Journey of

In-Flight Entetainment System

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PROJECT BRIEF

Various type of Opearating System around people getting develope as faster as Human need.
Phones, Computer, Tablet or car system. They reduce people's inconvenience and helps to save thier times.

But why not for IFE system?

As demand of flight is less than other tranportation,
flight's facilities needs to deveolpe to gather more customer.
We can offer more fun and convinience thorugh this
IFE System.

Based on past customer's of various airline, I extracted
what they need, what was dissapointed on their experiences
and **minimized customer's inconvenience and maximized convenience.**

RESEARCH

Mind Map

Customer's Condition

Improvable system

Food

- Satisfying?
- Need more option?
- Vegan's menu?
- Gluten free?
- Enough water?
- Need more snacks?
- Want to know the nutrition facts?

- Make accessible and new contents
- Make more language option for game
- Less advertisement
- Make movies of various play speed

Game/Movie

- Satisfying?
- Understand of rules
- Change play speed?
- New games?
- Language options?
- Want to see a phone downloaded files?
- A lot advertisement?

- Offer high speed charging
- Make wifi be more accessible

Personal – Device

- Satisfying?
- slow charging?
- Usable Wifi?
- Able to call or text?

- Make more restroom
  Offer a seat section only for babies
- Offer sitting cushion
- Personal seat AC
- Sell high quality eye patch, earbud, and blanket

Rest

- Satisfying?
- Not much toilets?
- Interrupted by noise?
- Need personal heat or cool?
- Need a more thick blanket?
- Uncomfortable seats?
- Need more quality for eye-patch, earplug?

- Making a chat service
  Reduce crew's traffic by self services
- Make online store shop in seat screen
- Store some pills

Service

- Satisfying?
- Hard to call flight attendants?
- Need some pills?
- Need more information about sky shopping?

- Make more individual light that next seated people won't bothered
- Remove some seat to stretch body

Extra

- Need more personal light to work?
- Need some space to stretching?
- I think this should be Improve/reduce…
- I satisfying with…

- Big bottle of water
- option for snacks
- Show nutrition facts
- Menu for gluten free, meat free, lacto free

TV Deconstruction

Deconstruction is important process of find problem.
Through this process, we can find the order of status and their location. It helps for creat or re-construction
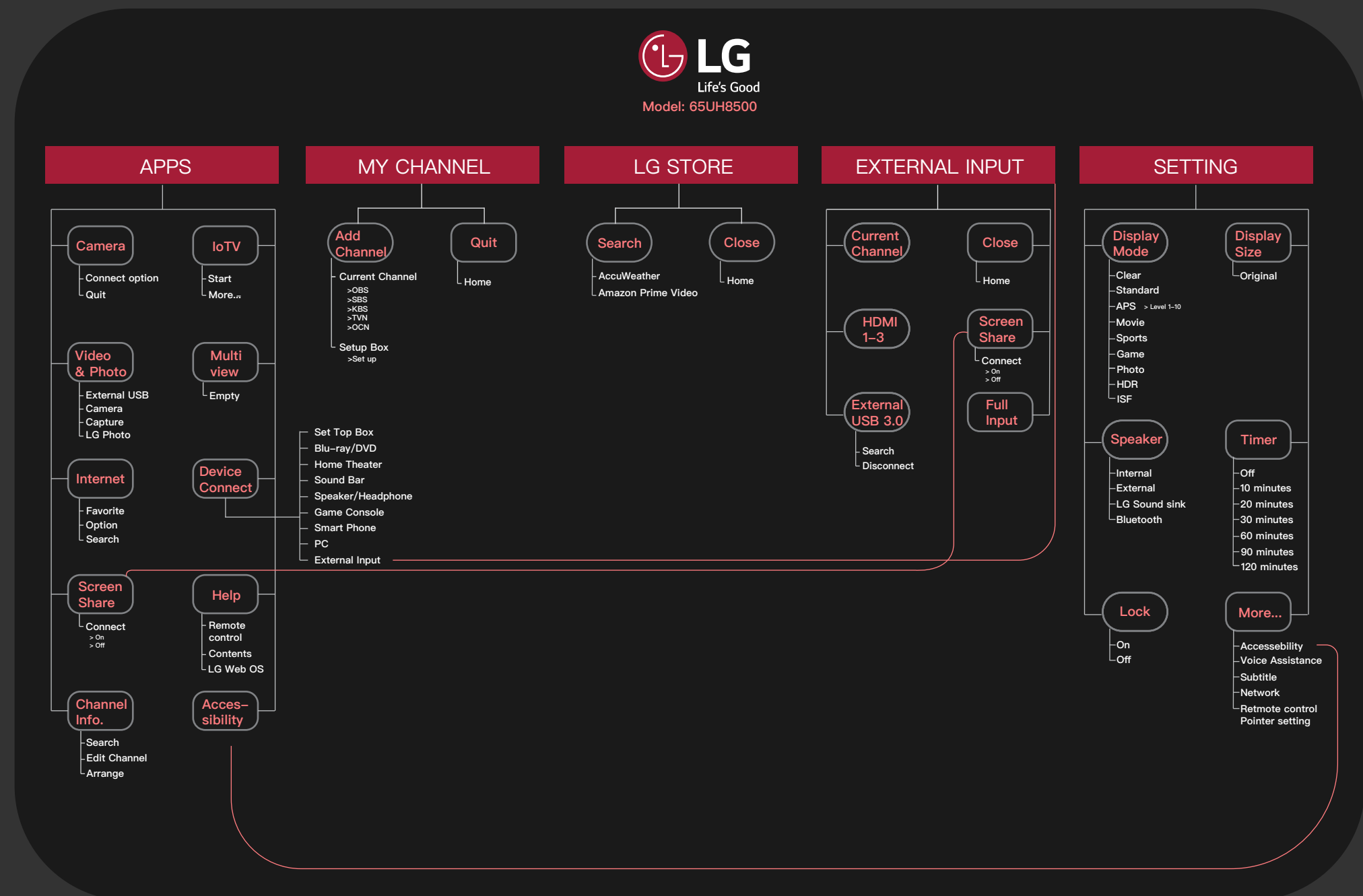
For creat **IFE** system, **Deconstruct** another airlines IFE system is the best way for figure out thier pros and cons.
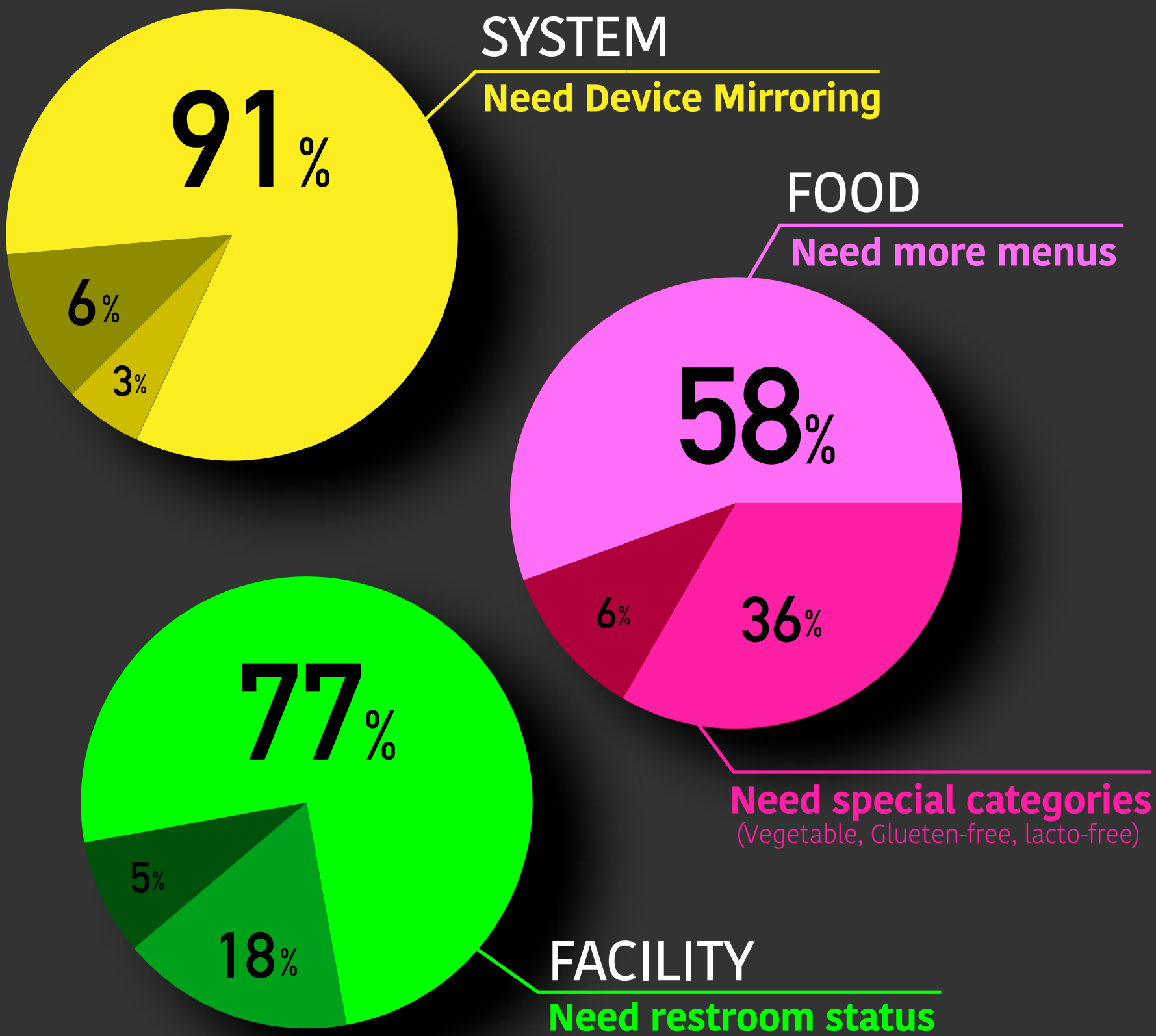
However, there limitation of observing IFE system in our times Therefore, **I Deconstruted my Smart TV which is easily observe in short time.**
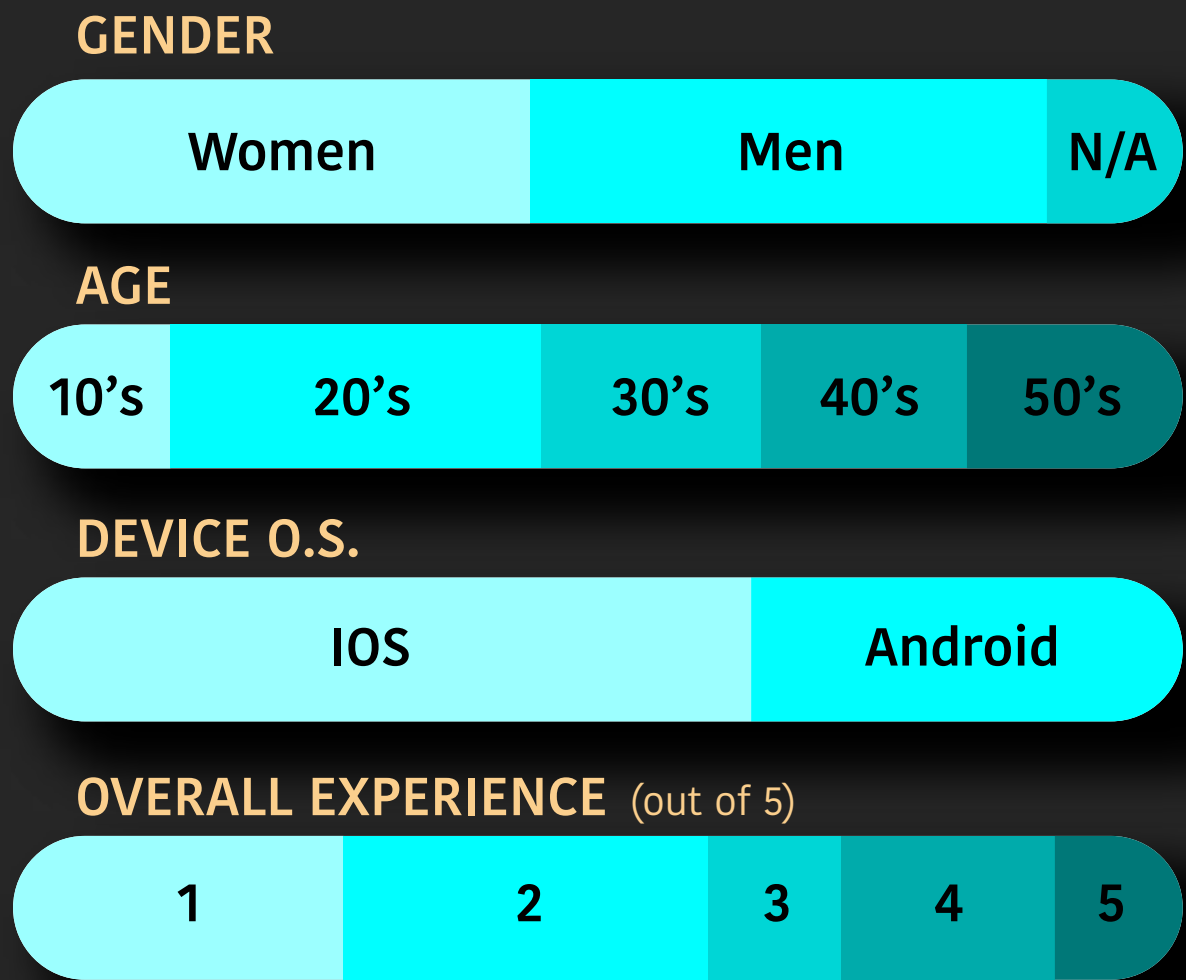
This helps me a lot to organize Items on to my IFE system.

LG

Life's Good

Model: 65UH8500

APPS

Camera
- Connect option
- Quit

IoTV
- Start
- More...

Video & Photo
- External USB
- Camera
- Capture
- LG Photo

Multi view
- Empty

Internet
- Favorite
- Option
- Search

Device Connect
- Set Top Box
- Blu-ray/DVD
- Home Theater
- Sound Bar
- Speaker/Headphone
- Game Console
- Smart Phone
- PC
- External Input

Screen Share
- Connect
  > On
  > Off

Help
- Remote control
- Contents
- LG Web OS

Channel Info.
- Search
- Edit Channel
- Arrange

Accessibility

MY CHANNEL

Add Channel
- Current Channel
  >OBS
  >SBS
  >KBS
  >TVN
  >OCN
- Setup Box
  >Set up

Quit
- Home

LG STORE

Search
- AccuWeather
- Amazon Prime Video

Close
- Home

EXTERNAL INPUT

Current Channel

HDMI 1-3

External USB 3.0
- Search
- Disconnect

Close
- Home

Screen Share
- Connect
  > On
  > Off

Full Input

SETTING

Display Mode
- Clear
- Standard
- APS > Level 1~10
- Movie
- Sports
- Game
- Photo
- HDR
- ISF

Display Size
- Original

Speaker
- Internal
- External
- LG Sound sink
- Bluetooth

Timer
- Off
- 10 minutes
- 20 minutes
- 30 minutes
- 60 minutes
- 90 minutes
- 120 minutes

Lock
- On
- Off

More...
- Accessebility
- Voice Assistance
- Subtitle
- Network
- Retmote control
- Pointer setting

User Surveys

SYSTEM
Need Device Mirroring

91%
6%
3%

FOOD
Need more menus

58%
6%
36%

Need special categories
(Vegetable, Glueten-free, lacto-free)

77%
5%
18%

FACILITY
Need restroom status

PARTICIPANT INFORMATION

GENDER

Women	Men	N/A

AGE

10's	20's	30's	40's	50's

DEVICE O.S.

IOS	Android

OVERALL EXPERIENCE (out of 5)

1	2	3	4	5

INSIGHTS

Most people unsatisfied on System, Food, Facility of thier experienced

User Empathy Map

SEEING

Wow there is a movie what I wants to watch

I can see a pesronal screen and calling crew button

HEARING

I heard the news of this airline drive a man out in force

I heard my friend spent so boring in airplane

SAYING & DOING

I want to play games with my friend who seated far way from me

I want some snacks whenever I want

I'm chargign my phone but It is too slow

THINKING & FEELING

I hope I can see the outside during flight

I feel the restrooms and it's systems are so weak

How's the weather where I'm heading?

Am I guaranteed for my life?

PAINS

Screen system is too slow and hard to navigate where I want

Feel so stuffy for long fly

GAINS

Arrived destination comfortable than driving car with saving my time

Purchase a product which is limited only for skymall

Persona Card

CHRISTINA

AGE: 28

GENDER: FEMALE

JOB: ARCHIETECTURE

STATUS: MARRIED

DEVICE

MacBook pro 13"

Galaxy Note 10+

IPad air 3

FREQUANCY

20 times per year

4 hrs per time

(average)

HOBBY

Watching movies

Cooking

Listening musics

PURPOSE OF FLIGHT

Christina lives in Irvine, California. She is a junior architecture in company Stantec. Her main job is going various cities and states, or overseas to manage each projects. For small projects, she stays only for a week, for big projects, she stays for a month. For big projects, she usually go with her family becuase her husband is free lancer. She is a hard worker that she expects more enhanced condition for work in flight. Especially wifi, fast charging, personal light, coffee for concentration
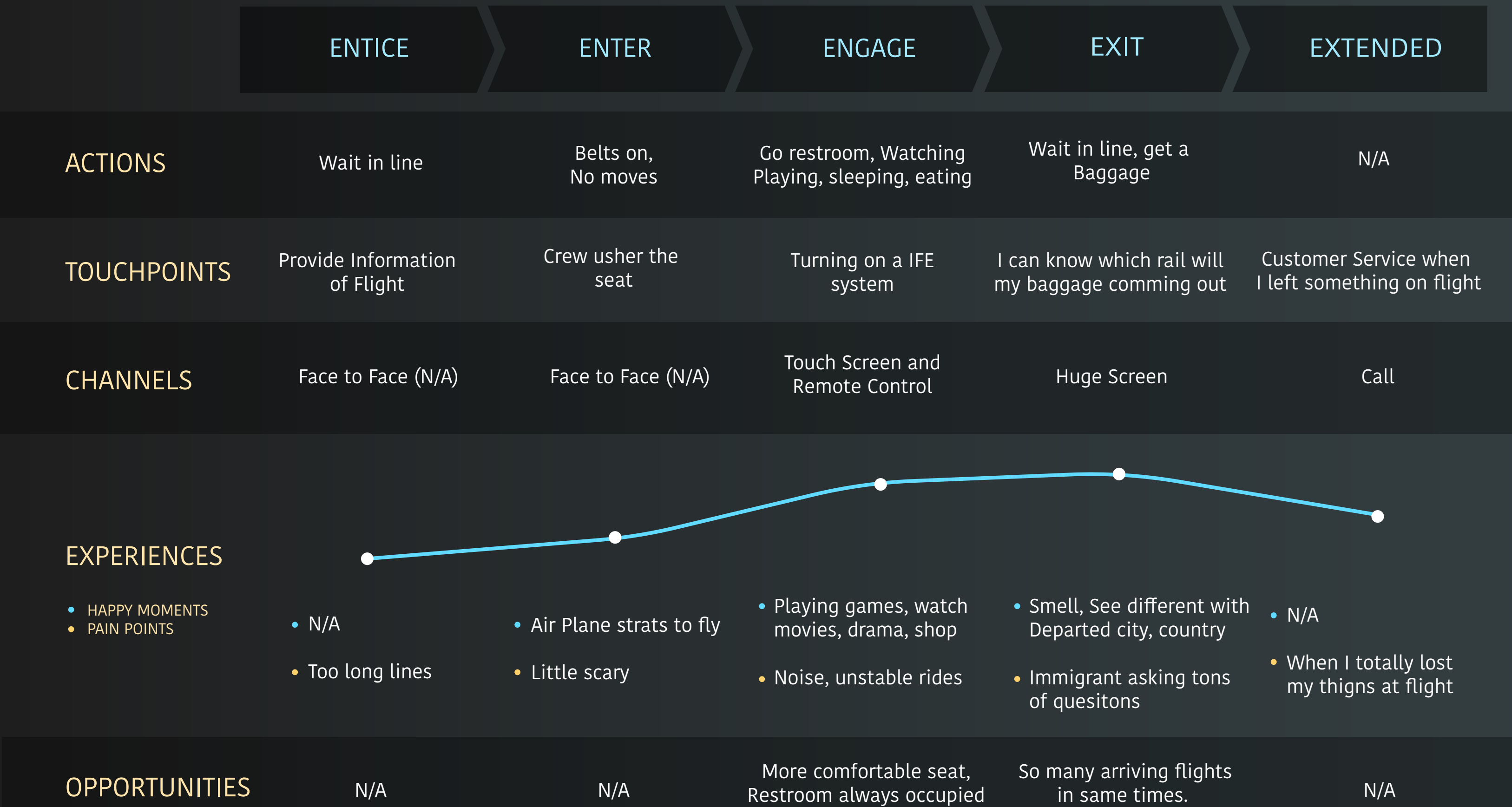
MOTIVATIONS

She wants to save her time when she is at the work place,So she prefer to do her task in flight.

FRUSTRATIONS

Disturb her time and privacy

Waiting in line

User Journey Map

	ENTICE	ENTER	ENGAGE	EXIT	EXTENDED
ACTIONS	Wait in line	Belts on, No moves	Go restroom, Watching Playing, sleeping, eating	Wait in line, get a Baggage	N/A
TOUCHPOINTS	Provide Information of Flight	Crew usher the seat	Turning on a IFE system	I can know which rail will my baggage comming out	Customer Service when I left something on flight
CHANNELS	Face to Face (N/A)	Face to Face (N/A)	Touch Screen and Remote Control	Huge Screen	Call

EXPERIENCES

- HAPPY MOMENTS
- PAIN POINTS

• N/A	• Air Plane strats to fly	• Playing games, watch movies, drama, shop	• Smell, See different with Departed city, country	• N/A
• Too long lines	• Little scary	• Noise, unstable rides	• Immigrant asking tons of quesitons	• When I totally lost my thigns at flight

| **OPPORTUNITIES** | N/A | N/A | More comfortable seat, Restroom always occupied | So many arriving flights in same times. | N/A |

Competitive Analysis

AIRLINES	FEATURES	PROS	CONS
KOREAN AIR	• Offer remote control • Use IFE system on customer's own device • Morningcalm: In-Flight Magazine	• Use IFE system more closely with own device • Newest movie, drama	• Need more newest technology for convenience
UNITED	• Use IFE system on customer's own device • Private screen mode • Live TV channels	• Use IFE system more closely with own device • Hardware/Software updates • Private screen mode	• Need more updates of Movie/Game
AIR NEW ZELAND	• Audio book • Contents and meals for kids • Seat chat • Offer spotify	• Newest features which customer need based on my surveys	• Best. However, based on my surveys, restroom detail maybe needs.
EMIRATES	• Radio, potcast, weather, news • Communication • Learn new language (uTalk) • Save the features on my account (ice playlist)	• Learn new language feature is so awesome • See a live news • ice playlist	• Cost money for data plans
EVA AIR	• E-Magazine • Duty-free pre-order • Connectivity and power	• Roaming services	• Cost for data or roaming Old movies and drama

MY DESIGN

My IFE Flowchart

'LOGO'
intro

NAVIGATION

Language

Chat
- To other seat
- To flight attendance

Brigthness

Sounds

Font Sizes

ENTERTAINMENT

Device Mirroring
- Andorid
- IOS

Movies
- Action
- Romance
- SF
- Horror
- Noir

<Subtitle language
<Dubbing language

Drama
- Action
- Romance
- SF
- Horror
- Noir

<Subtitle language
<Dubbing language

Youtube
- Log in

Game
- Single
- Duo
- Multiplev

ORDER

Drinks
- Alcohol
  - <Beer
  - <Soju
  - <Wine
  - <Wiskey
  - <Vodca
  - <Various traditional
- Soda
  - <Zero
- Ade/Sports
- Coffee/Blast
  - <Lacto-Free
  - <Caffeine free

Snacks

Meals
- See all
- Gluten-free
- Meet-free
- Only Vegetables

Sky Mall

Medicine / Vitamins

Cart

IN-FLIGHT INFORMATION

Restroom status
- Vacant/ No vacant info

Emergency Response methods
- Exit information
  - <How to open
- Emergency kit location

Crew information
- Pilot information
- Number of crews

Airplane Information
- Air plane model
- Chraged fuel amount

CONDITION CONTROL

Personal Lighting
- Brightness
- Timer

Seat Control
- Back
- Legs
- Head
- Table

FLIGHT INFORMATION

Flight Status
- Where are we
- Speed
- Wind
- How long it would take

About Destination
- Destination Weather
- Destination shuttle information
- Destination rental car information
- Destination restaurant information
- Destination Emergency number

Outside View
- Windshield view
- Right
- Left
- Top
- Bottom

User Case Scenarios

1. FOOD

Chirstina loves food. However, she always have a food what she doesn't like, when she is on a diet, she always check a nutrition facts however, she can not find it for every meals

2. RESTROOM

Christina frequently got stomachache that she somtimes need to go restroom in hurry. However, she need to wait in line somtimes. She see the all restroom status (vacant/ no vacant) through the screen. Not only for nearest, but also for far away. Therefore she can go a empty restroom ASAP

3. COMMUNICATE

Christina's company always o er a business class ticket. However, her husband's ticket is not so he always purchase a economy class ticket. They are chat to each other while on flight

My IFE Assest Inventory

JEN AIR

STATUS BAR / SUB NAVIGATION

MAIN DISPLAY AREA

MAIN NAVIGATION
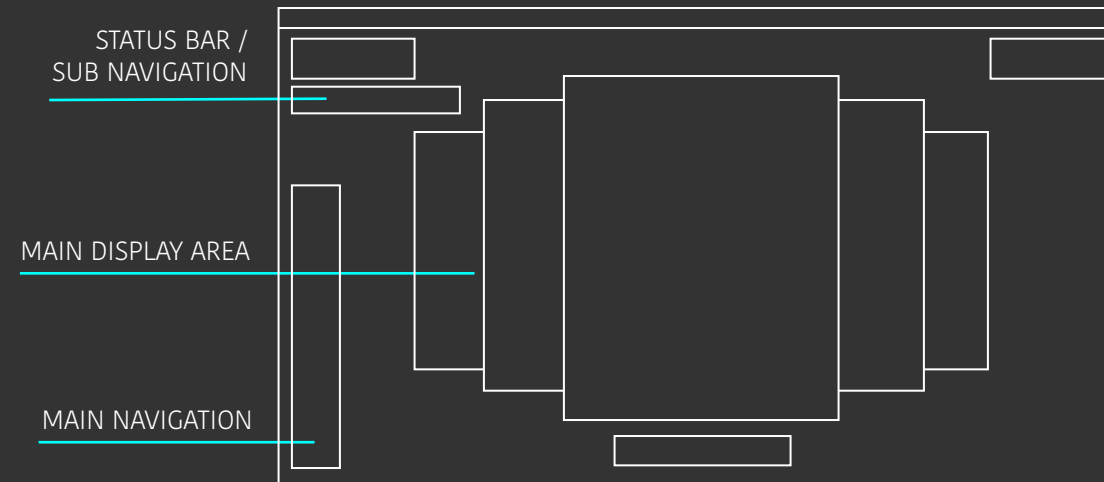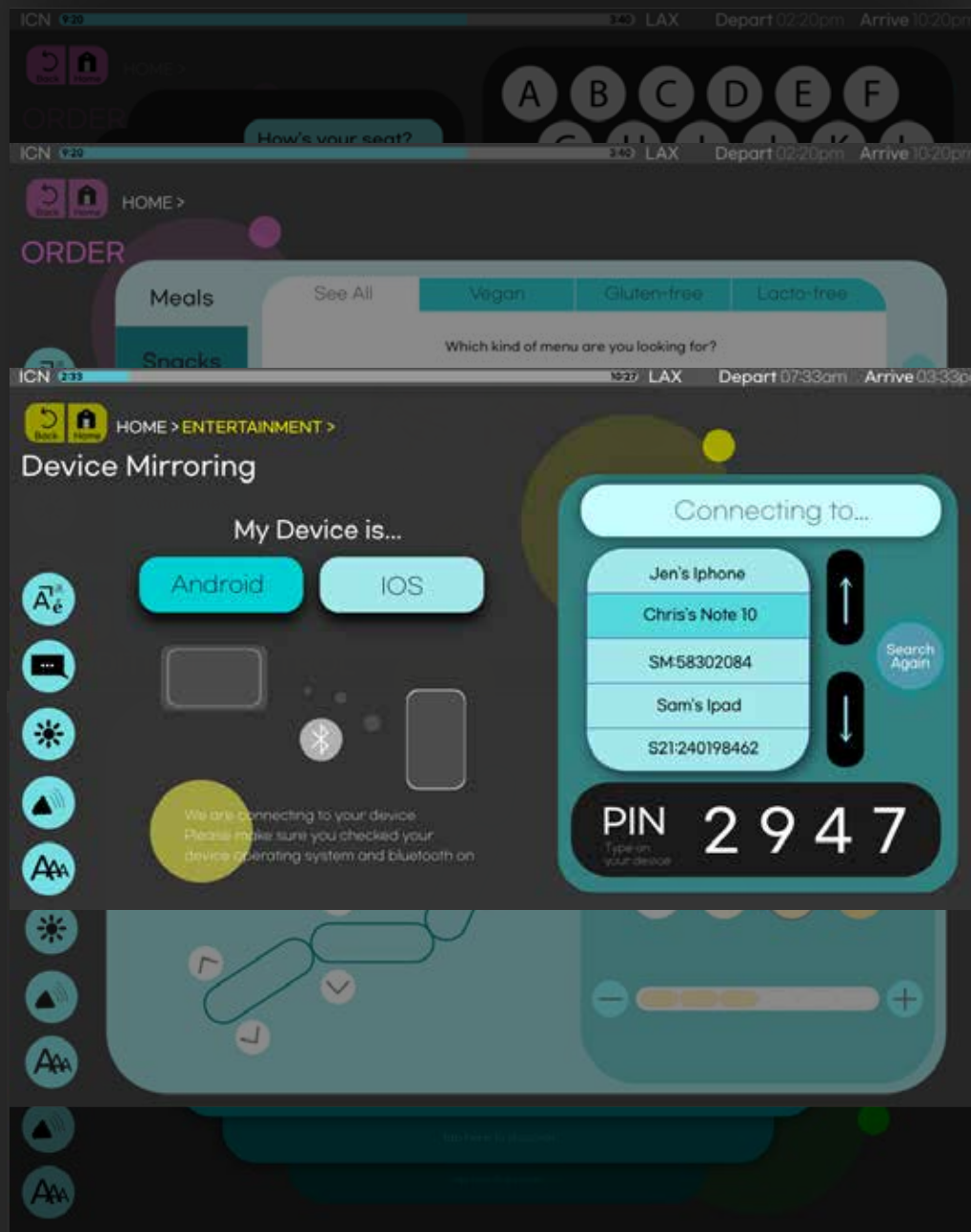
SAMPLE ICONGRAPHICS

Back   Home

SAMPLE BUTTONS

Enter
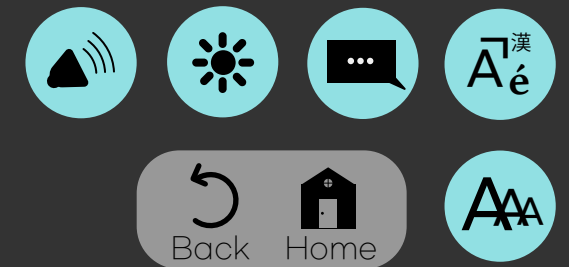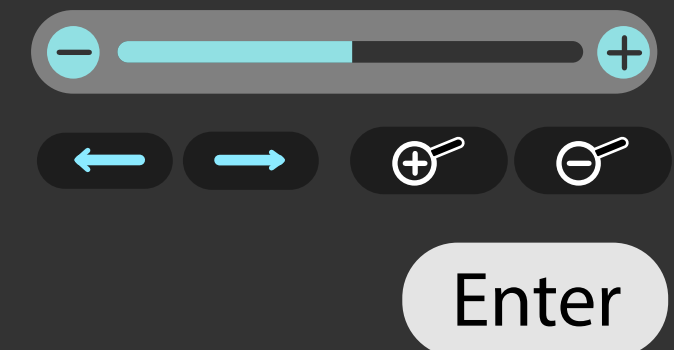
SAMPLE COLORS

#D3FFFD	#96DEE2
#00B0BB	#004C4D
#474747	#1A1A1A
#A7A8A7	#6397AB

ICN   LAX   Depart 02:20pm   Arrive 10:20pm

HOME
ORDER
How's your seat?

A B C D E F

ICN   LAX   Depart 02:20pm   Arrive 10:20pm
HOME >
ORDER
Meals   See All   Vegan   Gluten-free   Lacto-free
Snacks
Which kind of menu are you looking for?

ICN   LAX   Depart 07:33am   Arrive 03:33pm
HOME > ENTERTAINMENT >
Device Mirroring

My Device is...
Android   IOS

Connecting to...
Jen's Iphone
Chris's Note 10
SM:58302084
Sam's Ipad
S21:240198462

Search Again

PIN 2 9 4 7
Type in your device

We are connecting to your device. Please make sure you checked your device operating system and bluetooth on

ICN   LAX   Depart 05:06am   Arrive 01:06pm
HOME
HOME   JEN AIR
Entertainment
Movie
Drama
Device Mirroring
Game
Youtube
Music
Tap here to continue

Wireframes

A lot of screens are smaller then laptop or desktop monitor that I creat all features and Icon simple and big.

There are options for Device mirroring, destination information, restroom status, order for the wirframes
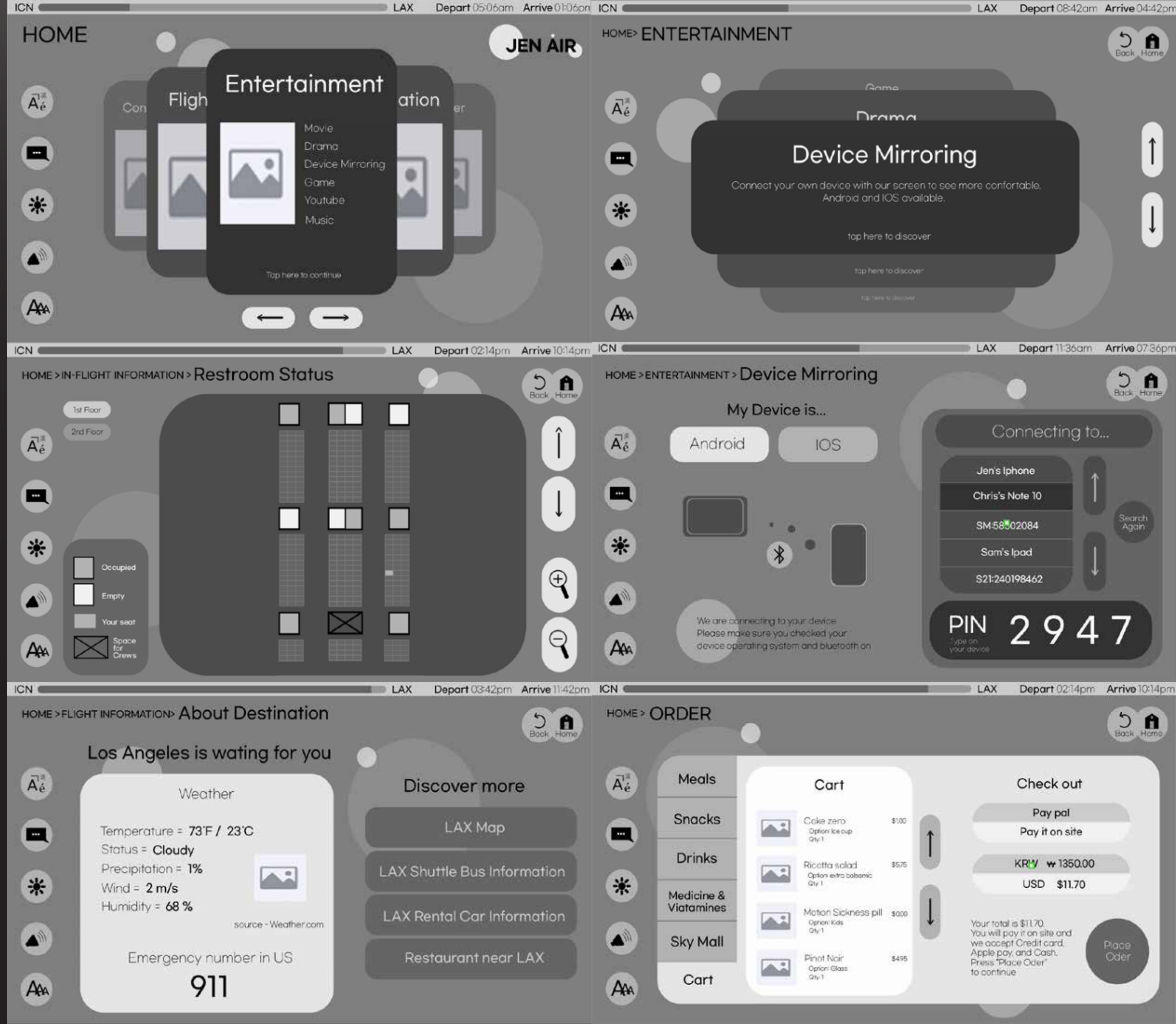
Final UI Screens - Theme (Main)
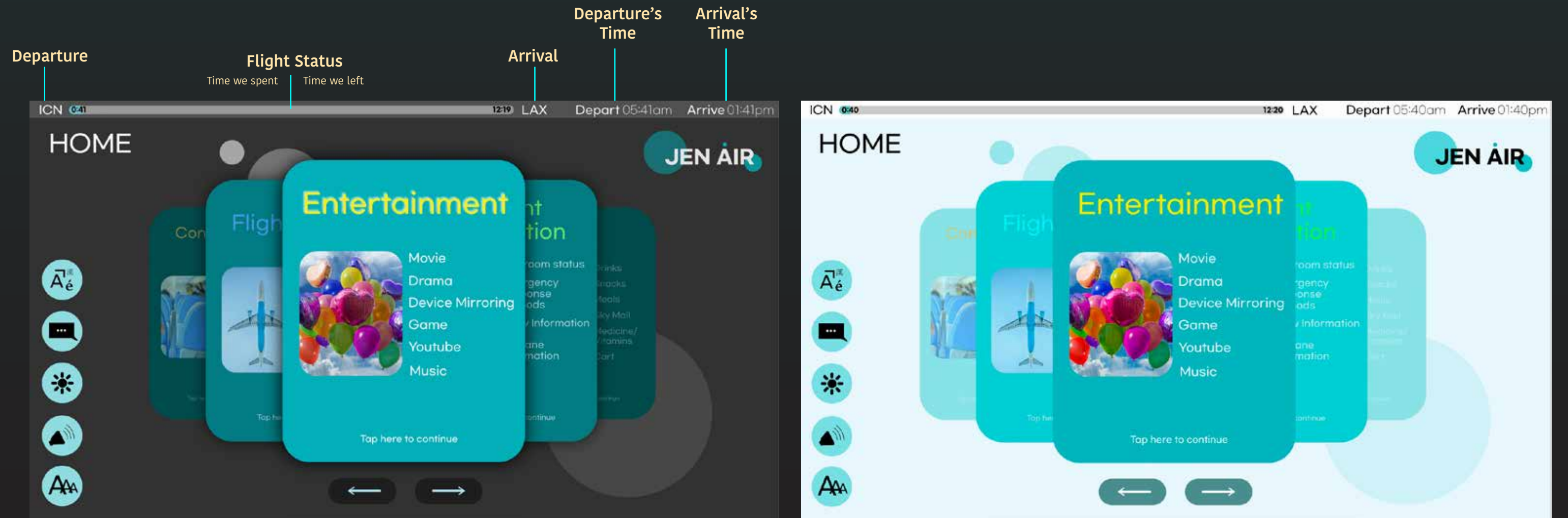
At brightness controls, customer can change a screen theme: Light mode/Dark mode.
For a long flight customers, they usually have sleep in a flight and dark mode will helps eyes relax.

Navigation bar got closer then the Wireframes to provide more space for upper side.

Final UI Screens - Chat
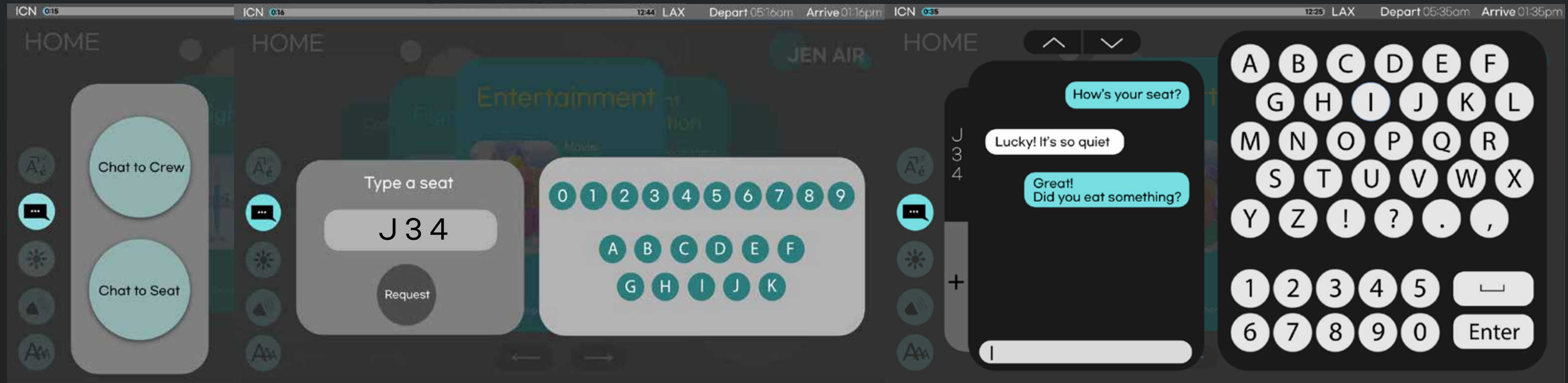
Chat is available to to Crew - Reduce crew's traffic, and Seat - Who seat far away.
For Seat, Customer should know other side's seat number. Sender need to **request** for initial chat to prevent unwanted chat from unknown people. Chat record will not be remove untill landing.

Final UI Screens - Device Mirroring
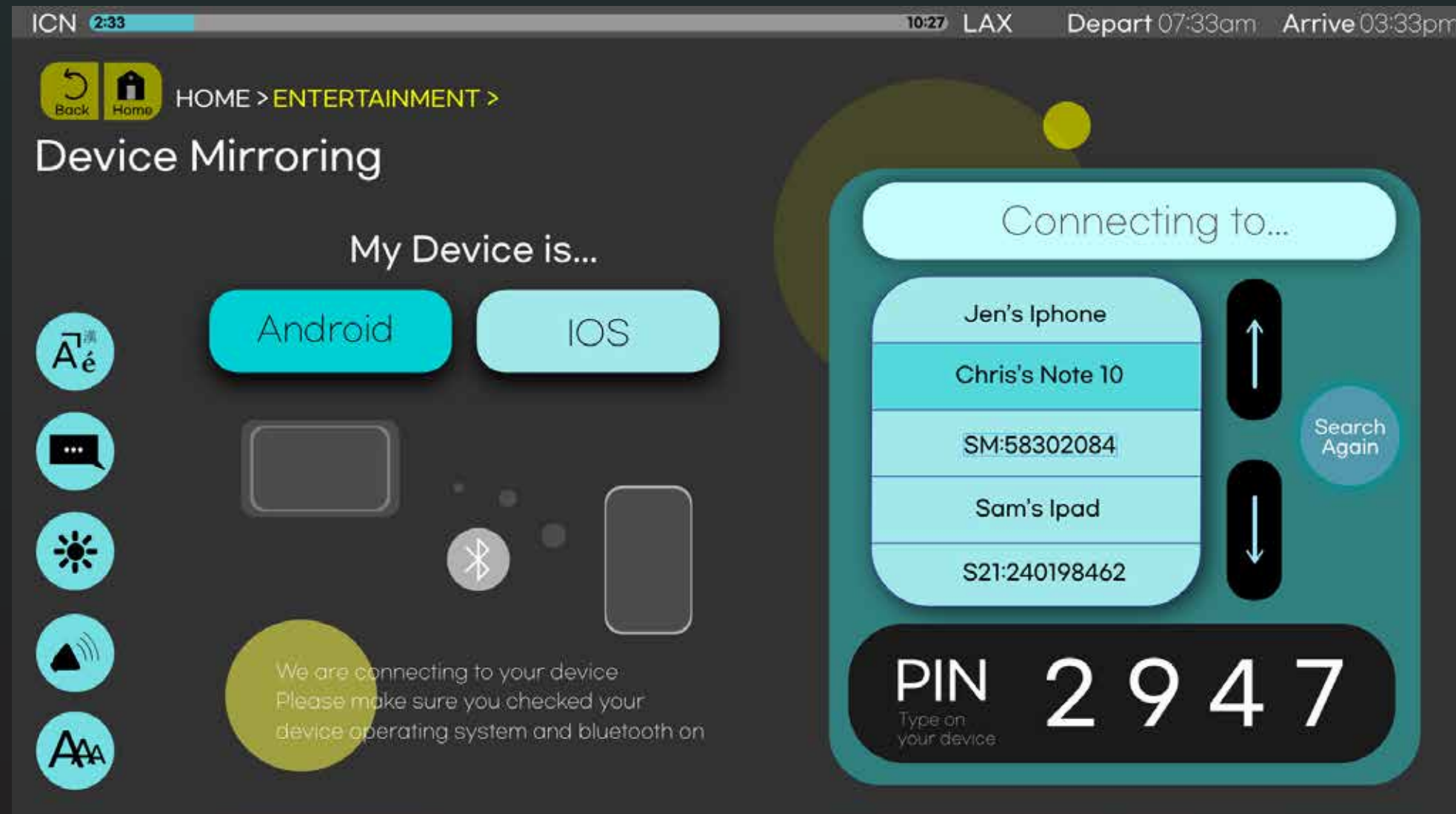
Customer have to turn on thier device's bluetooth and select it's Operating System and device.
This process required one time for the beginning unless turn off the bluetooth on thier device.

More focus on current page on the Path Bar then wirframes and
more accessible location of Backs, Home button (right to left)

Yellow Point color for Entertainment section

Final UI Screens - Oder/Chat

New Chat Alert

Nutrition Facts, Serving Amount, Indredieants for customer. (allergic, don't eat)

Various menu organized by meals type and cateroised by –
SEE ALL, VEGAN, GLUTEN-FREE, LACTO-FREE and each section for
Meals, Snacks, Drinks, Pills, and duty-free sky mall.
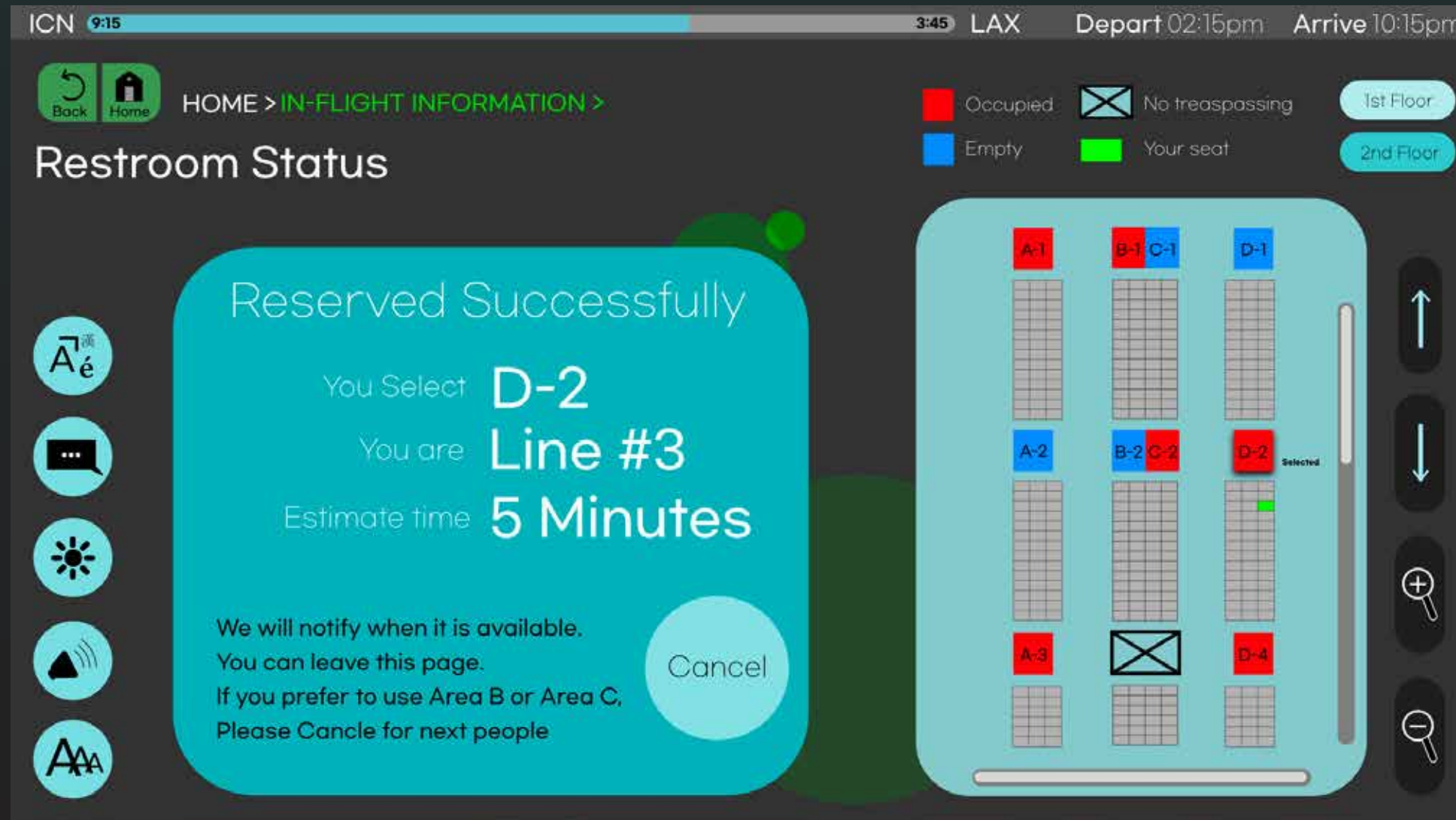
Pink Point color for order section
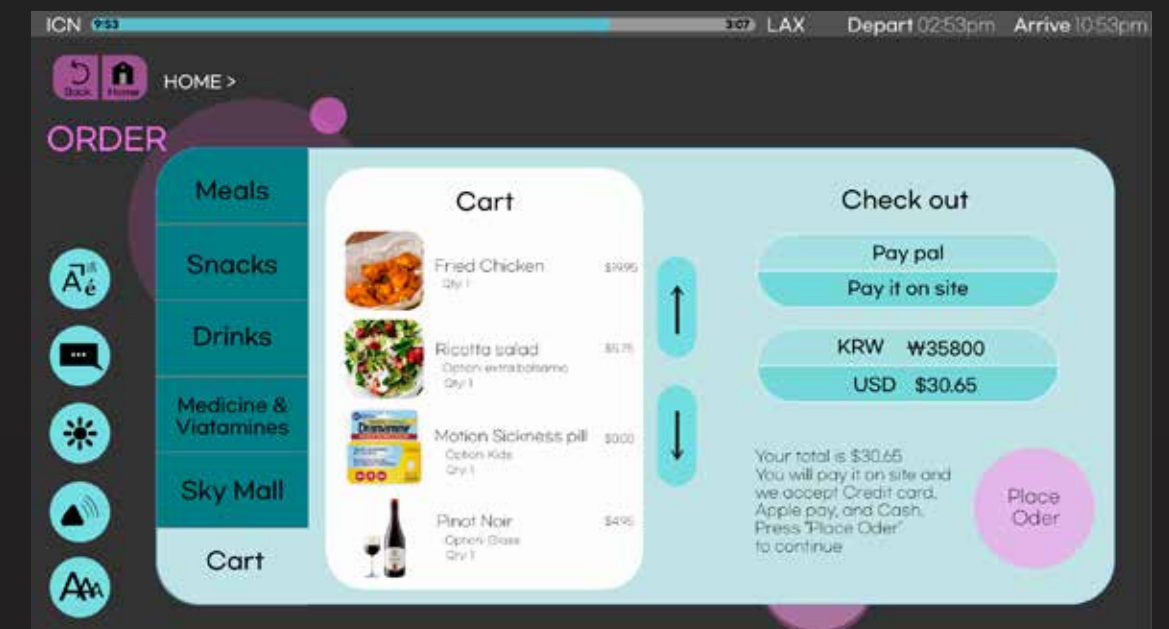
Check out procsseing of different method
and two currency of departure and arrival.

Final UI Screens - Restroom Status
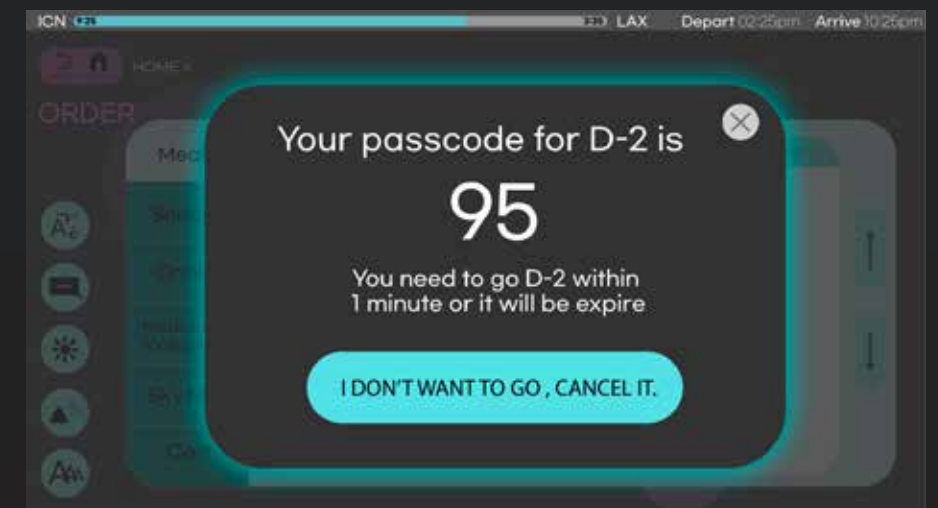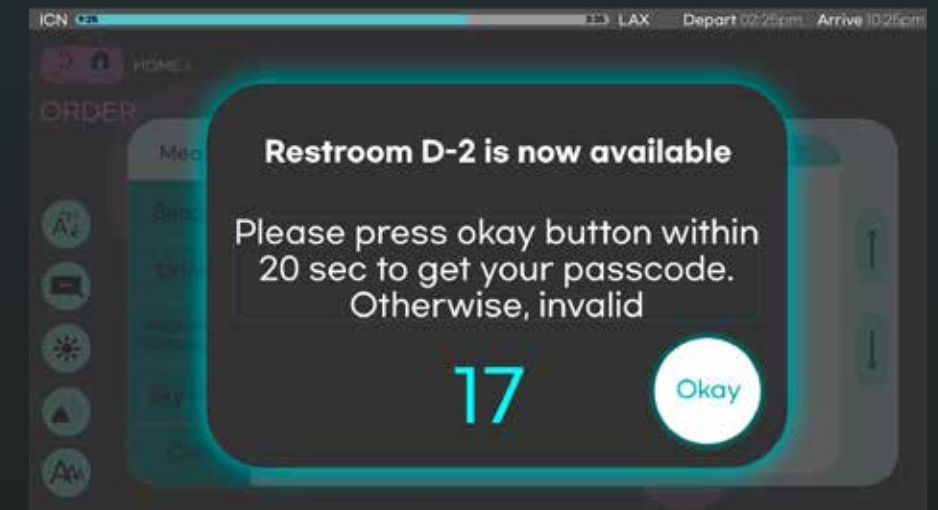
Flight's all restroom status is available. Customer can use B line and C line restroom whenever it is empty.
However, they also can reserve the restroom, line A and D. Estimate time and number is checkable.
After make a reserve, able to leave this page and get notify with passcode when it's available.
(Passcode expires after 1 minute)

Green Point color for In-Flight Information section

Final UI Screens - Other
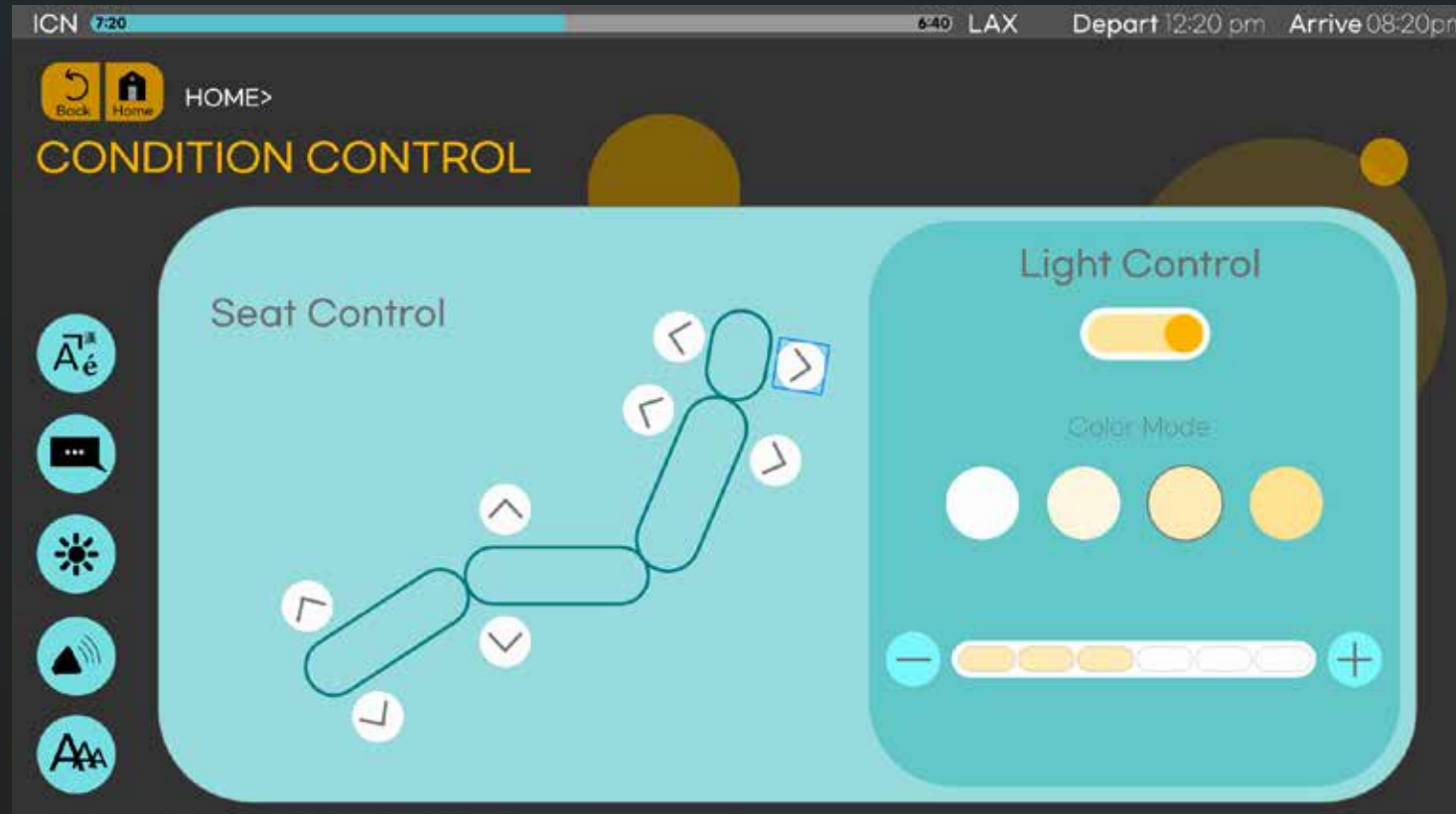
4 deatil parts of seat can controlable by tapping.
4 different colors of light, white helps concentrate
of work or study, yellow helps relax.
6 brigthness control is available.

Orange Point color for Condition Control section

Information of arrival airport's information.
Realtime weather and emergency contact number of
each destination is available each time.

Blue Point color for Condition Control section
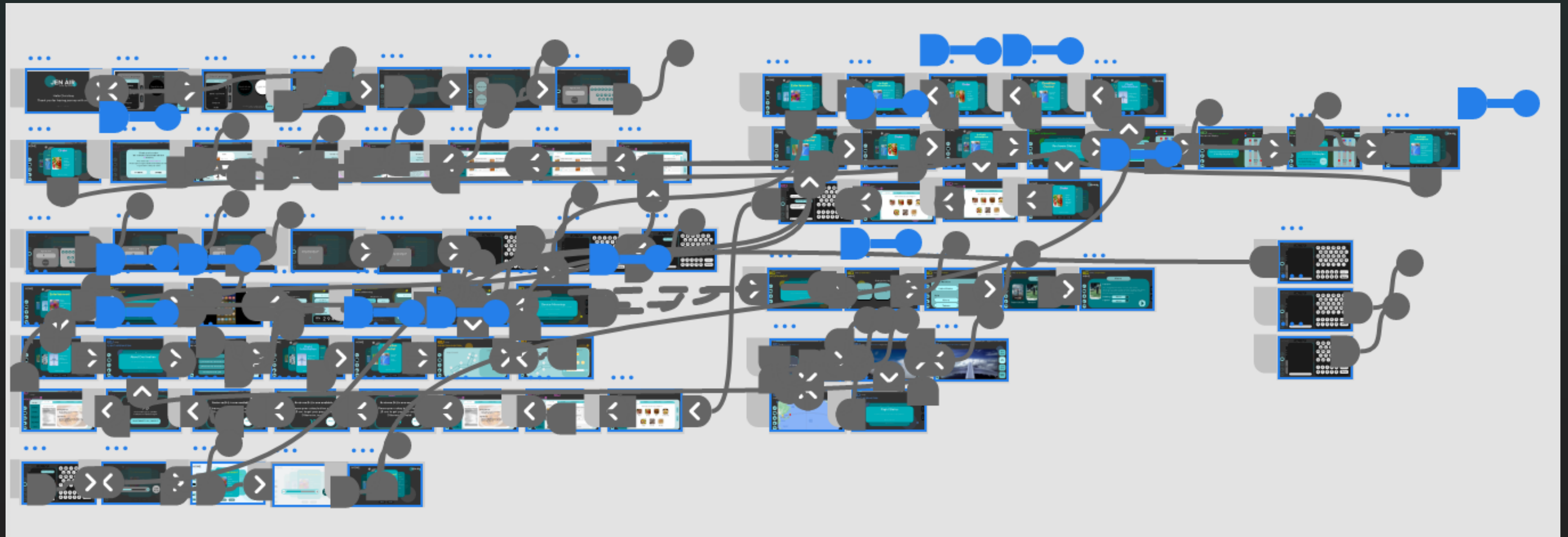
JEN AIR
Best experience

Thank you

Spring2021 GRDES76 section# 2388

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Prototype

Worked on Adobe XD

https://xd.adobe.com/view/2c810f34-590d-41cb-a823-0c9febb2e8bb-79d2/