

# **“The Silent Salesman: Packaging, a Driver for Innovation in the Food and Beverages Industry”**

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## **ABSTRACT**

Research and literature on (product) innovation processes typically describe innovation as the development and commercialization of a new product that needs to be packed. Development of the often new packaging and the packaging process is mostly regarded as a subsidiary and supportive activity in the total innovation process. The development of the new product innovation is the driver in this process. More and more however the NPD process is determined by innovations in packaging instead of in product (Emblem & Emblem, 2000; Gouliard, 2007; Hine, 1995; Hoogenhuizen, 2007). This is especially the case in the food and beverage market, the focus of attention of this paper and research.

There are several reasons to gear up the research focus on packaging as an innovation besides the fact that in the described market segments its importance is growing. From the scientific point of view research in this field can be regarded as an emerging area, of which this qualitative oriented PhD research makes part. In a recent article Cooper (2008) asserts that the NPD process is being re-invented by companies leading to a so-called Emerson 2.0 version - but the role of packaging in the process is not taken into account. The purpose of this paper is to explore what that role is.

Within companies that innovate generally speaking, packaging is neither seen as an *attribute* to a product, nor as an integral part of the invention or the innovation process. In the process it is not regarded as the driver for innovation but usually as one of the activities that needs to be undertaken (see e.g. Cooper, 1987, 1999, 2008) in the commercialization process to introduce a product on the market. Contrary to mainstream literature and views on the NPD process, ‘product’ in this research is seen as a *combination* of ‘content’ and ‘packaging’. The packaging is always new, while the product can either be new or an already existing product in a new packaging. The leading question in this research is: How can package innovation on product level -acting upon technological developments and improvements in this area- and the changing role of packaging in the innovation-chain contribute to an improvement of the innovation process within the Dutch food and beverage-industry?

We present the case of a recently (1<sup>st</sup> quarter 2007) introduced 33 cl returnable beer bottle aimed at the Dutch home-use market, as replacement for the 30 cl brewery-pool bottle. The bottle was developed by Royal Grolsch (SAB Miller), a premium beer brewery located in Enschede, The Netherlands. The new bottle proves to be one of the most important innovations in packaging in years for Royal Grolsch. With this introduction the company succeeds in translating their strategy into a product launch with a strong focus on innovation in packaging.

The case study was conducted through in-depth semi-structured interviews with all the involved project team members, both internal and external (suppliers, advisors). In this paper we explore two issues. The first issue consists of the personal and organizational success factors in the process, when packaging is the driver of innovation. Do

these vary in comparison to success factors identified for the NPD process by authors like for instance Buijs (1987), Cooper and Kleinschmidt (1987) and Cooper (1987). The second issue describes the linkage between innovation strategy and packaging decisions. The case demonstrates how a well defined long term innovation strategy by the aforementioned company is systematically translated into a development programme for packaging. Results from interviews with involved project team members show that personal and organizational factors alternate in contributing to the success of the development and launch of an existing product in an innovative and new bottle on the Dutch beer market. Linkages between organization of the project and the company's strategy are shown. It also explores what the implications are of the dominant role and importance of packaging in the NPD process, for the organization of the process. This is offset against traditional models of innovation like the one described by Wheelwright & Clark (1992), Cooper (1987) and Van de Ven (2004). The findings suggest that the role of packaging in the innovation process in this market segment needs to be re-assessed and its implications for the market success of an innovation.

## INTRODUCTION

There are several reasons to gear up the research focus on packaging as an innovation besides the fact that in the described market segments its importance is growing. The food and beverage industry is the largest industrial sector in The Netherlands. This industry represents a quarter of all Dutch industrial activities (Brouwer and Wiggenraad, 2002). From the scientific point of view research in this field can be regarded as an emerging area, of which this qualitative oriented PhD research makes part. In a recent article Cooper (2008) asserts that the NPD process is being re-invented by companies leading to a so-called Emerson 2.0 version - but the role of packaging in the process is not taken into account, while in the markets described we see a growing importance of packaging in the actual buying process. Braaksma, Van der Graaff and Muizer (2002, p.15) argue that more radical innovation in the food and beverages industry is only practiced by (very) large companies. The majority of the industry focuses on me-too products and line-extensions (Joppen, 2003, p.30-35). Hultink describes the dairy industry as an exception, in this industry has successfully turned into a more NPD-oriented environment (Joppen, 2003, p.30-35).

This is caused by factors like the fast growth of the typical supermarket assortment, up to 30.000 items (Hine, 1995), the so-called supermarket war which has led to decreased margins, the emerge of homogeneous markets for articles like lager-beer, the high failure rate (75% in the first year fails) of new products (De Vos, 2003, p.61-63; Roos and Slood, 2002, p.1-2) and the emerge of private labels. The purpose of this paper is to explore what the actual role of packaging in the NPD process is. And if and where 'packaging' is different from 'product' when applying literature on success factors, like the comprehensive survey of Henard and Szymanski (2001).

This paper is built up as follows. First a brief introduction is given of the Dutch market of food and beverages. Royal Grolsch - the company that forms the context for the case, which is subject of this paper - is positioned in the market and the problem is defined. Subsequently the methodological choices are discussed and the criteria which form the basis for the choice of cases. Then the case-study is introduced and the results are presented.

Research and literature on (product) innovation processes typically describe innovation as the development and commercialization of a new product that needs to be packed. Development of the often new packaging and the packaging process is mostly regarded as a subsidiary and supportive activity in the total innovation process. The development of the new product innovation is the driver in this process. More and more however the NPD process is determined by innovations in packaging instead of in product (Emblem & Emblem, 2000; Gouliard, 2007; Hine, 1995; Hoogenhuizen, 2007). This is especially the case in the food and beverage market, the focus of attention of this paper and research.

### **The Dutch beer market**

The Dutch beer market can be divided into two markets: in-home (households) and out-of-home (bars, restaurants, etc.). For 2007 sales were for in-home 70% and out-of-home 30%. The total beer-market in The Netherlands is slightly declining, minus 1% (2007). Royal Grolsch has an estimated(\*) market share of approx. 14-15% (2007) in The Netherlands and holds a third position on the Dutch market.

Key figures for Royal Grolsch:

- Employees: 875 (2007)
- Production volume (brewed beer, Royal Grolsch brand): 2,8 million hectoliters (2007)
- Turn-over: €332,9 million (2007)
- Profit after taxes: €19,97 million (2007)
- International position and ranking: 26<sup>th</sup> largest beerbrand worldwide (2007)
- National position and ranking: within top 10 (turnover) largest beerbrand (2007)
- Exports to: approx. 70 countries (2007)
- Sales to region: The Netherlands: more than 50%, United Kingdom: more than 30%, other international markets: less than 20% (2006)
- Dutch market: Royal Grolsch premium lager beer sold in 'BNR-30' bottles: 70% of sales (2006)

The second largest market share is owned by InBev Nederland (market share more than 17%, 2008). In comparison to the largest brewery in The Netherlands, Heineken has a market share of 48,7% (2007). Royal Grolsch is a very strong brand. In The Netherlands EURIB (European Institute for Brand Management) ranked brands. In 'EURIB, Top 100 van onmisbare merken van 2008' which can be translated into 'EURIB, Top 100 of indispensable brands of 2008' Royal Grolsch has a rating of position nr.2 (37%) in the category 'Beer'. In comparison: Heineken holds a EURIB (2008) nr.1 rating (44%). In the comprehensive list of EURIB (2008) with 1.327 brands, Royal Grolsch holds position nr. 165, where Heineken holds position nr. 99. InBev is not sold as an individual brand of beer, therefore its brand-position is not being discussed here.

*(\*) Royal Grolsch shows no market shares for the Dutch market. Estimation is based on the following figures: the total volume (hectoliters sold) in The Netherlands for 2007 is 10.242.985 hl. Royal Grolsch claims for 2007 to have sold more than 50% to the domestic market which makes  $[52\%-55\%] \times [2.800.000 \text{ hl.}] = 14\text{-}15\%$ . When the same figures are applied to Heineken, the Heineken market share is calculated as follows:  $[10.242.985 \text{ hl.}] \text{ divided by } [5.5 \text{ million hl.}] = 53,7\%$  which is close to the market share claimed by Heineken: 48,7%. (Riezebos, e.a., 2008), (Heineken, 2008), (Royal Grolsch, 2008), (CBK, 2008), (InBev, 2009).*

### **Royal Grolsch - company overview**

Royal Grolsch is a well established Dutch brewing company for premium beers, dating from 1615. The company was founded in the eastern part of The Netherlands, around Enschede. The company is still present in this region with a completely new brewery and headquarters (2004). The regional market is still an important part within the domestic market of Royal Grolsch. On 12 February 2008 Royal Grolsch became an autonomous subsidiary of SABMiller plc.

Around 2004 Royal Grolsch opted for a strategic reorientation in their innovation practices. Most important reasons were deterioration of price and loss of market share, both on the Dutch market. Against that background they decided for a radical innovation of their most used bottle in The Netherlands.

### **Case-study: the 33 cl bottle**

The case study described in this paper concerns the development of a recently (1<sup>st</sup> quarter 2007) introduced 33 cl returnable beer bottle aimed at the Dutch home-use market, as replacement for the 30 cl brewery-pool bottle. The new bottle proves to be one of the most important innovations in packaging in years for Royal Grolsch.

The new, green colored 33cl bottle replaces the former brown colored 30 cl so called 'BNR-30'-bottle. The 'old' bottle has been introduced to the market in 1985. 'BNR-30' stands for 'Bruine Nederlandse Retourfles, 30 cl.', which can be translated as 'Brown Dutch

Returnable Bottle, content 30 cl.'. This bottle was developed and adopted by all major Dutch breweries. The covenant of the 'BNR-30' makes it possible that all participating breweries accept every returned 'BNR-30' bottle, regardless which brewery sold the bottle for the former 'trip'. The labels are simply washed off, the bottle is cleaned and inspected and the bottle is ready for refilling.

The secondary packaging for returnable beer bottles in The Netherlands is typically formed by returnable plastic crates, containing 24 bottles. All 'BNR-30' crates of participating breweries have similar height, width and length and are fully compatible (stackable, also quarter turned when standing on a pallet). The crates for the new 33 cl. bottle still have the same width and length but have a different height. Therefore, the new crates are limited in compatibility to the 'BNR-30' crates. They can be stacked on BNR-30 crates but not quarter turned.

To summarize the differences between the old and the new bottle, all major (product) characteristics are described in the table below.

	New bottle	'Old' BNR-30 bottle
Content	33 cl.	30 cl.
One way or returnable	Returnable	Returnable
Colour	Green	Brown
Labeling	1 label (neck)	2 labels (neck and body)
Closure	Crown top	Crown top
Secondary packaging	Crate (24 bottles)	Crate (24 bottles)
Bottle suitable for Dutch BNR-30 system	No	Yes
Bottle to be used exclusively for Royal Grolsch	Yes	No
Compatibility secondary packaging (crates)	Only compatible on length and width	Fully compatible on length, width and height. Can be stacked also quarter turned.
Design characteristics of bottle	Flat, two embossed panels with brand name on body	None
Design characteristics of crate	Soft-grip handles	None

Table 1 - Bottle characteristics

What were the major reasons for Royal Grolsch to introduce the 33 cl. bottle?

The most important motives are given here.

- Royal Grolsch wanted to 'strike first' after the 'BNR-30' covenant (30 cl. bottle pool of all major Dutch breweries) ended. In 2005 the 30 year 'BNR-30'-covenant ended and all participants had the choice of staying in this bottle pool or leaving the bottle-pool and introduce company-unique bottles. Brewers feared that the largest participant, Heineken, would leave the pool first (creating efficiency-losses for the remaining participants) and introduce a new bottle.
- Royal Grolsch planned flexibility and production-capacity in its new (2004) brewery, so new packaging-types could be produced relatively easy.
- Royal Grolsch fights back on the 'supermarket-war'. From the first years of this millennium, major Dutch food retailers started the so called 'supermarket-war'. In order to get more customers, the supermarkets try to attract them with very low prices, especially for premium-priced products. In order to pay this war the supermarkets tried to gain their losses back by their purchasing power. The result was a loss of margin, for supermarkets as well as the suppliers such as Royal Grolsch.
- Royal Grolsch reacts upon change in demand. The Dutch beer market suffered from pressure caused by changes in the demands of Dutch consumers, such as alternating composition of population, too much homogeneity of the beer market (all major beer brands sell about the same products) and competition by other (alcoholic) beverages (ready-mixed drinks, wine, alcohol free beverages etc.). The Dutch beer consumption per capita per year is decreasing (from 1990: 90,0 l. to 2007: 77,2 l.).

- Royal Grolsch follows a vision and mission where packaging innovation is clearly emphasized. In 2005 Royal Grolsch already stated that innovation can exist out of 'new beertypes, packaging and concepts' (Koninklijke Grolsch, 2005).
- Royal Grolsch regards the brand and innovation as most important tools to break the homogeneity of the beer-category and to bring back the premium status for its beer. Efforts on the brand-front are directed to fight price deterioration and efforts on the innovation-front are focused on packaging. An increased number of consumers like to drink straight from the bottle (55%, 2007) and shape and color of the bottle is therefore very important.

Royal Grolsch decided to leave the covenant and developed and introduced its own, unique bottle with a matching crate.

A few major problems Royal Grolsch had to solve were the realization of the two flat panels of the bottle, the sorting-issues (what to do with returned non-Royal Grolsch 33cl. bottles in Royal Grolsch crates?) and the initial refusal of one of the largest retailers to put the new bottles in the assortment (because of expected sorting problems and other logistic issues).

This case solely focuses on innovation in packaging. Instead of a non-structured development method, Royal Grolsch decided for the first time to assemble a multidisciplinary project team and to introduce a structural method (funnel, fuzzy front end, stage-gate decisions, similar to the innovation model of Cooper) for the development process. It is interesting that they decided to use this structural approach solely for the packaging development process. In the next section we discuss the results of the introduction of this innovative bottle.

#### **Market results, achieved through introduction of the new 33 cl. bottle**

The new bottle was introduced in February 2007. In a slightly decreasing Dutch beer market (minus 1% of volume, 2007) Royal Grolsch claims to have increased its market share with 0,5%, mainly because of the new 33 cl. bottle (Royal Grolsch, 2007). In comparison: in 2006 the market share of Royal Grolsch decreased with 0,5%. This is in accordance with the assumption that attractive packaging can increase sales, especially since 70-80% of actual buying decisions are taken in front of the supermarket-shelf. Especially for products like beer where most of the promotion efforts is being put in commercials the actual packaging design needs more attention to create 'stopping power' (obtain the attention of the consumers while shopping and make them stop for a buying decision) (Kooijman, 1996; Koopmans, 2001). The results suggest that the decision taken by Royal Grolsch to innovate in this way is successful. This raises the question what underlies the process as they organised it? If we can uncover the factors contributing to the success then this might have implications for the NPD-process in general.

Within companies that innovate generally speaking, packaging is neither seen as an *attribute* to a product, nor as an integral part of the invention or the innovation process. In the process it is not regarded as the driver for innovation but usually as one of the activities that needs to be undertaken (see e.g. Cooper, 1987, 1999, 2008) in the commercialization process to introduce a product on the market. Contrary to mainstream literature and views on the NPD process, 'product' in this research is seen as a *combination* of 'content' and 'packaging'. The packaging is always new, while the product can either be new or an already existing product in a new packaging.

The leading question in this research is:

*How can package innovation on product level -acting upon technological developments and improvements in this area- and the changing role of packaging in the innovation-chain contribute to an improvement of the innovation process within the Dutch food and beverage-industry?*

## 1. METHODOLOGICAL CHOICES

This is an exploratory research which describes the outcome of one case-study carried out in the past few months. The case involves a radical innovation. The aim of the case-study is to get a rich picture of how an innovation project is organized, who are the people involved in the project, how the process is managed.

For this research we have chosen for a qualitative approach. In order to explore the practical aspects of the research question and to gain sufficient depth we have chosen for case-studies. Case study research allows to study the dynamics underlying social phenomena. A case-study can shed light on the decisions that were taken, why they were taken, how they were implemented and what the result was of the decision (Schramm, 1971). Case studies are often used as a means to observe and analyse complex and context dependent organizational issues (Yin, 1989). That is exactly what makes them suitable as a method to analyze an innovation project like the one that is presented here.

The unit of analysis is formed by innovation projects of food and beverages where packaging is a major subject or the driver for innovation.

After selection of a suitable company and project (criteria for suitability will be given in the next part), eight involved project-members were interviewed by a semi-structured questionnaire.

In this chapter, the criteria used to identify suitable projects are discussed. Prior to the approach of the interviews, the concerning case with its backgrounds are explained.

### Concepts

In order to set up the questionnaire, we made assumptions for important concepts. We have identified the following concepts, which have presumably an effect on innovation project success and commercial success.

- Technical aspects of the packaging
- Development process of the packaging including project management
- Awareness of the role and importance of packaging
- Cooperation/teamwork during the process
- Locus of innovation (where is the innovation being done?)
- Quality aspects of the packaging (effectiveness, intrinsic quality and quality to the user, the consumer)

### Criteria for the case-study

The research focuses on packed food and beverages, produced and sold in The Netherlands. Non food products are not included. First criterion for the selection of a case is that the packed product must be new. To determine 'newness' we used the product-market matrix of Ansoff (1968). 'New' then means that the product is completely new to the market or that the product is an adapted and/or improved version of an existing product with incremental to radical changes. An example of a new product is the introduction of the metal beverage-can in the first half of the former century at a time where there were only bottles. An example of an incremental change is the introduction of the easy-opening lid on a metal beverage-can and an example of a radical change is the introduction of a PET-bottle for beer.

Case - suitable for research	Product - present	Product - new
Market - present	No (Market penetration)	Yes (Product development)
Market - new	No (Market development)	Yes (Diversification)

Table 2 - Product-Market Matrix (Ansoff, 1968) with case selection

This classification appeared not to be specific enough for this research. Not all cases where new food and beverage-products are being launched meet our criteria for selecting these for a case-study. For that reason, the product-market matrix of Ansoff (1968) was adapted. This adaptation is based on the definition of a 'product' used in this research.

A typical product of the food & beverages industry is defined as follows:

PRODUCT = CONTENT + PACKAGING

The justification for choosing for this definition lies in the fact that the location of production of packed food & beverages -especially in Western countries- can be far apart from the location of consumption of the aforementioned products. Additionally the majority of food & beverages are preserved for a long shelf-life and the packaging plays an important role in this preservation process. For this reason, content and packaging are the required elements of a food & beverage product. In other words: content and packaging need to be brought together (integrated at the filling process) before a product can be commercially produced, stored, distributed, sold and consumed. A sugar-producing company in Brazil can't deliver loose sugar to European consumers and a non-filled sugar-bag has no commercial value to the same consumers.

It is important to remark that innovation in packaging is not an easy task. For several reasons the innovation meets important barriers: packaging lines and logistics are relatively non-flexible (suitable for limited packaging-types) and very costly. There is a lot of standardization which reduces flexibility as well. Furthermore packaging typically passes a lot of (industrial and logistic) users on its way to the consumer. All these users have different and quite often conflicting demands on the packaging they have to handle. Packaging for food and beverages is even more difficult since they have to protect products that are vulnerable to deterioration or tampering (Klooster, ten, 2002, 2007).

For this research we specifically select cases where the packaging -as a product component- is new. The content might be new but may also be already existent. The Product-Market Matrix of Ansoff (1968) can subsequently be extended with several variants. The column 'Product - New' is now split up into three sub-columns where newness of the packaging determines the selection of suitable cases ('Content' can be either 'present' or 'new'). New products with existing packaging are not selected.

Case - suitable for research	Product - present		Product - new (1)		Product - new (2)		Product - new (3)	
	Content present	Packaging present	Content present	Packaging new	Content new	Packaging present	Content new	Packaging new
Market - present	No (Market penetration)		Yes (Product development)		No (Product development)		Yes (Product development)	
Market - new	No (Market development)		Yes (Diversification)		No (Diversification)		Yes (Diversification)	

Table 3 - Variant on Product-market matrix (Ansoff, 1968) with case selection

To conclude: cases selected for this research can be classified into four types where packaging is always new and content and/or market are either new or present:

- Content present, packaging new, market present (product development),
- Content present, packaging new, market new (diversification),
- Content new, packaging new, market present (product development),
- Content new, packaging new, market new (diversification).

### Uncertainties in the results

Following the chosen methodology we explore the research question by case-studies. Although all eight involved project members, representing all involved departments were interviewed in-depth and with the same questionnaires, the presented case-study has its limitations in the following aspects. First we have only interviewed project team members and no other employees (yet). Second, we have not (yet) interviewed higher management or board-members. Third, we have not (yet) interviewed external parties like suppliers, advisors or retailers. In the conclusions we will present our plans for extension of the Royal Grolsch-case.

Above that we are presenting one case-study. This single case-study can not be generalised for packaging innovation projects of the complete Dutch food and beverages industry.

Another important remark is the fact that Royal Grolsch was the only one who actually did develop an alternative for the covenant and it can be argued what would have been the implications for success when major competitors (Heineken, InBev) would have done the same (or even prior to the new Royal Grolsch bottle).

### **Validity**

By definition for an exploratory research, the internal validity is relatively high and the external validity is relatively low (Yin, 2003). In order to increase the internal validity and especially the external validity, more case-studies will be necessary. We have planned to extend the case-study at Royal Grolsch with additional material, to be obtained via interviews with both internal and external parties, involved with the project. Internally, Royal Grolsch-directors (involved with the new 30 cl. bottle) will be requested for interviews. Externally, involved employees of parties such as suppliers for bottles and crates, consultants for the sorting problems, industrial designers for the initial bottle-designs and retailers will be requested for interviews.

## **2. RESULTS**

### **The interviews**

In the first half of 2008 all eight involved project members of the project development team of the new 33 cl. bottle were interviewed. All project members are employees of Royal Grolsch. Before the interviews, all interviewees received an invitation for the interview in which the backgrounds, goals and methods of the research were explained. All interviews were held at the brewery and headquarters of Royal Grolsch. They were based upon a semi-structured questionnaire. The typical length of an interview was approximately one hour or more.

The interviewed project members held the following positions during the project:

- Project manager Purchasing
- National Account Manager In-home
- Project manager Mechanical Engineering
- Manager Physical Distribution
- Controller Production & Logistics
- Innovation Manager
- Marketing Manager
- Innovation Manager Packaging

### **Research results**

The results will be discussed in three parts. The first part discusses the results, derived directly from the interviews. The second part discusses conclusions in relation to prior assumptions of concepts general results. The third part deals with the implications of the results for the assumed concepts.

#### **2.1 Direct results from the interviews**

The results of the interviews are discussed per interviewed project member. The aforementioned positions are not mentioned here, for reasons of privacy. In order to obtain as much information as possible, to let the interviewed project members speak as freely as possible, they were promised to be anonymous and that none of their statements can be related to the actual person who made it.

In the following table the results are presented. The results are presented at random order.

Position	Results
Interviewed project member no.1	<ul style="list-style-type: none"><li>○ A lot of attention was being paid to details, working with correct principles and accurate predictions. Working with scenarios (appliance of alternative approaches when initial approach wouldn't work) was a result of this precise practice.</li><li>○ Although retailers were involved in an early stage, a lot of effort was being put into secrecy in order the have the benefit of surprise.</li></ul>



	<ul style="list-style-type: none"> <li>○ The new bottle itself is not so innovative, but the accessory sorting system certainly is.</li> <li>○ It was a challenging project with a thorough approach.</li> </ul>
Interviewed project member no.2	<ul style="list-style-type: none"> <li>○ Teamwork was strong; the team was dedicated to the project.</li> <li>○ Higher management was hesitant.</li> <li>○ The project team has put high pressure on suppliers.</li> <li>○ Planning and phasing was not completely recorded in advance.</li> </ul>
Interviewed project member no.3	<ul style="list-style-type: none"> <li>○ Out of all options, the returnable green bottle was the best choice. Arguments for this choice were very diverse (marketing, costs, acceptance by consumers, etc.).</li> <li>○ The risks were substantial and it was not allowed that anything would go wrong.</li> <li>○ The flat panels on the body of the bottle were technically seen quite difficult to achieve.</li> <li>○ Learnings of this project are used in a subsequent project (the new 45 cl. swing-top bottle for the Dutch market).</li> <li>○ The renewal of bottles is quite radical for Royal Grolsch. When its employees have to do these projects, they like to work thoroughly and being supported fully by the board of directors.</li> </ul>
Interviewed project member no.4	<ul style="list-style-type: none"> <li>○ This person has taken the role of project manager as neutral as possible.</li> <li>○ Working according a project management-method was new to Royal Grolsch. Before this project, there was no systematical way at the company to do these types of projects.</li> <li>○ The project team has worked with large awareness, there was always a lot of feedback.</li> <li>○ The board of directors was indecisive, that has frustrated the project team.</li> <li>○ The project team had great mutual understanding. The project team once decided to work at the sorting line for returned bottles to undergo what is being done there.</li> <li>○ Everybody is proud of the project and is convinced that, considering the thorough approach, the success is well deserved.</li> </ul>
Interviewed project member no.5	<ul style="list-style-type: none"> <li>○ The project was derived directly from the Royal Grolsch strategy on these issues (innovation strategy).</li> <li>○ Project members have put the interest of the project above their own individual interests.</li> <li>○ The project was a turning point from cost control and efficiency towards added value.</li> <li>○ There were serious struggles with higher management, in these struggles the project team acted as one person.</li> <li>○ Large problems were the sorting issues, convincing the retailers to accept the new bottle and the struggles with higher management.</li> </ul>
Interviewed project member no.6	<ul style="list-style-type: none"> <li>○ A threat was changed into an opportunity: a large retailer, refusing the new bottle at first, was passed by another large retailer who did accept the new bottle.</li> <li>○ The advance of knowledge was effectively applied.</li> <li>○ There were several serious barriers to overcome but none was insurmountable.</li> <li>○ The risks (failure of project, loss of secrecy, technical barriers) being taken were substantial, but there was hardly any fear that it actually would go wrong.</li> </ul>
Interviewed project member no.7	<ul style="list-style-type: none"> <li>○ Packaging is the ultimate communication tool. The new bottle has to strengthen the brand, rejuvenate it and to emphasize the fresh, easy-to-drink character of its content.</li> <li>○ The process was a 'healthy' internal struggle where different needs are being resolved.</li> <li>○ There certainly were technical barriers to overcome, just as obstacles, being created by higher management. The lastmentioned obstacles</li> </ul>

	have only strengthened the project team.
Interviewed project member no.8	<ul style="list-style-type: none"> <li>During the project the marketing department and production have cooperated, despite of their differences, very well.</li> <li>A few problems of the project were complex (the sorting-problem: non-Royal Grolsch bottles being put in Royal Grolsch crates) but the project was very thoroughly done ('what-if?'-scenarios, plan-B, etc.) so everything was resolved effectively.</li> <li>Many decisions are taking after harmonious discussions.</li> <li>Royal Grolsch was aware not the dilemma taking by this project: cost control versus added value, both strategies have received full attention.</li> </ul>

Table 4 - Results per interviewed project member (anonymous)

## 2.2 Conclusions in relation to prior assumptions of concepts

In the table below, first conclusions from the interviews are related to the concepts.

Assumptions of concepts	Conclusions from interviews
Technical aspects of the packaging	<ul style="list-style-type: none"> <li>There were technical problems and managerial barriers to overcome. The managerial problems were perceived as more difficult. Still, top-management had confidence in the project and did not stop at critical moments.</li> </ul>
Development process of the packaging including project management	<ul style="list-style-type: none"> <li>Royal Grolsch applied for the first time an externally developed method (funnel-type) for this NPD=project.</li> <li>There was a strong, dedicated project manager who was given enough time to work on this assignment. Not seldom project managers in innovation projects are appointed for this task on top of their daily work (see e.g. Harkema, 2004)</li> <li>There were technical problems and managerial barriers to overcome. The managerial problems were perceived as more difficult. Still, top-management had confidence in the project and did not stop at critical moments.</li> <li>There was sufficient time to carry out the project (turnaround time en hours per person per week).</li> <li>The risks were high and the project team never underestimated these risks.</li> </ul>
Awareness of the role and importance of packaging	<ul style="list-style-type: none"> <li>All relevant disciplines for an innovation were represented in the project team.</li> <li>The project team members believed in the project, the need to innovate was clearly perceived and shared.</li> <li>Packaging (especially bottles) are very important to Royal Grolsch. Packaging has a substantial contribution to the strength and the image of the brand.</li> </ul>
Cooperation/teamwork during the process	<ul style="list-style-type: none"> <li>There was a firm, resolute team that worked together for a long time period. The team worked on one and the same location so they could meet relatively easy.</li> <li>Project team members typically attended all meetings.</li> <li>Sufficient attention was given to social aspects of this team-effort.</li> <li>The hesitant attitude of the board of directors strengthened the project team in its dedication to make a success of the project.</li> <li>The project team members declare that they put the interest of the project above that of their own interests. There was a strong mutual understanding of each others problems.</li> </ul>

Locus of innovation (where is the innovation being done?)	<ul style="list-style-type: none"> <li>○ There was a clear and motivated choice not to let the new 33 cl. bottle team develop the subsequent new Dutch 45 cl. swing-top bottle, although learnings were being put into the subsequent project. Other employees were given to opportunity to achieve a success as well.</li> </ul>
Quality aspects of the packaging (effectiveness, intrinsic quality and quality to the user, the consumer)	<ul style="list-style-type: none"> <li>○ The project team is very proud of the achieved results and able to explain the project is successful (thorough approach, alternative routes, fighting the right problems, etc.).</li> </ul>

Table 5 - Concepts and interview conclusions

### 2.3 Implications for the assumed concepts

When the results per interviewed project member are being compared to the initial assumed concepts, new concepts appear. The following six new concepts can be identified:

- Problemsolving/troubleshooting.
- Project management including handling of conflicts.
- Strategy/vision/definition of way forward.
- Learning aspects.
- Point-of-view towards the innovation ('is it a packaging innovation or a product innovation?').
- Motivation/dedication/teambuilding aspects.

## 3. CONCLUSIONS

Cooper (1999, p.118) describes eight critical factors for success of innovation processes where management can play an active role, if wanted/needed. These are:

1. Solid up-front homework - *to define the product and justify the project.*
2. Voice of the customer - *a slave-like dedication to the market and customer inputs throughout the project.*
3. Product advantage - *differentiated, unique benefits, superior value to the customer.*
4. Sharp, stable, and early product definition - *before development begins.*
5. A well-planned, adequately resourced, and proficiently executed launch.
6. Touch go/kill decision points or gates - *funnels, not tunnels.*
7. Accountable, dedicated, supported cross-functional teams with strong leaders.
8. An international orientation - *international teams, multicountry market research, and global or 'local' products.*

Compared to these eight factors, the results of the Royal Grolsch case match quite well. It has been agreed by the interviewed project members that the project is successful. Royal Grolsch claims to have gained market share, mainly because of the new bottle. There are some remarks: the 33 cl. project applies to factor number four to a certain degree. It was not stated initially that the new 33 cl. package had to be a glass bottle, although it turned out quite soon that a glass bottle would be the end-goal. However the results of the project were well-defined from the start. Factor number eight is not fully appropriate. The new 33 cl. bottle was principally targeted at the Dutch market. An international version of the bottle, the export version, has been developed as well but is different from the Dutch version. It has other technical, logistic and design characteristics. For instance, the body panels are less flattened, the body has a slightly different design, the weight is less and the bottle is one-way. Factor number six gives somewhat ambivalent results: although the higher management apparently supported the project all the way and on all aspects (resources etc.) the project members perceived a lack of commitment by the higher management.

Four out of the the six new-found concepts can be seen in the critical success factors as well, except for the concepts of 'Problemsolving/troubleshooting' and 'Learning aspects'.

Besides the critical factors for success, Cooper (1999) addresses failure to seven types of barriers, blockades that cause bad practices. These are:

1. Ignorance
2. Insufficient skills/incompetence
3. Incorrect appliance of innovation processes
4. Overestimation of skills/competences
5. Lack of discipline
6. Too much hastiness
7. Overcrowded project-portfolio simultaneously with a lack of resources

In the results from the interviews, as expected, none of these failure-factors can be identified clearly. The project team had the needed competences, followed a defined funnel-method, worked very disciplined over the years and preferred accuracy above speed when developing the packaging and accessory like crates and logistic systems. The interviewed project members mentioned the problems they had from an indecisive board of directors. Blockade-type number 6 for instance, was clearly not the case here.

Buijs and Valkenbrug (2002) argue that success of repeat innovation projects can be achieved by accurate reflection and learning. Only when this is applied improvement of the development processes can be achieved. The learnings from the project team have been applied to the subsequent project of the 45 cl. swing-top bottle, which was -seen from process view- a success as well. The new-found concept 'Learning aspects' can be applied here.

The only new-found concept of 'problemsolving/troubleshooting' can not be addressed to the arguments of Cooper (1999) and Buijs and Valkenburg (2002).

Overall it can be concluded that the development of the 33 cl. bottle was being carried out regarding it by Royal Grolsch as a complete product and not being seen as just an accessory for the product 'beer'. Royal Grolsch has fully deployed all involved disciplines, not only NPD employees, which is perceived by involved interviewed project members as a contribution to success. In literature, due the complexity of packaging innovation processes a multidisciplinary approach is regarded as crucial (Klooster, ten, 2002, 2007). The project team has worked consistently and with great awareness on this project, for the first time in a structured way. The project team members were confident in a positive outcome and see the achieved results and successes as a logical result of their efforts.

#### **Recommendations for further research**

Based on the results of the interviews with the internal project team we have concluded to extend the case-study towards the external involved parties as well. Beer is only one of the many product categories of the food and beverages-industry and therefore more case-studies will follow when we continue our research, preferably in other product categories, for instance dairy, confectionary, packed meat or packed bakery products.

On detail level, the new-found concept 'Problemsolving/troubleshooting' needs further attention, especially towards the role and importance of this concept. All found concepts have to be considered to build a conceptual model in our further research.

## WORD OF GRATITUDE

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