Sydney Opera House Kiosk Design

UX/UI Design Process

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Problem Statement

The Sydney Opera House is Australia's premier tourism destination, one of the architectural wonders of the 20th century, and among the world's busiest performing arts centers. More than 10.9 billion visitors from around the world come each year to explore the building and its history, attend diverse performances, and enjoy its broad range of dining experiences. However, upon observation it's evident that many of these visitors simply come to take photos and leave without making a purchase because there is no technology engaging them to stay in the space. Furthermore, during peak seasons, the box office and outside foyer areas can get very crowded and there are no alternative ways to purchase tickets on site, which may deter many visitors.

In the Sydney Opera House 2018-19 Annual Report, it was revealed that one of their goals for the coming years is to "increase digital engagement." However, their methods are focused on expanding their presence through livestreams and increasing social media content. So while it is clear that they are trying to keep up with digital trends, they are lacking one of today's most popular methods of visual communications: kiosks.
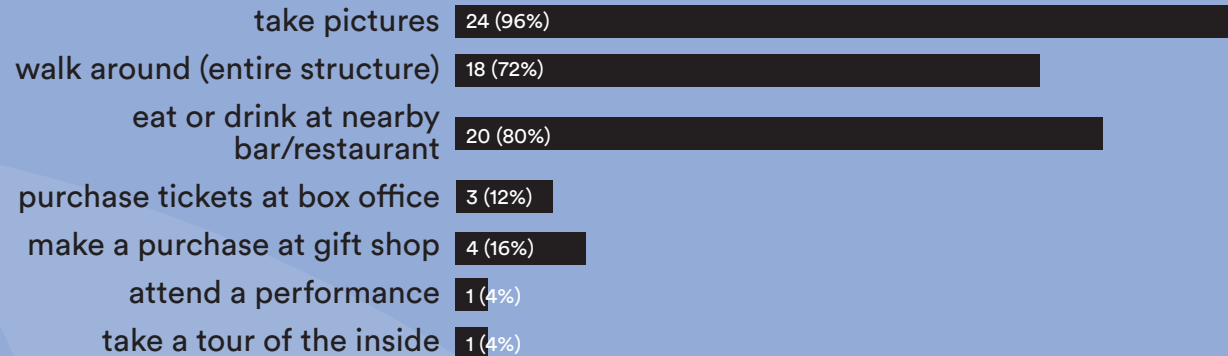
Needs Analysis

In order to gather more information on how visitors spend their time at the Sydney Opera House and determine their specific needs, a survey was sent out to 25 people who had been to the opera house in the last 2 years.
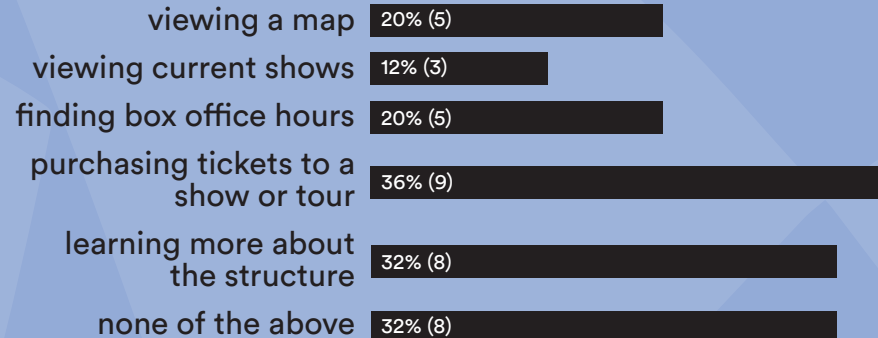
Demographics:

- 25 respondents*
- age range: 20-63
- age median: 22

- Native Language
  - English (6)
  - Spanish (9)
  - German (6)
  - French (2)
  - Italian (1)
  - Swedish (1)

## 1: When visiting, what did you do at the Opera House?

take pictures	24 (96%)
walk around (entire structure)	18 (72%)
eat or drink at nearby bar/restaurant	20 (80%)
purchase tickets at box office	3 (12%)
make a purchase at gift shop	4 (16%)
attend a performance	1 (4%)
take a tour of the inside	1 (4%)

2: While there, did you use your phone for any of the following?

|	
viewing a map	20% (5)
viewing current shows	12% (3)
finding box office hours	20% (5)
purchasing tickets to a show or tour	36% (9)
learning more about the structure	32% (8)
none of the above	32% (8)

Needs Analysis

**3: How long would you say you were at the Opera House? (not including time spent seeing a performance, taking a tour, or dining)**

60% (15)

16% (4)

24% (6)

- ● 1-2 hours
- ● > 1 hour
- ● < 1 hour
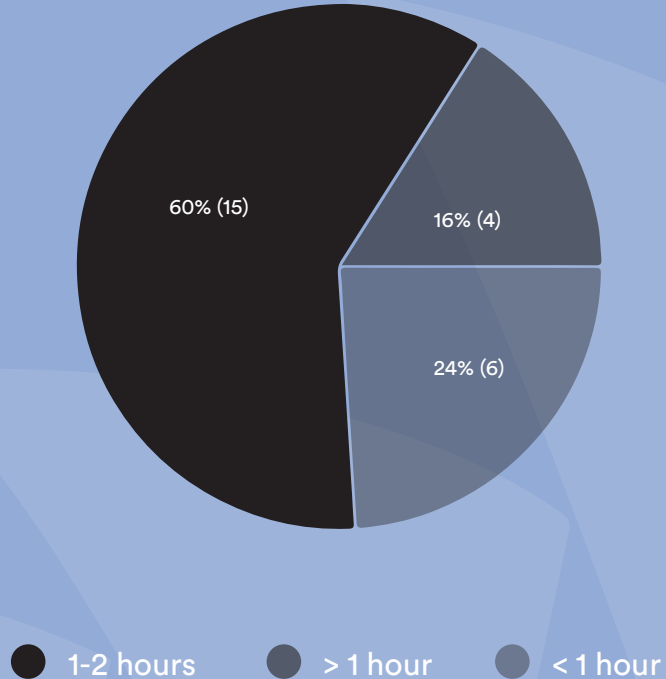
4: Do you recall any signage or easily accessible information on site about the history of the structure?

44% (11)

12% (3)

44% (11)

- ● Yes
- ● No
- ● Not sure
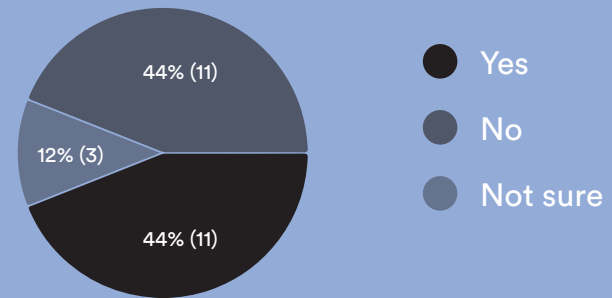
5. If English is not your first language, did you have any difficulty reading the signs?

14% (3)

86% (19)

- ● No
- ● I don't remember any signs
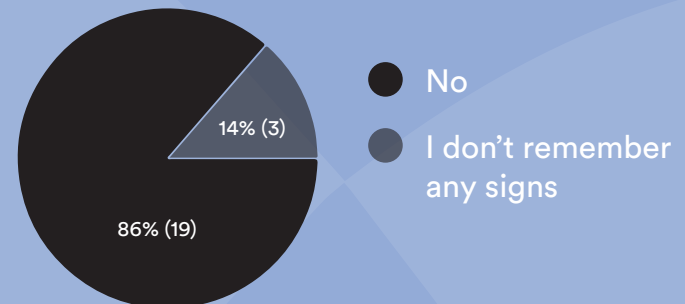
Additional options: "Yes" and "A little bit"

Needs Analysis

6: If there had been digital kiosks located around the outside of the Opera House, what would you have used one for?

- viewing a map — 48% (12)
- seeing what shows are playing/upcoming — 84% (21)
- purchasing tickets to a show or tour — 52% (13)
- reading relevant fun facts — 88% (22)
- seeing past notable performances/events — 40% (10)
- viewing box office hours — 28% (7)
- I wouldn't use one — 0% (0)
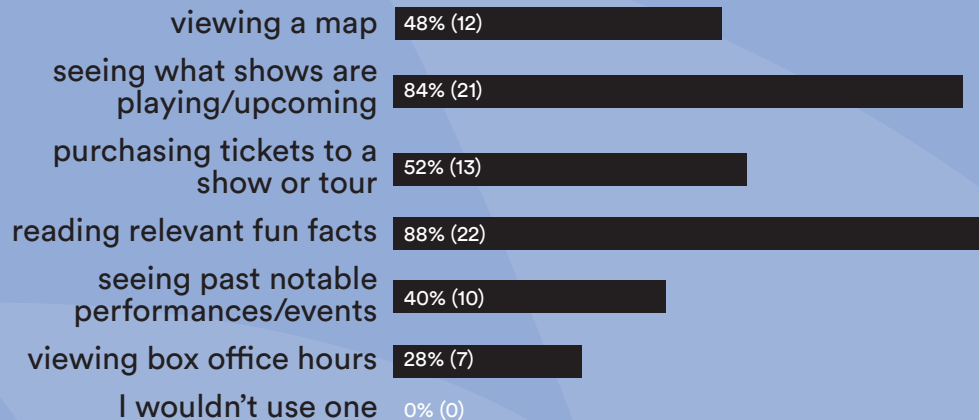
Key Findings:

1. While almost all of participants said they took pictures at the Opera House, only a small portion said they made a purchase
2. More than half of participants said they used their phone for a function a kiosk would provide
3. Nearly 1/4 of participants said they were only at the Opera House less than 1 hour
4. Almost half of partcipants did not recall seeing any sinage about the history of the structure
5. Some partcipants (14%) didn't remember seeing any signs at all
6. Everyone answered that they would use a kiosk if available, and the most popular functions would be fun facts and browsing current programming

Opportunities

The large spread out architectural layout of the structure allows for a lot of space that could be used to implement kiosks without distracting from the iconic building (see diagram).

Nearly 30,000 people visit the Opera House each day, creating 30,000 opportunities for visitors to have their own unique experience.
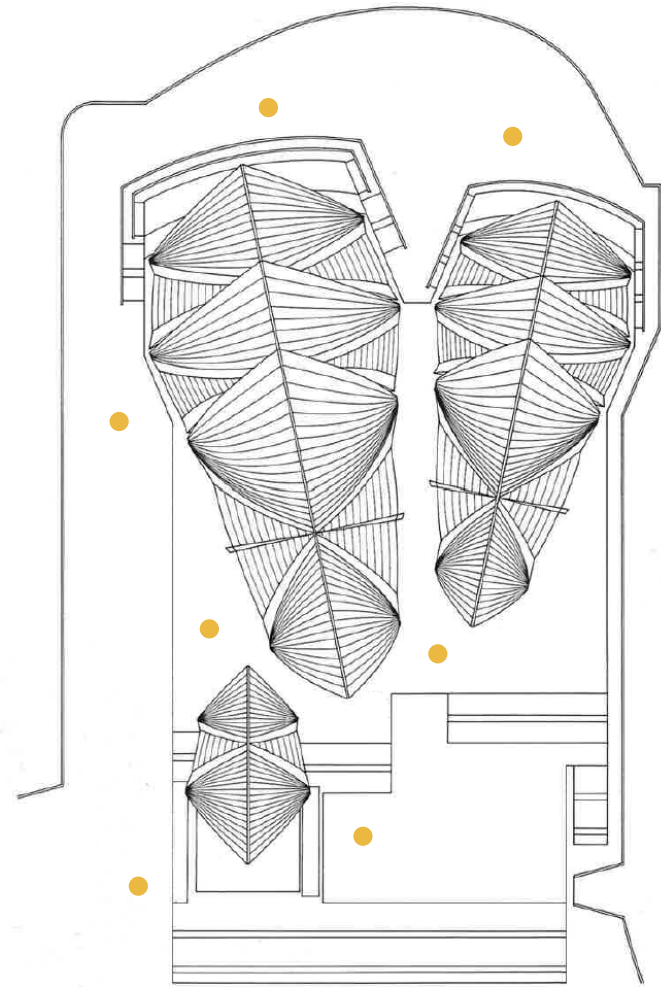
Goals

1. Encourage visitors to linger longer and engage more with the space by

   - Helping visitors get oriented in the space and see what's open for them to explore
   - Having another method for visitors to browse events and purchase tickets
   - Promoting the Opera House's events
   - Peaking visitors interest to learn more about the structure

2. Furthering their goal of "Maintaining and strengthening [our] enviable level of brand recognition and advocacy...to ensure the Opera House is **relevant and welcoming to all.**"

Proposal

Kevin McCloud, designer and presenter of the popular Grand Designs television show, describes the Sydney Opera House as "an eloquent essay about culture; the symbol of a **relationship between people and place.**" The implementation of digital kiosks around the Opera House will capitalize on this "relationship between people and place" by not only encouraging visitors to linger longer, but also to create their own personal experience by catering their interactions to their needs and interests. Strategically placed kiosks will allow users to:

- choose their language
- read fun facts about the structure
- view current programming and purchase tickets (for shows and tours)
- interact with a map of the Opera House and surrounding area
- browse through past notable performances
- view welcome center & box office hours

The kiosks will promote the Sydney Opera House brand by encouraging visitors to learn more about the space and their offerings, ultimately contributing to a more **positive all around experience.**

Challenges

One challenge will be the necessity to make the kiosks **wheelchair accessible**. In 2019, they started a three year "access strategic plan" which focused on improving accessibility of the building in general. In order to keep with these efforts, it will be important to design the kiosks in such a way that someone in a wheelchair may have the same ease of experience as others.

Furthermore, over the past decade the Opera House has focused on **sustainability** efforts and in 2018, they achieved carbon neutrality five years ahead of schedule. Continuing these environmental efforts will be key, and may be achieved by using renewable solar energy to power the kiosks.

User Persona
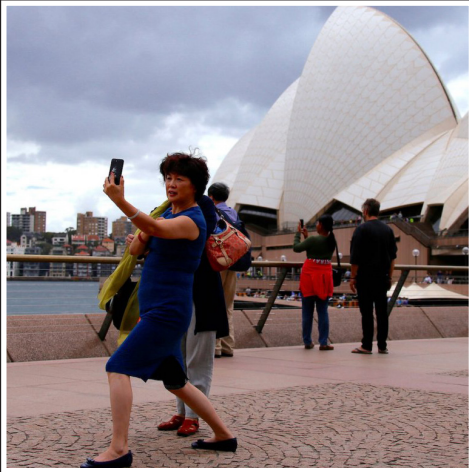
TYPICAL TOURIST
Age: 21-65
Home: not Australia
Native Language: not English

Values:
- feeling accommodated, having the status of world traveler, learning about iconic landmarks, being in control of the information received

Goals:
- get a picture by the Sydney Opera House
- attend a performance
- take a tour of the building

Motivations:
- convenience
- user-friendly appearance
- aesthetically pleasing
- saving time
- curiosity

Frustrations:
- cannot find the Box Office or Gift Shop
- not sure how to purchase tickets
- not sure what's currently playing
- too sunny outside to see website on small phone screen
- doesn't want to use phone data to access information online
- doesn't know anything about the landmark (history, architecture, fun facts)
- struggling to read the signs because most of them are in English

User Journey

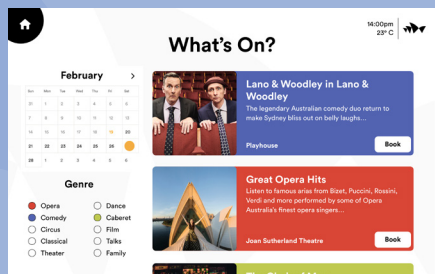| Stages:	Activities:	Emotions:	negative	positive
Arrival	Tourist arrives at the Sydney Opera House	excited		●
	Tourist takes picture with Opera House	happy		●
Identifies 1st Need for Information	Tourist wants to learn more information about the structure, but doesn't see any signs	confused	●	
Looks for Information	Tourist tries to find information on phone	unsatisfied	●	
Identifies 2nd Need for Information	Tourist wants to view current programming and possibly purchase tickets, but doesn't want to put in the effort to find the box office, nor be pressured to purchase something	curious		●
Looks for Information	Tourist tries to use phone to navigate to and view upcoming events on their website	frustrated overwhelmed	●	
Seeks Help	Tourist sees nearby kiosk that may be able to help satisfy their needs	hopeful	●	
Finds Information	Tourist uses kiosk to read fun facts, browse current programming, and purchase a ticket	satisfied		●

Information Architecture

```
                              ┌─────────────┐
                              │   welcome   │
                              └──────┬──────┘
                              ┌──────┴──────┐
                              │   choose    │
                              │  language   │
                              └──────┬──────┘
                   ┌─────────────────┴──────┐    ┌─────────────┐
                   │  function choice       │────│   change    │
                   │  (home screen)         │    │  language   │
                   └───────────┬────────────┘    └─────────────┘
   ┌──────┬───────────┬────────┴────┬────────────┬─────────────┐
┌──┴──┐ ┌─┴────────┐ ┌─┴──────────┐ ┌─┴──────┐ ┌─┴────────┐ ┌──┴────────┐
│ fun │ │ browse   │ │ view       │ │ view   │ │ browse   │ │ welcome   │
│facts│ │ current  │ │ available  │ │ map    │ │ past     │ │ center    │
└─────┘ │ & upcom- │ │ times for  │ └────────┘ │ notable  │ │ and box   │
        │ ing shows│ │ tours      │           │ perform- │ │ office    │
        └────┬─────┘ └────┬───────┘           │ ances    │ │ hours     │
        ┌────┴─────┐ ┌────┴───────┐           │ & events │ └───────────┘
        │ purchase │ │ purchase   │           └──────────┘
        │ tickets  │ │ tickets    │
        └──────────┘ └────────────┘
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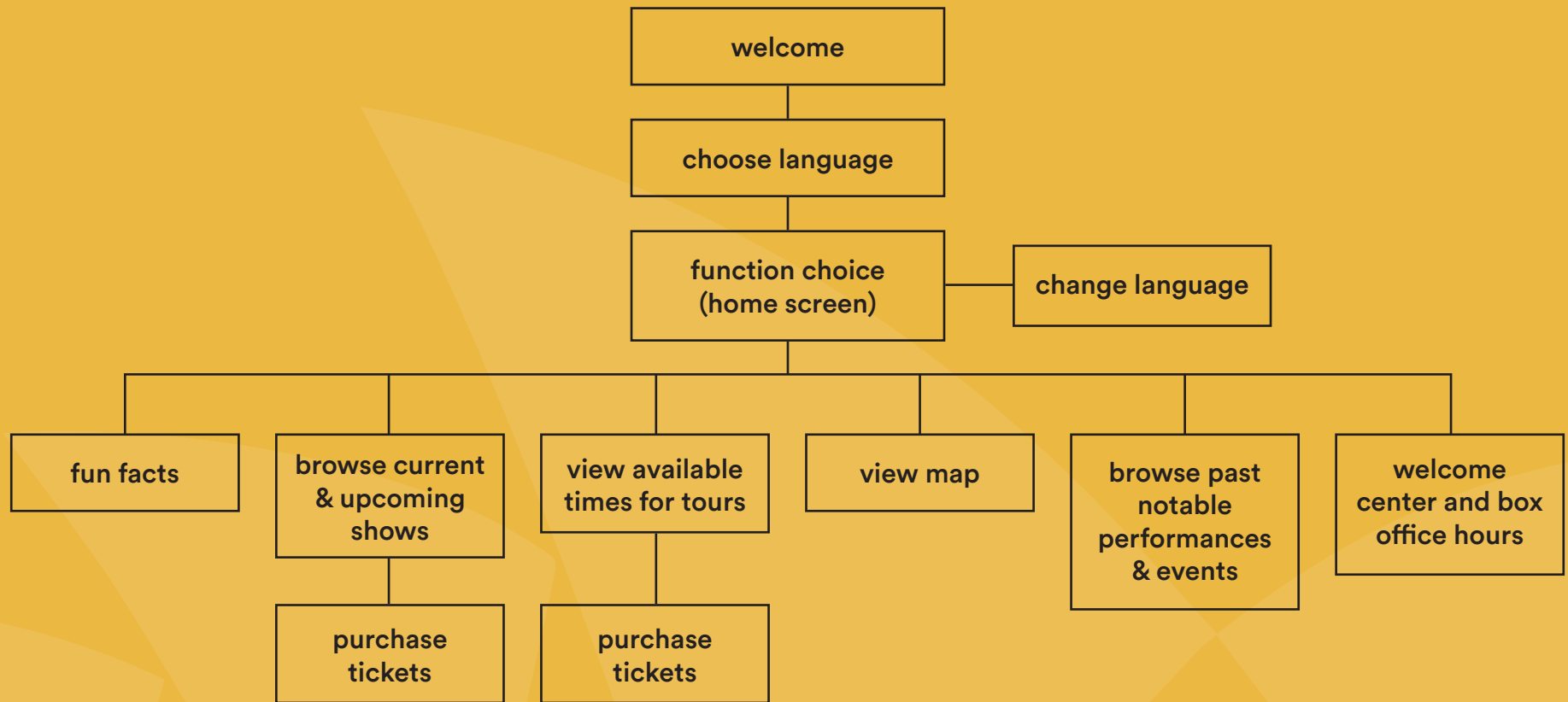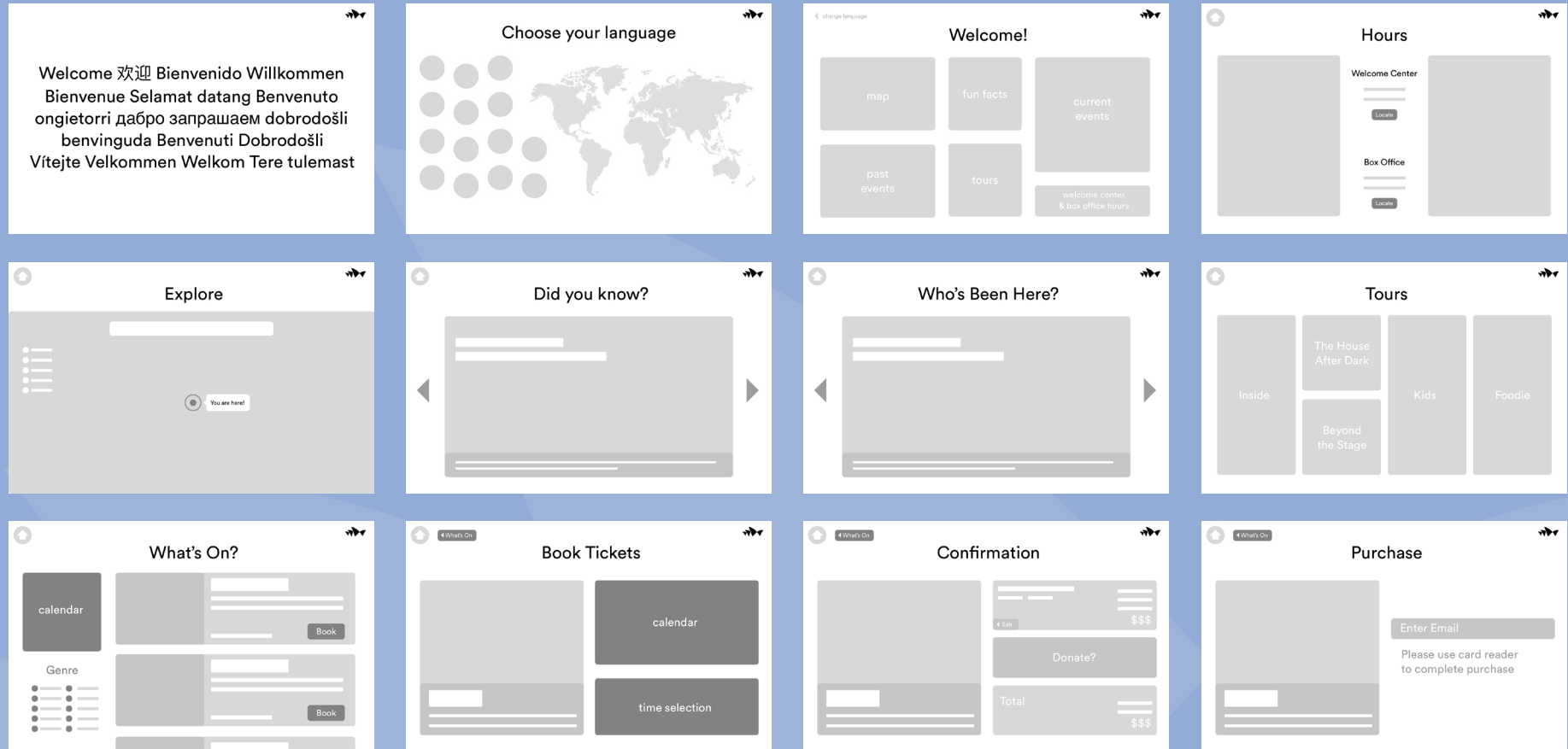
Low-Fi Mockups

High-Fi Mockups
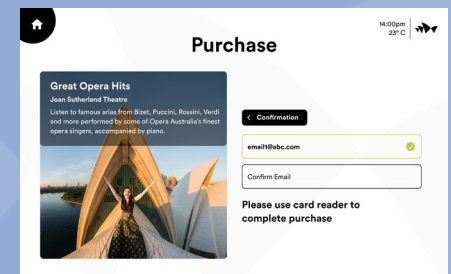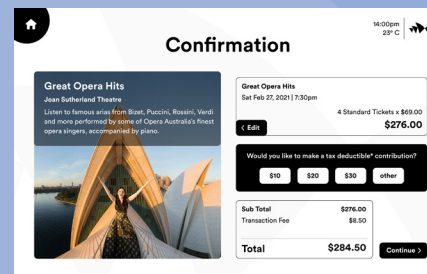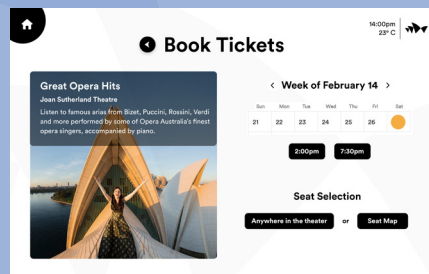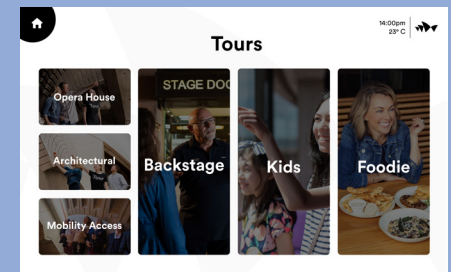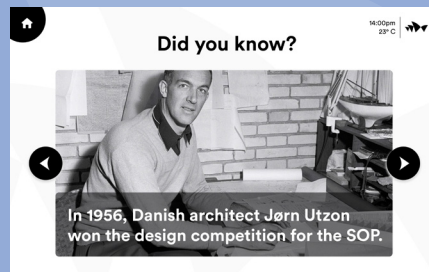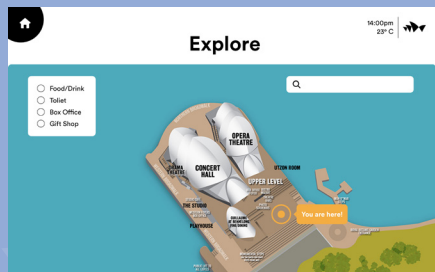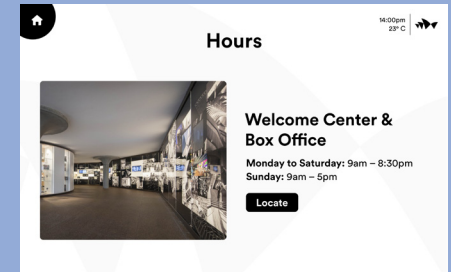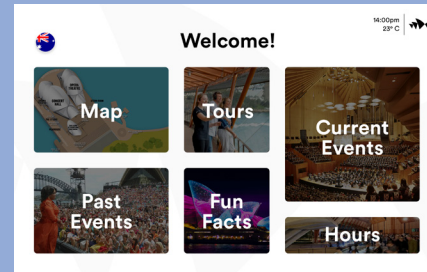
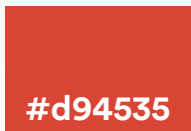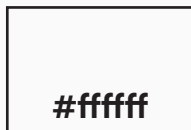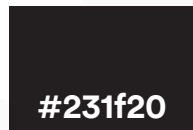# Style Guide

Text Styles:

Heading 1 (Circular Std Bold)

Heading 2 (Circular Std Bold)

Heading 3 (Circular Std Bold)

Paragraph (Circular Std Book)

Colors:

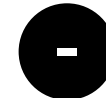|	
#231f20	**#ffffff**

#f4ad42	#d94535	#5263b1	#bec94f	#bac0db
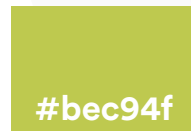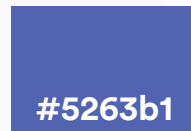
Logo:
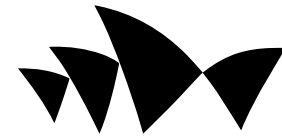
Icons:

Button   **Button**

Design Solution

The proposed kiosk design would be an 48in x 30in touch screen that could move up and down using the buttons below the screen. The adjustable height level ensures that the kiosk is wheelchair accessible and can be optimized for users of any height. The back side will not be a touch screen, but rather display image or video ads to the Opera House's discretion. Furthermore, in order to ensure that the kiosks are inline with their sustainability goals, the kiosks will be powered by solar panels on top of the screens.

Since users are able to purchase tickets to shows and tours on the kiosk, there will be a built-in card reader and keypad below the screen.
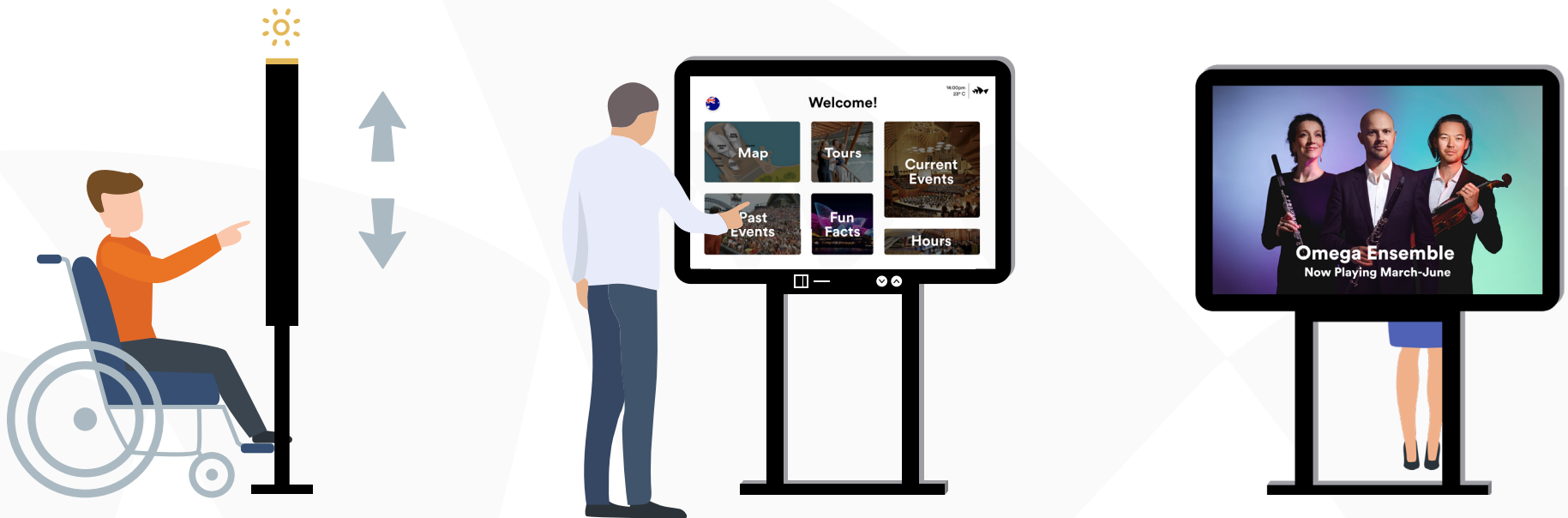
Design Solution

The kiosks will be strategically posititoned around the opera house and would replace exisiting digital signage.
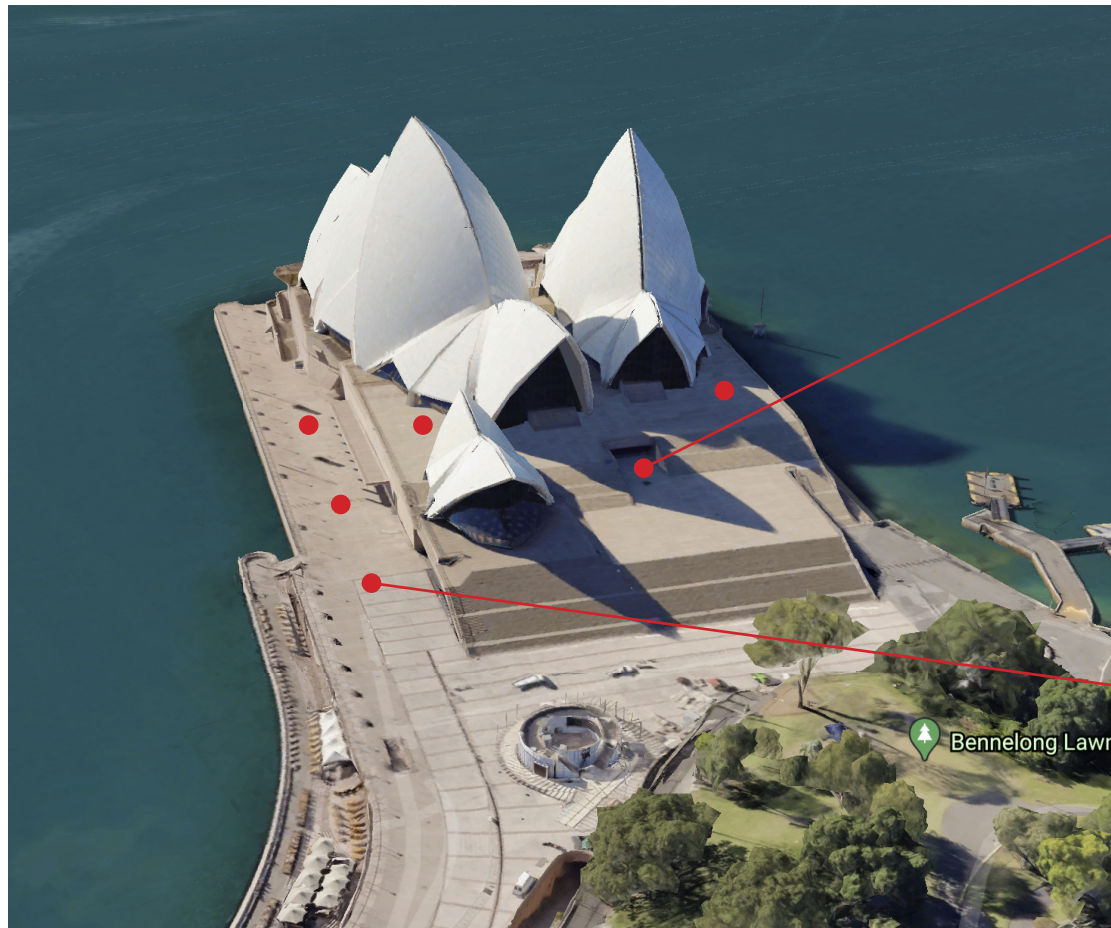
Universal Design

If there aren't any people within 5 feet of the kiosk, the kiosk will display an animated welcome screen. Once someone walks up to the screen, its motion detector will trigger the display to switch to the "Choose your language" screen which will have flag icons representing the 14 most common countries of residence of international visitors to Australia (based on data from 2019-2020) as well as a world map color coded by continent. The "Choose your language" heading will switch between the most common languages every couple of seconds. If users do not see their country's language represented by a flag icon, they can tap on their continent of origin which will enlarge the map to show that region with the corresponding flag icons, allowing the user to find their language and start their experience.
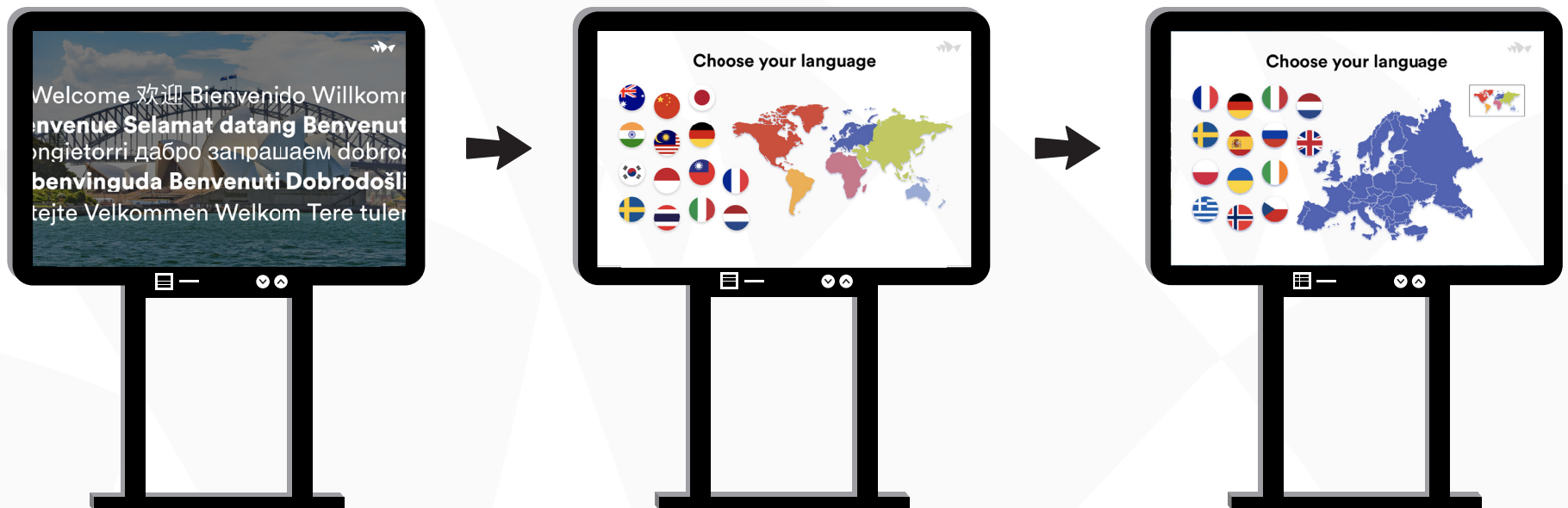
Error Design

In order to help users avoid frustration and pain while interacting with the kiosk, the following design elements were included:

- **Calendar Error Prevention**: When users are choosing a date to view the shows that are on, they are not able to click on a day prior to the current day, and the current day is shown in yellow.
- **Confirmation Pop-ups:** If users have reached the confirmation point in the purchase process and try to go back to the home screen, a pop-up box will appear that informs them their progress will not be saved, and verify that they want to return home instead of continuing with the purchase.
- **Automatic Email Validation:** When entering their email during the purchase process, invalid emails are immediately flagged and text appears notifying the user of the problem in addition to the border turning red and an alert icon appearing. Conversely, a valid email is marked by a green checkmark icon and green border.