

DEVELOPING A USER EXPERIENCE AND DESIGN SYSTEM FOR WHERETRIP.COM



Graduation Report
Douwe de Vries

Chair
David Keyson

Company Mentor
Wikaas Dihalu

Mentor
Eva Haagsman

wheretrip

TU Delft
Delft University of
Technology

Contents



Glossary	4
Executive Summary	6
Introduction	8
Process	10

Phase 1: ANALYSIS

The Product	16
Industry Best Practices	24
Company Vision	32
Assumptions	34
First User Test	36
Redesign Brief	42

Phase 2: IDEATION

UX Concepts	56
Aesthetic Concepts	66
Concepts User Test	76
Prototype	82
Concept	82

Phase 3: PRODUCTION

Building, Testing & Iterating	94
Final Test	100
Design System	108
Recommendations	116
Evaluation	118
Conclusion	120
References	122
Acknowledgements	123
Appendix	124

Glossary



Aesthetics: The visual appearance of a product.

Aesthetic Concepts: Sometimes referred to as themes, mock-ups of the styling of a product with out to much of focus on UX.

Atomic Design: A system for dividing parts of a UI, I prefer to use the Atomic naming scheme as I find the names to be more semantic towards the scale of the parts. Using Atomic names also prevents clashing names with developers of WhereTrip (for example they already have a definition of a component that does not fit molecules). What follows are the Atomic names with their usual name and their descriptions.

Nuclides: Nuclides are the smallest components in the system. They are invisible in the sense that you can not point them out on the screen, such as color or spacing.

Atoms (Elements): Atoms are the very basic components of the system. Like different kinds of typography, buttons, input fields, imagery, and icons.

Molecules (Components): Molecules are the more complex components and are often built from multiple atoms, like a search form (made from a label with an input and a button).

Organisms (Regions): Organisms are a step higher than molecules they represent a big section of a page like a top bar or a menu.

Templates (Layouts): A combination of organisms that form the generic layout of a page with no content (wireframe).

Pages: Specific instances of a template filled with real content.

Parts, Components or Elements: In the context of this report all of these mean the same thing; any part of the UI in any of the above categories.

Back-end: The part of a digital product that invisible to the user (database, algorithms, etc.).

Brand Identity: A set of guidelines of how a business presents itself, mostly in terms of visible elements.

Company Principles: Design/Interaction qualities that describe the intended user experience.

Component Library: A component library is a collection of reusable parts, that can be assembled to build any number of digital products.

Concept Prototype: A static set of mock-up screens that combine Aesthetics and UX, to be made into a working prototype.

CSS: Cascading Style Sheets, is the language that provides styling for HTML pages.

Design System: Design systems are a tool to help ensure scalability and consistency of design throughout a company.

Front-end: The visible part of a digital product.

HTML: Hyper Text Markup Language, This is the primary language in which all websites are written. It only handles content, so no styling or interactions.

JS: JavaScript a scripting language that makes it possible to add interactivity to web pages.

Micro Interactions: Small and short animation to communicate an action towards a user.

React: A front-end framework that allows for the dynamical creation of interactive HTML pages. This makes it easier to retrieve and show data from a server, and create single page applications.

Refactoring: The rewriting of code to be more efficient and better readable.

SASS: Is a pre-processor for CSS that makes it easier to write, by adding variables, functions and nested styles to CSS.

Screen Estate: The amount of space a device has to display information.

Trip themes: The type of trip a customer of WhereTrip is searching for, such as City trip, Sun trip, Ski trip, etc. Not the be confused with the aesthetic concepts/themes

User Experience (UX): How users perceive a product, aesthetics can be a part of the UX, but in this report, it is often treated as a separate entity. UX mostly in this report mostly is about the flow, writing style, interactions etc. and the feelings that are invoked.

User Interface (UI): When the term UI is mentioned in this report it refers to the actual visual presentation of a website or app (color, typography, spacing, layout, motion, etc). This is part of a bigger whole that is the User Experience.

User Test: A session in which a participant (user) tests the usability of a prototype or product.

UX Concepts: Wireframe prototypes that only focus on flow and interaction.

Executive Summary

The company:

WhereTrip.com is a search engine for trips that cross-references flight and accommodation prices from numerous sources to provide their customers with great deals. What makes them unique is their approach in searching for these trips; instead of a destination, the customer chooses a theme (such as city, beach, ski, etc.) and a budget, and gets a list of favorable results, some of which the users might not have thought of.



The project:

The original website was built without considering user experience (UX), and the company was lacking a brand identity. All the pages had a different look and feel. This project aims to rectify this by:

- Defining the intended user experience
- Developing behavioral patterns
- Creating the basis of a brand identity
- Documenting guidelines for future designs

Analysis:

To define the intended user experience the current product, the company, its competitors, and the user group was analyzed using a variety of methods. Four principles (that describe the desired UX and aesthetics) were defined: Fluent, Adventurous, Clear, Trends (FACT). These principles lead the rest of the project as well as the future development of the company.

Ideation:

Based on the analysis, five aesthetic concepts and four UX concepts were developed. These were user tested against the preference of the participants, the principles, and how well they would fit together. Those results were discussed with WhereTrip's leadership and it was decided to combine the frosted theme with the swift UX and develop those further into a prototype concept.

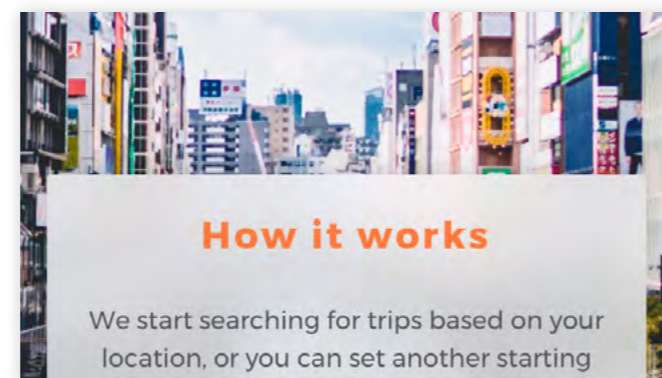


Figure 1: An impression of the developed system: Frosted panel

Production:

Once a prototype was built an iterative process was adapted; a user test was done and based on these results changes were made to the prototype. This was repeated until the requirements were met. Meanwhile the documentation for the design system was written.

The result:

The result of this project is the basis of a design system that can be used to create any number (digital) products that fit the WhereTrip brand in terms of aesthetics and user experience. Four principles are at its core:

- Fluent (smooth)
- Adventurous (exciting)
- Clear (understandable)
- Trends (contemporary)



Figure 2: An impression of the developed system: Trip card

The key parts in terms of interactions are:

- Give the user feedback of the choices they made
- Use Intriguing and playful transitions and animations
- Break expectations so that the user experiences WhereTrip is different than other travel search engines

In terms of aesthetic this means:

- Focus on images that give a sense of adventure
- Use frosted (semi-transparent) glass panel look, that emphasize the images through depth
- Use floating panels with rounded corners and diffused shadows that give a soft and modern feeling.

The final prototype was tested rigorously within the usage context, and has been found to meet the set requirements. There are however several recommendations formulated to improve both the design and some of the technical workings of WhereTrip.

Introduction



This report describes the process and results of the master graduation project of Douwe de Vries, Design For Interaction student of the Faculty of Industrial Design Engineering at the TU Delft.

The Company

The assignment is from a startup named **WhereTrip** affiliated with the YesDelft program. WhereTrip is an online search engine for low-budget vacations and trips. What differentiates them from other travel sites is that the user searches for a theme (an activity or type of location) rather than a fixed destinations (such as a specific city). This allows users to discover and go to places they usually would not visit.

The Problem

WhereTrip is a small team that mostly consists of developers, strategic managers and only one designer. This set-up led to an excellent working back-end but also to a lot of user interface design decisions being made by developers, often based on their personal preferences. Without a strong and established design language enforced by guidelines, website design became inconsistent, both in user experience and graphic (brand) design.

Design System

The initial brief was to rectify these problems and come up with a robust design. However, to prevent the same issues from occurring again the assignment evolved into the development of a design system.

What is a Design System?

Design systems are a tool to help ensure scalability and consistency of design throughout a company. A design system is composed of smaller sections such as the company vision, guidelines for customer communication, behavioural and perceptual patterns, component library and coding guidelines. During this project, the choice was made to focus on the company vision, behavioural and perceptual patterns, that are put to practice in the setup of a component library.

A component library is a collection of reusable parts, guided by clear principles, that can be assembled to build any number of pages. By reusing components, the overall design of the product becomes more consistent, easier to maintain and quicker to expand.

For example, the team wants to add a new feature to the site. There are already guidelines and principles in place that will tell them how to implement that function while maintaining brand consistency. These guidelines can be very broad (how it should feel, how it influences flow, etc.), practical (what components to use) to very specific (when and how new atoms and molecules might be created).

A design system for WhereTrip

WhereTrip is a small start-up. Design systems are usually implemented by big enterprises with multiple product teams. But I believe a starting company, like a small start-up such as WhereTrip, has a lot to gain from using a design system from the get-go. Starting with a design system gives a consistent brand identity and users experience (Power, 2017). When expanding the product, there is already a basis for how to design new features which speeds-up the development process. The system that was designed during this project serves as a starting point and can be adapted and expanded as the company grows. In that case, new employees have a guide that helps them learn how to do things according to the firm's way. And by implementing early, using, expanding and altering becomes entangled in the companies DNA, reducing the work need for on-boarding stakeholders when the company reaches enterprise levels and a system becomes necessary.

Process

The project consists of three phases; analysis, ideation, and production. This section describes what is done in each one of those phases.

Analysis

In the analysis phase (Figure 3), the current state of the website is examined to identify potential problems with the site. Other websites from the same branch are analyzed to distinguish best practices. The results of both exercises is a set of assumptions. A meeting with the four company founders is conducted to define a company

vision (mission statement, ethos, target audience, principles) and to discuss the assumptions that are made during the first two exercises. The assumptions are listed and validated by means of a user test and interviews, and altered or expanded accordingly into a list of issues.

Ideation

During the ideation phase, the list of issues and company vision leads to a set of problems to solve. Multiple solutions are developed for these problems and mapped in a morphological chart. Sets of solutions are combined in to user flow (UX) concepts. In parallel, mood boards based on the company vision are created. These are discussed within the company and lead to aesthetic (the look and feel of the WhereTrip) concepts. Both sets of concepts are examined in a user test. Participants evaluate the concepts based on a

set of criteria from the company vision. The most fitting aesthetic and UX concepts are combined with participant feedback into a final concept.

Together with the stakeholders within the company the contents of the design system are defined for the next phase.

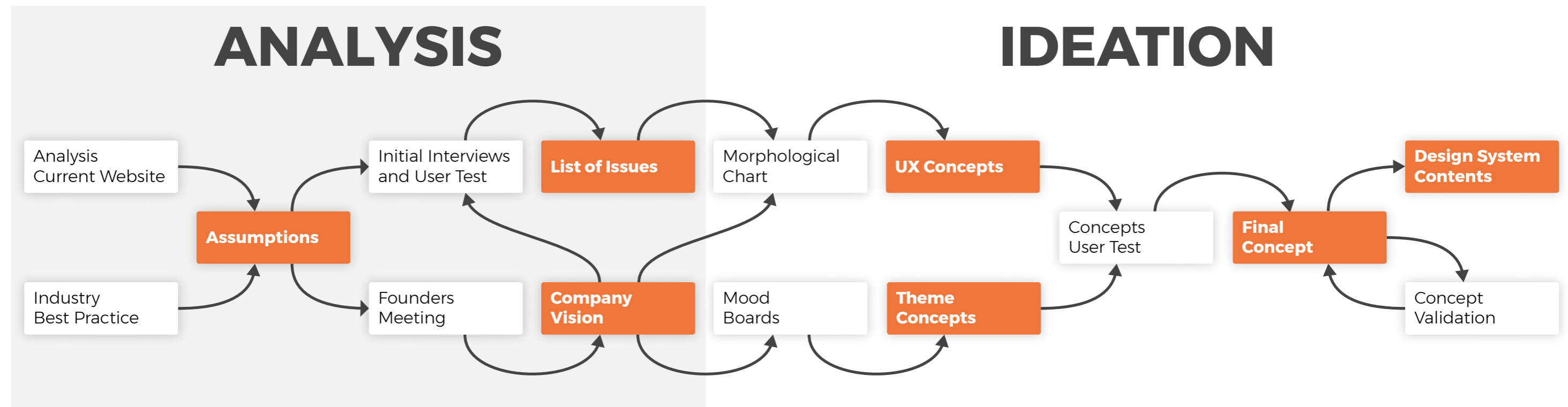


Figure 3: Analysis and ideation phase process diagram

Production

During the production phase, an agile process is adapted. A clickable HTML/CSS/JS prototype is built, user tested and refined in iterative cycles. Each element of the design system is implemented, validated, and iterated upon. Once the requirements of an element are met during validation, it is documented in the design system. These elements are not just the visible parts of

the system but may also contain flow patterns, experience metaphors, the company vision and articles on how to expand and alter the system while the company grows and the web changes.

PRODUCTION

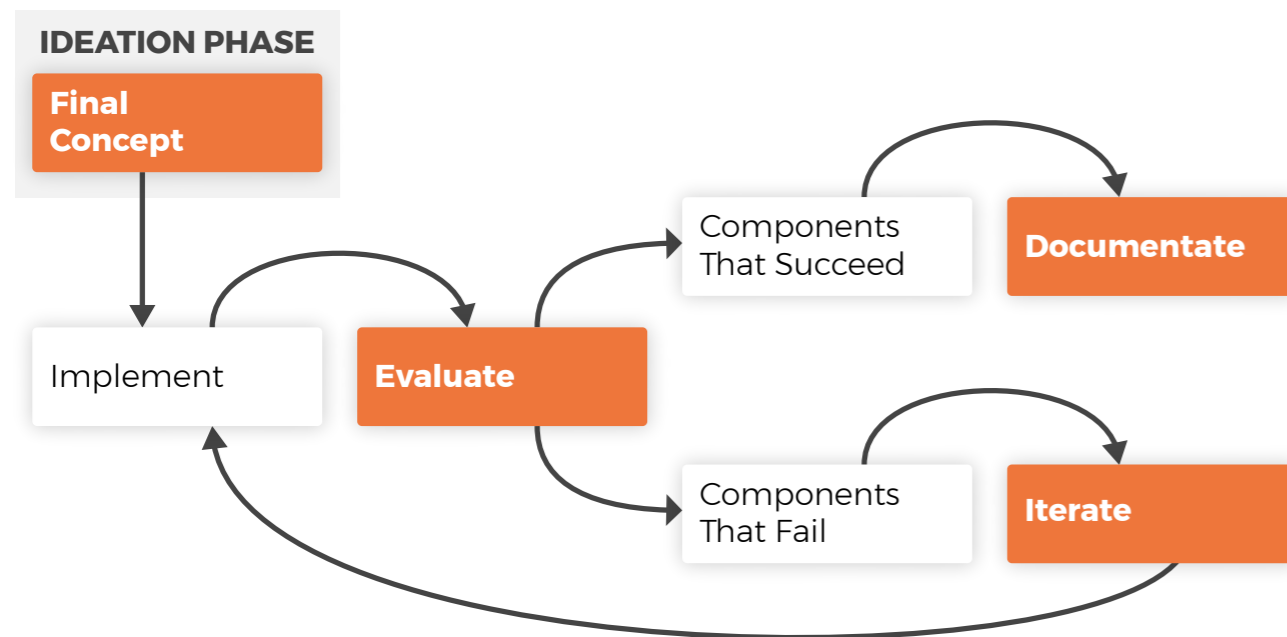


Figure 4: Production phase process diagram

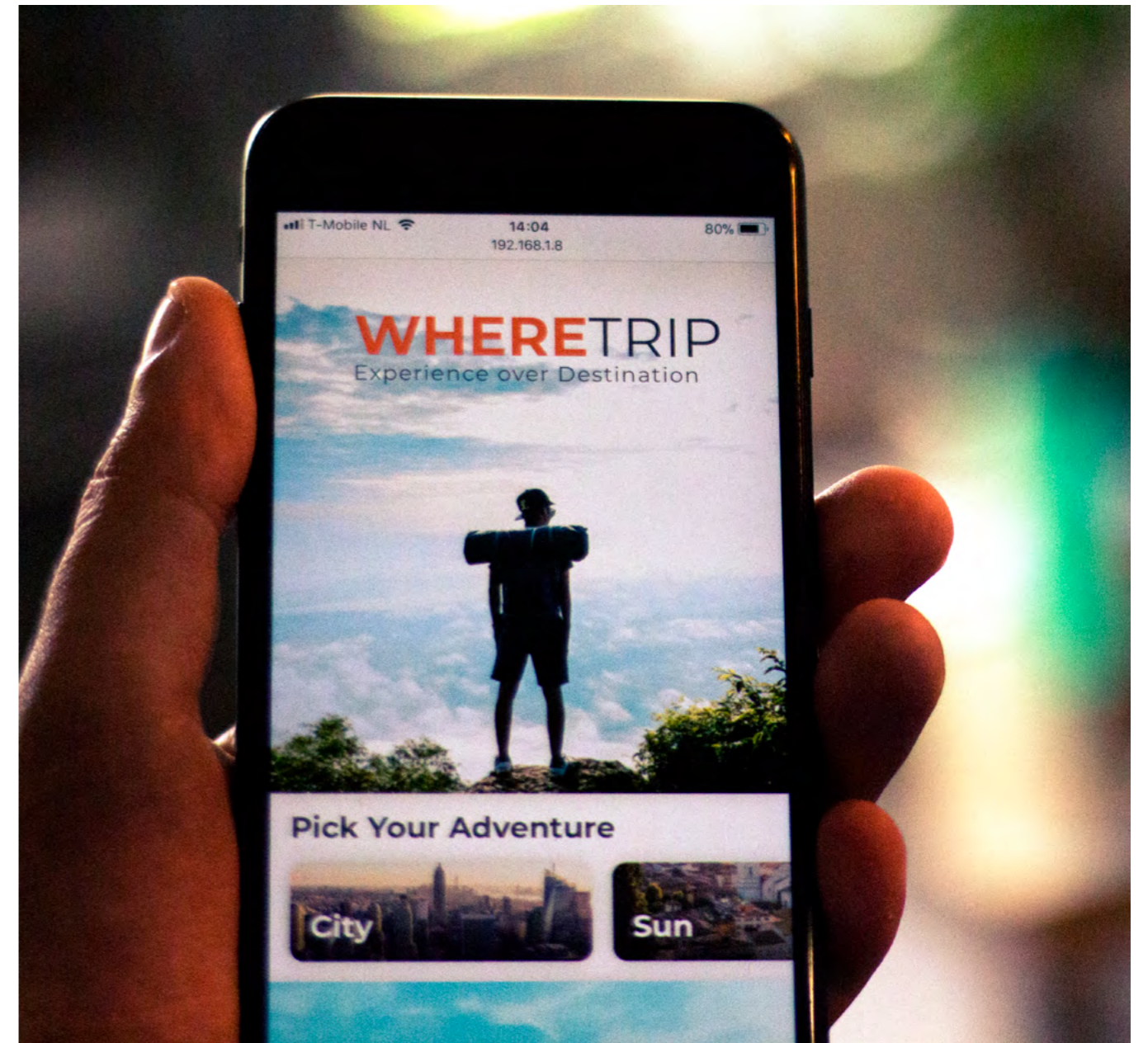


Figure 5: The final prototype

Phase 1:

ANALYSIS

In this first phase, the current state of affairs is analyzed. This involves looking at the prevailing design and UX of the product, the company goals, and vision, as well as competitor products. While doing this, some assumptions are made and validated during user tests and interviews.

All this leads to a (re)design brief, that is the basis of the next phase: ideation.

The Product



Each element of the website is shown, described, named, and has its functions analyzed. Meanwhile, the expected user flow and behavior is specified.

By doing an in-depth analysis of the components that make up the current product, potential user experience issues are identified that help shape the first user tests. This section also serves to capture the beginning point of the project and aims to help the reader understand the current product.

The analysis gives an overview of the current state of the product and a number of assumptions, both good and bad. These assumptions are gathered, and the most interesting ones for this project will be validated in a user test later on.

The full analysis is found in Appendix A, For clarity and brevity, only the points deemed essential to the project are discussed.

The website has three main pages and some static support pages (such as frequently asked questions, contact, and legal information). The three main pages, which will be the focus of this chapter, are the landing page, results page, and trip page. The flow through these pages is found in image (Figure 6).

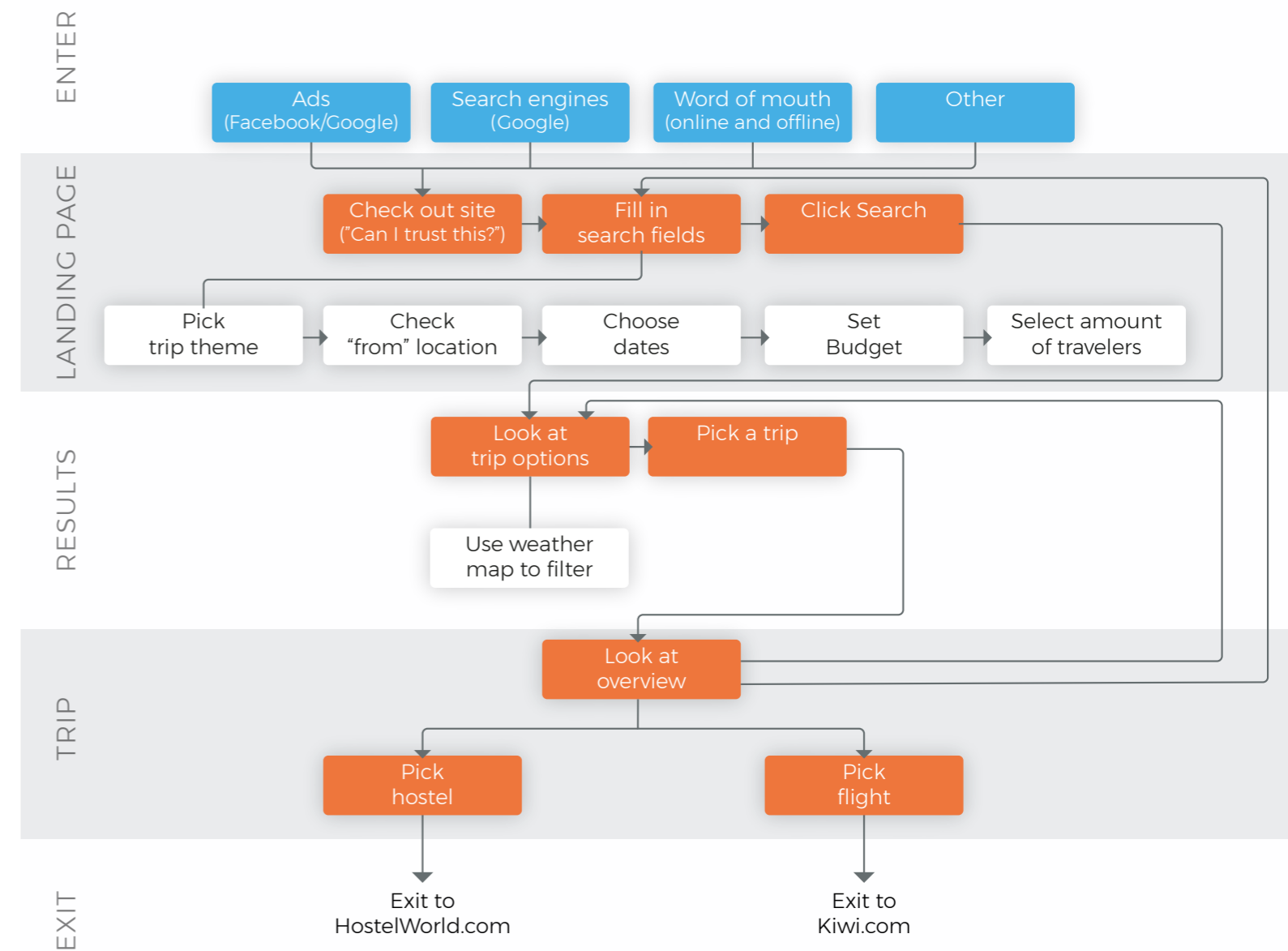


Figure 6: Hierarchical Test Analysis of the current product

Landing Page

Before the user starts to use the site, there are several ways they could get there. First-time users are expected to enter through either a search engine (Google), ads (Facebook), or word of mouth (both online and offline). Returning customers might have the site bookmarked or memorized. Either way, the landing page is the first interaction the user has with the website and should communicate the concept, as well as the intended experience (what makes WhereTrip unique).

The landing page (Figure 7) is divided into three sections; the first is called the hero banner. Here the tone is set, with a different background picture for each theme, which should excite users to take a trip (Assumption 1). The essential element of the hero banner is the search bar (Figure 7); we want users to start searching for trips as quick as possible. Users might be confused by the lack of “to” field (Assumption 2) and the poorly labeled “from” field (Assumption 3). As mentioned before, WhereTrip does not search based on a specific destination, but shows results obtained from a budget and theme. A block with unique selling points should clarify how WhereTrips works and what differentiates them from other travel search engines. It is, however, expected that this fails and the concept will still be unclear for most users (Assumption 4).

The second section of the landing page is called the thrust winner; it should persuade users who are not convinced by the first section with testimonials of previous customers and logos of big-name partners that some users already know and trust (Assumption 5). It is assumed that, with the current set up, in practice very few visitors will scroll down and see more than the hero banner (Assumption 6). The final part is the footer with links to social media and the support pages.

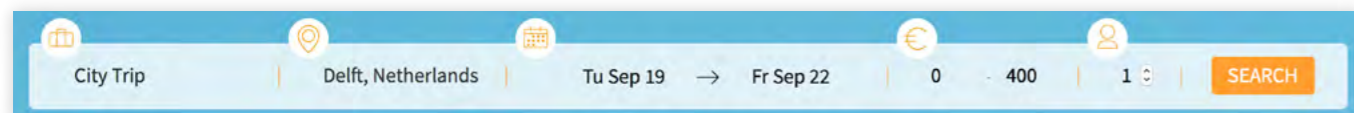


Figure 7: Search bar of the current website

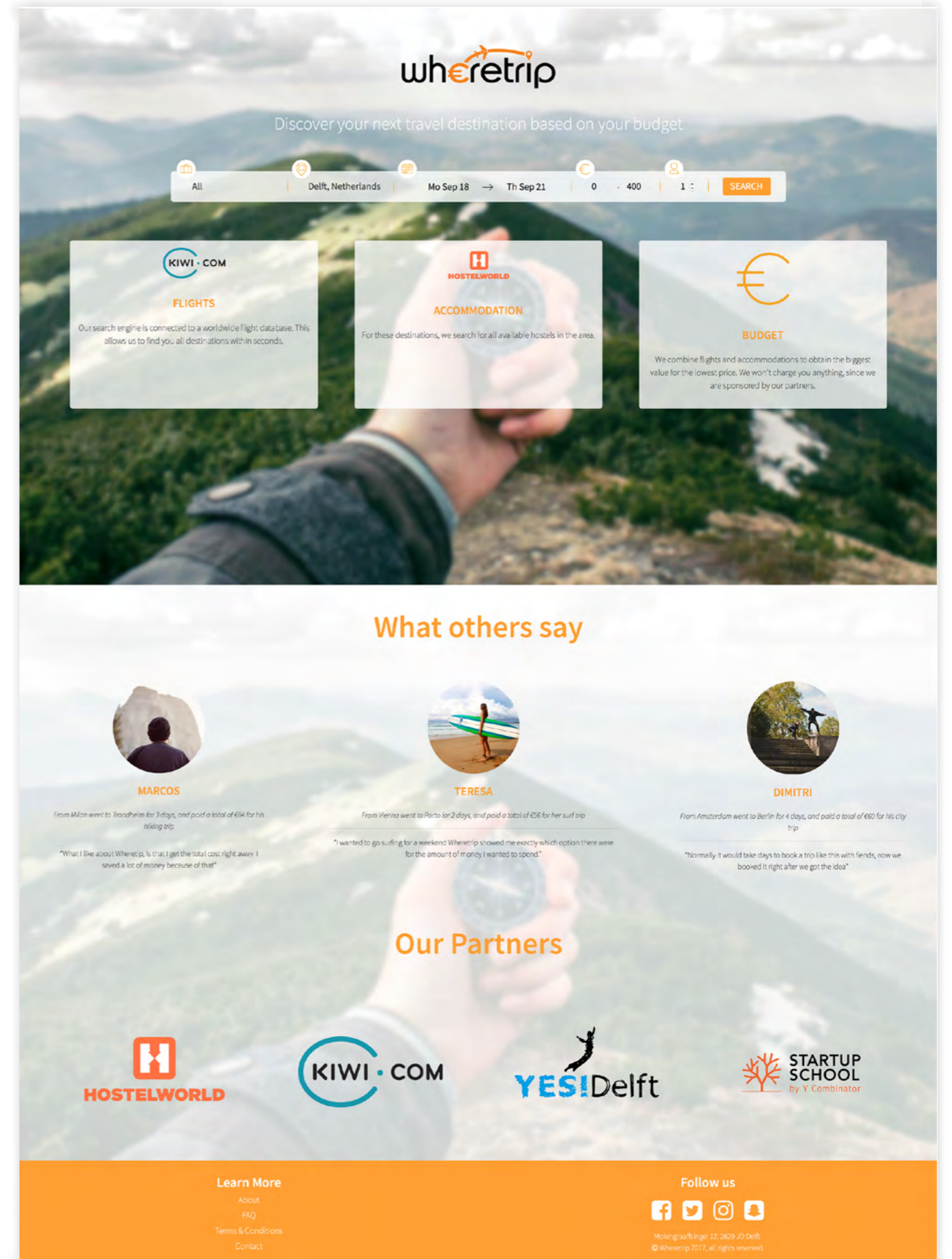


Figure 8: Current landing page

Results Page

The results page (Figure 9) shows the possible trips the user can take based on their search query. Another occurrence of the search bar allows them to change their search.

The results are displayed in a card format (Figure 11), showing the price, city, picture, and country of the destination. There is no indication whether the price is per person and if it includes both the flights and accommodation, this might lead to some confusion among users (Assumption 7). There is also no indication of how many days the trip will last, which might also be a problem for users (Assumption 8). There is also no possibility to filter or order the results, that might make finding the right trip more difficult (Assumption 9).

The map section shows the destinations on a map. The map has several weather options; temperature, clouds and rain, wind, and waves. The icons for these options are very inconspicuous and are probably easily overlooked (Assumption 10). There is a time-line as well, allowing users to see the weather forecast for the next five days, that suffers the same problem. It is expected that the colors used in the weather maps are not representative of the weather situations they portray (Assumption 11). For example the clouds and rain option (Figure 10) shows a dark gray map with light gray clouds and blue rain showers, this means that the dark gray areas on the map are actually the most sunny, which is expected to be counter-intuitive.

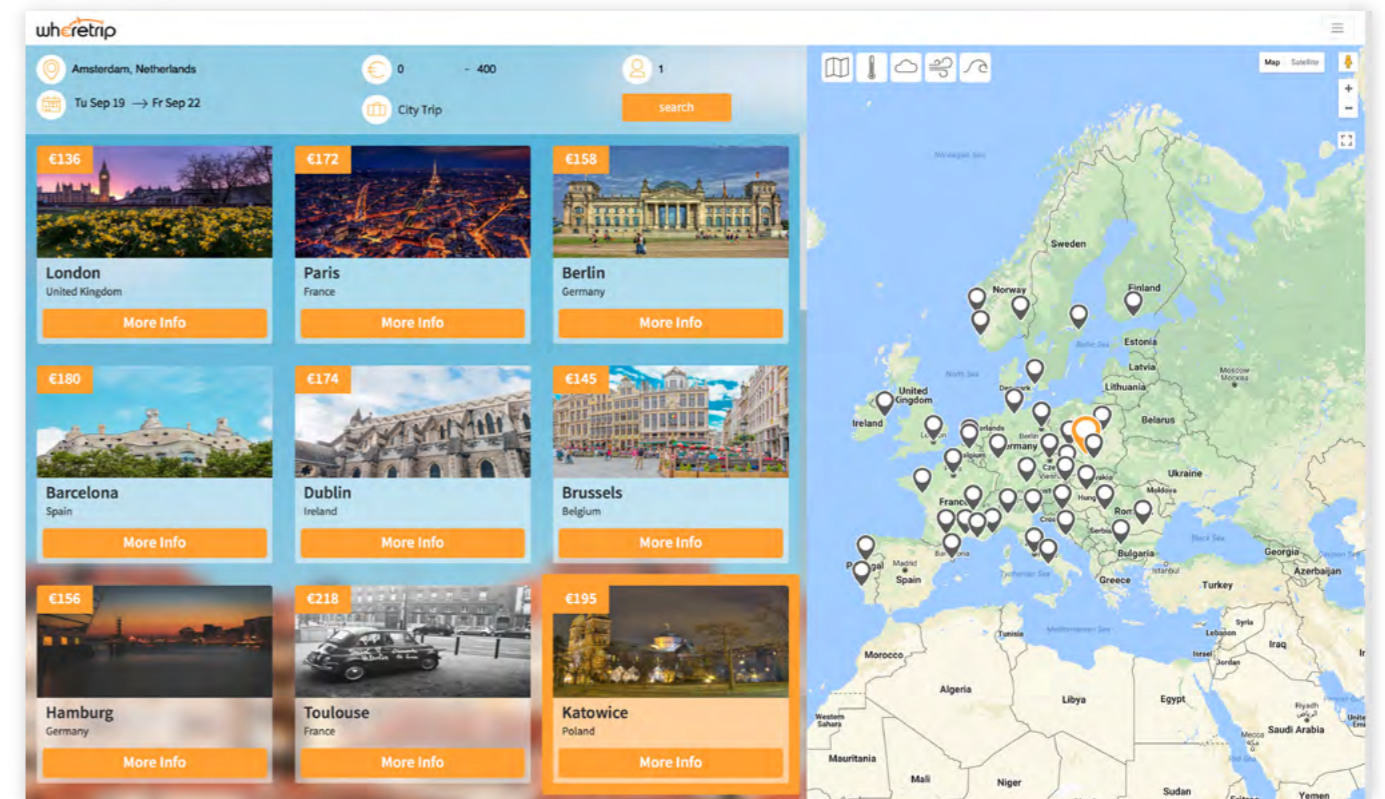


Figure 9: Current results page

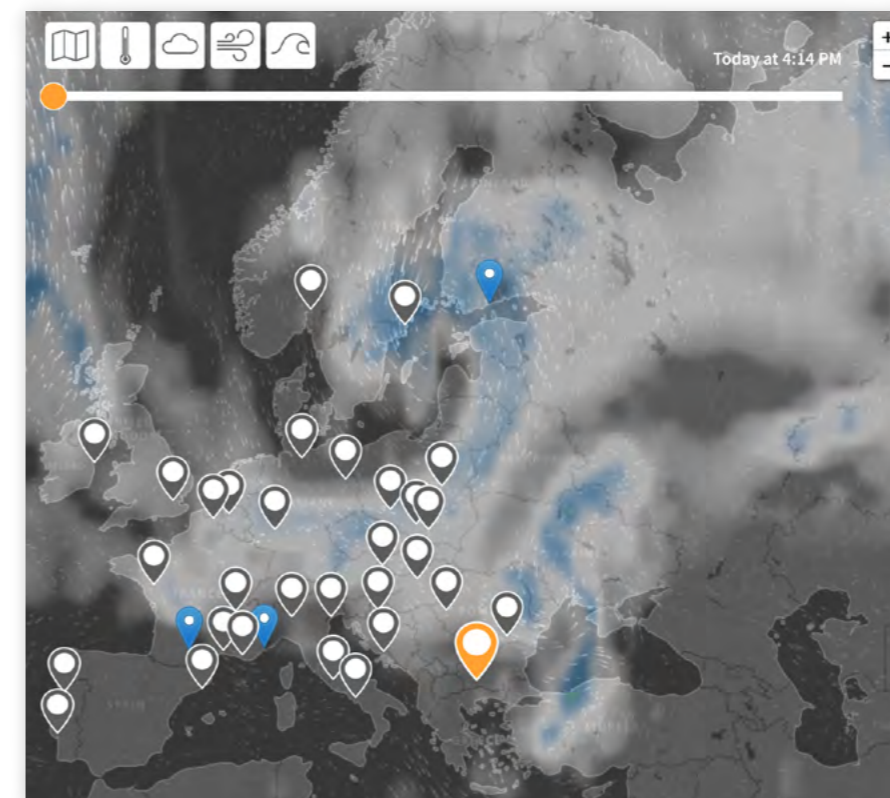


Figure 10: Current weather map - clouds and rain

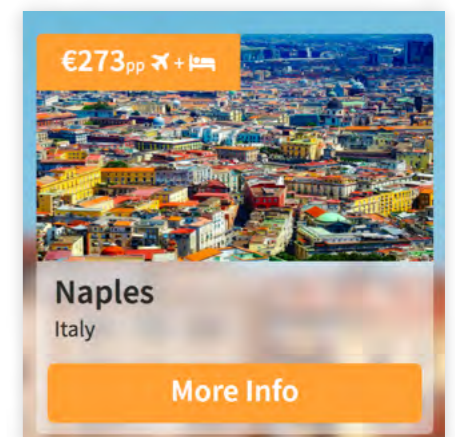


Figure 11: Current card after quick fix

Trip Page

The trip page (Figure 12) gives users an overview and allows them to pick and choose their transport and accommodation.

The overview section provides some general information about the city as well as the current weather and the average trip price. But since this is the first section users see on this page, it might obstruct more critical information such as flight and hostel information (Assumption 12).

The accommodation section shows information of the selected hostel, apartment or hotel. WhereTrip uses an algorithm to determine the best value for money, but users can pick other accommodations that better fit their needs. One situation that is expected to be unclear in this section is that the hostel is booked externally (Assumption 13).

The flight section is at the very bottom of the page and might be hard to find for the user (Assumption 14). It functions very similarly to the accommodation section. However, it is expected it is unclear that multiple flight options exist due to horizontal scrolling (Assumption 15). And again it is essential for the user to note that the flight is booked externally and separate from the accommodation (Assumption 13).

Mobile

The current website is designed and programmed for desktops and later scaled down to work on mobile. The site layout on mobile and desktop are very similar, except for the search bar which becomes more of a search form (Figure), the results page where the map is omitted, and the results are stacked above each other.

It is expected a significant amount of users, maybe the vast majority, (if we look at our target audience (Chapter about Company Vision)), will visit the site on mobile devices (Assumption 16).

Regarding user experience, this may create some problems for mobile visitors, such as a cramped look and feel as the information was designed to be viewed on a bigger screen (Assumption 17).

Because there is less room for information on the horizontal axis, it has to be spread out vertically which leads to longer pages with the chance a user misses essential information on the bottom of the page (Assumption 18).

Mobile users are more flexible, as they can visit the page practically anywhere while doing any activity (talking, watching tv, commuting, etc.). This might mean that they are easily distracted, and it should be effortless for them to pick up where they left when they get back. It is assumed the website in its current state does not take this account (Assumption 19).

The screenshot displays the 'uh_retrip' mobile interface. At the top, a vibrant image of Naples is shown above the city name 'NAPLES' and weather details: 'Italy 27°C, 86°F (w/ 27°C)'. A paragraph of text describes the city's history and UNESCO status. Below this, a flight icon and 'Average P.P. €257' and 'Duration 3 days' are visible. The 'OSTELLO BELLA NAPOLI' section includes a photo of the interior, a 4.5-star rating, and a price of '€13 per night PP'. A 'Book accommodation' button is present. The 'ALTERNATIVES' section is split into two rows: 'CHEAPEST' and 'HIGHEST RATED', each with five accommodation cards showing photos and prices. The 'TRANSPORT' section at the bottom shows a flight from Amsterdam (AMS) to Naples (NAP) for '€218' with a 2h 20m duration. An alternative flight is shown for '€232' with a 2h 45m duration. A 'Book Flight' button is located at the bottom right of the transport section.

Figure 12: Current trip page

Industry Best Practices

To identify the current best practices for the industry twelve website (for a list of websites see Appendix B) in the field of travel are analyzed. Design choices that are common among the sites are noted, as well as interesting ones (Curtus, 2017). These patterns serve as inspiration later on for the design process. The elements are examined and compared to the choices made in WhereTrip's current design. This feeds into the list of assumptions, to be validated during the user test.

It is assumed there are a lot of common design patterns in this field and that WhereTrip already uses some of them. Interesting are the differences with WhereTrip, and the unique design choices some of the websites make .

Sites are compartmentalized into the same three main pages that are present in WhereTrip.com: landing-, results-, and trip pages. Each page is analyzed and interesting observation is made it is compared to WhereTrip and the other websites. If the finding seems relevant, it is documented in Appendix C. What follows are the findings that directly impact the project.

Search-bar and Hero Image

Most websites have, like WhereTrip, a big hero image (or movie) behind their search bar (Figure 14 & Figure 15). As mentioned in the previous chapter, it is assumed this excites users to book a trip. A difference with WhereTrip is that on most of the sites don't have the image take up the full height of the screen, this indicates to the user that there is more on the page (Figure 13). It is assumed that very few users scroll down on WhereTrip.com since there is no indication that they can do so (Assumption 6).

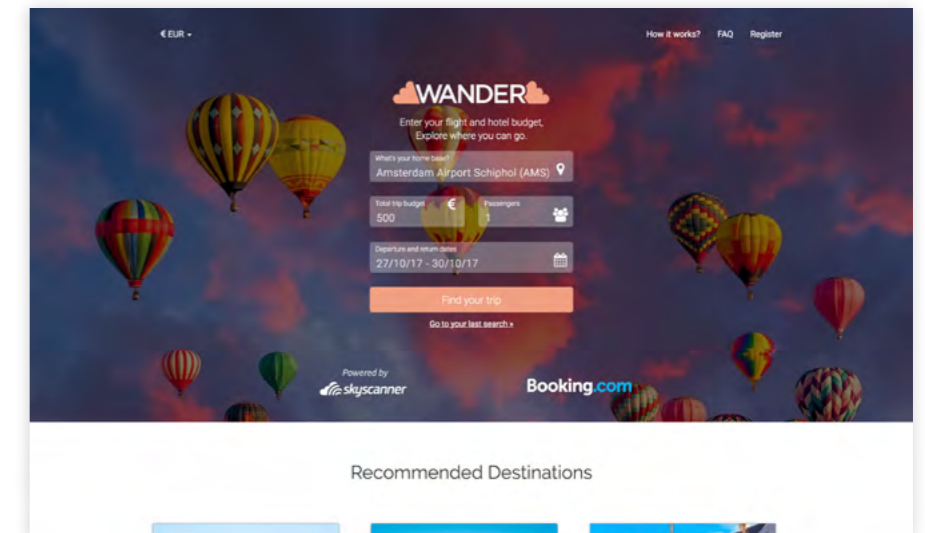


Figure 13: WanderApp landing with background image

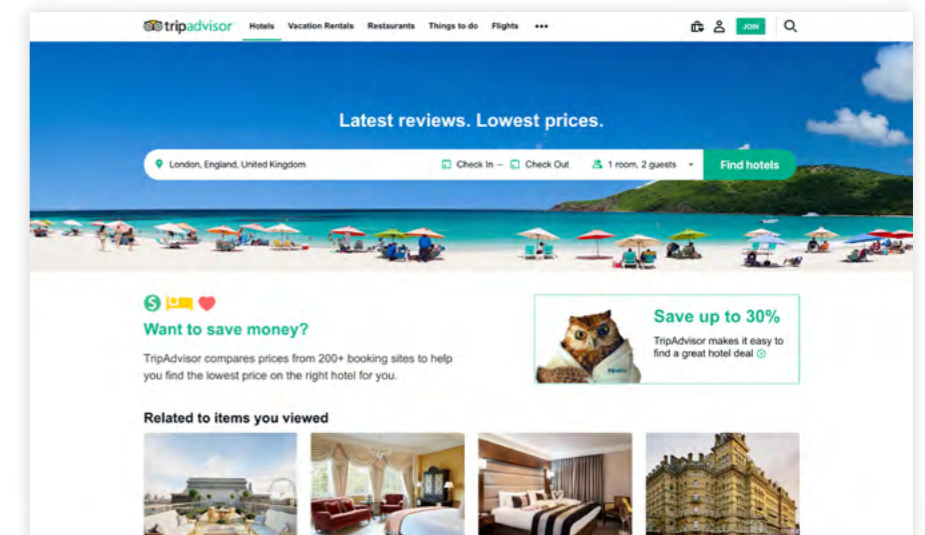


Figure 14: TripAdvisor landing with background image

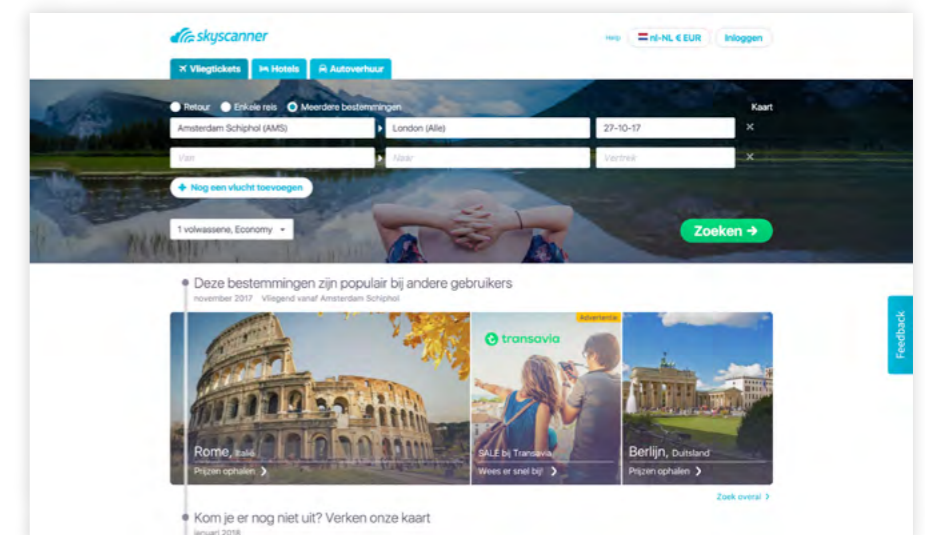


Figure 15: SkyScanner landing with background image

Popular Destinations

When users scroll down on the landing page, most sites have a section with popular destinations (Figure 16). These can be suggested destinations, complete deals with a price and date (Figure 17), or articles with travel tips and inspiration. Flykt.com has an interesting variation where each popular destination has its own search-bar (Figure 18); users can select their date and start location. These sections might be an excellent way to inspire visitors to start looking for a trip (Assumption 20).

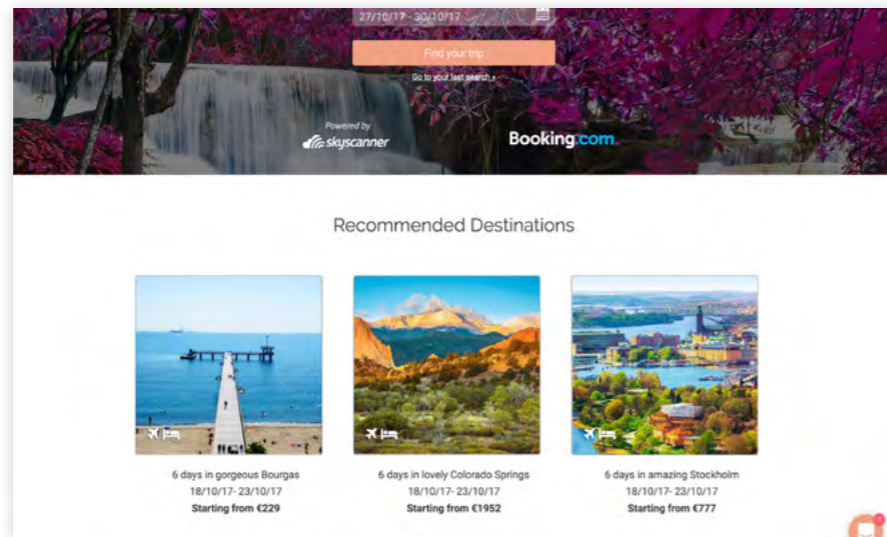


Figure 16: WanderApp recommended destinations

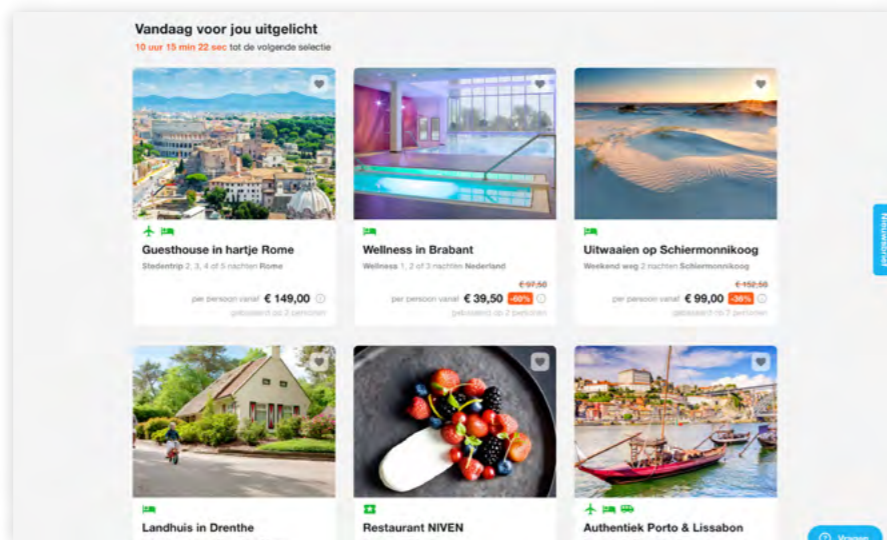


Figure 17: TravelBird daily deals

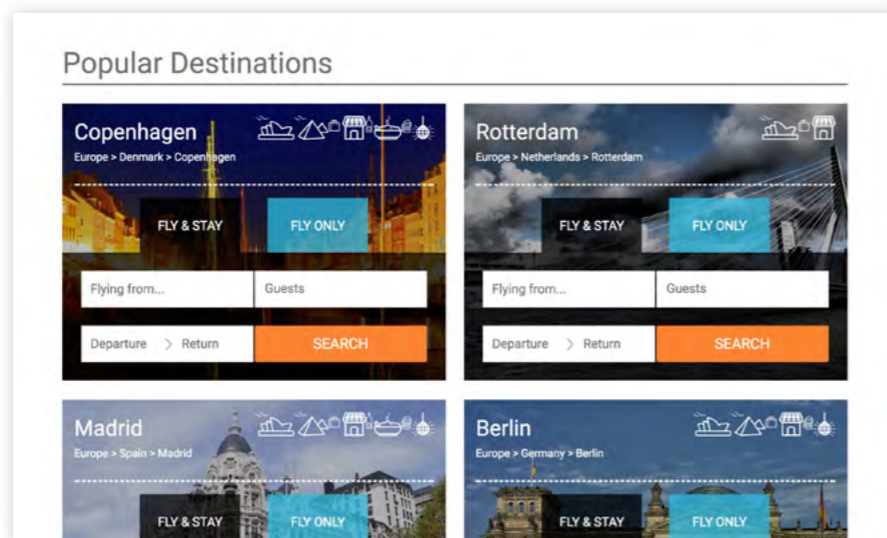


Figure 18: FLYKT searchbar in popular destinations

Currency, location, and language settings

A very practical observation: most sites have their currency, location and language settings (if at all present) in either the upper left (Figure 19) or upper right (Figure 20) corner. It is assumed that most users expect these settings to be placed there. Some sites have a pop-up, which is useful if they have all three of the options, but a bit excessive otherwise. Skyscanner has a switch to English button (Figure 21) which is a good feature to have on a multilingual website.

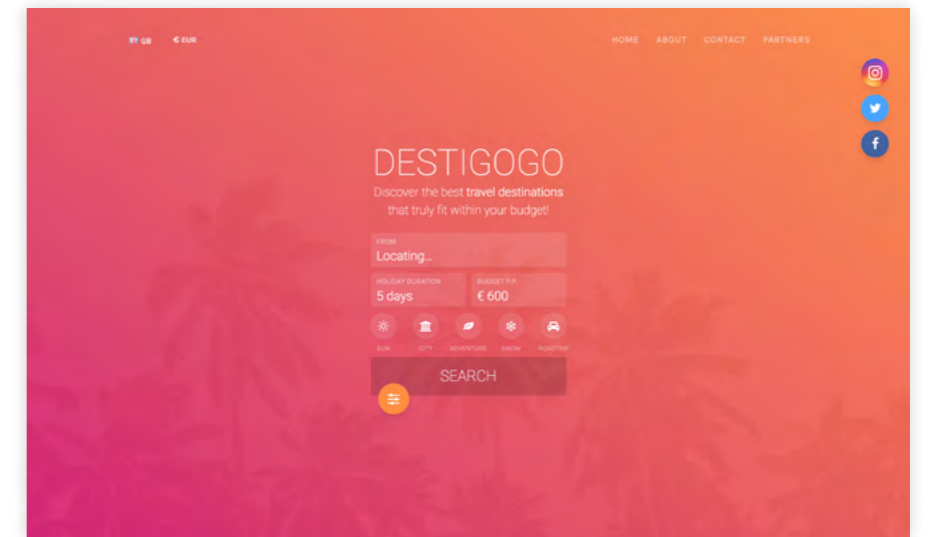


Figure 19: DestiGoGo currency and language in upper left

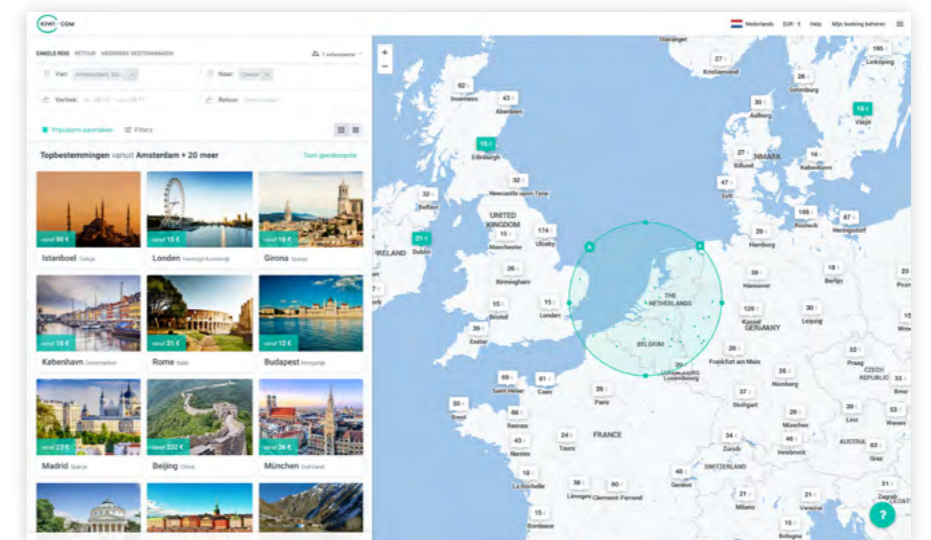


Figure 20: Kiwi currency and language in upper right

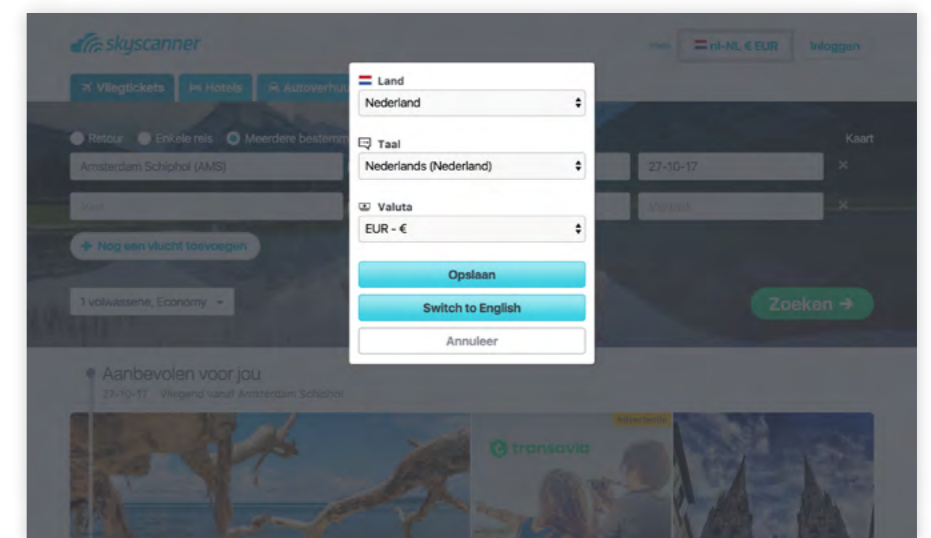


Figure 21: SkyScanner pop up (button upper right)

List vs. Tiles

There are roughly two ways of presenting results on a travel site: lists (Figure 23) and tiles (Figure 22). A list can provide a lot of information at once but the number of results you can show on screen diminishes quickly, and the page might get a cluttered look. Tiles are a very visual way presenting the results that allow high numbers to be displayed at a time, but cannot give a lot of information. It is assumed that users in different stages of finding a trip require different information on the results page (Assumption 21). With that in mind, TripMyDream gives users a toggle between lists and tiles.

Since lists can give pages a cluttered look, it is worthwhile to examine the HostelWorlds result page (Figure 24). They provide their list with a clear look, with the use of hierarchy in presenting their information.

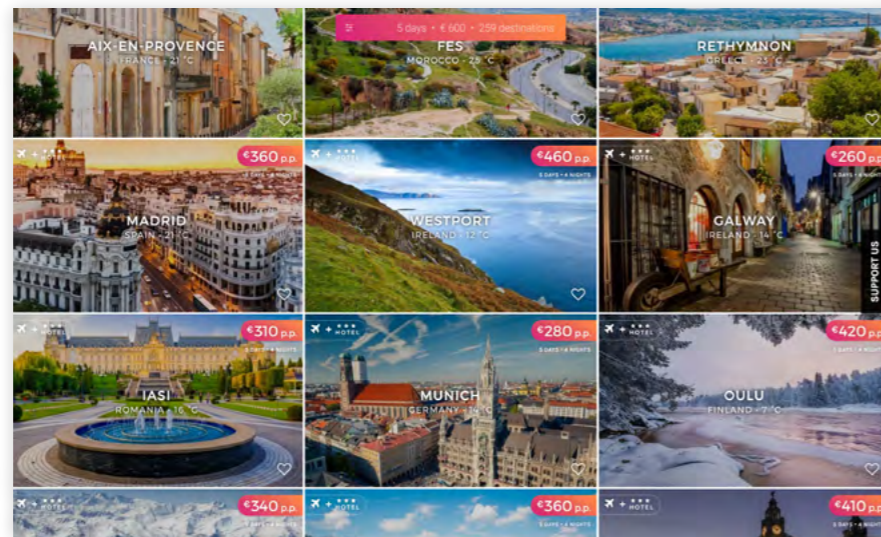


Figure 22: DesitGoGo very visual results tiles/gallery

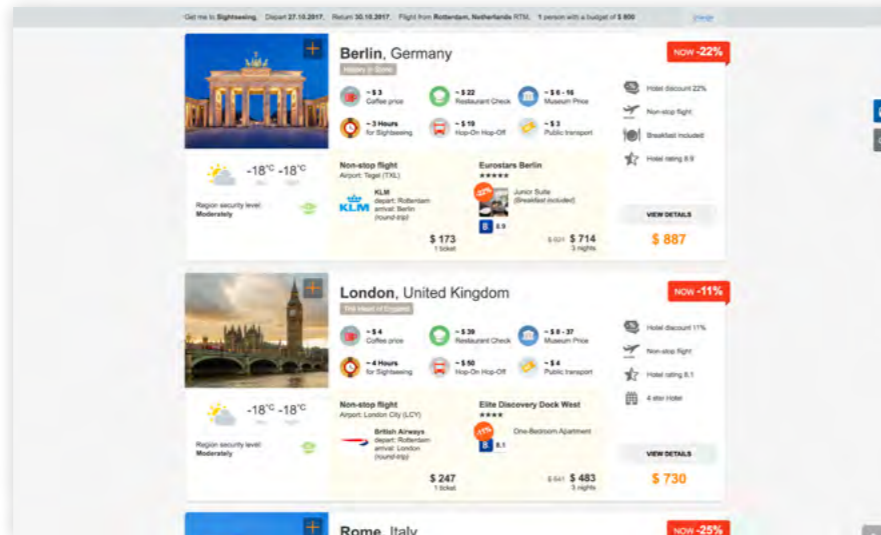


Figure 23: TripMyDream results list with a lot of info

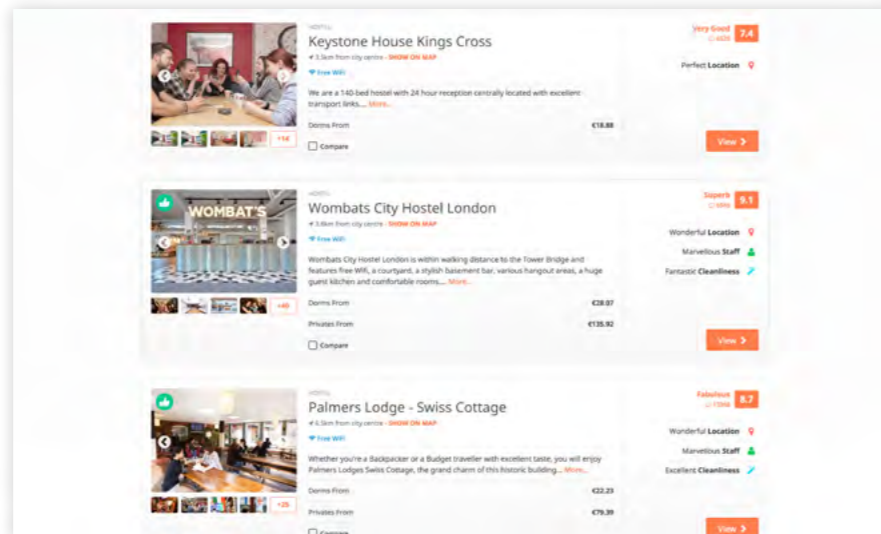


Figure 24: HostelWorld results list, but neatly ordered

Maps

A number of websites show their results on a map by default (Figure 25) and a few others as an option. A difference between how most other sites display their locations and the way WhereTrip does it, is that others often show the prices on the map (Figure 26), making it easier to find cheaper trips in the region of the users preference. It is assumed that some users will miss the prices on the map (Assumption 22). On the trip page, a map with the accommodation location and airport can be useful (Figure 27). Flykt has a transition from results to the trip page, where the map stays in the same place and zooms in on the city when a trip is selected.

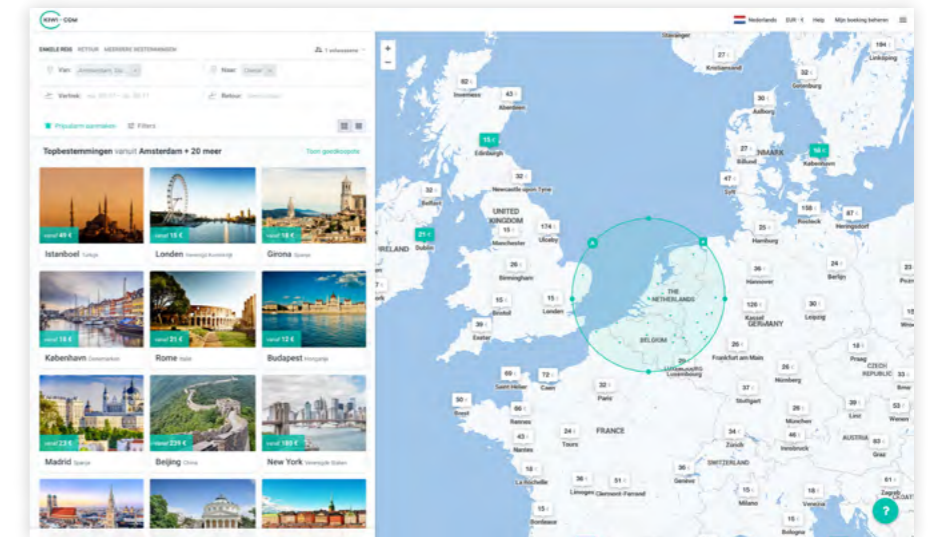


Figure 25: Kiwi shows prices on results map

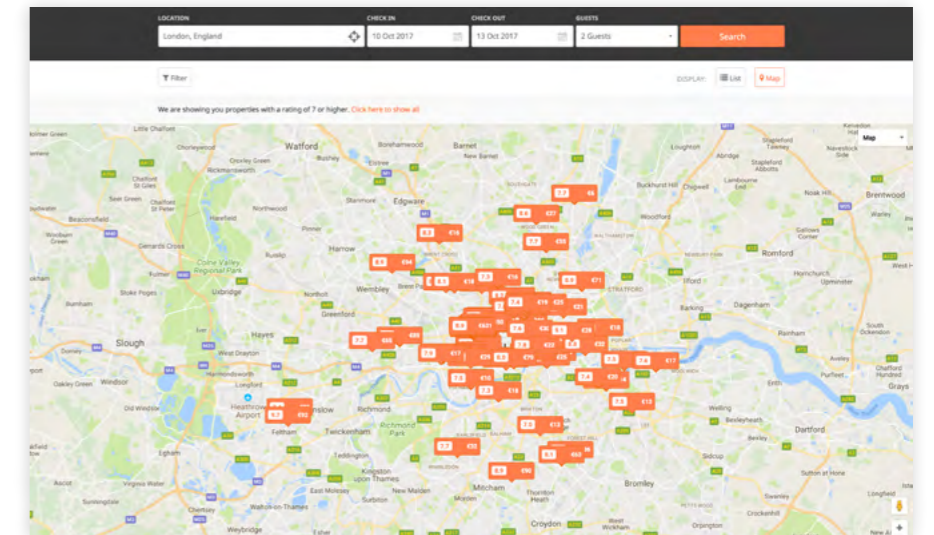


Figure 26: HostelWorld shows hostel prices on a city map

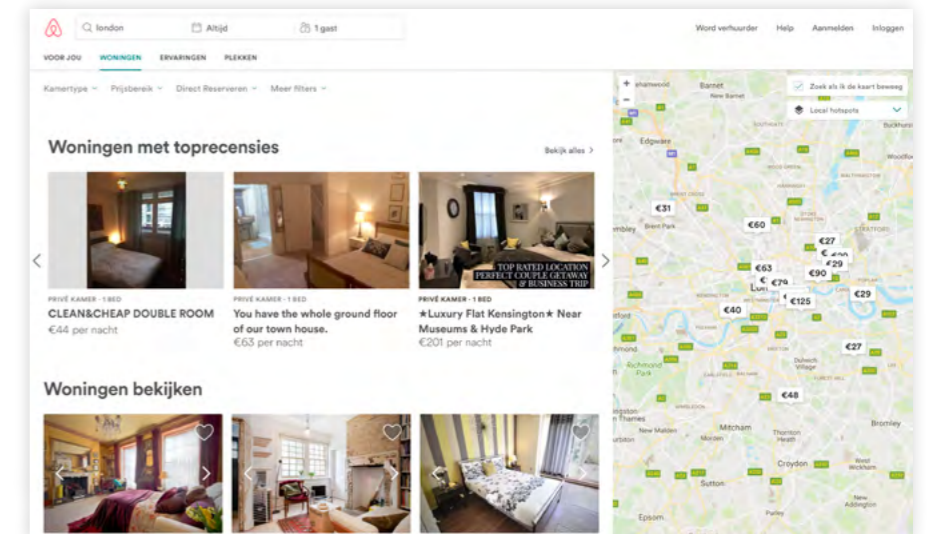


Figure 27: Airbnb split prices map and tiles/gallery

Refresh Messages

WhereTrip uses live data, meaning that prices displayed are only valid for about half an hour. At this point this is not communicated towards the users (Assumption 23). A couple of the other websites operate in the same manner, but after that period, when the data becomes invalid, they have a pop-up that informs the user of this, and refreshes the data (Figure 28 & Figure 29). Communicating this clearly to the visitors is vital in explaining the concept and providing a good user experience.

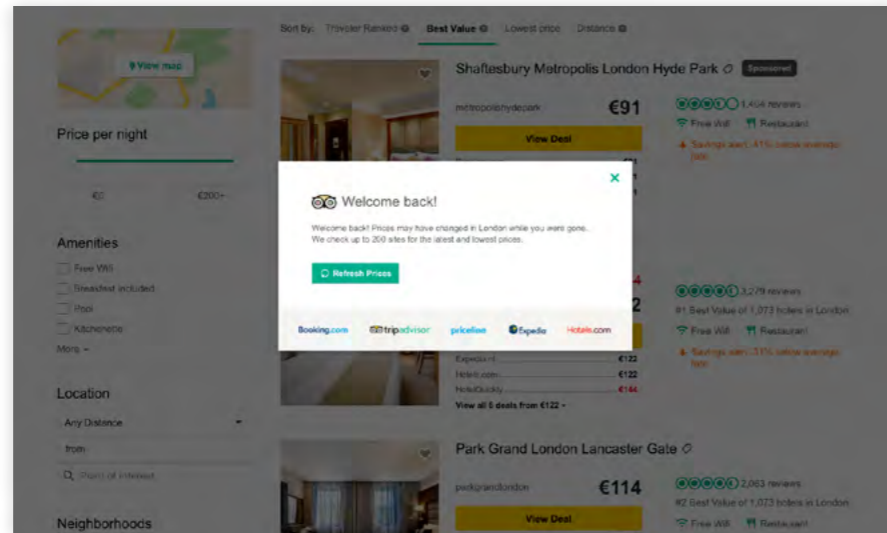


Figure 28: TripAdvisor refresh message

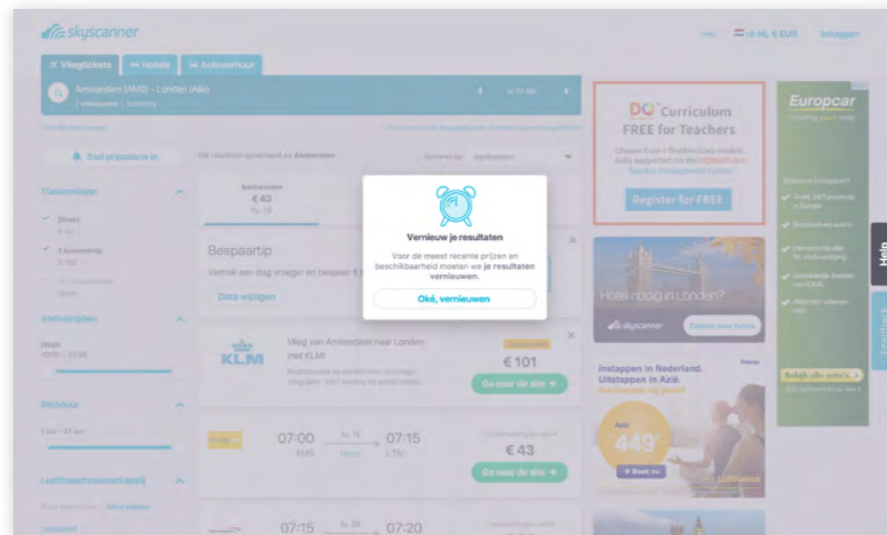


Figure 29: SkyScanner refresh message

Most important information pinned

On the results page, some websites give an overview of the trip (price, flight, and accommodation info) at the top of the page (Figure 30). When the users scroll down this info gets pinned in a bar at the top of the page (Figure 31 & Figure 32), allowing the user always has access to that information. Visitors of WhereTrip do not always have access to this information on the trip page, which might lead to confusion (Assumption 12).

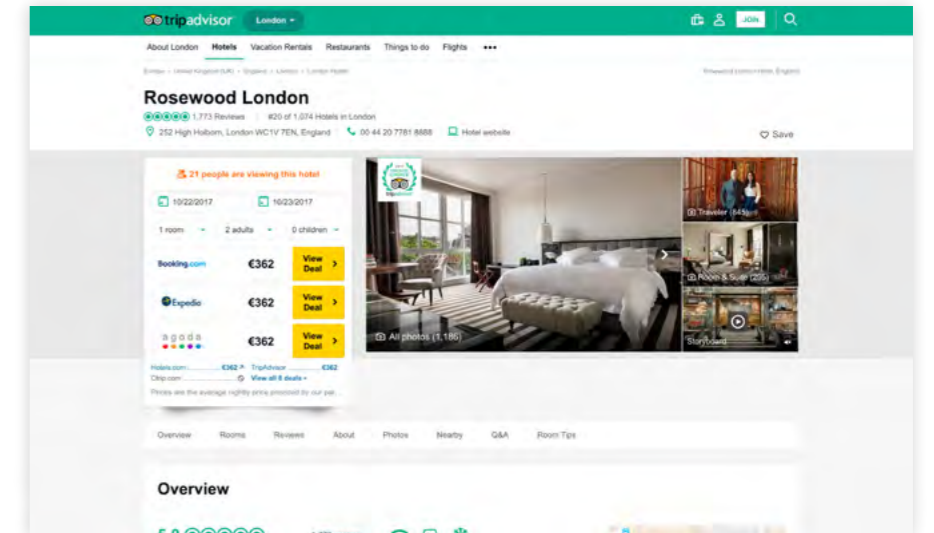


Figure 30: TripAdvisor trip overview (on the left)

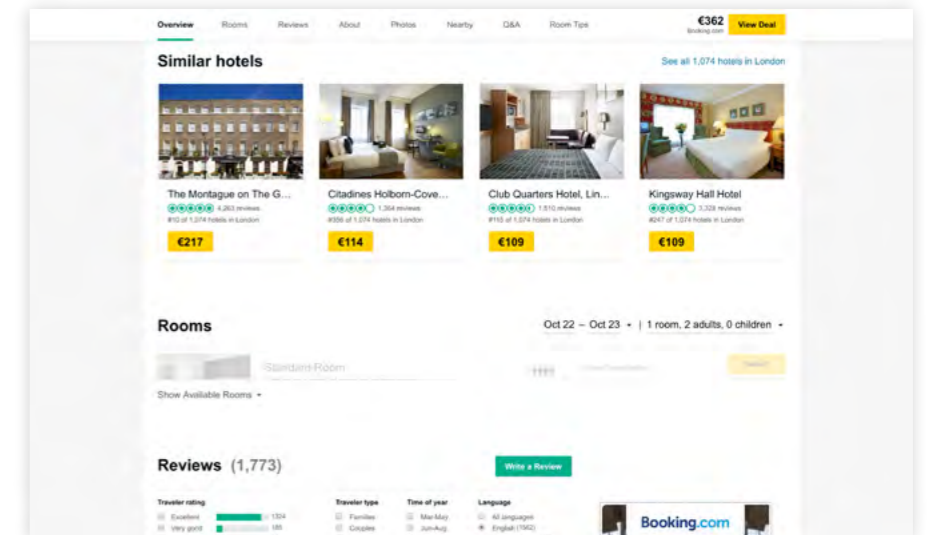


Figure 31: TripAdvisor trip price stays in top bar

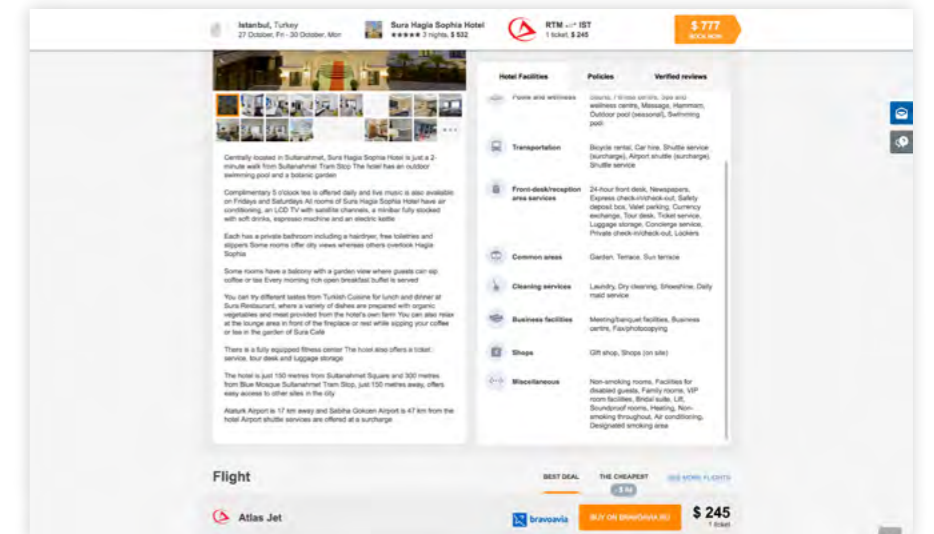


Figure 32: TripMyDream trip info stays in top bar

Company Vision

To develop a design (system) with a strong foundation, it is essential to start with well-defined business principles (Kholmatova, 2017, p. 46). The companies four founders had some ideas, however, during preliminary talks it became apparent these thoughts were never formulated and documented. It is assumed the four founders have similar opinions about most topics, but that they are not able to communicate a single well formulated vision. The company vision includes a mission statement, company ethos, target audience and a set of principles, to be leading in the further development of design system, company brand identity and user experience. And will allow the founders to communicate their shared vision more uniformly.

To prime the founders, a sensitizer (Appendix D) is distributed with questions about the topics. This ensures they have well-formulated thoughts during the meeting and prevents them from being put on the spot. During the session, ideas were collected, discussed, explored and reformulated. With the information gathered the first iteration of the company vision is made, which is discussed and altered until the founders agree on the shared company vision. The vision is a strong foundation to develop a user experience and design system.

The following section describes the about the decisions that were made during the session and why they are essential for the design process. For a more in-depth version of the company vision, see the chapter "Redesign Brief".

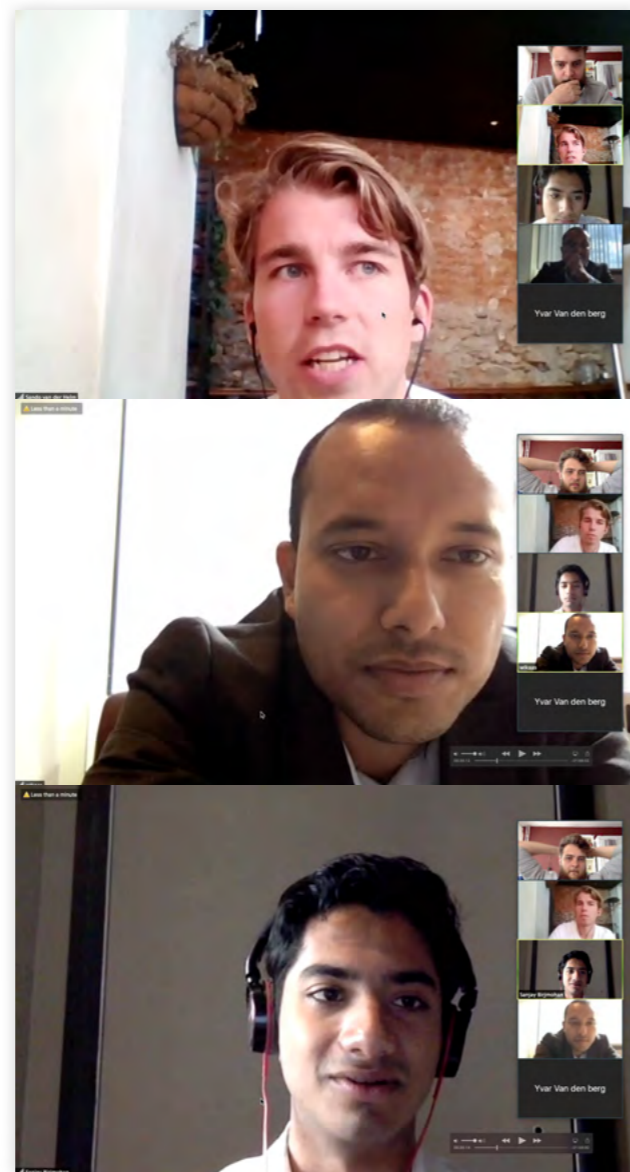


Figure 33: Screen shots taken during video conference call from the founders meeting. From the top: Sando, Wikaas, Sanjay. (Not pictured Yvar).

The first matter that was decided during the session was the core feature of the product. Until now, the product had many core features (Find new destinations, Find cheap trips within a budget, Search based on themes, Have very theme-specific search options, etc.). It is essential that there is focus on one feature that makes the product unique and is going to do very well, the rest will be secondary features. This allows a fitting design to be developed and communicate the product purpose in an understandable manner (Kholmatova, 2017, p. 57). For example, Twitter is at its core a platform where users can post short public statements/updates, but also allows users to post pictures or send private messages. For WhereTrip it is decided that the core feature is: "Finding new adventures, that are also affordable".

A mission statement is a specific goal the company sets for their products. It sums up what to accomplish, who the target audience is and how to achieve it. The final mission statement developed during this process is: "Inspire students, young professionals, and explorers with new and exciting destinations by enabling them to find and book trips within their budget easily."

"Experience over Destination", The company ethos is just a short catchphrase/slogan indicating what WhereTrip stands for; What you do on vacation is more important than where you do it. And, if you are open for unconventional destinations you will have new experiences for a better price.

The primary audience is essential to determine (Kholmatova, 2017, p. 59). It focusses design decisions, user tests, marketing, etc. WhereTrip focusses on young people (18-35) that don't have kids yet, and want to see the world. This group is quite flexible in their planning which allows them to go on these type of last-minute trips.

And finally the company principles; "Fluent, Adventurous, Clear, Trendy." It is essential to take note that these are generic company principles applicable to all (design) aspects of the company such as UX, and Aesthetics. Following the "Qualities of Effective Design Principles" (Kholmatova, 2017, p. 49)

These principles are chosen to be

- Authentic and genuine (all are very specific to WhereTrip's philosophy)
- Practical and actionable (with a bit more explanation in the chapter design brief)
- Have a point of view (they are in order of importance and give their users a perspective)
- Memorable (Spell out FACT)

An overview of the topics discussed in the meeting can be found in Appendix E.

Assumptions

In the last two chapters, several assumptions have been made. These are collected in a list to be discussed during the founders meeting and validated during the user test.

The assumptions are validated through four distinct methods:

User Test: Hypotheses with an orange background are tested through a user test. These are the assumptions that are observable when an individual user navigates the current website while thinking out loud (how do users react to the lack of “to” field?).

Interview: Theories with a purple background are confirmed through an interview that is taken before the user test. These assumptions are about the general behavior and thinking of users of a travel site (what do user look for in a travel site?).

Survey: Hypotheses with a blue background are examined through a survey done after the user test. These assumptions are quantifiable on a scale (does the website radiate adventure?).

Analytics: Theories with a green background are checked by looking at analytics data gathered from all users visiting the site. These assumptions are about the actual behavior of the masses (what proportion of the users use mobile devices?).

1. The background images in the hero bar excite the user to go on a trip.
2. The user might be confused by the lack of “to” field.
3. The user might confuse the “from” field with the “to” field due to inadequate labeling.
4. The communication of the concept towards the user might be insufficient.
5. The user might be familiar with WhereTrips partners and already trust them.
6. The user won’t scroll further than the hero banner because it is not indicated they can do so.
7. It is not clear the price is per person and includes both flight and accommodation.
8. It is unclear how long a trip is on the results page.
9. No filters or option to order results, makes it harder for the user to find what they are looking for.
10. On the map, the wheater icons and timeline are easily missed by the user.
11. Colors used on the weather map might confuse users, as they are not representative of the situation they portray.
12. Lack of flight and accommodation overview makes it easier for the user to miss relevant information.
13. Unclear flight and accommodations are booked separately and externally.
14. Flight section at the bottom is easily missed
15. Alternative flights in a horizontal scrolling section might be unclear for users there are more options.
16. A significant amount of users visits the site on a mobile device.
17. On mobile the site feels cramped and messy.
18. On mobile users might miss information at the bottom of long pages.
19. There is no good way to get back to the website for users that got distracted.
20. A popular destinations sections serve as valuable inspiration for costumers.
21. users in varying stages of finding a trip require different information on the results page.
22. Users prefer to have prices on the results map.
23. Users are unaware of the use of life data,

First User Test

To validate the assumptions that have been made and possibly find other problems with the usability of the product, a user test is conducted. This also presents an excellent opportunity to get a feel for the user's impression of the current website, the overall concept (especially not picking a destination), and the company vision.

Two types of research are done; The first is an in-person test consisting out of an interview, product test, and survey. The participants of this test are usability experts that are part of the target audience as well (DFI students that travel often). This group was chosen because five usability experts usually find most of the usability issues within a product (Nielsen, 2000) and DFI students are the closest to usability experts available for this test. The second inquiry is done online where we record the behavior and metadata (analytics) of 300 actual site users in October 2017 and asked them to fill out the survey. We got 27 responses.

Interviews:

The participants of the in person test are interviewed before the test. The goal is to obtain information about their traveling habits (destinations, activities, frequency, budget, etc.) and to prime them for the user test. For a full overview of the interview questions see appendix F, for a summary of the transcripts of the interview, see appendix G.

Interesting observations:

- Participants often use the same website again after having a positive experience with it.

"I usually use GoEuro[.com] for my transportation and HostelWorld[.com] because I never had any problems with them"

- Participants do not plan their trip very far in advance, and sometimes book the first transport and accommodation for the first couple of nights.

"I booked my plane ticket from Eindhoven to Pisa two weeks before, and I booked the first two nights of my hotel in Florence about a week in advance"

- Most participants search for trips on mobile, a few switch to desktop when it comes to the actual booking.

"Searching for trips I usually do on my phone and the last trip I took was the first time I also booked with my phone"

- Exchange students do take more trips

"Since in the US it is a luxury to fly this far [to Europe], I am like; 'I am here I am going to go everywhere I can!'"

User Test:

Participants are given a series of tasks to complete on a desktop and mobile version of WhereTrip.com. During the test, they are encouraged to think out loud; describing what they see, what they think of it, what they want to do and why they want to do it. Meanwhile, the facilitator observes how the participants perform and take note of

sections they struggle with. For a full overview of the tasks and the facilitators, focus points see appendix F, for a summary of the transcripts of the tests, see appendix G.



Figure 34: Participants during several stages of the first user test.

Interesting observations:

- The background on the landing page makes people excited to go traveling, especially when it changes with the chosen theme.

“Oh and the background changes to [a picture of the] sun! Oh this is cool”

- Users are disappointed that they can not specify their destination, and it is not very clear that you pick a theme and not a destination.

“From Delft? To where? Where can I fill in the Destination?”

- It is unclear how long a trip lasts.
- It is unclear that the prices are listed per person and include all flights and accommodations.

“Now I see results, per person per flight I guess?”

- The icons on the weather map are not prominent.
- The colors on the map do not match the user’s expectation.

“I think the color actually affects the way I perceive it. It is not clear that the gray parts are sunny”

- Participants preferred to have prices on the map instead of pins.
- It is expected that tapping on the plane icon in the overview would take you to the flight section.
- Flight information is easily missed because it is at the bottom of the page.

“I think it is strange that the flights are below the accomodations.”

- Horizontal scrolling through flight options is not clear.

Survey:

Participants are asked to fill out a survey (Appendix F) after doing the task. The purpose of this survey is to find out how the participants perceive the current version of the site with regards the company principles. The individual results of the survey can be found in appendix H.

It turns out that most of the principles are already represented, except the high-end feel (the current site has a very low budget look to it) and for some participants the clarity (especially on mobile).

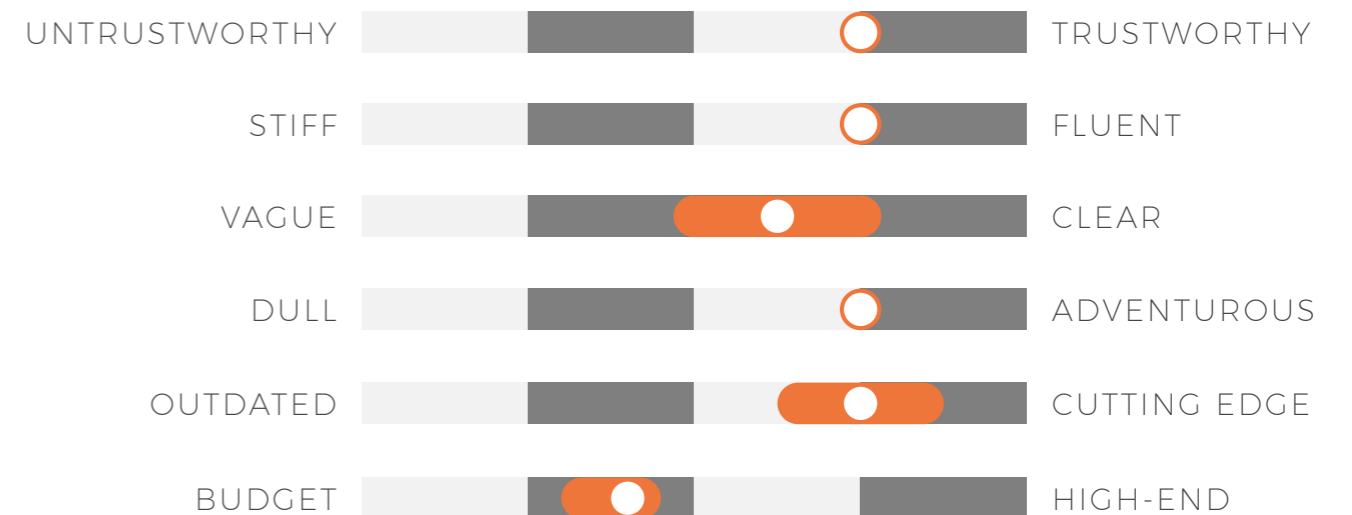


Figure 35: Results of the survey taken during the first user test.

Analytics:

By using the HotJar analytics tool, we can monitor the behavior of users on our site. The following is based on 300 unique users that are not connected to WhereTrip from all over the world. Some key findings from these data sets are.

- Some users tried to fill in destinations in the "from" field.
- Some users did not scroll to the bottom of long pages (landing and trip).
- Almost nobody changes the lower limit of the budget (€0 by default)
- The (icons on the) weather map were rarely used.
- After filtering out WhereTrip employees, 90% of the users visit the website on mobile.

We also asked visitors of the website to fill in an online survey (Appendix I); we received 27 results that can be found in the appendix (J). These mostly underline the insights gained from the in-person interviews and survey. New insights gained from this survey are; most people like browsing for trips and they spend on average 2-4 hours searching for a trip, 2/3 of our customers are students, and most are between 20-25 years old (5/27 are older than 30). Only 2 of the 27 people were reluctant about the idea of searching for a trip with a theme instead of a destination (gave it 7 out of 10 points or less).

Conclusion:

Most of the assumptions are true, to some extent, and should be considered while redesigning the UX. Some are confirmed (13, 21, 23) but it might still be beneficial to solve, and might have solutions that fit the company vision better.

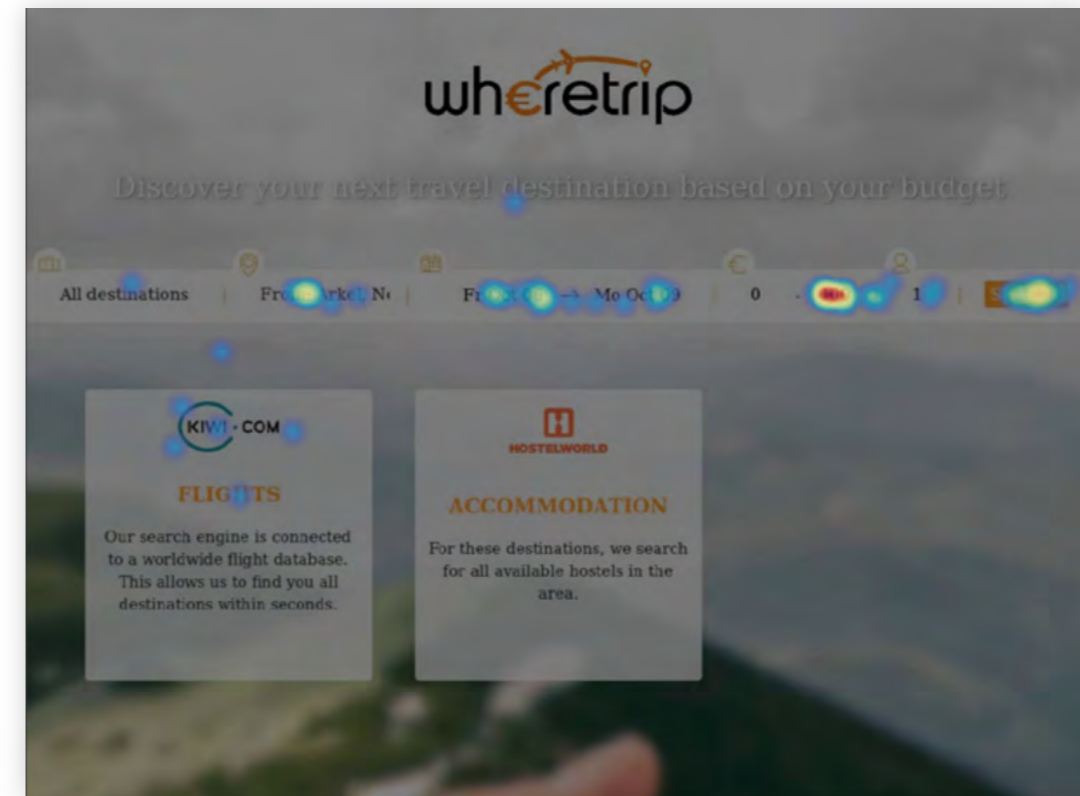


Figure 36: HotJar Heat Map from start page.

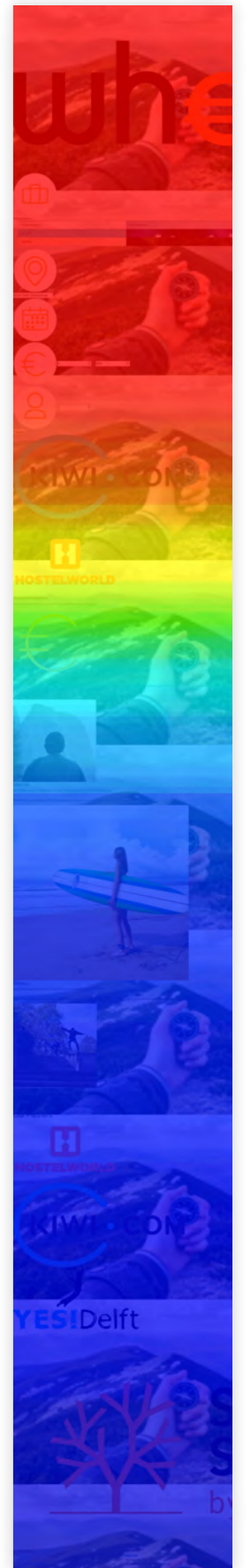


Figure 37: HotJar Scroll Map: Less than 25% of visitors (dark blue) scroll on the start page.

Redesign Brief

In this chapter, the findings of the analysis phase are summarized into a (re)design brief. This redesign brief consists of the company vision, description of target users, and a program of requirements and wishes.

Company Ethos

The ethos describes the core value of WhereTrip and can be seen as WhereTrip's mantra and (unofficial) slogan:

Experience over Destination



What you do on a trip is more important than where you are doing it. If you want to go snowboarding, you can go to a popular and expensive destination, such as the French Alps, or, you can go to a lesser known location and have more adventures, less touristy and cheaper trip in the Czech Republic. But in both cases, you can have fantastic snow experiences.

Mission Statement

The mission statement describes WhereTrip's target audience, goal, and approach:

Inspire students, young professionals, and explorers with **new exciting destinations** by enabling them to **find and book trips** within their **budget** easily.



The target audience are young people with a flexible schedule looking for adventure. We want to provide them with affordable trips to destinations they might not have initially thought of. We do so by making finding and booking trips to those places easier and more accessible.

Principles:

Principles serve as a basis for the company's design (system). They describe what WhereTrip's focus is when it concerns development and user experience.

FLUENT



Interaction:

Using the product should feel **effortless**. Placing of components should feel **logical**, and it should feel **evident** to users how to achieve their goals. **Fluent** is also manifested by providing the user with all information they might need. This results into not having to go to other websites and using multiple tabs/apps (for the weather, city information, etc.).

Look:

The way the eyes of the user move over the page should be **flowing**. Valuable information and images should draw the attention of the user, and fewer components carrying detailed information although still, **accessible** should not distract from the flow.

ADVENTUROUS



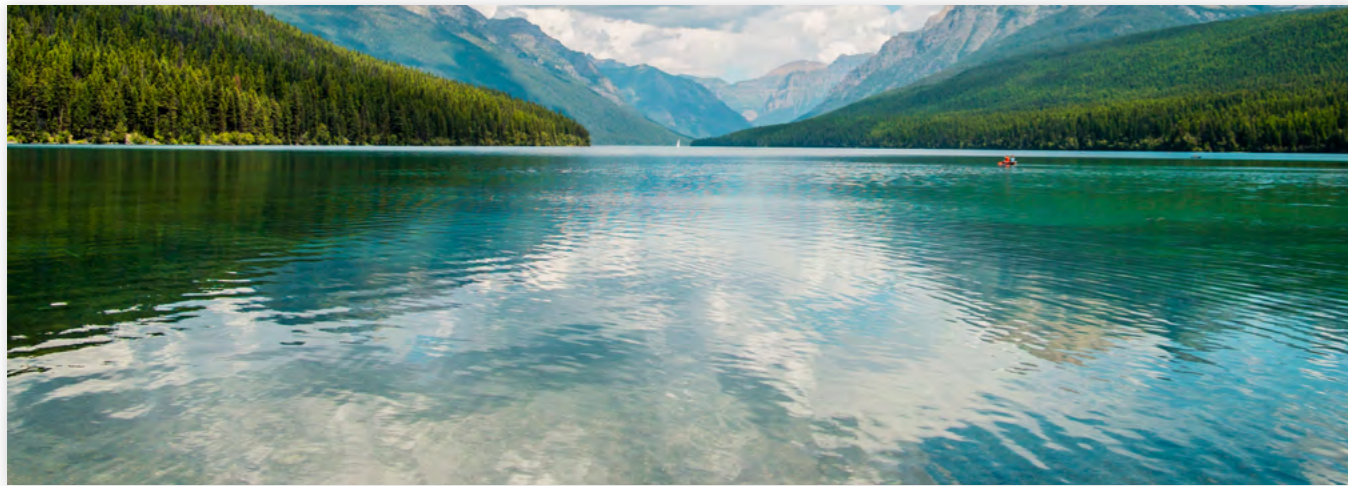
Interaction:

The website should give the user an **exciting** feeling. Using micro **animations** and transitions can help achieve this and retain the users' attention. The site should **invite** users to **explore** its features and keep users coming back.

Look:

Regarding visual appearance, the product should **inspire** to go on an **adventure**. One way this can be achieved drawing the attention to photos of the destinations and adventurous images in general.

CLEAR



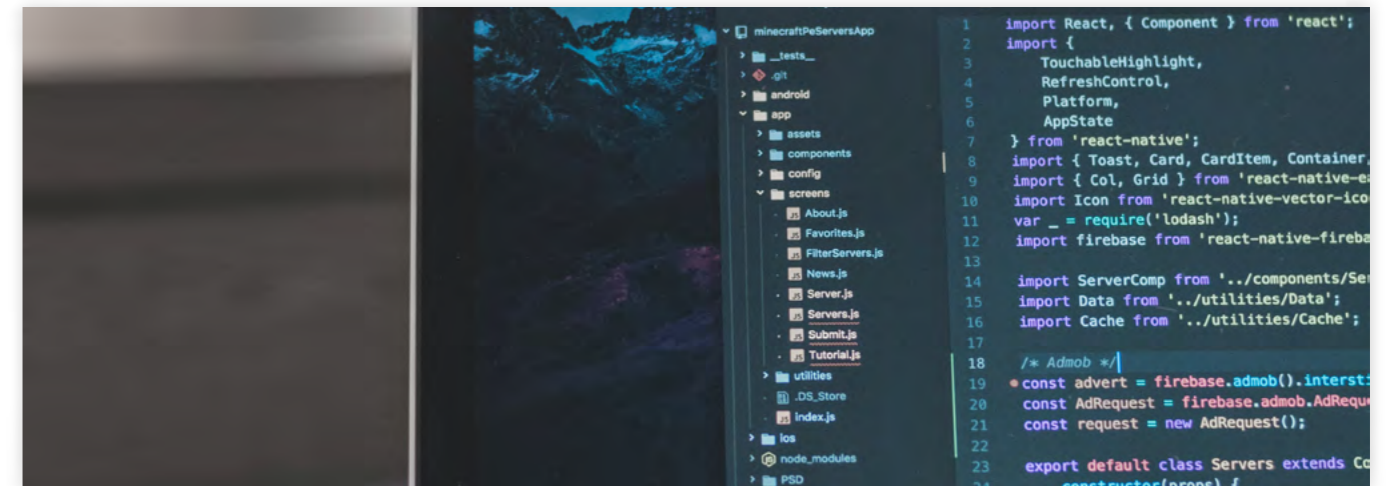
Interactions:

The interactions the user can do should be **apprehensible**, meaning that ideally before they take action, they have a good grasp of what is about to happen and otherwise they should **understand** after the interaction and be able to undo it. To achieve this, every component should have only one specific **purpose**, and this should be defined before building/designing it. (parent component can have very high-level purposes, such as “display results”)

Look:

The product should have a **coherent** look. Use of design elements should be **consistent**, so users will quickly understand how to read the product.

TRENDS



Interaction:

Interactions should always feel **modern** and **contemporary**. Keep monitoring new **trends** in the field and test their fit to the other principles. Keep searching for **new technologies** to improve the user experience and new platforms to deploy to. Be an **early adopter** or at least a **fast follower** of new technology to keep the interest of the user group, avoid becoming conservative in design decisions.

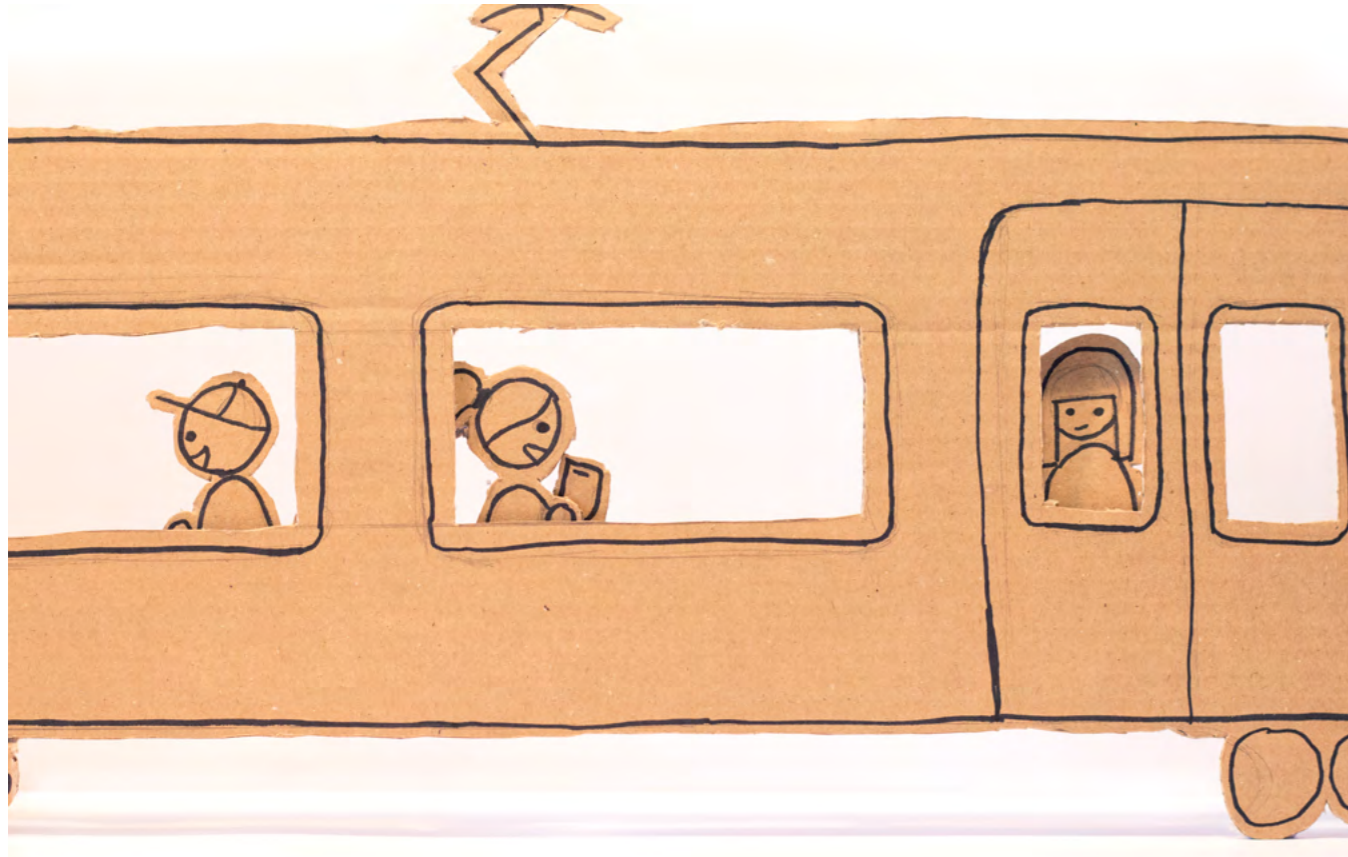
Look:

The look should be **refreshing** preferable something that has not been done many times before, while still having a sense of seriousness. Look for new trends in UI design and deliberate if it fits the WhereTrip brand.

Usage Context

WhereTrip is a digital product that can be accessed from a multitude of devices. This means the context in which it is used is very unpredictable; it can be used in virtually any context. However, some scenarios might be more common than others. Here are four of them:

Train:



Situation: While being bored on a train, a user stumbles upon WhereTrip through an ad on Facebook.

Mindset: At this point, they are not directly interested in booking a trip. They are just wasting some time while on a train.

Questions: What kind of website is this? What do they do? Is it useful for me?

Essential pages: Tour page to learn what WhereTrip does and the Results page to see what is on offer.

Environmental Factors: Somewhat easily distracted, due to other people on the train. Hard cut-off the moment the user arrives at their destination.

Duration: 5 - 10 min

Walking:



Situation: While walking through a city the user is reminded of their last trip, and becomes enthusiastic about going on vacation again. They decide to go back to WhereTrip.com and see what is on offer.

Mindset: The user is orientating and also windowshopping; looking at trips as entertainment.

Questions: What is available? How much does it cost?

Essential Page: Most of the time is spent on the results switching between different themes (maybe by going back to the landing page).

Environmental Factors: Easily distracted, because of traffic.

Duration: 15 - 20 min

With friends:



Situation: A group of friends is hanging out and decide to go on a weekend trip together.

Mindset: Searching for something everybody will enjoy and can afford. Also planning which dates are available.

Questions: What do we want to do?

Essential Pages: Most of the time will be spent on the results page, probably going deeper into the filters as there wishes become more defined.

Environmental Factors: As a group of friends together there is some banter, maybe the tv is on, so they are quite easily distracted. This is not a big problem since they have all evening, as long as it easy to pick up where they left off.

Duration: 2 - 3 hours

Booking:



Situation: Two people are sitting behind a computer ready to book, they already know what kind of trip they want.

Mindset: Book the trip, make sure everything is done right.

Questions: Is everything the way I want it to? How do I book my trip?

Essential Pages: The trip pages are significant here, checking if everything is right (flight and accommodations).

Environmental Factors: Very little, except they are looking at the desktop page now.

Duration: 20 - 30 min

Target Audience:

Millennials (actually 20 to 35-year-olds, since Millennials will be older in ten years), with a higher education. Students or young professionals, they have not that much money to spend but are flexible with their time since they have no kids. "Millennials value flexibility because balancing work and their personal lives is very important to them" (Smith & Galbraith, 2012). The target audience is world citizens (Benckendorff, Moscardo & Pendergast, 2010, p20); this means going to other countries is a relatively common for them, unlike for example their parents or grandparents (Machado, 2015). It also implies not to focus on a specific nationality, WhereTrip is an international product. A particularly fascinating sub-user-group would be international students. An exchange student from Asia living in Europe

for the first time, for example, has the opportunity to visit and discover places they would never go to if they were in Asia. However, now that they are living in Delft for a year or two they might want to visit Berlin or Faro one weekend if the price is affordable. We expect that our users value more what they are doing and seeing than where they are doing it, especially if it fits their budget. An interesting trend under millennials is the feeling of entitlement; the generation has come to expect a high-quality product for an affordable price/payment scheme. "Companies are starting to adjust not just to millennials' habits but also to their atmospheric expectations" (Stein, 2013). This can be seen in the success of companies like Uber and Airbnb that have this quality high-end look but deliver services at a lower price than the regular providers.



Program of requirements and wishes

Look and feel:

Requirements

1. The site must feel adventurous (exciting) towards most of the users
2. The site must feel trustworthy for most of the users
3. The site must have a clear (uncluttered) look for most users

Wishes

1. The site should feel high-end (with budget pricing)
2. The site should feel modern/contemporary
3. Colors on the weather map should correspond with the user's expectations

Usability:

Requirements

1. Users must have more options to choose destinations
2. It must be clear what is included in the listed prices
3. Users should be able to filter their results with a wide range of options
4. Relevant information (such as flight info) must be readily accessible and presented prominently

Wishes

1. Users should know what input is expected
2. Users should be able to find most relevant information for their trip on the WhereTrip website, without going to external sources.
3. Mobile users should be able to get quickly get back to the process while multitasking or when getting distracted

Experience:

Requirements

1. The site must excite users to go on a trip
2. WhereTrip's concept must be communicated clearly
3. Discovering and booking trips must be a fluent experience
4. Users must want to return to the site

Wishes

1. Users should feel like they get a great deal
2. Users should feel like they have personal experience
3. "Window shopping" should be a satisfying experience

The Design System:

Requirements

1. The design system must be easily accessible to all employees
2. The design system must contain readable explanations
3. The design system must contain usability patterns
4. The design system must contain design examples (Do's AND Don'ts)
5. The design system must contain examples of when and how to use pre-made components.

Wishes

1. The design system should contain the code of pre-made components
2. The design system should contain information on how to expand the system
3. The design system should contain information on how to alter the system

Phase 2:

IDEATION

During the ideation phase, user flow and the look and feel of the website are split and developed independently. Several concepts are generated for each and tested at the end of the cycle. Eventually, two concepts are merged into a single concept, based on the results and discussions within the company.

This design will be worked out during the production phase.

UX Concepts

A morphological chart is made to generate partial solutions. From this chart groups of solutions are combined into concepts for the general user flow. These concepts are prototyped and tested during a user test.

The reason for designing and testing multiple UX concepts is to come up with a set of behavioural patterns, that fit WhereTrip's principles. These are interactions that are repeated on the site that gives the user a feeling of consistency and predictability, that increase the trust in the website and make them want to come back.

Morphological Chart:

Five problem categories are defined; concept communication, search form, results, filters, and trip presentation. A brainstorm is done for each of these categories, finding multiple ways of solving the problem and collected in a morphological chart (Figure 38), for a fully developed version see Appendix K. Groups of solutions are clustered together; here the method deviates a bit from the morphological chart method since some of the solutions are from the same problem category. After trying several combinations, the following

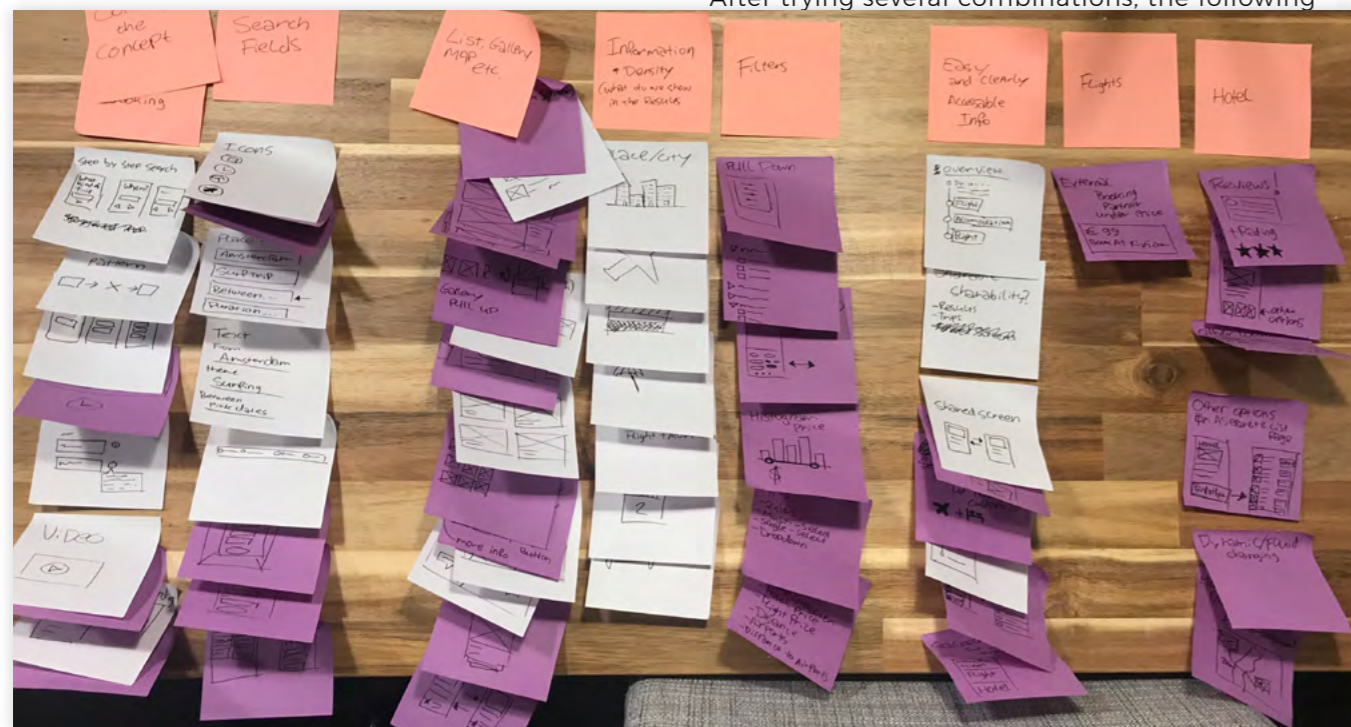


Figure 38: Morphological Chart on post its, a digital version can be found in Appendix(XX).

concepts are developed:

- Feed Forward: Focus on informing the user what they did, what is expected and what will happen (Figure 39).
- Improved Original: Try to fix what was wrong with the old site, mostly by giving the user more information (Figure 46).
- Modern App: Display only essential information in contained screens, try to minimize scrolling (Figure 52).
- Swift and Deep: Make it in such a way that users can go through the site quickly, but if they want they can go deep (lots of filters and customization) as well (Figure 59).

Each prototype is made interactive so that the same set of basic tasks could be executed:

1. Search for a 3-day city trip, from Delft, with a budget of about €100, between 8 and 29 December.
2. Filter the results not showing trips to Asia.
3. Select the trip to Brussels.
4. Change the flight.
5. Change the hotel.

For a complete overview of all screens in the prototype see Appendix L. What follows is a walkthrough of the key features of the prototypes.

The general flow of these concepts are wire-frame prototyped using Sketch and made interactive with the use of InVision. A uniform, neutral look (white background, light gray cards, dark gray boxes for pictures and orange as an accent) was chosen for all prototypes, to limit bias from test participants.

Walk-through:

Feed forward:

Instead of a regular input field with labels, users are asked their search query in question form (what kind of trip do you want to make?). This communicates the exact meaning of the input field and gives a personal feeling (Hypothesis 1 & 2). Users select the right answer by swiping horizontally through the options and go to the next question by swiping up (Figure 40).

On the results page, a recap of the user's search query is given, and the results are displayed in a row, so users scroll through them horizontally (Figure 41). The filters button is placed at the bottom, a panel with filters pops up, and users can swipe through the different screens horizontally (Figure 43). When a city is selected, a description is presented as well as the types of activities that can be done (Figure 42). The user can choose this trip by pressing a button.

Users are asked to pick a flight and a hotel, in both cases they have the option to see more information about their selection before choosing (Figure 44). After that, they are presented with the possibility to change the hotel or flights, or go to the external booking partners (Figure 45).

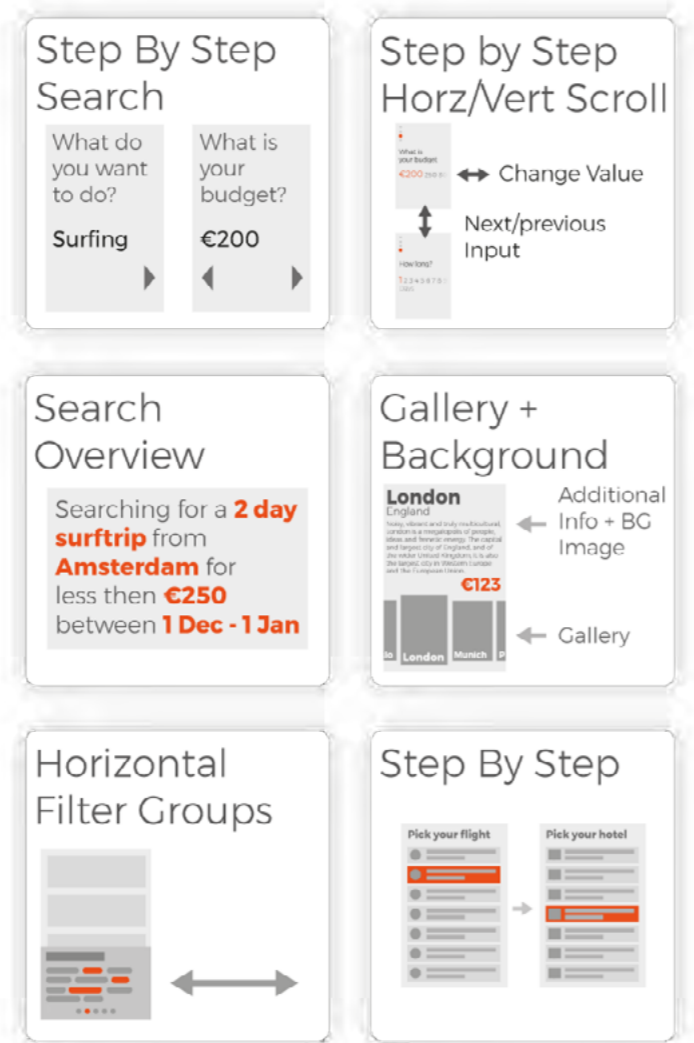


Figure 39: Key solutions for the feed forward concept

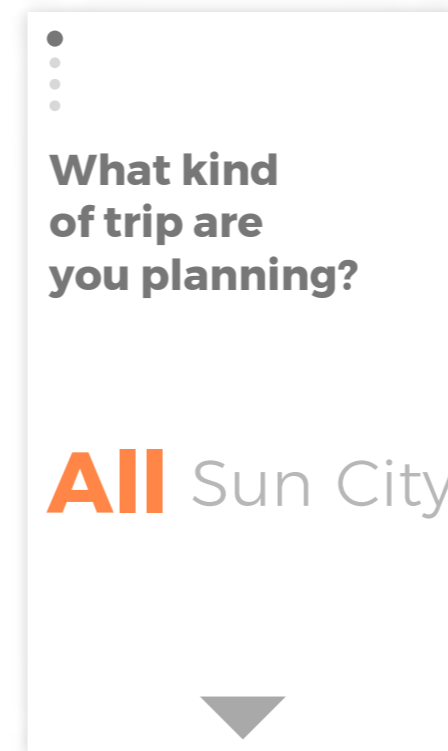


Figure 40: Search query through questions, horizontal swiping to select vertical to confirm.

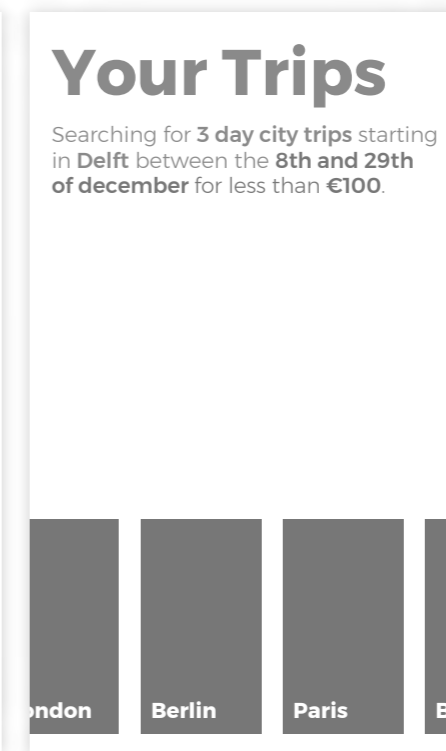


Figure 41: Results with search summary. Horizontal scrolling through results.

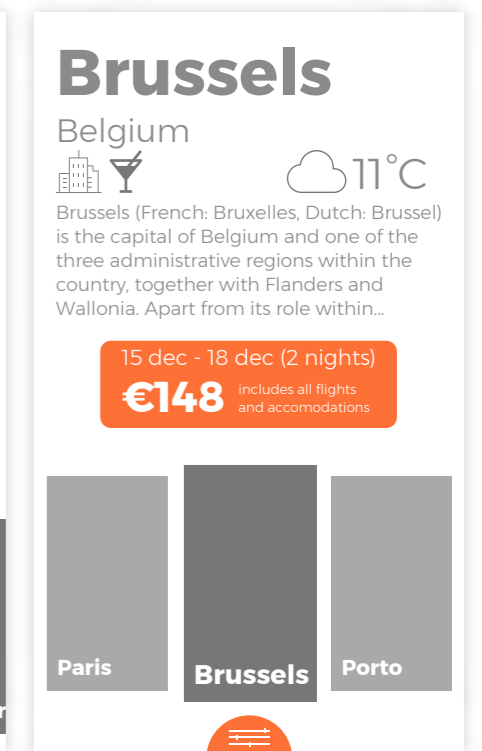


Figure 42: More info on results page, with description and types of activities.

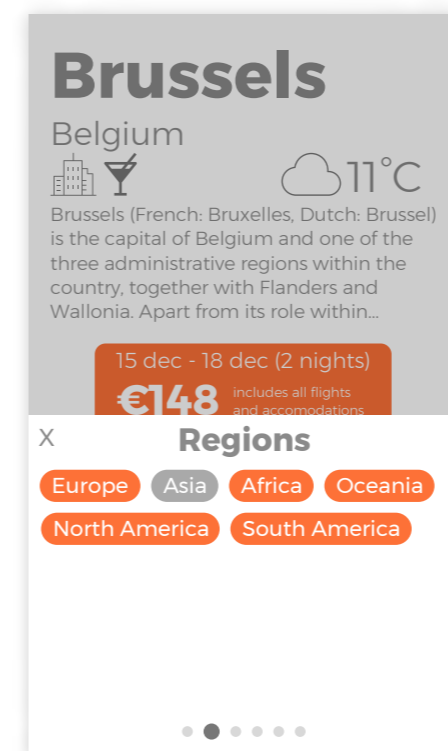


Figure 43: Filter panel add the bottom, horizontal swiping to go through different filters.

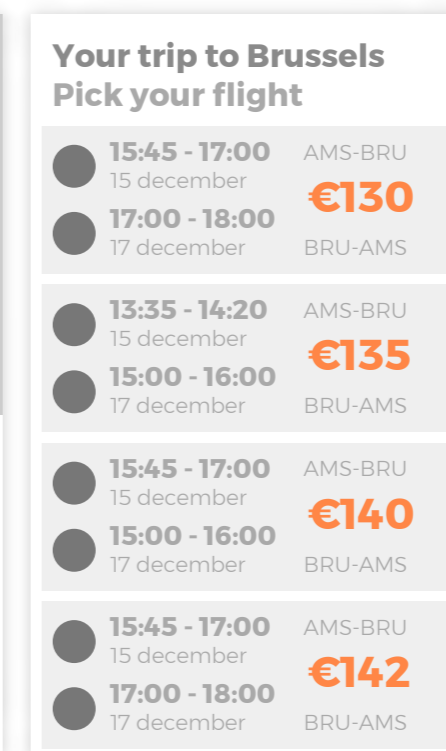


Figure 44: Users have to pick a flight and hotel themselves.

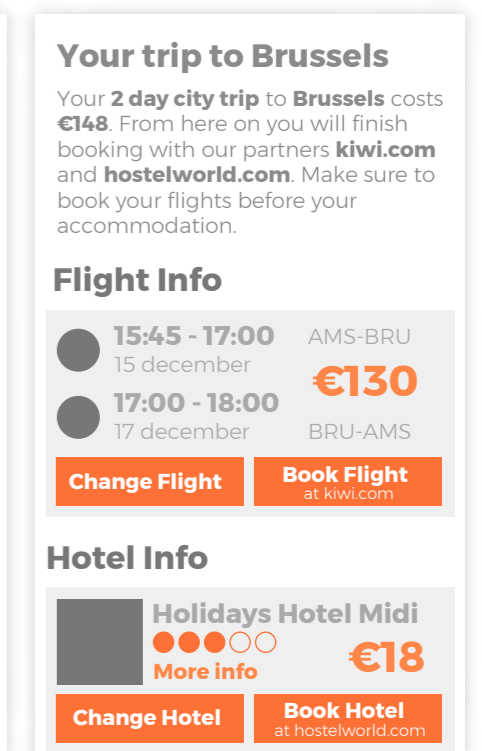


Figure 45: Trip overview, change hotel/flight and go to the external booking partners.

Improved Original:

The search page is similar to the current design (Figure 49) with information buttons for each field. If the users do not understand what is expected of them, they can click on the button, and will get an explanation of what goes in the field and how it will affect the search. This helps to communicate WhereTrip's core concept (Figure 47) (Hypothesis 3).

The results are presented in a vertical list (Figure 48). The filter button is on top when pressed panel drops down with all filter options, the user can scroll to these vertically (Figure 50). The panel is closed by pressing the filter button on the bottom of the panel.

There is a single trip page, as the original design, but in the overview, there are now two buttons that will scroll to the flight and hotel sections (Figure 51), this prevents users from missing vital information (Hypothesis 4). In these parts there is an option to change the flight and hotel, that will take the user to a separate page. On that page, users have the opportunity to request more information about a particular flight or hotel, before choosing.

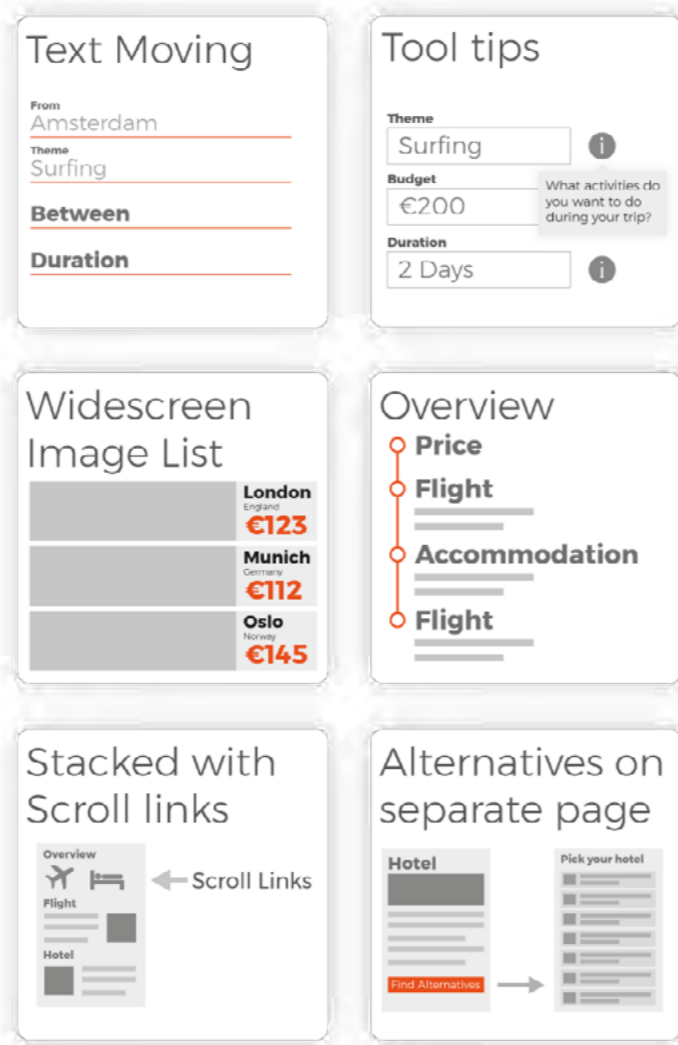


Figure 46: Key solutions for improving the original concept

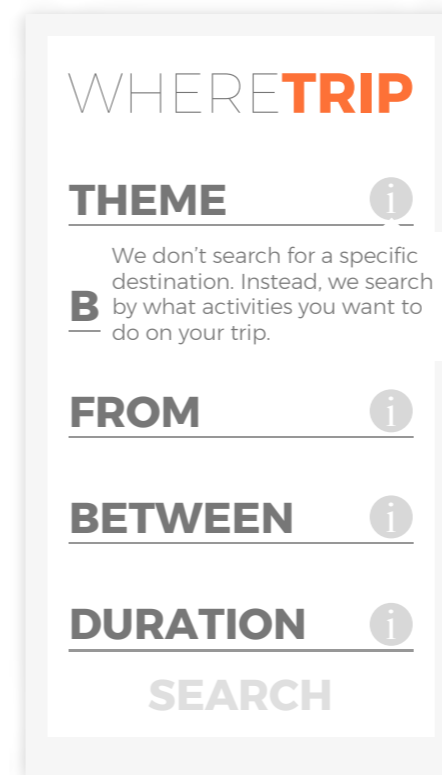


Figure 47: Tool tip explanations for each field in the search panel

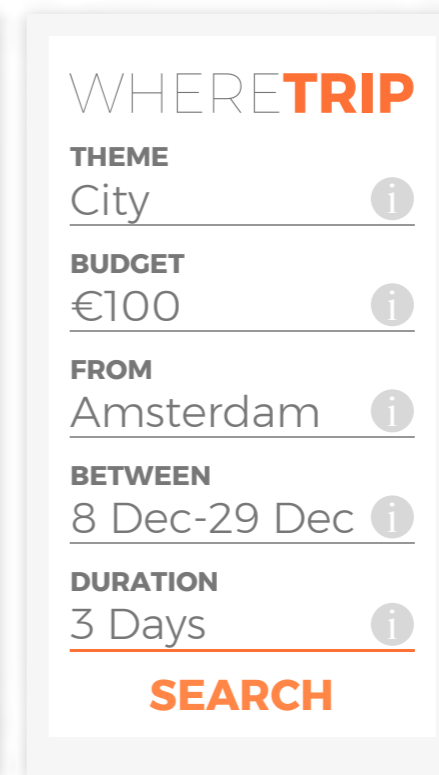


Figure 49: Similar to the original design of the search panel.

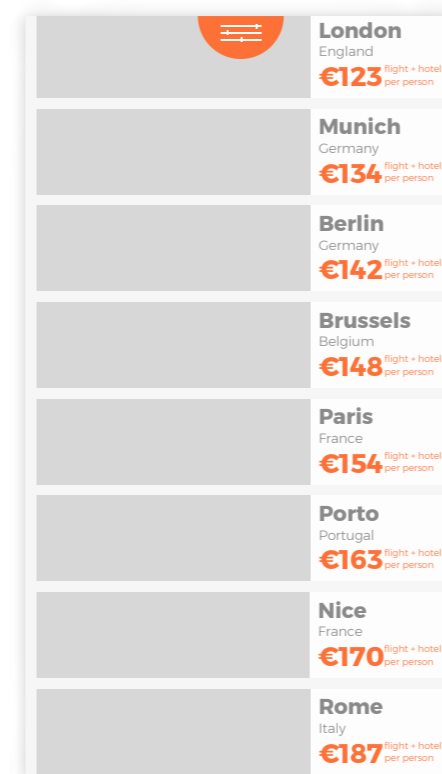


Figure 48: Pretty standard result list, filter button on top.

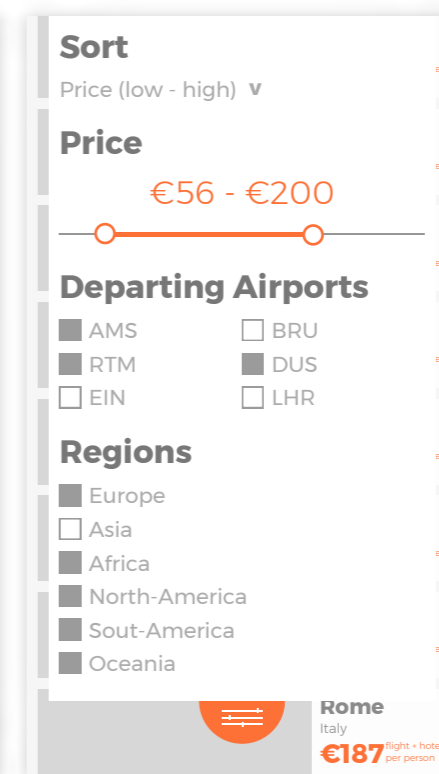


Figure 50: Filter panel, scroll vertically for more filters.

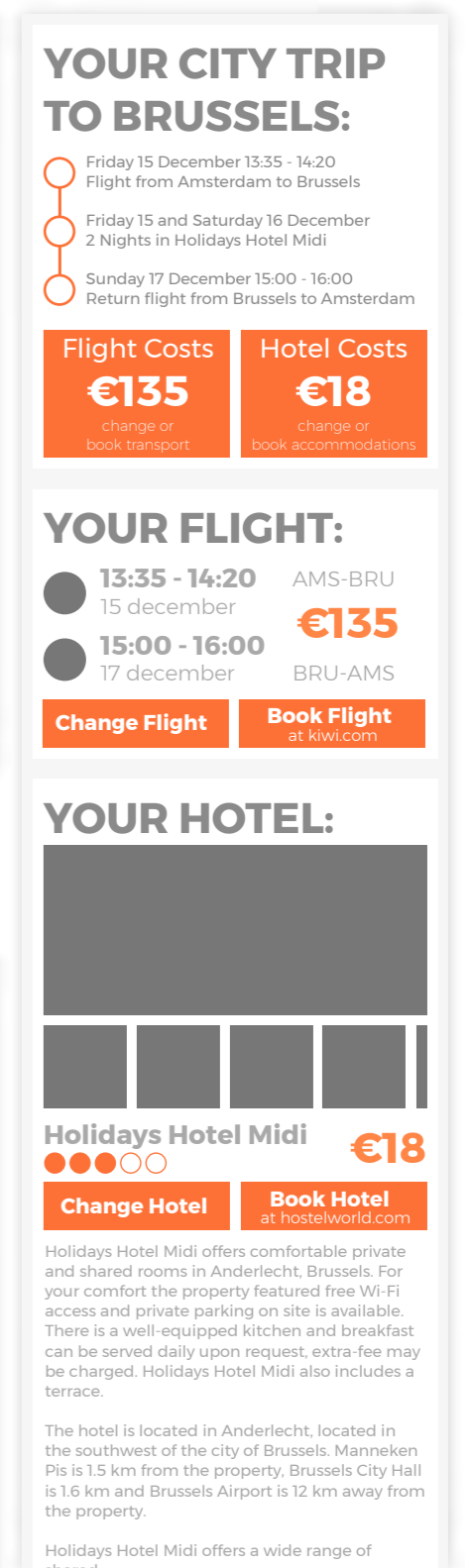


Figure 51: Trip overview, all on the same page, but with scroll links on the top to flight and hotel sections. change hotel/flight and go to the external booking partners.

Modern App:

This concept uses the regular search form, but instead of listing all option immediately, the form grows (Figure 53) when the previous field has been filled in (Figure 55). This steers and focuses the user (Hypothesis 5).

The results are presented with big cards (Figure 57). On the right bottom there is a button for filters. The filter panel slides in from the right (Figure 54). As with the "Improved Original" concept, the filters are presented vertically. The panel closes by tapping on result on the left.

The trip page is split into three tabs; overview, flight, and hotel. This prevents the need for scrolling on long pages and informs users that more information to be found (6). The overview tab gives a summary of the trip and informs the user about the booking procedure (Figure 56). The flight and hotel tabs show detailed information and allow users to change their flight or hotel and go to the external booking sites (Figure 58).

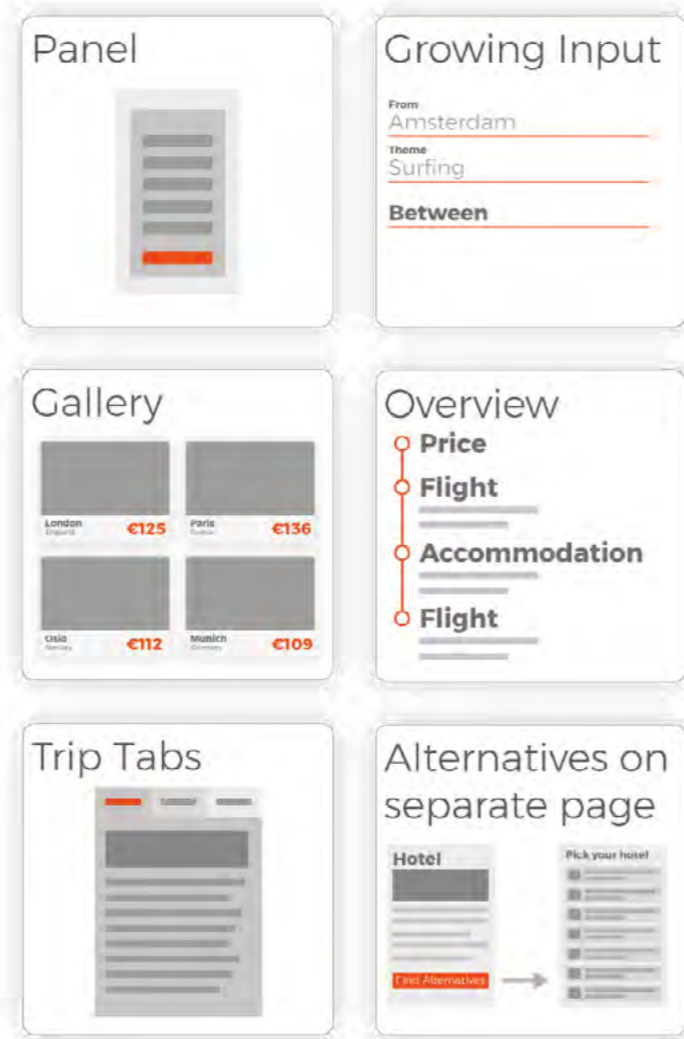


Figure 52: Key solutions for the modern app concept

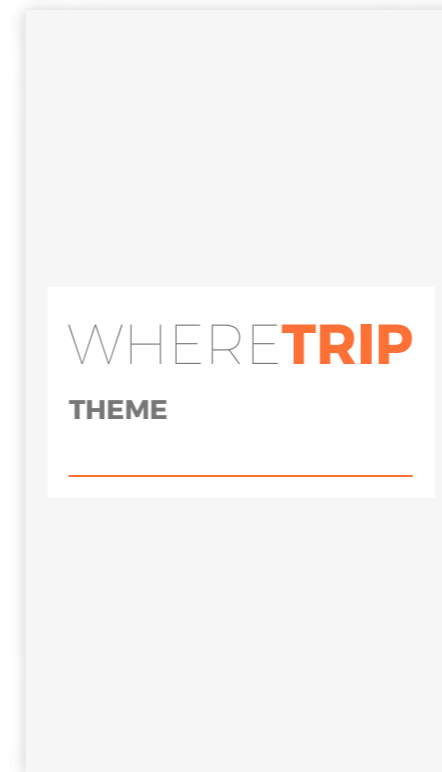


Figure 53: Search field inputs are staggered to focus the user.

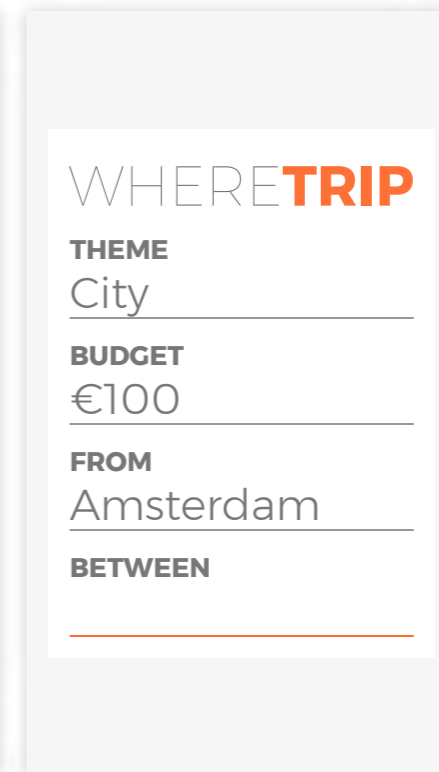


Figure 55: The search form grows every time the user fills in a field.

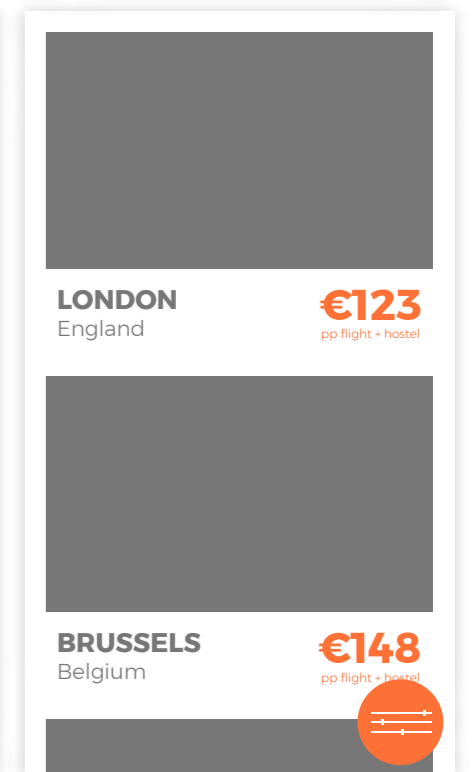


Figure 57: Results are listed in big cards (possibly even in a stack)



Figure 54: Filters slide in from the side, scrolling vertical.

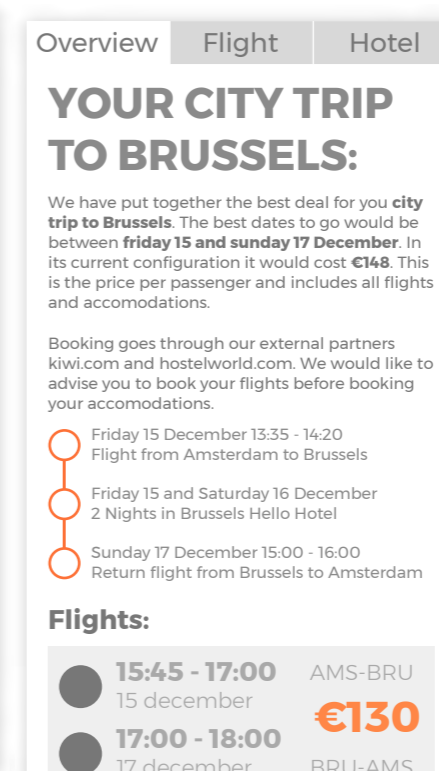


Figure 56: Trip page is divided into tabs, overview, flight and hotel.

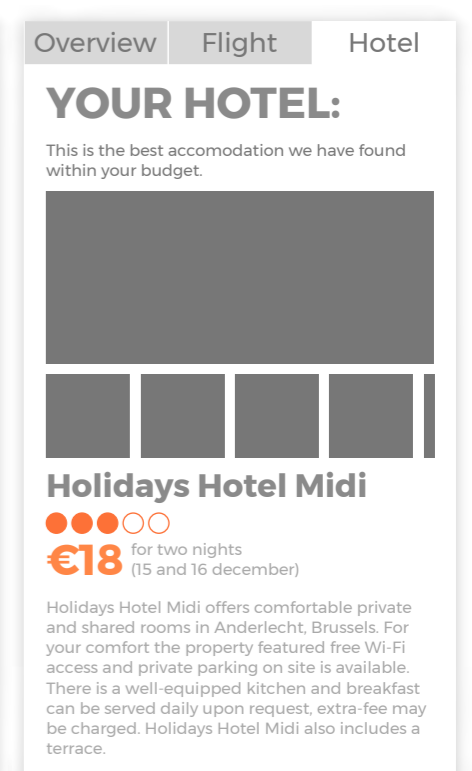


Figure 58: Tabs organize information and ensure critical information is easy to find.

Swift:

This concept loads all possible trips right away and allows users to filter them afterwards (Figure 60). This immediately engages users and inspires them with suggestions (7 & 8). The filters button on top opens a filter panel; the filters are in categories that can collapse, and the search options are incorporated into the filters (Figure 62).

Results only show names of the city; users are encouraged to click on the results to "discover" a bit more information (price, rating, country). A second tap opens the trip page (Figure 61).

The trip page is similar to the "Improved Original" concept (Figure 63) with the most significant difference being that when changing the flight or hotel, those options are presented on the same page (Figure 64).

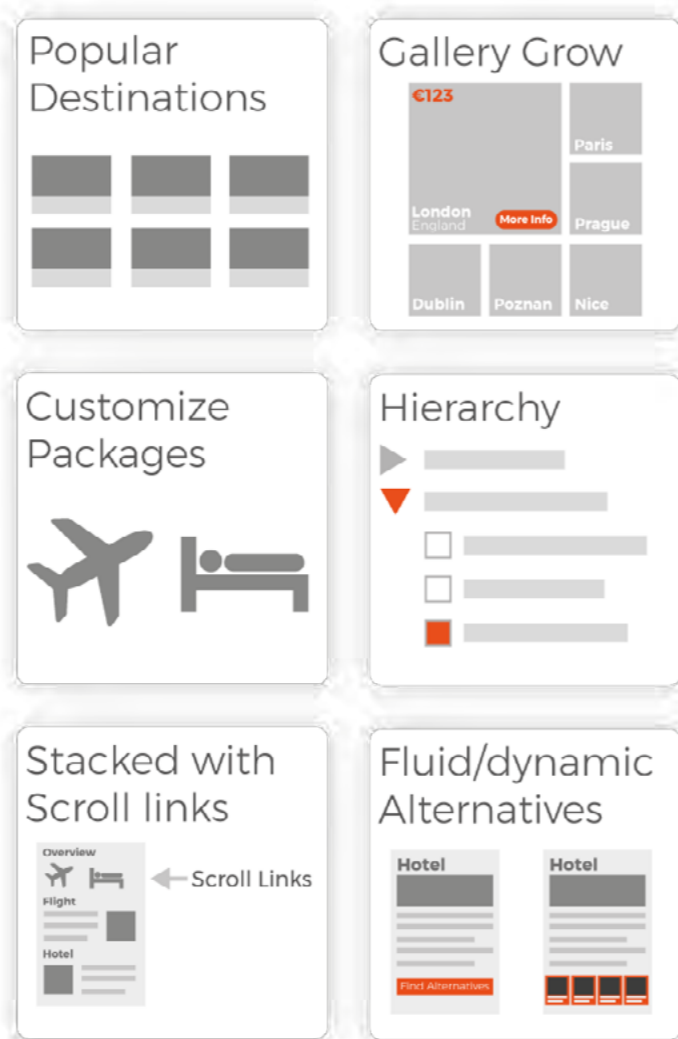


Figure 59: Key solutions for the swift concept

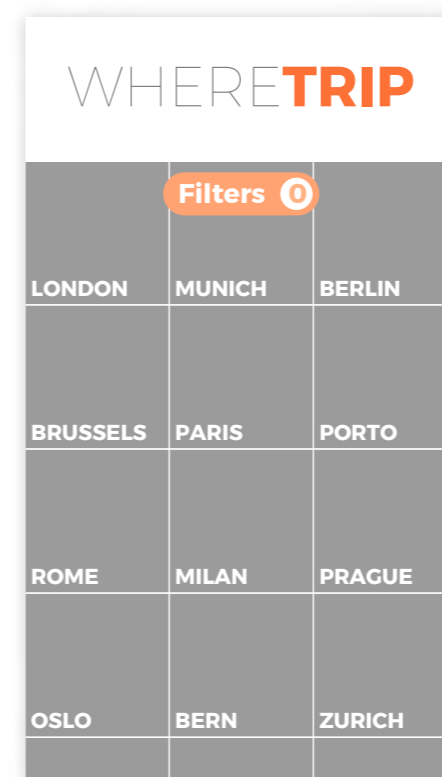


Figure 60: Results are loaded immediately based on user IP location.

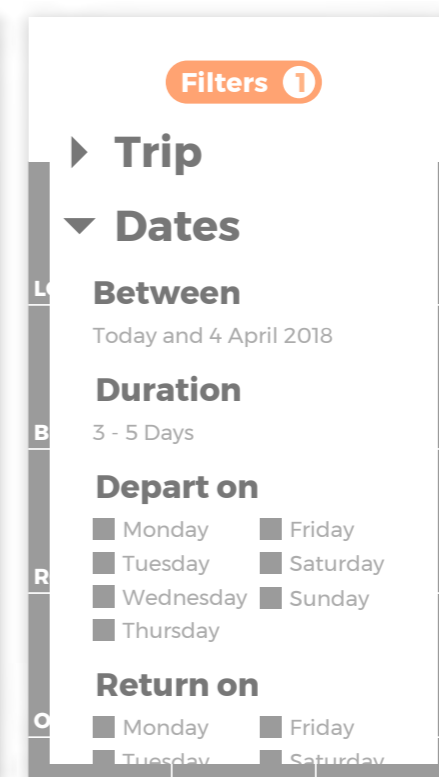


Figure 62: Search query and filters are combined, more filter options available.

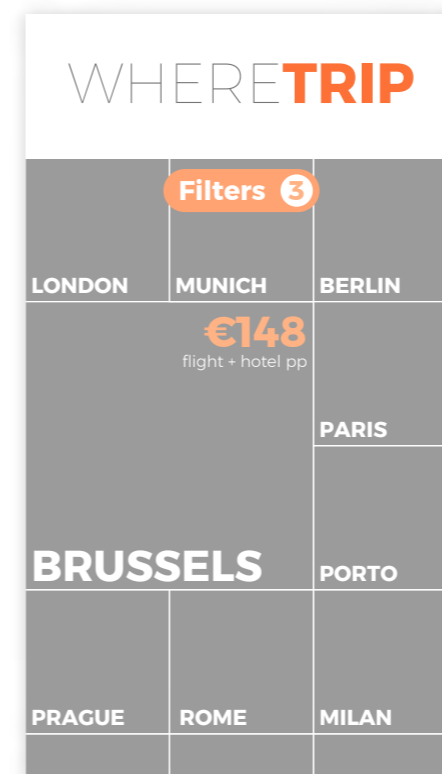


Figure 61: "Explore" by tapping once, get more info. Tap again to go to trip page.

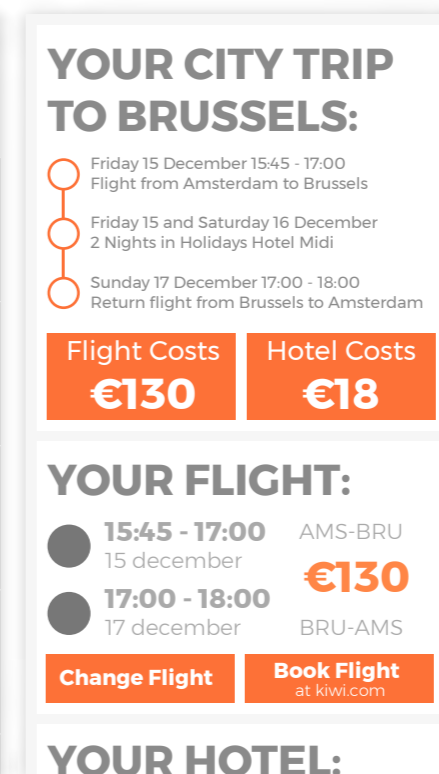


Figure 63: Trip page a single page (with scroll links).



Figure 64: Change flight/hotel happens on the same trip page.

Aesthetic Concepts

To determine a general direction for the look and feel of the redesigned website, several theme explorations are done. First, a mind map is created, out of which mood boards follow, which lead to aesthetic concepts.

Mood boards:

A mind map (Figure 65) with the four company principles (fluent, exciting, clear, cutting-edge) is made with regards to what those words mean for

styling. The results of the mind map are grouped.

Many UI examples and inspirational images are collected during the analysis and the beginning of the ideation phase (Figure 66). These example images are sorted into groups that result from the mind map and arranged into moodboards. Based of these moodboards, mood examples are created: Examples of UI elements that convey the atmosphere and emotions of the mood.

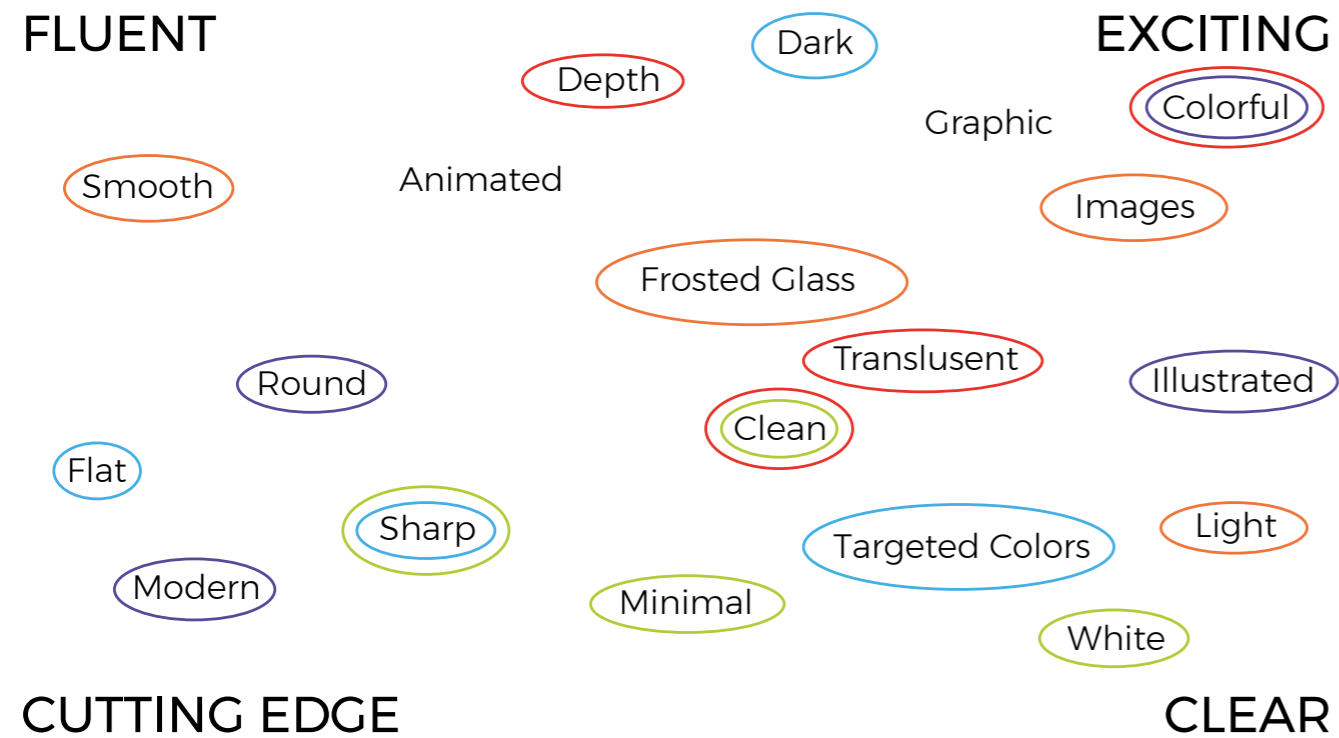


Figure 65: Styling mind map, colors correspond with moodboard titles on the next page.

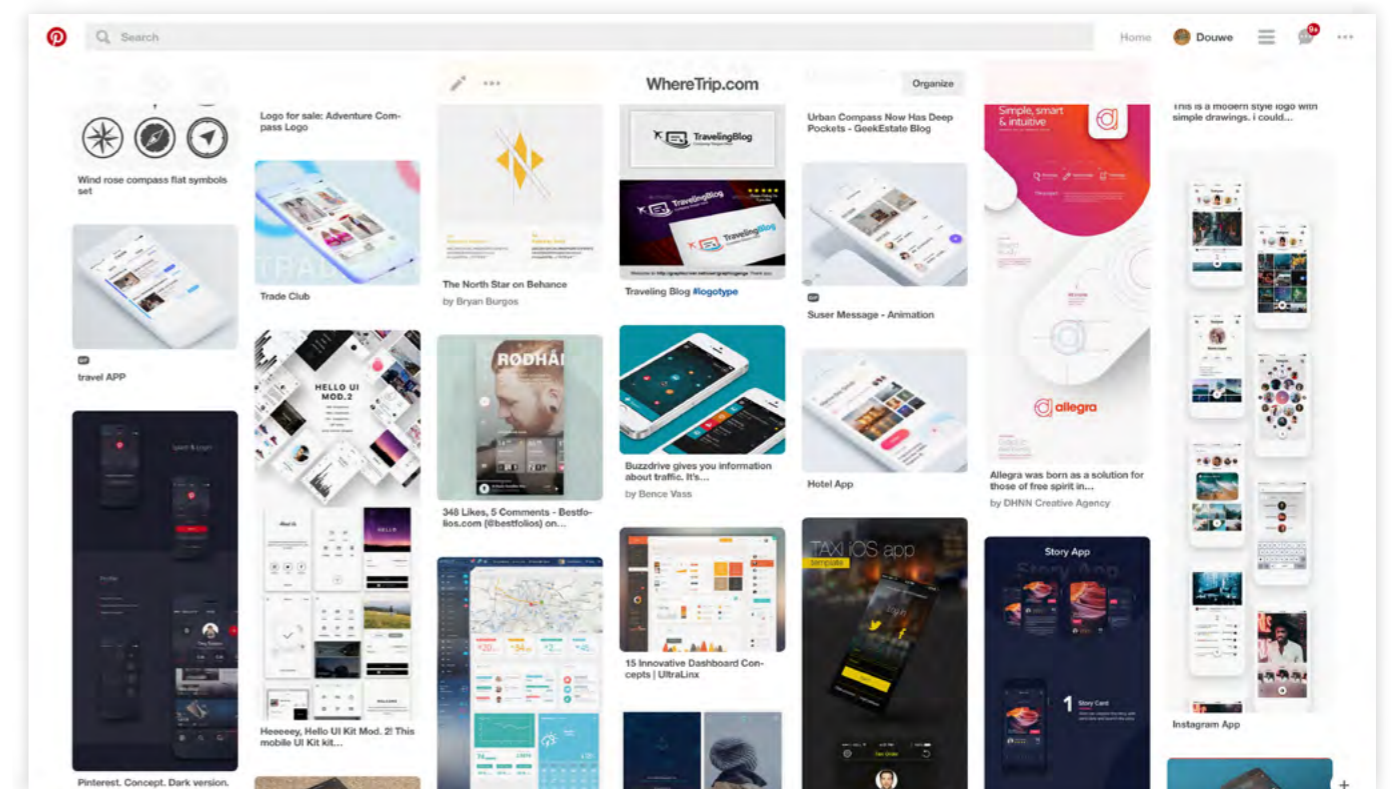


Figure 66: Screen shot of pinterest board with collected examples and inspirational images for the moodboards.



Figure 67: Dark mood board

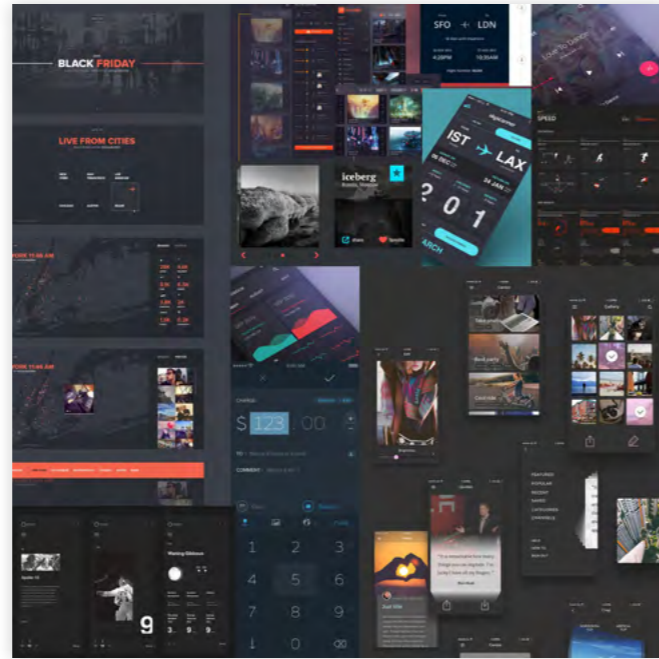


Figure 68: Dark mood example

Dark: (flat, sharp, targeted colors)

Dark mat colors are mysterious, luxurious and exciting, there is a nice contrast with colorful pictures, and the user can be easily be guided with one or two accent colors. It is also not very common to have dark interface, especially on a travel site, which would make it stand out. The rest of the mood board portrays sharp edges and flat panels, which fit well with dark themes.

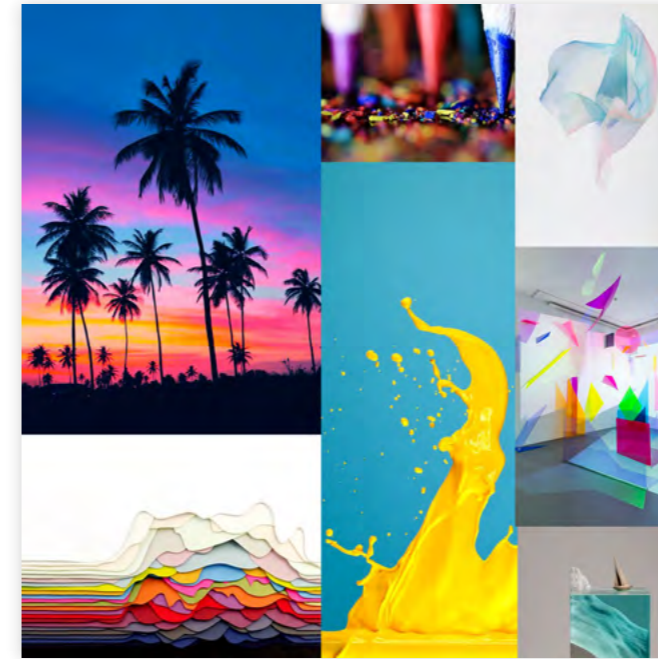


Figure 71: Depth mood board

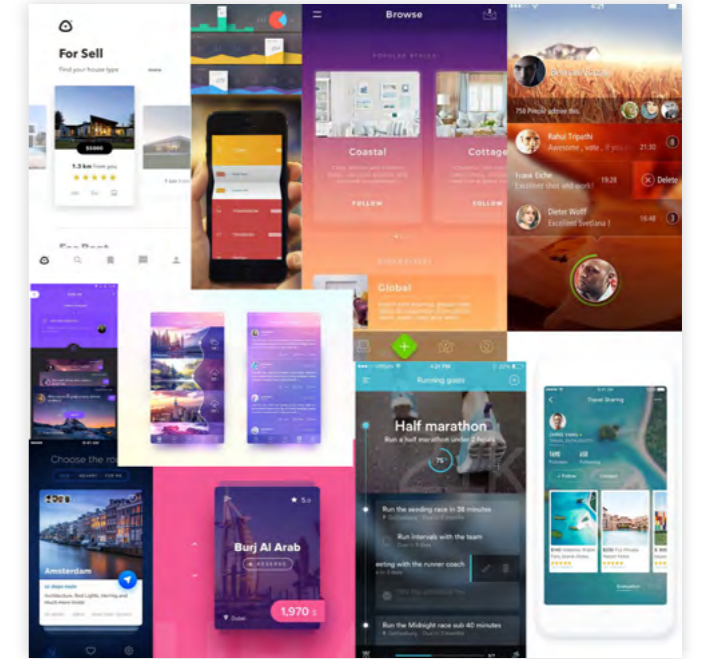


Figure 72: Depth mood example

Depth: (translucent, colorful, clean)

A contemporary design trend that shows depth in a page. This can bring the attention to specific components without resorting to dull solid color backgrounds. The illusion of depth can be created by blurring, gradients, layering, shadows, perspective, and desaturation and brightness.



Figure 69: White mood board

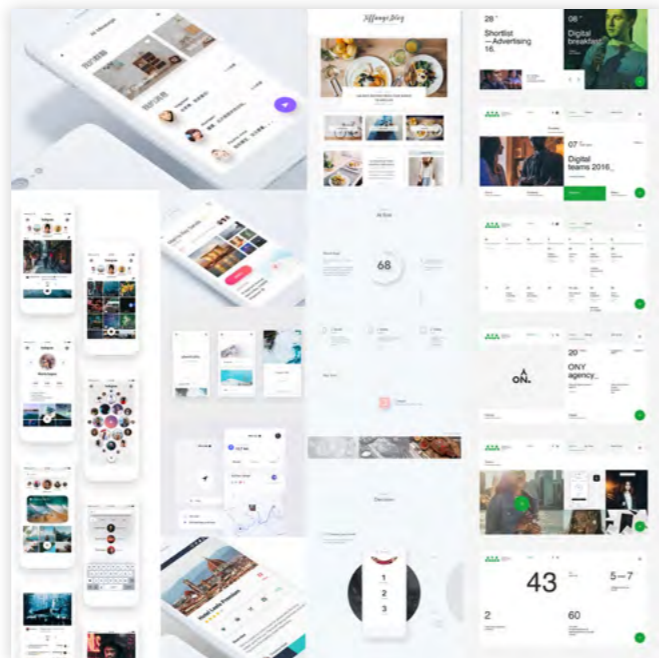


Figure 70: White mood example

White: (sharp, minimal, clean)

White with soft shadows and round shapes. This is a relatively common design aesthetic nowadays, seen often in both digital and physical products from Google and Apple. White backgrounds with white or light gray cards that have a subtle shadow. It gives a clean look and allows users to focus on images or a colored component.



Figure 73: Illustrated mood board

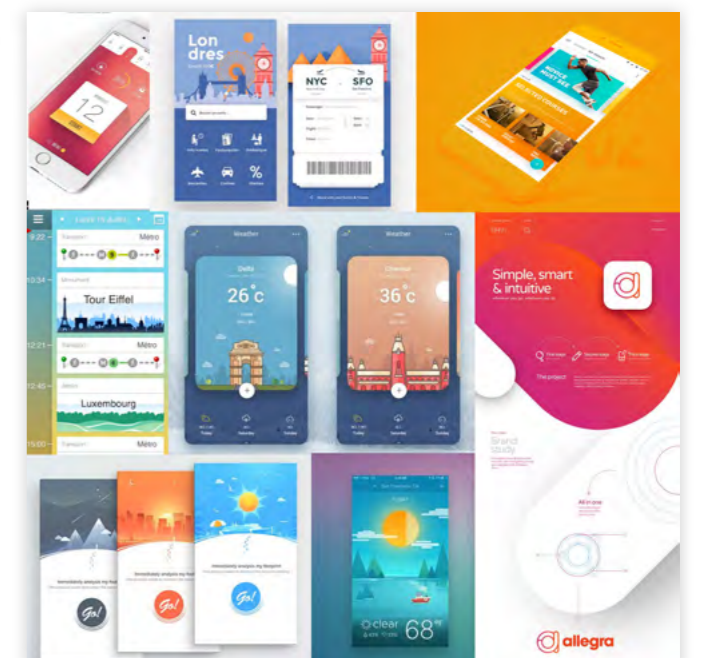


Figure 74: Illustrated mood example

Illustrated: (round, colorful, modern)

This aesthetic is often seen in start-ups, geometric vector illustrations make for lively, playful, pages. Illustrations are not the only part of this; the use of saturated colors, gradients, and rounded corners can approximate the same feeling without illustrations.



Figure 75: Frosted mood board

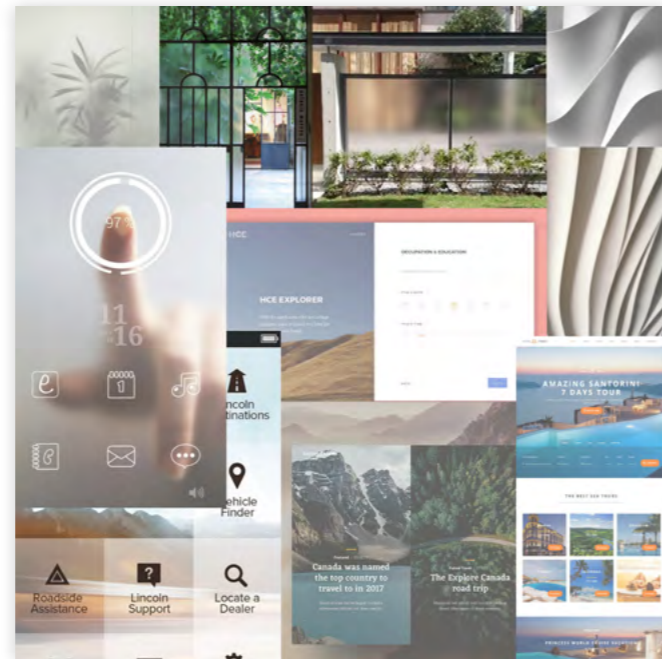


Figure 76: Frosted mood example

Frosted: (smooth, images, light)

This frosted glass style is an upcoming trend and breaks with the flat interfaces from the past few years. Apple has been slowly implementing this effect in their UI's and Windows did so as well in their recent update. What makes this style interesting is the ability to keep the feeling of the images without them becoming to much of a distraction.

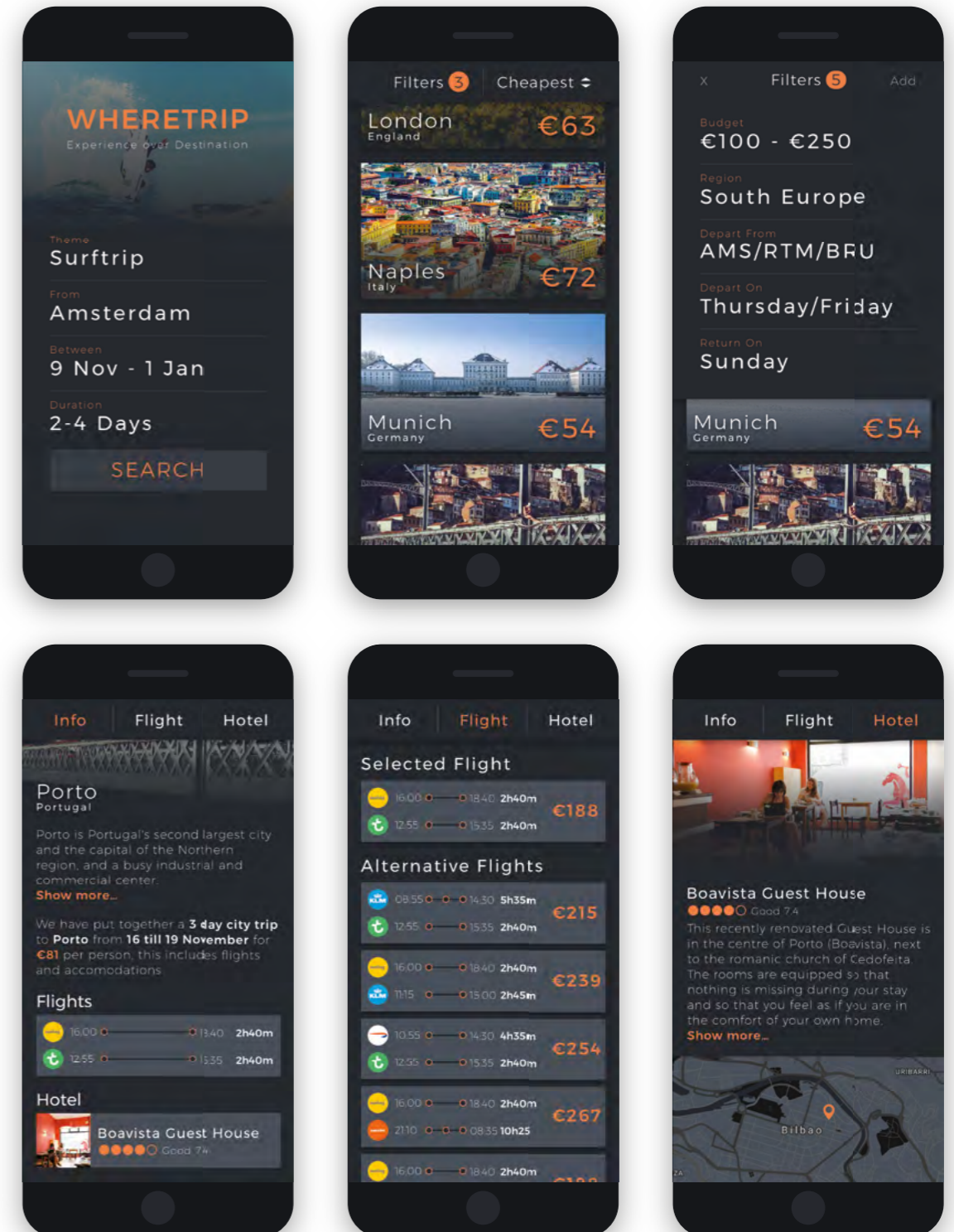
Mood sketches

With the mood boards as inspiration, five aesthetic concepts are developed. These concepts all have the same seven basic pages (landing/search, calendar, results, filters, overview, flight, hotel) but have a different look and feel. The differences are mostly found in the use of colors, fonts, sizes and the use of images.

Dark:

Aimed to have a sharp, luxurious (Hypothesis 9) and mysterious feel. The dark nature of this design might make some user curious and excited to

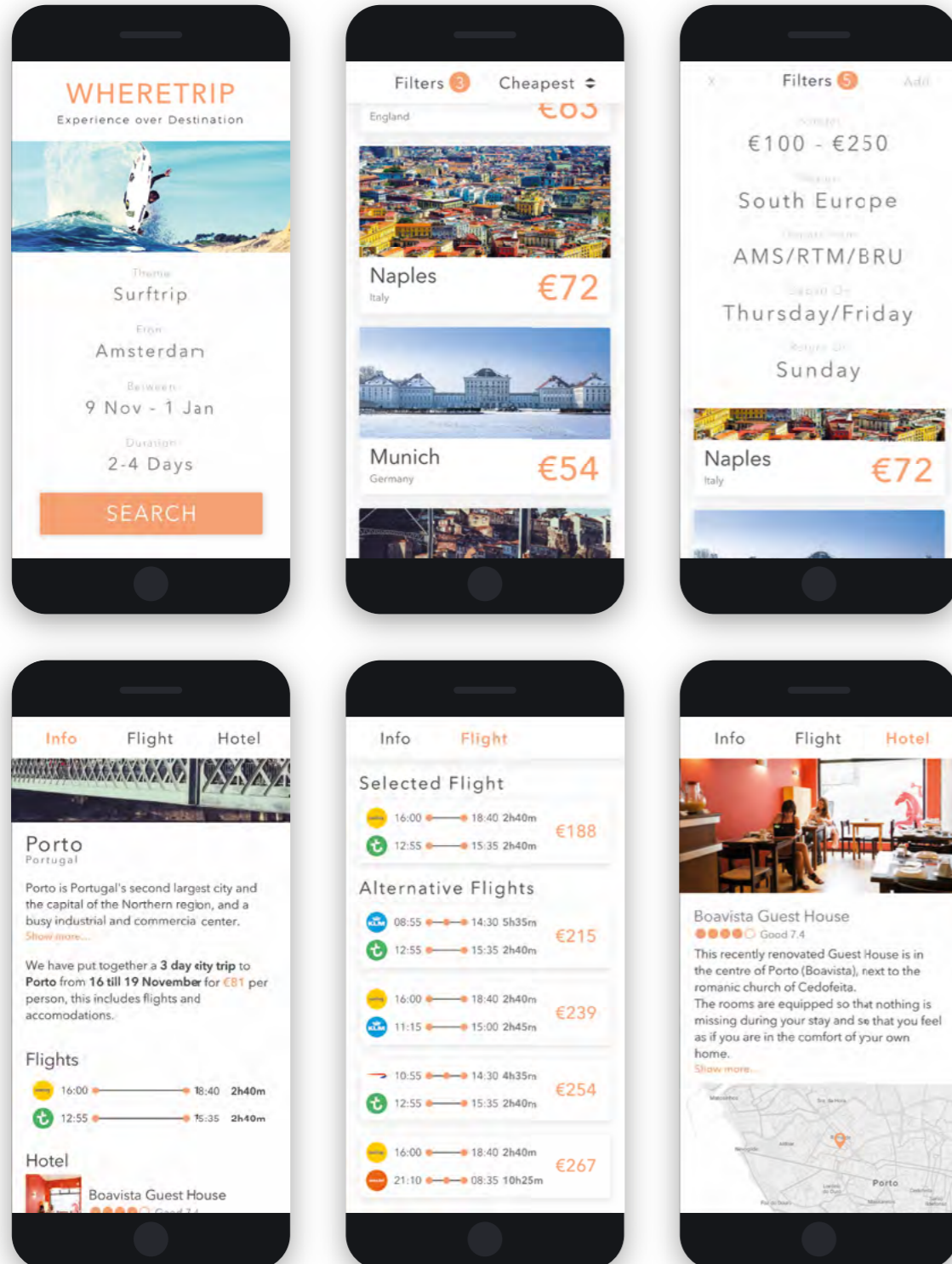
explore a vacation, but some user might find it of putting (Hypothesis 10).



White:

A very clean and minimal design. The aim here is to let the pictures do most of the "talking" when it comes to style (Hypothesis 11). There is a bit more

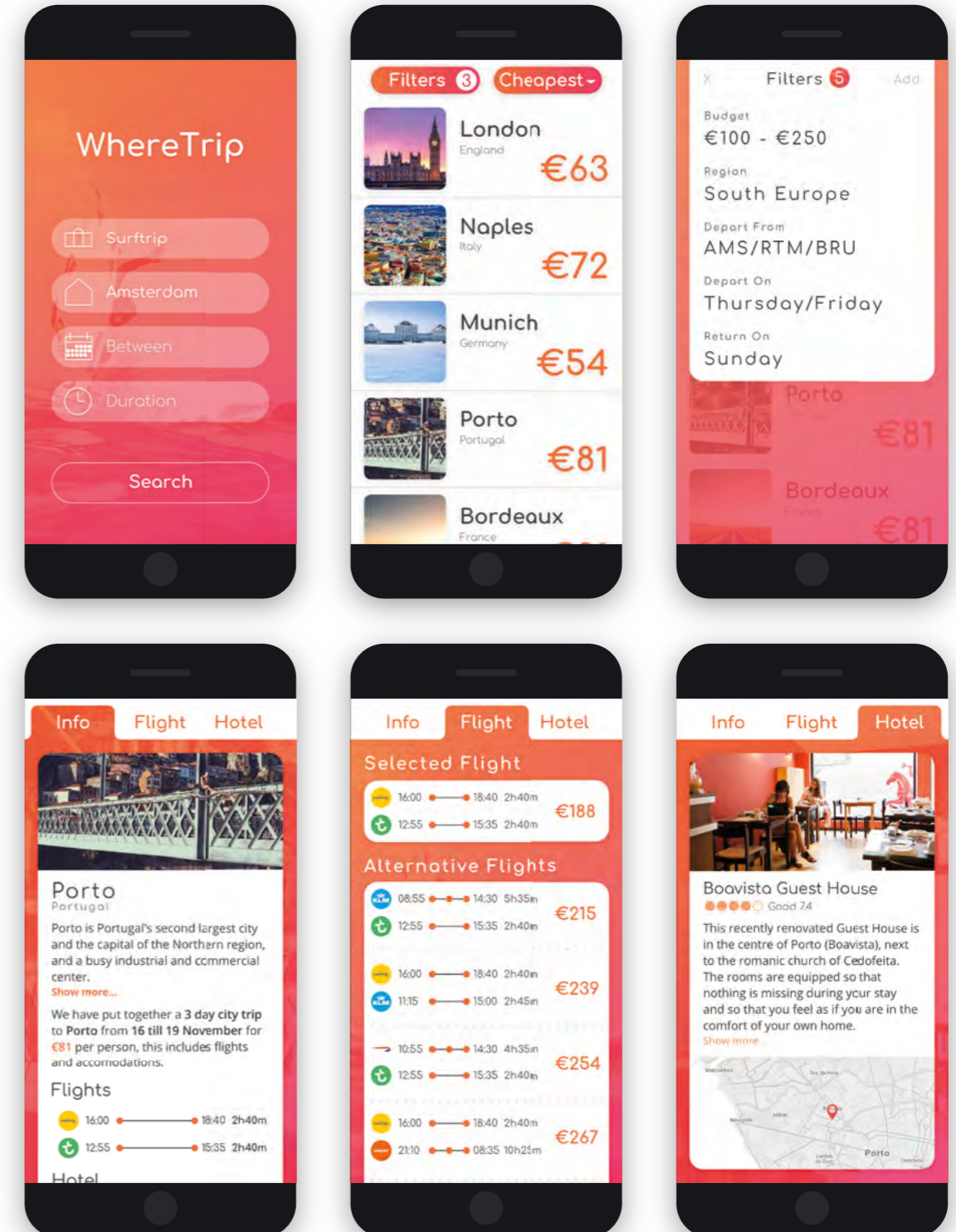
white space to keep the look clean (Hypothesis 12) and a more prominent contrast between the font sizes.



Colorful:

A modern, colorful look that is supposed to excite the user. Rounded edges and font give a bubbly feel that might fit with the target audience

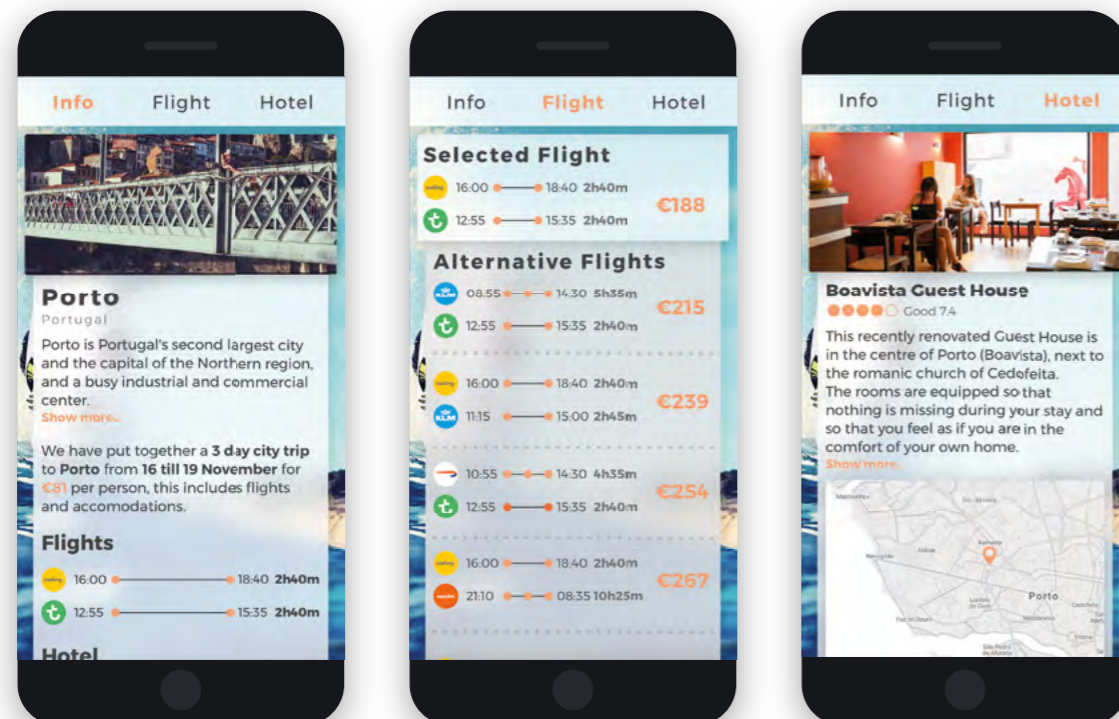
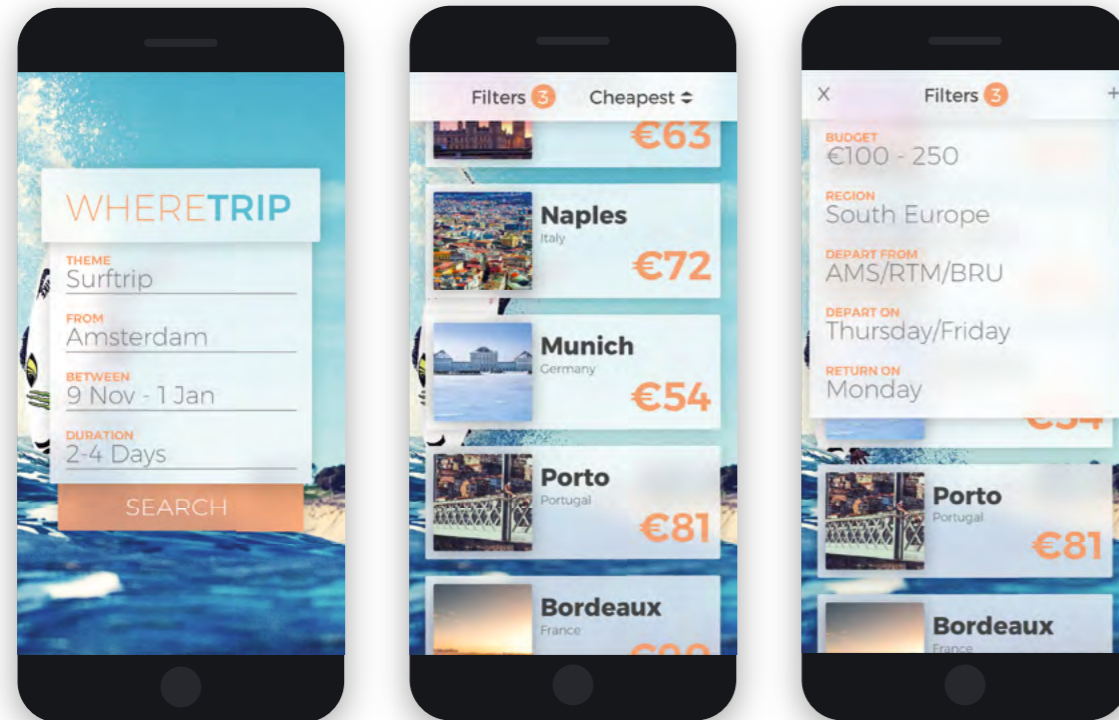
(Hypothesis 13). However, this look might also lack the ability to gain the audience trust because it is not very serious (Hypothesis 14).



Frosted Glass:

Frosted glass panels keep the background pictures visible. This allows us to set the mood and excite the user for their particular trip (and theme)

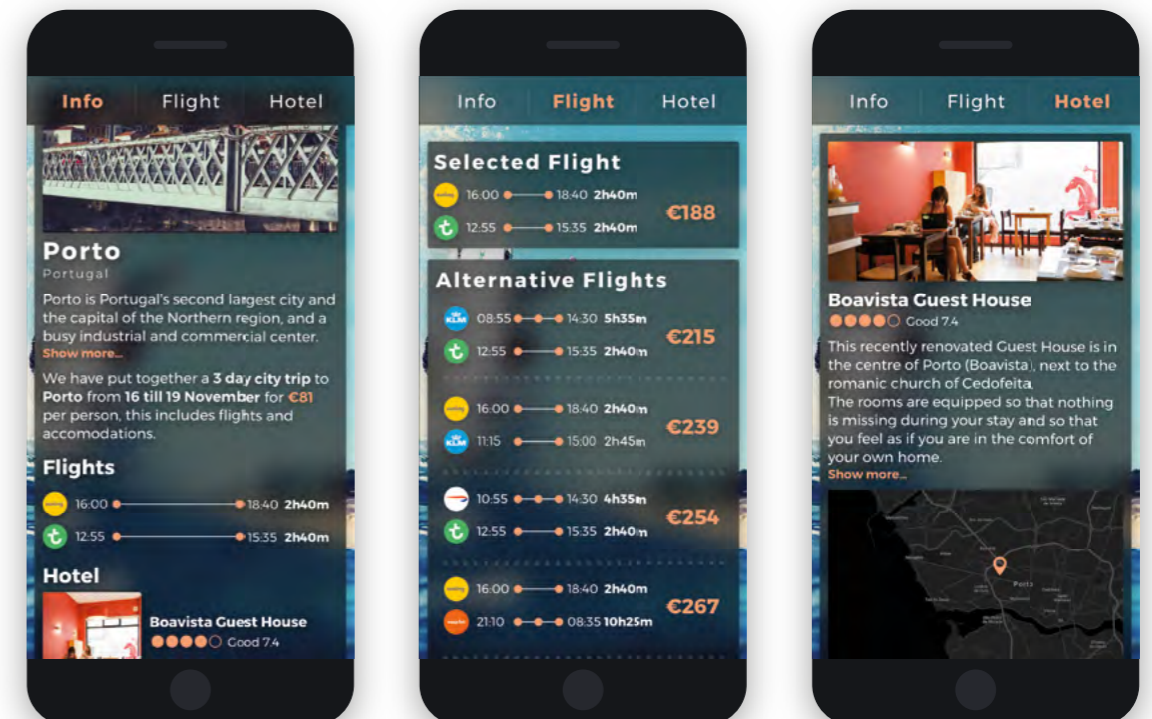
(Hypothesis 15), although this look might also be perceived as a bit messy (Hypothesis 16).



Burned Glass:

Similar to the frosted glass theme, but with dark panels instead of light. This sharpens up the look (Hypothesis 17) and creates that mysterious feel

(Hypothesis 18), but might also be perceived as bleak (Hypothesis 10).



Concepts User Test

To find out which flow and aesthetic concepts work the best, are most liked by the user, and are perceived as the best fit for the company principles, a second user test is conducted. During the development of the concepts, several hypotheses are made about the user's reaction; these are tested as well.

The hypotheses that have been made in the last two chapters are:

Flow:

1. The concept is better conveyed when input fields are presented with a question instead of a label.
2. Questions instead of labels give a more personal feel.
3. Tooltips are an adequate way of communicating the concept while using a more traditional input field design.
4. Users are less likely to miss vital information on a long page with the use of scroll buttons.
5. Users are more focused on what they need to fill in if input fields are staggered.
6. Tabs ensure that users have easy access to all information instead of scrolling on one big trip page.
7. Directly loading trips and give options to filter immediately engages the user.
8. Directly loading trips inspire the user.

Aesthetic:

9. Dark themes have a luxurious feel.
 10. Dark themes might put some of the users off, due to the gloomy appearance.
 11. Not much styling is needed if there is enough focus on pictures.
 12. Lots of white space and contrast between font size create a clean and luxurious look.
 13. The target audience might enjoy a colorful round look.
 14. A colorful round look might be perceived as not so serious and lacking in trust.
 15. Focus on images, especially linked to themes, might excite the user.
 16. Reliance on the use of background images might make a styling look messy.
 17. Dark frosted panels make background images seem less messy.
 18. Dark themes create a mysterious feel.
- As mentioned before, the criteria for the concepts are not only based on these hypotheses but also on the participant's personal preferences and the company principles; Fluent, Exciting, Clear and Cutting-Edge.



Figure 77: User test setup, placing concepts on scales.

Test Procedure

Participants get a short introduction about the company, the assignment and the purpose of the test. They are also told about the split between flow and aesthetic concepts. Finally, they are asked to think out loud.

During the aesthetic part of the test, participants are shown the mock-up screens on a smartphone. They also have an overview of all the screens per aesthetic concept on a laptop they can scroll through. They are asked to place each concept (labeled 1-5) on the following scales.

Dislike - Like

Confusing - Fluent

Dull - Exciting

Messy - Clear

Outdated - Modern

These scales are chosen and explained to the user for their ergonomic qualities. The scales are 1 - 10 and two concepts on the same scale cannot be on the same number, the aesthetics are placed on the scales with a poster buddy. This way of taking a survey is more cognitive and forces participants to think (Figure 77).

To test the smaller nuances between aesthetic concepts users are also asked to do the same for scales that have keywords that much closer related.

Sharp - Fluent

Playful - Exciting

Minimal - Clean

Chique - Luxurious

These scales are explained to the user with hedonistic (pleasure) qualities in mind. If the user finds neither of the two keywords to be fitting, they are asked to place them somewhere in the middle. In this way the most outspoken concepts

can be found.

In the second part of the test, participants are guided through the flow prototypes while thinking out loud. As mentioned before, each prototype has been made in such a way that the following steps can be accomplished:

1. Search for a 3-day city trip, from Delft, with a budget of about €100, between 8 and 29 December.
2. Filter the results not to show trips to Asia.
3. Select the trip to Brussels.
4. Change the flight.
5. Change the hotel.

Again, users are asked to place each concept (labeled A-D) on the following scales:

Dislike - Like

Fluent

Clear

Exciting

Novel

In the final exercise, participants have to rank how well the themes fit each ux concept on scales. This indicates which combination of concepts would work well together.

Participants:

The test was conducted with eight participants between 20 and 35 years old, three female and five male. Four of them work full-time and the other four are master students. Two of the participants are (student) interaction designers, the rest have a variety of specializations. All of them made at least two short trips the past year, most of them were planned within two weeks of departure.

Results:

A considerable number of data points are collected from the survey (620) these and the calculations for the box plot can be found in Appendix N. This quantitative data combined with qualitative data in the form of user transcripts (Appendix M), help answer the questions posed at the beginning of this chapter. What follows is a summary of the most interesting findings.

The survey data is converted into box plots. To read a box plot; the two outer lines represent the maximum, and minimum value participants gave, the box itself represents the data between upper and lower quartile and the line in the box is the median. The smaller the box, the more agreement there is among the participants.

If we simply start by looking at most liked flow concepts (Figure 79), we see that swift is the clear winner; the highest median by far and a small box (meaning the participants agreed a lot). This is backed up by the reactions of the participants:

“I liked that one [swift] the best, because you immediately have some results for inspiration, and then you start filtering out what you don’t like, it’s less of a hassle than filling in a search form”

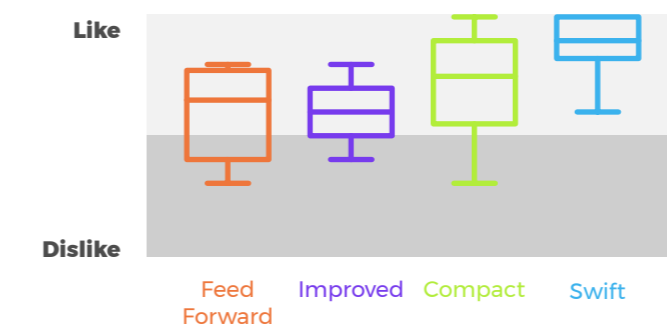


Figure 79: Flow concepts dislike - like box plots

Looking at swift’s score concerning the company principles (Figure 78) we see it does fairly well, especially looking at the other concepts, but there is still some work to be done to make it more clear.

“I really liked the beginning, but I think the trip page is a bit chaotic, it to full with information. I liked the other ones better”

Looking at the results for the aesthetic concepts (Figure 80) the answers of the participants are less straightforward. Some liked the darker themes while other passionately where against the use of white on black for a travel site.

“I think this beautiful, and it is cool because there is no other travel company that uses black”

“I would really like to urge you not to go with one of these black themes. It looks depressing and does not make me want to go on vacation at all”

Another way to look at it is to see what aesthetic is the best match with the best scoring flow (swift) (Figure 81). Frosted scores very high. But it is a bit average looking at the company principles (Figure 82).

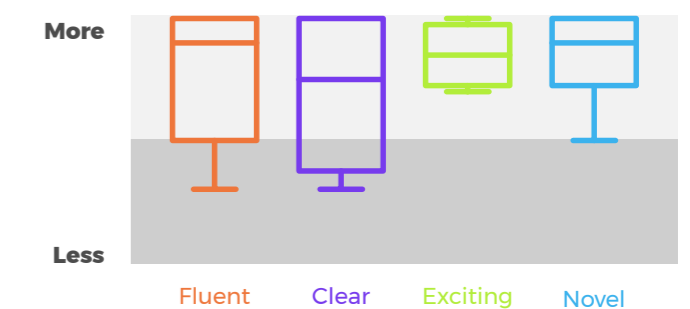


Figure 78: Swift flow concept company principles box plots

Conclusion:

The swift concept was the clear favorite in the flow category, some alterations can be made, and there could be experiments with how to do certain components, but the idea of loading first and filtering later was well received in the focus group.

There is no clear winner for the aesthetic concepts, but taking in to account the feedback from the participants a frosted could be a good choice.

“I kind of like this one to, but I is a bit busy with the pictures over pictures, maybe it could be a bit more toned down”

“I think this one is nice, I like that you have this background pictures that match the trip”

“It is serious but still hip”

“This one has a more trustworthy look”

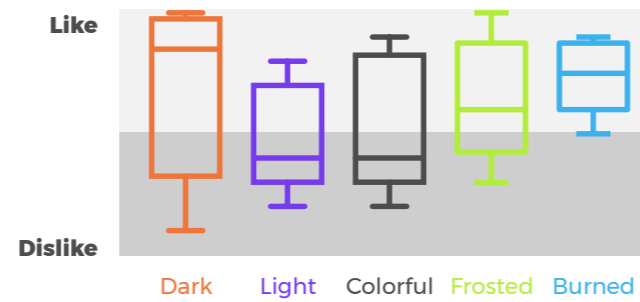


Figure 80: Aesthetic concepts like/dislike - like box plots

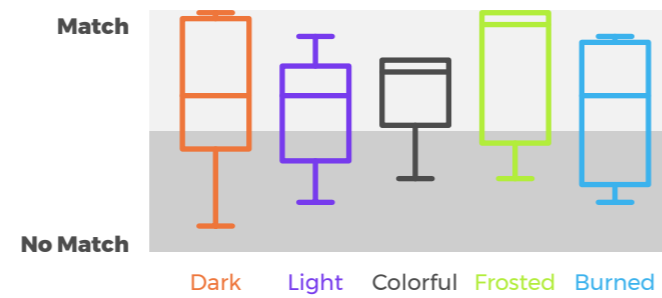


Figure 81: Aesthetic match box plots for the swift concept

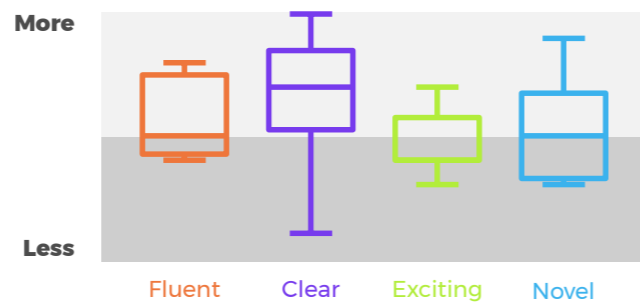


Figure 82: Frosted aesthetic concept company principles box plots

Prototype Concept



After presenting the concepts and the test results to the company, we came to a joined decision to go with the swift flow and explore the frosted theme further. These are combined into a final prototype concept, that will be made into a working HTML and CSS prototype and developed further through an iterative process in the next phase. What follows is an overview of the core pages of the final concept.

The combined prototype concept focusses on three key interaction qualities: swiftness, clarity, and intriguing.

Swiftness is derived from the company principle fluent and is about delivering information to the user as fast as possible: when entering the website, the user is only one click away from seeing results. There are no forms to fill out, or choices to make that need communication. This means loading of results can be done in the background while the user is on the landing page and as soon as they click the explore trip button, they will see their destinations. On the trip page, multiple tabs allow users to get information with one click instead of scrolling and searching all over a page. By using only one bright color on the website, the user's eye can be guided to where it needs to be, to make them find what they are looking for quicker.

Clarity is derived from the company principle clear and is about presenting information in an organized matter that allows the user to quickly get back to the website when multitasking. One

way this to achieve this is by presenting only essential data at first (for example the trip-flight-page) and give details when required (clicked on). Another way is to provide overviews of choices the user already made on the trip page. Clarity is also found in the aesthetics of the concept, such as the choice of font, the see-through qualities of the frosted panels, the selection of imagery and the limited use of colors.

Intriguing is derived from the company principle adventurous and is about inspiring and engaging the user. This is achieved by replacing certain common words with others that might invoke a more significant reaction, such as having the search button say "Explore Trips" instead of "Search Vacations". Or giving the user a sense of ownership by saying "Your Adventure" instead of "Selected Holiday". Imagery is also to intrigue customers and this concept puts the imagery centre stage, with big photos on the trip cards and softly blurred background images. And finally, motion, the concept is designed with transition animations and micro-interactions in mind, that will be explored further in the next phase.

Filters:

An essential part of the new swift and deep user experience is to allow users to do a very defined search, by giving them lots of filters. To keep the clarity and not overwhelm them with a ton of options the filters are divided into categories, and order by expected usage.

Trip:

Here the most critical aspects of the trip can be chosen.

- Theme: The trip theme (dropdown)
- From: The location the user wants to start the trip from (Autocomplete input text, prefilled by IP address)
- Passengers: Number of passengers (number input)
- Budget: Budget for the complete trip (number input + slider €0 - 2000)
- Transport/accommodation ratio: What percentage of the trip is spent on transport (slider)

Dates:

Here the user can change anything that has to do with dates and duration:

- Duration: Minimum and maximum number of nights (double number input + double slider 0 - 30 nights)
- Between: Between which two dates can the trip take place (double calendar)
- Depart On: What days of the week can the outbound flight be (days of the week checkboxes)
- Return On: What days of the week can the inbound flight be (days of the week checkboxes)

Destination:

Here the user can express their preference for the destination:

- Destination: Where can the trip go to, multiple inputs possible (Text input with autocomplete (cities, countries, regions, continents) + pills)
- Climate: What type of climate is preferred? (checkboxes Sunny, Hot, Snow, Cold, etc.)
- Distance: Minimum distance destination should be (number input + slider)

Transportation:

Options for how the user will get to the location:

- Transport type: Currently a choice flight or none (own)
- Departure Airports: What airports does the user want to go to? (checkboxes list of airports near from location)

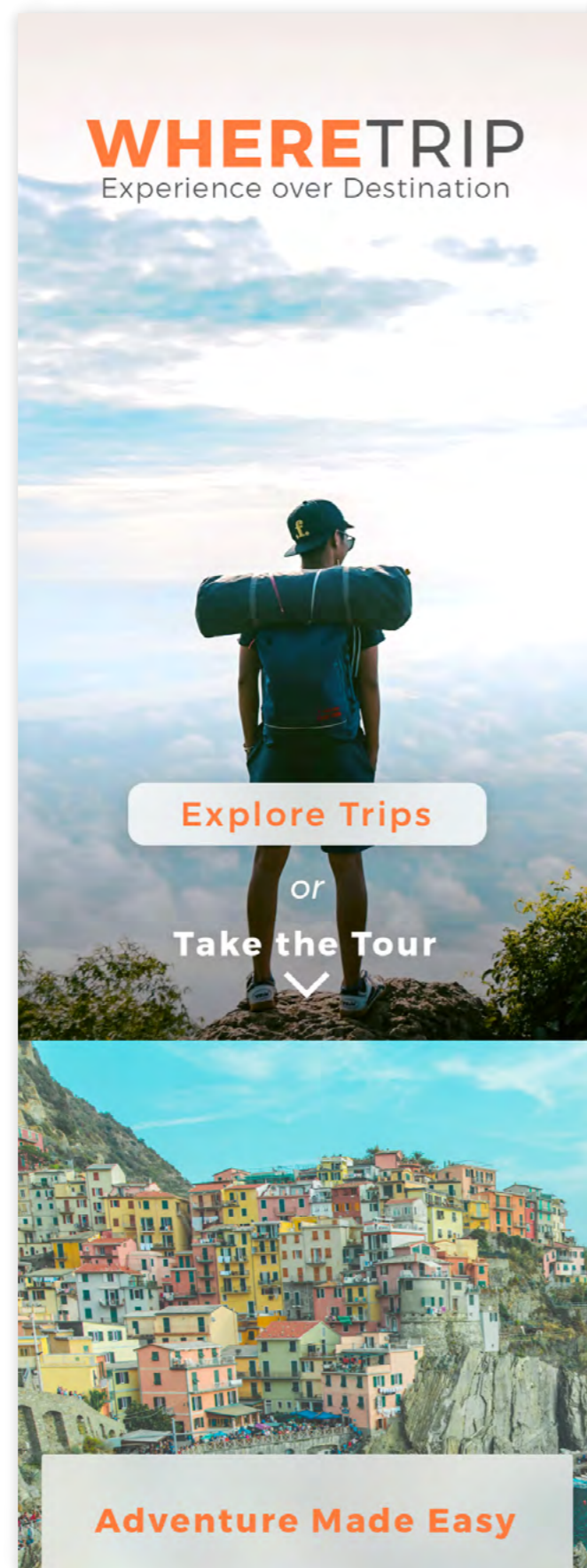
Accommodation:

Options for the user accommodation:

- Accommodation Type: What kind of accommodation does the user want (checkboxes: Hostel, Hostel (private room), Hotel, Airbnb Apartment)
- Distance from airport: How far is it from the airport to the accommodation (number input + slider)
- Distance from city center: How far is it from the accommodation to the city center (number input + slider)

The landing page

The landing page (Figure 83) has an inspirational photo combined with a quote about adventure. Users can either start exploring trips or read a bit more about what WhereTrip is, testimonials, how they work and their partners.



Ever wanted to get away for a weekend, but couldn't find a good deal? Want to explore the world but have no idea where to go? We search all over the web to present you with the best deals and exciting destination you might not have thought of.



Teresa

"I wanted to go surfing for a weekend WhereTrip showed me exactly which options there were for the amount of money I wanted to spend."



How it works

We start searching for trips based on your location, or you can set another starting location. We combine transport and accommodation options from several of our partners, to get you the best possible deals. Refine your results by using our filters such as trip type, budget, or departure dates. When you click on a trip you might like, you can pick your dates. Customize your trip by changing your accommodation and transport options. You don't book your trip through us, just yet (we are working on

as trip type, budget, or departure dates. When you click on a trip you might like, you can pick your dates. Customize your trip by changing your accommodation and transport options. You don't book your trip through us, just yet (we are working on that!), but through our external booking partners (such as SkyScanner, HostelWorld, Booking, and Kiwi), this means you have to book your transport and accommodation separately on their site.

OUR PARTNERS



HOSTELWORLD



Figure 83: The trip page (in 3 parts)

The results page

Results are being loaded (Figure 84) in the background the moment the user reaches the landing page. The trips are presented with big images and only the most necessary information (location and price), to encourage users to look at the trips in more detail themselves.

As described earlier, users will have a wide variety of filters to choose from in order to get the trips that fit them most (Figure 85).

The user can also use the map view and find trips based on geographical location (Figure 86).

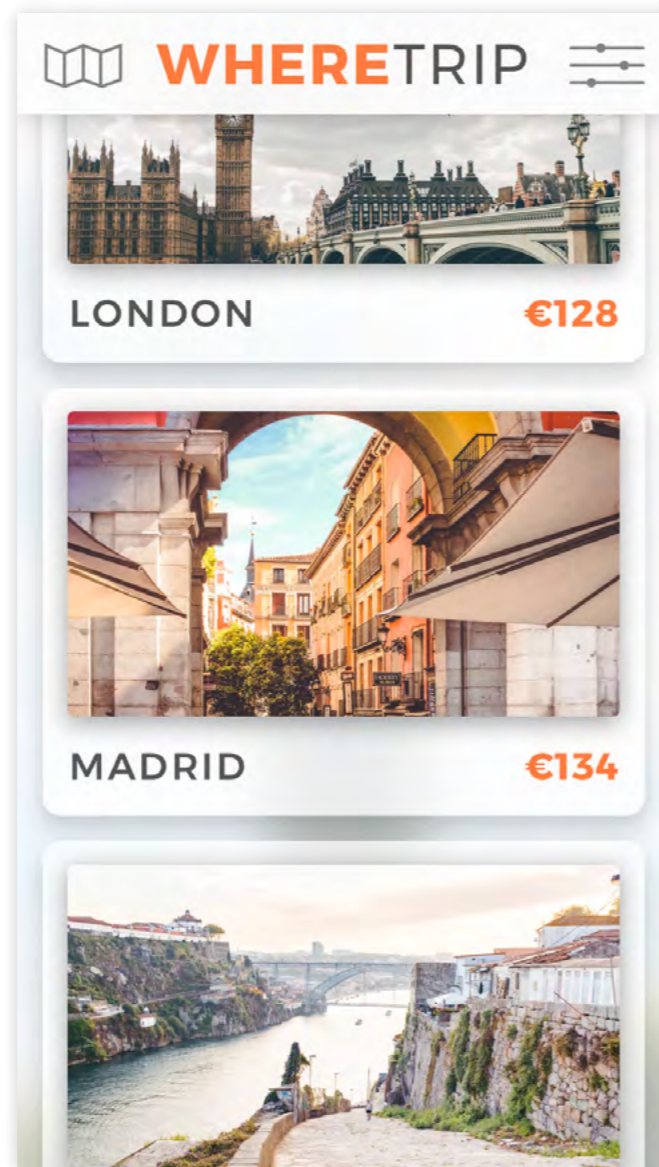


Figure 84: The Results page

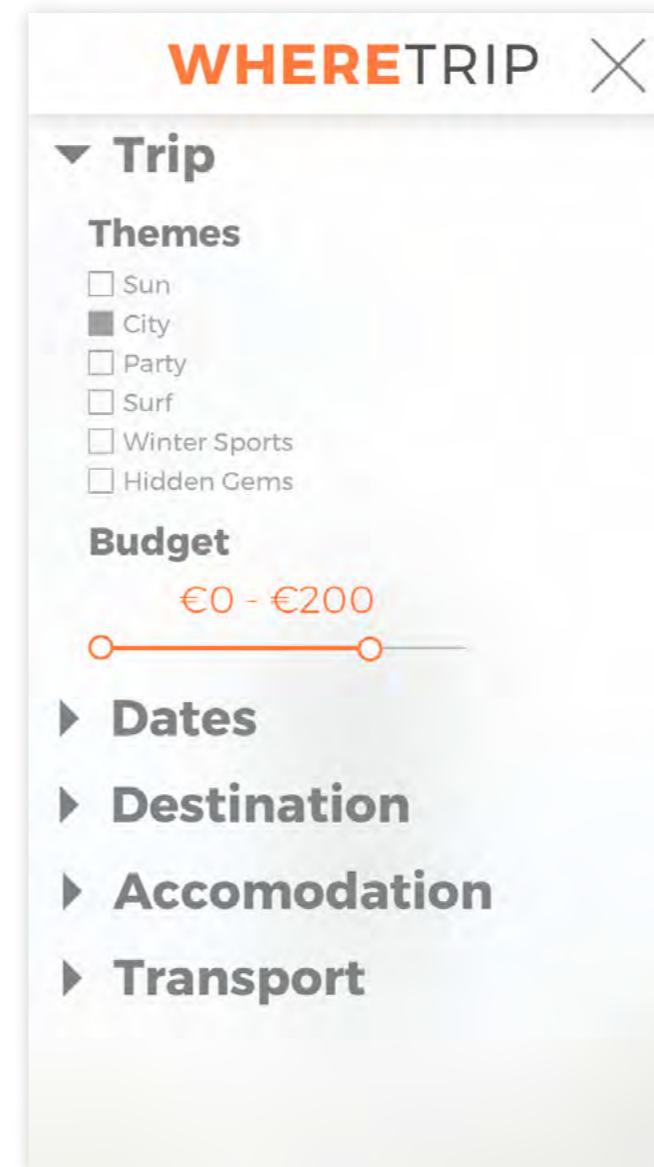


Figure 85: The Results page filters



Figure 86: The Results page map

The trip page

During the concept user test, many participants were very positive about the multiple tab trip page that the “modern app” flow had. It was decided to add this to the final concept (Figure 88).

When a trip is selected, the user is prompted to choose their dates (if multiple dates are available, Figure 87). After that, they are taken to the info tab. Where they can find more information about the city, an overview of the trip, and they can book their flight and accommodation from here (Figure 88).

A picture of either the city or the hostel is always visible on the top of each tab alongside the name of the city, the country, the current price of the trip and a book button. This button takes the user to the book section of the info tab.



Figure 87: Trip date picker

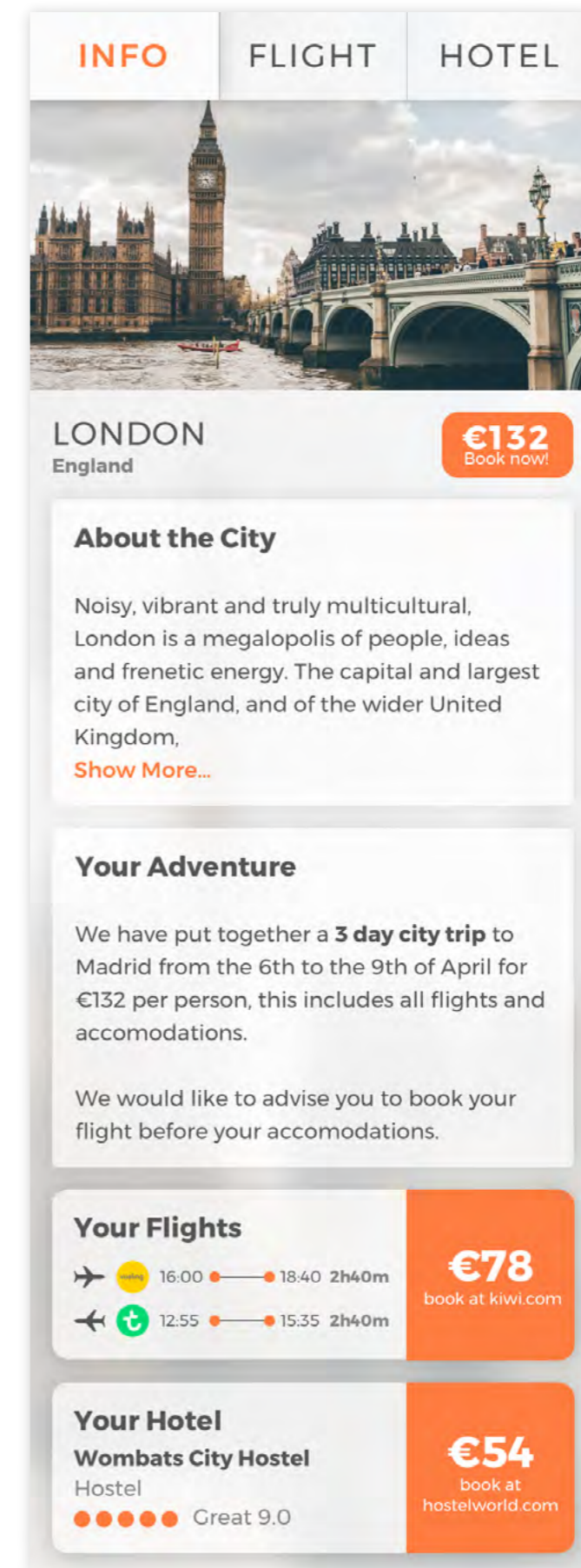


Figure 88: Trip page overview

The flight tab shows the currently selected flight and alternatives (Figure 89). By clicking on one of the flights the user is taken to a flight details overview (Figure 90). If that flight is not the one that is not the current flight, than the user can select another one.

INFO FLIGHT HOTEL

PORTO
Portugal

€132
Book now!

Selected Flight

✈️ 16:00 — 18:40 2h40m
✈️ 12:55 — 15:35 2h40m €78

Alternative Flights

✈️ 08:55 — 14:30 5h35m
✈️ 12:55 — 15:35 2h40m €114

✈️ 16:00 — 18:40 2h40m
✈️ 12:55 — 15:35 2h40m €133

Figure 89: Trip page flight + alternatives

INFO FLIGHT HOTEL

ATHENS
Greece

€132
Book now!

Outbound Flight

Friday April 6th 2018
Austrian Airlines 07:00 AMS Amsterdam 1h55m
OS378 08:55 VIE Vienna

Layover in Vienna: 12h10m

Austrian Airlines 21:15 VIE Vienna 2h15m
OS803 00:30 ATH Athens

Total time: 16h30m Arives: Saturday April 7th 2018

Return Flight

Sunday April 8th 2018
Austrian Airlines 07:20 ATH Athens 2h20m
OS804 08:40 VIE Vienna

Layover in Vienna: 6h25m

Austrian Airlines 15:05 VIE Vienna 1h55m
OS373 17:00 AMS Amsterdam

Total time: 10h40m Arives: Saturday April 8th 2018

Back Select

Figure 90: Trip page flight details

The hotel tab works similarly to the flight tab, as the currently selected hotel is presented alongside alternatives (Figure 91) and by clicking on any of the hotels the user gets more info and the option to select it (Figure 92).

INFO FLIGHT HOTEL

BERLIN
Germany

€132
Book now!

Selected Hotel

Grand Hostel Berlin
Hostel
Great 9.0
2 nights for €20

Alternative Hotels

Figure 91: Trip page hotel + alternatives

INFO FLIGHT HOTEL

AMSTERDAM
The Netherlands

€132
Book now!

ClinkNoord

ClinkNOORD is located in the culturally vibrant area of Amsterdam Noord, just 10 minutes from the back of Amsterdam Centraal Station. Simply catch the short free ferry across the IJ River, which runs 24/7.
[Show More...](#)

Facilities

- Linen Included
- Free WiFi
- Common Room
- 24 Hour Reception
- Bar
- Free City maps
- Wheelchair Friendly
- Elevator
- Housekeeping
- Cafe

[Show More...](#)

Reviews

"Facilities are incredible! Would definitely want to visit again even though it was a bit costly."
●●●●○
- Anonymous
[Show More...](#)

Back Select

Figure 92: Trip page hotel details

Phase 3:

PRODUCTION

During the production phase, a final prototype is built using HTML, CSS, and JS. This prototype is tested with users and based on the results of those test iterated upon. This cycle repeats several times until they meet the set requirements. In the meantime, the documentation for the design system is written, and the component library is built.

Building, Testing & Iterating

The final concept is built as a real website, using actual data, to test the user experience and usability of the design and start the component library. Problems areas that are found during tested are iterated upon and retested until the product requirements are met.

Building

The final prototype is built using HTML (for markup), CSS (for styling), and JS (for logic). Besides being very popular on their own, these three programming languages form the basis of most other languages used on the web. By programming a prototype, instead of using a mockup, real interactions with actual browsers on target devices can be tested. Based on the state of the back-end during the test there might even be the option to check the product with real live

data.

By writing the component library directly in CSS, the company will have a modular styling system they can start to implement very quickly. This method of prototyping also has the advantage that changes to the design can be made relatively quickly.

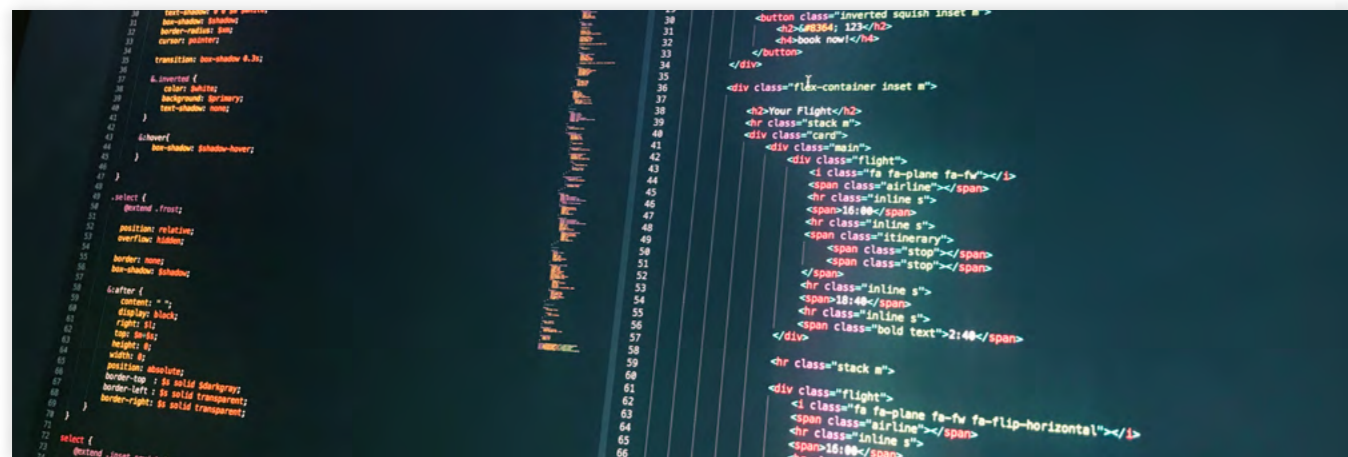


Figure 93: Coding the prototype

Testing

An agile approach is taken, to work out the kinks in the prototype. The prototype is examined in a short user test followed by an interview. The participants of this test are members of the target audience, man, and woman between the age of 20 and 35 years both students (not IDE) and young professionals. During the test, the participants are asked to think out loud and explore the website. The interview afterward is there to clear up uncertainties and check if their perception of the product matches the one that is set in the design brief. After two or three test some iterations are made to the prototype, and it is tested again, to see if the solutions worked and if any problems arise. A total of three of these cycles is done.

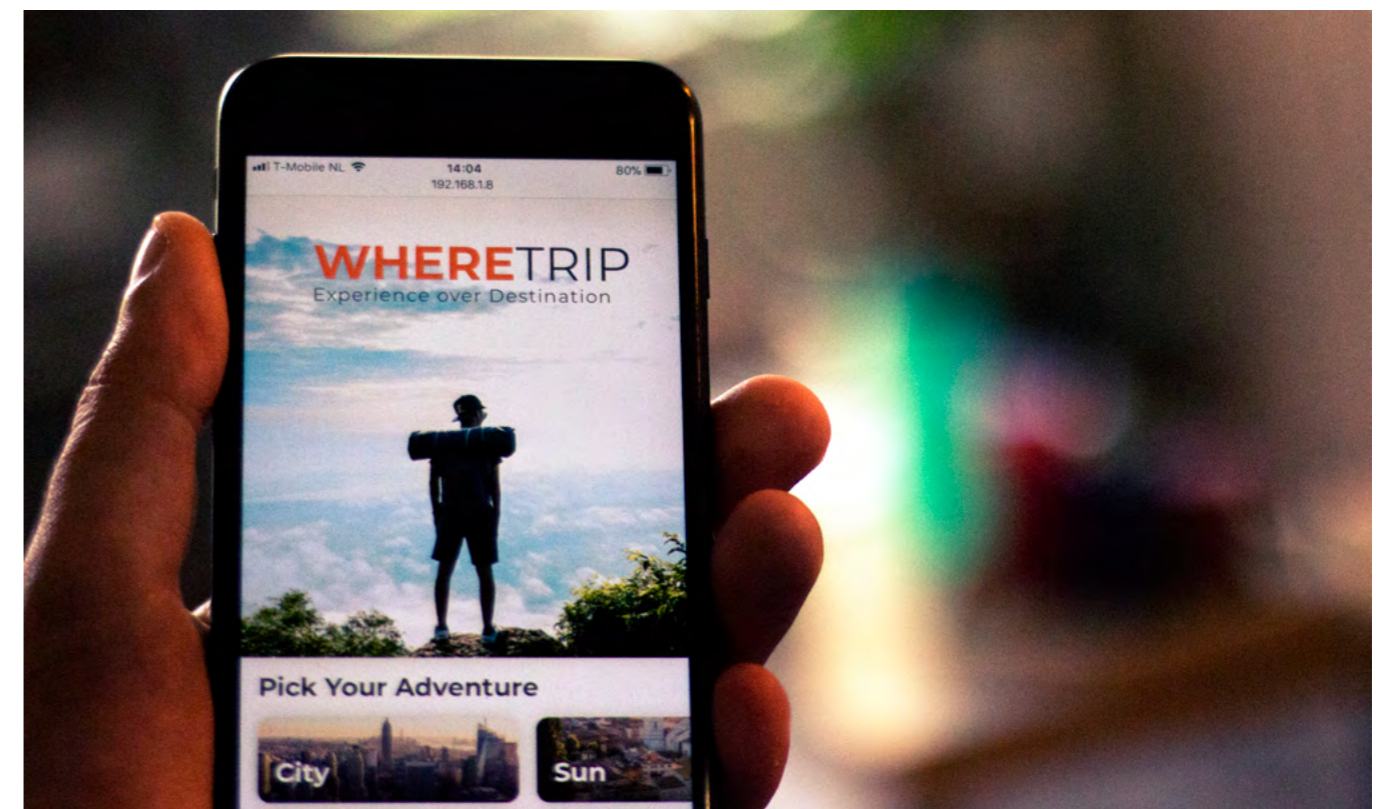


Figure 94: The final prototype

Cycle one

Testing during the first cycle found the following issues and solutions:

1. The purpose of the filter section is unclear probably because there is no title and all the groups start all collapsed. Only when a group is opened, it becomes clear that these are filters. *This can be solved by adding a title and starting with one group open.* (Figure 95)
2. Closing the filter section is done by clicking outside the panel, participants would have preferred it if there was a close button. *Solved by adding a close button.* (Figure 95)
3. The purpose of the date-picker is unclear, probably because of the lack of title/label. *Solved by adding a label "Pick Your Trip".*
4. Some pages feel very busy. *Possible solution by making some less important information light gray, orange fills less saturated and playing around with font weights and sizes on heavy information pages.* (Figure 96)
5. On the flight selection page, it is not shown from and to which airports the flights are. *Solved by adding airport codes to flight buttons.* (Figure 97)

Cycle two

Testing during the second cycle found the following issues:

1. There is no way to get back to the date-picker page in the trip section. *A change date button is added to the trip info page.* (Figure 98)
2. None of the pages have a footer, which allows the user to get back to the home and about page easily. *A footer is added.* (Figure 98)
3. How to book a flight and accommodation is sometimes unclear, this is done through the trip info page, but the amount of information the user gets on this page is quite a lot. *Instead, a book now button takes the user to a separate page. Here it is pointed out to the user that they have to book their flight*

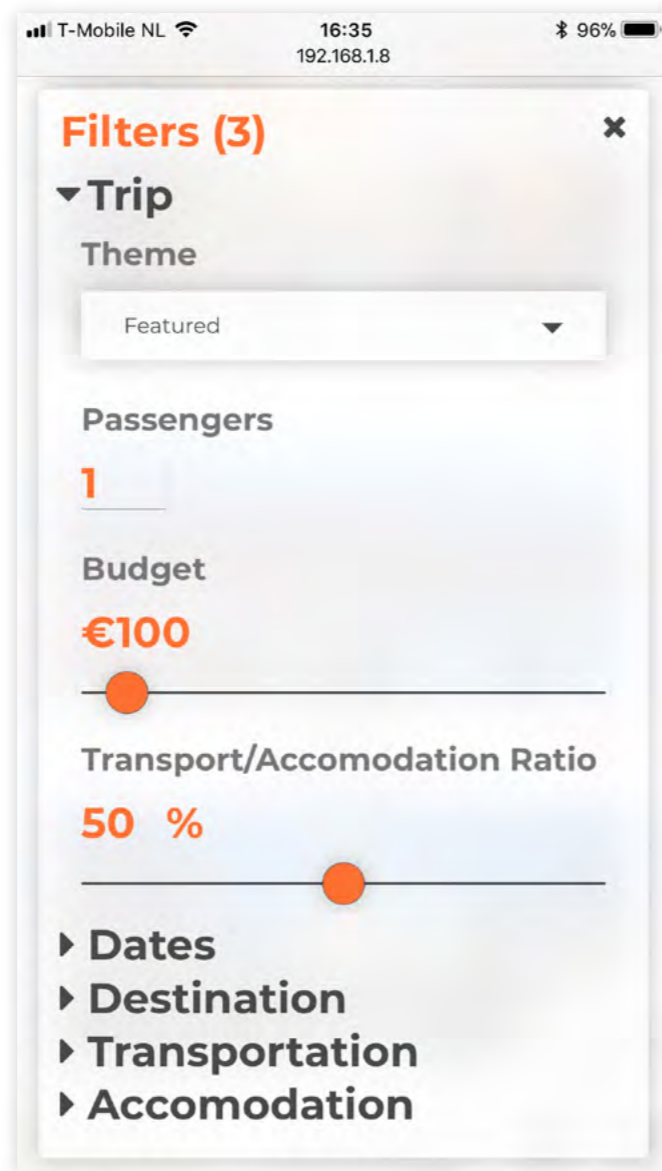


Figure 95: New Filters sections

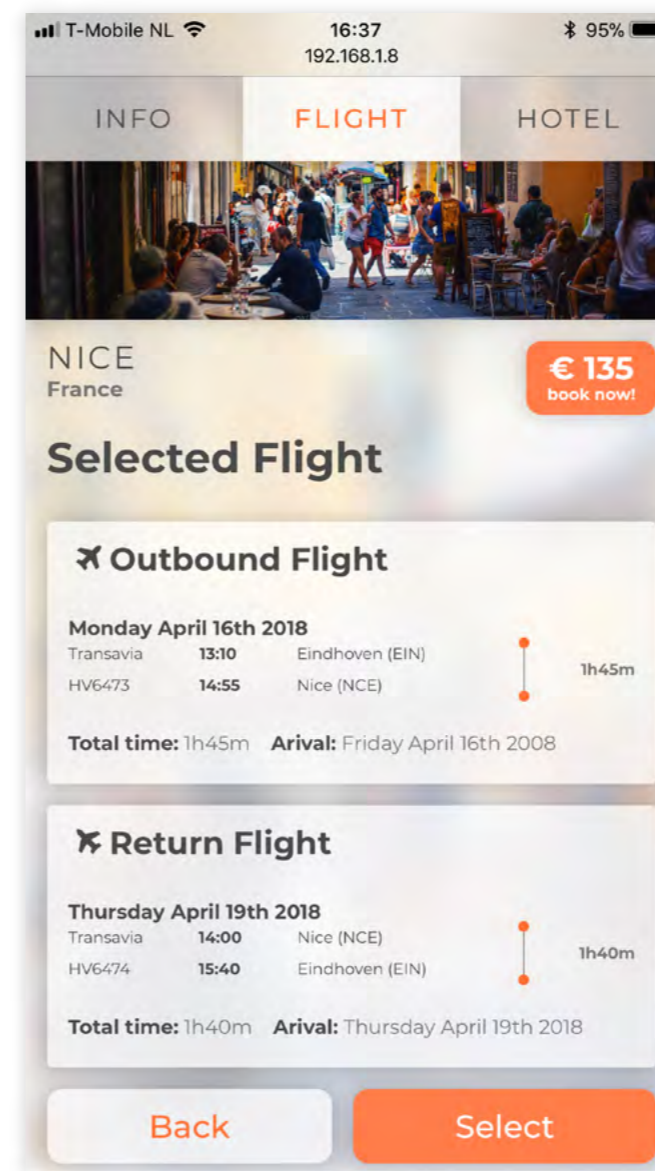


Figure 96: Hierarchy through gray tints, and balancing of the orange

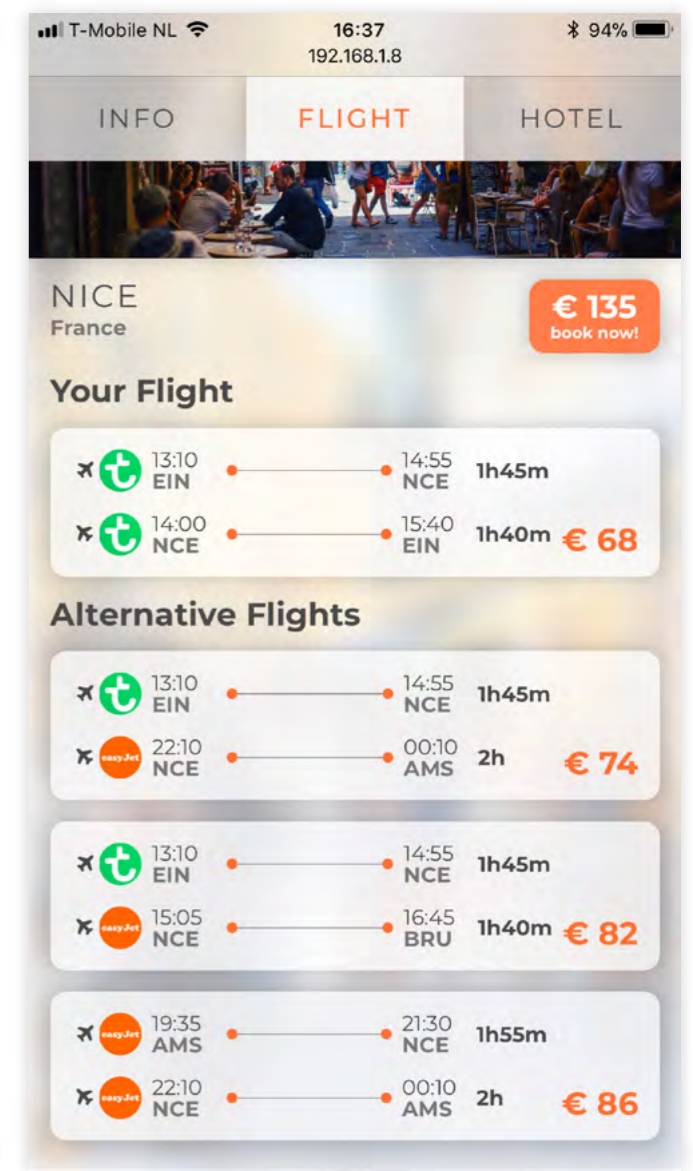


Figure 97: Airport codes added to the flight buttons

and accommodation separately and are presented with an overview and links to their external flight/accommodation booking pages. (Figure 98 & Figure 99)

- Some users expressed interest in a sort and filter option on the select flight and the select accommodation pages. *The same menu as the one used on the results page can be added to the select pages. (Figure 100)*
- Comparing trips is a hassle because the details are on a separate page. *The solution is to have the detailed information show up in the same flight button on the selection page when the user taps it. (Figure 100)*

Cycle three

Testing during cycle three found some issues but, it also revealed a bigger step in the iterations and a better prototype is needed to solve these problems, and properly test the product, not only for its ergonomic (usability) values, but also its hedonic and appeal values. It was decided to build a working prototype with live data and transition animations using the React framework. The problems found in cycle three are:

- The website has too much focus on swiftness and not on the themed based searching for trips; it poorly communicates WhereTrip's core feature.
- The circular menu button does not fit the behavioral patterns and aesthetics of the rest of the website, and its icons are not universally understood.
- The filter options the user has chosen are not summarised on the results page, contrary to the principles of fluent and clear.
- Lack of intrigue through transitions and animations (as it turns out this is hard to accomplish without a front-end framework like react).

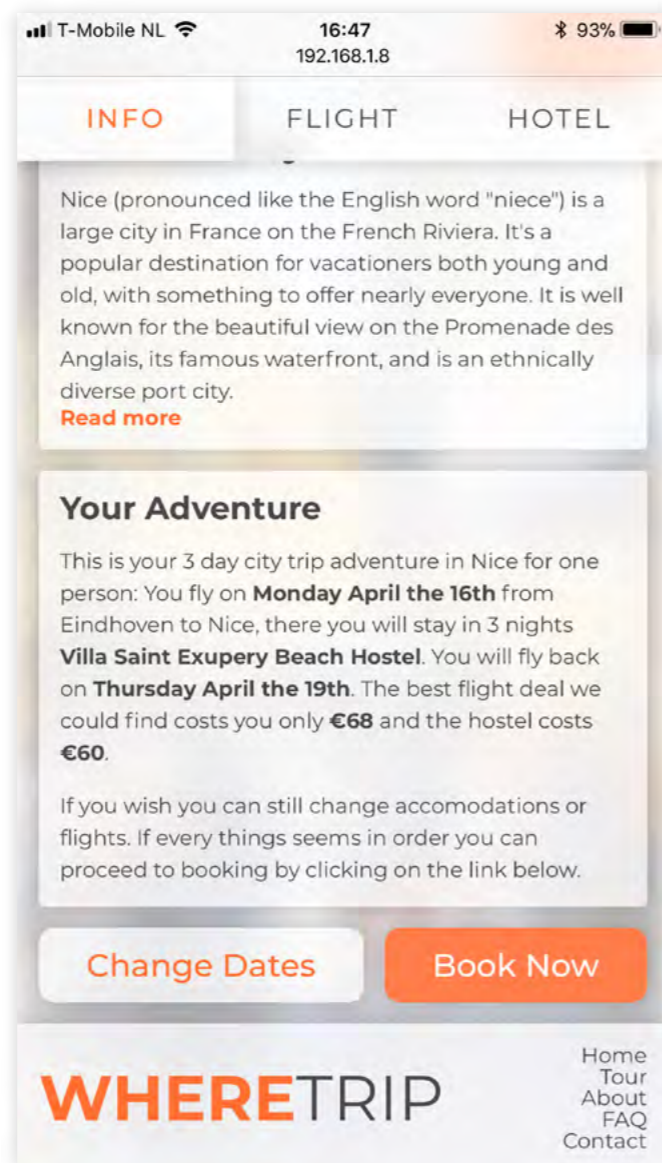


Figure 98: Footer, Changes dates & book now button

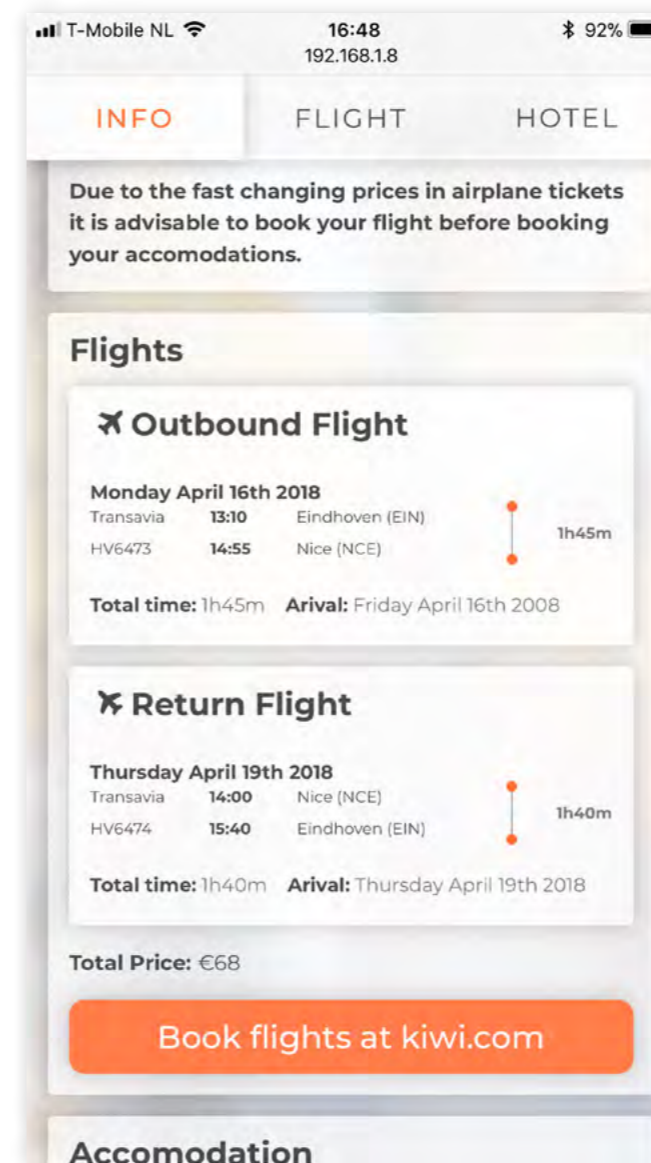


Figure 99: Booking page

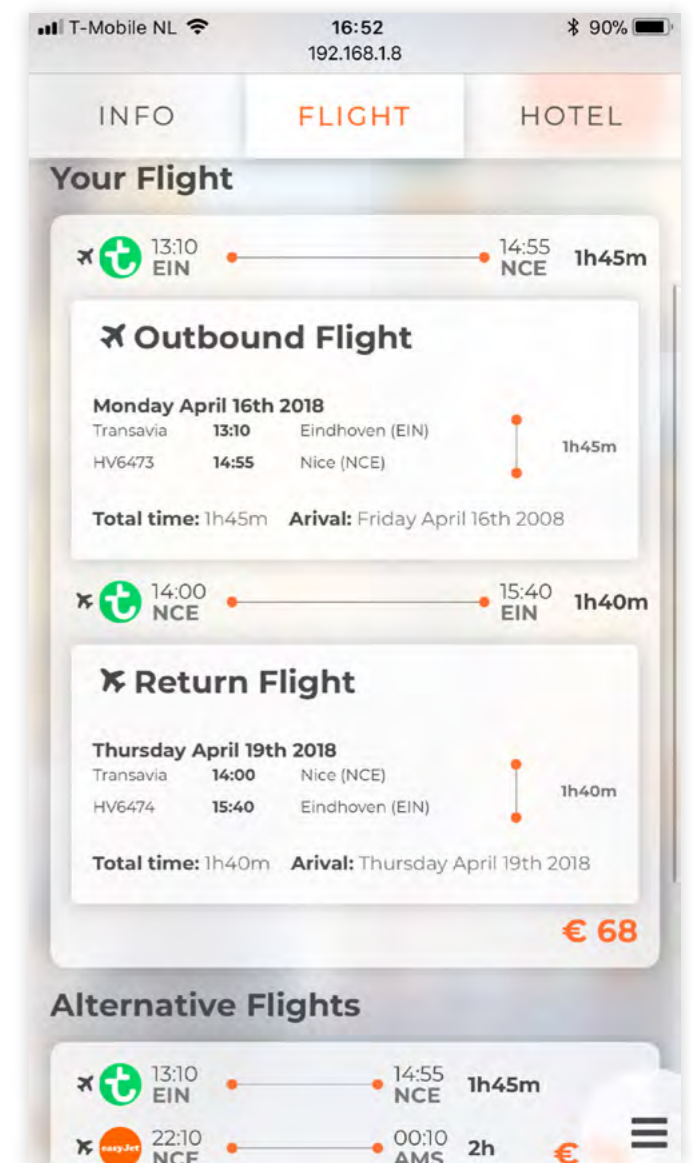


Figure 100: Menu button added to flights for filters and sorting. Flight details appear inside the button when it is tapped.

Final Test

A new prototype is build using the React. This front-end framework helps to create single page applications, meaning there is loading in between pages and transitions can happen smoothly. It also makes handling the data from the back-end server a lot easier and thus allows this prototype to use real data.

The major changes in this prototype compared to the previous once are:

- Below the hero image on the landing page, there now cards that display the different trip themes (Figure 101). When the user taps on this section, the hero image becomes smaller, and the cards become bigger, with a smooth animation, giving the user a small surprise. The bigger cards allow for a description of each theme (Figure 102).
- When the user selects the theme by tapping a card, the card flips around, and the user can increase or decrease their budget (Figure 103).
- By clicking "explore" the user starts searching for trips that are available within the next two months. By default, the duration is set between two and seven days, and their location is gathered from their IP address.
- There is a transition between the landing and the results page: the image that is linked to the theme quickly fades in covering up the whole screen, and after about half a second fades out to the results page. The results page has the theme image as background with a frosted effect, and there is a loading animation (Figure 104).

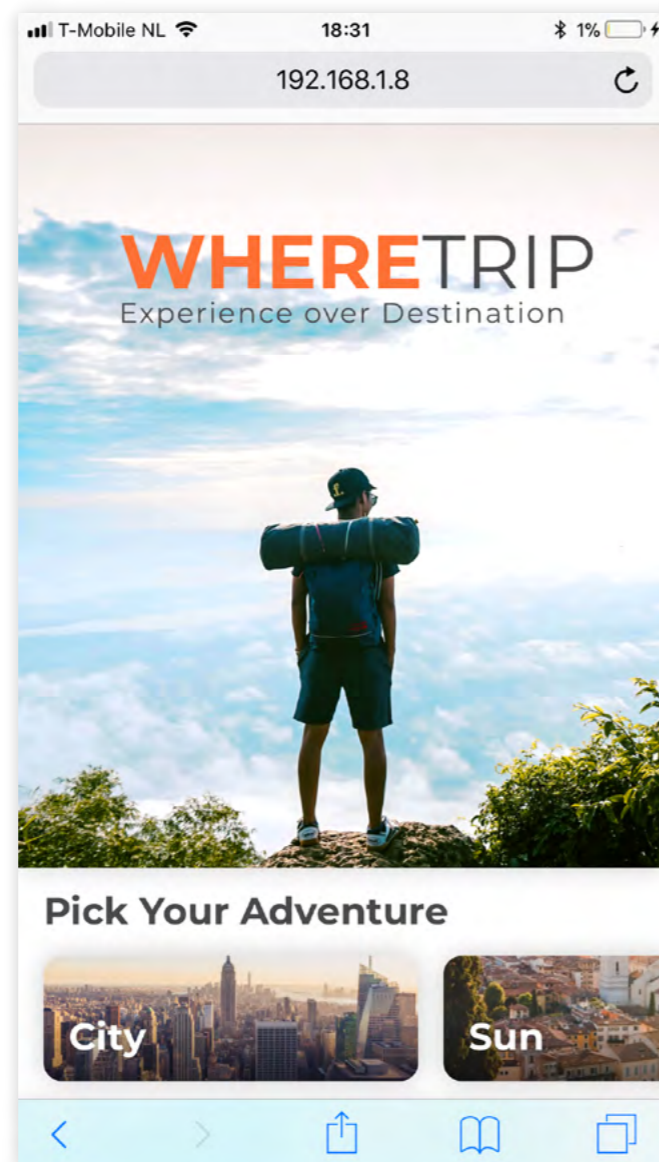


Figure 101: New landing page with theme selector

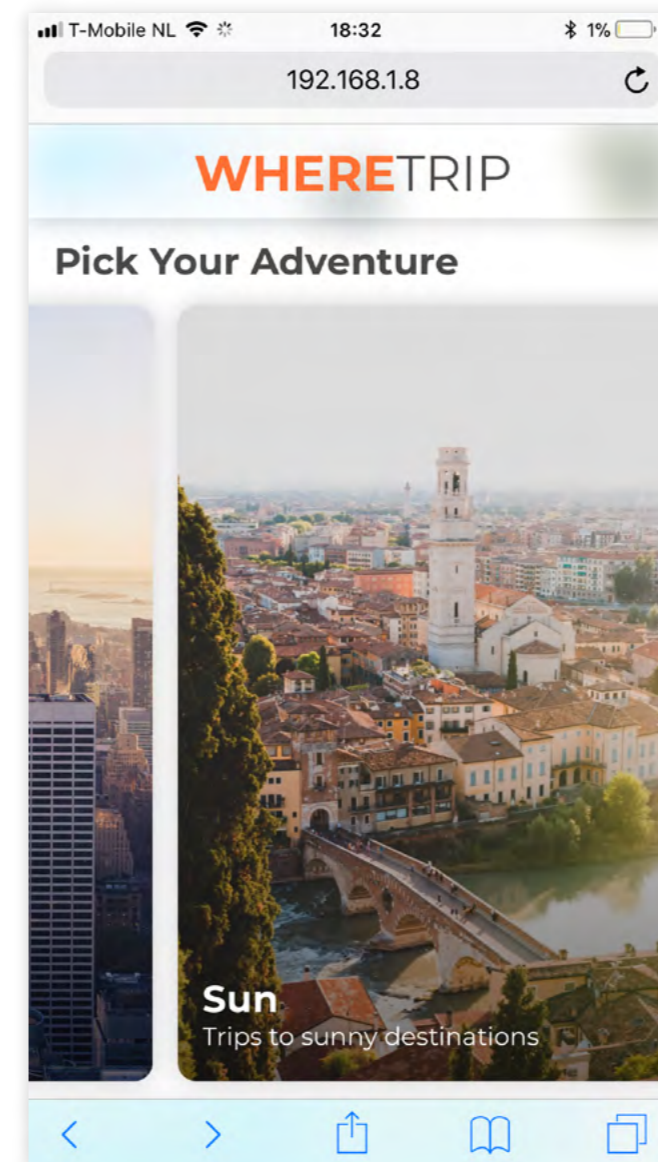


Figure 102: When interacting with the cards they grow, the hero image shrinks and becomes frosted

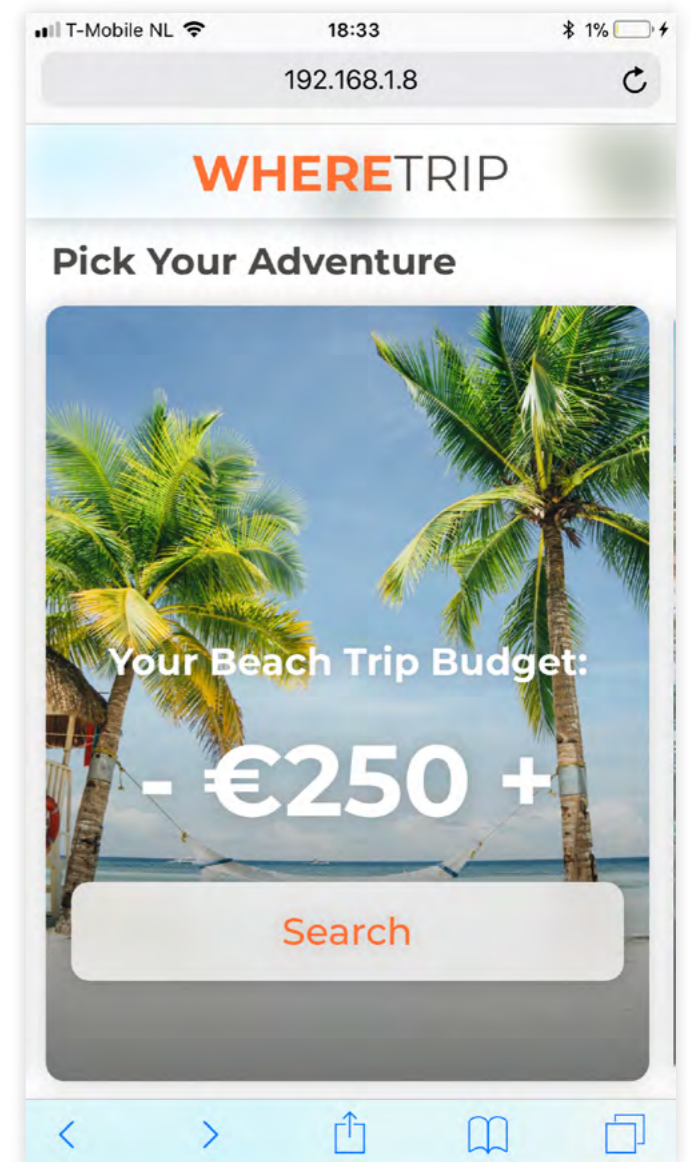


Figure 103: Theme cards flip, and allow the user to pick a budget

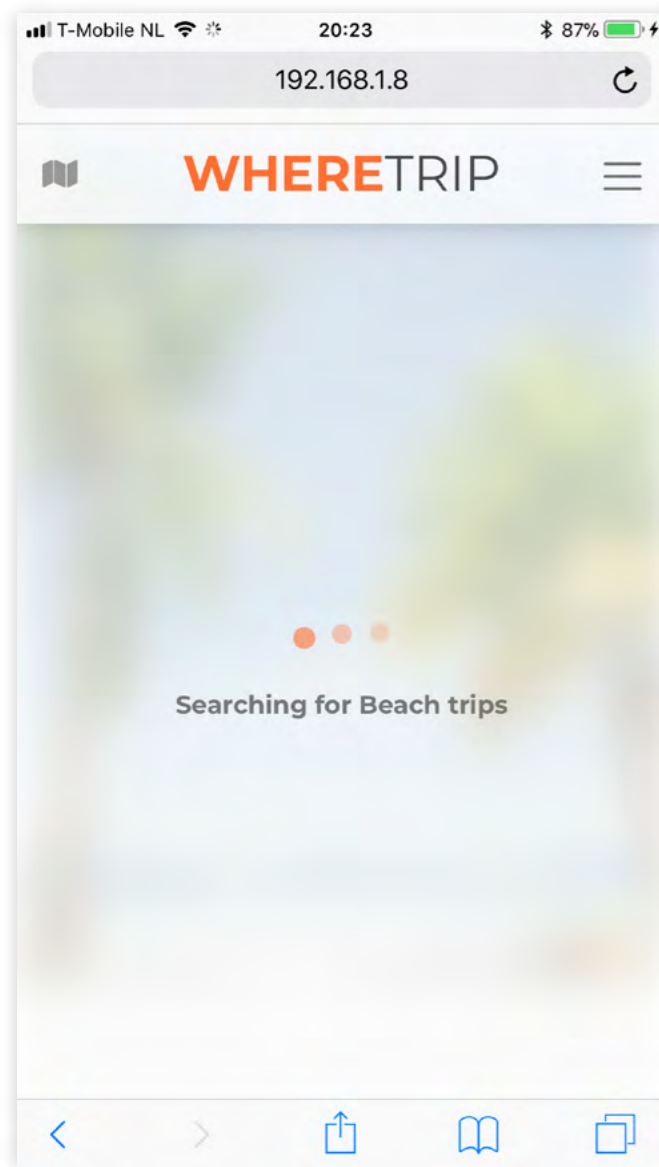


Figure 104: Loading animation

- When the loading is completed, one by one the trips quickly fade in (Figure 106).
- The menu is accessed in the top right corner of the results page. When clicked the top bar expands over the whole page to reveal the menu. Due to the frosted glass effect, the trip cards are still somewhat visible (Figure 105).

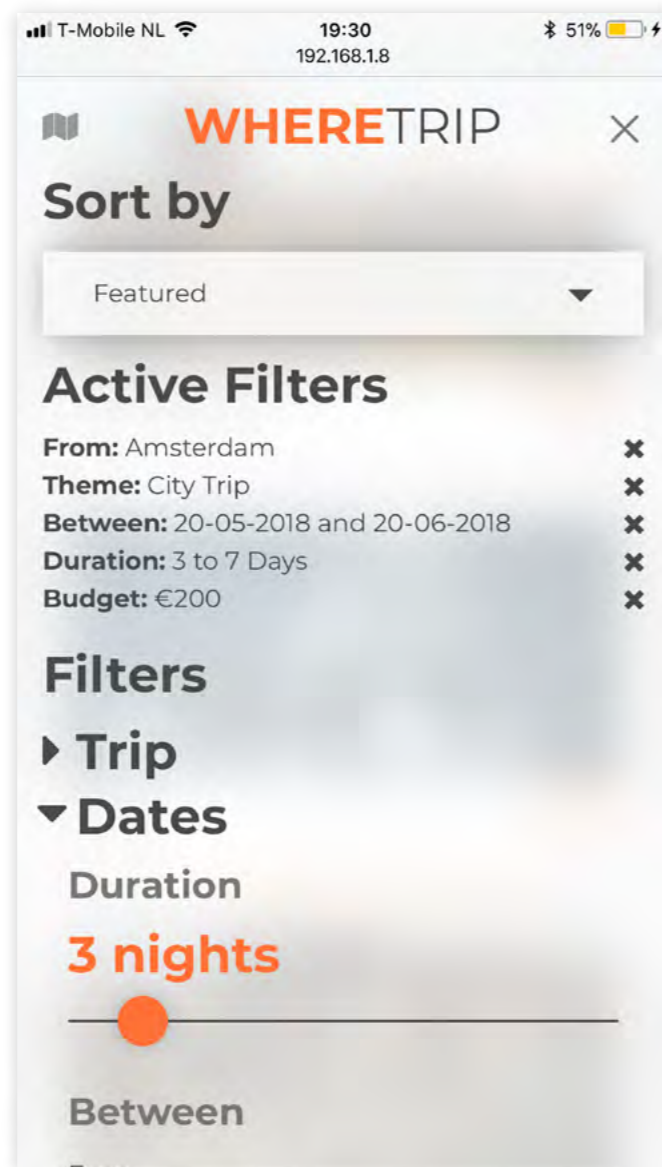


Figure 105: New menu with active filters

- The menu starts with the sort options, then the active filters, followed by the other filter options.
- When one of the trip cards is clicked, its elements move and resize to where they should be on the trip page, making for a vivacious transition (Figure 107).



Figure 106: Cards fade in one by one

- There are some smaller animations and transitions throughout the website, such as when expanding a flight card to reveal more details and when switching between tabs on the trip page.



Figure 107: Transition between results and trip. When a result card is tapped the card grows to fill the screen while changing in to the picture with a frosted effect, it now has become the new background. The menu bar slides to the left to reveal the tabs. The pictures grows and moves to its new position, and the same goes for the text.

The purpose of this final round of testing is to validate the concept. For this to be so the requirements and wishes stated in the first phase of this project, have to be met. It is important that the product works within the described context as well, so the test aims to replicate those scenarios. Finally, some requirements (users must want to come back, the site must feel trustworthy) are based on non-standard measuring scale. However, these can be derived from Marc Hassenzhal Ergonomic, Hedonic and Appeal scales (Hassenzhal, 2001).

The test protocol is similar to the first user test that was done in the analysis phase. Participants are interviewed shortly to prime them on the subject, and to make sure they fit the target audience. Then they can go through the website being guided only when needed by the facilitator. Afterward, a few questions to see if they have had

the desired experience. And finally, they are asked to fill out a survey to see if the company principles have been met and if the Ergonomic, Hedonic and Appealing qualities are satisfactory.

The tests took place in the contexts that have been described in the design brief.

Two participants (a 28-year-old male chemical engineer, and a 26-year-old female office worker) participated individually in a train ride. When they reached the results page, a short (5 min) conversation was started to distract them. Afterward, they were asked what filters they had used, to see if they would find the active filters section.



Figure 108: Participant testing the prototype on a train



Figure 109: Participant testing the prototype while walking in a busy city centre (Utrecht)

Two participants (a 25-year-old male chemistry teacher and a 22-year-old female student) participated individually while walking through a city center. The objective of this test is to see if any problems arise while having to constantly multi-task.

Three participants (a 27-year-old IT-support, a 30-year-old factory worker, and a 28-year-old electrician, all male) participated as a group. They were encouraged to share trips and searches to see how that would work.

Two participants (a 26-year-old male and a 25-year-old female, both students) participated as a couple using one device. This is a more controlled test, to be used as a baseline.

Transcripts of the users tests can be found in Appendix P. What follows are the most

interesting observations:

- Participants made comments about the fluentness of the website, because of the animations.

“It feels very lively with all the movement and stuff.”

- Scattering the sites with short summaries in combination with images helps users remember what they were doing.

“I like these overviews they make it easy to get back.”

“I find the background pictures helpful, [...] [it makes] it immediately clear that I was looking at surf trips.”

- The accommodation details gave some confusion (how to select, how to go back)

“This is a bit weird, I did not really understand where I was, and now I am not sure if I selected the Airbnb I wanted... Oh I see yeah it worked, but still weird.”

- Filters and sorting for the flights and accommodations is a must have (there was the intention to implement this in the prototype but was omitted due to time constraints).

“Can I sort these [flights] by duration?”

- Sharing links is a bit cumbersome because they can get very long.
- Finding the right combination of flights can be a bit of issue.

“Hmm. I would like this flight to Pisa but I am not happy with the return flight, and this one has a return flight I like but the outbound flight is too early for me.”

- Participants are more enthusiastic about the concept of searching by theme instead of the destination; this might be because of the flow and presentation. But they still express the need for a destination option.

“I like the idea, but what if I found this amazing trip yesterday and I want to book it today and it is not there. There should really be an option for that”

- Some of the flights are just not practical.

“I don’t even know why this would be an option, a 22-hour flight to Stockholm with two layovers, and if I pay €10 more I can get a direct flight”.

Aside from some of the minor inconveniences that are experienced when trying to share trips and searches, the prototype did not perform noticeably worse in any of the tested contexts. Navigating the site while walking is a bit slower, and picking up where you left off after a conversation takes a few seconds, but that is to be expected.

The survey results (Figure 110) (full results are in Appendix Q) show in orange the qualities that match with company principles. Fluent is represented by supporting and controllable, Adventurous by interesting and exciting, Clear by clear and comprehensible, and Trends by original and exclusive. As can be seen in the graph these are some of the highest scoring qualities, except for original. When one of the participants was asked to explain why they scored it a two, they responded:

“I don’t know. I would not call it unoriginal, but a lot of the layout is pretty ordinary. This is also not a bad thing it makes me trust the site more.”

Another interesting phenomenon is the low scores for simple and predictable, compared to the high scores of comprehensible and clear. This can be interpreted as a sign of the right balance between providing essential information but still allowing access to advanced options and information when needed. It also shows that the goal of breaking the user’s expectations to grab their attention is met.

The appeal qualities scored quite high; this means that participants enjoyed the experience of the product, and liked the way it looked. These are good indicators that they might want to come back and use the product again.

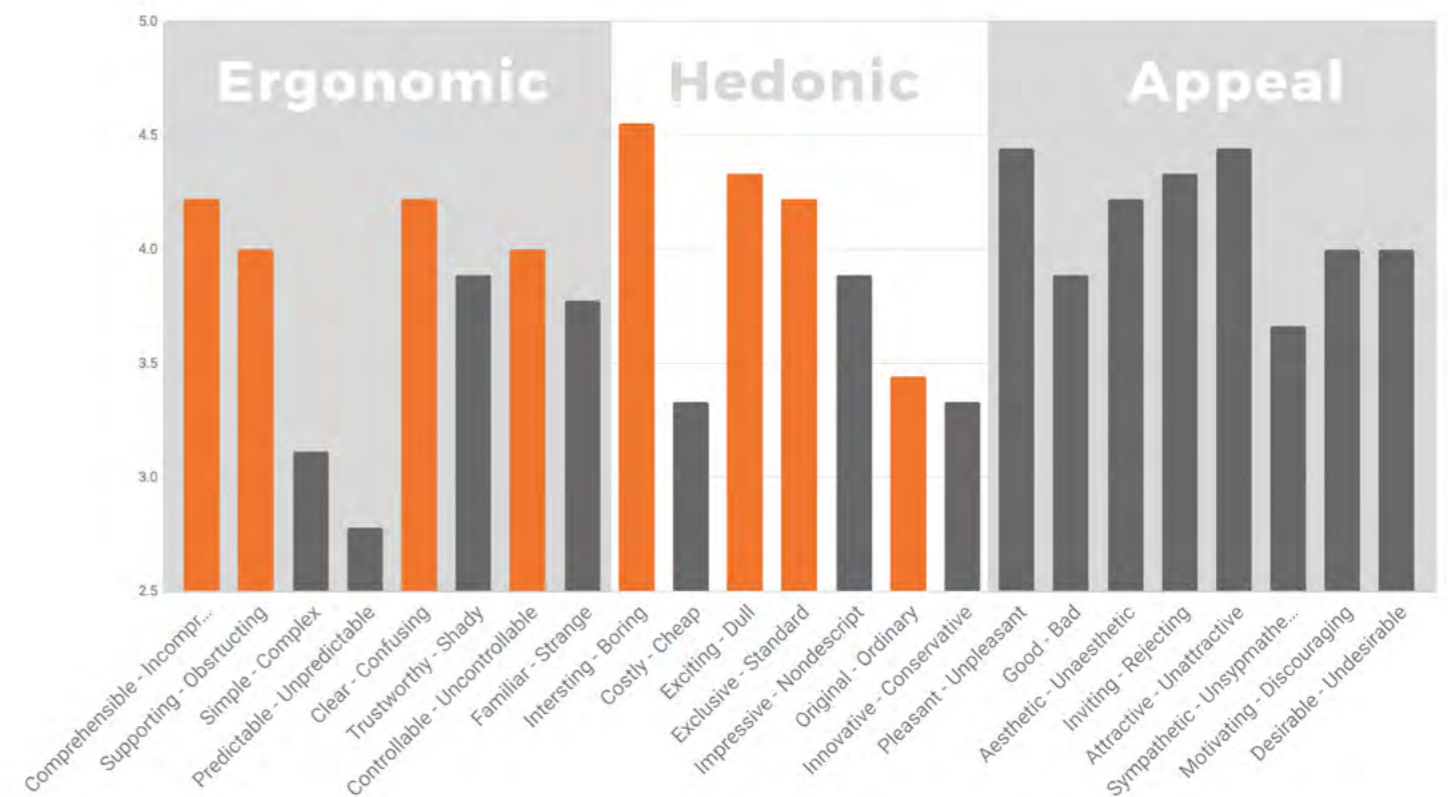


Figure 110: Average scores from Ergonomic, Hedonic and Appeal qualities survey. Orange bars are related to the company principles.

Design System

The actual product that is being designed in this project is not the website itself, this can change fairly quickly, but the design system and the component library behind the site. This chapter describes the central parts of the design system and gives a summary of the component library with some more in-depth examples. The full component library can be found in Appendix R.

Company Vision and the System

The first section of the component library is the company vision as already described in-depth in the chapter “redesign brief” in this report. It is meant as an introduction for new employees of the company as well as an inspiration to existing employees when designing and building new products. This section also describes the user experience WhereTrip aims to deliver their customers. The most important part of this section are the principles (Fluent, Adventurous, Clear and Trends). Employees should know these and their utilization by heart.

The second part of the library is about the system itself; how it is divided into sections, that it is living system meant to be altered and expanded upon if needed, that it serves as a single source of truth for developers and designers, and as a tool to speed up development. And that the system should not limit creativity and progression.

It also explains why the system was developed (to increase consistency in the design) and how it can be used (in a practical way). And finally, it explains how the system can be developed further (what kind of and how documentation is written, how things should be altered if needed) accompanied by a list of suggested areas that the company could work on.

Nuclides

Nuclides are the smallest components in the system. They are invisible in the sense that you can not point them out on the screen.

Space is an essential category of Nuclides. It starts with picking a sizing scheme, several options were deliberated. The first was linear scheme (4, 8, 12, 16, 20, 24, 28 pixels) the problem here is that the perceived difference, for example, between 4 and 8 pixels is way bigger than that of 24 and 28 pixels. Chances are there will never be a situation in which you need to have two elements one with a width of 24 and the other with a width of 28 pixels, because they will be so similar. The second option was the golden ration (4, 6, 10, 16, 26) although this is aesthetically pleasing it is not very practical when using pixels or rems (where the browser sets a base size) (Curtis, 2017). It was finally decided to use powers of two (2, 4, 8, 16, 32) (Figure 111), delivering best of both worlds. They are named using t-shirt sizes with 16 being m, in some none spacing related cases (rounded corners, blur) it might be useful to have an option between m (16) and s (8), so an extra variable xm was created with the value 12.

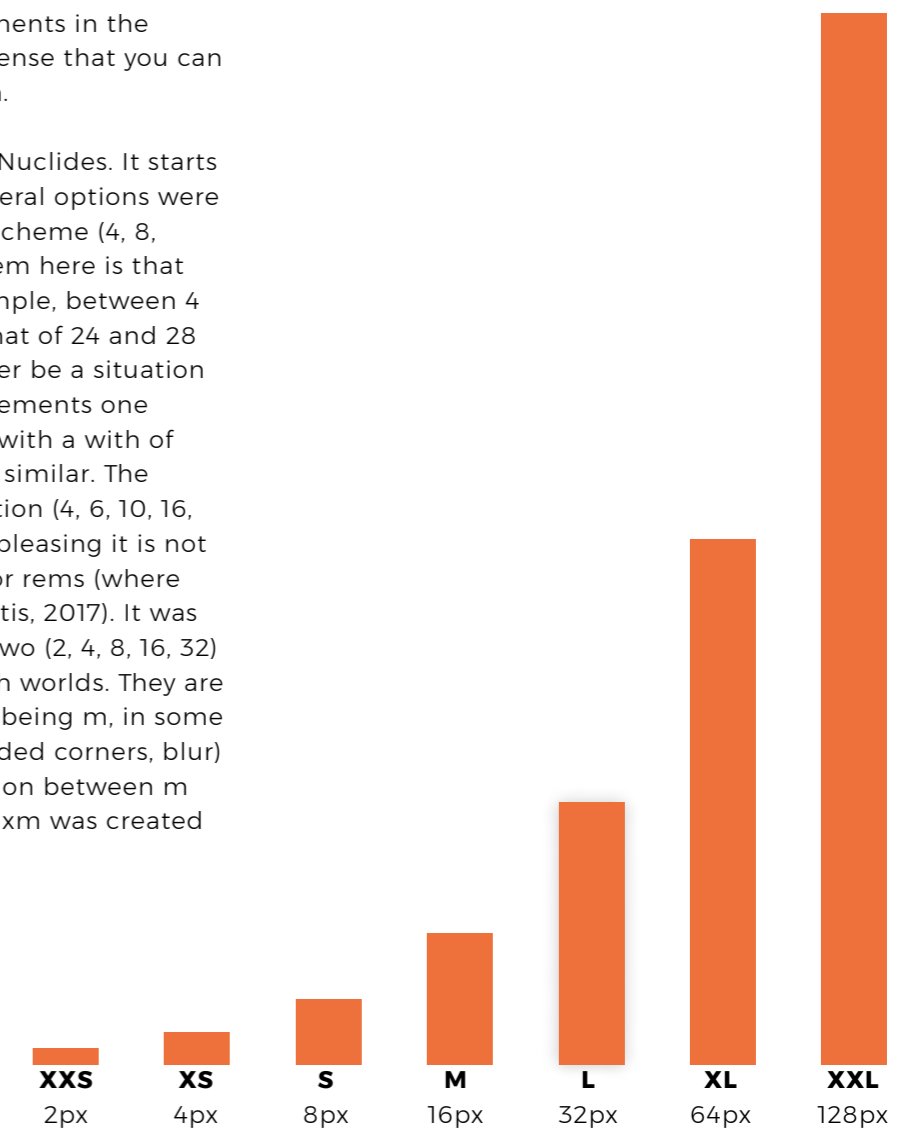


Figure 111: Sizing scheme

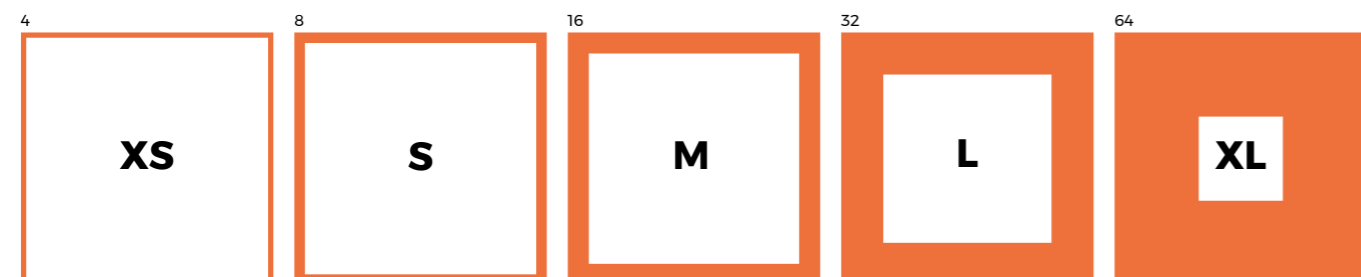
The spacing scheme as described above is used in 3 main ways; stack, inline and inset (Figure 112). Stacks are horizontal spacers, inlines are vertical spacers, and insets can be seen as padding. There is also a squish inset that has more padding on the sides than the top and bottom for elements like buttons. The reason that these have different names from their CSS counter parts (margin and padding) is that they can be used on other platforms (like iOS and Android) as well.

The final part of the space section are utility components that help with alignment and placing. These can be added to Atoms to make them full screen, or fixed in place or aligned in a certain way.

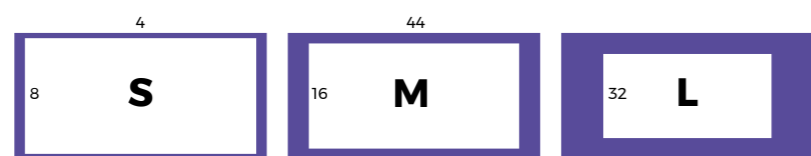
Another important category of Nuclides are colors, every color that is used on the website is defined here with a description of when and how to use them. There are several tints of orange and gray as well as guidelines for shadows.

Unique about this system is the frosted glass effect; it is described in the color section as well. It is achieved in two different ways (Figure 113); Frost takes a component, gives it a white background with a bit of transparency, and blurs everything behind it. It is used for panels, cards, and buttons (foreground components). Frosted takes a component with an image, blurs it, and adds a layer of white with a bit transparency. It is mostly used for background images.

Inset



Squish Inset



Stack



Inline

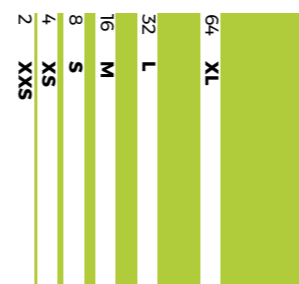


Figure 112: Cheat Sheet For Spatial Components

Atoms

Atoms are the very basic components of the system. Like different kinds of typography, buttons, input fields, imagery, and icons.

The chosen font for the system is Montserrat, it is used in this report as well. It is quite a versatile font (big difference between LIGHT and BOLD, and between no caps and ALL CAPS), it is a bit playful but still serious and elegant enough at the same time.

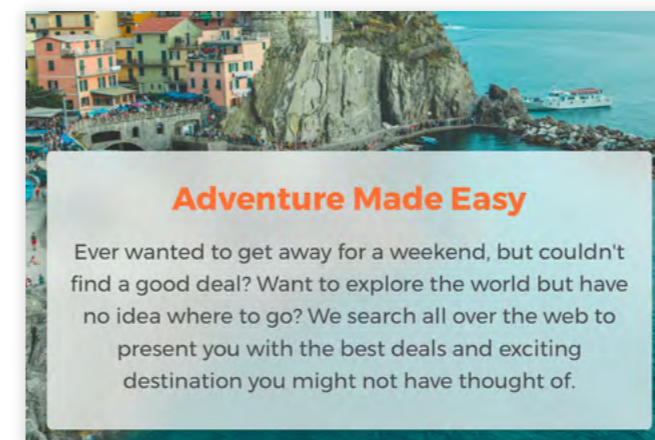


Figure 113: Frost vs. Frosted: The panel on the left has frost, the background on the right is frosted. Two methods used in distinct situations to create a similar effect.

Images are important for the system; they should be adventurous and exciting, but not so much that they are distracting when used as a background. There are several types of images in the system such as card images (used for the results), header images (on top of the trip page), background images (both blurred and not blurred) and round (for the testimonials). Icons come currently from a free to use icon library called font awesome.

Several inputs are created to be used when filtering trips (Figure 116), but while designing other application (such as a sign-up form or a booking page) were kept in mind. The focus of these inputs is on using the built-in systems of mobile operating systems (such as the date picker).

Buttons (Figure 114 top right & Figure 117) are designed to be easily tailored towards different situations (several sizes, frosted or orange background, deactivated, padding options).

Panels (Figure 113 left and Figure 115) are the primary containers of content; except for buttons and few headers all text should be placed inside a panel, giving it the frosted glass effect.



Figure 114: Four types of images: Header and frosted background (left), Background (top right) and Round (bottom right)

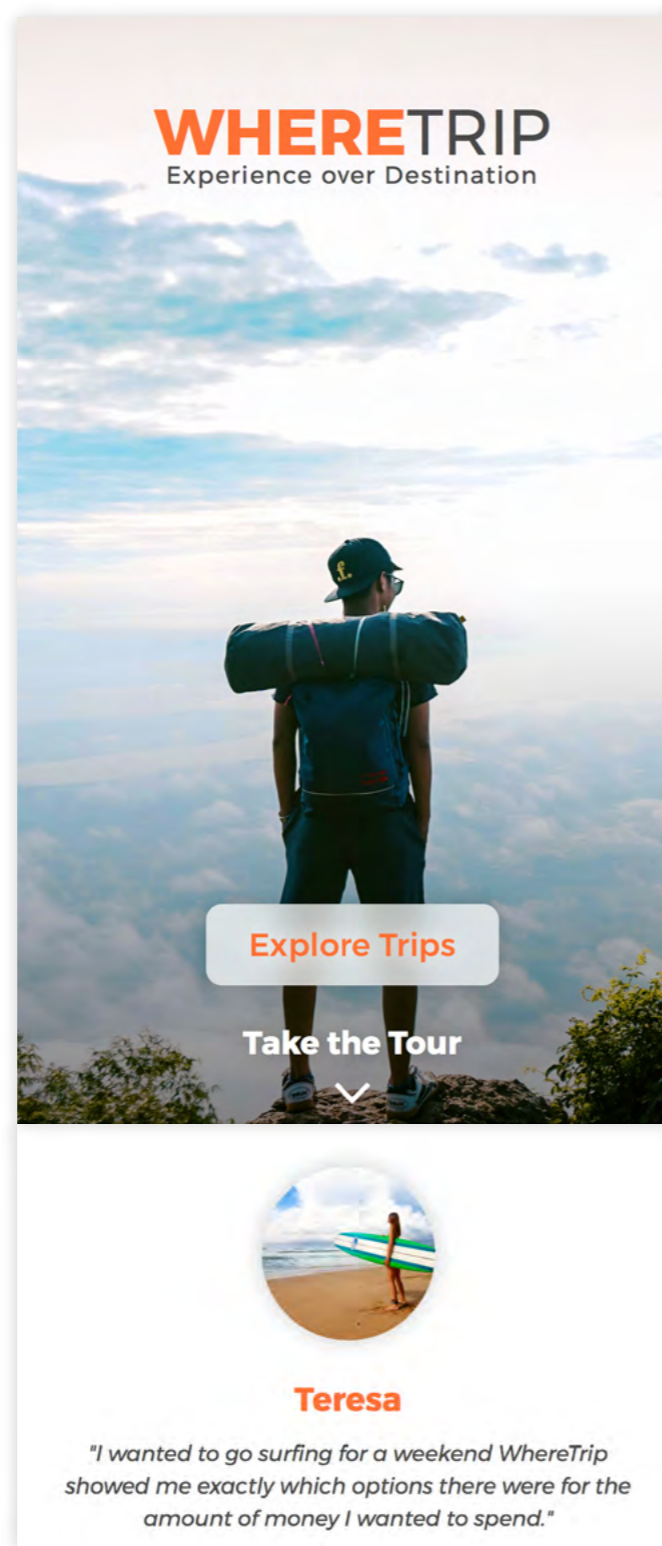


Figure 115: A Panel

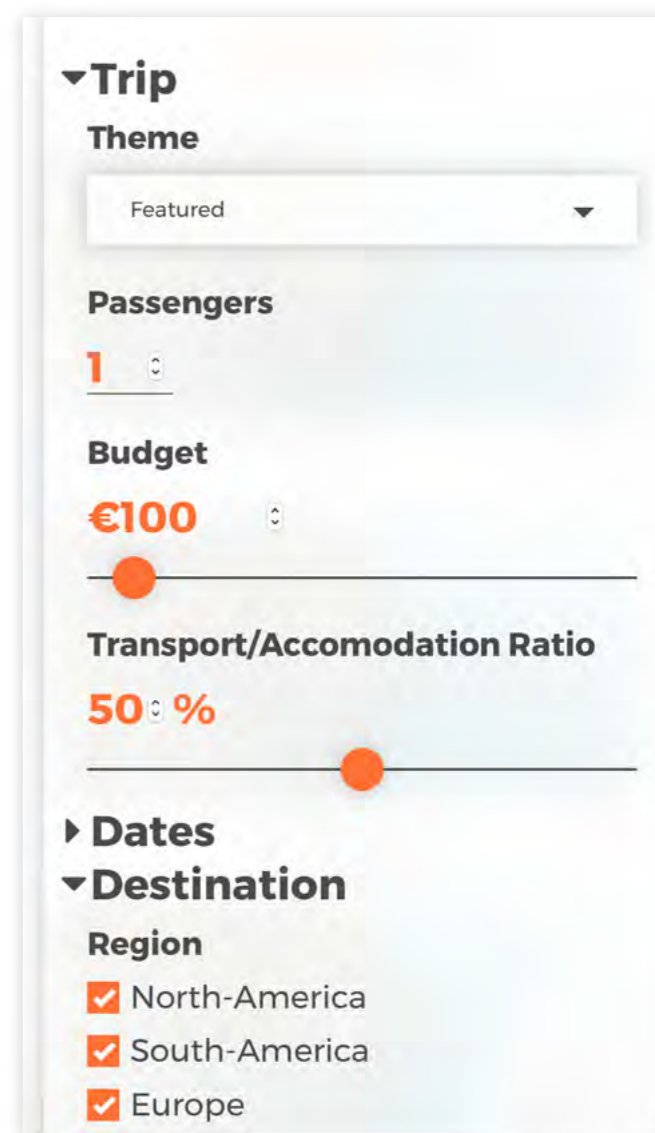


Figure 116: Several Types Of Input: Dropdown, Input (Number), Slider, Checkbox.



Figure 117: Alternative button (small inverted)

Molecules

Molecules are the more complex components and are often built from multiple atoms.

Cards are like buttons but with more content, like images, titles, prices, flight itineraries, hotel ratings, etc. There are many different versions of cards (Figure 118).

Modals (Figure 119) are popups that are only used to give the users very critical information or let them change a setting. They prevent the user from doing anything else on the site in the meantime. Expandable lists (Figure 120) are used to organize high quantities of information and inputs.



Figure 118: Three types of cards, all with the same basic rules in place..

Organisms

Organisms are a step higher than molecules they represent a big section of page like a top bar or a menu (Figure 121)

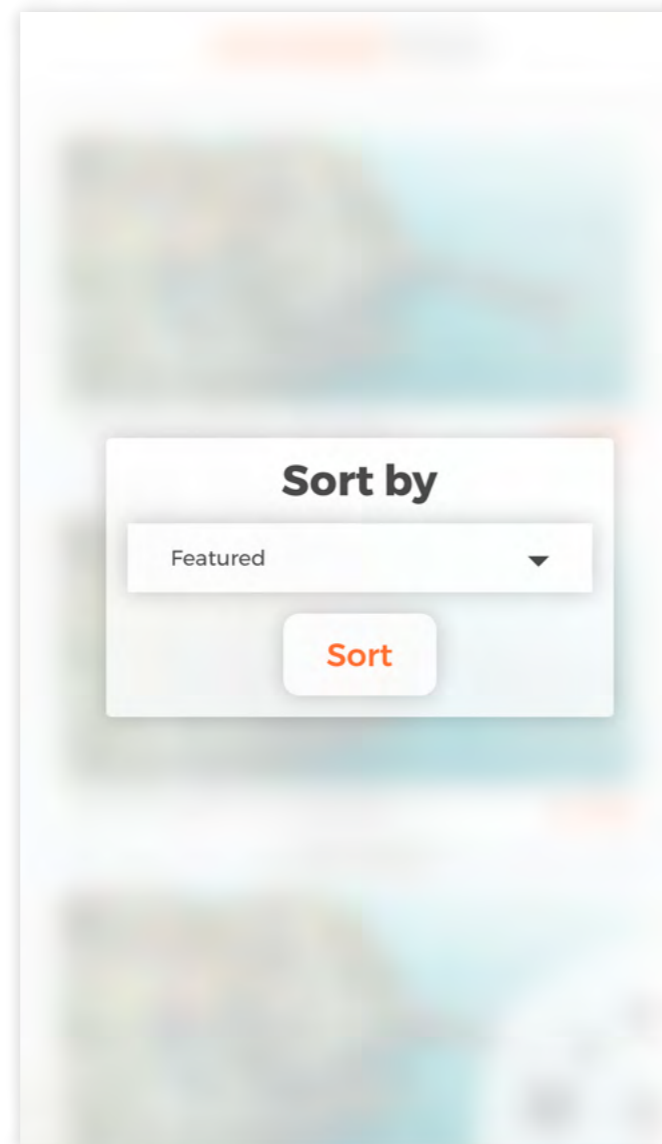


Figure 119: Modal (for selecting sort by)

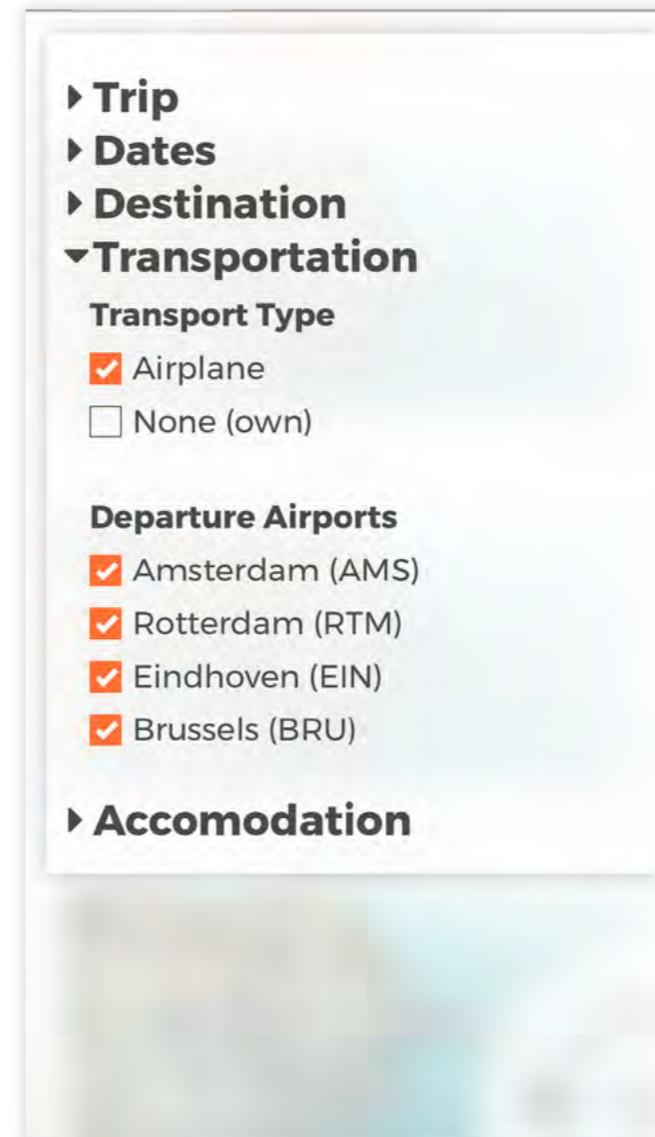


Figure 120: Expandable List Example

Animation

This section describes what kind of animation are used in certain situations, what their purpose is, and how the animation library can be expanded.

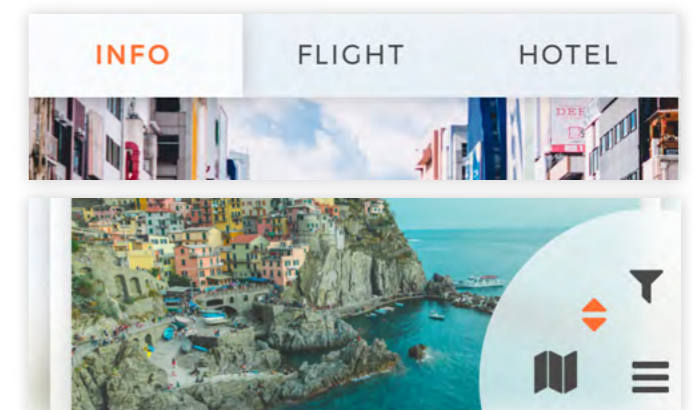


Figure 121: Top Bar and Menu

Recommendations

I created/developed a user experience ready to be used and the basis of a robust design system. However, several topics can be improved.

More and special Themes: Themes make WhereTrip different from the rest. Besides expanding the regular holiday themes, special themes could respond to trending topics such as Game of Thrones shooting locations, places that hosted the winter Olympics or summer festivals.

Motion/animation research: Although the participants of the final user test were enthusiastic about the transitions of the product, there is still some room to explore more micro-interactions, clean up the existing animations, and test how users respond to them.

Desktop Website: While making the prototype, the focus lay on design for mobile. With a few tweaks, using the same existing components, a decent desktop version can be produced. However, there is so much more screen estate on a desktop, that it is advisable to rethink the desktop flow and layout to fit the design system principles better.

Monitor Filters Use: It would be interesting to monitor how many times each filter is used during large-scale deployment. Currently, there are a lot of filters; not all of them will be used very often. To keep the website clear, some rarely used filters can be removed, or they could be rearranged in a manner that most used filters are placed at the top.

Shorter links: The current URL of the search results page and the trip page contains all the filters that the user has chosen, and this can become quite long. A shortening algorithm could be used to create shorter more comfortable to share URLs. (https://wheretrip.com/trip?date-From=6%2F12%2F2018&dateTo=6%2F4%2F2018&-duration=2&from=92&passengers=1&price-From=0&theme=ALL_DESTINATIONS&to=2038 could be <https://wheretrip.com/trip?london=C8Gh-CL>)

Share function: Every phone browser already has a share function that makes sharing links with your friends. Still people might be more inclined to share links if there is a button on the page.

Quality of flights: Some of the proposed flights are not very practical regarding time versus distance and price. There should be an algorithm in the back-end that analysis the average price and duration of the flight and decides whether it is worth showing.

Accommodation when having a long layover: On the other hand, a long layover might also be great opportunity to explore that city. In that case, WhereTrip could find an accommodation in the layover city as well.

Mix and match flights: Flight providers (like kiwi and Skyscanner) offer flights in return packages that are much cheaper than two one way tickets. However, it would be much more comfortable for to pick the outbound and return price separately and get back that package, instead of searching for the specific combination they want.

Reevaluation of the system: To maintain the design system it would be good to scrutinize it once every year or so and remove, update and add parts where needed. Before doing so it might be beneficial to sit down with the company leaders and figure out if the direction (principles) of the company has changed anything since the last time, define those changes, and alter the system based on those decisions.

Logo: The current logo does not resonate with the company principles. It is not clear because there are too many elements: a Euro sign, an airplane that is also some sort of arrow, and a map pin. It does not say anything about the principles and does not fit with the newer design of the website. The advice is to commission a new logo that focusses on adventure and has an icon which fits inside a square and a circle (for social media and favicon) based on the design system.

Dashboard: The development of a dashboard, to manage the back-end and monitor the front-end should be one of the higher priorities within the company. Here employees can add and edit destinations and themes.

System for missing data: WhereTrip grabs data from other providers; this sometimes leads to missing images or descriptions. It would be beneficial to have a system that catches this data and alerts an employee through the dashboard..

Refactoring the prototype: The prototype is decent and it works. However, the code is not clean at all, as this is not my expertise. The prototype is not a production product. The front-end developers should take this prototype and refactor it to match the same code standards as the back-end.

Evaluation



Overall the project meets the overall expectations I had at the beginning. There are several things that I have learned along the way and things that I would like to have done differently.

The first being the amount of work. Redesigning a user experience, a brand identity, bringing it together in a design system, and building a component library, alone, was a lot. This required me to divide my attention over many different aspects of the project and prevented me from paying attention to details that I wanted to give each element.

Although I had fun to designing different styles and flows for the product in the second phase, and learned a new skill in the UI design program Sketch. This phase could have been speeded up a bit. I could have searched for a very general direction for the UX and style and moved on to the next phase, instead of working out four UX flows and five different styles.

Building the prototypes was something that took more time than expected, and it is something I wish I had started earlier. It would have allowed me to do more tests and more iterations. This would have allowed me to grow the UX and aesthetics more organically, instead of starting with a worked out concept and tweaking it where needed.

Another mistake I made was not deciding to use standard measures from the beginning. I thought it would be a good idea to use the principles as measures, but the principles and their definition have changed somewhat during the project. If I had used Hassenzahl's ergonomic, hedonic, appeal qualities as the measure system from the beginning, I would have been able to compare the several user tests more efficiently. I still could have linked some of those qualities to the principles, and get the results that I ended up with now.

During this project I had to work a lot on my own. Design, in my opinion, is a team exercise. Its easy to get obsessed with tiny details, with nobody to call you back to the big picture. It is also difficult when there is nobody to bounce ideas off or that gives you new input that is as invested in the project as you are.

It was harder to communicate my progress and ideas with my coaches compared to other master projects. This has mostly to do with the frequency of the meetings, they were once a month on average. I also encountered some problems with clearly communicating my process and work through written reports.

The contact with the company was excellent, we had meetings almost every week, and I pitched in my opinions as an interaction designer on all fronts of the business. I was respected for my expertise, and I believe I handled input from the company towards the project with the same respect.

I am very pleased with the outcome of this project. I am proud of the way the prototype looks and works on a UX level. And I can't wait for it to be implemented on the actual website. I have learned a lot about front-end development was one of the learning objectives I had for this project. It is essential to have some of those skills as a modern UX designer. I got the chance to develop a design system on my own, that has a strong foundation in UX that leads the way for the brand identity of the company.

Conclusion



Analysis of the existing product revealed some problems, mainly that the mobile version was hard to navigate, while user data showed that most of the visitors were on mobile. A company vision was created in a session facilitated by the author. At the core of this vision is the company's mission statement: *Inspire students, young professionals, and explorers with new exciting destinations by enabling them to find and book trips within their budget easily.* Four principles: Fluent, Adventurous, Clear, and Trend (FACT) are defined to describe the qualities of the company and their user experience.

Multiple directions regarding user experience and aesthetics have been explored, and user tested. Participants favored a UX that allowed them to quickly see results, without having to fill in a search form. The aesthetics results were inconclusive; some users preferred dark themes while others were strictly against their use on a travel site. A decision was made with the company leadership to go for a frosted glass look, an aesthetic that is becoming more and more popular and that can be found in the latest Microsoft and Apple user interfaces.

A prototype was created, tested, and iterated upon, to meet the set requirements. A final user test acting out several user context scenarios revealed that the product behaved as expected and had a high appeal. A set of guidelines were developed and documented in the design system library, as well as a component library with modular elements used to create the prototypes.

Of the requirements and wishes most were met (Program of requirements and wishes). For the look and feel, usability and experience these were tested during the final user test and the accompanying survey. The design system requirements are mostly pieces of information that it should contain and it easily checked if they are there.

Only one of the wishes was not met at all, it concerns the map view and this was not implemented in the prototype. Two requirements and four of the wishes are not tested enough to give a definitive answer if they are met. Finally, two of the requirements of the design system are yet to be implemented but probably will be come graduation date.

Program of requirements and wishes

Look and feel:

Requirements

1. The site must feel adventurous (exciting) towards most of the users
2. The site must feel trustworthy for most of the users
3. The site must have a clear (uncluttered) look for most users

Wishes

1. The site should feel high-end (with budget pricing)
2. The site should feel modern/contemporary
3. Colors on the weather map should correspond with the user's expectations

Usability:

Requirements

1. Users must have more options to choose destinations
2. Users should be able to filter their results with a wide range of options
3. Mobile users should be able to get quickly get back to the process while multitasking or when getting distracted
4. Relevant information (such as flight info) must be readily accessible and presented prominently

Wishes

1. Users should know what input is expected
2. Users should be able to find most relevant information for their trip on the WhereTrip website, without going to external sources.
3. It must be clear what is included in the listed prices

Experience:

Requirements

1. The site must excite users to go on a trip
2. WhereTrip's concept must be communicated clearly
3. Discovering and booking trips must be a fluent experience
4. Users must want to return to the site

Wishes

1. Users should feel like they get a great deal
2. Users should feel like they have personal experience
3. "Window shopping" should be a satisfying experience

The Design System:

Requirements

1. The design system must be easily accessible to all employees
2. The design system must contain readable explanations
3. The design system must contain usability patterns
4. The design system must contain design examples (Do's AND Don'ts)
5. The design system must contain examples of when and how to use pre-made components.

Wishes

1. The design system should contain the code of pre-made components
2. The design system should contain information on how to expand the system
3. The design system should contain information on how to alter the system

- Implemented in design, tested and confirmed
- Implemented in design, not fully tested and confirmed, requires further testing
- Partially implemented in design, requires further implementation
- Not implemented in design, requires complete design, implementation and testing

References



Power, A. (2017, August 28). The benefits of creating a design system. Retrieved from <https://medium.com/qstream-design/the-benefits-of-creating-a-design-system-65eeae2977c>

Curtis, N. (2017, August 7). Starting a design system. Retrieved from <https://medium.com/eightshapes-llc/starting-a-design-system-6b909a578325>

Kholmatova, A. (2017). Design Systems: A practical guide to creating design languages for digital products. Freiburg, Germany: Smashing Media AG

Nielsen, J. (2000, March 19). Why you only need to test with 5 users. Retrieved from <https://www.nngroup.com/articles/why-you-only-need-to-test-with-5-users/>

Smith, S. D. & Galbraith, Q. (2012, March 30). Motivating millennials: Improving practices in recruiting, retaining, and motivating younger library staff. *The Journal of Academic Librarianship*, 38(3), 35-144.

Benckendorff, P., Moscardo, G. & Pendergast, D (2010). *Tourism and generation Y*, CABI

Machado, A. (2015, April 15). How millennials are changing travel, *The Atlantic*, Retrieved from <http://aimtvgroup.com/rawtravelblog/wp-content/uploads/2015/04/HowMillennialsAreChangingTravel-TheAtlantic.pdf>

Stein, J. (2013, May 20). Millennials: The Me Me Me Generation, *Time Magazine*, Retrieved from <http://time.com/247/millennials-the-me-me-me-generation/>

Hassenzahl, M. (2001). The Effect of Perceived Hedonic Quality on Product Appealingness, *International Journal of Human-Computer Interaction*, 13(4), 481-499

Curtis, N. (2016, September 26). Space in design systems. Retrieved from <https://medium.com/eightshapes-llc/space-in-design-systems-188bcbae0d62>

All images by author or royalty free curtsey of unsplash.com

Acknowledgements



I want to thank my coaches David Keyson and Eva Haagsman. Wikaas Dihalu, Sando van der Helm, Sanjay Birjmohan, Victor van den Berg and all the other people over at WhereTrip. Gerard de Vries for proofreading. Marieke Lous for the support. And all the participants of the user tests Pat, Barbera, Zoë, Steve, Rowan, Koen, Jody, Marieke, Jake, Amy Martin, Bram, Laura, Karam, Paul and Roeland.

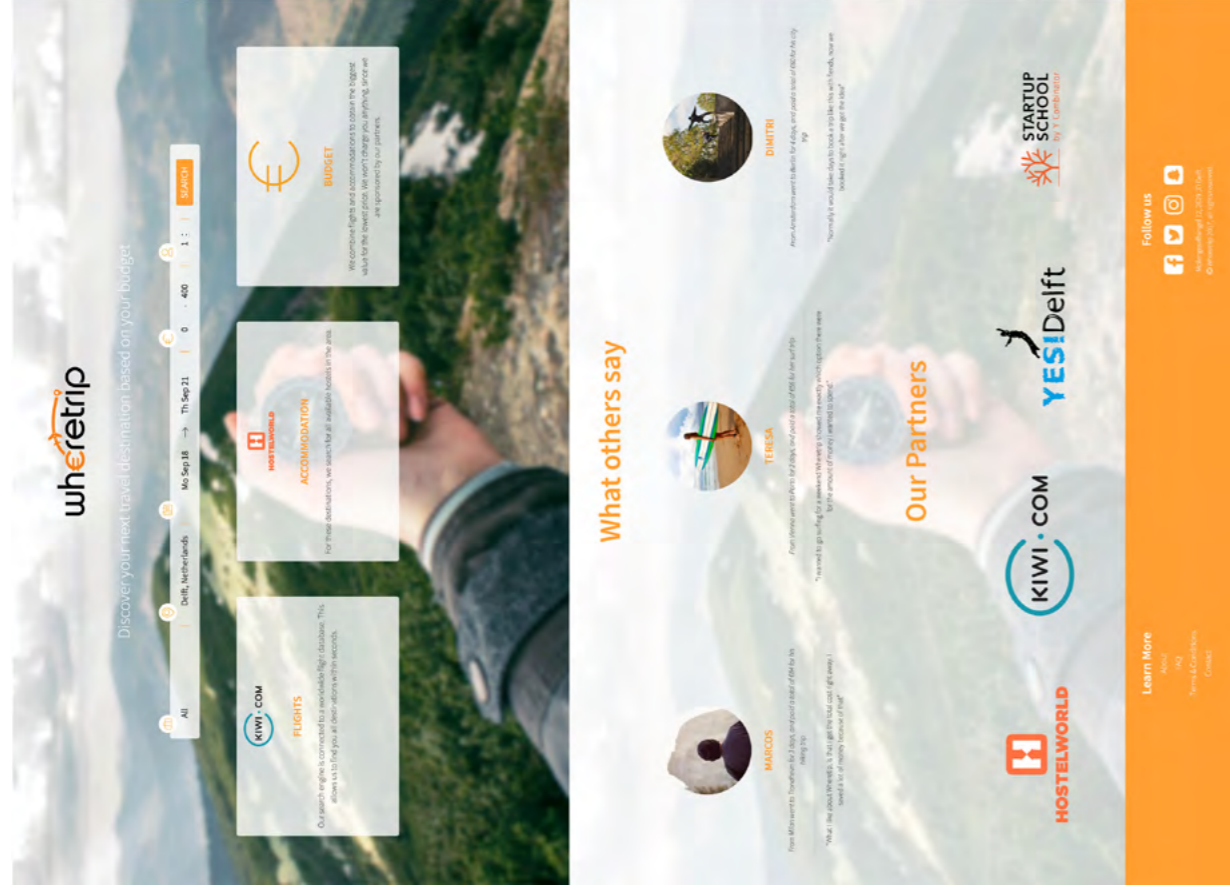
Appendix



A. Current Product Analysis	126	J. Initial User Test Online Survey Results	158
B. Industry Best Practices Websites	135	K. UX Concepts Morphological Chart	161
C. Industry Best Practices Findings	136	L. UX Concepts Screens	168
D. Founder Meeting Sensitizer	146	M. Concept User Test Transcripts	182
E. Founder Meeting Results	147	N. Concept User Test Data	184
F. Initial User Test Setup	148	O. Iterative Tests and results	189
G. Initial User Test Transcripts	151	P. Final User Test Transcripts	190
H. Initial User Test Survey Results	154	Q. Final User Test Data	192
I. Initial User Test Online Survey	155	R. Design System (and component library)	193

Appendix A: Current Product Analysis

Landing Page - Sections:



Hero Banner: The first thing user will see, here we want to introduce the users to WhereTrip with our logo, tagline, and unique selling points as well as get them started finding trips with the search bar.

Trust Winner: If the user has some doubts about the legitimacy of the product, we want to win their trust. We provide testimonials from other users and show the logos of our big name partners

Footer: This is standard for almost any website; here we provide links to our contact information, FAQ, legal documents and social media, as well as copyright information.

Landing Page - Hero Banner:

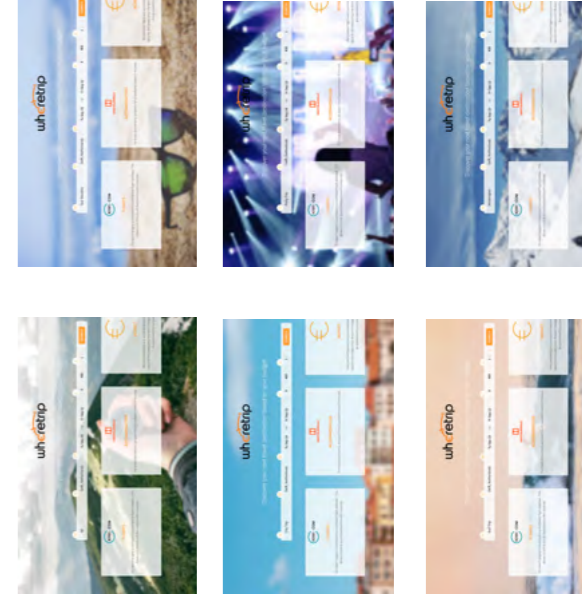
Logo: Main point of brand recognition

Tagline: We want to introduce the user to the concept of WhereTrip in one sentence



Searchbar: The main point of interaction on the site, allows users to search for trips. Should also reflect our concept (e.g., no destination field).

Unique Selling Points: We go a little bit deeper on what makes WhereTrip different and how we work



Background Image: The background images changes based on the selected theme (see image) to set the mood based on users interest.

Landing Page - Hero Banner - Search Bar:

Icons: Gives users a quick visual cue of what information the inputfield requires.

Input fields: Allows users to input their search queries.

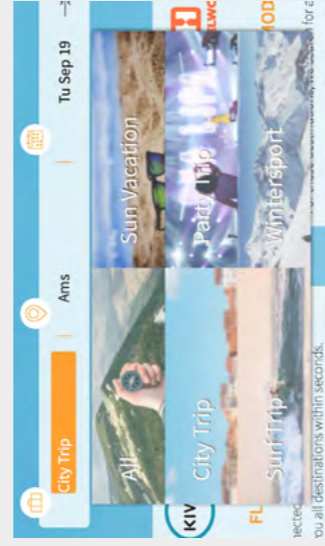
Budget: The minimum and maximum price users are willing to pay for their trip

Passengers: The number of travelers.

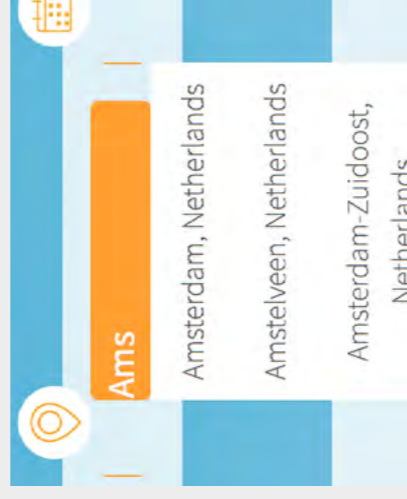
Search Button: Takes the user to the search results page.



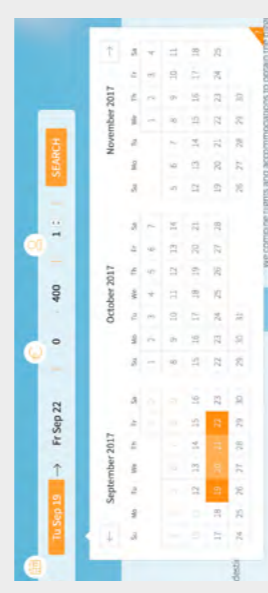
Theme: Has a drop down with all of the trip themes users can choose, menu items have corresponding images as background to set the mood.



Current Location: Shows the current location of the user based on their IP address. But users can also fill in their city or airport manually with an auto complete feature.



Date Picker: Allows users to pick their departure and return dates with a drop down calendar.



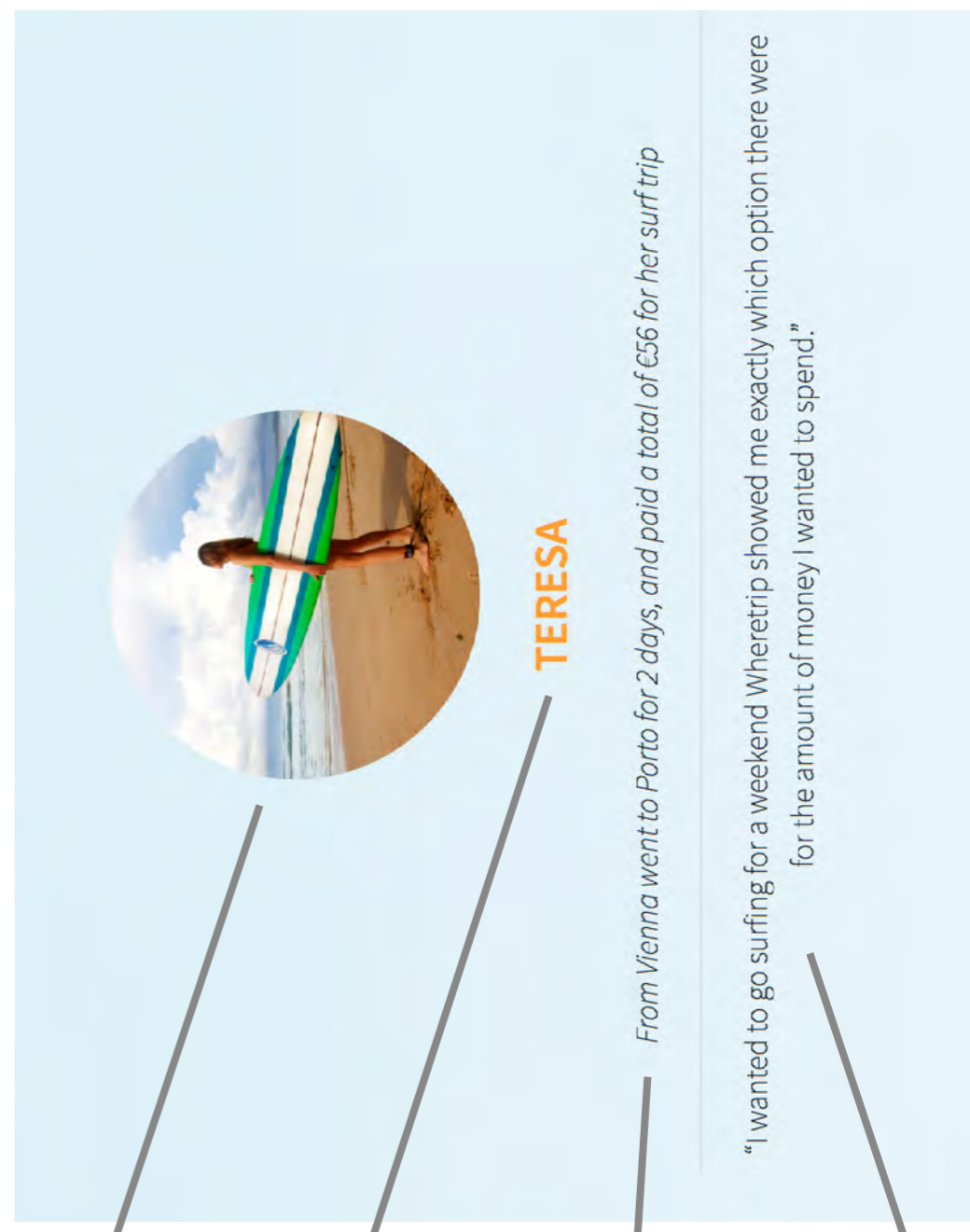
Landing Page - Trust Winner - Testimonial:

Picture: Shows a picture of the trip to increase credibility and visual stimulation.

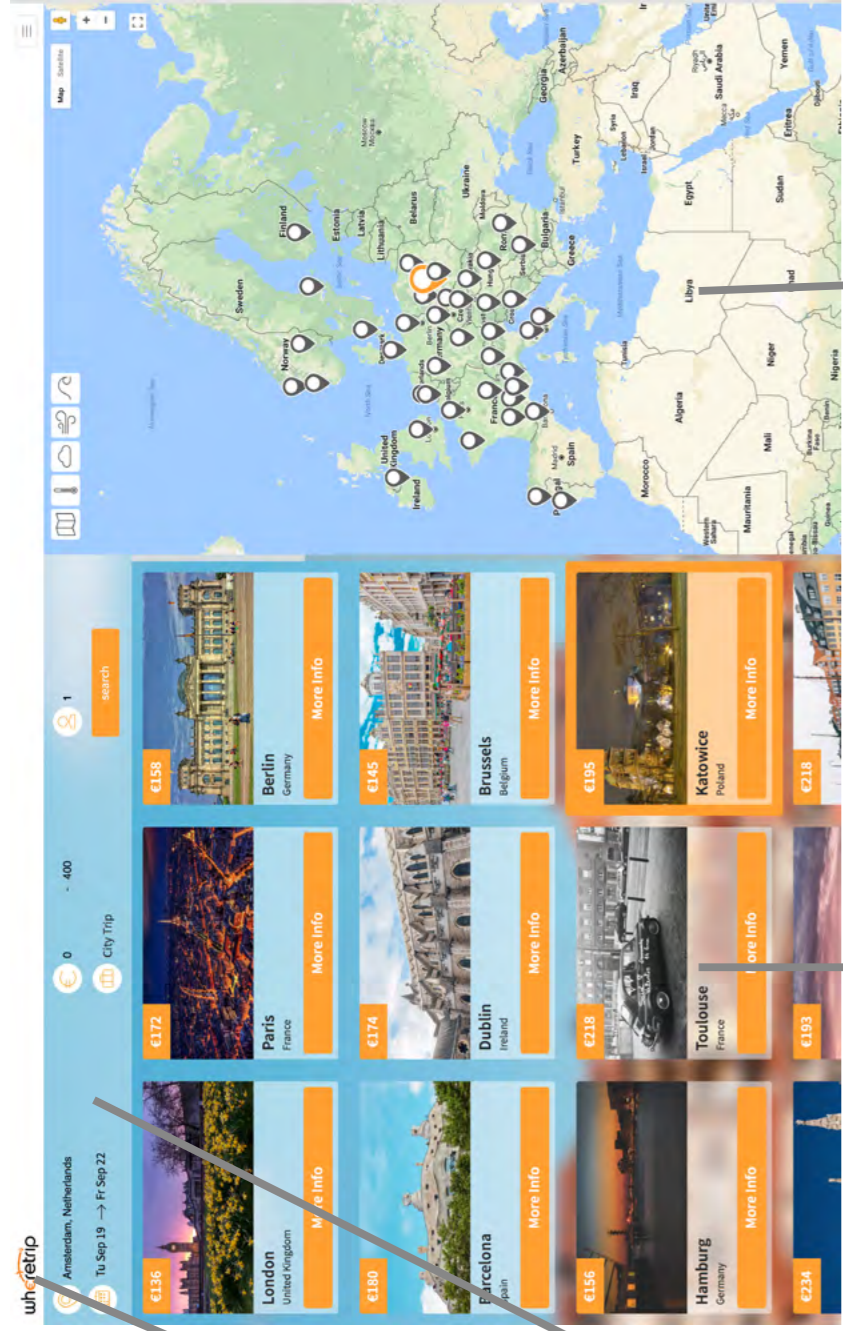
Name: First name of the person who booked the trip, to make it more personal.

Trip Info: Type of trip, starting location, destination, and price to illustrate the possibilities of WhereTrip.

Quote: Something active and unique about their WhereTrip experience, to highlight a feature.



Search Page - Sections



Top Bar: The top bar has the WhereTrip logo on the left, that will take the user back to the landing page, and a hamburger menu on the right. The menu contains the same links as the footer section of the landing page.

Search Bar: Very similar to the one on the landing page, slight change in layout.

Results: Shows the result that where found. The background image is based on the selected trip theme.

Map: Shows the results on a map, and highlights the selected city. The map has an option to display various weather conditions such as temperature, clouds, wind and wave conditions

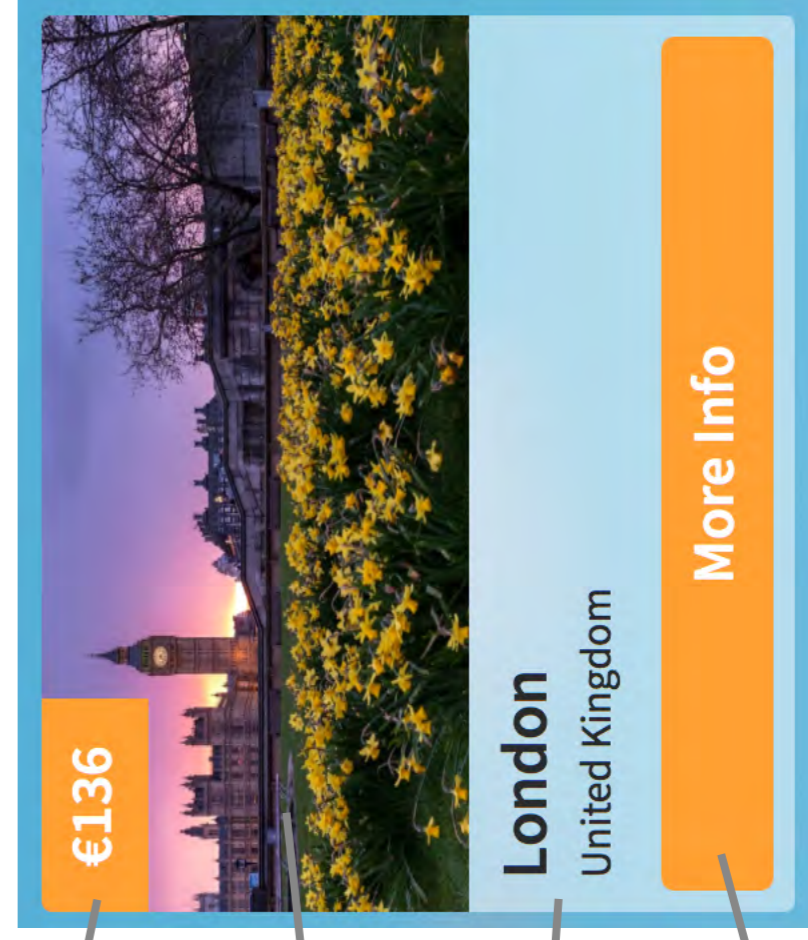
Search Page - Results - Trip Card:

Price: Average price of this trip (prices change with flights and accommodation).

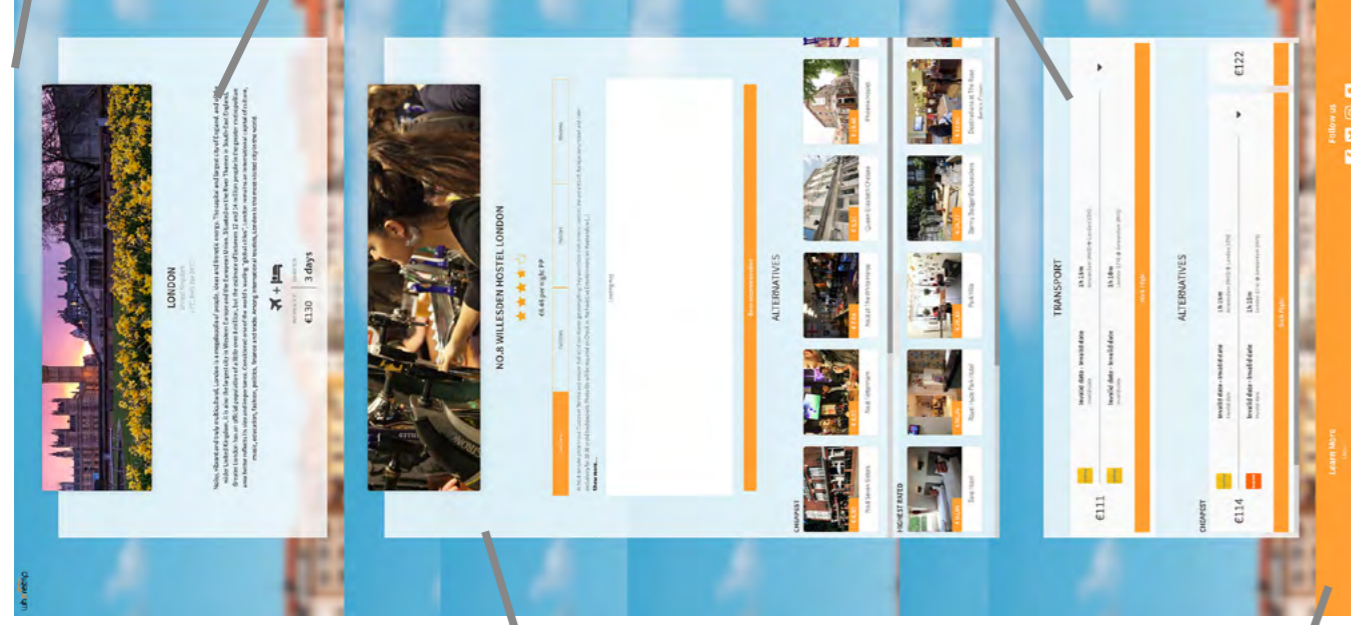
Image: An attractive image of the city in question to attract the user's attention to the card.

City and Country

More Info Button: Takes the user to the trip page where they get detailed information about the trip and have the ability to book the flight and accommodation.



Trip Page - Sections



Top Bar: Same as the one on the search page.

City Info: Some more information about the city combined with a picture, the average price and the duration of the trip.

Accommodation Info: We provide the user with information about their selected hostel, as well as alternative accommodations.

Transport Info: User can see the flight (or other transport options) that we recommend as well as some alternatives.

Footer: Same as on landing page.

Trip Page - Accommodation:

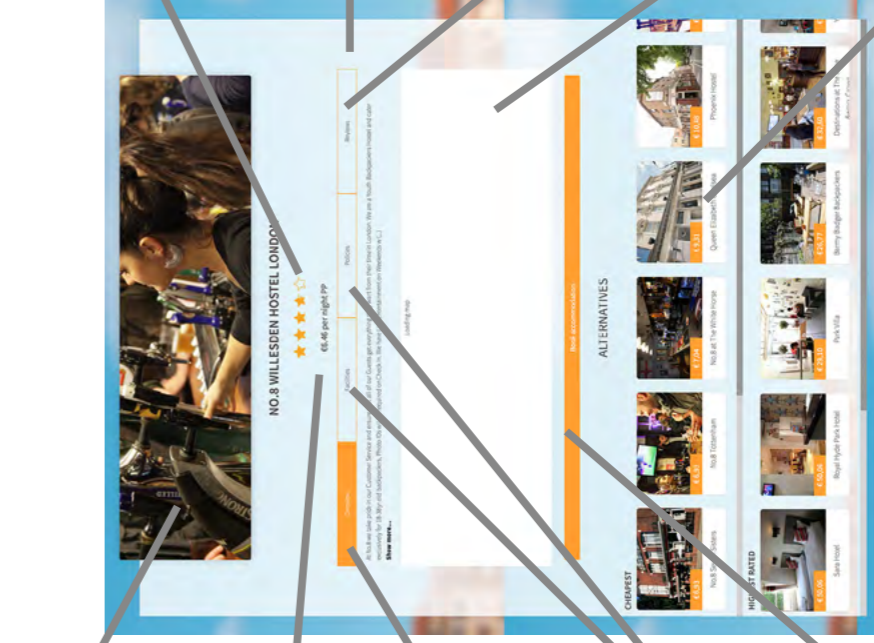


Image: To show of the accommodations atmosphere

Price: Per person per night

General Info: General information about the accommodation

Facilities and Policies: Illustrated with icons

Book button: Currently links to the external booking site (Hostelworld)

Rating: From the booking site (Hostelworld, Airbnb, etc.)

Tabs: Some of the information is hidden behind tabs, this is done not to overwhelm the user with content.

Reviews: From the bookingsite

Map: Map of the city showing the location of the accommodation

Alternatives: Cards with image, price, and name categorized by price and rating

Trip Page - Flight:



Appendix B: Industry Best Practices websites

The websites looked in the current product analysis are:

Trip Sites (Flights and Accommodations):

- Travelbird.nl
- Sprs.me
- Flykt.com
- TripMyDream.com
- WanderApp.me
- DestiGoGo.com

Accommodation Sites:

- HostelWorld.com
- TripAdvisor.com
- Booking.com
- AirBnb.com

Flight Sites:

- SkyScanner.com
- Kiwi.com

Appendix C:

Industry Best Practices Findings

Search bar over a hero image/video: Several of the analyzed websites have their search bars on top of a big image or video (image). The visuals help set the holiday mood right from the start. On some pages, this element takes up the full screen (image) other keep it narrow to show their recommended deals (image).

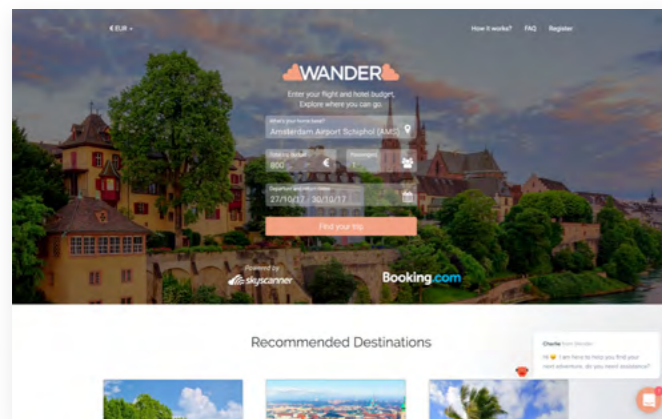


Image X: Front page of wander with a big hero image behind the search fields.

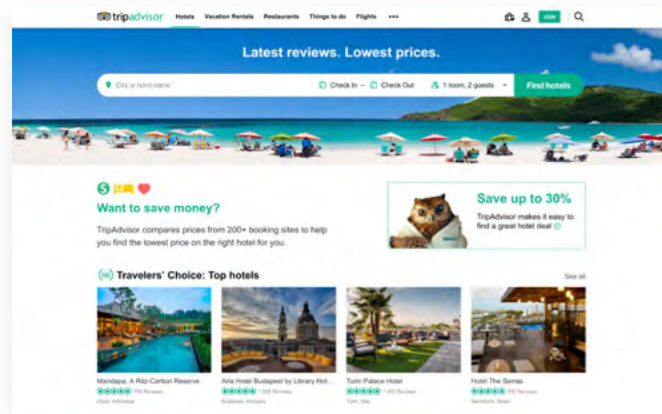


Image X: Front page of TripAdvisor with a narrow image and search bar. With room for recommendations.

Recommended Deals: Eight of the websites show some handpicked and or popular deals or destinations on the front page (image). This might serve as inspiration for customers as well as a way to get them to book quickly. An interesting variation is the on this can be found on FLYKT, here they have a small search function build into the recommended deal cards (image).

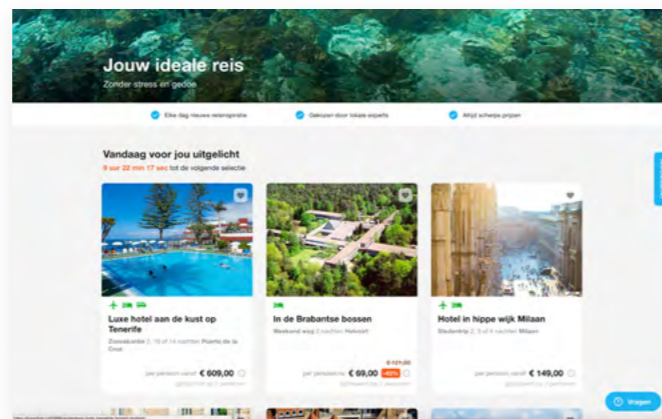


Image X: Front page of TravelBird with recommended deals.

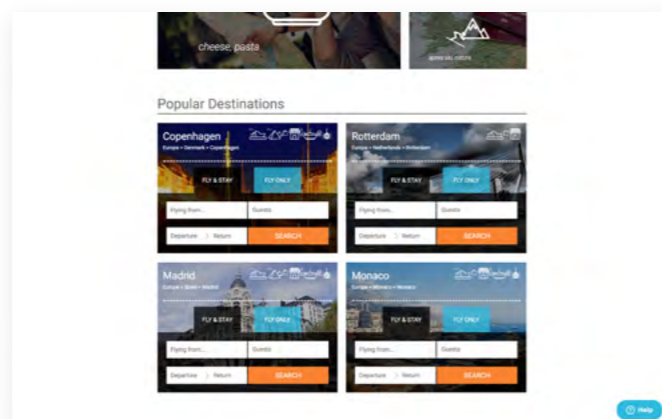


Image X: Front page of FLYKT with where the popular destination cards have a search functionalities.

Valuta, language and location settings: Almost all websites have their valuta, language, and location settings in the upper left or right corner (image). If there is only the option to change valuta's it is often in the form of a drop-down menu (image), otherwise a pop-up menu might be used (image).

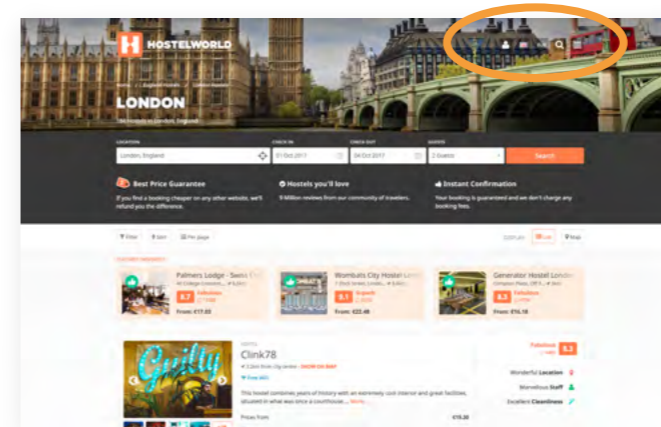


Image X: HostelWorld places their settings in the upper right corner.

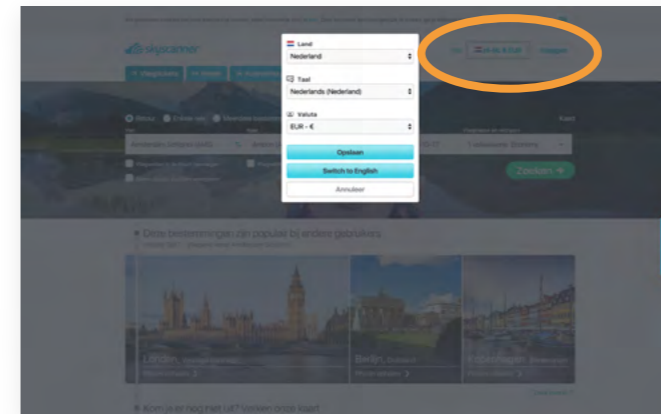


Image X: SkyScanner uses a pop-up menu for location, language and valuta (upper right).

Date Range Picker: Most websites have a date range picker that allows users to click once on a calendar to pick their departure date and a second time on the same to drop-down to pick their return date (image). Others require the user to open two separate drop-down calendars to choose a departure and return date (image).

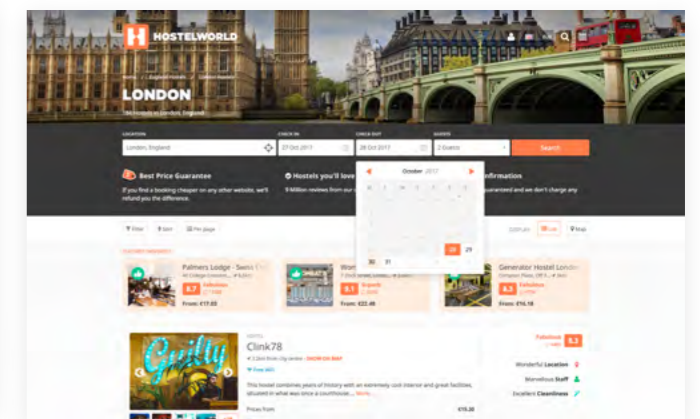


Image X: HostelWorld does not have date range picker user have to open a second callendar for the return date.



Image X: Airbnb has date range picker; you click twice on the same callendar and see the range.

Loading Messages: While searching for trips some websites show a loading message (image). This is an excellent opportunity to inform the user on how the site works as well as show a bit of the corporate identity by the use of language and icons (image).

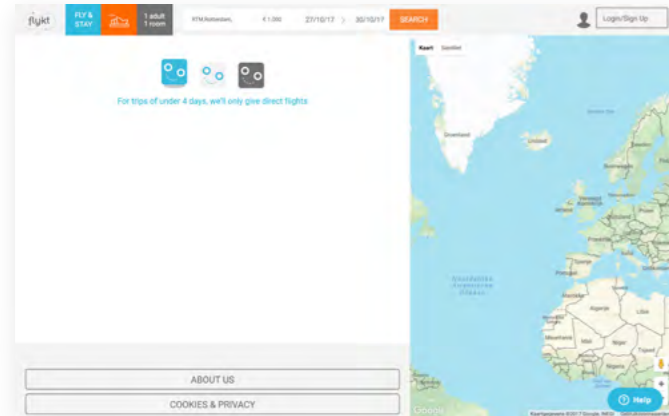


Image X: FLYKT shows a bit of their witty corporate identity through their loading messages.

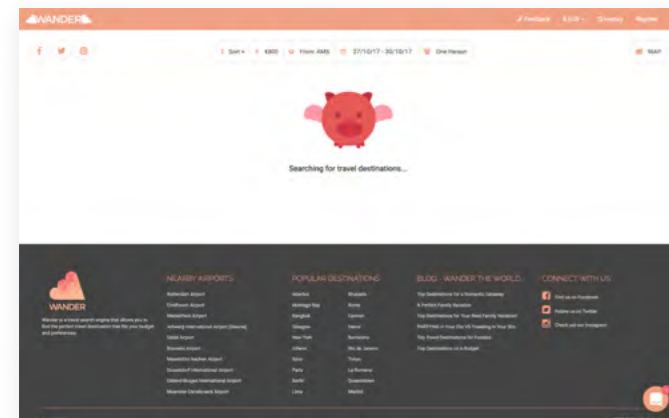


Image X: Wander informs the user what is happening with loading messages.

Refresh Message: Some websites show deals that are only valid for half an hour or so. To not show the user options that are gone search results are refreshed once in a while, this is often accompanied by a message (image). Keeping the user informed gives the user a better understanding of how the site works and urges them to book quickly.

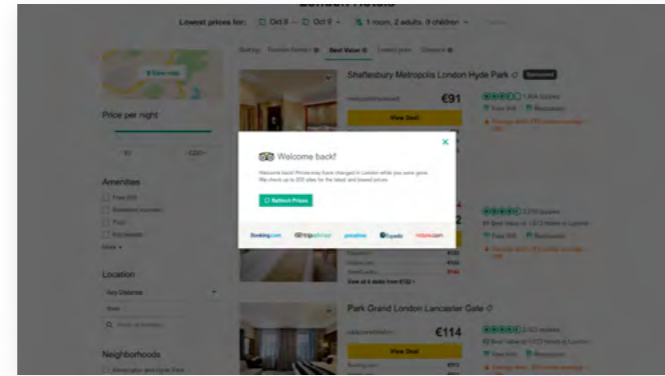


Image X: TripAdvisor shows a refresh message after half an hour.

Budget Sliders: Instead of letting the user type in their budget (image) or pick it from a drop-down menu (image), some websites have a budget slider (image). Airbnb has a particularly nice one in their search results filter with a histogram (image).

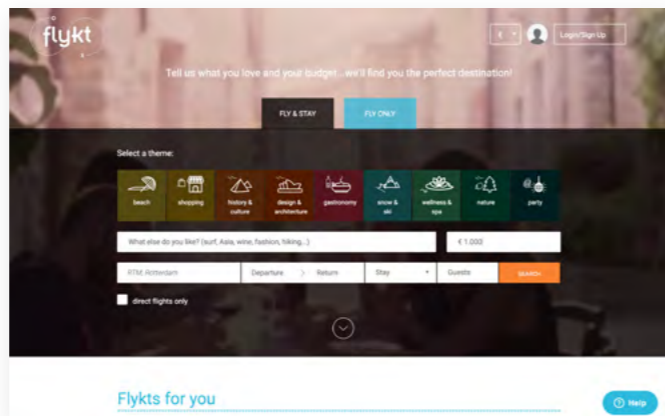


Image X: FLYKT requires the user to type their budget.

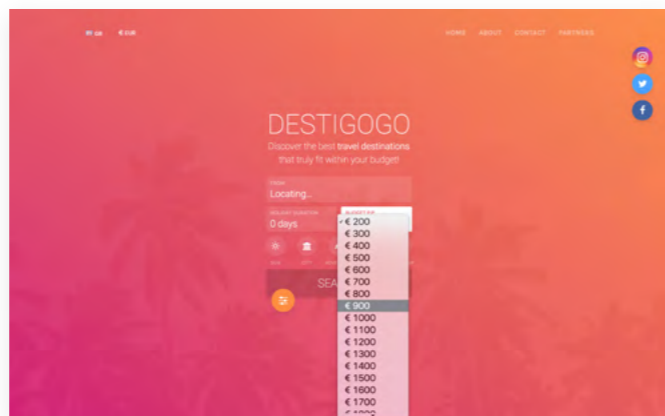


Image X: DestiGoGO has a budget drop-down.

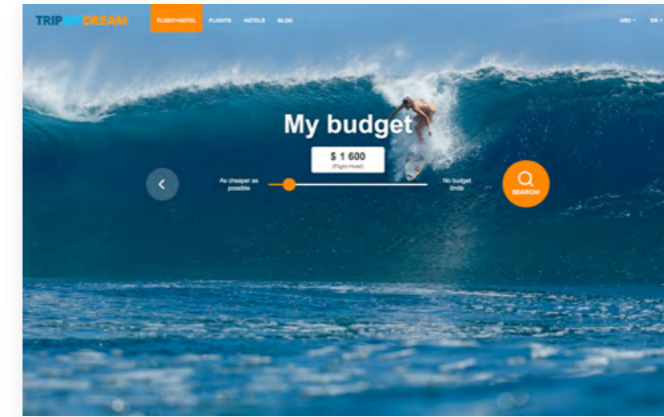


Image X: TripMyDream uses a budget slider.

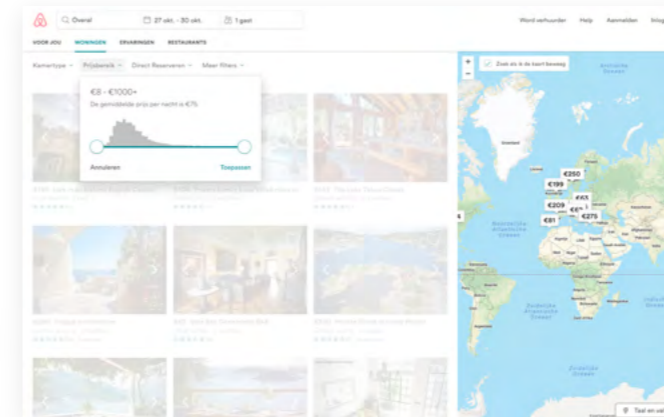


Image X: Airbnb has a budget slider with a histogram.

Staggered Input Fields: A couple of websites only show one input field to start with (their most important feature) (image), and once that is filled in they add/show the next one (image x2). This prevents the user from being overwhelmed by input fields and ensures that all fields are filled in.

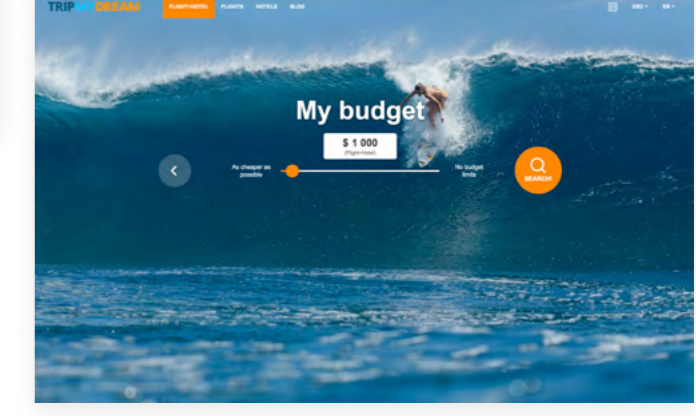
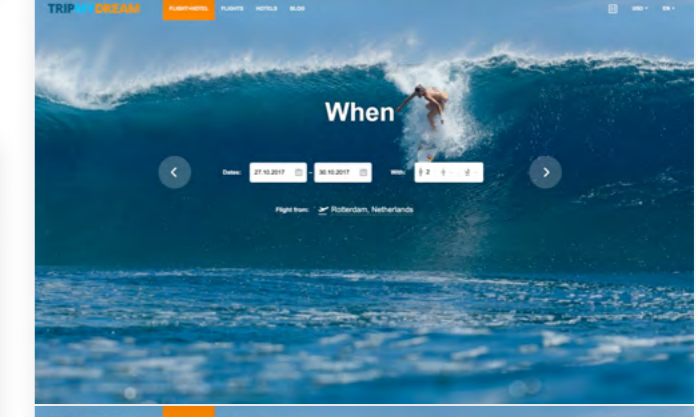
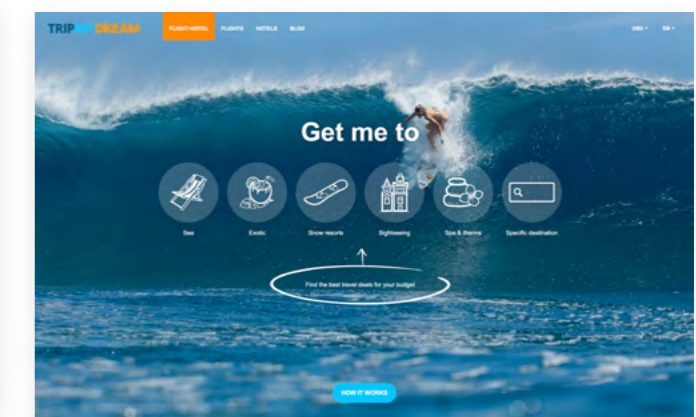
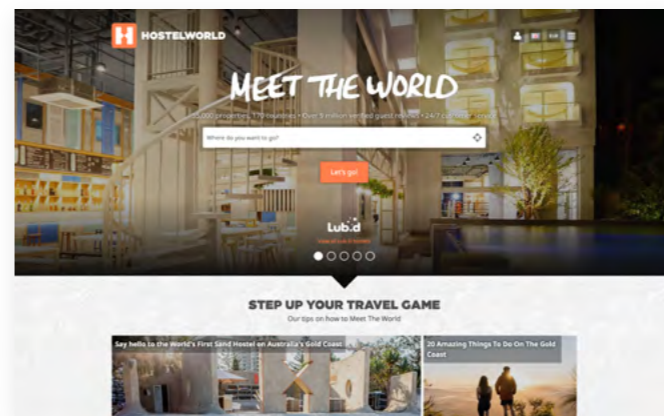


Image X: TripMyDream only shows one section of input at a time, first theme than dates and people and finally budget.

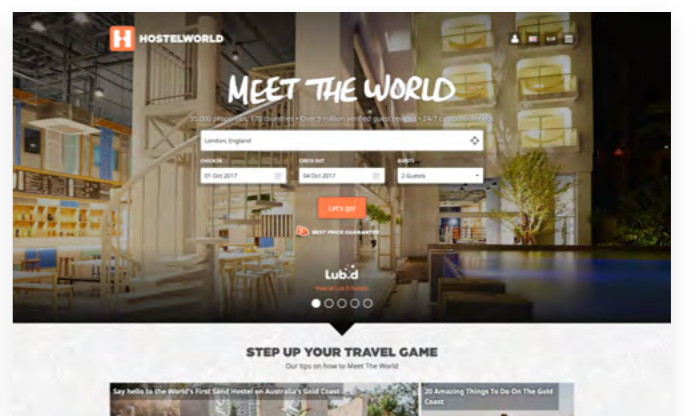


Image X: HostelWorld first shows the destination, after that is filled in they show dates and people.

Hidden Extra Input Fields: Some websites allow users to set additional search parameters by opening a hidden panel (image). Giving users that know exactly what they want a feeling of control.

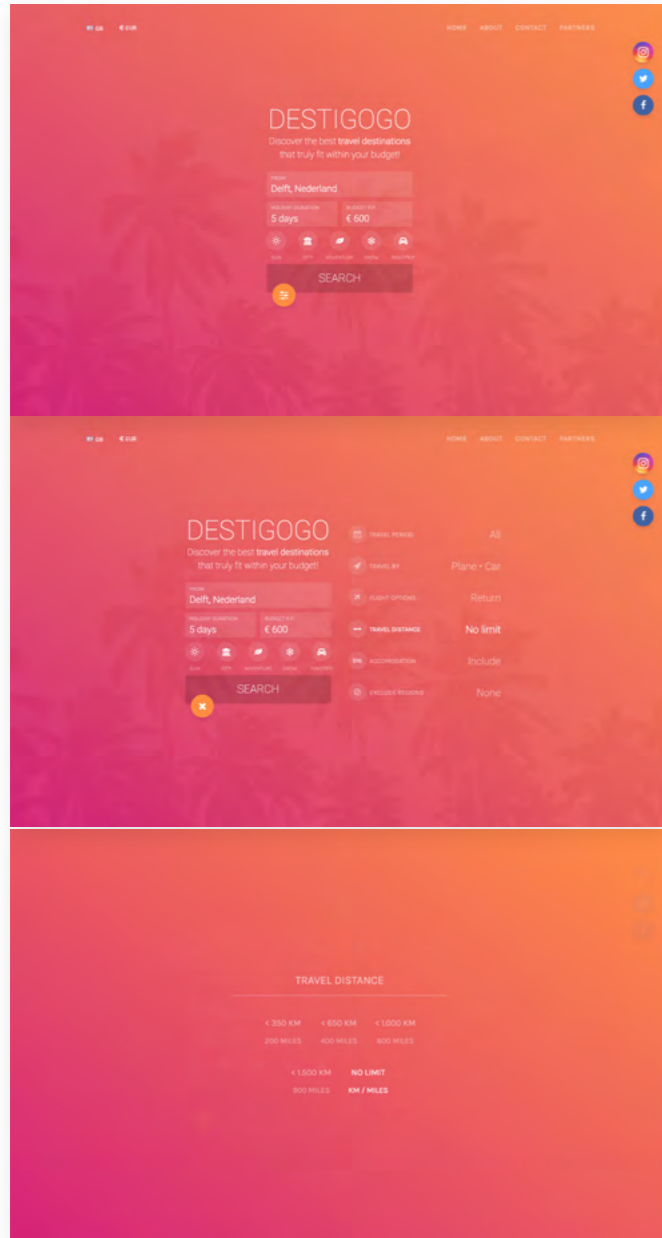


Image X: DestigoGo has a additional search parameters panel. And a nice visual selection screen.

Last Search: WanderApp.me remembers your last search query and fills in the input fields with that information, making it a lot more efficient for returning customers (image).

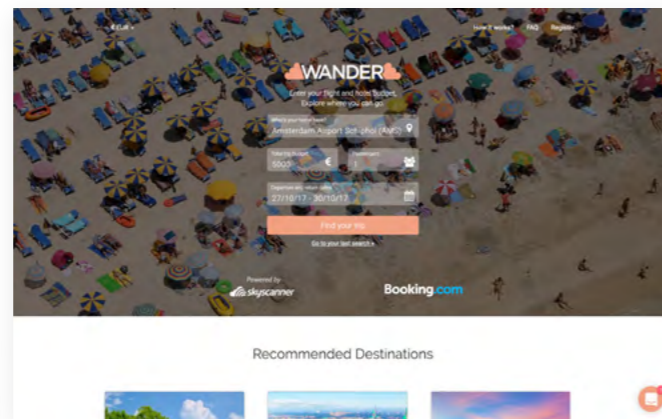


Image X: WanderApp remembers your last search query.

Results on a Map: A couple of websites display their results on a map (image). Five more give users this functionality as an option but do not do this by default (image). FLYKT keeps their map in place when opening a result giving it a very fluent feel (image).

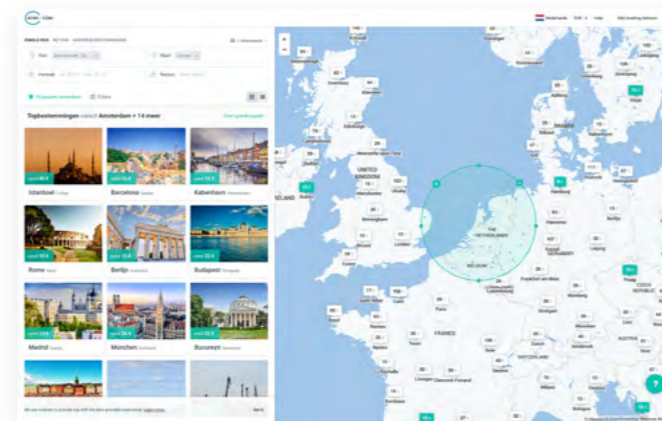


Image X: Kiwi shows a map with prices on the side by default.

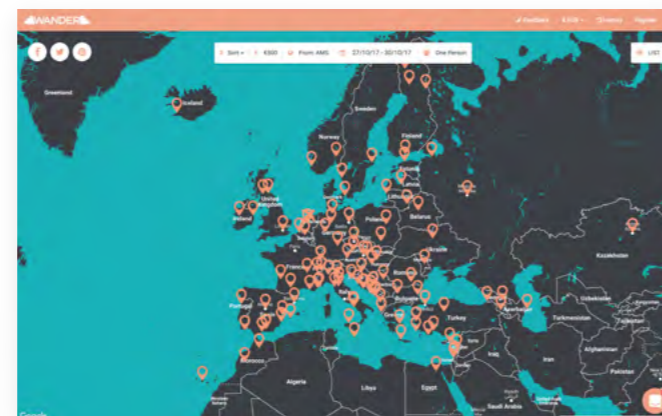


Image X: Wander has a full screen map as an option.

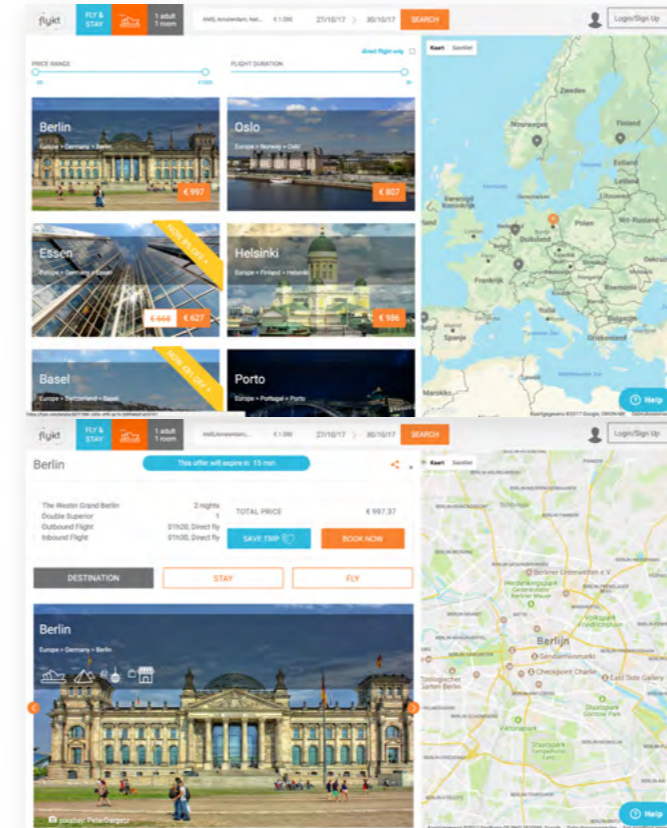


Image X: Flykt has a map by default and it zooms in when you click on a trip.

List vs. Tiles: There are roughly two ways of displaying results. The first being a list where the results are stacked vertically (image). This leaves room for a lot of information about the trips (image). The other method is in by displaying the trips on cards in (tiled) gallery (image), this makes for a more visual and cleaner look, but leaves less room for information. Some sites like TripMyDream give both options (image 2x).

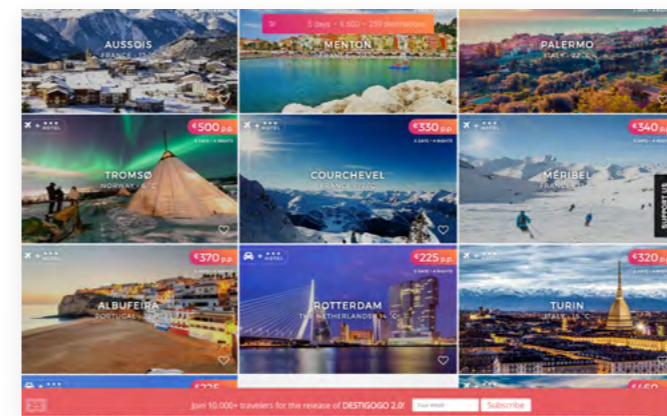


Image X: DestigoGo uses a gallery for more visual experience

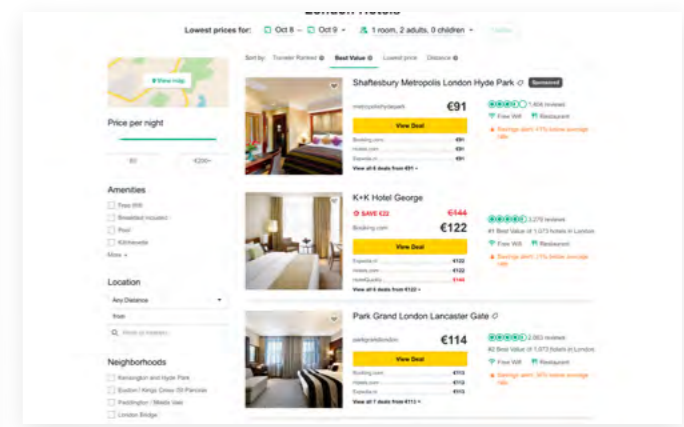


Image X: TripAdvisor shows results in a list

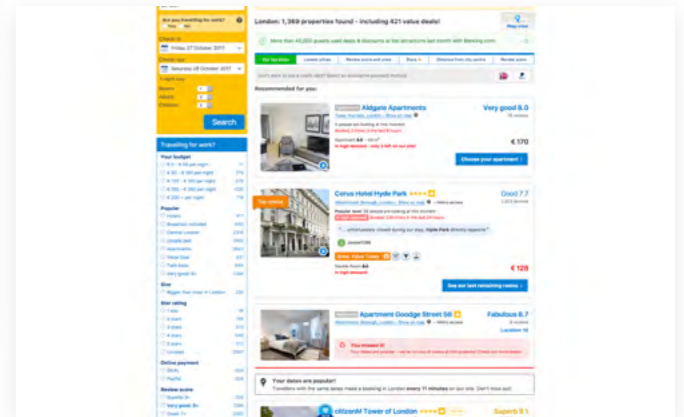


Image X: Booking.com shows results in a list and shows a lot of information.

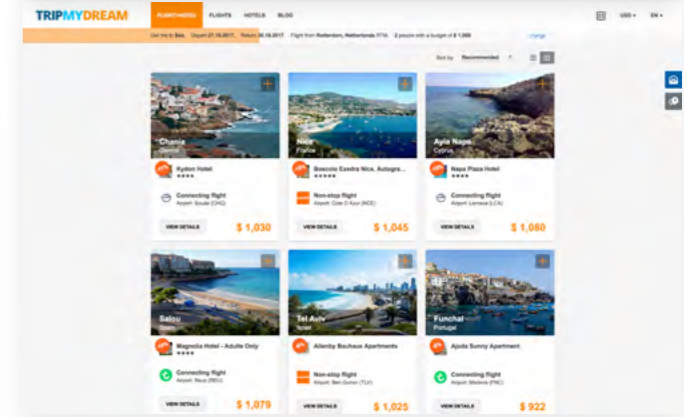
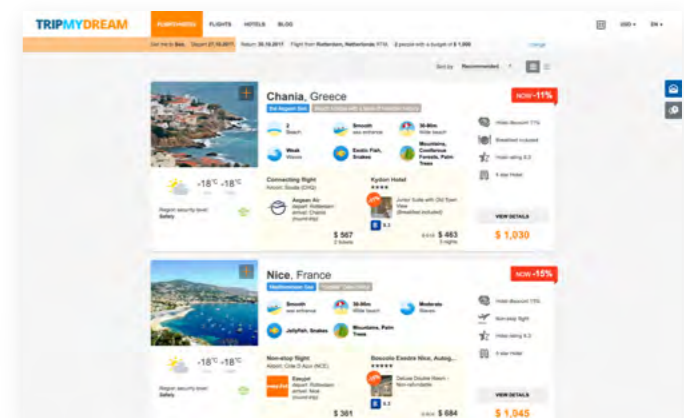


Image X: TripMyDream defaults to a list but gives the option for a gallery.

A Lot of Information: Some websites show a lot of information on their results page (image list vs tiles (TripMyDream)) this often gives a messy feeling (Booking.com)). However, when organized properly - like in the case of HostelWorld - this does not have to be an issue (image).

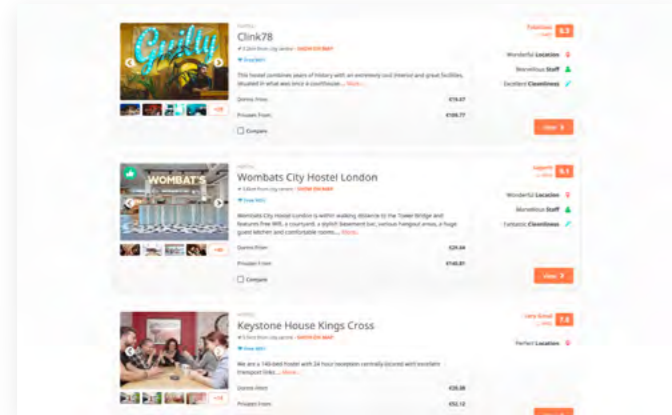


Image X: HostelWorld gives a lot of information per result, but keeps it organized

Filters: Almost all sites have some way of sorting and filtering the search results (image). Some hide it behind a tiny button (image). Others display it prominently to the left of the results (image). Most also give the option to alter the original search query (image).

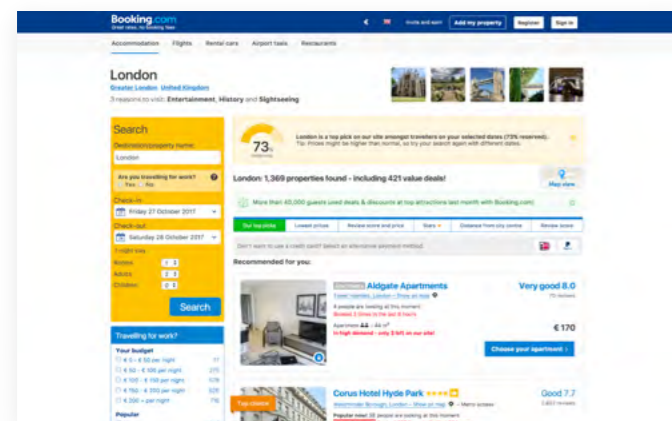


Image X: Booking.com filters

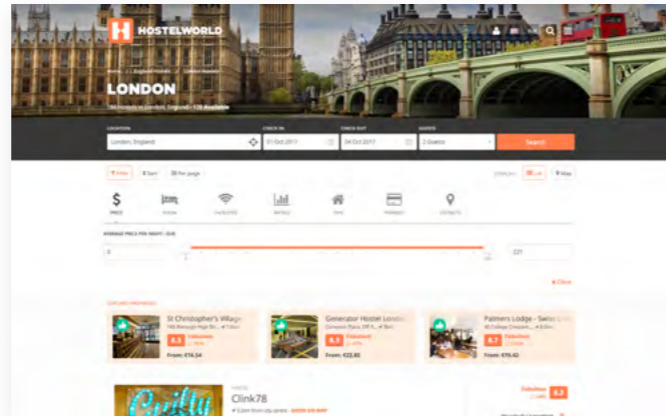


Image X: Hostel world has a tiny button that opens a drop down filter menu

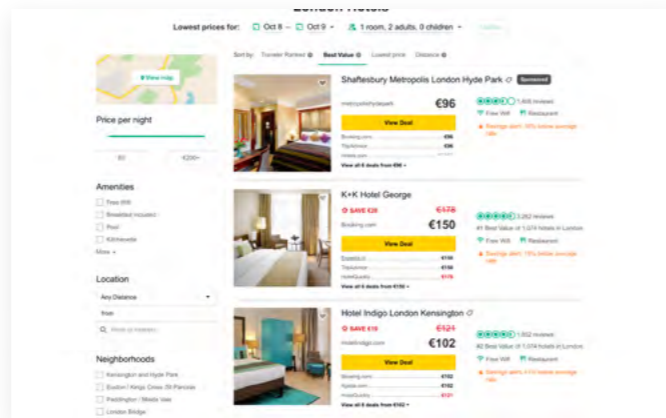


Image X: TripAdvisor displays their filters prominently on the side.

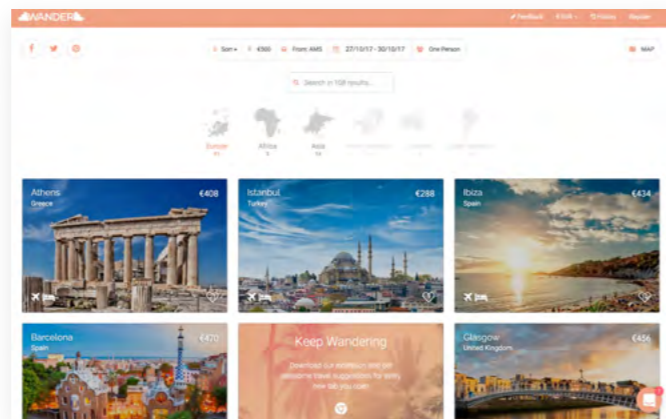


Image X: Wander also gives users the option to change their search query in the filters

Trip Page in a New Tab: When a user clicks on a result the trip page is opened in a new browser tab/window (image). This makes it easier for users to compare trips. TripMyDream also has a compare option on the site self (image).

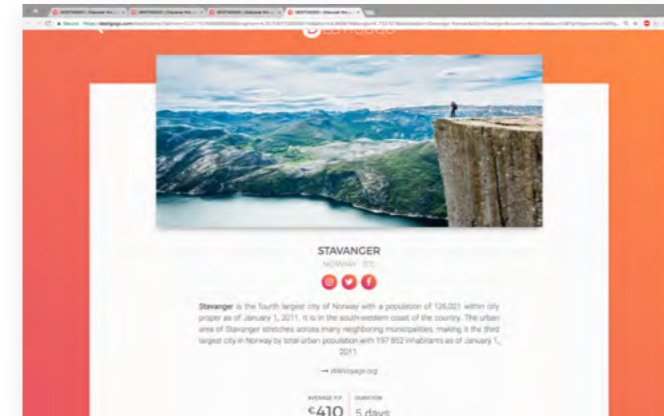


Image X: DestiGoGo opens trippages in a new tab

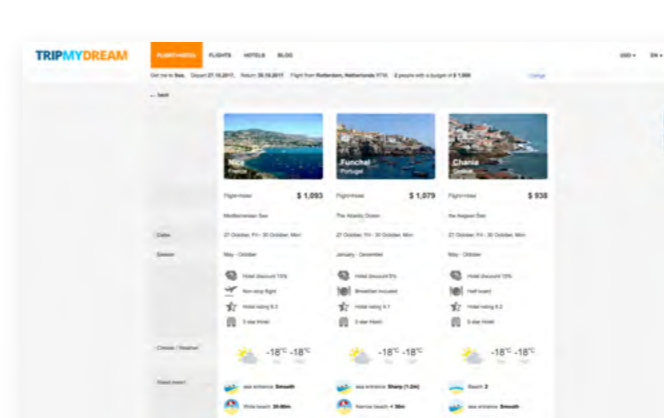


Image X: TripMyDream lets users compare trips.

Flights and hotel side by side: Wander app shows a list of available flights and accommodations side by side (image), this gives a helpful overview and allows users to compare different travel options easily.

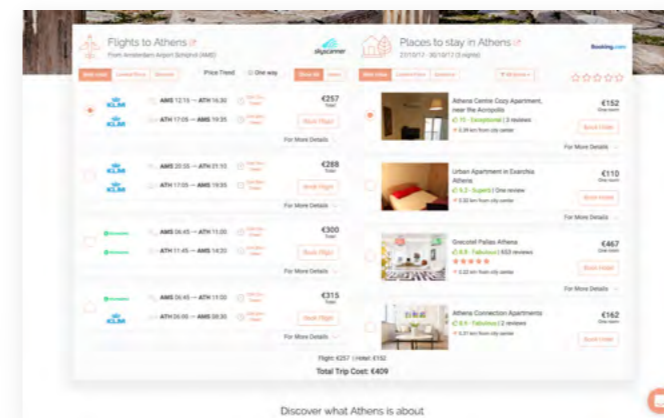


Image X: Wander shows flights and hostel side by side allowing user to mix and match

Keep Most Important Information Pinned: Some websites keep the most crucial information pinned to the top when a user scrolls down (image). This may include the price, dates and book button (image).

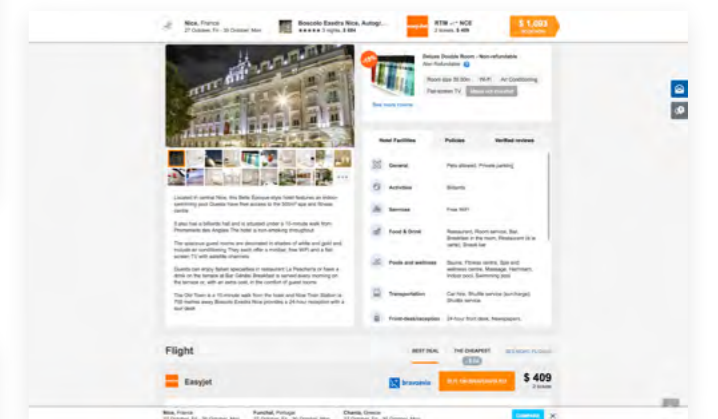


Image X: TripMyDream also shows travel and hostel information while scrolling down.

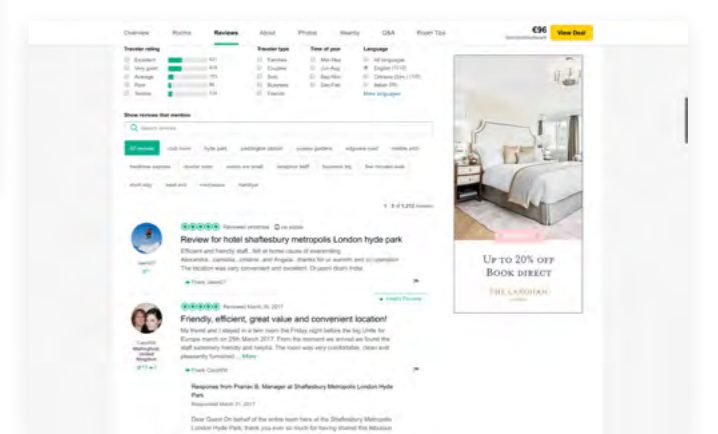


Image X: TripAdvisor shows the price and a book button in the upper right corner when scrolling down.

Map On Trip Page: Some of the trip pages have a map of the city shows and point to the location of the hostel and airport (image).

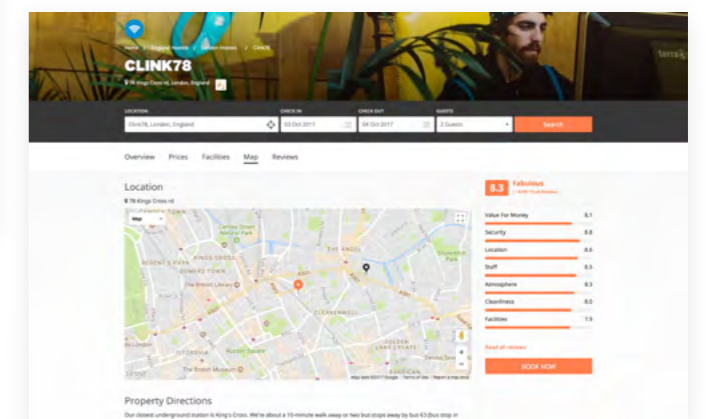


Image X: HostelWorld shows a map of the city with the location of the hostel.

Overview: A quick overview with the most relevant trip information accompanied with icons (image) gives the user an easy way to recognize trips while comparing.

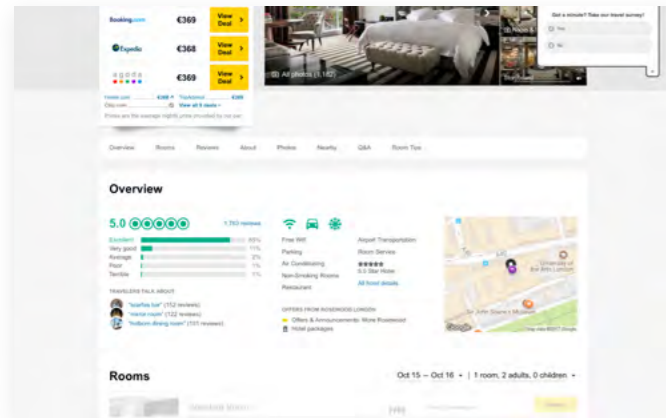


Image X: TripAdvisor quick overview of the accomodation.

Drop down with detailed information: As to not to overload the user with information some details are hidden behind a drop-down (image). For instance, a flight block may just show departure and arrival times initial and have a drop-down to display lay-over information.

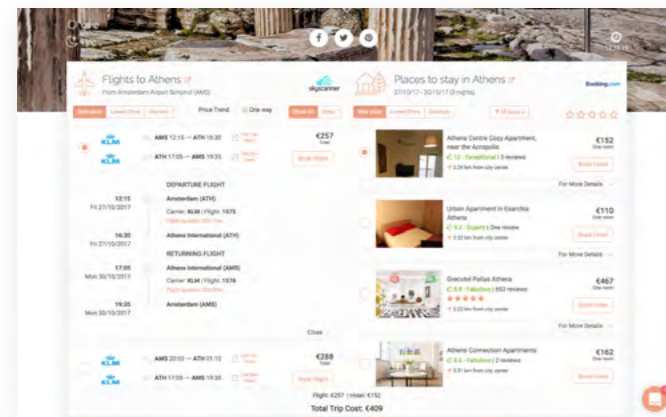


Image X: Wander drop-down detailed flight information

Timer: Travel search engines often find deals that are only valid for half an hour or so. To urge the user to book this trip while they can the sites show a timer (image). In some instances, this done very subtly like ... (image) in others, they emphasized it like .. (image).

Appendix D:

Founders Meeting Sensitizer

WhereTrip Founders Workshop Sensitizer - Vision and Principles

Please think about the following before our workshop next week and fill in this form.
As an example I filled in this form for a (fictional) 10 minute recipe website.

What are the 3-5 core features of WhereTrip?

What are the most important things you can do on our site? What differentiates WhereTrip from other travel sites?

- Search recipes by available ingredients
- Allow experimentation → optional/alternative ingredients
- Recipes with short and simple steps

Who are our customers? What do they value?

Think about who we are building for, what do we think they find important, why would they choose WhereTrip over a other website?

Busy professionals and their goal is to get a tasty, healthy meal without hassle and hours spent cooking.

What is WhereTrips purpose (mission statement)?

The purpose is the core of our product, and informs design and development decisions.

Motivate and empower people to cook delicious healthy meals in no more than ten minutes.

What is WhereTrips ethos?

The ethos is a bit broader and captures the spirit and value of a company. Its purpose is to differentiate from other companies in the same field. While and other cooking site might have an ethos such as "haute cuisine and mastery of culinary skills" our 10 minute recipe site will focus on:

Simple healthy food and experimentation with common ingredients.

What are WhereTrips design principles (qualities)?

To make sure the purpose of product is expressed clearly in everything we do, we define a set of principle we want to express through out our designs/communications/development. They should be 1. Authentic and Genuine 2. Practical and Actionable 3. Have a point of view 4. Relatable and Memorable.

Short, simple, fast and smooth.

Which one of our core features is most important? Why?

Determine which one of our core features is the most important. This will allow us to focus our efforts and communication to the outside world.

Recipes with short and simple steps. We want to make cooking as quick and simple for our users as possible, the other features are useful but do not the true core of the website.

Appendix E:

Founders Meeting Whiteboard

Mission Statement/Purpose/Design Goal

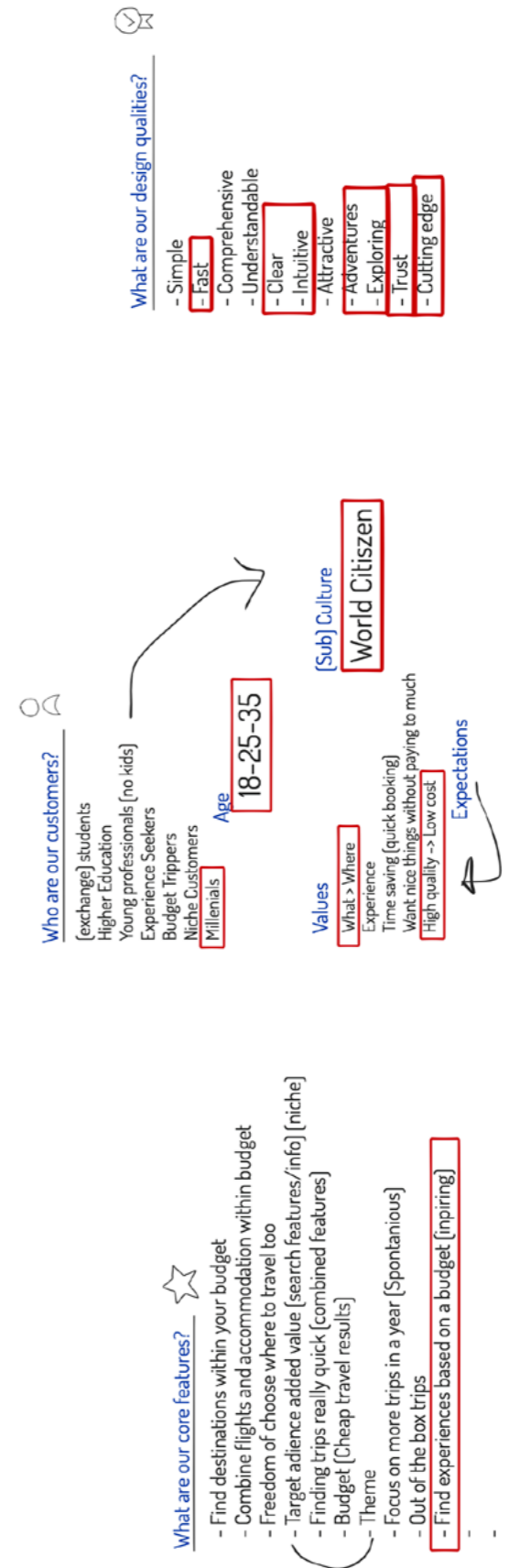
Enable young professionals, students and explorers to travel by simply showing the travel options within their budget within seconds

Inspire students, young professionals and explorers with new destinations and enable them to quickly find and book trips they like and can afford.

What is the WhereTrip ethos?

The world is getting more connected by the day in terms of transport, trippers stay behind. It should be more easy to book trips, and by that explore the world people live. To gain great life experiences. Easy and fast overview of all travel options within people's budget.

Experience over destination



Appendix F:

Initial User Test Setup

Procedure:

Introduction: “Today, we are testing the user experience of a travel search engine named WhereTrip. Please try to think out loud during this session. So describe what you see on the page, what you think of it, what you click on and why you do it. As long as you do that there is absolutely nothing that you can do wrong.”

Half of the users start off on a laptop; the other half starts using a phone. In both cases, the browser is open on the WhereTrip start page. After the first test the user switches devices for a second test.

Laptop:

Task 1: “Please describe what you see.”

Task 2: “Say you and two other friends want to go on a city trip during the first weekend of October. You each have €100 to €300 to spend. Could you search for one please?”

Leave some time to explore and explain what they see

Task 3: “If at all possible you would like to have some sunshine the day you arrive, can you find a location that suits?”

Let them open that trip page and explore for a bit

Task 4: “You want a hostel without a curfew, can you find one?”

Can you (pretend) to book this trip?

Phone:

Task 1: “Please describe what you see.”

Task 3: “Say for some reason you are in Berlin this week, and you want to go to someplace sunny this weekend. You have about 500 euro to spend, can you search for a trip?”

Leave some time to explore and explain what they see

Task 4: “Say you want to make sure the temperature is pleasant. Can you find a way to see that on this page?”

Let them open that trip page and explore for a bit

Task 5: “Can you find out if your current flight has any layovers?”

“You are willing to spend a bit more on a shorter flight, can you find one.”

“Can you (pretend) to book this trip?”

Interview

1. Can you describe to me what WhereTrip is and what it does?
2. What were your impressions of the site, in terms of look and feel?
3. Does the design of the website inspire you to go on a trip?
4. When was the last time you went on a trip/vacation?
5. Where did you book that vacation?
6. Do you usually use your phone or a computer to find trips?
7. And what about booking?

UserTest Survey

I found the look and feel of the website I just tested to be:

Untrustworthy					Trustworthy
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stiff/Rough					Fluent
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clear					Vague
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adventures					Dull
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outdated					Cutting Edge
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
That Of A Budget Product					That Of A High Quality Product
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The look and feel of the website I just tested inspired me to go on a trip:

False					True
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I would consider using WhereTrip.com to book my next trip:

Unlikely					Very Likely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I would recommend WhereTrip.com to my friends and family

Likely					Unlikely
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix G: Initial User Test Transcripts

Pat

Pat, a 26-year-old exchange student from Thailand. She studies DFI; she goes on vacation about 2-3 times a year. The last trip she took was two months ago, and she visited Italy and Germany.

0:31: [I usually] go alone on vacations.

0:44: [About how many times she goes on vacation] I would say two or three times in a year.

1:00: So I only bought a ticket from the Netherlands to Italy, and the rest was just planned later. [...] So I had to choose to go to Rome or either go to Munich. So on my second day in Florence, I chose to take a bus to Munich.

2:00: I think for the whole trip I just booked one week earlier, too Italy.

2:40: For my plane ticket I went to RyanAir because that is usually the cheapest option.

3:05: At home, I used my laptop, and I brought it with me on the trip to plan the second part of the trip. But somehow I lost it in Eindhoven at the airport. So I used my phone to book the rest of the trip in Italy.

5:09: From Delft? To where? Where can I fill in the Destination?

6:10: Nice! Very visual cool

7:30: Only one picture [of the accommodations] is not enough!

7:40: Reviews are not here yet

7:50: Now I only see text, but I want to see what it looks like.

8:25: [About the map] Ok this looks bad, is this the amount of rain per hour?

9:10: I think the color actually affects the way I perceive it. It is not clear that the gray parts are sunny

10:15: Why would I want to see the waves if I am not a surfer?

11:10: [On the top of the trip page] It doesn't say which airline what time

12:40: Boop boop boop boop boop boop... this takes more than 5 seconds, why is it so slow? Ok, this more than 10 seconds!

13:13: [About live data and options changing] Than maybe you should have some sort-of pop-up box and let the users know?

14:50: This is interesting! Hidden gems!

17:08: Oh and the background changes it the sun! Oh this is cool

18:00: [about rotating the phone to see the map] I don't like it even if it would have a message that says you have to rotate the phone. Because usually, I set my phone to have a fixed rotation.

18:45: You know it says accommodation, but it does not say book accommodation and flight. So where is the flight?

20:18: Yeah, you know what I would like? If I can click on the plane icon on the top of the page and it takes me down to here.

20:45: Ok so I have to other [flight] options? [facilitator shows it is horizontal scroll] Oh how would I know? Because there is no arrow!

21:40: The website helps me plans my holiday trips.

22:33: [I would describe it as] Relaxing, the overall feel is warm, I feel that I would be welcome to the destinations, soft, smooth warm

23:20: I haven't tested it, but I am really interested in the hidden gem feature. Because as a non-local you have to do a lot of research to find the not so touristy places.

24:15: So there is no option that I can choose my destination my self?

24:45: [What was unclear?] The alternative flight options and the colors of the map

25:40: It is not like really really adventurous because the color is a bit pastel, but it is also not dull so sweet adventurous I would say.

Barbera

Barbera, 27 years old exchange student from the United States. She studies DFI and goes on a lot of trips now that she is here in Europe. The last trip was a couple of months ago to Spain.

0:51: I guess I went to Spain end of August

1:15: [I went with] my boyfriend [...] It was about meeting his family and sight seeing.

1:14: We used Skyscanner, almost always used Skyscanner.

2:00: I booked it like pretty far in advance like two or three months before.

2:39: Oh man I have been going crazy, Since in the US it is a luxury to fly this far, I am like I am here I am going to go everywhere I can so I went to 3 trips this summer and from January until the summer a couple more.

3:10: I used hostel world or Airbnb

4:00: I see a pretty simple kind of search area [...] That's nice because there are a lot of search engines that ask you all this extra crap.

4:35: It is nice they have the [partner] logo's there so you can see they work with and who they connect to.

6:35: Now I see results, per person per flight I guess?

7:09: [about typing in the input fields] I would kind of like that when I start typing it would all disappear [instead of having to backspace it manually]

7:23: Ok now I see it is not in the order of cheapest to most expensive, so I would like it if it was.

8:00: [About having to turn the phone to get to the map] Oh no, oh no that's weird!

8:25: uhm thinking... it is kind of thinking for a while

9:20: Oh that's a lot! a lot of description [too much text]

9:43: I always look at the maps

10:00: I am not sure this one [hostel] is zoomed in, is it the cheapest or a picked one, or featured one?

12:25 It not clear what happens after I book the flight, do I get back or do I have to search for it again?

12:55: I think it looks better on the [desktop]

13:10: On the [phone] all the information seems a bit crowded.

14:20: Yeah you don't need to put in a minimum for me, and I think everyone likes to find something cheaper than they expect

15:00: I like the map I always like it when there is a map, I think it is more visual

15:10: I would like it if the map has numbers [the price] on it.

15:55: I did not notice those [map icons]

18:59: I think it would be easier to read if there where icons [hostel policies]

20:35: I don't know how it is trying to be different from other booking sites?

21:38: I think it looks better on the computer

22:45: I think [you should] be able to [search for] a specific place.

26:00: I think it has a budget feel, but it is kindof disconnected because some parts are really budget looking and other have really fancy elements.

26:55: I always compare Google Flights and Skyscanner and even check on different computers and in incognito. Because I really distrust the travel companies.

Steve

Steve, 25 years old student from the the Netherlands. He studies DFI and goes on 2 or 3 trips a yearwith usually with his girlfriend. His last trip was to Spain with his brother. The interview and the transcript are in Dutch.

0:44: Mijn laatste vakantie? Was deze zomer naar italië.

0:51: Maar nu zit ik te denken voor dit is het misschien interessanter, dat ik een paar weken daarvoor naar Barcelona voor een paar dagen. Dat heb ik ook allemaal zelf geregeld.

1:22: [Ik ga] twee a drie keer per jaar [op vakantie]

1:30: [Ik gebruik meestal] booking.com en [...] Skyscanner

1:50: Ik ben er altijd vrij laks in. De trip plannen dat ik altijd wel vrij ver van te voren maar het daadwerkelijk de reis boeken doe ik best wel kort van te voren. Twee weken drie weken van te voren ongeveer?

2:00: [Het uitzoeken] heb ik op mijn telefoon gedaan, [en het boeken] voor het eerst ook

3:00: Inderdaad ik zie meteen dat ze flights and hotels hebben. [...] een soort kieskeurig van de hotels

3:20: Ze zijn eigenlijk een bundeling van verschillende services die andere bedrijven aanbieden. Dus ze geven je een accommodatie en vluchten voor het beste budget.

4:15: Ik vind het heel erg duidelijk dat als je hierop klikt [searchbar → theme picker] dat er iets uit komt met heel erg duidelijk plaatjes en tekst.

5:00: Kun je niet gewoon een destination in vullen?

7:15: [About the weather map] Oh dit zijn niet de duidelijkste overlays ooit. Ik bedoel als ik Piet Paulus-

ma zou zijn dat zou ik het nog wel kunnen begrijpen maar... nee

7:48: Ja dit is wel heel weerman achtig. [...] het is ook echt stom want ik associeer lichter natuurlijk met zon.

8:30: Hij doet er wel lang over zeg!

11:00: Als ik deze vlucht geboekt hebt ben ik een beetje bang dat ik niet meer terug ga komen op deze website.Het makkelijkste is als hij hem gewoon even opent in een ander tabblad.

11:10: Dit is allemaal wel hartstikke leuk maar ik vind het raar dat de vlucht onder de accommodatie staat. Vind ik een beetje vreemd want ik wil eerst mijn vlucht boeken en aan de hand daarvan mijn accommodatie afstellen.

14:20: Ja ik denk dat als ik wat meer ervaren [met WhereTrip] ben dat en ik weet een beetje waarnaar ik op zoek dat ik dan zeg ik filter de goedkope trips wel weg.

15:10: Is deze prijs per persoon of in totaal?

18:00: Het is absoluut duidelijk [dat je op zij moet scrollen] omdat ik hier al een stukje van die andere er naast zag

19:20: [WhereTrip] vergemakkelijkt het om een hele trip te vinden zowel de vlucht als de accommodatie

19:45: [Wat maakt wheretrip anders] Overzichtelijkheid in alles het is en de reis en de accomodatie waar je normaal gesproken aparte sites hebt.

20:45: Rustig, Warm, Verwelkomend

21:30: Dat je kan filteren op het weer, die feature vind ik super interessant.

22:20: [Features die missen] Ander services rond reizen zoals eten

26:30: Ik ben gewoon gewend om meteen de stad in te kunnen

Zoë

Zoë, 26 year old student from the Netherlands. She studies DFI and goes on 2-3 trips a year. During her last big trip she went backpacking through Asia.

The interview and the transcript are in Dutch.

0:09: [Mijn laatste vakantie was] deze zomer naar Hong Kong, Singapore, Maleisië en Bali 0:45: Ik vind vluchten boeken altijd lastig, omdat ik het meestal gewoon in type in Google omdat ik gewoon niet zo goed weet wat een handige plek is, waar ik een eerlijke deal krijg en een goed overzicht zoals bij booking.com, die vertrouw ik, maar dat heb ik dus niet voor vluchten.

1:00: Dus ik Google het meestal en dan kijk ik op google flight maar dat is ook niet heel satisfying

1:10: En als ik dan een vlucht heb gevonden dan ga ik naar de website van de vluchtmaatschappij

1:20: Booking.com en hostelworld gebruik ik voor mijn accomodaties

1:35: Als ik een weekendje weg ga hier in europa dan boek dat wel allemaal van te voren maar tijdens het backpacken heb ik dat niet gedaan.

1:55: [Tijdens het backpacken] heb ik dat allemaal op mijn telefoon geboekt.

2:55: Ik heb het idee dat het een verzamelplek is van allemaal trips

3:20: Oh ik dacht dat ik hier een land most invullen of zo

3:30: Dit hoeveel geld ik wil uitgeven maar ik denk dat dat alleen voor de vlucht is.

4:15: Opzich voor een weekendje weg met vrienden vind ik dat wel leuk, want normaal moet je altijd een destination invullen en nu kan je gewoon zoeken op prijs en het maakt niet uit waar ik heen ga.

6:00: Oh het is dus wel de prijs per vlucht en accommodatie

10:40: Oh dat is wel jammer want ik dacht dat ik net een prijs kreeg die een totaal opgave gaf [dit was wel het geval maar onduidelijk voor haar]

12:30: Ah maar dat is dan natuurlijk de totaal prijs voor 3 personen dus 3 x 300 is 900 euro

13:20: Oh ok er staat hier nu wel duidelijk bij PP

19:40: Het is een facilitator, het is zoals bij boeing.com dat ik het idee heb dat ik geld aan hun moet geven.

20:05: Het ziet er gewoon overzichtelijk uit, het lijkt mij ook wel beter dan bijvoorbeeld booking.com

21:00: [Welke qualities] Jong, Fris, Trust

21:33: Ik vind de feature van ik kom hier vandaan en ik heb zoveel geld, waar kan naar toe? Heel fijn

22:30: Normaal ga je natuurlijk heen en terug, maar met backpacken ga je imprencipe natuurlijk maar één richting

24:10: Ik zou wel een lijst met wat attracties willen zien.

25:30: Dat met die vluchten was een beetje onduidelijk [Alternatieven]

25:40: Ik zou dan misschien zelfs bijna een beetje willen gaan spelen met de balans tussen de hostel en vlucht.

27:10: Het past ook wel een beetje in deze tijd dat je kunt kiezen van wat vind jij belangrijk en wat vind iemand anders belangrijk.

Appendix H: Initial User Test Results

	Pat	Barbara	Steve	Zoë
Untrustworthy - Trustworthy	4	4	4	4
Stiff - Fluent	4	4	4	4
Vague - Clear	3	4	4	3
Dull - Adventurous	4	3	4	4
Outdated - Cutting Edge	5	4	4	4
Budget - High End	4	2	4	3
Inspiring to go on a trip	5	4	5	5
Would use again	4	4	4	5
Would recommend	4	3	4	5

Appendix I: Initial User Test Online Survey

Win a trip!

Check out our website at <http://www.wheretrip.com> Please help us by filling in the following survey and get a chance to win a free trip!

Questions marked with an * are required.

What is your age? *

- <20
- 20 - 25
- 25 - 30
- 30 - 35
- >35

What is your occupation? *

Please type here...

How much time did you usually spent in total finding and booking that trip? *

- <1 hour
- 1 - 2 hours
- 2 - 4 hours
- 4 - 10 hours
- >10 hours

Do you enjoy the time spent on browsing for a destination? *

0 1 2 3 4 5 6 7 8 9 10

No

Yes

Do you enjoy searching for the best deal? *

0 1 2 3 4 5 6 7 8 9 10

No

Yes

Can you describe what WhereTrip is and what it does? *

Please type here...

What were your impressions of the site, regarding look and feel? *

Please type here...

Which features are the most important to you? *

Please type here...

Are there any missing features that would you would like to see? *

Please type here...

Are you open to search for a trip without a specific destination in mind? *

0 1 2 3 4 5 6 7 8 9 10

No

Yes

I would consider using WhereTrip.com to book my next trip. *

0 1 2 3 4 5 6 7 8 9 10

Not likely at all

Extremely likely

I would recommend WhereTrip.com to others. *

0 1 2 3 4 5 6 7 8 9 10

Not likely at all

Extremely likely

What is your email? (Required for discount code)

Please type here...

SEND

Appendix J:

Initial User Test Online Survey Results

Country	What is your age?	What is your occupation?	How much time did you usually spend in total finding and booking that trip?	Do you enjoy the time spent browsing for a destination?	Can you describe what WhereTrip is and what it does?	What were your impressions of the site, regarding look and feel?	Which features are the most important to you?	Are there any missing features that you would like to see?	Are you open to search for a trip without a specific destination in mind?	I would consider using WhereTrip.com to book my next trip.	I would recommend WhereTrip.com to others.
1 Netherlands	>35	Arts	4 - 10 hours	10	It's the first time trying to make a booking	Its difficult to book. The website domain is different every time. So its hard to find you	Low budget.	I miss the contact form	8	7	10
2 Netherlands	30 - 35	Tourisme	<1 hour	4	Morocco	Need more information...	All the destination improvisation the data base	No	0	3	5
3 United Kingdom	25 - 30	Project Manager	4 - 10 hours	6	It allows me to set an overall budget for the trip I want to take and then searches all flight / accommodation combinations that may fall within it... saving a huge amount of time crawling websites!	I really like the look of it, its professional and reminds me of Airbnb. Very intuitive as well.	The ability to search across all places rather than just the common ones - it's fun to come up with places you've never even heard of	10	10	10	10
4 France	20 - 25	Student	1 - 2 hours	9	Very nice site	Searches accommodation and and transportation to find trips that are within your budget	The budget option	Not in particular	10	10	10
5 Netherlands	25 - 30	Marketing Analytics	4 - 10 hours	7	Positive. Seems professional	Ability to search by date (flexible searches without having to go back and do a new search)	Not sure. I only got one page in. (I'd recommend doing the survey after 5+ pages next time!)	10	10	10	10
6 Netherlands	20 - 25	Sales Pricing and Analytics	1 - 2 hours	6	It helps travelers find cheap flights based on their origin (great idea!)	I love that it does the work of narrowing down the destinations, but wish it could somehow also help narrow down the time frame that I can type in my budget and that I can compare several options instead of checking out every options separately	It would be cool to somehow have the dates as an added variable... Maybe if you click on a date and have it auto-generate the lowest price for each potential return date? Could be color coded by price like google flights, but maybe when you hover over a return date a comment could pop up with the top 3 destinations? Maybe on top of that create an option where you can X-out of one of the top 3 cities, where it then removes that city from all results and re-generates the lowest prices... Might also be cool to add a filter or bar on the homepage to list cities or countries would and/or would not want to go to	10	8	9	9
7 Belgium	20 - 25	Student	2 - 4 hours	7	It checks all available journey destinations from your defined starting point in a specific time range and budget.	that I can type in my budget and that I can compare several options instead of checking out every options separately	a option to add how long the trip should be within the time range, and the question if the given dates are flexible or not	10	9	9	9
8 Netherlands	25 - 30	Truck driver	2 - 4 hours	8	It's a nice search engine for short trips. I'm glad Someone pointed it out to me.	I like the part where I can look for a citytrip.	Maybe when looking for a citytrip that you can look for a specific country or region?	6	7	7	7
9 France	<20	Student	<1 hour	10	An online platform that allows you to find the best destination + stay with an already set budget.	Pictures, orderliness, simplicity.	Not really.	10	10	10	10
10 Belgium	20 - 25	student	1 - 2 hours	10	It is a website that helps you find the cheapest trips.	I liked the look, but it still can be improved. The website is easy to use.	Speed, reliability, and the budget option.	More flexibility with the dates, eg. "cheapest month" option.	10	9	7
11 Belgium	<20	Student	<1 hour	7	I guess it mixes and matches locations and trips according to my preferences and Max budget	It wasn't very intuitive. Seemed rough, not very smooth with animations and no introductory page. The matches however, worked.	Accuracy to my cost and preferences. Legibility of the trip and security of my money	Introduction page. A proper run down of how the website matches trips and more options/filters to make my perfect trip. Any event based trip such as a football game. I'm a Barcelona fanatic and would love to have a trip made for one match.	7	5	5
12 Spain	<20	Student	2 - 4 hours	4	Is a website that help people find the best deal for a trip	Really good, simple but colourful	There are just the most important features so it's easier	I don't know yet	8	7	9
13 Canada	20 - 25	Student	4 - 10 hours	8	A site to filter price and value for trips for flight and hotels	Wasn't sure at first? But I can definitely see it being an extremely useful site	Flexibility	Not sure off the top Of My Head	10	7	7

14 Netherlands	20 - 25	student	1 - 2 hours	8	it finds flights and accommodation according to your budget	really nice layout, graphic, designs though it's not obvious if you really search for the cheapest flight etc. or maybe you get paid by a company so you offer their cheapest flight!	transparency, easy to use	no	10	10	8
15 Netherlands	30 - 35	Teacher	2 - 4 hours	3	WhereTrip allows you to select a date budget, with out preferred destination and then it searches the cheapest and the most convenient places. It also shows the whole price of the trip.	I only had a brief look but it was very intuitive and didn't look too "busy" i.e. I didn't feel overwhelmed with info. I liked how I was given options within my budget that extended outside Europe. It was incredibly easy and fast to use (I really hate booking holidays and trying to find "deals" - I spend hours doing it). I like the map with the options to have a look at the weather. Simple, clean and clear.	Speed, usability, that any hidden costs are made clear, a good choice of destinations that extend beyond Europe. The selecting a budget feature is great (as we're not big earners).	I can't really find anything crucial that is missing. Maybe if there is a possibility to have an option that allows you to select where the hotel should be located (walking distance to the centre, in the heart of the city, in the suburbs, etc.). That would be convenient for users who don't know the city that well, and can't distinguish how far is the centre for example.	10	9	9
16 Netherlands	20 - 25	Student	>10 hours	10	It is a website through which you find out where you can go on holiday with certain budget	The design of the website looks fresh, simple but still modern. It is also very easily navigating with it.	For me the best feature is that you don't have to select an exact destination, and that you can choose among countries, and most importantly to be able to compare the prices between them.	selecting other types of transport (maybe flexbus) or the option to travel in couple (maybe in the destination types or in the choice of rooms, to get a private room)	10	10	8
17 Hong Kong	20 - 25	Student	2 - 4 hours	8	A copy of Strips.me but than on a different approach and website.	Simple, easy, straightforward, copied.	Price transparency and quality trips	A calendar with prices of trips every day	8	5	5

19	Netherlands	30 - 35	Student	>10 hours	9	It is a search engine that allows me to find a trip by inserting my budget	That I get an idea where I could travel with my budget and don't have to look up places one by one	10	5	5	I would love if there would be an option to select an area in the world where you would like to travel with that budget (like South-East Asia, Africa, Europe, South America etc). Also I miss the button from where I could sort my trips (by price, area perhaps, maybe in the future also by users reviews). Also I'm pretty sure that the flight options that I get when I do not use the cheapest ones, but I know that their search engine can find 10 to 20 percent lower prices for flights. Did not have the time to compare the prices for accommodation with hotelscombined.com for example. In order I would really start using your site for booking the trips I think it's a must that it really would find the best offers/prices. Also I would maybe think about adding an option that you are flexible on your dates (for example +/-1 day and +/-3 day option) and also a possibility to insert up to three departure airports would make finding really the best trips for your budget much more convenient!
20	Netherlands	20 - 25	Customer service agent	2 - 4 hours	6	Budget trips	seeing the overall cost of the trip	6	6	6	To be able to select a specific country
21	Netherlands	20 - 25	student	1 - 2 hours	6	Provides cheap trips	Looks really nice and user friendly	10	7	6	Also open dates
22	Netherlands	20 - 25	Student	4 - 10 hours	8	A tool that helps you plan a holiday that fits your budget	Doesn't initially explain what it does (without prior knowledge) However it has a sleek design and its is clear which partners/ companies the site has/uses	10	8	8	more vacation options (e.g. walking holidays/ cpuntyside retreats)
23	Netherlands	25 - 30	Student	2 - 4 hours	3	A startup that helps people find trips based on a budget.	Well done website, looks nice, cozy and accessible.	8	10	10	Nope
24	Netherlands	20 - 25	Student	4 - 10 hours	5	It is a website that gives shows the best deals for trips for people on a budget	Feels pretty good. Looks great!	8	6	6	Ability to select flexibility on leave and return dates
25	Hong Kong	20 - 25	Student	>10 hours	6	Where Trip is a website dedicated to finding the best deals for budget travelers such as students.	Really user friendly, straight forward. No way to get confused. Still, takes too much time to show answers.	10	10	10	Filter for countries/continents.
26	Netherlands	20 - 25	student and customer service employee	>10 hours	10	It's a platform to find a destination according to your budget. You can filter the research by destination or type of vacation you are looking for, starting point, dates and number of travelers.	I do not like the choice of color and I also think the website should have more content, maybe a blog that provides tricks and inspiration	10	10	10	More pictures, more written features
27	Netherlands	20 - 25	student	1 - 2 hours	8	It's a site that searches trips based on a budget	looks really good and professional very clear - really like the feel of the site!	map	10	9	no

Appendix K: UX Morphological chart

How to convey the concept?

The image displays a grid of 12 UX concept cards, each with a title and a visual representation of the concept:

- Step By Step Search:** Shows a search flow with inputs like "What do you want to do?" (Surfing) and "What is your budget?" (€200).
- Video:** A simple play button icon on a grey background.
- Tool tips:** A form with fields for "Theme" (Surfing), "Budget" (€200), and "Duration" (2 Days), with a tooltip asking "What activities do you want to do during your trip?"
- Break Expectation Patterns:** A sequence of three grey boxes with a red 'X' over the middle one, indicating a deviation from a standard pattern.
- Reload Pop-up:** A grey box with a red "Search" button and a message: "It has been analyzed how your search's response to the last trip for 20 minutes. Recommended to repeat work."
- Popular Destinations:** A grid of six dark grey rectangular blocks.
- Staggered Search Input:** Three search cards for "Surfing" with budget "€200" and duration "2 days", each with a different background color and layout.
- Onboarding:** Three vertical panels showing a step-by-step process: "You pick a theme, a period, and the duration of your trip.", "Our algorithm searches for the best deals across the web.", and "Get the information you need for your trip."
- Countdown Timer:** A clock icon and text: "Plane tickets and hotel prices can change. This deal is only available for the next 18 minutes."
- Tutorial:** A sequence of three panels showing a user interface with a speech bubble indicating a tutorial or help message.

How to present the search field?

Icons

Searchbar

Text

From
Amsterdam

Theme
Surfing

Between
1 dec - 1 jan

Duration
2 days

Step by Step Horz/Vert Scroll

Panel

Show Steps

Text Moving

From
Amsterdam

Theme
Surfing

Between

Duration

Place Holder

Amsterdam

Surftrip

Between...

Duration...

Menu

From	Theme
Between	Duration
Theme	Between

Select your theme

How to present the results?

Search Overview

Searching for a **2 day surftrip** from **Amsterdam** for less then **€250** between **1 Dec - 1 Jan**

Gallery Depth

Map + Cards

List

- London** England **€123**
- Munich** Germany **€112**
- Oslo** Norway **€145**

Gallery

Gallery Stack

Widescreen Image List

Gallery Squares

Gallery Pull-up

Gallery + Background









Additional Info + BG Image

← Gallery









Gallery Grow

Map

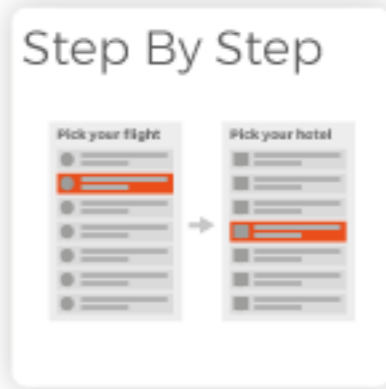
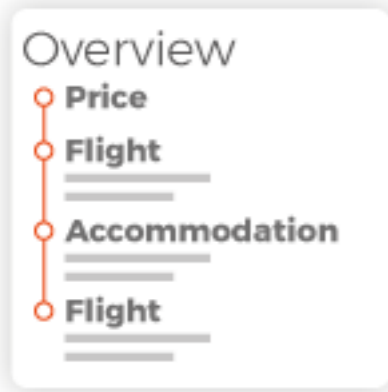
What information can be shown in the results?

<p>Place/City</p> 	<p>Dates</p> 
<p>Flight</p> 	<p>Duration</p> 
<p>Country</p> 	<p>Hostel</p> 
<p>Activities</p> 	<p>Price per Person Accommodation + Flight</p> 

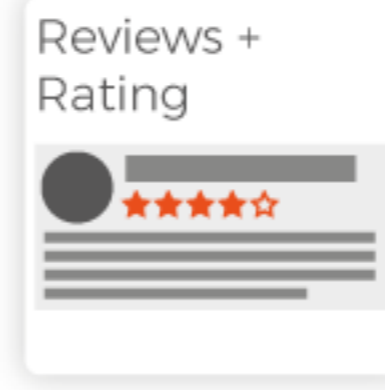
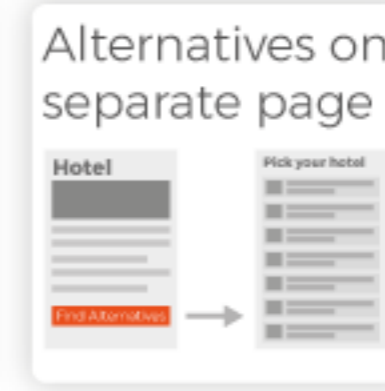
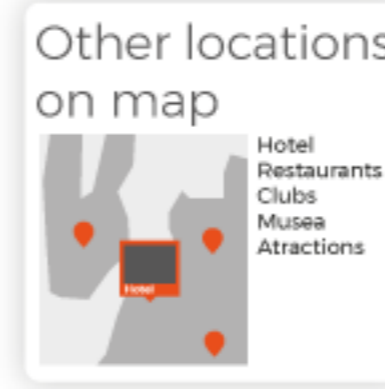
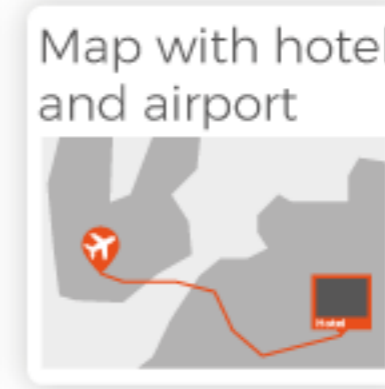
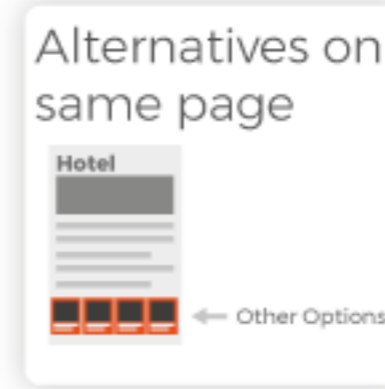
What can filters be displayed and organized?

<p>Pull Down</p> 	<p>Type: Multi-Select</p> 	<p>Type: Slider</p> 
<p>Hierarchy</p> 	<p>Type: Single-Select</p> 	
<p>Horizontal Swipe Groups</p> 	<p>Type: Dropdown</p> 	
<p>Histogram Price</p> 	<p>Filters</p> <ul style="list-style-type: none"> Location Temp/Weather Hotel Price Flight Price Distance Airports Distance from Airport 	

How to make information accessible and comprehensible?



How to better present trip information?



Appendix L:

UX Flow concept screens

Feed Forward

What kind of trip are you planning?

All Sun City

What kind of trip are you planning?

Sun City Pa

What kind of trip are you planning?

City Party S

What kind of trip are you planning?

Party Surf

What kind of trip are you planning?

Surf

How much do you want to spend per person?

€50 100 150

How much do you want to spend per person?

€100 150 200

What period do you want to go?

Mo	Tu	We	Th	Fr	Sa	Su
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

What period do you want to go?

Mo	Tu	We	Th	Fr	Sa	Su
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

How many days do you want your trip to last?

1 Day 2 3 4

Search

How many days do you want your trip to last?

2 Days 3 4

Search

How many days do you want your trip to last?

3 Days 4 5

Search

How many days do you want your trip to last?

4 Days 5 6

Search

How many days do you want your trip to last?

5 Days 6 7

Search

Your Trips

Searching for 3 day city trips starting in Delft between the 8th and 29th of december for less than €100.

London Berlin Paris Br

Your Trips

Searching for 3 day city trips starting in Delft between the 8th and 29th of december for less than €100.

London Berlin Paris

Paris

France

Paris, the cosmopolitan capital of France, is one of the largest agglomerations in Europe, with 2.2 million people living in the dense (105 km²) central city, 7 million people in the Metropole du Grand Paris...

15 dec - 18 dec (3 nights)
€192 includes all flights and accommodations

Berlin Paris Brussels

Brussels

Belgium

Brussels (French: Bruxelles, Dutch: Brussel) is the capital of Belgium and one of the three administrative regions within the country, together with Flanders and Wallonia. Apart from its role within...

15 dec - 18 dec (2 nights)
€148 includes all flights and accommodations

Paris Brussels Porto

Brussels

Belgium

Brussels (French: Bruxelles, Dutch: Brussel) is the capital of Belgium and one of the three administrative regions within the country, together with Flanders and Wallonia. Apart from its role within...

15 dec - 18 dec (2 nights)
€148 includes all flights and accommodations

X **Budget**

€25 €50 €75 €100 €125 €150 €175

€56 - €130

Brussels

Belgium

Brussels (French: Bruxelles, Dutch: Brussel) is the capital of Belgium and one of the three administrative regions within the country, together with Flanders and Wallonia. Apart from its role within...

15 dec - 18 dec (2 nights)
€148 includes all flights and accommodations

X **Regions**

Europe Asia Africa Oceania
North America South America

Brussels

Belgium

Brussels (French: Bruxelles, Dutch: Brussel) is the capital of Belgium and one of the three administrative regions within the country, together with Flanders and Wallonia. Apart from its role within...

15 dec - 18 dec (2 nights)
€148 includes all flights and accommodations

X **Regions**

Europe Asia Africa Oceania
North America South America

Your trip to Brussels

Pick your flight

- 15:45 - 17:00 AMS-BRU 15 december **€130**
- 17:00 - 18:00 BRU-AMS 17 december
- 13:35 - 14:20 AMS-BRU 15 december **€135**
- 15:00 - 16:00 BRU-AMS 17 december
- 15:45 - 17:00 AMS-BRU 15 december **€140**
- 15:00 - 16:00 BRU-AMS 17 december
- 15:45 - 17:00 AMS-BRU 15 december **€142**
- 17:00 - 18:00 BRU-AMS 17 december

Your trip to Brussels

Pick your hotel

- Holidays Hotel Midi **€18**
- Brussels Hello Hotel **€23**
- Generation Europe **€26**
- Es Hostel **€24**
- Auberge des 3 ... **€22**
- Hotel La Madeleine

Holidays Hotel Midi

€18 for two nights (15 and 16 december)

Holidays Hotel Midi offers comfortable private and shared rooms in Anderlecht, Brussels. For your comfort the property featured free Wi-Fi access and private parking on site is available. There is a well-equipped kitchen and breakfast can be served daily upon request, extra-fee may be charged. Holidays Hotel Midi also includes a terrace.

The hotel is located in Anderlecht, located in the southwest of the city of Brussels. Manneken Pis is 1.5 km from the property, Brussels City Hall is 1.6 km and Brussels Airport is 12 km away from the property.

Your trip to Brussels

Your 2 day city trip to Brussels costs €148. From here on you will finish booking with our partners **kiwi.com** and **hostelworld.com**. Make sure to book your flights before your accommodation.

Flight Info

- 15:45 - 17:00 AMS-BRU 15 december **€130**
- 17:00 - 18:00 BRU-AMS 17 december

Change Flight Book Flight at kiwi.com

Hotel Info

- Holidays Hotel Midi **€18**

Change Hotel Book Hotel at hostelworld.com

Improved Original

WHERE**TRIP**

THEME ⓘ

BUDGET ⓘ

FROM ⓘ

BETWEEN ⓘ

DURATION ⓘ

SEARCH

WHERE**TRIP**

THEME ⓘ

We don't search for a specific destination. Instead, we search by what activities you want to do on your trip.

FROM ⓘ

BETWEEN ⓘ

DURATION ⓘ

SEARCH

TRIP THEMES

All

Sun

City

Party

Surf

Hidden Gems

WHERE**TRIP**

THEME
City ⓘ

BUDGET
€100 ⓘ

FROM
Amsterdam ⓘ

BETWEEN
8 Dec-29 Dec ⓘ

DURATION ⓘ

SEARCH

WHERE**TRIP**

THEME
City ⓘ

BUDGET
€100 ⓘ

FROM
Amsterdam ⓘ

BETWEEN
8 Dec-29 Dec ⓘ

DURATION
3 Days ⓘ

SEARCH

London
England
€123 flight + hotel per person

Munich
Germany
€134 flight + hotel per person

Berlin
Germany
€142 flight + hotel per person

Brussels
Belgium
€148 flight + hotel per person

Paris
France
€154 flight + hotel per person

Porto
Portugal
€163 flight + hotel per person

Nice
France
€170 flight + hotel per person

Rome
Italy
€187 flight + hotel per person

WHERE**TRIP**

THEME
City ⓘ

BUDGET ⓘ

FROM ⓘ

BETWEEN ⓘ

DURATION ⓘ

SEARCH

WHERE**TRIP**

THEME
City ⓘ

BUDGET
€100 ⓘ

FROM ⓘ

BETWEEN ⓘ

DURATION ⓘ

SEARCH

WHERE**TRIP**

THEME
City ⓘ

BUDGET
€100 ⓘ

FROM
Amsterdam ⓘ

BETWEEN ⓘ

DURATION ⓘ

SEARCH

Sort
Price (low - high) v

Price
€56 - €200

Departing Airports

AMS BRU
RTM DUS
EIN LHR

Regions

Europe
Asia
Africa
North-America
Sout-America
Oceania

Rome
Italy
€187 flight + hotel per person

Sort
Price (low - high) v

Price
€56 - €200

Departing Airports

AMS BRU
RTM DUS
EIN LHR

Regions

Europe
Asia
Africa
North-America
Sout-America
Oceania

Rome
Italy
€187 flight + hotel per person

Your trip to Brussels
Pick your hotel

Holidays Hotel Midi
●●●○○ **€18**
More info

Brussels Hello Hotel
●●●○○ **€23**
More info

Generation Europe
●●●●○ **€26**
More info

Es Hostel
●●●●○ **€24**
More info

Auberge des 3 ...
●●●○○ **€22**
More info

Hotel La Madeleine
●●●○○

< **DECEMBER** >

Mo	Tu	We	Th	Fr	Sa	Su
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

< **DECEMBER** >

Mo	Tu	We	Th	Fr	Sa	Su
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

< **DECEMBER** >

Mo	Tu	We	Th	Fr	Sa	Su
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Your trip to Brussels
Pick your flight

● 15:45 - 17:00 AMS-BRU
15 december **€130**

● 17:00 - 18:00 BRU-AMS

● 13:35 - 14:20 AMS-BRU
15 december **€135**

● 15:00 - 16:00 BRU-AMS

● 15:45 - 17:00 AMS-BRU
15 december **€140**

● 15:00 - 16:00 BRU-AMS

● 15:45 - 17:00 AMS-BRU
15 december **€142**

● 17:00 - 18:00 BRU-AMS

<

Brussels Hello Hotel
●●●○○
€23 for two nights (15 and 16 december)

If you want to stay in Brussels in a friendly and international atmosphere, then why not book a stay in Hello Hostel. We are only five minutes away from the city center by subway, our rates INCLUDE the following:

Breakfast buffet (6h30 -10h00 AM)
Bed linen/sheets
Free internet computers and Wi-Fi
A shared, equipped kitchen
A free luggage room /lockers
Towels for rent 1€
Bar with Belgian beers
Free city-maps

YOUR CITY TRIP TO BRUSSELS:

- Friday 15 December 15:45 - 17:00 Flight from Amsterdam to Brussels
- Friday 15 and Saturday 16 December 2 Nights in Holidays Hotel Midi
- Sunday 17 December 17:00 - 18:00 Return flight from Brussels to Amsterdam

Flight Costs €130 <small>change or book transport</small>	Hotel Costs €18 <small>change or book accommodations</small>
---	--

YOUR FLIGHT:

- **15:45 - 17:00** AMS-BRU 15 december **€130**
- **17:00 - 18:00** BRU-AMS 17 december

Change Flight	Book Flight at kiwi.com
----------------------	--------------------------------

YOUR HOTEL:



Holidays Hotel Midi **€18**
●●●○○

Change Hotel	Book Hotel at hostelworld.com
---------------------	--------------------------------------

Holidays Hotel Midi offers comfortable private and shared rooms in Anderlecht, Brussels. For your comfort the property featured free Wi-Fi access and private parking on site is available. There is a well-equipped kitchen and breakfast can be served daily upon request, extra-fee may be charged. Holidays Hotel Midi also includes a terrace.

The hotel is located in Anderlecht, located in the southwest of the city of Brussels. Manneken Pis is 1.5 km from the property, Brussels City Hall is 1.6 km and Brussels Airport is 12 km away from the property.

Holidays Hotel Midi offers a wide range of shared...

YOUR CITY TRIP TO BRUSSELS:

- Friday 15 December 13:35 - 14:20 Flight from Amsterdam to Brussels
- Friday 15 and Saturday 16 December 2 Nights in Brussels Hello Hotel
- Sunday 17 December 15:00 - 16:00 Return flight from Brussels to Amsterdam

Flight Costs €135 <small>change or book transport</small>	Hotel Costs €23 <small>change or book accommodations</small>
---	--

YOUR FLIGHT:

- **13:35 - 14:20** AMS-BRU 15 december **€135**
- **15:00 - 16:00** BRU-AMS 17 december

Change Flight	Book Flight at kiwi.com
----------------------	--------------------------------

YOUR HOTEL:



Brussels Hello Hotel **€23**
●●●○○

Change Hotel	Book Hotel at hostelworld.com
---------------------	--------------------------------------

If you want to stay in Brussels in a friendly and international atmosphere, then why not book a stay in Hello Hostel. We are only five minutes away from the city center by subway, our rates INCLUDE the following :

- Breakfast buffet (6h30 -10h00 AM)
- Bed linnen/sheets
- Free internet computers and Wi-Fi
- A shared, equipped kitchen
- A free luggage room /lockers
- Towels for rent 1€
- Bar with Belgian beers
- Free city-maps

Groups: For bookings of more than 7 people we reserve...

YOUR CITY TRIP TO BRUSSELS:

- Friday 15 December 13:35 - 14:20 Flight from Amsterdam to Brussels
- Friday 15 and Saturday 16 December 2 Nights in Holidays Hotel Midi
- Sunday 17 December 15:00 - 16:00 Return flight from Brussels to Amsterdam

Flight Costs €135 <small>change or book transport</small>	Hotel Costs €18 <small>change or book accommodations</small>
---	--

YOUR FLIGHT:

- **13:35 - 14:20** AMS-BRU 15 december **€135**
- **15:00 - 16:00** BRU-AMS 17 december

Change Flight	Book Flight at kiwi.com
----------------------	--------------------------------

YOUR HOTEL:



Holidays Hotel Midi **€18**
●●●○○

Change Hotel	Book Hotel at hostelworld.com
---------------------	--------------------------------------

Holidays Hotel Midi offers comfortable private and shared rooms in Anderlecht, Brussels. For your comfort the property featured free Wi-Fi access and private parking on site is available. There is a well-equipped kitchen and breakfast can be served daily upon request, extra-fee may be charged. Holidays Hotel Midi also includes a terrace.

The hotel is located in Anderlecht, located in the southwest of the city of Brussels. Manneken Pis is 1.5 km from the property, Brussels City Hall is 1.6 km and Brussels Airport is 12 km away from the property.

Holidays Hotel Midi offers a wide range of shared...

WHERE**TRIP**
THEME

TRIP THEMES

- All
- Sun
- City
- Party
- Surf
- Hidden Gems

WHERE**TRIP**
THEME
City
BUDGET

WHERE**TRIP**
THEME
City
BUDGET
€100
FROM

WHERE**TRIP**
THEME
City
BUDGET
€100
FROM
Amsterdam
BETWEEN

< DECEMBER >

Mo	Tu	We	Th	Fr	Sa	Su
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

< DECEMBER >

Mo	Tu	We	Th	Fr	Sa	Su
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

< DECEMBER >

Mo	Tu	We	Th	Fr	Sa	Su
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

WHERE**TRIP**
THEME
City
BUDGET
€100
FROM
Amsterdam
BETWEEN
8 Dec-29 Dec
DURATION
3 Days
SEARCH

Modern App

WHERE TRIP

THEME
City

BUDGET
€100

FROM
Amsterdam

BETWEEN
8 Dec-29 Dec

DURATION

LONDON
England

€123
pp flight + hostel

BRUSSELS
Belgium

€148
pp flight + hostel

Sort

Price (low - high) ▾

Price

€56 - €200

Departing Airports

AMS BRU
 RTM DUS
 EIN LHR

Regions

Europe
 Asia
 Africa
 North-America
 Sout-America
 Oceania

Distance

100km - 10.000 km

Sort

Price (low - high) ▾

Price

€56 - €200

Departing Airports

AMS BRU
 RTM DUS
 EIN LHR

Regions

Europe
 Asia
 Africa
 North-America
 Sout-America
 Oceania

Distance

100km - 10.000 km

Your trip to Brussels Pick your flight

● 15:45 - 17:00 15 december	AMS-BRU	€130
● 17:00 - 18:00 17 december	BRU-AMS	
● 13:35 - 14:20 15 december	AMS-BRU	€135
● 15:00 - 16:00 17 december	BRU-AMS	
● 15:45 - 17:00 15 december	AMS-BRU	€140
● 15:00 - 16:00 17 december	BRU-AMS	
● 15:45 - 17:00 15 december	AMS-BRU	€142
● 17:00 - 18:00 17 december	BRU-AMS	

Overview Flight Hotel

YOUR CITY TRIP TO BRUSSELS:

We have put together the best deal for you city trip to Brussels. The best dates to go would be between **friday 15 and sunday 17 December**. In its current configuration it would cost **€148**. This is the price per passenger and includes all flights and accomodations.

Booking goes through our external partners kiwi.com and hostelworld.com. We would like to advise you to book your flights before booking your accomodations.

- Friday 15 December 13:35 - 14:20
Flight from Amsterdam to Brussels
- Friday 15 and Saturday 16 December
2 Nights in Brussels Hello Hotel
- Sunday 17 December 15:00 - 16:00
Return flight from Brussels to Amsterdam

Flights:

● 15:45 - 17:00 15 december	AMS-BRU	€130
● 17:00 - 18:00 17 december	BRU-AMS	

Hotel:

Holidays Hotel Midi
●●●○○ €18

Overview Flight Hotel

YOUR FLIGHTS:

These are the most avordable flights we could find within your budget, with reasonable durations.

● 15:45	○ 17:00	AMS	1h15m	BRU
● 17:00	○ 18:00	BRU	1h00m	AMS

TOTAL PRICE PER PERSON: **€130**

[Change Flights](#) [Book Flights at kiwi.com](#)

Overview Flight Hotel

YOUR FLIGHTS:

These are the most avordable flights we could find within your budget, with reasonable durations.

● 13:35	○ 14:20	AMS	0h45m	BRU
● 15:00	○ 16:00	BRU	1h00m	AMS

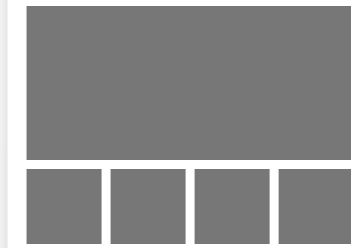
TOTAL PRICE PER PERSON: **€135**

[Change Flights](#) [Book Flights at kiwi.com](#)

Overview Flight Hotel

YOUR HOTEL:

This is the best accomodation we have found within your budget.



Holidays Hotel Midi

●●●○○ €18 for two nights (15 and 16 december)

Holidays Hotel Midi offers comfortable private and shared rooms in Anderlecht, Brussels. For your comfort the property featured free Wi-Fi access and private parking on site is available. There is a well-equipped kitchen and breakfast can be served daily upon request, extra-fee may be charged. Holidays Hotel Midi also includes a terrace.

The hotel is located in Anderlecht, located in the southwest of the city of Brussels. Manneken Pis is 1.5 km from the property, Brussels City Hall is 1.6 km and Brussels Airport is 12 km away from the property.

Holidays Hotel Midi offers a wide range of shared accommodation up to 12 people. All rooms have a private bathroom. The hotel offers mixed, female and male shared rooms.

► Policies

► Facilities

► Reviews

[Change Hotel](#)

[Book Hotel at hostelworld.com](#)

Your trip to Brussels Pick your hotel

Holidays Hotel Midi
●●●○○ €18

Brussels Hello Hotel
●●●○○ €23

Generation Europe
●●●○○ €26

Es Hostel
●●●○○ €24

Auberge des 3 ...
●●●○○ €22

Hotel La Madeleine
●●●○○ €22

Overview Flight Hotel

YOUR CITY TRIP TO BRUSSELS:

You have customised the best deal for you city trip to Brussels. The best dates to go would be between **friday 15 and sunday 17 December**. In its current configuration it would cost **€148**. This is the price per passenger and includes all flights and accomodations.

Booking goes through our external partners kiwi.com and hostelworld.com. We would like to advise you to book your flights before booking your accomodations.

- Friday 15 December 13:35 - 14:20
Flight from Amsterdam to Brussels
- Friday 15 and Saturday 16 December
2 Nights in Brussels Hello Hotel
- Sunday 17 December 15:00 - 16:00
Return flight from Brussels to Amsterdam

Flights:

● 13:35 - 14:20 15 december	AMS-BRU	€135
● 15:00 - 16:00 17 december	BRU-AMS	

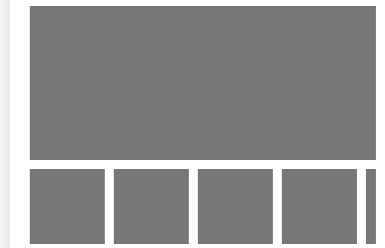
Hotel:

Brussels Hello Hotel
●●●○○ €23

Overview Flight Hotel

YOUR HOTEL:

This is the best accomodation we have found within your budget.



Brussels Hello Hotel

●●●○○ €23 for two nights (15 and 16 december)

If you want to stay in Brussels in a friendly and international atmosphere, then why not book a stay in Hello Hostel. We are only five minutes away from the city center by subway, our rates INCLUDE the following :

Breakfast buffet (6h30 -10h00 AM)
Bed linnen/sheets
Free internet computers and Wi-Fi
A shared, equipped kitchen
A free luggage room /lockers
Towels for rent 1€
Bar with Belgian beers
Free city-maps

Groups:
For bookings of more than 7 people, we ask you to make a request by mail to: groups@hello-hostel.eu (please mention : number of people/days, the age and dates)

Terms and condition:
We have a 48h cancellation-policy.
We have an age limit in the dorms 35 years. (If you are older, we ask you to book private room)
If you have booked for several people, we do our best to put you all together in the same room.
We remind you that female dorms are for females only.

CHECK-IN : 8h30 AM - 23h00 PM
CHECK-OUT : Before 10.00 AM
ACCESS TO THE ROOMS: As of 12 AM

► Policies

► Facilities

► Reviews

[Change Hotel](#)

[Book Hotel at hostelworld.com](#)

WHERE **TRIP**

Filters 0

LONDON	MUNICH	BERLIN
BRUSSELS	PARIS	PORTO
ROME	MILAN	PRAGUE
OSLO	BERN	ZURICH

€148 flight + hotel pp

€189 flight + hotel pp

BRUSSELS	PARIS	PORTO
BRUSSELS	PORTO	PARIS
BRUSSELS	PORTO	PARIS
PRAGUE	ROME	MILAN

< DECEMBER >

Mo	Tu	We	Th	Fr	Sa	Su
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

< DECEMBER >

Mo	Tu	We	Th	Fr	Sa	Su
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Filters 2

▶ Trip

▼ Dates

Between
8 and 29 December 2018

Duration
3 - 5 Days

Depart on

- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday
- Sunday

Return on

- Monday
- Tuesday
- Friday
- Saturday

Filters 0

- ▶ Trip
- ▶ Dates
- ▶ Destination
- ▶ Transport
- ▶ Hotel

Filters 0

▼ Trip

Themes

- Sun
- City
- Party
- Surf
- Winter Sports
- Hidden Gems

Budget

€0 - €200

- ▶ Dates
- ▶ Destination

Filters 1

▼ Trip

Themes

- Sun
- City
- Party
- Surf
- Winter Sports
- Hidden Gems

Budget

€0 - €200

- ▶ Dates
- ▶ Destination

Filters 2

- ▶ Trip
- ▶ Dates
- ▶ Destination
- ▶ Transport
- ▶ Hotel

Filters 2

- ▶ Trip
- ▶ Dates
- ▼ Destination

Regions

- Europe
- Asia
- Africa
- North-America
- Sout-America
- Oceania

Distance

100km - 10.000 km

Filters 3

- ▶ Trip
- ▶ Dates
- ▼ Destination

Regions

- Europe
- Asia
- Africa
- North-America
- Sout-America
- Oceania

Distance

100km - 10.000 km

Filters 1

- ▶ Trip
- ▶ Dates
- ▶ Destination
- ▶ Transport
- ▶ Hotel

Filters 1

- ▶ Trip
- ▼ Dates

Between
Today and 4 April 2018

Duration
3 - 5 Days

Depart on

- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday
- Sunday

Return on

- Monday
- Tuesday
- Friday
- Saturday

< DECEMBER >

Mo	Tu	We	Th	Fr	Sa	Su
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Filters 3

- ▶ Trip
- ▶ Dates
- ▶ Destination
- ▶ Transport
- ▶ Hotel

WHERE **TRIP**

Filters 3

LONDON	MUNICH	BERLIN
BRUSSELS	PARIS	PORTO
ROME	MILAN	PRAGUE
OSLO	BERN	ZURICH

WHERE **TRIP**

Filters 3

LONDON	MUNICH	BERLIN
BRUSSELS	PARIS	PORTO
BRUSSELS	PORTO	PARIS
BRUSSELS	PORTO	PARIS
PRAGUE	ROME	MILAN

€148 flight + hotel pp

YOUR CITY TRIP TO BRUSSELS:

- Friday 15 December 15:45 - 17:00 Flight from Amsterdam to Brussels
- Friday 15 and Saturday 16 December 2 Nights in Holidays Hotel Midi
- Sunday 17 December 17:00 - 18:00 Return flight from Brussels to Amsterdam

Flight Costs	Hotel Costs
€130	€18

YOUR FLIGHT:

- 15:45 - 17:00 15 december AMS-BRU
 - 17:00 - 18:00 17 december BRU-AMS
- €130

[Change Flight](#) [Book Flight at kiwi.com](#)

YOUR HOTEL:

This is the best accommodation we have found within your budget.



Holidays Hotel Midi

●●●○○ for two nights
€18 (15 and 16 december)

Holidays Hotel Midi offers comfortable private and shared rooms in Anderlecht, Brussels. For your comfort the property featured free Wi-Fi access and private parking on site is available. There is a well-equipped kitchen and breakfast can be served daily upon request, extra-fee may be charged. Holidays Hotel Midi also includes a terrace.

The hotel is located in Anderlecht, located in the southwest of the city of Brussels. Manneken Pis is 1.5 km from the property, Brussels City Hall is 1.6 km and Brussels Airport is 12 km away from the property.

Holidays Hotel Midi offers a wide range of shared accommodation up to 12 people. All rooms have a private bathroom. The hotel offers mixed, female and male shared rooms.

► Policies

► Facilities

► Reviews

[Change Hotel](#) [Book Hotel at hostelworld.com](#)

YOUR CITY TRIP TO BRUSSELS:

- Friday 15 December 15:45 - 17:00 Flight from Amsterdam to Brussels
- Friday 15 and Saturday 16 December 2 Nights in Holidays Hotel Midi
- Sunday 17 December 17:00 - 18:00 Return flight from Brussels to Amsterdam

Flight Costs	Hotel Costs
€130	€18

YOUR FLIGHT:

- 15:45 - 17:00 15 december AMS-BRU
 - 17:00 - 18:00 17 december BRU-AMS
- €130

Pick a flight

- 15:45 - 17:00 15 december AMS-BRU €130
- 17:00 - 18:00 17 december BRU-AMS

- 13:35 - 14:20 15 december AMS-BRU €135
- 15:00 - 16:00 17 december BRU-AMS

- 15:45 - 17:00 15 december AMS-BRU €140
- 15:00 - 16:00 17 december BRU-AMS

- 15:45 - 17:00 15 december AMS-BRU €142
- 17:00 - 18:00 17 december BRU-AMS

YOUR HOTEL:

This is the best accommodation we have found within your budget.



Holidays Hotel Midi

●●●○○ for two nights
€18 (15 and 16 december)

Holidays Hotel Midi offers comfortable private and shared rooms in Anderlecht, Brussels. For your comfort the property featured free Wi-Fi access and private parking on site is available. There is a well-equipped kitchen and breakfast can be served daily upon request, extra-fee may be charged. Holidays Hotel Midi also includes a terrace.

The hotel is located in Anderlecht, located in the southwest of the city of Brussels. Manneken Pis is 1.5 km from the property, Brussels City Hall is 1.6 km and Brussels Airport is 12 km away from the property.

Holidays Hotel Midi offers a wide range of shared accommodation up to 12 people. All rooms have a private bathroom. The hotel offers mixed, female and male shared rooms.

YOUR CITY TRIP TO BRUSSELS:

- Friday 15 December 13:35 - 14:20 Flight from Amsterdam to Brussels
- Friday 15 and Saturday 16 December 2 Nights in Holidays Hotel Midi
- Sunday 17 December 15:00 - 16:00 Return flight from Brussels to Amsterdam

Flight Costs	Hotel Costs
€135	€18

YOUR FLIGHT:

- 13:35 - 14:20 15 december AMS-BRU
 - 15:00 - 16:00 17 december BRU-AMS
- €135

[Change Flight](#) [Book Flight at kiwi.com](#)

YOUR HOTEL:

This is the best accommodation we have found within your budget.



Holidays Hotel Midi

●●●○○ for two nights
€18 (15 and 16 december)

Holidays Hotel Midi offers comfortable private and shared rooms in Anderlecht, Brussels. For your comfort the property featured free Wi-Fi access and private parking on site is available. There is a well-equipped kitchen and breakfast can be served daily upon request, extra-fee may be charged. Holidays Hotel Midi also includes a terrace.

The hotel is located in Anderlecht, located in the southwest of the city of Brussels. Manneken Pis is 1.5 km from the property, Brussels City Hall is 1.6 km and Brussels Airport is 12 km away from the property.

Holidays Hotel Midi offers a wide range of shared accommodation up to 12 people. All rooms have a private bathroom. The hotel offers mixed, female and male shared rooms.

► Policies

► Facilities

► Reviews

[Change Hotel](#) [Book Hotel at hostelworld.com](#)

YOUR CITY TRIP TO BRUSSELS:

- Friday 15 December 13:35 - 14:20 Flight from Amsterdam to Brussels
- Friday 15 and Saturday 16 December 2 Nights in Brussels Hello Hostel
- Sunday 17 December 15:00 - 16:00 Return flight from Brussels to Amsterdam

Flight Costs	Hotel Costs
€135	€23

YOUR FLIGHT:

- 13:35 - 14:20 15 december AMS-BRU
 - 15:00 - 16:00 17 december BRU-AMS
- €135

[Change Flight](#) [Book Flight at kiwi.com](#)

YOUR HOTEL:

This is the best accommodation we have found within your budget.



Brussels Hello Hostel

●●●○○ for two nights
€23 (15 and 16 december)

If you want to stay in Brussels in a friendly and international atmosphere, then why not book a stay in Hello Hostel. We are only five minutes away from the city center by subway, our rates INCLUDE the following :

Breakfast buffet (6h30 -10h00 AM)
Bed linnen/sheets
Free internet computers and Wi-Fi
A shared, equipped kitchen
A free luggage room /lockers
Towels for rent 1€
Bar with Belgian beers
Free city-maps

Groups:
For bookings of more than 7 people, we ask you to make a request by mail to:
groups@hello-hostel.eu (please mention : number of people/days, the age and dates)

Terms and condition:
We have a 48h cancellation-policy.
We have an age limit in the dorms 35 years. (If you are older, we ask you to book private room)
If you have booked for several people, we do our best to put you all together in the same room.
We remind you that female dorms are for females only.

CHECK-IN : 8h30 AM - 23h00 PM
CHECK-OUT : Before 10:00 AM
ACCESS TO THE ROOMS: As of 12 AM

► Policies

► Facilities

► Reviews

[Change Hotel](#) [Book Hotel at hostelworld.com](#)

YOUR CITY TRIP TO BRUSSELS:

- Friday 15 December 13:35 - 14:20 Flight from Amsterdam to Brussels
- Friday 15 and Saturday 16 December 2 Nights in Holidays Hotel Midi
- Sunday 17 December 15:00 - 16:00 Return flight from Brussels to Amsterdam

Flight Costs	Hotel Costs
€135	€18

YOUR FLIGHT:

- 13:35 - 14:20 15 december AMS-BRU
 - 15:00 - 16:00 17 december BRU-AMS
- €135

[Change Flight](#) [Book Flight at kiwi.com](#)

YOUR HOTEL:

This is the best accommodation we have found within your budget.



Holidays Hotel Midi

●●●○○ for two nights
€18 (15 and 16 december)

Holidays Hotel Midi offers comfortable private and shared rooms in Anderlecht, Brussels. For your comfort the property featured free Wi-Fi access and private parking on site is available. There is a well-equipped kitchen and breakfast can be served daily upon request, extra-fee may be charged. Holidays Hotel Midi also includes a terrace.

The hotel is located in Anderlecht, located in the southwest of the city of Brussels. Manneken Pis is 1.5 km from the property, Brussels City Hall is 1.6 km and Brussels Airport is 12 km away from the property.

Holidays Hotel Midi offers a wide range of shared accommodation up to 12 people. All rooms have a private bathroom. The hotel offers mixed, female and male shared rooms.

► Policies

► Facilities

► Reviews

Pick a accommodation

Holidays Hotel Midi
●●●○○ €18

Brussels Hello Hotel
●●●○○ €23

Generation Europe
●●●○○ €26

Es Hostel

Appendix M:

Concept User Test Transcriptions

Zoe:

0:35: Oh ik krijg wel meteen het gevoel inderdaad dat het voor jongeren is van mijn leeftijd in ieder geval

1:23: Deze is eigenlijk ook wel mooi. En ik vind het ook wel wat stoer hebben want er is geen één reis ding met zwart. Op de een of andere manier geeft dat voor mij wel wat aan dat het waarschijnlijk iets nieuws is. (Theme 1)

4:00: Deze tweede vind ik wel cleaner, en daardoor ook betrouwbaarder (Theme 2)

4:30: Ja deze komt mij gewoon niet zo serieus over, van hier wil ik mijn geld aan gaan uitgeven (Theme 3)

5:00: Kijk het gaat niet om kleine bedragen, als dit zou gaan over wil ik mensen meeten als ik op vakantie ben. Dan zou ik denken dit is leuk. Maar niet van hier ga ik €200 aan uit geven.

6:40: Deze heeft is net wat professioneler, probeert ook een beetje op te vallen door die foto's op de achtergrond, krijg ik wel meteen zin van om op vakantie te gaan (Theme 4)

7:20: Ja serieus maar toch ook hip

8:33: Oh nee duidelijk wit (Theme 5)

8:40: Deze trekt mij gewoon in stijl niet zo aan

9:30: Ik vind die zwarte toch wel heel duidelijk, rustig ook. (Theme 1)

10:40: Een simpele achtergrond maar nog steeds ik word er wel geïnspireerd van om op vakantie te gaan.

12:00: Ja het wel een beetje saai, het wit, het wat al een beetje kennen (Theme 2)

12:55: Ja hij is modern maar dat betekent niet dat ik hem leuk vindt (Theme 3)

14:00: Ok dan zou ik van deze wel kunnen zeggen dat ie iets meer confusing is (Theme 4)

15:00: Die vind ik dan minder confusing dan nummer vier, omdat je die zwarte achtergrond hebt dus die is wat rustiger (Theme 5)

17:20: Nee hij is wel lekker modern, en dat zwarte maakt hem minder confusing dan 4

20:40: Oja 1 vind ik wel meer luxurious dan chique

21:55: Nummer 4 dat is ook een witte die vind ik niet zo zeer minimalistisch, maar deze wel (2)

23:00: Ze hebben alle twee een beetje hetzelfde thema, de ene wit de andere zwart, maar ik denk dat 5 toch duidelijker is dan nummer 4

27:00: Ja hier vind ik hem heel erg leuk want de informatie is vrij duidelijk, en je hebt een inspirerende foto op de achtergrond. Maar deze heeft wat drukke informatie en een drukke foto dus dan verlies je me een beetje (Theme 4)

27:45: Ja deze vind ik gewoon iets meer edgy, dat ik denk van wat is dit voor een organisatie?

35:00: Huh choose duration? Maar ik heb toch net al van 8 to 29 [April] gekozen? (ux concept A)

39:00: Ik ben een beetje moe van al dat gelees altijd. Is er geen kaartje?

40:40: Ik vindt het wel een hoop geklik

41:15: Misschien zou ik wel iets willen zien van welke opties ik heb gekozen

42:55: Oja dat vind ik leuk zo'n pop-up (tool-tip) (ux concept B)

51:45: Ik wil gewoon iets meer overzicht en iets minder text.

1:03:30: Ojee al die text, maar toch ben ik bang dat ik informatie mis als ik het niet lees (ux concept C)

1:11:30: Oh die spreek me wel aan meteen eigenlijk (ux concept D)

1:15:20: Hoe gaan we nu terug? Ik mis een knopje (bij filters)

1:17:30: Ik vindt het wel logisch dat ik niet door verschillende pagina's heen ga.

Sando:

2:40: Hij heeft echt duidelijk een goedkope uitstraling (Theme 3)

3:15: Deze komt wat betrouwlijker over (Theme 4)

4:10: Die zit er wel netjes en clean uit maar die is net iets te wit (Theme 2)

5:45: Die andere vond ik zeg maar meer een geheel dan dit (Theme 4)

6:05: Ja deze ook, ik vind dat donkere gewoon mooi (Theme 5)

10:15: Ik vind hem wat onduidelijk omdat die afbeelding zo aanwezig zijn, maar daar door juist wel meer exciting (Theme 4)

19:35: Sharp ja dit vind ik een prototype sharp (Theme 5)

23:00: Ik denk dat je dan opzij zou moeten scrollen maar dat is niet helemaal duidelijk (ux concept A)

24:45: Dit is een hele verhalende manier van storyline of zo. Heel nice.

27:30: Ja ja en dat is dit in een keer heel veel informatie

33:55: Dit wel een belangrijke voor de mensen want hoe ga je dat goed uitleggen (het verschil tussen between en duration) (ux concept B)

36:40: Die verhaallijn vond ik heel mooi, maar dat startscherm van deze vind ik weer saaier

41:25: Voor de eerste keer dit perfect voor de tweede keer misschien wat minder, wacht maakt dat uit? Nee want je moet het toch altijd invullen (staggered input) (Ux concept c)

41:50: Ja dit is heel anders dan je normaal gesproken resultaten en filters hebt.

42:20: Ja dit is helemaal nice (tabs)

45:20: Hier wordt je er wel echt door heen geleid

50:10: Het punt is natuurlijk wel dat je een telefoon hebt ter grote van een tablet (ux concept D)

51:40: Ik vond het wel wat minder vloeiend en meer abrupt

Appendix N:

Concept User Test Data

P1	P2	P3	P4	P5	P6	P7	P8													
Zoë																				
Sando																				
Rowan																				
Sanjay																				
Koen																				
Jody																				
Marieke																				
Roeland																				
Theme Like																				
Boxplot:	min	1st quartile	Average	3rd quartile	max															
T1	9	10	8	10	7	2	9	1	5.75	7	9.25	10								
T2	7	4	2	8	4	3	7	3	4.75	7	7	8								
T3	3	3	9	9	2	5	3	6	3	5	6.75	9								
T4	8	5	5	3	9	7	4	10	4.75	6.375	8.25	10								
T5	5	8	7	6	8	9	6	9	6	7.25	8.25	9								
Flow Like																				
Boxplot:	min	1st quartile	Average	3rd quartile	max															
A	7	6	4	8	4	8	3	7	4	5.875	7.25	8								
B	5	7	6	5	7	4	6	8	5	6	7	8								
C	9	8	10	7	5	3	7	9	6.5	7.25	9	10								
D	10	9	8	10	6	9	9	10	8.75	8.875	10	10								

THEMES

PART 1

	P1	P2	P3	P4	P5	P6	P7	P8													
Confusing-Fluent																					
Boxplot:	min	1st quartile	Average	3rd quartile	max																
T1	9	9	2	9	8	6	9	8	2	7.5	7.5	9									
T2	10	8	4	10	7	4	10	1	1	4	6.75	10									
T3	5	7	10	8	4	7	7	7	4	6.5	6.875	10									
T4	4	5	8	5	5	8	6	4	4	4.75	5.625	6.5									
T5	7	6	6	6	9	9	5	5	5	5.75	6.625	7.5									
Dull-Exciting																					
Boxplot:	min	1st quartile	Average	3rd quartile	max																
T1	8	6	3	5	6	1	8	4	1	3.75	5.125	6.5									
T2	6	4	1	7	5	3	5	2	1	2.75	4.125	5.25									
T3	3	9	9	9	7	6	7	6	3	6	7	9									
T4	9	7	7	1	10	7	6	5	1	5.75	6.5	7.5									
T5	10	8	5	3	9	9	9	3	3	4.5	7	10									
Messy-Clear																					
Boxplot:	min	1st quartile	Average	3rd quartile	max																
T1	9	9	8	9	6	9	8	8	6	8	8.25	9									
T2	10	6	10	10	8	4	9	7	4	6.75	8	10									
T3	5	5	6	7	1	10	5	5	1	5	5.5	6.25									
T4	4	4	4	4	4	5	7	3	3	4	4.625	5.25									
T5	8	8	2	8	9	8	4	9	2	7	7	8.25									
Outdated-Modern																					
Boxplot:	min	1st quartile	Average	3rd quartile	max																
T1	9	9	7	6	7	8	9	4	4	6.75	7.375	9									
T2	6	5	1	8	5	7	8	2	1	4.25	5.25	7.25									
T3	10	10	5	7	10	3	6	7	3	5.75	7.25	10									
T4	7	6	3	4	9	5	5	3	3	3.75	5.25	6.25									
T5	8	8	9	5	8	6	7	5	5	5.75	7	8									

PART 2

	P1	P2	P3	P4	P5	P6	P7	P8		Boxplot:									
	P1	P2	P3	P4	P5	P6	P7	P8		min	1st quartile	Average	3rd quartile	max					
Sharp-Fluent																			
T1	1	7	3	3	4	2	4	8		1	2.75	4	4.75	8					
T2	10	4	8	9	3	4	7	1		1	3.75	5.75	8.25	10					
T3	3	8	10	8	6	9	5	9		3	5.75	7.25	9	10					
T4	5	2	2	5	7	7	6	5		2	4.25	4.875	6.25	7					
T5	4	3	1	4	2	8	3	6		1	2.75	3.875	4.5	8					
Playfull-Exciting																			
T1	9	6	7	7	7	6	8	5		5	6	6.875	7.25	9					
T2	8	5	5	5	8	5	6	8		5	5	6.25	8	8					
T3	2	3	1	9	2	3	3	4		1	2	3.375	3.25	9					
T4	6	8	6	4	9	9	5	7		4	5.75	6.75	8.25	9					
T5	7	7	8	6	10	10	7	6		6	6.75	7.625	8.5	10					
Minimal-Clean																			
T1	9	6	8	8	3	8	8	6		3	6	7	8	9					
T2	4	5	1	10	4	1	4	1		1	1	3.75	4.25	10					
T3	5	6	3	9	6	2	5	7		2	4.5	5.375	6.25	9					
T4	7	4	10	5	9	5	6	8		4	5	6.75	8.25	10					
T5	6	8	6	6	8	6	7	9		6	6	7	8	9					
Chique-Luxurious																			
T1	9	6	10	7	1	9	2	7		1	5	6.375	9	10					
T2	1	7	3	2	3	2	7	6		1	2	3.875	6.25	7					
T3	5	8	8	4	5	5	6	8		4	5	6.125	8	8					
T4	4	5	5	5	8	3	5	4		3	4	4.875	5	8					
T5	6	4	1	6	9	8	4	10		1	4	6	8.25	10					

UX FLOW

PART 1

	P1	P2	P3	P4	P5	P6	P7	P8		Boxplot:									
	P1	P2	P3	P4	P5	P6	P7	P8		min	1st quartile	Average	3rd quartile	max					
Fluent																			
A	5	7	4	5	7	7	4	6		4	4.75	5.625	7	7					
B	9	5	6	3	9	5	7	5		3	5	6.125	7.5	9					
C	8	8	8	9	6	6	8	4		4	6	7.125	8	9					
D	10	4	10	10	8	9	9	3		3	7	7.875	10	10					
Clear																			
A	8	4	4	6	4	8	2	6		2	4	5.25	6.5	8					
B	7	6	10	5	7	5	6	7		5	5.75	6.625	7	10					
C	9	8	8	7	5	6	7	5		5	5.75	6.875	8	9					
D	10	3	6	10	3	7	8	10		3	5.25	7.125	10	10					
Exciting																			
A	8	5	6	5	6	7	7	5		5	5	6.125	7	8					
B	5	6	4	4	10	6	5	4		4	4	5.5	6	10					
C	6	8	8	6	8	5	6	6		5	6	6.625	8	8					
D	7	7	10	10	9	9	8	8		7	7.75	8.5	9.25	10					
Novel																			
A	9	9	6	5	8	5	9	2		2	5	6.625	9	9					
B	4	6	4	4	7	6	7	4		4	4	5.25	6.25	7					
C	6	8	8	6	9	7	5	1		1	5.75	6.25	8	9					
D	7	10	10	9	10	9	8	5		5	7.75	8.5	10	10					

PART 2

		P1	P2	P3	P4	P5	P6	P7	P8	Boxplot:			
										min	Average	3rd quartile	max
A													
	T1	7	8	8	8	6	4	2	1	1	3.5	5.5	8
	T2	6	3	10	9	7	2	4	4	2	3.75	5.625	7.5
	T3	10	9	2	10	10	3	8	7	2	6	7.375	10
	T4	2	4	6	6	8	7	7	6	2	5.5	5.75	7
	T5	1	7	4	7	9	9	3	5	1	3.75	5.625	7.5
B													
	T1	9	9	8	9	7	4	7	3	3	6.25	7	9
	T2	10	3	10	8	8	2	8	5	2	4.5	6.75	8.5
	T3	3	8	2	10	5	3	4	4	2	3	4.875	5.75
	T4	8	5	6	6	9	7	6	6	5	6	6.625	7.25
	T5	7	7	4	7	10	9	5	2	2	4.75	6.375	7.5
C													
	T1	7	9	2	10	7	4	8	4	2	4	6.375	8.25
	T2	9	5	4	9	9	2	6	3	2	3.75	5.875	9
	T3	5	7	10	8	6	3	3	6	3	4.5	6	7.25
	T4	10	6	8	6	10	7	7	5	5	6	7.375	8.5
	T5	8	8	6	7	8	9	9	2	2	6.75	7.125	8.25
D													
	T1	7	9	4	10	6	10	5	1	1	4.75	6.5	9.25
	T2	8	6	2	9	7	7	6	3	2	5.25	6	7.25
	T3	6	7	8	8	8	8	3	5	3	5.75	6.625	8
	T4	10	4	10	6	10	3	9	10	3	5.5	7.75	10
	T5	9	5	6	7	9	2	8	2	2	4.25	6	8.25

Appendix O: Iterative Test

During the iterative tests, a total of 8 people participated in three cycles of testing and iterating. The purpose of these was to find problems quickly. The tests were recorded but not transcribed. Instead, the iterations were made based on notes that were taken during the test.

The tests were done at the homes of the participants, and they were asked to just explore the website and think out loud with minimal interference from the facilitator. Afterward, they were asked some questions about problems they encountered.

Appendix P:

Final User Test Transcripts

These are the transcripts of the key comments the participants made.

Martin:

A 28 year old chemical engineer, often goes on city trips with his girlfriend. Usually they only plan those trips a couple of days to a week in advance. This test was conducted during a train ride from Gouda to Rotterdam.

0:40: I like the pictures, they make me want to go on holiday

1:35: Usually I don't read a lot of the texts on website like these, but what I just read makes it pretty clear what they do.

2:50: It's nice that there is that transition when you click on the types of trip and between the first and the second page, it kinda suck you in to the page.

5:20: I find the background picture very helpful, maybe it could be a little bit more visible. But while I was talking to you I already forgot what kind of trip I was searching for. But one look at the picture and it was immediately clear that I was looking at surf trips

7:45: This is a bit weird, I did not really understand where I was, and now I am not sure if I selected the Airbnb I wanted... Oh I see yeah it worked, but still weird.

Marieke:

A 26 year old systems developer for an insurance company. Is actually looking to go on a trip in the coming months. This test conducted during a train ride from Rotterdam to Gouda.

0:30: Oh dit is leuk, dat die plaatjes groter worden als je er op klikt. [trip themes]

1:00: Wow dat was snel! Zijn dit echte reizen? Op andere websites duurt dit veel langer [...] en soms heb ik dan zoiets van laat maar.

2:10: Dit zijn wel echt veel filters, ik weet niet of ik ze allemaal zou gebruiken.

2:45: Opzich zijn ze goed ingedeeld en is het wel overzichtelijk. Dus voor mij is het ook niet nodig om er minder te hebben

6:00: Ja het ziet er goed warm en verwelkomend

Bram:

A 25 year old chemistry teacher, goes on a trip a couple of times a year. Sometimes alone sometimes with his girlfriend. They have used Surprise Me (a service where you don't know you destination until you are at the airport) in the past. This test was done while walking through the city center of Utrecht.

0:20: Ok, ik zie een foto van iemand die bovenop een berg staat of zo. Met daaronder verschillende soorten trips.

1:20: Ja duidelijk, die tekstjes met uitleg en zo [op de voorpagina]

1:00: Ik moet zeggen dit ziet er ook allemaal wel echt nice en gelikt uit.

2:20: Het voelt ook wel lekker levendig met al die bewegende dingen en zo

4:35: [Ik vind het] wel fijn dat je al die opties hebt [bij de filters]

5:00: Wacht. Wat is dit? Oh.. ok ja dat dacht ik al. Dus bij die filters kies je een periode waarin je weg wilt en hoeveel dagen en dan kies je hier welke dag je precies gaat, toch?

5:45: Ja ik weet niet of je dat anders moet doen. Ik denk dat dit gewoon iets is dat je één keertje gedaan moet hebben en dan is het meteen duidelijk.

6:20: Wel fijn dat het hier nog even allemaal in twee zinnen wordt samengevat.

8:00: Ok en dan boek je dus op kiwi.com en hostelworld, dus niet via jullie

Laura:

A 22 year old student, the previous participant's (Bram) girlfriend. The test was also done while walking through the city centre of Utrecht.

1:45: Ik vind die animaties en zo wel echt leuk gedaan

2:00: Ik zou het zelf wel fijner vinden als er hier ook bij staat wanneer de reis hoeveel dagen de reis duurt en misschien wanneer het is.

2:45: Zijn dit trouwens echte prijzen? Zelf zijn we altijd echt vet lang opzoek naar een vakantie voor deze prijs.

4:00: Zijn er alleen maar hostels? Oh nee ook Airbnb chill.

7:15: Ja dit is echt heel goed, vanaf wanneer kunnen we dit gaan gebruiken?

Karam, Roeland & Paul

Karam is a 27 year old IT support, Roeland a 30 year old factory worker and Paul a 28 year old electrician. They participated as group and were encouraged to share results and trips.

1:30 - Karam: Delen is gewoon de link via WhatsApp sturen denk ik? Paul open die link eens kijk eens of dat werkt.

2:00 - Paul: Ja ik krijg wel resultaten, maar ik weet niet of ik er echt aan gedacht had om die link te kopiëren. Kun je niet beter een knop of zo hebben te delen?

2:20 - Karam: Ja die link is ook echt veelste lang

4:00 - Roeland: Ik ben wel echt blij dat je niet voor die zwarte look bent gegaan

5:30 - Paul: Hmm.. Weetje wat echt vervelend is? Ik heb een set vluchten naar Pisa die of heen op een normale tijd zijn maar terug echt te vroeg of andersom. Eigenlijk wil ik deze heenvlucht en deze terugvlucht. Oh gevonden maar hij stond echt helemaal onder aan.

6:45 - Roeland: Ja ik begrijp wat je bedoelt man, eigenlijk wil je gewoon dat hij begint met de goedkoopste optie en dat je dan de heen en terugvlucht kan veranderen, en dat je dan ziet hoeveel prijsverschil er tussen zit of zo. Hier hoe is dit een optie?

7:30 - Roeland: Hier hoe is dit een optie 22 uur naar Stockholm met twee tussenstops en voor een tientje meer heb je een directe vlucht?

9:15 - Paul: Maar je kunt dus zeg maar helemaal niet zoeken op een bestemming of zo?

9:45 - Paul: Ja oke ik vind het idee wel vet, maar wat als ik gister nou een nice bestemming heb gevonden en vandaag staat hij er niet tussen als ik wil boeken? Eigenlijk zou je daar wel een optie of zo voor moeten hebben.

10:10 - Karam: Ja of als je heel graag naar een specifiek land of zo wilt

Appendix Q: Final User Test Data

	Martin	Marieke	Bram	Laura	Karam	Roeland	Paul	Jake	Amy	Average
Ergonomic Qualities										
Comprehensible - Incomprehensible	4	4	4	4	4	4	4	5	4	4.222222222
Supporting - Obstructing	4	3	4	4	4	4	4	4	5	4
Simple - Complex	3	3	3	3	3	3	3	3	4	3.111111111
Predictable - Unpredictable	3	2	2	3	3	3	3	2	4	2.777777778
Clear - Confusing	4	4	4	3	5	4	4	5	5	4.222222222
Trustworthy - Shady	4	3	4	4	4	3	4	4	5	3.888888889
Controllable - Uncontrollable	3	4	4	3	4	4	4	5	5	4
Familiar - Strange	4	3	3	3	4	4	4	5	3	3.777777778
Hedonic Qualities										
Interesting - Boring	4	4	5	4	4	5	5	5	5	4.555555556
Costly - Cheap	3	4	3	4	2	3	3	4	4	3.333333333
Exciting - Dull	4	3	4	4	4	5	5	5	5	4.333333333
Exclusive - Standard	3	4	4	4	5	4	5	4	5	4.222222222
Impressive - Nondescript	4	3	4	3	4	4	4	5	5	3.888888889
Original - Ordinary	2	3	3	4	4	3	4	4	4	3.444444444
Innovative - Conservative	4	2	3	3	4	2	3	4	5	3.333333333
Appeal Qualities										
Pleasant - Unpleasant	4	4	4	5	5	4	4	5	4	4.444444444
Good - Bad	3	4	3	4	3	4	5	5	5	3.888888889
Aesthetic - Unaesthetic	4	4	4	5	5	4	4	4	4	4.222222222
Inviting - Rejecting	4	4	4	4	5	4	5	4	5	4.333333333
Attractive - Unattractive	4	4	4	5	4	5	4	5	5	4.444444444
Sympathetic - Unsympathetic	3	3	3	4	4	3	4	4	4	3.666666667
Motivating - Discouraging	3	4	4	4	3	4	4	5	5	4
Desirable - Undesirable	4	3	4	4	3	4	4	5	5	4

Appendix R: Design System Library

Design System

Introduction

Here at where trip our ethos is Experience over Destination. To us, that means what you do is more important than where you are doing it. So in other to translate that to coherent User Experience we developed this design system. We aim to focus our design on the visual elements such as images and exciting interactions to give the users a sense of adventure that we want to represent.

This system is a living, breathing thing. If you think there is some that you can add to it or change it for the better, take a look at the section about the system or speak to Sando.

Ethos:

The ethos describes the core value of WhereTrip; it is not only our slogan but also our mantra.

Experience over Destination

What we mean by that is that what you do on a trip is more important than where you do it. For example, If you want to go snowboarding, you can go to a popular destination and pay a lot, such as the French Alps, or, you can go to a lesser known location and have more adventures, less touristy and cheaper trip in the Czech Republic. But in both cases, you can have fantastic snow experiences. We want to make it easier to find those more adventurous destinations.

Mission Statement:

The mission statement describes WhereTrip's target audience, goal, and approach:

Inspire students, young professionals, and explorers with new and exciting destinations by enabling them to find and book trips within their budget easily.

The target audience is young people with a flexible schedule looking for adventure. We want to provide them with affordable trips to destinations they might not have initially thought of. We do that by making finding and booking trips to those places more accessible.

Principles:

Our principles describe where WhereTrip's focus lays when it comes to development and user experience. Every time you design, build, develop or do something for WhereTrip ask your self if it is FACTual. Fluent Adventurous, Clear, Trendy.

FLUENT

Interaction:

Using the products should feel effortless. Placing of components should feel logical, and it should feel evident to users how to achieve their goals. Fluent is also manifested by providing the user with all information they might need. This results in them not having to go to outside sources and using multiple tabs/apps (for the wheater, city information, etc.).

Look:

The way the eyes of the user move over the page should be flowing. Valuable information and images should draw the attention of the user, and fewer components carrying more detailed information although still, accessible should not distract from the flow.

ADVENTUROUS

Interaction:

The website should give the user an exciting feeling. Using micro animations and transitions can help achieve this and retain the users' attention. The site should invite users to explore its features and keep users coming back.

Look:

Regarding visual appearance, the product should inspire to go on an adventure. One way this can be achieved is by laying focus of the pages on photos of the destinations and adventurous images in general.

CLEAR

Interactions:

The interactions the user can do should be

apprehensible, meaning that ideally before they take action, they have a good grasp of what is about to happen and otherwise they should understand after the interaction and be able to undo it. To achieve this, every component should have only one specific purpose, and this should be defined before building/designing it. (parent component can have very high-level purposes, such as “display results”)

Look:

The product should have a coherent look. Use of design elements should be consistent, so users will quickly pick up on how to read the product.

TRENDS

Interaction:

Interactions should always feel modern and contemporary. Keep monitoring new trends in the field and test their fit to the other principles. Keep searching for new technologies to improve the user experience and new platforms to deploy to. Be an early adopter or at least a fast follower of new technology to keep the interest of the user group, avoid becoming conservative in design decisions.

Look:

The look should be refreshing, preferable something that has not been done many times before, while still having a sense of seriousness. Look for new trends in UI design and deliberate if it fits the WhereTrip brand.

Target Audience:

Millennials (actually 20 to 35-year-olds, since Millennials will be older in ten years), with higher education. Students or young professionals, they have not that much money to spend but are flexible with their time since they have no kids. Our target audience is world citizens; this means going to other countries is a relatively common thing for them, unlike for example their parents or grandparents. It also implies we don't focus on a specific nationality, WhereTrip is an international product. A particularly fascinating sub-user-group would be international students. An exchange student from Asia living Europe for the first time, for example, has the opportunity

to visit and discover places they would never go to if they were in Asia. However, now that they are living Delft for a year or two they might want to visit Berlin or Fahren one weekend if the price is right. We expect that our users value what they are doing and seeing more than where they are doing it, especially if it fits their budget. An interesting trend under millennials is the feeling of entitlement; the generation has come to expect a high-quality product for an affordable price/payment scheme. This can be found in the success of companies like Uber and Airbnb that have this quality high-end look but deliver services at a lower price than regular providers.

System

What:

This design system library serves as a single source of truth for designers, developers, and anybody that communicates on behalf of WhereTrip. In it, we describe our

- Company vision
- The experiences we want our users to have
- Our style guide
- Our component library

It is imperative to take note that this document is not set in stone, and we rely on you, our employees, to use your expertise and improve the system where you see fit.

Why

We found that a lot of small inconsistencies kept creeping in our designs during design development. To prevent this from happening we decided to build this design system alongside this documentation library.

How to use

This library describes both high-level concepts that are illustrated with do's and don'ts, and a component library for the web that explains when and where to use those components, how to structure the HTML correctly and the used SASS code.

The component library is structured according to the atomic naming scheme where;

Nuclides are the invisible parts of the library such

as colors and spacing tokens,

Atoms are the smallest components such as text components, buttons, and icons

Molecules are a collection of Atoms that make a bigger component such as cards, input forms, and modals.

Organisms are big sections of a page such as a footer or a topbar.

By using these premade components and altering or expanding them where needed, development can happen much quicker, and the result will be much more consistent.

How to develop

When you come across something that you think is missing, wrong, or can be done better. Use the slack channels to discuss this with the people that (will) use that part of the system. Let the design system manager (Sando) know you want to make these changes.

When you have the approval to make additions and or changes to the system, you can work in the library files. These are a collection of markdown files structured in folder tree to create the menu.

- Make sure to add do's and don't examples when creating new guidelines.
- Make sure to create a working example when adding code to the SASS library

Future development opportunities

- Refactor the SASS code or translate to React Styled Components
- Rework the naming scheme
- Coding Principles Front End
- Coding Principles Back End

Nuclides

Space

Our spatial system is designed to work on any medium, to accomplish that we came up with a set of elements that can be used in most platforms (print, web, ios, android, desktop) and not only on the web.

Size

We use an exponential sizing scheme where we define any base size depending on platform and resolution, in most cases, this will be equal to 1 REM or 16 pixels. For names, it was decided to use t-shirt sizes so the base size would be M, double that size would be L double that is XL, half of M is S, half of S is XS, etc.

We use the following spatial tokens for all our spatial elements:

```
$xxs: 0.125rem;
$xs: 0.25rem;
$s: 0.5rem;
$xm: 0.75rem;
$m: 1rem;
$l: 2rem;
$x1: 4rem;
$xxl: 8rem;
```

Note that \$xm is only used for background blur and border-radius.

Spatial elements:

The spatial elements we use are inset, squish inset, stack and inline.

Inset is an even padding all the way around an element. Squish inset is similar, but the padding on the left and right is twice the size as that on the top and bottom. This is mostly used for buttons. Stack and insets are vertical spacers and are used instead of margins, since the current where trip style does not use any hr's it was decided stack and inset elements can be placed inside an hr to clean up the code.

HTML usage examples:

```
<div class="inset m">
  This box has a medium padding
</div>
<div class="squish inset m">
  This type of spacing is used for
  buttons
</div>
<hr class="stack m"/>
```

SASS code examples:

```
.inset.m {padding: $m;}
.inset.squish.m {padding: $s $m;}
.stack.l {height: $l;}
.inline.xxs {width: $xxs;}
```

Utility classes:

Some utility classes are available to position elements in the desired position on the screen. At the beginning of building the system, this seemed a good idea, shifting this to the HTML part of the code, however, now some elements have more than ten classes and the HTML starts to become a bit of a mess. During the next refactor it is advisable to reduce the number of utility classes, especially those with only one property and create classes for specific elements.

SASS code for utility classes:

```
.no-margin {
  margin: 0 !important;
}

.fullscreen {
  height: 100vh;
  width: 100%;

  &.h90 {
    height: 90vh;
  }

  &.background {
    z-index: -100;
  }
}

.fullwidth {
  min-width: 100%;
}

.fullbox {
  position: absolute;
  // height: 100%;
  width: 100%;
  top: 0;
  left: 0;
  bottom: 0;
  z-index: -10;
}

.center.align {
  text-align: center;
}

.right.align {
  text-align: right;
}

.left.align {
```

```
  text-align: left;
}

.vertical.centered {
  align-self: center;
}

.vertical.end {
  align-self: flex-end;
}

.vertical.start {
  align-self: flex-start;
}

.horizontal.centered {
  margin: 0 auto;
}

.fixed {
  position: fixed;
}

.sticky {
  position: -webkit-sticky;
  top: $x1;
  z-index: 75;
  position: sticky;
}

.overlay {
  top: 0;
  bottom: 0;
  left: 0;
  right: 0;
  overflow-y: scroll;
}

.relative {
  position: relative !important;
}

.hidden {
  display: none !important;
}

.inline.block {
  display: inline-block;
}

.horizontal.scroll {
  overflow-x: auto;
  overflow-y: hidden;
  -webkit-overflow-scrolling: touch;

  &.scroll-hidden {
    &::-webkit-scrollbar {
      display: none;
    }
  }
}

}
```

Color

Tokens:

We want to put the attention of the users on the images, that is why there are only six colors available in the design system:

```
$darkgray: #4A4A4A;
$gray: #777777;
$lightgray: #999999;
$white: #FFFFFF;
$primary: #FD7137;
$primary-fill: #FF7D4B;
```

Instead of black, we use a very dark gray. This makes the pure blacks in the pictures seem more profound. To emphasize the more important texts, less critical writing, is made gray. On pages with a lot of information, the non-essential text is made light gray. Prices and active elements, and elements the user can interact with are in the primary color (orange). To make the page look more balanced, we use a less saturated version on large fills.

```
$shadow-color: rgba(0,0,0,0.2);
$shadow: 0 0 $m $shadow-color;
```

All shadows, both box and text, are pure black with a 20% opacity and a \$m blur.

Frost:

Frost is what gives WhereTrip its unique look. This effect allows the heavy use of background pictures instead of colors, that provides each page with the right atmosphere.

There are two types of frost effects in the system: frost and frosted.

Frost is an effect that makes the element white with a 75% opacity and blurs what is behind it by \$xm. This effect can be used on panels, cards, buttons etc.

The current implementation of frost uses backdrop-filter, this is currently only supported by Safari. However, there is a workaround for other browsers: <https://css-tricks.com/frosting-glass-css-filters/>

SASS code

```
$frost: rgba(255,255,255,0.75);

.frost {
  background: $frost;
  backdrop-filter: blur($xm);
}
```

Frosted is an effect that is only used for background images. It simulates a fullscreen frost panel layered over a picture, and it gives a quite significant performance boost. Especially compared the non-safari workaround of frost.

SASS code:

```
.frosted {
  background-color: $white;
  filter: blur($xm);
  opacity: 0.25;
}
```

HTML example:

```
<div class="frost" style="background-image:
url(image.jpg)>
  <div class="frost">
    some content
  </div>
</div>
```

Atoms

Typography:

We use a font called Montserrat; there are two weight types 300 (regular) and 700 (bold). H2 comes in a special thin version that is used for place names. The default font size is \$m other sizes that are available are small (\$xm), large (\$m+\$s), huge (\$l) and giant (\$xl). Quotes are in italic.

[EXAMPLES OF ALL TYPES OF HEADERS AND STUFF]

When a monospace font is necessary, Inconsolata maybe used. It is a very readable font and one of the most aesthetically pleasing monospace fonts, which works well on both paper and screens.

Images

Images are an essential part of the WhereTrip user experience. It is important to have images with a high resolution (at least 1000x600 px). A good source for royalty free images is unsplash.com. Images should convey the sense of adventure: this can mean color full, exciting locations and maybe a bit of mystery. When not showing a specific location (such as on the front page, theme card or in advertising), a person should be the subject of an image, in this case, don't show their face, to make it easier for the customer to put themselves in that position.

Images should fit on the page dynamically no matter the aspect ratio, to achieve this the images are being displayed as the background image of a div with the following class:

```
.image.cover {
  background-size: cover;
  background-position: center;
}
```

Image Header:

Image header is the image at the top of the trip page.

```
.image.header {
  @extend .image.cover;
  width: 100%;
  height: 50vmin;
  box-shadow: $shadow;
  max-height: 33vh;
  opacity: 1 !important;
}
```

example:

```
<div class="image header" style="background-
image: url(image.jpg)"></div>
```

Image Round:

Image round is used to display profile pictures of users

```
.image.round {
  @extend .image.cover;
  width: $xxl;
  height: $xxl;
  border-radius: $xl;
  box-shadow: $shadow;
}
```

```
<div class="image round" style="background-
image: url(image.jpg)"></div>
```

Icons:

The current set of icons come from font awesome.

To use font awesome icons with react use react-fontawesome: <https://www.npmjs.com/package/react-fontawesome>

Input

The current input code does not work with react and should be refactored. After that, this section should be rewritten describing how every type of input can be made. This raw SASS code, alongside the results.html page in PrototypeV5 could serve as stepping stone for that.

```
.select {
  @extend .frosted;

  position: relative;
  overflow: hidden;

  border: none;
  box-shadow: $shadow;

  &:after {
    content: " ";
    display: block;
    right: $l;
    top: $m+$s;
    height: 0;
    width: 0;
    position: absolute;
    border-top : $s solid $darkgray;
    border-left : $s solid transparent;
    border-right: $s solid transparent;
  }
}
```

```
select {
```

```

@extend .inset.squish.1;
width: 100%;
height: 100%;
color: $darkgray;
font-family: 'Montserrat', sans-serif;
font-size: $m;
border: none;
border-radius: 0;
box-shadow: none;
background-color: transparent;
background-image: none;
outline: none;
-webkit-appearance: none;
-moz-appearance: none;
  appearance: none;

&:focus {
  outline: none;
}

.slider {
  width: 100%;
}

.slider > input {
  -webkit-appearance: none;
  appearance: none;
  width: 100%;
  height: $xxs;
  border-radius: $s;
  background: $darkgray;
  outline: none;

  &::-webkit-slider-thumb {
    -webkit-appearance: none;
    appearance: none;
    width: $l;
    height: $l;
    border-radius: $l;
    background: $primary;
    box-shadow: $shadow;
  }
}

.slider-output {
  color: $primary;
  font-size: $l;
  font-weight: 700;
}

.input-field {
  border-bottom: 1px solid $darkgray;
  background: $transparent;
  &:focus {
    outline: none;
    border-bottom: 1px solid $primary;
  }
}

input[type=number] {
  color: $primary;

```

```

display: inline-block;
max-width: $xl;
font-weight: 700;
background: $transparent;

&:focus {
  outline: none;
}

&.l{
  max-width: $xxl;
}

.date {
  font-size: $m;
}

input[type=date] {
  font-size: $l;
  display: block;
  width: $xxl*3;
}

.checkbox {
  display: block;
  position: relative;
  padding-left: $l;
  margin-bottom: $m;
  cursor: pointer;
  font-size: $m + $s;
  -webkit-user-select: none;
  -moz-user-select: none;
  -ms-user-select: none;
  user-select: none;
}

.checkbox input {
  position: absolute;
  opacity: 0;
  cursor: pointer;
}

.checkmark {
  border: 1px solid $darkgray;
  position: absolute;
  top: 0;
  left: 0;
  height: $m + $s - $xxs;
  width: $m + $s - $xxs;
}

.checkbox input:checked ~ .checkmark {
  background-color: $primary;
  border: 1px solid $primary;
}

.checkmark:after {
  content: "";
  position: absolute;
  display: none;
}

```

```

.checkbox input:checked ~ .checkmark:after {
  display: block;
}

.container .checkmark:after {
  left: $s;
  top: $xxs;
  width: $xs;
  height: $xm;
  border: solid white;
  border-width: 0 $xs $xs 0;
  -webkit-transform: rotate(45deg);
  -ms-transform: rotate(45deg);
  transform: rotate(45deg);
}

```

Buttons

There are two types of buttons in the system: regular and inverted. The regular type should be used by default. Only when the user's attention should really be on this button (the book now button for example) it maybe inverted. Any HTML element can be used as a button by assigning it the button class; the button element gets the styling by default.

HTML examples:

```

<a href="index.html" class="button">This is a link</a>
<div class="button inverted">This is a div with an inverted buttons sytle<div>
<button>This is a button</button>
<button class="inverted">This is a inverted button</button>
<button class="full width">This button has full width</button>

```

SASS code:

```

.button {
  @extend .inset.squish.1;
  @extend .frost;

  display: inline-block;
  color: $primary !important;
  font-size: $m+$s;
  font-weight: 500;
  text-shadow: 0 0 $m $white;
  box-shadow: $shadow;
  border-radius: $xm;
  cursor: pointer;

  transition: box-shadow 0.3s;

  &.inverted {
    color: $white;
    background: $primary-fill;
    text-shadow: none;
  }
}

```

```

&:hover{
  box-shadow: $shadow-hover;
}

button {
  @extend .button;
}

```

Panels

Panels are the visible containers of the system. By default, almost all text should be within a panel. Some exceptions are buttons, headers, cards and the hero image. Panels should have a header, and text should be inside a paragraph text.

```

<div class="panel">
  <h2>Header</h2>
  <p>Paragraph text</p>
</div>

```

On display pages, where we try to wow the user and not give them very specific information (like the front page). The text can be center aligned, and the header made orange.

```

<div class="panel align center">
  <h2 class="text primary">Header</h2>
  <p>Paragraph text</p>
</div>

```

Panels are frosted, have a regular shadow, have xm border-radius and a medium inset by default.

```

.panel {
  @extend .frost;
  padding: $m;
  margin-bottom: $m;
  box-shadow: $shadow;
  border-radius: $xs;
}

```

Molecules

Cards

Cards are buttons that contain more than one item of information. Cards can come in many shapes and sizes. The most basic being the trip card on the result page:

```
<a class="card">
  <div class="image" style="background-
image: url(image.jpg)></div>
  <div class="title">
    London
    <h4>England</h4>
  </div>
  <div class="price">
    €128
  </div>
</a>
```

But cards can also use to show hostels by giving the image a small class as well or for flights.

The card that is the most different is the theme card. This card has a background image instead of frost and can be turned over to display information on the back.

```
.card {
  @extend .frost;
  @extend .inset.m;

  flex-grow: 1;

  display: flex;
  flex-wrap: wrap;
  justify-content: space-between;

  cursor: pointer;
  box-shadow: $shadow;
  border-radius: $xm;
  margin-bottom: $m;

  transition: margin 0.3s, box-shadow 0.3s;

  .main {
    flex-grow: 2;
  }

  .image {
    @extend .image.cover;
    width: 100%;
    height: 40vmin;
    box-shadow: $shadow;
    border-radius: $xs;

    transition: margin 0.3s, width 0.3s,
    box-shadow 0.3s;

    &.small {
```

```
      width: $xxl;
      height: $xxl;
    }
  }

  .title {
    font-size: $m+$s;
    text-transform: uppercase;
    letter-spacing: $xxs;
    font-weight: 400;
    margin-top: $s;
    text-align: left;
  }

  .price {
    font-size: $m+$s;
    font-weight: 700;
    color: $primary;
    margin-top: $s;
    min-width: $xl;
    text-align: right;
  }

  &.theme {
    @extend .image.cover;
    flex-direction: column;
    justify-content: flex-end;
    flex-wrap: nowrap;
    margin: $m 0 $m $m;
    min-width: 50vw;
    padding: $m;
    transition: min-width 0.5s ease-in-out,
    transform ease-in-out 0.5s;

    .front {
      @extend .text.white;
      @extend .text.shadow;
      visibility: visible;
      transition: 0s linear visibility
      0.25s;

      &.hide {
        visibility: hidden;
      }
    }

    .back {
      @extend .center.align;
      @extend .text.white;
      @extend .text.shadow;
      visibility: visible;
      transform: scale(-1,1);
      transition: 0s linear visibility
      0.25s;

      .budget-button {
        @extend .giant.text;
        @extend .text.bold;
        @extend .vertical.centered;
        margin: 0 $m
      }
    }
  }
}
```

```
    &.hide {
      visibility: hidden;
    }
  }

  h2 {
    margin-bottom: 0;
  }

  p {
    max-height: 0;
    opacity: 0;
    overflow: hidden;
    // transition-property: opacity max-
height;
    // transition-duration: 0.5s;
    // transition-timing-function: ease-
in-out;

    &.show {
      opacity: 1;
      max-height: $xxl;
    }
  }

  &.turned {
    transform: scale(-1,1)
  }

  &:after {
    border-radius: $xm;
  }
}
}
```

Modal

A modal is a pop-up that hides everything that is behind it. It can be used in situations where the user should be alerted, like when reloading server information.

```
.modal {
  @extend .fixed;
  @extend .overlay;
  @extend .frost;
  @extend .flex-container;
  @extend .flex-container.space-around;
  z-index: 500;

  .close {
    @extend .align.right;
    @extend .large.text;

    margin-bottom: -($m+$s);
    cursor: pointer;
  }
}
```

Expandable List

An expandable list a list that has hidden sublists.

By clicking on one of the list items, the sublist is revealed.

```
<ul class="expandable">
  <li class="expandable item">
    <ul class="expandable container">
      <li>Hidden filter item</li>
    </ul>
  </li>

  <li class="expandable item expand">
    <ul class="expandable container">
      <li>Visable filter item</li>
    </ul>
  </li>
</ul>

ul.expandable {
  li.expandable.item {
    font-size: $l;
    font-weight: 700;
    margin-bottom: $s;

    a {
      cursor: pointer;
    }

    .fa-caret-right {
      transition: transform 0.3s;
    }

    ul.expandable.container {
      overflow: hidden;
      max-height: 0;
      transition: max-height 0.3s;
    }

    li {
      h2 {
        @extend .text.gray;
      }
      @extend .inset.m;
      font-weight: 400;
    }
  }

  li.expandable.item.expand {
    .fa-caret-right {
      transform: rotate(90deg);
    }

    ul.expandable.container {
      max-height: 200vh;
    }
  }
}
```

Organisms

Flex-container

On the mobile pages, we use the CSS flexbox system, because there is no need for a two-dimensional layout. When building the desktop version, the grid system might be implemented.

Most of the items are stacked vertically, for that reason the class flex-container has direction column by default. If a row layout is needed the row class may be added.

```
.flex-container {
  display: flex;
  flex-direction: column;
}

.flex-container.row {
  flex-direction: row;
  flex-wrap: wrap;
}

.flex-container.space-between {justify-content: space-between;}
.flex-container.space-around {justify-content: space-around;}
.flex-container.no-wrap, .no-wrap {flex-wrap: nowrap !important;}
.flex-container.fullwidth {width: 100%}

.flex-container .grow {
  flex-grow: 2;
  &.big {
    flex-grow: 100
  }
  &.small {
    flex-grow: 1;
  }
}

.flex-container .shrink {
  flex-shrink: 10;
  overflow: hidden;
}
```