

Concierge: A Tailored Travel Website
Designing a Knowledge Organization System

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1. Introduction

Travelling today is much easier than it was a couple of decades ago. The evolution of modes of transport has played a major role in the evolution of the travel industry. From sailboats to ocean liners; from horses to cars and trains, and most importantly, the invention of the airplane, travelling the world has now exited the realm of fantasy and become a reality for many people.

However, one thing that has not become easier with the passage of time is travel booking. When the world wide web entered the global scene, what came with it was a plethora of travel websites whose aim was to compete with travel agents. And of course, each of these sites claimed to offer better deals than the others. As the industry grew, more and more websites began to appear—each of them offering different deals spanning the same destinations. This much variety made it harder for travellers, whether new or seasoned, to find what they wanted. We have now reached a point where booking a trip is such a hassle that new waves of websites are appearing with their only purpose being the comparison of fares from all the other existing web sites, while also displaying their own. With this much online competition, every website is trying to highlight and promote their own new and never before seen features, and to make more and more services available so that potential customers won't feel the need to look elsewhere.

As avid travellers ourselves, this topic was of great interest to us, as it is for so many on a global scale—hence, our choice of a travel-related, alternative KOS. This report aims to show how the current travel websites, with an emphasis upon the best-known examples, such as Expedia, Booking.com, KAYAK, and Travelocity, can be improved upon to streamline and improve the travel booking experience for travellers—that is, to make booking less of a headache, and more of a pleasure.

First, we will present and describe the perspective of a user persona we have created who represents a typical traveller trying to make bookings online. Specifically, we will take a look at these websites from her perspective to better pinpoint existing OTA problems and how they affect this user, and others like her. Next, we will present and describe the empathy and journey maps of our user persona, adapted from Cheung's template, explain the inner workings of the current travel websites, also known as Online Travel Agencies (OTAs),¹ highlight what their major problems

¹ We will use these terms interchangeably in this paper.

are, and explain the importance of designing for optimal user experience. Following this, we will introduce our own solution as to how our tailored travel website, *Concierge*, improves upon existing OTAs. We will then conclude by describing the ways in which our KOS meets our user's needs, and with an examination of prototype testing and its potential limitations.

2. Methods

2.1. Our User Persona—Empathizing With Constance:



Constance Létourneau

Age: 30 years old

Gender: Woman

Status: Single

Occupation: Director at Compaq Inc.

Hobbies: Traveling, photography, home decorating, skiing and yoga

Technological skills: Advanced

"I want to spend my time traveling the world, not looking at travel websites."

To simulate the user experience, we created a persona to represent a prospective traveller resembling individuals we might encounter in the real world, with the goal of attempting to research and book a trip online. After a team-based envisioning process, we developed a persona named Constance Létourneau. She is a thirty year old single woman who works as a Director at Compaq, Inc. Her hobbies include travelling, photography, home decorating, skiing, and yoga. Her knowledge of technology is at the advanced level. Hence, online computer searches and travel bookings are not daunting to her. However, Constance has a demanding professional job, and her time is limited. As she herself expresses it, "I want to spend my time travelling the world, not looking at travel websites."

With this user profile in mind, we now turn to her experience of the existing online travel booking websites in the form of both empathy and journey maps to chart her user experience.

Mapping the User Experience: Empathy and Journey Maps

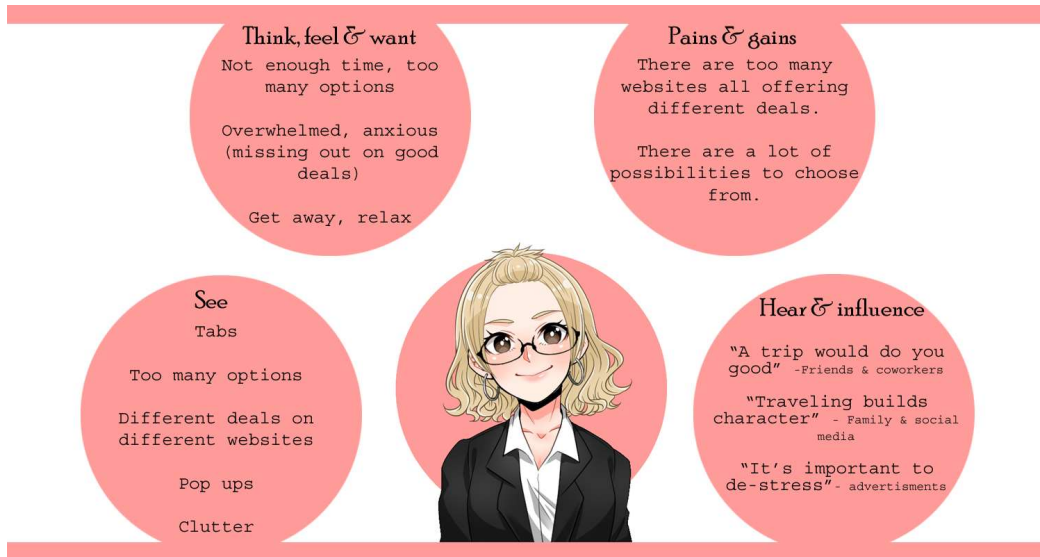
Empathy Map

With user experience—particularly affective computing—in mind, our team developed an empathy map with the goal of examining how our traveller, Constance Létourneau, thinks, sees, hears, and feels as she navigates the many potential options offered by the existing online travel websites.

First, imagining ourselves viewing the sites through our persona's eyes, we conceptualized what she saw. And what she observed were numerous tabs on the existing sites, as well as far too many options and deals, pop-ups, and clutter, including features she did not need, as well as advertisements.

Second, we envisioned what she thought, felt, and wanted; and here, cognitively, she thought that she did not have sufficient time to explore the overabundance of competing options presented to her by these websites. On the affective level, she felt overwhelmed, and anxious that she might miss out on good deals. As well, given the existing stress levels that she was already mired in at work, most of all, she simply wanted to have the travel plans booked so she could finally get away and relax.

Third, we imagined her pains and gains—that is, her primary challenges and opportunities. Here, what emerged for Constance was that there were too many websites offering many deals of different types. This presented her with the stress of having to take the time to investigate all of the options in order to be thorough and not miss any potential savings (pain), but also, with many exciting possibilities (gain). Fourth, and finally, we conceptualized what she heard around her—things that others in her interpersonal and media contexts were saying that might influence her travel decisions. These included her friends' and co-workers' comments that a trip would do her good, the notion that travel builds character, voiced by her family and on social media, and the pervasive message in online advertisements that de-stressing is important.



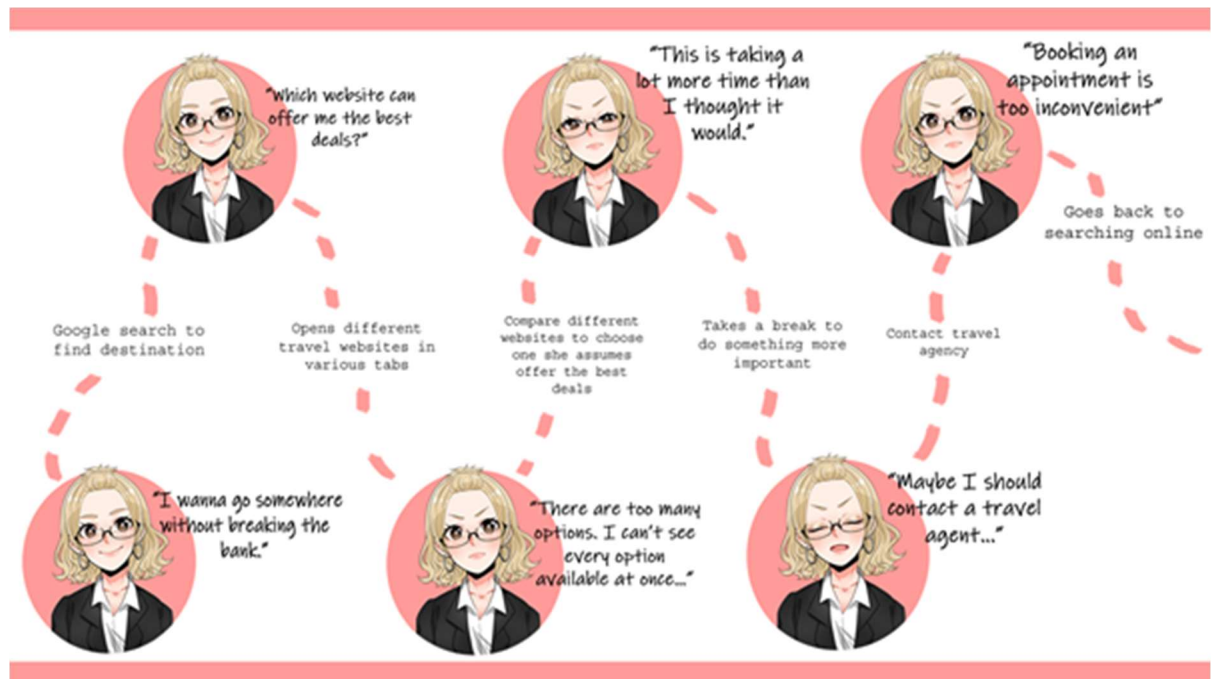
With this empathy map in mind, Constance then set off on her attempt to book her travel plans online. In the next section, we will explore this process by taking a look at a map of our persona’s journey toward that desired goal, and her responses to the process itself.

Journey Map

As we have seen, Constance is a seasoned computer user with limited time, who is very much ready for a needed vacation break. Therefore, her user experience is not frustrated by inability to use the system, but by what might be termed the tyranny of choice. She begins her journey with excitement, and with the goal of booking a trip without “breaking the bank.” An avid information seeker, she begins her research by conducting a Google search for her destination. Next, she wonders which website might offer her the best deals, and this search leads her to the recognizable and common situation of having several browser tabs open at the same time so that she can compare the different travel options and deals.

At this point on her journey, Constance is becoming frustrated. What bothers her the most is that not only do the existing sites provide her with too many options, but that she can’t see them all at the same time, making the choice even more daunting. And this sense of frustration ties into the vital matter of user experience—especially its affective dimension. She then attempts to compare deals on several different travel websites, but soon loses patience, and exclaims that it is taking a lot more time than she thought it would to find the right deal. As a result, she takes a break, and finally considers contacting a travel agent instead.

Unfortunately, she finds that booking an appointment with a travel agent is inconvenient given her busy schedule. Therefore, she returns to her online search, girding herself for yet more frustration with the online interfaces.



Our user, Constance, is of course, a manufactured persona. However, her user experience with online travel websites is far from unique. With her experiences and frustrations in mind, then, our team created an alternative Knowledge Organization System (KOS) to accommodate the busy professional, as well as others who find the existing websites to be stressful to use to achieve their goal of booking a trip.

2.2. Defining the Problem—Understanding the Inner Workings and Problems of Online Travel Agencies:

To truly understand what is wrong with current Online Travel Agencies, we need to know how they work. At its core, an OTA is meant to be a booking engine, and it tends to contain three primary ‘offices’: a front office, which is what the customer sees, a back office that comprises the heart of the OTA, and the provider’s office, composed of the connections to various travel distribution systems (AltexSoft, 2019).

Let's begin with the back office. An OTA usually has eight basic systems in its back office, but some of them have more. The first basic system is the one that controls inventory management, and this is the most important system of the back office, as it is used to organize connectivity to suppliers via many different channels. The second system is the booking desk, which handles bookings of all kinds. Since an OTA is at its core a booking engine, this system is, much like inventory management, vital. The booking desk consists of software connected to the websites' suppliers, and its purpose is to automatically process travel bookings and collect customer data. The third system encompasses the business rules, which are used in the company's decision-making. The fourth system is for accounting, and serves to process payments and reports. The fifth is the analytic system, which provides metrics and reports about the business, customers and employees. The sixth is the customer relationship management (CRM) system, with the goals of tracking and understanding customer activity. Next, the seventh system, customer service, handles the customers themselves. The eighth and final system is dedicated to user management, which establishes user roles and permissions, and also deals with users' personal information if they are registered on the system (AltexSoft, 2019).

Now, the provider's office is a lot more complex. The providers are the people in charge of various databases of all kinds, and who sell access to other OTAs. For hotels, these websites can use an extranet connection, which is currently the most direct chain possible, where the suppliers control what is displayed on the OTA with respect to availability. However, in practice, these sites rarely use an extranet, since this would involve an additional step. Instead, most websites use a central reservation system (CRS) that connects different websites together via an application programming interface (API) (Ibid.). The OTA will also have a channel manager connection, an intermediary between the OTA and the hotel. For air travel, most OTAs use either a global distribution system (GDS) that provides an inventory of airlines, cruises, buses, car rentals, etc., or a new distribution capability (NDC), which is an extensible markup language (XML), allowing airlines to communicate their inventory directly to travel agents (Ibid.). OTAs primarily use a GDS, because it is easier, since the NDC requires APIs to support the various airlines (AltexSoft, 2019).

So what are some of the key problems with the current OTAs? Well, there are many. First of all, there are numerous middlemen in the equation, taking the form of the various programs, such as the CRS and GDS, that are not run by either the OTAs or by individual businesses (i.e.,

airlines, hotels, etc.), but by a third entity known as the provider, as well as the OTA channel manager that takes the information from those systems to input into the OTA. The number of middlemen comes into play when it comes to prices, since everyone wants their piece of the pie. Even if a hotel has a room available that would normally cost \$100 per night, they might bring the price up to pay for those middlemen, and then the price could be raised once again when the provider takes their part. Next, the OTA might have additional hidden fees to cover access to these providers. This is typically why regular travel agents in brick-and-mortar agencies are able to secure better prices for clients than OTAs most of the time; in essence, they are cutting down on the number of providers and have more direct contact with the sources (AltexSoft, 2019).

For example, while planning a trip, one of the authors of this report had checked a flight path on Google Flights travelling from Quebec City to Fukuoka with transit connections in Toronto and Haneda, and a return flight from Narita to Quebec City, with a stop in Montreal. The flights, provided by Air Canada and All Nippon Airways, was shown to cost \$1600 round trip, and this was the best price among all OTAs researched. However, after visiting a travel agent, she ended up paying \$1400 for her ticket; this was \$200 less for the exact same flights, on the same days and times. This is a prime example of the hidden fees that add up when booking online using OTAs.

These are the major back office problems of the current OTAs. But, as we will now see, the front office also has some major problems that are affecting the users themselves—not merely their wallets.

2.2.1. Online Travel Websites—The Current User Experience:

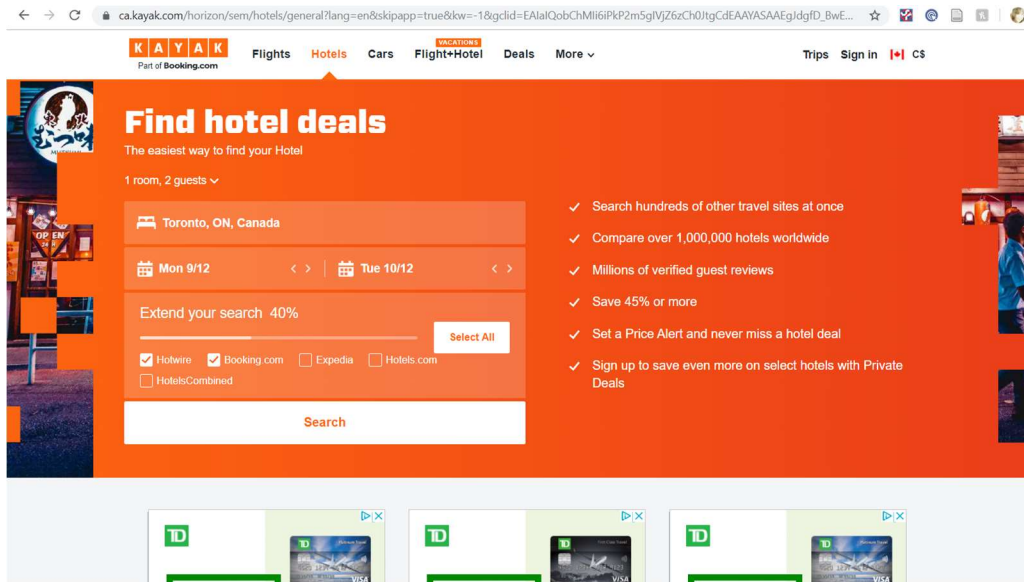
Over the past few decades, online travel websites such as Booking.com, Travelocity.com, Expedia.ca, and KAYAK.com have reigned supreme in the travel industry, replacing brick-and-mortar travel agencies, and allowing users to select from a wide array of choices, from travel fares to fees for accommodations and car rental, among other options.

While having these choices is indeed convenient, the time and energy that must be invested by the average site user is significant. To use one such travel website as an example, Travelocity.ca offers the user travel choices based on numerous parameters. This is what a user sees upon visiting the landing area of the site.

As we can see, this front-end user interface offers the prospective customer a plethora of travel booking options, from flights, hotels, and car rentals to standalone vacations and bundled packages. In addition, there is a menu allowing the user to select flight + hotel, flight + hotel + car, flight + car, and hotel + car options. Next, the user is able to select whether or not they desire only direct flights, and whether their hotel is required for only part of their stay. They can also choose their fare class. Under this drop-down menu is a line providing an incentive to book one's flight and hotel together to save anywhere up to \$543 Canadian.

On the face of it, these choices would appear to provide the user with the kinds of choices they need to make their travel plans. However, keeping the expectations, time-limitations, and lived experience of the average traveller in mind, the various choices that must be made up front in this interface may be perceived as information overload. Moreover, once those travel choices are made, the visitor is confronted with seven more special travel deals competing for their attention. In addition, the same choices are mirrored for the user in different menus, one on top of the other, which is both redundant and potentially overwhelming. And this is the experience on just one such online travel booking website/OTA. In reality, many travellers then turn to other, similar websites in order to find the best possible deals.

As a second example of what the user might experience, we turn to the following landing page, on KAYAK:



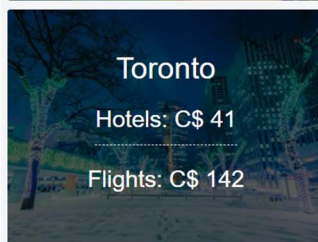
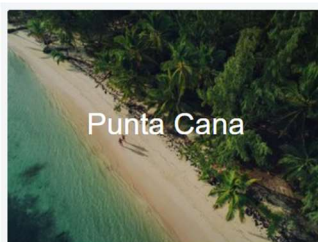
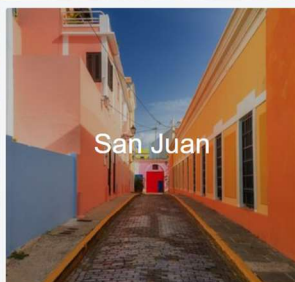
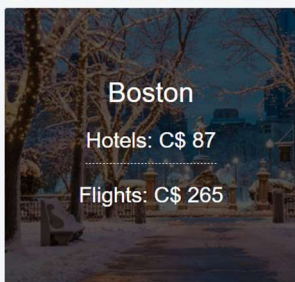
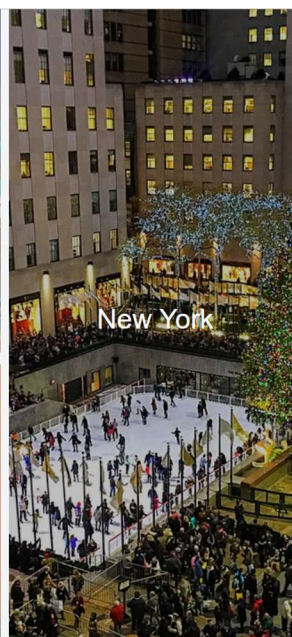
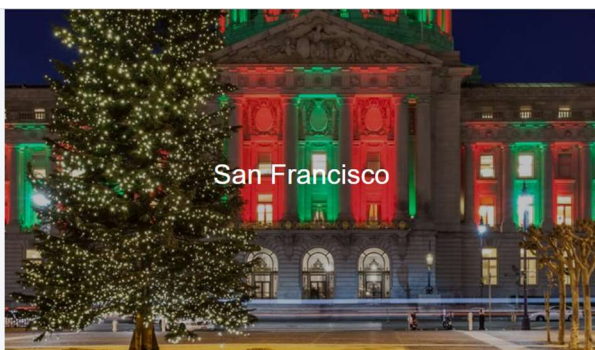
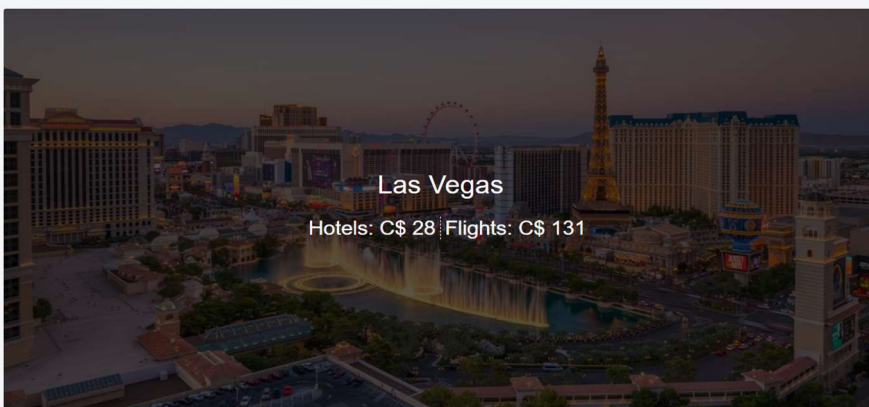
This website might potentially represent the second online travel booking site that a prospective traveller could choose after visiting Travelocity or another similar OTA. And here too, we see an array of choices confronting the user. Furthermore, this interface allows the user to compare prices for five different sites, including Expedia, Booking.com, Hotwire, Hotels.com, and HotelsCombined.

Next on the page, further down, the visitor sees the following series of clickable image options, distracting them from their existing search:

Unleash the traveller inside you

Discover our top destinations

Worldwide **North America** Canada Nearby



In essence, while these online travel websites, and others like them, present visitors with more than enough options to allow them to find the best possible travel deals, each site in itself contains a number of options, from standalone flight and hotel bookings, to packages, that are not always easy to compare to each other—or, frequently, to the many options and packages offered on other online travel websites. From a user perspective, this may lead to the overwhelm of too much choice, as well as the clutter of advertisements, pop-ups, and the inability to compare apples to apples, so to speak, with respect to shopping for trips, options, and fares, both on a single website, and when comparing several travel sites. Moreover, many busy travellers have little time to invest in such a laborious process.

This, in our view, highlights a need, and hence, a gap, in the online travel market, calling for an alternative Knowledge Organization System designed to better address the real-world user needs of information-seeking travellers.

2.2.2. Usability—The Importance of User-Centred Design:

Part of the discipline of User Experience (also known as UX), User Experience Design is used to program interfaces that are optimally useful and functional for users. In turn, the term “User Experience Design” encompasses concepts and practices including “Usability” and “User Interface Design” (Interaction Design Foundation, User Experience/UX Design). According to the Interaction Design Foundation, “a good user experience is one that meets a particular user’s needs in the specific context where he or she uses the product” (Ibid.). Moreover, UX design calls upon designers to be mindful of the end users’ needs throughout the entire design and development process, including the psychographics of users (i.e., their age and sex demographics, life contexts, expectations, preferences, and aversions), and in particular, how they will actually use software, a website, or other types of technological interfaces in the real world.

One aspect of User Experience is particularly important to the analysis of online travel websites, and this is the concept of usability and its evaluation. As G. Cockton describes it, usability is “the extent to which an interactive system is easy and pleasant to use” (Cockton). Some of the key elements of this dimension of user experience include functionality such as system status

visibility, to ensure that users have feedback to their input, the reduction and prevention of system errors, and flexibility of use (Ibid.).²

Finally, yet another dimension of user experience, a subset of human-computer interaction, is known as affective computing—an emerging perspective that takes user emotions and their perceptions of interface functionality and aesthetics into consideration throughout the design process (Hook). Functionality based on user needs is a factor of usability that helps minimize frustration, and aesthetics (i.e., elegance and beauty) is part of “designing for [user] wellbeing” (Hassenzahl 2018, 174). Indeed, As P. Chalmers has found in her research, usability has an effect on site user emotions, though other dimensions such as “situational and individual differences” also call for more research (Chalmers 2006, 183). As she expresses the matter:

Studying user emotions when users are trying to find information is challenging. However, our users deserve a fulfilling experience. The benefits of helping all web users find the information they need and want should be well worth the challenge in increased effectiveness, efficiency, and satisfaction. (Chalmers 2006, 183)

The development of our own user persona, empathy and journey maps of their experience with online travel booking, and our own KOS, were very much influenced by this perspective.

3. Results

3.1 Introduction to Our KOS Prototype, *Concierge*—Overview and Elements:

Through the persona’s empathy and journey maps and the analysis of current issues with existing OTAs, it has been established that booking a trip through an online travel website can be an overwhelming process. Firstly, because there are too many websites to choose from, all offering different deals and too many options; which can be difficult to navigate. Secondly, because of this, users may feel overwhelmed and anxious because they don’t have a guarantee that while sifting through the site and its option clutter, they are getting the best deal for their money. Moreover, many users have neither the time nor the will to go through this process when researching travel options. With this in mind, it was evident that an alternative travel booking website (KOS), would

² A more complete and relevant list will be provided in the Conclusion, in our description of prototype testing.

not only have to be user friendly, but also very practical in the sense that it would need to provide its users with options they are interested in and nothing more, so as to reduce the clutter. Enter our proposed alternative KOS, known as *Concierge*.

In order to achieve our goals for *Concierge*, it was decided that the website couldn't merely be an OTA, but would instead need to be more streamlined to accommodate our user persona and other travellers like her. As such, we designed it as an access portal directly connected to airline, hotel, and transportation company databases. This means that unlike other OTAs with providers who act as the middlemen between their users and the companies, *Concierge* aims to simplify its users' searches by giving them direct access to the travel companies' databases. In this way, the users not only act as their own travel agents, but are able to immediately access only the information they are interested in with respect to their trip, as it is updated in the companies' databases.

To compensate for the lack of pop-ups and other site ads, *Concierge* users would pay for a subscription to the KOS to obtain full access to these databases, as an ordinary travel agent would do, or as if the user were interacting with an airline representative at an airport service counter.

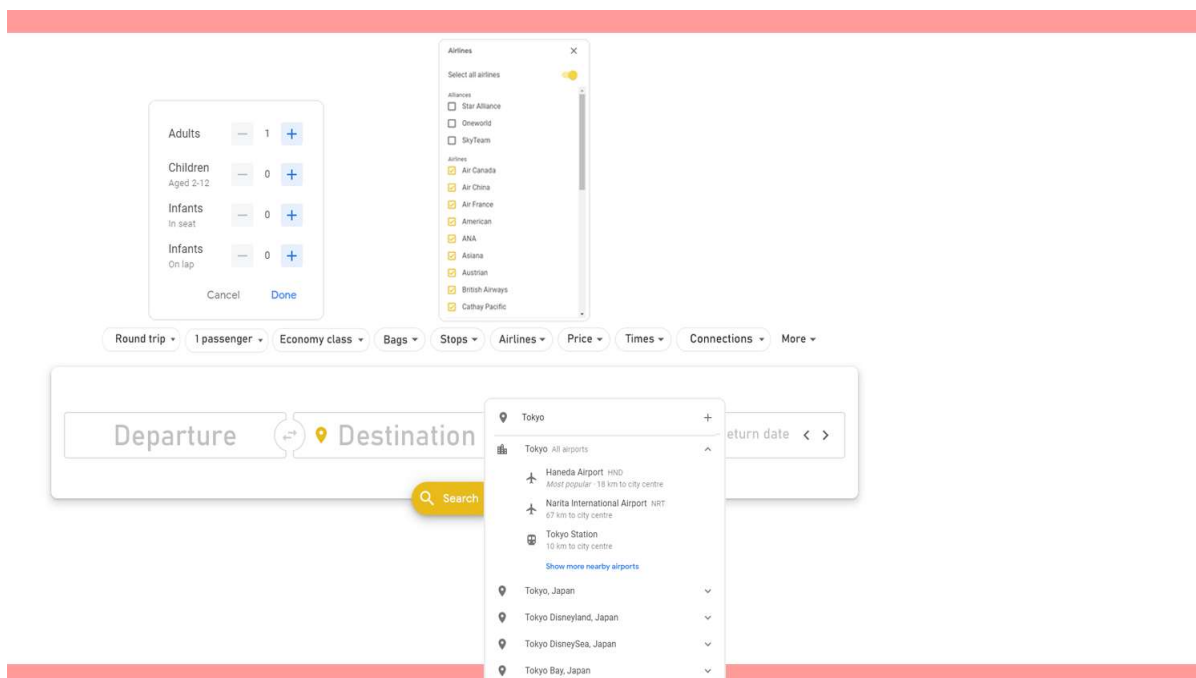
This streamlined approach offers an alternative to the current clutter problem present in other OTAs, because the *Concierge* interface is designed such that users can search the databases to obtain results tailored around their individual needs. The users pay to be their own travel agents, therefore, there are no paid advertisements promoting one deal over another. This greatly reduces the need for users to filter through irrelevant options and visual noise. *Concierge* pays the travel companies to allow its users direct access to their databases to best meet their needs and retrieve highly targeted travel deals.

With respect to the information architecture of the KOS, and as discussed previously, it is crucial that *Concierge* provides its users with simple and intuitive access to site content and functions. As a KOS, *Concierge* aims to not only make the retrieval process as smooth as possible, but also to ensure that the information is organized in a structured and unambiguous way for the user. Therefore, to achieve this, it must incorporate knowledge organization features such as: faceted classification, controlled vocabulary, and tagging, to contribute to indexing and organizing the website's information in an efficient way, while also ensuring ease of retrieval.

Firstly, the website is organized using a faceted classification. The main page provides users with a choice of multiple facets which they can use to filter their search from the beginning.

Given that the KOS aims to retrieve results tailored around the users' interests, facets are not only a great way for them to enter those interests into the website during search, but they also allow for retrieval of content tailored specifically around those choices. This is because with a faceted classification, each content unit is associated with one or more metadata categories, and may appear in different indexes. The metadata categories can, in turn, be organized into hierarchically related groups to form metadata systems that classify particular content attributes. This enables users to view indexes of the content associated with specific metadata categories (Ruzza et al, 2017, 167). This metadata-based and faceted system is a way for a KOS such as *Concierge* to allow its users to navigate the site based on many different indexes, as determined by the metadata categories with which these pages are associated (e.g., airlines, travel class), and by various sorting methods (e.g., price range) (Ruzza et al, 2017, 167). A facet such as "airline" would be associated with metadata indexed in the database, such as: Air Canada, Air France or British Airlines, for example. Once the user makes a choice, the chosen metadata in the facet is matched with all the respective indexed options in the database.

It is clear that faceted classification is thus an effective method to organize content with multiple taxonomies, because it enables retrieval of specific content, thereby leading to results that are specific to the users' needs. Moreover, a faceted classification avoids the construction of poly hierarchies, which would not be convenient for a travel KOS such as *Concierge*, because they would prevent taxonomies from being mutually exclusive. If the content of one facet were also listed in another, as is the case in poly hierarchies, it would defeat the purpose of having a tailored search that only retrieves content affiliated with that one particular facet. (Ruzza et al, 2017, 167) The results would then be mismatched with the users' needs, thereby creating disorientation and confusion for users, as is currently the case with other OTAs. This is why a faceted classification is a better fit for this particular KOS and its goals: ensuring that users can make targeted bookings based on relevant search results, and that they experience the KOS as uncluttered and pleasant.



Next, another feature of this KOS, a necessary addition to its faceted classification, is the controlled vocabulary of the facets. In fact, faceted classifications are not only based on predetermined hierarchies but also on a controlled vocabulary (Ruzza et al, 2017, 167). Just as faceted classification is effective for organizing content, indexing using a controlled vocabulary complements it by improving the precision and recall of searches, and therefore improves the speed, accuracy, and specificity of the search (Fenton, 2010, 189). The reason it does so is that controlled vocabulary provides sets of terms that can be used to describe items. This allows items to be described in a controlled way, and for the retrieval to be semantically precise and unambiguous (Miles & Pérez-Agüera, 2007, 70). This feature in particular is crucial for a KOS such as *Concierge*, where end users may not necessarily know a correct term when entering their query. Therefore, having a controlled vocabulary ensures that the same terms are used during the indexing phase when referring to a destination or an airline company, for example. That way, even if users enter different synonyms or generic terms during the retrieval process, they would still be able to retrieve relevant results, because the controlled vocabulary in the index gathers together variant terms and synonyms for concepts, and links them in a logical order, or sorts them into categories (Harpring, 2010, 12).

Facets like “airline,” for example, would contain metadata from the controlled vocabulary used to index the companies’ names in their databases. However, facets like “departure” or

“destination” would be controlled by the Getty Thesaurus of Geographical Names, as it contains controlled vocabulary specifically related to locations and place names. This ensures that the terms used to describe locations on the website are standardized, and can be easily retrieved by users. Finally, facets like “passengers” or “bags,” for example, will have to be predetermined in the sense that the metadata won’t be controlled vocabulary but rather, predefined free-text terms from which users can choose. This ensures that users don’t have to fill in metadata by themselves, but instead have a choice of predetermined metadata to choose from during search. The goal of this, once again, is to ensure that their booking experience in the interface (further described in 3.2.) is as stress-free and effortless as possible.

As for hotels, there would be many features designed to make the search easy and headache-free for users. The most prominent would be the tagging feature, which uses controlled vocabulary from hotel reviews to give users the ability to filter through them easily to find what they are looking for with respect to dimensions such as cleanliness, location, services, etc. To improve the experience, results would be shown on an interactive map, allowing users to see different hotel areas, and when filtering using tags, the map would highlight the hotels with the best reviews about specific aspects of interest.



Where do you want to stay?

The screenshot shows a travel booking interface for Tokyo. At the top, there are filters for Fees, Location, Rating, and Meals. The search bar is set to Tokyo, with dates from Sun, Dec 15 to Tue, Jan 14, and 1 person. Below the search bar is a price compass showing a range from \$36 to \$400+. The interface includes tabs for Hotels, Vacation rentals, Guest rating, Amenities, Brands, and More filters. There are also tags for Atmosphere, Cleanliness, Service, Property, Bathroom, Transport, Location, and Food. The results section is titled 'Taitō hotels' with 509 places. Two hotels are listed: Hotel Graphy Nezu (3-star hotel, 4.3 rating, 426 reviews, \$200) and Red Planet Tokyo Asakusa (3-star hotel, 4.3 rating, 654 reviews, \$140). A map of the Taitō City area is shown on the right side of the interface.

As mentioned previously, a goal of this KOS is to get rid of the middlemen, by allowing direct user access to databases, as if they were consulting real travel agents, thereby cutting out other providers in the process. *Concierge* would be the only provider, as the KOS would acquire access to the airline and hotel databases, creating its own systems instead of using existing ones. Ideally, hotel reservations would use an extranet connection, the most efficient option, as hotel availability would be directly accessible through the *Concierge* system. For transportation, *Concierge* would have its own distribution system, based on the NDC that would work similarly to the hotels' systems, in which airlines or cruise lines would have their availabilities directly accessible via *Concierge*. (AltexSoft, 2019)

One question that might come to mind is: doesn't this make *Concierge* a middleman? In a certain sense, yes, *Concierge* could be considered a middleman, because it stands between the user and the databases. But this is only to make the databases easily searchable by users, so it therefore acts more like a filter, and as a format given to the data from these databases to allow people to

search through them more easily, while accommodating users with useful features, such as the tag searches based on hotel ratings, or a price compass helping users learn the average prices for the season. While these features already exist on certain OTAs such as Google Flights or Expedia, they are nevertheless important to the user experience and would be featured in the *Concierge* KOS, because without such features, it would otherwise be a simple database access service and likely not be deemed worth the expense by potential customers (AltexSoft, 2019).

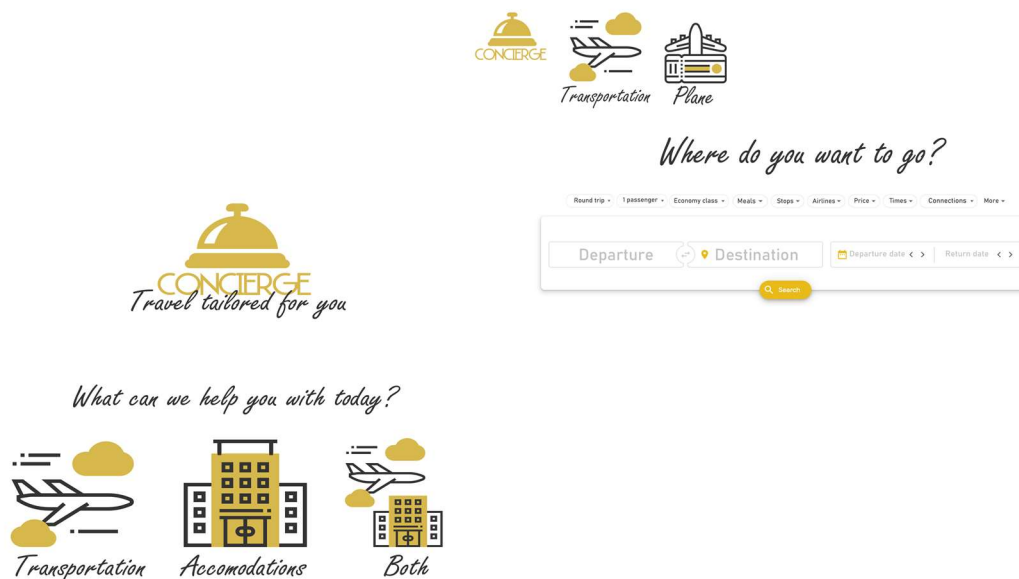
3.2. The *Concierge* User Interface:

The *Concierge* KOS features a user-friendly interface to address the feelings of anxiety and overwhelm that many users, including Constance, experience with current OTAs. Features such as a clean and simple main interface to make choices from will eliminate the pop-ups that can be so frustrating for users. In contrast to existing OTAs that present many menu options on the homepage, *Concierge* works on a funnel principle, in which relevant choices are provided to the user on the landing page, and subsequent choices become ever-more targeted, thereby reducing user frustration rather than offering new choices and surprise add-ons during the booking process.

Homepage and navigation menus play strategic roles in communicating the information architecture behind the website to the users (Ruzza et al, 2017, 167). It is their first encounter with the website, and these features provide them with an overview of the site's purpose. Therefore, when information architecture best-practices and theoretical principles are not put to good use, "the homepage becomes filled with links that redirect users to other pages, making it difficult to keep the homepage layout uncluttered and coherent" (Ruzza et al, 2017, 167). This is a source of stress and frustration for users in current OTAs.

This is why *Concierge*'s main interface would only have three main options: transportation, accommodation, or both, thereby allowing users to have a pleasant experience of the functionality and aesthetic dimensions from the beginning by making things simpler for them, targeting their search from the start, and offering a clean, uncluttered user interface.

Once their mode of transportation and/or accommodation is chosen, the facets described in section 3.1 would be at the users' disposal to help them target and filter their search even more, and to prevent them from having to do so after receiving results, thereby running the risk of missing out on other options.



Once again, in keeping with the user-fee model, there would be no advertisements or links redirecting users to other pages and cluttering their screens. Once users make their choices on the main page, they are kept on the website in the same tab. This will eliminate the need for multiple tabs and/or redirects that cause confusion and overwhelm among users of current OTAs.

In sum, the KOS aims to improve its users' travel booking experiences by providing them with an advertisement, pop-up, and generally clutter-free environment, as well as by giving them direct, subscription-based access to airlines, hotels and transportation companies' databases, and providing users with results specifically tailored to their needs. The experience is also made less emotionally draining due to a user-friendly interface, enabling users to not only navigate the website smoothly, but to use simple facets to target their search from the start to obtain better results.

4. Conclusion and Potential Prototype Implementation

As we have seen, our user persona, Constance Létourneau, needed a travel booking website that met her needs for ease of use, that respected her time, and that did not add more stress to her already busy lifestyle. It's our contention that the *Concierge* KOS aptly addresses her user needs, providing her with a clean, uncluttered interface, targeted access to booking information, and a more streamlined user experience than was provided by the existing online booking sites. Indeed,

unlike those OTAs, the *Concierge* KOS meets her stated need to spend her time travelling the world instead of researching multiple travel deals on the internet.

To assess the success of our prototype, our final step would be to evaluate the usability of the *Concierge* KOS based on subjective user experience. This would involve recruiting representative users to test the KOS, interacting with the site as if they were real users. These subjects would then be asked to perform sets of tasks typical of site users, and would be asked to rate their subjective experiences of the site, providing us with information about the ways in which our KOS has effectively met their needs, as well as potential areas for improvement, or gaps.

Metrics for the success of our *Concierge* prototype would include the following, adapted from the most salient usability measures for our user context provided by P. Chalmers (2006), as well as by D. Lavery, G. Cockton, and M. Atkinson (1996):

1. Location visibility (i.e., Users know where they are on the website) (Chalmers, 179-80)
2. System status visibility (i.e., Users how they are progressing; this reduces anxiety) (Lavery, Cockton, Atkinson, 4)
3. Error prevention and recovery (Chalmers, 180; Lavery, Cockton, Atkinson, 2)
4. Ease of scanning (especially when a large amount of information is present) (Chalmers, 180)
5. Matching site language to real-world user language (i.e., plain language) (Chalmers, 180; Lavery, Cockton, Atkinson, 4)
6. Assistance available to users (Chalmers, 181; Lavery, Cockton, Atkinson, 4)
7. Efficiency/flexibility of use (Lavery, Cockton, Atkinson, 3)
8. Aesthetic design/minimalism (Lavery, Cockton, Atkinson, 3)

Again, as Chalmers has pointed out, it is difficult to truly capture user experience when they are in the process of searching for information, and this might well be a limitation of our prototype testing (Chalmers 2006, 183). The potential inaccuracies of self-reports could represent another. Nevertheless, testing such as this may go a long way toward capturing some measures of subjective user experience.

Our objective in this paper was to design a KOS to meet the online booking needs of busy travellers, while prioritizing their lived user experience.³ Although existing travel websites are

³ Although it is beyond our scope in this report, the phenomenology of user experience has also been explored in the UX literature in its own right. Two articles by D. Svanæs that delve into this topic include (2013), *Interaction Design for and with the lived body: Some Implications of Merleau-Ponty's phenomenology* and (2019), *Phenomenology Through Design: A Tale of a Human Tail*.

currently in vogue, they are designed with the needs of advertisers and travel suppliers in mind. However, as we have seen, user experience should be the basis for KOS design, and in our view, the existing sites are not working toward this mandate. As such, it is our team's belief that a site like *Concierge* is sorely needed, and—by design, if you will—would provide a viable and more user-friendly alternative to the travel booking websites currently competing for both share-of-mind and share-of-market on the web.

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