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Introduction

For our Expert Review, we wanted to find an app of reasonable quality. As a group, we believe that an app of too poor quality is less fun to review. If everything is broken, there is obviously a lot of work to be done and our expert review would then only acknowledge that "everything has to be fixed or reworked".

Instead, we have decided to critically look at a high quality app that is actually used a lot by people of many different groups. This makes it possible to find very alternate personas that are not just made up, but actually relevant for the app. This is much more tricky, as there will not be that much to improve, but a lot more fun as well because the improvements we find will actually make the app worth a five-star rating.

With all of this in mind, we have chosen "Appie" by Albert Heijn, a giant grocery store chain originating from The Netherlands, but now also found in Belgium. The app has over a million downloads on the Google Play Store, which may not seem like much compared to other apps but is actually very significant when keeping in mind that this app is only used in The Netherlands which has a population of 17 million. It has a rating of 4.1 on a five-point scale, which indicates that it is good, but not perfect.

Personas

For the different personas, we have decided to take stereotypical members of the groups that can often be found in the stores of Albert Heijn. Though not all groups are equally likely to use the app, there will definitely be members of every group who do and as such we have decided to take all of them into account.

We have chosen these personas because there are very clear differences in age, gender, lifestyle, health and ethnicity. Due to this, the personas cover a very large majority of the population that visits the Albert Heijn, and thus of the population that uses the app. It is impossible to represent everyone, but many users will find themselves relating to a couple of groups.

Flip

Flip is a grandpa, aged 79, born and raised in Nijmegen, where he still lives. He is quite a modern grandpa, as he has recently received a smartphone from his family and actively tries to use it. Sometimes, he needs a little help from the grandchildren, but overall he does very well with this new technology. Flip lives alone as his wife has passed away. He goes to the Albert Heijn rather than other stores because the staff is always very friendly and willing to talk to him. Flip also drives a scooter, and the store has taken this into account with extra wide aisles in the entire store. Flip never buys much but goes to the store daily because he enjoys being there. He does not use selfscan on his phone or with one of the selfscanners, because he finds comfort in talking to the cashiers. Flip likes wine and is always on the lookout for new bottles. It is a hobby of his that he happily shares with whoever is stocking the shelves at that point.

Mark

Mark is a 20-year-old Law student at the Radboud Universiteit in Nijmegen. He lives in a house with 9 other students of his age, where they take turns in doing grocery shopping. The reason for going to the Albert Heijn is because it is the closest store; other grocery stores are at least ten minutes away, whereas this Albert Heijn is on walking distance. Mark is not a rich man, however, and thus he pays attention to what is on sale that week and uses that as a guideline for what to buy. Mark dislikes doing grocery shopping and wants to get through it as soon as possible. Although he does not do the shopping every week, he has a decent understanding of the store and needs no help finding things.

Annemiek

Annemiek is a stay-at-home wife. Her husband is a successful businessman and they have decided together that it would be beneficial if she remained at home to take care of their four children. This is a very busy task and Annemiek does not have much time to do groceries. Although she has become very good at buying precisely all necessary items, doing shopping for a family of this size is never going to be quick. She visits the Albert Heijn because of the enormous variety of products they have and the fact that the majority of products is always in stock. Because the four children all have very different schedules and Annemiek needs to pick them up and drop them off everywhere, she has considered having the groceries delivered, but it is simply too expensive to have this done on a weekly basis.

Pjotr

Pjotr is a 29-year-old trucker, originating from Poland. He works for a company in The Netherlands. As a trucker, he is on the road a lot, and visits many different stores. He likes Albert Heijn because it is such a recognizable brand and can be found almost everywhere he goes. He usually buys the cheaper products, because he is saving up money for his family in Poland. He checks the Bonus as well to see whether anything he wants is for sale. He also takes the Allerhande with him, which is a magazine containing recipes. Pjotr likes cooking and the recipes are quick but tasty. If Pjotr likes something, he will cook it much more often. Pjotr uses the Albert Heijn website often to find out where the nearest store is, because he is always on the road and does not know his way around in all of the cities he visits.

Jeroen

Jeroen is an entrepreneur. He has his own restaurant in the center of Nijmegen, and uses the Albert Heijn to buy supplies for this business. The restaurant is growing quite big and Jeroen is more and more busy, so recently he has chosen to have the goods delivered by the Albert Heijn service. He likes this a lot, as the goods are delivered by a small truck that has everything he asked for. It costs a little more, but the time it saves him is worth the fee. Jeroen is a very up-to-date entrepreneur and uses the newest technologies in his business to make sure he has an edge over the opposition.

Heuristic Evaluation

Flip (Grandpa)

Tasks:

- Using the wine finder functionality
- Using the product finder functionality
- Using the 'forgot my password' functionality

"I open the app and arrive at the home screen. I see a blue rectangle with 3 lines in it. I think this is the menu button, so I tap it. But actually, this is the button to make a shopping list. So I hit the back button. Now I see that the menu button is located in the top left corner. Maybe I should have looked better, but I find this a problem of type 4: Consistency and standards. In this menu, I can see some submenus and the wine finder. It's actually very extensive and clear. I can now find new wines and their prices. Great!"

"I return to the menu to look up 'product finder'. I can see it is ordered by means of product categories including pictures, which is a very handy way to do it in my opinion! There is one thing that bothers me, however: when hitting a category, say licorice. I now have to select a sub category, like sweet or salt and hard or soft. But this sub menu is totally different, just a list of words without pictures. This looks less attractive than the previous menu. A point of improvement of category 6: Recognition rather than recall. I can still find the product I need though, including it's price and varieties. I would also like to search by brand, this isn't an option."

"In this scenario I'd like to reset my password, because I forgot what it is. I want to see my order history and for this go to the corresponding sub menu. The app asks me to log in. I hit the button and immediately see the option forgot my password. I hit it, and fill in my email address. I receive an email with 1 blue button in it. I click it and end up on a page to fill in my new password. After doing that I can log in on the app. As simple as that! Very easy, no problems at all."

Problems:

- **Menu button**

This is a problem which will only occur once, to not even all the users of the app. I think a lot of people won't even face this problem, because they see where the home button is immediately. So I rate this problem at category 1: Only fix if there is nothing else to do.

- **List of submenus at the product finder**

This is not really a problem, it's just inconsistent and thus less easy to use. I would advise to add pictures to this list, and make it look like the rest of the menu. This error will not result in someone not using the app any more, but it does make the app less attractive and professional. So I would put this error in category 3: High priority. This fix shouldn't take too much time.

Mark (Student)

Tasks:

- Self Scanning using mobile phone
- Checking out Bonus Items

"After installing the app, I'm looking at the home screen. What pulls my attention immediately is that I can find what's at discount. Very useful of course. I also see there is an option to make a list for my groceries, so that I won't forget them. I forget something almost every time I do grocery shopping! I also see there is the possibility to use self scanning with my mobile phone. I think it's fun and useful to try this sometime, because it will save me a lot of time. I see the menu on the left side, that there are lots of submenus. This is actually quite a big app with lots of functionalities! I can for instance look up my previous purchases, find recipes and find out which products are in store."

"My plan for now is to look up what's on sale right now. I don't really need anything, but there might be some products for sale which I'd like to buy. This shouldn't take too much effort. But as soon as I open the app, I immediately see a menu option to look up the 'Bonus'. I'll just scroll through all the Bonus. I find it useful that I can click on a product and see what variants of this products are for sale and for which price. At the top of the screen I can scroll through some pictures of product-groups that are for sale, which is a nice addition as well."

"When I try to perform my second task: self scanning with my mobile phone, I'd like to go back to the home screen. My first guess is to open the menu at the left, and scroll to the top. I hit the top sub menu and arrive at the wrong screen. I re-open the menu and now see the AH-logo at the top left. This brings me to the home screen. This was not very obvious behaviour to me and this problem is a problem of category 6: Recognition rather than recall. The home button should have a more obvious position, not hidden in the list of submenus."

"I take a look at the tab for self scanning. I notice I have to be connected to AH's wifi network. I was not expecting that, but the app informed me about this immediately, so that's not a problem. It is a shame though, because this takes extra time. But there is a positive point of category 10: Help and documentation here. After connecting to the wifi network, I can start by scanning my AH bonus card. I can now scan my products and finish shopping, as easy as that! Very handy addition to the app. I found no errors at all, everything worked smoothly. Very error prone, good point at number 5: Error prevention."

Problems:

- **Home screen button**

This problem occurs once. As soon as the user knows where the button is, he won't have a problem with it any more. Though it's just not a logical place for the button to be at this position. So my advice is to fix this when someone has got the time: category 2.

Annemiek (Stay-at-home wife)

Tasks:

- Finding her fastest way through the store using the 'looproute' functionality
- Using the pick-up service

"When I went through the interface for the first time I thought it wasn't that bad. One of the things that irritated me was that I couldn't go back to the main menu. There is no button on each page to go all the way back to the main menu after clicking a few buttons. I also didn't notice there was a menu on the left with a lot of functions, this menu was a bit hidden and it took me a long time to find. Because of this there were a lot of functions which were unusable for me because I didn't know they were there."

"The second time around I tried the app again with the previously mentioned issues in the back of my mind. This time I got a list with usability aspects which could correspond with the problems I find. The menu that wasn't easy to find belongs under Aesthetic and minimalist design, it could have been done better by adding the word 'menu' in the top bar. I really liked the grocery list functionality, it was intuitive and easy to use. The specific product that I want is easy to find with keywords. The only problem with this was the walking route given by the app. After I pressed this button, I didn't notice that anything had changed immediately. This is probably a problem with 'Help users recognize, diagnose, and recover from errors' in the usability heuristics. After a while I found out that the order in which my groceries were displayed had changed. I tried following the given order but it was completely wrong. I had to walk across the store several times and it wasn't logical at all. This might be different in different stores, because you have to tell the app which store you are going to first. Maybe the store I went to didn't implement this very well."

"I also tried the pick-up service, after I pressed the button which was easy to find I was asked to choose a store to pick it up. After searching for a bit I noticed they didn't have that service at my store, so that was a bummer. I did however still try it and drove a little bit further to a store which did allow you to use the pick-up service. After I selected the store I could select a day and time, different times have different prices, but the difference wasn't big. After I selected a day and time I could select an existing grocery list or create a new one, I wanted to use an existing one but this wasn't entirely possible because I didn't have specific products in my list. For instance, I had to change 'Rice' to a specific product. This was very easy to do because I could just press on 'rice' and could then see a list with possible rice choices. Overall this was a very good experience."

Problems:

- **Home screen button**

This problem isn't major because you can press the back button multiple times, but this is still frustrating. Sometimes you forget where you are in the app and then a good and visible home button would come in handy. category 2.

- **Menu not very visible**

The three bars in the top left corner were not a clear indicator of a menu to me. this could be done better by adding the word 'menu' behind it. Category 1.

- **Walking route**

This function wasn't usable for me, it was completely off and just plain wrong. category 3.

Pjotr (Trucker)

Tasks:

- Checking out bonus items
- Checking out the recipes listed in the app
- Using the 'previous bought' functionality
- Finding the closest store

"When I first went through the interface the first thing that occurred to me was that there was only a Dutch version, my Dutch isn't very good so this was very hard for me. I did recognise things like 'bonus' in the app so I did find my way through it. There are also a lot of pictures that really help."

"When I was testing the app for the second time I tried to find products with English keywords, but this wasn't possible. The AH basic products have their product names printed on them in English so this was a bit of a problem. The most important part of the app was the bonus articles, I wanted to find which canned beers were in the bonus. This was very doable because of the general recognisable Dutch words. This part of the app is really useful for me. I think the 'Match between system and the real world' is really good here, because bonus is easy to find and the bonus word is used throughout the whole store and app. The pictures help a lot here too."

"I also wanted to check some nice recipes, but they were all in Dutch. One thing that was nice is that you can automatically add all the required ingredients to your grocery list. After I tried one of these recipes, I thought it was really good. Because I didn't know what it was called I couldn't find it anymore. But the Appie has a function which shows your previous purchases, this was a really great feature for me."

Another thing I have is that, because I drive around the country a lot, I have to search for the closest Albert Heijn every time. This is only possible by entering a zip code, it would be cool if the GPS could show the nearest Albert Heijn right now, because now I have to search using Google Maps or I have to find the local zip code.

Problems:

- **English language**

The app isn't available in English or any other language except Dutch. Because of this a big part of the target audience is missed. category 3.

- **Location**

It is not able to find location using the GPS, this might be a good functionality to add to the app, category 2.

Jeroen (Entrepreneur)

Tasks:

- Using the delivery functionality
- Using the product finder

"The first time I opened the app it was instantly clear to me what the app could do. There is a menu button in the top left and all the important functions of the app are right there on the home screen. The design is very nice and not cluttered. Overall the first impression is very good."

"The second time I used the app to deliver groceries to my restaurant. After clicking on the truck with 'bezorgen' under it I could instantly start a new order. First I had to create a profile, but this was intuitive and easy for me. The first thing I noticed is that I have to spend at least 70 Euros to be able to use the delivery service, this is no problem for my restaurant but it might be a problem for smaller households. After selecting a delivery moment I could add my grocery list or create one and from there Appie did the rest, great!"

"One of the things that I also really like in the app is the product finder. I can quickly look up the products I need and see different variants of it. These different products also inspire me for new products in my restaurant. I can quickly see which products are in the Bonus, which really helps making good financial decisions so my restaurant doesn't go into debt. A disadvantage with ordering products is that I can't check the expiration date, this is a big disadvantage because it might be stored for a long time in my restaurant before the product is ordered. A big problem once was that after the order had taken place, the truck driver told me one of the products wasn't in stock. This was a big problem for me that night, so it might be nice to include a stock status in the app for every store."

Problems:

- **Stock status**

To see which products are in stock. Category 2

- **Expiration date**

The possibility to see the expiration date is not included, implementing this would be very hard. category 2.

Conclusion

Severe problems

We can conclude that there are 2 problems which are encountered by serveral groups of people, and which need to be fixed for a more user friendly experience:

- Menu Button

This button is not easy to find, because it is small, and at the top left corner. A fix would be to make it bigger and place it in a more centered place

- Home screen button

Several people announced that this button is too hard to find. It is at the very top left, and only visible after opening the menu. It is not clear that this is actually the menu button, and also not found without any effort. Maybe place it at the top centre, where it is always visible?

- Walking route

The group which uses this functionality made clear that it doesn't work at all. Moreover, it is not clear how this works when first trying this functionality. This functionality needs drastic changes, or needs to be removed. Because at this stage it not useful at all.

Possible useful features

Some groups of people told that they would like to see some new or better functionalities in the app. They would cost a lot of time to implement, but it might be worth a try:

- English language

For the foreign users of this app, this functionality would help them a lot. Ofcourse you should consider whether this is worth the effort or not.

- Location

A nice addition to the functionality of finding the closest store, is to be able to find a store using GPS instead of postal code.

- Stock Status / Expiration date

For the sake of the functionality of ordering products, it would be nice to be able to see the stock status and expiration dates of some products. This might not be possible due to administrative cases though.

Overall this app scores quite well under different groups of users. Some small errors should be fixed, but the app is still very useful the way it is.