

APPENDIX

PERSONALIZATION FOR THE ONBOARD PORTAL

Enhancing the passengers' inflight
experience by emotion and data-
driven design

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A CONSUMER DATA

360 DEGREE VIEW OF THE CUSTOMER

To define the 360 view of the customer data categories, various sources were examined. Figures A1-4 showcase the 360 degree customer view from IBM, Cloudera, BigR.io, and Vantive Media.



Figure A1 How to Design Your 360-Degree Customer View (Schaeffer, 2017)



Figure A2 Cloudera's customer 360 view on consumer (Raya, 2016)

- A holistic real-time view of your individual customers
- Across all products, systems, devices and interaction channels
- In order to deliver a consistent, personalized, context specific and relevant experience



Figure A3 BigR.io's 360-degree view (Ho, 2017)

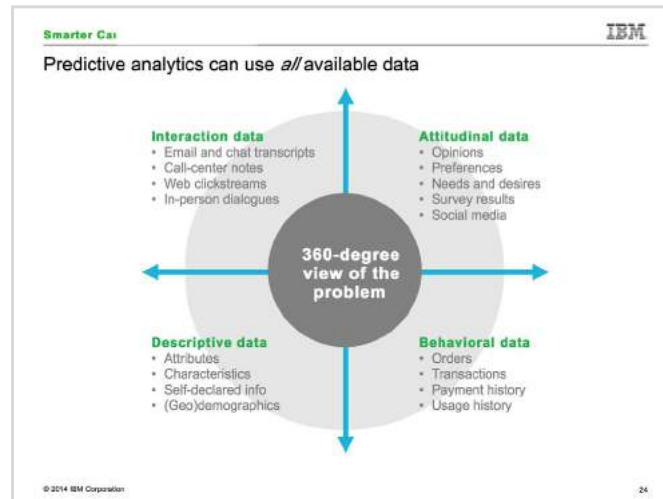


Figure A4 360 degree view of the problem (IBM, 2014)

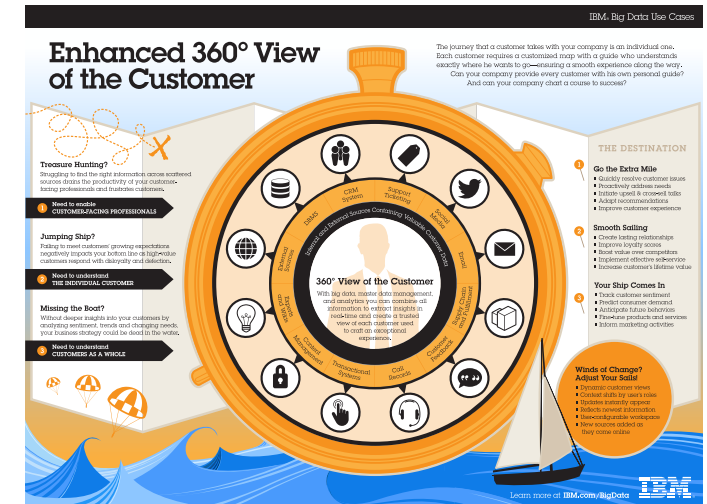


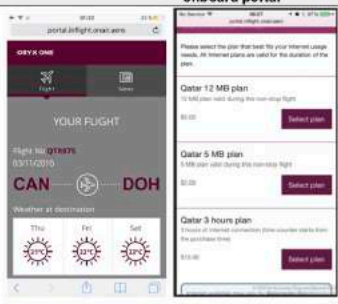
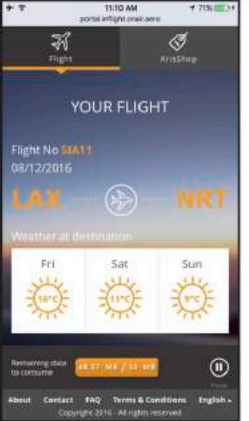
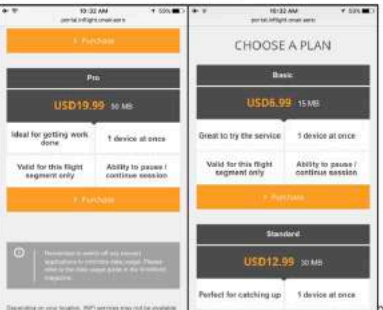
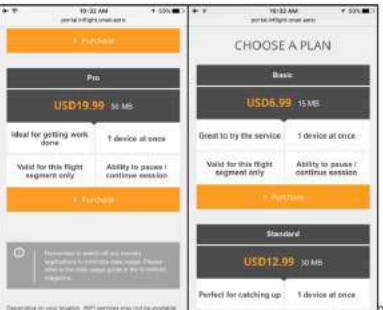
Figure A5 Enhanced 360 view of the consumer (IBM, n.d.)

B COMPETITORS

The following pages show a table of competitors (table B) examined for the external analysis. These airline competitors are ranked by Skytrax for 2017's


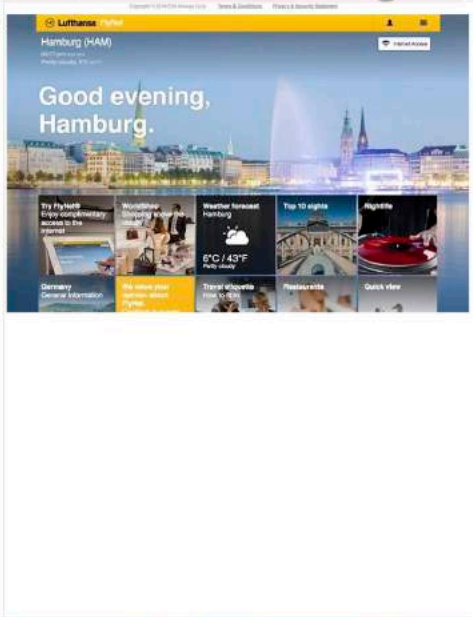

best airlines. Information is gathered according to the categories: pre and post flight services, airport services, lounge services, inflight services, OBP page, OBP




features. These categories aid in determining what services are offered and how their OBP is designed.

2017	Pre/post flight services	airport services	lounge services	inflight services - business	onboard portal	onboard portal features	
1	<p>Qatar Airways</p> <p>chauffeur-driven service Take the stress out of your travel plans as arranging your airport transfer has never been easier or more convenient Qatar Airways is proud to now offer our professional chauffeur-driven service for seamless, door-to-door airport transfers in all our major destinations worldwide, with our globally recognised partner Blacklane. Convenience 1. Complimentary wait time - Airport pickups include 60 minutes of complimentary wait time and all other pickups include 15 minutes 2. Professional drivers - All Blacklane drivers are licensed, insured and regulated. 3. Notifications - Receive up-to-date SMS and email updates and confirmations. 4. Modern fleet - Our large fleet of Mercedes-Benz vehicles are both modern and luxurious to ensure a safe, comfortable journey.</p>	<p>Transit Visa You can now enjoy the new Transit Visa free of cost when you add a short transit or stopover between five and 96 hours in Doha to your itinerary without any additional fare charges.</p> <p>Transit tour Turn your transit at Hamad International Airport into an incredible experience in Qatar by signing up for one of our daily excursions Discover Qatar, in association with Qatar Tourism Authority, hosts a tours desk in the transit zone for booking on arrival at the desk. If your transit is more than 5 hours, you can join a city tour or desert adventure, and enjoy a fantastic Doha excursion before connecting to your final destination.</p>	<p>Stay refreshed To help our guests stay refreshed, we have taken special care in the design of our shower and restroom facilities. Each shower is part of its own spacious area, with luxury amenities and fine linens.</p> <p>Relaxing experiences Relax with full body massages, manicure/pedicure treatments or even a haircut at the Ambassador Transit Lounges or Plaza Premium Lounge. Equipped with gym and shower facilities, these pay-per-use lounges are popular with passengers who wish to freshen up while on transit. Free foot massage machines are also available across all terminals.</p> <p>Changi Transit Programme: receive a Changi Dollar Voucher (CDV) valued from S\$20 when you transit through Singapore The CDV is valid for use at all retail, food and service outlets in the transit and public areas of Singapore's Changi Airport (exclusions apply), or can be redeemed for one-time access to the Ambassador Lounge at Terminals 2 or 3 for up to two hours. The Ambassador Lounge provides shower facilities (including basic toiletries), light refreshments, reading material and complimentary WiFi.</p> <p>Free Singapore Tour Choose between two different tour routes during your transit. If your transit is 5.5 hours or more, add the free Heritage Tour to your itinerary. And if it's 6 hours or more, you can enjoy the City Sights Tour. Each tour is 2.5 hours long, and jointly organised by Singapore Airlines, Singapore Tourism Board and Changi Airport. Tours are conducted in English only.</p>	<p>Meals: On-board cuisine With Pre-Select Dining, you can choose your preferred entrée from our à la carte on-board menu from 14 days and up to 24 hours prior to your departure, through 'My Trips'. Savour the satisfaction of knowing that your chosen dish will be prepared and available at your convenience. *Available on select flights from Doha only.</p> <p>Connectivity send SMS and MMS or access your email Oryx One Communications: you can use your portable electronic devices (PEDs) and send SMS and MMS or access your email and browse the Internet to stay in touch with everyone on the ground. Enable Wi-Fi on your laptop, tablet or smartphone, and select 'Oryx One.' You will need to launch your web browser, which will display the log-in web portal. From the portal, simply select your preferred price plan.</p> <p>Meals: Book the Cook: Reserve your main course up to 24 hours before you fly, including creations by notable chefs from our International Culinary Panel. Dine in restaurant setting onboard with full table service, and wines to match the food and altitude. International Culinary Panel (ICP): Not just one, but eight world-renowned chefs form our International Culinary Panel (ICP). Inspired by their culture and experiences, and the places we fly to, our team of celebrated chefs are constantly creating new dishes for you. Wine Experts: We taste more than 1,000 wines every year. So you can savour the best. Each year, we invite three of the world's leading experts to taste our wines - New World, Old World, red and white. Tested under cabin pressure, they look out for all the defining characteristics of a great wine. So the next time you take a sip on board, you know you're enjoying something special that stood up to two of the harshest tests: cabin pressure and wine critics. Special Meals: (religious, vegetarian, dietary, baby infant & child, other) When you savour your meal on board, you're not just enjoying it for the pleasure it gives. You're also assured that your meals are prepared to suit your needs. Whether it's for religious, dietary or allergy reasons, or simply for a leashing toddler, all you need to do is make a request from our list of Special Meals.</p> <p>IFE: An impressive selection of 1,000 entertainment options – movies, television programmes, music, games and apps – on a 15.4-inch wide LCD screen with noise-cancelling headphones. On selected flights, stay in touch with family, friends and colleagues with internet connectivity, as well as text and multimedia messaging.</p> <p>Connectivity Surf, tweet, or send a text message on your own mobile phone, tablet, or laptop. Thanks to our partnership with SITAONAIR and Panasonic, we're able to connect you to the ground even while you're 30,000 feet in the air. The convenience of inflight connectivity is offered on our Airbus A380, A350 and Boeing 777-300ER aircraft. Our cabin crew will play a video if connectivity services are available on your flight. To access the internet through WiFi, simply: - Enable WiFi on your smartphone, tablet or laptop, and connect to the 'KrisWorld' or 'OnAir' network. (Our cabin crew will let you know which network is available on your flight.) - Launch your web browser to display the onboard portal. - Choose your preferred price plan, and log in or create a new account. - Enter your credit card details and confirm your purchase. You are now online!</p> <p>Inflight Text / Data Roaming: Price plans - Your mobile service provider must have a roaming agreement with our connectivity service provider, OnAir or AeroMobile. Roaming charges are determined by your local mobile service provider, and will be reflected in your mobile phone bill. Please check your mobile service provider's roaming rates before you fly.</p> <p>Companion App: The free SingaporeAir mobile app brings you a whole new way to enjoy KrisWorld. Discover what is playing on KrisWorld even before you step onboard, shortlist your favourite movies, TV or music to your Favourites list and control the media playback right from your personal electronic device. By linking your Android or iOS device to your seat, you can now: - View the current flight path and location on your device - Check out updated flight information on your device - Browse the movies, TV, and music available onboard in full detail. While you watch a movie on the seat monitor, you can find out more about what's playing, or plan what to enjoy next! - Save your favourite movies, TV or music to a personal Favourites list on your device for easy reference and playback. - Remotely launch and control movies, TV shows and music from your saved Favourites, or directly from the KrisWorld listings on your device.</p>	  	<ul style="list-style-type: none"> - connect to wifi - wifi plans - flight # - flight from & to - weather at destination - news 	
2	<p>Singapore Airlines</p>			<p>First Class Check-in Reception: Porter services Just like the service in a top-class hotel, our Passenger Relations Officer will greet you when you arrive, and a porter will unload your baggage and assist you through to our elegant First Class Check-in facility, located next to immigration.</p> <p>Sit back and relax: Our Passenger Relations Officer will handle your check-in while you sit back and enjoy the comfort of the lounge.</p>	<p>Connectivity Surf, tweet, or send a text message on your own mobile phone, tablet, or laptop. Thanks to our partnership with SITAONAIR and Panasonic, we're able to connect you to the ground even while you're 30,000 feet in the air. The convenience of inflight connectivity is offered on our Airbus A380, A350 and Boeing 777-300ER aircraft. Our cabin crew will play a video if connectivity services are available on your flight. To access the internet through WiFi, simply: - Enable WiFi on your smartphone, tablet or laptop, and connect to the 'KrisWorld' or 'OnAir' network. (Our cabin crew will let you know which network is available on your flight.) - Launch your web browser to display the onboard portal. - Choose your preferred price plan, and log in or create a new account. - Enter your credit card details and confirm your purchase. You are now online!</p> <p>Inflight Text / Data Roaming: Price plans - Your mobile service provider must have a roaming agreement with our connectivity service provider, OnAir or AeroMobile. Roaming charges are determined by your local mobile service provider, and will be reflected in your mobile phone bill. Please check your mobile service provider's roaming rates before you fly.</p> <p>Companion App: The free SingaporeAir mobile app brings you a whole new way to enjoy KrisWorld. Discover what is playing on KrisWorld even before you step onboard, shortlist your favourite movies, TV or music to your Favourites list and control the media playback right from your personal electronic device. By linking your Android or iOS device to your seat, you can now: - View the current flight path and location on your device - Check out updated flight information on your device - Browse the movies, TV, and music available onboard in full detail. While you watch a movie on the seat monitor, you can find out more about what's playing, or plan what to enjoy next! - Save your favourite movies, TV or music to a personal Favourites list on your device for easy reference and playback. - Remotely launch and control movies, TV shows and music from your saved Favourites, or directly from the KrisWorld listings on your device.</p>		<ul style="list-style-type: none"> - connect to wifi - wifi plans - flight # - flight from & to - weather at destination - remaining data to consume - pause WiFi - shopping: Krisshop

TableB Competitors

<p>ANA All Nippon 3 Airways</p>	<p>ANA My Car Valet Service With this convenient service, you can drop off your car at the airport and get it back upon your return. [At Departure] After making your prior reservation, please come to our partner car park, Central Parking Narita, and drop off your car with us. Your car will be kept in a special fully-roofed garage. You will be escorted to Narita International Airport on our complimentary limousine service. [On Return] When you arrive at Narita Int'l Airport, we will deliver your car to the car drop. Relax and enjoy a moment of unwind in the ANA ARRIVAL LOUNGE (International arrivals Lounge) while you wait for your car to be delivered.</p>	<p>Priority lanes for security check. Business Class customers are welcome to use the priority lanes at selected airports to go through security check seamlessly. PRIORITY BAGGAGE SERVICE: The 'Star Alliance' priority tag will be attached to your baggage.</p>	<p>-Meals: The CONNOISSEURS, ANA Fine Dining & Bar To ANA, a "Connoisseur" is the embodiment of the ultimate host: someone with great knowledge in entertaining your palate. With the professional expertise of master chefs, beverage specialists and ANA chefs, we open new frontiers in the art of dining 30,000 feet in the sky. Wine: We serve wines selected by Olivier Poussier, voted the Best Sommelier in the World in 2000, for ANA customers. Special Meals: Allergen-free, Vegetarian Jain, kosher, bland, Low Lactose, Seafood, etc...religious, child & baby</p> <p>-IFE: Sky Live TV: (CNN, Sport24, NHK) Passengers can watch satellite TV on their seat screens on board. This new entertainment service allows passengers to enjoy the latest news and sports broadcasts in real time. Duty-Free Shopping: on the IFE e-books: can be viewed within the cabin on the screen for each seat. Passengers can enjoy not only economic magazines, sports magazines, lifestyle magazines, and tourist magazines but also popular comics and past archives of our in-flight magazine. The e-books service is provided by BookLive Co., Ltd. BookLive! is a comprehensive bookstore of e-books. A great number of free previews! Profitable point services! The country's largest selection! e-books can be enjoyed on various devices such as smart phones, tablets, and computers. Portable media player (PMP): You are able to enjoy own entertainment Movie, Video program and Music with Portable media player with HDD. Have complete control over play back, fast-forward and pause. Enjoy your own personal entertainment.</p> <p>- Connectivity: With our in-flight Internet service, you can access the Internet, use email and stay connected through social network sites using your smartphone, tablet or other devices with wireless capability</p>	 <p>News articles can be viewed on the portal site for free.</p> 	<ul style="list-style-type: none"> - connect to wifi - flight # - flight from & to - weather at destination - news - news - flight time left - destination time - business info - art & culture info - technology info - sports info
<p>4 Emirates</p>	<p>Chauffeur-drive Complimentary for First Class and Business Class travellers in more than 70 cities. Chauffeur-drive service ensures hassle-free transfers in comfort and privacy, both to and from the airport. https://www.emirates.com/en/english/experience/chauffeur-drive/</p>	<p>Begin your journey with gourmet cuisine, a delicious beverage, and even a spa treatment</p> <p>Indulge in a delicious meal, take a shower, or catch up on business</p>	<p>- meals 1 Explore the world with every bite: Savour the local flavours of your destination, with new menus updated every month. 2 Taste a wine selection for the senses: Pair your meal with a fine wine, sip a glass of champagne, or visit our A380 Onboard Lounge for cocktails and canapés. 3 Be good to yourself: Choose from our healthy meal options that are prepared without added saturated and trans fats, salt and sugars.</p> <p>- IFE triple screen: backseat, tablet, control screen ice inflight entertainment Select a movie on your personal 23-inch entertainment screen with the touchscreen controller, and sip a refreshing beverage from the new in-seat mini-bar. There's even a HDMI port to stream content from your personal devices directly onto your screen. Choose from over 3,000 channels of the latest and greatest movies and must-see TV shows, on demand and in multiple languages. Relax to music from around the world or play our range of fun games Witness breaking news, catch up on the world of business or see your team in action with ice TV Live on select aircraft. Create your personal playlist of favourites and laugh, shed a tear or cheer your way to your destination.</p> <p>- Connectivity 20MB free: You can enjoy up to 20MB of free Wi-Fi within the first two hours of log in across all your devices on board most Emirates flights. That's enough data to browse your favourite social networks and send messages. Emirates Skywards members can enjoy either free Wi-Fi or discounted data plans throughout their flight. In-seat phone, SMS and email: Use the in-seat satellite phone to stay in touch with home or your office, or use it to call other people on your flight. You can also send messages using our onscreen SMS and email services.</p>		<ul style="list-style-type: none"> - connect to wifi - wifi plans - remaining data to consume - # of connected users
<p>5 Cathay Pacific</p>	<p>Online shops and duty-free 1 Pre-flight order: available for reservation and pick-up onboard. 2 Home delivery: Home Delivery features a wider range of exclusive lifestyle products, all delivered right to your doorstep. 3 Cathay Shop: Cathay Pacific branded items</p>	<p>business class: Check in with ease: enjoy priority boarding privileges.</p>	<p>Asian hospitality In Business Class, service is delivered with a discreet, personal touch—flight attendants will greet you by name, and provide efficient, personalised service throughout your journey.</p> <p>- Meals Fine food and the best ingredients: Our Business Class menu incorporates locally sourced, sustainable ingredients that are in season, whilst also offering lighter and healthy dining options. To complement your meal, experience our award-winning selection of wines and beverages, accompanied with fine chocolates.</p> <p>- IFE dual screen presented on your own touchscreen TV</p> <p>- Connectivity https://www.ausbt.com.au/how-to-get-free-wifi-on-cathay-pacific-s-airbus-a350 Net-A-Porter and Mr Porter announced their collaboration with Cathay Pacific to launch the first ever e-commerce platform available on the airline's new inflight Wi-Fi on the A350 aircraft. Exclusive shopping offers will be available on the aircraft throughout the partnership period. Passengers who shop inflight can have their purchases delivered directly to their preferred addresses at their arrival destination. Both e-commerce sites offer same-day delivery in London and Manhattan while Net-A-Porter also offers the service in Hong Kong. http://www.scmp.com/magazines/style/news-trends/article/200903/cathay-pacific-teams-net-porter-and-mr-porter-inflight</p>		<ul style="list-style-type: none"> - connect to wifi - wifi plans - remaining connectivity time on flight - flight time left - destination content - map of flight - shopping > Exclusive shopping offers will be available on the aircraft throughout the partnership period. Passengers who shop inflight can have their purchases delivered directly to their preferred addresses at their arrival destination. - e-commerce > collaboration with Net-A-Porter, same-day delivery in London and Manhattan while Net-A-Porter also offers the service in Hong Kong.

<p>6 EVA Air</p>	<p>Duty Free: EVA SKY SHOP Pre-Order > pre-order your inflight duty-free products online before your flight.</p>		<p>- iFE "Star Gallery" added Connecting Gate Information (CGI), enabling travelers to check information for the arrival times, baggage collection and connecting flights status.</p> <p>Duty Free: EVA SKY SHOP Pre-Order > pre-order your inflight duty-free products online before your flight. Duty Free Onboard Shopping > The EVA SKY SHOP duty-free catalog is available to browse on your seatback monitor. Our product inventory is updated in real time, so you will know instantly whether an item is in stock or not. When you place an order, those items are immediately reserved for you. A flight attendant will come to confirm your order when you have finished shopping.</p> <p>adds new visual enjoyment, vivid graphics and multi-function modes for Browsing and Ordering mode.</p> <p>- connectivity SMS & e-mail service and individual satellite phones enable passengers to easily connect with anyone, anywhere at any time.</p> <p>http://www.evawifi.com/index_en_us.html https://tencent.co/works/eva-airline/ > 777-300ER which has sky-WiFi on the plane http://sky-wifi.tenent.co/#home-en</p> <p>- meals On selected international Lufthansa routes you will get to know some typical culinary delights from the country you are visiting whilst still on board. Regional chefs from prestigious hotels will spoil you with their high-quality menus. excellent gourmet cuisine is served on fine china, accompanied by an award-winning selection of wines.</p> <p>- iFE More than 100 films movies in up to eight languages More than 200 TV programmes "Box Sets" to enjoy featuring whole seasons of TV series More than 50 Lufthansa Playlists 60 Audio Books in German and English By using "myAudio" and "myVideo" travelers can easily create their personal playlists within the inflight program</p> <p>live TV channels: With Sport24, CNN and Euronews you'll always be up to date with broadcasts of international sporting events and the latest news. Free of charge in all classes on long-haul.</p> <p>eJournals Lots of newspapers and magazines in various languages and of various kinds are now available as free eJournals. You can download them easily to your smartphone, tablet or laptop before your flight, so that your travel reading is to hand before, during and after your flight in a space-saving and convenient way.</p> <p>- connectivity FlyNet: https://www.lufthansa.com/en/flynet https://www.lufthansagroup.com/en/themes/flynet.html</p>		<ul style="list-style-type: none"> - connect to wifi - wifi plans - remaining connectivity time on flight - news > Eva airline news.
<p>7 Lufthansa</p>	<p>Lufthansa Express Carsharing in cooperation with car2go Lufthansa Express Chauffeur Express Shuttle Express Helicopter in cooperation with HTM</p> <p>Pre-flight shopping from home Reserve your favourite products from our in-flight shopping range in the comfort of your own home – from as early as eight weeks and as late as up to two days before your departure.</p> <p>Digital baggage services See just where your baggage is at any time. Via a link on your mobile boarding pass you can quickly and conveniently display the loading status of your bags. After landing, a push notification will tell you which carousel your baggage is on. This service is available at Frankfurt, Munich, Stuttgart and Milan airports.</p>	<p>Airport Delivery – the new shopping freedom If you are a frequent flyer living outside the WorldShop delivery area, you can use this special service at both Frankfurt and Munich airports. You can order the specially identified products easily online from as early as 30 to up to four calendar days before departure. You can collect your order conveniently from the airport shop or – if you are a transit passenger – at the gate.</p> <p>"Taste & Travel" gourmet service in response to the trend of passengers ordering food and beverage (F&B) items for delivery to the gate. While many other F&B ordering services allow passengers to place orders via their own device, in this instance iPads will be placed in the check-in area and near the security checkpoints and passengers will be able to use them to order food and drinks to be delivered to their departure gate. http://www.futuretravelexperience.com/2016/02/lufthansa-and-fragport-team-up-to-explore-digital-retail-services/</p>	<p>"Lounge Shopping" Lufthansa and Fraport, the operator of Frankfurt Airport, have teamed up to offer a range of joint, digital-enabled retail services. Among them is the "Lounge Shopping" service, which allows passengers to use an iPad to browse and purchase items from the airport's duty free and travel retail stores, and have them delivered to the lounge within 30 minutes. Initially, passengers are able to purchase a limited range of exclusive items, but the product range will be gradually expanded. http://www.futuretravelexperience.com/2016/02/lufthansa-and-fragport-team-up-to-explore-digital-retail-services/</p> <p>Access to the Lufthansa Travel Guide. Send emails with file attachments without time delay Get the latest news via the free FlyNet® portal Never miss a major sporting event with the live TV channel Sport 24 Stay updated with the latest news from CNN and Euronews Send SMS/MMS messages or data synchronise with smartphones by GSM/GPRS mobile technology Receive information about connecting flights, check your current flight status, rebook flights Receive information about your destination and the current weather The opportunity of shopping online in Lufthansa WorldShop: "Inflight Shopping" service. This will enable Lufthansa passengers en-route to Frankfurt to order items from the airport stores during their flight and collect them at the arrival gate when they land.</p>		<ul style="list-style-type: none"> - connect to wifi - wifi plans - log-in to account - weather at destination - time at destination - destination content > top 10 sights of destination, nightlife, restaurants, country general info - news > CNN and Euronews - live TV channel Sport 24 - shopping > Lufthansa WorldShop, pre-order duty free, trials in-flight grocery shopping and home delivery service Lufthansa x Frankfurt Airport "Inflight Shopping" An early example of collaborative retail comes from Lufthansa and Frankfurt Airport. Passengers on in-bound long-haul Lufthansa flights can pre-order a selection of duty free from retailers at the airport via the Lufthansa inflight portal and have their orders delivered to them by the airport's 'runners' at their arrival gate. trials in-flight grocery shopping and home delivery service partnered with German supermarket chain REWE to trial an in-flight grocery shopping service. Passengers can connect to the onboard Wi-Fi, select the REWE service, select and purchase their groceries, and be delivered to their home address. The three-month pilot was launched on 1 October and is available on long-haul routes departing from Frankfurt, Munich and Düsseldorf for the first six weeks. For the following six weeks, passengers will be able make use of the service on long-haul flights arriving at the same three airports.
<p>8 Etihad Airways</p>	<p>chauffeur Our Etihad Chauffeur service is available for eligible First and Business Class guests in the UAE, operated with a full Mercedes Benz fleet.</p> <p>Preflight shopping you can receive a 10% discount when you shop for the latest fragrances, cosmetics, jewellery, watches and more and have them delivered directly to your seat on board.</p>	<p>Our Premium Lounges let you enjoy 5-star dining, free Wi-Fi and the opportunity for a shower, a shave or a spa treatment in the Six Senses Spa in Abu Dhabi.</p>	<p>- meals Our Dine Anytime menus are inspired by the best upmarket bistros around the world. With Dine Anytime, you decide when you want to eat. And with a wide range of options, you'll always find something that's right for your mood and taste.</p> <p>- iFE dual screen Live TV channels: Live news update, Sporting action as it happens Share videos with neighbor Order food&beverage Inflight Shopping: on ife</p>		<ul style="list-style-type: none"> - connect to wifi - wifi plans - flight time left - map of flight - weather at destination - news > destination news.

<p>9 Hainan Airlines</p>	<p>Limo Service Overseas Hainan Airlines provides limousine airport transfer service to our distinguished passengers who take Business Class on specified HU self-operated Europe, North America, and Australia routes.</p>	<p>Premium service GarudaMiles Platinum Card holders and Garuda Indonesia Business Class passengers are now able to enjoy a new, high-class, check-in experience through our new Premium Check-in facility. This new check-in process also applies to other services, such as direct check-in with or without baggage, overweight-baggage handling, class upgrades, reservations, ticketing and route changes. Pass by our SkyPriority access after check-in for no-hassle Security Check experience. For international flights, our staff will also guide you to fast track immigration counter where you may proceed the immigration process. Valet Service Passenger Service Assistance (PSA) is a service provided by Garuda Indonesia in the airport. The officers assigned by Garuda Indonesia will help and ensure convenience for the passengers, both on their departure and arrival. After C Class passengers and GFF tier Platinum passengers are assisted on the check-in process, they will be assisted on the Immigration Check (for international flights). The officers will continue to assist until the passengers are in the Executive Lounge.</p>	<p>- meals Hainan Airline chooses only fresh ingredients, which are prepared with great care to produce delicious Chinese food. You are treated to a taste of China. Foods of many countries are carefully selected, allowing you to experience the taste of home 10,000 miles high above the ground. Our Business Class offers international award winning alcoholic drinks to lighten up your trip.</p> <p>- connectivity WiFi is available, although these WiFi speeds mirror many Chinese airport standards and are slow. WiFi services can be provided on the 787-9. You may keep in touch with your friends and family, enjoy popular websites and catch up on work, chats and e-mail.</p>		<p>- connect to wifi - wifi plans - flight from & to - shopping > duty free</p>
<p>Garuda 10 Indonesia</p>			<p>- meals All prepared by our Manager Cuisine -qualified chef from 5 star establishments. Special meals: VEGETARIAN HINDU MEAL, BLAND MEAL, DIABETIC, FRUIT PLATTER, GLUTEN INTOLERANT, HIGH FIBER, HINDU, KOSHER, LOW CALORIE, LOW FAT, LOW PROTEIN, LOW SALT, SEAFOOD, VEGETARIAN LACTO-OVO, VEGETARIAN JAIN, LOW PURIN</p> <p>- IFE Live TV Garuda Indonesia's in-flight entertainment brings you the latest news from the world's leading news channels, even as you fly. Sit back and enjoy your Live TV.</p> <p>- connectivity Access emails and social media networks with our in-flight connectivity* and stay connected with your family, friends or business associates always. Available to all classes, this service is complimentary to our First Class passengers.</p>		<p>- connect to wifi - wifi plans - flight time left - link to airline website</p>
<p>22 KLM</p>	<p>Online tax-free shopping From luxurious gifts to exclusive KLM products, at Shop@KLM you can have your pick from a wide range of tax-free items and order them online from the comfort of your easy chair. Your purchases will be delivered to you free of charge during your flight. KLM Wannagives: surprise someone special on board Surprise a loved one, friend or colleague at an altitude of 30,000 feet. Connect to your social network (or use e-mail), choose a unique gift and write a personal note. Our cabin crew will deliver the surprise to your favourite passenger once he or she is airborne. Naturally, KLM Wannagives also offers home delivery.</p>	<p>SkyPriority Check in, drop off your baggage, pass through security checks and customs, board your flight and pick up your bags from the baggage belt – all with priority! If you travel in KLM Business Class, or if you are a Flying Blue Gold or Platinum or SkyTeam Elite Plus member, simply follow the red SkyPriority signs – at increasingly more airports worldwide. self-service kiosk</p>	<p>- KLM's Meet & Seat lets you find out about interesting people who will be on board your KLM flight such as other passengers attending the same event as you at your destination. Simply share your Facebook or LinkedIn profile details to check other participating passengers' details and where they'll be sitting. Of course you can also choose your seat.</p> <p>-Meals: Anytime For You On 1 July, KLM Royal Dutch Airlines will launch "Anytime For You" on its Amsterdam-Johannesburg flights, offering World Business Class passengers a wider range of meal options. This new service offers travelers more choice and control, allowing them decide what and when they want to eat on board. At the start of the flight, World Business Class passengers will be presented with a new menu. In addition to the regular three-course dinner or lunch options, the menu will also include an "Anytime For You" range, consisting of eight different dishes, hot and cold, savoury and sweet, health foods and special treats. Passengers can opt for the regular three-course menu or skip this entirely. After the standard meal service, passenger can order from the "Anytime For You" menu, which can be prepared, served and eaten throughout the flight.</p> <p>At Amsterdam Airport Schiphol you can freshen up with a shower or change your baby.</p>		<p>- connect to wifi - wifi plans - log-in to account - flight from & to - flight guide > aircraft info - destination content > articles of places to visit</p>

C TRENDS

In researching relevant trends, a chart is created to have a complete overview with descriptions, as seen in table C. For the trends that overlap, the same colors are applied under the subject column.

category	subject	description	link
Airline industry	Digital: an aircraft window that is also a touchscreen	There's no shortage in the 2017 shortlist for innovative concepts that make flying more attractive. There's the Vision Systems window pane, which is also a touchscreen, projecting information about the flight directly into the window. And then there are several innovative headrest concepts for long-haul flights, such as the successful Kickstarter project, FaceCradle, gently supporting the tired head from all sides. Traditionally, the University category is home to particularly creative ideas. With ten submissions from four countries this year, the category is more hotly contested than ever. Its reputation is already ensured with an idea coming from the University of Rio de Janeiro for 3D-printing of in-flight meals.	https://runwaygirlnetwork.com/2017/01/23/press-release-crystal-cabin-award-sets-new-shortlist-record/
	The digitally empowered traveler: automatic transition between platforms	The experience for travelers doesn't just need to be mobile-oriented, it needs to transition automatically between platforms, as 71 percent of travelers move between devices (tablet, desktop, mobile) when researching a trip.	https://www.jwtintelligence.com/2013/08/the-digitally-empowered-traveler/
	personalized inflight service using data	Knowledge-driven Inflight Service (KIS) Emirates several years ago has also equipped its pursers with tablets containing its 'Knowledge-driven Inflight Service' (KIS) system. Pursers can see which previous trips a passenger has taken with the carrier before and based on this, know their food, wine and seating preferences, or any issues a customer had during their travels. Furthermore, pursers can use the KIS device to brief the cabin crew before the flight, get an overview of the various languages spoken by the crew on the flight, as well as review flight attendants on the spot. Cabin crew can also use the KIS system to perform in-flight upgrades to Business or First Class, as well as post customer feedback	http://www.airlinetrends.com/2012/12/01/emirates-knowledge-based-in-flight-service-hp-elitepad/
meals	catering choice	Singapore Airlines' 'Book The Cook' allows passengers in First, Business and Premium Economy to choose their favourite dish from an extensive menu, while those travelling in Business and First can select from sixty menus on outbound routes from Singapore. Whereas many airlines only allow passengers to pre-order from the airline's home port – in order to control logistics and quality – Singapore Airlines' Book The Cook service is also available on many flights departing from outstations – be it that a more limited choice is offered.	http://www.airlinetrends.com/2016/01/15/choice-convenience-food-beverages-pre-ordering-airlines-airports/
	Customize Your Meal	In an effort to provide passengers who pre-book their meal with even more choice, arBaltic has gained worldwide attention for its novel food ordering system that allows passengers to customize their buy-on-board meal. Passengers placing their order online can virtually 'drag and drop' their preferred meal items onto a digital airline tray and create one of more than 70 pre-order meal combinations. According to Janis Vanags, airBaltic's VP Corporate Communications, the airBalticMeal service has seen a positive uptake because "the option to personalize ones meal is simply a better product than the limited choice that was available before."	http://www.airlinetrends.com/2016/01/15/choice-convenience-food-beverages-pre-ordering-airlines-airports/
	Mobile-Based Ordering	Taking a cue from the smartphone-based ordering deployed by the likes of Starbucks, Mc Donalds, and airport startups Grab and AirGrub, passengers on Alaska Airlines can reserve their favorite meals on the airline's smartphone app up to 12 hours before their flight and pay when the flight attendant delivers the meal onboard. Austrian Airlines is one of a dozen full-service airlines that offer passengers in Economy on long-haul flights the option to upgrade to a premium meal for a fee of 10 to 20 euro. Besides pre-ordering their gourmet meal at the time of booking, passengers can also pre-order a meal in a later stage via Austrian's mobile app. Furthermore, at Vienna Airport passengers can pre-order their meals at the last-minute at the 'DO & CO A La Carte' desk until 1 hour prior to scheduled departure. Passengers who have ordered a paid gourmet meal are served before the regular food service starts in the Economy cabin.	http://www.airlinetrends.com/2016/01/15/choice-convenience-food-beverages-pre-ordering-airlines-airports/
	Airlines and airports let passengers pre-order food via mobile apps	At multiple airports in the USA, passenger can pre-order meals from airport restaurants, using mobile apps such as Grab, AirGrub and HMS Hosts' B4 You Board, which saves them having to queue up for food and drinks, and provides some peace of mind for those who are running late for their flight. Passengers using these pre-order apps select an airport restaurant, place an order, pay and schedule a time to pick up their meal. When they arrive at the restaurant in the departure hall the freshly made meal is waiting to be collected. Orders can be placed days in advance, or even when passengers are queuing at the security checkpoint.	http://www.airlinetrends.com/2016/01/15/choice-convenience-food-beverages-pre-ordering-airlines-airports/

TableC Trends

	smartphones to take Business Class passengers' F&B orders	Meal Ordering Device (MOD) "The orders are taken on a hand held device and are instantly reflected on a tablet in the galley. Each order is then prepared immediately making service faster, more efficient and more personal," said Terry Daly, Divisional Senior Vice President, Service Delivery at Emirates. To take account of passengers individual needs the phones are synced with Passenger Number Records (PNR) before take-off. Along with the name and seat assignments for every passenger, the app can also tell crew about the status of the passenger, whether they were upgraded, their meal preferences and whether there are any 'special' notes about them.	http://www.airlinetrends.com/2017/04/03/emirates-meal-ordering-device-business-class/
	order F&B via IFE	With regard to the on-demand trend, IAG's new long-haul low-cost carrier LEVEL is one of several long-haul LCCs such as Norwegian and Azul to allow passengers to order food, beverages and travel accessories via the in-seat IFE system and pay with their credit card via a solution called Pair & Pay. LoyaltyLobby describes the Pair & Pay system as follows: "After selecting the items on the screen, you got the choice to pair the screen purchase with your WiFi connected device and to pay using the card info stored on your profile. The buying experience is seamless and so easy. Those not willing to open an account could order their items and pay to a flight attendant using their card."	http://www.airlinetrends.com/2017/06/21/inflight-ancillaries-how-airlines-can-monetize-their-inflight-engagement-platforms/
IFE	From In-Flight Entertainment to In-Flight Engagement platforms	"Passengers' expectations have evolved from a passive 'Please entertain me' to a proactive 'I want to entertain myself'. Our industry needs a new term to describe a holistic experience that is equal in every way to how people leverage their devices on terra firma. The future of the passenger/cabin interaction is beyond one of mere entertainment and can be more accurately described as one of deep and ongoing engagement: In-Flight Passenger Engagement."	http://www.airlinetrends.com/2017/06/21/inflight-ancillaries-how-airlines-can-monetize-their-inflight-engagement-platforms/
	Biometric IFE	Panasonic Avionics revealed an IFE upgrade, benefiting from multimodal biometric technology, which might help personalize the in-flight passenger experience and simplify the journey. The proposal for enhanced IFE technology as developed in collaboration with Tascent, which specializes in identity devices, software and services. The companies believe biometric identification of the passenger by the seat-back screen could enable services like personalized programming catalogues, secure payment authorization for ancillary sales onboard, and even seat-back immigration clearance. Alastair Partington, founder and co-CEO of Tascent, says: "Tomorrow's air travelers will be best served by an aviation industry that adopts biometrics technologies in an intelligent, personal and thoughtful way."	https://www.tnooz.com/article/onboard-viewing-inflight-entertainment/
	Alexa Skills	American Airlines adopted new Alexa skills developed by WPP inflight entertainment company, Spafax, which will allow the airline's customers to query their Echos and similar Alexa-powered home helpers about what movies and programs will be shown on their flights, including details about actors and film ratings. The service will also offer travel tips and information on airport activities based on a new IFE and online TV series, produced by Spafax and Business Traveller magazine.	https://www.tnooz.com/article/onboard-viewing-inflight-entertainment/
	Entertainment experience	Skylights revealed a new set of visionary goggles which will give all the millennials flocking to fly on Air France's Joon brand the opportunity to enjoy fully immersive entertainment and block out cabin neighbors. The new AlloSky headset, co-created with immersive headset producer Allomind, is less bulky than many existing immersive entertainment devices, 60% lighter, while offering 1080p resolution to each eye. The creator plans to offer films and programming in 2D, 3D and 180° produced by new content partners 20th Century Fox and Dreamworks as well as content from Warner Brothers, National Geographic, Lionsgate and BBC. David Dicko, SkyLights CEO says of the development: "For the first time, airlines will introduce an entertainment experience which is better than anything yet available on the ground." AccorHotels, Corsair and JetFly will also be deploying Skylights, with further launch partner announcements expected.	https://www.tnooz.com/article/onboard-viewing-inflight-entertainment/
	Netflix streaming	Netflix tried to woo airlines to bring its streaming services onboard by promising more efficient use of the expensive in-flight bandwidth required to deliver Netflix programming. The company's vice president, finance and investor relations, Spencer Wang, says that the new encoding would save airlines up to 75% in bandwidth on a typical flight, and offer a 60% reduction video play delay as measured in seconds. Wang made the case that Netflix service inflight can benefit airline brand positioning. "For airlines, [Netflix inflight streaming] can generate greater awareness and excitement for your investment in next generation wifi, because most consumers don't really know what it means to have 150 Mb on a plane, but if you tell them they can stream Netflix inflight they understand that and they understand that it's better than their prior experience. "In addition, it can help you ensure a high-quality streaming experience and help customer satisfaction, repeat business, improved net promoter score as well."	https://www.tnooz.com/article/onboard-viewing-inflight-entertainment/
(on map)	Book airport transfer	As Duncan Jackson, President of FlightPath3D, demonstrated to FTE, passengers can enter their final address (hotel, home, etc.) into the moving map in order to access myriad personalised features. For instance, rather than simply displaying the estimated time of arrival at the destination airport, the In-flight Travel Planner can draw upon historical or real-time traffic data to provide an accurate time of arrival at the passenger's final destination. Partnerships with the likes of Uber and SuperShuttle also allow passengers to view and book ground transportation options while they are flying to help make the arrivals experience more seamless. After booking their ride in-flight, passengers receive an SMS upon landing to confirm their booking and pick-up location.	http://www.airlinetrends.com/2016/11/07/flightpath3d-book-uber-taxi-via-moving-flight-map/

(on map)	Destination-based offering	<p>Jackson also highlighted how the next generation map takes destination guides to a new level. The concept FTE previewed included a virtual open-top bus tour of San Francisco, highlighting points of interest, which are complemented by information from the tour company, along with images and audio descriptions.</p> <p>If a passenger likes the look of the tour, they can book their ticket in-flight and make payment upon landing. For the airline, this provides another opportunity to generate ancillary revenue at 30,000 feet.</p> <p>As Jackson suggested, destination based activities, such as tours, could be added for any city, enabling airlines to provide passengers with tailored and relevant offers.</p> <p>"Once a passenger is on the plane, they've gone to the destination and for many this is the first time they've thought about what they'd like to do at the destination," Jackson explained.</p> <p>"When they're on the plane, the passenger has got time to think about the destination and we're providing them with an interactive experience that is personalised to their own journey."</p>	http://www.airlinetrends.com/2016/11/07/flightpath3d-book-uber-taxi-via-moving-flight-map/
	shopping via IFE	<p>Meanwhile in China, airlines are more opportunistic in their efforts to monetize in-flight digital platforms. Air China has partnered with online retailer JD.com to offer passengers a selection of goods they can purchase via the in-seat IFE system for delivery to their homes, while Spring Airlines is working on an inflight portal that allows for online shopping on international flights.</p>	http://www.airlinetrends.com/2017/06/21/inflight-ancillaries-how-airlines-can-monetize-their-inflight-engagement-platforms/
Web portal trends	Cross-Device Journeys	<p>The final and perhaps most significant trend affecting the portal market is the tablet and mobile revolution, including new patterns of usage which enables customers to be supported at any time and place.</p> <p>It isn't enough that consumers can view data easily from their mobiles. They can also continue this across different devices, as a component of a unified journey for consumers. Also, users have now become more agnostic when it comes to devices and expect enterprise web portals to offer smooth multi-channel experiences. This need for a seamless multichannel experience needs a shift in the development of web portals.</p>	https://www.itchimes.com/blog/top-trends-to-look-out-for-in-web-portal-development
	Digital Marketing	<p>The increasing amount of online applications is changing the portal into strategic platforms for customer applications. Due to this, digital marketers are currently looking for different ways to enhance sales results, enhance lead generation, and implement different marketing techniques. The web portal, as it continuously evolves, has great effect of the lifetime value of customers and is not only for the purpose of an integration platform for enterprises.</p> <p>Due to this, customer facing web portals now include more digital and marketing capabilities like targeting, channel optimization, and advanced analytics. Also, customer portals should have different capabilities like analyzing data, offering strong tools to offer personalized users, and implement different campaigns.</p>	https://www.itchimes.com/blog/top-trends-to-look-out-for-in-web-portal-development
	Lean portals: lightweight and easy to use with content & campaign management, etc	<p>Another popular trend is associated with the portal's nature. Several years ago, Gartner presented the idea of a portal that is actually "portal-less", along with the lean portal.</p> <p>They are a substitute to traditional portals that have become too complex and full with unnecessary features. Also, traditional portals are well known for going over the budget and deadlines. Lean portals are lightweight and really easy to use. It also incorporates modern 2.0 technologies, like AJAX, representation state transfer, and SOA approaches. Recently, there are many web portals that have increased their lean portal features and included content management and campaign management, therefore creating lean solutions.</p>	https://www.itchimes.com/blog/top-trends-to-look-out-for-in-web-portal-development
Consumer trends	Personalize it	<p>In 2017, we will have come to accept the idea that an industrially-produced product can be customised or personalised, at least in part. While there is a lot more personalisation of "mass-produced" items, high-end personalisation is also thriving due to demand for "experiential luxury", the shift from "having to being" (A shift in focus from purchasing luxury goods to enjoying services)</p> <ul style="list-style-type: none"> - Products that fit you... > "bespoke", Fit and Altra are creating a smart running shoe. According to Footwear News, the shoe is "designed to collect data about your stride as you run, allowing you to stay better informed about your personal biomechanics". - ...And learn about you > Greater consumer digital engagement has facilitated the easier compilation of a growing body of information on customers, with brands discovering consumer tastes and preferences. In practice, this ability lets brands target communication on an individual basis and offer products tailored for each person, thus upping customer satisfaction levels and perceived product value—at least in theory. This is not just about Amazon, Etsy or online news sites recommending products or stories based on search and purchase algorithms; smart shop windows are being tested that offer diverse promotions based on a "reading" of data, such as the age, clothing or language of passersby., Home sharing app Airbnb's above-mentioned Guidebooks offer pushes hosts to share more personal perspectives on the best their neighbourhoods have to offer. - Subscription services: curated by you > Many subscription services are positioning themselves as curators, selecting the new-release, "greener" or best value products they feel will best please their clients. New subscribers typically complete a user profile to determine their tastes resulting in the delivery of a product mix "tailor-made" for them, such as the high-end chocolate company Cocoa Runners—"We use sophisticated algorithms that continually learn based on your feedback combining the same techniques as top dating and music recommendation sites to find other bars we know you'll love". HelloFresh - Customers indicate what they don't like, perhaps seafood or pasta, and are regularly asked for feedback leading to a "hyperpersonalised" service. - personalized touches that tell a story > Personalisation is also about adding a personal face to a brand. To enhance its coverage of the 2016 Summer Olympics, the New York Times introduced a text-messaging service to make readers feel that they were receiving daily texts from friends on platforms central to their lives, 	<p>Top 10 Global Consumer Trends for 2017, Daphne Kasriel-Alexander, Euromonitor international</p>

	Post-purchase: Customers' own role in the post-purchase experience	Customers' own role in the post-purchase experience > Online reviews, of course, are where consumers discuss their new purchases., The sharing of buying experiences online is a recognised source of consumer power.	Top 10 Global Consumer Trends for 2017, Daphne Kasriel-Alexander, Euromonitor international
UX Design Trends	More movement	By this, we mean literally more movement. Many apps and websites have a multitude of things vying for our attention. Images that move will ultimately win out. Apps will focus on incorporating more movement when important information or other features not to be missed are concerned. Ads will certainly benefit from standing out by incorporating movement. One thing to note is that excess movement can have the unintended effect of overwhelming the user. Movement needs to be obvious enough to notice, but subtle enough not to be off-putting.	https://uxplanet.org/the-top-10-user-experience-design-trends-for-2018-2842be9364aa
	User responsive design: more customized interaction	There is a definite trend when it comes to user-responsive design which will continue into 2018. Personalized experiences that stem from chat bots or conversational interfaces are definitely seeing an increase as people are wanting a more customized interaction. One such example is age-responsive design, a feature that tweaks the user's experience slightly — a change in font size, color, etc. — based on age in order to accommodate younger or older users. This results in an interface that adapts to the user, ensuring ease of use for all.	https://uxplanet.org/the-top-10-user-experience-design-trends-for-2018-2842be9364aa
	Content-Centered Experiences	Sure, there are plenty of bells and whistles that can make a product look awesome. But the one thing that should be a big part of design in 2018 is content. It's well-curated and easily accessible content that makes a mobile or Web product appealing to its intended users. There's nothing wrong with creating a fantastic interface and adding an assortment of features and capabilities to a product — as long as the CX (content experience) isn't sacrificed in the process. Ultimately, finding the right mix of content and technology is what can make a product a go-to destination for users beyond that first-time use. Designers can keep content front and center in 2018 by: <ul style="list-style-type: none"> • Having a clear order with how visuals are presented to make content comprehension easier • Removing unnecessary "design clutter" to keep the attention focused on product content • Making good use of white space to give content some breathing room 	https://blog.prototypr.io/heres-where-ux-is-going-in-2018-top-7-design-trends-d0cb73e51b45
	Smarter Personalized User Experiences: right content and the right time using location, login memory features, in-app messaging, push notifications	Whether it's in the form of emails based on knowledge of previous website interactions or text messages delivered according to geographic location, the personalized UX trend is everywhere these days. Not surprisingly, app and Web product users will continue to demand a personalized experience in 2018. Users already appreciate conversational interfaces in the form of chatbots. Facebook makes use of Natural Language Processing technology to work chatbots into its user experience. The drawback is that there are several taps required, so it does create some friction for users. An emerging trend is hybrid conversational interfaces that combine NLP with graphical UI elements like images, videos, buttons, and menus. Personalization extends to tapping into universal human needs. Based on trends seen today, this means paying attention to things like transparency and security. There's also a psychological component here. People get emotionally attached to their devices and the apps they use on a regular basis. Therefore, they expect some level of human-like tendencies, such as knowing their likely pain points, and even identifying potential sources of stress associated with the UX. Creating personal experiences now and in the future will involve regular monitoring along with a keen eye for what type of interactive technologies make sense for a particular product. With mobile and Web applications, personalization might include: <ul style="list-style-type: none"> • In-app chat features for interactions with other users or access to instant assistance • Age-responsive capabilities that adjust things like font sizes and colors based on the age of the user • Login memory features that help users quickly get into the application • In-app messaging based on how users typically interact with an app (e.g., offering promotions based on what purchases a user makes with their app) • Push notifications timed to be delivered when users are most active to encourage consistent engagement 	https://blog.prototypr.io/heres-where-ux-is-going-in-2018-top-7-design-trends-d0cb73e51b45
	Voice-Activated Interfaces	In 2016, Google stated that roughly 20 percent of all mobile searches were done with voice activation. Factor in the rapid explosion in the use of virtual assistants and it's easy to see why the next big thing for 2018 will be voice-activated interfaces. Just look at the success of Siri, Alexa, and Google Now and the potential becomes clear with this type of interactive design. Voice activation boosts the user experience by eliminating the type, which also eliminates another potential source of friction for app users. This technology is likely to continue to be adopted by designers and embraced by users because it has now reached a point where more than 90 percent accuracy is the norm, not the exception.	https://blog.prototypr.io/heres-where-ux-is-going-in-2018-top-7-design-trends-d0cb73e51b45
	Augmented Reality	The ability to customized real-world imagery isn't just useful for gaming applications like Pokemon Go. Mark Zuckerberg is among the industry insiders predicting that all screens will eventually be replaced by lenses for what the Facebook founder describes as "the ultimate AR experience." Expect innovative app designers to find creative ways to incorporate augmented reality into their products in 2018. There are already plenty of AR-based apps that have successfully found ways to do this. Outside of the gaming world, AR is being used to do things like let customers see what product would look like in various rooms before making a purchase. With camera and display technology improving, AR will become increasingly appealing to users.	https://blog.prototypr.io/heres-where-ux-is-going-in-2018-top-7-design-trends-d0cb73e51b45
	Biometric Authentications	In concept, biometrics isn't exactly a new technology, but it is becoming more accessible. In 2018, we'll see more use of biometrics for authentication and identity management purposes. It's something that can also boost security for both end-users and businesses that incorporate this technology into their applications. Since it's a distinct and unique form of personal identification, products that include biometric-based technology can bypass the need for a traditional login requirement. With biometrics, all that's needed is a specific physiological or behavioral characteristics, such as facial recognition, fingerprints, voice recognition, or an iris scan.	https://blog.prototypr.io/heres-where-ux-is-going-in-2018-top-7-design-trends-d0cb73e51b45

D INFLIGHT CUSTOMER RESEARCH

SETTING

Purpose

To understand the target group's inflight experience from take-off to landing, a primary qualitative research is conducted.

Participants

To qualify for the research, participants must have a recent history of business flights in the past year at least once every two or four months. Also, their nationalities and location do not comply since the target group is made up of all nationalities. Five participants are gathered from the researcher's network (see in figure D1). Their ages range from twenty-five to forty-five. For those, who are located in another country, the research is catered to their situation as described below.

METHOD

The inflight customer research is held in two parts. The research guideline is seen in figure D2. First, a workbook with two exercises is handed out to participants. For the participants, who are in another location, the workbook is sent out digitally and for the participants, who are met with in-person, the workbook is printed out to be filled in for approximately ten minutes. Ideally the workbook is meant to be filled out by participants during or right after their flight. Nevertheless, participants can fill in the workbook by imagining as if they are on their last long-haul, business flight. The workbook serves as a sensitizing kit to trigger participants' thoughts, feelings, and experience. Figure D3 shows the workbook pages. The first pages consist of examples of products or services that may be used inflight and a list of twenty-

five positive and thirty-six negative emotions. These images and words can help participants with the two exercises. In the first exercise, participants are asked about two products or services they use during their flight. Then the participants are asked to map out their inflight journey from takeoff to landing with emotions they experience. Through these exercises, which is a part of generative research techniques, deeper levels of participants' tacit and latent knowledge is gathered. After the workbook is filled in, the research reviews what is written or drawn out and marks down interesting points to be asked in the follow up interview. Additionally, the participants' self

documentation of their thoughts and feelings through the workbook, enables them to answer questions in the second part.

In the second part, an interview is conducted in-person or on the phone. Participants are asked to explain their inflight journey map, reasons for feeling certain emotions, and their highest and lowest moments experienced inflight. The interviews are recorded, then transcribed and analyzed through the statement card method, which highlights discovered patterns.

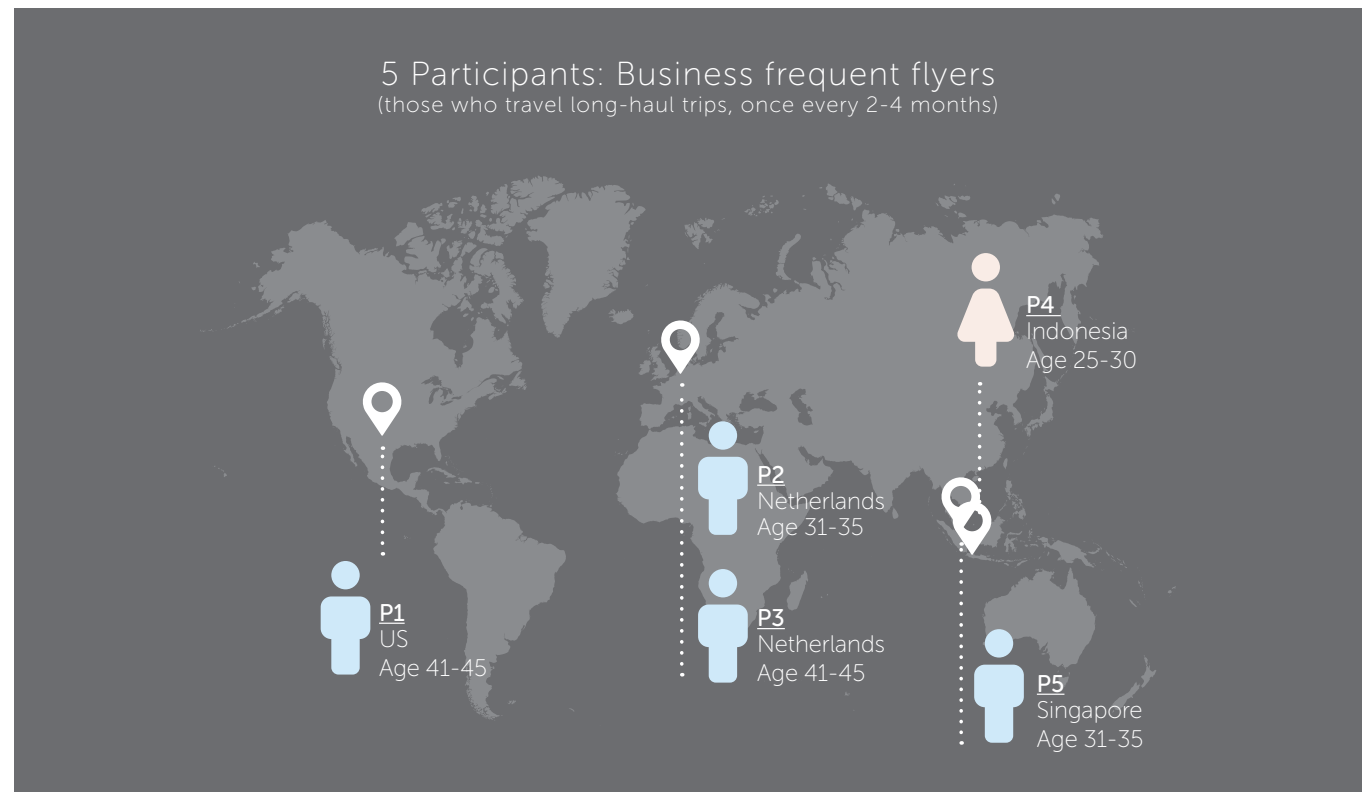


Figure D1 Inflight customer research participants

INFLIGHT CUSTOMER RESEARCH INTERVIEW GUIDE

Date

November 3-12

Setting

Long-haul flights: >7 hours

Who

Business frequent flyers, for long-haul flights

Purpose

To understand target group's inflight experience with emotional analysis.

Format

Part 1: workbook

Part 2: interview > phone or in-person

RQ

How do people experience their inflight journey, with emphasis on emotions?

Subtopic 1 - Inflight journey

Subtopic 2 - Personal information

Subtopic 3 - Internet onboard

Part 1

Workbook with inflight journey is done before, during, or after flight. (preferably during flight)

Part 2

Interview with questions

Subtopic 1 - Inflight journey

- Can you explain/go through your inflight journey map?
 - What is the highest moment of your inflight experience?/ What do you like the most throughout your inflight journey? (Why...)
 - Base on your last answer, What is the top **positive** emotion throughout your inflight experience? (Why...)
 - What is the lowest moment of your inflight experience?/ What do you dislike the most throughout your inflight journey? (Why...)
 - Base on your last answer, What is the top **negative** emotion throughout your inflight experience? (Why...)

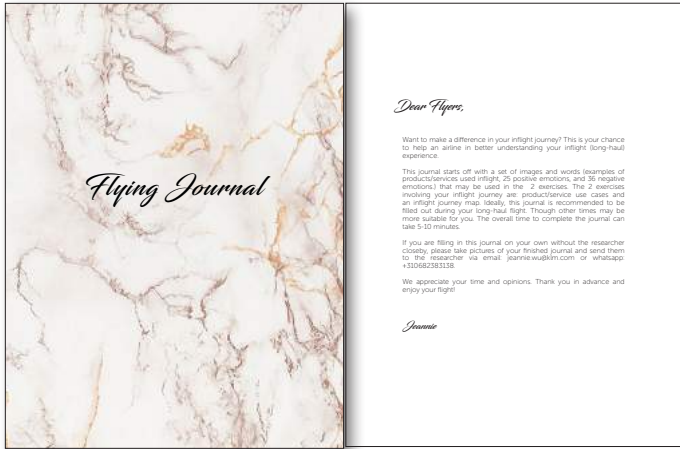
- Can you explain the products/services you use (base on your answers from the workbook on pg 10-11)?
 - Why do you like using them?
 - Why do you dislike using them?
 - Explain the emotions for the products/services you chose?
 - What products or services onboard would you like to see that currently aren't available yet?

Subtopic 2 - Personal information

- Are you a member of a frequent flyer program with the airline? (ex: Flying Blue)
- Yes:
 - How often do you make use of your membership benefits?
 - How would you like the airline to acknowledge you? Why?
- No: Why so?
 - Would you like the airline to acknowledge you? How? Why?
- What personal preferences would you like the airline to know about? Explain.
- How much personal information are you willing to share with the airline?
 - Would you be willing to share the things you like/dislike or preferences with the airline?

Subtopic 3 - Internet onboard

- Have you flown a connected flight before? Or connected to the internet inflight?
- Yes: How often have you flown a connected flight? How was that experience? What services did you use with availability to the internet? What kind of services do you expect or want if you have internet?
- No: How would your inflight journey differ when you have connection? What kind of services do you expect or want if you have internet?



Examples of Products/Services used Inflight

You can use these examples for the 2 exercises.

25 Positive emotions

SYMPATHY	To experience an urge to identify with someone's feeling of misfortune or distress.
KINDNESS	To experience a tendency to protect or contribute to the well-being of someone.
RESPECT	To experience a tendency to regard someone as worthy, good or valuable.
LOVE	To experience an urge to be affectionate and care for someone.
ADMIRATION	To experience an urge to praise and estimate someone for their worth or achievement.
DREAMINESS	To enjoy a calm state of introspection and thoughtfulness.
LUST	To experience a sexual appetite or desire.
DESIRE	To experience a strong attraction to enjoy or own something.
WORSHIP	To experience an urge to adore, honor, and be devoted to someone.
EUPHORIA	To be carried away by an overwhelming experience of intense joy.
JOY	To be pleased about an interesting or something or some desirable event.
AMUSEMENT	To enjoy a playful state of humor or entertainment.

HOPES	To experience the belief that something good or wished for can possibly happen.
ANTICIPATION	To eagerly await an anticipated desirable event that is expected to happen.
SURPRISE	To be pleased by something that happened suddenly, and was unexpected or unusual.
ENERGETIC	To enjoy a high-spirited state of being energized or vibrant.
COURAGE	To experience mental or moral strength to persevere and withstand danger or difficulties.
PRIDE	To experience an enjoyable sense of self-worth or achievement.
CONFIDENCE	To experience mental or moral strength to withstand or cope with the situation.
INSPIRATION	To experience a sudden and exhilarating feeling of creative impulse.
ENCHANTMENT	To be carried away by something that is experienced as consumingly pleasurable.
FASCINATION	To experience an urge to explore, investigate, or to understand something.
RELIEF	To enjoy a calm state of being free from mental or physical stress or concern.
RELAXATION	To enjoy the recent removal of stress or discomfort.
SATISFACTION	To enjoy the recent fulfillment of a need or desire.

36 Negative emotions

ANGER	The feeling when someone did something bad that harmed or offended you. You want to get against this person to stop them or prevent them from doing it again or do harm.
INDIGNATION	The feeling when someone's action goes against your moral values. You can't believe that a person could do something like this. You have the urge to speak out about what this person did.
RESSENTMENT	The feeling when you are treated unfairly. You get less than you deserve, or someone else got more than they deserve.
ANNOYANCE	The feeling when something is happening that bothers you. You have the urge to stop or do something to change or make it stop.
DISSATISFACTION	The feeling of being unhappy when something happens that is different from what you expected. You feel that it should be changed to meet your expectations.
FRUSTRATION	The feeling when you want to achieve something but find your action blocked. Nevertheless, you keep trying.
CONTENT	The feeling when you look down on someone. You don't want to have anything to do with a person like this.
HATE	The intense feeling when you think about a bad person who is doing very bad things. You would want something bad to happen to this person.
DISGUST	The feeling when you encounter something that you don't want to get too close with or any further (see, hear, smell, taste, or feel it) because you expect it to be bad for you. You want to get away from this.
BORING	The feeling when there is nothing interesting or engaging for you to do.
RELUCTANCE	The feeling when you know that you should do something that you do not feel like doing.
SADNESS	The feeling when you lost something that was important to you. You have the urge to withdraw and to seek comfort.
DISAPPOINTMENT	The feeling when you find out that something you had hoped for has not happened.
PITY	The feeling when you witness the misfortune or suffering of someone who is worse off than you.
LOVELINESS	The feeling when you think there is no one who cares about you.
REJECTION	The feeling when someone, who you want to like you, has done something that makes you feel that they don't like you at all.
HUMILIATION	The feeling when someone has deliberately done something to put you down or make you look bad in the eyes of others. You feel you have no power over the situation.
LONGING	The feeling when you want something that you cannot have now. You keep thinking how good it would be if you had it.

ENVY	The feeling when something good has happened to someone else, but not to you. You keep wishing that the good thing had happened to you instead.
JEALOUSY	The feeling when you think that a close relationship that you have with someone is threatened because a third person is trying to have a similar relationship. You really don't want that to happen and you are often afraid of it.
GUILT	The feeling when you think you have done harm to someone. You blame yourself and cannot stop thinking about this.
REGRET	The feeling when you think the something you didn't want to happen could have been prevented if you had acted differently.
SHAME	The feeling when you think that other people know something bad about you. What they know is true, or you also feel bad about yourself.
EMBARRASSMENT	The feeling when people suddenly focus unwanted attention on you in a situation that is not in your control. You have the urge to get away from the attention.
FEAR	The feeling when you encounter or think about a thing or person that can harm you. You have the urge to avoid or get away from the threat.
STARTLE	The feeling when something unexpected happens, which could be something bad. You have the immediate urge to find out what is going on.
WORRY	The feeling when something happened that could mean something bad will happen to you or someone else. You cannot stop thinking about this.
ANXIETY	The feeling when you think about bad things that could happen to you. You are on guard, because you don't know what the threat is.
DISTRUST	The feeling when you think that someone is not truthful and does not have good intentions. You have the need to be very careful when you deal with this person.
INSECURITY	The feeling when you are uncertain about your ability to do something or to measure up to a certain standard. The uncertainty has a negative effect on your self-esteem.
DOUBT	The feeling when you think to do something, but there is more than one course of action to choose from. You don't know which option you should choose.
NERVOUSNESS	The feeling when you have to do something, but you think that something might go wrong that prevents you from succeeding. You don't feel in control of the situation.
DISRESS	The intense feeling when something bad is happening to you at this moment. You feel that you need help, because you cannot cope.
DESPERATION	The feeling when you have lost almost all hope or ability to reach a goal. You will do anything to get achieve it.
CONFUSION	The feeling when you get information that does not make sense to you, leaving you uncertain what to do with it.
SHOCK	The feeling when you realize that something very bad has happened. You don't think something like this was possible, and you don't know what to think or do.

1. Product / Service Use

- What is the product/service that you use during your long-haul inflight journey and answer the following questions:

Product/Service A

- What do you use this product for? _____
- When do you use it? How often? _____
- What kind of functions/features do you use from this product/service? _____
- What are the **positive** and/or **negative** emotions you experience in using this product/service? (refer to pages 6-10) _____

- What is another product/service that you use during your long-haul inflight journey and answer the following questions:

Product/Service B

- What do you use this product for? _____
- When do you use it? How often? _____
- What kind of functions/features do you use from this product/service? _____
- What are the **positive** and/or **negative** emotions you experience in using this product/service? (refer to pages 6-10) _____

2. Inflight Journey

- Map out your long-haul inflight journey from take-off to landing.
- Circle products/services you use. (examples can be found on the pages 4-5)
- Include emotions you experience (please refer to **positive** or **negative** emotions on pages 6-10)
- An example of a journey map can be found in the back on page 14.

Take-off from _____

Landing at _____

Demographics

- What is the purpose of your travel? _____
- Where are you flying to from? or usual flight route? _____
- How often do you fly long-haul flights? _____
- Occupation _____
- Female / Male / Other _____
- Circle age range: 25-30 / 31-35 / 36-40 / 41-45 / > 46 _____

Additional comments

Example Journey Map

Figure D3 Inflight journey workbook

FINDINGS

Figures D4 and D5 show some of the participants filled in workbook exercises.

From the gathered interviews and organized statement cards, patterns are revealed. At the beginning of the flight, these business flyers like to work on their laptops:

"In general, sometimes I still do work in the beginning. With my laptop. I will do the work before the movie.

But I won't work anymore. Usually in the beginning."

P2 male, age 31-35, inflight research

When it comes to products and services, they are commonly frustrated with the IFE:

"The controls on the in flight system are sometimes lousy (fast forward, rewind, pause, resume movie from last point), and that's annoying and frustrating. Sometimes the screen quality is dissatisfying (depends on make and model of plane, and airline, etc)."

P1 male, age 41-45, inflight research

Although, they use products and services that make them feel relaxed, such as listening to music and watching movies, they would like more products and services for comfort:

"Maybe an opportunity to walk around. So having some space. Then just staying in the seat. Having for space actually to move around. So maybe a place where you can engage with others. You can activities, something like that."

P3 male, age 41-45, inflight research

"Massage therapy, socializing with others on board (display of their facebook etc..), shower before landing as a commonplace in first class."

P5 male, age 31-35, inflight research

Their longest activity for their long-haul flights is sleeping for about five to six hours. However, they experience bad sleep because of the uncomfortable space, noise, air, environment, and difference in time zones:

"Its how comfortable the seats are. It's also how quiet the whole environment is to allow me to sleep. And it's basically to have privacy in the plane."

P3 male, age 41-45, inflight research

"You don't ever sleep well, you hurt your neck no matter what type of pillow you bring, you're alone, your feet are cold, and you feel dirty, the entire time."

P1 male, age 41-45, inflight research

This is also the lowest inflight moment. As seen in figure D6, a compilation of all the participants' inflight journey maps, they experience negative emotions, such as disappointment, frustration, and loneliness.

"So end up with either people moving around, and then you have to wake up. Or not enough air in the plane, so you're ... So it's never like sleeping at home. Because you'll never get the comfort in here. So that's why this is the lowest."

P3 male, age 41-45, inflight research

Sleeping inflight is an important factor to getting enough rest for their business trip because these business flyers travel quite often and with a hectic work schedule:

"It affects your ability to continue.. with the activities that you are traveling for. So you are traveling for a reason, and you want to be there in a position where you can execute in a good way. And this bit (sleep) typically interferes with that. So you need time to rehabilitate to basically clear and reenergize, to be able to work normally."

P3 male, age 41-45, inflight research

An outstanding emotion they experience during mid flight is boredom:

"When I took a long journey, about 15 hours, and then I just sleep, and then I wake up every hour. And then.. What time is it? It's not arrived yet? Very boring.. Usually in the middle of the midnight."

P4 female, age 25-30, inflight research

Notably, they actually do not like the long distance travels and desire to land as soon as possible:

"I just feel frustration on what time on landing. I want to land as soon as possible."

P4 female, age 25-30, inflight research

"Everything about being on a plane is frustrating. Its not comfortable. You are there for a LONG time. Other people do strange things. The food us bad. The air quality is TERRIBLE. You pass the time by watching movies, surfing the news, or listening to music, but you would literally rather be ANYWHERE than on a plane. I can't wait to be back on the ground eating a normal meal."

P1 male, age 41-45, inflight research

Most importantly, physical well-being is the ultimate need for the inflight experience, since they travel very often:

"If you travel quite a lot, you tend to suffer from back problems, suffer from.. all kind of issues from being squeezed in a seat for 14, 15 hours. And you do that quite often, so keeping staying fit is key to continue. And part of physical wellbeing is picking the right airline, that gives you the space, give you the comfort, give you the ability to sleep . I think that's quite important."

P3 male, age 41-45, inflight research

"I would actually prefer LESS Products and Services and MORE physical space and comfort."

P1 male, age 41-45, inflight research

They even choose their flight seats for comfort and to get good sleep:

"Primarily reason for first class is to get a night's sleep for next days work. It's why they have beds and lounge chairs for sleep..peace and rest are key else next day ppl feel it."

P5 male, age 31-35, inflight research

P2-product/service use



1. Product / Service Use

- What is 1 product/service that you use during your long-haul inflight journey and answer the following questions?
 - Product/Service A: Inflight entertainment system
 - What do you use this product for? Entertainment, get the feeling that the flight is shorter, watching movies.
 - When do you use it? How often? Just after take-off 2 to 3 times a flight
 - What kind of functions/features do you use from this product/service? Watching movies, listening to music
 - What are 3 **positive** and/or **negative** emotions you experience in using this product/service? (refer to pages 6-10) Amusement, Relaxation, Annoyance
- What is another product/service that you use during your long-haul inflight journey and answer the following questions?
 - Product/Service B: Phone (smartphone)
 - What do you use this product for? listening to music
 - When do you use it? How often? before/during take-off and landing
 - What kind of functions/features do you use from this product/service? listening to music
 - What are 3 **positive** and/or **negative** emotions you experience in using this product/service? (refer to pages 6-10) Amusement, euphoria, energetic

P1-product/service use

1. Product / Service Use

- What is 1 product/service that you use during your long-haul inflight journey and answer the following questions?
 - Product/Service A: Movies (on in-flight entertainment screen)
 - How do you use this product? On long haul flights I'll decide ahead of time when I want to "sleep," and I'll watch a movie or two until I am tired. I try to arrange it so I wake up within 2 hours of landing.
 - When do you use it? How often? Any flight that travels "overnight" I will watch movies while trying to tire myself out for sleep.
 - What kind of functions/features do you use from this product/service? Watching the movie, listening to Audio from the movie (on my own headphones), occasionally fast forward or rewind if I fall asleep and wake up and want to rewatch part of the movie.
 - What are 3 **positive** and/or **negative** emotions you experience in using this product/service? (refer to pages 6-10) POS: Amusement, Satisfaction, Relaxation
NEG: Annoyance, Dissatisfaction, Frustration
- What is another product/service that you use during your long-haul inflight journey and answer the following questions?
 - Product/Service A: Phone (Android, Huawei Mate 9 Pro)
 - How do you use this product? Play Music stored on the device, Play Games (single player) (Backgammon, Checkers, Solitaire), if wifi available access Instant Messengers, Text/MMS apps, and News/Social Media
 - When do you use it? How often? Play Music when not watching movies or sleeping, games when not watching movies or sleeping, IM/MMS/SM as long as wifi is available throughout flight.
 - What kind of functions/features do you use from this product/service? Google Play Music, Games, WhatsApp, Trillian, Skype, Skype for Business, Facebook, Twitter, Chrome, Slack, Google Hangouts
 - What are 3 **positive** and/or **negative** emotions you experience in using this product/service? (refer to pages 6-10) POS: Amusement, Satisfaction, Relaxation
NEG: Anger, Indignation, Frustration

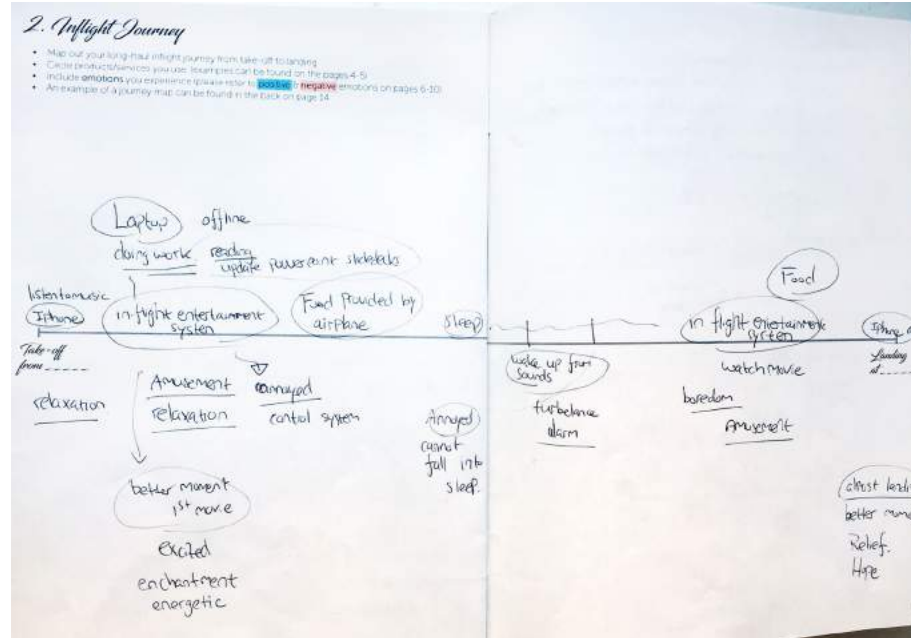
P5-product/service use

1. Product / Service Use

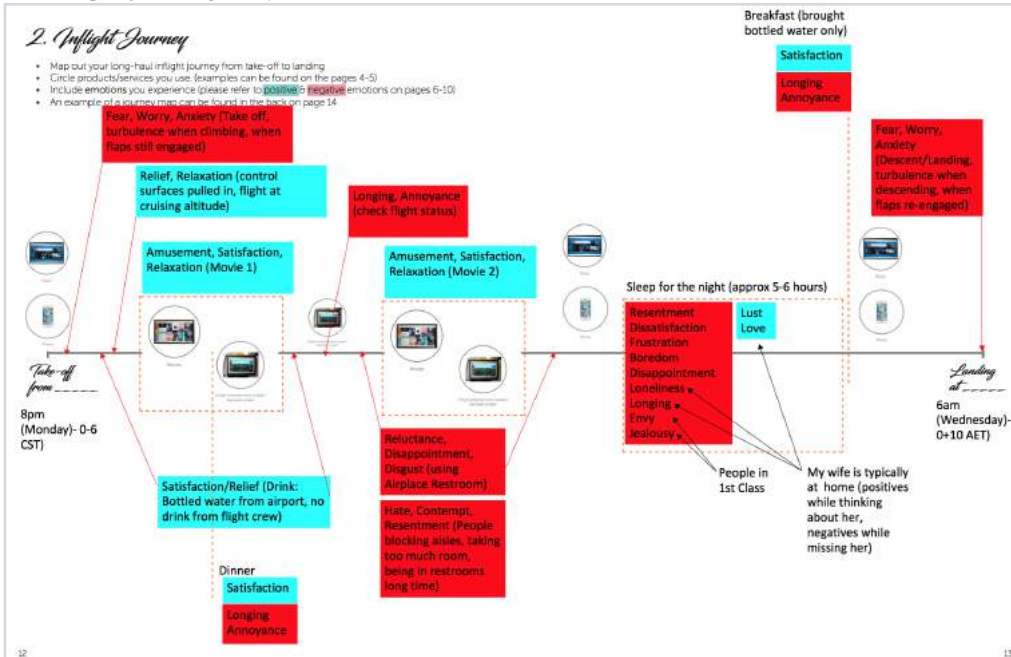
- What is 1 product/service that you use during your long-haul inflight journey and answer the following questions?
 - Product/Service A: Movies
 - How do you use this product? Watch the favorite movies
 - When do you use it? How often? in the beginning and during flight
 - What kind of functions/features do you use from this product/service? new release
 - What are 3 **positive** and/or **negative** emotions you experience in using this product/service? (refer to pages 6-10) surprise, inspiration, energetic
worry, insecurity, anger
- What is another product/service that you use during your long-haul inflight journey and answer the following questions?
 - Product/Service A: music
 - How do you use this product? listen to the music
 - When do you use it? How often? when I get bored with the movies and I'm going to sleep, I listen to the music
 - What kind of functions/features do you use from this product/service? easy listening music
 - What are 3 **positive** and/or **negative** emotions you experience in using this product/service? (refer to pages 6-10) love, dreaminess, relaxation
loneliness, sadness, guilt

Figure D4 Workbook results exercise 1 - Product/Service use

P3-inflight journey map



P1-inflight journey map



P5-inflight journey map

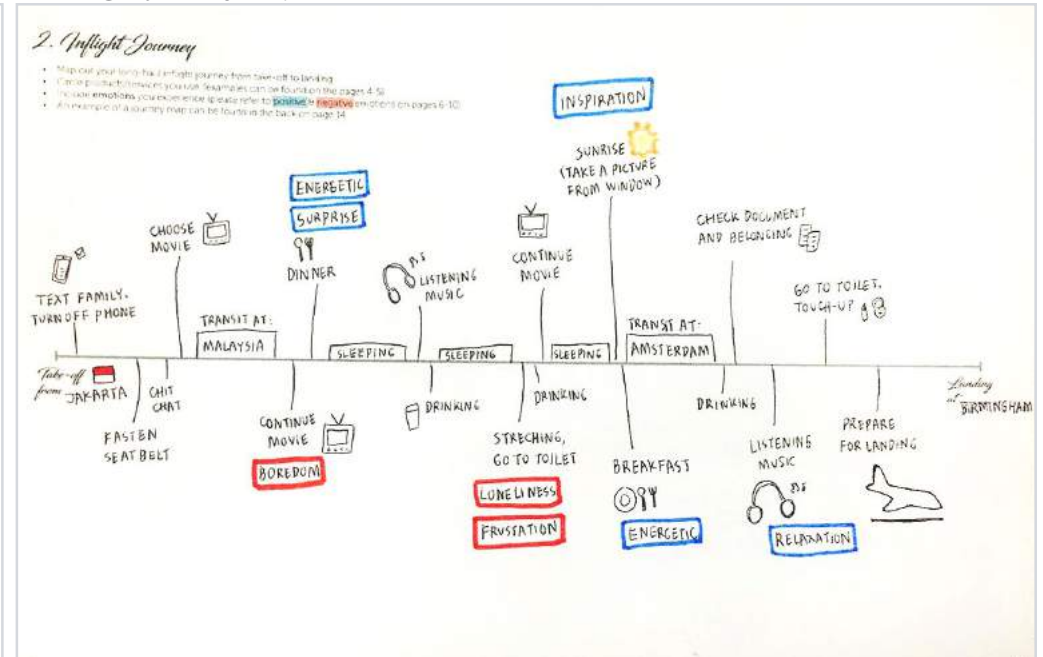


Figure D5 Workbook results exercise 2 - inflight journey map

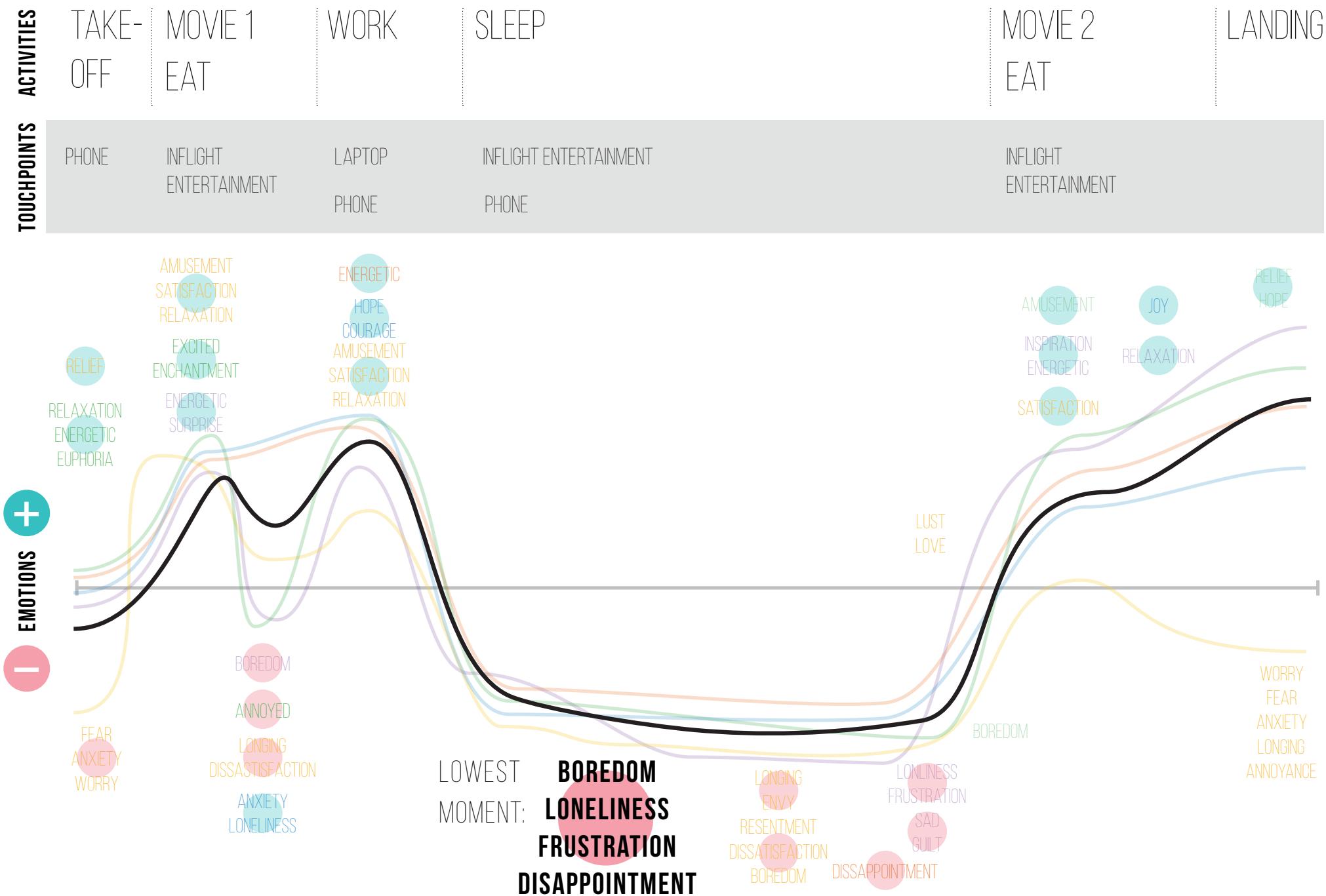


Figure D6 Inflight journey findings

CONCLUSION

Though the inflight findings are compelling, they are not significant enough to provide an overall perspective of the business, frequent flyers' travel journey. Additionally since the previous analyses in internal and external research reveal the importance of designing beyond the inflight journey, the pre and post flight experiences shall also be researched among passengers. Thus, a research with wider perspective including the entire travel journey shall be explored; this is performed in the following customer research: travel journey customer research.

E TRAVEL JOURNEY CUSTOMER RESEARCH

As explained in the report, section 3.3, this customer research investigates seven participants' travel journey from leaving their hotel or home to settling in at the destination hotel or home. Figure E1 shows the interview guide. Participants are first given an A3 size paper with a template to map out their current travel journey; this is also known as context mapping. Then they are asked to map out their ideal travel journey. To aid in expressing their journeys, supporting images and words are printed out for them to use or as inspirations. After their mapping sessions, the researcher will ask them to explain their work and additional, follow up questions.

CONTEXT MAPPING RESULTS

Interestingly, some participants like to use the supporting images and words. While others do not even bother and write down everything instead. Figures E2 to E5 shows participants mapping out their travel journeys. The context mapping sessions triggers the participants to recall their thoughts, feelings, and desires of their travel experience.

FINDINGS

From the general explanation of findings in the report, in section 3.3, the following are supporting excerpts from participants.

Preflight

At the beginning of the journey, participants experience positive emotions, such as excitement and energeticness, and negative emotions simultaneously, such as stress, restlessness, insecurity, and anxiety:

"There's a lot of stress and anxiety about packing, making sure that you have everything you need. You might be worried about your transport, so whether you want to take an Uber, or searching whether you want to take a bus. Wondering if it's going to be on time. So that's why I have that face (points to picture of a stressed out guy)."

P 7: age 25-30, male, American, travel journey research

As expected with most travelers, the security check process at the airport is largely unfavored.

"In the airport, I hate security, especially with everything that's going on in Europe. Makes me really anxious to be at a pretty secured, low-key area. So that causes a lot of anxiety."

P 7: age 25-30, male, American

Inflight experience

Also, two differing flight journeys occur due to when the business flyers want to land at their destinations. If they are considering of arriving at the destination in the afternoon or evening, they take a day flight from the morning. The day flight is usually the outbound flight, so that they have time to rest for a night before starting work in the morning. But if they are arriving in the morning, they take an overnight flight; this is usually a

inbound flight on the weekends. For the day flight, the business flyers will first work on their laptops for one to two hours:

"So I may board, get the wifi pass for 2 hours, get the work I have to get done, and then take a nap."

P 7: age 25-30, male, American, travel journey research

Also for the day flight, they do not sleep to prevent jet lag:

"If I fly during the day, sometimes you extend your day. I try to sleep as little as possible, cause then I arrive at night, then go to bed, and sleep a solid 8 or 9 hours. And then you're past your jetlag, cause you just reset everything you have to do."

P 3: age 30-35, male, Dutch, travel journey research

In terms of food, they do not like to eat a lot or they prefer to only eat the first meal:

"When the meal service is really long. Most flights you take off and they served food right away. My biggest thing anxiety onboard is just thinking about to work. So the longer the meal takes, the longer that's going on... Dine and rest. It's super popular for the people of my profile. In fact, often times it sells out because it's so popular for people like me. And then, in that case it comes in like 20 minutes. You're done eating in 30 minutes."

P 5: age 40-45, male, American, travel journey research

However on the overnight flight, business flyers usually do not work and sleep instead, especially if they have to be in the office in the morning:

"If I'm coming back overnight, then I won't work. Cause usually by then, I might of been traveling

on a Friday night, Saturday morning or night, Sunday morning. So it's usually a weekend and i feel like i don't have to work on weekends."

P 2: age 40-45, male, British, travel journey research

For food, these flyers prefer to skip it and sleep instead:
"So usually i don't eat at all, when i fly overnight. I just eat something at the airport, and then go to sleep right away."

P 6_ age 25-30, male, German, travel journey research

In both flight scenarios, the common lowest moment is the second half of the flight. Not only are they very bored, they also want to land as soon as possible:

"I start to feel bored. You're sitting there and it's only half of the total flight time. I also know about all the entertainment they have, so you can't be curious anymore. I just check the flight status. And you just .. goof around in the entertainment system. It's the most hard time. For example, 3 or 2 hours before landing. That's the most boring time."

P 4: age 25-30, male, Chinese

Additionally, they think of their next steps they have to take at end of flight:

"Especially the last hours before landing, I'll check how to get out of the airport, where can I get the luggage."

P 4: age 25-30, male, Chinese

Postflight

After their flight, some business flyers arrange transportation to their hotel beforehand, especially in risk countries, while others find transportation methods when they arrive at the destination airport. This is when they may experience difficulties, such as not having access to wifi to get an Uber or locating the taxi and shuttle zones in the airport:

"After you get your luggage. And then you go to the airport and then you feel like you're totally

a foreigner because you don't know where you take the taxi. Where you suppose to take the shuttle bus. So you start to look for all the information of the airport. Where is the shuttle bus to the hotel? Where is the taxi place? Or you ask local people there. Usually they give a very complicated answer. Basically you have to figure out by yourself."

P 4: age 25-30, male, Chinese, travel journey research

Business trip schedule

More than the travel journey, business trips are seen as unfavored necessities. Business flyers do not actually want to travel so much, but they know that they have to physically be present at the other location:

"Feels like a burden... because sometimes you realize that you could've done the work from home. Sometimes, I feel like you really brought me over for this?"

P 3: age 30-35, male, Dutch, travel journey research

Plus their business trips can be quite packed with work, which can put a damper to the travel journey. Since they know they have a busy schedule ahead, it is difficult to have time for themselves to enjoy:

"A lot of people think: Oh so you travel for your work? It's so nice; you get to see a lot. (shaking head for disagreeing) No. You see less than you think you would. If you arrive in the morning, you'll be at the office. You don't see anything. If you arrive and it's dark, you go to the hotel. If you are lucky, you outside for dinner with your colleagues."

P 3: age 30-35, male, Dutch, travel journey research

Ideal journey

For their ideal travel journey, they desire a seamless process without distractions and extra steps:

"So i said the 'hope' for on time for the travel because you're then in the airport and you kind of hopeful that everything's pretty smooth. And

so that your schedule kinda works out... Then onboard, fast service which keeps me energetic but also entertained. And then towards the landing, being well prepared for the airport for navigation through the airport. Then on the way to the hotel, fast baggage brings me joy. As i can easily navigate through the airport to then get to my hotel."

P 6_ age 25-30, male, German

The results and discovered emotions are discussed in the report.

TRAVEL JOURNEY CUSTOMER RESEARCH INTERVIEW GUIDE

Date

November 22-30

Who

Business frequent flyers, for long-haul flights

Purpose

- A. To understand the travel journey from hotel/home to settling in at the hotel/home.
- B. To test the current Onboard portal site

Format

- Part 1: Context mapping w/ questions
- Part 2: Testing current OBP

Research Questions

Topic 1 - Travel journey

1. How do passengers experience their travel journey from home/hotel to settling in at the hotel/home?

Topic 2 - Schedule

2. How do they plan out their work trip?

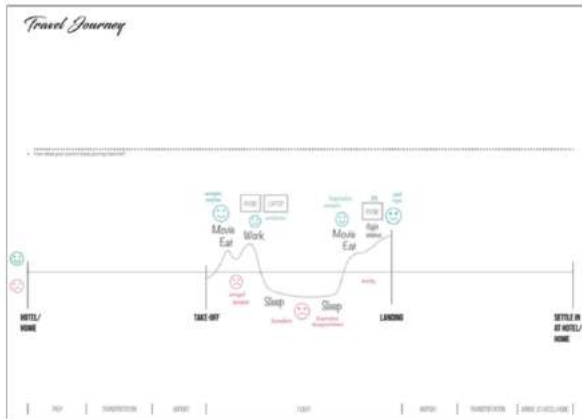
Topic 3 - Onboard portal

3. How do they view the current onboard portal site?

Part 1

Context mapping

Think of your latest long-haul flight.



Topic 1 - Travel journey

A. Current situation: How does your current travel journey look like? (fill in below dotted line)

- Show travel journey sheet.
- As you can see, the flight portion is already filled in. You can disagree and fill in your own experience.
- See pictures and words from other pages for inspiration.

- Explain your experience (**current situation**) from preparation at home/hotel to settling in at the hotel/home
- How do you feel at the beginning of the trip? (show sheet with positive & negative emotions)
- What do you dislike the most from your inflight experience? Why?
- What do you like the most from your inflight experience? Why?
- How do you feel when you have landed? (show sheet with positive & negative emotions)
- What do you dislike the most from the entire journey? Why?
- What do you like the most from the entire journey? Why?
- How do you prepare for your trip?
 - i.e. planning transportation

Topic 2 - Schedule

- How long is your trip?
- How is your work trip planned out?
 - What is your schedule like? Is it very tight or more flexible?
 - What other activities do you do besides work?
- Do you travel to the same places or to new places?
- New places: What do you like about traveling to new places?
 - How do you plan your travel differently when you go to new places?
 - What do you dislike about traveling to the new places?
- Same places: What do you like about traveling to the same places?
 - What do you dislike about traveling to the same places?

Topic 3 - Ideal journey

B. Ideal situation: What is your ideal situation from takeoff to settling in at the hotel/home? (fill in above dotted line)

- See pictures and words from other pages for inspiration
- Explain your **ideal situation** from takeoff to settling in at the hotel/home.

Figure E1 Interview guide - travel journey customer research

P4-context mapping



P2-context mapping

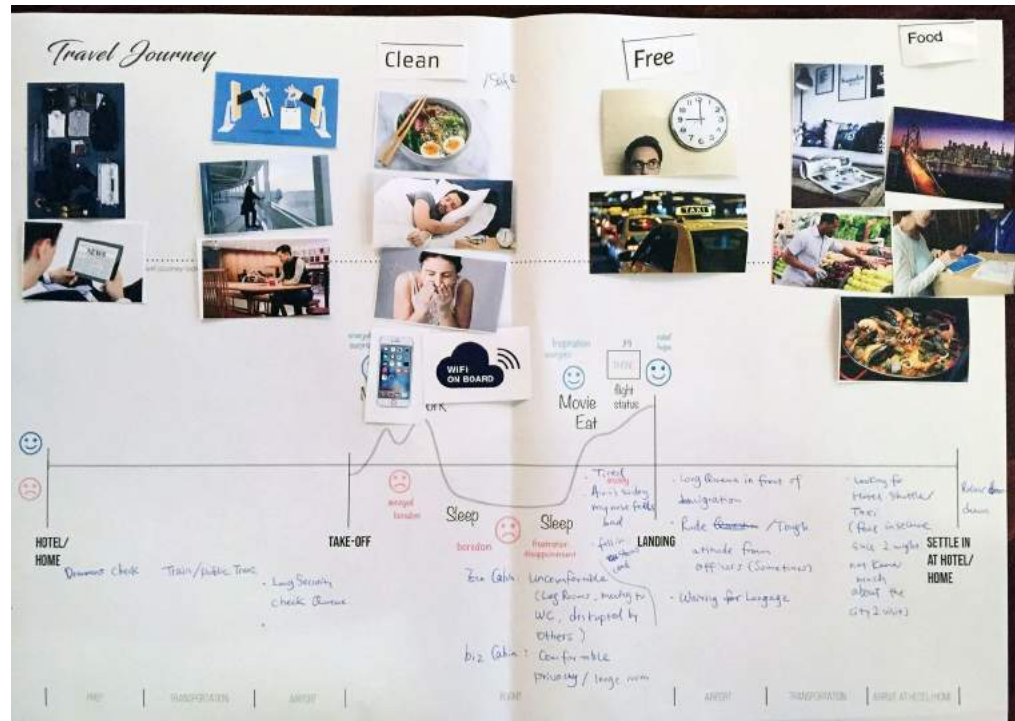


Figure E2 Context mapping session - travel journey research, P4

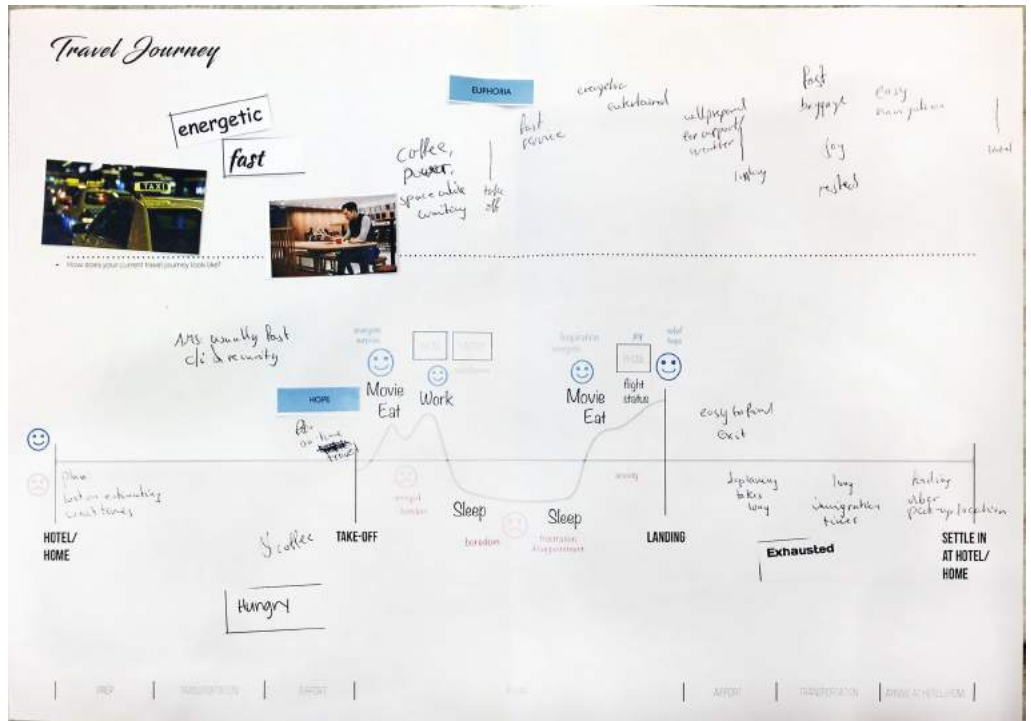
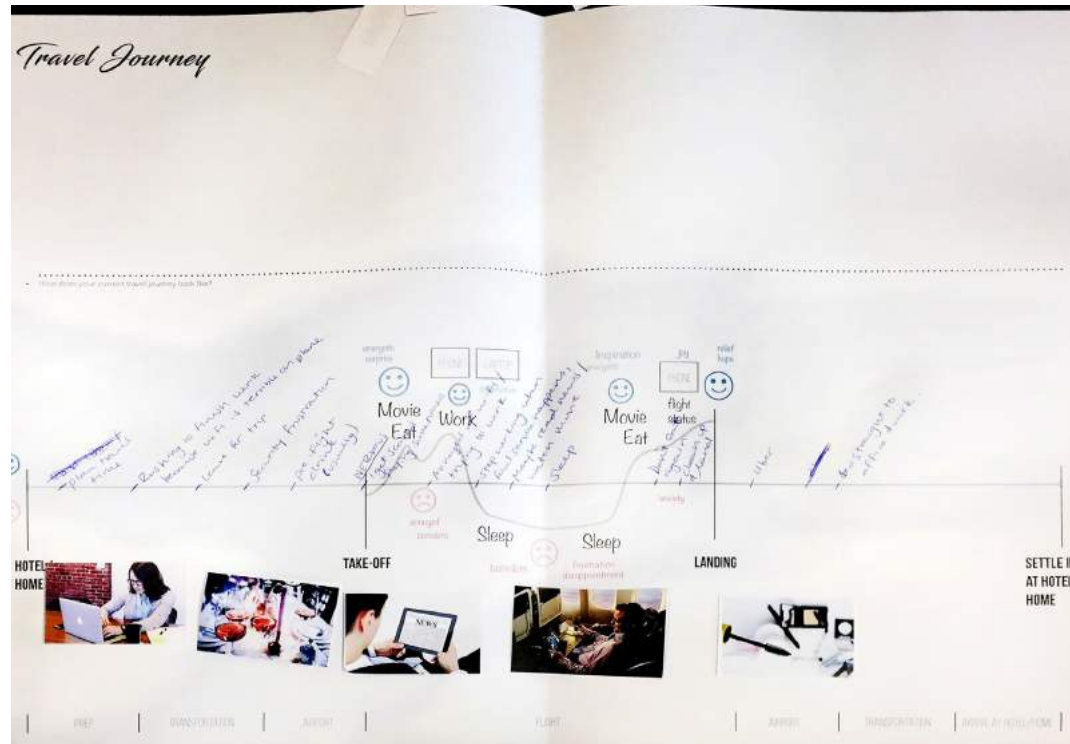


Figure E3 Context mapping session - travel journey research, P2

P1-context mapping



Current journey



Ideal journey

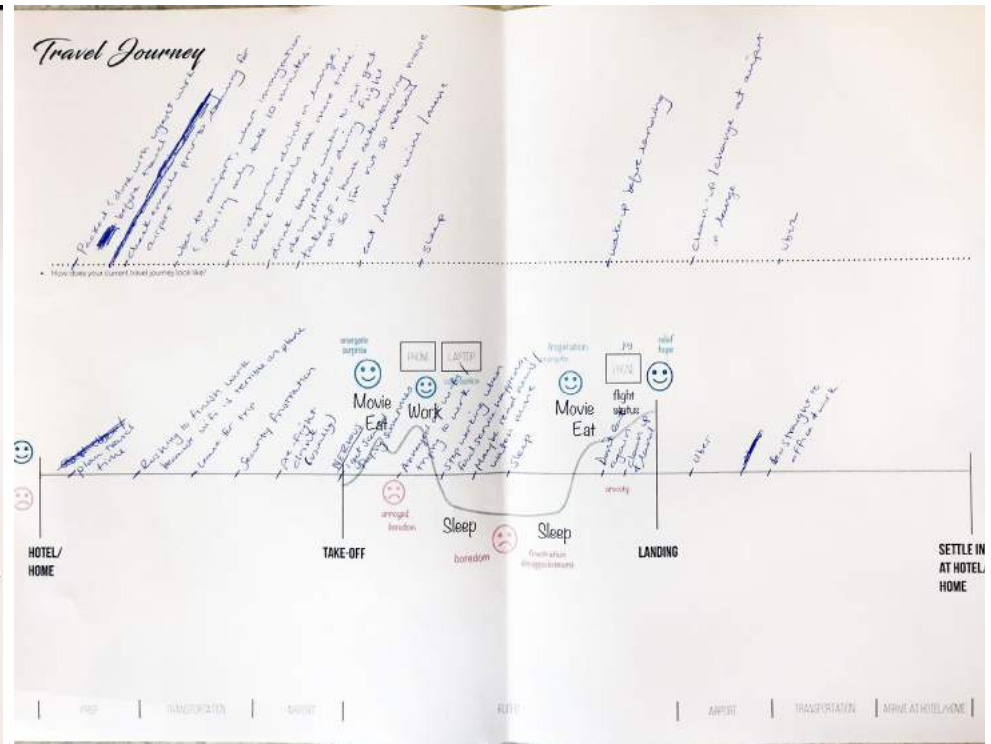


Figure E4 Context mapping session - travel journey research, P1

P7-context mapping



Current journey



Ideal journey



Figure E5 Context mapping session - travel journey research, P7

F CURRENT OBP TESTING

SETTING

Purpose

To uncover what the target group thinks of the current OBP, the site is reviewed. This will aid in determining if the current content is appreciated and what is other features are desired. The results are kept in mind for the ideation phase.

Participants

A total of fourteen participants have tested the current OBP. Seven of these participants are from the travel journey research. The other seven are tested the portal at Schiphol's KLM lounge with follow up questions for five minutes. Since these participants were already situated at the lounge, this means that they are a part of the frequent flyer category with Gold or Platinum Flying Blue accounts. The participants at the lounge are:

- P 8 Male, +40 years, African
- P 9 Male, +40 years, German
- P 10 female, +30 years, American
- P 11 Male, +30 years, American
- P 12 Male, +40 years, American
- P 13 Female, +45 years, South African
- P 14 Female, +30 years, Dutch

METHOD

The current OBP is tested by reviewing the site on the researcher's laptop. Figure F1 shows the interview guide. First, participants are asked to imagine that they are flying from Amsterdam (AMS) to San Francisco (SFO). This is because the testing link reveals a flight from AMS to SFO with destination content and articles on San Francisco. After having one to two minutes in reviewing the site and content, participants are asked about their thoughts, interest in the content, and their opinions in repurposing and improving the portal. This is brief test to gain a general sense of what the target group thought about the OBP.

OBP TEST RESULTS

Majority of the participants said that they would not visit the OBP site more than connecting to wifi. There is no prominent incentive for them to stay the portal: "A lot of info I don't care about."

P11: Male, +30 years, American, OBP test at lounge

"But I will say that usually once I've connected to wifi, I immediately navigate from that page. So I guess it would be a bit more helpful even like, you don't want to stay on this page, I would need it to have immediately on the top banner something worthwhile, like what is on this page that I would actually want to see versus things I already know."

P 1: age 30-35, female, American, OBP test

But they would be interested in the portal if it was their first time visiting that destination or if they have free time outside of their busy work schedule:

"Certainly if it was the first time I went and if I wanted to know something about it."

P 2: age 40-45, male, British, OBP test

"But if I have a few days to spend, have different kind of food, so yea I would probably click on this tile."

P 3: age 30-35, male, Dutch, OBP test

"But for travel trip: Yea potentially. It's a little bit for inspiration for things to do, or it's to plan the next trip, if you currently already planned out the one you are currently on."

P 7: age 25-30, male, American, OBP test

The business flyers would rather see more content on relating inflight services, connecting flight information, and destination information. For inflight services, they want to see practical information, such as meals:

"I know some airlines have pre-ordered meals. I think that would be nice. You can have some details on here on what the meals are, like what your options for the day are... I know they give you information about that usually. But it's kind of fun to hear about that, or who the chef is or something like that. That's kind of cool."

P 1: age 30-35, female, American, OBP test

live flight time:

"It'll be cooler if there's another button, if I click, I can see the track. For example, you fly from Amsterdam to San Francisco, this is the planet route, like a map. Cause I thought it's maybe live."

P 4: age 25-30, male, Chinese, OBP test

and being recognized of their member status for offerings:

"If you're a KLM frequent flyer, like login to Flying Blue, see your overall. . How many more flights you need to get to this status, how many upgrades or certificates you have."

P 5: age 40-45, male, American, OBP test

For connecting flight information, they want to see a

live status so they know what to do if they could not make the flight:

"I mean if i was on the wifi, i want to know what status of the connecting flight was. If you were late taking off and you have a tight connection or you missed a flight. It would be nice to know if they were definitely going to hold it or if they were definitely going to be on time, and i missed it. Then a chance to rebook. You know something like that to be able to possibly sort out problems like that would be useful from the air."

P 2: age 40-45, male, British, OBP test

For destination information, flyers want to see the destination airport information so that they know where to go:

"Well some airlines show you you're arriving in.. This little video is showing you how you get where you go, where you transferring. If you fly somewhere into Atlanta, do you go .. or do you take the train down between the terminals, where the bags are coming in? What's the immigration liking to be? Where you get a taxi from. How long a taxi takes?"

P 2: age 40-45, male, British, OBP test

Also, they prefer more cultural local destination activities:

"As far as how other activities go, if I am able to somehow save that I enjoy hiking when i have spare time at my destination, like going outdoors, like maybe it'll be able to say some preferences about activities that I would do once i'm on the ground."

P 1: age 30-35, female, American, OBP test

But also, they want to have the ability to change destination content into recommendations and other destinations:

"If that can potentially change your destination highlights. Again maybe you're on your work trip, but next week you are going for a vacation. So having an option that's like view recommendations for not only the city you are going to now, but Also the city in your future itineraries."

P 7: age 25-30, male, American, OBP test

Subtopic 3 - Onboard Portal

- Have you connected to wifi before in the aircraft?

Part 2

Testing current Onboard Portal (<https://onboard.ute3.klm.com/#/>)

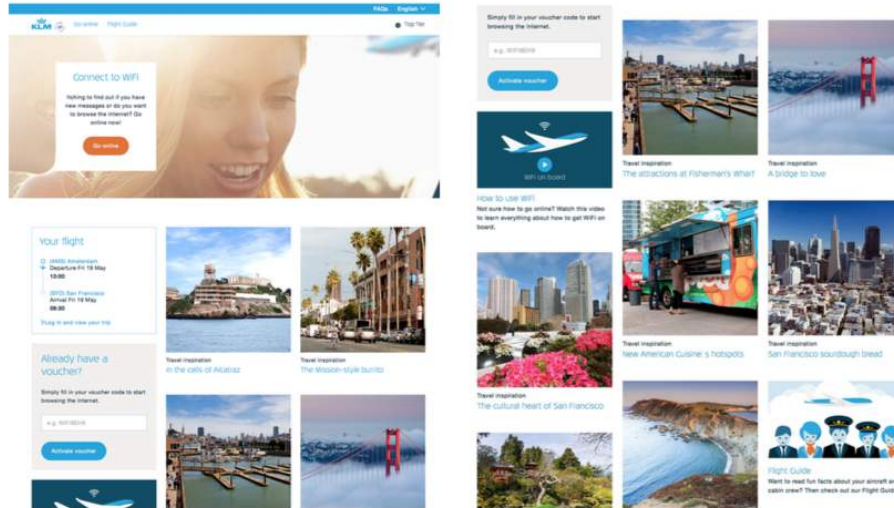


Image that you are flying from Amsterdam to San Francisco. You want to connect to wifi and you go to this portal page.

- What is your first impression?
- What is positive and negative about the site?
- What do you think is missing? What other things do you wish to see?
- Are you interested in these destination content on the site?
- Would you click on the articles to read more about your destination?
- What do you think about these destination articles?
 - Are they informing you the information you would like to see about your destination?
 - Do you want to have more specific info about your destination?
 - What kind of information would you like to see?
- Would you visit the site more than just connecting to wifi?
- To what extent would you consider upgrades (i.e. seats)?
- What personal preferences would you like to see integrated on the site?

Figure F Interview guide - OBP testing

G DESIGN DIRECTIONS

From the internal, external, and customer analyses, all the design directions are collected and categorized into six segments. The segments are titled with 'how to' statements, as shown in the following:

1 (Frontend) How to acknowledge passengers with more attitudinal data throughout the travel journey?

- Should recognize passengers throughout the travel journey
- Should include more attitudinal data: personal preferences, needs, and desires in designs

2 (Frontend) How to create engaging platforms that merge the digital and physical worlds?

- Should have proactive, deep, ongoing user engaging platforms.
- Should enable customizability for users.
- Should design with more movement in UI/UX
- As a differentiator, Should project personalization into the digital platforms: Onboard Portal and travel journey touchpoints, as physical personalized services. Merging digital and physical worlds.
- Should include post-purchase elements, where customers own role in the post-purchase experience
- Should incorporate mobile ordering through the OBP.

3 (Frontend) How to create smarter personalized experiences that learns about the passenger and gives the passenger control?

- Should incorporate Smarter Personalized User Experiences: instant assistance, login memory features, in-app chat and messaging, push notifications
- Should have personalized characteristics: Products that fit you, learn about you, curated by you, personalized touches that tell a story

4 (Frontend) How to connect touchpoints with the same interactions for cohesion throughout the entire passenger journey?

- Should design all touchpoints with the same interactions, and cohesion throughout the entire passenger journey
- Should connect touchpoints / design touchpoints to interact with each other.
- Should design beyond the inflight journey into pre and post flight moments
- Should digitally empower the traveler with automatic transitions between platforms.

5 (Backend) How to consider data to be shared across touchpoints?

- The OBP data should be linked with other touchpoints
- Should consider data being shared across touchpoints, so that the passenger can be recognized in all touchpoints throughout the journey
- Should implement lean portal as strategic platforms with data analysis, content & campaign management, specific targeting for Content-Centered Experiences.

6 (Backend) How to design for the next level of personalization with consideration of the personalization goal?

- Should design for the next level of personalization (from mass merchandising to macro segmentation) for the OBP
- Should keep in mind the personalization goal of 1:1 personalization / contextualized experience

H IDEATION WORKSHOP

To gain a fresh perspective and new insights from exterior personnel, an ideation session is held with eight master design students from the Industrial Design faculty of TU Delft. Due to the convenience of the participating students and having a suitable space for creative developments, the session is located at the Industrial Design faculty. To start off with an understanding of the project's scope, a brief presentation is given about the context and target group (as seen in figure H1). Then two questions are presented on how to enable the target group to feel relief and how to personalize the passenger's experience. These questions are more generative and open, so that the participants can come up with more innovative ideas.

In developing ideas, the eight students are divided into two groups. With each question, participants are given a couple of minutes to work together. Figure H2 shows the groups conversing, drawing, and writing down their ideas. The groups then present their collective thoughts and concepts. Figure H3 is a group's various perspectives and ideas.

IDEAS GENERATED

The many ideas and concepts from the workshop are reviewed and placed in an architectural diagram, refer to figure H4. Ideas range from features for the OBP and overarching personalization concepts for the system. The features that are thought of include topics, such as inflight meals, destination transportation, local events of the destination, and connecting to other passengers. An example about the inflight meals is for passengers to be asked about their last experience. Through this passengers can give feedback on what

they like, in which the airline can make improvements on their preferences. Another interesting idea that the live flight map can offer passengers suggestions and is able to change the suggestions every month. For transfer time at the airport, an appealing idea is for passengers to receive a gift or lunch box, so that their hunger is already taken care of. In the destination information, the participants emphasized the likings of receiving information on local stories and events, which are told by previous travelers or local natives. Also, a recurring subject is the ability to connect to other passengers, such as through a forum, about travel plans and means of transportation.

In discussing personalization, two concepts came about due to the theme of a travel assistant. One is to have customizable capabilities, where passengers can choose their preferences, what they like and dislike. This may enable the passenger to build up trust of the system, since they know that the system will recognize their choices and provide similar, personal recommendations. Another concept is to ask questions to passengers. A simple question, such as What can I do for you?, can set a foundation in the first level of personalization and serve in testing how to approach personalization.

All these ideas are taken into consideration in the ideation phase.



Figure H1 Presenting scope of the project



Figure H2 Participants ideating

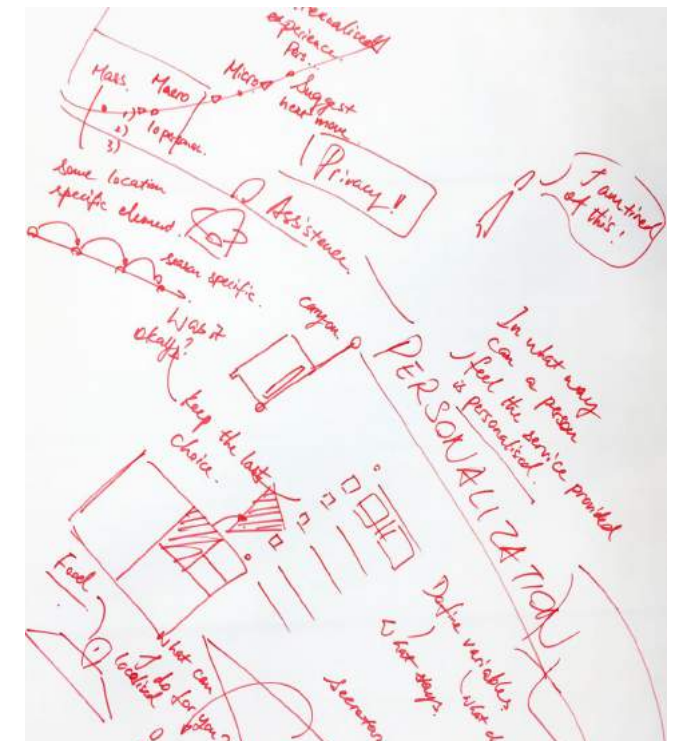


Figure H3 A group's ideas written down

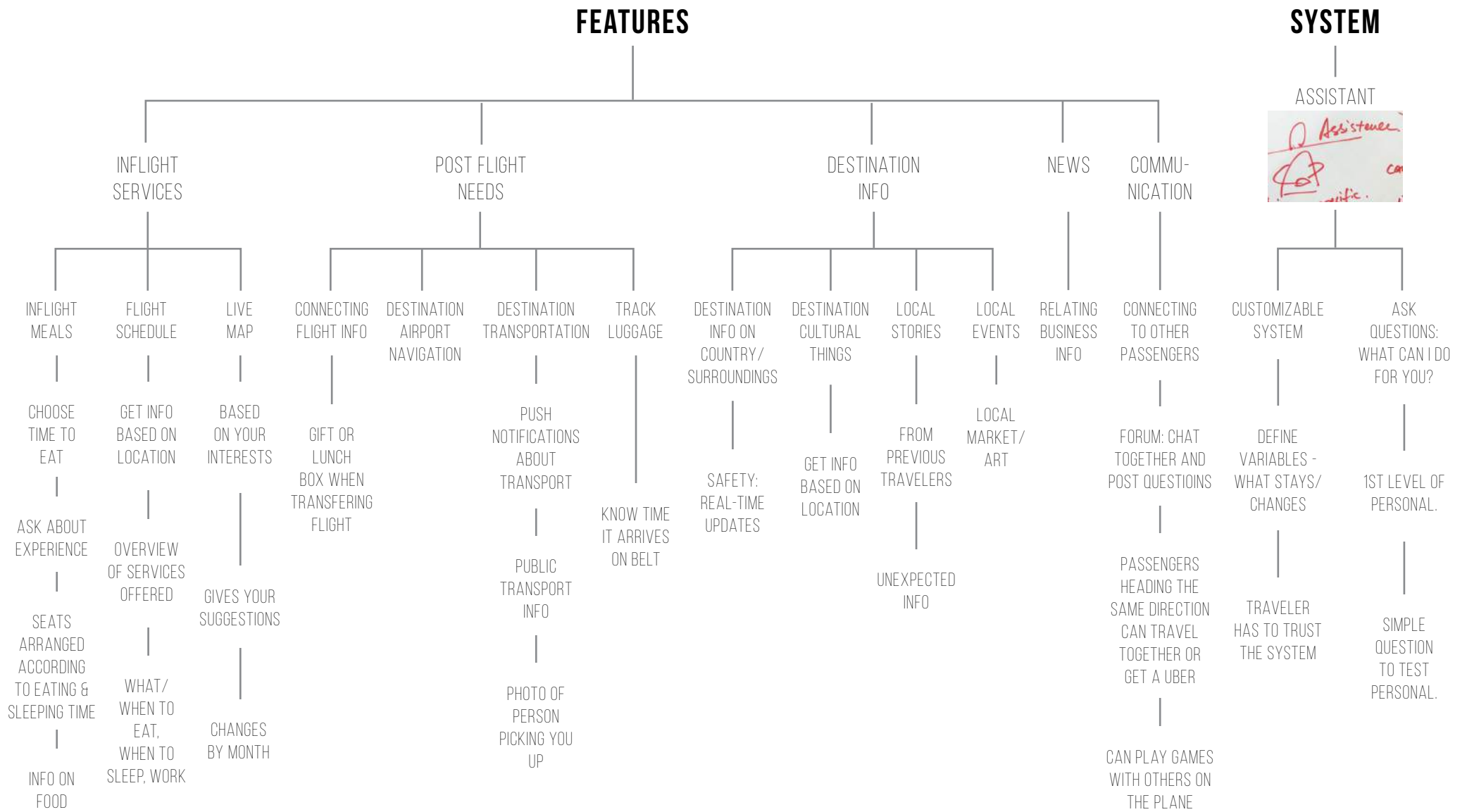


Figure H4 Diagram of ideation workshop ideas

I SYSTEM CONCEPTS

I.1 SYSTEM 1 CUSTOMIZABLE

The Customizable system is inspired by applications, such as Pinterest, Netflix, and Flipboard, where users are able to choose favorable content. As seen in the diagram below, figure I1, the passenger can choose desired topics and features throughout touchpoints in the travel journey. In return, the system continuously learns about the passenger and outputs personal recommendations. Figure I2 shows a storyboard of a business flyer from the search process to the destination.

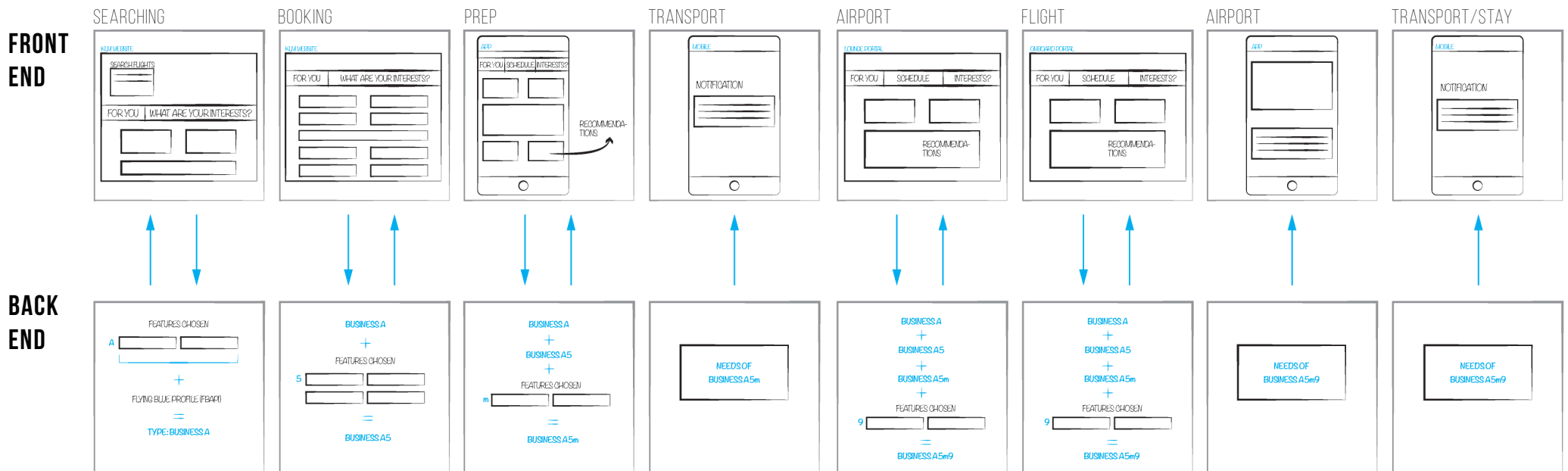



Figure I1 Diagram of concept 1: Customizable

1 CUSTOMIZABLE - STORYBOARD

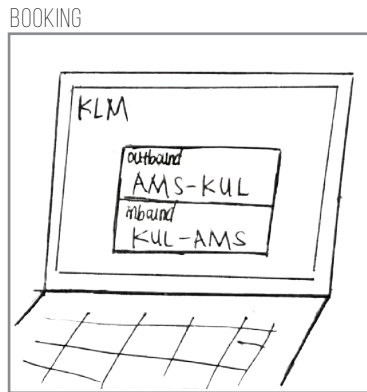


KEVIN

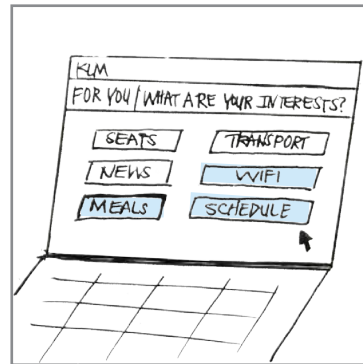
- male, 30-35
- business frequent flyer: 1/month or 1/every other month for long-haul
- Flying Blue: Gold
- works as mid-manager in Renewabel Energy sector
- dislikes travel journey
- loves to explore new places



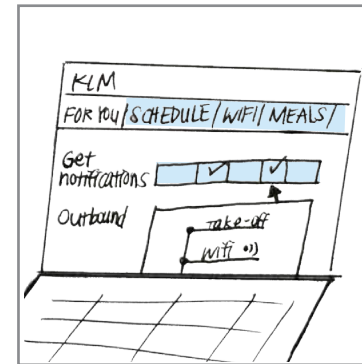
When searching for flights, Kevin goes to the KLM site. He first logs-in. He notices that the site greets him and has personal content for him.



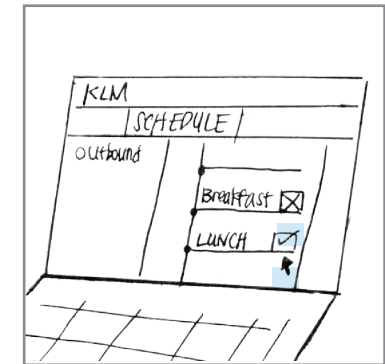
He books his flights from AMS to KUL and back.



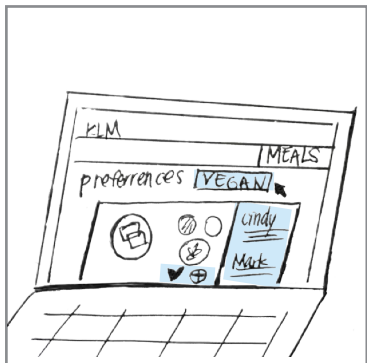
After booking, he sees a pages that asks him about his interests. He chooses topics: schedule, wifi, and meals.



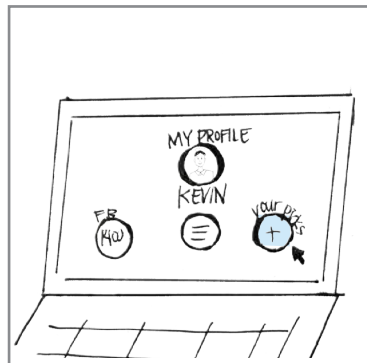
The page then highlights those chosen topics on the top banner. Under schedule, he marks when he wants to get certain notifications in his travel journey.



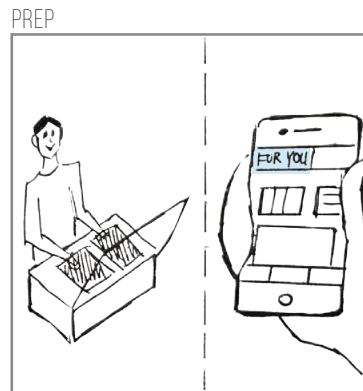
Also, he decides to not have breakfast, so he marks x and yes for lunch.



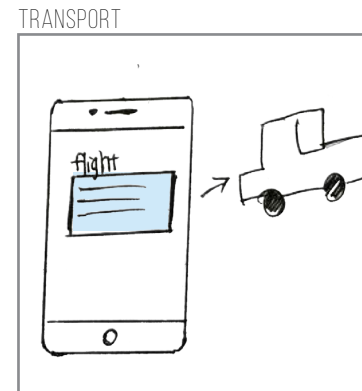
For the meals tab, he marks vegan as his preference. Then some vegan options are shown. He can like or save the content and see comments from other travelers.



When he goes to his Flying Blue profile page, he sees that there's a "your picks" button, which saved all the content he liked.



A day before his flight, he packs and checks-in using the KLM app. The app also contains the same personalized content (it refreshes often).



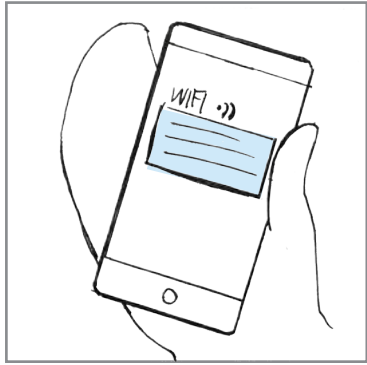
Since he checked "flight info" under notifications in the booking process, he gets a message that his flight is on time. So he makes his way to the airport.



After the security check, he goes to the KLM lounge. The lounge portal, also, greets him and shows his personalized content with some recommendations.

Figure I2 Storyboard of concept 1: Customizable

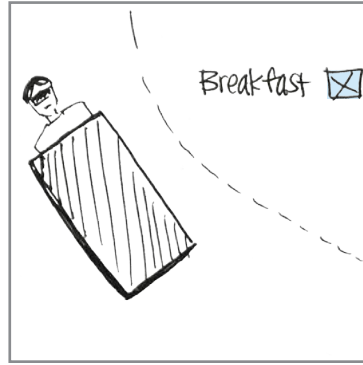
FLIGHT



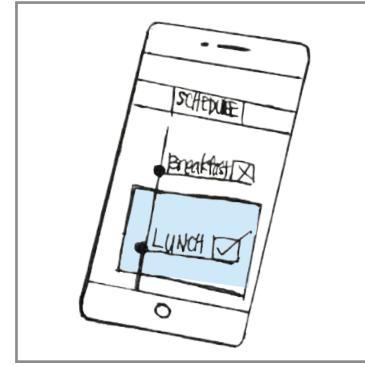
When the plane is at 10,000 feet, a message is sent to him that wifi connection (since he picked "wifi" as an interest before).



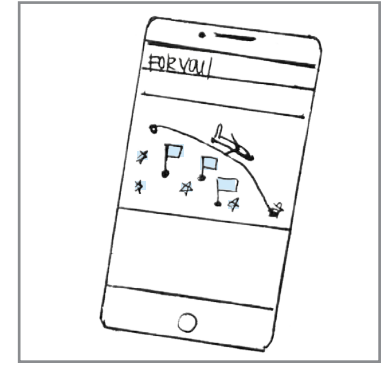
Then he connects to wifi via the onboard portal. He notices that the page has the same personalized content. With wifi, he quickly gets some work done.



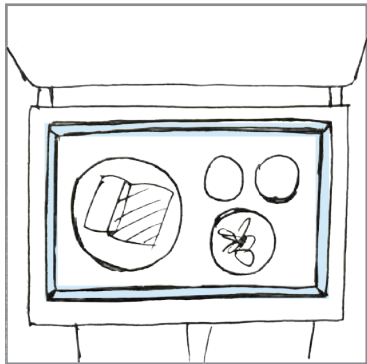
After working for 1-2 hours, he decides to take a brief nap to adjust to the new time zone. Since he already marked no for breakfast, the flight attendant will not bother him.



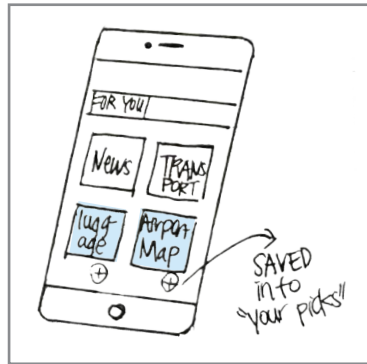
He then wakes up. He's a bit bored. He checks the flight schedule on the onboard portal page via his phone. He notices that lunch is next.



Additionally, he sees the live map of where the plane is currently at. He is able to see highlighted landmarks and other KLM destinations.

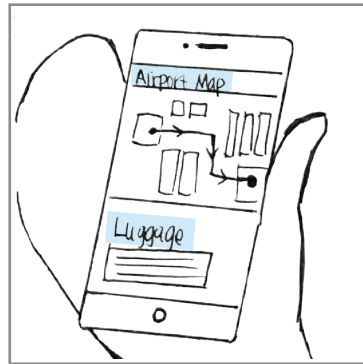


When it's lunchtime, the vegan meal that he liked before is suggested to him.



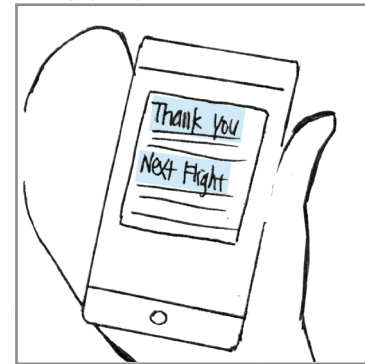
About 2 hours before landing, he is thinking of the next steps to take in this journey. He remembers seeing airport info on the onboard portal page, so he checks the page and sees airport map and luggage info. He saves this info.

AIRPORT



After landing, he follows the directions from the airport map info that he saved. (viewable on his KLM app, under "your picks")

TRANSPORT/STAY



On his way to the hotel, he gets a personal thank you note and reminder of his next flight back to AMS.

I.2 SYSTEM 2 ASK QUESTIONS

The Ask questions system is inspired by personalized subscription models, such as Birchbox and HelloFresh. Here users answer a set of questions at the beginning to receive tailored products and services. Refer to figure I3 for the diagram of this system. The passenger first answers questions before searching for flights. Then the system outputs notifications and recommendations during the rest of the travel journey. The passenger does not have to worry about inputting additional preferences after the first step. Figure I4 shows this systems' storyboard of a business flyer from the search process to the destination.

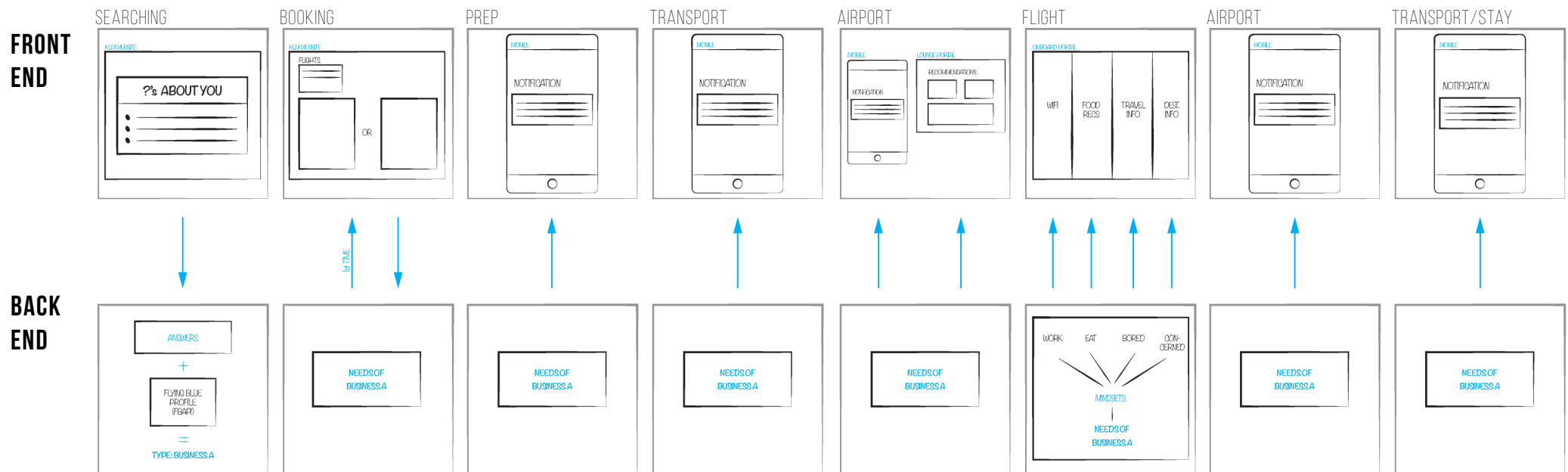



Figure I3 Diagram of concept 2: Ask questions

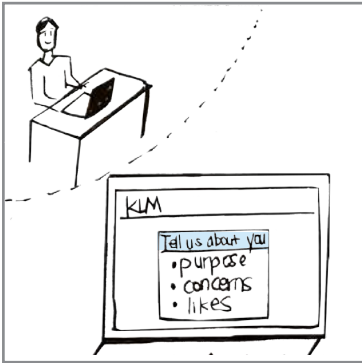
2 MINDSETS - STORYBOARD

KEVIN

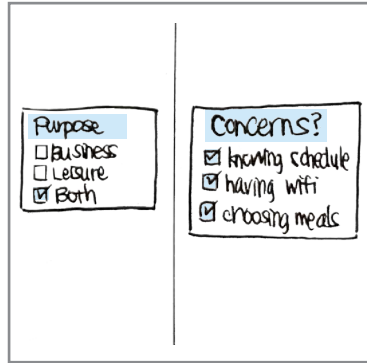


- male, 30-35
- business frequent flyer: 1/month or 1/every other month for long-haul
- Flying Blue: Gold
- works as mid-manager in Renewabel Energy sector
- dislikes travel journey
- loves to explore new places

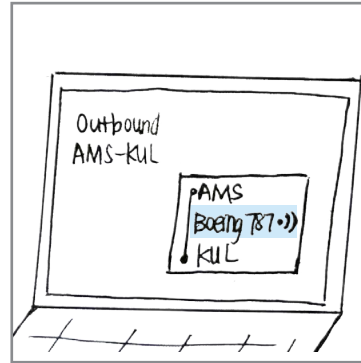
SEARCHING



When searching for flights, Kevin goes to the KLM site. He first logs-in. Then a pop-up window appears: Tell us about you.. It asks 3 questions.

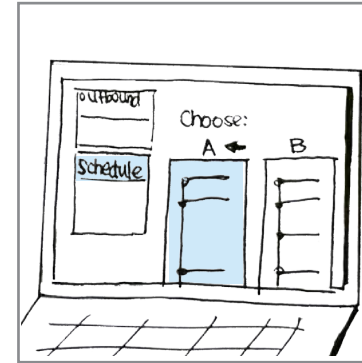


For purpose, he marks both as he has a weekend leisure trip after the business trip. Under concerns, he marks: knowing schedule, having wifi, and choosing meals.



He proceeds to search flights. While choosing flights, he is glad to see wifi availability.

BOOKING

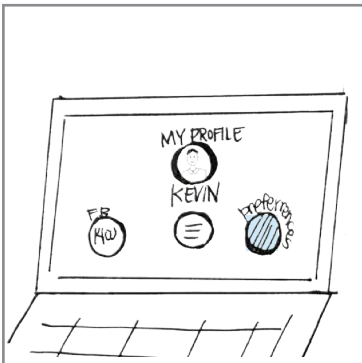


After booking, he is shown the outbound flight schedule options. He chooses for A, which shows meals first and no disturbances for the rest of the flight.

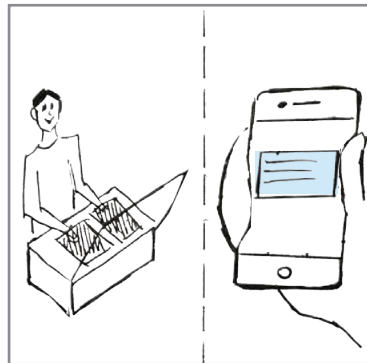


Then, he chooses vegan for meal preference. Also, he gets to choose his food and drink preferences. (The system remembers what he chooses.)

PREP

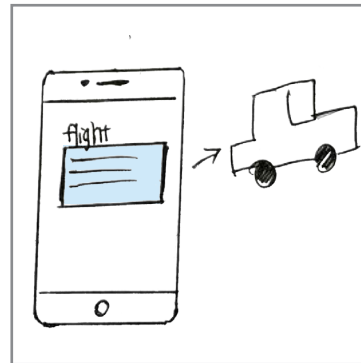


While checking his profile page, he notices that his preferences are saved.



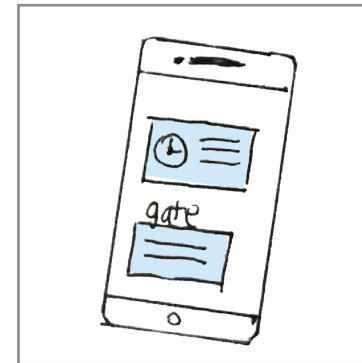
A day before his flight, he packs and checks-in using the KLM app. He gets a reminder message of his flight info.

TRANSPORT



A couple of hours before his flight, he gets a notification that his flight is on time. So he makes his way to the airport.

AIRPORT



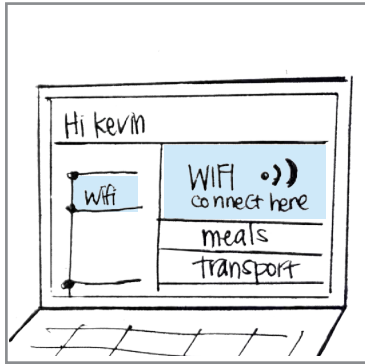
After the security check, he goes to the KLM lounge. He gets notice about how much time he has and when to go to the gate.



Also on the lounge portal, he sees recommendations on services that he may be interested in.

Figure 14 Storyboard of concept 2: Ask questions

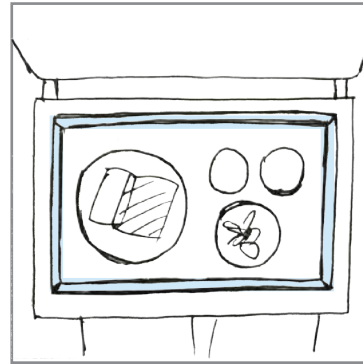
FLIGHT



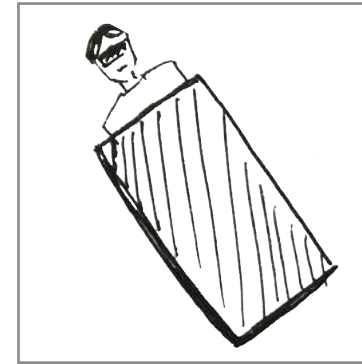
Since the system knows that he will work first, the onboard portal page encourages him to connect to wifi. It also shows options for later use in the flight.



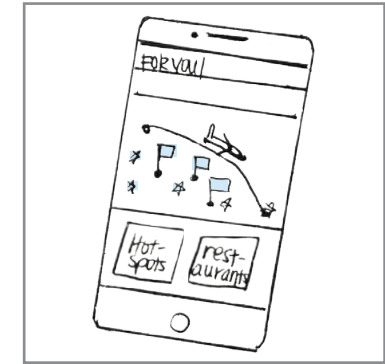
About 1 hour of working, the portal suggests wine to relax. (the system knows that he will rest soon.) Also, the schedule is live; it highlights the current setting.



When his meal arrives, the flight attendant recognizes that he prefers vegan.

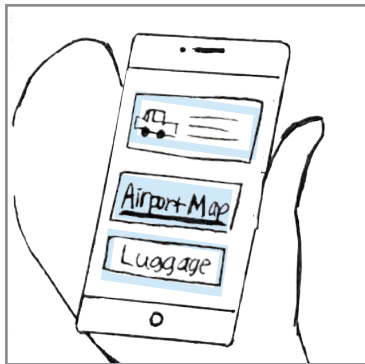


Afterwards, he decides to take a brief nap to adjust to the new time zone. Since his schedule involves no disturbances, the flight attendant will not bother him.

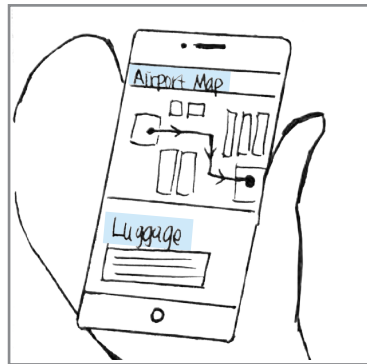


He then wakes up. He's a bit bored. He checks the onboard portal page on his phone. He sees the live map of where the plane is currently at. Also, he is able to see highlighted landmarks and other KLM destinations.

AIRPORT



About 2 hours before landing, he is thinking of the next steps to take in this journey. He then gets a notification about the transportation options, the airport map, and luggage info.



After landing, he follows the directions from the airport map info. Also, he gets a message about his luggage pick-up point.

TRANSPORT/STAY



On his way to the hotel, he gets a personal thank you note and reminder of his next flight back to AMS.

J INTERNAL STAKEHOLDERS SYSTEM EVALUATION

For evaluating the two systems, internal stakeholders are asked for feedback through one-on-one meetings. An explanation of how the two systems work is given initially. Then stakeholders are asked about the feasibility, viability, desirability. The following are notes from their feedback:

Wilbert Baan, UX manager

System 1

- Activity of choosing > a bit difficult
- Feasible
- More of an afterthought
- Skeptical > what questions will you ask. But show recommendations first, then know behavior, and then give recommendations

System 2

- Do you need to ask questions? Maybe not
- Ask questions near the flight day, example: the meals the schedule should be shown closer to the flight
- Easier for customers

Both

- It's like Google versus Flipboard. Google shows recommendations according to behavior. Flipboard shows recommendations according to choosing. But both have same results.
- Can ask questions throughout journey

Vahid Babaloo, Digital Experience Manager

System 1

- Means we should have infrastructure between all touchpoints, but we don't have the infrastructure yet
- Preferred, but not feasible

System 2

- Questions > not good for user experience, can be too many questions
- Not have questions all in same journey, can split into multiple segments
- Feasible > in customer profile, can ask all the questions

Both

- Can combine the 2

Jan Willem, Head of UX strategy and design manager

System 1

- In line with the customer
- Not feasible
- We are already doing this
- More screenish
- If you're going to change something, it's a huge impact

System 2

- It's more a bit of an add-on, feels more personal state
- More feasible
- More easier to fit in for the current environment. So if you make a booking, the passenger can then tell a bit about themselves. Can say we can learn from you and better serve you.
- Feels a bit more modern, like a conversation
- Not really for the customer
- More in the future, driven base, towards voice

Both

- I wouldn't see them separately. They go together.
- Going towards voice and chat
- You can combine the 2, have voice capability, show

Laura Engelshoveand Tanvi Pande, Service Designers

System 1

- Feasible for now, but not capable for KLM
- Functional
- More power for customers
- Can inspire choices, such as book new flights

System 2

- More for the future
- In line with KLM projects
- On amount of notifications, customers should decide

Both

- Combine both > Survey oriented, break questions as

per touchpoint (Figure J)

- Consider enrollment process for new or existing users

Willem Vreugd, UX interaction designer

System 1

- Feature can evolve in 1 year
- Can update interests
- Learn more about the passenger

System 2

- Easier to implement
- Can control what the customer gets

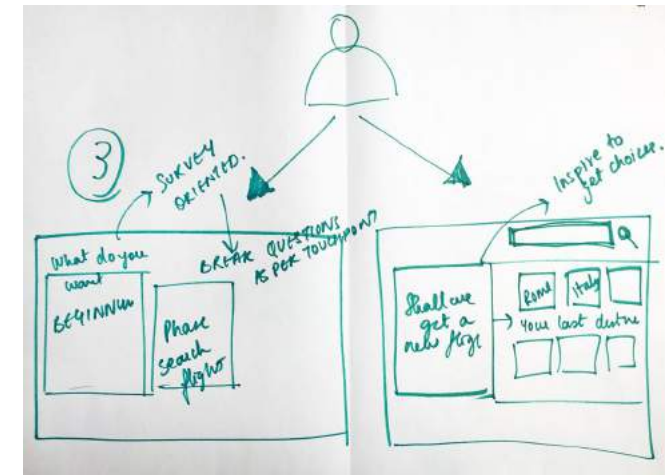


Figure J Sketch of combining 2 systems

K INDIVIDUAL OBP BRAINSTORM SESSION

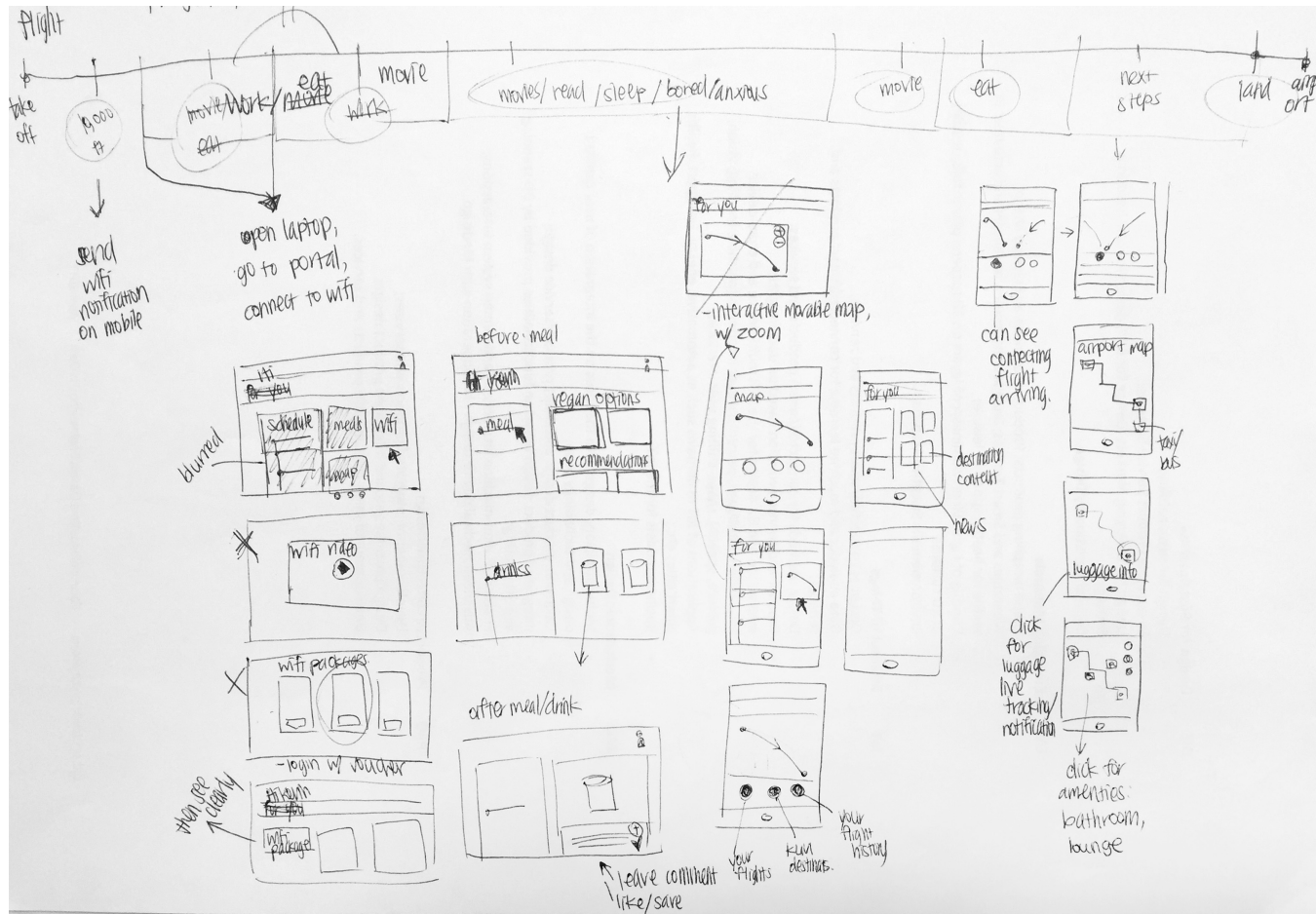


Figure K1 Preliminary OBP sketch

Upon determining what features to include in the OBP, several sketches are made, such as in figure K1. This image shows which features can be activated according to the timeline of the flight. For example, the wifi and meals features are utilized at the beginning of the flight. Then the map and connecting flight functions are prompted during mid flight and last hours of the flight. This is a good start to what features to include and when features can appear. However, there is no substantial theme or defining character that projects the OBP as an attractive product to be engaged in.

Through contemplating how to categorize the features under more personal relating topics, such as 'your flight' and 'your world', a rough outline is made. See figure K2. Perhaps the topics can refer to current or present happenings and next and future events. Or rather 'your flight' can include everything about the flight and 'your world' can include other, exterior features, such as destination news. When sketching out wireframes of the 'your flight' and 'your world' topics throughout the flight timeline, the page layout presents an overall display of everything happening. See figure K3. Hence 'your flight' and 'your world' can be 'your view' into the flight. 'Your view' can be represented as an airplane window as the starter page.

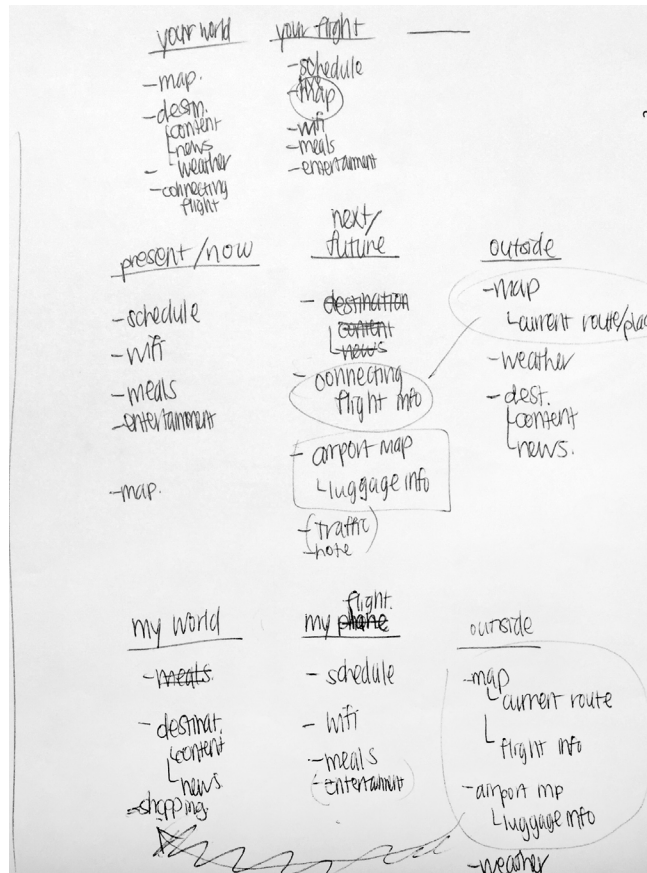


Figure K2 Outline of features under topics

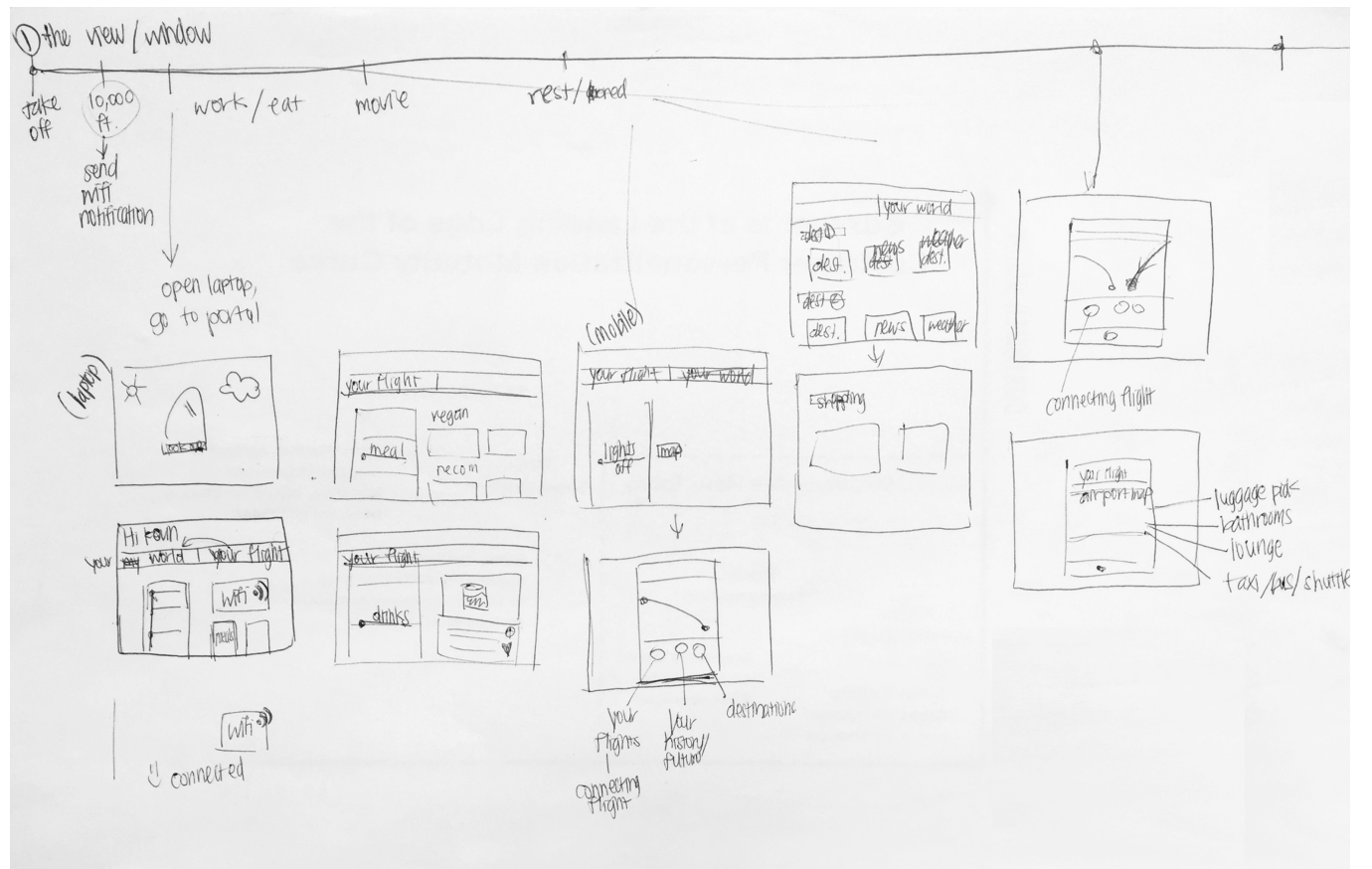


Figure K3 Wireframes - concept 1 Your view

Another concept that came about when imagining the surrounding space of your environment from a top view, in this case the airplane seat is the focus. Perhaps the seat image can be zoomed in and out into other parts of the aircraft. Thus the concept can be called, Zoom-in, where the starter page is an aircraft. Also, around the passenger's seat can be a display of the main topics, such as flight schedule, meals, map, and wifi. The wireframes are seen in figure K4. This concept presents tangible, spatial interactions matched with services offered.

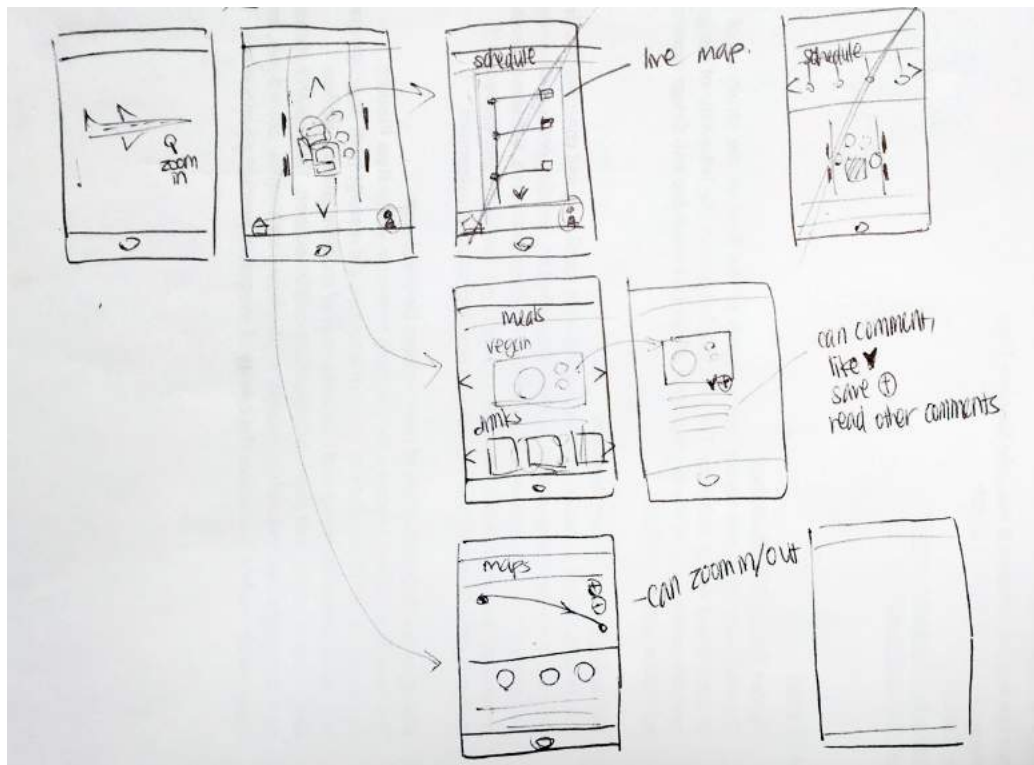
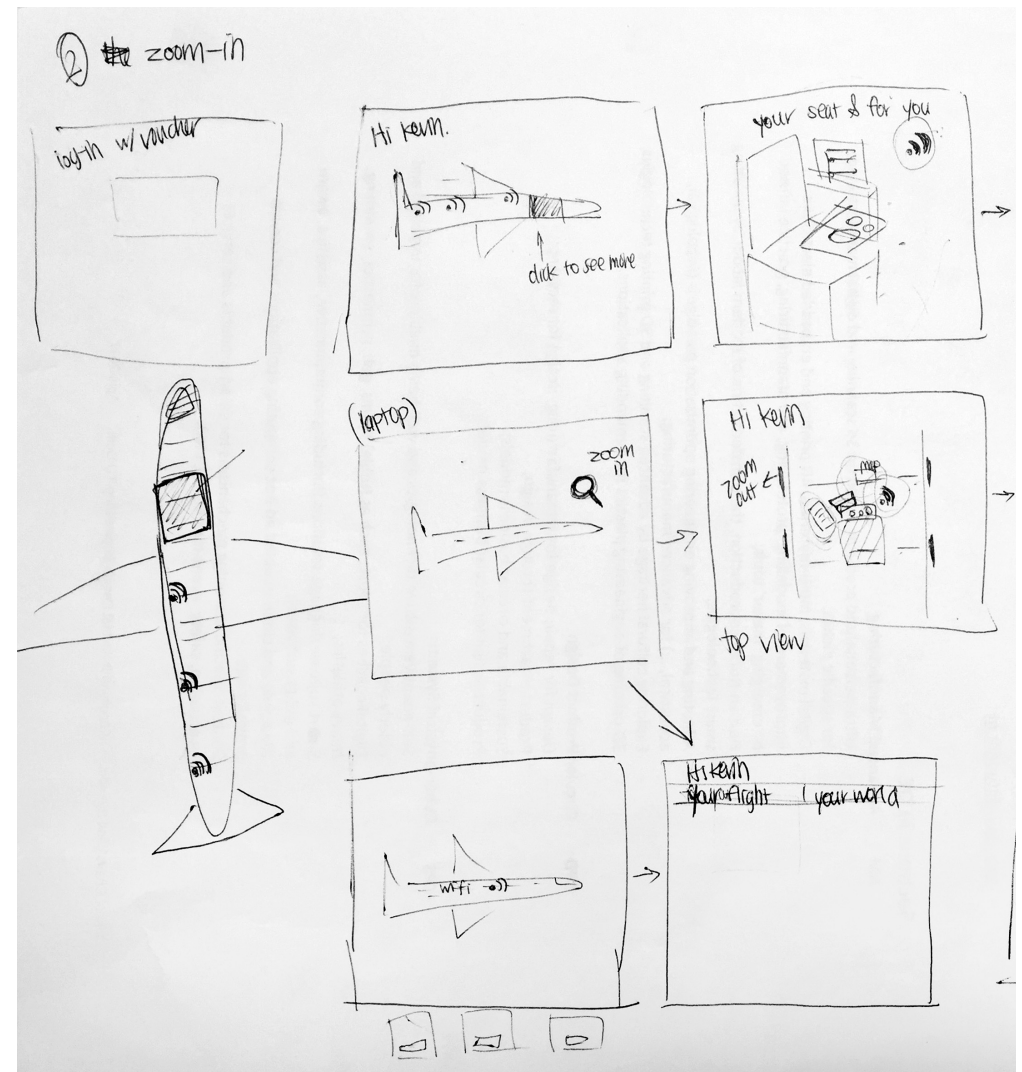


Figure K4 Wireframes - concept 2 Zoom-in

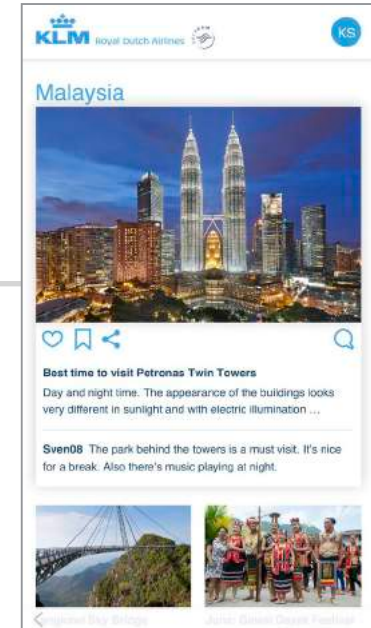
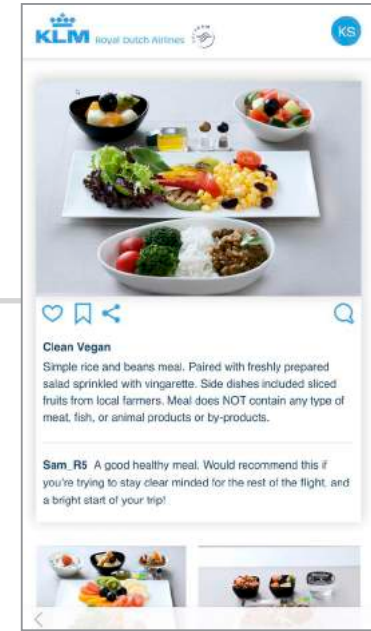




L OBP WIREFRAMES

ARCHITECTURE OF CONCEPT 1: YOUR VIEW



Active 'Your view' page - content changes according to time



KLM Royal Dutch Airlines  


Your flight Your world

Hi Kevin


Your flight to Singapore
Welcome to your new flight schedule for KLM!

11:00 Amsterdam
12:30 Singapore
14:00 Singapore
15:00 Singapore
16:00 Singapore
17:00 Singapore
18:00 Singapore
19:00 Singapore
20:00 Singapore
21:00 Singapore
22:00 Singapore
23:00 Singapore
00:00 Singapore
01:00 Singapore
02:00 Singapore
03:00 Singapore
04:00 Singapore
05:00 Singapore
06:00 Singapore
07:00 Singapore
08:00 Singapore
09:00 Singapore
10:00 Singapore



Singapore airport food

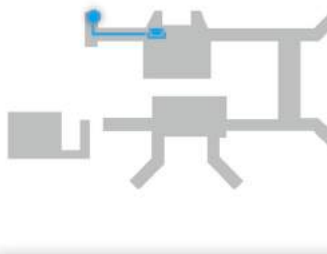





Bikanervala Popular Indian sweets and goibai snack dishes



DFS



KLM Royal Dutch Airlines  

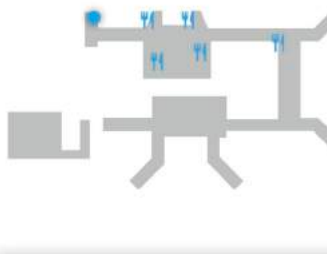





  

Lounge Restaurants Shopping


The lounge is in Terminal 3,
10 minutes from your gate.


KLM Royal Dutch Airlines  






  




Lounge Restaurants Shopping

Bikanervala
Popular Indian sweets and goibai snack dishes 


Crystal Jade La Mian
Traditional Chinese dishes with xiao long bao 


KLM Royal Dutch Airlines  



Lounge Restaurants Shopping

DFS シンガポール チャンギ空港店
Duty free products 

TWG Tea Boutique
Finest teas and gifts 

KLM Royal Dutch Airlines  

Your flight Your world

Hi Kevin

 Malaysian local farmers market on Saturdays

 Comedy movie **Diner + Schmucks**



 Weather in Amsterdam **29°C**

 Quality tea at SIN airport








profile page


KLM Royal Dutch Airlines  

My profile

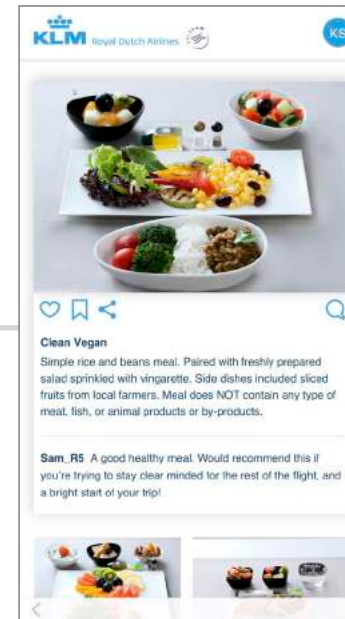
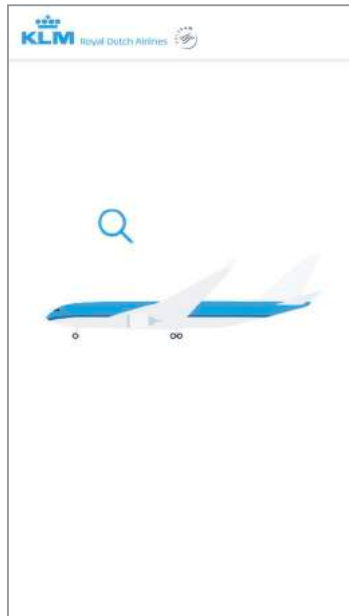

Kevin

 **6800**
my points

 my details

 my saves

ARCHITECTURE OF CONCEPT 2: ZOOM-IN





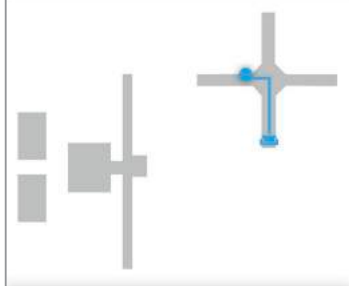
KLM Royal Dutch Airlines  




Flight time left 7:14
 NL Time 15:48
 SIN Time 22:48
 Outside temperature 7C





 Your Flights
 Destination Airport
 Search

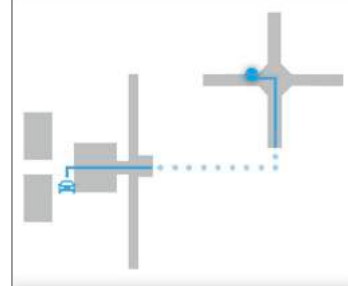
KLM Royal Dutch Airlines  






 Lounge
 Transport
 Luggage

The lounge is in the South Wing.
 7 minutes from your gate.



KLM Royal Dutch Airlines  

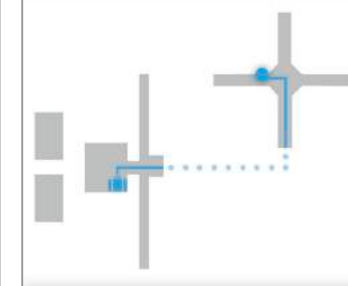





 Lounge
 Transport
 Luggage

Your driver is at the pick up point in the Main Terminal Building (MTB).
 Take the Aerotrain from the South

Wing to the door of MTB



KLM Royal Dutch Airlines  







 Lounge
 Transport
 Luggage



Your luggage will be at Baggage Claim 3 in the Main Terminal Building (MTB). 20 minutes from

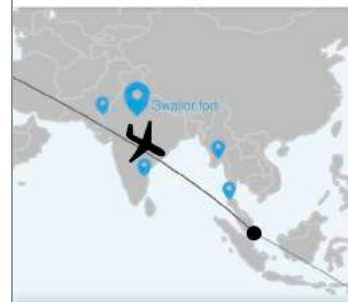
end of queue

KLM Royal Dutch Airlines  







 KLM Destinations
 Landmarks
 Destination Restaurants


KLM Royal Dutch Airlines  



Gwalior fort
 Madhya Pradesh, India

 like
 save
 nearby
 share

Gwalior fort is an hill fort near Gwalior, Madhya Pradesh, central India. The fort has existed at least since the 10th century, and...





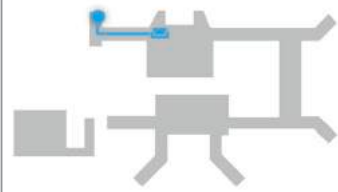
KLM Royal Dutch Airlines  




Your flight to Singapore

Welcome to your live inflight schedule for flight KL731.

- 11:00 **Amsterdam**
19:00 Departure
- 11:35 **Wifi available**
18:35 Be connected and work as long as the aircraft is above 10,000 ft.
- 15:00 **Meal service** 
22:00 Clean Vegan meal
- 15:45 **Beverages** 
22:45
- 17:30 **Lights off** 
00:30 Check out your destination info, news, guides, weather ...
- 21:30 **Lights on** 
03:30 Check out the live map, connecting flight info
- 23:00 **Wifi off**
05:00
- 23:30 **Singapore** 
05:30 Arrival: a map around SIN airport
- 00:45 **Singapore**
06:45 Departure
- 01:50 **Malaysia** 
07:50 Arrival: a map around KUL airport



KLM Royal Dutch Airlines  

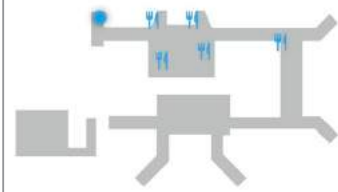





  

Lounge Restaurants Shopping


The lounge is in Terminal 3, 10 minutes from your gate.


KLM Royal Dutch Airlines  





Lounge Restaurants Shopping

Bikanervala
Popular Indian sweets and gobal snack dishes 

Crystal Jade La Mian
Traditional Chinese dishes with xiao long bao 

KLM Royal Dutch Airlines  





  

Lounge Restaurants Shopping


DFSシンガポール チャンギ空港店
Duty free products 

TWG Tea Boutique
Finest teas and gifts 


profile page


KLM Royal Dutch Airlines  


My profile



Kevin

 6800 my points

 my details

 my saves

M FINAL OBP CONCEPT EVALUATION

CONCEPT EVALUATION WITH TARGET GROUP

Figure M presents a concept evaluation guideline for testing the final prototype.

Target group feedback

Four frequent business flyers have participated in the final concept evaluation. Notes from their individual feedback is recorded:

Tester 1: female, age 30-35

- Good info. Basically see all the connecting info, it's nice to have that
- Meals: Confused, do you buy it?
- Meals are most important to her. She wants to see more details, like wine info and wine pairings
- Baggage & transport: Distance is good, how long it will take. Since she always have a problem at one airport
- Destination: Likes seeing the news
- Preferences questions: Don't mind answering questions, like the stay preference
- Missing: It would be nice to see all the drinks, the full range of options on flight
- Connecting flight > always felt doubtful, it helps remove doubt
- Emotion: Reluctance to buy wifi; Entertainment > relax, surprised, new movies = happier; Crew > admiration, like seeing it; All the details. It's a source of entertainment > Amusement

Tester 2: female, age 30-35

- Cool useful information
- Schedule: really like the schedule a lot, really like this
- Time: Confusing, not give 2 times
- Baggage & transport: 20 minutes from gate is good:

- Preferences questions: Customizable is interesting
- Missing: put immigration information in airport map as well; Maybe have an option to change meal, if you change your mind
- Emotion: relax > cause i know my schedule, it helps you prepare; Confidence > don't have to worry all the stuff in your head; satisfaction

Tester 3: male, age 25-30

- Tabs: May be don't have too many tabs, classify/ categorize them
- Time: Put another time, how many minutes, time range, instead of time of day
- food> extra options , extra snacks
- Entertainment: Can't watch anything. He wants to watch the movie or show on the page
- Map? > rename to "flight status"
- Missing: Online shopping, tax free, Likes more interactive capability on the map, Other people to communicate with > can log-in together, like MSN chat
- Prefer this as an app
- Emotion: Cool and thoughtful. Really being taken-care of

Tester 4: male, age 25-30

- Well organized and thought out
- Tabs: A lot in the top tabs, too much, too long, organize it
- Schedule: Helpful, know when to be expected
- Time on schedule: 2 times is confusing, may be keep it more vague
- Entertainment: Can use phone as remote , integrate with IFE

- "moving map" or flight map instead of map
- Missing: Chat with other passengers; have an aircraft layout; Route map, click on different things; Future trips > find your next trip or new flights; Shopping; no tab for booking flight; How about champagne, or featured cocktail of the month
- Connecting flight > great
- Emotion: relief > have expectations in that when or what

Testing final prototype with target group

Purpose

to gather feedback on how the target group views the Your view OBP

Research question

How does the target group view the Your view OBP?
How would it help them in your travel journey?

Participants

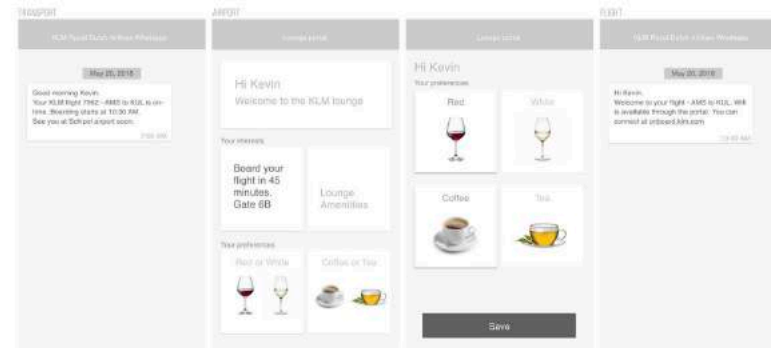
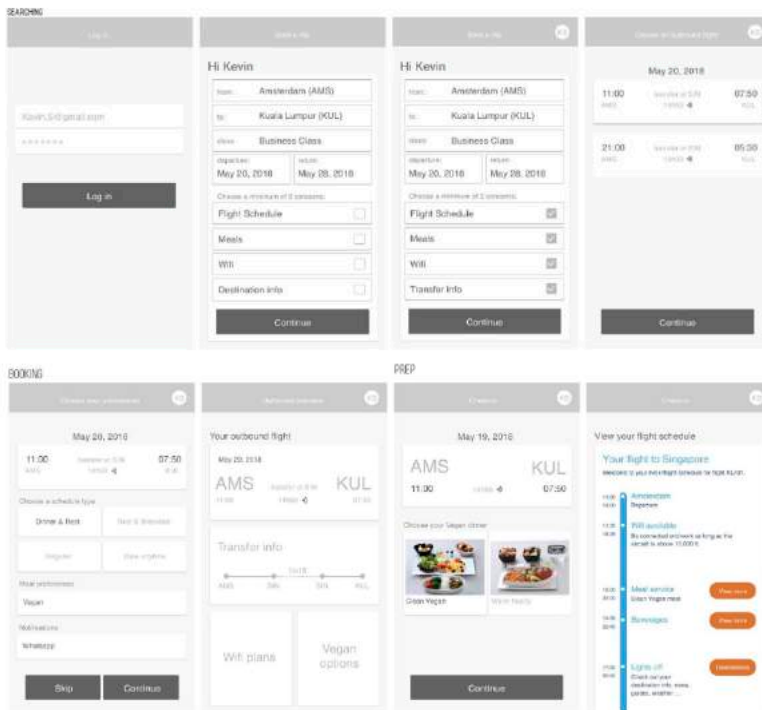
Previous participants from customer research

1 Introduction

Go through entire journey user flow from searching to receiving wifi message during boarding

DATA

- Kevin S.
- male
- Age: 34
- Flying Blue Gold - 66000 miles
- Nationality: Dutch
- Booking frequency: 1/ every other month for long-haul
- Future bookings: KUL-SYD

2 Exploring with different scenarios

Image that you are on a long-haul business flight:

A. Beginning: It is at the beginning of the flight, the airplane has reached 10,000 feet and you need to connect to wifi.

B. Middle: Image that you are in the middle of the flight. You might be trying to sleep or you don't have much to do.

C. Last: Image that there is 2 hours left in the flight.

3 Overview of OBP

What do you think of this onboard portal?

What do you like about it?

What do you dislike about it?

How would this help you in your travel journey?

What do you think is missing?

4 Emotions experienced

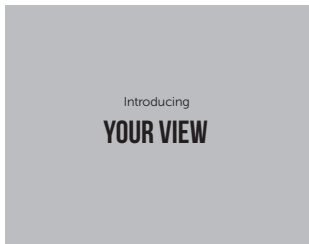
Image that you are traveling to your next long-haul business flight and you have access to an onboard portal like this one (new OBP), what emotions would you experience?

(Can look at the 25 positive and negative emotions)

Figure M Concept evaluation with target group guideline

IN THE MAKING OF A FILM

For the thesis defense and other presentations, a short film is made to show the final OBP concept in use. To prepare for the filming, the following are scenes are illustrated. Two actors chosen to be in the film; they represent a business flyer and a male, KLM flight attendant.

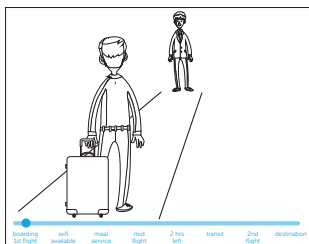


Scene: start page

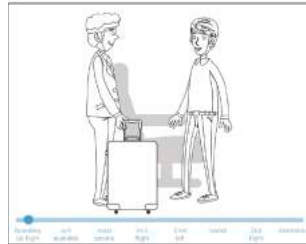


1 KEVIN - BUSINESS FLYER

Location: air bridge
Scene: Camera starts with front view of Kevin, then camera goes around him



Scene: Kevin walks on air bridge. At the end of air bridge is flight attendant, Nik.

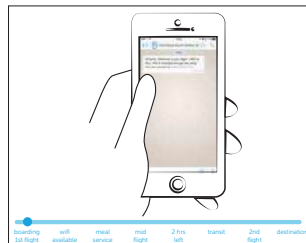


2 KEVIN BOARDS PLANE & GET WIFI NOTIFICATION

Location: in aircraft, business seat
Scene: Kevin walks to his seat. Nik helps him with his luggage



Scene: Kevin sits down. He is content (smile).



Scene: Kevin gets a wifi notification. He looks at his phone.



3 FIRST ONBOARD PORTAL INTERACTION

Scene: Kevin scrolls through main page 'Your flight': the tabs on top, schedule, & 'what's next'



4 CONNECTS TO WIFI & WORKS

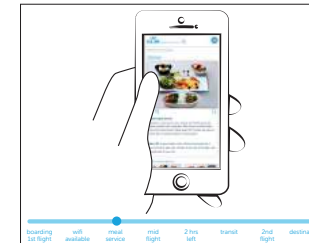
Scene: Kevin clicks on the wifi button. Scrolls through the wifi page and click on a wifi package.



Scene: Camera zooms out to whole body. Kevin is happy to start his work. (with laptop)



Scene: Kevin touches his stomach (he is hungry).



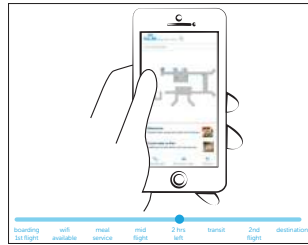
Scene: He looks at the portal. Goes to the meal page, clicks on vegan dinner image and reads about his vegan dinner.



Scene: He goes back to the meal page, clicks on the red wine. He orders the red wine.

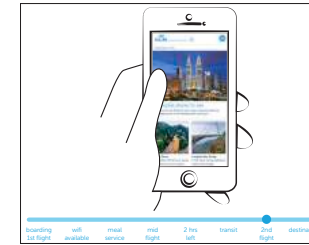


Scene: The flight attendant, Nik brings him a glass of the red wine.



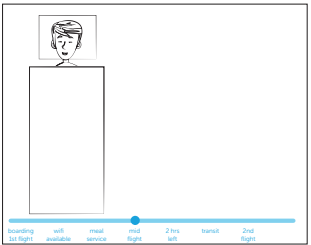
9 LAST 2 HOURS OF FLIGHT

Scene: He looks at the time on the phone. Checks the connecting flight info and the airport pages.



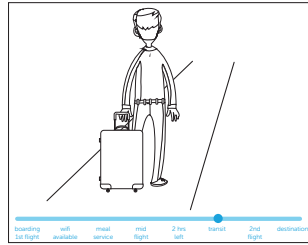
13 DESTINATION PAGE

Scene: He also checks the destination page. Reads about the place to visit.



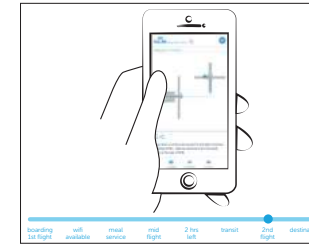
6 MID FLIGHT - SLEEP

Scene: He is sleeping. He gets cold and grabs his phone to message the attendant. He goes to the crew page and messages Nik (Hi, I'm cold. Can I get a blanket?)



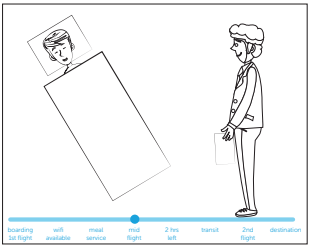
10 TRANSIT

Location: air bridge
Scene: Kevin leaves the air bridge



14 SAVES TRANSPORT PAGE

Scene: He looks at the 'baagage & transport' pages. He saves the transport to his phone.



Scene: Nik comes to bring him a blanket.



Scene: Kevin grabs a coffee, based on the SIN airport food map.



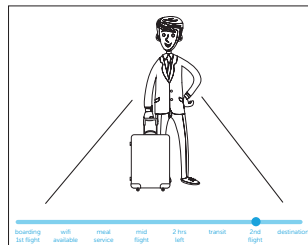
15 AFTER FLIGHT

Location: KUL airport
Scene: He walks through the airport. He looks at his phone for the transport location.



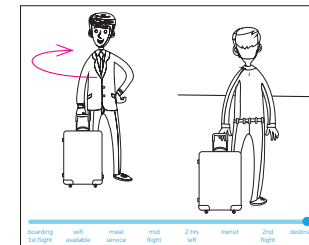
7 CHECKS CURRENT FLIGHT STATUS

Scene: Kevin wakes up because he can't sleep. He checks the live map and landmarks.

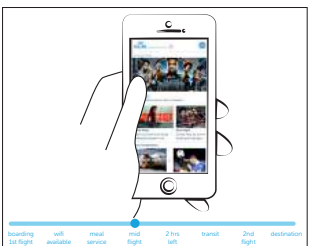


11 BOARDS 2ND FLIGHT

Location: air bridge
Scene: He walks on the air bridge to 2nd flight

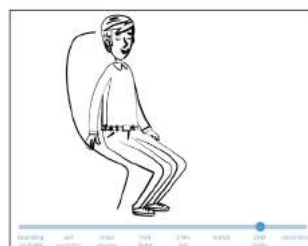


Location: outside airport
Scene: He smiles with satisfaction and walks towards his taxi. Camera blurs out.



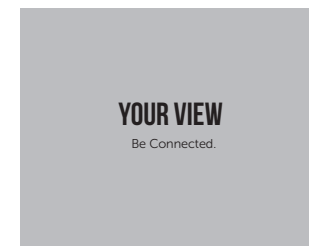
8 CHECKS FUN PAGES

Scene: He checks the entertainment pages. Clicks 'Sports' as his preference.



12 AT END OF 2ND FLIGHT

Location: in aircraft, in seat
Scene: Kevin looks at time and notices that it is almost landing time.



14 END

Scene: Last scene

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