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Mapping the hotel booking experience of an online travel agency (OTA) to optimize the payment flow and improve localization

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Abstract

Online travel booking has become very common and ever competitive, in most cases the user's opinion of selecting a provider largely depends on his experience while using the website. This is a thesis study conducted at an online travel booking company, the aim of the study is to understand how the UX of the case company website affects the user's decision to book a deal and evaluate how it can be improved. The study details a lot of generic insights about e-commerce and focuses on localization, ie; the difference in expectation's between users of different geographic locations. Furthermore, the thesis explores specialized UX tools used in the professional industry and how these can be used to conduct efficient and effective UX studies. A detailed theoretical evaluation of UX and user journey in online travel booking was conducted. Based on these an exploratory usability study following user-centered design was conducted, which branched out into three separate UX evaluations. Based on the conclusions from the previous evaluations, the website design was improved, and A/B was tested with the actual customers of the case company. The initial three UX evaluations showed positive responses from users, but overall the A/B test showed a negative impact on the users with a marginal decrease in user bookings. Even though the A/B test was not as expected, there are valuable insights on how to interpret the result and identify the hypothesis for further iterations. As such, the thesis discusses various generic insights, UX tools, evaluation methods, documentation methods, insights, and limitations that could help further research.

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1. Introduction and research objectives

Ecommerce businesses, whether it be online travel booking, shopping or a car rental service have been trying to make a foothold in the market by enhancing their customer satisfaction. In today's digital economy customers have many options to choose from and with slightest discomfort they abandon your website for another. While trying to improve customer satisfaction I should first understand the customer expectations and our limitations as an e-commerce platform. Second, identify the areas that can potentially help the customers improve their booking experience and iteratively work on the improvements in a human centered approach (this is explained in chapter). In this thesis the case company is in the online travel booking domain and most of the explanations about deals will be in this context, but the findings can be generalized to all e-commerce platforms. The purpose of my thesis is to determine what factors influence a user's decision to investigate a website, what issues users encounter when booking this deal, and how the user experience of the website may be improved to increase business conversion. My thesis will also familiarize the different tools that are being used in the industry and how they can be used for UX evaluations. The analysis will also look at how website localization based on user location enhances the business conversion for any e-commerce platform.

The case company in this report is a Dutch online travel agency that allows customers to investigate and book travel products/services directly with travel suppliers via a web-based marketplace, including hotels, apartments, resorts, and more. The case company has been incrementally updating their website to create a better user experience that will assist them to achieve its business objectives. The main business objectives of the company are to provide the best value for the deal. Value is not the cheapest deal but factors in more parameters like a trustworthy deal, relief after booking, value for money feeling and more. By providing the best deal, the case company tries to, improve the conversion of customers who come to explore the site (Lookers) into customers who actually book with the website (Bookers).

Achieving these objectives involves understanding customers' processes in booking a deal, needs, and perceptions throughout their relationships with the company. The company's primary design and research challenge in accomplishing these goals are:

- To provide clarity for the users regarding the price of the deal, throughout the booking flow (referred from now on as payment flow) on the website.
- To provide the same booking experience for users booking from different parts of the world viewing their websites in their own regional languages.

The main research questions in my thesis are:

1. How can I identify the elements in the design that contribute to the user's awareness of the deal's price and improve the convenience with which they complete the payment process?
2. How can I understand the difference in expectations of users from different countries and regional languages? How is the user experience affected due to these and what are the difficulties faced by them when using the website in their own regional language?

This research will focus on the importance of usability and user experience in the online travel e-commerce environment, specifically how usability contributes to a positive user experience and how it may be used to create a gratifying online experience. During the report, I go through many design rules and concepts for clear and engaging online design, in addition to academic research on these themes. The study will also investigate some of the industry's most popular UX tools, such as Fullstory, UsabilityHub, PlaybookUX and OptimalWorkshop. These tools are rarely examined in the university environment, but they can be quite useful for generating user insights and hypotheses.

The case company operates all over the world, with varying market penetration in different regions. Providing a great experience for people, across different regions of the world, who travel to places with a different language, time zone and currency; requires user research across different phases of the purchase, characteristics of each phase, users' emotions, goals, requirements, and points of interest. My report will study the generic customer journey of users booking through an online travel agency from various literature and competitor benchmarking. This will aid in identifying the various phases and emotions that occur during the customer journey, which will aid in design decisions.

This study will be conducted according to the Human Centered Design (HCD explained in chapter 2.4) approach. I will start with a heuristic evaluation of the case company's website, this helps me to familiarize myself with the product and to identify preliminary usability issues. The first phase is to empathize with the user, which will be done by understanding main user frustrations faced by existing users by going through session recordings, exploratory semi structured user interviews. Next in the define phase, these raw data will be converted to insights and will be used to generate hypotheses and design requirements. Final two phases are the iterative ideate and prototype phase which will involve further user tests and interviews to confirm and test hypotheses generated. Once the design was fixed it was A/B tested to validate the research, proving if the improvements in the interface in turn improved the conversion rate. In this thesis, even though the individual UX evaluations showed positive result the A/B test did not improve the user conversion.

The main objective of this study is to improve and optimize the payment flow for users and provide a common user experience for users from different regions. The case company has been operational for the last six years and the product is widely appreciated by customers. Further optimizing the flow requires identifying key issues and subdividing them into smaller problems which can be identified, quantified and tested properly. In the next chapter I will explain the methods used to identify the key usability issues and how I refine them.

In this report the main research question is “How can I identify the elements in design that contribute to the user's awareness of the deal's price and improve the convenience with which they complete the payment process?” can be subdivided into questions giving emphasis on the payment flow. Some of the questions that I considered are:

- R1.1. What are the deciding attributes that promote the user to investigate a deal further and eventually book it? Are these attributes clearly presented and understood by the user?
- R1.2. Does the user understand the price correctly and accurately throughout the flow?
- R1.3. Does the user understand the cancellation policy? Can I improve the user's understanding?
- R1.4. What are the frustrations in the users when reconfirming he has selected everything correctly?

Subdividing the main question can bring more focus to the research and helps to run customized experiments to investigate and validate. According to the product team at the case company, the maximum impact on conversion could be from answering the first two questions (R1.1 and R1.2). R1.1 and R1.2 could be answered by usability testing and will give an understanding on which attribute I should improve in the design to provide an improved user experience. The research will also identify a list of usability problems that already exist within the current product and towards the end of the research new design solutions will be provided and tested to see if there is improvement. While answering these questions, I have used specific tools that can accurately gather information from the users, I have tried to give a generic explanation of how this tool can be used and its benefit, so that I can be used in any other e-commerce study exploration.

The first main steps to answering these questions would be to start with understanding the product and its domain. For this I can start with heuristic evaluation (chapter 2.3) and finding usability problems. This is done at an exploratory level initially (Chapter 7.1) and then in a detailed level with focus on payment flow (Chapter 7.2). Secondly, I will formulate structured research questions for the selected sub-questions, R1.1 and R1.2. At this sub-level, the research questions are:

1. What are the deciding attributes for a user when making an online hotel reservation through an OTA? How does the user expect these attributes to be displayed in the interface?
2. What are the issues that users find in identifying this information(attributes)? Do they understand and interpret this information correctly in the case company website?
3. How does removing redundant information in the payment flow and emphasizing the total impact the understanding and readability of the price?
4. Do users understand how to check the price breakdown details on RSP?
5. Is chargeable currency communicated in a noticeable way? (Chargeable currency is the foreign currency in which the transaction takes place when the user's bookings are done outside of his home country.)
6. What are the customer's difficulties in comprehending the price breakdown and chargeable currency throughout the flow?
7. Is the discount tag reconciled with the total price and would users click to read more about it? Do they notice how much they save?
8. Does the user notice and understand 'pay now' and 'pay at property'?

This kind of question can be addressed in two ways: Firstly, conduct user interviews with the existing design to gather usability problems, cross-check it with the existing problems I already identified and then go for further iterations of the design with testing. The second method, which is much faster is to update the design for the existing user problems and then conduct user interviews, this can validate if the updated design is performing better than the previous design and identify still additional problems. In this research, I followed the first method since it will give a deeper understanding of the product and domain. I conducted an in-depth task-driven semi-structured usability testing of the product (Chapter 7.3). At this stage I have a deep understanding of user problems and lots of insights (Chapter 8.1).

Third step is to iterate based on the insights I generated, create new designs and test these designs against the hypothesis. In this research I iterated the designs two times, initially from the first insight generated, I created a design three

2. Theoretical background

This chapter will give a more generalized overview of various terms, practices and methods in e-commerce design. The chapter goes into detail about User experience, User interface design and explains the concepts of usability and user centered design.

2.1. User Experience

What is the goal of any online business? How does it achieve it? Conversion of users coming on their website into customers is the intended action of any business from a marketing standpoint. This business goal should be intuitively supported by websites. A well-designed website is simple to use and has functions that direct viewers to achieve the business objective. On a website, conversion can take the form of purchasing a product or signing up for a subscription. Hence, I can say conversion rate is also a metric for evaluating the effectiveness of a user's experience.

The case company operates only as an online website and 80% of the customers view the website on their phones. According to Butkiewicz, M et al [1], the user experience principles of design for mobile and desktop are very different. Catering to both mobile and desktop users requires the design to be responsive to the display size, also referred to as responsive design. Not only are mobile screens smaller than desktop screens, but they're also oriented differently. The majority of desktop devices are landscape-oriented, but the majority of mobile users see the material in portrait mode. This has repercussions for a few design decisions, the most important of which is navigation. Throughout the report, I will be following a mobile-first approach in analyzing and evaluating the design. Mobile-first design is a design philosophy that aims to create better user experiences by beginning the design process with mobile devices in mind first, often prioritizing the smallest of screens. A mobile-first strategy can eliminate navigation usability issues when designing responsive screens according to Cazañas, A. et al.(2017)[3].

General user experience principles are also applicable for mobile-first design. Defining customer journeys on the product that are most favorable to commercial success is possible with a meaningful user experience [4]. Any interaction a user has with a product or service is referred to as a user experience (UX). Every factor that defines this experience, how it makes the user feel, and how easy it is for the user to perform their desired activities are all taken into account by UX design. The purpose of UX design is to provide users with simple, efficient, relevant, and overall enjoyable experiences [4]. To create seamless user experiences for products, services, and processes, UX designers integrate market research, product development, strategy, and design. They serve as a link between the firm and the client, allowing it to better understand — and meet — customer wants and expectations.

The timespan of UX

Understanding emotions, preferences, perceptions, and beliefs that influence a user's interaction with a system before, during, and after use is at the heart of UX. User experience lasts longer than actual usage, beginning with an indirect experience before the first contact (expectations developed through marketing, similar technology, and so on), and ending with an indirect experience after usage (reflecting on usage afterwards). The observed time span defines the focus of what is studied: momentary UX, episodic UX, or cumulative UX, as shown in Figure 1 (Roto et al., 2011.) . UX might relate to a specific change of feeling during interaction (momentary UX), evaluation of a certain usage session (episodic UX), or overall thoughts on a system after using it for a long (cumulative UX). Anticipated UX is imagined by a person before a precise moment during the interaction, a usage session, or life after using the system, anticipated UX can refer to the period before first use or any of the three other time spans of UX.

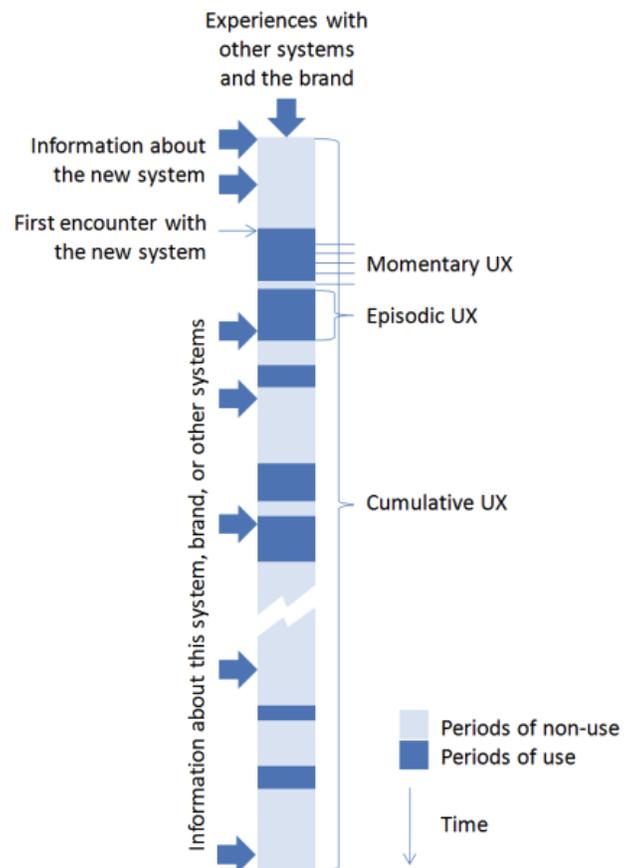


FIGURE 1 (from Roto et al., 2011) depicts UX over time.

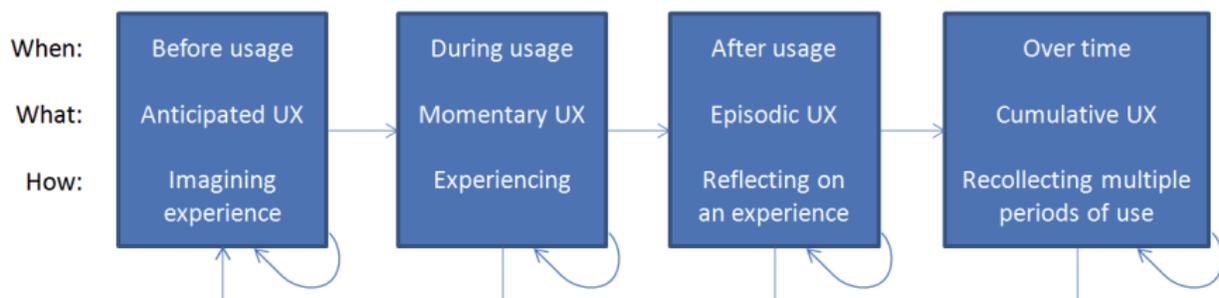


FIGURE 2 (from Roto et al., 2011) depicts the UX process in terms of when (top row), what (second row), and how (third row).

2.2. User Interface

User Interfaces (UIs) is a vital part of UX, it is that part of the business that humans interact with to complete their objective. The purpose of good UI is to make the user's experience simple and intuitive, requiring the least amount of work from the user to achieve the maximum desired result. [8]. A successful user interface should be simple, quick, and easy to use. According to Daz et al., 2017 UI achieves a good user experience by including metaphors, mental models, navigation, interaction, and appearance. Metaphors are concepts conveyed through the use of words, images, or sounds (e.g. icon of the waste bin to show recycle bin or delete). Data organization, functions, tasks, and roles are all part of mental models (e.g. hierarchies of information and task). The navigation feature allows you to move around the interface (e.g. menus, control panels and icons). Input/output mechanisms are part of the interaction (e.g. drag-and-drop items, selections, actions and much more). Finally, appearance refers to the interface's overall appearance, which encompasses both visual and auditory qualities such as colors, fonts, and design style. The layout, colors, typography, images, and iconography are considered UIs.

In his book *The Design of Everyday Things*, Norman explains seven fundamental design principles which can be used in both digital and physical design. Discoverability is one of Norman's principles, and it is achieved with the proper application of the following concepts: feedback, conceptual model, affordances, signifiers, mappings, and restrictions. Norman gives a statement for each of his principles, (as mentioned in Batterbees post [10])

Discoverability: "it is possible to determine what actions are possible and the current state of the device".

Feedback: "some way of letting you know that the system is working on your request".

Conceptual model: "the design projects all the information needed to create a good conceptual model of the system, leading to an understanding and a feeling of control".

Affordance: "The term affordance refers to the relationship between a physical object and a person".

Signifier: "The term refers to any mark or sound, any perceivable indicator that communicates appropriate behavior to a person".

Mapping: "when mapping uses spatial correspondence between the layout of the controls and the devices being controlled, it is easy to determine how to use them".

Constraints: "physical, logical, semantic, and cultural constraints guide actions and ease interpretation".

When explaining my design rationale I will often refer to these terms, for example, the current sign up button on the case company website doesn't provide enough affordance for the user to feel like clicking on it, maybe adding an information icon could signify this better. Understanding of these concepts would make it easier to follow the final thesis report.

2.3. Heuristics and Usability of UI

It is necessary to define usability in order to comprehend UX. According to Norman [11], a product's experience encompasses more than just its usability; it also encompasses aesthetics, enjoyment, and fun. And Jakob Nielsen says "Usability is a quality attribute that assesses how easy user interfaces are

to use. The word "usability" also refers to methods for improving ease-of-use during the design process." According to him, there are five quality components that define usability:
 Learnability: When users first meet the design, how easy is it for them to complete basic tasks?
 Efficiency: How quickly can users accomplish activities once they've mastered the design?
 Memorability: How readily can users regain competency with the design after a time of not using it?
 Errors: How many faults do users make, how serious are these errors, and how quickly can they recover?
 Satisfaction: Is it enjoyable to utilize the design?

When I will be detailing the issues, I find during the user testing, I will identify which usability attribute is being violated by the issue. For transactional websites (eCommerce or OTA), usability is critical because users must be able to achieve their goals quickly, effectively, and satisfactorily (Daz et al., 2017 [9]). Effectiveness (how accurately and completely the user could really achieve the goals that are to be achieved) and efficiency (how quickly and efficiently the user can accomplish the objective that is to be achieved) are two components frequently associated with cognitive aspects of usability, according to Coursaris & van Osch (2016) [12].

How to measure the usability of website?

Measuring usability is a critical step in understanding what are the issues with the case company website and improving it. There are various approaches for investigating usability, but user testing is the most fundamental and useful. In UX and usability research, the metrics are slightly different. Usability tests assess task-related performance (efficiency, effectiveness, and error rate), and their techniques are typically focused on cognition-related aspects, whereas UX research focuses on emotional qualities (sensation, meaning, and value) in addition to task-related performance. Usability goals seem to be more objective in nature (performance), whereas UX goals are more subjective (user evaluation).

Nielsen's usability heuristics have long been basic suggestions for effective (online) design, they consist of a set of 10 principles. Heuristics are supposed to be utilized as rules of thumb rather than detailed instructions. The degree of usability of a software product can be measured using a variety of approaches. Heuristic evaluation is a popular inspection method since it allows for the detection of a wide range of usability issues. Because transactional websites have unique characteristics, typical heuristics may not be suitable when assessing their usability. For transactional applications, Quiñones et al. (2014) [13] have created a collection of additional usability heuristics from Nielsen's usability principles

Nielsen's Heuristics		Transactional Web Applications Heuristics (Quiñones et al., 2014)	
H1	Visibility of system status: "The design should always keep users informed about what is going on, through appropriate feedback within a reasonable amount of time."	F2	Visibility of system status:
H2	Match between system and the real world: "The design should speak the users' language. Use words, phrases,	F1	<i>Visibility and clarity of system elements</i>

	and concepts familiar to the user, rather than internal jargon. Follow real-world conventions, making information appear in a natural and logical order.”	F3	<i>Match between system and user’s cultural aspects</i>
H3	User control and freedom: “Users often perform actions by mistake. They need a clearly marked "emergency exit" to leave the unwanted action without having to go through an extended process.”	F15	User control and freedom:
H4	Consistency and standards: “Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform and industry conventions.”	F7	<i>Standardized symbology</i>
		F5	<i>Alignment to web standards design</i>
		F6	<i>Consistency in system design</i>
H5	Error prevention: “Good error messages are important, but the best designs carefully prevent problems from occurring in the first place. Either eliminate error-prone conditions, or check for them and present users with a confirmation option before they commit to the action.”	F9	<i>Prevention, recognition and error recovery (H5,H9)</i>
H6	Recognition rather than recall: “Minimize the user's memory load by making elements, actions, and options visible. The user should not have to remember information from one part of the interface to another. Information required to use the design (e.g. field labels or menu items) should be visible or easily retrievable when needed.”	F14	Minimize the user’s memory load
H7	Flexibility and efficiency of use: “Shortcuts — hidden from novice users — may speed up the interaction for the expert user such that the design can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.”	F10	Appropriate flexibility and efficiency of use
H8	Aesthetic and minimalist design: “Interfaces should not contain information that is irrelevant or rarely needed. Every extra unit of information in an interface competes with the relevant units of information and diminishes their relative visibility.”	F8	Aesthetics and minimalist design
H9	Help users recognize, diagnose, and recover from errors: “Error messages should be expressed in plain language (no error codes), precisely indicate the problem, and constructively suggest a solution.”	F9	<i>Prevention, recognition and error recovery (H5,H9)</i>
H10	Help and documentation: “It’s best if the system doesn’t	F11	<i>Help and documentation</i>

need any additional explanation. However, it may be necessary to provide documentation to help users understand how to complete their tasks.”	F4	<i>Feedback on the final state of transaction</i>
	F12	<i>Reliability and speed of transactions</i>
	F13	<i>Correct and expected functionality</i>

In this thesis I have used Nielsen’s heuristics, as my evaluation was straight forward based on the complexity of the e commerce evaluation Quiñones heuristics may be used. According to Jakob Nielsen [11], the concept of "usability" cannot be defined simply. It consists of five characteristics that will better concentrate on what is truly required to examine a project. Learnability, Efficiency, Memorability, Low Error Rate, and Satisfaction are all qualities that are useful. Learnability refers to how I try to make it as simple as possible for a user to figure out how to move through the system and achieve his goal. The number of tasks a user can perform after learning how to use the system indicates how efficient the system has become to the user. Memorability refers to the system's ability to be recalled so that when a user returns to it after a period of time, he or she finds it simple to complete the tasks desired. Errors are expected to be avoided, resulting in a low rate of errors, which is a project aim. Finally, satisfaction refers to how well it delivers what stakeholders requested in a way that users can easily navigate and get all of the features they require.

2.4. User-centered design

User-centered design (UCD) is a well-known approach to developing interactive software. It is a broader definition of usability that encompasses both a philosophy and a set of tools for defining design processes in which end-users can have a say in how a design is created. Usability testing and context of use are important parts of UCD In usability testing, task analysis has become an important method for assessing the design and identifying any discrepancies between the designer's vision and the user's experience. Because all activities and usage are inevitably occurring inside a certain context, including geographical settings, social surroundings, physical resources, and the dynamic transitions between these settings, the context of use is an important aspect of the design process (Eshet & Bouwman, 2017 [15]).

UCD is achieved through design thinking, which according to interactiondesign.org [16] “*design thinking is a non-linear, iterative process that teams use to understand users, challenge assumptions, redefine problems and create innovative solutions to prototype and test. Involving five phases—Empathize, Define, Ideate, Prototype, and Test—it is most useful to tackle problems that are ill-defined or unknown.*” This research will be following the double diamond design thinking methodology in this research [17]. There are various iterations of the double diamond methods, some of them can be found in reference. I have made some adaptations to this and added a pictorial representation (figure 3) of the design process I followed below.

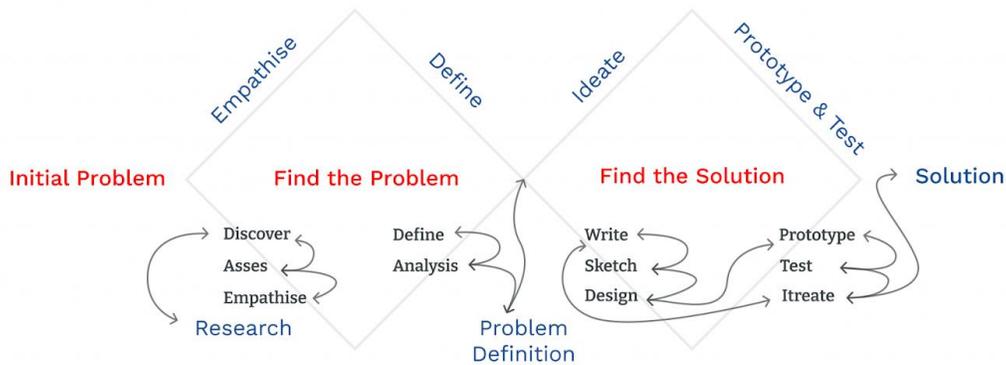


Figure 3 A modified version of the Double diamond method of design thinking.

The methodology starts with an initial problem or a hypothesis. In our case, the problem is How can I improve the booking payment flow for any customer? And What can be the improvements based on the localization of the website for the users?

Design thinking is divided into 4 phases, the first is the empathize phase or Discover phase, in this phase, I gathered further information about the user, the context of the use of various user profiles using our system, the issues they phase, their limitations, expectations, familiarity with similar products and much more. This helped us to make better design decisions considering all the requirements of the user and keep them motivated to book through the website. Once the required pool of information is collected, I enter the second phase 'Define'. I analyze this information to find solid insights that can give a direction to focus on product development. The third is the ideation phase, the insights will be developed into wireframes and sketches that can be later converted to prototypes. Finally, in the Prototyping and testing stage. (Prototype mostly done in Figma. a vector graphics creator and prototype tool that is mostly web-based, with desktop apps for macOS and Windows [18]).

The value of collaboration and communication is also again briefly discussed through the generalized process of UCD and how the iterative product development process takes place. This process is common for any digital design project. As Jokel T en al gives an overview of ISO 13407, an international standard published in 1999. The standard *"provides guidance on human-centred design activities throughout the life cycle of computer-based interactive systems"*. This standard ISO 13407 describes UCD in four aspects:

- Rationale - The reasoning section briefly highlights the advantages of useable systems, such as reduced training and support costs, increased user happiness, and increased productivity. In this report, our rationale for following UCD is to improve the clarity of the users towards the price components in the design thereby making the users confident in their decision, which makes them trust the website and also improves their overall user experience. Hence focusing on increasing happiness and productivity.
- Principles - The standard defines four fundamental concepts that define the user-centred design and are not tied to any one stage of the development process:
 - Active user participation and a thorough understanding of user and task needs.
 - A proper division of responsibilities between users and technology.

- Design solutions are iterated.
- Design that is multi-disciplinary
- Planning - The planning section gives instructions on emphasized. This is one of the important phases in User Research, the outcome of the research largely depends on your planning and at times it is not possible to revise your research question or method midway down the research. It is important to have flexibility in the timeline to add another iteration of the design or maybe to add a new sub-research topic for further validation of a find that came up.
- Activities - The description of user-centred design activities is at the heart of the standard, as stated clearly. Figure 2 depicts the four key actions of UCD as identified by the standard:
 - Understand and Specify Context of Use: Know the user, the environment in which he or she utilizes the product, and the tasks that he or she performs with it. I investigate this through contextual enquiry interviews, in this report, it is included together with a usability study discussed later on in section 7
 - Specify the User and Organizational Requirements: Determine the product's usability success criteria in terms of user tasks, such as how soon a typical user should be able to perform a task using the product. Determine the design restrictions and guidelines. This would be the main evaluation of this report and they vary based on the previous points, the user's context of use
 - Produce Design Solutions. Design solutions that incorporate HCI knowledge (visual design, interaction design, and usability).
 - Evaluate Designs against Requirements. User tasks are used to assess the usability of designs.

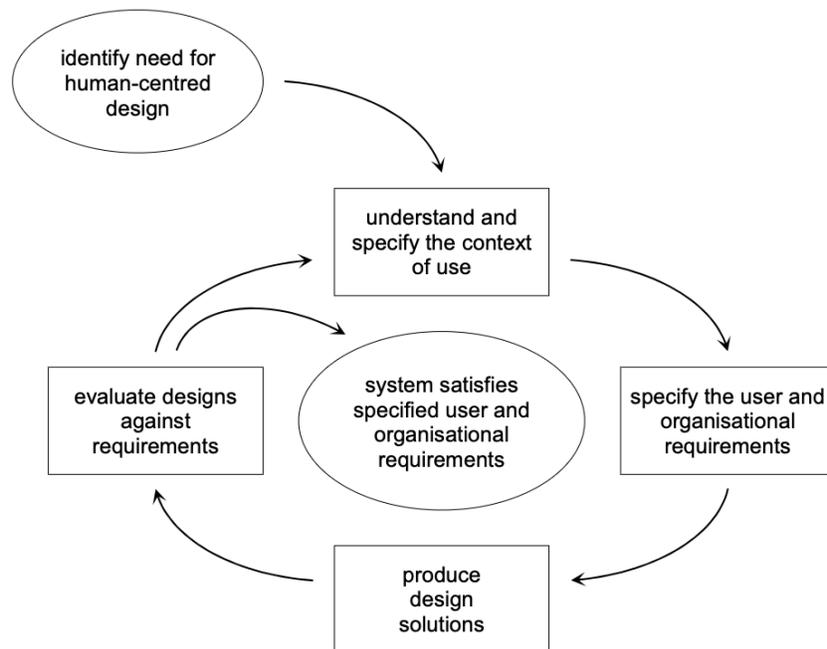


Figure 4 Block diagram of UCD as per Jokel T en al

Before I dive into the research let us see how to incorporate user-centred design activities into the overall system development process. This is a cyclic process, and one cycle is called an iteration. During each iteration, I evaluate the design and check if the system satisfies the user requirements or else I again iterate. During the evaluation, I also generate insights about the user and how they think and perceive different areas of the interface. Some of these insights will need to have further iterations on their own in this thesis I call them sub-iterations.

2.5. UX tools

UX tools are digital tools that UX and product designers use to develop functional websites, applications, and products at various phases of their work. UX tools assist them across the various product development processes, from user research to wireframing and prototyping to monitoring design efforts. They'll also assist with information architecture, user flow, and product experience. Some of the UX tools I have using in this thesis are Fullstory, PlaybookUX and UsablityHub. I will give a brief introduction to them here and further discuss their usage in below chapters along with UX evaluations.

FullStory is a web-based digital intelligence technology that aids in client experience optimization [21] [22]. FullStory works by recording all the visitors' page views, mouse movements, and clicks on your site. The most important feature of FullStory is the session replays, unlike normal video recordings of user sessions; Fullstory allows to narrow down sessions based on specific user actions like users who filtered a date and then found a deal, this gives a very narrow list of user sessions that can be viewed to get the exact behavior. Click Maps, Scroll map and Inspect Mode are features of the Page Insights tool. Click map allows observing which page elements and at what rate are being clicked on. Click Map investigates, areas of user dissatisfaction, and clicks that have no effect on the website (dead click). Inspect mode is an extension of Click map which allows clicking on the individual elements on the website, to know how much the users have interacted with the element. And finally, the scroll map gives how much the users are scrolling down on a page, this is especially useful on mobile screens.

Both PlaybookUX [23] and UsabilityHUB [24] are comprehensive UX research tools that allow you to collect video-based feedback on websites, prototypes, concepts, and more from your target population. These tests can be Unmoderated and moderated in remote user interviews. The application handles everything from finding the proper participants to motivating them, transcribing the sessions, and analyzing the sentiment of the transcripts into positive or negative statements. The test can be conducted on a specific device (mobile/desktop), a tool for testing prototype files in image, video or other design software like Figma.

3. Online Travel Agent OTA

An online travel agency, also known as an OTA, is a website or online business that provides customers with travel-related products. Hotels, airfare, vacation packages, excursions, and auto rentals are examples of these things. Importantly, OTAs are third parties who resell these services on behalf of other businesses, including hotels. An OTA will typically provide many of the advantages over an offline travel agency, with the added benefit of ease and a more self-service approach. They will also have a

built-in booking system that will allow for immediate reservations. In this report, I will be more concentrating on the hotel booking industry. An increasing number of potential visitors are turning to online travel agencies (OTAs) to book their hotel rooms since they act as a "one-stop-shop" allowing consumers to conveniently search for hotels, read reviews, and compare costs. Because they act as both a marketing and distribution outlet, online travel agencies are becoming increasingly crucial for hotels.

Customer Journey

A customer journey is a series of interactions between a customer and a firm, with each interaction triggering good, negative, or neutral feelings in the customer. The goal of customer journey mapping is to comprehend these interactions between customers and businesses. (Micheaux & Bosio, 2019 [28]). The foundation of customer journey mapping is buyer personas, which is the depiction of an ideal consumer, including demographic, behavioral, and motivational characteristics, as well as individual requirements and aspirations. Personas show customers' frustrations, which is useful information for improving user experiences and decreasing usability issues. (In this report I am not investigating customer journey by personas) Companies that are successful in providing exceptional, easy, adaptable, and affordable solutions on their websites have the best chance of succeeding. User experiences can be understood as carefully customized online engagements.

Emotions are also crucial for customer journeys, just as they are for UX; they help to discover where customers are having problems and how to solve those problems. There are one or more successful touchpoints ("A touchpoint is any time a potential customer or customer comes in contact with your brand—before, during, or after they purchase something from you" according to surveymonkey) between the customer and the brand at each stage of the customer journey. (Micheaux & Bosio, 2019) Numbers 0 to 4 denote sequential touchpoints during a customer journey when purchasing through an e-commerce website in FIGURE 5 (adapted from Micheaux & Bosio, 2019). Our study focuses on the *Purchase stage* and slightly discusses the *Pre-purchase*, or when a customer is already on a website, and how the user experience affects their customer journey.

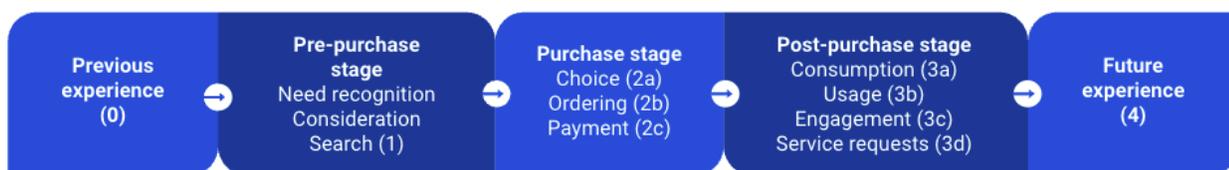


Figure 5 Different phases of customer journey according to Micheaux & Bosio.

In real cases, the *planned customer journey* and *actual customer journeys* can (and frequently do) diverge. The planned customer journey, like the planned UX, is a procedure designed by the organization based on what the customer is expected to go through while the actual customer journeys are the experiences that customers have. (Haugstveit et al., 2016. [29]) Usability testing can identify whether the planned customer journey and the actual customer trip are similar.

Different methods to map customer journey

Customer journey is used to better understand what consumers go through and to improve the quality of their experience by providing consistency and a consistent experience across all touchpoints and media. Different companies use different methods to map it and represent it based on their business objective. In 2013 Booking.com [30] , created *The Booking Truth*, the first comprehensive look into the aspects that influence the American traveler's experience in hotels and other facilities. The Booking Truth (Figure 6) outlines 65 different aspects that influence guest experiences, ranging from unsatisfactory to satisfying to wonderfully lovely. This figure is only related to the physical experience but is equally important to understand the customer's expectations when wanting to book a hotel online.

GCH Hotel Group provides their customer journey [31] in Figure 7 with five stages

- 1) **INSPIRATION FOR TRAVEL:** Every hotel reservation is made on the basis of a desire or need to go. This motivation comes from a variety of sources — whether it's a conversation with friends, a TV show, or tailored advertising – the client is continually reminded about travel.
- 2) **RESEARCH:** When a person decides to travel to a given location, they must pick whether to stay in a hotel or an apartment. Whichever is the option, customers can find a plethora of additional hotel options on the internet, this phase is about finding the hotels that match their requirements.
3. **BOOKING:** At this moment, the consumer decides whether or not to stay at the hotel. However, if a consumer decides to book a hotel, they do not have to do so right away. This step might last hours, days, weeks, or months, but in most cases, the booking is made through one of three channels: the hotel website (or corporate site), an OTA, or email/phone.
4. **ON-LOCATION/SERVICE:** The guest's stay is the most important part of the hotel business since it determines whether or not the guest returns and whether or not they promote the hotel to friends and acquaintances. This step is key in determining whether positive or negative evaluations are offered — the handling of complaints, room cleanliness or good service.
5. **POST-STAY/LOYALTY**

This phase is crucial when hoteliers try to win the guest's loyalty to the hotel and brand. GCH says for this I need to consistently a) encourage the client to rebook, b) express gratitude for their loyalty/potential future bookings, and c) remind them of their pleasant stay.

Oaky, a platform for upselling hotel experience, divides its journey into 3 phases [32]. (1) Pre stay: Pre-arrival contact with guests at optimal moments between reservation and arrival (2) In-stay: Providing visitors with access to relevant add-ons and upgrades throughout their stay. (3) Booking : Boosts direct booking conversion and decreases cancellation rates by offering customers with relevant facilities, services, and experiences that pique their interest in their trip. Platforms like Oaky can show the scope of improvement that is possible on general OTAs.

Booking.com

A COMPREHENSIVE MAP OF THE GUEST EXPERIENCE

- Points of satisfaction
- Points of dissatisfaction
- Points of both satisfaction and dissatisfaction
- Points of Delight

Size of circle = Frequency of mentions

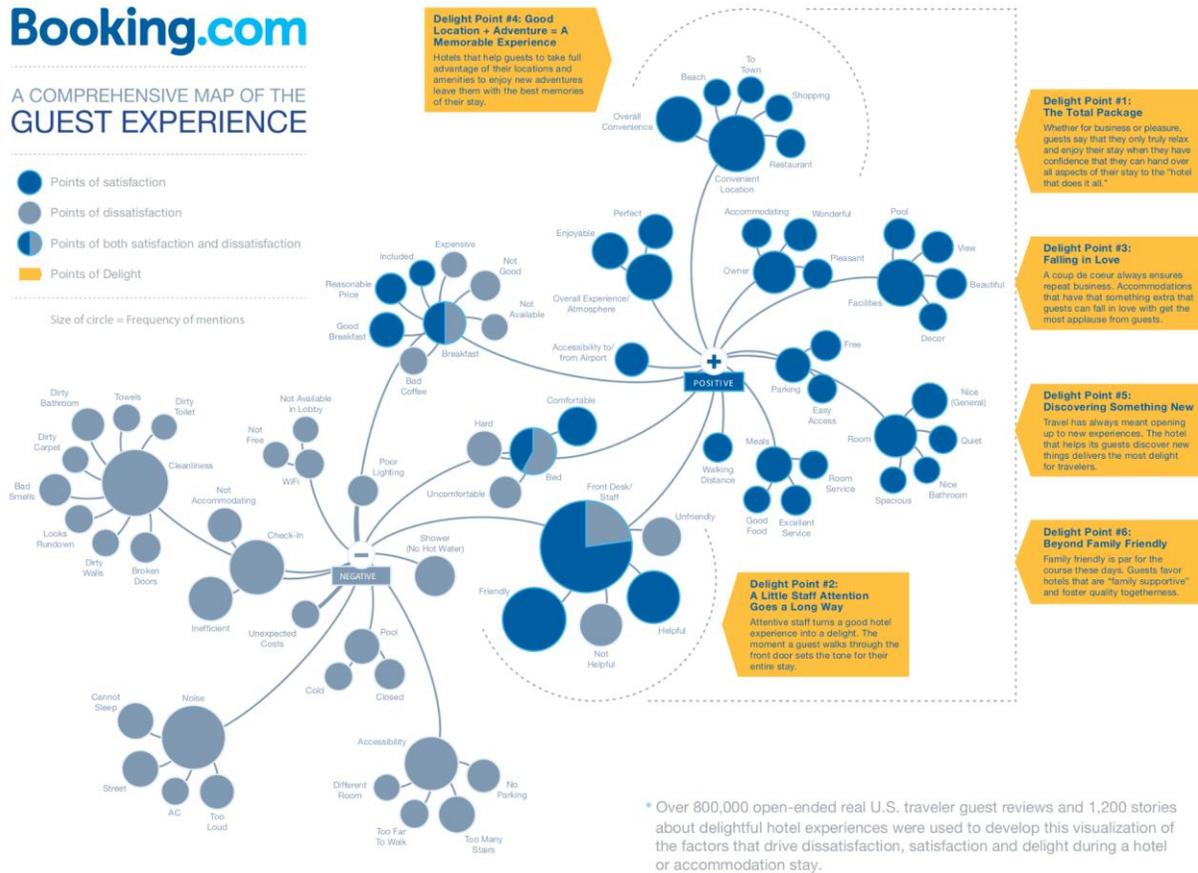


Figure 6 Guest insights by Booking.com

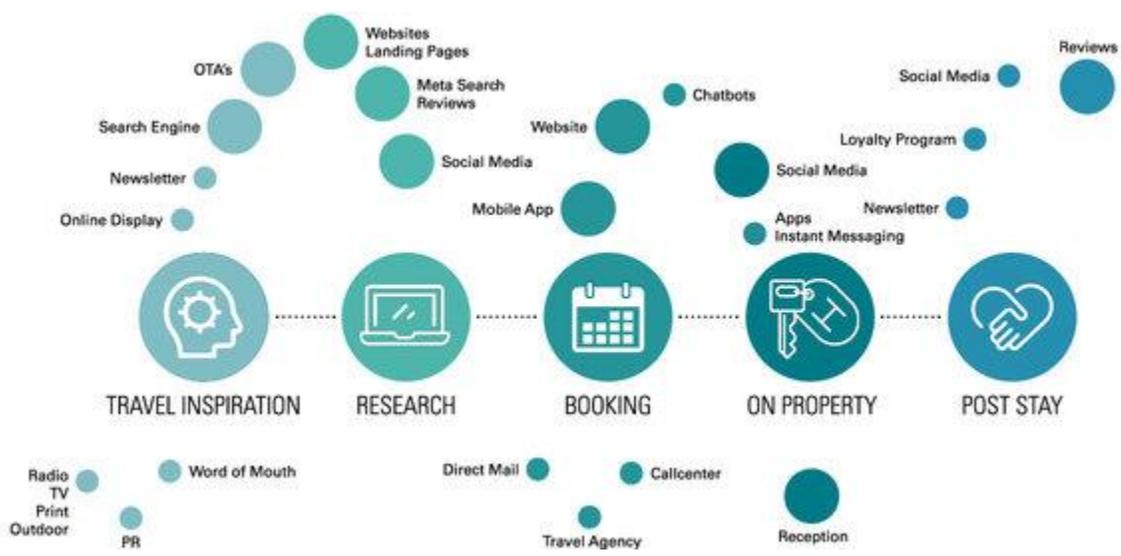


Figure 7 Customer journey of GCHHotel group

4. Localization

The method of redesigning the website content considering the culture, language, and flow to deliver the most beneficial and relevant experience for users of different nationalities is known as website localization. True website localization is significantly more complicated than translation, merely displaying words in a foreign language may not produce the same experience for users. Culturally appropriate web pages need less cognitive effort from site users to digest content, making navigation easier and sentiments toward the site more favorable. Case company has a diverse user base (the number of people who utilize a specific product or service, particularly over the internet) with varying conversion rates in different countries. One of the main objectives of the case company is to improve the conversion rates through localization initiatives. Other than that there can be three benefits when localizing the website [33].

- Obtain a foothold in local markets and compete with local vendors. There is always a sizable demographic who prefers to shop from local vendors. You may obtain a competitive advantage over local sellers by researching the market and tailoring your messaging to meet their demands.
- Boost brand recall and confidence among all of your customers. Translating the website into regional languages make it easy for the customer to digest and promotes customer to revisit the site. CSA Research discovered that 30 percent of customers seldom buy anything or avoid accessing English-only websites in a survey spanning ten nations, including Brazil, China, France, Germany, Japan, Russia, and Turkey.
- Customer service/support concerns are reduced. Miscommunication accounts for a large portion of customer service or support issues. The customer may overlook some information included in the product description, or he or she may notice a discrepancy between the information and visuals. These problems are less likely to occur as a result of localization.

Cermak R 2020 [34] discuss Hofstede's cultural dimensions and how it can be used to understand the cultural influence on a website. Hofstede identified six "national culture dimensions" that influence differences in cross-cultural responsiveness to similar stimuli. Hofstede's findings can be used by designers to create the most culturally optimized and selective User Experience possible. The following are Hofstede's cultural dimensions [35]:

1. Individualism vs. collectivism: This dimension is linked to individuals' incorporation into primary groupings. Individualism is when people prioritize themselves and their interests, whereas collectivism is when the group takes precedence above self-interest.
2. Power distance: This term refers to people of society who are subjected to unequal distributions of power in areas such as social position and prestige, mental or physical ability, law, and wealth.
3. Avoidance of uncertainty: Refers to a society's level of sensitivity or stress in the presence of an unforeseeable future. Uncertainty avoidance can be described as the degree to which members of a culture group perceive ambiguity as a threat and attempt to avoid it.
4. Masculinity vs. femininity: This refers to the division of emotional roles between men and women in various countries. Values such as gender roles, aspirations, and the acquisition of riches define masculine societies. Women are not allowed to work in some jobs in the Jalapates culture, for example.

5. Long-term vs. short-term focus: Emphasizes people's efforts in the future, present, or past. Long-term orientation occurs when people concentrate on the future and are willing to forego immediate social achievement or even immediate emotional fulfillment in order to prepare for it. Short-term orientation occurs when people focus on the present or past rather than the future.
6. Indulgence vs. restraint: Concerned with gratification vs. control of basic human desires related to life enjoyment.

Cermak R 2020 research compared 20 puls websites over nine-country to give a foundation on how Hofstede's cultural dimensions can be used to evaluate a website's customizability to different cultures. When analysing the case company website I can use the Hofstede insights website [36] which provides comprehensive information about Hofstede's cultural dimensions for different regions. The case company is more focused on the localization of websites from the United States to Europe (mainly Germany, Britain and France). The details on how I will be using the dimensions in redesigning the website will be explained in the main thesis.

When the customers visit the case company website, it should feel as if it was designed specifically for them. To accomplish this, UI design must incorporate concepts that are adaptable enough to accommodate language-specific text, symbols, colours, and icons. Some aspects to consider [38] are: Spacing - Some languages appear larger when translated from English. Creating dynamic designs will assist them in avoiding misalignment and other design flaws.

Text on Images - When it comes to product visuals with embedded text, they must make sure that all of the text is externalized. This way, translators will not overlook this text, and your customers will receive a reliable localized experience.

Icons, symbols, and colors - each culture has its own set of views and beliefs about these elements. Conduct culturally appropriate design research for each target market and language.

Further details on how this is implemented are explained in the localization chapter of the thesis.

5. Research Method

With the initial literature review, I created a deep understanding of the product domain, the principles and the generic customer journey taken by the users. This helps me think from the point of view of a common user and helps me empathize with them. At this point, the idea is to conduct a Heuristic Evaluation of the product, from first to last. This HE has three benefits

- It can help me define the customer journey of a user from landing on the page till booking and post-stay.
- Identify the usability problems in the interface from a UX perspective.
- Thoroughly familiarize me with the product.

The main steps in the user flow in the booking process in our product is similar to that of Figure 3, this involves 5 steps:

1) Aspiration: The desire and motivation to travel. Which leads to the requirement of booking a room. From the perspective of an OTA this part of the Customer Journey (CJ) has the least direct interaction with the customers, most interaction could be of inspiring the user to travel by providing offers or reminding users with advertisements and emails.

2) Research: When a person decides to travel to a given location, he or she has a plethora of options to choose from, hotel or apartment, friend's place, online or offline, by phone, book at the location and much more. This choice can be driven by multiple factors, price, value, the availability, urgency of booking, trust in the brand, purpose of the visit, duration of visit, location, companions in the trip and much more. When the user has weighed in all these factors, they choose which service they are looking for. If our products meet the requirements, the user will select us. Based on where the user finds information about us there are different methods to reach the product, through search results, clicking on the link will take the user to the product page and the next most common method is the user directly searching for the product, this situation arrives when the user is aware, has previously used and is satisfied by the product, wants to use it again. The latter is the objective any company wants to achieve in ecommerce.

3. Deal finalization and Booking: This is the lengthiest and most critical touchpoints of customer interaction with the company and products. At this moment, the consumer decides which hotel to stay at. This step might last hours and days or could be done in one go. There are many factors underplay in this step like the clarity of the pricing, transparency and trust in the product, customer service, previous experiences with the product, user experience, technology and much more. It is the responsibility of the company to ensure that the user has all he needs to make and execute his decision easily and efficiently.

4. Stay and hospitality: The guest's stay at the hotel is also an important part of the CJ even for an OTA, any problem during this stage can lead to losing the customer forever. Moreover, issues with bookings, and miss-match can leave the guest stranded at the hotel's doorstep.

5. Post stay: This is the make or break stage, where I want to convert the user into a returning customer. This involves a) encouraging the team to rebook, b) expressing gratitude for their loyalty/potential future bookings, and c) reminding them of their pleasant stay.

In this study I will be more focused only on step 3: Deal finalization and Booking. To evaluate the usability and to plan further course of action of the research I will start with a Heuristic Evaluation of the pages, to identify the usability problems from an expert point of view. This could be great to familiarize myself with the product and understand which areas need improvement and further investigation. The heuristic evaluation will be done for the entire product but the focus of this research is on the payment optimization flow. Having compiled this information into a presentable manner there will be a discussion with the concerned product team on their opinion and to understand if these issues are already noticed and steps have been taken to correct it. This step is important to understand the pipeline of changes that would be coming to the product and the current research should be aware of it. Further fullstory session analysis can be used to validate these issues, will give us a wider scope of the user action, which will help while creating the customer journey map.

Next, I will conduct a user testing session through playbook UX, after which insights will be generated that can help to make design hypotheses for further design iterations. In parallel to the insights generated from the user testing, I would also investigate on Hofstede's cultural dimensions for the target countries (US, UK, Germany, France) with the Hofstede insights website . Cermak R 2020 has identified a list of UI elements that can have cultural significance after comparing different websites in various countries. I would use this list as reference and Hofstede's insights to make design hypothesis, which should provide a better localized experience to users.

After the design hypothesis are made, I would follow the Human Center design process to come up with the new designs, further implement the change and conduct another round of usability tests. Once this usability test also comes positive the design can be developed for A/B testing, running an A/B test can confirm if the given design changes have been successful and it provides an appreciable increase in conversion.

6. Understanding the website - User flow & schema.

The website under consideration is an online travel booking, it follows the same design trends of e-commerce design and functions similar to any other booking website. The factor that differentiates the case company website from other websites is that users can directly book deals with the case company and also click on offers provided by competitors that redirect them to other OTA websites. An important note is that 80% of the customers on the case company website book hotel rooms through their phone hence most of the discussion in this report will be on mobile user experience.

If you examine Figure 8 below you can understand the user flow. There are three methods to reach the case company website:

1. Customers use Google to search for hotels (Called Google Hotel ads or GHA for short) and if they find the deal interesting they select it to reach the webpage Search results page (SRP).
2. As mentioned in the previous paragraph, users can be redirected to the case company website on to SRP (3*) from an aggregator website.
3. Customers can directly type the case company website URL and search on the website Home page (2) to reach the SRP. The home page is very straightforward with a simple form to input the travel itinerary information Figure 9.

**The number indicated in the brackets refer to the numbers in Figure 8*

On the SRP (3) the users are shown the hotel offer that they selected on the previous page either on GHA or other aggregator platforms (OTA). The offer that the user selected is shown as the main offer and other hotel offers that might be interesting to the user are also shown below the main offer giving the user more flexibility.

Figure 10 shows the page layout and schema for SRP. Here you can see two situations, each hotel might have an offer from the case company or all the offers might be aggregate offers from other OTA's. The user can decide which offer he wants to choose. The main section of this page is the Hotel card, each page has a main hotel card and several below that show alternate hotels. The hotel card has two Call to action (CTA) buttons, first one is indicated by dark blue colour, which is to explore the main deal and second, are two alternate offers for the same hotel. As you can see by the two Red boxes marked on the Case company in Figure 10, the position of the offer from the case company within the hotel card can change in each case according to the user's search. If the user selects the case company he is taken to the Room Selection page (RSP (4)) to select the room specification. If the user prefers an offer from another OTA the user is then redirected to another website. It is important to note that when the user is redirected to another website, the case company earns money, the objective

is not to drive the entire users to select the case company MoR deals but to maintain a balance between MoR and Redirect deal bookers.

On reaching the RSP(4) Figure 11 user has more information about the hotel and further details about the room, number of persons in the room and type of bed. The top section of the page is the details of the hotel, below it is the main deal that is highlighted, which the user selected on the previous page. On RSP also, the case company allows selecting deals from other competitors which are called portfolio deals. Under the portfolio deals, the types of rooms available are shown with different rates based on amenities. The main call to action on this page is 'Book' used to book, either the main deal or a deal from the selected room. The secondary CTA buttons are 'Deal details' and 'More details' for the room. 'Deal Details' button gives information about the break of price for the deal.

On clicking 'Book' the user is taken to the checkout page (5) shown in Figure 12, this page gives details of the hotel, the booking information and forms to enter the personal and purchase information. The main call to action button on the page is the 'Complete booking' at the bottom of the page. When the user clicks the complete booking the page checks for form validation like if the email is in the right format or if the phone number field has any alphabet in it. Once the check is done the user is taken to the payment page of the bank to complete the transaction and to the final confirmation page.

On the confirmation page (6), shown in Figure 13 the user can recheck the information in the booking and be relieved. He will also receive a confirmation email with this information.

Flow charts and schemas

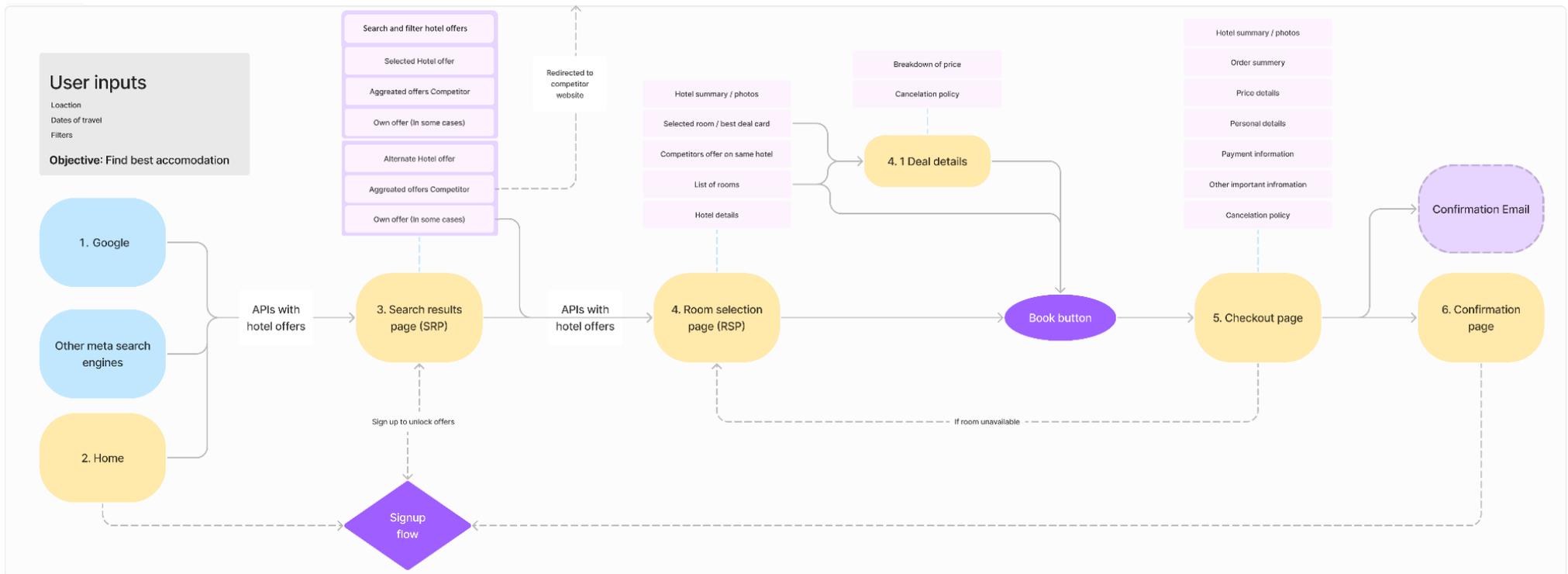
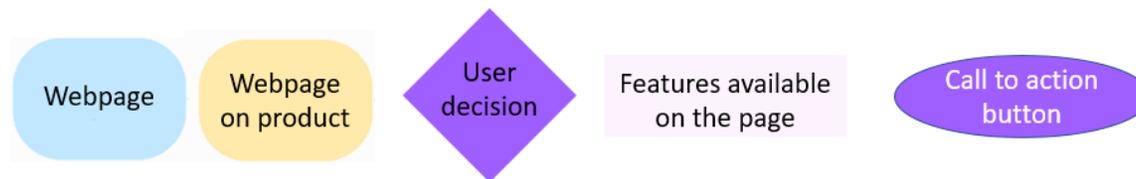


Figure 8 User flow through the case company website.

Legend for the above image (user flow)



HOME PAGE

The home page layout includes a search bar at the top left, a navigation bar on the right, and a main search form in the center. The search form contains a text input field, check-in and check-out date pickers, and a guest/room selector. A search button and a call-to-action (CTA) button are positioned below the form. Footer logos for Expedia, Booking.com, Hotels.com, and Agoda are located at the bottom left.

Figure 9 Home page (Indicated by 2 in figure 7)
**Case company logo is blurred.*

SEARCH RESULTS PAGE

The search results page layout features a search bar at the top with the current search criteria. Below it are filter and sorting options. The main content area displays a list of hotel cards. Each card includes a hotel image, name, location, rating, and price. A 'View Deal' button is present on each card. The layout is annotated with labels for 'SEARCH BAR', 'SEARCH FILTERS', 'HOTEL IMAGE', 'HOTEL DETAILS', 'MAIN OFFER', 'PRICE', 'CTA', 'SECOND OFFER', and 'THIRD OFFER'.

HEADER

MAIN HOTEL CARD

OTHER HOTEL CARDS

Figure 10 Search results page (Indicated by 3 in figure 7)

ROOM SELECTION PAGE

ROOM SELECTION PAGE

Annotations:

- HOTEL DETAILS:** Caesars Palace - Resort & Casino, 4.5 stars, Superb 10,291 Reviews.
- MAIN DEAL:** Forum Classic Room, 1 King Bed, Non Smoking. Price: \$765 (18% off \$932).
- PORTFOLIO BOX (ALTERNATE OFFERS):**
 - Booking.com: Forum Classic Room, 1 King Bed, Non Smoking. Price: \$852.
 - Expedia.com: Forum Classic Room, 1 King Bed, Non Smoking. Price: \$810.
- ROOM CARDS:** Forum Classic Room, 1 King Bed, Non Smoking. Price: \$765.

Figure 11 Room Selection Page (Indicated by 4 in figure

ROOM DETAILS PAGE

Annotations:

- HOTEL DETAILS:** Julius Deluxe, 1 King, Non-Smoking, Roll-in Shower. Price: \$1275.
- MAIN DEAL:** Offer details and CTA button.
- ROOM CARDS:** Room image and specifications.

OTHER ROOM CARDS

CHECKOUT PAGE

CHECKOUT PAGE

Annotations:

- HOTEL DETAILS:** Movenpick Hotel Amsterdam City Centre. Location: Plet Heidekade 11, Oostelijk Havengebied, Amsterdam The Netherlands.
- MAIN DEAL:** Booking information: 1 Room, 2 Guest, 2 Nights. Price details: Total saving \$15.00.
- PORTFOLIO BOX:** Personal Details, Billing Address, Payment, Important Information, Cancellation Policy, Terms and Conditions.

Figure 12 Checkout Page (Indicated by 5 in figure 7)

7. Research

As discussed previously in Chapter 2.4, I will be approaching this thesis from a User-centered design (UCD) perspective with four phases Empathise, Define, Ideate and Prototype & test. This approach could be used for the entire project and also for sub-tasks within the project. Like in our case the main objective is to identify the attribute that promotes the user to book a deal and investigate

if these are presented and interpreted by the user as they expect to see. To draw conclusions on this topic I will need to subdivide this question and further investigate these as I discussed at the beginning of this report in chapter 1. Each section of this chapter discusses the method used by me in this thesis starting with a preliminary evaluation of the website, then defining insights from it and finally processing and testing a new design.

7.1. Preliminary Heuristic evaluation

To understand the product end to end, I decided to conduct an exploratory evaluation of the product. The product under investigation is a travel website, hence I also belong to the target audience and noting down my first impressions can be valuable. To evaluate the usability of the website and speculate on some of the user problems I will use Heuristic evaluation (discussed in chapter 2.3). In this report, I will be following Nielsen's Heuristics since the issues that were found during the evaluation could be adequately categorized by them. Issues did not need further distinction as mentioned in Transactional Web Applications Heuristics.

I divided the heuristic evaluation into two phases. The first phase is general exploration, this is because I am not familiar with the product and might overlook some issues or consider them to be more severe than they really need to be. The second phase will be more detailed and focused on the payment flow.

When doing any heuristic evaluation it is necessary to efficiently report our findings and document them. To do this I created a miro board and an excel sheet. The Miro board was more of a whiteboard where I can add all my ideas and tag them. I generally add all the information on one board and use posted notes and arrows to indicate connections. Figure 15, which is the first preliminary board and Figure 15.1 shows the position marked in red. To make the refinement of insight easier and for better navigation through the whiteboard I tag each posts as Important, Low important and Need Checks. Since this is a preliminary first impression, I don't add a severity or impact metric to the discovery.

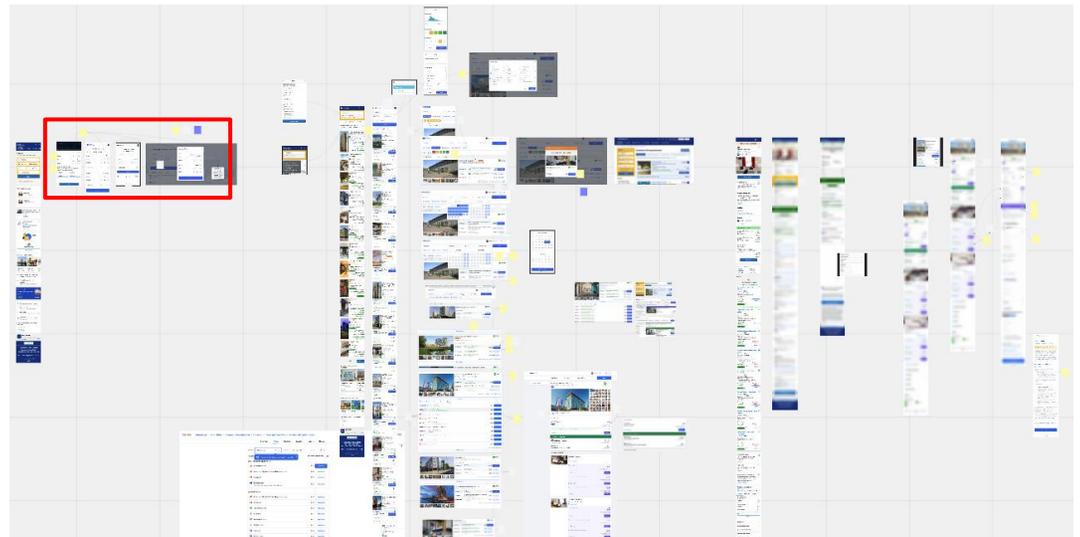


Figure 15 Miro board with the screenshots from HE.

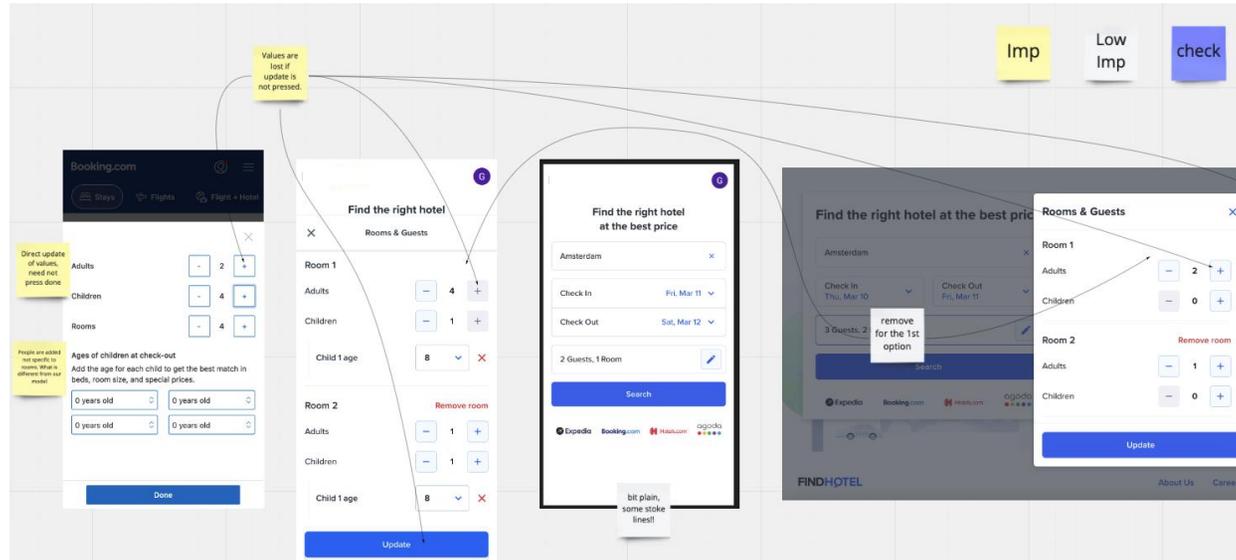


Figure 15.1 Red rectangle expanded view. The figure shows the use of posted notes and arrows to indicate connections.

Once the issues are listed on a board I try to arrange this and give a bit more context about the issue so that anyone referring to the board can understand it better. As shown in Figure 16, I colour-coded the posts - Yellow for comments, red for issues and Blue for future improvements. Colour coding makes it easy to identify the issues in the big board and helps to zoom to the location. I used a diamond symbol on areas which needed further investigation and used a star symbol to show Heuristic violations. A screenshot of a portion of the board can be found in Figure 17.



Figure 16 Expanded legend for HE

When finding and listing issues, I also conducted some comparisons with competitor websites to see the difference in UX. Then I grouped the comments on each page and added notes explaining them. This is shown in Figure 17 to elaborate on how I added the post and showed the heuristics, I have added Figure 17.1, which is the part marked in red on Figure 17. I am trying to illustrate the process of the evaluation as this would be the same in any e-commerce website.

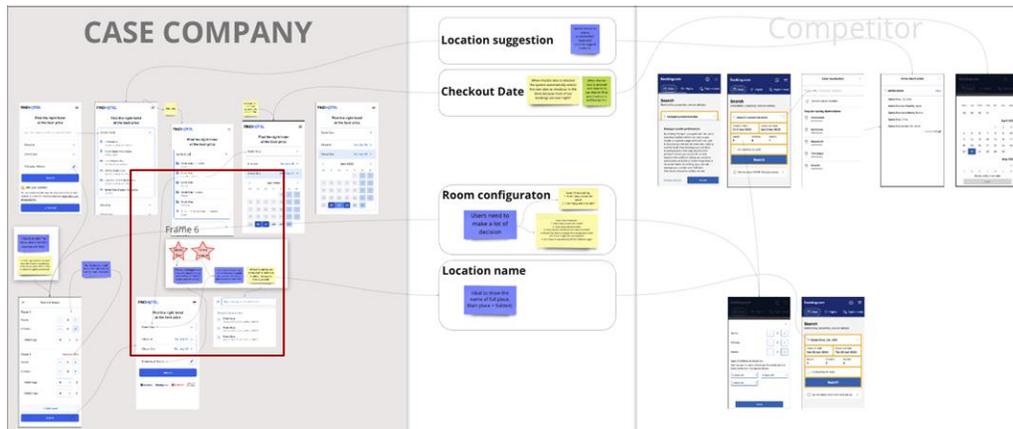


Figure 17 Improved HE board with added legend symbols and competitor study.

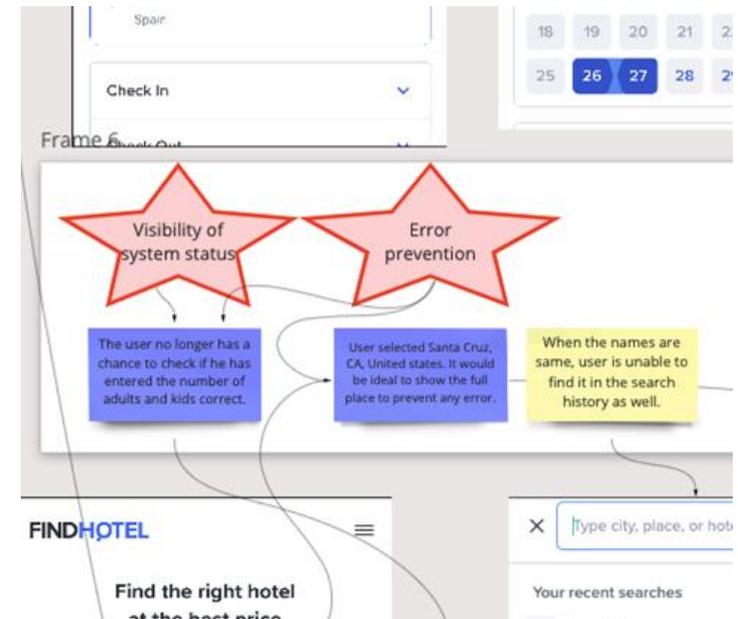
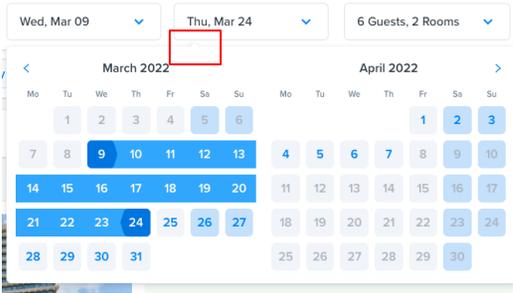


Figure 17.1 Zoomed in View of the red rectangle

7.1.1. Results

To make this insight actionable these need to be prioritized and further, action should be taken on it. This would be hard to do in Miro so I created an excel sheet for the issues as shown in the table below (only two issues are listed here the remaining are added in **appendix 1** (due to lack of space it has been removed from appendix)).

Image	Issue	Suggestion	To Do
<p>Hotel rating filter.</p> 	<p>Users may not understand the rating system and the colour alone might not aid all users.</p>	<p>Going with 2 colours could be attractive, 8+ and 9+ in Green remaining in one colour? This way they get spotted faster.</p>	<p>Investigate the impact of the rating filter.</p>

<p>Calendar date picker</p> 	<p>While editing dates some dates become disabled!</p> <p>Once you click somewhere on the calendar it's not easy to know which date you are going to enter (start date or end date) because the bubble head (shown in the red box, is not very visible).</p>	<p>Stroke on the date box should be there when the calendar is open, to indicate which date is being entered.</p>	
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Now I have a detailed idea of the flow and product. One method to validate these issues would be to check the occurrence in user sessions in Fullstory (more details of the tool are explained in section 2.5). This will allow an understanding of how the users are actually interacting on the interface. Watching about 15 to 20 user sessions on issues raised in the preliminary evaluation gave more context to the issues and showed some new issues. I will keep these in mind when conducting the second phase of Heuristic evaluation, that is on the payment flow. Often when issues are taken separately their severity might appear less. For example, a lack of clarity of price on the landing page, might create further confusion for the user at the checkout page, but if I evaluate the checkout page separately it might appear to be well designed. When issues accumulate the impact on the user experience will be high, that is the reason why I conduct the heuristic evaluation in two stages.

7.2. Heuristic evaluation of payment flow

As discussed earlier for the second heuristic evaluation I will focus on the third step in the user flow (mentioned in Chapter 5) Deal finalization and Booking part of the user's journey, from the SRP to Checkout. To evaluate the usability and to plan further course of action for the research I will start with a Heuristic Evaluation of the pages, to identify the usability problems from an expert point of view. This could be great to familiarise me with the product and understand which areas need improvement and further investigation.

The method of recording the usability issues is similar to that of phase one, using Miro and excel sheets. The insights generated from this analysis is categorized into three category -

- Price clarity,
- UI and Copy improvements
- Flow optimization

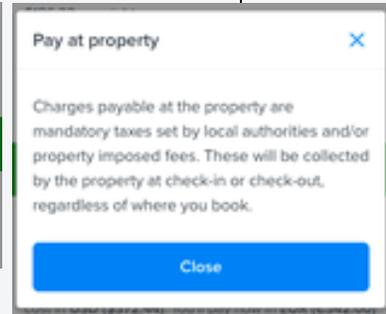
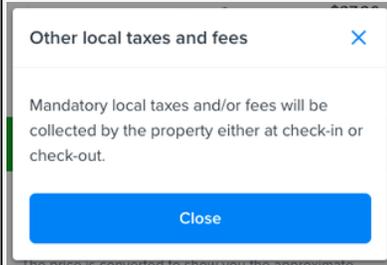
Two examples from each category will be shown below and the full list is added in **Appendix 2** (due to lack of space it has been removed from appendix). The six parameters (mentioned in Chapter 5), recorded about an issue are shown as a tabular column. The evaluation was very exhaustive and discovered 16 possible issues with Low and Medium priority.

As seen in the table below, each issue has a Description, a Preliminary Hypothesis: on what could be the problem or why is it a problem, Potential issues: What are the problems caused to the user because of these issues, Priority: a severity of the issues or the impact it can have toward the user, and Finally the Objective and recommendation, to solve this. Images are added where ever necessary to illustrate issues and recordings of user sessions from Fullstory are added to give better context for the reader (Unfortunately the fullstory session cannot be shared).

Price clarity			
Description	Preliminary Hypothesis	Potential issues	Objective and recommendation
Improvements in Chargeable currency and Pay at property information.	The current description is text heavy and rigid. Further optimisation of this information to promote informed transparency and trust could reduce the cognitive load of the users and improve the conversation.	<ul style="list-style-type: none"> The portion of the UI above the text is already taxing the users with different amounts, reading a long paragraph may not be ideal. Prase like “may vary at time of payment.” could create trust issues and fear within the mind of users. There could be other information that the users expect to see here. (for example, what is the currency rate now, where can I get more information about it, will I be charged for the currency conversion etc) 	<p>Priority : MEDIUM</p> <p>Perform tests to understand the price clarity.</p> <p>Investigate:</p> <ul style="list-style-type: none"> What are the difficulties the user face in comprehending the Chargeable currency information? What other information does the user expect to find? Which information does the user need to effectively understand the Chargeable currency?
<p>Pay now \$372.44</p> <p>Pay at property \$37.26</p> <p>The price is converted to show you the approximate cost in USD (\$372.44). You'll pay now in EUR (€342.00)</p> <p>Pay at property amount will be collected by the property in the local currency. The rate quoted in USD (\$37.26) is based on current exchange rates, which may vary at the time of payment.</p>		<p>✗ UX heuristic: Aesthetic and minimalist design</p> <p> Improve on Learnability and efficiency. The current design might expect the users to have prior knowledge of 'Exchange rates'.</p>	

<p>Other local taxes and fees' and 'Pay at property' amounts are mostly the same.</p>	<p>Making the 'Pay at property' more justifiable to the users could help reduce doubt and improve conversion.</p>	<ul style="list-style-type: none"> Some of the users may not be familiar with “Pay at property” and paying taxes (“Other local taxes and fees”) at property also might be inconsistent with user's mental model. Also the information model for both 'Other local taxes and fees' and 'Pay at property' provides similar information. Not enough information: It can be confusing to the user if they have to “Pay at property” in cash or in which currency, there could be more doubts in his mind. 	<p>Priority : MEDIUM</p> <p>Investigate:</p> <ul style="list-style-type: none"> What does the user understand by 'Pay at property'? What are his doubts and concerns? What information does the user expect to find in the information model? (Is the descriptions in the information model adequate?)
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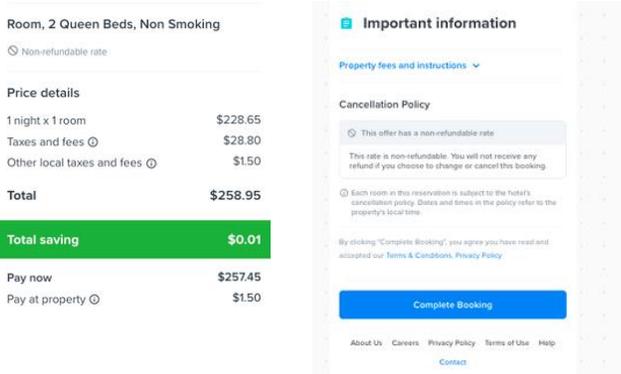
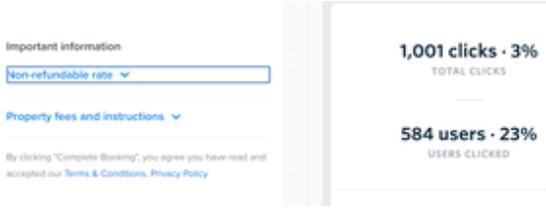
Price details	-2% off
2 nights x 1 room \$186.22 per night	\$372.44
Other local taxes and fees ⓘ \$18.63 per night	<u>\$37.26</u>
Total	\$409.70
Total saving	-\$8.13
Pay now	\$372.44
Pay at property ⓘ	<u>\$37.26</u>



✗ UX heuristic: Match between system and the real world

UI and Copy improvements

Description	Preliminary Hypothesis	Potential issues	Objective and recommendation
-------------	------------------------	------------------	------------------------------

<p>Better indications for - Non-refundable property.</p>	<p>Improving the 'Non-refundable rate' could reduce users from accidentally booking properties which they expect to cancel in future, thereby reducing calls to customer service</p>	<p>Non-refundable rate' may be a new word for some users or they may not be aware of what it means in the context of FH. Non - refundable transaction is an irreversible action that the user performs. Enough affordance should be provided by the system to make the user aware of it. Currently, it has very less prominence.</p>	<p>Priority : MEDIUM</p> <p>→ Providing an information model could help users understand more about 'Non-refundable rate'. → A better indication to make it more evident.</p>
<p>'Non-refundable rate' is mentioned in the current design.</p>		<p>There can be users who are not opening Non-refundable rate, and thereby may not be aware of its implications. (need to find the exact figures to make accurate assumptions. If the numbers are high the priority needs to be moved to HIGH.) Fullstory example. Fullstory click rates snipit</p>  <p>✗ UX heuristic: Visibility of system status ✗ UX heuristic: Error prevention 📄 Improve: Error prevention</p>	<p>📄 Very minor savings of \$0.01 may not be shown as savings.</p> <p>Investigate:</p> <p>→ I could conduct a 5-sec test, ask the users to go through the page and when they feel confident to click Complete booking. Further, ask them about Cancellation.</p>
<p>UI copy 'Property fees and Instruction'</p>	<p>Improve UI copy for 'Property fees and Instruction' can improve the post stay experience for the user, thereby improving returning customers.</p>	<p>Certain information in the accordion could be vital for the users to know (like the Deposit amount they have to bring along), keeping it hidden can cause the user to overlook it, which could in turn lead to issues during stay. · Information is not complete: It is not very clear if the Deposit money will increase with the number of nights? Is</p>	<p>Priority : MEDIUM</p> <p>Can some of these instructions be eliminated, like <i>“Please note that cultural norms and guest policies may differ by</i></p>

[Property fees and instructions](#) ^

Property fees

You'll be asked to pay the following charges at the property:

- Deposit: USD 100.00 per day
- Sanitation services: USD 1.50 per night

We have included all charges provided to us by the property.

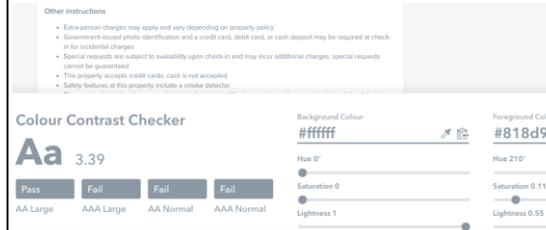
Other instructions

- Extra-person charges may apply and vary depending on property policy
- Government-issued photo identification and a credit card, debit card, or cash deposit may be required at check-in for incidental charges
- Special requests are subject to availability upon check-in and may incur additional charges; special requests cannot be guaranteed
- This property accepts credit cards; cash is not accepted

it refundable?

- Accessibility issue: Text contrast is less for font size of 13 points. Would be hard to read for people with low vision or when they view on their phone in daylight.

Contrast check



- Inconsistency in terminology: Sometimes 'Pay at property' amount is same as 'Resort fees' or other property fees, this can create further confusion in the mind of users.

Pay at property = Resort fee

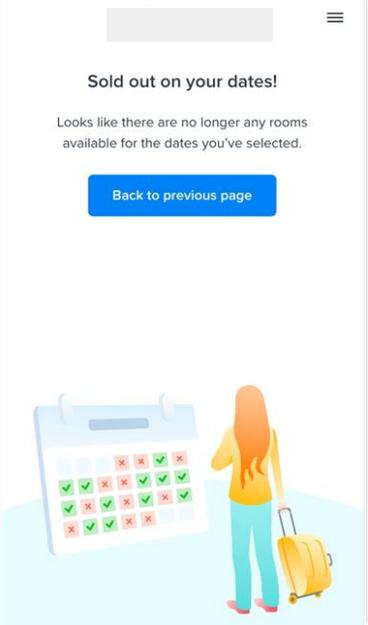
- ✗ UX heuristic: Aesthetic and minimalist design
- ✗ UX heuristic: Consistency and standards
- 📝 Improve: Satisfaction and Error prevention

country and by property; the policies listed are provided by the property”

Some of the areas of investigation could be:

- What do users expect to find in Property Instruction?
- What is the ideal placement for 'Property fees' and 'Property Instruction' ?
- What are the user's views on the deposit? How does it affect their decision to book the deal?

Flow optimization			
Description	Preliminary Hypothesis	Potential issues	Objective and recommendation
<p>Improve the final confirmation flow after entering all the payment details.</p>	<p>Improving the confirmation experience of the users on the checkout page, could help the users complete the booking faster and with greater confidence.</p>	<p>Too much scrolling for the user: The user needs to scroll up to the price details to reconfirm the details, he is especially concerned about the rate and hotel reservation details, then the values he entered.</p> <p>Example fullstory</p> <p> Improve: Efficiency and Satisfaction</p>	<p>Priority : LOW</p> <p>Investigate:</p> <ul style="list-style-type: none"> · How important is it for users to reconfirm the booking details, after filling in payment details and before completing a booking? What are the parameters that the users check? · What are the frustrations of the user in accessing these parameters on our page? · What are the user's expectations to make this process efficient? <p>→ Exact figures could be found if I can analyse scroll back to Total top after filling payment details. (Not possible in Fullstory)</p> <p>→ Colapsable input for payment and personal details form? This can help the user go back easily. Also, this can create isolation of tasks and reduce the user from seeing an overwhelming form.</p>
<p>Sold out page</p>	<p>Users might want to know exactly what is sold out, this could make their further search easier.</p>	<p>Not enough information to recover from error: The user expects the checkout page to load but instead reaches the sold-out page. Users click "Back to the previous page" but the user is not provided with</p>	<p>Priority : MEDIUM</p> <p>Investigate:</p> <ul style="list-style-type: none"> · What are the user's thoughts on the sold-out

	<p>any information about the sold-out room.</p> <p>I believe the unavailable option is removed. The user spends time deciding on this deal, when it is sold out wouldn't he prefer to compare it again? Now, the user needs to remember which room he selected to compare with the next best option.</p> <p>Fullstory session</p> <p>The sold-out page doesn't give the user what was exactly sold out or how to recover from the error.</p> <p>✗ UX heuristic: Recovery from error ✗ UX heuristic: Recognition rather than recall.</p> <p> Improve: Efficiency and Satisfaction</p>	<p>page?</p> <ul style="list-style-type: none"> · What information does the user expect to see here? · What are the next steps that the user does after they find this page? (Are they able to understand what happened? identify the sold out deal?)
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At this stage, there is a holistic understanding of potential issues and confusion that appear in the mind of the user. Now let's understand these issues from the user's point of view. In this thesis, I have used Semi-structured task based interviews to understand the users. As discussed, chapter 5 there are five stages in the booking process: Aspiration, Research, Deal finalization and Booking, Stay & hospitality and Post stay. Of these stages I am concerned most about the 'Deal finalization and Booking' but to get a better context of the user it is important to understand the 'Research' stage as well. For the interviews, I will also explore the research stage.

7.3. Semi structure User interview with Usability study

Now I have an understanding of different issues and areas of potential friction, found during the HE and fullstory analysis. I need to understand what actual users would expect when they face these issues and how severe would they consider this issue. For this, I planned to use semi-structured user testing. The first step in conducting any the user interview is to establish exactly what outcome you want from the user interview. This can be done by defining some research questions which I would like to answer qualitatively after the interview. In my user test, the following are the questions.

- What are the issues faced by the users in understanding the price throughout the flow from GHA to the Checkout page?
- How does the portfolio deal on SRP and RSP influence the user?
- What does the user understand from the %off component?
- What are the expectations of the users when it comes to knowing the breakdown of the price?
- When does a user interact with Deal Details and what do they expect?
- How do the users interpret the price details on the DD model and Checkout page?
- What is the influence of total price Vs nightly price for the user in making a decision on the deal? Especially on the RSP?
- How does the information in the information models related to taxes and property fees help the users? Do they meet their expectations?

I will also make detailed semi-structured interview questions which I will use during the interview and an observation template to take observations, they are explained in the below sections.

7.3.1. Initial user description

With the research questions in mind for the user study, it is very important to narrow down the user subset that is most relevant for your study. In general, the user segment for e-commerce is very large and can be kept as wide but ideally, if you believe there are possibilities of variations in behaviour between customers or you want to understand the behaviour of certain customers it would be wise to select your user groups specifically including these users. It's important to choose participants that accurately reflect your (possible) users. These participants ought to exhibit traits shared by your target market, or the people who will become your clients. Some criterias investigated for the participants for this study are listed below..

Expected users of the system will have the below characteristics

- Age: The user does not have a specific age or ethnicity specification because travel is common to all users. The age group can be between 18+ to 65 years old. With this age group, I am assuming they can travel by themselves or as a group that is with friends or family. Travelling in a group might bring some changes in their behaviour while selecting the place.
- ICT proficiency: Not necessarily proficient in technology.
- Nationality: In general the user can be of any nationality. In our scenario, I want to investigate the difference in pain points and preferences between US users and EU users. (I have selected the US and French users)
- Geographical Location: A user from any nationality might use the product from any country. This is an important parameter to investigate because there can be user pains related to currency

conversion and differences in the timezone. In the current test, I am already investigating users from two different nationalities, hence I can hope to collect information related to this topic from these users.

- Experience:
 - Subject knowledge: For some of the interviews I would need the user to have some domain knowledge or familiarity with the subject. This would make the user give a relevant answer to the questions, rather than speculations and also share previous experience. In this user interview, I need the user to be familiar with online travel, possibly having made some online reservations.
 - Specific insight: Sometimes in the interview, I would need to know particular insight on a specific scenario. Like if a user booked a reservation and had to cancel the booking. I can ask specific insights about the cancellation experience to this user. This study is an exploratory study hence I am not looking for any specific insight at this point.
- Technology: There can be lots of classification based on technology like the user operates the product on a mobile or desktop, maybe the product has a voice-activated feature like Alexa. These requirements are also needed to be considered when planning.
- Inclusion: Users might have varied abilities, in an ideal world all products should be equally accessible to everyone. According to the company's vision and objective, it is advisable to have some individuals in this category in the study. The more accessible the design the better it is for all the users. In this study, I am not focusing on this.
- Specific context of use: In some interviews, the context in which the product is used is very important. For example, the user might be on the beach in the sun and wants to book accommodation in a nearby hotel, but due to insufficient contrast in the colour, it becomes hard for him to see the screen. Since I am conducting an exploratory study I have a generic travel context and I am not concerned about this.

7.3.2. Participant Recruitment

There are various approaches to participant recruitment. Although hiring a recruitment agency is frequently an effective way to find members, it is also expensive. The ideal participant recruitment strategy will depend on the project. If the participant segment you are looking for is related to users you know already, you can leverage social media and use a screening form to recruit participants. In this test, I am using Playbook UX to recruit the participants and conduct the interview (Mentioned in chapter 2.5).

PlaybookUX for Moderated user interview and participant recruitment.

PlaybookUX is an effective tool to conduct user interviews they have a very good panel of participants who can be screened according to your user test participants. The tests are slightly expensive (you can find the pricing here [43]), without a subscription you are able to conduct user interviews for 60 minutes for 150\$. PlaybookUX provides filters that allow us to configure the users according to our requirements and add screening questions. Figure 18 shows the configurable demographics filters for participants.

Demographics		Employment	
▶ Age	Any	▶ Job Role	Any
▶ Gender	Any	▶ Current Work Status	Any
▶ Ethnicity	Any	▶ Company Size	Any
▶ Household Income	Any	▶ Industry	Any
▶ Location - Country	Any	▶ Seniority	Any
▶ Location - US States	Any		
▶ Language (English by default)	Selected		

Figure 18 PlaybookUX participant panel filters.

The filters used in our user interview are

- the First three participants with country as the US and next three participants as French
- Language of communication was selected as English.
- All other filters are kept as any, since I want a generic user.

Screening questions for the French user is shown in figure 19

Question 1	Are you someone who can speak and read both French and English?
	Answer 1: Yes (QUALIFY)
	Answer 2: No (DISQUALIFY)
Question 2	When was the last time you booked accommodation (hotel/apartment/resort / b&b) online?
	Answer 1: Less than 6 months ago (QUALIFY)
	Answer 2: Between 6 months and 1 year (DISQUALIFY)
	Answer 3: Between 1 and 2 years ago (DISQUALIFY)
	Answer 4: More than 2 years ago (DISQUALIFY)

Figure 19 Screening question in playbookUX.

For the US user, I will only have the second question as the screening question. Four options are given in the screening question and the users who have booked a hotel within the last six months and have their booking experience in their mind are qualified to participate in the test.

7.3.3. Planning

Recruiting participants own your own requires a lot of planning. For their participation in the research sessions, the selected research participants typically receive some kind of "reward" or cash compensation. Based on the amount of time and effort spent by the participant the reward varies. The session can be done in person or online, when the session is in person required arrangements are to be done.

One advantage of using PlaybookUX is the high efficiency of planning the user sessions, I can plan sessions in a very short span, since I am recruiting from their participant panel generally I can get participants within two working days. I provide the availability on a shared calendar and the participants

that qualify for the screening questions can add their availability. PlaybookUX will send you a notification each time you get a participant enrolled on the test.

7.3.4. Prototype

The objective of the user study is to understand the issues faced by the users on the current system. Hence, I can approach it in two ways

- Use the actual website to do the usability study and interview: It can provide information at an exploratory level but each user might go in a different flow and the insights developed may not have any consistency and I won't have any control over the experiment.
- Another method is to use the actual website and edit the HTML code of the website to make the screens show the scenario that you want the user to follow.

I followed the second method in this user test, I created two types of prototypes

- US user booking domestically within US, which is the highest user demographic among the US customers (as per the data in Looker [44], the data analytics tool used at the case company). Language of the interface English.
- French customer booking to Spain, which is the highest user demographic among the European customer. Language of the interface French.

I created two separate sets of prototypes for this experiment by editing the HTML code so that both the flow and offers in the prototype are similar but reflect a real-life example. The prototype screenshots are attached in **appendix 3**. The interface is made for mobile prototypes because the case company follows a mobile-first design and also because the highest user base uses the website on their phone. The edited HTML pages were then added in Figma (The UI design tool used at the case company) and the main interaction style was direct manipulation. Direct manipulation is the interaction style where the user can interact with UI elements on the screen while getting visual cues that the object that they are interacting with is responding. NN group defines it as "Direct manipulation (DM) is an interaction style in which users act on displayed objects of interest using physical, incremental, reversible actions whose effects are immediately visible on the screen." [45]

7.3.5. Interview Process

The general process for a user interview is to start with a welcome text, explaining the context of the test and why you are doing the test. In our case a very brief introduction is enough because users on the playbookUX have already been educated by PlaybookUX and every minute is expensive. After this gather personal information relevant to the user interview and start following the test script, which involves the task and question that needs to be followed. A generic process for User interview is as below

- Say the "welcome text" to the participant.
- Gather personal information.
- Do the usability testing of the prototype. Ask the participant to perform the tasks, gather data and observations.
- After using the prototype, ask the participant to fill the quantifying measures if needed, like the user satisfaction questionnaire (SUS [46]), and the user experience questionnaire (UEQ [47]) and ask for general impressions.

- Ask if they have any questions
- Thank them for their time and hand over the incentive.

In this test, I am not using any measure to quantify the user satisfaction because I have the NPS score for the website. (I have mentioned SUS and UEQ here because they are good methods for user satisfaction evaluation for any e-commerce study). NPS is a customer satisfaction metric that assesses a customer's tendency to refer a product or service to their friends, family, or coworkers in addition to returning for a subsequent purchase or service. (You can learn more about it in [48]) The case company has a NPS score of 50 which is very good for a company.

Interview script and task

The interview is semi-structured, that is I have a set of questions already prepared in advance that covers questions to be asked to the user on a specific page. But sometimes in order to get further information or clarify some comments from the user further questions might be asked. Sometimes the user already answers some questions that are yet to come in the interview in that case it is okay to skip the question (It is important to note that sometime the responses of a question might change for a user based on the page and context). At the prescribed time slot the user joins the interview online through a web link shared by PlaybookUX. The script that I used in this test can be found in **appendix 4**

Interview processing

An observation sheet is prepared to note down the observations during the interview it is show in **appendix 4**. It is a good practice to note down observations during the interview, like the points were the user felt confused or when the user gives non verba cues like a confused look or be J0101M. The first interview has been transcribed and added as reference **appendix 5**, the remaining are not added due to limitation of space. To improve the readability of the report and also to enable quick conclusions it is good to add symbols in the transcript and observation sheet. Following are some of symbols I used.

-  symbol is used to indicate user quote.
-  symbol is used to indicate when there is a deviation from user mental model.
-  Emojies are are used to indicate the users emotion like happiness, anger, confused.
-  [← Additional context on the insights are added as notes.](#)

In this chapter I covered how I conducted the user interview, the tasks involved and how the interviews are transcribed into usefull insights. In the next chapter I will detail on how the insights from each individual interview will be combined together to identify specific issues and suggest design mprovements.

8. Define Phase - Insights

As expected, general impressions of the users was that the product was good and effective for them to make an online hotel reservation. For the experiment I have selected a very complicated situation hence the experience of the users would generally be much better than the test case. Collecting insights from all the interviews and summarizing them I am able to identify the most relevant insights that need to be kept in mind while redesigning the product. Also the issues caused can be identified and priority can be added to it. From the insights from individual interviews I have tabulated the below table of insights, I have color coded the insights, green when the expectation of the users perfectly matches with the system, orange when the user expectation is not a match but they feel its okay and red when user expectation is very different.

Topics ↓ Participants →	J0518F	T1805F	D1805M	J1805M	S0520F	M0520F
	US users			EU users		
Search starting point	Hotelscom	Google T mobile	Expedia	Google Hotels	Booking AirBnb	Google
Commonly used website	Bookingcom, hotelscom, Expedia, Agoda, Offical hotel website	Kayak, Offical hotel website	Expedia, Kayak, Priceline. Tripadvisor	Hotelscom, bookingcom sometimes AirBNB	Booking AirBnb	Non
Impression on SRP with price difference btw main deal and Your choice deal	Okay	Okay			Okay	Okay
Identified the deal on GHA was Your choice deal	No	No	No	Yes	Confused	Yes
Identified taxes in nightly price correctly		No				

Expectation from Deal details copy	Breakdown of price Amenities	Breakdown Reasoning for discount Info about room	Breakdown of price Amenities	Breakdown of price	Breakdown of price Amenities	Plus program info Info on the % off
Is breakdown of price important	Good to see	Good to see	Not important	Important	Important	Important
Identified Deal details to has Price breakdown	Yes	Yes	Yes	Yes	No	No
Satisfied by Deal details model	Yes	Yes	Yes	Yes	Yes	No
Cancelation policy on DD model	Good	Good	Good	Good	Good	
Pay Now' & 'Pay at property'		As expected				
Model: Pay at property		As expected	As expected	As expected	Okay	Okay
Model: Other local taxes and fees		Not as expected	Okay	Not as expected	Okay	Okay
Identified 'Property fee and instruction' to have pricing info		No	Yes	Yes	No	Yes
Confused	😄	😄	😞	😞	😞	😞
CONFUSION AREA	SRP (Your choice)	SRP (type of room)	Checkout (Resort Fee)	Checkout (Savings banner)	Checkout (Savings banner)	SRP, RSP, DD & Checkout (Savings banner)

8.1. Insights and issues

The main insights from each page are listed below the remaining insights are added in **appendix 6**.

The issues are given a code indicated by ☆ XHYZZ where

- X stands for S / I, S indicating that it is a suggestion, I indicating it is a suggestion.
- HY stands for the heuristics, if there is a violation (as pers section 2.3). If there is no violation then it left as 00.
- ZZ stand for the issue number.

Legend of symbols in transcript

To improve the readability of the report and also to enable quick conclusions it is good to add symbols in the transcription.

-  symbol is used to indicate user quote.
-  symbol is used to indicate when there is a deviation from user mental model.
-  emojis are used to indicate the users emotion like happiness, anger, confused.
-  **Additional context on the insights are added as notes.**
-  Symbol is used to mark general insight.
- ☆ Symbol is used to indicate an issue or suggestion.
- US vs FR Symbol is used to indicate difference of opinion between US user and EU user
-  Actionable insights relevant to price clarity.

Insights On GHA

- Users do investigate a deal that appears cheaper, even though they don't intend to book on them.
 -  *"I'm assuming that. How it gets me to that one 601 instead of the 800, like the one from MGM. I think was 197 versus this one is 156th"* ← **Users remember and mention the rate that they saw for the official website.**
- US vs EU FR Users tend to avoid the deals in the advertisement and check for further deals below. (2/3)

US	EU
<p>Ads · Featured options </p> <p> Booking.com No Hidden Charges · 24/7 Customer service Customer support: 24/7 Phone · Email · Facebook · Twitter</p> <p> West Wing King \$197 > 1 king bed · Free cancellation until Jul 18</p> <p> Grand King \$248 > 1 king bed · Free cancellation until Jul 18 · 3 guests</p> <p>2 more room rates</p>	<p>Annonces · Options de nos partenaires </p> <p> Booking.com Service Clients 24h/24 · Pas de frais cachés</p> <p> Chambre Double Deluxe - Vue sur Jardin 429 € > 1 lit double · Annulation gratuite jusqu'au 19 juil. · Petit-déjeuner inclus · Wi-Fi gratuit</p> <p> Chambre Double Deluxe (2 Adultes + 1 Enfant) 491 € > 1 lit double · Annulation gratuite jusqu'au 19 juil. · Petit-déjeuner inclus · Wi-Fi gratuit · 2 personnes</p>

i Users sometimes have the doubt that all the offers provided on GHA is for the same room.

i The tags like free cancellation are very important in making or breaking a deal. ← Some deals on GHA have cancelation tag and others don't have.

Insights On SRP

Improper room name creates confusion. (1 of 2)

i Room names like "West wing King #Double" (marked by red box in figure on left) confuse users if the bed type is a King Size bed or a Double bed. ← This is not a sever concern for the user but adds to the doubts when moving forward. On the next page also this doubt is not cleared properly.

☆ IH504 : Proper nomenclature for room names.

Priority: **Medium**

Improve usability attribute: **Effectiveness**

😊 About the MGM grand offer, one user was confused if the selection is for a Kingsize bed or a Double bed. (The room name was 'West wing King #Double') ← Improper room names can create confusion among the user.

Copy (Improvements in the wordings in the UI)

i ⊖ The copy 'Your choice' can be improved. ← (4/6) Users didn't interpret the Your choice tag.

MGM Grand Hotel & Casino
★★★★★
Las Vegas Strip, Las Vegas, NV
7.6 Good
Nightly price
~~\$197~~ \$156
West Wing King#Double
FREE cancellation
View Deal >
Booking.com \$197 >
FREE cancellation
Your Choice \$154 >
Stayforlong

H10 Casa Mimosa
★★★★★
Dreta de l'Eixample, Barcelone
9.4 Superbe
Prix par nuit par chambre taxes incluses
Prix le plus bas
~~421€~~ 375 €
Chambre Double Deluxe
Participation GRATUITE au programme Plus
Voir l'offre >
Agoda 375 € >
Frais d'annulation
Votre choix 370 € >
Roomdi.com

☆ IH504 : 'Your choice' copy to be changed

Priority: **Low**

MGM Grand Hotel & Casino
★★★★★
Las Vegas Strip, Las Vegas, NV
7.6 Good
Nightly price
~~\$197~~ \$156
West Wing King#Double
FREE cancellation
View Deal >
Booking.com \$197 >
FREE cancellation
Your Choice \$154 >
Stayforlong

Improve usability attribute : [Learnability](#)

- ☹️ One user wrongly interprets the 'Your choice' offer as an offer that might give him the option to select flexible dates. 💬 "I'm either thinking that means flexible dates that you can pick or flexible in terms of room options that they have."

Thoughts on the crossed-out price and reason for the discount.

- One user thought the crossed-out price was the price of the deal on the official website.
- ⓘ The crossed pricing gives a feeling of savings in the mind of users.

☹️ Finding the exact reasoning for the discount is not very important for the users but they fear that when they have a discount, **they are likely losing some amenity in that deal in comparison to other deals.** ← **HMW communicate with the user that the deals are compared equally and have same amenities so that users can feel confident and move ahead with the deal.**

☹️ Users also think that crossed-out prices are often inflated prices shown as a marketing tactic. (3/6)
← **When I provide the reasoning to the user this should be taken into consideration**

- 💬 "For me, it would be quite important because if I originally thought something for 197 and now it's 156. I'm going to wonder if it's the same. If it's offering me, the same thing that I originally saw. If it is not, then that's where things get a little tricky." ← **More than knowing the reasoning behind the discount she is concerned about knowing if the comparison between the other deals is exactly the same. Increasing transparency here would be good.**

Insights On RSP

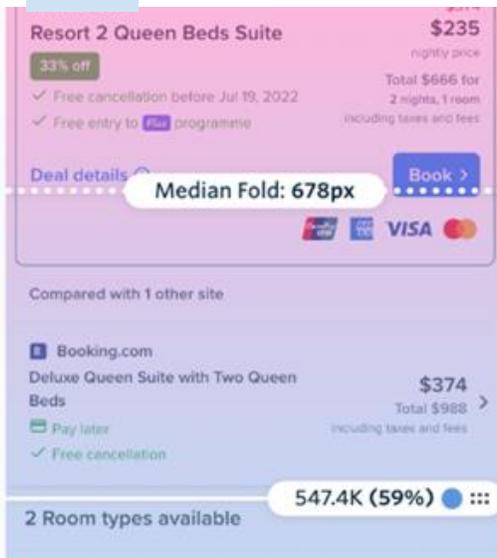
Low visibility of Deal details.

✗ Users expect the room details of the offer to be more visible on RSP.

Users tend to stop scrolling at portfolio deals. When the user scrolls down they come across the portfolio deals, after seeing redirect deals their expectation from the current page might change and they don't expect to find room details below. If the users don't scroll down they tend to miss the room details completely. ← **40% of the users don't scroll down to the room details area as per scroll map (figure below). Room details should be made more accessible and evident on the page.**

☹️ **When users don't find the room details, they assume that the room details are available in the Deal details.**

☹️ **Even when the user scrolls down it is not easily evident to the user, which room type has been selected as the best deal.** ← **This information should also be more evident.**



About 40% of the users don't scroll down below this point, hence seeing no room details.

- When one of the users landed on RSP she had a pause, as if, she was not seeing what she was looking for and then she scrolled down to see the room selection and she said *"eah, that's what I was wondering"*

☆ IH405 : Room details need to be more Visible on the RSP as the user lands on the page.

Priority: **Medium**

☆ IH506 : Users miss interpret Deal Details button. Copy can be improved.

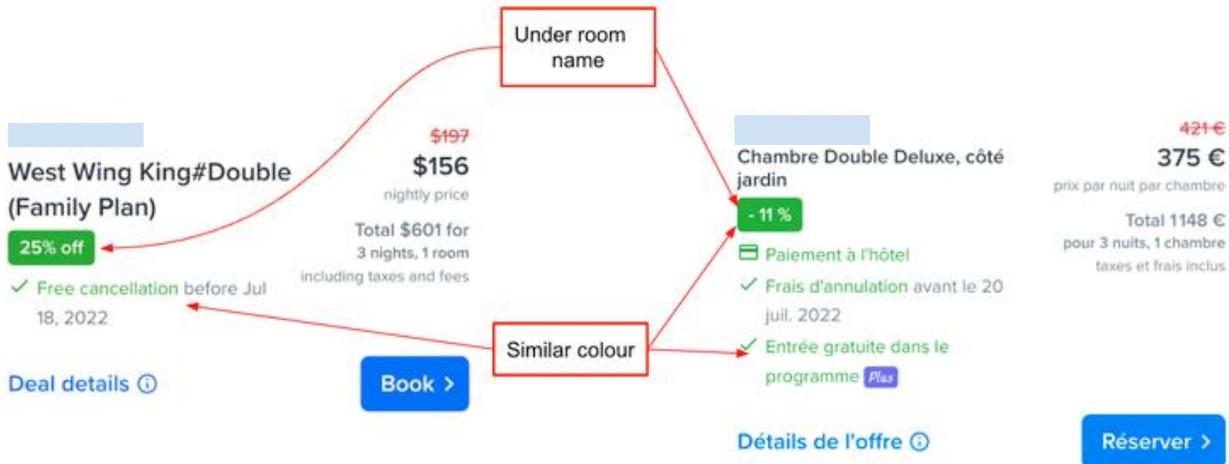
Priority: **Medium**

Improve usability attribute : **Efficiency and satisfaction**

i ✗ The position and colour of %off is interpreted wrong.

- The % off being the same colour as that of the deal parameters, users at times correlate them together.

- Sometimes the room name may have additions like 'Family Plan' and since the %off is just below the name users tend to associate the off with this.



- **⊖** He also related the 25% off to the family plan. *"It's part of a family plan so it's 25% off"* ← Improper room naming and the positioning of the %off can create an unnecessary interpretation of the savings.

☆ IH508 : Position of % off needs to be changed.

Priority: **Medium**

☆ IH509 : Colour of % off and tags needs to be different.

Priority: **Medium**

Improve usability attribute : **Learnability**

Improper room name creates confusion. (2 of 2)

- **i** Users feel that they have enough information to compare the room. But in fact, they are comparing just by the room name. ← Firstly, accuracy in the room name is important and secondly room details basically bed type and number of occupants should be displayed.

i ⊖ Users felt that there is a chance that the deals on the portfolio box are for different rooms.

☆ IH5&610 : Better room naming.

Priority: **Low**

Improve usability attribute : **Learnability and efficiency**

3 Room types available



West Wing King#Double (Family ...

Free cancellation before Jul 18, 2022

\$156
nightly price

Total \$601 for 3 nights, 1 room including taxes and fees

Deal details **i**

Book >

i The case company room names contain terms like double, King which users interpret as bed type. Which might aids in users selecting a deal but users are still confused if the deal is same across other portfolio deals.

⊖ At times in the absence of more room details as in figure, users may go forward with the booking, just with the room name information, which could create a wrong booking.

Copy change for Deal Details button

⊖ User think, deal details button would give more information about the room. (4/6) ← Refer table of insights, if it was more evident from the copy then user would have found the price breakdown when clicking on deal details.

i One US user initially on landing at RSP assumed deal details

☆ IH511 : Copy of deal details can be changed Priority: **Medium**

Sticky button

✓ This offer has free cancellation

Cancel by

● Jul 18, 2022
Until 05:00 AM (GMT)
Free cancellation with full refund.

Nightly price ~~\$197~~ **\$156**

Book >

i Users expect to see the total price near the sticky button or no price displayed near it.
☹️ One user mentioned, he doesn't want to see the crossed price again and feels it's too pushy when coming from GHA.
← Not sure someone coming from a redirect deal would feel the same.

☆ IH4&815 : User expects to find the total price near the sticky button on deal details page. ← This could be a similar trend in other e-commerce websites.

Priority: **Medium**

Insights on Checkout

Savings banner confusion

US US VS EU FR ← **Only for EU user had this issue**

⊖ The position of the saving banner between the total and pay now was wrongly interpreted in the user's mind. Because naturally, users feel to subtract the savings from the total and see the 'pay now' amount but the calculation seems to be wrong on the screen, this confuses the users.

Price details	25% off	3 nuits x 1 chambre	1022,73 €	User think ↓
3 nights x 1 room	\$468.83	340,91 € par nuit		
\$156.28 per night		Taxes et frais ⓘ	102,27 €	
Other local taxes and fees ⓘ	\$132.66	34,09 € par nuit		
\$44.22 per night		Taxe locale ⓘ	22,80 €	
		7,60 € par nuit		
Total	\$601.49	Total	1147,80 €	This
Total saving	\$202.38	Économie totale	138,00 €	-
Pay now	\$468.83	Payer	1125,00 €	This
Pay at property ⓘ	\$132.66	Payer directement auprès de l'établissement ⓘ	22,80 €	=
Pay at property amount will be collected by the property in the local currency. The rate quoted in USD (\$132.66) is based on current exchange rates, which may vary at the time of payment.		Le montant à payer à la propriété sera réglé dans la monnaie locale. Les montants exprimés en EUR (22,80 €) sont basés sur le taux de change actuel. Ils peuvent différer au moment du paiement.		

This issue arises in the mind of the EU users alone, this is something to be curious about. Maybe EU users are more prone to do mental math at their checkout and US customers might go more with the website's interpretation.

☆ IH5&217 : Change the design for the savings banner.

Priority: **High**

Hofstede-insights on French Vs US

Earlier in chapter 5, I discussed Hofstede-insights and how they can be used to substantiate the cultural difference between users of different countries. According to the country comparison tool on Hofstede-insights [49] there are differences in the metrics for French and US users, as shown in Figure 20. These metrics could give some context to some differences in trends between the user groups.

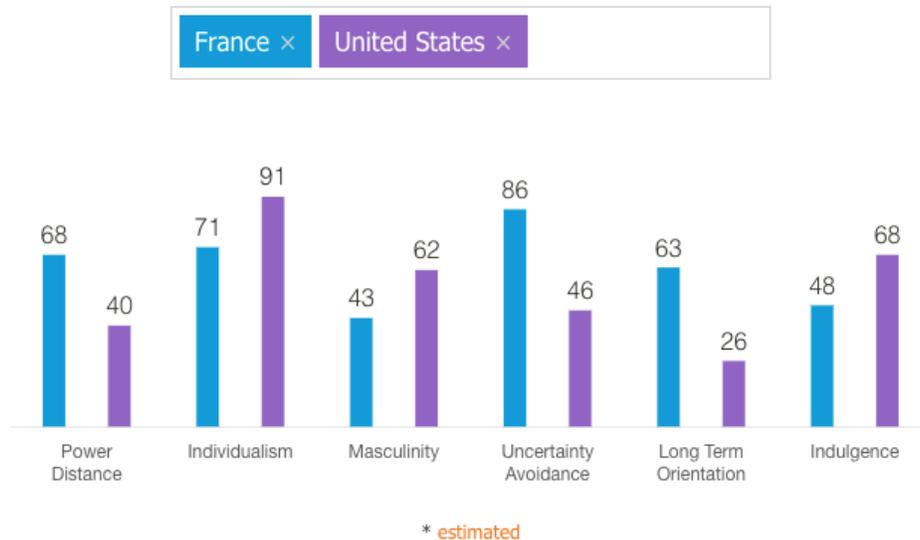


Figure 20, Country comparison tool on Hofstede-insights between US and French [49]

My observation of the Hofstede-insights is that they are good insights to keep in mind for further hypotheses but without enough external quantitative data it is not possible to validate that the behavior of users might be because of differences in metrics. In the above insights table none of the US users identified the 'Your choice' deal on the GHA but all the French users did, maybe this could be attributed to the factor that French have a high 'Uncertainty Avoidance' and 'Long Term Orientation' compared to US. The gist of the Hofstede-insight "The French don't like surprises" and hence I could assume that they go more in detail in each step hence are more likely to see the 'Your choice' deal. These points can't be taken as hard evidence but are points to consider when designing the interface. One advantage of Hofstede-insight is they can be very helpful to the designer to empathize with a user group he is not familiar with, the extensive insight can help paint a picture of how the user might see the product in his cultural point of view.

There are a lot of interesting insights from Hofstede-insights when comparing the US and French users, not all of them are valuable in our context but understanding them could aid the design thinking. Some of them are as follows:

- French score fairly high power distance that US with a higher score of 68 compare to US of 40. Which shows that French society would accept a fair degree of inequality. This might be an interesting insight when designing offers in e commerce.
- US scores more than French in Individualism, but when this is read along with the power distance. The fairly low score of Power distance for US when combined with the highest scores of individualism, reflects that the society highly regards equality and equal opportunities American organizations, the hierarchy is set up for convenience, superiors are approachable, and managers rely on the knowledge of specific individuals and teams. Both managers and staff

members anticipate consultation, and information is regularly exchanged. In addition, communication is somewhat informal, direct, and participative. Even though the US scores better on individualism, the need to clearly separate work and personal life is more in France than in the US. Due to their emotional reliance on what their employer says and does, employees in France react to pressure more swiftly than they would in the US.

- US is a more masculine society while France is more feminine. This indicated that French favor a more welfare system, which means that French might be more offended by targeted features only for a particular group. As a society French consider quality of life is the sign of success and standing out from the crowd is not admirable.
- French has a high Uncertainty Avoidance score to that of US, which means that US users might be more open and tolerant to new features. In contrast to French that scored higher, Americans do not demand a lot of regulations and show their emotions less. When rolling out a new product or feature, US could be a better market to study the impact of the feature.
- There is also a difference in vision, US has a short-term vision Vs to that of French. French are quite pragmatic and show an ability to adapt traditions easily to changed conditions, a strong propensity to save and invest, thriftiness, and perseverance in achieving results. While the US may not be as pragmatic, they investigate on new information and act. For me it shows that accusation of customers might be easier in US but retention of customers might be easier in France.

8.2. User Journey Map

From the information gathered from the exploratory interview, fullstory session and fullstory journey (shows how users moved between the pages [50]) and combined with the literature review conducted in chapter 3 and 4, I am able to map the experience of the user while using the application, the experience of the user while using the application is indicated by the thick black line. The dotted line indicates the experience of the user while not in contact with the product (The journey shown by the dotted line is generated with insights from Chapters 4 and 7.3, this section actually being out of scope for this research has not been investigated in depth). From the user journey, it is evident that the user pain is highest when comparing hotels and rooms to finalize the deal and this is where I need to focus most.

9. Ideate and test

As discussed earlier I am following the human centered design process and hence design changes need to be in close collaboration with our users. In the previous chapter I have identified several insights and user issues, these issues were presented to the product team in multiple presentations at the end of which, some issues were given more priority to be investigated forward as new design solutions. The ideation and testing phase take place as an iteration in itself with problem definitions, solutions screens and validation testing. Firstly, I started a detailed experiment into the pricing elements because this was the area that confused most users and caused localization issues. This experiment is named as 'Price clarity improvement'. The Second scenario of the experiment branched out from the first experiment of Price clarity; it was understood that the information shown in the Chargeable currency information could be improved. In parallel to the chargeable currency investigation, I also ran an experiment to identify what should be the ideal CTA on the deal details page of the case company website. Each of these three experiments is explained in detail below.

9.1. Price clarity improvement

Previous chapter I have identified, that the way that the case company currently display the price includes some redundant information, the user is introduced to various pricing, starting with nightly price, then total price (taxes and fees) and prices like 'Pay Now' and 'Pay at Hotel' and all of that may be difficult to follow throughout the flow. An improved design can keep a common price thread throughout the flow, and communicated and present prices in a consistent manner, which may help users to comprehend the price breakdown better.

Since I am following a lean approach in the design, only necessary changes in the design will be made. This means that I will not be changing the structure of the page but will try to make small changes incrementally to overcome the user issues. The pages that I will be investigating to undertake these changes are, the Search results page (SRP), Room selection page (RSP), Deal details (DD) model and checkout page. In this iteration, the SRP is not planned to be changed since SRP is the landing page from google, other OTA and aggregator redirects. Changes on SRP can be the second step if the result of the initial testing seems positive. The main issues I am trying to solve here are show on figures 22 & 23, numbers marked on the figure correspond to the serial number below

1. The better arrangement of information can enhance readability.
2. Position of %off is misleading to the user.
3. Deal details button is often confused as containing more information about the room.
4. Better design of portfolio box.
5. User had difficulties associating the %off.
6. Improved price breakdown by removing redundant information.
7. Nightly price could be changed with the total price or what is the ideal CTA?
8. The %off can be better signified in the design.
9. The information models of the taxes and the price breakdown can improve.
10. Total savings banner creates confusion.
11. There is minor confusion between pay now and pay at property
12. The currency conversion text can have better clarity.

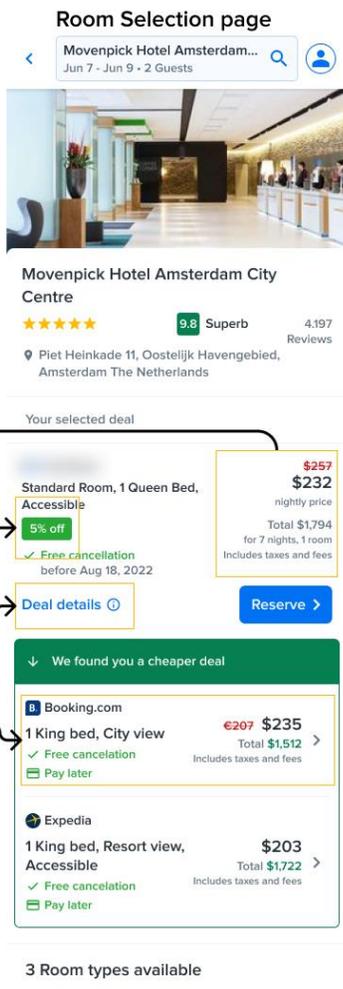


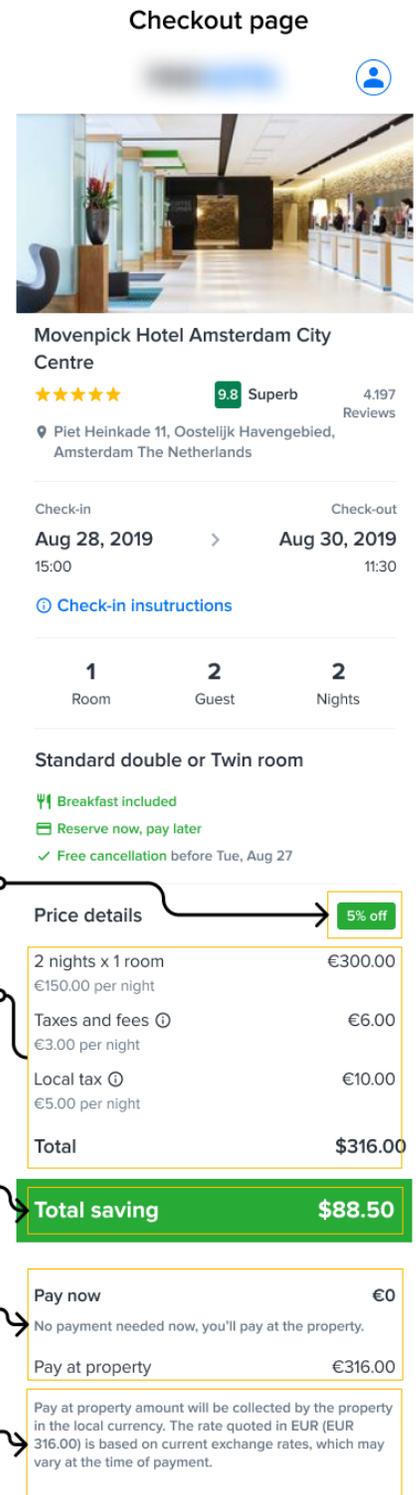
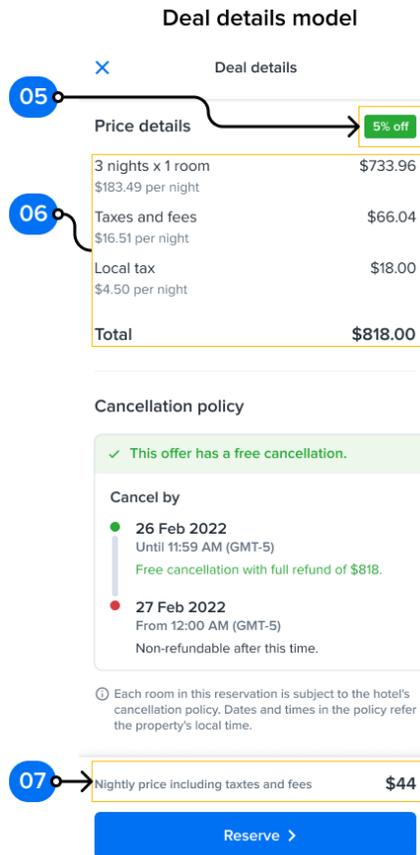
Figure 22 Issues marked on the Room selection page

9.1.1. Ideation and prototyping

After the issues were identified, I looked for competitor websites to see how they are displaying the price breakdown and how is it different from our design. **Appendix 10** shows the price details of various competitors which I took inspiration from while making new designs.

From the competitor study, I understood the methods of displaying price information in the e-commerce difference from website to website. The common methods of displaying information in e-commerce is as follows:

- Offer price displayed: Most of the website display their offer price with a crossed price, this aligns with the user's mental model as a discounted price.



Important information

Figure 23 Issues marked on the checkout

- Reasoning for offer price: Explaining the reasoning for providing an offer could provide more transparency to the user. Like in the case of bookingcom shows only the Total price on the SRP and RSP. When there is an offer, additionally they add an information icon and clicking on the icon opens a bottom sheet as in figure 24, where one offer doesn't have an offer and another has.

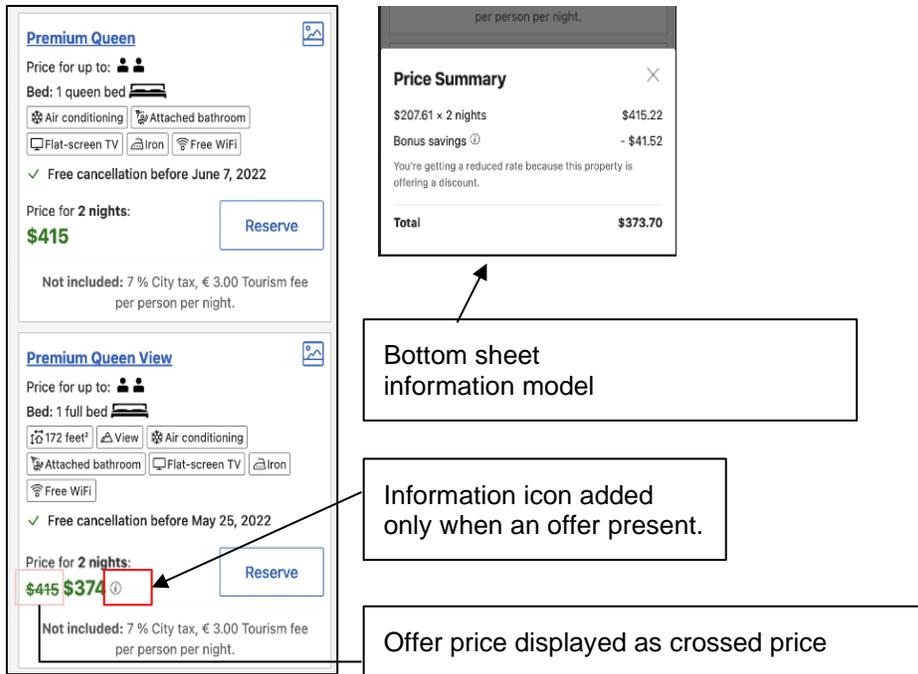


Figure 24 Bookingcom room cards, On the right top is the bottom sheet that opens when clicking information icon.

- Currency conversion: When there is a currency change or when the user is viewing the page in a different currency than the countries local currency, converted currency information can also be displayed. Some websites display the price in both currencies and some only in the selected currency.

You selected:		Payment will be in	
Premium Queen		euro	
		Users currency \$	
Premium Queen	\$342.84		
9 % VAT	\$30.86		
Tourism fee	\$12.65		
7 % City tax	\$24		
Total Price:	\$455		
	€ 389.37 \$410.34		
The price in € has been converted to show the approximate price in \$.			
		Total price \$480.40	
		for 1 room, 2 guests, 2 nights including taxes and fees	
		Prices are quoted in USD based on the current exchange rate. The amount due at the property is payable in EUR.	

Figure 25 Currency conversion information displayed.

- Payment disclaimer: Most websites provide some form of payment disclaimer. Some disclaimers are descriptive, whereas some use one-liners.
- Information model: Different websites use information models differently. Some provide a text link to reach the information model while others use an information icon (As shown in figure 26). The context and way of displaying information in the model also differs from website to website.

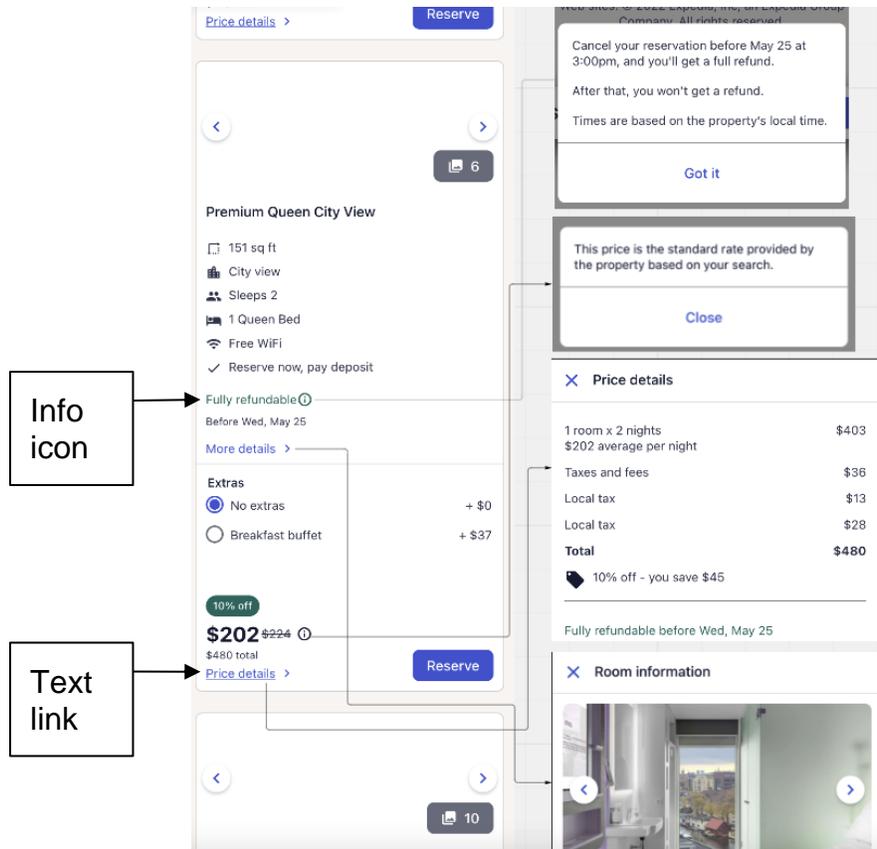


Figure 26 Information models and progressive disclosure.

- Savings display: There are different methods of displaying the savings information, some display it as a tag with less emphasis while some show a very noticeable banner (as shown in figure 27).

Figure 27 Savings display →

Total	\$480	Includes special offer: 10% off
10% off - you save \$45		Total price
		\$480.40
		for 1 room, 2 guests, 2 nights including taxes and fees
Limited Time Offer	-\$45.16	63% OFF TODAY
Subtotal (Pay to Trip.com)	approx. \$406.33	Original price (1 room x 2 nights)
		\$979.53
Extra Charges (Due at Hotel)	\$38.71	Room price (1 room x 2 nights)
City Tax	\$26.09	\$ 361.08
City Fee	\$12.62	
Total	approx. \$445.04	Final price
(Local currency: €423.33)		\$ 431.44
		(€ 410.44)
		Included in price: VAT \$ 32.50, Tourism Fee (Pay at the property) € 12.00, City tax (Pay at the property) € 24.04
		We price match. Find it for less, and we'll match it!

After going through the user flow for eight competitors Bookingcom, Hotelscom, Expedia, Agoda, Trips, Kayak, Trivago and Airbnb. I got different ideas, and along with the product team I brainstormed on the ideas and came up with a few iterations of designs.

Proposed changes on RSP are marked in red as Shown in figure 28. Following are the changes:

- Removed the Deal Details button to avoid confusion that more room details will be available in the deal details.
- Made the total a text link button to access the deal details model. The hypothesis is that the user will expect to find more information about the price on clicking the total and seeing the price details.
- Rearranged the price details eliminating redundant information and clutter.

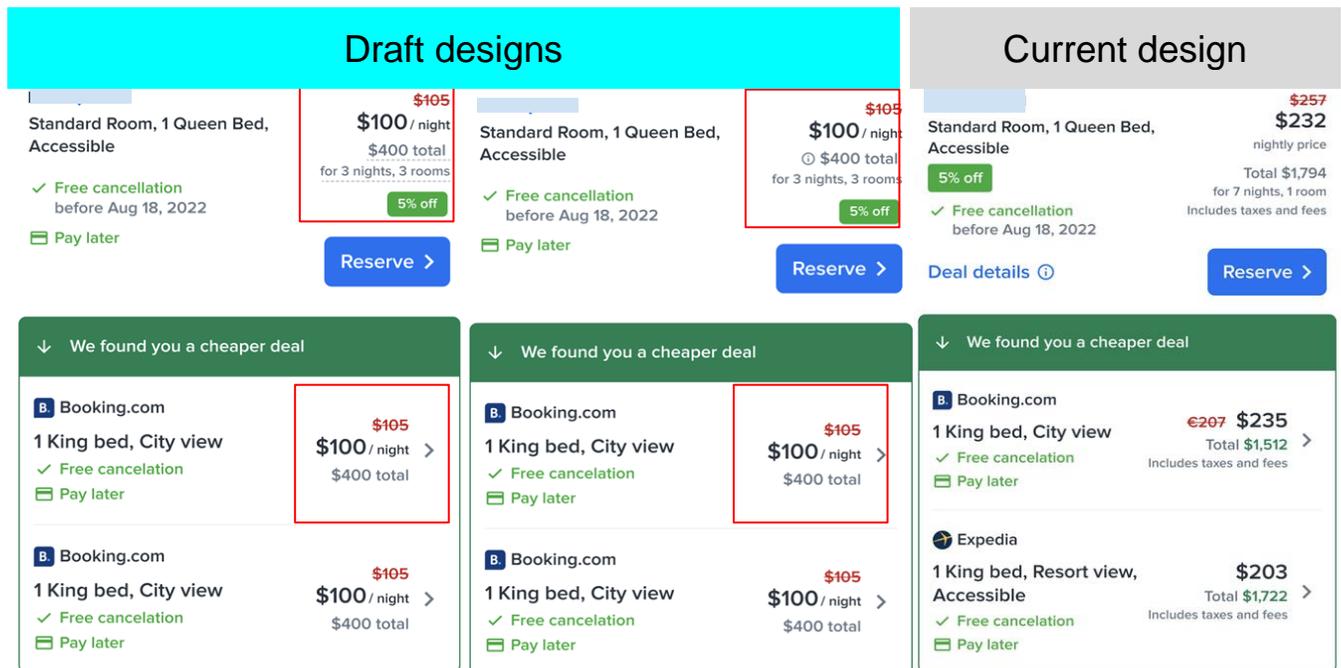


Figure 28 Proposed changes on RSP.

Proposed changes to **the Deal details model** are Shown in figure 29. Following are the changes:

- Removing the taxes breakdown per day and showing only the total. As per our previous interview, this seeing taxes breakdown per day was not important to the user but just good to have. Hence evaluation of its removal could give further insight.
- Adding an additional savings banner and making it consistent with the price breakdown in the checkout page.
- Making the % off more obvious.

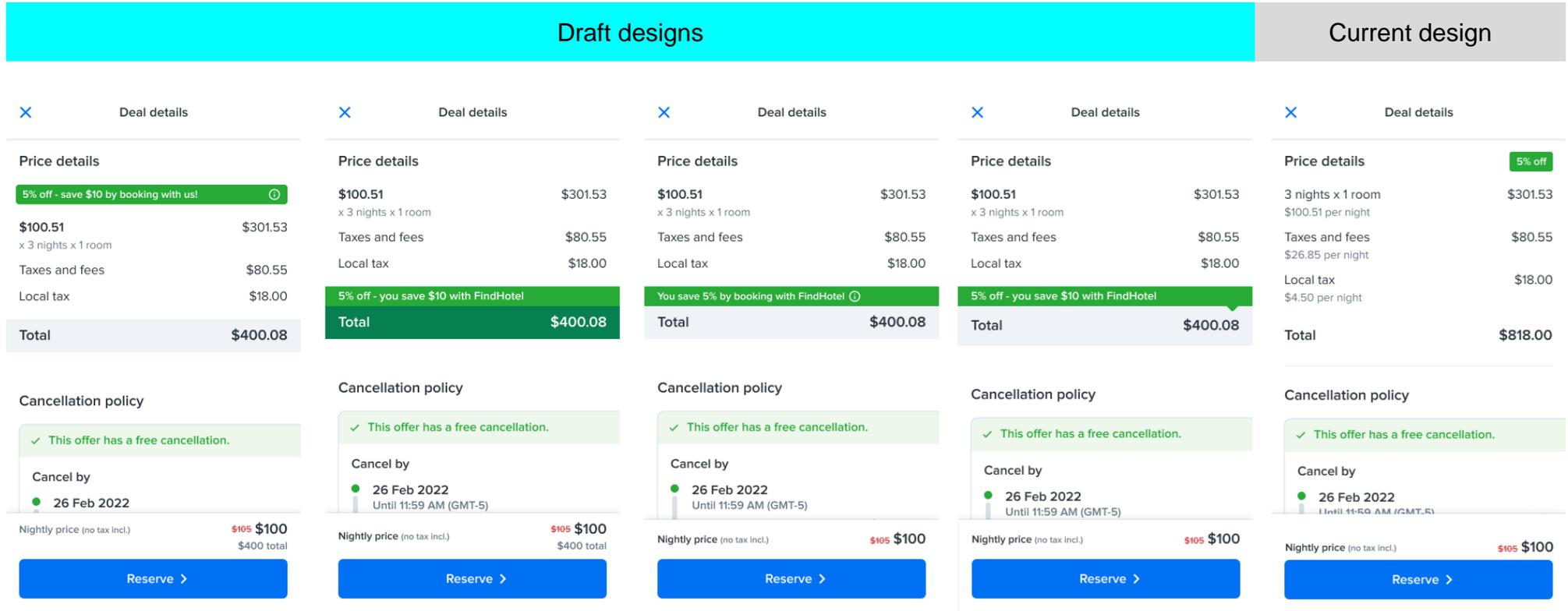


Figure 29 Proposed changes on Deal details.

Proposed changes on **the Checkout page** are Shown in figure 30. Following are the changes:

- Changing the way I display the savings banner and % off similar to that of the deal details.
- Changing the currency conversion text under the price details

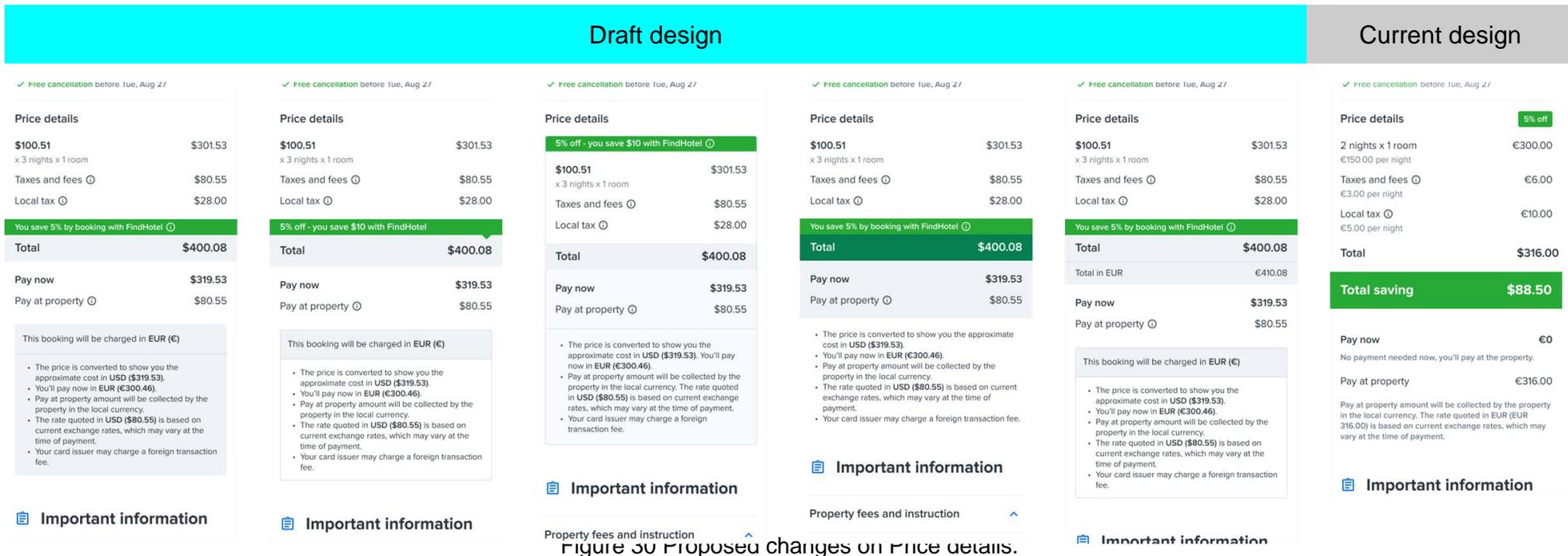


Figure 30 Proposed changes on Price details.

Different changes have been proposed on SPR, RSP and checkout page, after having brainstorming sessions a design variation was accepted. Following the human-centered design, these changes need to be tested before implementation. In this test, I wanted to understand how clearly various elements of the deal price, such as discount, total price, taxes, 'Pay now' and 'Pay at property', are communicated to the user with the new design. I will use a clickable prototype in order to make the concept more tangible for users and gather relevant feedback.

The research question for this iteration

1. How does removing redundant information and emphasizing the total impact on the understanding and readability of the price?
2. Do users understand how to check the price breakdown details on RSP?
3. Is chargeable currency communicated in a noticeable way?
4. What are the customers' difficulties in comprehending the price breakdown and chargeable currency throughout the flow?
5. Is the discount tag efficiently reconciled with the total price and would users click to read more about it? Do they notice how much they save?
6. Does the user notice and understand 'pay now' and 'pay at property'?

9.1.2. Un-moderated user testing (PlaybookUX)

When there is a lack of time and you want to investigate specific insight and unmoderated user testing can be done. In an unmoderated user testing user will be given a set of questions and a clickable prototype, they will be asked to read the question and think aloud while interacting with the prototype. The interaction with the prototype will be screen recorded, once the first question is answered the user moves to the next question.

The advantage of this method is that I can ask different types of questions like rate your experience from 0 to 5 and give a rating scale or a multiple-choice question and get quantitative answers. Secondly, it reduces the time taken for evaluation. The answers to quantitative questions are visualized as soon as the interviews are completed and hence getting a conclusion can be quick. Thirdly, even though the quality of the answer is less compared to moderated user testing where you get lot of contextual information as well, the time taken to complete the interview is very less as there is no moderator. There is no need to match the schedule of the interviewer and the interviewee, interviews can happen in parallel and be completed in one-tenth of the time of a moderated interview. In this experiment, I am conducting the un-moderated user test with PlaybookUX.

Participants : Five participants were recruited from the panel of PlaybookUX, the process of recruitment is similar to that used in section 7.3 :

- Country: USA
- Language: English

The clickable prototype with the final design is added as **appendix 7**

Test script

The test script consists of a series of questions and tasks for the user to accomplish on the prototype while thinking out loud. This is slightly different from the moderated user testing, when creating the script for Un moderated user testing it is important to understand that users need to understand the question and each user should interpret the question similarly, hence it is necessary to keep the questions simple and also provide enough context so that there is no confusion. In **appendix 8** you can find the test script I used for this test.

9.1.3. Evaluation of result

Another advantage of using playbookUX is that it automatically transcribes the interview and analysis the quotes as positive and negative as shown in figure 31. In our case, this was not useful but on other occasions, it could be useful.

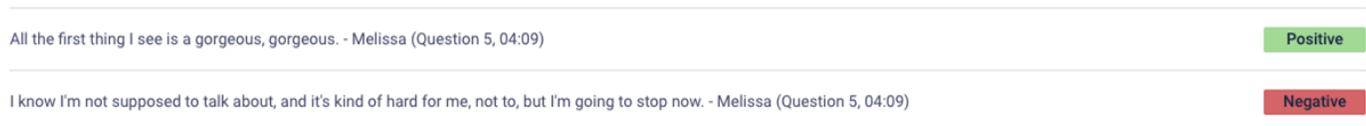


Figure 31 PlaybookUX automatic sentiment analysis of the interview.

All the quantitative questions are automatically visualized at the end of the interview as shown in Figure 31.

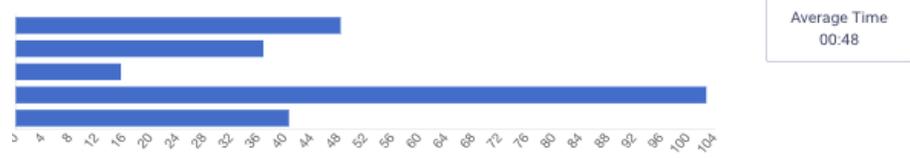
Rating Scale

Question 15 Please summarize your experience about the price clarity throughout the flow. (1 = Very Confused 5 = Very Clear)



Time on Question

Question 1 Before we start, please briefly speak about how often you travel and how do you normally look for hotel prices?



Multiple Selection

Question 2 When finalizing a hotel, which attributes below would motivate you to check further details about the hotel? Check maximum two and briefly explain your choice.



Figure 32 PlaybookUX visualization of quantitative questions.

Summarizing and tabulating the result in the table below:

User Tasks	M0305F	L0305F	V0305F	S0305F	K0305M
Understood how to view price breakdown (Clicked total)	✓	✗	✓	✗	✗
Clarity of Pay Now.	✓	✓	✓	✓	✓
Clarity of Pay at the property.	👉	👉	👉	✓	👉
Re confirms rooms, guests and days easily	👉		✓	✓	
Noticed info on the chargeable currency.	✓	✓	✓	✓	✓
Understood info on the chargeable currency.	✓	👉	✓	👉	👉
Perceived price clarity throughout the flow	5	4	4	4	4
Motivating attributes when selecting hotel price	Price / night Discount	Price / night Discount	Total Price Cancellation	Price / night Total price Discount Cancellation	Price / night Total price

As seen from the table only two users felt motivated enough to click on the total to view the deal details page. All the users had a good clarity of Pay Now and the amount that would be deducted from their account just after the transaction was executed. Users are clear that they need to Pay at the property, but they still have confusion as to if it has to be paid in dollars, euros, or cash. All the users felt confident in confirming the booking selection, out of which two of them confirmed exactly looking at the intended design element (Two of them did not attend the question). All users noticed the information on chargeable currency but only two of them understood it accurately.

Even though some of the users did not perform accurately in all the tasks, overall they felt that they had a very good clarity of price throughout the flow. Users are shown multiple times price details from a basic breakdown on the RSP, then a bit more detailed on the Deal details page and again on the checkout page, during the test, there were no contradictions and users felt the price display to be consistent.

Eliminating the bad sample, in evaluation, it was found that one of the users was very novice to playbookUX and also was very fast during his responds. This can be seen in the response time per question, the user was too quick to answer, this was the first indication on further investigation of the quality answers which was also very bad so I eliminated the answers. There are many insights from the test only the main insights are listed below the remaining are added in **appendix 9**

Learnings on the RSP :

1. ☹ The test cannot be conclusive to determine whether users understood that the total price could be clicked to get the price breakdown. Only 2 out of 4 users clicked on it to visit deal details. ← This could be because
 - a. the Font was small, to identify the underline.
 - b. The design is not providing enough indicators to motivate the users to click on it.
 - c. Does the user feel he has enough information at this movement and would go further to see the price breakdown on checkout?

Learnings on the deal details page:

1. ☹ Nightly price not noticed. Only one user mentioned seeing the nightly price given along with the Reserve button at the bottom. ← It would be advisable to test this to see if users understand this or need this information?
2. ☹ One user mentioned she missed information about limits on the number of people per room on the deal details page. (Point B.3.b)

Learnings on Checkout Page:

1. ☹ UI of RSP and Checkout page are very similar. This can create confusion in the user that they went back to the RSP page after they pressed deal details. Only one user had this issue (Point A.4.b) ← How can I evaluate if the users have difficulty identifying if they are on a new page?
2. 🤔 All users notice the information on Chargeable currency and understand that they are paying in a different currency. But still, there is mild confusion,
3. 🤔 Users understand what 'Pay at property' meant but fail to identify that it is to be paid in euro. All four users understood they had to 'Pay at the Property', among the four only two understood they had to pay in euro at the property .
4. 🤔 Two users related 'Pay at property' to 'Taxes and fees' because both of them would have similar values, this leads users to make natural conclusions that are not intended by the design.

Conclusion

Overall the test went well, all participants indicated confidence in understanding the price throughout the flow. All of the users understood Pay Now and the amount that would be debited from their account immediately after the transaction was completed. Users understand that they must pay at the property, but they are unsure whether they must pay in dollars, euros, or cash. The main inference for the case company from the evaluation was, eliminating the redundant information has not affected the user's understanding of the price. Users understand that the discount offered on the deal but our test was not conclusive in determining if they understand the discount was for total and saw the total savings.

The design has enough merits to be A/B tested and can possibly improve the price clarity of the user and thereby the conversion from looker to booker. But I can further investigate on the 'Pay now' and 'pay at property' and currency conversion information (Chargeable currency) in parallel to the A/B test.

9.2. Investigating Chargeable currency

Previous user tests have shown that users lack clarity in understanding the transaction currency when there is a foreign currency involved, that maybe when the user books to a hotel of another country or want to pay in another currency. The currency in which the payment will be done is called the chargeable currency. Most of the users notice the chargeable currency information, but fail to capture key elements while scanning through. To improve on the current design which is text-heavy, it is important to know which piece of information is more important for the user to finalize the deal. For this, I can first conduct a competitor analysis of how other companies are showing this information. And secondly, I can ask the users to prioritize the information in the chargeable currency by doing a card sorting session.

The objective of the test is:

1. Which pieces of information do the users consider to be most important when it comes to chargeable currency?
2. How does our design compare with our competitors on display chargeable currency information?

9.2.1. Competitor benchmarking:

In this scenario, I am considering six competitors and four scenarios. The competitors I am considering are

1. Bookingcom
2. Hotelscom
3. Expedia
4. Agoda
5. Trips
6. Airbnb

And the context of booking I am looking for is a

1. US customer booking within US (Domestic)
2. EU customer booking in Europe (Domestic)
3. US customer booking to Europe (International)
4. EU customer booking to US (International)

Do's and Don't of competitor bench marking

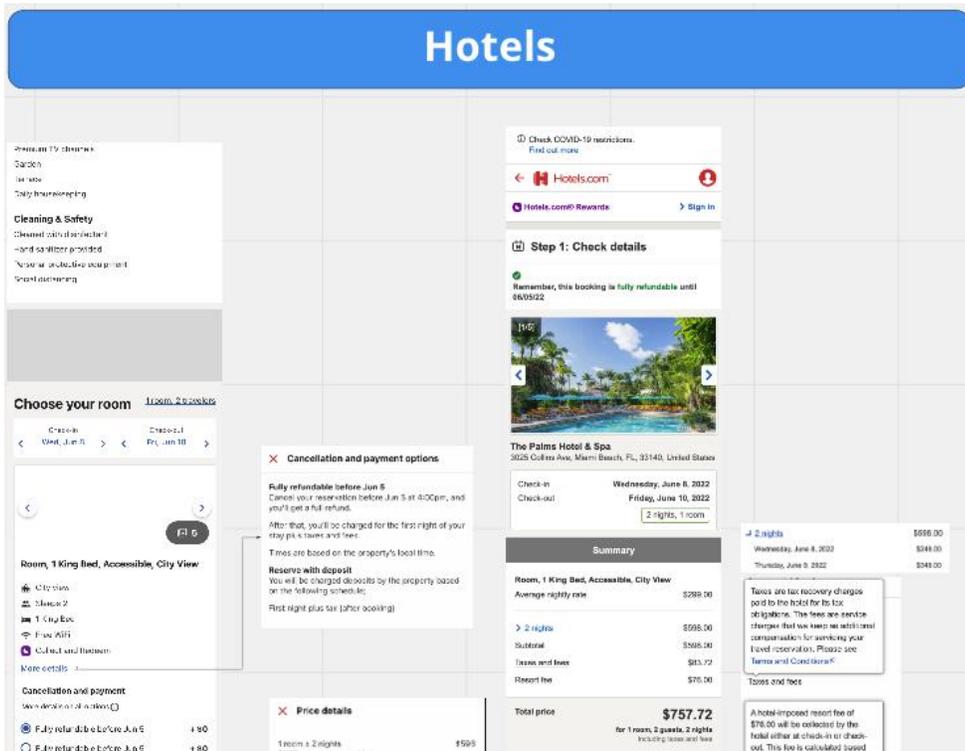
When evaluating and benchmarking with competitor I found it important to consider the following:

- Using a VPN (Virtual Private Network [53]) is ideal, this can help to understand all the localization initiatives from the side of the competitor. Using VPN you can view a website as how a user would view it from a different country, comparing this webpage with the webpage opened in VPN from another region can show you the different localization initiatives taken by the website.
- Always open in an Incognito window so that your browser cookies don't interfere with the website and give an unintended behavior.
- Always login with a new account to get the new user flow correct.
- Remember that other competitors might be running A/B tests and hence you might get a different version of the website each time. Be mindful of this while opening the browser again another day.
- Go through the flow once and without spending much time, make rough notes on what information you want to gather. Then after the first note, check the information that needs to be noted down constantly from each competitor.

As shown in figures 33 and 33.1, each user flow was screenshoted and specific sections were added with arrows to show how information was progressively displayed in information models. After this specific section of information was captured and tabulated as shown in the figure 34. Tabulation of this helps to gather insights very quickly.

Figure 33 Competitor analysis board. →





← Figure 33.1, The expanded view of the red section is shown in Figure 33.

COMPARISON OF HOW CHARGEABLE CURRENCY INFORMATION IS DISPLAYED

	Booking.com	Hotels.com	Expedia	Agoda	Trip.com	Airbnb
For EU booking in US	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."
For US booking in EU	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."
Any extra information related to chargeable currency displayed near to the total?	Yes	Yes	Yes	Yes	Yes	Yes
Local currency of user	1 Main 2 In the subject	1 Main 2 In the left side of local currency	1 Main 2 Below the local currency in Booking	1 Main 2 Below the local currency in Booking	1 Main 2 Below the local currency in Booking	1 Main 2 Not displayed
For both EU viewing US and US viewing EU	Copy availability message "The local currency amount is not available" - shown in local currency	✗	✗	✗	✗	✗
Copy availability message "Amount not available in foreign currency" - shown in foreign currency	✓	✗	✓	✗	✗	✗
Local night stay at time of payment / cancel or change request	✓	✗	✗	✓	✓	✗
EU visitor viewing US hotel	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."
US visitor viewing same EU hotel	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."
EU visitor viewing EU hotel	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (EUR) and a note: "Prices are shown in EUR. If you are viewing this page from outside the United States, prices may vary based on your location."
US visitor viewing US hotel	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."	Shows local currency (USD) and a note: "Prices are shown in USD. If you are viewing this page from outside the United States, prices may vary based on your location."

← Figure 34 Competitor analysis

Learnings

	How is currency displayed on Checkout page? (US visitor viewing EU hotel and Vice versa)					Chargeable currency copy explicitly mentions		
Companies	Total price is displayed in :		Pay at property' (Pay@prop) price is displayed in :		UI placement	"You card issuer may charge foreign transaction fees"	"The price is quoted in USD..."	"...and might vary at time of payment / based on exchange rate"
	Local currency (LC)	Chargeable currency (CC)	Local currency (LC)	Chargeable currency (CC)				
Case Company	Yes	Yes but, not prominent	Yes	Yes but, not prominent	Both Total and Pay@prop are displayed as CC in information box.	✓	✓	✓
Booking	Yes	Yes	Yes	No	Total price is displayed with CC & LC side by side	✗	✗	✗
Hotels	Yes	Yes	Yes	Yes	Both Total and Pay@prop is displayed with CC & LC, one below the other	✗	✓	✗
Expedia	Yes	No	Yes	Yes but, not prominent	Pay@prop is displayed prominently as LC and CC in information box.	✗	✓	✓
Agoda	Yes	Yes	No	Yes but, not prominent	Pay@prop is displayed only as CC in information box.	✗	✗	✓
Trip	Yes	Yes	Yes	No	Pay@prop is displayed only as LC	✗	✗	✓
Airbnb	Yes	No				✗	✗	✗

From the tabulation it is clear, the must have information are:

- The total amount is to be displayed in Local currency (5/5 competitors).
- The chargeable currency is prominently displayed along with local currency (4/6 competitors).
- Pay at property amount is prominently displayed in Local currency (4/5)
 - with some competitors also showing the amount in Chargeable currency (3/5) in a less prominent manner, for example in the information box.

Good to have information

- The amount might vary at the time of payment or based on the exchange rate. (3/6 competitors)
- Rate is quoted in Chargeable currency.

✗ None of the competitors mentioned that card issuers may charge foreign transaction fees. (0/6)

9.2.2. Card sorting with OptimalWorkshop

The case company displays a lot of information on a currency conversion, when trying to reduce the wall of text I need to prioritise and determine which information is to be displayed and which can be moved to another location. To understand this I am using a technique called card-sorting. There are many applications for card sorting, in this scenario, I will ask the users to group a set of cards into a set of predefined groups. I am using Optimal Workshop for card sorting.

Optimal workshop - OptimalSort

Optimal workshop is a combination of five specialized UX tools, Card sorting, Tree testing, First-click testing, Online surveys, and Qualitative research. Here I am interested in the card sorting module that is called Optimalsort. With the help of OptimalSort [54], you can securely and quickly optimize your content structure by learning how people conceptualize, group, and label ideas. Optimal sort provides an easy to use card sorting platform with a very little learning curve and has its own panel of participants for interviews. After the experiment it provides a very strong visualization that makes it easy to conclude.

Users can be screened to participate in the session like in the case of playbookUX and once the user joins the session he sees the common welcome screen from optimal sort and on the next page the user is given a bit more information about the context of the experiment and task instruction as shown in figure 35. Once the users read the screen and understand he can move into the card sorting screen on Figure 36. The users can view the image again if they click on the view instructions.

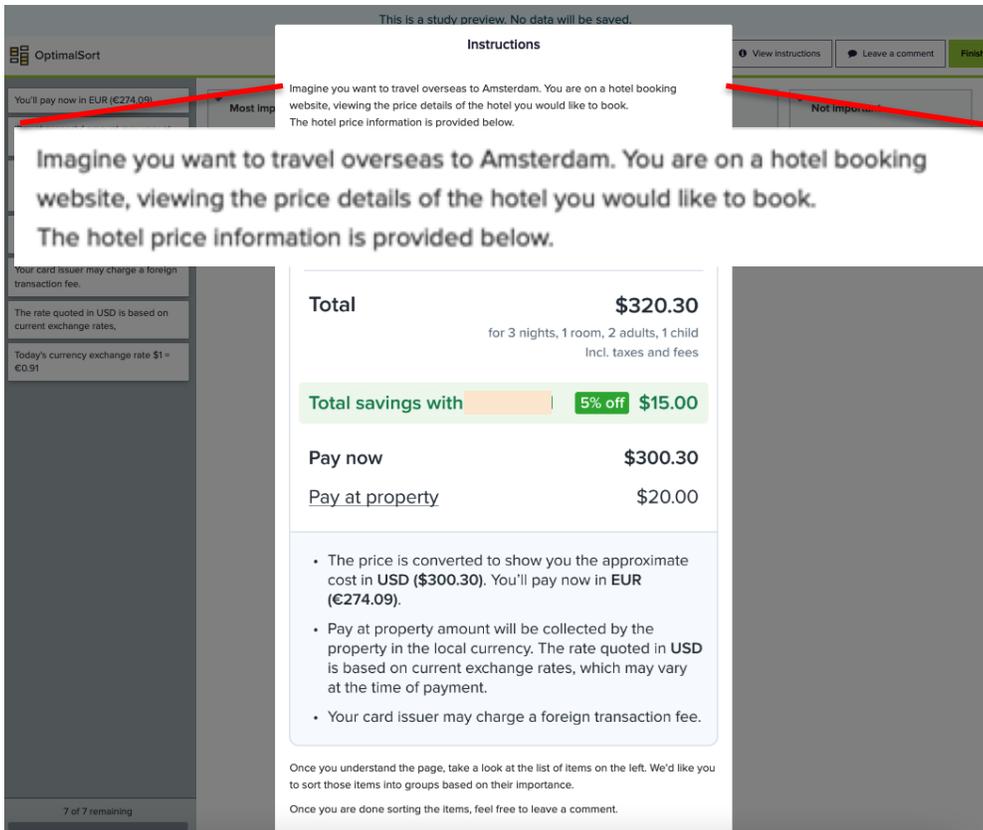


Figure 35 Optimalsort task instruction screen.

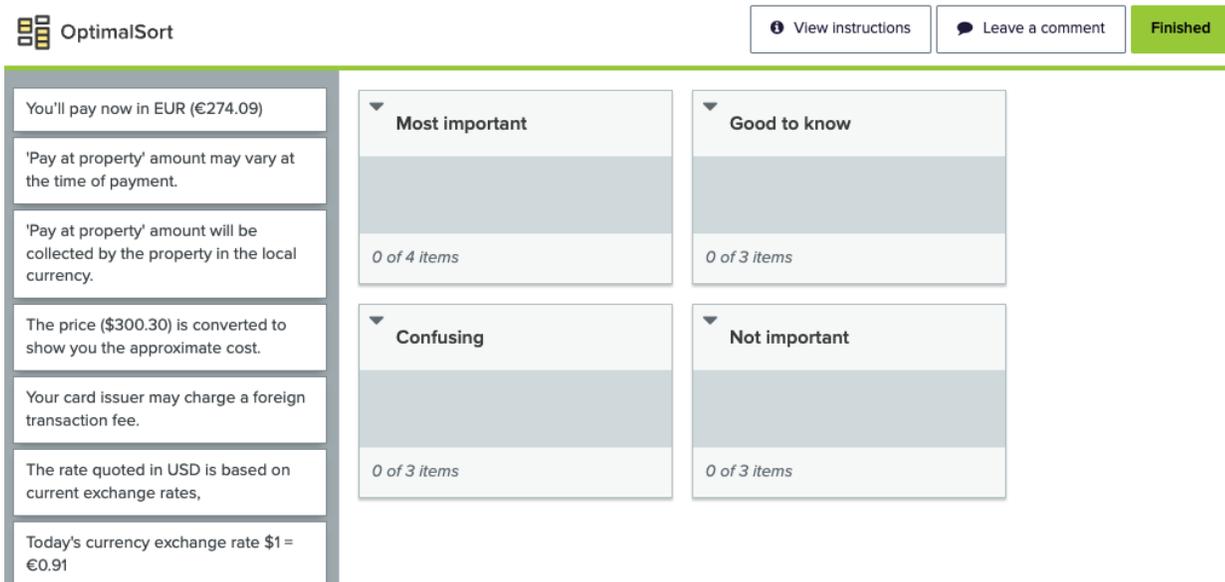


Figure 36 Card sorting environment of Optimalsort.

The users are given a context and then asked to sort the information given as cards into different groups based on their importance to them.

Context

- Imagine you want to travel overseas to Amsterdam. You are on a hotel booking website, viewing the price details of the hotel you would like to book.

- Booking hotel rooms outside of your country involves currency exchange. On the left, you'll find a list of currency conversion information that you could discover on a hotel booking website. We'd like you to group those items according to their importance to the slots on the right.

Cards:

1. I would like to see the price of the hotel in my local currency (\$)
2. When I have selected to pay the total amount at the hotel, I'd like to know what currency I'll have to pay with.
3. When I have selected to pay the total amount at the hotel, I'd like to see a disclaimer "The amount might vary at the time of payment based on current exchange rates"
4. I would like to see the price of the hotel in the foreign currency (€)
5. I would like to be reminded that my card issuer may charge a foreign transaction fee.
6. I would like to see today's currency exchange rate \$1 = €0.91
7. I would like to see a sentence like "The rate displayed in USD is based on current exchange rates." explicitly mentioned in the UI.

Groups:

1. Most important
2. Good to know
3. Confusing
4. Not important

Result

The cards in the analysis are given value based on the group into which they are classified. Each card grouped into the category 'Most Important' is given 4 points and subsequently, 'Good to know' is given 2 points, 'Confusing' 0 and 'not important' -2. To calculate the 'Total points' the frequency of the card in the group is multiplied by the point for the group.

Cards	4	2	0	-2
	Most important	Good to know	Confusing	Not important
I would like to see the price of the hotel in my local currency (\$)	14	3		2
When I have selected to pay the total amount at the hotel, I'd like to know what currency I'll have to pay with.	12	4	3	
I would like to be reminded that my card issuer may charge a foreign transaction fee.	5	10	4	
When I have selected to pay the total amount at the hotel, I'd like to see a disclaimer "The amount might vary at the time of payment based on current exchange rates"	8	6	1	4
I would like to see today's currency exchange rate \$1 = €0.91	6	8	2	3
I would like to see the price of the hotel in the foreign currency(€)	3	13	1	2
I would like to see a sentence like "The rate displayed in USD is based on current exchange rates." explicitly mentioned in the UI.	5	8	3	3

**For ease of understanding I am describing two terms that will be used in the descriptions that is:*

The local currency: Is the user's home currency.

Chargeable currency: Hotel's currency, is also referred to as foreign currency.

Learnings:

Most important card for the user (Indicated in Green in the above table):

- What will be the amount the users will be paying in their local currency?
 - There was no confusion among the users on this topic and 14/19 users grouped it as 'Most important' and overall by Total points, it belongs to the top tier.
- When paying at the hotel, they want to know the currency they will be paying with.
 - This card is grouped as 'Most Important' by 12/19 users.

Good to know information (Indicated in Purple in the above table):

- Users would like to be reminded that the card issuers may charge a foreign transaction fee.
 - This was grouped as 'Good to know' by 10/19 users
 - This was also grouped as a confusing card by 4/19 users, which could imply that users are not aware of the 'Foreign transaction fee' or they don't understand the context of why there needs to be a Foreign exchange. ← When writing copy it might be good to take this into consideration.
- Users would like to know the hotel price in foreign currency.
 - This card was grouped as 'Good to know' by 13/19 users and 'not important' by 2/19 users.
 - But further investigation with competitor benchmarking shows this information is displayed 4/5 competitors.

The remaining cards do not have a conclusive result (Indicated in dark grey)

Card sorting can give quantitative insight into what users consider important, but it lacks exact context as to why they choose one card over another. Conducting a competitor benchmarking gives an idea of how the industry is approaching this problem. Concluding from both card sorting and benchmarking, when the users have a difference between their local currency and chargeable currency,

- The total amount could ideally be displayed in their local currency, with chargeable currency displayed slightly less prominent but directly visible.
- Pay at property amount can be displayed conditionally for users
- When the user has selected to pay at the property, the currency he is going to pay is important to the user. Ideally, it needs to be displayed.
- Pay at the property amount is prominently displayed in local currency by our competitors.

9.3. CTA on Deal details model

In section 8.1, I also recognized that the user showed a possibility of confusion on the Call to action (CTA) button of the Deal Details (DD) model. In the current design of DD, the nightly price is displayed along with the CTA button on the DD page. Earlier usability tests led to the hypothesis that the total price could replace the nightly price, under the assumption that it would be more relevant to the user to see the total before clicking reserve. Adding to the argument, in a pilot test one of the users was slightly confused by the nightly price, he felt that he was going to reserve for one night while he was reserving for three. In another user test, it was found that only one among the six users saw and mentioned the nightly price. Hence the question is raised whether the price is needed at all near the CTA. In this context, there are only three possible outcomes, so a preference test is an ideal method to validate this

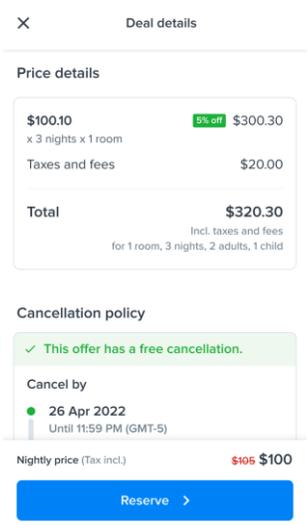
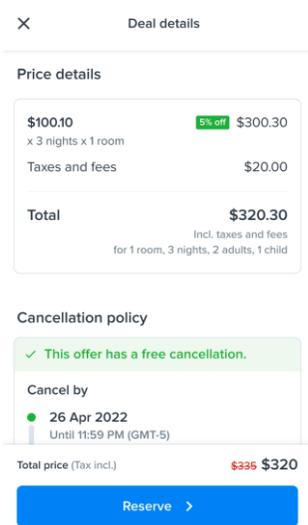
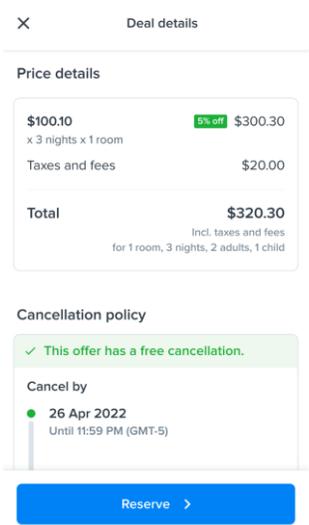
insight quantitatively. **Research question:** Should the price be displayed along with the CTA button on the DD page? If Yes, which one, “Total” or “Nightly”?

9.3.1. Preference test with Usability Hub

UsabilityHub provides the ability to ask questions to the user and as the answer, the user can select from the three or four variations of design. Once the user selects a design further follow-up questions can be asked as to why they prefer this or how is it different from the other designs. It is hard to give context to the user when they are performing preference tests hence mostly they are used to measure the aesthetic appeal. In our case since travel website is a very common subject for most users, I can get quantitative information from the user by providing some context information before the preference test.

Usability hub also allows selection of participants from their Participant panel: The participants were screened only for English speaking. Demographics 100 participants (USA) Age: 20 to 64 (More than 50% between 30 to 44) and Gender: 70% Male 30% Female

Three variations were presented to the users are shown below.

Current design	Proposed	
Nightly price displayed along with CTA	The total price displayed along with CTA	Simple CTA
 <p>Deal details</p> <p>Price details</p> <p>\$100.10 x 3 nights x 1 room 5% off \$300.30</p> <p>Taxes and fees \$20.00</p> <p>Total \$320.30 <small>Incl. taxes and fees for 1 room, 3 nights, 2 adults, 1 child</small></p> <p>Cancellation policy</p> <p>✓ This offer has a free cancellation.</p> <p>Cancel by</p> <p>● 26 Apr 2022 Until 11:59 PM (GMT-5)</p> <p>Nightly price (Tax incl.) \$105 \$100</p> <p>Reserve ></p>	 <p>Deal details</p> <p>Price details</p> <p>\$100.10 x 3 nights x 1 room 5% off \$300.30</p> <p>Taxes and fees \$20.00</p> <p>Total \$320.30 <small>Incl. taxes and fees for 1 room, 3 nights, 2 adults, 1 child</small></p> <p>Cancellation policy</p> <p>✓ This offer has a free cancellation.</p> <p>Cancel by</p> <p>● 26 Apr 2022 Until 11:59 PM (GMT-5)</p> <p>Total price (Tax incl.) \$335 \$320</p> <p>Reserve ></p>	 <p>Deal details</p> <p>Price details</p> <p>\$100.10 x 3 nights x 1 room 5% off \$300.30</p> <p>Taxes and fees \$20.00</p> <p>Total \$320.30 <small>Incl. taxes and fees for 1 room, 3 nights, 2 adults, 1 child</small></p> <p>Cancellation policy</p> <p>✓ This offer has a free cancellation.</p> <p>Cancel by</p> <p>● 26 Apr 2022 Until 11:59 PM (GMT-5)</p> <p>Reserve ></p>

Test method :

On the first screen user is given an instructions: “Imagine you wanted to go on a holiday for three nights in Amsterdam, You have compared several hotels and found one that you like. On the next page, you will be presented with three designs for the price details of this hotel.” Then the design is presented to the user along with the first question “Which of these designs is most straightforward to you?” Once the user selects a design, the second question is asked automatically “Please briefly explain why you chose this design.”

9.3.2. Result

Preference test can be a very useful validation test which gives a quick result. UsabilityHub, visualizes the answers as soon as the test is completed. As shown in figure 37 showing the total price along with the CTA is the clear winner. Another feature in UsabilityHub is the ability to tag the answers, even though this is a manual process it is very effective when drawing conclusions. From my experience too many tags are bad but if there is too little number of tags, then also it becomes hard to identify hidden trends, an optimum balance needs to be there as per each test requirement. In this experiment I have tagged all the 100 responses with multiple tags, they are shown in figure 38. UsabilityHub also provides a word cloud from the responses which might be useful in some instances.

2. Preference test

Which of these designs is most straightforward to you?

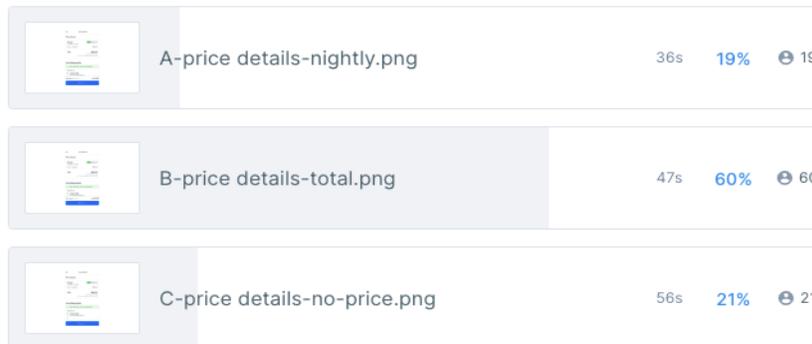
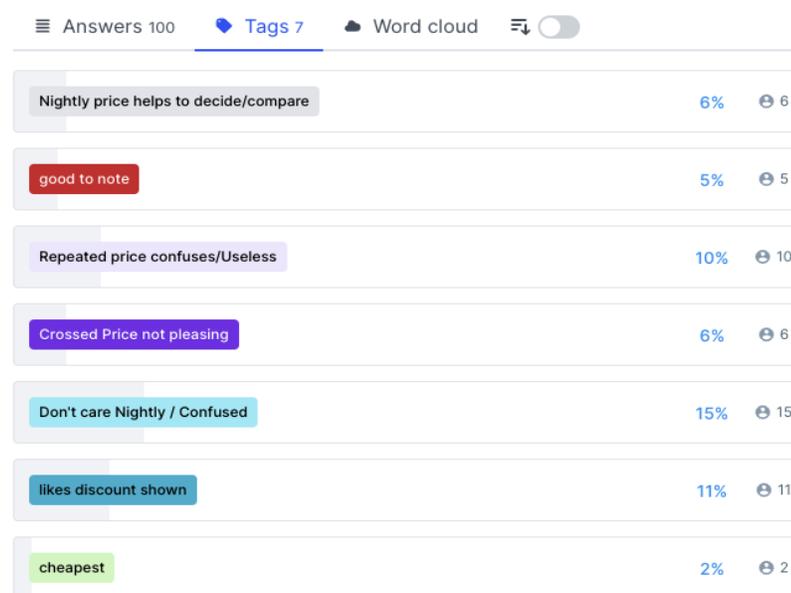


Figure 37 Preference test visualized on UsabilityHub.



← Figure 38 Responds tagged into insights.

From the tagged responses (Figure 38), I have generated the following Insights:

1. Nightly price displayed near the CTA on DD page: 19/100 user think that it might helps them to decide or compare the deal.
2. Total price displayed near the CTA on DD page: 60/100 users prefer total and think it helps clarify what they are paying. They are also of the opinion that total price matters more to the user.
3. Likes discount shown along with the total on CTA on DD: 11/100 users who also preferred the total price along with CTA, liked that the discount was shown near the CTA. (This discount was shown as crossed price)

4. Confused or didn't care about the Nightly price displayed near the CTA on DD page: 15/100 users felt confused to see the nightly price displayed along with the CTA, this insight is a strong driver to remove the nightly price from the CTA.
5. Preferred reserve button without a price as CTA on the DD page: 21/100 users actually prefers not seeing any pricing near the CTA.

Showing the price again near the CTA was useless (10/100) or further confused them. 10/100 users felt that the prices are repeatedly shown and it creates confusion.

6. Crossed price again at the bottom was not pleasing (6/100) and one user mentioned it felt like a scam: 6/100 users felt displaying the crossed pricing again at the CTA was too pushy and it felt like a scam.

9.3.3. Conclusion

In the test, the Total price was the clear winner and should be near the CTA, with 60/100 users preferring to have it near the CTA on the DD page. For most users, the total price matters more than the nightly price and more importantly providing the nightly price is causing confusion for the user, avoiding this confusion may positively impact the conversation rate. It is important to note that 21/100 of the users preferred to have no price displayed along with the CTA button, they felt that repeating the price again is redundant and creates further confusion.

Surprisingly some of the users (6/100) pointed out being displeased with having the crossed pricing displayed along with CTA they see it as unnecessary and cluttering, even one user felt it was a scam. On the contrary, there are (11/100) who like that discount is shown along with the call to action. When reading this together with 21/100 users not wanting any price displayed along with the CTA, it might be wise to test if the crossed pricing needs to be displayed near the CTA. Maybe reducing the clutter by removing the crossed pricing can improve the conversation. The main take away for the case company from the evaluation was the price to be shown near the CTA of the deal details page should be the total price.

9.4. Conclusion from the experiments

The two experiments, which branched out from the price clarity experiment, chargeable currency and CTA on deal details have given unique insights to improve the user experience of the website. Overall, the price clarity experiment designs show high promise to improve the UX and drive the conversation forward. After having a detailed discussion with the product team about the results from the three experiments, it was concluded that the design from the price clarity experiment (design from section 9) will be tested first and based on the outcome, the Chargeable currency and CTA on the Deal details can be further A/B tested.

10. A/B testing

A/B testing also referred to as split testing, is a randomized experimentation process in which two or more variations of a variable (web page, page element, etc.) are displayed to various groups of website visitors at the same time to see which version has the greatest impact and influences business metrics. A/B testing involves altering a webpage or app screen to produce a second version of the same page. A single headline, button, or a complete page redesign can all be included in this modification. Then, half of your traffic sees the page's updated version and the other half sees the original version (known

as the control). Visitors are shown with either the control or variation, and their interaction with each is tracked, gathered on a dashboard, and then analyzed using a statistical engine. Then you may assess whether altering the experience had a favorable, unfavorable, or neutral impact on visitor behavior. In this thesis, the A/B test was planned and executed along with the product analyst.

The objective of the experiment is

- Improve the display of key price information across the booking funnel.
- Localize how price details are shown for different regions.

Proposed hypothesis

- Increase in conversion; looker to booker, RSP to PPer,
- Decrease in abandon rate; PPer to Booker

Nomenclature:

Lr - Looker - Person who investigated a deal (they may have booked or not)

Br - Booker - Person who booked a deal (It can involve users who booked on the case company website or booked on redirect deal)

Lr t Br - Percentage of users who are searching for deals that are booking the deal.

Booking Value - Average price of the booking.

RSP - Room selection page

Pay clicker - User who clicked the payment confirmation button with the intention to pay.

RSPr - Room selection page to Pay clicker

PPr - Checkout page to Pay clicker (Users who visited the checkout page to the users who clicked the payment)

The experiment was set up with the support of the product analyst and the front-end engineers in Optimizely [51].

- Platform: Mobile, Web
- Target audience: All markets/countries
- Traffic allocation: 50%
- Estimated running time: 2 -4 weeks

Figure 39 below, shows the sample size calculator according to the optimizely calculator [52]. Which says with a sample size of 13000 visitors or more on both variations the experiment will attain statistical significance. At this point, the experiment can be evaluated in terms of the monitoring metrics to determine if the variation was better than the control. In our experiment as a team, we have decided to go for 50% allocation, which is equal traffic in both versions, so that we can reach significance at a much faster rate. In general case, if you feel that the experiment will surely be a success and will not have any significant impact on the business even if the experiment goes wrong, you can increase the traffic on the variation side and the experiment can reach statistical significance even faster.

During the A/B test, I constantly monitored the metrics, especially in the first few days of the test to check for any peculiar behavior in the users like, is the Lr t Br remaining in a similar range or is there any sudden changes in the booking value. I also look for the error log in Fullstory, to check that both the versions are behaving the same way as they are supposed to, sometimes due to some implementation issues, even though the UX is the same, subtle changes in the loading time of the page could affect the overall metrics. And finally, I keep monitoring the Fullstory user sessions, to see the behavior of the users between the two variations. In any case, If there is an unprecedented variation that significantly

effects any of the business metrics, I would raise a flag to pause the experiment and switch the traffic to the control version. Further, investigate why the issues was happening and then decide if I want to continue the experiment or not.

The test ran for three weeks to reach significate figures, the result of the test is explained in the below section.

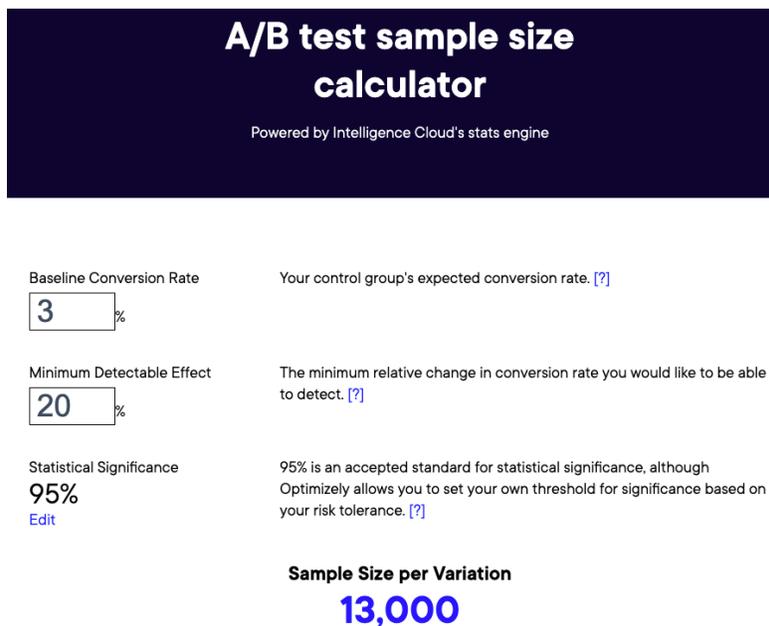
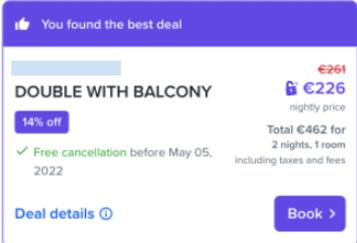
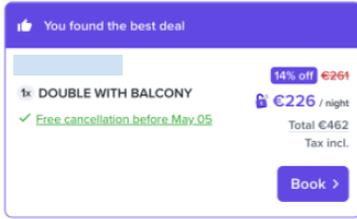


Figure 39 Sample size calculator on Optimizely

10.1. Result

The variation did not perform as expected there was an increase in the RSPr to PPr metric but there was a drop in PPr to pay clicker. This means even though more users went from the Room selection page to the checkout page, the number of users who completed the booking went down. Since the PPr to Pay clicker is a business metric of higher importance and which seriously impacts the conversion ratio, it was decided to roll back to the control version of the design and further investigate why this might have happened.

* Dependency column shown in below table, indicates the insights that are related to each other.

SI No	What I know from A/B test	Assumption / Hypothesis	Particulars	Dependency
1	RSPr to PPr increased 6.6% (Statistically Significant)	<p>Lower visibility of Deal details on the B side causes the customers to go to the PP to get the breakdown of price thus increasing RSPr to PPr. PRIMARY HYPOTHESIS</p> <p>On the A-side there is a very prominent DEAL DETAILS text button. They get the details of the deal before reaching the PP.</p> <p>13% more leaders clicked on the DEAL DETAILS on the A-side. For customers on the B side, the only way to get the breakdown of the deal is to move forward to PP.</p> <p>The position of % off displayed alongside the price on the B side could make the customer think that they are getting a discounted price, making them feel more confident in booking the deal.</p> <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>A side</p>  </div> <div style="text-align: center;"> <p>B side</p>  </div> </div>	<p>MEIDUM HYPOTHESIS Impact on Conversion NEGATIVE</p> <div style="background-color: cyan; padding: 5px; border: 1px solid black;"> <p>i Not disclosing clear price details earlier in the funnel generates leads with lower intent to book, hence lower PP to Pay click on the B side. CHECK SL NO. 2</p> </div> <p>Questions to investigate further:</p> <ol style="list-style-type: none"> 1. What is the ideal position of %off? 2. What does the user understand from the crossed price (Anchor price)? Does he relate it to the price of the deal in the portfolio box? 3. Would providing transparency about %off improve their chance of booking the deal? How can I improve transparency? DESIGN IMPROVEMENT 	1, 2, 3

2 PPer to Pay click - 9.7% (Statistically Significant)

The savings banner is less prominent on the B side than on the A side **PRIMARY HYPOTHESIS**

The feeling of getting a discount in a deal might be strongly motivating users on the A side to complete the booking.

A: Control	B: Variation
<p>Price details 24% off</p> <p>3 nights x 1 room €129.78 <small>€43.26 per night</small></p> <p>Taxes and fees ⓘ €19.42 <small>€6.47 per night</small></p> <p>Resort fee ⓘ €106.59 <small>€35.53 per night</small></p> <p>Total €255.79</p> <p style="background-color: #28a745; color: white; padding: 5px;">Total saving €79.27</p> <p>Pay now €149.20 Pay at property ⓘ €106.59</p> <p><small>Pay at property amount will be collected by the property in the local currency. The rate quoted in EUR (€106.59) is based on current exchange rates, which may vary at the time of payment.</small></p>	<p>Price details</p> <p>\$43.26 €129.78 <small>x 3 nights x 1 room</small></p> <p>Taxes and fees €19.42</p> <p>Resort fee €106.59</p> <p>Total €255.79 <small>for 3 nights, 1 room, 2 adults, 1 child Incl. taxes and fees</small></p> <p style="background-color: #28a745; color: white; padding: 2px;">Total savings with FindHotel 24% off €79.27</p> <p>Pay now €149.20 Pay at property ⓘ €106.59</p> <p><small>• Pay at property amount will be collected by the property in the local currency. The rate quoted in EUR (€106.59) is based on current exchange rates, which may vary at the time of payment.</small></p>

Customers on the B side who want to book multiple nights might feel that they are paying higher resort fees or taxes because they are not able to see the per night breakdown like on the A side.

STONG HYPOTHESIS

Questions to investigate

1. What should be the size of the savings banner?
2. What should be emphasised, total or savings?
3. What should be the position of the savings banner? Does showing the savings banner towards the top of the price details make the users more curious to scroll down and explore the deal?

Data Analysis investigation

Two types of assessment

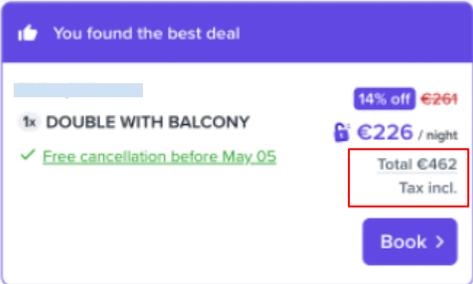
→ Impact of savings banner:

Deals with 'Single room multiple nights' and with savings banner shown might have higher PPer to Pay click on A-side. **NO SIGNIFICANT PATTERN**

→ Design without savings banner:

Compare 'single room single nights' deals without offer the PPer to Pay click should be similar on A & B. **SIMILAR PATTERN**

WEEK HYPOTHESIS

3	Discoverability of deal details is low on the B side. (same as SI no. 1) 13% more leaders clicked on the DEAL DETAILS on the A-side.	<p>Users don't expect to find the 'Deal details' in the total and free cancellation links. The underline for 'Total' and 'Free cancellation' is not visible enough for the users. PRIMARY HYPOTHESIS</p> <div style="text-align: center;"> <h3>B SIDE</h3>  </div>	<p>Design Suggestion</p> <p>Suggestions to increase visibility:</p> <p>Bigger font</p> <p>A font colour that has more contrast against the white background</p> <p>Add better signifiers, the underline is not enough. For example, adding an info icon could be a solution.</p>																
4	US and EU customers differ in their behavior after clicking on Deal Details. DD seem more important for European users than US users.	<p>US customers expect to see the taxes added towards the end of the funnel, hence they are less curious about the deal details.</p> <p>Compared to US deal details viewed users, European Users who view deal details are more likely to complete a booking.</p> <table border="1" data-bbox="428 781 1207 906"> <thead> <tr> <th></th> <th colspan="2">A side</th> <th colspan="2">B side</th> </tr> <tr> <th>% of leaders who had view</th> <th>EU</th> <th>US</th> <th>EU</th> <th>US</th> </tr> </thead> <tbody> <tr> <td></td> <td>6% more</td> <td></td> <td>1% more</td> <td></td> </tr> </tbody> </table> <p>On the A side European customers have a higher Lr-t-Br when they see deal details while US has a reverse trend.</p>		A side		B side		% of leaders who had view	EU	US	EU	US		6% more		1% more		<p>Questions to investigate</p> <p>What is impact does the deal details have on the US users Vs EU users?</p> <p>What is the significant difference between US users and EU users, when it comes to comparing deals?</p>	
	A side		B side																
% of leaders who had view	EU	US	EU	US															
	6% more		1% more																
5	The intent to view deal details is not affected by number of rooms or nights booked.	<p>The percentage of deal details click leader remains in a similar range regardless of the number of rooms and nights</p>	<p>Questions to investigate</p> <p>When does the user intend to check the deal details?</p>																

The primary hypothesis for the control version performing better than the A side would be the influence of a prominent savings banner. On the B side when the information, became less cluttered and structured, the visual emphasis of the savings banner also went down. There is two main takeaways from the A/B test. Firstly, both versions the control and the variation had very similar UX with subtle difference in UX, in such experiments it is very hard to predict the outcome of the experiment. This also emphasizes the need for testing before deployment, the previous experiments even though individually the user's test gave a positive outcome the end result may not necessarily lead to a positive result. Secondly, in this test I test many changes together (figure 22 and 23), some of these changes might have had some positive impact while others the opposite, but now we are not able to identify them separately. I believe this is a dilemma common to any A/B test, a judicious decision needs to be taken in select the changes for the A/B test so that the result from the test becomes measurable.

11. Conclusion

User experience of the website is largely affected by UI elements in the design, even minor changes in the design can change how the users perceive the design. E-commerce, mainly Online Travel agencies is a tough market, with a strong competitive market it is quite tough to pursue users to accept your product. The users are very informed of the market and the trends and have a strict mental model of what they expect when they approach an online service provider. Users are demanding and want the companies to come forward with business practices which make it easier for them to search, find and purchase online hotel reservations while providing as much transparency as they can about the deal. The research has been following the human-centered design approach of iterative design, during each iteration I have been interacting with users on their thoughts and expectations. The sole conclusion of the insights would be, that today the users are more aware, they know exactly what they want and they only need the right amount of information for them to complete the stage they are currently in. They also prefer an aesthetically appealing design, but then most of the website designs fair better in this sense, it is the subtle differences that differentiate businesses from each other. For example, one French user mentioned that bookingcom gives the option to select if he wants breakfast or not, on the UI, this makes it very easy for the user to plan the budget. The same functionality might be achieved in other websites as well with a different UX, but these differences could be the make or break of the deal.

Another factor that is driving the e commerce is the offer price of the deals. Whenever the user is provided with the deal there are two emotions in play, user is happy to get good deal but at the same time he is skeptical as to why is the deal priced lower, is he losing out on some feature compared to the other deals. The offer price is a strong motivator drive traffic into a website, users definitely explore a good deal, even though initial they may not have a intention to take the deal. Once landing on the page if the site can provide a good & familiar UX there is high chance that the user might feel the site is trustworthy and go forward with the deal.

In this research, I started with a literature study on how e-commerce and user experience are related and further investigated the techniques and customer journey for an Online Travel agency. I learned how to organize and present information and to understand the importance of practicing literature study before starting research. Based on the initial study, I formulated a research strategy for the research. I

was able to stick to the initial research strategy with an additional two experiments to validate the insights generated from the initial experiment. I started with a Heuristic evaluation of the case company website which gave me a good understanding of the product and identified many usability issues. The thesis details how Heuristic evaluation can be done to find usability issues for e-commerce website. The identified issues were then prioritized with the case company and further exploratory user interviews were conducted to evaluate the severity of these issues for actual customers. Various steps in conducting the user interview like, creating the interview script, prototype and observation sheet for any generic case was described in the thesis. I have also depicted how PlaybookUX can be used for conducting moderated user interview for online e-commerce evaluation. The user interview identified issues in user understanding of price, which was further investigated as three separate UX evaluations, Price clarity evaluation, card sorting on chargeable currency and preference test for CTA on deal details. Price clarity evaluation was done using an improved design using unmoderated user testing with PlaybookUX. The thesis details how to formulate questions for unmoderated user testing, which is a fast evaluation method for any e-commerce application. Price clarity evaluation showed that the main point of confusion in user arises when there is a currency conversion. Further investigating this, I conducted a card sorting to prioritize which elements of pricing are important to the users. I used Optimalsort which is an exclusive tool for card sorting and has explained how it could be used for other applications. Card sorting helped the case company to eliminate some of the redundant pricing information. Before eliminating these information, a competitive benchmarking was done. And lastly to finalize which pricing information should be shown along with the CTA on deal details page of the case company, a preference test was done. UsabilityHUB was used for preference test, I detailed how the user needs to be introduced to the context for the preference test. Then I A/B tested the design; test was not successful. I learned from the A/B test that even though individual evaluations showed a strong promise of success, overall, there was a marginal decrease in conversion. In the thesis I have portrayed how we conducted the A/B test and defined our success criteria, A/B testing can be a common method which can be used to evaluate if the design change of a e-commerce website is a success. From the A/B test I realized the world of e-commerce is much more complicated and emphasized the need for more agile methods of testing. I then formulated a small UX roadmap that would be the next steps after the A/B which is out of scope for this report and is added in appendix.

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13. Appendix

Appendix 1 - Preliminary Heuristic analysis result

Due to limitation of space they have not been added.

Appendix 2 - Payment flow Heuristic analysis result

Due to limitation of space they have not been added.

Appendix 3 - Screens for Exploratory usability study

US customer booking in US

GHA
SRP
RSP
Deal Details model
Checkout

Overview | Prices | Reviews | Location | Photos

Nightly price: \$197

Check in: Thu, Jul 21 | Check out: Sun, Jul 24 | 2 guests

Featured options:

- Booking.com: West Wing King - \$197
- Grand King - \$248
- MGM Grand: \$197
- Hotels.com: \$197

All options:

- MGM Grand: \$197
- Snaptravel: \$166
- LastMinuteTravel: \$177
- us.rehla.com: \$172
- Reserving.com: \$179
- Stayforless: \$183
- Booketta: \$183
- eSky.com: \$190
- Skyscanner: \$178
- View more options from \$143

Currency: USD

MGM Grand Hotel & Casino

7.3 Good 15,210 reviews

West Wing King#Double: \$156 (25% off)

SAHARA Las Vegas: \$99 (Price Drop)

agoda Blanca Double: \$99

Mandalay Bay Resort And Casino: \$218

Resort King Room: \$218

Stayforlong: \$202

Caesars Palace: \$244

MGM Grand Hotel & Casino

You found the best deal

West Wing King#Double (Family Plan): \$156 (25% off)

Total \$601 for 3 nights, 1 room including taxes and fees

3 Room types available

West Wing King#Double (Family ...): \$156

Deal details

Price details: 25% off

- 3 nights x 1 room: \$468.83
- Other local taxes and fees: \$132.66
- Total: \$601.49

Cancellation Policy: This offer has free cancellation

Cancel by: Jul 18, 2022 (Free cancellation with full refund)

Nightly price: \$197 (25% off) = \$156

Other local taxes and fees: \$132.66

Pay at property: \$132.66

MGM Grand Hotel & Casino

3799 Las Vegas Boulevard South, Las Vegas Strip, Las Vegas, Nevada, United States

Check in: Jul 21, 2022 15:00 | Check out: Jul 24, 2022 11:00

1 Room | 2 Guests | 3 Nights

West Wing King#Double (Family Plan): \$44.22 per night

Price details: 25% off

- 3 nights x 1 room: \$468.83
- Other local taxes and fees: \$132.66
- Total: \$601.49

Total saving: \$202.38

Pay now: \$468.83

Pay at property: \$132.66

Personal Details:

- Room 1: West Wing King#Double (Fami...)
- 2 adults
- First name: [input] ✓
- Last name: [input] ✓
- Email address: [input] ✓
- Phone country code: United States of America +1 ✓
- Phone number: 8008648331 ✓

About this data Web results
Displayed currencies may differ from the currencies used to book properties. Learn more

Las Vegas Strip, Las Vegas, NV, 1.1 miles from MGM Grand Hotel & Casino
8.9 Good

Nightly price

Lowest price

Booking.com
Forum Classic, 1 King Bed, Non-Smoking
FREE cancellation
View Deal >

Agoda
FREE cancellation
\$289 >

Hotels.com
FREE cancellation
\$289 >

New York New York Hotel & Casino
4.5 Price Drop
Las Vegas Strip, Las Vegas, NV, 0.3 miles from MGM Grand Hotel & Casino
8.1 Very good

Nightly price

Lowest price

Booking.com
Park Avenue King#Double (Family Plan)
FREE cancellation
View Deal >

Booking.com
FREE cancellation
\$145 >

Trip.com
FREE cancellation
\$124 >

Planet Hollywood

West Wing King#Double

Free cancellation before Jul 18, 2022

nightly price
\$156

Total \$401 for 3 nights, 1 room including taxes and fees

Deal details & Book >



Grand King#Double

Free cancellation before Jul 18, 2022

nightly price
\$165

Total \$426 for 3 nights, 1 room including taxes and fees

Deal details & Book >

- Check-in & Check-out
- Important information
- Amenities
- Activities
- Internet
- Parking
- Services
- Optional extras

Reviews

Who stays here?

Business	14%
Couple	40%
Family	20%
Group	20%
Solo	3%

Rating summary

8.1 Cleanliness	7.9 Dining
7.7 Facilities	8.1 Location
7.9 Rooms	7.9 Service

Top comments from travellers

- "Well-sized beds"
- "Great check-in/check-out process"
- "Loved the restaurant"
- "Rooms were well sized"

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You may be reached at: +1 8009648331

Special requests (optional)

Billing Address

Address *
Address line 2
Postal code *
City *
Country *
United States of America
State *

Payment

We accept the following payment methods

VISA MASTERCARD AMERICAN EXPRESS DISCOVER

Card number *
Expiration MM/YY *
03/23
CVV code *
Cardholder's name *

We use secure transmission
We protect your personal information

Important information

Property fees and instructions

Property fees

You'll be asked to pay the following charges at the property:

- Deposit: USD 100.00 per accommodation, per day
- Resort fee: USD 44.22 per accommodation, per night

The resort fee includes:

- Fitness center access
- Internet access
- Phone calls

We have included all charges provided to us by the property.

Cancellation Policy

This offer has free cancellation

Cancel by

- Jul 18, 2022
Until 05:00 AM (GMT)
Free cancellation with full refund.
- Jul 20, 2022
Until 10:00 AM (GMT)
You'll pay \$468.83 in fee.
- Jul 21, 2022
Until 12:00 AM (GMT)
You'll pay \$468.83 in fee.
- Jul 21, 2022
From 12:00 AM (GMT)
Non-refundable after this time.

Each room in this reservation is subject to the hotel's cancellation policy. Dates and times in the policy refer to the property's local time.

By clicking "Complete Booking", you agree you have read and accepted our Terms & Conditions, Privacy Policy

Complete Booking

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French user booking to Spain

GHA

H10 Casa Mimosa

Aperçu Prix Avis Emplacement Photos

Prix total par nuit Annullation gratuite uniquement

Arrivée: jeu 21 juil. Départ: dim 24 juil. 2

Annexes - Options de nos partenaires

- Booking.com: Chambre Double Deluxe - Vue sur Jardin - 429 €
- Booking.com: Chambre Double Deluxe (2 Adultes + 1 Enfant) - 491 €
- Hotels.com: 383 €
- eDreams: 382 €
- Agoda: 370 €
- H10 Hotels: 372 €
- Staylonging.fr: 380 €
- Booking.com: 429 €
- Destinia: 383 €
- Expedia.fr: 383 €
- Agoda: 375 €
- Hotels.com: 383 €
- Bluepillow.fr: 429 €
- ZenHotels.com: 383 €

Toutes les options

H10 Hotels: 372 €

Staylonging.fr: 380 €

Booking.com: 429 €

Destinia: 383 €

Expedia.fr: 383 €

Agoda: 375 €

Hotels.com: 383 €

Bluepillow.fr: 429 €

ZenHotels.com: 383 €

Afficher plus d'options à partir de 381 €

* Ce prix a été personnalisé par le partenaire de réservation. En savoir plus

SRP

H10 Casa Mimosa

Filtres Trier Carte

Montrez les offres avec Annullation gratuite d'abord

H10 Casa Mimosa

Dreta de l'Eixample, Barcelone

5.4 Superbe

Prix par nuit par chambre taxes incluses

Chambre Double Deluxe - 429 €

Chambre Double Deluxe - 491 €

Agoda: 375 €

Roomli.com: 370 €

De très bonnes offres disponibles 21 juil. - 24 juil.

Vincci Gala

Dreta de l'Eixample, Barcelone 1.3 km de H10 Casa Mimosa

9 Fabuleux

Prix par nuit par chambre taxes incluses

Booking.com: 290 €

Agoda: 245 €

Staylonging: 247 €

Hotel Regina

Dreta de l'Eixample, Barcelone 1.2 km de H10 Casa Mimosa

5.3 Fabuleux

Prix par nuit par chambre taxes incluses

Booking.com: 218 €

Agoda: 214 €

Hotels.com: 218 €

Hotel Pulitzer

Dreta de l'Eixample, Barcelone 1.2 km de H10 Casa Mimosa

5.5 Fabuleux

RSP

H10 Casa Mimosa

21 juil. - 24 juil. - 2 Invités

H10 Casa Mimosa

Pau Claris, 179, Dreta de l'Eixample, Barcelone, Catalogne, Espagne

9.4 Excellent 1499 avis

L'offre que vous avez sélectionnée

Chambre Double Deluxe, côté jardin - 375 €

Total 1148 €

Agoda: 421 €

Booking.com: 421 €

3 catégories de chambre disponibles

Chambre Double Deluxe, côté jardin - 375 €

Chambre Double Deluxe, côté jardin - 421 €

Informations sur la chambre

Chambre Double Deluxe, côté jardin - 421 €

Deal Details model

Détails de l'offre

Détails des prix

3 nuits x 1 chambre: 1022,73 €

Taxes et frais: 102,27 €

Autres taxes et redevances locales: 22,80 €

Total: 1147,80 €

Politique d'annulation

Annulez avant le 20 juil. 2022

Annulation gratuite avec remboursement

Taxes et frais

Les taxes et les redevances sont généralement les frais de recouvrement que FindHotel verse à ses partenaires (par exemple, des hôtels).

Taxe locale

L'établissement facturera la taxe locale obligatoire en début ou en fin de séjour.

Checkout

H10 Casa Mimosa

Pau Claris, 179, Dreta de l'Eixample, Barcelone, Catalogne, Espagne

9.4 Excellent 1499 avis

Arrivée: 21 juil. 2022 15:00

Départ: 24 juil. 2022 12:00

Instructions pour l'enregistrement

1 Chambre, 2 Invités, 3 Nights

Chambre Double Deluxe, côté jardin

Détails des prix

3 nuits x 1 chambre: 1022,73 €

Taxes et frais: 102,27 €

Taxe locale: 22,80 €

Total: 1147,80 €

Economie totale: 138,00 €

Payer: 1125,00 €

Données personnelles

Chambre 1: Chambre Double Deluxe, côté jardin

nombre d'adultes

À propos de ces données Résultats Web
Comment fonctionne Google Hotels ?
Les devises affichées peuvent être différentes de celles utilisées pour réserver des établissements.
En savoir plus

Booking.com Prix le plus bas
Chambre Double Ou Lits
Jumeaux
Frais d'annulation, Paiement à l'hôtel
221 €
Voir l'offre >

Agoda 221 € >
Hotels.com 221 € >

El Avenida Palace Hotel
Dreta de l'Eixample, Barcelone · 0,9 km de H10 Casa Mimosa
Fabuleux
Prix par nuit par chambre taxes incluses

Booking.com 256 € 222 €
Chambre Double (12 Adultes)
Frais d'annulation, Paiement à l'hôtel
Voir l'offre >

Agoda 201 € >
Hotels.com 222 € >

Hotel Royal Passeig de Gràcia
Dreta de l'Eixample, Barcelone · 0,2 km de H10 Casa Mimosa
Fabuleux
Prix par nuit par chambre taxes incluses

Booking.com 256 € 236 €
Chambre Confort
Frais d'annulation, Paiement à l'hôtel, Petit-déjeuner compris
Voir l'offre >

Agoda 212 € >
Booking.com 268 € >

Room Mate Anna
Dreta de l'Eixample, Barcelone · 0,5 km de H10 Casa Mimosa
Fabuleux
Prix par nuit par chambre taxes incluses

Booking.com 230 €
Chambre Double Basique - Non Remboursable
Voir l'offre >

Hotels.com 214 € >

Détails de l'offre



Chambre Deluxe, vue jardin, côté j...
2 personnes(max)
2 Twin Beds and 1 Twin Sofa Bed
1 King Bed and 1 Twin Sofa Bed

Informations sur la chambre

Paiement à l'hôtel 425 €
Frais d'annulation avant le 20 juil. 2022
Entree gratuite dans le programme Plus
Total 1296 € pour 3 nuits, 1 chambre taxes et frais inclus

Détails de l'offre

Paiement à l'hôtel 483 €
Petit déjeuner compris
Frais d'annulation avant le 20 juil. 2022
Entree gratuite dans le programme Plus
Total 1472 € pour 3 nuits, 1 chambre taxes et frais inclus

Détails de l'offre



Chambre Triple Deluxe, côté jardin
2 personnes(max)
1 King Bed and 1 Twin Sofa Bed
2 Twin Beds and 1 Twin Sofa Bed

Informations sur la chambre

Paiement à l'hôtel 425 €
Frais d'annulation avant le 20 juil. 2022
Entree gratuite dans le programme Plus
Total 1296 € pour 3 nuits, 1 chambre taxes et frais inclus

Détails de l'offre

Arrivée & Départ

Informations importantes

Équipements

Activités

Internet

Stationnement

Prestations

Suppléments en option

Avis

Qui séjourne ici ?



Récapitulatif de l'évaluation



Meilleurs commentaires des voyageurs

- "Salle de bain spacieuse"
- "Formalité d'arrivée/départ fluides"
- "Emplacement idéal"
- "Les chambres étaient de bonne taille"

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Demandes spéciales (facultatif)

Veuillez noter que la demande de chambre reste à la discrétion du propriétaire et ne peut être garantie.

Choisir une catégorie de lit
2 Twin Beds

Adresse de facturation

Ligne d'adresse 2
France

Paiement

Nous acceptons les modes de paiement suivants



- Nous utilisons un service de transmission sécurisée
- Nous assurons la protection de vos données personnelles

Informations importantes

Property fees and instructions

Frais de propriété

You'll be asked to pay the following charges at the property:

- A tax is imposed by the city EUR 2.80 per person, per night, up to 7 nights. This tax does not apply to children under 17 years of age.

We have included all charges provided to us by the property.

Other instructions

- Des frais pour toute personne supplémentaire peuvent être facturés et dépendent de la politique de l'établissement.
- Une pièce d'identité officielle avec photo et un dépôt de garantie en espèces, par carte de crédit ou par carte de débit, peuvent être demandés à l'arrivée pour couvrir tous frais imprévus.
- Les demandes spéciales, qui ne peuvent pas être garanties, sont soumises à disponibilité à l'arrivée et peuvent entraîner des frais supplémentaires.
- Cet établissement accepte les cartes de crédit; espèces non acceptées.
- Certaines chambres de cet établissement ne conviennent pas aux enfants; veuillez indiquer l'âge des enfants dans les paramètres de recherche pour afficher les chambres disponibles.
- Veuillez noter que les normes culturelles et les règles pour les voyageurs peuvent différer selon le pays et l'établissement. Les règles mentionnées sont fournies par l'établissement.

Le personnel de la réception vous accueillera sur place. Cet établissement est situé dans la zone à faibles émissions de la ville. Seuls les véhicules à faibles émissions sont autorisés à y entrer. Si vous possédez une plaque d'immatriculation non espagnole, vous devez enregistrer votre véhicule à l'agence suprie de la ville.

Politique d'annulation

Cette offre offre une annulation gratuite

- Annulez avant le
- 20 Jul. 2022
Jusqu'à 11:59 (GMT+2)
Annulation gratuite avec remboursement intégral.
 - 21 Jul. 2022
Jusqu'à 11:59 (GMT+2)
Vous paierez une pénalité de 1 nuit plus taxes et frais.
 - 21 Jul. 2022
De 11:59 (GMT+2)
Non-refundable after this time.

Chaque chambre de cette réservation est soumise à la politique d'annulation de l'hôtel. Les dates et les heures indiquées dans la politique sont référencées à l'heure locale de l'établissement.

En cliquant sur « Réservation complète », vous reconnaissez avoir lu et accepté nos conditions générales et notre politique de confidentialité.

Réservation complète

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Appendix 4 – Exploratory user interview test script and Observation sheet

Test script

Welcome text

- Hi, welcome [participant's name]! My name is [interviewer name], I am a [role]. And my colleague [note taker name] is also here, he/she is a [role]. I work for a travel company in Amsterdam. And travel is the topic of this session.
- Have you participated in usability testing before? (they will say yes). Alright, then you know I will be recording this session for internal use only. Shall I start? (they will say yes)

Interview script and tasks

1. Can you introduce yourself?
 - If they didn't mention: Tell us where you are from?
2. Not considering the Corona pandemic, how often do you travel on average per year?
 - For business:
 - For leisure:
3. Please tell us briefly how you normally look for accommodations
 - 👉 Give the participant approx. 2 minutes to answer. If they don't mention these topics themselves, ask:
 - Which website(s) do you use to start searching?
 - On which websites do you usually book your hotels or apartments?
 - Which are the most important factors for you when booking rooms?
4. 👉 Did the participant mention starting on Google in their previous answer?
 - If yes: You mentioned that you sometimes use Google to find hotel deals. Now imagine that you want to travel to Vegas and are interested in booking a stay for 3 nights at the MGM Grand. I will now share a link with you that shows a price comparison on Google for this hotel.
 - If no: Imagine you are interested in booking a stay for 3 nights at MGM Grand in Vegas and decided to compare the prices for this hotel on Google. I will now share a link with you that shows what the price of this hotel is on different websites.
5. 👉 Share the link to the prototype
Feel free to scroll, but please don't click anywhere yet. Take a few moments to view the offers for MGM Grand on this page. While you're looking, think out loud about what you see.
 - 📱 Participant should be looking at the GHA screen
 - 👉 Give the participant 1 minute to digest the page. If they don't mention the below topics, ask:
 - Without clicking anywhere, take me through your process of how you finalize and choose an offer? Why?
 - If they did not mention opening multiple tabs: Do you compare offers in parallel or go through them one by one?
 - Which is the most appealing offer here? and why?
6. 👉 Did the participant choose 'Case company'?
 - If they chose 'Case company':

-   If not already mentioned, ask: How do you do that?
 -  Is there any information that missing for you while comparing rooms?
- What information do you expect to see when you click on the blue 'Deal details' button?
- You have the total price and the nightly price displayed on this page, How important is it for you to see the breakdown of the price?
 -   If required, ask: What do you expect to see in the breakdown of the price?
 -   If required, ask: How do you expect the taxes and fees to be displayed?
-  Can you suggest any improvements regarding pricing that could aid you in making a decision?

1. Imagine you want to see the breakdown of the price on the best deal (the deal on the top). How would you do that

-  *Users should land on the Deal details model, if not, guide them more. Give them some time to digest the page. If they don't speak out loud, remind them to do so.*
-  *User should have arrived at Deal details model*
- Tell us what you see here
 -  If not already mentioned, ask: Is this how you expected to see the breakdown of the price?
 - If yes: The next question
 -  If not: Can you suggest any improvements regarding the breakdown of the price?
 -  If required, ask: Can you go line by line and tell us what you understood from the pricing, starting with 25% off?
 -  If not already mentioned, ask: What do you associate the '25% off' with?
 -  If not already mentioned, ask: What were your thoughts when you saw 'Cancellation policy' also displayed on this page?
 - *SKIP - IF LOW ON TIME*  If not already mentioned, ask: Can you describe what you understand from the cancellation policy?
 -  If not already mentioned, ask: What about the subtext below the cancellation policy with the information icon?
- What are your thoughts on the blue button at the bottom and the details along with it?
 -  *If not already mentioned, ask: Did you expect to see the per night price here?*
 -   If not already mentioned, ask: Where do you expect to reach when you click on the button?

2. Please proceed to click on the button.

-  *Users should land on the Checkout page. If they don't speak out loud, remind them to do so.*
-  *User should have arrived at the Checkout page*
 - Think aloud about what you see here
 - If not already mentioned, ask the following:

- ▶ What do you normally look for when you first reach this page?
 - What do you feel when you see the breakdown of price on this page?
 - 🖱 If required, ask: How is this different from the previous page?
 - 🖱 If required, ask: Tell us what you understand from pay now & pay at the property? (Expecting that users will mention that)
 - ▶ What information do you expect to find when you click the info icon near pay at the property?
 - Please go ahead and click on it:
 - 🖱 If required, ask: Does this information meet your expectation?
 - How important is it for you to see the per night taxes in this breakdown?
 - What information do you expect to find when you click the info icon near other local taxes and fees?
 - Please go ahead and click on it:
 - 🖱 If required, ask: Does this information meet your expectation?
 - 🖱 Without clicking anywhere, Can you find any other information regarding pricing on this page? Expecting users will find the 'Property fee and instruction'
 - 🖱 If required, ask: Can you go further down, Do you see the heading 'Important Information'?
 - 🖱 If required, ask: What kind of information do you think you will find under property Fees and instruction?
 - Please go ahead and click on it.
 - What are your thoughts?
 - Now that you have enough information about the pricing, tell us what you have to pay now and on the trip?
- 3. Going to the personal details: Could you click on the personal details form?**
- 🖱 *Users click the personal details.* Imagine you have filled in all the information required before payment.
 - What do you normally, do next?
 - 🖱 If the user doesn't mention, reconfirming the deal ask: Do you reconfirm the details of the offer before payment?
 - 🖱 If the user has not mentioned: What all do you check when reconfirming the offer before checkout?

Wrapping up:

I am coming to the end of the session,

A final question, Could you recollect any item that was confusing to you regarding the price, anywhere in the session?

Finally, Do you have any questions for us?

Through out the script I have used symbols and colour changes in the font so that it can guide me easily during the interview. Legend of symbol is as below

- 🖱 Point to be note while asking
- All questions in bold are important questions.

- Information in grey colour are additional information which is given for context after the first or second interview you may skip and go directly to the question.
-  symbol is used to indicate questions which could be skipped if there is a time constrain.
-  symbol is used to indicate when a new screen is reached in the prototype.

Observation sheet

Participant Code:

Location:

Job:

Travel habits:

-

How do you normally look for accommodations? 

-

Most import factors when booking

-

Users shared the prototype:

 Participant on GHA

Process of booking a deal on google

-

Most appealing offer?

-

Users click FH deal:

 Participant on SRP

First impressions  :

-

Is the offer the same price as you saw on the Google results page?

-

What have they understood from how the offers are shown?

-

Are there any concerns at this point?

-

Thoughts on the crossed-out price of ~~\$197~~?

-

How important is it for you to understand, how you got the offer from \$197 to \$156?

-

What do you expect to see when you click the blue 'View Deal' button?

-

Users click View deal:

📱 Participant on RSP

First impressions 🤔 :

-

What do you feel when you see the green banner?

-

Thoughts on the two offers in the portfolio box?

-

Do you think the nightly price included taxes? ⓘ

-

Thoughts on interchanging Total price and nightly price on RSP?

-

Thoughts on comparing different room types?

-

where do you expect to find the breakdown of the price? ⓘ

-

Thoughts on the breakdown of the price?

- Importance:
-
- Expectations of the breakdown of price:

-

Did the user identify 'Deal details' to have the breakdown of the price? ⓘ

-

Users click Deal details:

📱 Participant on Deal details model

First impressions 🤔 :

-

Did it meet the expectation? ⓘ

-

Understanding of 25% off

-

Thoughts on seeing cancellation policy on DD ⓘ

-

Thoughts on nightly price at the sticky button.

-

📱 Participant on the Checkout page

First impressions 🤔 :

-

Thoughts on the deal

-
- Thoughts on the breakdown of the price
-
- How important is it for you to see the per night taxes in this breakdown?
-
- Thoughts on the info icon near other local taxes and fees?
-
- Thoughts on pay now & pay at the property
-
- Thoughts on the Info icon near pay at the property?
-
- Thoughts on property fees and instruction?
 - Identified 'Property fee and instruction' to have pricing info: Yes/No
 - Before opening the dropdown
 -
 - After opening the drop-down:

Appendix 5 : Transcript of User interview

Legend of symbols:

To improve the readability of the report and also to enable quick conclusions it is good to add symbols in the transcript and observation sheet.

-  symbol is used to indicate user quote.
-  symbol is used to indicate when there is a deviation from user mental model.iew script
-  Emojies are are used to indicate the users emotion like happiness, anger, confused.
-  [← Additional context on the insights are added as notes.](#)

Participant code: D1808M

Location: Phoenix, Arizona, USA

Job: Administrative staff at Universities

Travel habits:

- For business: two to three work trips a year
- For leisure: seven or eight trips a year
 - usually like six domestic in the states, maybe 7. And then usually one international trip per year.

How do you normally look for accommodations? 

- He starts normally on Expedia
-  *"Expedia for myself. I think it's the most convenient just because it's a good combination of being able to use or secure my flight as well as like hotel and then a possible car if I need it"*
- He starts at Expedia to gauge the cost for the trip and sometimes books also directly with the hotel.
- After he does his investigation on Expedia and
- He also checks Kayak, Priceline and Tripadvisor.

- He also feels that he gets a better deal when he combines the hotel, flight and airport tickets.
- He used to look for rooms on Google but now he mainly sticks to Expedia because of the rewards.

Most import factors when booking

- Clear description and pictures  “And what I mean by description are kind of like the bullet points that they give you for like the room details like, you know, the square footage. How many beds is it? Is it an ocean or garden view, whatever, and then have the pictures of the room.”
- Reviews  “And I think probably reviews from others. I think is, it doesn't make or break my selection, but it does help me in making a selection”
- Price  “I definitely price comes into play, but I don't mind paying for more, you know, for quality.”

Users shared the prototype:

 Participant on GHA

Process of booking a deal on google

- He first checks the dates that he booked for and then makes a mental note of how much the price range varies in the offer.  “it looks like my range is about 197. And so maybe even 166 is the cheapest or 154. So basically 154 to the high as 197”
- He also prefers to go directly to the official website of the hotel.
- He also prefers to pick the dates for the say based on the price calendar.  “ So instead of like Night price... there's literally a calendar for the month of May and price under each day. So, you'll see when it more expensive to go, which is usually the weekends and then, just be cheaper prices on, like a Tuesday or Wednesday night so I could see myself doing something like that.”
- He has not interacted with the nightly price toggle on the GHA but believes that if he could set the price to total for the whole trip it would be beneficial for him.  “Because I feel like when you factor in the taxes or fees, Vagas has like Resort fees and it gives you more realistic, a more realistic picture of what your actual total is going to stand, instead of you, which is not, it's not hard math. But instead of me having to do extra math”
- He usually looks through one deal and investigates that before going to the next.

Most appealing offer?

- He prefers to go with websites he is familiar with, here it was 'LastMinuteTravel' because he has booked with them before. ← Users remember the website if they have booked before and tend to feel a bit more comfortable.

Users click FH deal:

 Participant on SRP

First impressions :

- He understands that he is seeing the nightly price and he is saving because it's cheaper than the MGM rate of \$197.
- He understands that FH is comparing the deal with other websites and also for other property.
- He noticed that on SRP it says it's Free cancellation, but it was not shown on GHA. He says it might have enticed him to select this deal more. ← Sometimes on GHA some deals don't have the free cancellation tag shown along with that even though they have free cancellation in the deal.

Is the offer the same price as you saw on the Google results page?

- *thinking that means flexible dates that you can pick or flexible in terms of room options that they have.”*

Are there any concerns at this point?

- He didn't feel any concerns and added he would have liked to know the cancellation period for the deal.
- He expects to get the total price of the deal on the next page.

Thoughts on the crossed-out price of \$197?

- 😊 He says it makes him feel good because he is saving money, but he also believes that *"that part of me thinks like, you know they make up a price, and then just do a slab to make it look like it's saving money, but It can still make you feel good."* ← First landing on the GHA, he felt that he was saving money because the price (197) was the same as that of the deal on MGM but when asked specifically about this, he still has a feeling that this price can be a make-up price. This can be a common feeling in the minds of the users coming from their exposure to e-commerce and, it is better not to base any insight on this.

How important is it for you to understand, how you got the offer from \$197 to \$156?

- he doesn't feel it is very important as long as he knows the price is competitive and he is saving. *"Ultimately, not super important because I don't think it really affects."*

What do you expect to see when you click the blue 'View Deal' button?

- Open the hotel or room description page, picture, amenities of the room and breakdown of the price.

Users click View deal:

📱 Participant on RSP

First impressions 🤔 :

- The sees the cancellation date and reads the total price including taxes, which he was expecting to find on this page.
- ☹️ He also related the 25% off to the family plan. *"It's part of a family plan so it's 25% off"* ← Improper room naming and the positioning of the %off can create an unnecessary interpretation of the savings.
- He felt it to be pretty straightforward.
- He also felt that resort fees may not be included in the total. ← Would a copy change from 'Taxes included' to 'All-inclusive' be effective.
- Clicking on Book will take him to the page to fill in the payment information.

What do you feel when you see the green banner?

- He felt good and that he doesn't have to search anymore. *"It makes you feel I don't have to search any further, it feels like the system or the app is prioritizing the best deal"*

Thoughts on the two offers in the portfolio box?

- He felt that they are given so that if he doesn't want to go with FH he can choose other options.
- ☹️ He also felt that the room offered were different because of the room naming. (FH name: West wing king# Double (Family plan), Booking: West wing king, Agoda: West wing king room) ← the difference in the naming can create confusion among the user and if the price margin between the deals is less it can lead the user to select a portfolio deal.
- He wouldn't click on the portfolio deals because he feels he is getting a good deal.

Do you think the nightly price included taxes? ⓘ

- *"A have to do slight math here. I don't know if it's included in the nightly price. But I definitely have confidence is included in the total price"*
- *"I feel like no, off the top of the head because it's not communicated that way"*
- He believes it's shown without taxes to make it more attractive by showing a smaller number.

Thoughts on interchanging Total price and nightly price on RSP?

- *"If I were to flip them. I would probably recommend just providing the total price for the stay after taxes and fees, and not even giving me a night price. I think the way this is set up where I*

guess that's how I'm used to reading them seeing the nightly price and then getting a total is fine for me, but then another option that I'm also fine with, not even giving me a nightly price."

- The believes that he is more concerned with the total price than the nightly price, because he is fine comparing the hotels by their total price.
- Later on, in the interview, he adds that when he plans the trip budgets based on the total price and not the nightly price.

Thoughts on comparing different room types?

- He compares the room types within a hotel as well.
- He compares the bed type between rooms if the trip is with his wife he books a double bed and if it is with a co-worker he needs a twin bed.
- He also looks into room setup, sq ft, balcony.

where do you expect to find the breakdown of the price? 

-  *"I'm thinking under deal detail like a part of me thinks that deal details either like the amenities of the room that I talked about like to have a mini-fridge. Do you have a coffee machine in the room or the deal details is the actual breakdown of the money"* ← On his first impressions of RSP he expressed that Deal details might contain the breakdown of the price, after further investigation, he felt that it might also be further amenities of the deal. It could be a hypothesis that users need more information about the specification and amenities of the deal to make a decision on the RSP and since the copy says 'Deal Details' they expect to find more information there. If the information in the deal detail is only related to pricing then it could be also mentioned as 'Price details'.

Thoughts on the breakdown of the price?

- Importance: For him, it's not important to see the nightly breakdown but he is more concerned with the Grand total. 
- He also adds that when looking at other bills he is always concerned with the grand total and checks through the remaining just to see if there are any charges that weren't his. ← If I ever plan to show the structured breakdown of all the taxes, like fees towards OTA, tourist charges, Cleaning fees etc, then I need to focus heavily on the copy so that the user is clear on why this charge is collected from him. Users shouldn't feel like this is a charge I shouldn't be paying.
- ★ He says that the breakdown of the price per night (instead of the current method where I show the average price) could be useful for him to determine the duration of his stay.  *"The only thing I could think maybe, if I'm going from like a Wednesday to Saturday, understanding the price difference as you get closer to the weekend in Las Vegas, you know, cuz I know I've been to Vegas Wednesday to Saturday before, like your Wednesday and Thursday. Nights could be yes, \$60 a night, then \$90 a night and then it doubles Thursday and Friday nights to 160 & 200. And I think that's the only thing that could maybe because that could impact how long I stay on a trip."*
- He understands that the prices of the hotel can change over the weekdays.
- Expectations of the breakdown of price:
 -  *"I would expect to see your night rates. So say like, say I stayed somewhere from June 1st until June 3rd. So, I'm expecting you to say June one room rate price, a June One room tax/fee and then underneath June three ... you know, if there's a resort fee, June One, the third line would be Resort fee so on and so forth."*

Did the user identify 'Deal details' to have the breakdown of the price? 

- Slightly confused and expected that deal details could be a breakdown of price or details of amenities.

Users click Deal details:

📄 Participant on Deal details model

First impressions 🤔 :

- He liked the way it was displayed and understood the cancellation policy.

Did it meet the expectation? ⓘ

- This is better than what he expected, it is one line for each item room rate, taxes etc.

Understanding of 25% off

- He understood the 25% off correctly. 🗨️ *"I'm assuming that. How it gets me to that one 601 instead of the 800, like the one from MGM. I think was 197 versus this one is 156th"* ← Earlier on RSP he said that the 25% off might be due to the family plan but on the deal details model he understands it correctly. But an important thing to note here is that most often users compare the rate with the official website rate (here MGM which they saw on GHA). Even though the rate of portfolio box deals is the same users don't mention that, this could be a good behaviour to investigate.
- He also understands that the 25% discount is already applied and the price shown here is after the 25% discount. ← **Should it be more evident?**

Thoughts on seeing cancellation policy on DD ⓘ

- He liked it to have that here.
- He also was slightly confused but he understood it as 468.83 that would be charged and he will get back the remaining.
- 🗨️ *"You know, I'm not sure. If I was expecting it to be this in-depth, I was expecting if anything to say, like, you know, free cancellation up until this day. At this time, not like, a partial refund beyond that point. Cuz that's something I really see, which is actually a good thing. I guess."*

Thoughts on nightly price at the sticky button.

- He prefers to have no price displayed on deal details near the sticky button. 🗨️ *"I seen already thought it is not like affecting positively or negatively. I honestly don't even feel like it needs to be there because I've seen it. I've seen it at the top, I've seen it on the previous page. So it's fine. it always comes over. I don't want to say like super pushy, but kind of almost like here's a reminder again your saving 40\$, Okay I get it"*
- He says 🗨️ *"if I had to the pick, I would say nothing here, but if some price was going to be displayed here, I would go with the total."*

Users click Book:

📄 Participant on the Checkout page

First impressions 🤔 :

- 🗨️ *"This is what I was expecting"*
- He related the savings banner and 25% off.
- At first look, he felt that he would pay 60 -70% now and remain at the property.

Thoughts on the breakdown of the price

- How important is it for you to see the per night taxes in this breakdown?
 - Not super important, he feels confident that if needed he can slit this himself.
 - He doesn't mind having the information there, it saves him from doing the math.

Thoughts on the info icon near other local taxes and fees?

- 🗨️ *"Maybe either break down or just a short little two sentences about what these taxes and fees are"*
- **Maybe it's a good idea to write the copy as "Other local taxes and fees" when there are taxes and fees.**
- On seeing the information model he said 🗨️ *"It's a little more vague than I expected"* but then he realized that it would be hard to describe each type of city tax and said 🗨️ *"Actually, not"*

really good enough because without going into detail of every tax setup of every city and say, like if you're in town in Los Angeles, here's Los Angeles County tax, Los Angeles city tax. I think it's good enough." ← The copy could be improved.

Thoughts on pay now & pay at the property

- He initially felt slightly confused, then suddenly realized and said he will pay now the rate for the room and taxes and fees at the property.
-  "So what I'm paying right now is literally just reserved the room for those three nights and then applicable taxes will be applied. I'm assuming once I actually stay on the property."

Thoughts on the icon near pay at the property?Info

- He expects to find more information about pay at the property.
- When he opened the model, he felt the information was clear to him and as he expected.

Thoughts on property fees and instruction?

- Identified 'Property fee and instruction' to have pricing info: Yes
- Before opening the dropdown
 - He expects to find the resort fees here.
 - He is also curious, he believes that resort fees are normally not included in the taxes and fees. He felt that resort fees are not mentioned till now and the breakdown of the price above was not very useful for him to know about this.
- After opening the drop-down:
 - He understood the information in the copy clearly.
 - When asked if he would have found this information eventually he says probably not. He has been to vegas and so he was looking for the resort fees, but if not for that he won't have found the information.
 - Since the 'resort fee' and the 'Other local taxes and fees' are the same amount he thinks they could be the same. He also mentions resort fees are the most confusing part when booking the deal because some deals have resort fees included and some deals say specifically not included.
 -  He is not confident whether the resort fees are included in the total or not.

Appendix 6: Insights from Moderated User Interview

The issues are indicated by ☆ XHYZZ where

- X stands for S / I, S indicating that it is a suggestion, I indicating it is a suggestion.
- HY stands for the heuristics, if there is a violation (as pers section 2.3). If there is no violation then it left as 00.
- ZZ stand for the issue number.

Legend of symbols in transcript

To improve the readability of the report and also to enable quick conclusions it is good to add symbols in the transcription.

-  symbol is used to indicate user quote.
-  symbol is used to indicate when there is a deviation from user mental model.
-  emojis are used to indicate the users emotion like happiness, anger, confused.
- ← Additional context on the insights are added as notes.
-  Symbol is used to mark general insight.

- ☆ Symbol is used to indicate an issue or suggestion.
- US vs FR Symbol is used to indicate difference of opinion between US user and EU user
- ⓘ Actionable general insights.
- ⓘ Actionable insights relevant to price clarity.

Important factors when selecting an offer

Deciding a whether to go forward with a deal in Online travel booking are as follows

- Location of hotel, reviews and the offer on the hotel price.
- Clear description and pictures
- “because its covid cleanliness is important”
- The selection of type of room depends on companions
 - When users are going with kids they prefer to select Suite room
 - Users might look for specific amenities Like Pool, bathtub, baby feeder
 - Couple
 - Bed size
 - Amenities
 - Refrigerator so she can bring food.
 - Bathtub

ⓘ Combination deals - If deals are combined with other amenities like flights or car rental, the overall deal appears cheaper and users tend to book it. ← This is common for any e commerce deal.

💬 “Expedia for myself. I think it's the most convenient just because it's a good combination of being able to use or secure my flight as well as like hotel and then a possible car if I need it”

☆ S0001 : Combining deals with value added offers can increase the conversion rate.

× Filter

Property type ▾

Hotel Features ▲

<input type="checkbox"/>	Airport shuttle	20
<input type="checkbox"/>	Swimming pool	39
<input type="checkbox"/>	Parking	156
<input type="checkbox"/>	Kitchen	262
<input type="checkbox"/>	Restaurant	105
<input type="checkbox"/>	Fitness Room/Gym	72
<input type="checkbox"/>	High-speed Internet	24
<input type="checkbox"/>	Free Wi-Fi	669
<input type="checkbox"/>	Kitchenette	12
<input type="checkbox"/>	WiFi	621

Reset Apply

Improve usability attribute [11] : Satisfaction

ⓘ Users look for particular amenities when selecting a deal (Refrigerator, Bathtub), currently filtering and selecting the deals are difficult due to the large number. ← Proper categorisation or search could be an option.

Figure above on the left shows list of features in the hotel, this is a long list with more than 50 features. This is very hard for the users to navigate through and find the amenities they are looking for. This is a violation of Heuristic Flexibility and effecny of use.

☆ IH702 : Proper categorisation or adding a search feature.

Priority: Low

Improve usability attribute : Efficiency and satisfaction

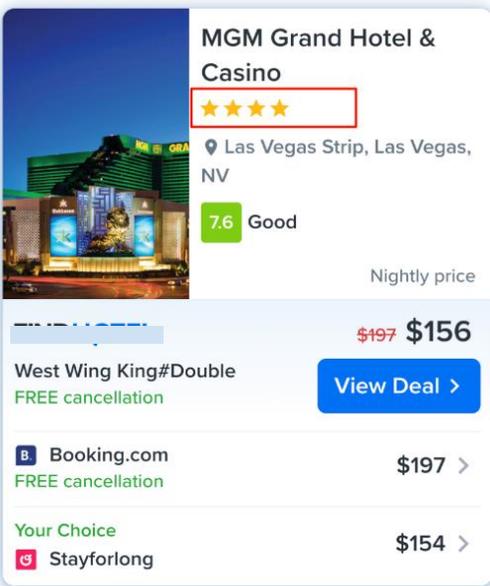
How do you look for accommodations?

- Most users have an orientation to go with websites they are familiar with.
- Prefers to go with websites that have an account or reward program.
- Prefers to go directly to the official website of the hotel.
- Users start their accommodation search on Google and go-to options that they are familiar with.
- Users also start with using the map feature to narrow down the hotels near their location before booking.
- When landing on SRP of OTA they apply various filters that matter to them.
- One user mentioned using a rate picker to select the duration of stay.

On SRP

Star rating confusion (1 of 2)

  One user confused hotel star rating with Review.



MGM Grand Hotel & Casino
★★★★
Las Vegas Strip, Las Vegas, NV
7.6 Good
Nightly price
~~\$197~~ \$156
West Wing King#Double
FREE cancellation
View Deal >
Booking.com \$197 >
FREE cancellation
Your Choice
Stayforlong \$154 >

Figure on the left shows the star rating of the hotel shown on the Hotel card.

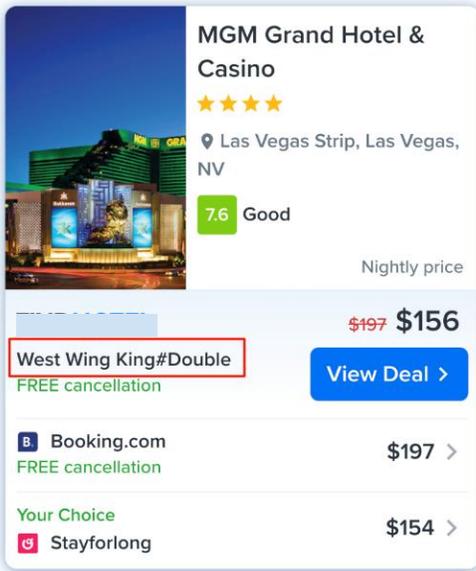
☆ IH503 : Star rating is not clear.

Priority: **Low**

Improve usability attribute : **Effectiveness**

Improper room name creates confusion. (1 of 2)

 Room names like "West wing King #Double" (marked by red box in figure on the left) confuse users if the bed type is a King Size bed or a Double bed. ← This is not a severe concern for the user but adds to the doubts when moving forward. On the next page also this doubt is not cleared properly.



☆ IH504 : Proper nomenclature for room names.
Priority: **Medium**

Improve usability attribute : **Effectiveness**

😊 About the MGM grand offer, one user was confused if the selection is for a Kingsize bed or a Double bed. (The room name was 'West wing King #Double') ← **Improper room names can create confusion among the user.**

Order in which the deals are displayed

- ⓘ When coming from GHA to SRP users don't remember the accurate rate but have remembered the average range.
- ⓘ Remembers room rate of the official website
- ⓘ 😊 When the users come from GHA to SRP and if they realise the main deal is different from the deal they selected on GHA, then Users have a slight confusion. But they are not very

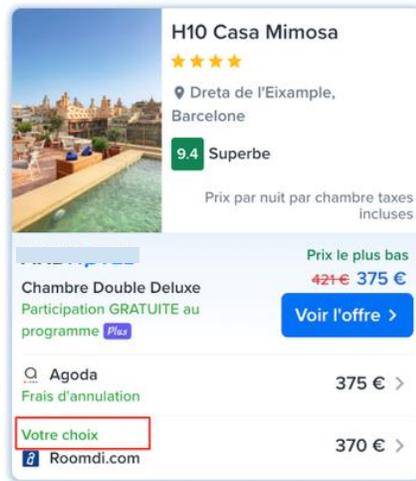
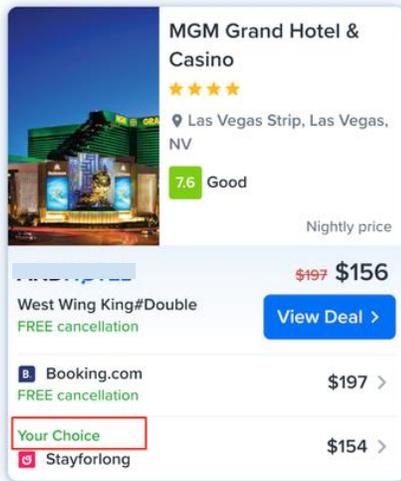
concerned at this point, they eventually make their own conclusion and move forward.

✗ One user thought even though the deal she selected on GHA was the 'Your choice' but the FH deal was highlighted as a marketing tactic because it had a discount. ← **I can try to reduce the friction.**

😊 Users are confused, if they are getting the same room in all three deals.

Copy (Improvements in the wordings in the UI)

ⓘ ⊖ The copy 'Your choice' can be improved. ← (4/6) Users didn't interpret the Your choice tag.



☆ IH504 : 'Your choice' copy to be changed

Priority: **Low** Improve usability attribute : **Learnability**

- ⊖ One user wrongly interprets the 'Your choice' offer as an offer that might give him the option to select flexible dates. 💬 "I'm either thinking that means flexible dates that you can pick or flexible in terms of room options that they have."

Thoughts on the crossed-out price and reason for the discount.

- One user thought the crossed-out price was the price of the deal on the official website.
- ⓘ The crossed pricing gives a feeling of savings in the mind of users.

🤔 Finding the exact reasoning for the discount is not very important for the users but they fear that when they have a discount **they are likely losing some amenity in that deal in comparison to other deals.** ← HMW communicate with the user that the deals are compared equally and have same amenities so that users can feel confident and move ahead with the deal.

🤔 Users also think that crossed-out prices are often inflated prices shown as a marketing tactic. (3/6)
← When I provide the reasoning to the user this should be taken into consideration

- 💬 *“For me, it would be quite important because if I originally thought something for 197 and now it's 156. I'm going to wonder if it's the same. If it's offering me, the same thing that I originally saw. If it is not, then that's where things get a little tricky.”* ← More than knowing the reasoning behind the discount she is concerned about knowing if the comparison between the other deals is exactly the same. Increasing transparency here would be good.

Plus deal bad experience

ⓘ One user mentioned an experience where she had to give her phone number to unlock the deal, she felt this was very weird. This is similar to the experience the user has when booking with case company.

- 😊 user mentions she sometimes looks for the cheapest one but she feels that it usually doesn't work. 💬 *“ Sometimes, I try to like look for the cheapest one, but that usually never works out for me because you get what you pay for.”*
- 😊💬 *“I have also clicked on a website before, In order for me to get the details of the room. They wanted me to enter my telephone number and then they text me something and then by the time, they sent me the text, I had to look at it (website) through the book. It was like weird. So yeah, and that was one of the cheap options.”* ← She had a similar experience as that of our plus flow and she felt it was weird. Could be investigate further.

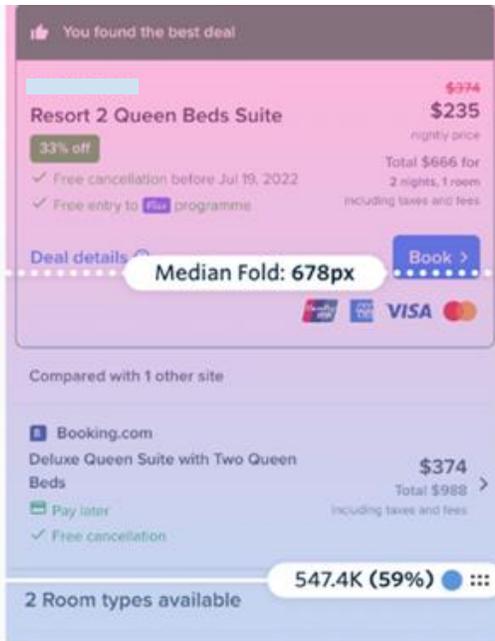
Insights On RSP

✗ Users expect the room details of the offer to be more visible on RSP.

Users tend to stop scrolling at portfolio deals. When the user scrolls down they come across the portfolio deals, after seeing redirect deals their expectation from the current page might change and they don't expect to find room details below. If the users don't scroll down they tend to miss the room details completely. ← 40% of the users don't scroll down to the room details area as per scroll map (figure below) Room details should be made more accessible and evident on the page.

⊖ When users don't find the room details, they assume that the room details are available in the Deal details.

⊖ Even when the user scrolls down it is not easily evident to the user, which room type has been selected as the best deal. ← This information should also be more evident.



About 40% of the users don't scroll down below this point, hence seeing no room details.

- When one of the users landed on RSP she had a pause, as if, she was not seeing what she was looking for and then she scrolled down to see the room selection and she said 🗨️ "eah, that's what I was wondering"

☆ IH405 : Room details need to be more Visible on the RSP as the user lands on the page.

Priority: **Medium**

☆ IH506 : Users miss interpret Deal Details button. Copy can be improved.

Priority: **Medium**

Improve usability attribute : **Efficiency and satisfaction**

Copy

📘 ⊖ The translation for 'Pay later' tag is given as 'Paiement à l'hôtel' which is 'Payment at hotel', but both the statements convey a different meaning to the user.

☆ I0007 : Copy needs to be consistent when translating.

Priority: **Medium**

Star rating confusion (2 of 2)

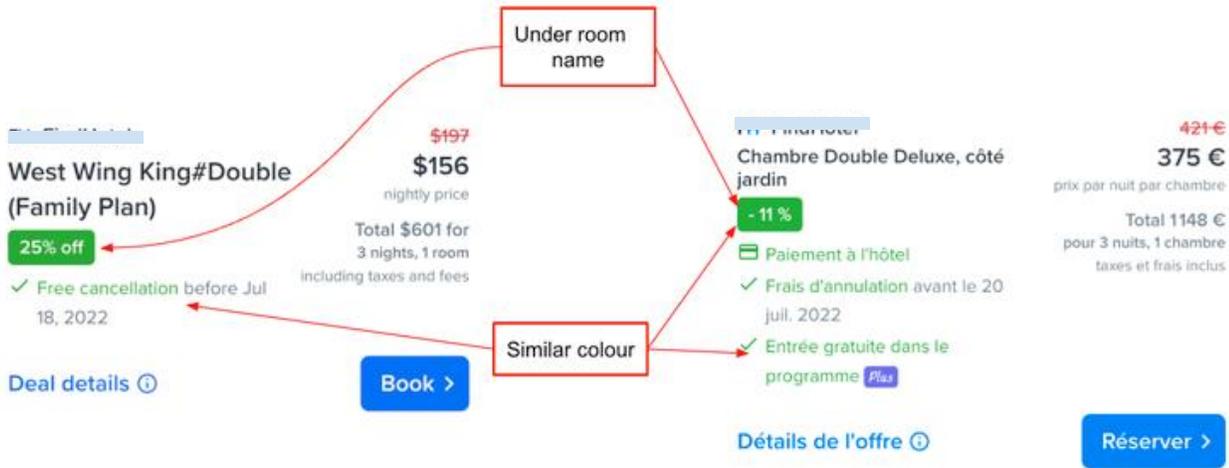
📘 😞 User felt that the star rating was miss leading. ← He understood that it was the hotel star rating eventually without help but it might be better in make it clear either by copy or position.

- ⊖ He feels the Star rating of the hotel can be miss leading. 🗨️ "Oh, No, I didn't know if it. Is like the rating of the hotel or four out of five stars as in rating of the clients"

📘 ✗ The position and colour of %off is interpreted wrong.

- The % off being the same colour as that of the deal parameters, users at times correlate them together.

- Sometimes the room name may have additions like 'Family Plan' and since the %off is just below the name users tend to associate the off with this.



- ⊖ He also related the 25% off to the family plan. 💬 “It’s part of a family plan so it’s 25% off” ← Improper room naming and the positioning of the %off can create an unnecessary interpretation of the savings.

☆ IH508 : Position of % off needs to be changed.

Priority: [Medium](#)

☆ IH509 : Colour of % off and tags needs to be different.

Priority: [Medium](#)

Improve usability attribute : [Learnability](#)

The reasoning for %off

- Even though it is not necessary, some users expect to get the reasoning for %off. They expect to find it in Deal Details. (2/6)
 - One user related that the deal details would provide more information about the 25% off
 - 💬 On clicking deal details “I would get more understanding of? Where that 25% off went.”
- Users sometimes associate the % discount with the official price of the hotel.

Improper room name creates confusion. (2 of 2)

- ⓘ Users feel that they have enough information to compare the room. But in fact, they are comparing just by the room name. ← Firstly, accuracy in the room name is important and secondly room details basically bed type and number of occupants should be displayed.

ⓘ ⊖ Users felt that there is a chance that the deals on the portfolio box are for different rooms.

You found the best deal

West Wing King#Double (Family Plan)
 \$156 nightly price
 Total \$601 for 3 nights, 1 room including taxes and fees
 25% off
 Free cancellation before Jul 18, 2022
 Deal details ⓘ [Book >](#)

Compared with 2 other sites

Booking.com West Wing King Free cancellation	\$197 Total \$804 including taxes and fees
Agoda West Wing King Room Free cancellation	\$197 Total \$804 including taxes and fees

Nous avons trouvé une offre plus intéressante

Agoda Garden Deluxe Room Frais d'annulation	421€ 375 € Total 1125 € taxes et frais inclus
Booking.com Chambre Double Deluxe - Vue sur Jardin Paieement à l'hôtel Petit déjeuner compris Frais d'annulation	421 € Total 1286 € taxes et frais inclus

Different room names

☆ IH5&610 : Better room naming.

Priority: **Low**

Improve usability attribute : **Learnability and efficiency**

← The difference in the naming can create confusion among the user and if the price margin between the deals is less it can lead the user to select a portfolio deal with clear name.

3 Room types available

West Wing King#Double (Family ...)

Free cancellation before Jul 18, 2022

\$156 nightly price
 Total \$601 for 3 nights, 1 room including taxes and fees

Deal details ⓘ [Book >](#)

Information: The case company room names contain terms like double, King which users interpret as bed type. Which might aids in users selecting a deal but users are still confused if the deal is same across other portfolio deals.

Warning: At times in the absence of more room details (as in figure on the left) users may go forward with the booking, just with the room name information, which could create a wrong booking.

Copy change for Deal Details button

Warning: Deal details button would give more information about the room. (4/6) ← Refer insights table in section 8.1. It should be more evident from the copy that user would find the price breakdown when clicking on deal details.

Information: One US user initially on landing at RSP assumed deal details had price breakdown information. But after exploring he had doubts that it could also be the amenities of the room. Conversely, an EU user landing on RSP mentioned the 'Deal details' will have room details and later when he scrolled down he understood that there is information about the room in 'more details. ← This indicates that users are

looking for room amenities on the page but are not able to find them easily. And assume them to be in Deal details. Need further investigation.

-  "I'm thinking under deal detail like a part of me thinks that deal details either like the amenities of the room that I talked about like to have a mini-fridge. Do you have a coffee machine in the room or the deal details is the actual breakdown of the money" ← On his first impressions of RSP he expressed that Deal details might contain the breakdown of the price, after further investigation, he felt that it might also be further amenities of the deal. It could be a hypothesis that users need more information about the specification and amenities of the deal to make a decision on the RSP and since the copy says 'Deal Details' they expect to find more information there. If the information in the deal detail is only related to pricing then it could be also mentioned as 'Price details'.

☆ IH511 : Copy of deal details can be changed

Priority: **Medium**



Chambre Double Deluxe, côté jardin

~~421€~~
375 €
prix par nuit par chambre

Total 1148 €
pour 3 nuits, 1 chambre
taxes et frais inclus

- 11 %

Païement à l'hôtel

✓ Frais d'annulation avant le 20
juil. 2022

✓ Entrée gratuite dans le
programme **Plus**

Détails de l'offre ⓘ

Réserver >

⊖ One user did not expect the Deal details to be clickable. ← One user thought that it was a heading and didn't have any information below that. Maybe in French, since the button text is too long (As in figure on left) she might have felt it to be a heading.

ⓘ If the translation of text links become long users might not interpret them as clickable.

Nightly price

ⓘ ⊖ One US user felt the nightly price included taxes and fees. She saw the

'Including taxes and fees' written below the price description on RSP (as shown in figure above) and thought it applied to nightly also.

- One user was not confident. ← This could be investigated further.



West Wing King#Double
(Family Plan)

25% off

✓ Free cancellation before Jul
18, 2022

~~\$197~~
\$156
nightly price

Total \$601 for
3 nights, 1 room
including taxes and fees

Users might think fine print including taxes and fees belongs to both total and nightly price.

-  "A have to do slight math here. I don't know if it's included in the nightly price. But I definitely have confidence is included in the total price" ..  "I feel like no, off the top of the head because it's not communicated that way"

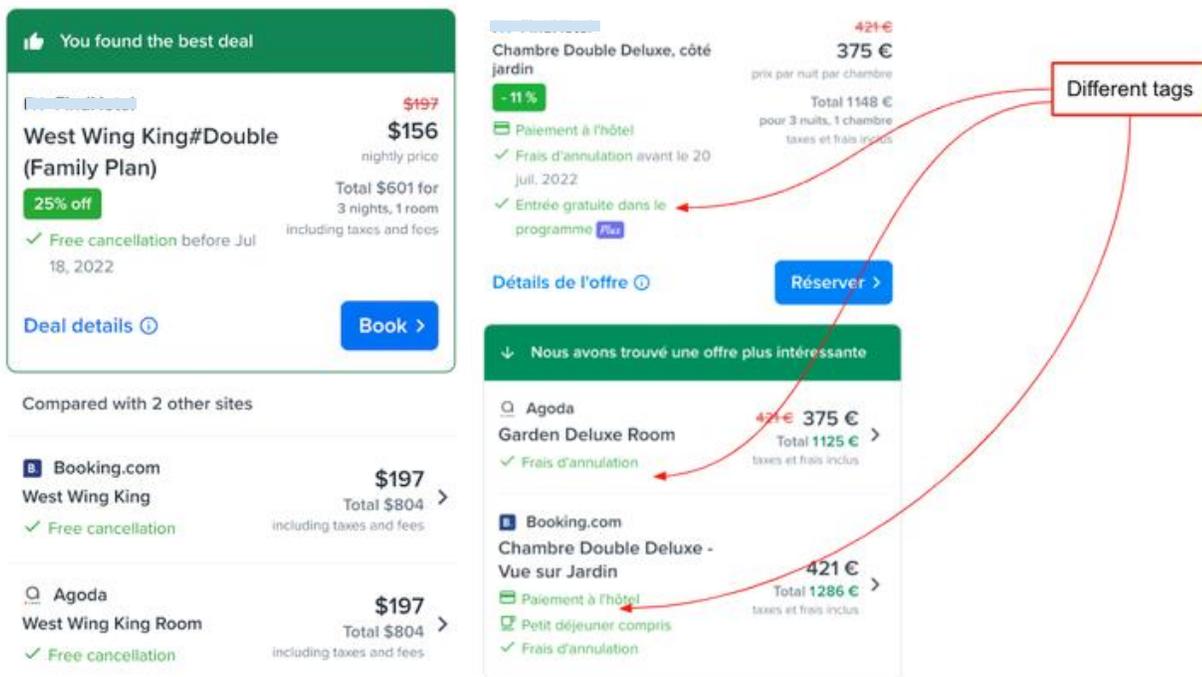
☆ IH512 : Change the design for price display

Priority: **Low**

Portfolio box

-   The deals in the portfolio box reassure the users that they have the best deal and help them go forward.
 -  “I feel like the correct price on other websites(booking and agoda) is 197 and ours is 156.”
 - One user felt the prices shown on the portfolio box to be reassuring  “if you're now here and you're still seeing that other places(Other websites) are offering 197 and this is like the fourth time, you're seeing this 197. I would say just look at it because that's probably the best deal(FH deal) you have”

  When the tags like Free cancellation, and Pay later are different for different offers (as shown in figure below) in the portfolio box this creates confusion in the user's mind.



The screenshot displays a travel deal comparison interface. The main deal is for a "West Wing King#Double (Family Plan)" at a nightly price of \$156, with a total of \$601 for 3 nights. It includes a "25% off" tag and "Free cancellation before Jul 18, 2022". Below this, two other sites are compared: Booking.com and Agoda, both showing a total of \$804. To the right, a detailed view of the "Chambre Double Deluxe, côté jardin" is shown for 375€, with a total of 1148€ for 3 nights. This detailed view includes tags like "-11%", "Paieement à l'hôtel", "Frais d'annulation avant le 20 Jul. 2022", and "Entrée gratuite dans le programme Plus". A red box labeled "Different tags" has arrows pointing to the "Free cancellation" and "Entrée gratuite" tags in the detailed view, and the "Free cancellation" tag in the comparison table.

Plus flow

  Users feel sceptical about the free entry to the plus program.  “I'm usually really suspicious of the free entry to the program because sometimes it's like, most of the time, it's like, oh don't worry, it's free and then they take your information and next month. They will take money from you.”

Nightly Vs Total on RSP

-  Emphasising total price can have a wow effect.  “Oh my God, bookingcom is total 804. Where is FH is 601. So It was already a nice kind of difference.” ← User saw that case company deal was cheaper than booking earlier on the SRP but she expressed a wow on RSP when she saw the total.
-  Seeing a bigger number upfront would scare some users off of the deal. (1/6)

i The total price has an overall preference when it comes to decision-making about the deal. The users seem okay with the current design but would like to have the total price a bit more emphasised.

- “If I were to flip them. I would probably recommend just providing the total price for the stay after taxes and fees, and not even giving me a night price. I think the way this is set up where I guess that's how I'm used to reading them seeing the nightly price and then getting a total is fine for me, but then another option that I'm also fine with, not even giving me a nightly price.”

i [US vs FR] European users look for the surface area of the rooms when deciding the room. ← **Need to investigate.**

Deal details Model

i 😊 One user sees the %off on the model but she doesn't understand where it is applied. ← **I could either show no discount details in the model or also show the crossed price and savings.**

Taxes and fees

- **i** US users have a fear that taxes and fees can add up towards the end and can go beyond their budget. (2/3)
- The amount of tax can also shock the user.
 - 😊 “This is 132 a lot and taxes and fees, you know, cuz like every other website” ← **seeing the total tax user felt a slight shock.**

Per night taxes displayed

- **i** Users like that the per night tax is displayed, even though they mentioned earlier that they would prefer to see only the total. ← **No change need here**

Cancellation policy

- 😊 Users expected to see cancellation policy information in the DD model, but not this detailed. Two users expressed it was a pleasant surprise to them.
- They like the way the schedule is displayed and understand the traffic light analogy.

i 😊 One user was slightly confused (As shown in figure on right) but then he understood, that he will get back the amount after deducting the fees. ← **'The copy You'll pay \$468.83 in fee' can be improved.**

☆ SH613 : Show the amount that the user has to pay instead of the amount that will be deducted.

Priority: **Low**

Improve usability attribute: **Efficiency and satisfaction.**

Total \$601.49

Cancellation Policy

✓ This offer has free cancellation

Cancel by

- Jul 18, 2022
Until 05:00 AM (GMT)
Free cancellation with full refund.
- Jul 20, 2022
Until 09:59 AM (GMT)
You'll pay \$468.83 in fee.
- Jul 21, 2022
Until 12:00 AM (GMT)
You'll pay \$468.83 in fee.
- Jul 21, 2022
From 12:00 AM (GMT)
Non-refundable after this time.

Cancellation on 20th July he will get the amount 601 - 468

Politique d'annulation

✓ Cette offre offre une annulation gratuite

Annulez avant le

- 20 juil. 2022
Jusqu'à 11:59 (GMT+2)
Annulation gratuite avec remboursement intégral.
- 21 juil. 2022
Jusqu'à 11:59 (GMT+2)
Vous paierez une pénalité de 1 nuit plus taxes et frais.
- 21 juil. 2022
De 11:59 (GMT+2)
Non-refundable after this time.

ⓘ Chaque chambre de cette réservation est soumise à la politique d'annulation de l'hôtel. Les dates et les heures indiquées dans la politique font référence à l'heure locale de l'établissement.

Change to 'à partir de'

Copy

ⓘ ✗ French translation: He says that the translation for 'From' in the cancellation policy should be "à partir de" not de.

☆ IH514 : Correct translation from from.
Priority: Low

Cancellation Policy

✓ This offer has free cancellation

Cancel by

- Jul 18, 2022
Until 05:00 AM (GMT)
Free cancellation with full refund.

Nightly price ~~\$197~~
\$156

[Book >](#)

Sticky button

ⓘ Users expect to the total price near the sticky button or no price displayed near it.
☹️ One user mentioned, he doesn't want to see the crossed price again and feel it's too pushy when coming from GHA.
← Not sure someone coming from a redirect deal would feel the same.

☆ IH4&815 : User expect to find the total price near the sticky button on deal details page. ← This could be a similar trend in other e commerce websites.

Priority: Medium

- One user felt okay to see the nightly price and expressed, to prevent confusion it's written its nightly price. 🗨️ "it doesn't say what 156. And it does make sure that it does say that it is the nightly price, just in case someone has any confusion again. There they are going to understand that it was not for the entire three days because it clearly says nightly price." ← She feels that there is a chance of confusing the nightly rate with the total.
- One user prefers to have no price displayed on deal details near the sticky button. 🗨️ "I seen already thought it is not like affecting positively or negatively. I honestly don't even feel like it needs to be there because I've seen it. I've seen it at the top, I've seen it on the previous page. So it's fine. it always comes over. I don't want to say like super pushy, but kind of almost like here's a reminder again your saving 40\$, Okay I get it" ... 🗨️ "if I had to the pick, I would say nothing here, but if some price was going to be displayed here, I would go with the total."

Insights on Checkout page

 Even though it might be obvious, adding before or after in front of check-in or check-out time (as shown in figure below) can reduce the cognitive load of the users.

Arrivée		Départ
21 juil. 2022	>	24 juil. 2022
15:00		12:00

- He understood the check-in check-out but added that “Yeah, maybe emphasize more on the check-in and checkout time, maybe write It just before 12, write Check out, and just before, 15 write Check-in.”

☆ S0016 : Add before and after on the checkin checkout time.

Priority: [Low](#)

Improve usability attribute : [Efficiency](#)

Savings banner confusion

US US VS EU FR ← [Only for EU user had this issue](#)

 The position of the saving banner between the total and pay now was wrongly interpreted in the user's mind. Because naturally, users feel to subtract the savings from the total and see the ‘pay now’ amount but the calculation seems to be wrong on the screen, this confuses the users.

<table border="0"> <tr> <td>Price details</td> <td>25% off</td> </tr> <tr> <td>3 nights x 1 room</td> <td>\$468.83</td> </tr> <tr> <td><small>\$156.28 per night</small></td> <td></td> </tr> <tr> <td>Other local taxes and fees ⓘ</td> <td>\$132.66</td> </tr> <tr> <td><small>\$44.22 per night</small></td> <td></td> </tr> <tr> <td>Total</td> <td>\$601.49</td> </tr> <tr> <td>Total saving</td> <td>\$202.38</td> </tr> <tr> <td>Pay now</td> <td>\$468.83</td> </tr> <tr> <td>Pay at property ⓘ</td> <td>\$132.66</td> </tr> </table> <p><small>Pay at property amount will be collected by the property in the local currency. The rate quoted in USD (\$132.66) is based on current exchange rates, which may vary at the time of payment.</small></p>		Price details	25% off	3 nights x 1 room	\$468.83	<small>\$156.28 per night</small>		Other local taxes and fees ⓘ	\$132.66	<small>\$44.22 per night</small>		Total	\$601.49	Total saving	\$202.38	Pay now	\$468.83	Pay at property ⓘ	\$132.66	<table border="0"> <tr> <td>Détails des prix</td> <td>- 11%</td> <td></td> </tr> <tr> <td>3 nuits x 1 chambre</td> <td>1022,73 €</td> <td rowspan="3">User think ↓</td> </tr> <tr> <td><small>340,91 € par nuit</small></td> <td></td> </tr> <tr> <td>Taxes et frais ⓘ</td> <td>102,27 €</td> </tr> <tr> <td><small>34,09 € par nuit</small></td> <td></td> <td></td> </tr> <tr> <td>Taxe locale ⓘ</td> <td>22,80 €</td> <td></td> </tr> <tr> <td><small>7,60 € par nuit</small></td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td>1147,80 €</td> <td>This</td> </tr> <tr> <td>Économie totale</td> <td>138,00 €</td> <td>- This</td> </tr> <tr> <td>Payer</td> <td>1125,00 €</td> <td>= This</td> </tr> <tr> <td colspan="3"><small>Payer directement auprès de l'établissement ⓘ 22,80 €</small></td> </tr> <tr> <td colspan="3"><small>Le montant à payer à la propriété sera réglé dans la monnaie locale. Les montants exprimés en EUR (22,80 €) sont basés sur le taux de change actuel. Ils peuvent différer au moment du paiement.</small></td> </tr> </table>		Détails des prix	- 11%		3 nuits x 1 chambre	1022,73 €	User think ↓	<small>340,91 € par nuit</small>		Taxes et frais ⓘ	102,27 €	<small>34,09 € par nuit</small>			Taxe locale ⓘ	22,80 €		<small>7,60 € par nuit</small>			Total	1147,80 €	This	Économie totale	138,00 €	- This	Payer	1125,00 €	= This	<small>Payer directement auprès de l'établissement ⓘ 22,80 €</small>			<small>Le montant à payer à la propriété sera réglé dans la monnaie locale. Les montants exprimés en EUR (22,80 €) sont basés sur le taux de change actuel. Ils peuvent différer au moment du paiement.</small>		
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This issue arises in the mind of the EU users alone, this is something to be curious about maybe EU users are more prone to do a mental maths at their checkout and US customers might go more with the websites interpretation.

☆ IH5&217 : Change the design for savings banner.

Priority: High

Taxes and fees, Other local taxes and Fees, Local taxes

- ⓘ In general, users don't bother about taxes much as long as the figures are within the proportion they expect.
- 💡 When there is only 'Other local taxes and fees' as a tax it's better to word them 'Local taxes and fees.' ← When there is 'Other' added, users might tend to expect there is more tax to be added somewhere.

☆ S0018 : Change the copy to taxes and fees if there is only one tax.

Priority: Low

😊 Users don't understand the correlation between the 'Local taxes' and 'Pay at property' directly. ← Making it more direct in the interface can reduce the cognitive load and prevent speculations from users.

😊 Users are more concerned with total taxes but would appreciate as much transparency in the breakdown if they can understand it easily.

- Some users would like to see the taxes and fees separate because users' interpretations of the meaning of taxes and fees are different. Some think taxes are the same and fees is the one that changes from website to website, while others feel taxes changes from region to region.
- Some users would want to see the total per type of taxes. 🗨️ "But at least I would like to have the breakdown of each tax. Like you see the state's tax, the hotel tax, the region tax, at least per tax. But per tax per night, it would be too crowded, I would say." ← The user expects to see the breakdown of each tax but not per night.
- **Displaying taxes that are not understood by the users can also be problematic**, there is an instance where a user mentions not going forward with an Airbnb deal because there was too many types of taxes she couldn't understand.

ⓘ 😊 As shown in Figure on right Sometimes users have to do the math to check if the information matches. Under the property fees and instructions, the taxes might be displayed per person and Local taxes per day are displayed as a total for all the people.

☆ SH5&619 : Adding a tag 'Paid at property' for 'local taxes' could help the users understand better.

Priority: Low

Improve usability attribute :
Efficiency and satisfaction

Informations importantes

[Property fees and instructions](#) ^

Frais de propriété

You'll be asked to pay the following charges at the property:

- A tax is imposed by the city: EUR 3.80 per person, per night, up to 7 nights. This tax does not apply to children under 17 years of age.

We have included all charges provided to us by the property.

User has to do the math to realize its the same tax.

Détails des prix		-11 %
3 nuits x 1 chambre	340,91 € par nuit	1022,73 €
Taxes et frais ⓘ	34,09 € par nuit	102,27 €
Taxe locale ⓘ	7,60 € par nuit	22,80 €
Total		1147,80 €
Économie totale		138,00 €
Payer		1125,00 €
Payer directement auprès de l'établissement ⓘ		22,80 €

Le montant à payer à la propriété sera réglé dans la monnaie locale. Les montants exprimés en EUR (22,80 €) sont basés sur le taux de change actuel. Ils peuvent différer au moment du paiement.

Information models for taxes

i Generally when there is an info button near a price or tax users expect to see a breakdown in the model.

⊖ The copy in the taxes and fees model needs improvement (as shown in figure below). Users understand as this charge is paid back by 'Case company' to the hotels, this is not logical to users.

Taxes et frais



Les taxes et les redevances sont généralement les frais de recouvrement que FindHotel verse à ses partenaires (par exemple, des hôtels).

Taxes and fees are generally recovery charges FindHotel pays to its partners (e.g. hotels).



Fermer

Other local taxes and fees

Copy in the model can be improved. Users find the information in the model to be useful But don't seem very convinced. (2/6 users)

- On seeing the information model user said "It's a little more vague than I expected" but then he realized that it would be hard to describe each type of city tax and said "Actually, not really good enough because without going into detail of every tax setup of every city and say, like if you're in town in Los Angeles, here's Los Angeles County tax, Los Angeles city tax. I think it's good enough." ← The copy could be improved.

Pay now and Pay at the property

For US customers: Some users have slight confusion but it gets cleared when reading the instructions.

- One user initially felt slightly confused, then suddenly realized and said he will pay now the rate for the room and taxes and fees at the property. "So what I'm paying right now is literally just reserved the room for those three nights and then applicable taxes will be applied. I'm assuming once I actually stay on the property."

☆ IH5&920 : UI copy for the taxes information models can improve
Priority: [Medium](#)

Improve usability attribute : [Efficiency](#), [Effectiveness](#) and [satisfaction](#)

Property fee and instruction

⊖ Users miss important information if they miss to open 'property fees and instructions'.

⊖ The design needs improvement. User may miss judge that the cancellation policy is the information that comes under Property fees and instructions (as shown in figure below).

😬 Normally, users don't expect to open the property fees and instructions. Before confirmation users have the tendency to read through everything and when additional pricing information is shown here it tends to confuse them.

😬 In a situation where users have not opened the information model on taxes, the confusion created by the information in the Property fees and instruction will be more.

- Users don't expect to find pricing information under property fees.
- After reading the information sometimes the users have doubts if these fees or taxes are already included. ← It is better to hint to the user, that he can find this information below. But the info inside the Property fees and instructions are dynamic some providers might have that information while some others will not.
- The design should hint the user to also check this info. or change its placement.
- Sometimes important information is available under this tab, like resort fees, tourist fees and deposit amounts. The user might miss this information if they fail to read it.
- 😞 User felt that not knowing the deposit fee up front could be an issue for her. 💬 *"I would say for the deposit information. I wouldn't be happy about booking the deal and not knowing that, by the time I get there, I have to pay a deposit because what? If I don't have a deposit and now I'm there, and now I'm stuck. So to not have that important information, then that's probably a little bit of an issue but the resort fees and stuff. Okay. That was a front."*

User might think Cancellation policy was under 'Property fees and Instruction' and overlook important information.

📄 Important information

Property fees and instructions ▾

Cancellation Policy

✓ This offer has free cancellation

Cancel by

● Jul 18, 2022

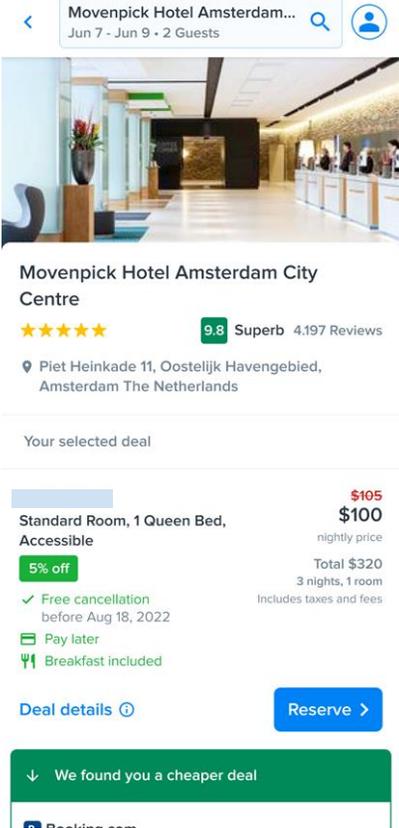
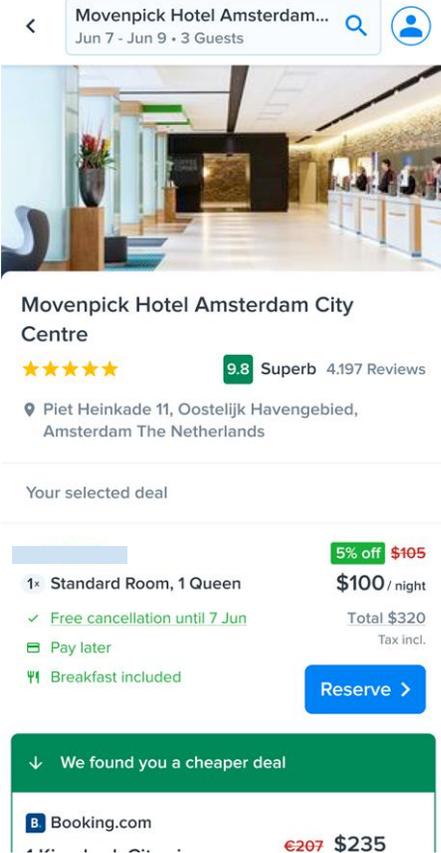
Until 05:00 AM (GMT)

Free cancellation with full refund.

● Jul 20, 2022

Until 10:00 AM (GMT)

Appendix 7 : Prototype for Un moderated user testing of price clarity

Current design	Future design
RSP	
 <p> Movenpick Hotel Amsterdam City Centre 9.8 Superb 4,197 Reviews Piet Heinkade 11, Oostelijk Havengebied, Amsterdam The Netherlands </p> <p>Your selected deal</p> <p> Standard Room, 1 Queen Bed, Accessible \$100 /nightly price Total \$320 (3 nights, 1 room, includes taxes and fees) </p> <p> 5% off ✓ Free cancellation before Aug 18, 2022 📅 Pay later 🍳 Breakfast included </p> <p>Deal details ⓘ Reserve ></p> <p>↓ We found you a cheaper deal</p> <p>  €207 \$235 </p>	 <p> Movenpick Hotel Amsterdam City Centre 9.8 Superb 4,197 Reviews Piet Heinkade 11, Oostelijk Havengebied, Amsterdam The Netherlands </p> <p>Your selected deal</p> <p> 1x Standard Room, 1 Queen \$100 /night Total \$320 (Tax incl.) </p> <p> 5% off \$105 ✓ Free cancellation until 7 Jun 📅 Pay later 🍳 Breakfast included </p> <p style="text-align: right;">Reserve ></p> <p>↓ We found you a cheaper deal</p> <p>  €207 \$235 </p>

Deal Details

X Deal details

Price details

5% off

3 nights x 1 room \$300.30
\$100.10 per night
Taxes and fees \$20.00
\$6.66 per night

Total \$320.30

Cancellation policy

✓ This offer has a free cancellation.

Cancel by

● 7 Jun 2022
Until 11:59 AM (GMT-5)
Free cancellation with full refund of \$320.30.

● 7 Jun 2022
From 12:00 AM (GMT-5)
Non-refundable after this time.

ⓘ Each room in this reservation is subject to the hotel's cancellation policy. Dates and times in the policy refer to the property's local time.

Nightly price including taxes and fees ~~\$105~~ \$100

Reserve >

X Deal details

Price details

\$100.10 \$300.30
x 3 nights x 1 room
Taxes and fees \$20.00

Total 5% off \$320.30

for 1 room, 3 nights, 2 adults, 1 child
Incl. taxes and fees

Cancellation policy

✓ This offer has a free cancellation.

Cancel by

● 7 Jun 2022
Until 11:59 AM (GMT-5)
Free cancellation with full refund of \$320.30.

● 7 Jun 2022
From 12:00 AM (GMT-5)
Non-refundable after this time.

ⓘ Each room in this reservation is subject to the hotel's cancellation policy. Dates and times in the policy refer to the property's local time.

Nightly price (Tax incl.) ~~\$105~~ \$100

Reserve >

Checkout page



Movenpick Hotel Amsterdam City Centre
★★★★★ **9.8** Superb 4.197 Reviews
Piet Heinkade 11, Oostelijk Havengebied, Amsterdam The Netherlands

Check-in **Jun 7, 2022** 15:00
Check-out **Jun 10, 2022** 11:30

[Check-in instructions](#)

1 Room **2** Guest **2** Nights

Standard double or Twin room

- 🍳 Breakfast included
- 📅 Reserve now, pay later
- ✓ Free cancellation before Tue, Jun 13

Price details	5% off
3 nights x 1 room	€300.30
€100.10 per night	
Taxes and fees ⓘ	€20.00
€6.66 per night	
Total	\$316.00

Total saving \$15.00

Pay now	\$300.30
Pay at property ⓘ	\$20.00

The price is converted to show you the approximate cost in USD (\$300.30). You'll pay now in EUR (€274.09). Pay at property amount will be collected by the property in the local currency. The rate quoted in USD (\$20.00) is based on current exchange rates, which may vary at the time of payment.

[Important information](#)



Movenpick Hotel Amsterdam City Centre
★★★★★ **9.8** Superb 4.197 Reviews
Piet Heinkade 11, Oostelijk Havengebied, Amsterdam The Netherlands

Check-in **Jun 14, 2022** 15:00
Check-out **Jun 17, 2022** 11:30

[Check-in instructions](#)

Standard double or Twin room

- 🍳 Breakfast included
- 📅 Reserve now, pay later
- ✓ Free cancellation before Tue, Jun 13

Price details

\$100.10	\$300.30
x 3 nights x 1 room	
Taxes and fees	\$20.00
Total	\$320.30
for 3 nights, 1 room, 2 adults, 1 child incl. taxes and fees	
Total savings with FindHotel	5% off \$15
Pay now	\$300.30
Pay at property	\$20.00

- The price is converted to show you the approximate cost in USD (\$300.30). You'll pay now in EUR (€274.09).
- Pay at property amount will be collected by the property in the local currency. The rate quoted in USD (\$20.00) is based on current exchange rates, which may vary at the time of payment.
- Your card issuer may charge a foreign transaction fee.

[Important information](#)

Appendix 8: Test script

Context:

Imagine you are planning a vacation in Amsterdam and want to book a hotel room for two adults and one kid. After comparing your options, you have selected a hotel.

Task/Question

1. Before I start, please briefly speak about how often you travel and how do you normally look for hotel prices?
2. Multiple Selection (pick any)
 - When finalizing a hotel, which attributes below would motivate you to check further details about the hotel? Check maximum two and briefly explain your choice.
 - i. Price per night
 - ii. The total price of the deal
 - iii. Discount offered
 - iv. Cancellation policy
3. In the next screen, I am going to share a prototype with you. Because this is just a design, not everything on the screen will be clickable. If you click on something and nothing happens, don't worry, tell us what you have expected to happen.
4. URL  Price Clarity
5. Please don't click anywhere yet. Take a few moments to familiarize yourself with this page and speak out loud about what you see on the screen. What can you tell about the selected deal?
6. How much will this booking cost you? What are your thoughts on included charges?
7. If you were looking for more information on the price, where would you expect to find it? (From this point on, you are free to scroll and click anywhere on this prototype. Keep in mind that this is not a fully functioning website.)
8. You are now on the 'Deal Details' page. Again, please think out loud about what you see here.
9. (If you haven't already) Can you give a detailed breakdown of the pricing?
10. Imagine you are happy with your choice and you want to proceed with the booking. Please go ahead and click on 'Reserve'. You will reach the 'Checkout page'. Take your time to understand the screen and think out loud about what you see here.
11. Before payment you want to re-check, how many rooms, guests and days have you selected in this booking. Tell us where you would find this information?
12. Multiple Selection (pick any)
 - How much money will be deducted from your bank account just after clicking 'Confirm payment'? (Select multiple)
 - i. €274.09 will be deducted from my account.
 - ii. \$320.30 will be deducted from my account.
 - iii. \$300.30 will be deducted from my account.
 - iv. If you are not confident with your answer please tick this as well and tell us why you feel so.

13. Did you notice the information below the price breakdown? What is it about? What do you think about it?

14. Multiple Selection (pick any)

- Will there be any charges at the hotel? (Select multiple)
 - i. No, I have already completed the transaction.
 - ii. I would need to pay \$20 at the hotel.
 - iii. I would need to pay in euros, an amount equivalent to \$20.
 - iv. I understood this once I read this question and checked the screen again.
 - v. If you are not confident with your answer please tick this as well and tell us why you feel so.

15. Rating Scale(5 points)

- Please summarize your experience with the price clarity throughout the flow.

16. What would be one thing that I could improve to make your understanding of price easier?

Appendix 9: Unmoderated user test result.

Learnings on the RSP :

2. 💡 Interested in having information about extra bed or pullout couch on RSP (2 out of 4, both female and family travellers (Points A.2.a & B.6.a))
3. All users are able to identify the deal details like Price per night, discount, total, free cancellation and breakfast included accurately.
4. ☹️ The test cannot be conclusive to determine whether users understood that the total price could be clicked to get the price breakdown. Only 2 out of 4 users clicked on it to visit deal details. ← This could be because
 - a. the Font was small, to identify the underline.
 - b. The design is not providing enough indicators to motivate the users to click on it.
 - c. Does the user feel he has enough information at this movement and would go further to see the price breakdown on checkout?

Learnings on the deal details page:

3. ☹️ Nightly price not noticed. Only one user mentioned seeing the nightly price given along with the Reserve button at the bottom. ← It would be advisable to test this to see if users understand this or need this information?
4. Users found the design of the page very straightforward with comments like "very friendly for people that are not very smart" "it's all pretty straightforward"
5. All the users understood the price breakdown (price per night, total price and taxes) accurately.
6. ☹️ One user mentioned she missed information about limits on the number of people per room on the deal details page. (Point B.3.b)

Learnings on Checkout Page:

5. ☹ UI of RSP and Checkout page are very similar. This can create confusion in the user that they went back to the RSP page after they pressed deal details. Only one user had this issue (Point A.4.b) ← *How can I evaluate if the users have difficulty identifying if they are on a new page?*
6. 🗨 Displaying the number of rooms, guests and days could be more prominent. Only two users were able to re-check the number of rooms, guests and days below the total price (Intended place where the users would look for this information). One user felt confident with the booking details provided across the Checkout page that she didn't further investigate to see if it was specifically provided. ← *On average this task took users more than a min which could be improved?*
7. 🗨 All four users understood what Pay Now meant.
8. 🗨 All users notice the information on Chargeable currency and understand that they are paying in a different currency. But still, there is mild confusion,
 - a. One user did not understand how the 'pay at property' might vary, she did not relate it with the currency conversion. But later on, when she read the information again she realized it was the currency fluctuation. (Point B.4.c) ← *The current UI copy is text-heavy and rigid, I can improve on reducing the text and making it simple, maybe adding icons to symbolize currency conversation.*
 - b. Two users mentioned improving in Chargeable currency information
 - i. one suggesting having an example because she was not aware of how much the currencies fluctuate. (Point B.5.b) ← *Providing an example may not be apt in our context but the user's comment shows that the Chargeable currency information can raise concerns and uncertainty in the minds of users.*
 - ii. Another user mentioned having a side by side comparison saying the amount in USD and how much you have to pay (Point D.5.b)
 - iii. Both of them were mentioning about the 'Pay at the property' amount. ← *This indicates that users might need to see how much they would have to pay in local currency. Also, they are not that concerned about 'Pay now' because they are very clear or they might think this is automatically deducted from their account and are concerned about the money they have to take with them and pay.*
9. 🗨 Users understand what 'Pay at property' meant but fail to identify that it is to be paid in euro. All four users understood they had to 'Pay at the Property', among the four only two understood they had to pay in euro at the property too after reading the question and checking again on the screen. It could not be clearly identified from the test, but users might have even thought that the payment may need to be done in cash. ← *This could be further investigated.*
10. 🗨 Two users related 'Pay at property' to 'Taxes and fees' because both of them would have similar values, this leads users to make natural conclusions that are not intended by the design. One of the users mentioned paying taxes at the property to be "*a little different*" practice. ← *This might be reduced to some extent in the actual product as the user will be able to click on 'Pay at property' and read the description in the model box. But it is still good to investigate further.*

11. Users don't explicitly mention the amount saved on the checkout page. ← This might be because they have already mentioned this on RSP or deal details page or because the amount saved tag is below the fold and users stopped thinking aloud when they reached the page. (Good to note that the amount saved is \$15 on checkout, which could have been sticking to mention for the users). I can further investigate the placement of the discount tag would improve the perception of the users with a 5-second test.
12. 💡 One user was interested in having PayPal as a payment option as she felt their service was better.

Learnings on UI design:

1. 💡 Increased font size for better accessibility. (One user explicitly mentioned it was a bit hard to read for her (Point A.6.a) and another user miss read information (Point D.2.a.v))
2. !! One out of all the users associated the star rating with the reviews.

Learnings on User Behaviour:

Users crosscheck the booking date, after seeing the Free cancellation date. ← Important to note when changing Cancellation designs.

Learnings regarding user testing method:

It might be useful to filter participants with a bit more experience with playbookUX so that they are not further confused by the process flow of playbookUX.

Appendix 10 : Competitor bench marking - price details

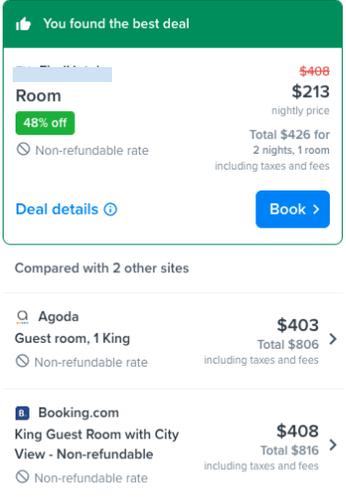
The screenshots illustrate the following stages of a booking process:

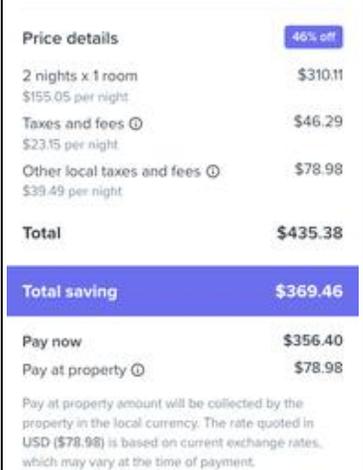
- Check-in/Check-out:** Shows dates (Thu, 14 Apr 2022 to Sun, 17 Apr 2022) and a total price of 3,900.51 PLN for 1 room, 3 nights.
- Price summary:** Breaks down costs into room price (£152.28), taxes (£16.92), and a total due at hotel of £152.28.
- Driver Information:** Displays driver details for 'Mobbin Design' (Age 31).
- Confirmation:** Shows a 'Due Today' amount of SGD 0.00 and a 'Due at Pick-up' of SGD 223.68.
- Review & Pay:** Details a 'Price Breakdown' with a total trip cost of SGD 4,732.18 and offers a 'Free Cancellation until Sep 4'.
- Hotel Details:** Identifies the hotel as 'Cugó Gran Macina Grand Harbour' in Senglea, with arrival on Monday, Dec 03 and departure on Wednesday, Dec 05.
- Payment Schedule:** Shows a total price of \$396.75 for 2 nights, with a due amount at the property of \$18.89.
- Rewards:** Highlights 'Expedia Rewards' points earned (1464 points) for the booking.

Appendix 11: Next steps

Following the iterative design process, the test doesn't conclude here I can further investigate and update the design. The belowtains list of steps that can be taken to further investigate and iterate. (This is out of scope for this research hence the next steps are list but not taken forward.)

* Following abbreviations are used in the table, UR: User research test, DA: Data analytics & CA:

Test	Description	Objective	Particulars	Remarks
UR 1	<p>Variant test of RSP with: Copy changes 'Deal details' Vs 'Price details'</p> <p>Position of %off, anchor price (crossed pricing)</p> <p>Information icon near to anchor price</p> <p>Sample image</p>  <p>5 Room types available</p>	<p>What does the user expect to find when they click on deal details?</p> <p>Which copy 'Deal details' or 'Price details' communicates the price breakdown?</p> <p>What is the impact of positioning %off and anchor price?</p> <p>Understand the effect of portfolio box and the anchor price on users decision making.</p>	<p>80 US participants & 80 EU participants Users will be shown randomly 1 among 4 designs, all the numeric copy on the design will be same, except some positioning and design elements. After they have seen the design they would be asked to answer a set of follow up questions to understand how each design was processed by the user.</p> <p>Follow up questions</p> <p>-What do you expect to find when you click on the Deal details button? -What did you understand from the 48% off? -How did you feel when you saw \$405? -What are your thoughts on how you got this saving? ← I keep the same price as \$405 on one of the deals in the portfolio box. -What can you tell us about the deals shown below the text "compare with 2 other sites" ? -What information do you expect to find if you - would click on the information icon near \$405 (Only for the design with the information icon)</p> <p>DESIGN REQUIRMENT Three to Four possible designs I would like to iterate on placement and copy. One set of this for US customer and another for EU customer.</p>	<p>UR1 and UR 2 might be done together as one test, it could give better context to the user.</p> <p>Schedule Design requirement.</p> <p>One day for - Scheduling</p> <p>One / Two day for testing</p> <p>Two days for interpretation.</p> <p>Design suggestion: Also I can maybe add an icon before the crossed price of \$405 and check what the user expect to find when they click on it.</p>

UR 3	<p>Variant test of Checkout page price details.</p> <p>Image</p> 	<p>To understand the effect of perceived saving in a deal by changing the design of the savings banner and position of % off.</p> <p>To understand how users interpretation changes when the positioning of the components changes.</p>	<p>Users will be shown randomly 1 among 4 designs, all the copies on the design will be the same except the positioning and design of the savings banner. After they have seen the design they would be asked to rate the deal that is shown on the page from 0 to 5 (with 5 being a great deal and 0 being a Bad deal). A set of follow-up questions will be asked to understand how each design communicated with the user.</p> <p>Follow up questions : Describe what you felt about the deal?</p> <p>Looking from the UI what is your understanding on how you got 46% off?</p> <p>What did you feel when you saw the blue savings banner?</p> <p>Imagine you have to redesign the interface and want to change the position of 46% off or the blue Savings banner where would you place it ? and why?</p>	<p>Schedule: Design requirement.</p> <p>One day for - Scheduling</p> <p>One / Two day for testing</p> <p>Two days for interpretation.</p>
CA 1	<p>Competitor analysis (US Vs EU)</p>	<p>How do our competitors display pieces of information regarding pricing (Copy) : Deal details, Total price, Nightly price, Pay at property, Pay now, How much information regarding pricing is available on each screen of a competitor? Progressive disclosure of price at SRP, RSP, Checkout. What are the relative positioning of information regarding pricing on each screen of competitor? Positioning of Offer price, Total price, savings, nightly price, Price breakdown, cancelation policy</p>		
<p>New iteration of design created from the interpretation</p>				

UR 4	Card sorting analysis to understand which are the most essential price points for the user.	<p>Understanding which pieces of information regarding pricing is important for the user in choosing the deal.</p> <p>Where does the user expect to find this piece of information?</p> <p>How prominent does the user expect the information to be on the UI?</p> <p>Why does the user want to sort the card to this category?</p>	<p>Moderated (3 US & 3 EU) Unmoderated (10US & 10EU)</p> <p>Cardsorting is a good method to understand the user holistically and complement our research from UR 1 &3. In card sorting the user is usually does not see the interface and is sorting the cards based on his own mental model. This means I am not capturing the reaction of the user when the information on the card in place of the UI. Cardsorting can be done as a second phase.</p>	<p>PRIORITY LOW</p> <p>Schedule: Two day for - designing One week for testing Three days for interpretation.</p>
UR 5	Usability test between Current design (A side) and New design	<p>Compare the areas which show an improvement in price clarity.</p> <p>Understand new problems created by the design.</p>		<p>PRIORITY HIGH</p> <p>Suggestions for design: Chargeable currency information simplified, some information moved to pup up box and explained in detail at the confirmation screen.</p> <p>Total emphasized on RSP instead of Nightly.</p>
A/B test the design				

SA 1	Session analysis	<p>First week: Understand users interaction with the deal details model. The Difference in the behaviour between EU and US customers, does it match with the insights that I generated. The Difference in behaviour of users when coming from GHA and other redirects.</p>	<p>Refinded objectives can be defined a bit later once the design insights are generated.</p>	
DA 1	Looker	<p>First week: Look for outlier metrics and generate hypothesis. Compare the Median time in each step of funnel (for a single user session) [Funnel: GHA → SRP → RSP / RSP redirect → Deal Details/ Anchor Deal/ Change room selection → PP → Pay click.</p>		