori@univpm.it

This work-in-progress paper, through an exploratory case study, investigates how two industrial companies, operating in different sectors, start a business relationship. One company, named Antrox, operates in the lighting industry, whereas the other, Nel Design, primarily in the design industry. This case shows the antecedents and inhibitors to business relationships beginning. Reciprocal trust is the foundation and the driving force of the relationship. The outcome of combining two firm’s previous set of facilities, actors, relations and business units is unpredictable a priori; anyway, both companies saw potential benefits in combining them, as they are distinctive and non-overlapping. The article sheds light on the effects of the partnership on each firms’ set of resources and on the reciprocal adaptations faced by both companies.

Key words: New Product Development, Partnership, Resource Interaction

JEL classification: M10.

1. Introduction.

Relationships are the basis of business. No business would exists without relationships. Business relationships consists of interactions processes. Relationships are delicate: they require involvement and commitment; every part put itself on the line. They may carry advantages but also problems.

Business relationships are indeterminate in terms of changes that materialize over time. They are discontinuous and intermittent, as they could stop for months and recover later or interrupt definitively (Hakansson and Snehota, 1998). Similarly, the process behind the birth of business relationships is discontinuous, as business relationships do not emerge unexpectedly, without prior negotiations. The outcome of those consultations is uncertain, but it may be influenced by particular dynamics and episodes. Relationship beginning is a relevant theme, not enough discussed in management research, as much more attention is reserved to the management of established relationships, maybe because relationship beginning is often a blurred phase (Holmen and Pedersen, 2001; Aarika-Stenroos, 2008; Edvardsson et al., 2008). Anyway, some conditions and episodes have proved to favor, or act as obstacles, to business relationships beginning (Pedersen et al., 2005): we speak about antecedents, or inhibitors, to business relationships beginning (Oliver, 1990). The beginning of a new relationship could be considered as a critical moment in which the companies try to enlarge their market (Perna et al., 2013). As for the companies of our case, new business relationships may result in the establishment of a partnership, with the goal of developing a new product and strengthen their presence in the design market.

The aim of this paper is to investigate how the new product development process unfolds by taking as empirical context the case two companies operating in different sectors. This paper will shed light on the antecedents and inhibitors of relationship formation, as the firms involved in our case took six years to form a business together, in a back and forth approaching process. The interaction processes and the reciprocal adaptations faced by the two companies, from prototyping to distribution phases, will be presented.

Reciprocal trust, developed sharing experiences, is a precondition of successful partnerships (Morgan and Hunt, 1994; Ploetner and Ehret, 2006). As stated by Oliver (1990) there several antecedents to relationship formation, such as necessity, asymmetry, reciprocity, efficiency, stability and legitimacy. Anyway there are also several factors that may inhibit the business beginning, such as the image of a firm,
perceived risk and bonds with other companies (Edvardsson et al., 2007).

Relationships evolve during various stages. According to Ford et al. 2011, they move into four stages: pre-relationship stage, exploratory stage, developing stage, stable stage. During the first stage, companies evaluate possible advantages coming from the relationship. During the exploratory stage, the parties invest time and get close to each other, but no procedures are established. Intensive mutual learning, trust building and tangible investments characterize the developing stage. The final stage is the stable one, characterized by formal routines and by an institutionalization of the relationship. Relationships have three facets: they are a device, an asset and a problem. They are a device for different purposes: the may be useful to influence others and to reassure them about the reputation of a firm or its fulfillment level; they may generate demand; they may solve uncertainties with clients and partners, they may foster innovation through a matching process with other technologies; they may increase efficiency through shared resource management. Relationships are also an asset because they require substantial investments of time, people and technologies; they have to be implemented over time and they are costly, but they are one of the main features of a firm. Relationships may also be a source of problems, as every relationship requires a freedom concession; the parties involved may have different opinions on strategy and different perceptions about each other; in these cases, even if relationships interrupt, it may take time for a firm to recover from the costs sustained.

One of the aim of any relationship is to have access to the other party’s resource set, as every business builds on a collection of specific resources, combined to form a meaningful whole of value (Penrose, 1959); furthermore no company control all the resources it need. Firms use a constellation of resources found in their network, therefore a firm’s network is among its most important attributes (Ford et al., 2011). A counterpart may permit the exploitation of a company’s current resources in a new way, but it may also allow the creation of new resources, through interactions. The driving force behind every collaboration is the quest of advantages from the relationship. A company decides to collaborate with another, only when the benefits deriving from the relationship are expected to overtake the costs (Ford et al. 2011). Relationships allow companies to access resources out of their control, enhancing innovation opportunities. Interactions across firm boundaries are crucial to foster business development and technological improvements (Baraldi 2008; Hakansson and Waluszewski 2002, 2007).

This paper is structured in the following parts: first, the Industrial Marketing and Purchasing Group (IMP) approach about business-to-business relationships and networks will be presented. Then we will describe in detail the companies involved in our case study and the interaction processes that took place between them. We will analyze all the steps through which the business relationship began, the inhibitors and antecedents of this relationship and the effects of firms’ interactions on their network; we will conclude with final considerations.

2. Relationship formation in B2B contexts.

In literature, little attention is paid to relationship formation and to the factors that may facilitate business beginning between two firms. The formation of a partnership is rarely a linear process, but usually requires discontinuous interaction processes, made of episodes, factors and conditions facilitating, and others inhibiting, the new venture creation (Johnston and Sibley 1994). Oliver (1990) classify six antecedents of relationship formation. Necessity refers to the establishment of inter-organizational linkages to satisfy legal or regulatory requirements. Asymmetry refers to the potential to exercise power or control over another organization or its resources. Reciprocity concerns the fact that two parties will engage in a relationship only if both benefit. Efficiency concerns the firm’s drive to improve its cost structure or profitability. Stability is an adaptive response to conditions of environmental uncertainty. Finally, legitimacy is the quest of consensus from internal or external stakeholders, as a response to environmental pressures. For what concerns the inhibitors, Edvarsson et al. (2007) classify three categories of factors that could create relationship inertia, difficulties in cooperation processes or negative outcomes. Image is related to the external perception of a firm’s competence and service offering, thus it is based not only on direct interactions with the counterpart, but also on others’ experiences; it may contain both facts and fiction. Risk is related to the perception of the counterpart reliability, thus it is a subjective factor, consequence of a particular assessment. Bonds refers to structural or perceptual ties between the firms, which result in preference and stability in partner selection. Companies collaborate for several and different purposes, but
the drivers behind every partnership formation could be found in the common vision for future benefits, the development of new markets, technologies or capabilities (Speakman and Carraway 2005).

The outcomes of any collaboration have to be forecasted prior to its realization. The traditional literature on the subject, underlines the importance of the evaluation phase prior to the collaboration start: the assessment of the company’s needs, the assessment of the counterpart’s resource base and the consideration of the external risks. If the analysis has been correct and nothing extraordinary happens, the partnership will almost certainly be successful. The Industrial Marketing and Purchasing Group (IMP) express a more complex view on the topic: the results of a collaboration are only partially predictable. Companies do not know how clients, suppliers, distributors and every other entity affected by the relationship may react to it. Companies just guess, and hope. Companies have also to evaluate how a new relationship may fit within their existing relationships portfolio, as it may generate unexpected effects through the network such as challenges, dilemmas and trade-offs (Persson and Awaleh 2003). Managers should try to examine all the technical, social, administrative and economic connections between the relationships of the portfolio.

The IMP group consider B2B markets as complex network settings, strongly connected between crucial, long-term relationships that make companies interdependent on each other. The real object of B2B relationships rarely concern only the transaction of products, but it is rather a multidimensional complex matter (Ford et al. 2011). Business landscapes are shaped by the interactions that take place between firms: “business relationships are built from interaction processes and are embedded in their counterparts’ context, which takes the shape of a network” (Hakansson and Snehota, 2000). This is the so-called “Industrial Network Approach”, where companies and their relationships can be viewed as part of a complex network of interconnected relationships (Hakansson and Johansson, 1992). The network shapes relationships and relationships shape the network: in a network, firms are interdependent. The position occupied by a company within its network of relationships is defined by its most important relationships. As stated by Ford et al., 2011: “A network position consists of its set of relationships and the benefits, restrictions, obligations and reputation that it has acquired through its unique interactions with those relationships. Each company’s network position is affected by changes in those around it. The position is not solely the result of a company’s strategy”.

No single company possess all the resources it needs to achieve its goals, but every company is dependent on other counterparts providing them, through a process of combination, re-combination and development of resources among organizations (Baraldi et al., 2012). The effects of the introduction and implementation of a new product have to be investigated understanding of the complex mechanisms by which several other resources, both technical/physical and social/organizational, need to be combined with and around the new technology in order to allow it to produce its effects (Baraldi and Waluszewski, 2005). The potential value of a resource emerges only through the use made by actors within specific activities in specific contexts. The longer the use, the more adaptations between resources, with the result of improving their functioning (Baraldi et al. 2012).

The IMP perspective is innovative for considering how this resource interaction phenomenon takes place, not only between the resources of the single firm, but also between the resources of other firms of the network and the single firm’s resources.

3. Methodology

We will use an exploratory case study, which is a good method to “investigate a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident” (Yin, 2003). To increase case validity, we will triangulate between different sources of data (Eisenhardt, 1989), obtained during six months of research: interviews, participation in meetings, e-mail and websites analysis, internal reports and brochures.

Case studies may not be fully generalizable, but this case is relevant as the companies object of study, even if belonging to different sectors, decide to partner and to produce innovation in order to respond proactively to the slowdown of their businesses.
4. Case analysis.

4.1 Antrox.

Antrox is an Italian Ltd. company that provides tailored lighting solutions. It was founded in 2004 in Ancona; at the moment the company is split in two equal shares between Luca Giraldi, who takes care of the management of the company, and Massimo Rinaldi, in charge of the technical and commercial aspects. Other people working in the firm are: lighting engineers, an accountant, a commercial agent for Italy and an IT systems professional. The company sells professional solutions capable of satisfying any lighting request. Their lighting solutions characterize for high performances, great reliability and a premium customer service. They sell primarily to individual architects, distributors and contractors involved in big projects (i.e. hotels, restaurants, shopping centers…). They don’t just sell the product, but they assist the client in designing and realizing the desired lighting experience. Every year they sell in about 15 - 20 different countries. At the end of 2013, 35,3% of revenues came from Italy; 10,4% from EU (except Italy); 54,3% from Extra EU countries. The company’s turnover varies deeply from year to year, as picking a big project can really boost revenues. 2011 was the best performing year of the company, as their sales accounted for more than 5 mln. €. During the other years, revenues varied from 1 to 2,4 mln. €. Every year the company concludes between 100 and 200 transactions, with a range of clients between 50 and 90. They have a wide network of distributors all around the globe, who keeps them updated about job opportunities. They are now selling two categories of lights: Cold Cathode and Led. The former is the technology who made the fortune of the company. It was customizable in shapes and colors, but required technical capabilities and a deep knowledge of its functioning. Led is a newer, cheaper and more efficient technology. It is easier to shape and customize, as its design and realization doesn’t require big technical capabilities. The global market is gradually adopting Led technology for most uses, but the Cold Cathode technology remains superior in some applications. Since 2012, the company, in addition to Cold Cathode, started selling Led Lighting Solutions. Big structured companies were already present in the Led market and, in the last couple of years, the competition became even more intense, especially abroad. At the end of 2014, Led lighting sales are expected to weight for more than 5% of Antrox revenues and around 40% of Antrox Italian sales. Antrox is still capable of playing the game in this market, as its value doesn’t derive purely from the product, but mostly from its designing service.

4.2 Nel Design

Nel Design is a Ltd. Italian company established in 2010 at Corropoli (Teramo) speciliazed in polystyrene carving. At the moment the company is run by two associates: Sauro Raschiatore, in charge of the managerial aspects, and Simone Pelizzi Narcisi, in charge of the designing and technical part. Other people work in the company as specialized technicians and clerks. Company’s revenues are between 200.000 and 250.000 Euro each year. The company invested in cutting and coating machineries: its technological development is considerable, but the company’s value added resides in the capability to satisfy buyers’ requirements with a complete package of services, that start from design and end with the physical realization. They use hot wire cutter for simple productions and a computer numeric control (CNC) machine to create complex shapes. Starting from buyer’s input, they design the desired object in front of a computer, where the all the information regarding the product is putted into (desired shape, size, weight, resistance…) and a digital prototype is done. After that, polystyrene cutters machines read the file, until the creation of the desired object. The last step is the hot coating, to give resistance and strength to the polystyrene. Their products’ destination are typically furniture and outdoor decorations, but the potential applications are endless. Nel Design’s points of strength are: the lack of any shape constrains, the competitive price and the low weight of the final product, compared to more traditional materials. They sell in two different markets: the construction market (outdoor decorations for buildings) and the design market (refined objects for interior design). The former suffers from the crisis of the construction industry, whereas the demand for the latter is increasing.

4.3. Antrox Lab

Antrox Lab is the product resulting from the interaction between Antrox and Nel Design. The former provides its lighting design capabilities; the latter its polystyrene design capabilities.
The relationship between Antox and Nel Design started in 2008, when Luca Giraldi (Antox) met Sauro Raschiatore (Nel Design); at the time, Luca was offering consulting services at Policolor Ltd, another polystyrene company. Luca believed in the potentiality of polystyrene for design purposes and he was wondering about a possible collaboration between the two companies. Right from the beginning, he wanted to insert Antox’s lighting solutions into a polystyrene shell. That same year, Policolor was looking for an account manager and Sauro applied for the position. Luca was present during the job interview and was instantly fascinated by Sauro’s communication skills and by his competences. Immediately he felt he could trust a person like Sauro and convinced Policolor’s staff to give him the job. Anyway, the time wasn’t ripe for the collaboration between the two firms: things in Antox were going good and revenues were increasing; the cold cathode technology was still in its expansion phase, with dozen of new clients every year adopting Antox’s solutions from all over the world. Furthermore, Daniele, one Antox associate, was unwilling to invest in a new project, as he was completely absorbed in its role of sales manager and he preferred to spend all his efforts trying to maintain and develop his already established relationships. In a similar vein, Policolor’s associates preferred not to take the risk of investing in a new project. In 2010, Sauro left Policolor to form with other associates Nel Design. In those two years he increased his competences as account manager and developed substantial knowledge of the polystyrene sector.

A second meeting occurred in 2012, as Nel Design was engaged in a project with other partners to realize furniture turnkey solutions. The contractor was looking for a lighting solution provider and Sauro named Antox. They asked Antox to join the project for the lighting part. Anyway, Luca wasn’t completely convinced and refused the collaboration for a lack of trust, not in the project, but in Nel Design’s partners.

The relationship evolved during the second half of 2014, when Sauro contacted again Luca. Both companies were now facing a different situation: Nel Design was suffering from the construction sector crisis. Similarly, Antox was facing a demand slowdown for cold cathode products. Luca and Sauro still deeply believed in the potentiality of creating innovative lighting solutions inserted in a polystyrene shell. Furthermore, they still profoundly respected each other and the competences of the people working in their companies. Another decisive factor was the exit of Daniele from Antox, as he was the one who refused the partnership in 2008. All these factors, in September 2014, allowed the start of a relationship of collaboration between the two firms, that few months later gave rise to the first Antox Lab products.

The idea is to build decorative lighting systems with a Porotex structure and Led lights inside. Both technologies are highly customizable and easy to mold; furthermore, both technologies are cheaper and more efficient than traditional solutions. At the knowledge of both firms, this product is unique. In the market, there are no highly customizable lighting solutions in Porotex. The goal is to transfer a technology (Porotex) from one application (constructing) to another (lighting solutions). To make this possible, the actors forming the partnership have to evaluate all the peculiarities of the new context: Antox’s contacts and experience in the sector play a vital role. At the moment, there is no formal agreement between the parties, but they are planning to create a formal partnership, as the market has been very responsive to their product and both parties may benefit from it.

In order to understand why Nel Design decided to form a partnership with Antox and viceversa, a list of 20 parameters regarding the counterpart’s features has been submitted to Luca Giraldi and Sauro Raschiatore (Table 1).

<table>
<thead>
<tr>
<th>PARAMETERS</th>
<th>ANTROX SEEN BY NEL DESIGN</th>
<th>NEL DESIGN SEEN BY ANTROX</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Marketing Capabilities</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>2. Product Quality</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>3. Value for Money</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>4. Company’s reliability</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>5. Clients Number</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

In order to understand why Nel Design decided to form a partnership with Antox and viceversa, a list of 20 parameters regarding the counterpart’s features has been submitted to Luca Giraldi and Sauro Raschiatore (Table 1).
Table 1. Factors affecting the counterpart's perception (1 minimum value, 5 maximum value)

<table>
<thead>
<tr>
<th>6. Clients Importance</th>
<th>4</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Design capabilities</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>8. Company’s Technological level</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>9. Delivery Time</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>10. Company’s Innovation Capabilities</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>11. Product Innovation Level</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>12. Company’s Ability to Adapt to Changes</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>13. Brand Equity</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>14. Company’s Distribution Network</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>15. Product Array</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>16. Communication / Promotion</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>17. Commercial Capabilities</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>18. Suppliers Bargaining Power</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>19. Service Level</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>20. Product Customization</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

The table shows that Nel Design perceives Antrox in very good terms, especially for what concerns marketing, design and innovation capabilities, their service, brand and distribution network. Evidently, Nel Design sees Antrox as a well-established and structured company. Differently Antrox perceives Nel Design as a company with a very good product, in terms of quality, value for money, innovation level and customization possibilities. The company is considered technologically advanced and with good design capabilities, but with poor marketing and commercial skills, an insufficient client base, a scarce distribution network and low bargaining power toward suppliers. Markedly, Antrox sees Nel Design as a company capable of designing a product with high potentialities, but inexpert in selling and promoting it. Luca believes that Nel Design need to increase its marketing efforts, presenting its product to more extended audiences. Sauro and Simone, on Nel Design side, are impressed by the fact that such a small company, from a small Italian town, is involved in important projects worldwide.

Luca and Sauro deeply trust each other, as they spent time working together and confronting their opinions in several occasions. Their reciprocal trust is the basis of this relationship, and it represent an asset on which to build a successful collaboration between the two firms. They thought that they could create a new product, profitable per se and that could increase their visibility in the design market. They persuaded their associates to form a partnership to sell Led lighting solutions inserted in a Porotex shell. In this way, each company could access to the counterpart unique resources, which are different and non-overlapping. The relationship should be formalized with a formal contract of partnership during the second half of 2015. The agreement details will be depend on sales and criticalities. If things go well, they don’t exclude extending the collaboration to other market segments.

The partnership may generate several benefits. Each party will be stimulated by the counterpart’s different view of the business and by their design capabilities. Nel Design will leverage Antrox’s experience in dealing with important partners worldwide, its brand and its distribution network. On the other side, Antrox will leverage Nel Design’s innovative product to be more visible in the led market, differentiating from competitors: not just lighting solutions, but also the possibility to realize the desired object in any shape, at a small cost and in a very short period, thanks to the Porotex characteristics. The Antrox Lab project will also be promotional for the companies’ others businesses.
5. **Interaction processes**

Antrox Lab project started in September 2014, but the relationship between Luca and Sauro started six years before. During this period a series of events sometimes facilitated, sometimes inhibited the collaboration. In our case, we found six factors facilitating the start of the partnership: previous personal knowledge of the members of each company; reciprocal personal trust; reciprocal high regard for the competences of the members of each company; revenue’s slowdown of each company’s traditional business; overlapping competences; high technological level of the firms involved.

Since all the conditions were favorable to the start of a business relationship, actors, resources and activities of the two companies interacted continuously in a great effort to create an innovative lighting product. The prototyping phase took approximately two months and started right after the decision of collaborating. Massimo Rinaldi and Simone Pelizzi Narcisi started to discuss possible shapes, where to insert led lights. Some technical constrains soon emerged. Led Lights did not have to generate a temperature higher than 70°, otherwise the Porotex material could be damaged. For this reason, they decided to use only highly efficient lights, with low or medium voltages. Furthermore lamp shape had to be of at least medium size (30 sq. cm or more), otherwise the 5-D machine could not guarantee its optimal cutting precision. Starting from these limits, they began to do some freehand draw of possible shapes. They had to raise architects’ interest; therefore, their shapes had to be extreme and unconventional. To do this they could rely on Porotex’s high versatility, compared to traditional materials. Together with the company’s staff, they selected a sample of draws and started the rendering process at the computer. Then, the draws were transmitted to the 5-D machine for the physical realization and coating. They asked feedbacks to lighting experts to test perceptions and main criticalities. Their product resulted to be lighter in weight, more customizable and more affordable than traditional lighting solutions, but they had to face a skeptical attitude towards polystyrene, as it is generally considered as a fragile and low value material. Therefore, they needed to work on the coating to increase the feeling of resistance and durability, at touch. They soon found a new coat supplier. In 2 months, four prototypes were ready and functioning. For what concerns the managerial aspects, the website was redesigned and Luca organized a list of potential clients, working in different sectors, and started contacting them. They created a specific catalog, and, a month later, it was online together with a video, on the Antrox’s website, under the name “Antrox Lab”. Both parties presented the product to architects and participated at several fairs. Some architects asked to touch the product; the product’s lightness and resistance surprised them all. New connections were established. Both the parties started also to send email to old and potential clients around the globe, presenting their new creation. After only 3 months, from the start of the prototyping they sold their first two products to Fala Città della Luce, a furniture and lighting contractor. From February 2015 the products were also promoted sending to architects: a brochure via email; a letter with 1 € coin inside, with the slogan: “Please give me the time of a coffee and read my brochure”; a sample of a 10 cm high lamp in Porotex (so they can touch and appreciate the material’s lightness and resistance).

6. **Conclusions**

In our case, the process behind the formation of a business relationship hasn’t been linear. Several factors and episodes facilitated and inhibited the venture formation. Business relations are discontinuous over time and they are often the consequence of episodes and changes in actor bonds. The start of a partnership, resulting in new product development, can only takes place under certain circumstances: the openness of collaboration may exist under complex dynamics of interaction in a non-linear process. Much more attention should be reserved to the episodes anticipating the formation of business relationships, as it is in this phase that we can find dynamics that will play a crucial role in the following events. Applying the factors we found in our case to Oliver (1990)’s framework, one factor categorize into asymmetry antecedents (overlapping competences), one factor into reciprocity antecedents (high technological level of both companies) and one factor into stability antecedents (revenue slowdown of both firms). Out of the six, three factors don’t fit within Oliver’s model, as they are facilitating factors, rather than explaining factors. In detail, we found social relations (previous personal knowledge), trust (reciprocal personal trust) and subjective evaluations (reciprocal high regard for the competences of the members of each company) as factors that play a facilitation role in the creation of business relationships. We suggest that Oliver’s model could be extended to embrace these dimensions. Conversely, in our case all the factors we found as acting
as obstacles to the partnership formation fit into the model proposed by Edvardsson et al. (2007). Specifically, in 2008 the risk inhibitor took place when Policolor associates refused to hazard investments in the project. During the same occasion, the bonds inhibitor occurred, as Daniele preferred to spend all his efforts with his already established relationships. Finally, in 2012, the image inhibitor prevented Luca to start a collaboration, as he had a negative perception about Nel Design partners in the contractor’s project.

The interaction process required mutual technical and organizational adaptations, in a back and forth process. Neither Antrox nor Nel Design were able to completely control the counterpart. The product management, in all the phases, from prototyping to promotion had to be interactive, evolutionary and responsive. Only when the parties started to cooperate, they found out how to assemble their resources. A need for process integration occurred, allowing adaptations during the design phase, to cope with the different expertise involved. The first prototypes necessarily had to be produced jointly, and actor bonds soon emerged, in order to share solutions and different points of view.

Only through interactions, they were able to adapt their working processes and routines to fit the counterpart’s software packages and knowledge. Both parties had to adapt their working habits: Antrox and Nel Design way of designing was different; they used different software and each company was specialized in its own field. To be compatible, Antrox changed the software used for prototyping, whereas Nel Design had to modify its project management software. The product design required technical mutual learning and process adaptations, to fit with pre-existing procedures and facilities. Employees’ relationships moved from weak to strong as mutual knowledge and trust arose. Each company’s set of expertise was slowly unveiled, as far the prototyping was moving forward.

Cultural, technological and social distances between the companies progressively decreased. New knowledge and skills also emerged from the collaboration, born from the combination of explicit and tacit knowledge embedded in the two companies’ resources, activities and actors. However, this is an ongoing process, continuously evolving through new interfaces, necessary to make adaptations between the venture’s resources and the network’s resource constellation.

The collaboration produced effects on the companies involved but it also changed their position in their network. If we take the IMP approach, every company is a node that is tied to others by a complex web of relationships. Business is about developing the position of that node in the network and managing those relationships (Hakansson and Snehota 1995). Nel Design can now have access to a wider network of potential clients all over the world, where it appears as a dynamic, flexible and innovative design firm. Without the Antrox Lab project, it would never access such a global network and its brand image would be probably appear less innovative and more associated with the constructing sector rather than with the design sector. The Antrox Lab project could also have positive consequences on the company as a whole, as it will increase the whole company visibility in all its productions. Architects all over the world would probably never hear about Nel Design and its design capabilities. If Antrox Lab orders continue to grow, Nel Design would possibly negotiate better prices with polystyrene and coat suppliers. Revenues growth would also produce the effect of increasing the company’s reliability towards banks, institutions, universities and all the other entities to which it relates. In a similar vein, the relationship had effects on Antrox as it gave new inputs to a company who was suffering from the cold cathode crisis. Especially abroad, this partnership allowed the company to be considered an innovative led solutions provider, different from the others. Antrox still has to compete in the led arena offering excellent services and an affordable price, but, thanks to Antrox Lab, it has also something new and fresh to offer. This granted the attention of foreign buyers, unlikely to receive without it, with potential positive effects on all the company’s products. Both companies seem to have changed their network position as new interaction patterns were set-up with the result of a modification in the companies’ position through the network. In any case, this is to be verified in the long term, as the relationship, and its effects, are constantly evolving.

References


