

KYMENLAAKSON AMMATTIKORKEAKOULU

University of Applied Sciences

Degree Program in Design

Vasily Zayarskiy

Developing a Graphic Solution for the Packaging Design of a Line of Food Products

Bachelor's Thesis 2013

## ABSTRACT

KYMENLAAKSON AMMATTIKORKEAKOULU

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Design

VASILY, ZAYARSKIY  
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Sarah-Jane Leavey, Lecturer

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The aim of this work is to create a packaging design for a line of food products, which retains the integrity of the brand's visual identity. This paper is written as a case study, in such a way as to give the reader an insight into the process of developing a packaging, its visual language and its application throughout the company materials.

The study was conducted using the workflow that was heavily influenced by iterative and incremental design methodology paradigms. The ideas went through cyclic development and evaluation in order to improve on them, and numerous people from the focus group were allowed to see the progress on various stages in the design process in order to monitor their reactions.

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## 1 INTRODUCTION

The topic of this thesis is to give a line of food products a distinctive look that would help it stand out on the shelves from its competitors. The product line is a physical embodiment of the brand identity, which is also seen in materials such as printed advertisement material and web pages.

The work was performed for a startup company called ООО «BEK» in Russian, which roughly translates to “VEK” LLC. The company is based in St. Petersburg, Russia, and it planned to put out a line of food products. These products consisted of various types of flash-frozen berries marketed as a base for smoothies and aimed at a broad demographic group. They had already decided on the product name — «Смузи Ягоды» — which is Russian for “Smoothie Berries”.

The company needed a designer to carry out graphic design work for them and create a line of packaging for their product that would be appealing to their target demographic.<sup>1</sup>

Following the research phase, the development was broken up into four pipelines that were worked on simultaneously: graphic elements, layout, color and typography. This was done with the purposes of allowing more creative freedom to change one pipeline when influenced by the results of another pipeline, as well as making the task as a whole easier by breaking it up.

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<sup>1</sup> Target demographic is a way of identifying markets based on common personal traits of market segment such as e.g. age, occupation, gender, marital status etc. (Kokemuller, n.d.)

## 2 RESEARCH

### 2.1 Brief

The aims of this project were to design packaging for the frozen berries that would help the product stand out among similar products, be attractive to the target demographic, and to make the product distinctive and memorable. The packaging must also serve as a base for the future development of their brand identity and the defining stylistic elements must be suitable for use in other media.

After a short discussion with the client where I learned the general information, I proceeded to create a questionnaire for them to fill in. The purpose of this questionnaire was to gather more details about the job, and to give the client time to come up with more thought-out answers.

Among other things, I asked the client to come up with a few adjectives that could describe the qualities they most wanted to see in the finished package design. The adjectives they defined were 2-dimensional, attractive, flashy, and contemporary.

To determine what kind of visual aesthetics would resonate with the client, I prepared a selection of images with different visual styles and asked the client to pick out those they liked. As a result, I ended up with a mood board that I could use as a guide. (Figure 1)

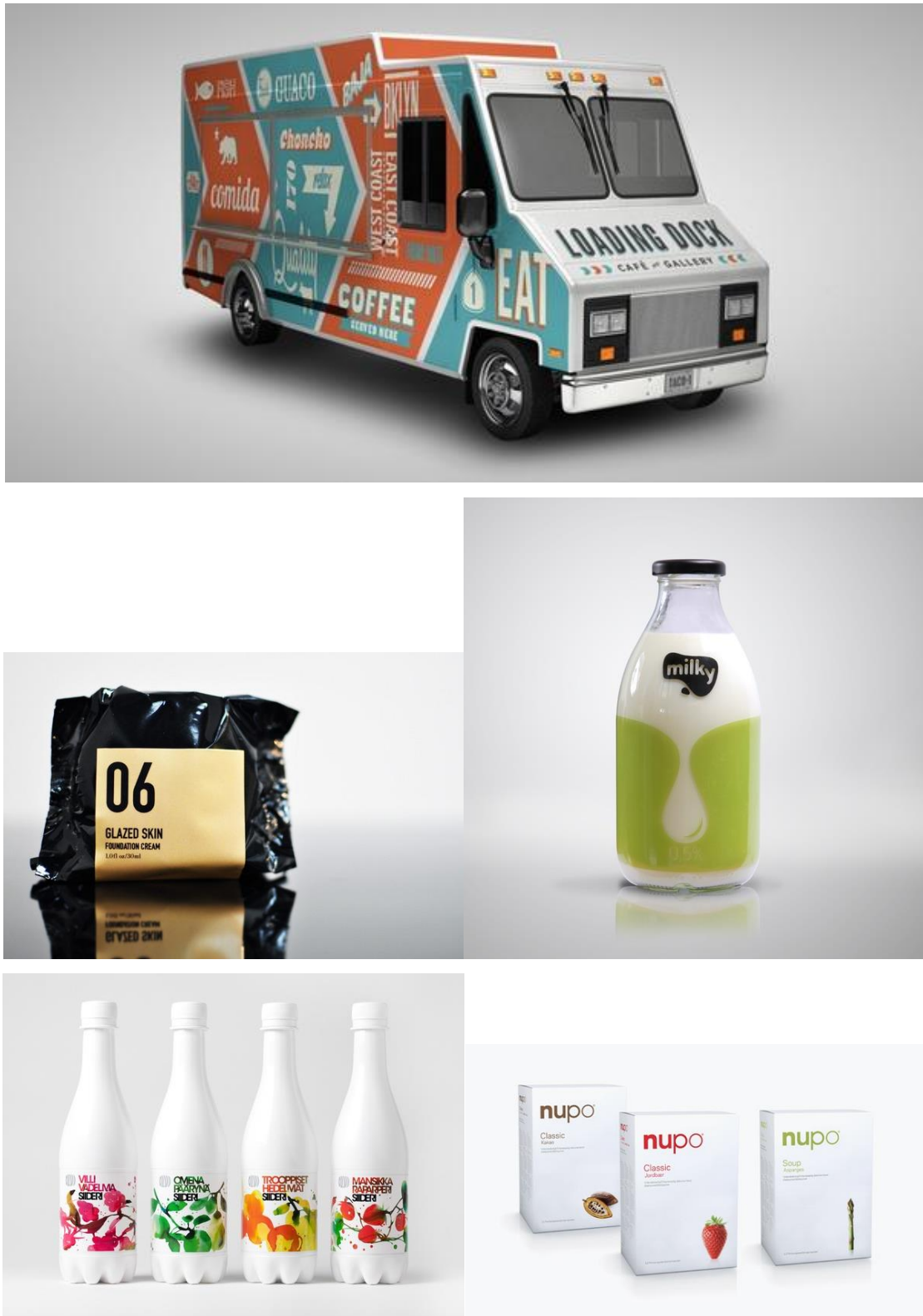


Figure 1. Mood board

The client defined the target demographic as mostly young people who are aware of current trends, are health-conscious, probably into sports and generally lead an active lifestyle.

The client had decided to use the Tetra Pak packaging solution before the designer was involved in the project. This meant that they could immediately pass on the packaging die<sup>2</sup> that they had been provided with by their contact in St. Petersburg branch of Tetra Pak to the designer for use as the basis of his work. The initial choice of printing method had been Pantone<sup>3</sup> five-color flexo print, with all three packages being produced at the same time in a combined print run. After the design phase was over, there was a change in printing firm to the firm called Molopack that produces similar packaging solutions, resulting in the conversion to the CMYK method of printing, but this change happened so far into the development process that it was not possible to take full advantage of the new technology.

## 2.2 Incremental and iterative design

The methodologies used in incremental and iterative design are both very widely adopted and well suited to tackling large-scale projects. While they are superficially similar, they are different in purpose and nature. (Cockburn, 2008, p. 27) However, in combination these two strategies applied in suitable circumstances tend to produce good results.

The definition of incremental design, briefly, is a type of development where the task is segmented into smaller chunks that are more comfortable to deal with. The finished segments are then joined together within the main piece of work.

Iterative design, on the other hand, is best explained as a cyclic process in which trial, evaluation, error and error correction play very large roles. The first phase comprises of an initial planning stage, which is corrected in accordance with the job requirements. The second phase consists of analysis and design, which is followed by implementation that, in turn, either leads to debugging and closes the loop by requiring a

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<sup>2</sup> A packaging die is a design template that outlines the exact dimensions of the packaging in an unfolded form. It also indicates folding lines, cut lines and other relevant information.

<sup>3</sup> Pantone Matching System is a color matching system that uses a set of base colors, which are then mixed according to specifications in order to ensure consistency of achieved end colors across use cases. The end colors are used for print or reference. (Design, P-O-P, n.d.)

new planning stage or, if the result is deemed suitable, leads to deployment.  
(Cockburn, 2008, p. 28)

### 2.3 Product

The product line consists of three sorts of berries: blueberries, lingonberries and blackcurrant, all native to the St. Petersburg area. Initially, the line included cranberries, but mid-project they were replaced by lingonberries by client's request. All berries are distributed in a flash-frozen<sup>4</sup> state and are locally produced with a lot of attention being paid to using the least possible amount of pesticides and other potentially harmful chemicals, as an effort to be more appealing to the client's target group.

To further protect the berries, the client decided to use the .5l Tetra Rex packaging solution by Tetra Pak. This thermally insulated packaging provides extended product life outside the freezer, and gives added protection to the products as they are often mishandled during transportation and storage. With this packaging, the product stays at a temperature below melting point for about two hours depending on the initial product and outside temperatures. Keeping the berries frozen before they reach the client is crucial because refreezing it will severely damage the product. Compared to plastic bags, the packaging also gives berries moderate protection against physical shock and other possible rough conditions during distribution, so it is more likely to be in best condition possible when it reaches the consumer. Comparatively, the vast majority of competing products are packaged and shipped either in plastic bags or in non-airtight thin cardboard boxes that both are inferior in terms of thermal insulation and physical shock protection.

The berries are going to be sold in regular retail grocery stores in St. Petersburg, with plans for possible future expansion into regional markets. In the shops, the product

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<sup>4</sup> Flash-freezing is a technique used to preserve food products during which the food is subjected to the temperatures well below water freezing point, which prevents large water crystals from forming inside the food, which would otherwise damage the cellular structure of berries and make them unnaturally mushy.



will be stored in freezers of two major types: front- and top-loaded, so the packaging should be clearly identifiable from both perspectives.

## 2.4 Competition overview

The client had stated that their product would fall roughly into a 50 Russian rubles ( $\approx 1.25\text{€}$  as of 1.4.2013) per pack of 250 grams price bracket. With this information, it was possible to determine their competition, and after visiting a few major grocery retail chain stores, it was determined that four brands fall into a similar price range.

(Figure 2)



Figure 2. Competing products

Uniting features among these competing products are:

- the base packaging, which is a basic plastic bag;
- prominent display of actual berries;
- heavy reliance on photographic imagery or imitation of photographic imagery.

## 2.5 Flexographic process

As the packaging was initially developed with the flexographic printing method in mind, it largely shaped the nature of the graphics that were designed. The Flexo process is a type of letterpress<sup>5</sup> process that uses rubber or photopolymer printing plates and fast-drying low-viscosity inks<sup>6</sup> to print on paper or other substrates. A common feature of flexo and letterpress processes is that the printing elements are on a different level from the non-printing areas, therefore making flexo a relief printing process. (Kipphan, 2001, p. 29) As opposed to other letterpress techniques, flexographic process is the only letterpress technology that is still showing signs of growth, mainly in newspaper, label and packaging print. (Kipphan, 2001, p. 46)

The basic flexoprocess setup consists of an ink supply, an anilox roller, a soft printing plate and finally a printing substrate. The process transfers the low-viscosity ink from a supply to the anilox roller, which transfers it to a printing plate with the help of the indentations on its surface. The ink is then transferred from the printing plate to the substrate that is located on the impression cylinder. (Figure 3) (Kipphan, 2001, p. 47)

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<sup>5</sup> Letterpress process is a printing technique that utilizes printing plates with protruding image elements covered with a layer of ink coming into contact with a printing substrate in order to produce the image. (Kipphan, 2001, p. 45)

<sup>6</sup> Dynamic viscosity ( $\eta$ ) is a property describing how flowing a substance is. The less viscous the substance is, the easier it is for it to flow. (Kipphan, 2001, p. 132)

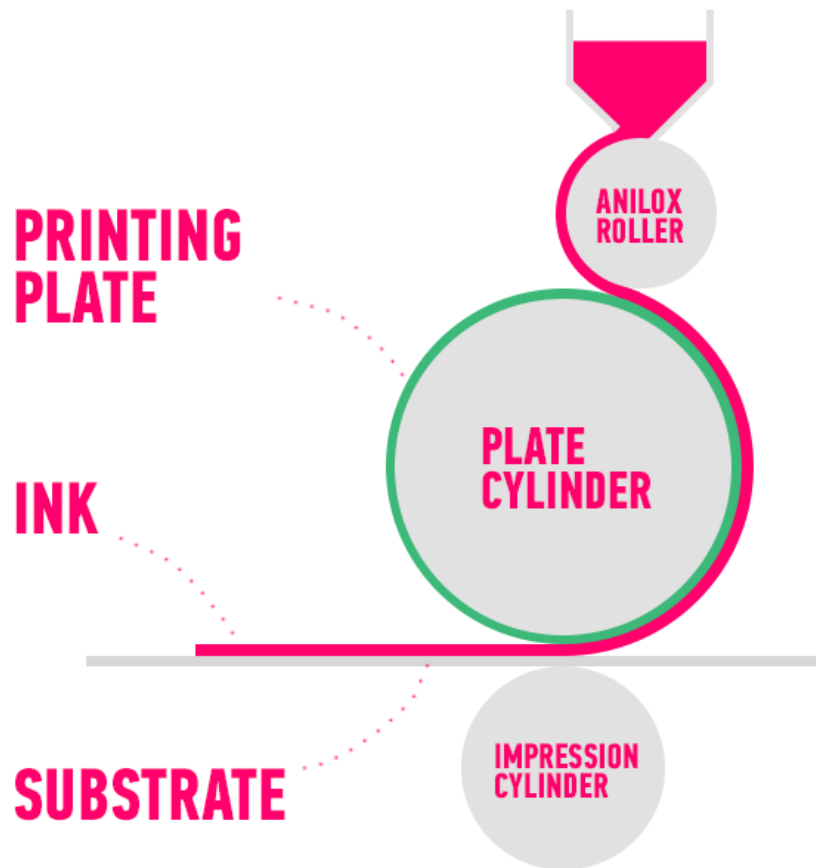


Figure 3. Flexographic process

Tetra Pak offers two quality levels, which they call Flexo Line (client's choice) and Flexo Process. The difference between these quality levels is made apparent when preparing files for Flexo Line production. In the Flexo Line method all colors used should be treated as spot colors<sup>7</sup> not process colors<sup>8</sup>, and the process will only allow two colors to be overprinted, with only one of them able to be screened<sup>9</sup>.

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<sup>7</sup> Spot colors are the colors that are mixed before printing process and are applied to the substrate via their own printing plate. (University of Missouri, 2010)

<sup>8</sup> Process color is a term used to describe colors that are mixed on the substrate itself using four basic inks: cyan, magenta, yellow and black. (University of Missouri, 2010)

<sup>9</sup> Screening is a process of breaking up a solid color into individual dots in order to vary the intensity of said color. Intensity is controlled either via varying the distance between the dots or, alternatively, by adjusting their size. (Kipphan, 2001, p. 41)

## 2.6 Packaging anatomy

Different sides of Tetra Rex packaging solution (Figure 4) have varying degrees of visibility depending on how the product is displayed in a grocery store, so they can be utilized to perform different functions:

- The display sides are the sides that are likely to be facing the consumer when the product is on a shelf of a display freezer;
- Top sides are a continuation of display sides and form the gable top of the Tetra Rex carton. These are visible when the product is stored in both glass top and display freezers;
- Top seam is the part of the carton that carries shelf life information;
- Info sides are most likely going to be hidden from view unless the packaging is picked up;
- The fold is the least visible part of the packaging. The majority of consumers would probably not notice most of the things that are printed in the fold.

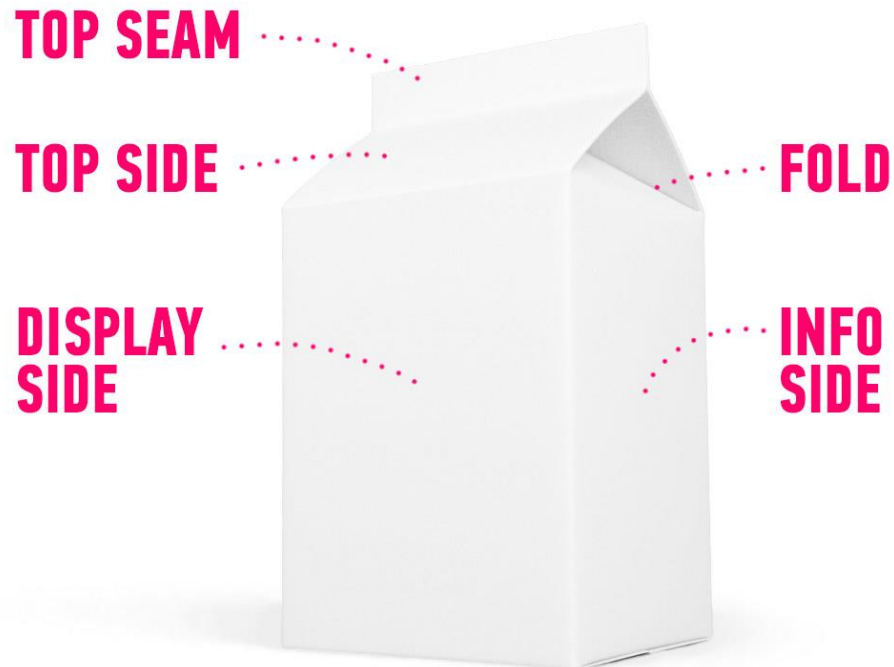


Figure 4. Tetra Rex carton surfaces

According to state laws, all goods sold in Russia must comply with certain regulations. Food products are subject to many additional regulations relating to health and

safety. The full list of regulations that had to be kept in mind during this project were the following:

- The text on the packaging must be in the Russian language (however it can also carry a foreign language or the languages of other national minorities);
- The packaging must show the manufacturer or importer name;
- The manufacturer's address must be present;
- The product must display its GOST standard number, or identification of conformity to other food product quality assessment;
- Nutrition information and contents must be shown;
- Expiration date must be shown.
- State regulations also demand that packaging cannot utilize pigments that contain heavy metals and other toxic materials.

Aside from the state regulations, the packaging also needs to have a barcode. An EAN-13 barcode is a type of barcode used to encode a unique product identifier known as GTIN-13. This identifier consists of 13 numbers and is used in retail POS (Point of Sale or checkout) and General Distribution Scanning Environment.

Being primarily designed to be read by computer equipment, barcodes are subject to relatively rigid specifications. A regular EAN-13 (Figure 5) is 31.35 mm wide with a bar height of 22.85 mm. (GS1 Australia, 2013, p. 215) It has the so-called left and right Quiet Zones of 3.63 and 2.31 mm respectively. Quiet zones are blank margins used to help the barcode scanner recognize the beginning and the end of the barcode. The barcode may be magnified within the limits of 80%—200% of the original size; the Quiet Zones must be scaled together with the barcode. The bar height may be truncated at the expense of scanning reliability.



Figure 5. Quiet zones and Bar Height

Barcode color is an important consideration, as barcode scanners use infrared light source to read barcodes. GS1 advises to use black bars on a white background as an ideal solution, but a possible alternative is to use light colors from the red side of visible spectrum of light for the background, and dark colors from the blue end of the spectrum for the bar fill color. (GS1 Australia, 2013, p. 209)

### 3 LOGO

The perception of a logotype in relationship to a particular business or product is often compared to how people perceive another person's face. It serves the function of differentiating a product from an array of functionally identical products; it helps present the brand image in a refined and concise way. The Logo acts as the focal point of a visual identity, being able to quickly convey a lot of information about the brand and with time possibly transcending its intended original purpose to become an icon that is instantly recognized and used by people when talking about a brand.

According to David Airey, there are six main components to an iconic logo design: simplicity, relevance, endurance, distinctiveness, memorability and adaptability (Airey, 2010, p. 22).

To focus on themes relevant to the product, the logo development phase started with me creating a mind map (figure 6) that plotted my various associations stemming from concepts related to the words "fresh", "cold", "quality", "smoothie" and "berries". This mind map was created to explore associations out of which the initial ideas could be built by visualizing and joining them together in various combinations.

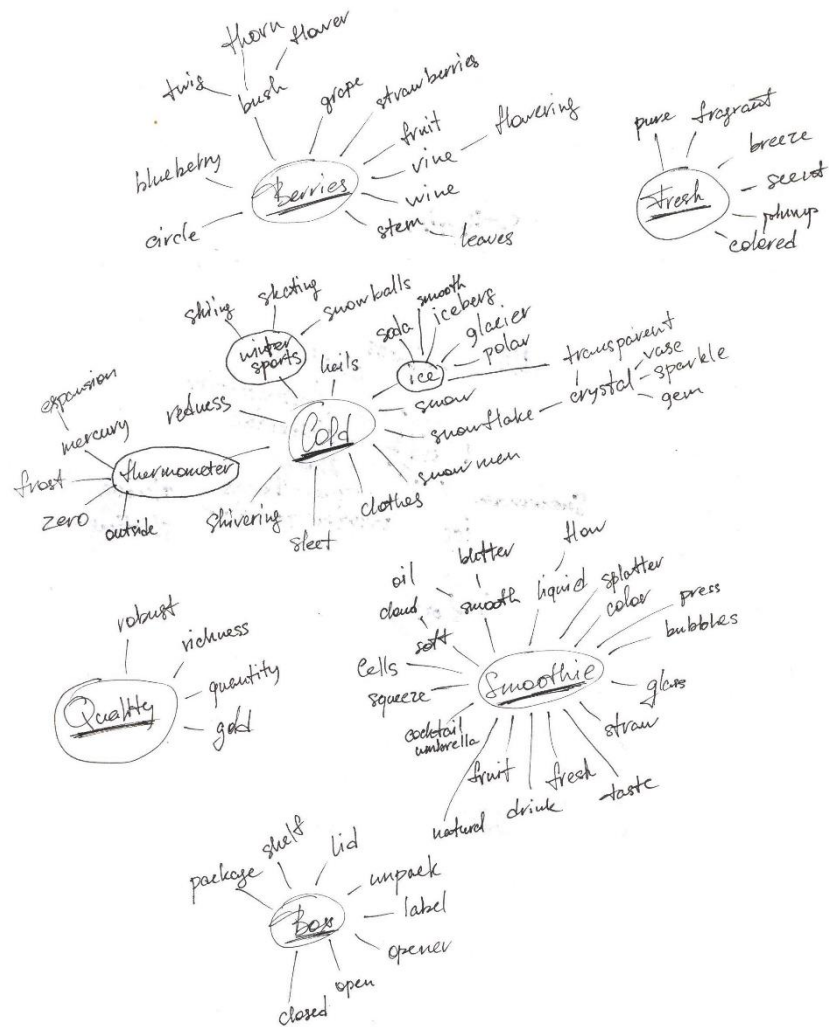


Figure 6. Mind map of associations used in logo ideation.

Having a list of concepts related to the keywords, I used those concepts to sketch out a first set of ideas. After those initial stages were complete, I picked out a few of the rough logo ideas (figure 7) and sent them to the client to find out their opinion and preference. The client's response was that they liked a couple of these ideas, one that combined a drinking straw with a berry or cloud, and another one that combined a berry and a snowflake. Based on this information I proceeded to refine those ideas.



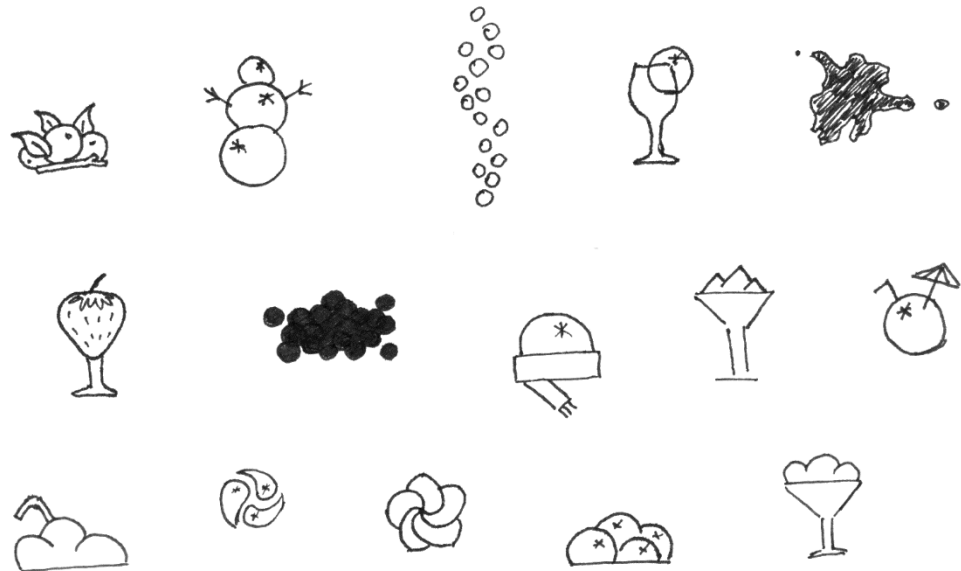


Figure 7. First sketch developing logo ideas.

After producing a series of paper sketches in order to refine the ideas and to develop a deeper feeling for them, I proceeded to construct digital versions of the drawings. I started out by creating templates of the more complicated shapes in Autodesk AutoCAD and later exported them into Adobe Illustrator.

When it comes to producing more iconic shapes, which have a simple logic to them like e.g. radial symmetry, I generally find Autodesk AutoCAD software package to be more suitable to my workflow. Compared to Adobe Illustrator, AutoCAD provides more calculated precision and a set of Boolean and array tools, which make the development process significantly faster and more straightforward.

Once in Illustrator, I produced several variations of logo shapes by combining elements that had been favored by the client in different ways. These were then sent back to the client for feedback. (Figure 8)

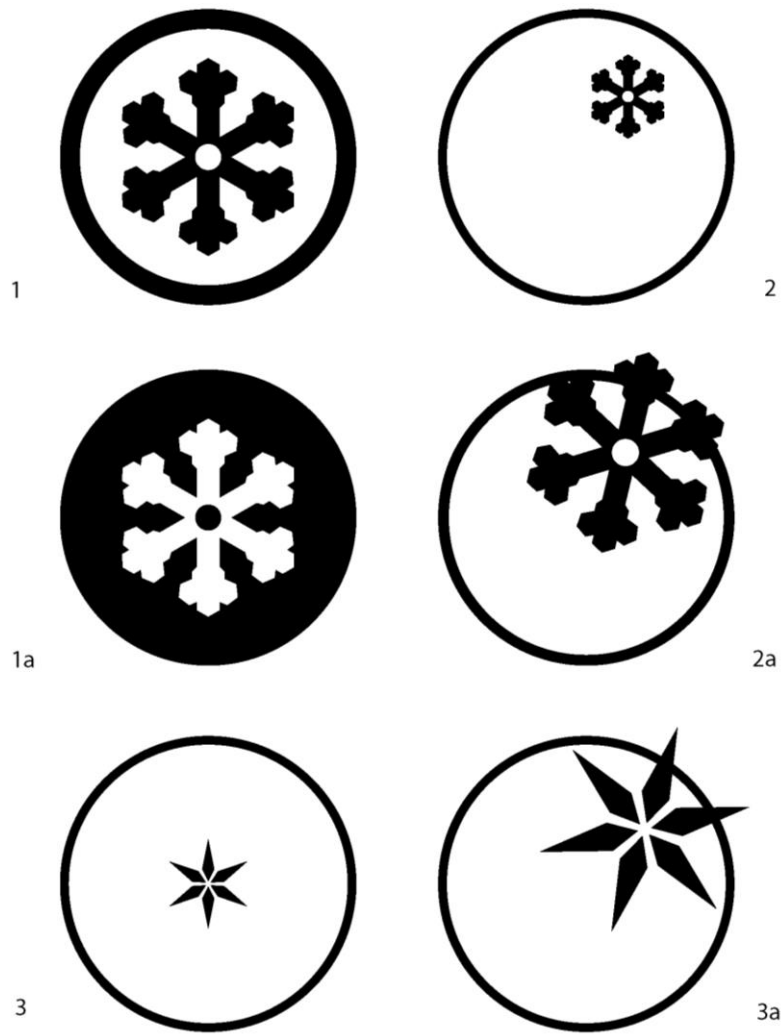


Figure 8. Digital sketches exploring the combination of a berry and snowflake.

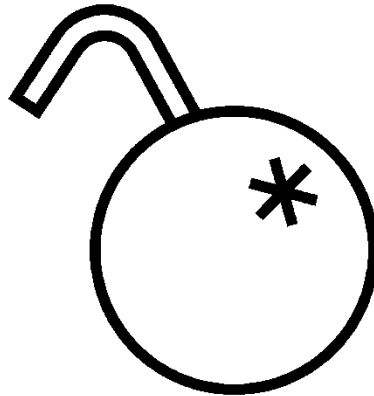
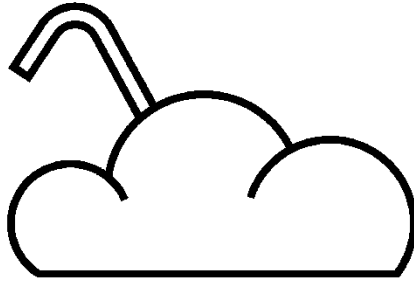


Figure 9. Digital sketches exploring the combination of a drinking straw with a berry or a cloud.

The client responded best to the last version, a berry with a cocktail straw inserted into it, so the logical decision was to continue developing said version. (Figure 9) One of the most obvious flaws with this drawing was the way the straw was depicted—using an outline instead of a solid shape created a visual dissonance. The other fault was the angle and position of the straw relative to the berry. It was clear that the logo should be reworked.

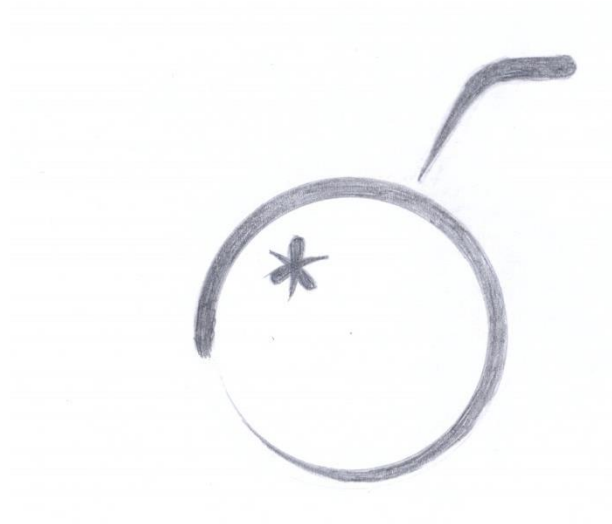


Figure 10. A sketch of an improved version of the logo.

In the sketch above (Figure 10) I had addressed the issues of the straw appearance, angle and position, as well as stylizing the whole logo to appear to be made with a brush as an effort to make the logo feel more organic and thus more appropriate for a smoothie product. In addition, the logo was reflected along the vertical axis for a bit more comfortable feel.

As these improvements had been implemented, it was time to add the “Smoothie Berries” product name to the logo. A selection of fonts was presented to the client and after a discussion we set our minds on the DIN font family designed by Panos Vassiliou and published by Parachute type foundry. This family, aside from aesthetic aspect, suited the job because it includes Cyrillic<sup>10</sup> character set and has an extensive set of weights<sup>11</sup> as well as webfont<sup>12</sup> versions of those weights. With the typeface choice fixed, I created a few final versions of the logo. (Figure 11)

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<sup>10</sup> Cyrillic script is a writing system that originated in First Bulgarian Empire and is now mainly used in Russia and neighbouring countries.

<sup>11</sup> Font weight is a term used to describe how thick the letters are in a font relative to their height. Common weights include Thin, Regular, Bold etc. (Samara, 2011, p. 23)

<sup>12</sup> Webfonts are a set of specific font file formats interpreted by various internet browsers, and used on websites. Additionally, webfonts are a type of license that allow the use of aforementioned font files on the internet. (FontShop International GmbH, 2013)



Figure 11. Final multiple logo choice.

After presenting the final proposed signature variations to the client, they chose the bottom left version. (Figure 12)



Figure 12. Final logo version.

## 4 PACKAGING

### 4.1 Graphic patterns

As the product line consisted of three different types of berries, it was logical that the packaging clearly reflected those different berry types. To that end a combination of color and illustration was used to aid and complement the required written content.

According to the technical requirements of the printing process originally selected to produce these packages, the illustrations had to use a single non-gradient color and preferably be vector<sup>13</sup> shapes. Vector shapes are preferable to raster<sup>14</sup> images because when printed, vector shapes produce much sharper and cleaner results as well as lacking the possible compression artifacts and color deviations. (Brown, 2012) These limitations made an engraving-like technique of line drawing the most suitable option for creating illustrations.

To employ the illustrations in a more effective way, I needed to base them on something relevant to the corresponding berry type. My initial ideas for the illustrations were based on using elements like the molecular structures of compounds commonly found in those berries, on basic geometric shapes, or on some distinctive traits of the plants etc. However, I eventually decided to make the illustrations abstract, based on my impressions from the flavors of the berries, because none of the initial ideas seemed to provide enough visual contrast between the different packages for the customers to quickly tell one packaging from another based on illustrations alone.

Before starting the actual illustration development, I had to decide on what type of illustration the packaging needed. I made a few concept sketches and showed them to

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<sup>13</sup> Vector graphics is a way to describe geometric shapes using points and mathematically defined curves between them. Vector graphics are infinitely scalable without quality loss, as opposed to raster images that do exhibit quality loss when enlarged. (Hewitt, n.d.)

<sup>14</sup> Raster image is an image composed of individual pixels, or points, arranged in a rectangular array with each pixel assigned specific color values and, sometimes, other parameters such as transparency. (Hewitt, n.d.)

the client. They were most impressed by a sketch featuring numerous groups of concentric circles (figure 13).



Figure 13. Illustration sketch.

Based on that sketch, I started to develop a set of various illustrations for different berry types. They were drawn with a Pilot 0.1 Drawing Pen, scanned as a raster file and then vectorized using the open source Inkscape software package, as I found that it produces better results than Adobe Illustrator in this type of job.

Before vectorization, the files need to be processed through Adobe Photoshop to adjust the gamma curve,<sup>15</sup> as the algorithm behind vectorization produces results that are more accurate if the images being vectorized are monochromatic. After adjustment in Photoshop, the files are imported into Inkscape, where they are auto-traced and saved as scalable vector graphics (SVG format) before finally being imported into Adobe Illustrator, where it was combined with all the other aspects of packaging.

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<sup>15</sup> Gamma correction is originally a method of compensating for the non-linearity of the way computer displays render luminosity values. (Westin, 2011)

As the elements used in the illustrations were often very similar to each other, they were drawn separately in a number large enough to prevent noticeable repetition, but small enough to significantly reduce the amount of time required to create larger compositions. As a consequence, I could now manipulate these individual pieces within illustrations and correct small mistakes that would otherwise have required the re-drawing of a whole illustration if these elements had been drawn as a single piece.

While developing a pattern for the blueberry, I decided that something smooth with a minimum amount of sharp corners and straight lines would be the best course to take, considering its taste is very mild and delicate. The initial circles concept proved to be very effective for this purpose. (Figure 14)

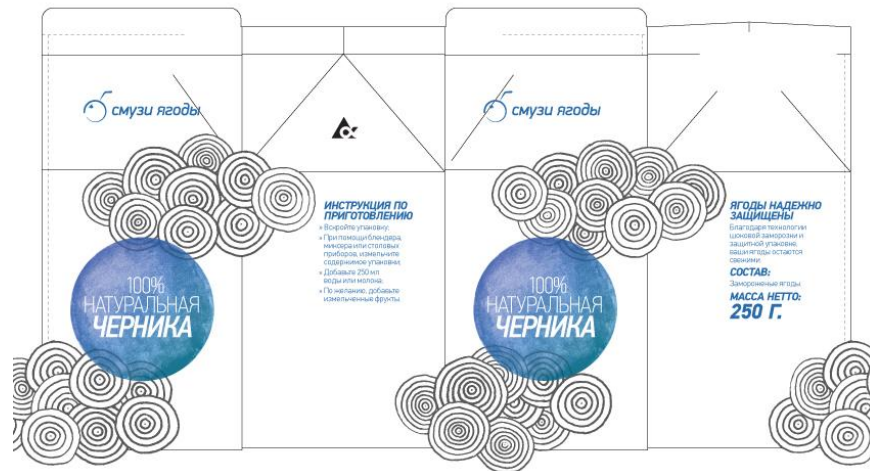


Figure 14. First blueberry illustration mockup

As lingonberry has a very tart flavor to it, I decided to make the pattern reflect the almost aggressive character of the taste with a lot of angled spiky shapes and tighter hatching. (Figure 15)



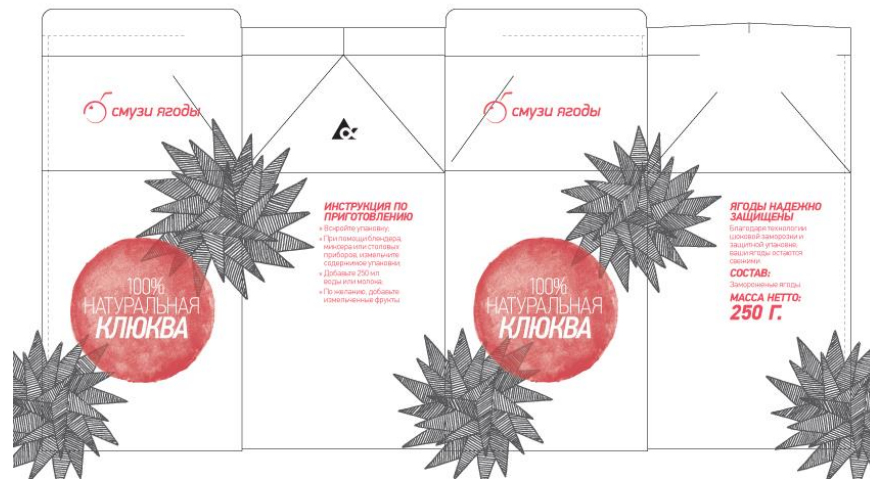


Figure 15. First lingonberry illustration mockup

There are a few different cultivars of blackcurrant—from very acidic with a very colorful flavor, to sweet and mild, but the one that will be sold by the client is a relatively lightly sour variety. The first illustration for blackcurrant (Figure 16) was met coldly and later in the process was replaced with another one.

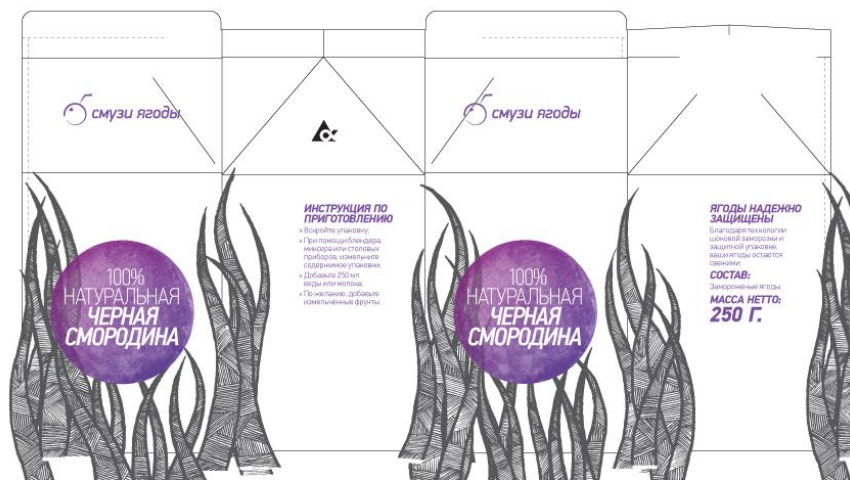


Figure 16. First blackcurrant illustration mockup

## 4.2 Typography

Typography is the cornerstone of communication in packaging design. Certain kinds of information, such as brand names, contents of the packaging, expiration dates etc. need to reach the end-user in the least possibly ambiguous way. The best tool in a graphic designer's arsenal for conveying those types of information is text. Typography can also serve to strengthen the brand differentiation as well as communicating

brand positioning and personality. Choosing a certain font may lead consumers to perceive a brand as traditional, modern, functional etc. (Calver, 2004, pp. 122-124)

As was discussed earlier when talking about the logo, the typeface selection process was largely determined by the limitations of the project, namely the requirement to have a Cyrillic character set, a webfont version and preferably an extensive set of weights to allow for more typographic freedom. To test out various type combinations, I used several digital type retail websites such as myfonts.com to generate previews of the words that would end up on the packaging, set in different fonts. From an aesthetical point of view, fonts were chosen based on the inspiration from the mood board that was created by the client earlier in the process. The total list of typefaces presented to the client consisted of four font families featuring Futura PT, Monotype Harmonia Sans, (Figure 17) PF Din (Figure 18) and Fontfabric Code families. When presented with a few weight combinations of each these font families, the one preferred by the client was PF Din Text family.

**100% КЛЮКВА**  
 Натуральная клюква в шоковой заморозке

100% КЛЮКВА  
 Натуральная клюква в шоковой заморозке

Figure 17. Monotype Harmonia Sans Cyrillic Pro

**100% КЛЮКВА**  
 НАТУРАЛЬНАЯ КЛЮКВА В ШОКОВОЙ ЗАМОРОЗКЕ

100% КЛЮКВА  
 НАТУРАЛЬНАЯ КЛЮКВА В ШОКОВОЙ ЗАМОРОЗКЕ

Figure 18. PF Din Text Compressed Pro

At this point, it was reasonable to start developing the typographic hierarchy. Considering the very limited space and fixed proportions of the working surfaces, typography

needed to adapt to the conditions. The DIN font family includes a variety of font weights in varying widths, so it can be effectively utilized in a broad range of layout proportions.

Upon client's request, it was decided that the display side of the packaging would carry big point size title reading "100% fresh berries", in order to draw potential buyers to the product. For this purpose, a compressed version of DIN proved to be the most useful because of how narrow it is, as a narrow font allowed bigger point size in a narrow layout.

To eliminate any possible confusion, another two lines of text were added under the title, reading "100% natural flash frozen berries", set in smaller and lighter type. These lines were given a colored background in order for them to stand out more and were also used on top sides because their size fitted space restrictions. Additionally, to maintain a better vertical rhythm, these lines were set in such a way that their height matched the height of characters in the title. (Figure 19)

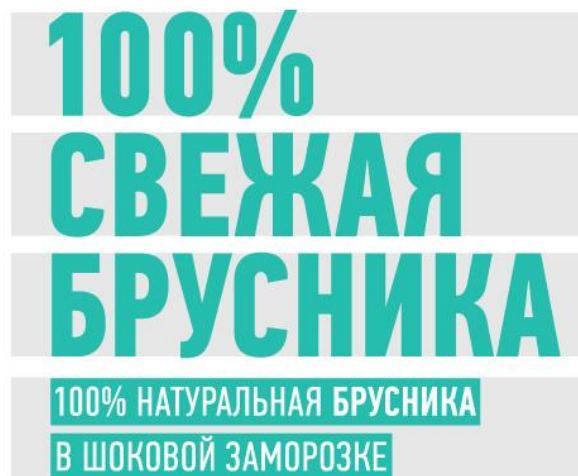


Figure 19. Display typography

The initial mockups had headings on the info sides using a compressed version of DIN in an effort to unify typography across the packaging, but when more and more information was supplied by the client to be accommodated on the packaging, there was soon no more space left, especially considering the fact that the technical specifications provided by printing house demanded the minimum font size to be 10 points for

the inverted sans-serif<sup>16</sup> type, which is a fairly large minimum size for the info side of the packaging, which is meant to be read up close. All this added up to the point that the way information is presented had to be adjusted.

The main challenge of the presented task was to group related elements while keeping apart the unrelated ones and in order to accomplish this, several Gestalt principles could be utilized. Proximity principle<sup>17</sup> was used to differentiate visually separate paragraphs and other unrelated elements by padding them apart with white space<sup>18</sup>. In order to save space, it was possible to pull headings and body copy together, providing they have enough visual contrast, as evidenced by the Similarity principle<sup>19</sup>. This contrast was achieved by adjusting the weight of the headings, which gave them a darker typographic color<sup>20</sup>. They were also adjusted to better take advantage of horizontal space instead of vertical by changing the font to an italic font version. The body copy was set as regular 10 point DIN Text font which provides excellent readability and legibility. For space conservation purposes, the text was set solid<sup>21</sup> and the margins were reduced significantly.

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<sup>16</sup> Sans-serif font is a font without decorative elements on terminals of its letterforms. (Samara, 2011, p. 22)

<sup>17</sup> Rule of Proximity is a concept from the Gestalt Theory that states that elements close to each other are perceived as a group. (Todorovic, 2008)

<sup>18</sup> White space is space on the layout that is perceived as "empty".

<sup>19</sup> Similarity principle in Gestalt psychology states that similar objects tend to appear as belonging to the same group.

<sup>20</sup> Typographic color is a term used to describe the effect when area occupied by a font with a bolder weight appears darker than an area occupied by a lighter font.

<sup>21</sup> Setting type in such a way that the distance between lines of text is equal to type size is referred to as solid setting. (Klanten, 2007, p. 76)

## **СПОСОБ ПРИГОТОВЛЕНИЯ**

- Вскройте упаковку;
- Налейте воды для разморозки содержимого;
- Подождите 2–3 минуты и слейте воду;
- Ягоды готовы к употреблению (упаковку можно использовать как емкость).

## **ЯГОДЫ НАДЕЖНО ЗАЩИЩЕНЫ**

Благодаря технологии шоковой заморозки и защитной упаковке, ваши ягоды остаются цельными и свежими.

**250** ГРАММ **12** МЕСЯЦЕВ  
ХРАНЕНИЯ  
ПРИ -18°C\*

\*Срок годности и дату изготовления см. на верхнем шве.

Продукт повторно не замораживать.

Figure 20. Info side typographic hierarchy

Aside from space issues, the body copy included a sample basic smoothie recipe which was best presented as a bulleted list. Leaving those lists as is produces an optically ragged left edge of the text block as punctuation occupies less space than the average letter. In order to make this list and other lines beginning and ending with punctuation appear more orderly, a technique called punctuation hanging is used. (Boulton, 2005) The technique involves aligning the left edge of the line based on the first letter instead of a punctuation mark. (Figure 20)

### 4.3 Color

At its core, the word color is used to describe the way people perceive wavelengths of electromagnetic radiation from the visible spectrum. Visible spectrum spans from about 400 nanometers to roughly 800 nm, from violet through blue through green to red. (Itten, 1970, p. 16) This, together with luminance and saturation, are the most basic elements of color available to a designer. When differences are perceivable between two colors, those differences are commonly referred to as contrast, and it is this contrast that helps us build color palettes consisting of colors of variable distinctness. There are seven ways of managing color contrast, according to Johannes Itten: (Itten, 1970, p. 32)

- Contrast of hue
- Light-dark contrast
- Cold-warm contrast
- Complementary contrast
- Simultaneous contrast
- Saturation contrast
- Extension contrast

Before the change in printing company, the packaging was supposed to be printed in a combined run with a 5 Pantone color palette, so at least one color had to be reused across at least two packages. With this in mind, a color palette with two colors per packaging seemed to be the most reasonable solution—this way there would be enough color variation for a clear visual distinction between the products while at the same time, only one or two colors had to be reused, depending on whether the color of the barcode would be black or some other suitable color. To begin developing color palettes, their purpose had to be defined; the dominant color had to be chosen; an accent color had to be picked. (AdamsMorioka, 2006, p. 41)

As the process required Pantone Solid Coated colors, I had to refer to Pantone color swatches. In the end, five colors were picked out from the swatch book. (Figure 21) Please note that the colors in this document are not representative of the real Pantone colors, and are just an approximation. Bright colors were chosen to draw attention to the packaging and evoke a feeling of freshness. To compensate for the lack of saturation and luminosity contrasts, the colors that are far apart on the hue scale were picked. Those could be interchangeably used as dominant and accent colors.

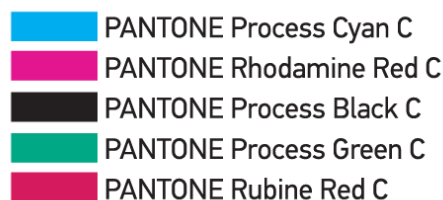


Figure 21. Chosen spot colors

It was decided that Pantone Process Black C should be used for the barcode for maximum scanner readability. The main color was used as a background for info sides and

folds, as well as being a fill color for the patterns on the display and top sides. The accent color was used to separate the text on the display and top sides apart from all the other content. For the blackcurrant packaging, Rhodamine Red C was used as the main color with Cyan C used for accents. (Figure 22) Similarly, the dominant and accent colors for blueberry were Process Cyan C and Rhodamine Red C respectively, while for the lingonberry they were Rubine Red C and Process Green C.

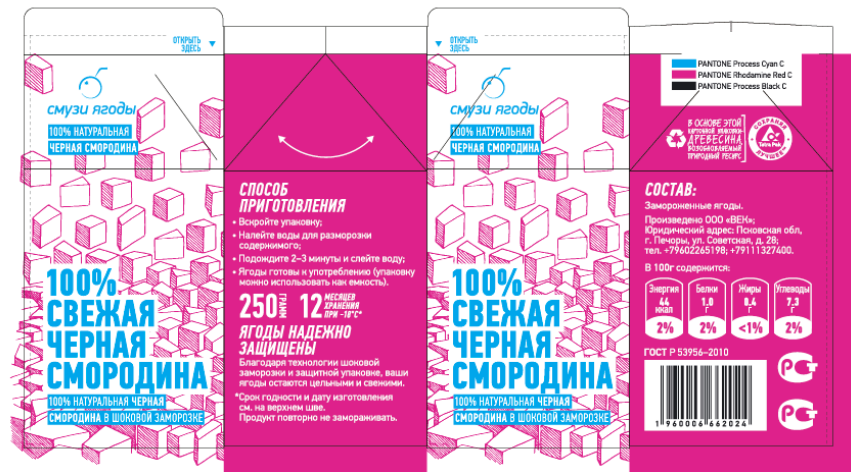


Figure 22. Color usage example

A change in printing technology occurred when the switch in printing house happened, so the colors had to be converted to process color. Standard process color doesn't provide the same broad color gamut as the Pantone Matching System does, (American Institute of Physics, 2006) but with this change it was possible to add more colors to the packages as the five color limitation did not apply any more. Color conversion was made possible thanks to the new printing house providing an ICC color profile<sup>22</sup>, which was loaded into Adobe Illustrator to approximate how the colors would look when printed out. After the conversion process was finished, the color of decorative patterns was changed to a lighter tint of the dominant color in order to make the patterns less overpowering. (Figure 23)

<sup>22</sup> ICC profiles are a system designed to predict and possibly compensate for color transformation in data that is being transferred between different input and output devices such as scanners, cameras, printers etc. (International Color Consortium, n.d.)



Figure 23. Colors after the printing house change

#### 4.4 Layout

Layout is a term used to describe the way design elements are positioned within the design and relative to one another. (Ambrose & Harris, 2011, p. 6) The way the elements are positioned within the design can influence how those elements are perceived and whether, in case of three dimensional working spaces, they are seen at all. Often, to present information in a structured way when creating layouts, graphic designers utilize grids — a way of arranging the elements on the design — but in some cases adhering to the grid may be undesirable in order to not stifle creativity. (Ambrose & Harris, 2011, p. 58) With this in mind, I decided that given the size of packaging and the amount of information that needed to be featured on it, it would be sensible to not use the grid and instead opt for simple margins on each side.

Next step in creating a layout began with defining the purposes of each side of the Tetra Rex packaging. Given the fact that the product will be stored in a variety of different freezers, it was reasonable to make product recognition easier in a broad set of situations when various sides are obstructed from the view of a potential buyer. As the gable top would be visible in all expected scenarios, it would make sense to place all the most essential information in a succinct way there. As the display and top sides are adjacent to each other and at least one of them would be unobstructed in most freezer types, a continuous surface graphic containing information designed to deliver the ini-



tial impact could span across them. All the additional back-of-pack information including mass, contents, barcode, certification signs etc. was decided to distribute among the other sides.

To gain an initial feeling of the degree of freedom in terms of space restrictions, I proceeded to assemble the first mockups and variations (Figure 24) on how the illustrations may interact with other elements on the packaging and how information may be laid out. These first variations explored the idea of containing the illustrations within a round shape, as a reference to the shape of a berry.



Figure 24. Variations on layout and illustration usage

Based on the feedback from the client and a small survey, what people liked most from all the aspects of the initial mockups were the illustrations, so the next version saw improvements on the display side, having the illustration featured more prominently. It also incorporated the improvements on the display typography. In order to improve on nutrition information readability, as it could be important for the target demographic, it was enclosed into bubble-style nutrition labels. (Figure 25)

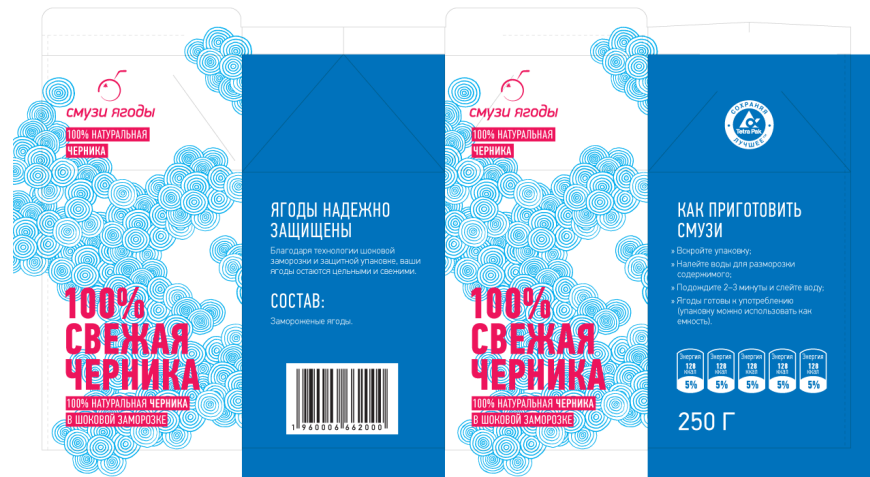


Figure 25. Variations on illustration usage

As the typography and color development was finalized by this point, they were incorporated into the final layout version for Tetra Pak. This version also had printer marks incorporated into the design, which must be inside the trim area for this type of packaging. The barcode was truncated for space conservation purposes, and the quiet zones were extended, as the printing company expressed concern about the barcode readability. “Open here” mark was also added to the gable top seam to guide the consumers towards the correct way of opening the packaging. In order to improve display text readability and to avoid inks bleeding into each other, the title was given a white background. (Figure 26)

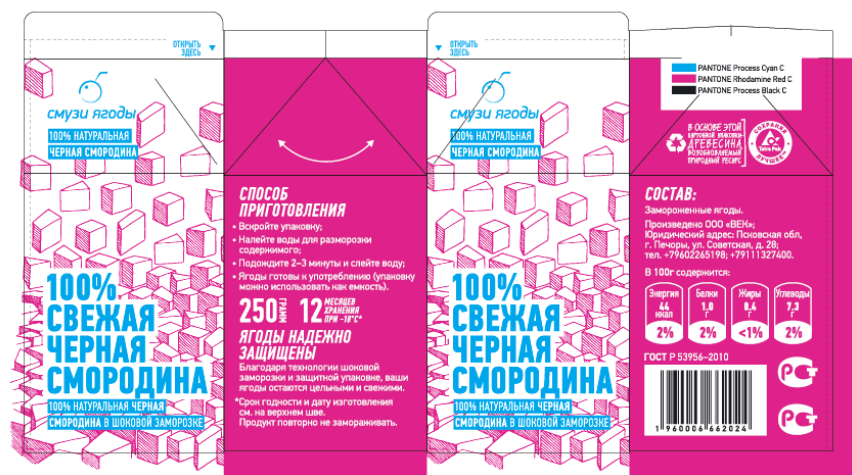


Figure 26. Color usage example

During the shift to Molopack company, I was provided with a new packaging die which prompted slight changes in the layout. The color bars were excluded from the

packaging, as well as the logos of printing firms were swapped to reflect the change. (Figure 27)



Figure 27. Final layout version for Molopack

In order to present the finalized design to the client in a more realistic way, several 3D renderings<sup>23</sup> were produced using a Blender open source software package coupled with a LuxRender rendering engine. A 3D model of a 1L Tetra Rex carton was procured from the internet, published under Attribution 3.0 creative commons license which allows third parties to modify and use it for commercial purposes. (Creative Commons, n.d.) The model was shortened to the proportions of a .5L carton in Blender and rendered untextured to save time, as the LuxRender is an unbiased<sup>24</sup> rendering engine and thus produces more realistic results at the expense of greatly increased rendering time compared to biased rendering systems. (Farnsworth, 2006) Once the render was complete, the model was textured in Adobe Photoshop to produce the final images. (Figure 28)

<sup>23</sup> Rendering in computer graphics is a term used to describe the process of generating the final production quality imagery.

<sup>24</sup> Unbiased rendering is a physics-based approach to rendering computer generated imagery.



Figure 28. Final packaging versions

## 5 CONCLUSION

Overall, the graphic solution had been developed and the client was satisfied with the result of this project. The packaging is going to be utilized in real world situations. Compared to the competing brands, the resulting packaging is very distinct in its visual appearance and thus, depending on how the client utilizes this packaging in their marketing efforts, may create a new niche in the market or set a new trend.

Creating a graphic design piece with vibrant elements requires balance across design elements in order to avoid the piece to become chaotic. Graphic design process strives to produce unity within design elements and this project had succeeded in achieving this goal. (White, 2011, pp. 81-105)

Like any other piece of graphic design, the result project is defined by the circumstances in which it is likely to be used. Given this, the project had met the goal outlined at the beginning of this thesis, as well as laying the foundation for possible future development of the Smoothie Berries brand which may encompass online presence materials, stationery, advertising etc.

The process had revealed a large quantity of valuable practical knowledge of printing processes, professional interaction with a client, project planning, graphic design, typography, color theory. All these skills and knowledge can be utilized in later professional projects.

## 6 REFERENCES

AdamsMorioka, 2006. *Color Design Workbook: A Real World Guide to Using Color in Graphic Design*. Beverly, Massachusetts: Rockport Publishers.

Airey, D., 2010. *Logo Design Love: A Guide to Creating Iconic Brand Identities*. Berkeley, CA: New Riders.

Ambrose, G. & Harris, P., 2010. *Design Thinking*. Lausanne: AVA Publishing SA.

Ambrose, G. & Harris, P., 2011. *Layout*. 2nd ed. Lausanne: AVA Publishing SA.

American Institute of Physics, 2006. *Color Space Fundamentals*. [Online]  
Available at: [http://dx.aip.org/advisor/cmyk\\_color.html](http://dx.aip.org/advisor/cmyk_color.html)  
[Accessed 14 April 2013].

Bonneville, D., 2011. *How to choose a Typeface..* [Online]  
Available at: <http://www.smashingmagazine.com/2011/03/24/how-to-choose-a-typeface/>  
[Accessed 16 March 2013].

Boulton, M., 2005. *Five simple steps to better typography - Part 2*. [Online]  
Available at: <http://www.markboulton.co.uk/journal/five-simple-steps-to-better-typography-part-2>  
[Accessed 11 April 2013].

Bringhurst, R., 1996. *The Elements of Typographic Style*. s.l.:Hartley & Marks.

Brown, A., 2012. *Vectors vs. Bitmaps for Printing*. [Online]  
Available at: <http://designinstruct.com/print-design/vectors-vs-bitmaps-printing/>  
[Accessed 29 March 2013].

Calver, G., 2004. *What is Packaging Design?.* s.l.:Rotovision.

Cockburn, A., 2008. Using Both Incremental and Iterative Development. *CrossTalk: The Journal of Defense Software Engineering*, May, pp. 27-30.

Creative Commons, n.d. *Creative Commons — Attribution 3.0 Unported — CC BY 3.0*. [Online]

Available at: <http://creativecommons.org/licenses/by/3.0/>

[Accessed 17 April 2013].

Design, P-O-P, n.d. *Glossary / P-O-P Design*. [Online]

Available at: <http://www.popdesign.com/glossary?letter=p>

[Accessed 28 March 2013].

Farnsworth, M., 2006. *Biased vs Unbiased Rendering*. [Online]

Available at: <http://renderspud.blogspot.com/2006/10/biased-vs-unbiased-rendering.html>

[Accessed 17 April 2013].

FontShop International GmbH, 2013. *FAQ*. [Online]

Available at: <https://www.fontfont.com/faq#what-does-web-mean>

[Accessed 30 March 2013].

GS1 Australia, 2013. *GSI Australia User Manual - Numbering and Bar Coding*.

[Online]

Available at:

[http://www.gs1au.org/assets/documents/info/user\\_manuals/numbering\\_and\\_barcoding/Numbering\\_and\\_Bar\\_Coding\\_2013.pdf](http://www.gs1au.org/assets/documents/info/user_manuals/numbering_and_barcoding/Numbering_and_Bar_Coding_2013.pdf)

[Accessed 5 April 2013].

Hewitt, T., n.d. *Raster & Vector Graphics*. [Online]

Available at:

[http://faculty.rcc.edu/hewitt/Adobe\\_Photoshop/raster\\_vector\\_gfx/raster\\_vector.html](http://faculty.rcc.edu/hewitt/Adobe_Photoshop/raster_vector_gfx/raster_vector.html)

[Accessed 29 March 2013].

International Color Consortium, n.d. *ICC Frequently asked questions*. [Online]

Available at: <http://www.color.org/faqs.xalter>

[Accessed 15 April 2013].

Itten, J., 1970. *The Elements of Color: A Treatise on the Color System of Johannes Itten Based on His Book the Art of Color*. New York, NY: Van Nostrand Reinhold Company.

Kipphan, H., 2001. *Handbook of Print Media*. Berlin: Springer-Verlag Berlin and Heidelberg GmbH & Co. K.

Klanten, R., 2007. *The Little Know-it-all: Common Sense for Designers*. s.l.:Die Gestalten Verlag.

Kokemuller, N., n.d. *The Differences Between a Target Market & a Demographic / Chron.com*. [Online]

Available at: <http://smallbusiness.chron.com/differences-between-target-market-demographic-23090.html>

[Accessed 1 April 2013].

Samara, T., 2011. *Typography Workbook: A Real-World Guide to Using Type in Graphic Design*. s.l.:RockportPublishers.

Todorovic, D., 2008. *Gestalt Principles*. [Online]

Available at:

[http://www.scholarpedia.org/article/Gestalt\\_principles#Proximity\\_principle](http://www.scholarpedia.org/article/Gestalt_principles#Proximity_principle)

[Accessed 3 April 2013].

Twede, D., 2005. *The Origins of Paper Based Packaging*. [Online]

Available at:

<http://faculty.quinnipiac.edu/charm/CHARM%20proceedings/CHARM%20article%20archive%20pdf%20format/Volume%2012%202005/288%20twede.pdf>

[Accessed 21 March 2013].

University of Missouri, 2010. *Color tutorial: Process color*. [Online]

Available at:

<http://www.ps.missouri.edu/ps2/support/TutorialFolder/ColorTutorial/ColorTutorial3.html>

[Accessed 15 April 2013].



University of Missouri, 2010. *Color tutorial: Spot color*. [Online]

Available at:

<http://www.ps.missouri.edu/ps2/support/TutorialFolder/ColorTutorial/ColorTutorial2.html>

[Accessed 15 April 2013].

Westin, S. H., 2011. *Yet Another Gamma Correction Page*. [Online]

Available at: <http://www.graphics.cornell.edu/~westin/gamma/gamma.html>

[Accessed 29 March 2013].

Wheeler, A., 2009. *Designing Brand Identity*. Hoboken, New Jersey: John Wiley & Sons, Inc..

White, A., 2011. *The Elements of Graphic Design*. New York, NY: Allworth Press.