

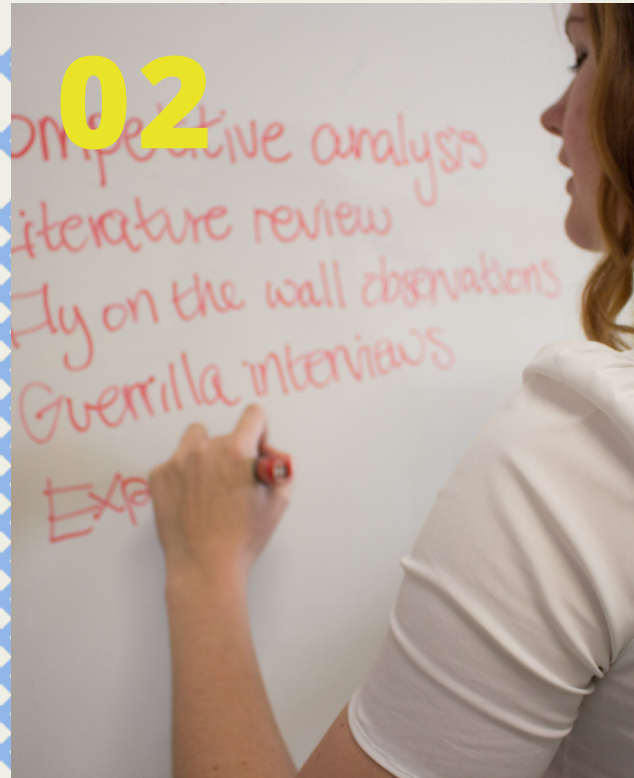


FALL 2017 CAPSTONE REPORT

# TABLE OF CONTENTS



*Introduction*



*Discovery research*



*Prototyping*



*Final concept*





# *Introduction*

**EXECUTIVE SUMMARY**  
**ABOUT THE CLIENT**  
**PROJECT STATEMENT**  
**TIMELINE**





## *Executive summary*

Over the last 10 years, the hotel industry has experienced significant changes. The rise of sharing economy services such as Airbnb and HomeAway have offered travelers an alternative to hotel accommodations, and these options have proven very appealing. At the same time, hotels are beginning to incorporate guest-facing technology and the use of customer data to improve the guest experience, leading to both opportunities and risks.

In this project, we seek to imagine the future of hotel accommodation in a post-Airbnb world, and how that future can be adapted to meet the specific tourism needs that exist in Madeira. In our research, we spoke with current visitors to Madeira and people who we thought could give us insights into these trends—travelers who have eagerly adopted sharing economy service models and new technologies—to learn what appeals most to these travelers and how hotels could adapt to meet those desires. From these two groups of people, we have created traveler personas and journeys to direct our designs.

In order to understand the wide range of successful hotel service models that exist, we visited hotels in Madeira with high TripAdvisor ratings and conducted observations of guest interactions. We also visited hotels in mainland Europe that are successfully experimenting with new modes of service and technologies that support the guest experience. From these experiences, we drew conclusions about both the promises and the pitfalls of emerging services and guest-facing technologies.

Throughout our research, we have aimed to understand the current state of tourism in Madeira and to imagine what tourism on the island might be like in the future. In this report, we present our findings from this research, and our visions for a few possible futures for tourism and accommodation in Madeira.





## *About the client*

In 2016, Pereira & Filhos Investimentos purchased the historic Gorgulho Hotel in the Lido neighborhood of Funchal and began the process of renovation. It is now Tiles Madeira Hotel, a 4-star hotel that combines the Gorgulho's unique facade with an entirely contemporary approach to hospitality.





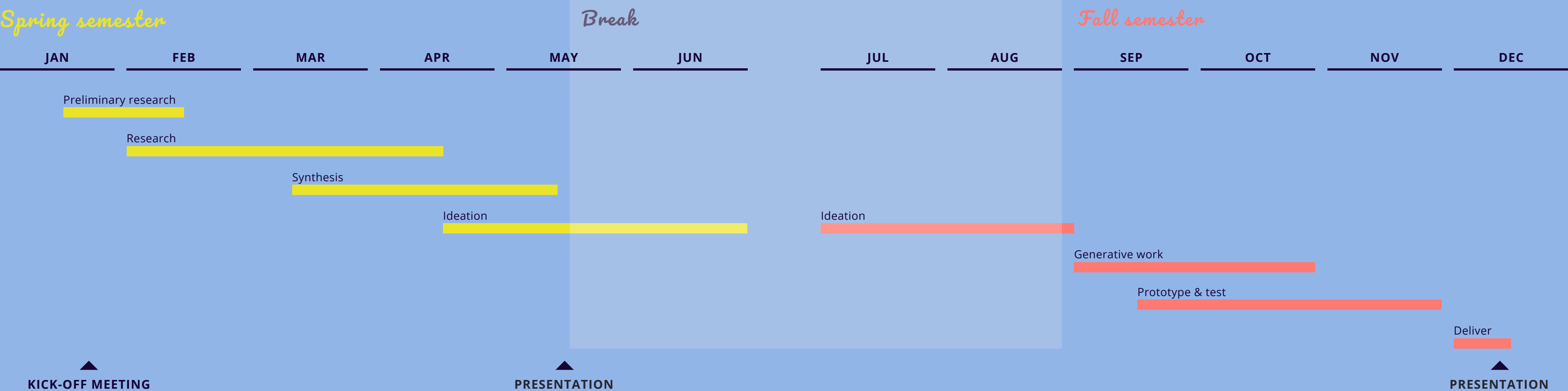
## Project statement

In our brief, our team was asked to introduce interactive technologies to maximize hotel efficiency, improve the guest experience, and maximize hotel revenue. Our proposal is a service that connects Tiles guests to unique local recommendations from Tiles employees, enabling them to explore the island and better connect with their hosts. This service will improve the guest experience by offering the kind of local insight that travelers currently seek from services like Airbnb. It will also allow hotel employees to better connect to and understand hotel guests, and provides ample opportunity for the hotel to form partnerships for cross-selling complementary services.



# Timeline

CAPSTONE IS A TWO-SEMESTER LONG PROJECT BEGINNING IN JANUARY 2017 AND CONCLUDING IN DECEMBER OF THE SAME YEAR.





*Discovery research*

**RESEARCH METHODS**

**TOURISM IN MADEIRA**

**TRENDS IN TECHNOLOGY**

**HOTEL SERVICE INNOVATION**

**THE FUTURE OF TRAVEL**

**OPPORTUNITY AREAS**

**FINAL CONCEPTS**



## Methods



### SECONDARY RESEARCH

Review of tech and literature in hospitality service design, hotel design innovation, and Madeira tourism



### COMPETITOR ANALYSIS

Assessment of online reviews and hotel websites to compare amenities, location, and guest sentiment of hotels in Funchal



### MADEIRA TOURIST INTERVIEWS

Guerrilla interviews with local tourists about their trip planning and accommodation experiences in Madeira



### FLY-ON-THE-WALL OBSERVATIONS

Observation of guests' interactions with staff, technology, and one another within the hotels' public spaces



### TOURISM ACTIVITY INTERVIEWS

In-context interviews with guides and tourists during typical Madeira tourism activities



### EXPERIENCED TRAVELER INTERVIEWS

Interviews with frequent travelers to uncover their preferences and setbacks during all stages of travel



### SERVICE SAFARIS

First-hand immersion in hotels with innovative business models and tech-driven services



### PARTICIPATORY DESIGN WORKSHOP

Workshop centered around research insights with diverse members of the M-ITI community to learn their values while traveling

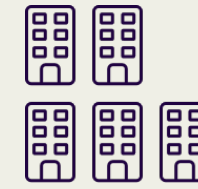
## By the numbers



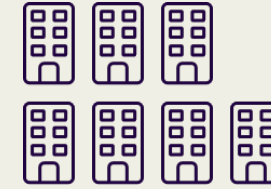
32 interview participants



16 workshop participants



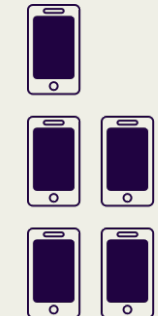
5 fly-on-the-wall sessions



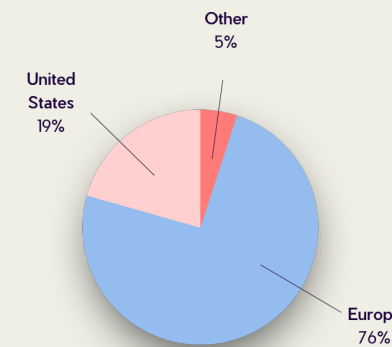
7 service safaris



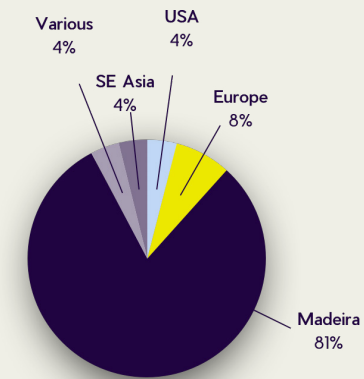
10 academic papers



5 hotel app reviews



participant nationality



participant travel destination





## *Tourism in Madeira*

In order to get a broad look at tourism in Madeira and the needs of travelers on the island, we interviewed a number of tourists on the streets of Funchal and spent a day experiencing activities on the island with them.



## Primary research

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In order to get a broad look at tourism in Madeira and the needs of travelers on the island, we interviewed tourists on the streets of Funchal and each spent day experiencing typical tourism activities on the island. From these first-hand research activities, we learned:

- Madeira is seen as an easy getaway for European visitors, who come primarily for the natural beauty and weather
- Some visitors plan extensively, others play it by ear
- Visitor choose a mix of guided activities and self-guided excursions



## Secondary research

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We also conducted secondary research to learn about the trends in Madeira's Tourism. From this we learned:

- People are drawn to Madeira for outdoor recreation, water sports, and leisurely activities
- July, August, and September are the busiest months
- 77% stay seven nights or longer







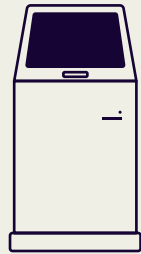
## *Trends in technology*

We conducted service safaris at 12 different hotels in order to better understand the kinds of service and tech innovations that are being used in Madeira and mainland Europe.



## Hotel tech touchpoints

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▼  
CHECK-IN  
CHECK-OUT



▼  
CONTROL  
CUSTOMIZATIONS



▼  
DIGITAL  
CITY GUIDES

## TECH TOUCHPOINT INSIGHTS

We found that the success of these touchpoints was dependent on the usability of the touchpoint itself, which varied greatly. Frequently, these touchpoints did not work as intended, or did not meet guest needs. In these instances, they came across as a “techy” gimmick.

We also found that many hotels now offer guests custom applications that can connect guests to concierge services, allow booking, and offer local tips. However, our experience with these apps was uniformly negative. They frequently supported only non-useful goals (like booking) or did not work at all. We attributed these failures to the high cost of maintenance for custom applications.





## *Hotel service innovation*

As we were conducting our research on tech in hotels, we were also looking for service innovations that improved the guest experience.





## Hotel service innovation

Each hotel we studied had a unique set of service offerings. We grouped innovative services into six categories to explore different opportunity spaces. By taking these into consideration, hotels are better positioned to provide service for guests at different touchpoints based on individual needs and desires.

## SERVICE INSIGHTS

### LOYALTY SYSTEM

By providing exclusive perks such as a point system or lower priced rooms, guests are more inclined to book their stay directly through the hotel. This also allows easy tracking of customer data such as habits, preferences, etc.

### EVENTS & BUSINESS

More space dedicated to event or meeting areas enables additional revenue through conference room rentals and catering services.

### A LA CARTE OFFERINGS

Guests opt to pay for what they want instead of having all amenities included. Additional items include breakfast, on-demand video, etc.

### PUBLIC SPACES

Smaller guest rooms lead to more common area spaces where guests can interact with each other. There is also opportunity to encourage locals to spend time in these areas through service offerings and local events.

### EMPLOYEES AS GUIDES

Employees act as guides in the digital and physical realm to give guests authentic recommendations of what to do in the surrounding areas. Employees are trained as experts in recommendations and feel less of a hierarchy within the staff structure.

### DIGITAL ENHANCEMENTS

Through digital screens in rooms, guests can not only create a personalized in-room experience, but also discover places to visit and things to do within the city.





## *The future of travel*

To supplement our research on visitors to Madeira, we reached out to frequent travelers who represented modern attitudes and values. We found that many of their contributions validated our early findings, and drew valuable insights that would help us flesh out opportunity areas for concept development.





*The future of travel is about information, empathy, and awareness.*

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#### INTERVIEWS WITH EXPERIENCED TRAVELERS

We conducted interviews to explore the entire travel process from planning through execution through reflection. The interviews were intended to be Madeira/island-agnostic, encompassing travel goals and processes more generally.

#### PARTICIPATORY DESIGN WORKSHOP

We embarked on a participatory design sprint to validate our research and begin exploring ideas built on remixed opportunity areas.

#### AUTHENTICITY IS A PRIORITY

While often intangible, authenticity is easy to detect; as one traveler put it, “the details need to match up.”

#### SMALL ENCOUNTERS ARE DELIGHTFUL

Casual, serendipitous run-ins feel personal and memorable, and are often the most fondly-remembered part of a trip.

#### GUESTS WANT HELP WITH LOGISTICS

Although travelers vary in how much they plan ahead, most arrive with some idea of what they want to do, but are eager for help in figuring out how to do these things.

#### INFORMATION YOU CAN TRUST COMES FROM REAL PEOPLE

Travelers rely on the contextual information around a recommendation—stories, photographs, anecdotal tidbits—to assess whether a given activity is right for them.

### INSIGHTS



Travelers want the independence that comes with feeling informed.



Knowing the history and idiosyncratic details of a place enhances enjoyment.



Travelers seek out locations where they will encounter locals.



Travelers often feel skeptical of faceless reviews, but personal recommendations are strong motivators.



Minimal planning is done ahead of time; most embark on their trips with only a rough idea of what they want to do and see.





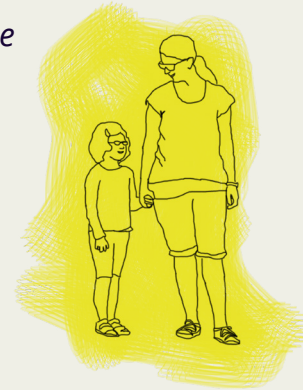
## *Opportunity areas*

During our synthesis process, we began to identify what we see as opportunities within the hospitality industry. These areas focus on service-level offerings, and they capture distinct ways to improve the guest experience.



## Opportunity areas

*"We picked our hotel because it was child-friendly."*



### SUPPORTING THE NEEDS OF FAMILIES WITH CHILDREN

**Children are a deciding factor in their parents' travel plans, in choosing destinations, activities, and accommodations.**

Hotels that supply family-friendly activities and spaces where children can entertain themselves will appeal significantly more to parents than hotels that lack those amenities.

*"I don't want something canned."*



### CREATING PERSONALIZED GUEST EXPERIENCES

**Travelers seek out recommendations to find the experiences that best suit their interests, but not all recommendations are seen as equal.**

**There's opportunity for hotels to offer recommendations to improve the guest experience, but keeping those recommendations authentic will be tricky.**

*"I want to see new things and step outside my habits."*



### FEELING LIKE A LOCAL

**Many travelers value autonomy, but they also want to feel that they have the information and support they need.**

Travelers appreciate feeling a sense of belonging, even when visiting a different country or culture.

*"I love the small encounters you have when you stay at a hotel."*



### CONNECTING VISITORS TO LOCALS AND OTHER VISITORS

**Travelers enjoy meeting locals, both through service encounters and chance meetings.**

Unexpected encounters are often the best things about a trip, and hotels can design opportunities for people to meet.

*"If I go to a hotel for an event, I'm more likely to recommend it."*



### CRAFTING INVITING PUBLIC SPACES AND EVENTS

**Younger hotel brands are building event and business space rentals to create new sources of revenue and advertise their hotels.**

Building appealing public spaces brings guests out into the open and locals into the hotel, creating a vibrant environment where people can meet.





## *Final concepts*

After identifying our opportunity areas, we zeroed in on two concepts that really excited us: connecting guests to unique activities and featuring employees as locals and experts. We first explored the two concepts separately, imaging how each of them could deliver value for guests and employees. Then, when we entered the prototyping phase of the project, we began experimenting with ways to combine these two concepts in one final design.



## Connecting guests to unique activities

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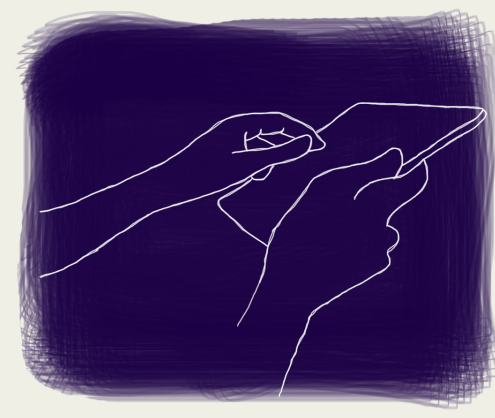
We propose that the hotel help guests find and select activities that are local, off-the-beaten-path, and authentic. These activities could be a mix of unique offerings only available through the hotel and partnerships with small-scale service providers.



Two guests just arrived in Madeira. They are sunbathing on their hotel balcony and thinking of activities they want to do.



They check out the in-room iPad, which offers a variety of activities. They are interested in an authentic local experience, so they select the appropriate category.



They decide to book an art workshop for tomorrow at the local quinta. With one click, the application seamlessly charges their room.

## Employees as locals and experts

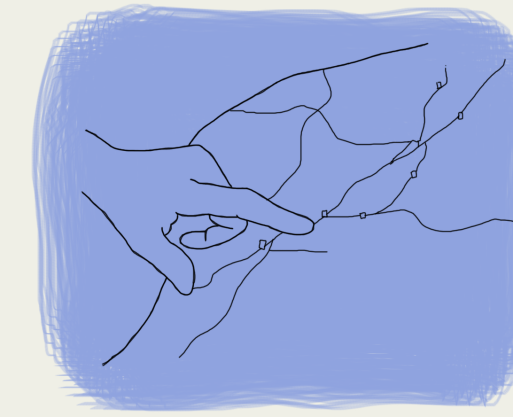
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Here, we imagined featuring the hotel employees' local expertise to help guests learn about and feel connected to Madeira. Through these personal connections, we hope to provide a better guest experience while also empowering employees and increasing job satisfaction. We imagined three ways this could work.



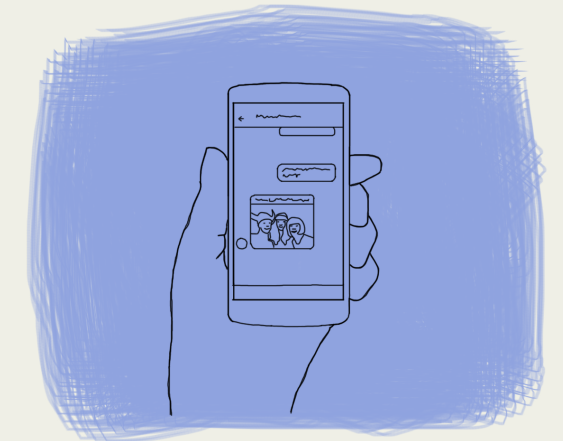
### VIDEO

A prospective guest browses the hotel website and encounters brief, friendly videos introducing the staff as they share their favorite spots on the island, essential Portuguese phrases, etc. When he arrives at the hotel, the guest recognizes some of the faces, enhancing his sense of familiarity and belonging.



### MAP

A guest approaches the front desk to ask the concierge for recommendations. Together they discuss the concierge's favorite spots on the island over a map, which the concierge proceeds to annotate with directions and tips. The guest is pleased to get a local perspective to help her navigate the island on her own.



### CHAT

While out exploring Madeira, a guest has a few questions about where to get drinks and how much to tip waiters. She pulls out her phone and messages a staff member from the hotel. Within minutes she gets a response to her questions, with all the ease of texting a friend.



Prototyping

TWO USERS, TWO SIDES  
LOW FIDELITY PROTOTYPE  
STAFF CO-CREATION  
MEDIUM FIDELITY PROTOTYPE

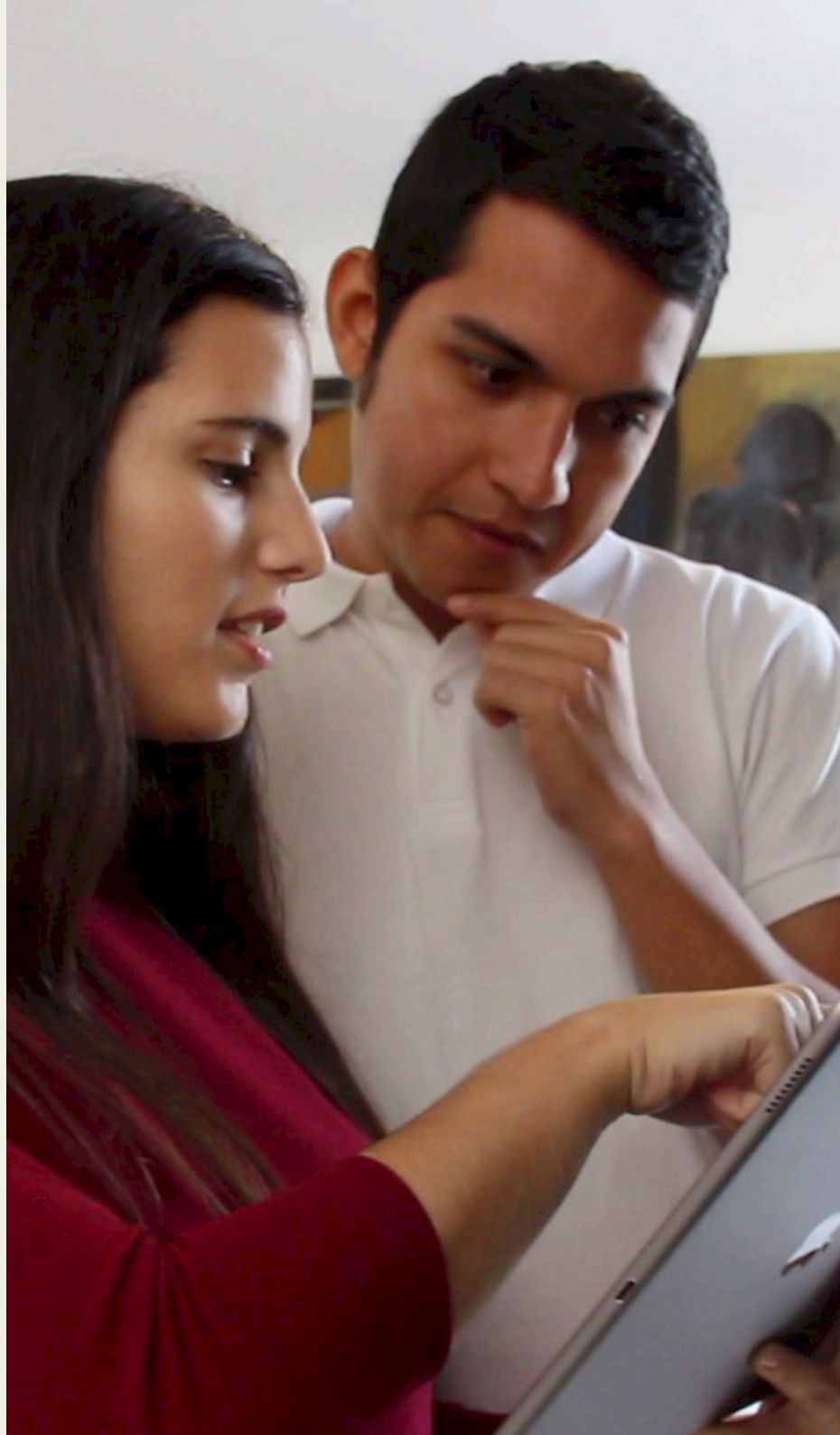




## *Two users, two sides*

The goal of our system is to connect hotel guests with hotel employees, and so we knew from the start that our system would need two sides: one side that hotel guests interact with when learning about Madeira and finding recommendations, and one side that hotel employees use to add and edit their content. Throughout the design and prototyping phase of our project, we aimed to develop the two sides in tandem, treating both groups of users as crucial contributors.





## Guests

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As the end users of our system, hotel guests will likely only encounter our system a handful of times during their trips. That gives the system very little time to show its value, and so early on we focused on testing a rough prototype with travelers to see which functions were most appealing to them. We then started iterating on our design, working on issues like onboarding, usability, and discoverability so that our system could immediately be useful to hotel guests with only a few days to spend here.

## Hotel staff

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Hotel staff are the primary content creators of our system, but they also have jobs to do. In designing this side of the system, we first wanted to make sure that staff wanted to participate. Our earliest research focused on ensuring that the kinds of content we asked them for were things they were comfortable sharing. Then, we wanted to make it fun and easy, so that participating in our system would be one of the perks of the job. Finally, we wanted to give staff as much control over their content as possible to enhance the feelings of ownership and pride that we want our system to support.







## Low fidelity prototype

As we began the design phase of our project, we first wanted assess how travelers responded to different kinds of recommendations in the context of a system like ours. We created a rough wireframe of how the system might look, allowing users to choose among staff-recommended activities, personalized recommendations, context-aware recommendations, and recommendations drawn from other guests' experiences.





## Goals

With our first prototype, we aimed to discover how travelers approached planning, what kinds of recommendations they were drawn to, and how they assessed and chose among a variety of recommendations.

## Methods

We spoke to 15 participants from ages 22-55 about their travel experiences, asking each to use our prototype and think aloud, followed by interview questions.

## FINDINGS



### Travelers want to see the map

“First I’d make a list of everything that looks interesting, then I’d see where everything is so I can see what I can do in a day.”



### Recommendations from local staff members are highly appealing

“Oh, I bet she would know some really good places to eat. I never trust TripAdvisor for food recommendations.”



### Giving users greater control over their experience may help to build trust

“I think I would rather set my own preferences so that I see the stuff I really want to see, not what the system wants me to see.”



### We can help travelers assess recommendations by providing narrative details and contextual information about the recommender

“When I look online, I make sure to read blog posts and look at pictures of the people doing it. That way I can figure out if we’re like-minded.”

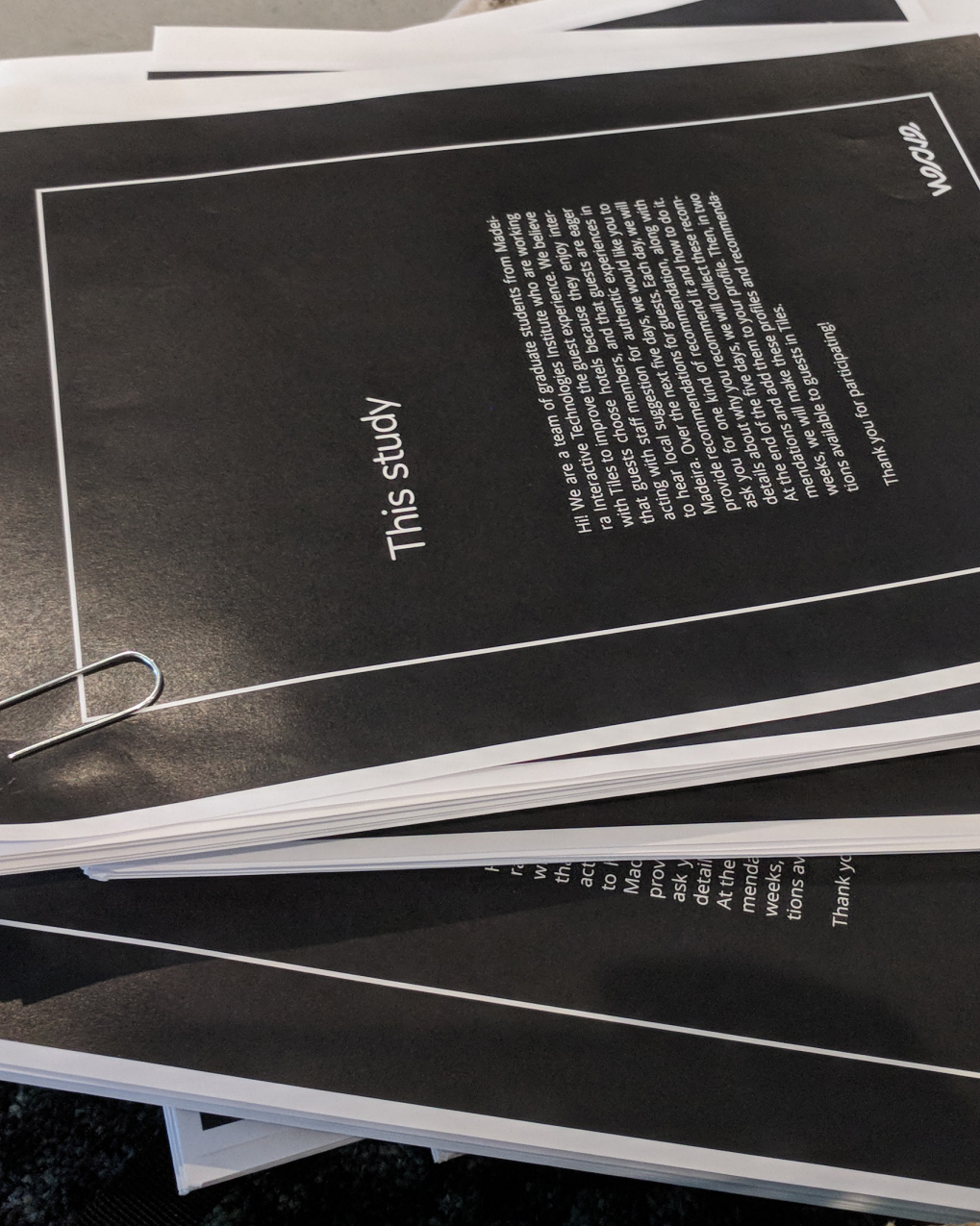




## Co-creation with staff

Co-creation is a design strategy that brings different parties together (for instance, a company and a group of customers), in order to jointly produce a mutually valued outcome. In our project, we knew that whatever we designed would need to work for staff, fitting into both their work lives and their personal desires for interacting with guests. To learn what would work best for hotel staff, we conducted a series of workshops, each intended to help us learn from the staff how this service could work for them.





## Approach



- 1 **At the beginning of the semester, we met with staff and conducted interviews to gauge their interest in sharing recommendations.** We found that guest-facing staff members genuinely enjoyed sharing and connecting with guests and were interested in tools that could make this kind of connection easier.



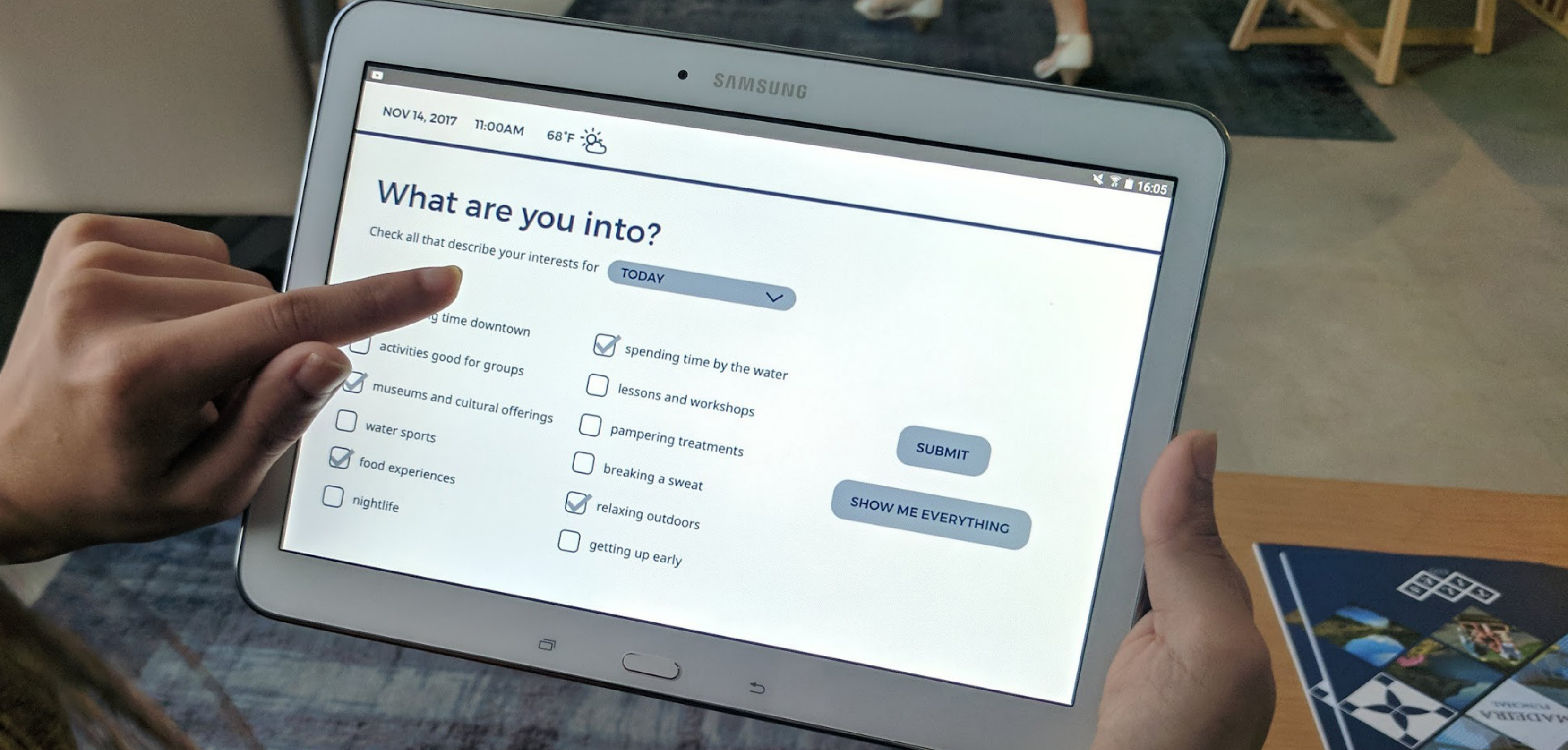
- 2 **We then ran a co-design session with three staff members to find out what they feel comfortable sharing with guests.** We found that the hotel staff were eager to collaborate with one another, and that the staff felt comfortable sharing the kind of information that they believed guests most wanted to know. We also found out that Kelly, one of the reception staff, had been a very fat baby.



- 3 **Finally, we asked staff members to supply recommendations and create profile content over a five-day period in the hotel.** This served as a paper prototype for the onboarding process with our system. At the end, we were blown away by the quality of the recommendations and the eagerness of staff members to provide their own pictures and correct their content.







## Mid fidelity prototype

Now that we had engaging content provided by the staff members, we wanted to see how real users would engage with a higher-fidelity prototype in the context of the hotel. We created two versions of the prototype, both with polished screens but limited functionality, and proceeded to test them with real hotel guests over a three-day period on-site at Tiles Madeira Hotel.





## Goals

In testing two versions of the prototype, we hoped to find out what modes of interaction guests were most drawn to—a map-based interaction, a category-based interaction, or an interaction that focused on staff member profiles. We also wanted to assess the overall strength of the system, any holes or blind spots, and outstanding user needs and usability issues.

## Methods

We held “office hours” in the hotel during the morning breakfast rush and in the afternoon hours when guest return to the hotel. During these times, a Weave team member would set up in either the lobby or the breakfast area and offer guests the opportunity to try the prototype. We conducted think-aloud testing with a total of 7 guests over the 3-day period. These sessions lasted anywhere from 5-45 minutes, and the average session length was 22.5 minutes.

After the test was completed, we held debrief interviews with staff members to get their thoughts on the prototype and to learn about their experience in having their content featured.

## GUEST FINDINGS

**Overall, users derived a lot of value from the prototype**

“You just inspired my day! Thanks a lot!”

**All three forms of content—host profiles, a map-based interface, and a category-based interface—were useful to guests**

Guest seemed to prefer exploring the profiles and categories when looking for something to do, but preferred the map-based interface when they already had an idea of what they wanted.

**Some users were skeptical of hotel recommendations, but were won over by the personal voices of the staff members**

“You can see that it’s honest and that it’s a personal opinion, not the hotel’s opinion.”

**It encouraged staff and guest interactions**

After testing, one guest said to a reception staff member, “I didn’t know you collected sugar packets!” which led to a short conversation.

## STAFF INSIGHTS

**Staff members who observed guests using the system thought it worked really well**

As one staff member said, “sometimes I spend an hour going through options with people. Now they can see what I recommend and we can have a nice conversation about what they’re interested in.”

**Facilitating ownership is hugely important for staff satisfaction**

After reviewing their content, several staff members had detailed corrections and additions they wanted to make, suggesting a strong desire to shape how their content is presented.

**The role of the staff member in the hotel influences how easy it is for them to add content**

Reception staff, for instance, had more time than restaurant staff to dedicate to creating content.

**Staff members would love if sharing with guests were two-way street**

One staff member saw value in guests filling out personal profiles, too.





*Final concept*

INTRODUCING LENDA

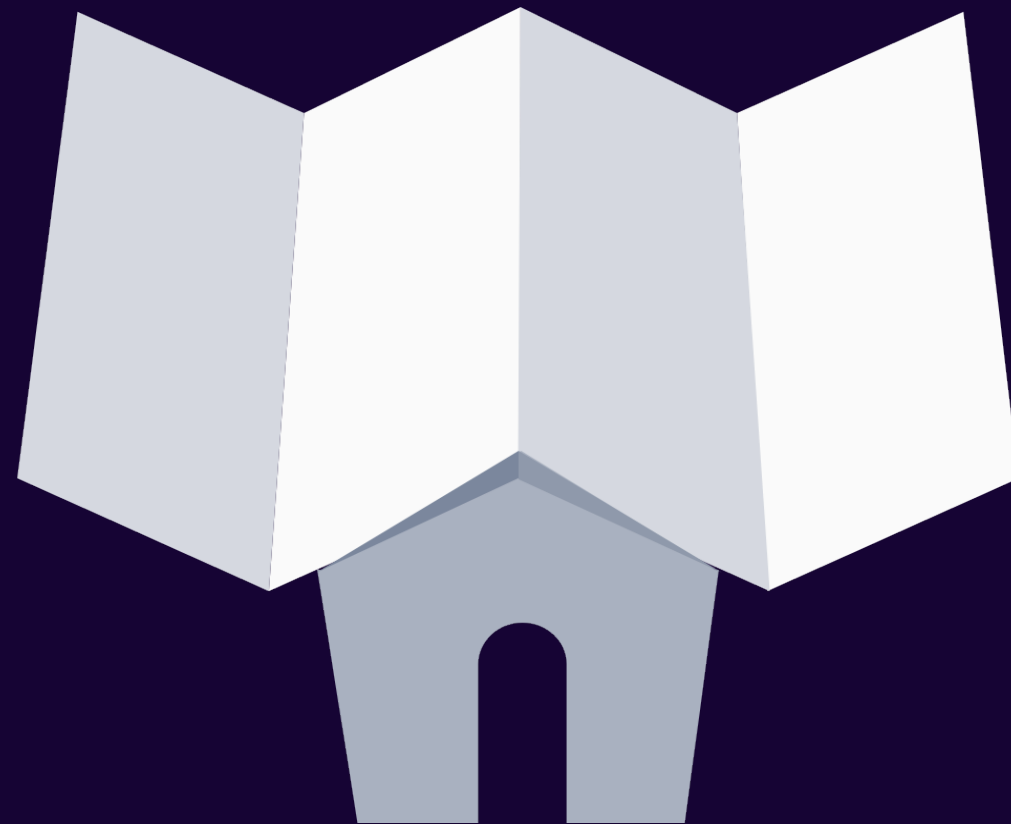
LEND A IN ACTION

HOW IT WORKS

SNEAK PEEK

NEXT STEPS





LEND A

## Introducing Lenda

Lenda is a service that connects hotel guests to local recommendations from hotel employees through a tablet and desktop application. Guests can browse and save recommendations within the system, and then take those recommendations with them on the go. They can also use the system as a jumping off point for conversations with hotel staff about recommendations, common interests, or unique aspects of Madeira.

Its unique value proposition is that it allows guests to learn what locals genuinely love and recommend about their home while simultaneously elevating employees by showcasing their expertise as locals. By sharing knowledge, Lenda allows hotel employees and guests to bond and connect, providing the kind of cross-cultural exchange that motivates many travelers in their choice of destination and accommodation.

We've identified four principles crucial to Lenda's success:

- 1. Place genuine value on employees' opinions.** This means setting aside time for employees to contribute to the system, and encouraging the conversations with guests that will arise as a result. Contributing to Lenda should never be off-the-clock, but should be a fun part of working at the hotel.
- 2. Encourage collaboration.** From our earliest tests, we noticed that contributors to the system enjoyed talking about their recommendations, comparing them, and drawing inspiration from one another. As Lenda is added to the hotel's routines, it is crucial that employees are encouraged to collaborate as they add to the system.
- 3. Enable pride of ownership.** Contributors to the system should feel that their content is truly their own, whether it's pictures, descriptions, or the recommendations themselves. This means that they can edit their content, and that they are given as much freedom as possible in its creation.
- 4. Avoid commodification of contributions.** We believe that tying contributions to direct remuneration (bonuses, raises, etc), will reduce participation to paid labor and reduce the inherent reward in sharing one's recommendations. This could lead to less participation and lower-quality recommendations, in addition to minimizing the intangible benefits to employees.





## *Lenda in action*

In designing Lenda, we wanted to make sure that we were not only meeting the experience needs of our two user groups, but that we were providing opportunities for experiences that they otherwise would not have had. For guests, this comes in the form of recommendations for activities that they otherwise would not have discovered. For staff, this comes in being able to share their own discoveries with others. However, beyond those two things, we wanted Lenda to support personal connection between guests and staff, with guests seeking out and following up with staff members who wrote the recommendations they had used. It's these conversations and connections that we see as the ultimate metric of Lenda's success.

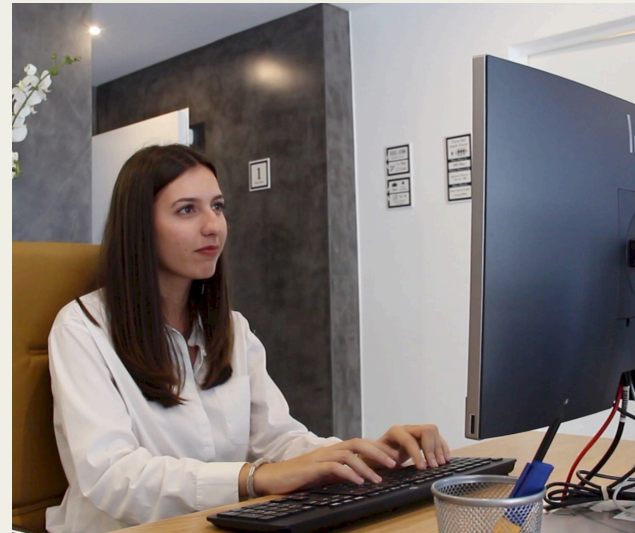


## Lenda in action

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Alexandra, a front desk staff member at Tiles Madeira Hotel is a local Madeiran who enjoys hiking and the breathtaking natural beauty of Madeira.



She uses Lenda to add a recommendation for a hike that she did that morning before work to the employee-managed database.



Two travelers are unsure of what to do with their day. They have looked through brochures for outdoor activities, but they feel that everything is too “canned” for their tastes.



They see a tablet in the lobby. On the tablet they find a multitude of local recommendations from staff at Tiles Madeira Hotel. They find a hike under Alexandra’s profile and are interested in trying it out.



They see her working at the front desk and go to her with a few questions about getting there, the difficulty of the hike, and what they should bring.



They go on the hike and are happy to find this gem of a lookout that they would not have otherwise found.



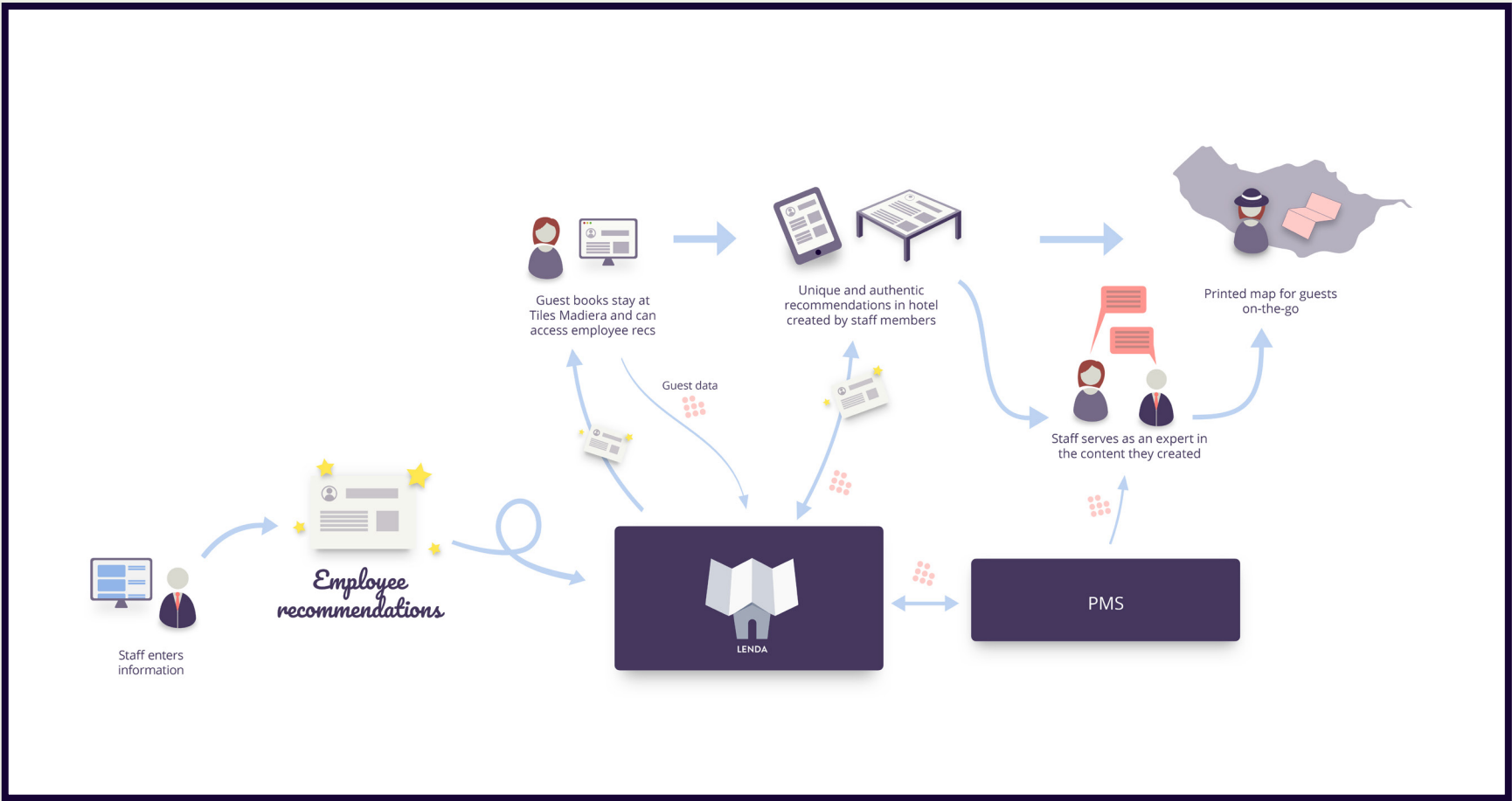


## *How it works*

Because Lenda is a system with two sides, we've had to think through the touchpoints for both sets of users and their experiences. We've also made sure to consider how Lenda connects to the other tech touchpoints in the hotel, including the PMS and the booking system. Because Lenda cannot function as a stand-alone application, it's crucial that we consider the entire experience and ecosystem in which it will exist to ensure a seamless and useful experience.

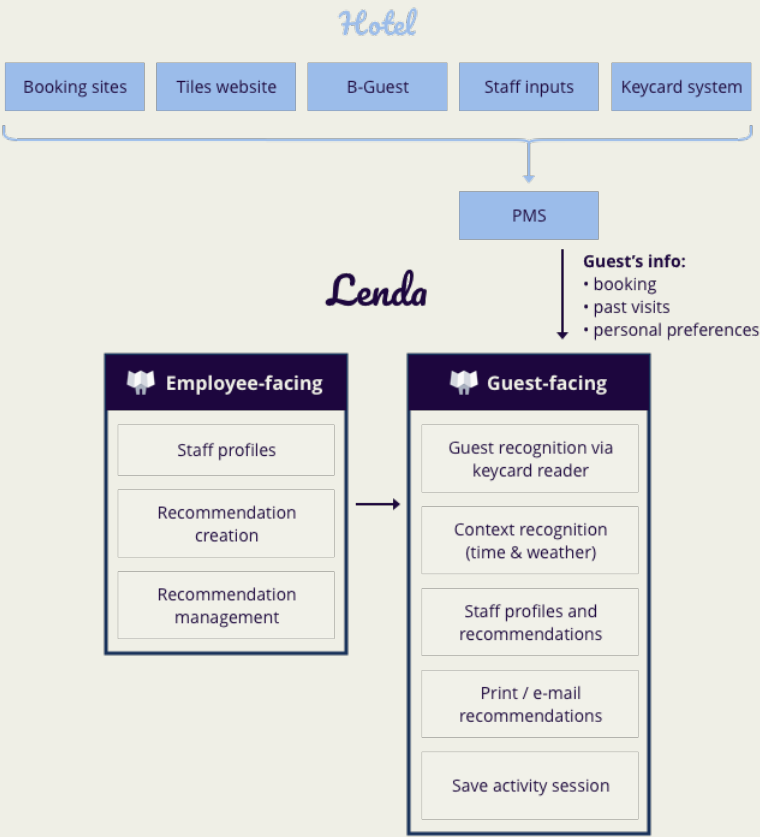


# How it works



# System architecture

Lenda has two components: an employee-facing system and a guest-facing system. Employees must initially create content to support the guest-facing application. Once guests book a stay and checks-in to the hotel, the system collects guests' data from the PMS in order to provide guests a personalized experience through the on-site installation.







## *Sneak peek*

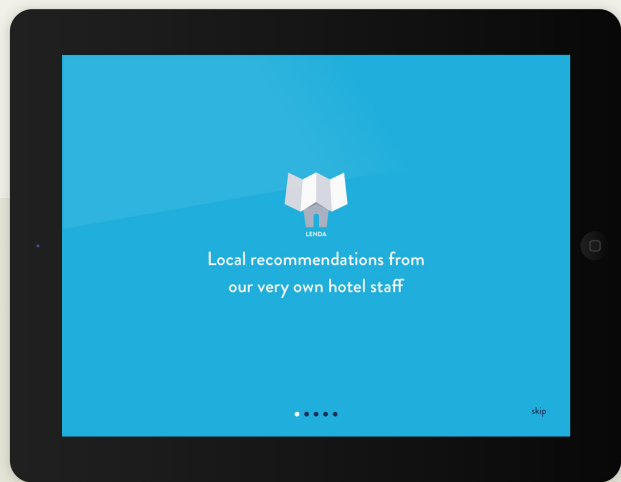
And now, here are few of the key screens that support Lenda's most important features. For guests, we've focused on the best ways to help organize recommendations to make them usable and engaging for visitors. For staff, we have focused largely on the practical activities of creating profiles and recommendations, but also wanted to make sure we supported collaboration between staff members and gave each staff member a strong sense of control over their own content.



## Guest-facing Prototype

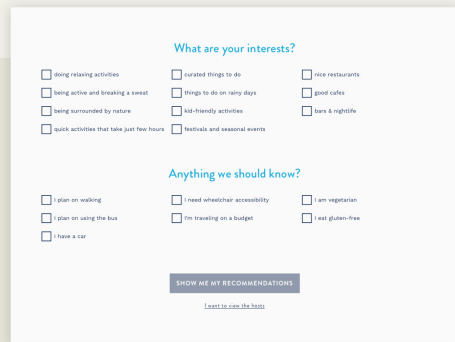


- tablet application (or a kiosk installation) in the hotel common space
- web accessible from the hotel website



### Overview

get a brief intro to the application and its features



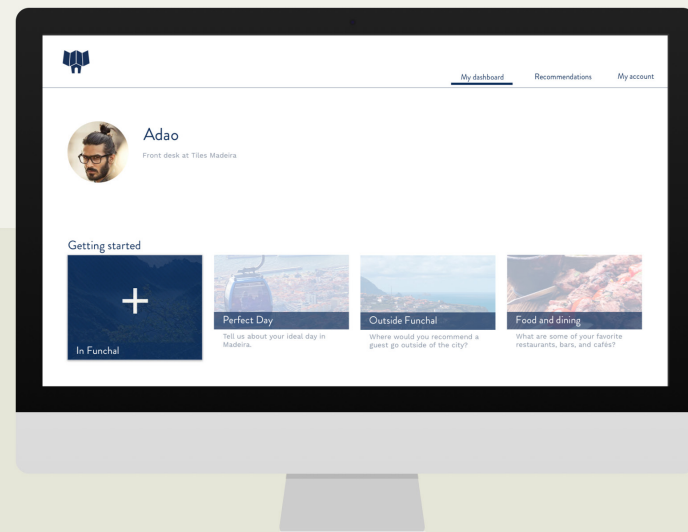
### Personalization

select preferences for personalized recommendations

## Staff-facing Prototype

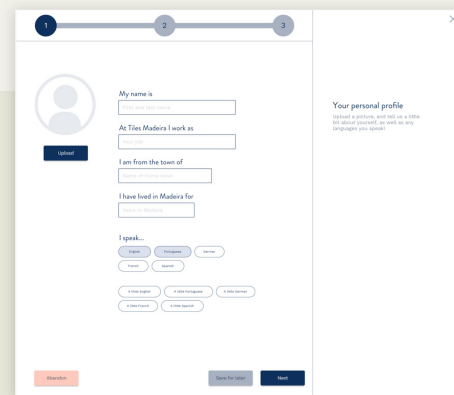


- web application



### My Dashboard

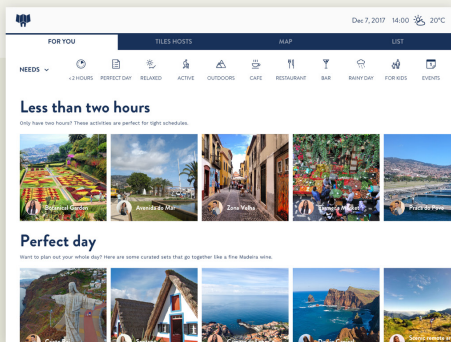
get started smoothly with step-by-step onboarding instructions



### Create a Profile

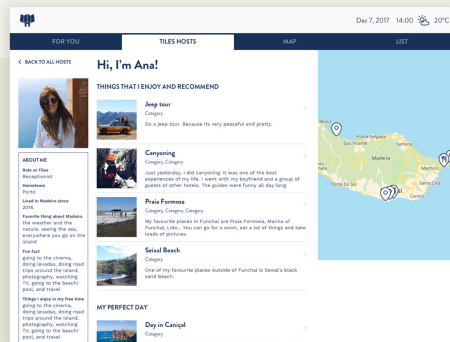
make a personal host profile using a template

## RECOMMENDATIONS



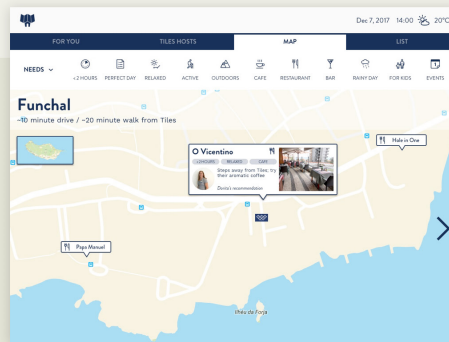
### For You

explore recommendations by categories and needs



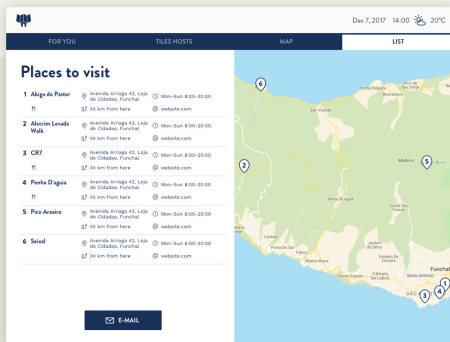
### Tiles Hosts

get to know the hosts and see recs based on their interests



### Map

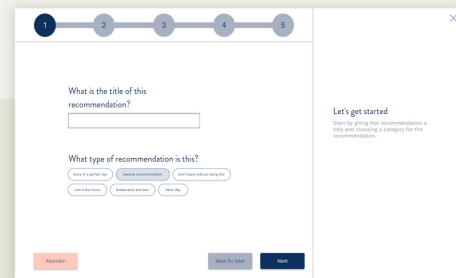
browse recommendations by area to help plan logistics accordingly



### List

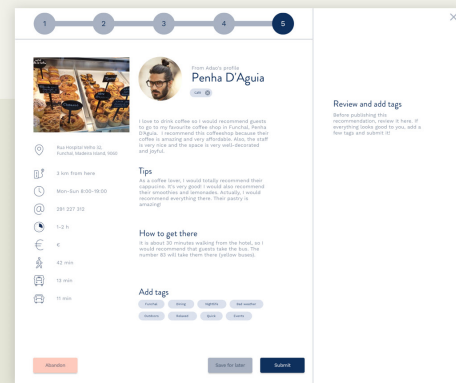
make a list of selected activities and print or e-mail it for on-the-go

## RECOMMENDATIONS



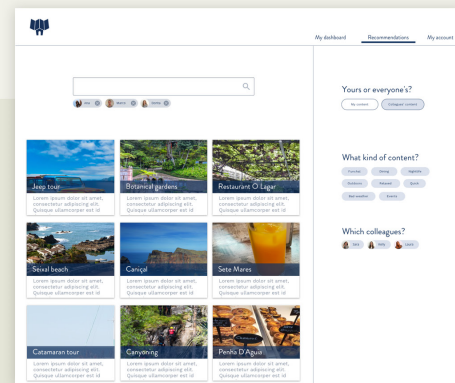
### Create Recommendations

follow step-by-step to create quality recommendations with rich narratives



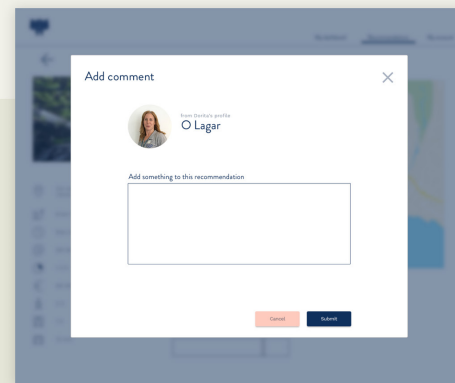
### Take Ownership

customize with tips, pictures, and more to make it genuine and personal



### Search

browse all to easily add & edit to existing recommendations



### Collaborate

piggyback on to colleague's recommendations





## *Risk and reward*

Like all new ventures, Lenda offers several opportunities for expansion and financial growth. Here, we share our vision of Lenda's business applications, as well as an analysis of the strengths, weaknesses, opportunities, and threats within this business model.



# Business model

We've defined two different ways that Lenda brings value to its users. The first is as a service for hotels to integrate Lenda into their system and leverage hotel employees to enrich their service. The second part is the guest-facing application that enables travelers to discover local recommendations that employees have created. These aspects work together to provide travelers a unique and authentic experience while encouraging employee involvement and strengthening the service value of the hotel business.



# SWOT analysis

We've evaluated the service by identifying its internal strengths and weaknesses, as well as its external opportunities and threats, in order to define the ideal environment for Lenda to function as a successful service.







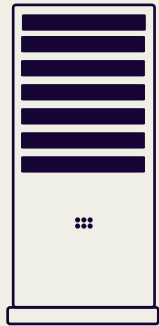
## *Next steps*

In order to make Lenda a reality, we envision three main areas of work: technical development, business development, and additional feature design. Of these three, technical development will be necessary to bring Lenda to life, taking it from an interactive prototype to a fully-working system. In addition to its underlying experiential benefits, business development will allow Lenda to make money for the hotel directly. Finally, additional feature design will allow for the exploration of features that our team thought would be useful, but that were not central enough to the main value proposition to include in this initial prototype.



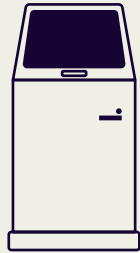
Tech development

1



▼  
BACKEND  
DEVELOPMENT

2



▼  
PHYSICAL  
IN-HOTEL  
EXPERIENCE

3



▼  
PORTABLE  
DIGITAL  
EXPERIENCE

BACKEND DEVELOPMENT

The first step to making Lenda a reality is to fully develop the system as a web application that hooks into the hotel's PMS system. This could be done through APIs or through collaboration with other services.

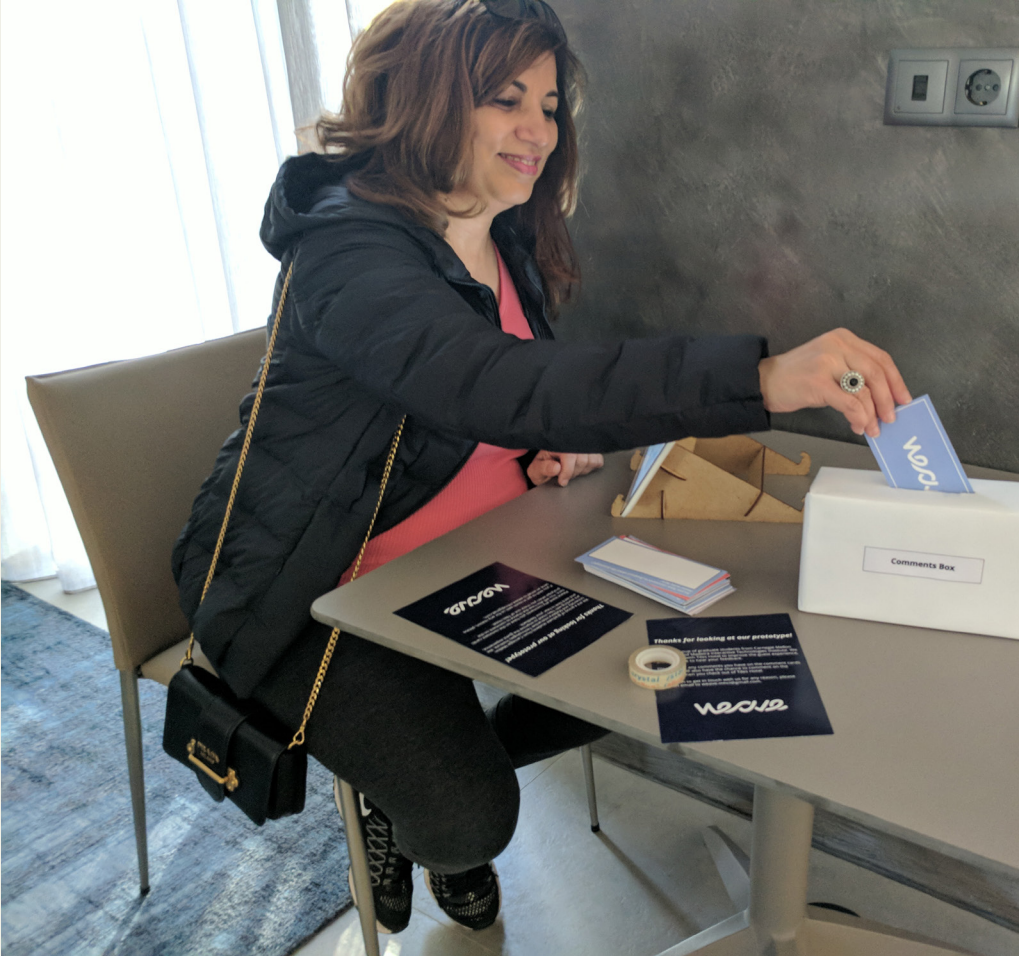
PHYSICAL IN-HOTEL EXPERIENCE

Next, the system would be placed in the hotel's public spaces. This could be on tablets, kiosks, or other custom installations.

PORTABLE DIGITAL EXPERIENCE

Finally, the application could also live on the hotel's website, which would require integration with the existing site.





## Business development

### GUIDING PRINCIPLE

All recommendations should be authentic. This means that the staff member who created the recommendation should have genuinely enjoyed that activity and feel eager to share it with guests. To support this, it will be important to prevent the implied pressure to positively review activities that could generate venue for the hotel.

## TYPES OF PARTNERSHIPS

- The simplest type of partnership would allow the hotel to collect a set percentage or amount of any bookings made through the hotel. These could be arranged through the top-down or bottom-up approaches.
- In addition to simple cross-selling, the hotel could partner with particularly successful service providers (those whose activities guests have reviewed positively) to provide customer offerings with the hotel that allow for profit-sharing. Think “A tour of Madeira’s backyard vineyards” or the like.
- Finally, there is ample opportunity for cross-promotion. For example, a local blogger or promoter could agree to contribute content to the system and agree to mention Tiles on their blog.

## POSSIBLE APPROACHES

Partnerships can be top-down or bottom-up.

1. In the top-down approach, the hotel would pursue new partnerships and staff would then try out the activity to see if it was something they would recommend.
2. For the bottom-up approach, the hotel could reach out to a business that a staff member had reviewed positively to see if that business would be interested in a partnership.



## Feature design

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During the prototyping and design phase of this project, we've followed the tenants of lean design. That means that we have prioritized getting MVP versions of our ideas in front of users to test their usability and effectiveness. It also means that there are a handful of features that we think are really promising, but that did not make it into this round of design. On the right we have three of the features that we would be most excited to see developed and tested.



### GUEST INPUT

Throughout our prototyping process, we've been interested in developing ways for guests to add comments and reviews. Staff members also expressed interest in being able to see guest information in the form of profiles, which could be layered onto the CMS.



### FEATURED LOCALS

While we believe that staff recommendations should remain the backbone of the system, there are intriguing possibilities for partnering with local bloggers, artists, or others people of interest to create compelling content. This also presents possibilities for new business partnerships.



### CONTEXT-AWARE CAPABILITIES

Finally, we're intrigued by the potential to offer timely and personalized recommendations based on knowing the guest's personal context. If a guest slept poorly, for example, we could suggest low-energy recommendations.





## The team

Weave is composed of five Masters students in the joint Human-Computer Interaction program offered by Carnegie Mellon University and the University of Madeira.

### CATHERINE CHIODO

Catherine holds an MFA in writing and worked in environmental consulting. She likes hotel rooms that are as quiet as space.

### SARA STALLA

Sara holds a BA in film and worked in content strategy and social media product development. She likes hotels with towel warmers.

### MIKI NOBUMORI

Miki holds a BA in Computing and the Arts and worked in the tech industry doing UI/UX design. She likes hotel rooms with good coffee.

### MIKE HENDERSON

Mike holds a BS in Mechanical Engineering and worked in the medical device and 3D printing industries. He likes hotels with good views.

### TRISHA SURI

Trisha holds a BS in Business Management and Marketing and has experience working in tech in SF. She likes hotels with fancy bathtubs.



Carnegie  
Mellon  
University



Photography courtesy Tiago Aguiar & Henrique James

