



Advisory Document

Obero Platform

The purpose of this document is to act as an advisory for future prospects of the Obero project, detailing the finalization, conclusion and recommendation that focuses upon the created designs and concepts, as well as an overall list of professional products ready for handover.

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Results & Deliverables

The overview of professional products can be found here, alongside the submission of zip folder containing all deliverables planned for handover.

Phase 0 — Setup

1. Project Proposal

A project proposal was made to create a preliminary overview of the proposed project by the company and measure the scope and capabilities of self by looking at topics of interest and stakeholder requirements.

A total of seven iterations have been made for the proposal, mainly focusing on refinements of the project's scope. The proposal has been submitted to both parties (Fontys and Obero), completed, and approved for execution.

2. Project Plan

Once the proposal has been approved, a project plan is created as a detailed oversight of the project, where research questions, methodologies and timeline plannings have been discussed and panned out as was agreed by stakeholders. The project plan underwent multiple iterations, with version 4 being the most recent. The project will take about 18 weeks to finish. Primary work methodologies are conducted via Agile Scrum mixed with the Double Diamond method.

Phase 1 — Discover

3. Literature Study

A literature study was conducted in order to gain some level of understanding and context about the topics and sectors related to the assignment:

a. In-store Operations

Research on in-store operations and the responsibilities of restaurant owners, and associates within the foodservice industry.

b. QR Ordering System

Research on the benefits of QR ordering system and its standardized functionalities in different use cases.

c. CRM & SaaS & OOS

Research on the concepts of Customer Relations Management, Software as a Service, and Online Ordering System, and its real-life applications on different use cases.

d. Data Visualization

Research on data visualization and different types of methods used to represent data.

4. User Research

User research is conducted to identify the main target audiences and other associates linked to Obero. A user research report was crafted to compile the findings. As a result, two main deliverables were made out of this research: three personas of different target groups associated with the platform and application, each with its own empathy map.

a. Online Survey

An online survey in Microsoft Forms was made to create profiling of user preferences on both restaurant owners and usual in-store customers. A total of 141 respondents was recorded.

b. Expert Interview

Expert interviews were done with vendors and a focused restaurant owner in order to gain insights on user motivation and sales strategies to increase and maintain constant streams. A total of 4 vendor interviews and 1 field study was conducted.

5. Competitive Analysis

A competitive analysis was conducted via best, good and bad practices according to the main features and functionalities found from the literature study of CRM & SaaS & OOS, providing a clear scope of features and creating a contrast with Obero's existing management platform. A report was created to document the findings.

6. Heuristic Evaluation

Observation was conducted using Jakob Nielsen's 10 Usability Heuristics Principles, to evaluate and observe the current interface and find out any errors or design opportunities associated with the UIs. This evaluation is then brought for discussion with internal stakeholders. The aforementioned evaluation will be brought upon:

- a. Obero Admin & Merchant Platform
- b. Obero Website

Phase 2 — Define

7. Information Architecture

Based from the results of the research done on the current platform, an Information Architecture (IA) was derived to simplify and prioritize features that were available based on relative frequency of usage by the restaurant owners. Further observation and analysis from the field study suggested a downscoped version for the owner of Remix, one of Obero's current clients still utilizing the platform. That way, the platform's redesign would be more streamlined for the usage within a cocktailbar/lounge bar setting. The full architecture is then broken down into features and sub-features which are then further defined via user stories made for both design and development.

8. Customer Journey

The customer journey is the direct result from the observation made during the field study within Remix — a customer's path from sitting at a table, into receiving their orders. It describes the different paths customers may taken in ordering a beverage at Remix, with several opportunities being brought into discussion with the idea of: how can we upsell to customers? This customer journey also gives chance to take a closer look at the different POS systems that are available and utilized for making orders. Surprising results show that a heavy reliance on technology may not equal to a proper streamlined quality of service, as shown by the owner's perspective via on-site interview.

9. Feature Listing

The feature listing was done as a result from observing and analyzing user research and field study results, being brought into the roundtable with associated stakeholders (product owner, data analyst) to summarize and refine the features into categorizable and demand-oriented list.

10. User Flow

Each user stories are then visualized using Figjam into a user flow, detailing the associated target group and its actions toward the interface, to understand further the workarounds of the solution and the desired paths the users should take.

Phase 3 — Develop & Test

Prioritization is made, userflows are crafted, architectures for both interface have been approved. Now comes the design development phase.

11. V0

The version 0 of the prototype includes both management platform and consumer application. The design choices were made based on Tailwind CSS layouts and color schemes have also been made to follow. This was done for the rest of the iterations to allow quicker and easier development process. Version 0 was brought in as the main basis for discussions surrounding vendors and our targeted restaurant owner, letting them 'nitpick' which features are essential to be refined and focused upon the decision-making based on their agreements.

12. V1

Results of the reviews are then brought for further refinements, creating the version 1 of the prototype. Alongside these design changes, user stories are then also prioritized and turned into checkpoints that will be used to create user tasks, in preparation for the user testing. Version 1 was made in reference to Remix's requirements, with both platform and application available for testing. Significant changes made are on: color palette, placement of banner, restaurant information, menu item aesthetics, payment flow.

13. V2

The version 2 seeks small minor changes based on usability scores received from the first user test. Changes made were primarily focused upon technical fixes (Adding multiple paths to fix indirect success issues, switching to Useberry from Maze) and the removal of gesture-based interactions, as the main issue of v1 lies within that area. The results of the testing is then brought for another review session with stakeholders mainly to discuss any last changes before it is being brought for finalization and eventually onto the development phase.

14. Brandbook & Styleguide

This brandbook was a cumulative result of the research efforts in evaluating Obero's current brandables; a side mission that was tasked mainly to provide preliminary solutions

in establishing Obero's brand presence. Together with the Angular website, this deliverable mainly aims in shaping a newer and fresher identity for Obero. This was also brought into discussion regarding its contents with vendors and stakeholders alike.

15. User Test Plan

A user test plan was made to encapsulate the procedural overview of the test plan, laying out methods, setup planning and detailed questions that will be asked. The first version of the user test is conducted via Maze, while the second and latest version is conducted via Useberry. Both online testing tools work similar in comparison, providing similar metrics to capture the data necessary in evaluating the usability of the prototype flows.

16. Test Analysis Report

The test analysis report documents the findings gathered from the user testing. The metrics used to gather these findings are:

- a. Success Rate
- b. Time Completion
- c. Misclick (Error) Rate

These metrics are then measured per user tasks presented to the testers, which their actions/responses are automatically recorded via the testing tools (consent is preliminary asked at the start of the test).

Post-questionnaires are focused on using questions deriving from the System Usability Scale (<https://www.usability.gov/how-to-and-tools/methods/system-usability-scale.html>), fetching user feedbacks and responses via the likert scale.

Phase 4 — Deliver

17. Advice Document

This document showcases an overview of the process and deliverables made throughout the graduation internship journey. Deliverables are listed and explained briefly, and is handed alongside a zip folder containing the aforementioned deliverables. There is a conclusion section that encapsulates the answers to the research questions, as well as recommendations for long-term prospects for both design development and market-based strategies; think of it as a handover document.

18. Assets Figma Document

An asset list containing all necessary design elements has been created alongside the prototype versions, to be used for future consideration for Obero to use within their development phase enrollment. This document also contains the MVPs and process journeys that are documented within Figma/Figjam.

19. MVP: IA

Information Architecture of the MVP for Remix is available and accessible within Figjam, alongside other sub-features architecture and user flows.

20. MVP: Prototype

The prototype v2 is available within Figma, in both application and platform interfaces. As of currently, it is only made available within mobile screens, with progress to tailor-making the platform MVP design for Remix in tablet format.

21. Angular Knowledge: Obero Website

Results of research knowledge on Angular was transferred onto a side task of re-creating Obero's old website into a new, Angular-based website. Alongside the brandbook, this deliverable is considered under Obero's brand redesign, as well as a proof of knowledge and expertise handling with using the Angular framework.

Conclusion

SRQ1 — Who are the users involved within Obero's platform?

There are 3 different users that are involved and are related within Obero's platform:

Vendors, Restaurateurs and Consumers.

- a. Vendors prioritize on utilizing and selling Obero's platform to restaurateurs, of which requires high technical knowledge and workarounds of the platform itself, ensuring high quality customer acquisition and relationship. They are mainly affiliated directly with the progress of the assignment (MVP requirements, identifying USPs, employing marketing strategies, etc.)

Vendors demand a complete technical knowledge and expertise of the platform's workarounds, and a more usable system to ensure better management of their customers.

- b. Restaurateurs (aka restaurant owners) are owners of in-store businesses that require surveillance of their day-to-day operations. Consists of owners and staff members that work together within a hierarchical structure, and are mainly motivated in establishing seamless, efficient and high quality management handling.

Restaurateurs demand a more streamlined and efficient dashboard platform that can be easily integrated into their POS system, and a digitalized way of reducing minor interactions between customers and staff members.

- c. Consumers (aka customers of restaurants) are the main motivation behind every restaurateur, ensuring high quality goods and services for a positive experience and (eventually) determining the outlook of a restaurant's popularity.

Consumers are the most powerful out of the three, as they are the main indicator of generating revenue for restaurateurs: consumers would strive for a positive dining experience that mainly focuses on the quality of food and services, weighing its value for their money and time.

To answer this question, user research was conducted with internal stakeholders and affiliates of the company to conduct preliminary profiling of the different users that are using the solution. This was achieved via expert interviews with vendors, peer reviews to involve the stakeholders within the process, and, once identified, continued with online surveys (targeted towards restaurateurs and consumers) and literature study to further identify and validate the target audiences, including their needs and wants. A user research report was created to document and conclude this research process, alongside three user personas and empathy maps for each target user respectively.

SRQ2 — What factors define the functionality of a CRM platform?

The factors that define the functionality of a CRM platform lies upon key features that make up for different types of CRM systems:

- a. Workflow Automation
- b. User Onboarding*
- c. Analytics & Reporting*
- d. Forecast & Prospecting
- e. Email/Comms Management & Handling
- f. Team collaboration & performance tracking
- g. Security and compliance
- h. Third-party integration
- i. Personalization & customization
- j. Customer service*

** features that are relevant for Obero's platform requirements.*

To answer this question, a long and extensive literature study combined with stakeholder interview was conducted to understand the core fundamentals of CRM. A competitive analysis was also made to view certain POVs from competitors, and thus identifying specific CRM features that would be relevant and applicable to Obero's use case. As a result, Information Architecture and feature list has been made and filtered using MOSCOW prioritization, providing an overview of the platform.

SRQ3 — What is SaaS, and how can CRM platforms be offered as a SaaS?

Software as a Service (SaaS) is a form of cloud computing where user needs are hosted within the cloud as 'microservices', making it accessible at any given time for the users via the internet. Its popularity revolves around the digitalization of businesses — instead of self-maintenance and installation from the user part, all necessary apps are hosted by the cloud provider. Data security will not be compromised, as there is one unique entry point necessary from within the cloud.

CRM platforms can be offered as a SaaS by hosting the software via the internet, enabling users to utilize the microservices offered within the software. Its multi-tenant architecture allows the software to work for multiple tenants, allowing efficient resource utilization and stability. Due to its availability within the cloud, it is required to be a web-based application.

This answer was gathered mainly from literature study of CRM and SaaS, and the competitive analysis that follows — identifying SaaS components or aspects that concur within a CRM system. Card sorting session with Obero's technical advisor and data analyst helps contributing the real life use cases of these microservices within Obero's own management platform, and a realization that the platform itself does not resemble a full CRM system, and that CRM systems offer various different solutions that usually is tailor-made by the request of each subscribers.

SRQ4 — What design factors determine the usability of a CRM platform?

The usability of CRM platforms are determined by several best key practices, as established by competitors:

1. Modular and cohesive design elements
2. 24/7 access to customer support
3. Filters & ready-made templates
4. Identity Access Management & Personalization
5. Responsive across multiple screens

This answer was obtained via literature study and competitive analysis on CRM established companies within the market, as well as an additional look onto different types of data visualization — types of dashboards and how data is visualized, presented in an efficient, yet effective way. A heuristic evaluation session was also conducted within the platform to determine its current usability, and how improvements can be made for its different aspects:

- a. Aesthetics
- b. Layout
- c. Data visualization
- d. Navigation
- e. User feedback

Continued through improvements made from co-reflections and iterative prototyping, eventually the usability of Obero's redesigned platform is tested over usability metrics, timing through the success rate per tasks, time completion, misclick rates, and user satisfaction via questions derived from the System Usability Scale (SUS), categorized within a likert scale model.

SRQ5 — What features define an efficient in-store ordering system?

The features that define an efficient in-store ordering system should consists of the following:

- User-friendly and intuitive interface
- Fast and accurate order processing to avoid inefficiency due to errors
- Streamlining processes via integrations with other POS systems
- Room for personalization and customization
- Multiple ordering channels
- Gamification & User-oriented programs
- Reporting and analytics
- Integrations with other services (delivery/pickup)

By incorporating these features, in-store systems become efficient, enhance the customer experience, and streamline order operations and accuracy, ultimately enhancing productivity.

Through the field study research done with the owner of Remix, our main client and product tester, the results of the competitive analysis and literature study is realized and grounded upon real case scenarios, with the surveyaiding in the discovery of consumers' desires, and questions regarding the true motivation behind dining experience. This knowledge helps in supporting the aspect of identifying the feature list and defining the aspects of efficiency within a system, eventually being brought up at multiple iterative sessions.

SRQ6 — How can streamlining in-store processes impact customer satisfaction and employee efficiency within daily operations?

Through streamlining in-store processes via collective usage of Point of Sales (POS) systems and Online Ordering Solutions (OOS), employees could conduct faster services towards each customer, leading to shorter time consumption per consumers and quicker transactions (combined with OOS & digitalized ordering solutions).

With streamlining via online ordering and digital payments, there will be less unnecessary interactions between consumers and employees, allowing simple and straightforward services for consumers. Upselling opportunities from these systems can also be implemented by enabling gamification methods, promotional materials, time-limited events to grasp consumer attention and create brand loyalty. Internal management is also improved — with the presence of a universal, data-driven platform available for restaurateurs and associates, data is stored and seen without the hassle of manual sharing; all users affiliated can view the data (and do as they please according to their roles). Hence, this would contribute to the betterment of consumer-centric operation, automatically creating a bigger room for revenue with less hours for manual maintenance.

To answer this research question, a literature study was conducted on in-store management and operations, taking note of the different user entities and associates involved. Results gathered are then evaluated alongside peers and stakeholders to form requirements related to the efficiency of the system. The solution is then tested to internal users as a prototype flow and underwent two iterations.

SRQ7 — Should Obero adapt a Point of Sales (POS) system for managing transactions?

Obero should adapt a POS system for the long term, as adapting this system enables POS capabilities within one's own ecosystem, such that if Obero wishes to expand (given the availability of resources). However looking at the current scenario from current subscribers, they only require a better management platform, and would prefer a module that enables integration with third-party POS systems.

Answering this question requires literature study of POS and countless iteration sessions with the stakeholders, especially the product owner to discuss the decision of whether if its feasible to build, because POS in itself is more than just managing transactions. Once the research is complete, knowledge is then transferred into features, designed and visualized from mere user stories into visual prototypes. The chosen POS system (order handling and menu item management) is then brought for usability testing, and results will eventually be shown to the owner of Remix to determine its usage. Iteration plays the most when it comes to answering this question.

SRQ8 — What design principles would contribute to better usability of ordering applications?

For ordering application, core design principles that would improve its usability are:

- a. *Simple and intuitive navigation* — Navigation that is easy to follow and does not require too much thinking from the end-users, allowing easy ordering and intuitive completion process.
- b. *Consistent UI elements* — Usage of consistency are a must-have principle and, while it tackles identity crisis and ensures cohesiveness, it may establish a stronger brand identity of the business, and eventually end-users will catch up to that fact.
- c. *Clear visual aid and hierarchy* — Clear informational hierarchy is a must when dealing with interfaces that grow and scale up over time (scalability). Ensuring maximum output of information while filtering and maintaining interface screens to hold out just the right amount for the users can benefit both restaurateurs and consumers: restaurateurs could fetch data only that is currently relevant to them within that scenario, whilst consumers would not be bombarded with so many information all at once, maintaining a good balance between awareness and attraction.
- d. *Minimalism equals efficient inputs* — Ensuring a minimalism approach in converging different layout designs and placement of micro-elements, so that a seamless transition would be much preferred to the users, minimizing their efforts to input information (auto-fills, predictive text, pre-filled input fields, other methodical input fields: dropdowns, checkboxes, etc).

To answer this question, a heuristic evaluation was conducted upon Obero's existing platform and application, identifying weak points in their design system and referencing those weak points with Jakob Nielsen's Usability Heuristic Principles. The results combined with literature study and competitive analysis of CRM systems bear fruit to early design ideas that may mitigate scalability issues and data fitting problems. Trials and errors upon the prototype designs were done based on competitor's design usages, rationalized with the heuristics and design guidelines, and are eventually tested and iterated (both functionality and aesthetics) to vendors and associated stakeholders for final evaluations.

SRQ9 — How can Angular be utilized in making scalable and efficient UIs?

Angular can be utilized effectively in making scalable and efficient UIs through its architecture model and reactive programming environment:

- a. Angular follows a component-based architecture that allows creating modular components that are reusable according to needs, allowing better organization and handling of different design components, as well as easy and tidy changes that are contained per component.
- b. Allowing data synchronisation between interfaces and the backend model (known as Two-Way Data Binding), allowing automatic updates to data changes on both front-end and back-end.
- c. Only loads on-demand components through selective module loadings (also known as lazy loading), reducing loading time and optimizing the speed of the interface, which is perfect for scaled up complex structures.
- d. Angular offers performance optimization techniques to help in reducing application sizes and as a result, improve its load times. Server-side rendering via Angular Universal is also available for improving Search Engine Optimization (SEO) capabilities, which benefits the rate at which interfaces can be rendered.

This question is answered through literature study on Angular, mainly the Angular Udemy crashcourse that was offered by the company allowing easier onboard and familiarisation. Multiple peer review sessions with the development team helped in understanding Obero's development workflow and environment, where the knowledge is then used to redesign and create Obero's website, now using Angular's infrastructure.

Main Research Question

“How can Obero’s Platform be improved on to allow better usability and efficiency for managing restaurateurs & their in-store operations within the foodservice industry?”

After conducting extensive research on target groups and their relationships, performing a competitive analysis on different competitors, evaluating the platform according to usability heuristics, and engaging in iterative sessions with stakeholders and targeted clients, several vital improvements have been identified for Obero’s platform:

a. User-Centered Design (UCD)

Implementing a user-centered approach creates a more intuitive environment tailored to restaurateurs’ specific needs for their in-store operations. By understanding user workflows and incorporating user feedback, the platform can be optimized for usability and efficiency.

b. Centralized Dashboard

Developing a centralized dashboard will provide restaurateurs with a comprehensive overview of critical metrics and vital information, presenting real-time operational data such as sales, inventory, customer feedback, and others, presented in a visually appealing and easily processed format, enabling swift and informed decision-making for users.

c. Modular and Configurable Microservices

Combined with the dashboard, this will allow restaurateurs to customize based on their preferences. This flexibility ensures that the platform can adapt to different establishments within the food service industry, providing tailored solutions for specific and situational needs.

d. Integrations with Other POS Systems

Integrating the platform with POS systems familiar to what restaurateurs have used within their operations will automate data synchronization, eliminating manual data entry and improves their operational efficiency.

e. Scalable Data Visualization

Incorporating data visualization capabilities into the platform will enable restaurateurs to generate detailed reports, visualize trends and gain insights into their operations, empowering data-driven decision-making and helps identifying areas for improvements.

f. Accessible & Responsive Interface

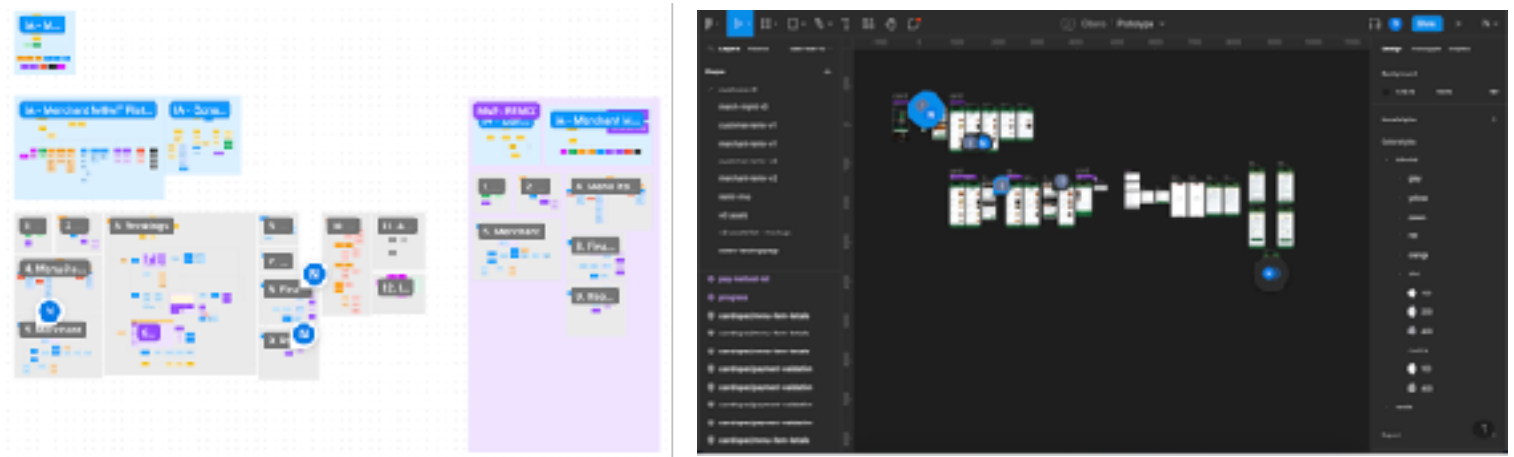
Ensuring accessibility across multiple devices will allow users the flexibility to monitor and manage their operations anywhere, anytime. This accessibility (especially for mobile devices) enhances convenience and productivity.

g. Continuous User Feedback & Iteration Cycles

Establishing a feedback loop with end-users and incorporate inputs throughout the development process to ensure that the platform evolves based on real user needs. Conducting it on regular cycles will enable timely updates and improvements to enhance and address emerging challenges.

By implementing these improvements, Obero's platform can deliver a more user-friendly, efficient and eventually scalable solutions for managing restaurateurs and their in-store operations.

Advisory & Recommendation



The design process including all discussed core features, user stories and fixated MVP structures can be found within Obero's Figma file under ['Main-Figma'], whilst the project timeline and planning materials can be found under ['Project-planning']. The Figma project file contains all iterations of the design process for both customer application and merchant platform (v0, v1, v2), including documented assets in unison with Tailwind-based styling. The design for the new website is also made within Figma, and all is included within ['Prototype']. All remaining deliverables will be contained alongside this document inside a zip file.

Having those resources in mind, the next plausible future steps for Obero is to continue sessions with vendors to create situational plan packages, conducting more market research for different sectors of the food service industry, which allows tailor-made offerings with minimal maintenance back-and-forths with future subscribers. Focus on Remix will be maintained as Client Zero for the new Obero, making iterative changes while utilizing it as an experimental site to conduct iterative user testing (based on agreements with the owner); other modules of Obero's management platform should be further investigated to allow equal feature development and further prioritization, in preparing for scale-up.

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