

BANG & OLUFSEN AND SAMSUNG: EARLY SUPPLIER INVOLVEMENT

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Photos: Samsung

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INTRODUCTION

The Danish manufacturer of high-end audio and video equipment, Bang and Olufsen (B&O), is known for its high-prestigious products, especially because of its designs. Throughout the years B&O have cooperated with several different international firms regarding product development. Most of these partnerships have been successful. One example is the Pininfarina designer car Enjoy, where B&O supplied the sound equipment. However, not all of B&O's partnerships have been a success. In the early 1990's, B&O and the Swedish mobile manufacturer Ericsson agreed to collaborate on developing a new mobile phone. The outcome of this project was a mobile phone, which both partners felt was too expensive to survive on the market; therefore it never went live. Recently B&O has announced that they are developing a new mobile phone with the Korean company Samsung Electronics (Samsung).

THE PRODUCT

With B&O handling the design and Samsung handling the technology, the Serene mobile phone is called "the purest relationship between function and form" (Serene, 2005). One would expect that the new model would have some outstanding new features or functions. However, the beauty of this phone is in the design and the sound, not in the new gadgets that companies are adding onto other phones. In typical B&O fashion the phone was designed to be comfortable in the hand and simple to use. The overall idea behind Serene is to create a mobile phone that is dedicated to one prime purpose: to enable comfortable and convenient communication. This synopsis examines the "coming together of the two companies' respective competences in technology and design" (B&O, 2005). The mobile phone will target the high end of the market in terms of price and quality and the mobile phone will retail in B&O stores for about 1100 Euros.

FOCUS

The main focus in this synopsis will be early supplier involvement as B&O developed the new Serene mobile phone. Furthermore we will also discuss which supply chain strategy is right for the new product and if the mobile phone will become a dominant design.

METHODOLOGY

In the synopsis we will use both literature from the course and external literature to answer our questions. The structure of the synopsis will be the following: First, we will examine what academic literature would have recommended to B&O as they integrated Samsung in the product development process. Following literature has been found relevant: "*Managing supplier involvement in new product development: Three critical issues*" (Wynstra, Weele and

Weggerman, 2001), *“Product Development: Past Research, Present Findings, and Future Directions”* (Brown and Eisenhardt, 1995), *“Japanese-Style Partnerships: Giving Companies a Competitive Edge”* (Dyer and Ouchi, 1993), *“A Second Look at Japanese Product Development”* (Kamath and Liker, 1994), *“Risky Business or Competitive Power? Supplier Involvement in Japanese Product Design”* (Wasti and Liker, 1997). Second, we will examine which supply chain would be the right for B&O using the article *“What is the right Supply Chain for your product”* (Fisher, 1997). Finally, we will discuss if B&O’s new mobile phone will become a dominant design. Here we will use the book *Mastering the Dynamics of Innovation* (Utterback, 1994) and the article *“Doomed from the start: What is the value of selecting a future dominant design?”* (Tegarden, Hatfield and Echols, 1999).

WHAT WOULD ACADEMIC LITERATURE HAVE SUGGESTED TO B&O?

Research shows that it can be a competitive advantage to integrate suppliers in the new product development process (Wynstra, Weele and Weggerman, 2001). In several industries, manufacturing companies give suppliers increasing responsibilities with regard to the design, development and engineering of components. The overall aim is to leverage supplier’s technological capabilities and improve product development efficiency and effectiveness. Using extra and specialized development potential embedded in the skills, competencies and knowledge of suppliers can make product development more efficient, by decreasing input costs and increasing the output.

Japanese-style relationship between B&O and Samsung?

One main stream of research in new product development has its origins in several empirical studies on Japanese product development practices in the mid-1980s. Successful product development is seen as a balancing act between relatively autonomous problem solving by the cross-functional team and the discipline of a heavyweight leader (Brown and Eisenhardt, 1995). Among the critical success factors of this approach is subtle control by top management, an overarching product vision and high supplier involvement.

The latter factor has been the object of more recent research. Nowadays, as vertical integration becomes more and more replaced by smaller specialized enterprises tied together in complex and flexible supply networks connecting distributors, manufacturers and suppliers, the question no longer is if suppliers should be integrated, but how to integrate them. Japanese enterprises are known worldwide for their traditionally close relationships to suppliers. Several studies

examined these relationships with a focus on the automobile industry (e.g. Dyer and Ouchi, 1993; Kamath and Liker, 1994; Wasti and Liker, 1997). Despite this focus, findings can be generalized to other mass manufacturing industries with similar complex products (Kamath and Liker, 1994), as long as products have a lifecycle long enough to justify investments in long-term supplier relationships.

Though B&O is in a high-tech market with rather short product lifecycles, its focus on outstanding designed products, like Serene, allows it to achieve an above-average lifecycle that justifies a long-term relationship with Samsung. Hence it can be concluded that the relationship discussed here can take advantage of examining what is called a Japanese-style relationship by Dyer and Ouchi (1993).

According to them, Japanese-style partnerships have the following key-characteristics: They are long-term supplier-manufacturer relationships that start right at the pre-concept stage and focus on maximizing the efficiency of the supply chain. Suppliers' responsibility lies in the design of complete independent product subsystems (here: mobile technology). The relationships are characterized by commitment and frequent planned communication. Mutual assistance and a focus on quality and total value chain costs leads to production at near-optimal costs. Often, significant customized investments in plant, equipment and personnel are made and valuable technical information is shared. Technical and cost information are shared intensively and regularly to improve performance and set prices so the rewards of the relationships are shared equally. Last but not least, trust-building practices like transferring employees, having guest engineers, and using flexible legal contracts are used to create a high degree of goal congruence and mutual trust.

Further, following Dyer and Ouchi (1993), Japanese-style relationships are more productive than vertical integration or frequent changes of suppliers as well as more cooperative and risk-based than traditional Western arm's-length relationships due to the following:

- Fewer direct suppliers
- Customized investments
- Forced competition
- Stable, long-term employment and transfer of employees
- Face-to-face contact
- Minority stock ownerships

When examining Japanese-style relationships, an often made error is that Japanese manufacturers mainly rely on close supplier relationships. In fact, Japanese manufacturers only regard a small percentage of their first-tier suppliers as partners (Kamath and Liker., 1994). Kamath and Liker identify four relationship roles with decreasing closeness (partner, mature, child, contractual). But as the relationship between B&O and Samsung is a relationship between equals, both experts in their special business developing a co-branded product together, it can be concluded that the relationship in this case truly resembles a Japanese-style relationship which can be named a partnership (at the topmost level of closeness).

An opposing view of these Japanese-style relationships has been addressed by researchers (Hartley, Zirger and Kamaht, 1997; McCutcheon, Grant and Hartley, 1997) in the mid-1990s when they found that early supplier involvement does not automatically lead to decreased costs or decreased development lead time. This may have been the problem in B&O's previous relationship with Ericsson. While we do not dispute the conclusion that some relationships go sour, we believe (according to Wynstra, Weele and Weggemann) that early supplier involvement in product development is an effective strategy. Of course, these results can only be obtained when addressing three critical issues (Wynstra, Weele and Weggemann, 2001) as follows:

- Identifying the management tasks in achieving
an integrated product development and sourcing (IPDS) approach
- Forming an organization for the execution of these tasks
- Staffing the organization with the people that have the right skills

Identifying management tasks

In identifying the management tasks, Wynstra, Weele and Weggemann suggest the tasks be broken up into four management areas: development management, supplier interface management, project management and product management. In the case of B&O and development management, researchers may have suggested a meeting between B&O and Samsung to “determine which technologies to develop in-house and which ones to outsource” (Wynstra, Weele and Weggemann, 2001). In the area of supplier interface management, B&O may have required Samsung to “build up and maintain specific knowledge” (Wynstra, Weele and Weggemann., 2001). For example, if Samsung had never developed a battery that was thin enough to fit into the B&O designed phone, B&O may have required Samsung to create that knowledge. With regards to project management, decisions need to be made as to what specific tasks will be completed by each company. Communication of these tasks is crucial throughout

the entire development process from conception to distribution to customers. Lastly in the area of product management, success was dependent on B&O communicating the design to Samsung so that the design fit the technology (Wynstra, Weele and Weggemann, 2001).

Developing an organization

As B&O and Samsung worked to produce this mobile phone, academics would have suggested they form a specific organization to support this project. Since B&O is located in Denmark and Samsung in Korea, there may have been some traveling back and forth for the team members. As team members come together in the same physical location, the amount of communication does not necessarily increase (Moenaert and Caeldries, 1996). However, more importantly the quality of communication improves in a way that greatly enhances the productivity of the project. Also Moenaert and Caeldries noted that team members are better able to focus on relevant information when they are physically in the same location.

Staffing the organization

According to Wynstra, Weele and Weggemann, the most critical requirement for successful supplier involvement is adequate human resources. Other researchers even outline the personal attributes needed in order for the organization to function efficiently. These attributes (Anklesaria and Burt, 1987; Moenaert and Caeldries, 1996) include:

- Kind of previous experience
- Kind and level of training/education
- Degree of technical expertise
- Degree of pro-activeness
- Abilities as perceived by others (credibility)

While level of education is important and relevant, often “communication skills and the ability to collaborate in team settings are equally important as the more tangible dimensions of education and experience” (Wynstra, Weele and Weggemann, 2001). In order for the Serene mobile phone to be launched, there had to be many joint teams of B&O and Samsung employees working together in hopes of reaching a synergistic relationship. Also one has to wonder if B&O employees who worked on the Ericsson project also worked on this relationship with Samsung. If so, the conclusion could be made that they did learn something and brought that learning with them as they worked with Samsung.

WHAT SUPPLY CHAIN STRATEGY IS RIGHT FOR B&O?

In the article “*What is the right Supply Chain for your product*”, Fisher creates a framework for determining which supply chain is the best for a given product. Fisher defines two distinct supply chain functions: *physical* and *market mediation*. Furthermore Fisher argues that in order to determine the right supply chain, one first has to determine the nature of a product. A product can either be *functional* or *innovative* (Fisher, 1997). In order to determine which supply chain strategy is right for B&O, we will now examine if the mobile phone Serene is a functional or an innovative product.

If we look at the two defined product categories, it can be concluded that Serene is an innovative product. What are the reasons? This is because the mobile phone Serene fulfills the basic assumptions of an innovative product, which are:

- Fashion items such as apparel or technology
- Unpredictable demand, rather short lifecycles, variety
- High profit margins

But what does it mean for B&O, that the Serene mobile phone is an innovative product? When B&O’s product is innovative, which supply chain strategy is then the right one to use? Looking at the following matrix, one notices that innovative products require responsive supply chains:

	Functional Products	Innovative Products
Efficient Supply Chain	Match	Mismatch
Responsive Supply Chain	Mismatch	Match (Serene)

Table 1: Matching supply chain with product (Fisher, 1997)

And what does it mean that B&O should choose a responsive supply chain for Serene?

- React quickly to new information about demand
- Focus on dealing with uncertainty, not costs
- Position inventory and capacity to protect against uncertain demand
- Choose suppliers not based on cost but on speed and flexibility

In reference to the above it is very important that B&O defines the right supply chain for their product in order to behave appropriately in the market. Many companies today have great difficulties in finding the right supply chain strategy and they are not aware that different

products require different supply chains. This often leads to a mismatch between the type of product and the type of supply chain.

WILL B&O's NEW MOBILE PHONE BECOME A DOMINANT DESIGN?

To determine whether Serene has the ability to become a dominant design, the first step is to establish what the concept implies and depends on. Utterback defines dominant design as (Utterback, 1994):

“A dominant design in a product class is, by definition, the one that wins the allegiance of the marketplace, the one that competitors and innovators must adhere to if they hope to command significant market following. The dominant design usually takes the form of a new product (or set of features) synthesized from individual innovations introduced independently in prior product variants.”

The outcome of a dominant design depends on (Utterback, 1994):

- Collateral assets
- Industry regulation and government intervention
- Strategic maneuvering at the firm level
- Communication between producers and users

A dominant design is not necessarily the one that embodies the most extreme technical performance. It is the one that is the so-called satisfier of many in terms of the interplay of technical possibilities and market choices, instead of an optimizer for a few. Therefore the emergence of a dominant design is not necessarily predetermined, but rather the result of the interplay between technical and market choices at any particular time. A dominant design is the architecture that becomes widely accepted as the industry standard (Tegarden, Hatfield and Echols, 1999).

In reference to the above it can often be difficult to determine whether a new product will be a dominant design. In that case, could Serene then become a dominant design? Design simplicity and technological elegance are often clear characteristics of many dominant designs (Utterback, 1994). Serene has a simple design and technological elegance which in reference to the above could often lead to a dominant design. From that perspective one could say that Serene could have a dominant design regarding the unique design and the advanced technology. But on the

other hand dominant design also is a satisfier of many. This is not the case for the mobile phone Serene. The high price indicates a narrow customer segment and Serene is therefore not a satisfier of many, but rather an optimizer for a few.

By looking at the definition of dominant design, one can also see that a dominant design in a product class is one that wins the allegiance of the marketplace, the one that competitors and innovators must adhere to if they hope to command significant market following. In the case of B&O, we don't think that Serene is a product that will win the alliance of the marketplace or a product that competitors will have to follow. In connection with dominant design, an open question is whether the mobile phone is doomed if it doesn't become a dominant design.

CONCLUSION

In order to optimize the development of the new mobile phone, academics would have recommended B&O to integrate technology supplier Samsung in the product development process by forming a close Japanese-style partnership starting right at the pre-concept stage. In detail this means identifying management tasks, developing an organization to support these tasks, and staffing the organization with skilled employees. By utilizing these three principles of managing early supplier involvement, B&O can ensure greater chances of success in their relationship with Samsung.

B&O and Samsung should design a responsive supply chain for the Serene mobile phone as it is an innovative product where the focus lies on dealing with market uncertainty. Close relationships with reliable suppliers to increase speed and flexibility are more important for innovative products than a simple cost reduction strategy.

Finally, odds are against that the Serene design will become a dominant design. The product is rather an optimizer for a few than a satisfier of many. Hence, expected competition will be rather low while on the other hand the partnership is connected with a high risk of reaching enough end customers to get the development costs refunded during the product lifecycle. B&O's competitive advantages here are experience with this kind of niche markets as well as existing collateral assets like market channels and a valuable brand image that fits the product's high-end design, while Samsung mainly supplies the advanced mobile technology.

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