

DPB200 - PROJECT 2 DESIGN - CEST - 2017-2018 - B2.1 - PROJECT COACH: ANNIKA HUPFELD - BY JOPPE SCHUTSELAARS (S160514), BRANDON SMITH (S141033), ASTER VAN KAAM (S164934) AND SOPHIE BAARS (S160343)

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WHO ARE WE?



BRANDON SMITH

Changing shape, cut and colour according to the wearer's preference may possibly be realized by 3D printing- or laser cutting techniques or by means of smart textiles, which are skills and materials I want to learn and get comfortable with.



SOPHIE BAARS

My vision touches upon embracing yourself, being unique, confident and comfortable in your body. I believe that this can be achieved by means of fashion. I wish to create something that achieves this goal.



ASTER VAN KAAM

Fashion is greatly influenced by cultural change, but can also trigger cultural change. I want to design for a changing culture. I think it would be great if we could design something that steers this change in a desirable direction.



JOPPE SCHUTSELAARS

During this project I would like to come up with a design which causes a discussion about so called "fast" and "slow" fashion. I hope this will contribute to making clothes more durable and less environmental damaging.

EXECUTIVE SUMMARY



At Scrapjacket, we want to do something about the upcoming trend of fast fashion and the negative consequences that come along with it. These are things such as environmental pollution, huge amount of waste, low wages and bad working circumstances. We want to do this by offering an alternative that is durable, affordable and fashionable.

With our service we give people the possibility to recycle their old jeans and turn them into a new, unique denim jacket. In this way every denim jacket is different and personal, because your jacket will be made out of your own jeans. To order a jacket customers can visit our site www. scrapjacket.com where they can select their desired jacket. After this they can fill in their sizes and customize several characteristics of their created jacket. The customer can choose the fit of the jacket, which is either baggy/loose, regular or slim-fit. The second choice is the length of

the jacket and finally there is the possibility to customize the length of the sleeves. When this is completed the user will receive an email with further information such as the amount of jeans needed for their own jacket.

When this is completed our work starts. After the jeans arrive they will be laser-cut in the computer-generated patterns, for this we will use Lectra. When all of the parts are cut, they will be send to fashion students. These students possess the basic-knowledge needed to sew a jacket, are more affordable than normal tailors and get more study related experience while working.

Finally when the jackets are finished they can be sent back to our customers and the jeans can start living their second live.



PROLOGUE

During the first week of our project, we decided to get together and talk about our visions as a designer. Each one of us has their personal vision, thoughts and reason for choosing the wearable senses squad. During the ideation phase, we wrote this down.

Aster: I want the result of the project to reflect my vision and to communicate it to others. Fashion is greatly influenced by cultural change, but can also trigger cultural change. Since I want to design for a changing culture I expect this squad to fit my vision. I think it would be great if we could design something that steers this change in a desirable direction. I also look forward to doing user research to see if our design can create a conversation and find out it's social impact. Furthermore I want to this project to incorporate data and programming, Other practical skills I want to learn are 3d printing, laser cutting and sewing. During this project I want to find out if the hands-on approach suits me and if so, how I can use it in the future.

Joppe: I chose this project because clothes and the role they play in our society have always interested me. I also want to try to work with my hands instead of only using my head. During this project I would like to come up with a design which causes a discussion about so called "fast" and "slow" fashion. I hope this will contribute to making clothes more durable and less environmental damaging. This could be done by using fabrics which last longer or fabrics made out of eco-friendly fabrics such as PIÑATEX. I also would like to learn about new producing techniques such as laser cutting and 3D printing. This could be combined with learning about and using smart fabrics in our project. In this way there would be a possibility to let people "customize" their clothes to perfectly fit their body, style and needs. If strong fabrics are used, people could be wearing the same clothes for years instead of just one season.

Brandon: The question we want to ask ourselves during this project is, 'how does self-expression fit into slow-fashion?'. Change shape, cut and colour according to the wearer's preference may possibly be realized by 3D printing- or laser cutting techniques or by means of smart textiles, which are skills and materials I want to learn and get comfortable with within this project. I also want to incorporate data and programming in this project, perhaps in relation to a perfect fit. Part of my vision is to provide a social contribution to society and to be able to change behaviour of people in a positive way. Within this project this may be done by means of sustainability, and see if our design can cause a discussion and convince people of the importance of it. I wish to create something that achieves this goal.

Sophie: Part of my vision touches upon embracing yourself, being unique, confident and comfortable in your body. I believe that this can be achieved by means of fashion. I wish to create something that achieves this goal, whether that is by finding someone's perfect size, making durable garments or giving someone the freedom to be creative when it comes to fashion. I want to learn how to incorporate data in clothing and about new techniques to create garments, like laser cutting or 3D printing. I enjoy the handson approach that comes with this squad, and believe this is a great way to generate new and different ideas. Finally, I hope to develop a better vision during this project, along with development within the different competency areas.

INTRODUCTION

Over the last 100 years clothing has transformed from the traditional made to order into the mass produced standard sized and fixed priced of today, where more often than not it's designed in one country manufactured in another and sold worldwide. This model, known as fast fashion, has completely changed the face of the industry.

Most of the clothes we wear end up in landfill. According to a recent Greenpeace report¹, the average European consumer now buys 60% more clothing items a year and keeps them for half as long as 15 years ago.

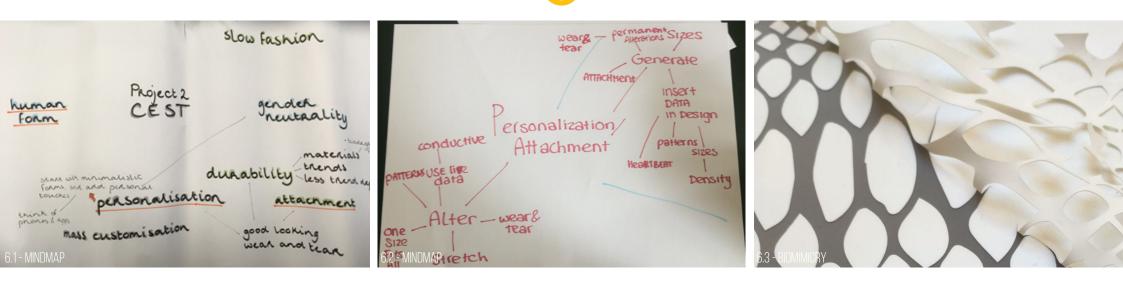
Cheap fast fashion is a huge obstacle to a more sustainable industry. Many people recognize the bad influence from the current model and are willing to change it. However, our user tests showed that for many students slow fashion is often too expensive. But fashion (shopping, dressing yourself etc.) is also a very social and creative experience. Our challenge comes from changing the system, without getting rid of these experiences. For many people buying new clothes is a form of self expression. You not only buy the clothes, but also the feeling of luxury and how you want to present yourself. Students can not buy slow fashion without losing the possibility for selfexpression and social experience that fast-fashion offers them.

The goal for this project is to find a way in which this self expression could be fit into slow-fashion. We all know that our resources are limited, which is why we most of all have to be smart. Perhaps extending the lives of fast-fashion is the answer. Maybe it's possible to give worn out clothing or clothing that you get bored of new lives by personalizing and mending them or making them anew.

¹ Roloff, L, Graumann, D, Brodde, K. (2016, November 26th). Black Friday: Greenpeace calls timeout for fast fashion. Retrieved from http://www.greenpeace.org/international/en/press/releases/2016/Black-Friday-Greenpeace-calls-timeout-for-fast-fashion/



IDEATION



Since groups were formed based on shared interest we started by exploring the problems that surrounded these interest. This also led us to figuring out how different interests were connected. This was done by making a color coded mind map.

Research showed us that cheap fast fashion is the biggest obstacle to a more sustainable industry. This led us to ask ourselves: "Why do we keep buying fast-fashion clothing if we know this is bad for the environment?" We assumed there were many reasons for this. For example, wanting to keep up with the constantly changing trends could be a reason. However we expected the most important reason to be that people will simply feel bored of their clothes after a while. In our own experience expressing oneself through clothing was also an important reason. We expected that if we could find a way to let people feel more emotionally attached to their clothing they would not get bored of it. Our ideas for creating this attachment were amongst others creating the perfect fit, or making a pattern on the jacket that could show personal growth of the user.

For perfect our thought process mainly focussed on creating an online service that would let people of all sizes order a garment that would fit them perfectly. We looked in to fibonacci ratios to see if we could calculate all the measurements of a body from knowing only one measurements. So that users at home would, for example, only have to fill in their length when ordering their garment. And a program written by us would find their other measurements. We also successfully made a 3D model of a person, from this measurement could be measured without an actual person present with the user to take measurements. Furthermore two other processes were set in motion. First we tried to find materials that we could connect to our ideas. For this we had two ideas we had two directions. One was "generate" and the other was "alter". With "generate" inserting personal data in the original design is meant. This would create a personal garment that people could feel emotionally attached to.

IDEATION

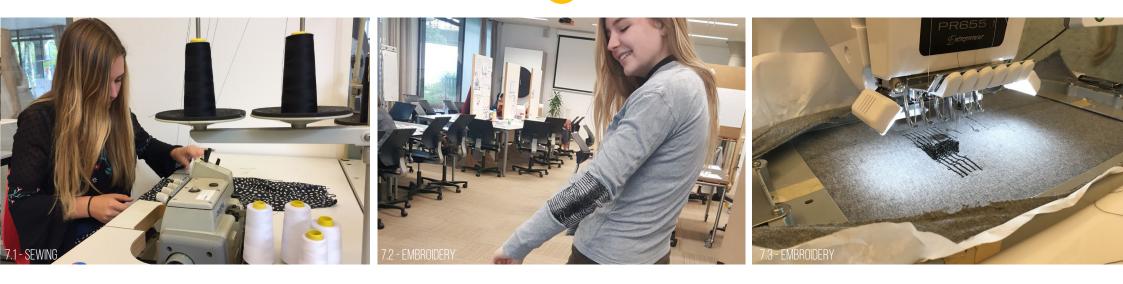


The other, "alter", was letting the garment change over time by wear & tear. For example if a material becomes prettier or changes with age it would not be so subjected to changing trends and people getting bored of the article of clothing. For this we did several material explorations. The other process was a bit of validation. We conducted personal user interviews to see if our assumptions were correct.(verwijs naar user interviews in appendix) From these interviews we found that people do not really feel personal attachment towards their clothing, but they do like it when their clothes last for a long time. Both in means of trendiness of the garment as physical durability. We also found that most people are aware of the fact that the clothes they buy are bad for the environment, but keep buying them, because they don't have the budget for slow-fashion and/or have a 'need' to express themselves through their clothing. Many people also noted that shopping is an important social experience for them.

From this our challenge became: How can we find solution that hears people's concerns about the environment, without taking the joy out of fashion for them?

After some conceptualizing and realizing of our project more ideation was used for creating a brand image. We found it very important to create something that people would actually want to wear and to create a brand vision that people could get behind. Many young people do not feel attracted to brands that mainly profile themselves as environment conscious. 'environment-conscious' seems to be synonymous with boring and expensive. ScrapJacket aims to change this. Our vision is offering a product that's durable, affordable and fashionable. A lot of thought was put into communicating this message to potential customers. This can be seen in the writing style in the texts of our website, the logo, the pictures and the color scheme that are used.

CONCEPTUALIZATION



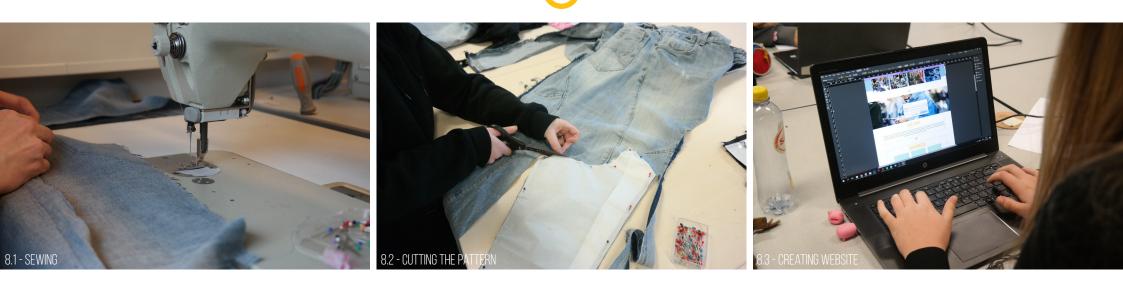
After the Ideation, we had to make a selection of our ideas and start working to one idea and further elaborate this concept. After some discussion and brainstorming we came to the conclusion that we wanted to create a service to extend the life of your worn out clothing which would otherwise be thrown away. At first we wanted to do this in 2 different ways. This is also what we presented on the midtermdemoday.

The first way was extending the life of clothes which people did not like anymore or that were worn-out in certain spots. We wanted to do this by giving people the possibility to generate their own prints or patterns. These than would be embroidered into the clothes which would give them a new look and strengthen them in worn-out spots. In this way an old garment could be re-used without having to buy a whole new garment, which is also better for the environment. We also tried these techniques on worn out clothes, in this case old sweaters. This showed that the interest of the user in the old sweater was resparked, however the pilling of the sweater could not be repaired.

The second way in which we wanted to do this was by letting people hand in their clothes. The parts of the clothes that are still usable would then be lasercut into new clothing patterns, so that new garments could be made out of these scraps.

The latter method is the method which we decided to further elaborate and which would later become known under the name of "Scrap Jacket". The foundations why this choice is made can be found under validation. For our service we chose to first focus on just one product category. In this way could perfect the service and maybe later focus on other products as well. For Scrap Jacket, we wanted to create a service where people could hand in their jeans and they would be turned into denim jackets, made out of those jeans. We chose jeans, because jeans are often made out of quality fabrics, they often have one unfixable hole and user tests showed a lot of people had old jeans laying around.

REALIZATION



To realize our idea, the following things had to be done: making the jackets, writing a program to customize the fit, writing a business plan and creating a website.

Fashion students helped us with the jackets. We asked them to include as much of the old jeans as possible to personalize the jackets and give them a unique feel. Kristi and Sverre took our measurements, started by making two patterns and took apart the old jeans we gave them. The patterns were laser cutted into the jeans and then sewn together to create the jackets.

We wrote a program in processing to customize the fit of the jacket. The customer can choose whether he wants the jacket to be tight, regular or loose. Additionally, he can customize the length of the jacket and the

length of the sleeves to match his preferences.

The website was made in Adobe Muse, but before we started designing it, we made a UX flow chart and a simple lay out, which can be found in Appendix I, to make sure the website would be as user friendly as possible. The website is responsive, has a consistent design and is easy to use. On the website, it is possible to pay for the jackets and customize the design.

Finally, a business plan had to be written to make sure the idea is realizable. We estimated that the jackets would have to be \in 40, of which the calculations can be found in Appendix II. The entire business plan and business model canvas can be found in Appendix III and IV.

VALIDATION



To validate all of our major choices we used several methods. We made online surveys, did more in-depth-interviews and did quick face-to-face interviews, to get more insights in the needs and opinions of other people. we started off with face to face interviews. This was an interview containing 20 questions, which can be found in appendix V, handling several topics, such as age, gender, shopping behavior, the reasons behind buying certain clothes or brand and finally, the fast fashion industry. Every team member did 3 interviews, so that in total we would have 12 interviews. When comparing the results we could see that not all people knew a lot about fast fashion, but they were willing to change their shopping behavior as long as this would not get too expensive. Secondly we took a survey using google forms, which can be found in appendix VI, in which we asked about the two services we had designed during the midterm-demoday. We asked why people don't wear certain clothes anymore and what they do with them once they stop wearing them. The questionnaire was also about their opinions of the two services, the extent to which they wanted influence the outcome of the process and the amount of money they were willing to pay for the services. After looking at these results we decided to put our focus on the service where old clothes would be laser cut and turned into new garments. Furthermore we did a survey where we would let people test our website. For this people had navigate to certain parts of our website and then reflect on the accessibility and whether or not they had any difficulties or problems.

Finally we did a lot quick face-to-face interviews. A few examples are when we had to make decisions for a logo, a brand name and a color pallet for our website. To test this we would print our ideas and then ask people which one they liked the most and the reason why that was their preference. In this way we could very quickly get the opinion of a lot of people to make a substantiated decision for our choices.

DEMO DAY



To prepare for the demo day, we made a few posters, a video, visualized our business plan in a business model canvas, wrote a pitch and thought of our display. Our posters, business cards and pitch can be found in appendix VII, VIII and IX.

During the demo day we showed the two jackets, the business model canvas and the video. The website was displayed on three different devices to show the website is responsive.

We received a large amount of positive feedback. A lot of people asked if we were going to continue this project after it had officially finished since they were interested in buying one of the jackets for themselves. Moreover, we received a few business cards from people interested in helping us, and gave away a few business cards to people interested in buying a jacket. We were also interviewed by a photographer from the TU/e and nominated to join the TU/e contest.

We also received some points of improvement. These mostly consisted of the way one of the jackets was sewn, and a few small things like how we could improve our business model canvas.

The positive response has given us a lot of motivation and confidence within the project and within Industrial Design. We are currently motivated to continue this project in the future.



OVERALL RESULTS

Our final result is a service/product named ScrapJacket. ScrapJacket is a service that lets users buy and customize a jacket made from their old jeans. The service focuses on young adults that are both environmentconscious and fashionable. Since other environment-conscious brands are often not very affordable and fashionable ScrapJacket fills a gap in the market.

Our final results exists of a website, code and two example jackets. The website if fully functional and online and lets people buy a jacket through PayPal. On the website users can also see pictures that other users have shared of their own ScrapJacket on Instagram and of course they can share pictures themselves. ScrapJacket also has a facebookpage, so that we can communicate with our customers. The idea is that our online reach will grow over time as Scrapjacket becomes more popular. Letting customers share their experiences will strengthen the brand, since making and wearing a ScrapJacket is all about wearing your own stories with you and showing it to others

A processing code lets customers design their own jacket as to make the final garment more personable. This code is enclosed in the zipfile. Buttons of the left are used to let customers customize their jacket for each category they have three options. Thus the customer can create 27 jackets in total. Of course this is only the cut of the jacket. In reality each jacket is different, since different jeans are used to make it. To give customers a sense of the final result an illustration is used. This gives customers the idea that the jacket does not yet exist and that they are truly designing it themselves.

The two jackets were made out of actual discarded jeans. We are incredibly pleased with how the jackets turned out and with the enthusiastic response they got at the final demo day. Since some tears, seams and labels from the old jeans are used in the design, you can actually see and feel that the jackets are recycled. Users can recognize their old jeans in their new jackets and perhaps ponder on the memories made in those jeans. This really makes each jacket unique and personal. Additionally, since the jackets are visibly made from old jeans, they could serve as conversation starter. This could spark interest in both recycling as well as ScrapJacket itself.

CONCLUSION



With ScrapJacket our main goal of creating a fashionable alternative to fast-fashion was achieved. No solution was found for the constant changing of trends. Our original thought was that for this a constantly changing garment was needed. Instead we opted for a timeless kind of garment, a jean jacket.

To further develop ScrapJacket there are some points of improvement. Firstly the the customization experience should be more elaborate. For example it would be cool if users could use the colors of their old jeans while designing their jacket. So that they can see the effect of different colored panels. Also it would be nice if users could fill in their sizes so that the final jacket fits them perfectly.

Some feedback we received at the final demo day was that our logo and brand name aren't recognizable enough. It might be helpful to look at other strong brands, and see what sets them apart and makes people remember them. Also the name ScrapJacket is not very strong when looked up in a search engine. For this we could hire and expert so that our website shows up higher on search engines.

Another needed improvement is that our current jackets are not

correctly sewn together. This influences the fit of the jacket. The problem lies mainly with how the sleeves are placed in the armholes. Of course we care deeply about the quality of the products that we offer. A collaboration with a sewing workshop is needed to ensure that customers experience our jackets as durable and qualitative. A website needs to constantly be maintained, so of course ScrapJacket is never finished. More feedback from customers is needed to optimize the user experience. Furthermore if ScrapJacket were to gain in popularity the online platform, the sharing of stories and pictures on social media, would grow. More revenue and popularity could mean that more kinds of products could be added to ScrapJacket's assortment. Overall we received very enthusiastic and positive feedback on ScrapJacket at the final demo day. People were attracted to the design of the jackets and website as well as interested in the sustainable aspect. It seemed that people could really see themselves wearing their very own ScrapJacket made from their own old jeans. Some improvements are needed if ScrapJacket were to become a real start up.

BRANDON SMITH - 0889199

In the 1st semester of year 2, I have done a design project in the Crafting Everyday Soft Things squad. I chose to participate in this squad because of the appealing projects exposed in Laplace's spaces, the pitch during the project market and because I have a general affection with clothing, other textile based products and technological innovations in this area.

The design process didn't pass without problems. We successfully addressed a societal context for design research, namely fast-fashion. However, with addressing design challenges we encountered a few dead ends. But because of asking ourselves and future customers the right questions and thinking about what we wanted to achieve within this project, we managed to address a new design challenge each time, which in the end was to find a way in which selfexpression could be fit into slow-fashion.

Integration of the expertise areas within the project

A goal was to further develop my basic skillset of design tools, and also dive deeper into skills concerning 'Business and Entrepreneurship' which I hadn't really developed last year. To integrate the expertise area of Business & Entrepreneurship I wanted to identify business issues in a clear and visual manner. I managed to do that by filling in the Business Model Canvas and develop a business cases, in which, amongst others, market trends and competition analysis were implemented, and from which I learned about writing financial models addressing manufacturing, sales and service.

Next to this expertise area, Creativity and Aesthetics and User and Society were expertise areas that have developed during the course of the project as well. The expertise area of Creativity and Aesthetics comes back in almost everything. Think of quality of finish of the jacket, quality of touch etc. But also in the idea generation, where our own bodies were used as an ideation tool. And in the design of the website, from the design of the brand's logo to the layout. We wanted every detail to be aesthetically pleasing and attractive to future customers.

From this it follows that I wanted to consider the impact of our design for users. This involves the expertise area User and Society. We approached design from very a user-centred perspective, by doing user tests for almost every decision that had to be made and analysing the data to collect



user insights and design evaluation. All of these integrations in the end were made visible in a prototype in the form of an interactive website, and denim jackets as an outcome of the entire service.

Development of professional skills

I think the collaboration went quite well. We divided different parts and worked together in such a collegial fashion that we helped each other when it was needed. I think this was a nice way of working since we divided the study load of the course in this way, and we still did most things together.

Secondly, we started off with keeping up the Reflective Transformative Design Process (RTDP) very well, however, after a few weeks we lost track of this. Therefore, some trouble was experienced in writing the report during the last phase of the project. A valuable thing that I have learned from this is that documentation of alterations, iterations, etc. is very important and you should always keep track of the RTDP.

The planning was quite good, but since we were dependent on the fashion students of the Summa College, and they delivered the patterns relatively late, we weren't able to walk through the designed service and create a denim jacketourselves. However, with help of the Summa students, we still managed to finish two jackets designed through our service, before the Demoday.

Overall competence as a designer

Part of my vision is to provide a social contribution to society and to be able to change behaviour of people in a positive way. A goal was to create something that achieves this goal. I think I managed this, by means of sustainability. I think our final design (service) can cause a discussion and convince people of the importance of it.

At the start of the project, I also mentioned that, within this project, I wanted to learn and get comfortable with skills and materials as 3D printing- or laser cutting techniques and smart textiles, i.e. textiles that combine sensors, actuators and signal processing capabilities. Aside from some try-outs during the ideation phase. unfortunately I haven't explored the possibilities of 3D printing which definitely is a missed opportunity. Likewise for smart textiles. When exploring for materials and techniques in the ideation phase, I also learned some programing in processing to generate patterns that afterwards were used in digital embroidery and digital vinyl cutting. Unfortunately I haven't explored the possibilities of these techniques any further either. However, I am very happy to have gained better insights in the laser cutting technology and its possibilities during the entire project.

All in all, this project helped me to even out the knowledge and skills over the different expertise areas and I am on a good way of getting competent in all of them. I think I have built awareness regarding the overall competence of designing. As said before, 'Business and Entrepreneurship' was an expertise area which I hadn't really developed last year, but this project gave me the opportunity to really develop in that.

I have really enjoyed participating in this squad and in the team and I am very satisfied with the end result. The positive feedback we received during the demo day makes me want to push further and set the project through after the deadlines.



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SOPHIE BAARS - 1006616

One of the main reasons I decided to study Industrial Design, was because I saw the wearable senses lab during one of the open days. As this was the first project I was able to join the wearable senses squad, I started the project with a large amount of motivation, confidence and excitement. I thoroughly enjoyed the past semester and I am incredibly proud of the final result. As mentioned above, the positive response we received during the demo day has given me the motivation to continue the project after the deadlines.

Part of my vision touches upon embracing yourself, being unique, confident and comfortable in your body. I believe that this can be achieved by means of fashion. We created a service in which I was able to incorporate this vision, by making durable, customizable and unique garments.

The competency areas that I have developed most were 'creativity & aesthetics,' 'business & entrepreneurship' and 'technology & realization. I learned how to make a functional and responsive website in the past semester. I also practiced my graphic design and presentation skills by designing posters, videos and the website. Finally, I have gotten comfortable with laser cutting, embroidery, 3d printing and, most of all, sewing. I have finished the project by making one of the jackets for myself, which I was not able to do beforehand.

Regarding the collaboration within our team, I feel like we worked together very well. We were all motivated and excited, which helped keep each other feeling this way. We could improve when it comes to our structure, as there were instances where we were a few minutes late or not as focussed as we could be. However, we have managed to finish everything in time, and stuck to our planning. We all met the obligations we set for ourselves and were able to deliver a project we can all be proud of.

ASTER VAN KAAM - 1027348

VINTAGE REBEL thevintagerebel.com 13.4 - ASTER VAN KAAM



JOPPE SCHUTSELAARS - 1023472

The reasons I chose this project are a lecture I got during a "meeloopdag" about the designing shoes because I wanted to choose a topic which also interested me outside of my education. Clothes and wearables are both things that interest me and are in my life on a daily basis, whether it is when putting on clothes or reading about new wearable product releases. Therefore the squad "crafting every soft things" seemed like a logical choice for me to make.

I believe the main competency areas that I have developed during this project are: 'creativity and aesthetics', 'technology and realization' and 'math data and computing'. I think a lot of these also overlap each other in a certain way. For example when we wanted to try 3d printing on fabric, we first had to learn how to make a 3d model which would be in the area of 'math data and computing' but when we actually learn how to handle the 3d printer and print on fabric it would be in the area of 'technology and realization'. Furthermore I deepened my knowledge about building websites using muse, especially focused on responsive web-design. This is to guarantee a website is viewable and optimized for all screen sizes. I believe this would be in area of 'technology and realization' as well as in the

area of 'creativity and aesthetics' because you also have to make decisions on which design is most suitable for which screen format. Another skill I learned are the basic sewing skills during a workshop in the wearable senses lab.

The collaboration in our team went very well. There was a good ambiance and everyone listened to what other people had to say. When someone had problems with one task everyone was also eager to help if they could. A small point of improvement could be for everyone to be on time, but this also never caused any major problems. We maybe could have been a bit more structured, but despite that we always were on schedule. A point of improvement for me could be to more often take initiative and more strongly make my opinion known. All members tried to achieve a result as good as possible and I believe we can be very proud of the outcome.

In the future I would like to further work on our service and try get everything working. This also due to a lot of interest and positive feedback during the demo-day. We have also been selected for the TU/e contest, which could help us a lot in getting our service of the ground.