

MASTER'S THESIS

Theory of Effectuation

NOSOROGCHE

"Wake up the warrior within"

2019

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Introduction

The idea for a clothing line within the sportswear industry here in Denmark, started in the late 2018 by one of the team members along with a long-time friend who studies Graphic Design in the University College of Northern Denmark (UCN). Prior to coming to this paper, work has been done in regard to creating samples of the initial designs of leggings and sport bras which will be



Figure 1. French braids. source: google.com

explored in blabla. However, before even stepping in the depths of the sportswear industry, everything began with a simple hair style for girls. A hairdo which inspired the team to pursue the idea of making something special and something different. This is the French braid hairstyle (figure 1) which, wildly enough,

was associated with the thick, armor-like skin of a rhinoceros. The rhino association did not just stop there, taken step further it was used as a ground for creating the initial name of this future brand, i.e. “Nosorogche” /No-so-rog-che/ also spelled in Cyrillic alphabet Носо́рогче. The chosen name comes from the native language of two of the team members (Bulgarian), literally meaning ‘baby rhino’. Additionally, despite being a giant animal, the rhinoceros symbolizes gentleness, unconventional behavior, peaceful personalities, steadiness, stamina, power and agility (NG, 2019) - all of the values and characteristics affiliated with the brand. Correspondingly, this is what



Figure 2. Initial logo of Nosorogche, written in Cyrillic “Носо́рогче”

the French braids hairstyle represents - the look gives the vibe of a tough girl and is coherent with the attitude that girls are looking for when they go for a workout. Moreover, the idea behind the hairstyle is that it keeps the hair from falling out when doing highly intense moves by keeping it in place, staying off the neck and still looking good even while sweating. The logo of the brand was decided to be tightly connected to the hairdo, which is a head of a

girl (braided) seen from the back (figure 2). This is not your typical logo but more like illustration which was chosen to portray the passion of the team for braids and sports. From this point, the originators of the idea were just trying out how the logo/illustration and different styles of the



Figure 3. The name Nosorogche written in Cyrillic on a t – shirt and photo manipulation on a sweatshirt

signature of the brand fits on random type of clothing like t-shirts or shirts (figure 3. above) until finally settling at sports garments like leggings and sport bras. More on the logo and the visual identity of the brand can be found in blabla. The shift from regular garments to sportswear was also induced by the fact that the team members are coming from a sport background, including but not limited to karate, kickboxing, swimming, judo, gymnastics, weightlifting/bodybuilding, football and basketball. Essentially, the passion and love about sports, and being active plays a big part in the lives of the team members. An initial observation was made, in Aalborg (Denmark), of the current clothing trends regarding the choice of what girls were wearing as they head out to practice their sport or exercise routines like jogging, yoga or going to any gym to lift weights, do cardio or have a group workout. The observation showed that 80%¹ of the girls going to the gym or running on the street are wearing very simple and plain looking garments (figure 4. On the right) – predominantly in dark colors – black/gray/navy etc. Suffice it to say, it looked the same and something vital was missing – fire, life or passion, you name it. Wherever we turned our heads to, all we saw was dark colors. This was the moment when we knew that we want to change something – to change the appearance of these type of garments and to change the perspective of the person wearing those garments, empowering the feeling of the unconventional, the feeling of standing out of the crowd. The figure below shows the very first design that was created as a mock-up by the team. It was made on Adobe Photoshop, which is a



Figure 4. Plain navy-blue leggings. source: google.com

¹ Ca. 8 out of 10 girls



Figure 5. Initial design for Nosorogche leggings - "Cosmos"

graphic editor by Adobe Inc. Hence, this is how the journey from an idea to a potentially sellable sportswear product began for the team. Before digging into the depths of the venture, we will first introduce the team who created it.

The Team

The team consists of 3 members, 2 of whom are studying Entrepreneurial Engineering in Aalborg University and the 3rd member studies Graphic Design in the University College of Northern Denmark.

Slavoljub Drobnjak – Currently part of the Entrepreneurial Engineering master's program in AAU. Has a Bachelor's degree in Innovation & Business from the University of Southern Denmark.

Lars – One of the entrepreneurs on the team who is currently studying Entrepreneurial engineering at AAU. Lars has a background in Renewable Energy Engineering. He has experience within entrepreneurship, which he gained from the EE master's program.

Venelin – the designer in the team who currently studies graphic design at University College of Northern Denmark and has a bachelor's degree in Sociology in Bulgaria. Moreover, he has a lot of experience with photography, photo editing and has previously been part of a group called Destructive Creation back in his home country. Long story short, it is a Bulgarian – based group of anonymous artists involved in and art intervention (DC, 2019).

Research question

This master's thesis aims to investigate the journey from an idea to a potential business in the performance apparel/fashion industry on a regional scale in Denmark. In order to address this, Effectuation theory and its principles will be investigated. Thus, making our main research question as follows:

How can an idea turn into a potential business within the sportswear industry using the Effectuation theory and its principles?

Additionally, this study will assess the extent to which the suggested effectual approach can be utilized as well as its' limitations when starting up a new business. With the principles of effectuation serving as a guide, this thesis will attempt to introduce a product to an accessible customer segment within the aforementioned industry with the goal of validating the business concept. Furthermore, the objective of this study is to also gain an understanding of possible partnerships and investors to pursue funding and thus, move from the stage of discovery to the stage of incubation. That leads us to the following research sub-question:

To what extent the suggested effectual approach can be utilized when starting up a new business in order to validate its business model?

Effectuation framework

Effectuation theory

The effectuation theory is a mindset developed by Saras. D Sarasvathy. Sarasvathy's goal was to illustrate how entrepreneurs think, act and process new ventures, and to compare this to causal thinking. Her research led to the creation of a set of principles to follow in order to act effectual.

The research

To determine the entrepreneurs' different mindset to that of managers and strategists, Sarasvathy created a set of questions she presented to variety of different founders of companies within in the US. The founders where set on solving problems concerning starting companies and how to approach these problems. Sarasvathy also went into each founders' story and background to achieve and understanding of how they processed different questions and obstacles to create a successful venture. During her research, she also presented the scenarios and questions to managers and people in strategic positions.

What Sarasvathy observed was that entrepreneurs had a mindset that varied to that of a strategist and that of a manager. While the manager and strategist had a causal way of thinking, the entrepreneurs had an effectual way of thinking. (S. Sarasvathy, 2001A -B)

Causal thinking vs effectual thinking

In causal thinking, there is a given goal to be achieved. To achieve this goal, possible means are analyzed and assessed so that one can choose the best means to the given goal concerning efficiency, cost, speed and so on. (S. Sarasvathy, n.d, page 2,3)

The managers way of thinking is a standard causal reasoning to approach a defined goal. There is a set of predefined means to achieve this goal and the managers choose the best suited way of achieving the goal. The means originate from the companies' abilities, funds etc and the companies' network. In figure 6 below, there is a representation of the managerial way of thinking. (S. Sarasvathy, n.d, page 3)

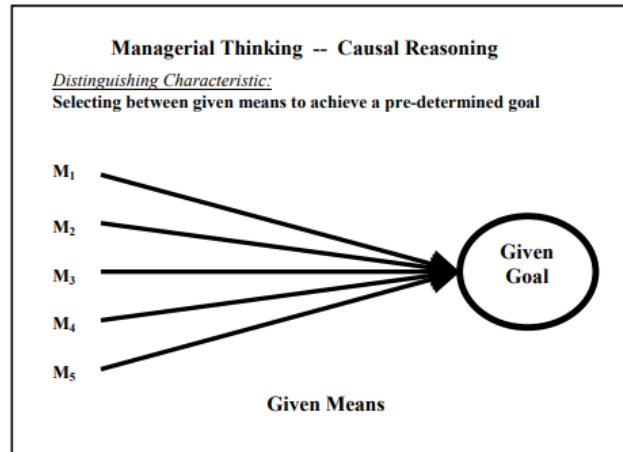


Figure 6. The Managerial thinking presented by Sarasvathy. The figure features a set of given means that can be chosen to achieve a given goal. (S. Sarasvathy, n.d, page 3)

The strategic way of thinking is similar to that of the managerial one. They both deal with a given goal to reach. However, in strategic thinking there is a focus on creating the best means to the goal rather than just use the existing ones. (S. Sarasvathy, n.d, page 3) In the case of a company, the strategic thinking is about obtaining new IPs, developing new sectors within the company, outsourcing etc. to be able to achieve the goal. It is a creative causal reasoning. See figure 7 below.

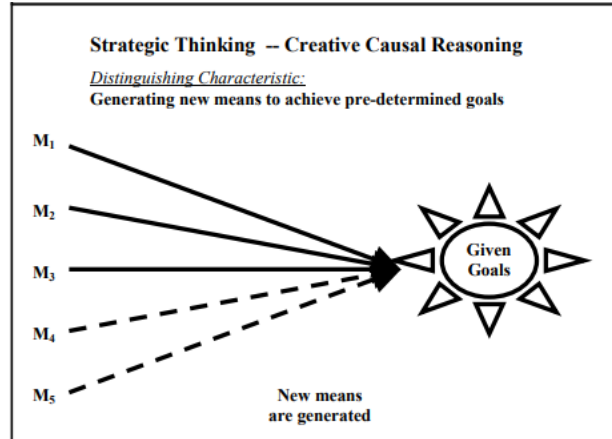


Figure 7. The strategic thinking presented by Sarasvathy, the figure features a mix of given and created means to achieve a given goal. (S. Sarasvathy, n.d, page 3)

The effectual way of thinking is different from causal and creative causal thinking concerning the goal. The goal in effectual thinking is not predetermined but something that is imagined/ created by given means. The means originate from the thinker/ entrepreneur and comes down to three questions the entrepreneur answer about themselves:

Who they are? – What are the entrepreneurs' abilities, personal traits and characteristics.

What they know? – their background, experience, education and expertise.

Who do they know? – Both professional and personal network of the entrepreneur.

Within these questions, the entrepreneur can start to assess a variety of given means based on themselves and their network. With the given means, the entrepreneur start reaching out to areas that are within reach (closest and easiest) and start executing plans straight away rather than doing considerate planning before executing. In this process of execution, plans are made and discarded on a whim, based on the feedback and response from the chosen area. In this process, the entrepreneur creates a journey that gradually generates more data that can be used to successfully reach an imagined end, which attracts and connects more stakeholders to the ongoing process until it becomes a successful match between the means and a goal. (S. Sarasvathy, n.d, page 3) In figure 8 below there is a visual representation of the entrepreneurial way of thinking/ effectual reasoning.

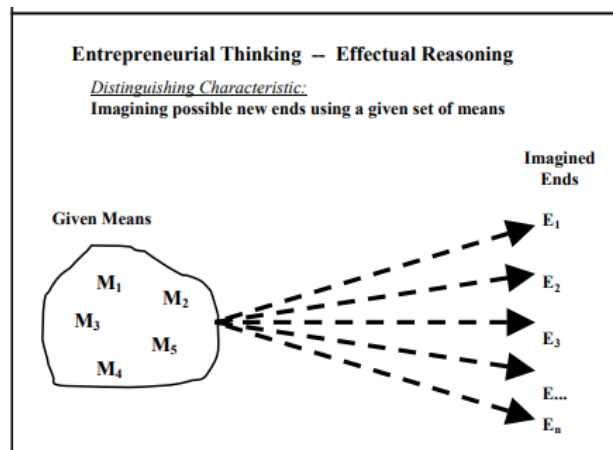


Figure 8. Features the entrepreneurial way of thinking presented by, where a pool of given means is used to create a set of imagined goals. (S. Sarasvathy, n.d, page 3)

Causal vs Effectual marketing approach

Based on her findings, Sarasvathy created a model which feature the causal and effectual market strategies, see figure 9 below.

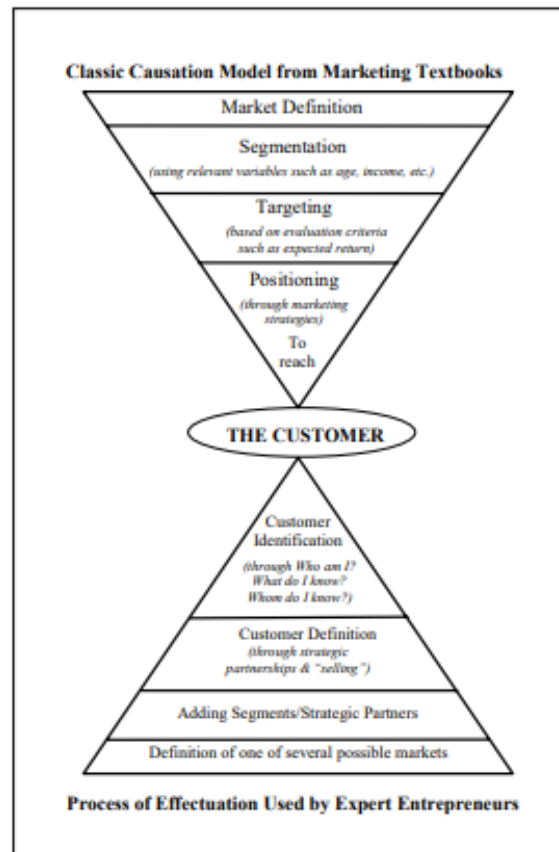


Figure 9. Features both the classic causation model and the process of effectuation model. These models define the steps to reach the customers. (S. Sarasvathy, n.d, page 4)

Classic causation model: Originates from marketing textbooks. In this model, one defines the market to pursue as a first step. With a chosen market, the next step is to start creating segments within this market, based on metrics as for example age, status, behavior, income etc. With these segments, one can start evaluating them to choose the most attractive one to target. This is based on the segments' potential and attractiveness concerning the expected return. With the target in place, one starts positioning with suitable marketing strategies to reach the customer. (S. Sarasvathy, n.d, page 4)

Effectuation process model: This model represents the expert entrepreneurs' strategy to reach the customer. It starts by defining a possible market to proceed in. Within this market, the entrepreneur actively seeks partners and segments and start selling with the help of these. With the selling activities and strategic partnerships, the entrepreneur starts to define the customer and identifying the customer. During this procedure, initial strategies are bound to change either because of unsuccessful results or because of capital build-up until entrepreneur successfully reaches the customer. (S. Sarasvathy, n.d, page 4)

Sarasvathy admits that there are limitations to the effectual process. It serves as an initial strategy to help start a business, but as customers and the market gets defined, it is beneficial to adapt to the causal marketing process to help the new business capture more shares in the market and to grow. (S. Sarasvathy, n.d, page 4)

The effectuation principles

Sarasvathy states that there are five principles that together forms the effectual process:



Bird-in-hand Affordable loss Lemonade Patchwork quilt Pilot-in-the plane

Bird-in-hand principle: This principle involves the means that an entrepreneur has available and use to start a venture. These means are based on the entrepreneurs' own abilities, originated from the questions "*who I am*", "*what do I know*" and "*whom do I know*" as previously mentioned in section *Casual thinking vs effectual thinking* above. Existing means are used to reach for a set of possible goals rather than creating new means to achieve one given goal. (S. Sarasvathy, 2008, page 21) (University of Virginia, 2011)

Affordable loss: This principle implies a focus on costs the entrepreneur can afford rather than investing in research that predict expected returns. When setting goals, the entrepreneur assesses the cost of reaching the goal to determine if the goal is worth pursuing. If the activity is

a failure, it should still provide an upside to the ventures' process. (S. Sarasvathy, 2008, page 21) (University of Virginia, 2011)

Lemonade principle: The lemonade principle advocates “surprises” rather than creating risk assessments. Negative outcomes are not to be viewed as problems, but rather opportunities that can be exploited to create new goals and/or markets. (S. Sarasvathy, 2008, page 21) (University of Virginia, 2011)

Patchwork quilt principle: The patchwork quilt focuses on using stakeholders early in the ventures' process to co-create the market. It promotes action rather than competitor analysis and connects all stakeholders willing to make commitments to the venture. These stakeholders define the goal of the venture. (S. Sarasvathy, 2008, page 21) (University of Virginia, 2011)

Pilot-in-the-plane principle: Entrepreneurs focus on activities they can control instead of predicting future market changes. This principle sees the future as something to be made rather than predicted, meaning that the entrepreneur knows the actions taken leads to desirable outcomes. (S. Sarasvathy, 2008, page 21) (University of Virginia, 2011)

The effectuation process model

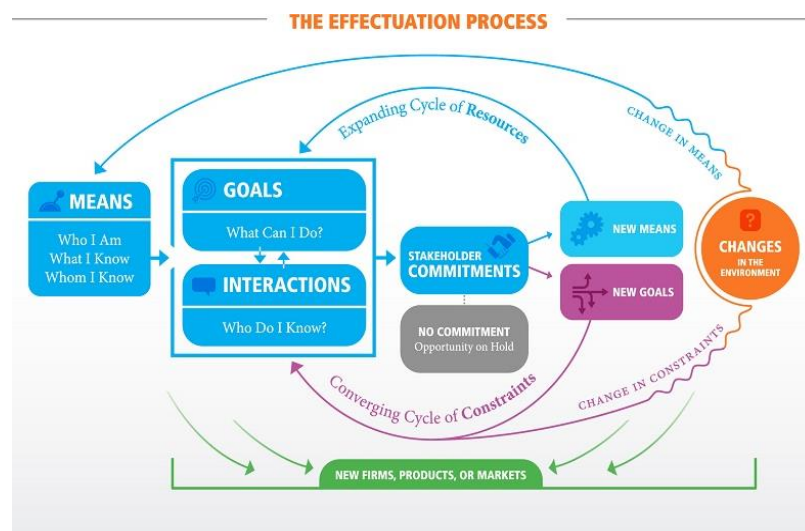


Figure 10. The effectuation Process; Source: effectuation.org

Sarasvathy and Nicholas Dew summarizes the effectual process as two cycles that contrast each other. It starts with the bird-in-hand principle, which feature the means available to the entrepreneur. These means are used to assess the possible actions the entrepreneur can take within the principle of

affordable loss. The entrepreneur then interacts with their network to obtain stakeholder commitments. These interactions provide the outlet that cycles in two directions: new means

and new goals. The new means translate into an expansion of resources which cycles back to the entrepreneur as “new birds-in-hand”. The new goals shape the aim of the process, providing the entrepreneur with new possible actions to take. These goals eventually converge into a new product, markets, companies etc. (S. Sarasvathy, N. Dew, 2005, page 11-13)

Limitations to the effectuation process

Sarasvathy admits that there are limitations to the Effectuation process. As previously mentioned in her marketing model, the effectuation process in marketing serves as an initial approach to marketing. As a project or venture develops, it is beneficial to adapt to a causal model, which, according to Sarasvathy, is doable by applying the causal model as a continuation of the effectuation model.

Furthermore, the effectuation process is not a complete system that dictates all your actions during the development of the business. It also cannot cover every aspect within the startup phase, and thus, is not singularly a way to launch an entire business. It is also not an excuse to not plan the actions one takes during the business development process. (University of Virginia, 2011)

Application of Effectuation logic for this thesis

As mentioned previously, having rather an 'effectual' mindset instead of causal can be a great way to start with an idea and end with a sellable product or service by 'doing the doable' with as few resources invested as possible. Needless to say, this is a very important perspective and a tool for an emerging entrepreneur, who wishes to start a company fast and efficiently by minimizing risks along the way. So how does that apply to the case presented in this thesis? An overview of the principles that make up the effectual logic was illustrated previously. Serving as a guideline in this section these principles will be followed and applied.

Starting means



According to Professor Sarasvathy (2001), all entrepreneurs start with three categories of means – who they are, what they know and whom they know. By leveraging those elements effectively, the likelihood of reaching a success within the launch of a new venture maximizes.

Starting with the question *"Who are we?"* – simply put, sport-loving guys who are tired of looking at the same pair of leggings every time they go out. This deep passion for sport which is present in the team is what triggered the beginning of this venture, inspiration through being active, mobile and having a healthier lifestyle for a happier and longer life. Being involved with sports from early age teaches a kid a lot of things – some of which are responsibility, discipline and willpower. That being said, a 'lead by example' mindset intrigues us to go even further and help others who lack the necessary motivation or will to achieve their goals. This also correlates with the fact that almost the entire team have outgoing personalities – meeting, conversing and connecting with new people seems to be a rather casual trait and not a hassle. Of course, learning new things and self-development are crucial and familiar to all members. In addition, the entire team values beauty and aesthetics (regardless of the context), which is another big factor that contributed to the frustration of the same-type-same-color² leggings 'virus'.

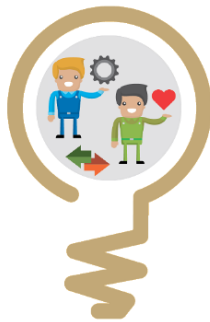


² Referring to a minimalistic, one-color type of design



The next category of means is “*What do we know?*” or the professional tangible and personal intangible competencies that the team members have.

As mentioned in the introduction chapter, each member of the team comes from different educational and professional backgrounds. Hence, this diverse environment also induces a creative thinking inside the group. Even though none of the team members have any experience within the fashion industry in terms of manufacturing, there is still one key resource that is present, and this is having a designer. It can be used as an advantage without having to hire an external one for the team. Additionally, having technical backgrounds and know-how are also valuable assets for the group. These can be utilized on per-need basis, e.g. when building a landing page/website or in the development of a basic application for phones or desktop versions. Furthermore, since two of the team members are currently in the Entrepreneurial Engineering program in AAU, business development and sales knowledge are all part of the skillset. As part of sales is also the ability to interact and empathize with people, which fortunately can be further aided by our designer who is a sociologist with a deep understanding of socio- and psychological behavior. Lastly, despite the fact that nobody inside the team has any professional sport education, it is still worth noting that there is a significant experience and knowledge when it comes to certain sports (i.e., weightlifting, yoga and gymnastics).



The third and final category of the starting means is “*Whom do we know?*” or essentially the people in our networks, be it social or professional.

Firstly, there’s always the family factor to use as a resource – financial, moral or even network wise. Next on the line are friends, school classmates and former colleagues – some of whom are deeply involved with sports on a daily basis. Some of them are recreational sportsmen³, and others are athletes competing at an amateur or even professional level. To specify further, the sport from person to person varies and includes yoga practitioners and instructors, gymnasts, personal trainers⁴, weightlifters, ballerinas and also dancers. Additionally, their social and professional networks include people

³ Practicing their sport as a hobby

⁴ Also practicing weightlifting and/or yoga

who are likeminded and practice either similar sports as a hobby or way of life. These 'networks of networks' can be utilized as new means while moving through our venture journey.

In the beginning of the thesis it was mentioned that before starting with this paper there was some work done, which involves the work on the designs, logo, and manufacturing of several samples. At that point in the timeline of the venture the team did not consciously apply or use the effectuation logic per se. However, looking retrospectively, the effectual mindset was present, and the team was following the effectuation principles without knowing it. Having lived and studied for several years here in Denmark, the founding team members were aware of the high standard of life in the country. For reference, pricing of different products, whether those are for food or clothes, is significantly higher than in Bulgaria (Country economy, 2019). Naturally, this is because of the difference in the countries' economic status, including the tax-system, average salary, etc. Thus, if the team decided to manufacture the garments locally (in Denmark), it would significantly increase the amount of resources needed for the manufacturing process. Additionally, the fact that the founding members are from Bulgaria also serves as an advantage for the starting means (Bird-in-hand principle) – for example, larger social and professional networks and cheaper pricing of course. This minimizes the risk of investing too many resources at the start of the venture and is with an accordance with the Affordable loss principle. Essentially, spending somewhere between 100 to 200DKK for garment sampling wouldn't hurt the team's pockets and if it doesn't work – we move on with our lives. Moreover, having local and trusted friends in Bulgaria that have some spare time at hand can be very useful. In this case, not only the friend can be present when meeting with different manufacturing companies in person, but it also eliminates the need for the starting members to travel back and forth between countries to arrange meetings and check on the samples for example. Hence, spending as few resources as possible was the way to go. Having one particular friend of the founding members in mind, who at that time was a Psychology graduate and pursuing additional degree in Entrepreneurship, turned out to be a vital resource (Whom do we know). Suffice it to say, he was hyped up to help whenever possible and he was also the reason for finding the current sportswear manufacturers that the company is working with in Bulgaria. However, before finding the current manufacturing company, the team had to go through a set of hurdles which despite

being a surprise along the way served as an important experience and a lesson (Lemonade principle). What matters as an entrepreneur is the perspective and turning the negative view into a positive one is something invaluable but also not so easy to achieve. The initial goals of the team were to create a different style of leggings (design wise) for the Danish and/or Bulgarian sportswear markets and potentially achieve a positive financial outcome by doing so. As mentioned earlier, starting with almost no experience within the fashion/sportswear industry, the team did not know so much about technical drawings and corresponding clothing patterns, types of fabrics used within sportswear, type of prints, etc. Fortunately, both companies that the team contacted had their own tech packs with specifications and clothing patterns. Despite having the designs for the leggings ready (or at least that's what we thought), there were certain criteria that were initially unknown. The process and the different criteria are described below.

[First sportswear manufacturer](#)

Sports Fabrics

Part of the criteria was knowing what kind of fabrics the manufacturers use to make their garments and the fabrics that the customer (us) and the end-user would like to have. When looking at sports fabrics there are different requirements depending on the type of sport of course. Basically, the fabrics for sports are technical materials which "...help to keep the wearer comfortable during exercise. The type of fabric required will depend upon the intensity of the exercise and the activity." (FabricUK, 2016). For example, yoga clothing requires the fabrics to have a good stretch ability for the ease of movement of the person wearing them. Additionally, it will likely require the fabric to have a knitted construction (FabricUK, 2016). Another example includes apparels for long distance running or outdoor sports – "...these should keep the wearer in good comfort if it has excellent moisture wicking properties to enable sweat to transfer from the inside to the outside for the garment. Performance clothing for outdoor sports in the winter or snow sports ought to use breathable fabrics with very good insulating properties." (FabricUK, 2016). More on the fabric research can be seen in Appendix I.

Fabric Printing

Another criterion which is important in our case is of course the type of printing on the fabrics themselves. When deciding on the printing method to choose for the desired fabric, the answer is not simple. It boils down to several factors like: the fabric, the details in the design, the quantity and the finishing look (SC, 2017). There are several printing methods these days, to note the 5 most popular ones – Direct to Garment (or DTG), Sublimation printing, Screen Printing, Heat transfer and Block Printing (SC, 2017). A more detailed explanation and the differences between these printings can be found in Appendix II. Essentially, the desired printing choice for our company is digital print and more specifically sublimation, as it offers many advantages (described in Appendix II under ***sublimation***) for the type of fabrics that are being used for the manufacturing of the garments. One crucial lesson that we learned from working with the first company was that the designs we wanted to print were not suitable for printing. Meaning that the images that our designer, Venelin, was using in the beginning for the designs of the leggings were not high-resolution images or vector images which in turn makes the print on the leggings look very pixelized.



Figure 11. Our desired design sent to the company



Figure 12. Suggested design based on the manufacturing company's services

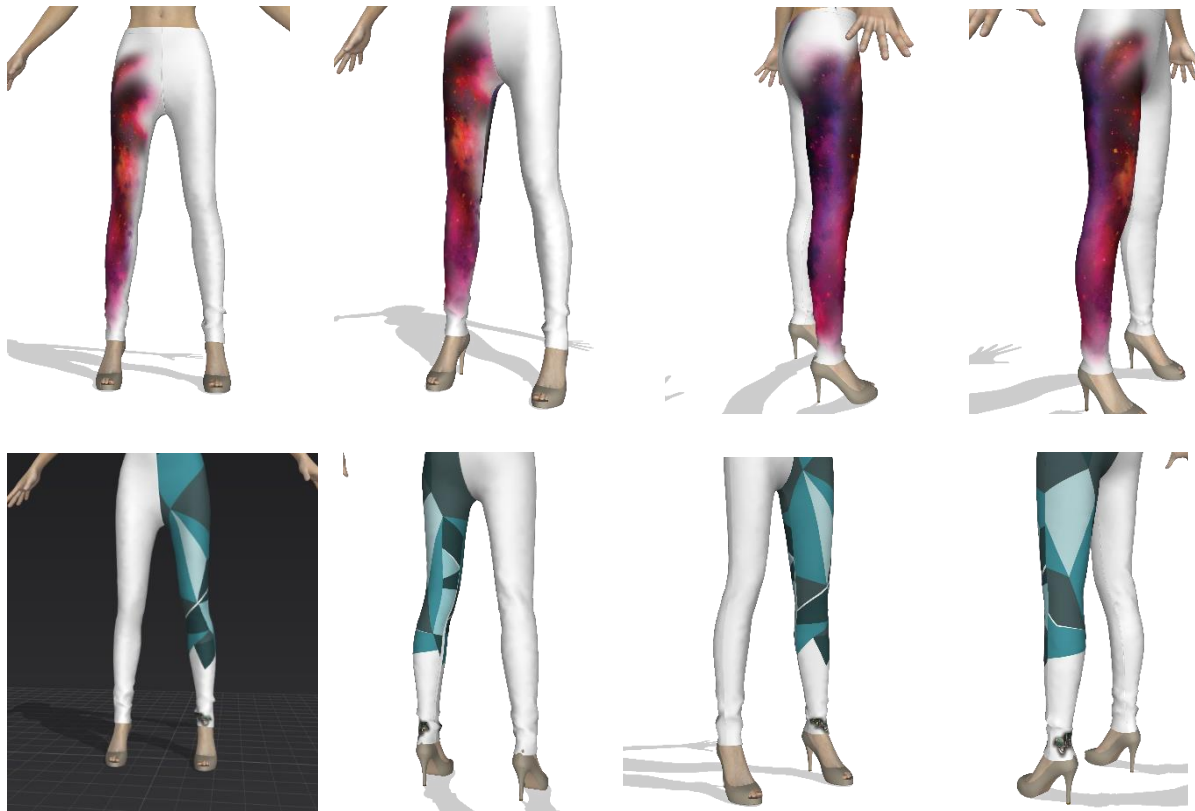


Figure 13. Cosmos /nebula and subzero designs suggested by the first manufacturing company

As seen from the above illustrations, the suggested designs by the manufacturers vastly differ from the desired design. The sample produced by the first company was the only product sample that was created with them because the fabrics that they used and the services they provided did not meet the requirements of our company.

Types of seams and finishes for the samples

The construction details for the garments is part of the multi-faceted process, and the types of seams and finishes are amongst the important elements of sampling. Thus, having knowledge for the different types of seams can help when designing the different garments – it will elevate the design, shape the function, aesthetics and the durability of the garment (Fashion Angel Warrior, 2019). For more information on the different types of seams see Appendix III.

What is a seam?

By definition, “a seam is a line where two or more pieces of fabric are joined together. Seams help form the structure of a garment which is why they are often considered the building blocks of clothing. While many seams are purely for constructional purposes; they can also serve as decorative elements.” (Fashion Angel Warrior, 2019).

With that being said, the type of seams to choose from should be determined by different factors which are also thoroughly explained in Appendix III. Hence, the factors and the choice of the seams would be mentioned briefly below.

Factors

- **Type of fabric**

As seen already from the different parts involved in the manufacturing process, the type of fabric determines the rest of the design outcomes. Accordingly, the type of seam will be dependent on the fabric itself.

- **Time & Cost**

Another big factor to consider for the type of seams is the time and cost. Basically, those seams that require more time and resources to craft would result in larger costs.

- **Seam location and placement**

Certain seam finishes are more suitable for example for curves than straight lines. Depending on the type of garment, the seam will lie in a different place.

- **Garment function/use**

Naturally, it is important to think of the person that is going to wear the finished products and their lifestyle. Since, we are looking at the sportswear segment, the leggings would require the seam to stretch significantly because of intense movements, without jeopardizing the garment's condition and functionality.

- **Equipment**

Most of the seam types can be done on standard industrial sewing machines and some can only be crafted on specific machines. Different manufacturers have different equipment and machines, some of them might even outsource this part of their manufacturing process. However, it is important to consider this factor before starting the production phase.

Based on the abovementioned factors, the best choice for the type of seams for a sportswear/active wear garment would be a **flatlock** seam which suits the required need for stretching (figure 14 on the right).



Figure 14. flatlock seam

Minimum Order Quantity (MOQ)

When manufacturing clothes, regardless of the specific application, it is very important to look at manufacturers who offer MOQ which suits the needs and capabilities of the client, which in this case is our company – the most notable aspects are the budget and the location. Hence, the lower the budget of the customer the harder it is to find a company which can provide low sample sizes (e.g. 1 to 10 pieces per design) because it is more expensive to produce such an amount compared to an MOQ of 100+ pieces per design. Nevertheless, the initial sportswear manufacturing company did not have any objections or critical requirements regarding the MOQ and made the first sample of the leggings within a week. However, as mentioned before their design suggestions were simply not the right fit for our company as we were not satisfied with the final sample that they provided us with. Moreover, they suggested us to look for a different manufacturer and this is exactly what we did next.

Current sportswear manufacturer

After failing to create anything useful with the first company, we did not look at it as a complete failure (Lemonade principle). In fact, not only we did not spend a lot of resources, but we managed to learn a couple of new things and find ourselves a new manufacturer. Which basically changed our initial goals regarding the products that we wanted to sell. Now we knew what we were looking for in terms of the fabric and its' functionality, thus making the task of finding a new manufacturer easier and more efficient. After brief internet search and thanks to our friend in Bulgaria, we found what we were looking for and secured ourselves not only a supplier but a

potentially long-term partner who was ready to commit and create something new by collaborating with our company (Crazy quilt principle). On a fun note, it turned out that the location of the manufacturing company is in the same area where one of the team members lives in Bulgaria.

At that time, it was a summer break so the majority of the team could go personally to visit the company in Sofia, Bulgaria. We spend some days getting to know each other and working on sampling the initial designs with the manufacturers in their office. After having several meetings with them and exchange of ideas, we began creating the samples. It is worth noting that we could immediately see how passionate they were about their work. Additionally, they were much more knowledgeable regarding the manufacturing process of sportswear garments than the first company. They provided us with information regarding their services, type of fabrics they use and their in-house printing facilities. Moreover, they are working with partners in Italy and Portugal from where they acquire their fabrics for manufacturing. Based on our designs and ideas they suggested us to work with a certain fabric called ASPEN which is made by a leading Italian textile company named Carvico. The fabric is made of 82% Polyester and 18% Elastane, which is the type of fabric used typically for sportswear/active wear and swimwear merchandise. This is due to the fact that Polyester fabrics and fibers are extremely strong and durable, which makes them resistant to different kind of forces – to chemicals, stretching and shrinking, wrinkling, mildew and abrasion. The polyester is also hydrophobic in nature and dries quick, which is perfect for wicking sweat or moisture (when working out or being in a humid environment). Finally, it retains its shape making it good for making outdoor clothing for harsh climates. Moreover, it is easily washed and dried (WIP, 2019). The elastane fibers inside the fabric is under the brand name of LYCRA and can stretch up to six times its length and return to its original state – time and time again. “Other admirable properties of Lycra include its resistance to sunlight, sweat and improvement of comfort, ease of movement and shape retention when used in a fabric.”. Additionally, Lycra can be utilized for compression garments in sportswear which improves blood

circulation, reduces lactic acid and also DOMS⁵ (FabricUK, 2016). More about the ASPEN fabric specification can be found in Appendix xx.

One of the key factors which allowed us to cooperate with these guys was also their low MOQ and lead time. In fact, they didn't have a specific requirement for the number of samples, thus if we wanted, we could produce one at a time. The results were rather astounding compared to the first company that we worked with. Moreover, they had also their own sewing patterns for leggings and sport bras which



Figure 15. Sketches of the cosmos nebula tights with the current manufacturers

meant that we did not need to spend additional resources for creating the patterns. Finally, we made some sketches of the initial designs before working on the patterns digitally with the intended software (figure 15 on the right). The sketches were saved and used later in the communication process with our stakeholders (potential customers) to visualize/portray the design ideas of the brand. Furthermore, the fact that the current manufacturer had developed their own sewing patterns for tank-tops and sport bras made us change our initial mindset regarding the type of products we would like to have in the company (New means and new goals). Hence, we created also some tank-tops and sport bra samples. The production cost for the sampling of the leggings including work on the design was around 120 DKK and for the sport bras/tank-tops ~70 DKK. The samples were ready in about a week from the placement of the orders, after which we were eagerly headed to try them out with our potential customers and partners. Before testing the first samples with three potential customers in an outdoor environment, we had some initial skepticism regarding the quality of the garments. Despite looking like a high-quality fabric, and also feeling like one, we were not completely sure that everything is 'the way it seems'. Thus, we had to assume the worst-case scenario happening, i.e. the garments to fall short in a functional way. We also had some concerns regarding the design of the merch – how the print would look like on the fabric for example and whether it's going to

⁵ Delayed-onset muscle soreness, or simply the sore feeling a person might feel after working out

have the same colors as desired. Another critical element which was discussed earlier was the type of seams for the garments. As stated, we chose to use the flatlock seams because it makes the most sense for the type of fabric that we have (i.e. Polyester/elastane) and the type of activity in our segment. The seams' quality is a very important part that has to be checked in a real environment before eventually moving to a production phase – if they tear or get destroyed easily it's essentially a 'no-go'; also how much stress/stretch they can actually withstand before getting destroyed is another critical question that needed an answer.

We also weren't sure how the tights and the sport bras will fit our test users because the only test we made with the merchandise was done on a female mannequin inside the office of our manufacturers (figure 17. on the right). Essentially, trying it only on a mannequin doesn't provide any valuable information in terms of size, fit and functionality of the fabric and the seams. As a plastic statue, the mannequin doesn't really move, thus it cannot show how the fabric 'moves' and 'feels' on the person when there's a mechanical stress or tension (in the form of movement of the body). By trying it with real people in real time, one can get a detailed feedback from the person about the comfortability,



Figure 16. Mannequin with our nebula design

functionality and the design of the garment. Other key assumptions we had were regarding the users, for example that they might think of the designs as being 'too colorful' or 'too sparkly' for them and they might feel too unconventional wearing them which could potentially discard the whole concept. Another assumption concerning the users was the pricing point for which they were willing to buy these types of garments – could we sell it for example at a higher price point where the higher-end brands⁶ sit or would they look at it as a cheap cloth ready to be used and thrown out after a while. How and where would they prefer to buy such merchandise – local retailers, online, etc. Instead of thinking about it too much, we had to go out and test it with the ladies themselves - which leads us to the first session.

⁶ Nike, Adidas, Under Armour

First test sessions with stakeholders - Bulgaria

Fortunately, in our social circles there are girls who are actively wearing leggings when going out for a run or a workout (Bird in hand principle in play). We asked three different girls from our networks for their feedback, aged between 19 and 30, who practice different sports in their spare time like weightlifting, dancing and kickboxing. The idea was to let them move around and do some positions which are custom to the sport they were practicing in their time. In the end the 'test' session became a 'photo' session – some of the photos are shown below on figure 17.



Figure 17. Sessions with three potential customers/stakeholders

They include two leggings designs, a tank top and a sport bra. Two of the three girls we tested out the samples with were also big fans of the French braid hairstyle, so needless to say they showed up properly 'dressed'.

The main feedback from the tests/photoshoots was that the designs are unique and something that the girls have not bought or experienced before. Moreover, they also really liked the 'second skin feeling' of the garments and felt as if they are not wearing anything. An interesting observation they made was regarding the logo/illustration and more specifically how it made them feel – "tough", "ready to destroy their workout", "empowered", "unconventional" and "sparkly". Worth noting was that the logo looked somewhat pixelized when bringing it closer to the eye. Additionally, one of the girls suggested that the waistline could be higher, wider and that the logo or the name of the brand can be put right on it. In a perfect world everything should be perfect, but life is a mixture of ups and downs, like a roller-coaster. Hence, despite generally liking the designs, the girls were kind and brave enough to point out some flaws in the sport bras - they were either too tight or too loose. Regarding the quality of the fabric, they asserted that the product is of a very high-quality, something they don't typically see in their local retailers unless it's a famous brand like Nike or Adidas. However, they also wouldn't find such unique designs despite the brands being famous. They said that they would put the leggings in a higher price range between 50 and 80 Euros (400 – 600 DKK) and the sport bras somewhere around 20 Euros (150 DKK). Worth noting is that the price range provided by the girls is sitting in the high-end of the spectrum on the Bulgarian market next to brands like the abovementioned ones (Nike, 2019). When asked if they are willing to buy the product right now, all of them answered with a loud YES.

Reflection

Taking all the feedback we've gathered from the first test session lead us to make some modifications to the design of the leggings by improving the waistline and adding the name of the brand either on the waistline or somewhere along the sides. We managed to validate most of our initial assumptions – specifically regarding the design and the functionality of the garments. Moreover, we took into account that our initial logo was an animated picture on Photoshop from a normal photo (not a vector image). Thus, we decided to create a newer version

of the logo which was hand-drawn by our designer and then imported digitally for further work on Photoshop (figure 18 below). More about the logo and the visual identity can be find in *Nosorogche's Visual Identity*. Furthermore, by working closely with one of the girls, we've managed to come up with several new design ideas which we implemented into our collections (Bird in hand principle) (figure 18 below).

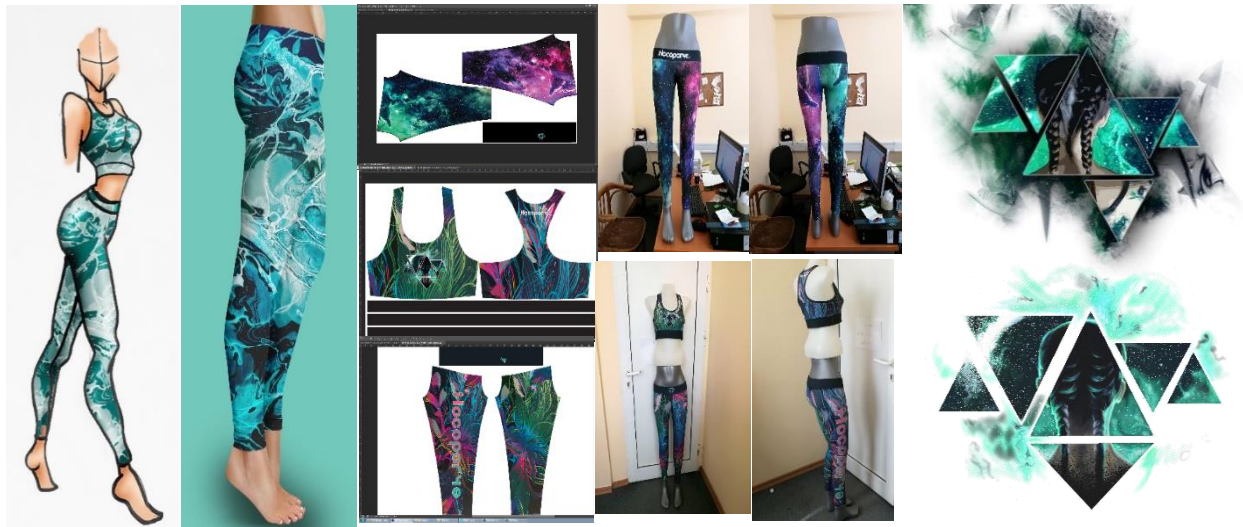


Figure 18. Reworked waistline design on the cosmos leggings (middle); New design sketches and mockup with sport bra (left); New design middle; Final Samples of the new designs (middle-right); Old logo (far top right) and New logo (far bottom right)

Session with a ballet girl



Figure 19. Modified designs without the Nosorgoche sign

After improving on the previous designs and generating new ones, the team decided to create several more samples and to test them out with one more girl (partner/customer) who are in the field of dancing and ballet. This girl was actually a friend of our friend⁷ (New means and new goals) and it turned out that she is also studying and living in Denmark. Nevertheless, the idea behind the test

was similar to the first one – to try out the design, fit and the functionality of the garments. As

⁷ The Psychology student mentioned in the beginning

seen from the figure below, everything was made in a rather unconventional setting because the girl had to travel the next day for a performance with her ballet club. Additionally, we could not meet with her again in person because our stay in Bulgaria was coming to an end so the whole session was very rushed and made at a parking lot. The girl was kind enough to show up late in the evening just to try out the leggings we brought for her. She really liked the design and the fit of the garments and mentioned the same thing as the first users – ‘the second skin feeling’ of the leggings. Furthermore, she acknowledged the way the leggings were contracting and stretching with her body when she was performing different movements which is very important in her sport. She also mentioned that the garments are of a high-quality which made her ideate that the price point for the leggings can be ca. 400-500 DKK. Additionally, the rest of the new designs and photos from the session with the ballet girl can be found in appendix V.

Reflection

The feedback from the ballet girl validated another assumption for us – and that was whether our garments can be used in this specific segment (ballet). In fact, it was more of an unexpected chain of events, because we didn’t plan to meet specifically with a ballet girl to try out the merchandise, nevertheless it turned out to be a good thing. Therefore, the meeting at the parking lot in the middle of the night was a surprise for both parties. She did give invaluable feedback regarding the fabrics’ specifications and design. Moreover, she suggested something interesting - since we also wanted to target the Danish market, we could remove the sign Nosorogche (spelled in Cyrillic) on the side of one of the legs and just keep it simpler with the logo on the waistline. The reason for that is because such a design can be seen more relevant to the nature of the Scandinavian minimalistic design. That gave us a new perspective (Crazy quilt principle) and new means to use to our advantage. Hence, we took her idea and removed the sign from the side of the legs making the design more simplistic (figure 20 below).

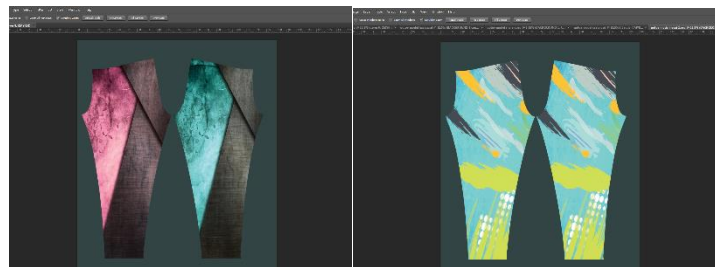


Figure 20. Reworked leggings on Photoshop – removed sign from the legs

Session with a certified strength and conditioning personal trainer

The last session that we conducted during this thesis period was back here in Aalborg, Denmark. It was with the strength and conditioning coach Stina, who we met at the usual place where we break our sweat (SATS gym located in Aalborg). She used to work there as an assistant manager, and since we are very talkative people, we decided to approach her. Essentially, she became part of our means and provided us with a great intel regarding the Danish market and Danes in general. In addition, she also tried several of our samples and gave us a feedback regarding the designs, fit, functionality and the quality of the garments. Unpredictably, she wasn't as fascinated as the Bulgarian girls regarding the designs, but she was impressed with the quality of the fabrics. One element that she is looking for when buying tights is having a non-see through fabric that covers her lingerie when working out. Moreover, other key factor that influence her choice of leggings is having a squat-proof fabric – basically, when squatting low, cheaper fabrics or fabrics without a lot of stretch properties and mix of elastane tend to going down with the legs, revealing sections of the wearer's body (the glutes or the butt) which is certainly not an effect desired by most girls in public. This was something that she was delighted with when trying out our merchandise – the fact that it gives her the freedom to move around and stretch without having to worry about her tights going in places where they shouldn't be going. Based on her opinion, the price point for the leggings lies within the 500-700 DKK range. Despite not falling in love with most of our designs, she wanted her own custom design. We worked together to create two different designs which are shown on the figure 21 below. Additionally, she was presented with two colors for the waistline which she could choose from.



Figure 21. Sketches of her custom design (left); 2 new designs on patterns Photoshop (middle); final samples (right)

Even though she helped for the creation of both of the designs, she only really wanted to get the design with the roses.

Reflection

The overall feedback we got from Stina regarding our garments was that they have the potential to be sold on the Danish market. As mentioned earlier, she liked the fabric quality and its functionality (squat-proof, non-see through fabric). Moreover, she made an interesting point regarding the Danish and Nordic mentality in general – the Law of Jante. This code of conduct is found in the Nordic countries and “...portrays not conforming, doing things out of the ordinary, or being overtly personally ambitious as unworthy and inappropriate.” (Wikipedia, 2019). Essentially, what is meant by this code of conduct is that people rarely want to stand out of the crowd, which is in a sense paradoxical with our concept. It does also explain why most of the girls that are seen here in Denmark wear clothes in similar fashion (so they don’t look weird or out of the ordinary). However, it can be said that this does not apply to every single person in the country, else it is generalizing which is of a more subjective nature. Despite that, she suggested that we can try using simpler designs with less colors and complexity as it may amplify our sales potential. Nevertheless, after our session and the creation of the new designs she committed to directly purchase her custom-tailored Rose design from us (Interactions -> Commitments). The pair of leggings were sold to her for 400 DKK and she implied that she could easily have paid 600-700DKK instead. Moreover, she was very delighted with the product that she received from us and in fact was wearing it quite often inside the gym (and sometimes outside).



Figure 22. Stina - Rose leggings photos

Reflection of Effectuation principles in the case study

Looking retrospectively on the way that we used the effectuation principles prior and during the course of the thesis gave us a vital information in terms of mindset and opportunities. One of the great things about the theory and its' principles is the fact that is not a linear process but more like a cycle which repeats over and over again until a final goal (a new product, market, or a firm) which is in coherence with the rest of the stakeholders is created. This is what we tried to do by focusing on the cocreation process with our partners/stakeholders. By working closely with them we've managed to create new means and new goals for our venture including new designs and new resources. One of our key findings or change of goals was based on the last two sessions with our stakeholders. Essentially, we decided that at least for the current state of our venture we will only focus on the seemingly more profitable market, which is here in Denmark, and pull away from the Bulgarian market's sportswear industry. The reasons behind are generally because of the differences in the economic status of the two countries. Considering the average salary in Bulgaria is significantly lower than the Danish average wage, the price point of our products is way too high for an unknown brand to explode from the abyss in such an environment. Additionally, since we are planning to live in Denmark for a while (at least for the next couple of years) gives us the opportunity to sell our products here where we are present. Not only that, but we are also accustomed to the way of life in Denmark. However, we will still be in a partnership with our current manufacturers because we like their services, the way they work, and we actually got a bit closer in terms of a business relationship. Another advantage is that they supply us with the high-quality Italian and Portuguese finished garments that we want, on a cheaper price of course. Built on the feedback we received from Stina in the last session gave us also another direction to pursue which is to include more simple designs with darker colors into our collections – it is something that might be more suitable for the typical gym lady here in Denmark. Nevertheless, we still want our brand to be unique and exotic and ultimately cause a change of perspective regarding the choice of colors here in the North of Europe for example. Amongst other things, all of our potential stakeholders decided to commit to us and our goals and help us develop our brand – which in turn makes them 'stakeholders'. On board we have a ballet girl, a yoga instructor, a strength and conditioning coach and also a Zumba instructor. They all have several things in common and most notably – they love our designs and idea, they love

the French Braid hairstyle, they love practicing sport, and they are exposed to a large group of people based on their professional and social networks. What that means essentially is a significant environmental exposure or the raise in awareness for our merchandise in its current start up phase. Additionally, the girls are leading several group classes per week which as explained later in the *Business Model* chapter will be used as a channel to reach our segments. To fund or find a larger investment (than our own pockets) for more stock initially, we will use crowdfunding. Basically, crowdfunding is “a way to raise money for an individual or organization by collecting donations through family, friends, friends of friends, strangers, businesses, and more.” (Crowdfunding, 2019). Indeed, it’s not any kind of crowd, it’s our own crowd, our own stakeholders. The people who believe in us and the people in whom we believe – technically all the attendants of the classes of our partners and the intermediaries who are interested the success or the development of the venture. As it will be later stated, we will also use social media like Instagram to spread awareness for our brand and thus reach more potential customers.

Naturally, nearly everything has its’ limitations or implications and so does the effectuation theory. As mentioned in the theoretical framework, it can be many things, but it certainly is not the only way to do things. Matter of fact, as described by Saras D. Sarasvathy and mentioned earlier, the effectual logic is like 1st and 2nd gear when starting up things. However, it is not a perfect system that tells a person what to do and the more a business grows the more it shifts from effectual to causal (traditional) logic. However, it still helped tremendously throughout the hatching of our brand. We did use more causal/traditional tools like market research and content analysis when the creation of our visual identity was taking place - including some trends among competitors and the market, their products, etc. Which brings us to the next section, Nosorogche’s Visual Identity, which will shed more light on the making of the logo.

Nosorogche's Visual identity

Visual identity is essential for every company, people say that we judge others through the way they look and that goes the same way for companies and their visual identity. People judge the prestige and the status of the company in the same way, and sometimes a bad visual identity can really harm the image of the company in the same way as a bad product does. One needs to create a strong identity that represents the company, the color, the shape and the form which creates the symbolic meaning that cannot be imparted through words. Therefore, creating strong identity that represents the company values is one of the most important things that the company should consider doing.

Who are we?

Nosorogche active wear brand is a Bulgarian-based brand for fitness clothing that specifically focus on high-quality products with unique design for all athletes' types. The collections are for both winter and summer and it uses the latest trends in pantone color scheme. The brand is new, it is exotic, and it collaborates with professional models and semi-pro athletes that advertise products on Instagram (figure 23 and 24). The name originally means young rhino in Bulgarian and in English there is no such word for that. It sounds exotic, it's catchy and it's a name you will never forget. The brand is working with partners who use the latest fabric technologies in the industry such as highly breathable fabrics with muscle control and UPF50+⁸ protection and more (figure below), as well as sublimation coloring (digital print). Nosorogche tries to communicate with their young audience (19-34 y/o) in a way that they want to wear them.



Figure 23. Instagram post with labeled products of the company



Shape retention



UV protection



Muscle control



Perfect fit

⁸ Ultraviolet Protection factor



Figure 24. Instagram post from one of our partners

Research methods

In order to create a visual identity that will fit good with our brand and will communicate in a way that the company needs, we needed to take enough relevant data that will blend in a beneficial way for the company. Therefore, the following methods and theories were selected:

Desktop research - Gives good and real-time accurate information about how the competitors are approaching their target groups and how they communicate within their values.

Content analysis - To see what the current competition is doing in the fitness industry, and how the competitors connect their values and message through their visual identities.

Brainstorming - To generate new ideas around the fitness industries in a free-thinking environment in order to produce more ideas and solutions.

Color Theory - To select the most suitable colors for the logo that will communicate with the values of the company in the most beneficial way.

Gestalt law - To finalize the logo in the way that the clients of the company will associate the logo with the values of the company.

Market research (SWOT analysis model)- To understand the Strengths and Weaknesses and to identify both the Opportunities and Threats that we will face on.

Tone of voice - To define the values that the company has.

Software - Photoshop (mostly of the mock-up), Illustrator (creating the logo)

Semiotics - Helps to communicate with a symbol.

Making of the logo

The first part is to understand how the active wear market works; therefore, the content analysis is the perfect tool to work with. One of the benefits of that research is that you can see how the competitors are working and trying to survive in this rapidly growing and changing environment. Due to the digitalization of all industries many of the companies need to adapt fast if they want to survive. Therefore, they changed the way they advert their merchandise in a way that the needs of the customers are met. One of the tools that the internet provides to the companies is the social media influence, there are many companies that are advertising their products through them. For example, using Instagram, Facebook, tweeter, snap and many more portals that generate views and likes (figure 24). Instagram nowadays works positive for many of the companies if they know how to use it, advertising products using Instagram could be very beneficial for the starting companies due to the fact that it does not necessarily charge the content creators.



Figure 25. Instagram post of tights_no

The way that works is: You find semi-pro sports influencers send them free merch that they can use and post on their Instagram feed, (You can ask them to make a promo video of how the product arrives or add a photo that refers to the product) in that way you generate viewers for your company, sell products and generate viewers for your page. One of the things that also came out from the content analysis is that there are many growing companies that are trying to be different and stand out of the crowd with using unique names for their brands and logos that are specifically designed for merchandise. The desktop research gave a game-changing information

that was used for finishing the logo idea. That research we wanted to make differently, due to the fact that you need to change perspective to see the idea better. This method has been used by the famous Leonardo Da Vinci (turning upside down the image to see the things he missed). So, we looked in the same way and started to explore other industries which are not related to active wear brands but have a unique style and catchy names. One of the companies that we found out that is growing and it pops-out from the competitors is “Kjaerweis”, this is a make-up company that is founded by a Danish woman in New York and its one of the best companies nowadays for organic make-up. The company decided to stay different with a name that is exotic and hard to pronounce if you are not a native Dane. The name is so catchy and unique that the company itself decided to make a promo video of how to say it correctly, and many famous models took a part of this experiment that blew the way of thinking of the people (figure 3).

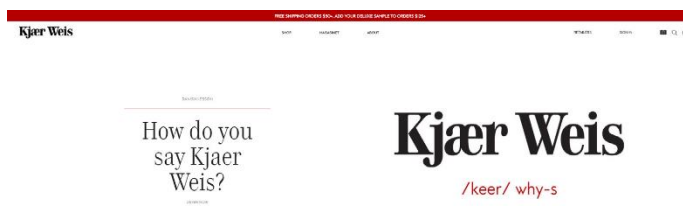


Figure 26. Kjaer Weis page

So, the name of our company will stay the way it is, and we will build up our identity over the idea of the exotic need that is growing in this industry and generally in the markets. One of the reasons is that people will ask who and what it means, and it will generate interest. The other

thing is that the name opens up communication and positive vibes due to the fact that people will pronounce it funny. The font is Cyrillic and that makes it unique too. Nowadays many of the companies that are founded in Cyrillic-based countries are trying to blend with the world and adapt their names with the English language, which makes them really hard to be remembered.

Logo Design

The logo represents the values of the company that were created from the tone of voice research, the values communicated with the customers and the company itself. We need to have a good connection with our customers in order to build up a strong identity. Our company represents the fighting spirit of the female warriors, with their braided hair that makes them ready to fight and focus on the new adventures and tasks they have. The semiotic meaning of the logo goes in two directions: the first is the fighting warrior with the braids and the second is the exotic and

rare animal - the rhino, which is big strong looking animal with grace and finesse. Additionally, despite being a giant animal, the rhinoceros symbolizes gentleness, unconventional behavior, peaceful personalities, steadiness, stamina, power and agility (NG, 2019) - all of the values and characteristics affiliated with the brand. Also, the braids symbolize the armor of the rhino that is hard to be penetrated. Therefore, we have semiotic meaning of the logo itself and the name, which makes it double edged motivation that goes with the unique name that brings up the exotic in the people who wear the brand.



Figure 27. Current logo and choice of colors

The colors are green and brown which brings up that pleasant eye looking combination. Green, the color of life, renewal, nature, and energy, is associated with meanings of growth, harmony, freshness, safety, fertility, and environment. The color green has healing power and is understood to be the most restful and relaxing color for the human eye to view. Green can help enhance vision, stability and endurance. Green takes up more space in the spectrum visible to the human eye and it is the dominant color in the natural. It is a natural choice in interior design as an ideal background or backdrop because we as humans are so used to seeing it everywhere. Brown, the color of earth, wood, stone, wholesomeness, reliability, elegance, security, healing, home, grounding, foundations, stability, warmth, and honesty, is a natural, neutral color that is typically associated with the seasons of fall and winter. The color brown is a warm color that stimulates the appetite. While it is sometimes considered dull, it also represents steadfastness, simplicity, friendliness, dependability, and health. Shades of brown when combined with green create a palette symbolize, earth-friendly, or all natural. Dark brown can be used in place of black and brings warmth to color palettes.

The visual identity of Nosorogche is exotic, new, trendy and it has a logo that was created from a different perspective. However, the logo communicates well with the customers and their

values due to the semiotic meaning of the name and the shapes (illustration) and due to the color harmony, that was blended with the help of the color theory. The logo will stand out from the other competitors and it will give their own identity that will appear on the market with a positive feeling of the exotic and rare vibes that goes with it. Moreover, we also created some marketing assets namely business cards to communicate and portray our visual identity to potential customers. The old business card shown below were made before the writing of this thesis and was lacking the colors from the new logo. Thus, we had to redesign them and print out new ones. What we are currently missing is a landing page through which we can communicate with our potential customers and inform them about pre-orders and delivery times. Nosorogche is trying to create and innovate in the branch of an industry that is rapidly growing and changing the way we go into the active way of living.



Figure 28. New business cards with the new logo (left); Old business cards with the old logo (right)

Business model

In this chapter, the results from the application of the effectuation process are summarized into a business concept. This is to gain an overview of the status quo after the ended process and to help answer the research question and to map out what is missing. The concept is visualized and narrated with the help of the Business model canvas, by Alexander Osterwalder.

The business model canvas

The business model canvas is a tool that visualizes a business model. It contains nine building blocks which covers the elements that together forms a business. It was created by Alexander Osterwalder. See figure 29 below.



Figure 29. The business model canvas with the nine building blocks, by Osterwalder. Extracted from Strategyzer.com

According Osterwalder and Yves Pigneur (A. Osterwalder, Y. Pigneur, 2010) and as illustrated in the canvas above, the building blocks of the canvas are:

Customer segments: Represents the customers to the business. These are the ones willing to buy what the business offers and the one that the business targets and are a part of the target market.

Customers relationships: Represents how the business relates to the customer segments. There are various relationships a business can have with a customer, as for example, a personal relation where there is a salesperson in direct contact with the customer, or an automated approach, where the customer simply access the value by a website. The purpose for this block is to find the best way to keep a relation concerning continuous and/or additional sales.

Channels: Channels are the methods the business use to reach the customer. They can either be direct (for example by sales personnel in a physical store owned by the business) or indirect (through partner channels/ outsourcing). The channels' purpose is to facilitate the five channel phases, which are: Awareness, evaluation, purchase, delivery and after sales. A company may have more than one channel to cover all the five phases.

Value proposition: One of the most vital parts of the canvas, which involves the value the business offers the customer segments. What customers perceive as value varies depending on the pains or needs the customer has. It can be easier access to a certain product, lower prices, a brand that offers uniqueness etc. It is in the companies' interest to create a match between their product and/or service and the customer segments pains/ needs to attract a larger portion of the segment, and thus, generate more revenue.

Key partners: Key partners include vital partnerships the company makes with other companies with the goal of covering parts of the business model the company can't do themselves. Other purposes include reducing risks and to acquire necessary resources. There are four types of partnerships: Strategic alliances between non-competitors, Strategic partnerships between competitors, joint ventures and buyer- supplier relations.

Key resources: Key resources are the resources the company needs to run the business. These resources can be physical (office supplies and space, warehouses etc) or immaterial (Licenses, computer programs etc). Human resources are vital part of all businesses and involves the operators and personnel within the business. These people handle activities such as R&D, sales and management.

Key Activities: Key activities are the activities that keeps the business running. These activities vary depending on the type of business but often include sales and networking. Other activities may include manufacturing of products, problem solving and platform maintenance/ operation.

Cost structure: This block represents all the costs within the business model. These costs may include rent on office space, materials for production and prices on licenses etc. One can separate the costs into: variable costs – costs that change over time in relation to increase/decrease of company activities and fixed costs – costs that stays the same regardless of change activities.

Revenue streams: This block represents the income the business generates from the customer segments. There are many ways a business can generate revenue from their segments, as for example, one-time sales of products and services, or, continuous revenue streams from subscriptions and/or rentals. Revenue subtracted the costs from cost structure equals the profit the company makes from their activities.

The business concept

So, what does our business model look like after applying Sarasvathy's principles to our business development? In the sections below, we take a look at how the business model concept has developed thus far.

Customer segment

The current customer segment is based on the people that has participated the testing sessions of the apparel as six of these participants has purchased one or more pieces of clothing from us. While these participants prove the interest for the product, they do not give us a complete metric of the customer segment. They can, however, be used to develop a detailed segment to for us to target.

All the participants were acquired through our private network and acquaintances of the team. They were reached by direct contact with the help of a yoga instructor (who is also one of the participants of the tests, and a person that purchased a pair of leggings). For the purpose of identifying the segment, let's look at what characteristics and backgrounds each participant share:

- They were all female
- They were in ages between 18 and 34
- They were all physically active, meaning they practiced yoga, traditional workouts and other related activities
- They were interested in wearing apparel that had specific designs. Their design preference varied, but they preferred designs with various colors, illustrations, etc. and not just neutral colors with no additional design features.

With these factors we see that the customer segment is reachable through other partnerships like the yoga instructor, as for example, through a personal trainer working at SATS. Another thing to notice is the age group present. According to Statista.com, this age group is the most active on Instagram. This gives the indication that there is a high possibility of spreading awareness of the product with the help of Instagram, where our customer segment post pictures of themselves in our apparel, and thus, feature it to other people within our segment.

Value proposition

What we offer our customer segment is sports apparel products that are made with high quality materials to ensure comfortability and sturdiness. We also offer a unique design, based on feedback from the potential customer segments.

Channels

Our business will operate with a variety of channels. To spread awareness of our product, we will use key partners as a channel to our customer segments, see section about key partners below for further details. This will also give the customer segments to observe our products to evaluate it. Another channel we plan to have is an online platform, where the customer can evaluate the product (for example browse the designs) and purchase it. We also need a channel that delivers the product to the customer. In the beginning, we can handle local delivery ourselves, but it becomes a problem when the distance to the delivery point increase. To tackle this, we will use the Danish postal system as a logistics channel, at least in the earlier stages of the business.

Customer relationships

Our relationship with the customer is both personal and impersonal. It is personal because we intend to further develop our products based on customer feedbacks. It is also impersonal as the actual sales of our product will mainly be through our online platform and delivery of the product happens by mail.

Key partners

From our activities we currently have a key partner in our manufacturer. This partnership is the buyer – supplier type of relationship and involves a cooperation on details around the apparel design, what fabrics to use, the seams etc. This is a key partnership since it directly affects the quality of our product, which we need to maintain to satisfy our customers' needs and generate sales.

Another key partner we have obtained is a yoga instructor as she acts as a direct channel for us to reach a portion of the customer segment. While she alone cannot be our channel for an expanding business, she acts as a first port of access. By networking activities, we can reach more people like her that can act as more channels to further spread our product. We have established contact with another possible channel in a personal trainer, who is interested in working with the product. This personal trainer works at SATS, a large chain of gyms spread across Norway and Denmark. Using her as a partner and a channel, we can gain access to a large pool of new customers that would fit in with our customer segments as people working out in a gym are very likely to be interested in quality sports apparel.

Key resources and key activities

One of the most prominent key activities we have is networking. We need to keep networking in order to reach more people and companies to further expand our network of partners. This is important as we intend to use these partners to a variety of activities such as marketing channels and sources of customer segments.

Together with our manufacturer, another key activity is product development. If we want to develop as a brand, we need to be able to produce more than one design of apparel considering both the functional and the visual aspects of the product.

One key activity is sales. We need to constantly sell our product as that is our source of revenue.

Together with our key partners, we will perform marketing activities to create awareness of our product.

Taking the key activities into account, we see that in the future, there will be key resources we need such an office space with computers. This is to have a central in which to operate the design developments, networking activities and sales activities. We are also in need of software to support these activities. At current state of the business, however, our only key resource is our designer.

Cost structure and revenue streams

At the current state of the business, the main cost we have is producing the sportswear. This is a variable cost that, per unit, gets lower if we order in larger quantities. There will be other costs along the line, including a fixed cost in renting an office space, and a fixed cost in acquiring the necessary licenses for further design sessions. There is also a variable cost in shipping the product from the manufacturer to our location. Another cost concerning our product is packaging.

Our revenue streams come from selling the product to our customers. It is a one-time income per product sold.

Our pricing strategy is inspired by how people with a high entrepreneurial expertise price their products in uncertain business situations (S. Sarasvathy, N. Dew, M. Song, S. Read, R. Wiltbank 2009. Page 8). They set a higher price point to their products to capitalize on the value they give the customer. To follow this example and to approach it effectually, our pricing strategy is value-based pricing. Value-based pricing is a strategy, which, as mentioned above, aims to capitalize on the value brought to the customer rather than basing the price on costs and competitor pricing. (G. Armstrong, S. Adam, S. Denize, P. Kotler, 2014. Page 265.) This gives us a higher profit margin on our product.

To get a picture of the possible profit margin, we use the average price we paid to the manufacturer for the samples we created (including shipping). We base the sales price on the price some of the participants from our research said they are willing to pay.

	Cost	Sales price	Profit
Leggings	120 DKK	600 DKK	480 DKK
Sportsbra	70 DKK	400 DKK	330 DKK

Table 1: Features an estimation of possible profit we can acquire with our product.

The calculation in the table above serves more as a measure of potential rather than actual profit. There are more variables concerning the cost of the product that are yet to be defined by actual numbers. This includes quantity discounts from the manufacturer, packaging costs and various fixed costs, such as rental fees.

Discussion and Conclusion

In the beginning of this thesis we asked the following research question:

How can an idea turn into a potential business within the sportswear industry using the effectuation theory and principles?

So, how has the effectual approach affected our startup process? First of all, the effectual approach has been used as a narrative for our process. This means it has not dictated all the decisions we have made during the process, but rather given us an overlay to follow. This is evident in the fact that we started our process with the birds-in-hand principle, using our means to accelerate our process. Although our process probably was not in complete line with the effectual framework, we still managed to constantly generate new means and goals. An example of this is when we narrowed down our target market from including both Bulgaria and Denmark, to only include Denmark.

The following sub-question was also proposed at the start of the thesis:

To what extent the suggested effectual approach can be utilized when starting up a new business in order to validate its business model?

Rather than doing extensive research on competitors, design theories and market analysis, the effectuation process gave us an action-oriented approach, where we used our network and knowledge to start a series of testing that provided us with the means to start selling the product before even creating a business concept. It has also provided us with various cost-effective partnerships to cover various parts of the business concept. Without the research on competitors (except from the competitor research used for the logo) and market analysis, however, the limitations of the effectual approach become apparent. While we are proving our concept with successful sales, we have a very limited grasp on possible scale of our business. This is in relation to the customer segment, where we have identified the segment, but not researched the size of it within our local market (Aalborg). The limitations of the process are also reflected in our current business model, where we have identified the necessary aspects to launch the business, but not validated each aspect. We have, however, been able to develop active partnerships that drive

the business and we currently sit with a product that is designed (and validated) to provide the customer segment value.

To conclude, the overall process has been very exciting. Concerning the team, two of the members: Slavoljub and Venelin had already been working on the business idea before the start of the thesis. The new member, Lars, joined the project at the beginning of this thesis. With an extra member came new angles and ideas on how to proceed with the project as, for example, setting the theme in relation with the effectuation process. While the extra member provided the project with an extra pair of eyes, the execution of the project has not been easy. For starters, Lars lives in Norway, while Slavoljub and Venelin lives in Aalborg. This distance caused some of the team discussions and decision making to happen without all the members being able to participate. The team has been able to work well together despite these challenges, and during the summer, had a shared trip to Bulgaria to meet the manufacturer. This adventurous trip acted as a teambuilding journey as well as a trip to gather data. Finally, we did what we intended to do and woke up our warriors within.

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Appendices

Appendix I - Fabrics research

Source: <https://blog.fabricuk.com/974-2/> ; <https://lycra.com>

Sport Fabric Properties

Taken from a blog post of Fabric UK from 2016, several sport fabric properties are presented below.

Thermal insulation – Fabrics with good thermal conductivity are not good insulators, therefore these fabrics will be cooler to wear. Air is one of the worst conductors of heat which is why the more still air a fabric can trap, the warmer it will keep you.

Wicking – Wicking is the transport of moisture through a fabric. Moisture can pass between fibers, yarns and through the fiber itself. The ability for moisture to pass through a fabric will depend on the fabric construction and the fiber type. Synthetic fibers tend to dry quickly and are the most commonly used fiber in athletic wear now.

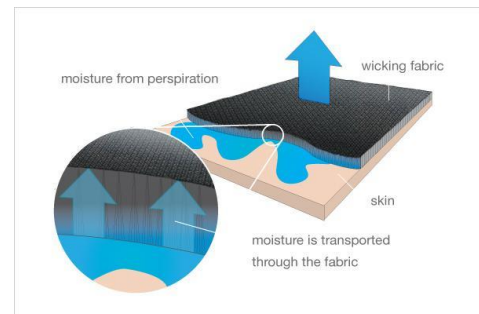


Figure 6. Wicking Fabric

Water Vapor Transmission – When high intensity exercise takes place, sweating will occur to evaporate heat off the skin. If clothing is not breathable than there is nowhere for the moisture to escape. This causes moisture to build up inside the garment and on the skin resulting in the body getting hotter. Another consequence is when exercise decreases and heat stops being generated from the body, the moisture (which is less insulating than still air) will then increase heat loss rapidly, especially in a cold environment. From this we can conclude that clothing needs to prevent rain and wind from getting in but at the same time allow moisture from the inside to escape out. This process is known as water vapor transmission and fabrics which are able to do this are known as waterproof breathable fabrics.

Fabrics

For sportswear the types of fabrics and the technology involved in those would vary but the main ones are typically: Polyester, Nylon, Polypropylene, Goretex, Kevlar, coated fabrics and sometimes even cotton. These are used with different performing techniques and finishes to serve the specific purpose of the sport, e.g. with spandex ('cheaper' version of Lycra or elastane). For the sake of this paper, we will only look upon the relevant fabrics.

Polyester



Polyester is a term “often defined as “long-chain polymers chemically composed of at least 85% by weight of an ester and a dihydric alcohol and a terephthalic acid”. In other words, it means the linking of several esters within the fibers. Reaction of alcohol with carboxylic acid results in the formation of esters. Polyester also refers to the various polymers in which the backbones are formed by the “esterification condensation of polyfunctional alcohols and acids”.” (WIP, 2019).



Polyester characteristics

Usually, Polyester fabrics and fibers are extremely strong. They are very durable, which means that they are resistant to most chemicals, stretching and shrinking, wrinkle resistant, mildew and abrasion resistant. The polyester is hydrophobic in nature and dries quick, it can be used for insulation by manufacturing hollow fibers. Finally, it retains its shape making it good for making outdoor clothing for harsh climates. Moreover, it is easily washed and dried. (WIP, 2019)

Nylon (Polyamide)

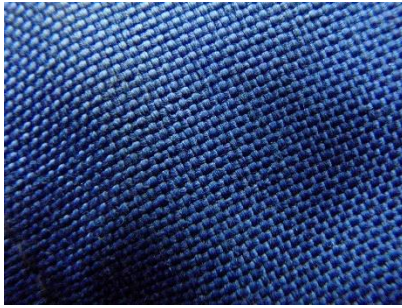


Figure 7. Nylon fabric (top) and nylon ropes

Similarly, to polyester, Nylon “is a synthetic material that belongs to the polymers. Instead of ester, its molecules are made up of amide groups. This is why nylon is also sometimes called **polyamide**. To turn this plastic into fabric, nylon chips are first melted. The melted nylon can be then turned into fiber by pushing it through small holes. Finally, the nylon fibers are woven into fabric. Nylon can also be blended with fibers like polyester, spandex, and cotton. For example, nylon can be made more durable by combining it with polyester. Or if added elasticity and comfort is the goal, spandex is blended.” (Sleepinglucid, 2019).

LYCRA



Figure 3. Lycra fibers (top); Nylon and Lycra combined - 80% / 20% (bottom)

“LYCRA® is a synthetic elastane fiber that can stretch up to six times its length and return to its original state – time and again. LYCRA® fibers have redefined comfort, fit, freedom of movement and shape retention in virtually every garment category since its first use as a substitute for rubber over 50 years ago. LYCRA® fibers are a versatile, invisible ingredient that improves the characteristics of natural and man-made host fabrics. They have fundamentally transformed close-to-the-body garment categories such as swimwear, hosiery and intimate apparel. They enhance the drape, shape, comfort and appearance of outerwear. And they have played a key

part in the development of entirely new active and performance sportswear concepts. The comfort, freedom of movement and shape retention that LYCRA® fibers bring to stretch materials is fundamental to garment appeal in this highly competitive sector. Advanced technology

platforms with LYCRA® fiber have even more to offer. They create extremely flexible, lightweight fabrics with superior breathability, moisture management and muscle support characteristics. They offer both styling and functional advantages. They meet the demanding performance standards that consumers look for in active and outdoor apparel. Their built-in bi-directional stretch qualities radically improve freedom of movement and ensure comfortable, long-lasting fit. Sports enthusiasts recognize and value the difference.” (LYCRA, 2019).

Mesh



Figure x. 100% polyester. Airtech mesh

“Mesh is a fabric which includes a certain amount open spaces; a typical mesh is about 85 percent material and 15 percent holes although different mesh fabrics will vary in weight and hole size. Mesh is beneficial in sportswear as it provides good comfort and stretch and allows air to circulate and reach the skin meaning that it is ideal for ventilation areas of a garment, especially for places where heat accumulates very quickly such as

on the back.” (FabricUK, 2016).

Neoprene

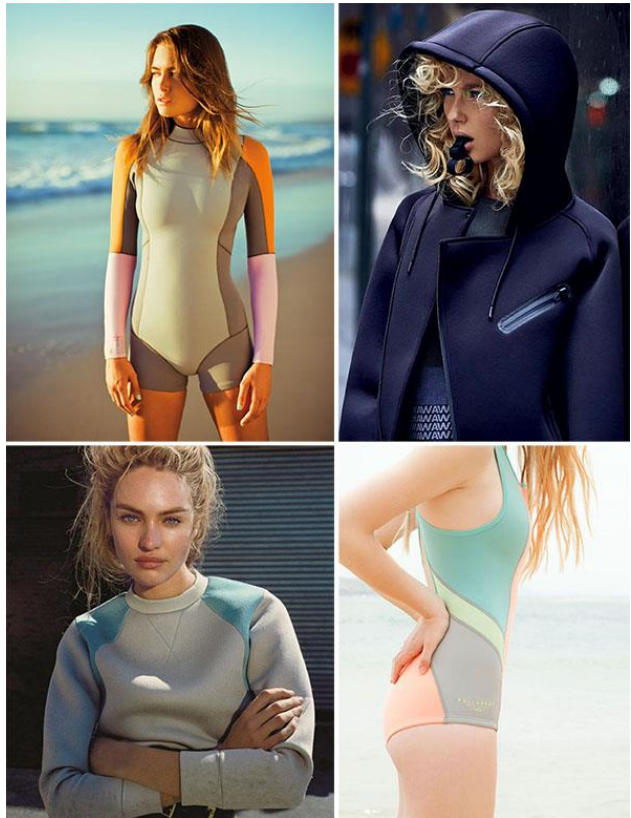


Figure 4. Neoprene and its application in sportswear

“Neoprene is a foam like synthetic rubber made from polychloroprene chemicals. It doesn’t fray, is a good insulator and is water resistant. There are two types of neoprene: open cell and closed cell. Closed cell neoprene is cheaper and is the most common type; it consists of nitrogen filled separated bubbles and allows a small amount of water to pass through which is heated by the body. This type of neoprene is lined and is suitable for people who will stay continually active in the water so that body heat continues to keep the layer of water inside the suit. For very cold conditions and for activities where there is waiting around, open cell neoprene is the appropriate option. Open cell neoprene is raw (unlined), softer and more flexible than closed cell which is rigid and strong. Open cell is made up of interconnected air spaces and works by clinging tightly to the body. It can contain up to 98% still air inside it giving good insulation to weight properties. Open cell is more

insulating and depending on the thickness and type, can be used for deep sea diving and for staying in the water all day. Neoprene is used for water sports and is now very fashionable for casual sporty type clothing and swimwear.” (FabricUK, 2016).

Appendix II - Printing techniques for fabrics

Source: Supply Compass (<https://www.supplycompass.com/blog/fabric-printing-what-method-should-i-use>)

Direct to Garment



Direct to garment (DTG) is a digital printing technique where designs are printed directly onto the fabric or garment using an inkjet printer with special water-based inks. Before being printed, the fabric needs to go through a pre-treatment process which involves coating it with chemicals that enable better absorption of the ink. It is then passed through another machine that sets the ink using steam or heat, before being washed and dried to remove the chemicals.

What's DTG good for?

- Complex designs with intricate details, a broad range of colours, or realistic photos.
- Designs that need to be printed right to the edge of the fabric.

- DTG printing works better on lighter fabrics, composed of 100% cotton, or a cotton blend.

The cost

- Low set up fees, which means it's quicker and cheaper to sample than other types of printing such as screen.
- You can print small quantities at relatively low cost.

Sublimation printing



Sublimation, like DTG, is a digital printing technique that uses an inkjet printer. But, instead of directly printing the fabric the design is printed in reverse onto paper and then transferred onto the fabric.

What's sublimation good for?

- You can get more vibrant colours and vivid pictures than any other printing.
- Sublimation works great on 100% polyester but isn't compatible with non-synthetic fabrics like cotton.

The cost

- Sublimation is more expensive than DTG and the sampling cost is higher.

Screen printing



- There are two main types of screen printing; flat bed and rotary.
- Flatbed screen printing can be fully automated, semi-automated or manual. This method uses a squeegee to transfer the ink paste through an engraved screen.
- With rotary or cylinder printing, pressure forces the paste through engraved roller screens.
- For both types, each screen can only apply one colour at a time.

What's screen printing good for?

- Large order runs. Rotary printing gives you a more consistent finish compared to screen and is great for print runs of 1000m or more.
- It's a great choice for simple designs with only a few colours though it's worth noting that it's hard to achieve consistency of colour across batches of fabric.
- Solid colours come out well but shading is hard to achieve. Lines on the designs need to be well defined and slight bleeding of colours is common.

The cost

- It's an affordable method of printing that gives a fantastic end result but the set-up cost to develop the screens is high, as is making changes to your designs after the screens have been made.
- The more colours, the more screens need to be engraved and therefore the more expensive it becomes.

Heat transfer



With this method, you print on paper and transfer the design to fabric by heat. The finish is vivid and clean and is ideal for logos and labels on products like sportswear, underwear and swimwear where you don't want a fabric label. It's most effective on polyester and is inexpensive,

but slower compared to other types of printing.

Block Print



Block printing is the oldest printing technique with roots in India, Japan and China dating back to 5th century BC. Wooden blocks are hand carved with designs, then covered in ink before being hand pressed onto the fabric. The dyes for block printing are usually mixed by hand and eye to match the desired pantone – a job requiring incredible skill and experience.

Appendix III - Types of seams

Source: <https://fashionangelwarrior.com/which-types-of-seams-will-work-best-for-my-design/>

Factors to Consider When Choosing the Most Suitable Types of Seams

Type of fabric –Many new designers don't realize that the fabric will determine the rest of your design outcome- including which types of seams and finishes you'll use. Are you designing a draped chiffon blouse? You'd probably want to use a french seam, for the cleanest finish. If you're designing a line of denim; you'd probably need to use a sturdy flat-felled seam along with topstitching for added durability.

Time & Cost– Time and COST are huge factors to consider when choosing appropriate seam finishes. Seams that require more time will result in added cost. For example, french seams and bias bound seams are much more tedious and expensive to construct in production than overlocked seams. When sewing leather, the seam allowances are typically opened and then glued down after sewing. If your design requires seams with a tedious finishing process like these; you'll need to have the budget and the customer to accommodate for that price point.

Seam Location and Placement – A curved princess seam along the bust will be treated differently than a straight shoulder seam. Certain seam finishes are more suitable for curves than others, so that's important to think about depending on where each seam lies on the body.

Garment Use/Function– It is important to think of the wearer and their lifestyle needs. For example, jeans will need sturdier seaming than a women's silk camisole. The camisole probably won't endure as much wear and tear as a pair of denim jeans. Also, activewear, especially leggings, typically use flatlock seams as it allows the seam to stretch enough for the wearer to be active and get the leggings on. The seam finishes of a good design should correspond to the needs and lifestyle of its potential wearer.

Toolery and Equipment– While many seams can be achieved on a standard industrial sewing machine, some can only be done on specific machines. Flatlock and flat-felled seams should have

their own respective machines for them to be done most efficiently for production. It's important to note that each manufacturer you meet will have different equipment and specialty machines. It's best to discuss your designs and finishes with several factories before the production phase; this will help determine which manufacturer is most capable of producing the best result for each design. That way your options of seam finishes won't be limited by your "go-to" manufacturer.

Most Common Types of Seams for sportswear

Top-Stitched Seam:



Description - Whether it's a single or double top-stitching seam, this type of finish can be done purely for decorative purposes or to add strength and durability. Topstitching can also help reduce bulk and keep seams flat and secure on high-stress areas.

Construction - Top-stitched seams are typically straight seams that are visible from the right side of the fabric. Topstitching can be applied on top of any type of seam though it's commonly used to stabilize the seam allowances of plain seams. This is usually done as single-topstitching or double topstitching (which distributes bulk most evenly). Most Suitable For - Outerwear, denim menswear, and sportswear. Double top-stitched seams are often used for blanket edges and pocket borders.

Flat-Felled Seam:



Description- Flat-felled seams are another great method for hiding and protecting raw edges. The seam is left neat and tidy from both sides. Flat-felled, along with counter seams, are the most reversible as they create a clean finish from both sides. These are also the strongest types of seams.

Construction- To achieve a flat felled seam, fabrics should be joined first with wrong sides together. Both seam allowances are then pressed together in the same direction. One side is

trimmed down to a 1/8" while the other is trimmed to 3/8." The raw edge of the 3/8" seam allowance is then folded over the shorter seam allowance with the fabric edge turned under for a clean finish. The fold on the right side of the garment is then edge-stitched to hold it in place. The right side of the seam will show two rows of stitching and the wrong side will show one row of stitching. Most Suitable For- Heavier weight fabrics or garments that need the utmost security. Most common in men's sportswear; sports shirts, side seams for pants and jeans, and childrenswear. Also used to encase boning in corsetry and eveningwear. Not ideal for tightly curved seams.

Flatlock Seams:



Description: Flatlock seams are ideal for garments with unwanted bulk that need to maintain a lot of stretch.

Construction: This join results in no seam allowance as the raw sides of the fabric lie on top of one another, encased by the multi-thread seam. They are joined by a looped chain stitch on a multi-needle machine. Flat lock has two sides; one finished with a looped zigzag and the other with a ladder stitch look. Most Suitable For: Undergarments and lingerie; active wear, etc.

Bonded, Heat-Sealed (No-Sew) Seams:



Description: Bonded, heat-sealed, or heat-welded seams create seamless garments. Bonding yields more elasticity and water-resistance, making it ideal for sportswear and athletic wear. It also results in a clear, lighter look as seams are much less prominent.



Construction: Bonding is ultimately achieved by double-sided adhesive tapes available in many different widths, colors, and textures. The adhesive tape can be implemented by a range of heat-sources such as hot-air welding, heat-press machines, lamination belts, and tacking irons. Most Suitable For: Sportswear/Athletic Wear; Stretch garments, and design where a more subtle, less-abrasive seaming method is desired

Appendix IV – Fabric Choice

ASPEN Fabric by Carvico Ltd.

Source: <https://www.carvico.com/en/fabrics/aspen/>

Aspen by Carvico: made of super matt polyester, it is ideal for transfer printing and ensures an extraordinary brightness of colors. Moreover, it is absolutely non see-through, guarantees a perfect fit and shapes the body without constraining it. Aspen fears no extreme condition: from mountain sports, such as cross-country skiing, to the beach or even fitness activities to be practiced into the swimming pool. Indeed, it is not only resistant to chlorine, suntan creams and oils, but is also UV protective (UPF 50+).

USES	COMPOSITION	FABRIC FEATURES	TREATMENTS ON REQUEST
SPORTS	82% PL 18% EA	 Excellent coverage	 Water repellent
ATHLEISURE / FITNESS	WIDTH cm 160	 UV protection	
SWIMWEAR	WEIGHT g / m² 210	 Ultrachlorine resistant	
Fashion	PIECE LENGTH m 70	 Shape retention	
Competition		 Perfect fit	
APPAREL		 Muscle control	
		 Two-way stretch	
		 Resistance sun cream and oil	

Appendix V – New designs and samples at the second photo session (ballet girl)



Figure 5. New Designs (left) and samples (right)