



DESIGN GROUP PROJECT

TANIA TURDEAN - 19004997

GIULIA ZHANG - 19112842

HOIJIN KIM - 19081830

ERWAN GUILLOUX - 19088368

MIHNEA MACOVEI - 19030283

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1. MAKEUP IN TIMES OF COVID

The global beauty industry generates \$500 billion a year and accounts for millions of jobs. Come 2020, the industry took a big hit due to the COVID-19 pandemic, with makeup sales dropping by 22% in the first quarter (1). This comes partly because of the customers' tendency to test products before committing, now unavailable due to sanitary measures.

1.1 THE IMPORTANCE OF TESTING COSMETICS

In most major beauty-industry markets, in-store shopping accounted for up to 85 percent of beauty product purchases before the COVID-19 crisis (1).

Shopping habits, by age group, % of respondents¹

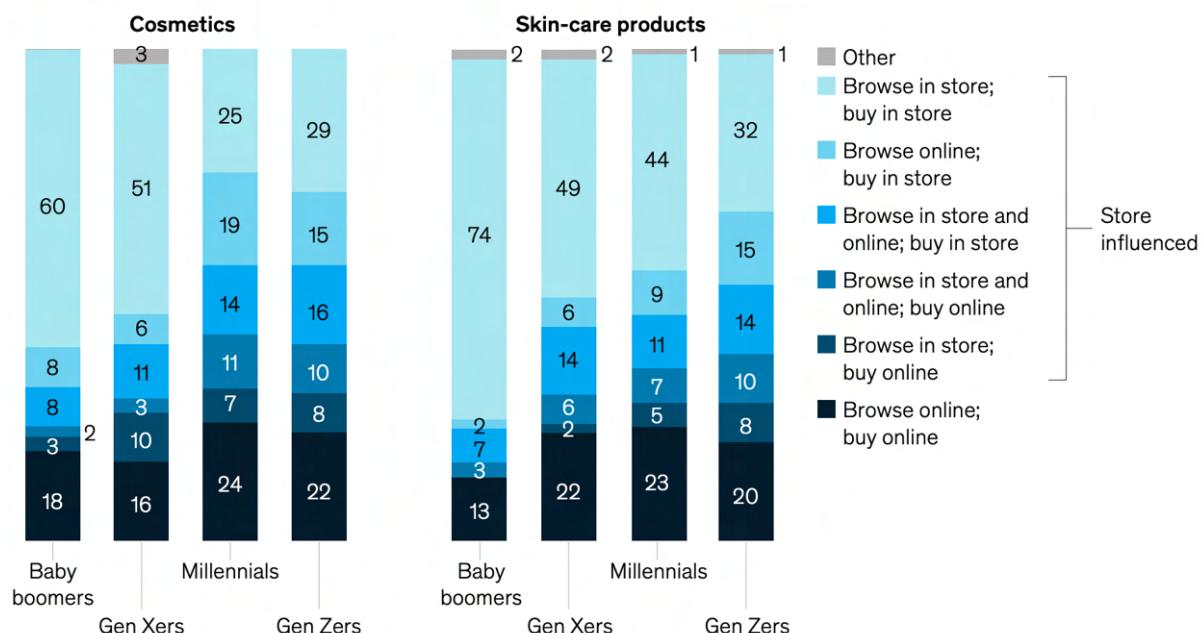


Figure 1 - Cosmetic shopping habits (1)

According to a survey conducted in the US, the primary reason why consumers prefer to buy beauty products in-store is because of the ability to see the shades of makeup in person.

The secondary reason diverges by age group. Younger consumers enjoy the retail experience of trying on makeup and examining the products through touch, while older customers report that in-store shopping is more of a convenience for them. (2)

1.2 PROBLEM STATEMENT

After the emphasis and defining steps (Section 3), we decided to focus our design

problem on helping customers choose the right foundation both in-store and online with Covid restrictions. To comply with sanitary requirements, retailers (in-store) are not allowed to give out testers and clients cannot physically see the product when purchasing online. People who use foundation care about the shade and the texture of the product.

A customer's journey of both in-store and online shopping can be seen below.

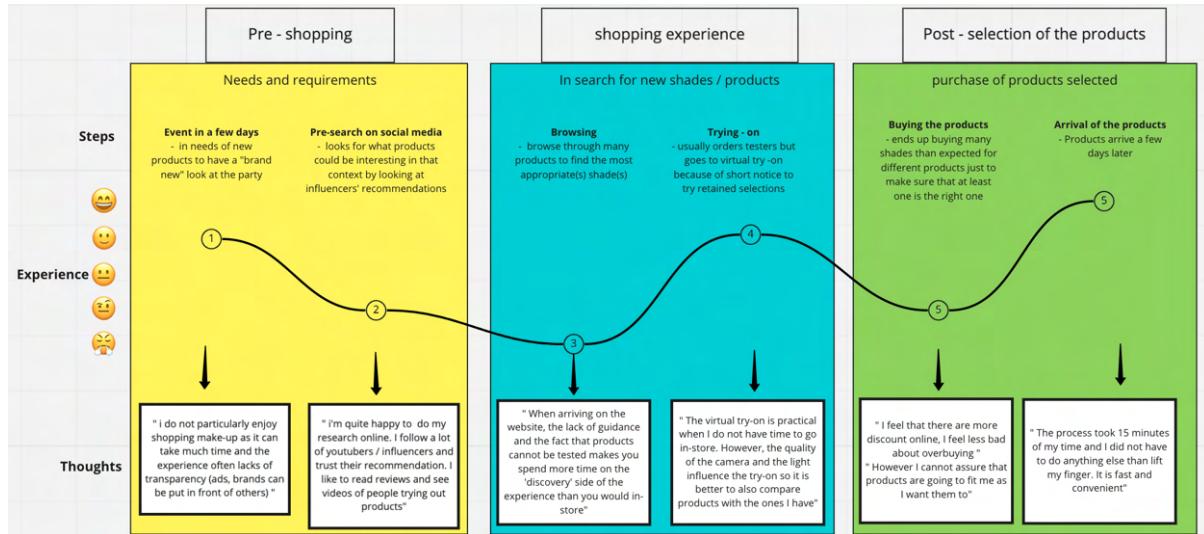


Figure 2 - Customer's journey map (online)

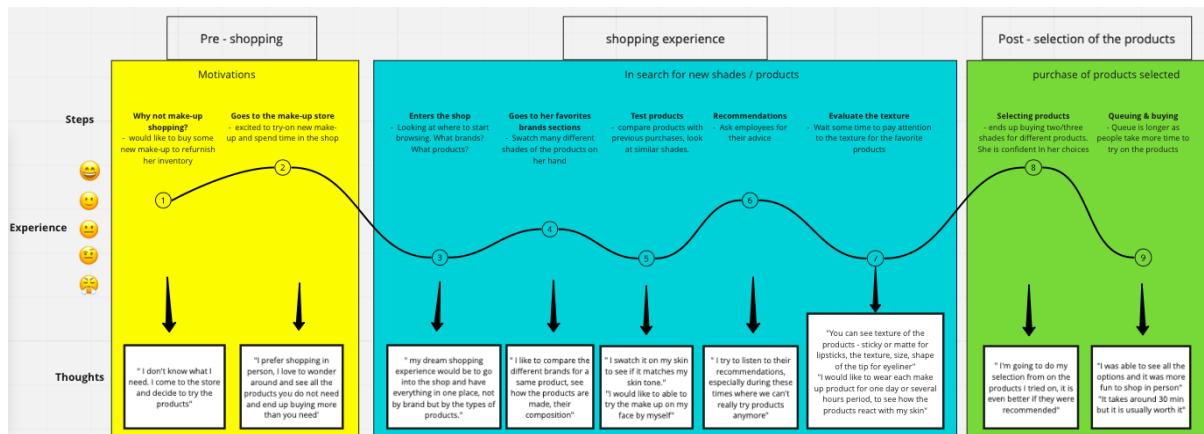


Figure 3 - Customer's journey map (in-store)

1.3 KEY STAKEHOLDERS

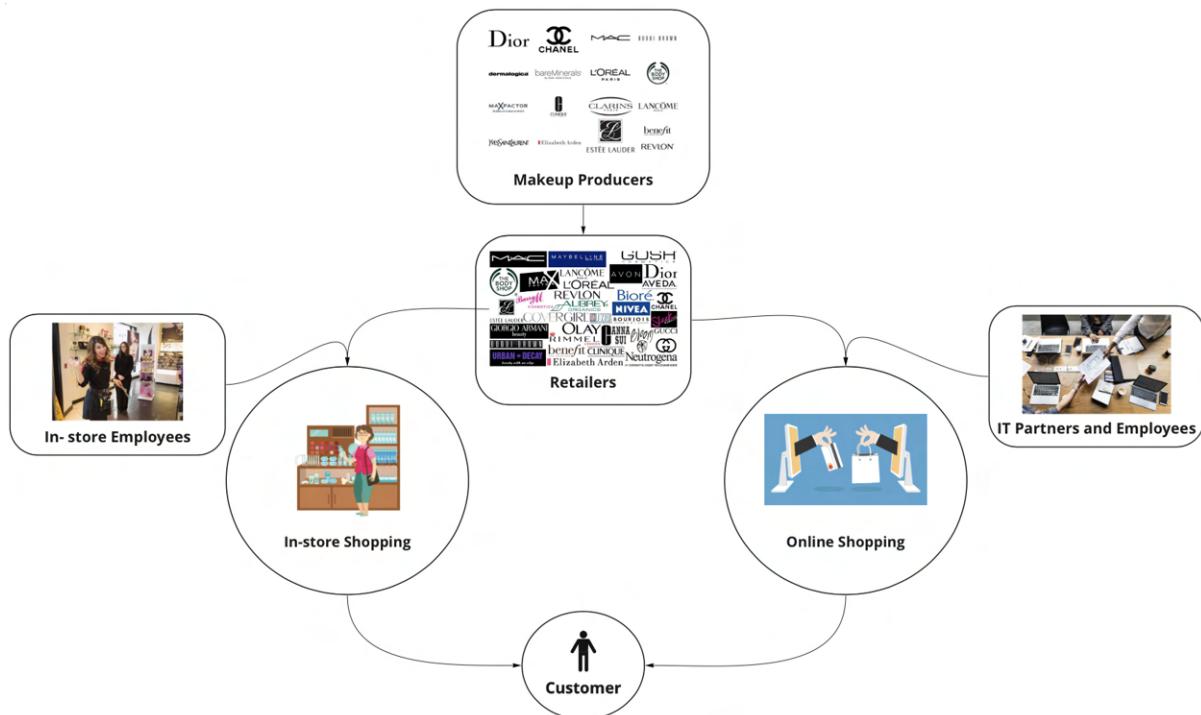
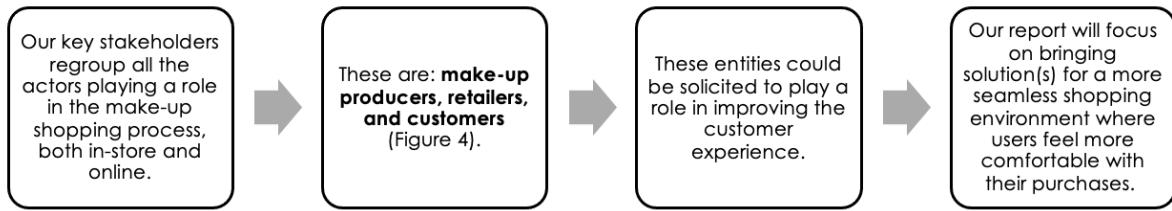


Figure 4: Stakeholder map

2. IMPROVING THE MAKE-UP SHOPPING EXPERIENCE

2.1 HOW IS THE SYSTEM IMPERFECT

"Since I do not go out, I do not feel like wearing make-up as much if I am not going to see anyone. I'd say it also comes from laziness."

"The mask bothers me, it is inconvenient."

From our interviews and observations, we observed a tendency to reduce make-up use.

IN-STORE

"I really like to see the product, test it, see the quality."

The largest proportion of users revealed that their ideal way of purchasing make-up products in-store should include tests on the skin to see how the shade of the product looks with the skin tone, under natural light, or how the skin reacts to it.

ONLINE

"I tried on several makeup products. I find the idea really nice. However, the quality of the application is not good enough so it is not the same as trying on make-up in real life."

Out of our 31 respondents, only 13% reported preferring online shopping. This was mostly justified by the fact that it is less time-consuming and that users do not need to go out "just to buy make-up". However, when it came to testing, users reported that the simulation (Virtual try-on) lacks accuracy.

2.2 WHY DOES IT MATTER?

Beauty retail sales were well positioned for growth before COVID-19. However, make up stores have experienced one of the worst sales years as a result of the pandemic.

Therefore, providing customers with a solution that can help them choose the right foundation both in store and online, could help the beauty industry stay resilient even during the pandemic.

3. DESIGN PROCESS

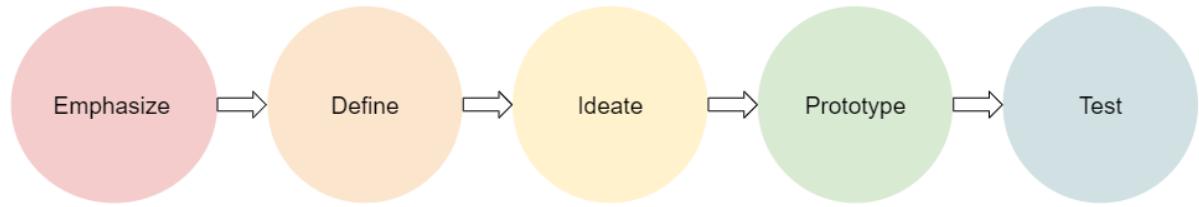


Figure 5 -Design process method

3.1 EMPHASIZE

After carrying out the desk research on the problems the makeup industry faces during the pandemic, we interviewed a cosmetic company CEO to gain more knowledge about the industry and its challenges. Once we had a clear problem statement, in-depth interviews and observations were carried out to challenge our assumptions and understand our target users better.

INTERVIEW WITH A COSMETIC COMPANY CEO

We interviewed the CEO of the Romanian cosmetic company Farmec. We found that make-up sales dropped a lot during COVID (the exact percentage is confidential). We understood that producing testers is as expensive as producing the product because of the packaging. He also proposed some alternatives for make-up testing such as advertising using influencers or trying the product online using apps such as L'Oréal's Virtual Try-On. (Full interview - Appendix)

IN-DEPTH INTERVIEWS

31 Europeans in three different age groups have been interviewed about their make-up selection behaviours: choosing the shade of a product, shopping in-store or online makeup, and what would be the ideal way of shopping for makeup. Among participants, one was a makeup artist and three were in-store employees. Additional questions were asked specifically to them.

The first interview questions focused on the testing and consumption of different make-up products. After getting some feedback, we added additional questions on what the “dream” shopping experience would look like, the amounts of money spent, and the duration of choosing the right shade (for different products both online & in-store).

From the interviews, we understood that most customers care about testing the shade of foundations but not so much for the eyebrow pen and lipsticks. Therefore, we narrowed down the scope of the problem to foundations. Moreover, users value the colour of the product but also the texture (matte, watery, etc). We thus decided to consider that aspect when designing our solution.

The next step was to create personas and user journeys from the interviews and empathy maps.

INTERVIEWS WITH SEPHORA STAFF

The staff employees interviewed outlined a decrease in the number of clients in-store, however, they were not able to reveal any quantitative data. They also mentioned that customers tried to use products when they were not monitored, which strengthens the importance of testing products before buying.

OBSERVATIONS

Non-participant observations of 5 people (3 customers and 2 employees) were gathered in a Sephora store in Bucharest, Romania. We used them to analyse in-store processes using the AEIOU Map.

LIMITATIONS AND RECOMMENDATIONS

Cognitive bias	How it was overcome
Say/Do gap: initially assumed asking what they prefer and want would give us the best solutions	During the interview, asking their ideal in-store and online shopping without thinking about the feasibility but at the same time, also carrying out observation in-store to understand users' real behaviours

Limitations & Recommendations
Due to covid-19, observation in the United Kingdom was limited. Moreover, in-depth interviews were only carried out using the video calls, thus face to face interactions were not possible. Observing in more stores would give us better understanding, especially in different countries, not only in Romania

3.2 DEFINE

AEIOU MAP



Figure 6

Observations were gathered and analysed through the AEIOU map, which shows the Activities, Environment, Interactions, Objects, and Users during a visit to a Sephora store.

EMPATHY MAP

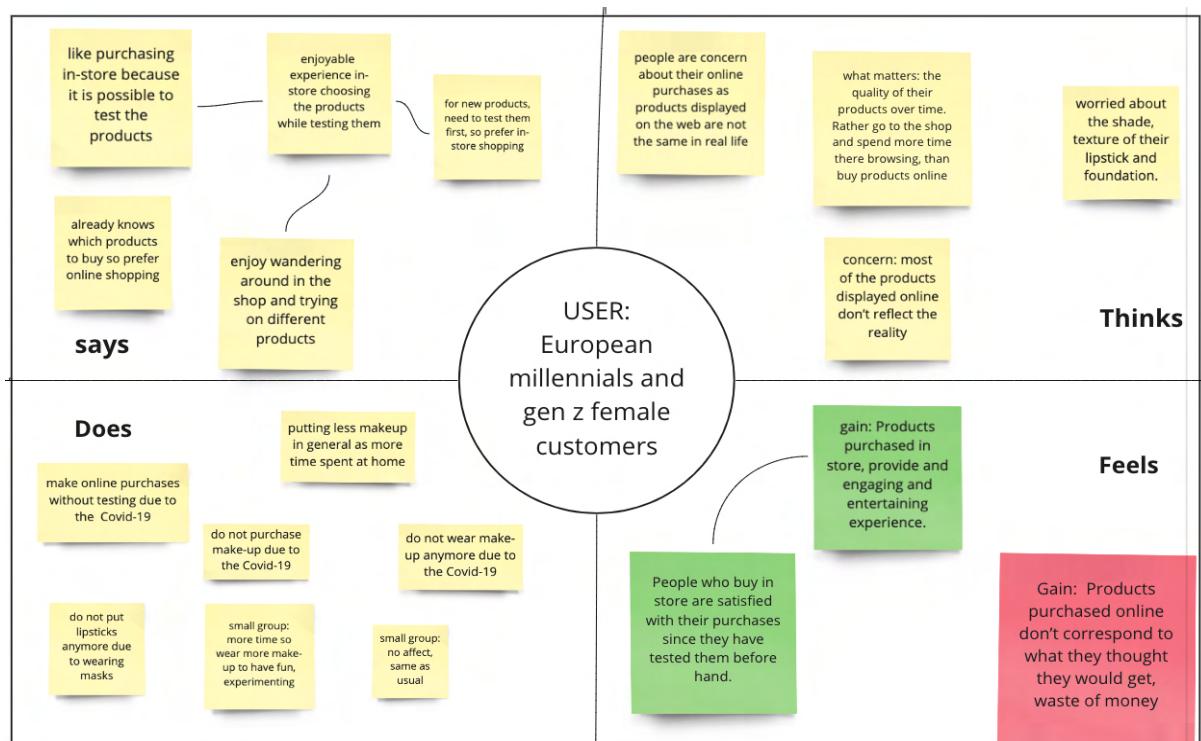


Figure 7

Using the in-depth interviews, an empathy map has been created with what our users say, think, do, and feel. We understood that many customers do not only wish to buy make-up products but also enjoy the in-store shopping experience.



Figure 8: Empathy map

The first step to create personas was creating an empathy map (Figure 8) using the in-depth interviews. We wrote down answers with the correspondent respondent number and then added respondents 'numbers with similar statements. For instance, respondents 1, 2, 4, 12, 16, 17, 25, 28 said that they test foundation on their hands before buying.



Figure 9

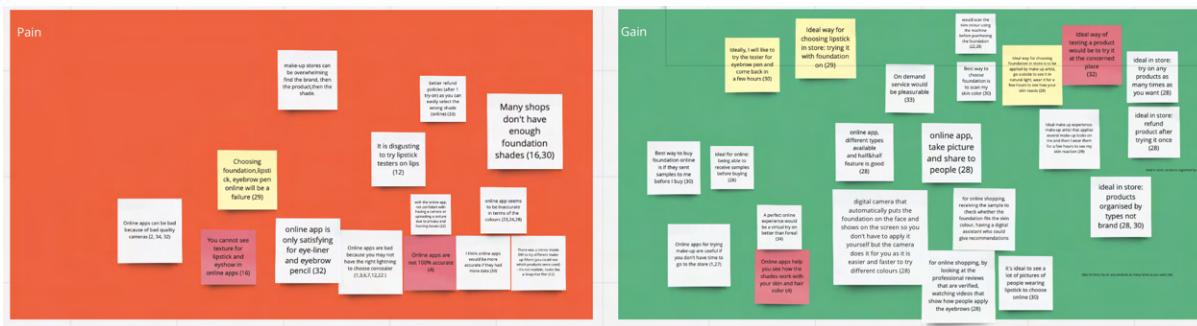


Figure 10

The next step was to regroup the answers based on fields similarity (Figure 9 & 10) such as pain and gain points, or the way users choose foundations. We used these boards to create personas by looking at the similarity between each combination of answers: we saw that the different respondents trust employees but do not follow their advice but also use testers on their hands - this is how we created Olivia, "the Independent In-Store Picky Shopper".

FOUR PERSONAS

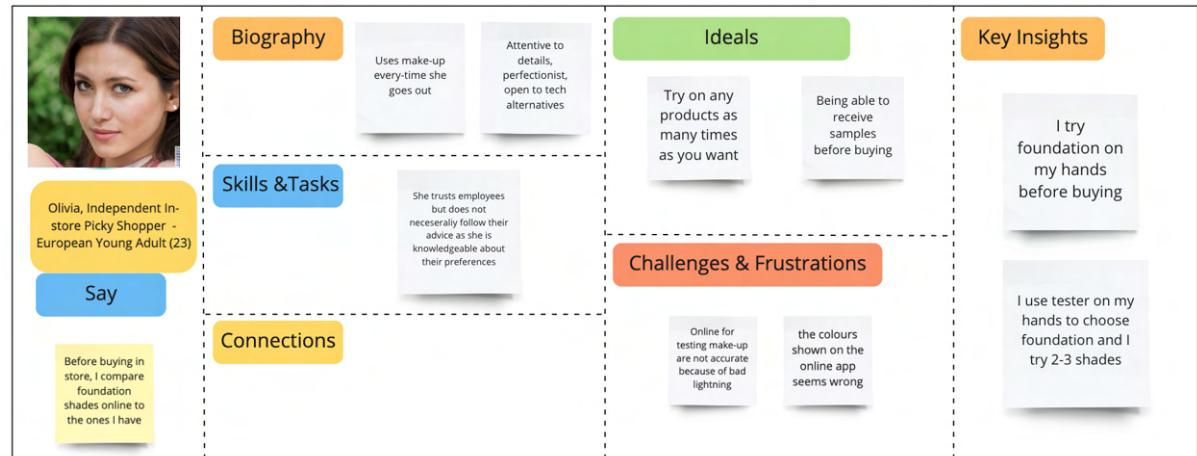


Figure 11

She would rather test the shade of a foundation before buying, and so prefers in-store shopping. Although she trusts employees, she does not follow their recommendations.

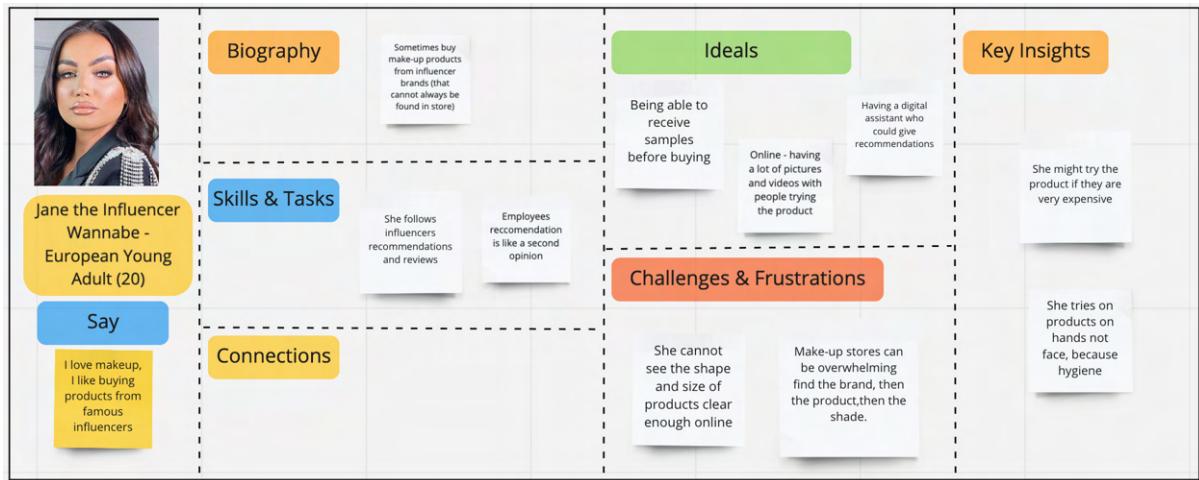


Figure 12

Jane, "the influencer wannabe" loves makeup. She follows influencers 'recommendations and brands and so prefers shopping online.

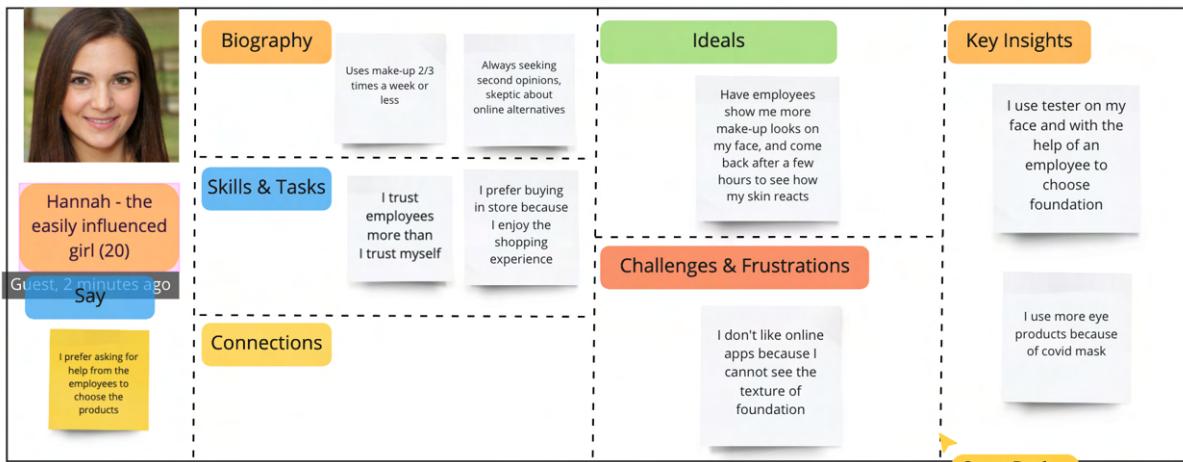


Figure 13

Hannah, "the easily influenced girl", always looks for employees 'recommendations. She prefers buying in-store and cares about the texture as well as the shade of products.

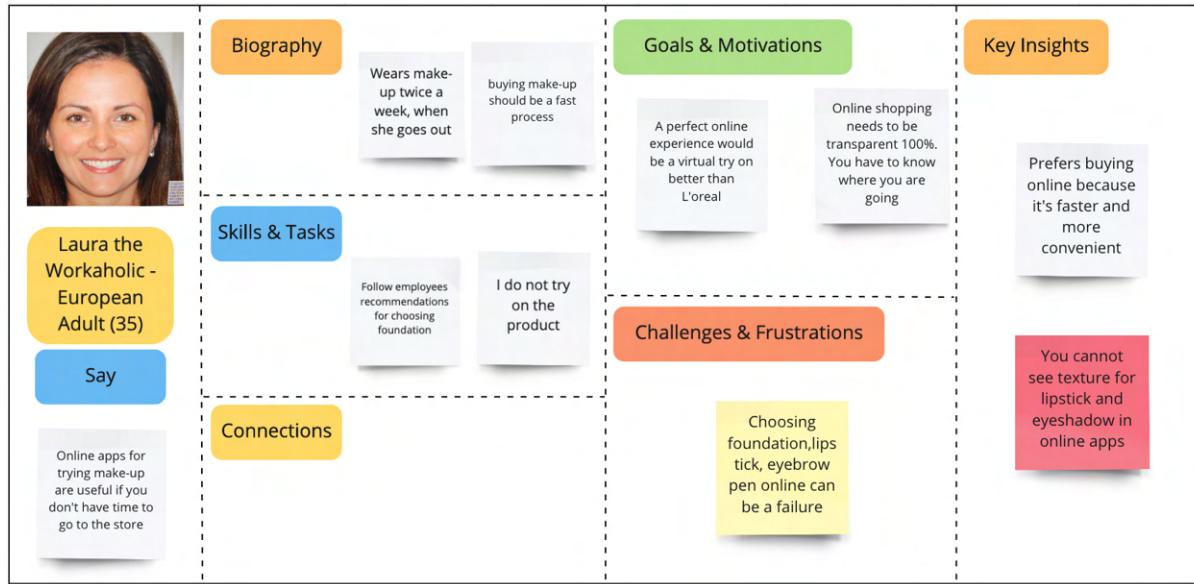


Figure 14

Laura the workaholic is a middle-aged adult who prefers buying makeup products online as she finds it faster and more convenient. She usually does not test makeup products and follows employees 'recommendations.

LIMITATIONS AND RECOMMENDATIONS

Cognitive bias	How it was overcome
Egocentric empathy gap: Initially believing everyone would only care about the shades when choosing makeup products	When constructing personas together after analysing the in-depth interviews, it was possible to understand that people also care about the texture of the makeup as much as the shade, thus we came up with Hannah the easily influenced girl as one of our personas and considered this when coming up with potential solutions

Limitations & Recommendations
The first empathy map only gave us the general ideas about the problem, but it was not helpful for constructing personas, thus another empathy map that analysed all the interview answers, had to be made again Analysing interview answers in depth in the first place would benefit us from saving time

3.3 IDEATE

BRAINSTORMING + SCAMPER

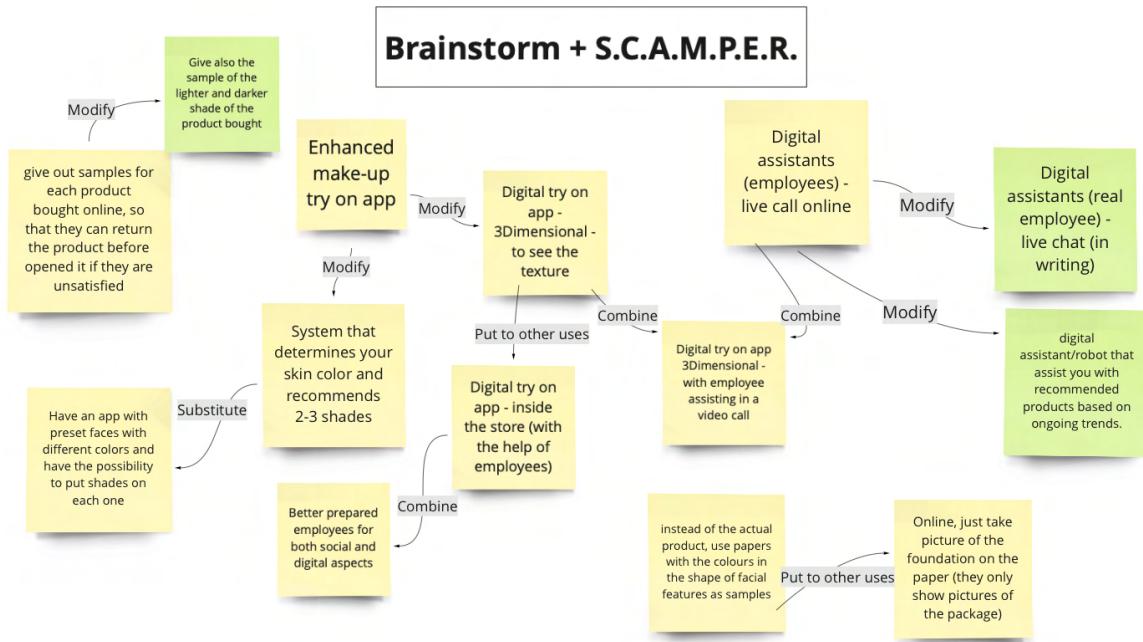
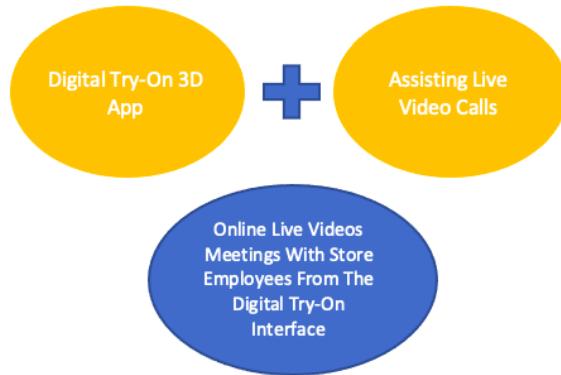


Figure 15

We started our ideation process by brainstorming ideas, taking into consideration our persona's challenges and goals. We then used the SCAMPER method to combine ideas.

This process helped us bring about 14 new ideas.

Exemple of the Scamper Method To Combine Two Ideas



SCAMPER

Online App S.C.A.M.P.E.R -



Figure 16

We decided to make solution clusters based on our ideas. The use of SCAMPER allowed us to firstly focus on digital-driven ideas that could be implemented through an app. This cluster mostly considers two aspects of the make-up shopping experience: recommendations and make-up try-out.

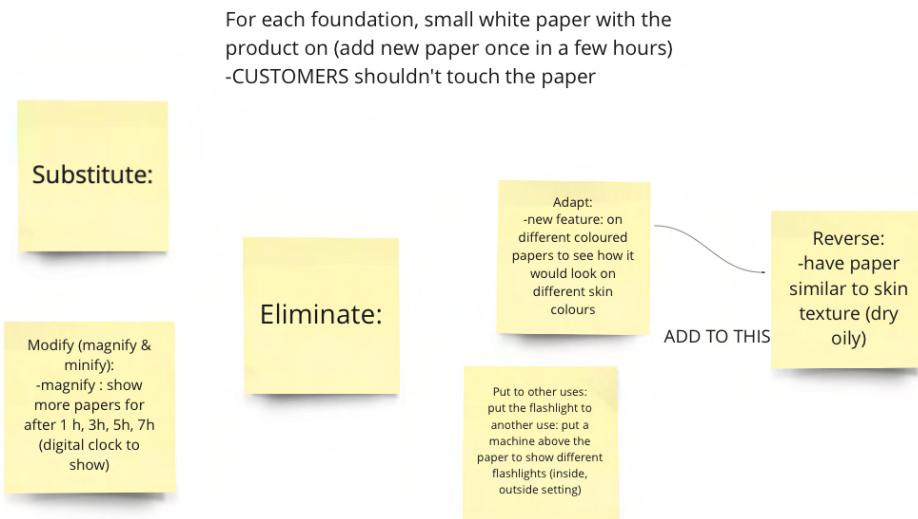


Figure 17

A SCAMPER was then used for our in-store Paper Tester idea, we came up with putting the flashlight to other uses, in particular for changing the lighting adapted to different settings (club/party dimmed lighting, sunny, rainy, cloudy).

SORTING MATRIX

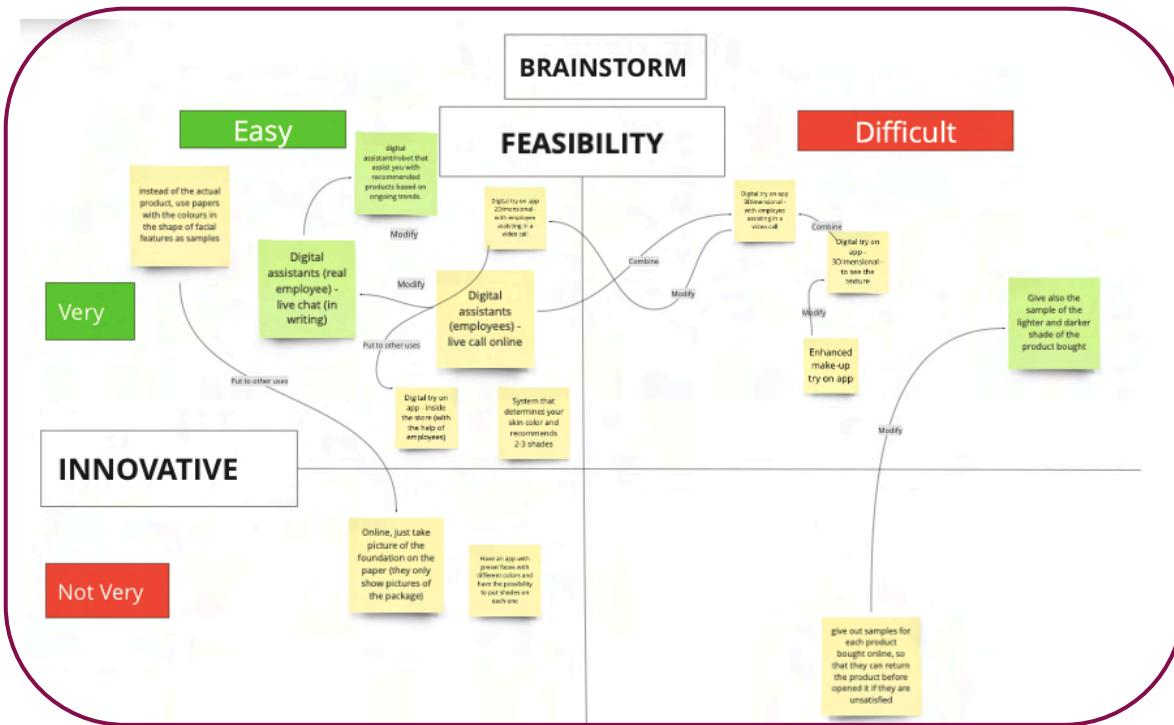


Figure 18

The next step was to build a sorting matrix. We positioned all our ideas (Figure 15) based on their feasibility and innovative level comparatively to the other ideas. We found the idea of a digital try-on app inside the physical store very innovative and easy, but less than in-store papers with foundation on them, so the second one is placed upper and more to the left.

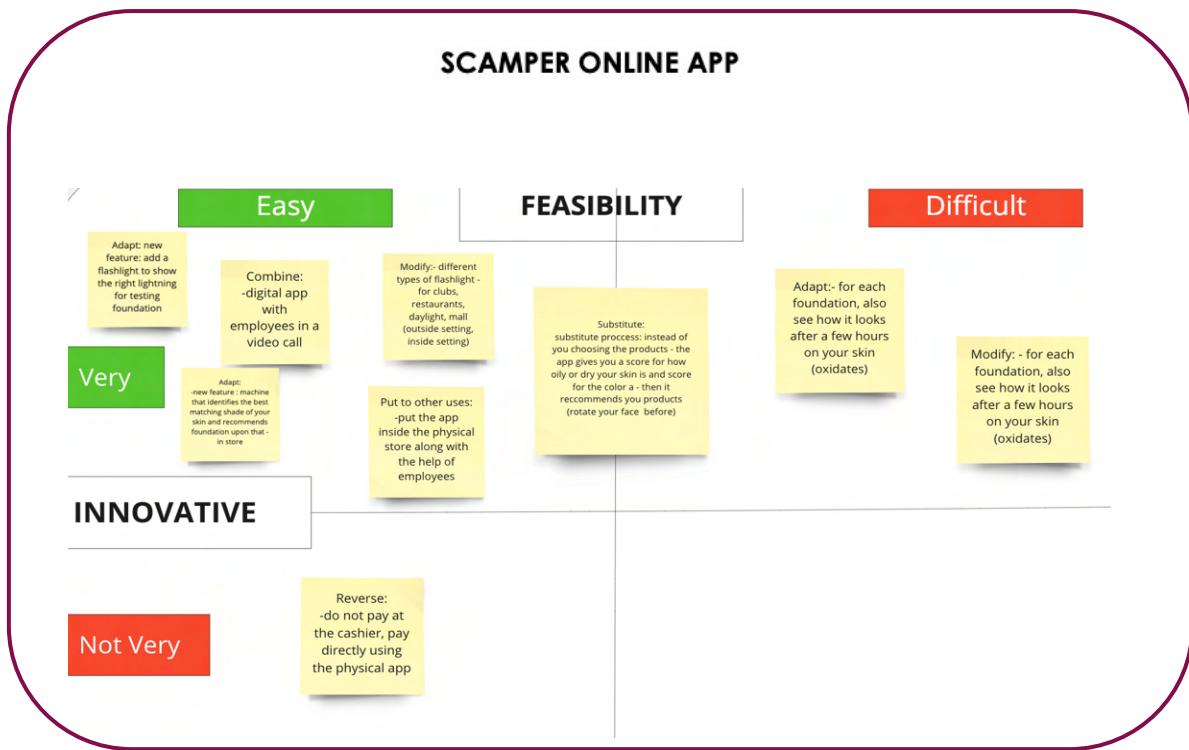


Figure 19

FOUNDATION PAPERS
Small white papers with the product on
Customers should not touch the paper - SCAMPER

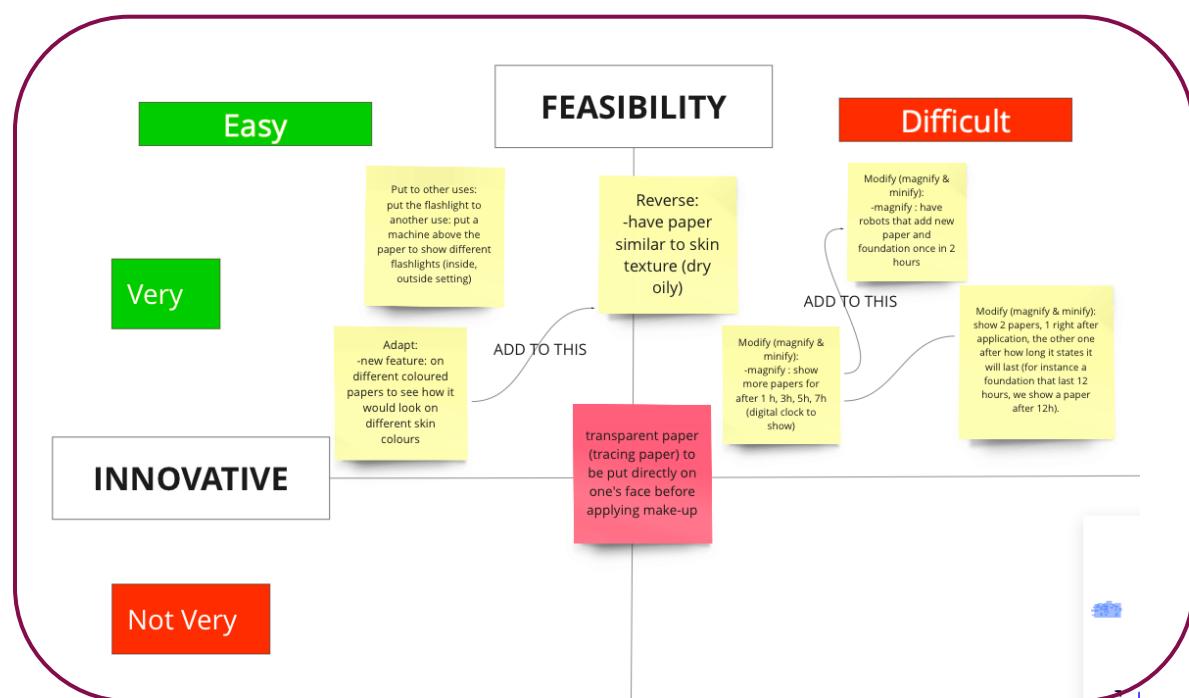


Figure 20

We then also applied it to the boards in figures 19 and 20.

EVALUATION

Each member has been given 2 coloured dots to vote for the two most promising ideas. The most voted idea for in-store was “Transparent Paper Tester”, whereas the most voted one for online was “employees assisting in a video call”.

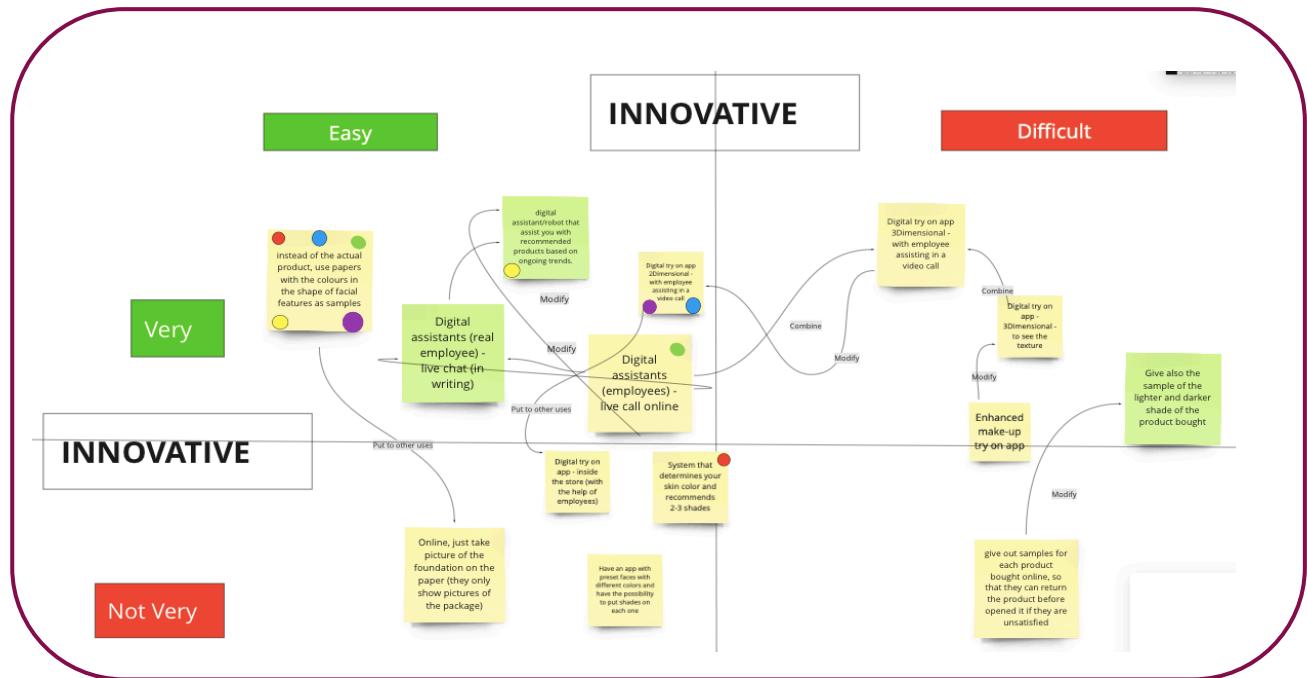


Figure 21

We then decided on what features to add to our Paper Tester in-store idea (See Figure 22 below). We used the matrix from figure 20 to debate the features. The black dots represent the ideas/features we decided to implement. Our final solutions are:

- **In-store** - displaying transparent papers with foundation on them for each product instead of the foundation package, with a flashlight that can switch to different lightings placed above so that customers can see the real colour and the texture in different lights
- **Online** - a virtual online try-on for each foundation with a professional employee assisting in a video call and additional lighting features.

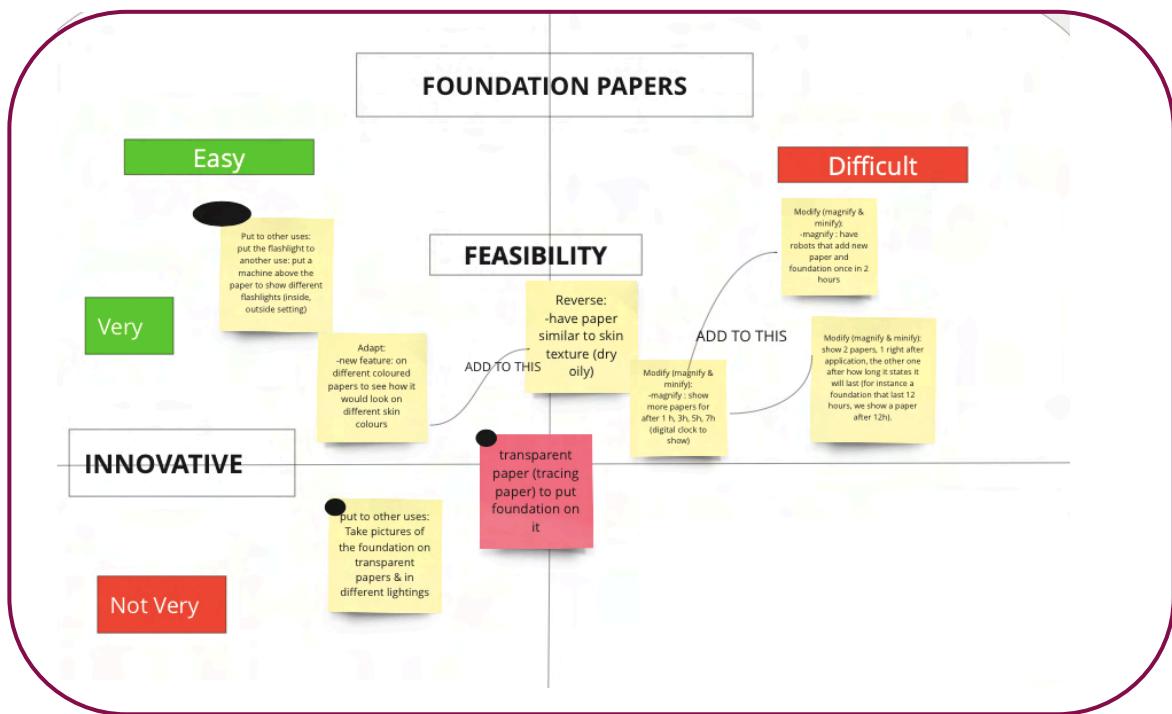


Figure 22

LIMITATIONS AND RECOMMENDATIONS

Challenge	How it was overcome
Deciding on the solution/ eliminating existing alternatives	We used a feasibility and innovation matrix and placed our solution in the right cell. We disregarded the solutions that were not innovative and not feasible. We used dot voting to select from the feasible and innovative solutions.
Existing online solution	Our first proposal for the online solution was defined using SCAMPER. (Figure 22). We put our instore solution to other uses and proposed pictured to be displayed on the website of the foundation on paper. However, after visiting Sephora's website we realised that this has already been done. Therefore, we went back a process to ideation and had another look at our SCAMPER and then to evaluation, dot voting. From here, we selected our second most voted idea: digital video assistant with the virtual try-on app.

3.4 PROTOTYPE

IN-STORE

OLIVIA'S STORYBOARD

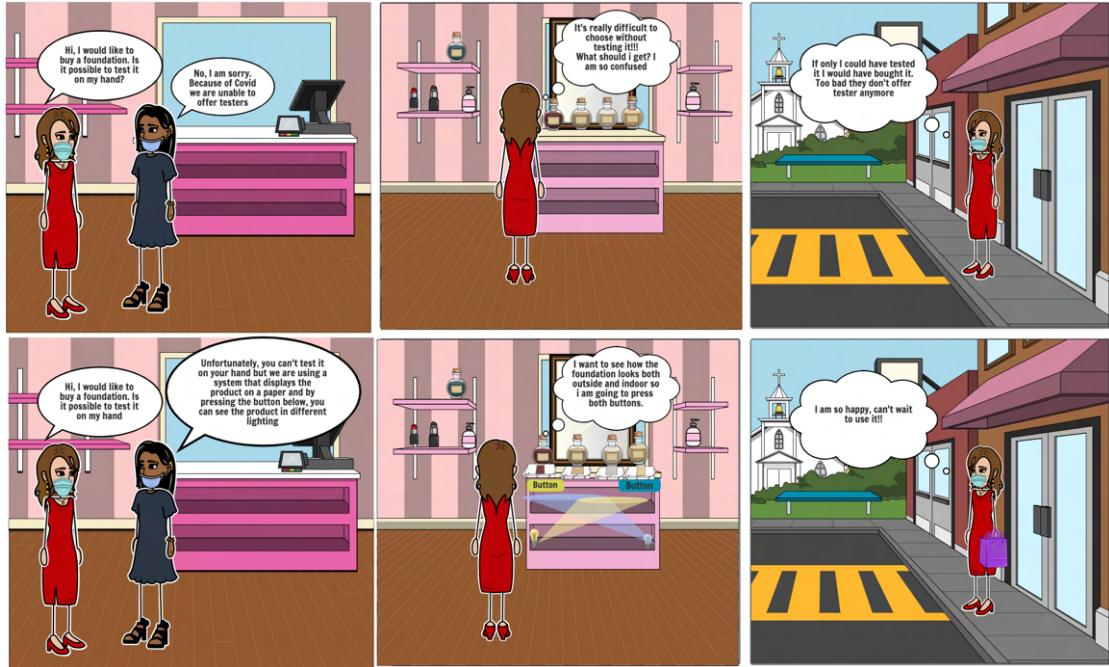


Figure 23

HANNA'S STORYBOARD



Figure 24

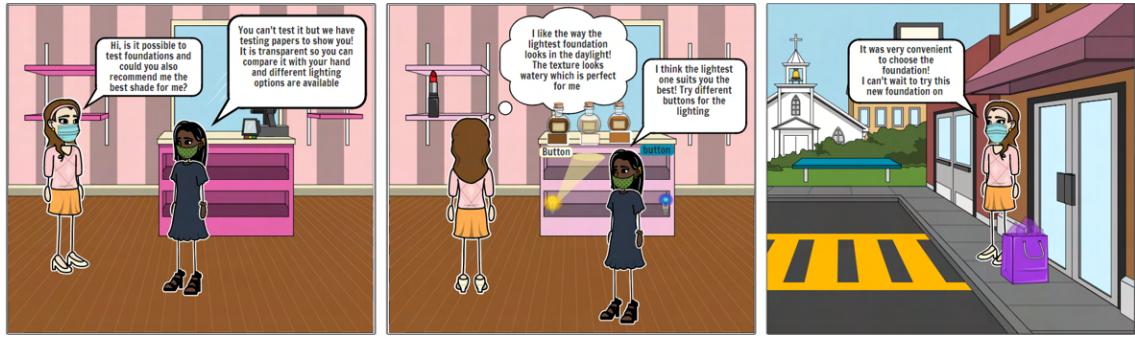


Figure 25

ONLINE

Since Laura and Jane were too different from each other, we decided to only focus on Laura and provide a solution that satisfies her needs.

LAURA'S STORYBOARD

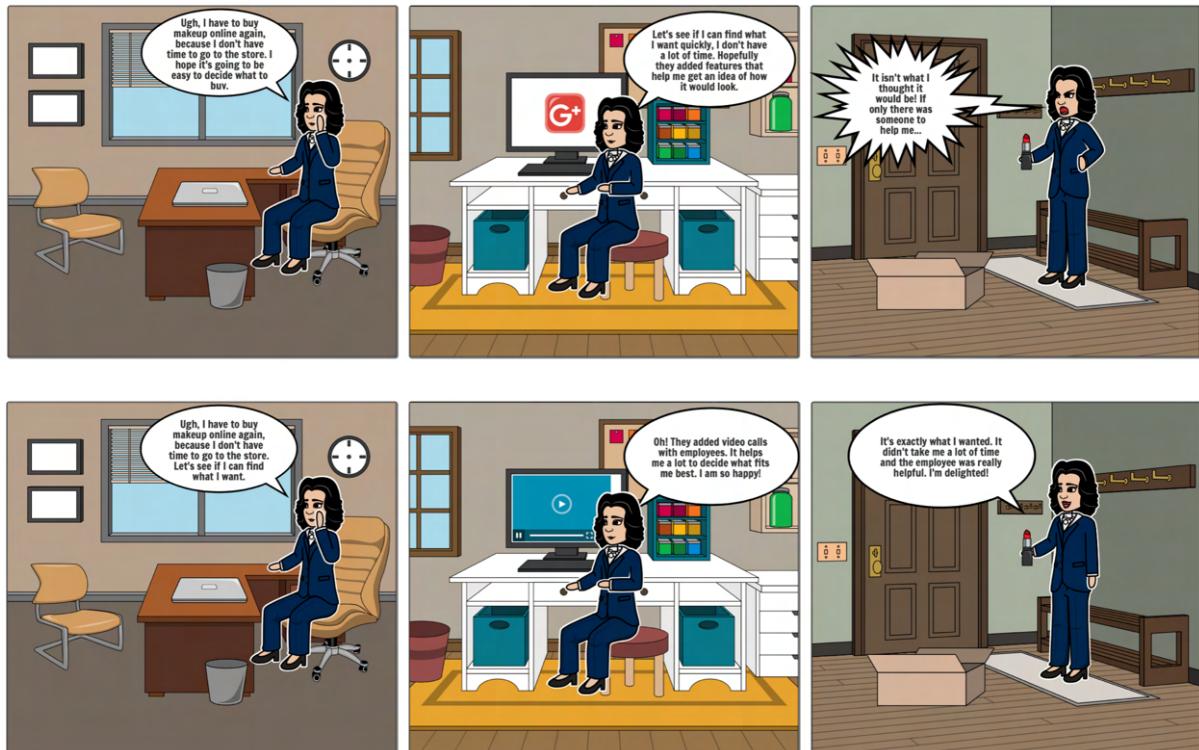


Figure 26

LIMITATIONS AND RECOMMENDATIONS

Limitations & Recommendations
Although the story boards created are detailed, there is a chance of people misunderstanding the points that are to be addressed It would be helpful to make service blueprint as additional prototypes to gain better insights between the relationship of different actors

3.5 TEST

IN-STORE

To test our in-store prototypes, we showed the storyboards to 2 women reflecting the two personas identified.

For Olivia, our paper testers idea was appreciated. However, she thought it could be inaccurate for some people as the skin tone of the hand might differ from the one of your face.

For Hanna, the easily influenced girl, our idea was mainly received positively. She especially liked the lighting feature, to see how each foundation looks in different settings.

Based on the feedback, the final solution received an additional feature (see 4.1)

ONLINE

To test our online prototype, we showed the app prototype below to two women which reflected the persona - Laura, The Workaholic.

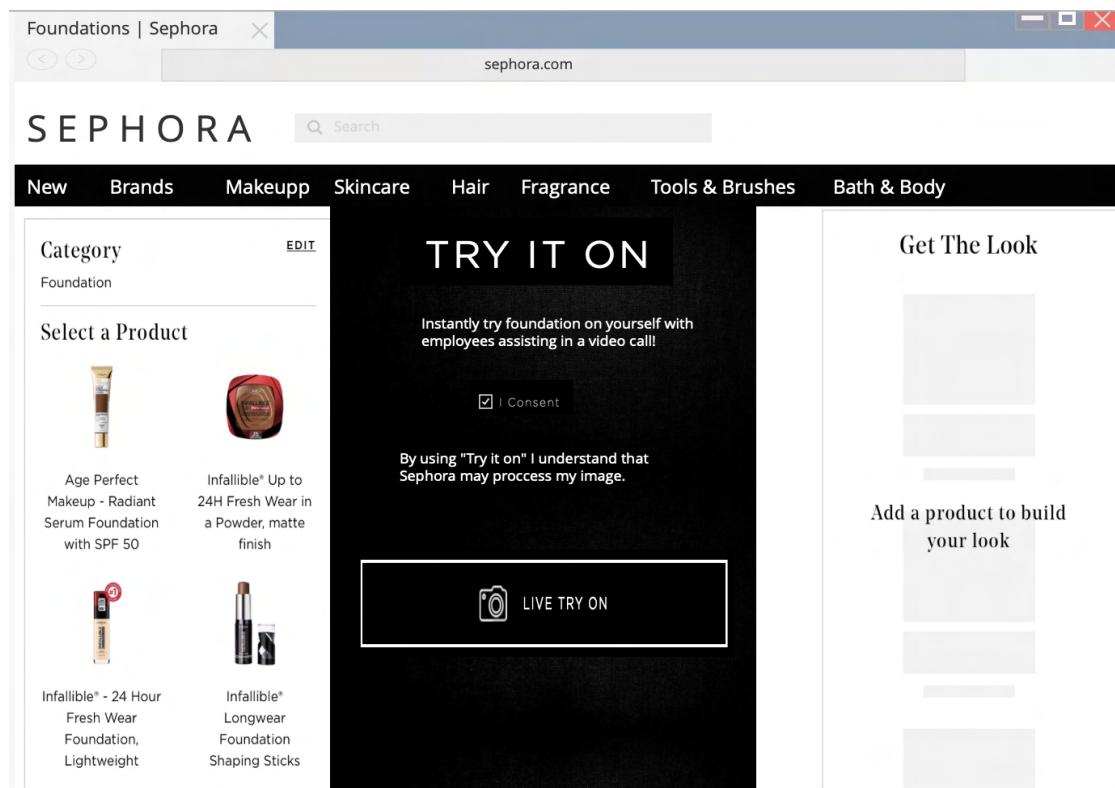


Figure 27

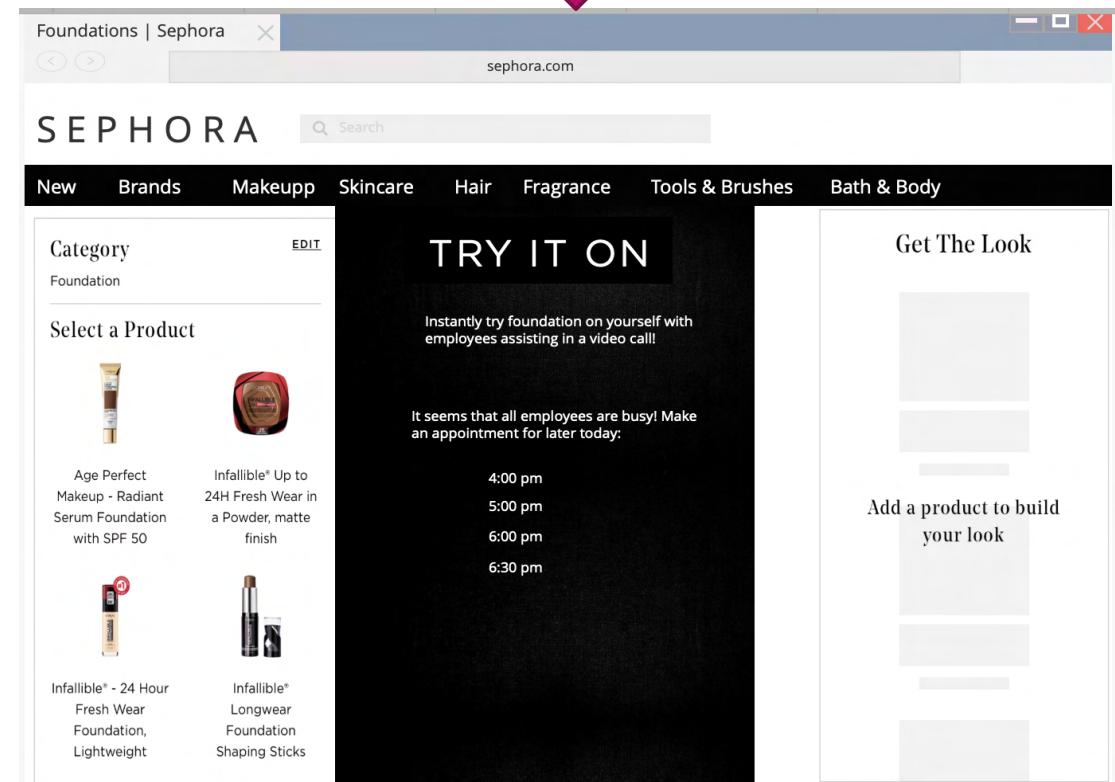


Figure 28



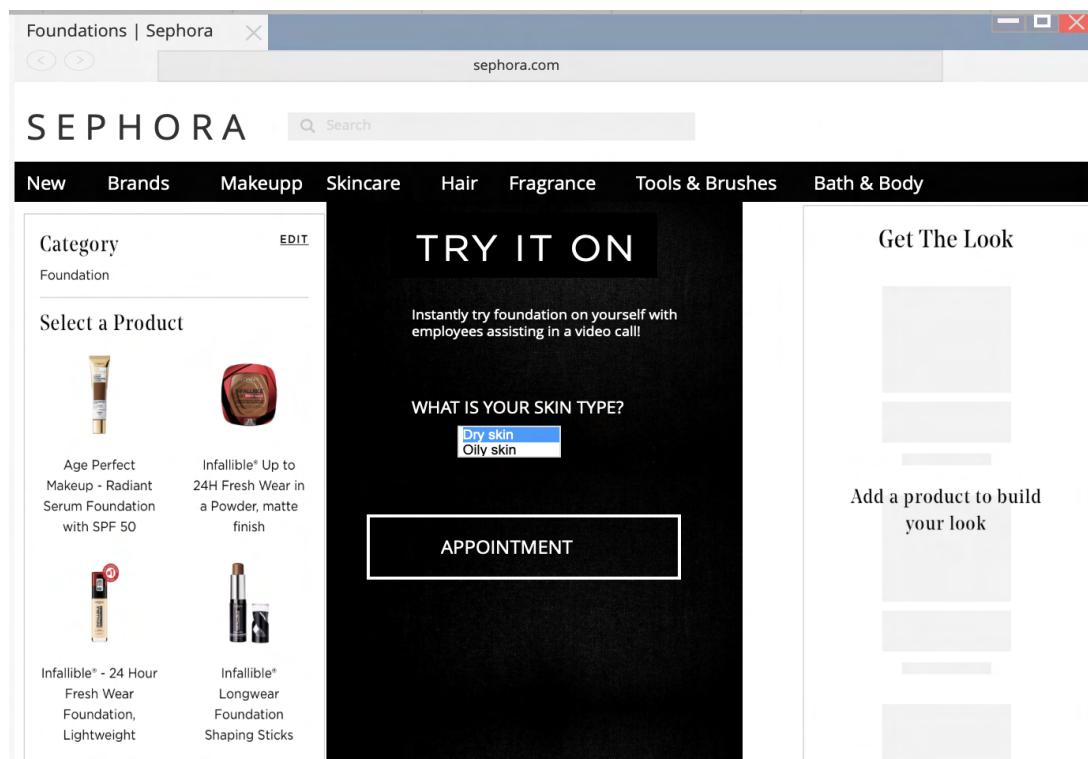


Figure 29

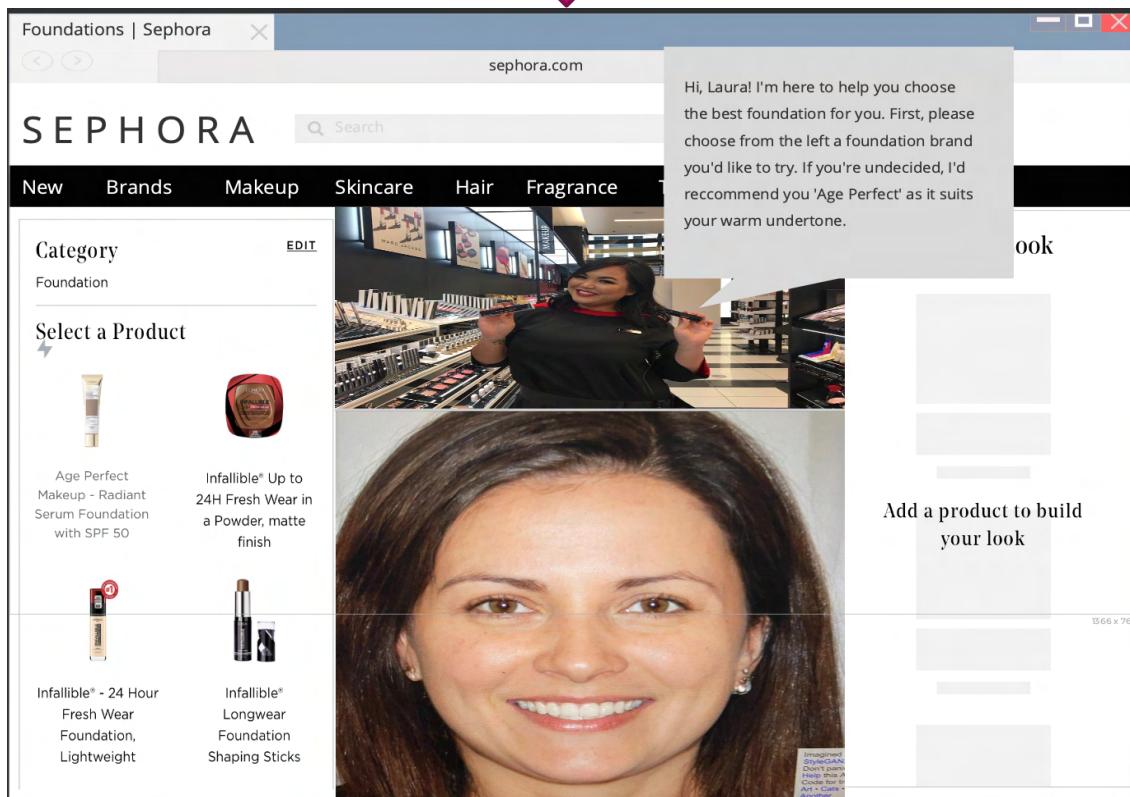


Figure 30



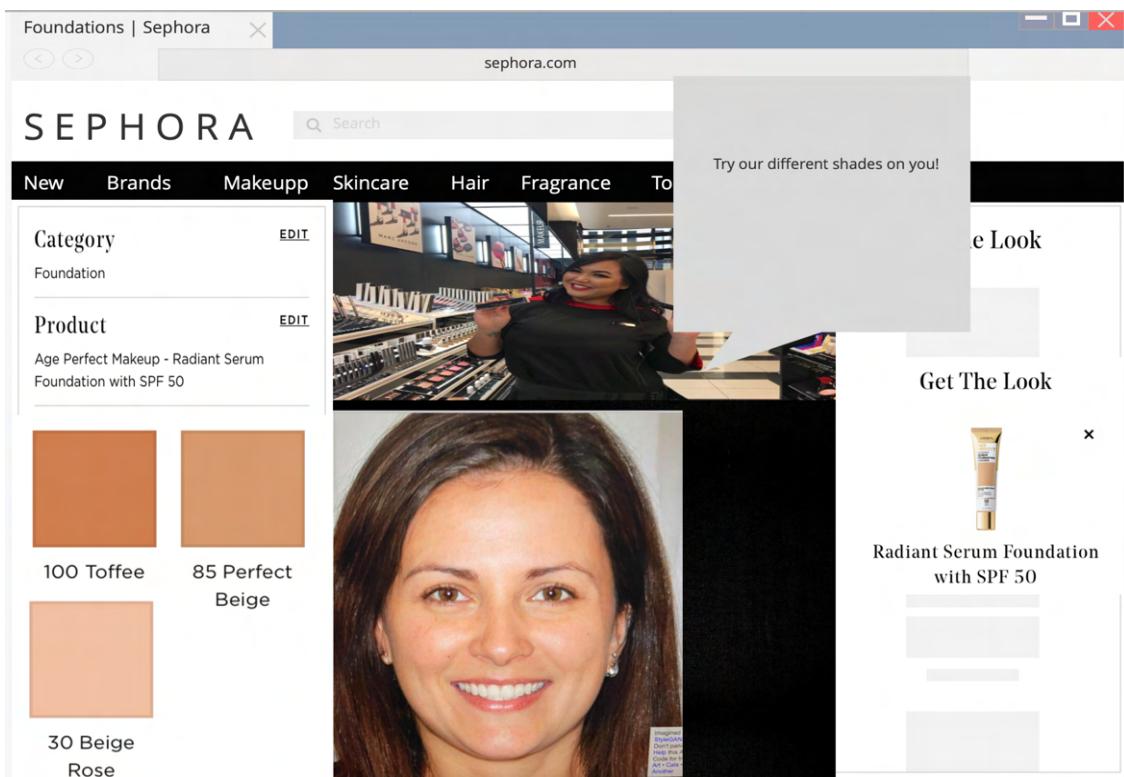


Figure 31

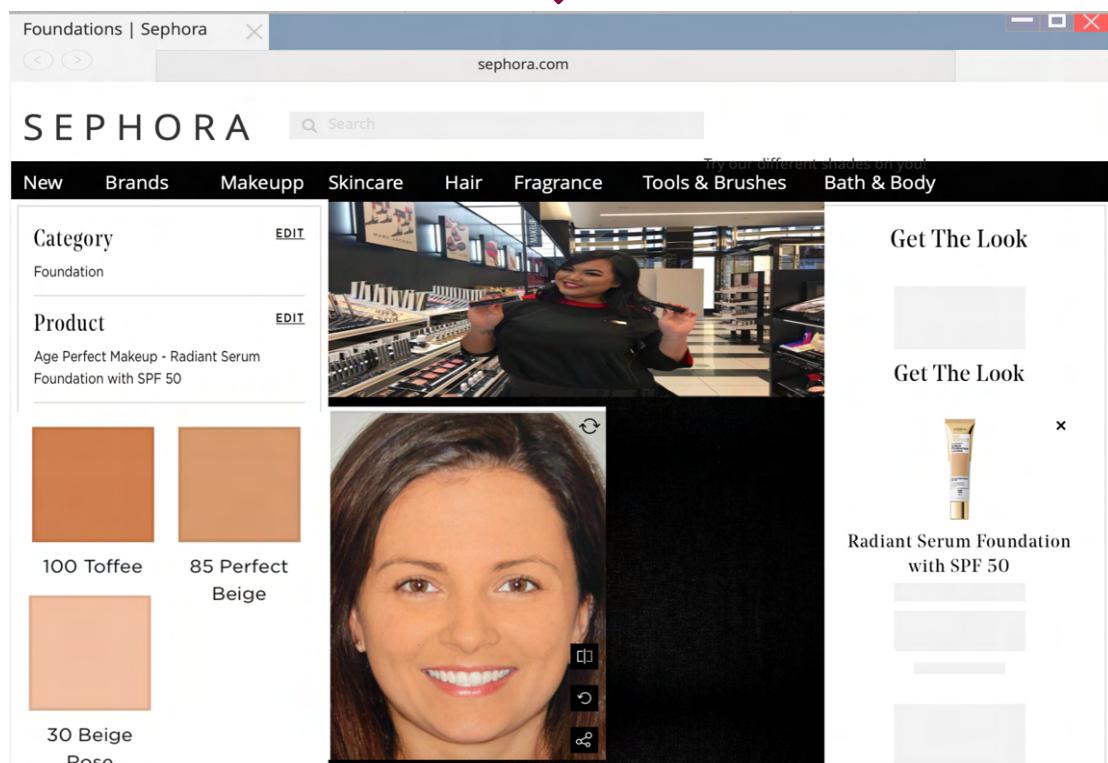


Figure 32



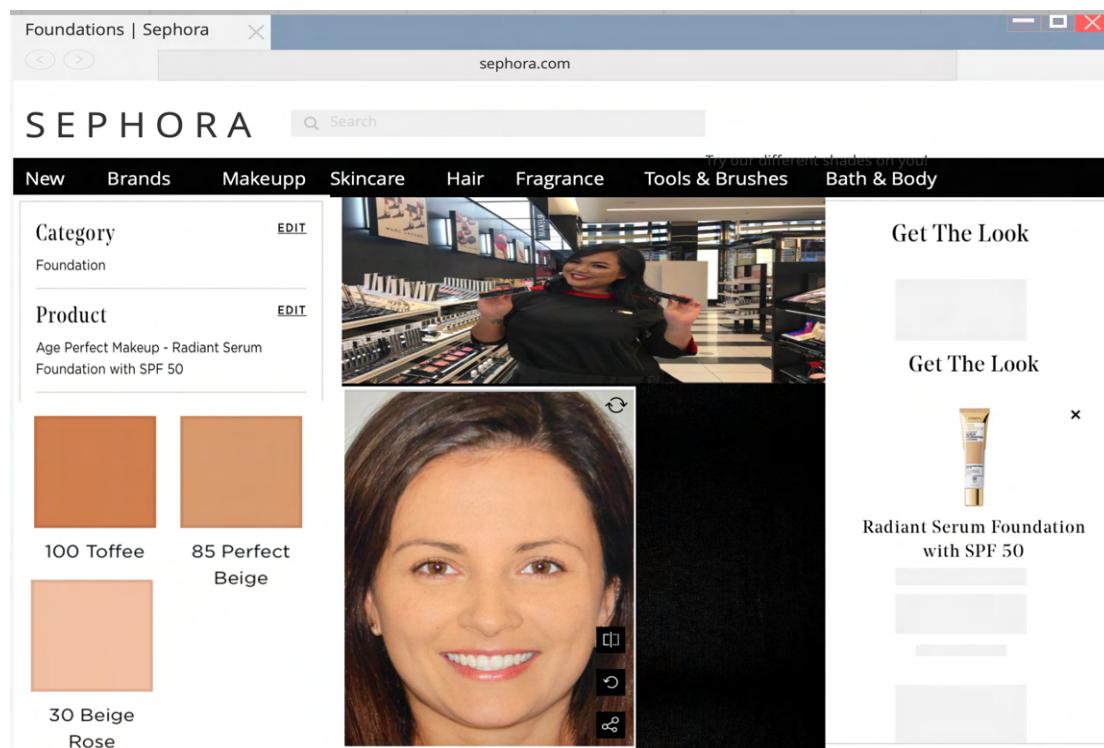


Figure 33

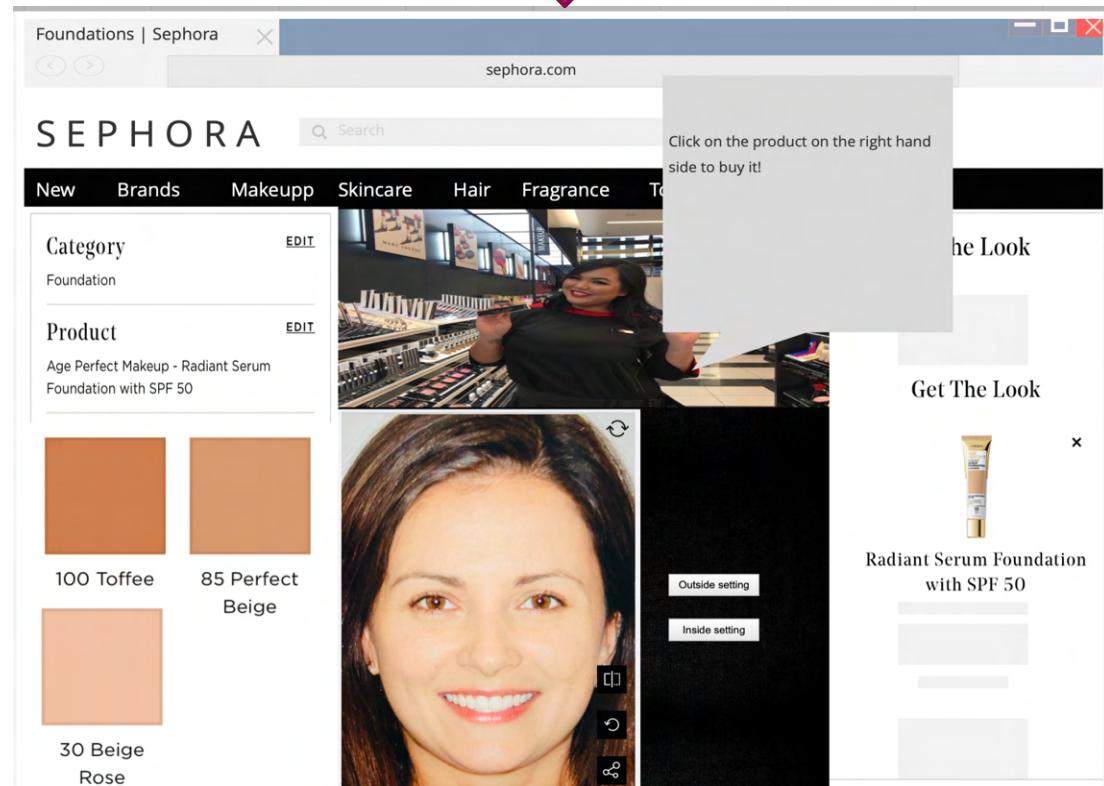


Figure 34



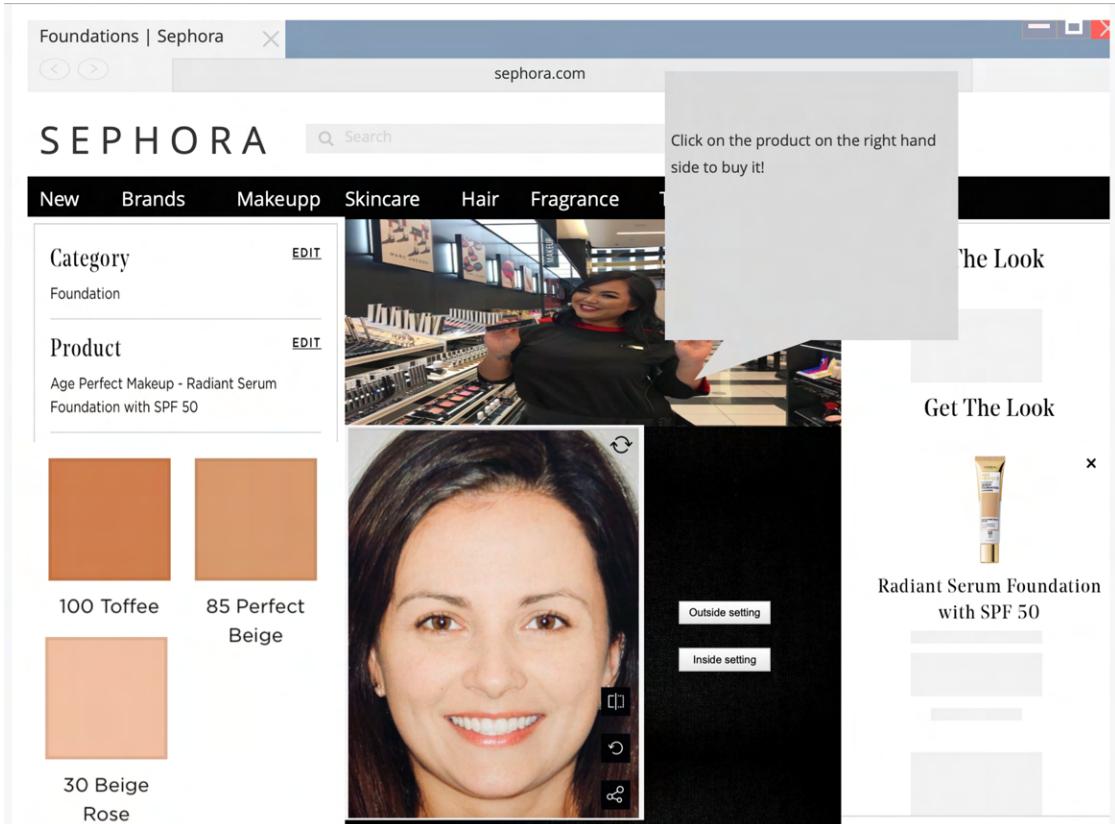


Figure 35



THANK YOU !

Figure 36

See the interactive prototype created with Justinmind:

<https://www.justinmind.com/usernote/tests/51443666/51444064/52010925/index.html>

Feedback:

The first participant: mentioned that some additional recommendations could be made after-purchase by the assistant. She navigated very easily through the app prototype and saw it as a "seamless" experience.

The second participant: really liked the app and the features as well, she reported that every element had its place in the app. However, she mentioned that some additional questions could be asked in terms of make-up use. She also said that the person who tests the app should be asked how much coverage is needed in terms of foundation. Some people with acne might need much coverage, while a person with a natural and soft skin might need lighter foundation.

The third participant: mentioned that a possible improvement might be having a queuing system instead of an appointment system. Customers should see how many people are in front of them in the queue.

The final solution has been modified according to the feedback. (see 4.1)

LIMITATIONS AND RECOMMENDATIONS

Limitations & Recommendations

Due to Covid-19, it was not possible to test the prototypes face to face but only through video calls, thus real interaction and reaction may not have been caught
It would be better to test the prototypes face to face when restrictions are gone

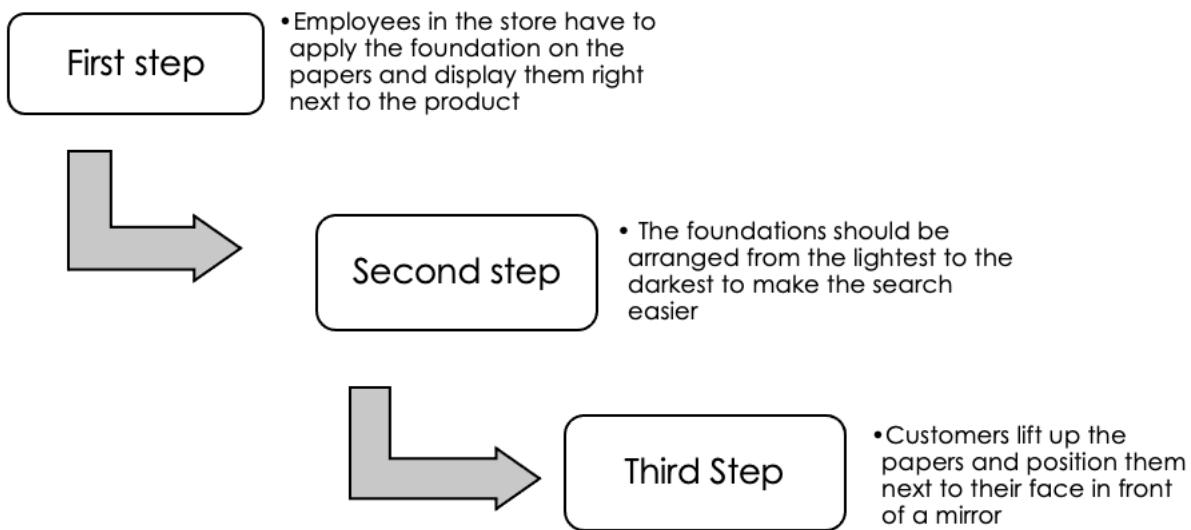
4. OUR SOLUTION

We proposed one solution for in-store settings and one for online.

4.1 HOW IT WORKS

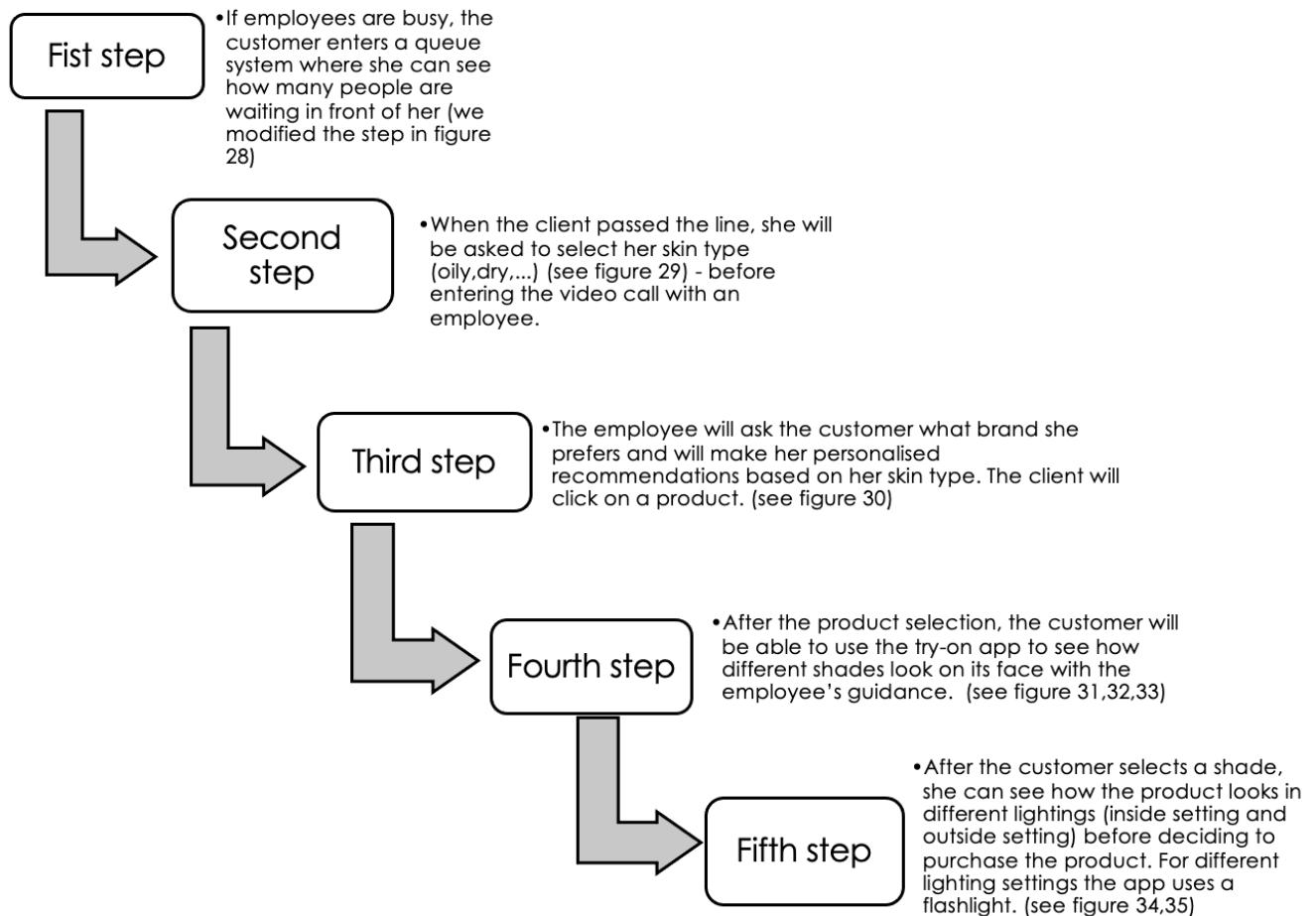
IN-STORE

Following our testing step, we have added an additional feature to our original idea (see 3.3). We decided to add a stick to our transparent papers so that customers can lift them and position them closer to their face to compare the tester to their skin tone.



ONLINE

After testing our prototype with “Laura, The Workaholic” participants, we replaced the appointment system with a queue system.



4.2 VALUE PROPOSITION AND IMPACT

IN-STORE

Stakeholders	Value Proposition	Impact and value added	Problem solved
Olivia , "the independent and picky in store shopper"	Testers are displayed according to colours and skin types to facilitate a fast and independent search.	With testers available, customers can browse independently.	Our proposed solution will allow clients to test foundations in a safe and easy way.
Hanna , "the easily influenced girl"	For people who are inexperienced, employees are available to help in choosing the right paper-tester.	Employee assistance could simplify the search and speed up the process.	Adding the stick to the paper makes it easier for the employee to compare the shade with the skin while maintaining social distancing.
Make up producers	Our solution uses paper-based testers, with no need of packaging.	Paper testers are less expensive than products testers, so makeup producers can save money.	With testing available, sales will increase and Make up producers will be able to continue their production.
Retailers (in-store)	Retailers will be able to display testers in a safe and convenient way.	With testing available, clients are more likely to visit the shops.	Increase in retail sales.
Employees	Employees can show testers to clients.	With testers available, it would be easier for employees to assist clients.	Employees will be able to better serve the client and encourage them to buy the product.

ONLINE

Stakeholders	Value Proposition	Impact and value added	Problem solved
Laura, "the Workaholic"	A virtual try-on app like L'Oréal's AI app, but with video call assistance and recommendations. A feature shows the product in different lightning settings.	Employee assistance and the lighting feature improve transparency and accelerate the process.	Choosing foundation online can be a failure when there is no time to go to in-store. Online shopping should be transparent and fast. She prefers the improved version of L'Oréal's try-on app.
Make up producers	The value added for customers makes them more likely to shop online.	The sales should increase as a new niche of customers was found (Laura, the Workaholic). This group of clients could not shop online before as her needs were not addressed. There will be costs associated with the app, which can be founded by the producers involved.	Online sales account for only 15% of make-up purchases (see 1.1.)
Retailers (in-store)	The sales would increase for the reasons specified before. The implementation of the try-on app will require collaboration between the producers and the retailer so that the products can be incorporated in the Artificial Intelligence System.	Increase in sales/ Increase in costs as the producers need to invest in the app as well	Online sales account for only 15% of make-up purchases (see 1.1.)
Employees	The employees can assist the customer in their shopping journey to provide more transparency for the products and make personalised recommendations	The employees will make themselves useful as they can parallel their in-store tasks	There was no communication between the employees and the customer in the online store

5. FUTURE RECOMMENDATIONS

5.1 ADVISES ON IMPLEMENTATION

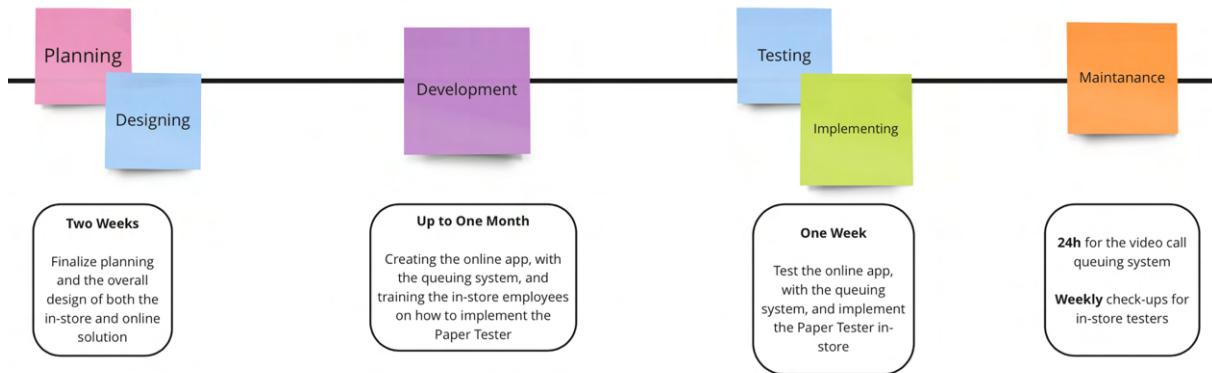


Figure 36

5.2 IMPLEMENTATION COSTS

The cost of the app would range between \$500,000 and \$750,000 (3).

For the in-store solution, Materials and Additional Workforce would cost another \$250,000.

Cost Division

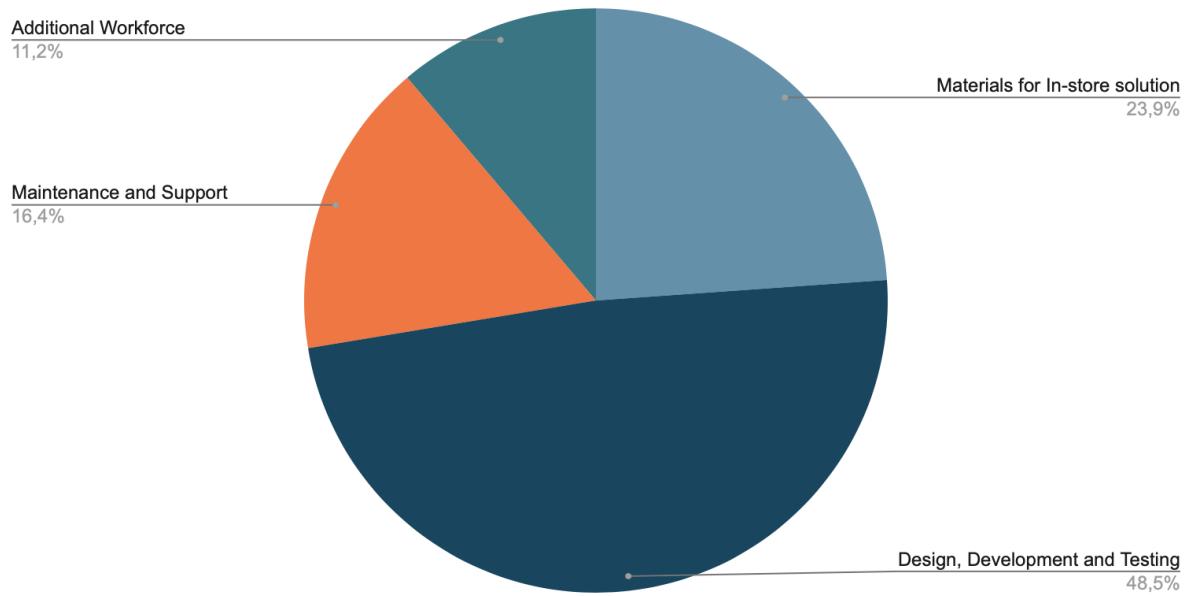


Figure 37

5.3 RESOURCES NEEDED

Project Manager	Developer and Designer Teams	IT Personnel and Engineers
<ul style="list-style-type: none"> Activity and resource planning Organizing and motivating a project team Controlling time management Cost estimating and developing the budget Ensuring customer satisfaction Analyzing and managing project risk 	<ul style="list-style-type: none"> Manage deliverables according to the plan Recruit project staff Determine the methodology used on the project Establish a project schedule and determine each phase 	<ul style="list-style-type: none"> Designing and installing computer hardware configurations Installing software and networking systems Troubleshooting network and software issues Installing high-level software security systems

Figure 38

5.4 FUNDING AND REVENUE

In terms of funding, enterprises wishing to take on our solutions should invest their own resources. It would lead to a better profit margin and an increase in popularity among traditional and online customers looking to enquire about cosmetics.



Figure 39

6. APPENDIX

INTERVIEW WITH AN EXPERT

INTERVIEW WITH ROMANIA COSMETIC COMPANY CEO - FARMEC:

1. Did sales on make-up drop during covid?

Yes, both on the market and for Farmec. For confidential reasons, I can't share the percentage of the decline in sales.

2. Is it expensive to produce small samples so they can offer testers in the shop for makeup products?

Yes, producing a small sample is as expensive as producing a normal size product, due to packaging, manufacturing... You need to think about numbers if you want testers. You need to think about how many customers you have, how many testers will you need, for how long.

3. How can you help customers choose the shade that best suits their skin for a make-up product such as foundation?

A good marketing strategy is to hire influencers to advertise your product. Think about this instead of offering testers. It is less expensive and can be more efficient.

4. But how can we address the problem regarding choosing the best product, for instance the right shade of foundation for your skin tone or the right colour of lipstick?

There is an app L'Oréal uses on their website. You can open your camera and try out different products and see how they suit you. I recommend you look into that.

5. I personally have tried the app but i don't find it very accurate.

Testing out the product is the best way, but further improvements can be made on the app. I think it is a great idea to invest in that technology. It has great potential for increasing sales for make-up.

IN DEPTH INTERVIEWS

INTERVIEW QUESTIONS:

- Who is the interviewer?
- What is your occupation?
- How old are you?
- Where are you from?
- How much money do you spend on a foundation?
- How often did you use make-up before Covid-19?
- How often do you use make-up these days?
- How did Covid-19 affect your make-up routine?
- Do you prefer shopping make-up in store or online?
- Why?
- When you buy in-store, how do you choose the shade of the foundation once you know which brand to buy?
- When you buy in store, how much time does it take you to choose the shade of the foundation?
- What would be your ideal way of choosing the shade of foundation in-store? (use your imagination)
- When you buy online, how do you choose the shade of the foundation once you know which brand to buy?
- When you buy online, how much time do you spend on choosing the shade of the foundation?
- What would be your ideal way of choosing the shade of foundation online? (use your imagination)
- When you buy in-store, how do you choose the colour of the lipstick once you know which brand to buy?
- What would be your ideal way of choosing the shade of lipsticks in-store? (use your imagination)

- What would be your ideal way of choosing the shade of lipsticks online? (use your imagination)
- When you buy in-store, how do you choose the colour of the eyebrow pen once you know which brand to buy?
- What would be your ideal way of choosing the colour of the eyebrow pen in-store? (use your imagination)
- What would be your ideal way of choosing the colour of eyebrow pen online? (use your imagination)
- To what extent do you follow/trust employee's recommendations in store? - for choosing the shade/colour of a make-up product
- Did you usually use testers for trying out foundations, lipsticks, eyebrow pen?
- Why?
- Are you tempted to change the brand if the colour doesn't match you?
- Why?
- Which product/products would you not buy without testing a sample and why?
- Have you ever used an online app for testing make-up? explain your experience (if they don't know, show them) (part 1)
- Have you ever used an online app for testing make-up? explain your experience (if they don't know, show them) (part 2)
- Are you satisfied with the online app? What did you like and what did you not like? (what can be improved?)
- What would be your ideal in-store makeup shopping experience and why? Describe your dream make-up shopping experience (not necessarily real) -IN - STORE
- What would be your ideal online makeup shopping experience and why? Describe your dream make-up shopping experience (not necessarily real) - ONLINE

Additional Questions for Staff - only answer if you are a make-up staff in-store

- How has the purchasing behaviour changed due to the Covid-19?
- Can you see a noticeable decrease in the sale?

Additional Questions for Make-up Artists - only answer if you are a make-up artist

- Which is the best lighting to check the shades of make-up?
- How do you estimate the right shade for different products?
- How many shades do you buy for foundation and depending on what?

7. REFERENCES

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