

Advice document

Collaboration Drinkers Pub
& DriveMKB Lectoraat

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1.0 Summary

This advisory report was commissioned by DriveMKB, which wants to build an open-source platform on which 'plug & play' applications for data-driven work are made available to entrepreneurs.

The main research question of the study was as follows: "How can the Drinkers Pub be supported through data-driven digital transformation in order to create a consistent and enhanced experience for both staff and customer?". The Drinkers Pub was used as a use case as noted in the main research question, meaning our overall solution could be used for any similar business.

To answer the main question of the research, different research methods were used, to give an example some of them are as follows: Literature study, participant observation, surveys, expert interview, prototyping, user testing,

The solution consists of a suite of applications to support the business activities as well as enhance the customer experience. The application adds structure to the business activities provides insights that were not available before the digital transformation. With our solution, customers can get digital service on busier nights, allowing staff to offer a higher quality service to the less tech-savvy customers. This will release some pressure of the staff.

In addition to the application, the branding products aim to enhance the overall experience of the business for staff and customers. This solution will provide better brand recognition as well as strong (online and offline) relationships with the customers.

Term list

- **Horeca** - Hotel/Restaurant/Café industry
- **DriveMKB** - Duurzaam Regionaal Innovatief Veerkrachtig Ecosysteem Midden- en kleinbedrijf, Dutch term for SME (Small and Medium Enterprises)
- **MKB** - Midden- en kleinbedrijf, Dutch term for SME (Small and Medium Enterprises)

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2.0 Introduction

The Drinkers Pub

The Drinkers Pub is a pub located in the center of Eindhoven, offering a very large variety of beers.

DriveMKB

Duurzaam Regionaal Innovatief Veerkrachtig Ecosysteem voor het MKB.

Drive stands for Sustainable Regional Innovative & Resilient Ecosystem for SMEs in Eindhoven and Tilburg, with a focus on catering and retail.

The Drive MKB project aims to build an open-source platform on which 'plug & play' applications for data driven work are made available to entrepreneurs. This platform is filled by collaborating entrepreneurs in this project. We will often use (big) data and artificial intelligence (AI). The applications will be developed by our students, in collaboration with teachers, researchers and IT companies from the region. The aim is to support entrepreneurs in their digital transformation, in order to create new business.

Goal Drinkers Pub

The goal of the project for the Drinker's Pub is to come up with a data-driven technological solution to improve the overall experience of the Drinker's Pub for staff and customers.

Goal DriveMKB

This goal fits in with the overall goal of the DriveMKB initiative of "building an open-source platform on which 'plug & play' applications for data-driven work are made available to entrepreneurs".

Within this project we will aim on improving the overall experience and service by digital transformation on the following pillars:

- Take the tailored beer experience to a next level.
- Optimize the customer service by supporting the staff.
- Improve upon the customer engagement.

Problem analysis

In short, for the Drinkers Pub, we have identified problems in the following areas:

- Customers have a hard time making a choice because of the large beer variety
- Staff members have a high workload on busy days as a result of the Covid-19 crisis and the lack of digitalisation
- The pub had no overall consistency in their branding, resulting in a low customer retainment and low brand awareness

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Research design

1. What data-driven requirements can add consistency and enhance the current customer experience?

- 1.1 What is the current customer journey?
- 1.2 What do competitors do to attract customers, what innovative/interactive concepts are already proven?
- 1.3 How to use data to enhance the customer experience?
- 1.4 How can we make the brand and its distinctive assets more consistent and recognizable for customers?

Methods

Participant Observation
Interviews

Literature study
Best, good & bad practices
Interview/survey

Literature Study
Ideation
Prototyping

Literature Study
Best, good & Bad practices
Prototyping
Showroom
Usability testing

2. How can we enhance the consistency of the service by supporting the staff in their activities?

- 2.1 What is the current staff journey?
- 2.2 What do other companies do to optimally schedule staff taking into account work experience and efficiency?
- 2.3 How to gather and use data to improve staff efficiency?
- 2.4 How can we support the staff with a consistent online presence?

Methods

Fly on the Wall
Interviews

Literature study
Best, good & bad practices
Interview/survey

Literature Study
Ideation
Prototyping

Literature Study
Ideation
Prototyping

3. What data-driven digital solution can enhance both the customers and the staffs experience meeting quality criteria for development?

- 3.1 What are relevant quality criteria for software development that should be taken into account?
- 3.2 How could we combine staff & customer & development requirements into one prototype/solution?
- 3.3 To what extent does the solution enhance both the customers and the staffs experience?

Methods

Literature study
Expert interview
Best, good & bad practices

Ideation/brainstorm
Proof of concept
Wireframing
Prototyping

Pitching
Field trial
Usability testing
Benchmark test

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3.0 Preliminary Research

3.1 Customer research

In order to get a better overview over the customer experience, research was conducted in order to form a customer journey. This research was done in two parts; a Survey which was shared with customers and we performed a participant observation which included us going to the Drinker's Pub and be the customer ourselves.

During this research we gathered the following insights:

- Only **2** out of **32** visitors discovered the pub through social media.
- There is a distinct difference between the experiences for people who order at the table and who order at the bar itself. Ordering at the bar can be considered a suboptimal experience. (Look into the customer journey's themselves for more)
- The large beer menu makes customers reliant on getting recommendations on what to order by the staff. We experienced first-hand that this service was quite good at the pub whenever we would get it.
- However, at a certain point in time, when it got busier, we noticed that this service wasn't offered as often anymore. This is a problem because of how reliant customers are on it.

Thanks to this research we were able to conclude that we should focus the project on the following themes:

- Find a solution which makes getting a beer recommendation easier and faster in order to improve the service speed and enjoyment of customers.
- Introduce buttons which allows customers to call over staff, this makes it so customers don't have to order at the bar as often.
- More information about beers can be appreciated and fits a craft beer pub's USP.

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3.2 Staff research

- To find out what requirements the staff has, we have visited the bar on different occasions. During the visits, we conducted expert interviews with the owner of the pub, as well as other members of the staff such as the sommeliers and brewers
- We also conducted observation research on multiple occasions and took notes on sight to better understand how the business activities are managed
- We created a survey for the staff to find out what features are required in the application, but unfortunately, we got no results on that

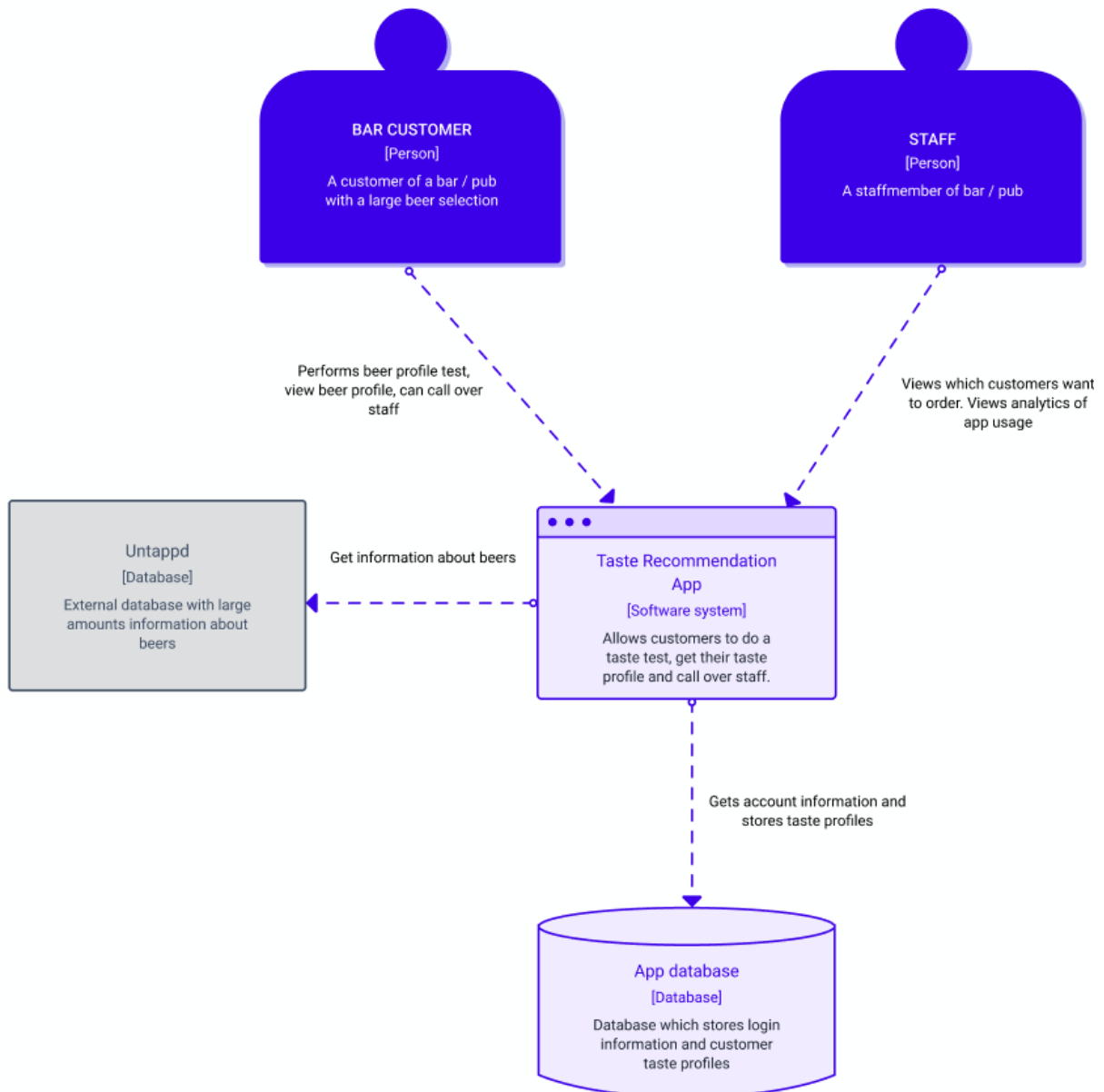
As a result to our research, we found a couple of areas that the staff can be supported on:

- Managing the orders (especially on more crowded evenings)
- Getting an analytic overview of the orders, preferences, and habits of customers
- Structuring the brand image for a better interaction with costumers

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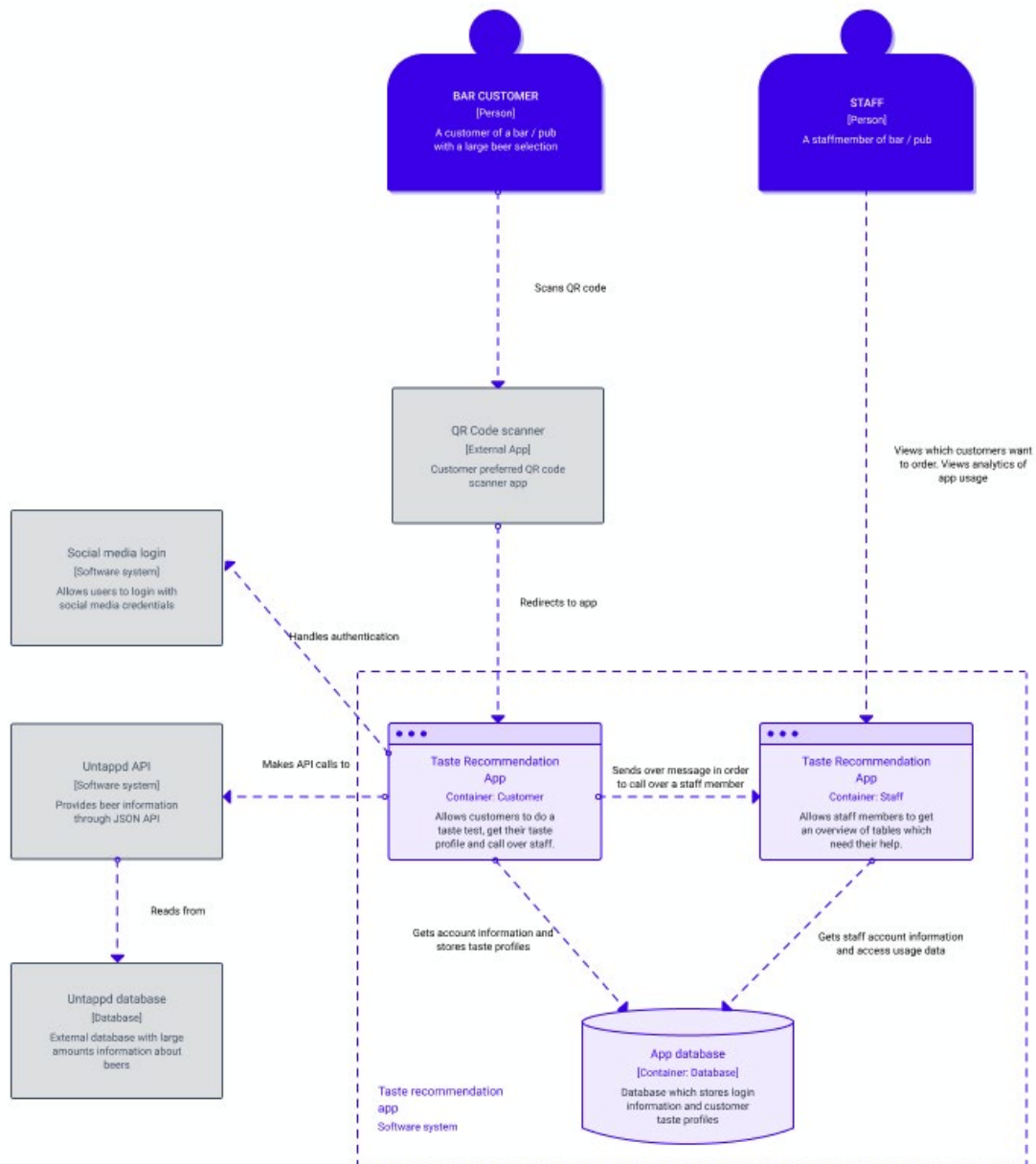
4.0 C4 Models

C1



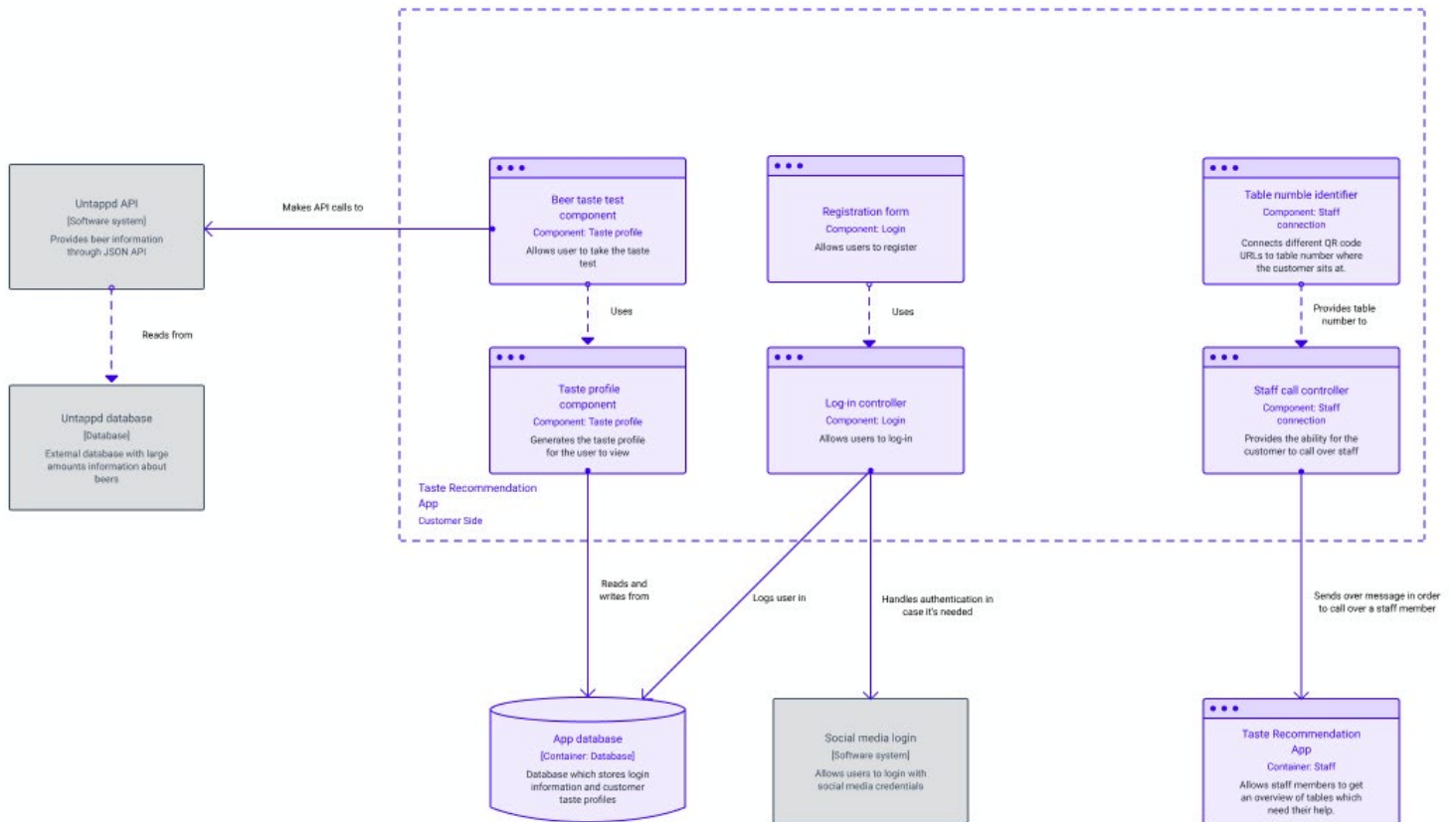
Advice Document

C2



Advice Document

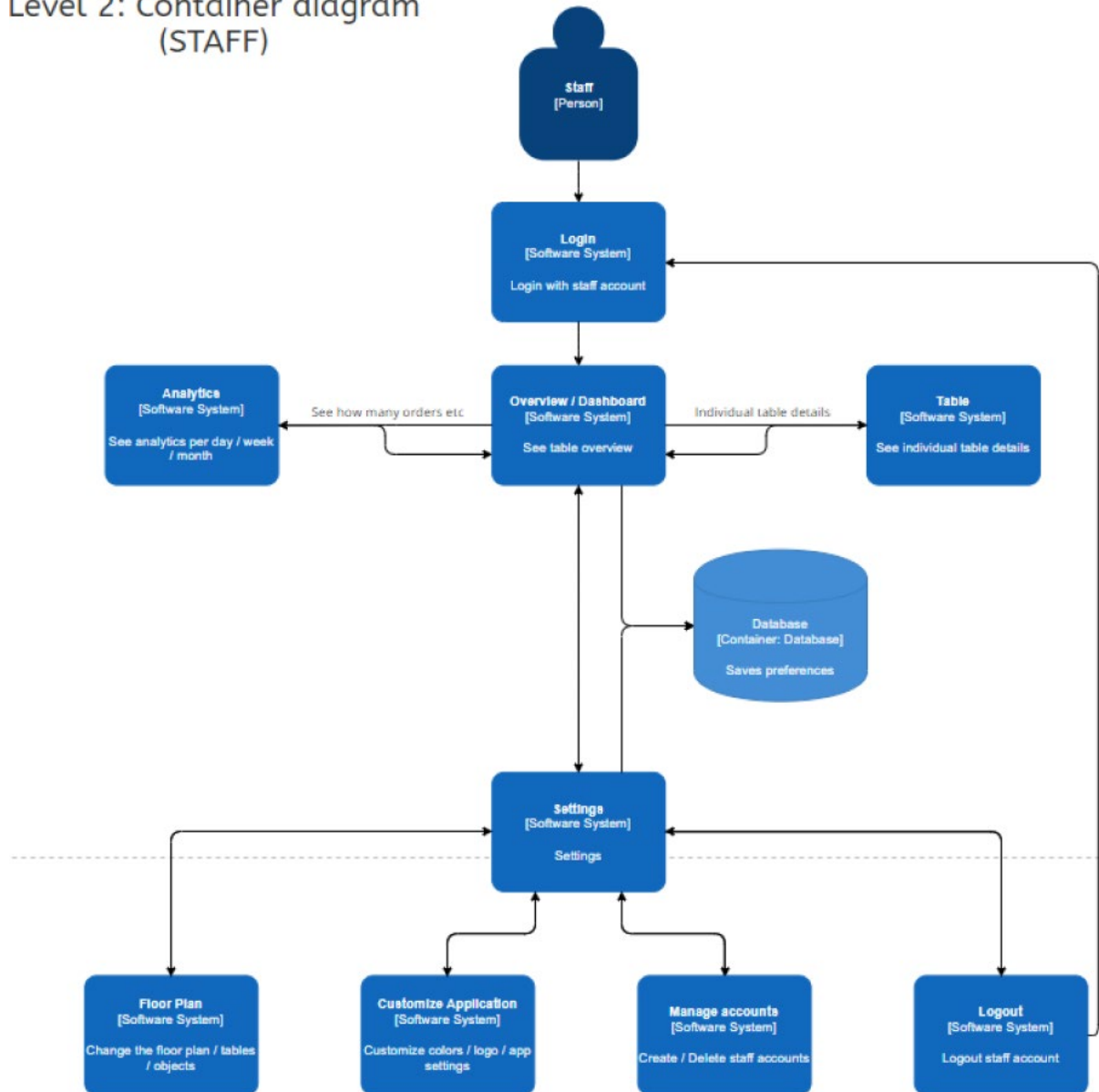
Customer diagram



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Staff diagram

Level 2: Container diagram
(STAFF)



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5.0 Solutions

5.1 Customer

Explanation

The customer side of the app is a mobile app which allows customers of horeca to take a test which creates their own unique beer taste profile. They have the ability to share this with friends and bartenders. This in return enables them to get more accurate beer recommendation which they can truly enjoy. On top of that the app will also include a 1.ordering process and likewise they also have a payment option to speed up this process. The app can also include other features to improve the customer's experience, you can read more about this in the conclusion.

Advantages

- Makes it so **customers can create and show their own taste profiles**, this allows customers to get more educated on their own taste profile and what tastes beers can have. This can help the business by selecting their beers towards the more popular profiles.
- The customers can **bring their own taste profiles** to other horeca places and show it to the bartenders over there; it is not a one-time thing.
- **It allows the customer to call over the bartender much easier**, no need for putting your hand in the air and hoping the bartender sees you.
- **The staff doesn't have to spend as much time** asking the same questions to understand what beer taste the specific customer prefers.

Disadvantages

- **Less time spent between staff and customer** during the ordering process might be negative to the overall experience (assumption).
- Our app is designed so **you can't order directly through the app**. We decided upon this because we wanted the bartender-customer relation to exist as much as possible. However, some customers might still prefer online ordering.

Impact of Change

If the Customer application is implemented, the following will be improved:

- Better and easier beer recommendation for staff to customer
- Customer experience for notifying staff
- Customer gains knowledge of own beer tastes
- Bar gathers extra data and insights

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5.2 Staff

Explanation

The staff app could be used by people that work there. The app contains an overview made by the staff of the bar with all the tables. Here the staff can see which table calls, orders or wants to pay. On top of that, the application offers an analytics screen that can help the managers with making data-driven business decisions. This app is the main portal for the staff to make changes or get information.

Advantages

- Everything the staff needs to know or edit in one application.
- See immediately what table ordered, calls or wants to pay.
- Edit the overview which include remove or add tables. Design your own floorplan.
- Edit the style of the application with logo and colours.
- Edit the permission list of staff members and what their rights are within the application.
- See insights about the favourite beers and taste profiles.

Disadvantages

- Analytics screen can use more research about what additional insights would be useful to display
- Application does not contain a feature to finalise payment as a security measure
- Application customisation screen is basic for easy design purposes, if font colors and contrast are considered, more customisation options can be added

Impact of Change

If the Staff application is implemented, the following will be improved:

- Informed and data-driven business decisions
- Data and insight gathering
- Scheduling
- Balanced workload
- Structured way of working
- Easier to train new employees
- Staff to customer response/interaction

5.3 Extra solution(s)

In addition to the two applications, we have also created a Brand guide, a website design and a Projector proof of concept. Those are products that are aimed to support the branding of the businesses.

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5.4 Data-driven Transformation

As the majority of Horeca businesses have a low data maturity, we have decided to find the easiest and most cost-effective solutions to use already available data as well as generate new data.

During the project we have investigated the “Untappd” application as it fit our study case best (Drinkers Pub). Other applications such as “Tripadvisor” also offer a wide range of open APIs to generate data and insights for other Horeca businesses.

The APIs from Untappd were easy to access, given they are mostly open source and free to use. We have successfully connected the Power-BI tool to the Untappd database through the APIs. This has provided us all the necessary data about the beverages that the pub had on the menu and retrieved additional insights about the online and offline customer interaction, ratings, reviews, specific data about a certain “product” and more. We have researched the benefits of such a business purchasing a professional business subscription for these services. The main idea is that in Untappd, with a business subscription you can add your business in the application, interact with clients and potential clients, as well as getting extra APIs, a bigger database and control over your online image.

The other area of our data chapter is aimed at gathering data directly from the two applications (customer and staff). The Customer application has the potential of gathering data from scanning the QR code, counting how many orders per hour have been placed, how many times staff members have been called at a table or which table do the clients prefer.

Both data sources can be modelled using an available software such as Power-BI, which requires a minimum level of data manipulation. The insights created from the data can be displayed in its most useful form in the ‘Analytics’ page in the Staff application. This can help with scheduling for understaffed/overcrowded businesses, deciding upon the stock and inventory based on the ratings and most ‘sold’ products as well as getting an overall feeling of what customers think of the business.

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6.0 Conclusion and Advice

Beercommendation customer side

For the customer side of the application, we have some points of advice that could or should be worked out in the future to convey a better experience within the application. In short, we will describe our advice below in the areas that we think are necessary.

White label

The entire application will be customisable so that every company that wants to use the application can apply their own brand style to it. This is an important part for the developers to keep an eye on, the application consists of a few main colours, these should be easy to change so that every company can apply their own brand style, the same goes for the fonts, the logo and the text within the application.

The design of the application we made is a template / use case of the application. We created the whole basis for the application with a clear picture of what the application should consist of and what it should contain at least.

Animations

The current prototype of the application is almost entirely static. This means that almost no animations - transitions or other moving elements have been added to the prototype yet. Micro animations and transitions can bring the prototype and the final application to a much higher level. It gives the user a better experience and more clarity about the application, while also making it more enjoyable.

I (Wilko) will be working on this during my individual project within semester 6. If more work is needed after my individual project, I will again write some advice on what can be improved.

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Development

When converting the designs into an actual application, it is important to look at which implementation will be the best. We have done research on this and will give our advice on what we think is the best option.

Development possibilities:

1. Progressive web application (PWA)
2. IOS & Android application (Native application)
3. Responsive website

Progressive web application (PWA)

In short, a progressive web app is simply an application that uses the functionalities of a browser but at the same time functions just like a mobile application. Why should you choose for a PWA, this is mainly due to the following advantages:

- **Responsive:** the application looks good on any screen, whether mobile, tablet or desktop. Even though the application will probably only be used on mobile phone it is always useful to have the ability to make it responsive.
- **Connectivity independent:** Once the elements have been loaded, the application can also be available offline (i.e. without functioning internet). It is therefore not a problem if the internet should be down at some point.
- **App-like-interactions:** A progressive web application has the same look and feel as a (native) regular application would have on your mobile, which makes it very easy to work with and recognizable for the users.
- **Safe:** The use of secure connections (HTTPS) prevents information from being seen or modified. This makes it a reliable and safe environment.
- **Costs:** Because you only must develop a progressive web application for one platform (the web), it is easy to maintain and cheaper to develop. A native application (mobile application) will have to be developed for both IOS & Android and maintained separately for both.
- **Reachable:** For a PWA you do not have to download an application, you can easily type the URL in your browser to get to the PWA. On your mobile or tablet you can put the PWA on your home screen to open it faster. And in our case, you can easily link it to a QR-code giving the users the opportunity to scan the QR-code in the specific bar/pub or restaurant.

There are more advantages to a PWA, but these are the most important ones, which is why we advise to develop the application as a PWA.

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Extra features

At the moment, the prototype of the application contains all the functionalities that we consider must-haves. But there is still a possibility to add extra functionalities to the application. Since the application must be applicable for every company, it could be interesting to give companies the option to add or remove extra functionalities themselves. The most important thing is that the basic functionalities are always there.

Below, we will list some possible extra functionalities to give you a better idea of the possibilities.

1. **Beer spinner game**

Allows customers to open a beer spinner on the application, it will look very similar to a wheel of fortune. The customer can spin the wheel and it will land on a specific beer; this could then be the beer they "have" to order. This is especially useful for the customers who do not know what to offer or just want to try something fun with their friends. Some customers requested something similar to this during our customer survey.

2. **Menu in application**

Currently there is no option to view the actual menu of the specific restaurant or pub within the application. For some pubs it might be useful to add their menu to the application, making it easier for the customers to already see the entire menu on the application itself and making the choices of what to order right away without needing help of a bartender.

3. **Wine or other drinks/food recommendation**

Currently the taste profile is based only on beers, this could be changed to the specific bar/restaurant's needs. Let's say restaurant that serves mostly wines would want to use the application then the beer taste recommendation should be changed to a wine taste recommendation. The questions asked should be based on gaining the knowledge of wine taste profile instead. The same goes for other foods or drinks depending on the specific specialty of the restaurant/bar.

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Beercommendation staff side advice, explain how its white label

Suggested extra features (also based on final user test):

- Extra screens for analytics page
- A scheduler for bar shifts
- Add a section for all the products
- More customizable settings
- A graph of the estimate customer attendance per hour / day

Overall applications advice:

Both applications will need to be linked as they need to communicate. For example, the 'call bartender' function in the Customer application needs to be able to send a message in the Staff application. Both applications need to be linked to a database to store the generated data. The additional database that could come from APIs of Untappd or TripAdvisor can be added for extra insights about certain products for the Analytics screen in the Staff application.

Projector

We have tested the window projection with 4 different shades of semi-transparent screens. We concluded that the best video quality comes on the darkest/most opaque screen, but that will make it harder to see through the window as well. The two middle shades work best for an optimal projection as well as being able to see inside and outside through the window.



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Brand Guideline

The brand guideline we have created is based on larger scale international brands' brand books. This comes from the need of brand recognition of smaller Horeca businesses as well as a structured way to represent the business online and offline. The chapters are thought out to fit those smaller business models of bars and restaurants and can be changed according to the branding.

Figma link to view designs

[Link to Figma Design project](#)