

# The Expectations and Consequences of International Partnership: The Case of Benecol

**Olavi, H, Uusitalo**

Tampere University of Technology  
P.O. Box 541 FIN-33101 Tampere  
Finland  
Email: olavi.uusitalo@tut.fi

**Kjell, Grønhaug**

Norwegian School of Economics and Business Administration

## Abstract

### **Purpose of the paper and literature addressed**

The purpose of the paper is to analyse the expectations and consequences of an international partnership in a global commercialization of a break-through innovation. The innovator has several options. It can build up a global sales organization. Often the innovator must enter cooperation either with several local partners or one global player. These options differ with regards to risk and control. The own sales organization is extremely expensive and thus out of question. In our analysis we use an actual case, Raisio's Benecol cholesterol lowering margarine and the global partnership built to commercialize it. Central in our study is Gartner's and Fenn's Hype Cycle Model (<http://www.out-law.com/page-6043>). A successful commercialization of an innovation often requires capabilities or assets not possessed by the innovator termed by "Teece (1986)" as complementary assets. We also use the concepts of informal and formal cooperation "(Håkansson & Johanson, 1990)".

### **Research method**

In our study we apply a longitudinal, historical and contextual approach. We do so because exploitation of an innovation does not take place in vacuum, it is context bound. It also takes substantial time. In addition the outcome of an effort for exploit a new technology and how it actually happened can only be studied ex post

### **Findings**

In the early 1996 stock analysts noticed an article about Benecol's effects in a well known scientific journal and based on it they made excellent forecasts for the innovation. A huge publicity and visibility, a hype, followed. This was the first positive "market research" on Benecol. Raisio's expectations and stock price skyrocketed and thus, the expectations of potential partners rose, as well. Stock analysts loved the global distribution agreement between the innovator and a global partner. This was the second positive "market research" made by the stock analysts. However, there were several risks involved. Consumers attitudes were not known, since not a single Benecol product was sold on the target market. The partner lengthened the distribution channel and Benecol had to compete with partner's several own products. Moreover, formal co-operation tends not to motivate partners sales people.

### **Main contribution**

The enormous publicity, stock market reactions and top management option program confused the decision making of Raisio with Benecol. Had Raisio not been a stock listed company it would not have got such publicity and pressure. The company would have been much more patient in licensing negotiations and partner selection. Probably Raisio would have also used informal co-operation. Raisio knew little about the industry. It trusted totally on its partner. Raisio overestimated greatly the importance of world wide monopoly for Benecol. The risks were also poorly analysed.

**Keywords:** Partner selection, internationalization.

## Introduction

This paper analyses Raisio's effort to exploit its break-through innovation Benecol. The true value of a break-through innovation rests on whether it can / will be commercialized. An important point is that whether it is based on projected expectations. Also projected expectations are not always realized. Moreover, to exploit the first commercial potential of a break-through innovation accesses to global markets are needed. This is particularly so when the innovation originates in a small market, insufficient to fully exploit its commercial potential.

To access global markets is time and resource demanding. Often this requires assets and capabilities not possessed by the company or as termed by Teece (1986) "complementary", as well as "co-specialized" assets. Besides capital requirements such assets are imperfectly trackable. In its efforts to exploit the potential of a break-through innovation the company – in principle – has several options. For example the company may build up its own global distribution network. This option is, however, often unlimitedly costly. The company can sell out the rights of the innovation, or it may lease it to others. The profit potential of these options is, however substantially lower. The company may also cooperate with one or more global partners. A key point is that the profit potential of the various options differs. The also differ in resource requirements and risks.

This paper addresses Raisio's efforts to exploit its break-through innovation, Benecol, in the global market by entering a formal and exclusive alliance with a global player, Johnson & Johnson McNeil division. In our analysis we apply concepts of innovation visibility, co-operation types and tools for evaluating the industry environment. Benecol, cholesterol-lowering margarine, was introduced in the food industry by Raisio Group (Raisio) in 1995.

The remaining part of the paper is organized in the following way: in the next section we briefly describe the theory / literature underlying our study. Here we build on Gartner's and Fenn's "Hype Cycle Model". We do so because this model explicitly addresses the role of expectations and that expectations not always are realized as pointed at above. In addition we briefly describe resource requirements and risks of various options to access global markets.

Then we report our case, i.e. Raisio's effort to commercialize its break-through innovation Benecol. This is based on a longitudinal, historical and contextual case description applying multiple sources of data. After this we analyse the case, where we in particular try to enlighten not only what happened, but also why to, i.e. we try to explain the various recurrences. Finally, we draw conclusions, and discuss implications.

## Literature

In this section we report the literature underlying the study, serving as base for capturing and understanding the actual case. Central to our work is Gartner's and Fenn's Hype Cycle Model (Figure 1). The horizontal axis of the model is the maturity of the technology and the vertical axis of the model is visibility. The model contains five stages: 1) technology trigger, 2) peak of inflated expectations, 3) trough of disillusionment, 4) slope of enlightenment and 5) plateau of productivity. In technology trigger a break-through, public demonstration, product launch or other event that generates significant press and industry interest. Peak of inflated expectations, a phase of overenthusiasm and unrealistic projections during which a flurry of publicized activity by technology leaders, results in some successes but more failures as the technology is pushed to its limits. The only enterprises making money at this stage are conference organizers and magazine publishers. In trough of disillusionment, the point, at which the technology becomes unfashionable and the press abandons the topic, because the technology did not live up to its overinflated expectations. In slope of enlightenment focused experimentation and solid hard work by an increasingly diverse range of organizations lead to a true understanding of the technology's applicability, risks and benefits. Commercial off-the-shelf methodologies and tools become available to ease the development process. In plateau of productivity the real-world benefits of the technology are demonstrated and accepted. Tools and methodologies are increasingly stable as they enter their second and third generation. The final height of the plateau varies according to whether the technology is broadly applicable or only benefits a niche market. ("<http://www.out-law.com/page-6043>").

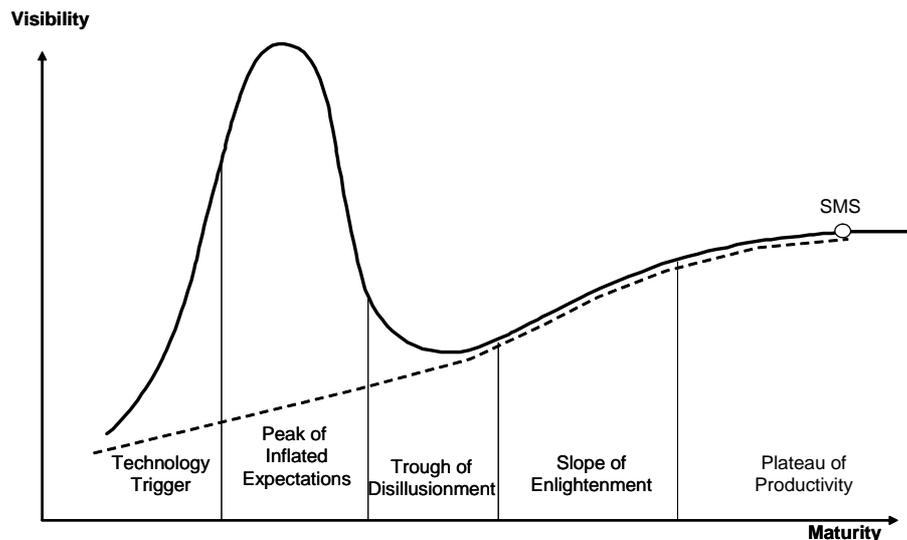


Figure 1. Hype Cycle of Emerging Technologies (Jackie Fenn, 1995)

When a new technology is introduced it has huge publicity with impossible expectations. Then comes the drop to the reality and new start is in the hand. The peak of inflated expectations are not necessary. A new technology can be adopted without any publicity. One example of this is SMS messages.

The benefit from a new technology access for global market is often needed. Market access is resource demanding usually requiring resources not possessed by the company itself. The resources needed to access and exploit global markets are often complementary to the resources possessed by the company. The resources needed may as well be co-specialized (Teece, 1986) not easily available in the market. To get global access for the resources needed cooperation with others are needed to access and exploit global markets. Cooperation may take multiple forms. A crude distinction can be made between formal and informal cooperation.

Formal and informal cooperation differs from each other in three aspects. First, formal cooperation is more visible both within the cooperating firms and outside to other actors. Second, informal cooperation is based on trust developed through social exchange attained through business exchange. The informal cooperation evolves as a result of growing awareness of mutual interests, which takes time and resources. Informal cooperation implies that business comes first and visibility later - if ever - whereas, in formal cooperation, visibility comes first and business later - if ever. Third, informal cooperation is developed by people who are directly involved in the business exchange between firms, such as line managers. Formal cooperation is decided in the higher management level with high involvement of staff. "(Håkansson & Johanson, 1990)".

Cooperation is often needed, and is as such advantageous. However, cooperation may also impose risks. Risks are in particular related to the appropriability of the innovation. In particular when the innovating firm is weakly positioned –vis a vis- owners of the needed complementary resources the risk of losing the benefits are high (Teece, 1986).

## Research method

To examine the challenge of exploiting a break-through in global markets empirically we address an actual case, Raisio's Benecol. In our study we apply a longitudinal, historical and contextual approach (Yin, 1984 and Pettigrew, 1985). We do so because exploitation of an innovation does not take place in vacuum, it is context bound. It also takes substantial time. In addition the outcome of an effort for exploit a new technology and how it actually happened can only be studied ex post.

## **Raisio's Benecol in 1989-2003**

The term functional foods leads to think a food with a specific function or effect. The product may vary both in shape and in specific function but the desired outcome is a scientifically justified medical effect. The effect may be a preventive one, which delays or altogether impedes the onset or further development of a disease, or even a curing one. The last effect, curing one, makes the distinctions between food and medicine blurred. If functional foods are seen as food products, they are also expected to appear food-like and have a pleasant taste. If functional foods are seen as proactive medicines, they may assume medicine-like shape and taste (Mark-Herbert, 2002).

In the late 1970s, research showed that plant stanols were the most effective and safe of the plant sterols in reducing serum cholesterol. In 1989 Raisio, a Finnish food and chemical manufacturer, found a way of turning plant sterol and stanol into plant stanol fat suitable for food production. In 1991 Raisio got world wide patents for Benecol and four years later manufacturing of Benecol started. In the meantime Raisio had made the top management option program agreement in 1993. Raisio's turnover in 1996 was 0.65 billion euros. The cholesterol-lowering findings of a Finnish clinical study were published in the New England Journal of Medicine (NEJM) in November 1995. At the same time Benecol margarine was introduced with great success on the Finnish market. The stanol discovery had also sparked very active interest internationally. Cholesterol problems were shared by all industrialized countries. Two grams (obtained from 25 grams of Benecol margarine) a day can be an effective dosage of stanol. In summer 1996 stock analysts valued the Benecol patents to 2 billion Euros.

Raisio couldn't keep up with the demand - even though the product was seven times more expensive than ordinary margarine. Raisio's shares soared - from around FIM14 in January 1996, to a high of FIM89 in March 1997. Since the health authorities in Finland approved Benecol's cholesterol reducing claims. Raisio sold \$12 million worth of Benecol in 1996 – and gained 2.6 % of the Finnish margarine market. Raisio looked also the US market. Raisio told that they knew that it may take years for the company to get Food and Drug Administration's of US (FDA) permission to claim that Benecol reduces cholesterol levels. According to one UK based stock market analysts Benecol was a break-through product, the next-generation Nutra-Sweet, a trade mark of aspartame. Raisio management was surprised with offers (of cooperation) coming from large and small companies. In April 1997 the CEO of Raisio said: "One giant global partner would not get Benecol out with maximum speed, [but] the No. 2s in individual markets may be more hungry to take this interesting innovation forward" "(Echikson, 1997)". International press followed Raisio and its acts with Benecol very intensively (Brännback, 2003). Raisio also believed that the profit will be made by selling the Benecol active ingredient to other players in the food industry.

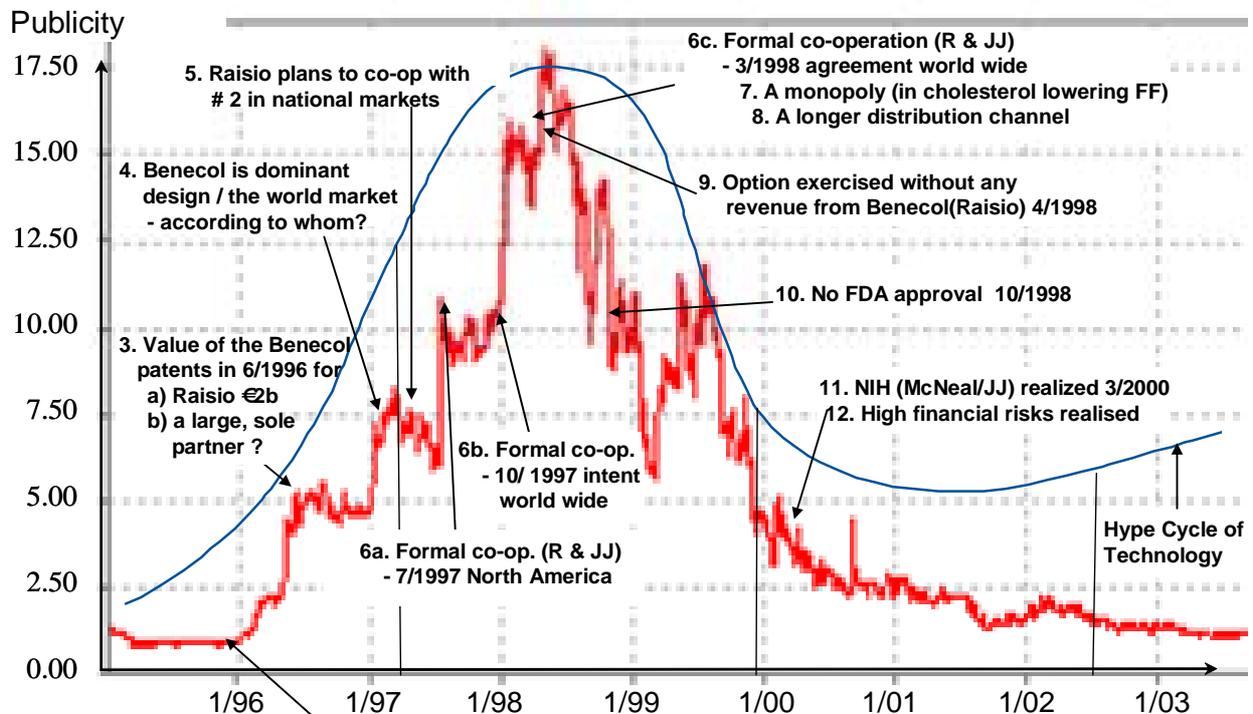
In July 1997 Raisio signed an agreement with the American McNeil Consumer Products Company (McNeil), a subsidiary to the Johnson & Johnson group (JJ). The contract gave McNeil the sole right to use the Benecol trademark and patents on the US, Canadian and Mexican markets. The agreement released Raisio's resources to other markets. McNeil estimated the US market 70 times as large as the Finnish market and it aimed to introduce the first products in US in 1998. In March 1998, Raisio extended the cooperation with McNeil to global dimensions. Raisio kept the entire production of stanol ester and was responsible for the Finnish and neighboring markets. According financial analysts the agreement was a win in lottery for Raisio. JJ was that time the world's biggest producer of health-related products. Its turnover in 1996 was 24 billion euros and it had 170 subsidiaries in 50 countries. McNeil is the largest supplier of over the counter drugs in the US. Raisio chose McNeil because it trusted McNeil's abilities to handle the bureaucracy of the FDA.

In 1996-1999 Raisio invested in Benecol production facilities 50 million euros. In April 1998 the top management of Raisio exercised their option. The antitrust authorities of the US approved the Raisio and McNeil agreement quickly, but the FDA did approve the Benecol ingredient as the status of an ordinary food after a long process in 1999. This long waiting time gave the possibility for competitors to enter the market. McNeil sold the first Benecol products in the US market in the mid 1999. During the four months after its introduction in the US the sales of Benecol were only \$13 million, which was much less than the partners expected. Because of the low sales McNeil decided to cut the advertising of Benecol budget. At the end 1999 also Unilever launched its cholesterol lowering margarine in Europe. In 2000-2003 Raisio and McNeil have agreed that McNeil were no more responsible for several international markets. Instead Raisio took responsibility of them.

## Analysis

Figure 2 summarizes the major events and facts, and is central to our analysis of the case. The figure has the development of the share price of Raisio (K-serie)<sup>1</sup> in 1995-2003. Benecol was patented in 1991 (not presented in Figure 2). In 1993 Raisio made a option program for its top management (Figure 2; Item 1, which is outside of the timescale). Benecol got enormous publicity a couple of months after the article of Benecol's effects on lowering the cholesterol (Item 2) was published in NEJM in 1995. Based on this stock analysts made the first "market research" with excellent forecasts for Benecol. The stock analysts watched all the moves of Raisio, but mainly overlooked reaction of potential customers. Stock analysts interests and the publicity in the world wide media created a huge hype on Benecol. At the end of 1995 only ten percent of Raisio's stock was owned by foreign investors, but at the end of April 1996 foreign investors owned already 40 percent of the shares. Several stock analysts gave values for Benecol patents and the range was from one to two billion euros (Item 3). Raisio's expectations and stock price skyrocketed. Raisio probably got the feeling that Benecol will solve all the cholesterol problems in the industrialized countries and thus thought that Benecol is a dominant design in functional foods (Item 4).

### Raisio K / €



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|---|---|
| <p>1. Management option program (Raisio)<br/>a) created 9/1993<br/>b) usable 4/1998</p> | <p>2. Scientific article in NEJM 11/1995<br/>(a breakthrough)</p> |
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Source for stock price: Kauppalehti

Figure 2. Hype Cycle Emerging Technologies and the share price (K-Serie) of Raisio in 1995-2003.

In April 1997 Raisio' top management believed that based on the rapidness of the diffusion of Benecol the No. 2s in individual markets would be a far better choice than one giant global partner (Item 5). Still a giant global partner was kept in consideration. The entire profit estimation with a giant global partner is interesting. In assuming that Raisio planned to make at least one billion euros (half of the price of the highest value of Benecol patents) profit let say in ten years, and then a 20 times larger partner planned certainly to make at least 15 times Raisio's profit in the same time period, that is 15 billion euros. The only way for a sole partner to make this profit is a world wide exclusive agreement.

<sup>1</sup> The nominal value of FIM 10 of the share was split to ten FIM 1 in 1998. (1 € = FIM 5.94)

Raisio (R) and McNeil, a subsidiary of Johnson & Johnson (JJ) group, made the agreement covering the North America in July 1997 (Item 6a). The world wide press and stock analysts were extremely overwhelmed of the announcement of the agreement (Brännback, 2003). The analysts thought that the agreement with JJ was a win in lottery for Raisio. "We gave applaude the agreement which gives Raisio an excellent partner, which has remarkable marketing abilities on the most important market, the U.S., of Benecol" Anne Alexandre, an analysts of credit Suisse/First Boston, proudly presented in her memo. Share price rose again. Raisio and McNeil continued the negotiation to enlarge the co-operation world wide. In October 1997 they announced to have signed a letter of intent of the world wide co-operation (Item 6b). Stock price rose again. At this moment both companies thought (or hoped) that Benecol is indeed a dominant design in cholesterol lowering functional foods.

In this way they also made a world wide monopoly for Benecol in cholesterol lowering functional foods (FF), and hoped to conquer the whole world immediately (Figure 2, items 6c and 7). All food manufacturers in almost every country must buy Benecol from McNeil. However, this also lengthened the distribution channels (Item 8). After the agreement was signed stock analysts made another "market research" with excellent forecast (especially in the US) for Benecol, again, although not a single Benecol product was sold there. The agreement confirmed the principle that Raisio kept the entire production of stanol ester in its own hands and developed Benecol production and marketing in Finland and neighboring areas.

The first stanol ester plant was completed in Raisio in December 1996. It was a prototype designed within the company, and development has taken place alongside daily production. Another adjoining unit was built after the agreement with McNeil was signed. In 1996 and 1997 Raisio invested in Benecol \$25 million (27 million euros) (Talouselämä 4/97:59). In November 1997 the company decided to build a stanol ester plant in South Carolina, scheduled to go on stream in early 1999. The investment totaled \$ 22 million (22 million euros). The building project was related to the contract made with McNeil. At the beginning of Benecol marketing, McNeil got stanol ester from the expanded Raisio plant. When the stanol ester plant in South Carolina was ready, stanol ester production capacity was four times the 1997 level.

Just after the global agreement between Raisio and McNeal had been made the top management of Raisio exercised their nice options on the right time in April 1998 (Item 9). That time no a single unit of Benecol had been sold in the targeted North American market. Raisio's US partner tried to get approval as a health related product from FDA. The process was difficult. The approval process of functional food in FDA was not new for Raisio. The company knew the challenges xylitol, a Finnish artificial sweetener, had had in FDA's testing. Xylitol had to wait for almost a decade for approval (Uusitalo, 2000). Maybe it is also good to know that the US citizens were saved from consequences of the drug thalidomide in the early 1960s thanks to the rigid tests and resistance of one individual in FDA.

JJ is the world's biggest and most versatile producer of health-related products. Its turnover totaled \$ 21.6 billion in 1996 and it has 170 operative companies in 50 countries. JJ is also a very R&D oriented company. For instance, in 1996 they invested in R&D almost 10 billion FIM, which is twice as much as the turnover of Raisio. In the same year JJ received the highest US award, the National Medal of Technology, for the innovation capability of a company. Thus Benecol had to compete with JJ's own products for salesmen's attention and effort. Moreover, in formal co-operation top management gives orders to the lower level, which affects on salesmen's motivation (Håkansson & Johanson, 1990). This is reflected in Figure 2 as a Not Invented Here (NIH) syndrome (item 11). In the early 2000 when the sales of Benecol did not take up the huge financial risks were realized (item 12).

The third phases, technology trigger, peak of inflated expectations and trough of disillusionment, of Gartner's and Fenn's Hype Cycle Emerging Technologies cycle has been added also in the Figure 2. The share price of Raisio is pretty much following the curve.

It is well known that neither, consumers, competitors nor authorities like monopolies. Benecol ended up being just a generic complementary asset among McNeal's brands (Teece, 1986). Benecol would have been a cospecialized asset for the hungry No. 2s in individual markets. This can partly explain the difficulties of Benecol to become approved FDA, which delayed marketing.

"Drucker (1985)" points out that customers' expectations, their values and needs are important for an innovation to be successful. This aspect was totally neglected in the Benecol case. Nobody was interested how (in which form and in which product; in margarine, milk etc.) Benecol should be marketed for instance in the US. How important are third parties, for instance medical doctors in promoting the product? Everybody believed on stock analysts and the international press. Maybe Benecol's experience in the Finnish market was just generalized in the 70 times larger US market. Also Drucker's (1985) second idea of a successful innovation that it should be simple and focused was forgot. Bececol is a functional food between ordinary food and medicine, thus providing a lot challenge for the commercialization. Which way to market it? Should it be sold as an ordinary food via food stores or as a medicine via pharmacies? Moreover Raisio tried to start market Benecol in a large scale on world wide market against Drucker's message. When this was not done properly it created an opportunity for the competition.

## Conclusions

The enormous publicity, stock market reactions and top management option program confused the decision making of Raisio with Benecol. Had Raisio not been a stock listed company it would not have got such publicity and pressure. It would have been much more patient in licensing negotiations and partner selection. Probably Raisio would have also used informal co-operation. Raisio had poor knowledge of the industry. Neither analysed Raisio the consequences of the formal co-operation with one player, and overestimated greatly the importance of world wide monopoly for Benecol. In order to exploit the potential benefits of a monopoly the product must attention and sufficient resources. Here the needed attention and effort were lost or directed to other JJ's products.

It would be interesting to find out the mechanism which pose the share price of Raisio in 1996-1998. At the moment we do not have operationalized the effect of publicity in the international press to the share price. It will be the next step in our work.

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