

Case report - Rynkeby

Purpose

The project aimed to give Rynkeby's R&D department a basic understanding of problem areas in the existing packaging as well as insight in other possibilities for development. The end user study should furthermore give Rynkeby insight in the end users' approach to various packaging types used by their competitors.

Gathering insight and research

In the preparatory work they analysed their existing packaging types in order to identify those best representing Rynkeby's assortment concerning different opening mechanisms. Furthermore an evaluation was made regarding which of the competitor products would be the most beneficial for Rynkeby to test.

Test packaging

Five types of packaging were chosen.

Different juice cartons on the market (se below):

1. 1-liter carton with a small screw cap clearly ribbed.
2. 2-liter carton with large screw cap plus pull ring under the cap.
3. Small carton with screw cap with wings
4. Gable top opening with a pull ring
5. Bag in Box (bag inside a cardboard box)

Mechanical test

Danish Technological Institute measured the opening force necessary in order to assess whether the force needed for each packaging was a critical parameter for Rynkeby's target group. The mechanical test showed that the force needed was moderate for every packaging tested, but that packaging types with pull ring required the greatest amount of force to open. This meant that children and elderly women potentially would experience trouble opening this type.

End user observations

The five chosen types of packaging were tested in an end user study. It is important for Rynkeby that everybody – including children - can open their packaging and therefore the test persons were both children and elderly people with and without physical ailments.



Workshop and idea generation

Rynkeby gathered employees from the entire organisation for a workshop day. Videos from the end user studies were analysed during the workshop. Below you will find an overview of the insight from the end user study.

Insights from the end user study

Packaging size

- The size of the container is of great significance when buying as most people expect the container to fit in the refrigerator door.
- The size also has importance concerning who buys the product depending on the size of the household.
- Small cartons are handy when going on a trip but have no appeal to the customers when it comes to household use.
- Larger quantities (e.g. 3-liter cartons) must be cheaper to buy than three separate 1-liter cartons.
- When considering size think about which method the end user has to apply when pouring – is the packaging too heavy?

Screw caps

- Packaging with screw caps is easy for children to open.
- The grip on the screw cap is important in order to be easy to open – also when using tools.
- Large screw caps can provide a better grip.
- It can be difficult for the end user to determine what way to turn the screw cap.

Pull ring

- Pull ring is an irritation factor for many people.
- Pull rings can hurt the fingers making the packaging unpleasant to open.

Gable top and pull ring

- If a pull ring is applied on a gable top packaging it is important to ensure that it works as intended and do not break.
- The pull ring on the gable top packaging only works on the tested packaging if a moderate amount of force is used.

Bag in Box

- A lot of end users had trouble opening the Bag in Box packaging.
- Several of the children were able to use the dispenser in the Bag in Box packaging.
- Bag in Box packaging requires a clear and precise guidance.
- Better flaps or a ring on the Bag in Box packaging would make it easier to use.
- The great advantage of Bag in Box is that it only needs to be opened once.

Generally

- The packaging has to be simple (several people states that packaging with screw cap and pull ring is inconvenient).
- The packaging material has to be sturdy so that it is not deformed during opening.
- Opening directions have to be clearly stated on the packaging.

- A lot of end users are not sure whether a packaging with screw cap can lie down in the refrigerator without leaking. It should be communicated whether the packaging has this function or not.
- Several people express trouble with the product squirting out when the packaging is opened – this applies especially to the type of packaging that needs to be torn or cut open.

Ideas/focus from the workshop

Based on the end user studies and the gathered insight concerning user-friendly packaging group discussion were conducted and ideas for new packaging concepts were outlined. The following input for product development was generated:

- Clear instruction in how to open the packaging.
- More space around screw caps on the packaging.
- Provide the tip on the packaging that by bending the carton top it will be easier to get a good grip on the screw cap.
- Clearer marking on the screw caps in the form of colour and design.
- New carton shape.
- Children-friendly packaging – also concerning larger cartons.
- New way of thinking – the packaging becomes smaller concurrently with it being emptied – e.g. by using foil.
- Bag carton.
- Transparent packaging.
- If at some point the development of packaging which is able to lie down in the refrigerator is considered it is essential to ensure that it fits the refrigerator measurements as well as ensure that all the juice can be emptied out of the packaging even though it is lying down.
- Larger wings on opening mechanism if a tap is used.
- If small cartons for concentrate is used it is important to provide a dispensing mechanism which will also help the end users to grasp the advantages of a small type packaging.

Concept development and prototypes

As Rynkeby has not yet finished developing their concepts it is not possible to describe them in more detail. In the continuing development of a more user-friendly packaging it is important to involve the entire company as well as still conduct tests on end users as well as mechanical tests if Rynkeby want to prove the new packaging to be more user-friendly and demanding less strength to open than the existing one.