

## Final Report — Team 12

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## INTERVIEW

### Participants

**Leah** (35-minutes session with fieldnotes) A 42-year-old mother of two: a ten-year-old son and a 21-year-old daughter. Her daughter was and her son still is in a private school in the canton of Zurich. Living with her husband – a banker –, she works as an acupuncturist. Following an overall healthy lifestyle, the family is characterized by diverse food habits. Leah is keen on always trying to satisfy the nutritional needs of her family, at home, as well as at school. The latter is not a simple task. The whole family follows atheistic beliefs and thus, in general, is not further limited by religious restrictions.

**David** (35-minutes session with transcription, name changed) David is the founder and director of a new bilingual school which is following alternative teaching methods in comparison to the traditional school. He has got three kids: two boys who are six and four years old and a girl who just turned three. These children also visit the school he founded with his wife. He is a perfect candidate for this interview, because he represents both worlds: the parents and the school. The lifestyle of his family could be described as healthy and balanced, while they still try to enjoy life to the fullest. But still, performance is an important keyword for David, since he is an enthusiastic iron-man athlete and needs to train and sometimes adjust his diet to the races

**Nuria** (32-minutes session with transcription) – Nuria, a 29-year-old woman, is teaching at a primary school in Zurich and lives together with her husband and a young dog in the heart of Zurich. At her workplace, a public school, a daily menu is offered for children who spend the whole day at school. When it comes to food, she is a straightforward person, but she is concerned about the impact of food on the environment. In the preceding years, she has already tried many different diets, momentarily however her food habits do not have any restrictions.

### Findings

#### 1. Influence

One first aspect we could conclude after the interviews was the influence parents and children have on the food that is offered at the cafeteria. Leah mentions that she'd like more influence on the nutrition in school which at the same time shows that she doesn't have a lot of influence at the moment. Diego on the other hand mentions that providing influence for parents is a difficult topic. He thinks that a voting app would only be useful for the school in terms of ordering demanded quantity and is afraid that it would discriminate against people who have unusual eating habits and that it would overcomplicate the whole topic.

#### 2. Trends/Awareness/Society

There are different trends & awareness aspects that could be found after conducting the interview. One important aspect, that especially Nuria mentions, is the impact of religion and allergies. These aspects should always be kept in mind when it comes to food that is offered at a cafeteria. Another point that Diego mentioned was, that he noticed that our society tends to lean in extremes instead of having a balanced way of living. Meaning the society is leaning more towards the trend of eating strictly plant based than having a balanced eating habit.

### 3. Food/Diet characteristics

*“It comes as a huge challenge, trying to satisfy an all-eater, vegetarians, as well as a vegan, while at the same time not restricting one of them.” [Leah]*

As Leah mentions, her family has very diverse eating habits. This was one key aspect we could conclude after the interviews. A lot of people nowadays have a lot of different eating habits. We could see that in Leah's case where her whole family behaves differently when it comes to eating (two vegetarians, one vegan person & one carnivore). Even with this in mind we could see that Diego again behaves differently than Leah's Family because he does eat meat but only once in a while. Also, Nuria has a slightly different food lifestyle. She does not eat vegan or vegetarian but tries to have the aspect of seasonality in mind which again differs from the other interview participants. So, after the interviews we could conclude that all of the interview partners had a different eating lifestyle which proved our point that food and diet characteristics in today's society do behave differently from person to person.

## DESIGN PROBLEM

The main target group are the parents and the secondary users are the schools.

The parents would like to have more influence and transparency regarding the menu choice of their children at school.

Since there is a variety of food that the school could implement in their everyday life, they also need to be aware of different diets or nutrition habits (pescatarian, vegan, vegetarian, halal, kosher etc.). The school would like to satisfy most of the parent requirements and to receive important data about the menu plan, which should be important information in the negotiations with the caterer.

Our project idea is relevant to the user's goal, because we would like to enable the parents by giving them a voice regarding the choice of dishes. In case of complaints or suggestions for change, the parents can review the dishes with likes/dislikes or comments. Even writing a message about different nutrition topics is possible. The school would be able to see feedback, statistics and further data about the menu plan, which helps them to adjust their menus according to facts and numbers. Furthermore, parents are going to be more satisfied with the school since they are being included in the whole formation process.

## USAGE SCENARIOS

### 1. Information-Scenario:

Every Friday afternoon Lea's dad goes food shopping. Since the whole family only eats dinner together the meal is very special to them. As a good hobby chef, he wants to have a balanced menu plan throughout the entire week. Therefore, he wonders what Lea's dishes will be next week to plan his menus according to hers. To choose his recipes he opens the app and checks the menu plan of Lea's school. After looking at the dishes offered at her school, he chooses his recipes and writes down his shopping list. "Great", he thinks to himself. Tuesday is Lea's birthday, and at school they're serving spaghetti Napoli, one of Lea's favourite meals. She will be very happy when he can tell her in the evening. With excitement about the future dinners, he walks to the store to buy the ingredients for this week's menus.

### 2. Reviewing (Social Media Approach→ Parents):

During dinner in the evening Rosetta's mom gets really upset, when Rosetta tells her about the lunch, they had that day at school. According to her mom, two dishes with pasta each week in the school is too much and that from her point of view, they should offer a bigger variety. She forgot to look up the menu plan for this week on the application, but she thought that it would have been a coincidence that the past two weeks were also like that.

So, she picks her phone and opens the app, which welcomes her warmly after successful signing in. She sees the menu for each week and the previous ones and selects the one from this week. There she notices that on that day she is not the only one that had her critics. While the other menus seem to have a lot of likes, only this menu received quite many dislikes. She feels understood and glad that the other parents share the same opinion, as she sees that there are 40 dislikes and only one like for this certain dish on that day. She also leaves a dislike and a like on the pepperoni dish, because she thinks children should eat more of these vegetables.

Afterwards, Rosetta told her also that yesterday the dish was disgusting, because of the combination of pea sauce with rice. Rosetta just took two bites of it and left it. Her mother chose this dish a week later, because there was no other vegan dish like that.

To solve this, she opens the history of the dishes and selects yesterday. She discovers that there are already more dislikes, but no comments, so she opens the comment box and writes that they should try another side dish or rather just never do any dishes with pea sauce. It was a vegan dish, so she added that the school could do more dishes with tofu instead. However, she goes back to the homepage and opens the „direct message” box, where she writes about the problem that there is always just one vegan dish. She suggests that there could be 2 vegan dishes and asks if it would be possible.

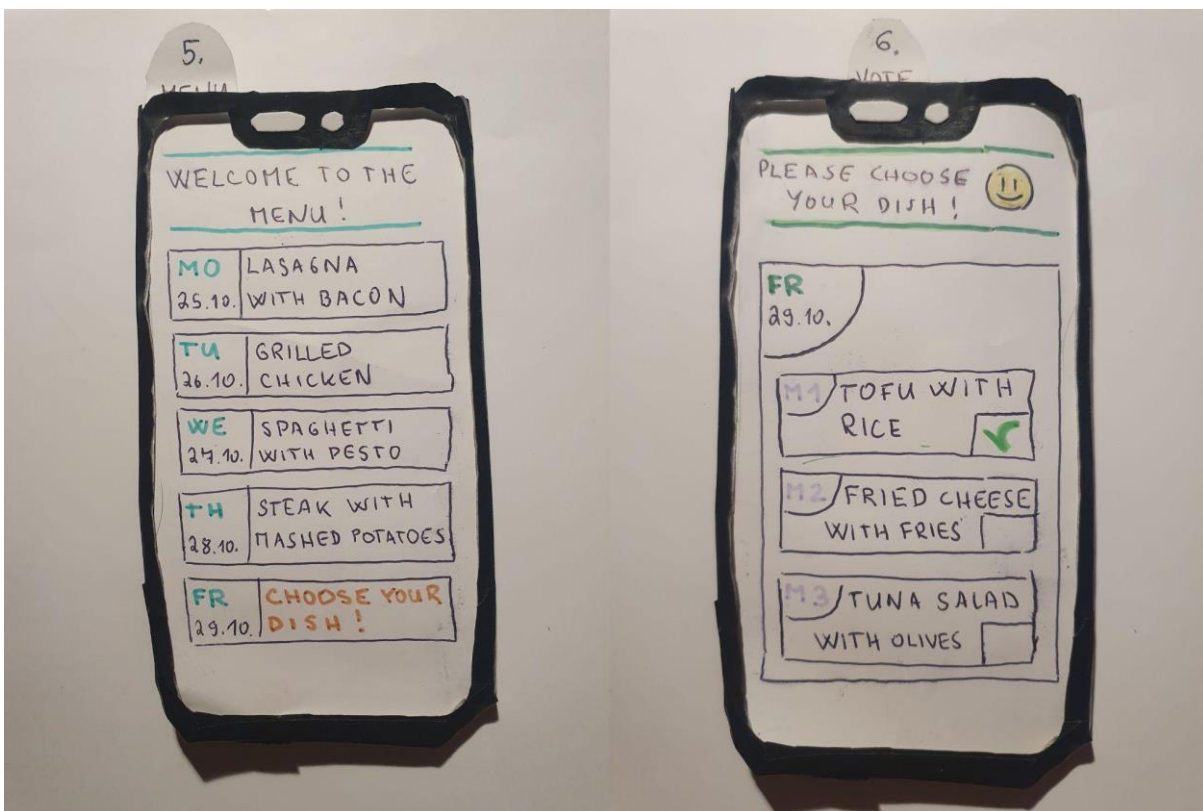
### **3. Informational Analysis for the school**

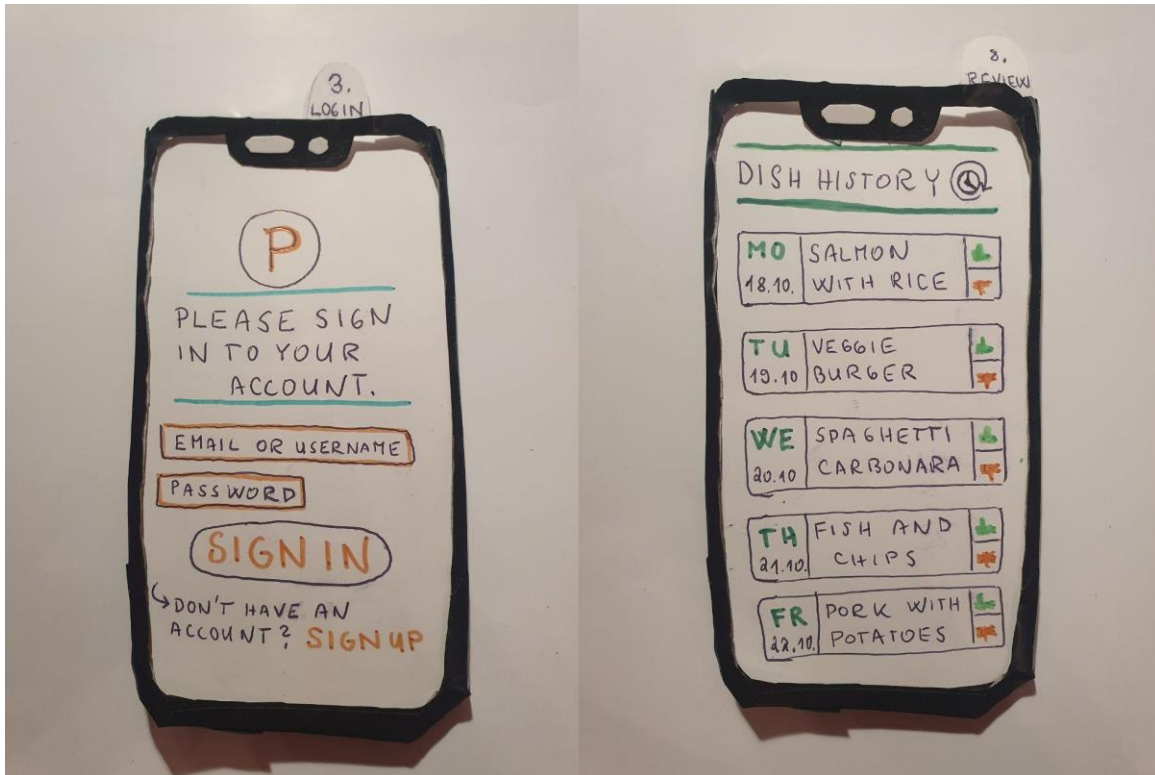
It's quite a normal day of work for Paul, the principal of a private school in Zurich, when he gets a call from Simon, the head of the canteen. He complains that they are throwing away a lot of food lately. The principal wants to know what kind of food exactly, but Simon can't give him an exact answer because they are offering different kinds of menus every day and he can't really spot a similarity between the food he is throwing away. Luckily Paul installed the app at the beginning of the year to track which menus are liked and which are not. He opens his interface which shows him different diagrams which show how many likes and dislikes some menus have. He can also see the comments for each menu. He then analyses these diagrams and realizes that one particular food is disliked a lot. A lot of menus where pork is being offered have a bad like to dislike ratio or comments that mention that the students aren't eating pork. The principal didn't realize that the amount of people who don't eat pork was such a high amount. With the help of the app he now got this information and is cancelling the order for menus in which pork is being offered. So he is on one hand saving money and on the other hand offering a more environmentally friendly canteen environment.

## AN EARLY PROTOTYPE

Link to the early prototype video:

<https://mega.nz/file/JwIWgYwL#y1lLog1aHOWYHqTyirzPbhgRBx8x2Qup-bjdhy7VQEM>





### Prototype and the prototyping method

The method we used for our first iteration of a low-fidelity prototype, created during our brainstorming ideation sessions, was prototyping on paper. For this we created screens with paper, which show an initial visualization of the fundamentals of our idea. The paper prototype only superficially touches the four dimensions. The reason behind this decision is to only show a very basic idea of the product.

### Usage in the design process

The prototype was created and used in an early stage of our project, to elicit a first high-level feedback from the whole team. This first iteration was then used to flesh out a higher-fidelity version.

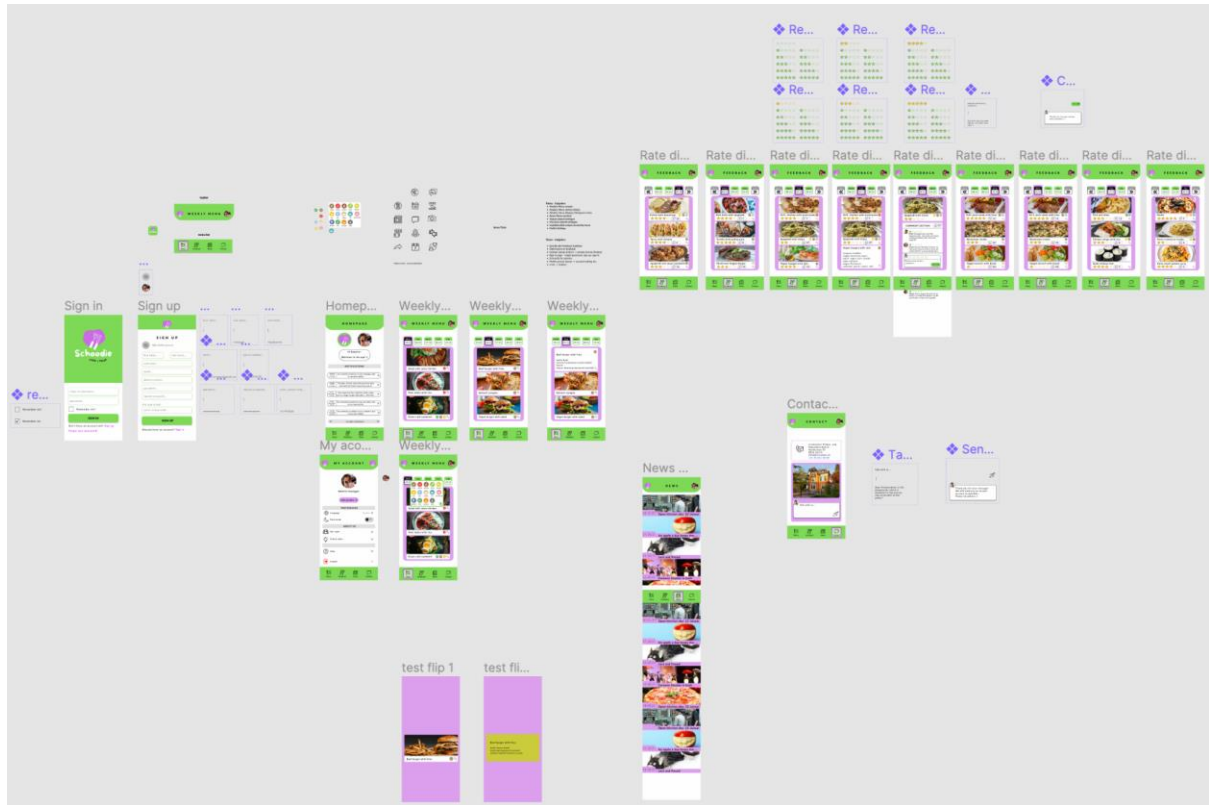
### Learnings

At the beginning we focused too much on the design rather than spending more thoughts on the functionality. We then realized during creation of the paper prototype, that the focus should not lie on details, but rather on the core functionality. The paper prototype was helpful in creating the higher-fidelity version; a software prototype. As we have already looked into and elicited feedback on the main functionality, we were then able to put work into the other dimensions.

Thanks to the mentioned feedback rounds, we were also able to drop or adjust certain features. The like / dislike function was changed to a star-based rating, the meal booking feature was scratched completely, to only name a few.

## PROTOTYPE TESTED WITH USERS

### *Prototype and the prototyping method*



The method we used during our second phase of prototyping was Prototyping software (Figma). The aim was to create a more high-fidelity prototype that begins to touch all the dimensions. We converted the functionalities that we created during our first prototyping session on paper, to Figma, in a way where we could now really focus on the dimensions, look, depth and interaction. This way we really could bring forward our design ideas to complete a prototype that is ready to be tested with users.

### **Evaluation with users**

Our high-fidelity prototype was distributed to our testers via Figma, mirroring the app directly on their phones. Three tests focused on the parent user group and were conducted using the “Think aloud” technique. These formative testing sessions allowed the testers to explore the design concept, while we monitored them. In both sessions, the tasks were followed in a specific order and assigned after successfully achieving the goal. If the user faced a problem, the moderator gave some guidance in order to improve the user’s understanding of the prototype. All sessions were recorded on video to give us the possibility to rewatch and analyze the interactions retrospectively. Table 1 shows the task lists.



User 1: Father of a young boy	User 2: Mother of a daughter	User 3: Father of two boys
1 - Sign-Up to the app	1 - Sign-up to the app	1 - Sign-up to the app
2 - Write a comment on the spaghetti with clams dish your child ate	2 - Log-in to the app	2 - Log-in to the app
3 - Find the information that the canteen theater is back	3 - Look up the menu for next week (tuesday)	3 - Allocate the menu list of the 16.11 (tuesday)
4 - Turn the application into dark mode	4 - Get information about the dishes, get allergens info	4 - Get all the ingredients of the beef burger menu
	5 - Review the dish „Spaghetti with clams” with 2 stars	5 - Check the menu ratings of the previous week
	6 - Read the comments on that dish and write one	6 - Get in touch with the school (find the chat function in the contact menu)
	7 - Look up the news	7 - Logout
	8 - Write a direct message to the school	
	9 - Change the language	
	10 - Check the latest notification	
	11 - Logout	

Table 1: Task lists

During these sessions we were able to obtain important feedback, which clearly facilitated our road to a final prototype.

### Learnings

Overall the feedback supported our design problem. All testers thought that the design, as well as the functionality of the app is simple, comprehensible and intuitive. User 1 (see Table 1 on p. 7) did not have a lot of problems solving the tasks. He understood the use-case, as well as the design problem. Looking at the latter, he thought that the icons of the allergens and their descriptions are too little.

Furthermore the user suggested a red design or in general more red hues, as to his experience, food companies usually have some red in their visual identity. While we found this to hold true for a lot of fast-food companies, we did not incorporate this into our final prototype. After all, we do not necessarily want to be associated with said businesses. Schoodie does not produce or supply any food but rather wants to decrease information asymmetries.

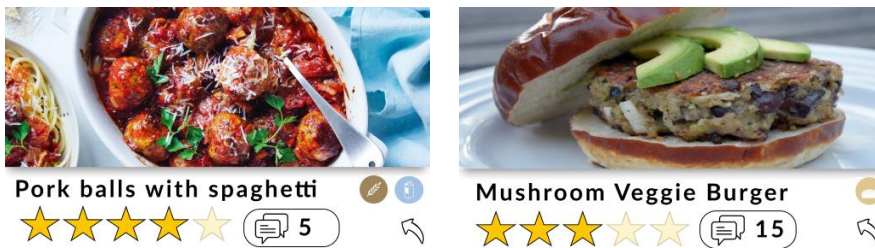
Other functional issues arised from the test with user 2. In the third task the user did not know about the swap function. This showed us that the implementation of signifiers would support the underlying affordance. The same holds for the allergens feature (task 4), the user did not know how to get to that info. Other problems were finding the settings, where the user expected a “typical settings icon”. This was also the case for the third test user, who did not find the logout function at first glance. After a short consternation, he referred to other apps he knew where you can logout via the profile icon. Consequently, he tapped on the profile picture and found the logout function.

Overall, user 2 had more complications than user 1. A possible explanation lies in how the tests were conducted. User 2 had to complete a greater number of tasks.

In conclusion, all users would download the app as a parent, if the developers would consider the described lacks. Nevertheless, the data and feedback we gathered from these sessions showed us that we are on the right track. Our idea meets acceptance and interest.

## DESIGN HIGHLIGHTS

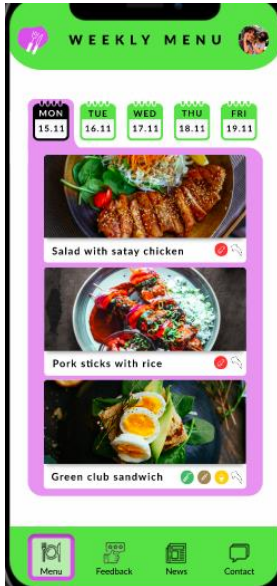
### Rating system



A feature that stands out and constitutes the heart of our application is the star-based rating system. This serves as the main feature to support the core user activity. The aforementioned focal user activity lies in being able to directly provide feedback and therefore, to some extent, influence what is served at a school.

From a general perspective, the chosen system, as opposed to simple like / dislike buttons, which were used in a first iteration, makes sense and serves the purpose of supporting the user activity in mind well. Furthermore, this feature satisfies Norman's design principles. The 5 stars afford giving an opinion on the menu item, which is rendered in the same tile. Also, a signifier is added to indicate the mentioned affordance. In this case, it's a clearly perceivable visual indicator which communicates appropriate behaviour to the user. If a rating was not given, the filling colour is washed out. Clicked stars, meaning a given rating, is signified by filled colour, which also leads to appropriate feedback. In addition, this feature is meaningfully mapped. It can be seen as a cultural convention, especially in the age of the internet, that stars represent somewhat of a rating or reflection on a specific thing which is to be judged. Also, it is globally understood that more stars equal a better rating.

### Day picker



One highlight of our design is the way we designed how to pick a date to check the menu on that certain date. You can see this part of the design on the menu or feedback page.

For this aspect of the design, we really paid attention to the knowledge we obtained during the course. The way the field for the date looks serves as a great affordance because the look resembles a physical calendar which encourages the action of choosing which date the user wants to look at. The purple colour that underlies the menu serves as a signifier because it indicates the mentioned affordance of the calendar field. At the same time the purple colour has the role of a feedback. The purple colour that lies behind the menu makes it crystal clear which date the user chose. This form of feedback (purple colour) is also consistent throughout the whole application. Whenever a different page or date is chosen it is signalled with a purple colour where in the application the user is at that moment. You can also see this on the bottom left where the menu field is framed with a purple rectangle. All in all this is a great example on how we have implemented the newly acquired knowledge of this course such as affordances signifiers and feedback.

## LIMITATIONS OF OUR WORK

### Single-Account Restriction

During the design process and elaboration of our project, we made the decision to focus on the user group, where the parent(s) make use of the app for one child only, meaning that a user is limited to one account. The reason behind this decision is the following. If we would have to consider families with more than one child eligible to use the app, there would have to be a multi-account system or an option to “add” a child. Not only would this overcomplicate the - in theory - simple design of our app, it would also lead to confusing account management. Furthermore, the interface would get more complex due to additional components being present.

We also made the assumption that the relative proportion of families, with more than one child at the same private school, is to be considered neglectable.

### Caterer - Restriction

A second decision we took during our design process was to not include the user group of caterers in our product. After our first few ideation sessions our plan was to also incorporate caterer businesses that could directly see what foods were wanted and with which menus the children weren’t satisfied and that they could, based on that information, provide the wanted menus. We then decided to not include this user group because it would have made the whole design overly complex. We already had the school as a secondary user group because it had to offer the possibility for the parents of the students to use the app for their canteen. A third user group was simply too much because we would have had to offer another way of using the app while already having the parent and school side, which could have caused a lot of confusion for our users.

## APPENDIX 1: THE INTERVIEW GUIDE

We expect the interview guide to have the following characteristics:

- The planned questions cover multiple aspects of the topic.
- There are enough questions for the interview session around 45–90 minutes.
- There are preparation notes for pre- and post-interview activities.
- When appropriate to the topic, the interview guide indicates an attempt to collect data from other modalities (e.g., photos, screenshots)

## 1. Introduction (5 min)

- Give out release form and get signature
- Turn on video camera
- Confirm timing
- Who are we and why are we doing this
- There no wrong answers, this is information that help us direct our work
- Thank you for taking your time. Today we are going to talk about you (and your partner's) food habits and how they impact your kid's nutrition at school.

## 2. Main Body (35 min)

### Overview (10 min) (Maximilian)

- Please tell us a little about your family.
- What are your family's food habits? (E.g. vegetarian, pescatarian, vegan etc.)
- If any special habits apply, why do you choose to follow such a diet?
- Are there any religious constraints or allergies which prohibit you from eating specific foods?

### Nutrition Trends / Behaviour (10 min) (Max)

- What are your thoughts on the change that nutrition gets more and more plant-based?
- What is your opinion about eating meat?
- How would you describe a perfect balanced diet, which you'd like to follow?
- How important is it for you that bio food is provided at your child's school?

### Exploring Specifics (locations, subject matter, motivations) (10 min) (Roberto)

- Which points do you emphasize most in child nutrition at a private school?
- In what manner does the child nutrition at a private school differ from the one at home?
- Have there been any special circumstances, where the choice of the school did not match your nutrition behaviours and allergies?
- Does it bother you, when your child has to eat something completely different from the other students?
- How far should parents engage in the choice of menus at a private school?

### Application (5 min) (Timon)

- How often do you use your mobile phone/web browser?

- Do you use any mobile or web applications for your children's school? If so, which one and if not, then why?
- What do you think about the connection between dish voting and a mobile phone/web browser?
- When did you last get into trouble when using a certain application? Why did that happen?

### 3. Project/dream questions (15 min)

#### The Future (15 min) (Tobias)

- What would you like to have a say on the menu in the future?
- The menu selection cannot accommodate all preferences. What is a satisfying compromise for you?
- What do you think a menu plan should offer in the future?
- How much effort are you willing to invest in menu selection in the future?
- If a majority prefers a certain menu, to what extent are you willing to accept this?

### 4. Wrap-Up (5 min)

- Summarizing the whole conversation and the most important insights of it
- Is there anything we haven't talked about?

## APPENDIX 2: AFFINITY DIAGRAM

We created an Affinity Diagram online on **Miro**

The link is: [https://miro.com/app/board/o9J\\_lpCU0](https://miro.com/app/board/o9J_lpCU0)

# Affinity Diagram Group 12

## family

### basics

### nutrition

### opinions

### personality

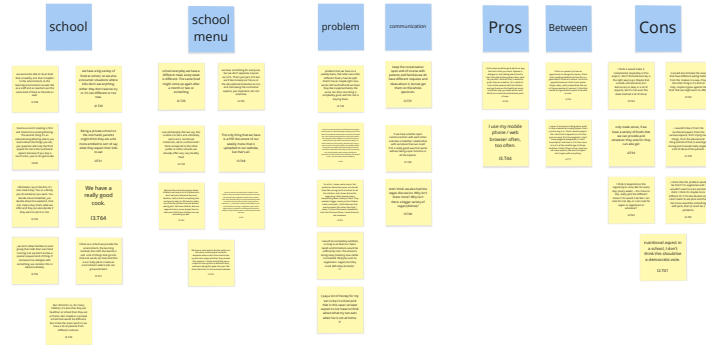
## school

### environment

### situation

### voting app

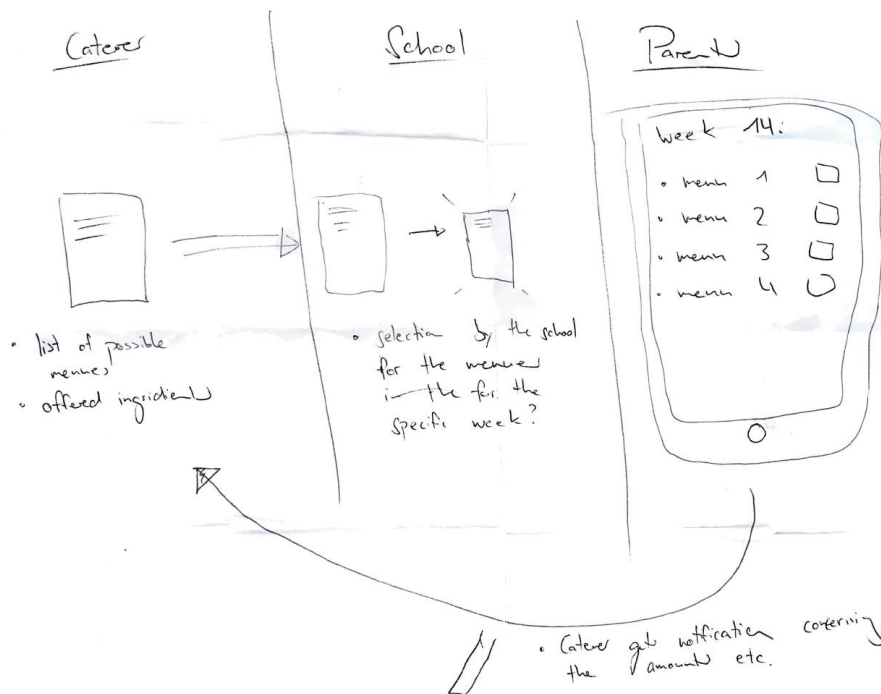
## society



## APPENDIX 3: TRACES OF IDEATION

### Brainwriting Session 10.11.21

- NightRidePizza (Get the best pizza around your location in the night) (Timon)
- Discount Hunter (Find the closest store with the cheapest food item) (Timon)
- Thirst Killer (Find drink spots on the map, bars, restaurants or stores, where you can buy or get something to drink) (Timon)
- Wastage reduction through "smart" planning (Maximilian)
- Menu Generation -> get rid of planning altogether (Maximilian)
- Fitness-Nutrition Track App (Count the calories you eat) (Roberto)
- Check and Track App for water consumption (Tobias)
- Toddler-App (Is your kid eating enough during the day?)(Roberto)
- Common Planning-App with goals (Maximilian)
- School-Application for weekly menus (Communication to parents) (Roberto)
- SportMatcher (find partners for different sports for a healthier lifestyle)(Max)
- EatMatcher (same as Sport but for eating)(Max)
- Foodstagram (Like Instagram, share photos but just for food)(Max)
- App for recipe suggestions (Tobias)



## APPENDIX 4: NOTES FROM THE DESIGN CRITIQUE

We agreed with the other group that one person per group would take the lead and handle organizational issues with the other group as well as leading the design critique session. We created a short from creative brief and handed it over to the other group together with the latest Figma export files. Thus, everybody could already think about it in advance and prepare for the actual critique session. Since not everyone from both groups could participate due to scheduling reasons, written feedback was also possible. The written feedback was then taken over by the group leader. We finally met in a lab room of the UZH Binzmühlestrasse. We were able to project the notes as well as the prototype via the beamer so that everyone could follow the session optimally. We discussed all the criticisms that were prepared and supplemented the session notes with new spontaneous feedback from the participants of the design critique session.

*A short sample from the Design Critique Session notes of both groups.*

+	-
Continuously color schema (like juicy)	Icon for Home was not that intuitive at first
Nice sliding animation between calendars	Clicking on Profile screen has no label (signifier)
Intuitive usage of icons with labels (signifiers)	2 Home icons on the my account page
Overall nice spacing and good usage of Gestalt's law of Proximity	not clear that you rate the meals by clicking on the stars -> thought that you first have to click on the item
Good use of rating schema with 5 Stars	Top Row not consistent fixed (shifts from one screen to the other)
Nice Signifier of showing existing reviews	After Login not on HomePage, rather than on Menu
Nice flipping animation	Information on Homepage too small, it's illegible
	HomePage Greeting "Hi Robert..." is not

### General use-case critique

- How can Francesca keep track of her available items/leftovers at home? When does an item disappear?
- Suggestions for leftovers can in fact reduce food waste, very good idea
- How are the suggestions added and changed?
- Can everyone edit a shopping list and the meal calendar?

### Inspiration and Recipes

- Nice that the user is guided by the small information "help" text
- Excellent Mapping: Inspiration is mapped with the light bulb
- What happens after the user types in a leftover? Is it possible to type in multiple leftovers? Is an egg for example really a leftover? (or not an inventory, stocks, etc.)

### Meal Calendar

- Very good idea to keep track of all the ingredients needed for a certain period
- Missing information icon – compared to the inspiration and



To best incorporate the other group's feedback into our prototypes, we then created an action plan that captured the steps we planned to take. This is a short sample of our action plan following the design critique session. We discussed all positive feedback but decided to only include negative feedback in the action plan.

#### Action Plan Design Critique Session

Nr.	Feedback	Further actions	Status
1	You should use Fake Personas and not real names as we've learned in the lecture	No further actions, names have already been anonymized	closed
2	Not quite clear for which scenario which app? Offer all the same <a href="#">functionality</a> ?	Like in the design critique discussed, we can improve this issue by creating different icon and/or login screens to make sure which app is for which user	open
3	Icon for Home was not that intuitive at first		paused
4	Clicking on Profile screen has no label ( <a href="#">signifier</a> )	No further action, Nowadays, it is common for apps to access the profile settings via the profile picture icon.	closed
5	It seems contact doesn't have a specific use, why is it on every submenu displayed in the bottom row?	No further action, for us it is essential that the application offers beside the public comment function on meals also an opportunity for parents to get in touch with the school directly	closed
6	Top Row not consistent fixed (shifts from one screen to the other)	Adjust the top bar in the <a href="#">figma</a> prototype	open
7	Icon of Profile Picture in Review not consistent Roberto and Woman	<a href="#">Indeed</a> the contact for example has the old profile picture	open
8	<a href="#">HomePage</a> Greeting "Hi Robert..." is not tailored to this app, what is it being used for? <a href="#">Becomes useless when reopening after some time...</a>	This is only a prototype in further version the welcome text can change/disappear etc.	closed