

Exploring and expanding communication by specification: packaging design in a value chain perspective

Focus in packaging design for food is often on the point of purchase, where more and more choices are made among the customers. But also the other stages of the usage are of great relevance. Examples are the Coca Cola bottle. According to Smith and Taylor [2002] the design brief stated that the shape of the bottle should be recognized also when the bottle is broken. For many products in our daily lives the packaging are essential for the functionality and the experience; jars of jam, toothpaste tubes ect.

The amount of information a packaging need to communicate seems to be increasing; maybe due to focus on branding and story telling. But not least because of laws and regulations demanding traceability, recycleability ect; and information about such printed on the packaging.

On the other hand, studies have shown that the environmental and economical aspects of a packaging solution to a great extent are depended on the packaging and product value chains [Hanssen, 1998]. Also in packaging legislation there is a trend to focus on packaging optimisation instead of packaging minimization. Optimisation grounds on the fact that far more energy and resources are used on producing the product than the packaging, hence the main task of the packaging is to protect the product from production to usage; keeping the right quality for the end user.

The paper presents a doctoral programme in design methodology at Department of product design, NTNU. The programme is part of a Norwegian R&D project Marinepack, which is interdisciplinary and user driven. 15 to 20 seafood, food and packaging companies are involved in the project.

The objective in the doctoral programme is tools for effective packaging solutions for food. Effectiveness is defined by three aspects: protection of the product, efficiency through out the value chain and not least the product appeal; the ability to increase sales or value of the product. The area of interest is three dimensional packaging design. In the remaining time of the doctorate project the focus will be on specifications as a tool for communication in the design and development process.

In addition to literature studies, two retrospective case studies of design and development of new packaging for food are carried out. Together with a companyseminar the current situation in Norwegian food and packaging industries is uncovered. Many companies are SME, or have limited resources for product development. The development is to a large extent carried out in cooperation with other companies in the value chain and external designers. A challenge in one case was to keep the information to all participants updated through out the product development and design process.

In the case the packaging development and design was divided between the marketing and product development department. Marketing was involved with the graphical design company, which engaged an industrial designer for the package's shape. The product development department was responsible for technical aspects, protection and distribution, and had contact with the packaging processors. To shorten information flow, the company encouraged the designer to communicate with the packaging processors. Meanwhile the marketing

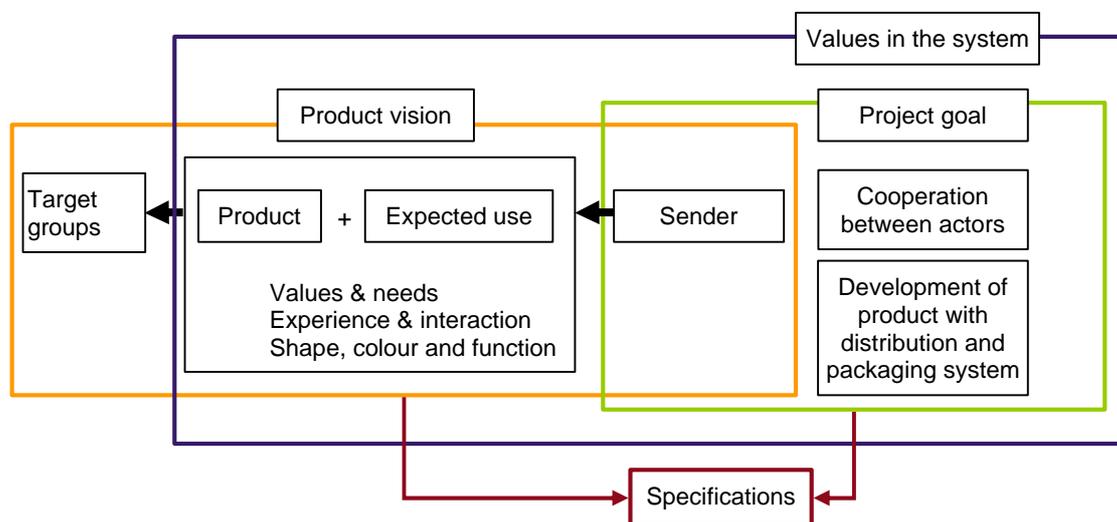
department was responsible for keeping everybody up to date with changes on design, product, distribution, packaging etc.

The development team says that the packaging was more complex than usual for this company. Product launch was in February, and is so far a success. But the study showed that some user functions pointed out as success criteria early in the project was ignored when the mould for the packaging was produced. One function was left out, for another function they were able to add the functionality at a later stage at some higher costs.

In development of food packaging a great quantity of resources are spend on protecting the product. The value chains are sometimes given, but some changes are usually necessary even thou the packaging is fitted to the existing system. Essential is also selling the product, making and keeping promises for the users. 3-dimensional packaging design would advantage of knowledge and skills from several methods and methodologies in design and development. E.g. system engineering gives some insight into development of value chains, theory of communication and user experience in design of packaging and labels.

I claim that a vision bases approach can be useful in packaging design, for combining these domains. Vision based approach to product design as presented by Lerdahl [2001] grounds on critics of existing design literature; e.g. that the product development process is not as linier as many models seems to express. Vision based approaches also seek to link the philosophy of a product or the emotional aspects of the product to materialization, details etc. This is essential for packaging for food. Where there are strict demands on the technical properties – as well as great expectations on the communicational aspects.

The preliminary model is an attempt of linking existing models in product design and development together. The right side is the issues related to the value chain; where the product is produced and distributed, the packaging/product is developed in cooperation, and the sender of the product. On the left side the need of the end user and the commercial communication are integrated. The purpose of this model is an overview of design methodology in the doctoral project.



When many companies are cooperating in design and development, an assumption is that adequate communication of values and expectations would improve the processes. In vision based product development the design team is working around a vision or towards a goal. Some criticism is however the ability to carry the ideas through to products ready to be launched.

Specifications frame what kind of solutions that should be developed or designed in a project. Therefore it might not be useful at early stages in the development process, where visions or ideas are leading. Introducing specifications early might not be fruitful, but demands and

criteria are also found through analyses, idea and concept generation. Specifications can on the other hand be a useful document for communication between the involved actors; what kind of solution are the team seeking at a certain stage in the process.

In the remaining time of the doctoral programme I will challenge the way specifications are made and used. In food industry today, specifications seem to be more widely used for technical aspects of packaging, sometimes also functionality, but there should be a way of communicating values in the specification, e.g. by introducing pictures. The objective in the research project is to find a form of specifications that can bridge the marketing and the technical/system aspects of the packaging. Hopefully this will increase the understanding of the goals and visions among the participants, and improve communication between actors in the value chain.

In Marinepack we try to involve the packaging processors at an early stage in the development process. Together with the introduction of a vision based approach to packaging design, we try to stimulate for more innovative suggestions and open communication between participants. The overall goal is still to develop effective packaging solutions. I hope to gain increased understanding of the processes from values to specification and the effect on the process from ideas to products.

The research will be carried out in close relationship with companies in an action based approach. I will participate and observe product development and design processes. Two or three action oriented case studies will be carried out with Norwegian seafood and packaging companies. I will be working with the companies in relevant phases of the projects; from values to specifications and then observe how the work is influencing the processes. Some interviews will also be carried out. Researcher involved in other case studies in Marinepack will be instructed to work with specifications and finally, some student projects will experiment with specifications.

References:

Smith, P.R. & Taylor, J.; *marketing communications an integrated approach*, 3rd ed, Kogan Page limited, London UK, 2002

Hanssen, O.J., Økstad, E., Askham, C. & Ruback, S. 1998. *Rapporterings- og indikatorsystem for avfallminimering og miljøoptimalisering i emballasjesektoren*. STØ OR.47.98. (Stiftelsen Østfoldforskning, Fredrikstad).

Lerdahl, E.; *Staging for creative collaboration in design teams. Models, tools and methods*. Thesis, NTNU, 2001.

I would like to thank Erik Lerdahl, Trond Are Øritsland, Ole Jørgen Hanssen and Ulrik Lie at IPD for valuable input used in this working paper.