



IMD Research Team

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re-Imagining Museum Experience

Working with staff and visitors to conceptualize the future of the museum experience.

Imagine Children's Museum

The Imagine Children's Museum, located in Everett, WA is a museum dedicated to playful education. Utilizing sensory exhibit installations to cultivate real-world learning, imagination, and playtime friendships, the museum is dedicated to creating an educational space for children of Western Washington. This project with the Interactive Media Design (IMD) Program at UW Bothell in association with the Office of Community Based Learning and Research (CBLR) seeks to further these plans, by looking to take away some onsite museum experience hurdles, while also improving the out of museum experience.



Teddy Dillingham

Director of Education

TeddyD@imaginecm.org

“At Imagine Children’s Museum, we promote the power of play: learning and growing by doing what every child loves to do best...play! Our interactive exhibits and activities encourage children chronologically (ages 1-12) and their families to role play, experiment, splash, think, wander and create together in a place where they can feel physically and emotionally safe.”

The Museum strives to be an enriching community partner, by being a resource for local nonprofits, schools, and family services organizations. Additionally, free admission nights, discounted memberships, and specialized events and hours allow for diverse populations to be able to visit the museum.

Their commitment to the local community and the empowering nature of their mission statement inspired their partnership with the University of Washington, Bothell.

The point of contact for this Project is Teddy Dillingham, the Director of Education for the Imagine Children’s Museum.



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This project was completed via the course *BIMD 481: Researching Design Contexts* taught by Dr. Mark Chen at the University of Washington, Bothell. This course is within the Interactive Media Design (IMD) program. The facilitation of community partner's within the course was supported by Layla Thomas, program manager of the office of Community Based Learning and Research (CBLR). Their collaboration within this course gave opportunities for students to have hands-on learning experiences that resulted in a meaningful project that has ties to the local community. This furthers the goals of the university and program, which look to create transformative and immersive learning opportunities. In relation to this course, their collaboration centered around the following ideas surrounding research and design:

1. Design work **always exists in social and cultural contexts**
2. Design must consider the **specific ways context affects how people do the things they do.**
3. Design should **serve and challenge assumptions about those contexts**, while reflecting local values and strong creative visions.
4. Design in context requires a deep understanding of those local settings, **placing onus on us [as designers] to understand people and their lived experiences.**



Angela Casidsid

Visual Designer



Julie Hung

UX Designer



John Kim

UX Researcher



Rachel Raymond

Project Manager



Cynthia Sanchez

Visual Designer



Chang Wu

UX Researcher

The design team was created from a diverse cohort class of IMD students graduating in 2020.

As a design team, they believe that crafting experiences takes more than skill, but a **passion for empathy and collaboration** sprinkled with a **preference for the visionary**. They're were excited to apply this belief to the following design project, and utilize this mindset to create something that is **not only functional, but meaningful**.

Through the research process, the team discovered that the museum experience was more than just providing play spaces; it was about facilitating interactions between adults and children, adults and the museum, and the museum and children. They began to see that children had a consistent, playful interaction with the museum. This was contrasted by the adults, whom had a wide range of experiences, from playing with the child they had brought, to being on their phone. This inspired the team to look further into the interactions that the museum was cultivating between adults and children, which lead to looking at two general scenarios and personas. The scenarios examined contrast each other. One reviews a parent that had little challenge interacting with children in the museum, while the other explores the experience of a parent dealing with over exposure to the space. By creating these scenarios into personas, they were able to come up with two design ideas: creating a Universal Design System for use on-site at the museum, and creating a smartphone app that assists in developing the before, during, and after the museum experience.

Problem Space

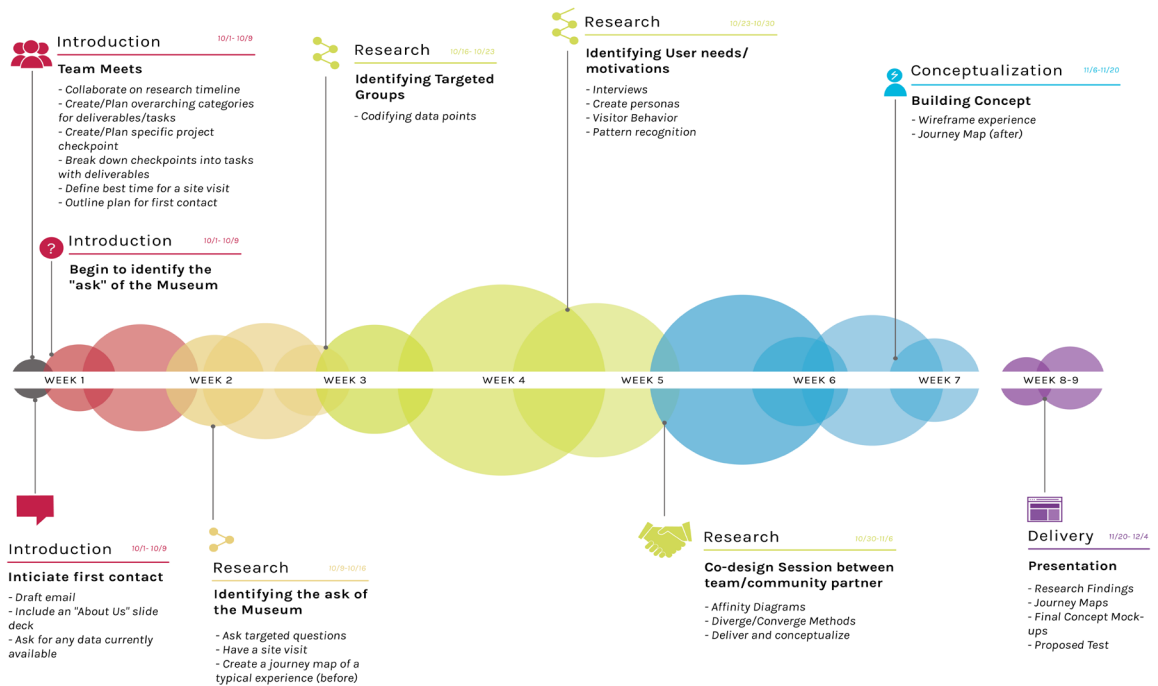
Initially, Teddy Dillingham, the Director of Education for the Imagine Children's Museum reached out to Dr. Chen for student assistance in realizing a vision the museum had defined. The museum had conducted research to identify areas of opportunity within the museum experience, and had found that visitors had a desire to have a smartphone app. She submitted a proposal to have IMD students work on an app experience as a means of creating an extended experiential learning environment for visitors to the museum. When invited to pitch to students, Dillingham pitched developing the smartphone app, but also spoke to the value of an end to end experience. Since the museum was expanding by an entirely new building, there were opportunities to re-evaluate the onsite museum experience.

The team of design students were interested in examining the visitor experience to confirm the smartphone app's desirability, but were inspired by the thought of using ethnographic research to delve into how Interactive Media Design extended to non-digital spaces. The Imagine Children's Museum pitch allowed them an opportunity to look at how to bring technology and innovation into a space in mindful and specific ways.

Therefore, in order to begin thinking about their research and design journey, the team asked themselves the following guiding question:

What is the experience of a visitor to the Imagine Children's Museum?

Overview



In order to answer this question, the team created a research plan. Due to the Ethnographic nature of the course, it was understood that their data collection, analysis, and design conceptualizations would emerge from ethnographic research practices, specifically a focus on a qualitative approach.

Ethnographic research focuses on data collection that is immersive within the research scene, requiring that researchers insert themselves in order to observe the site in context. This is because ethnographic research looks to analyze a design context through the process of coding or tagging data, allowing for patterns and relationships to emerge that inform the conceptualization of design ideas. The qualitative nature of the data would be informed by how the team planned to conduct their research. The data would be collected via site visits, and would consist of observational field notes, sketches, diagrams, blueprints, pictures, and videos of the space, in person surveys of the museum's visitors. The team visited the Museum on 5 occasions, collection 45 pages of research notes and 17 surveys. In addition to this, they took over 200 pictures, 17 360 videos, and created 13 sketches, diagrams and blueprints for reference.



5 site visits; high + low traffic, Free Admission Night
5 meetings with Imagine Children's Museum Staff
1 visit when museum was closed

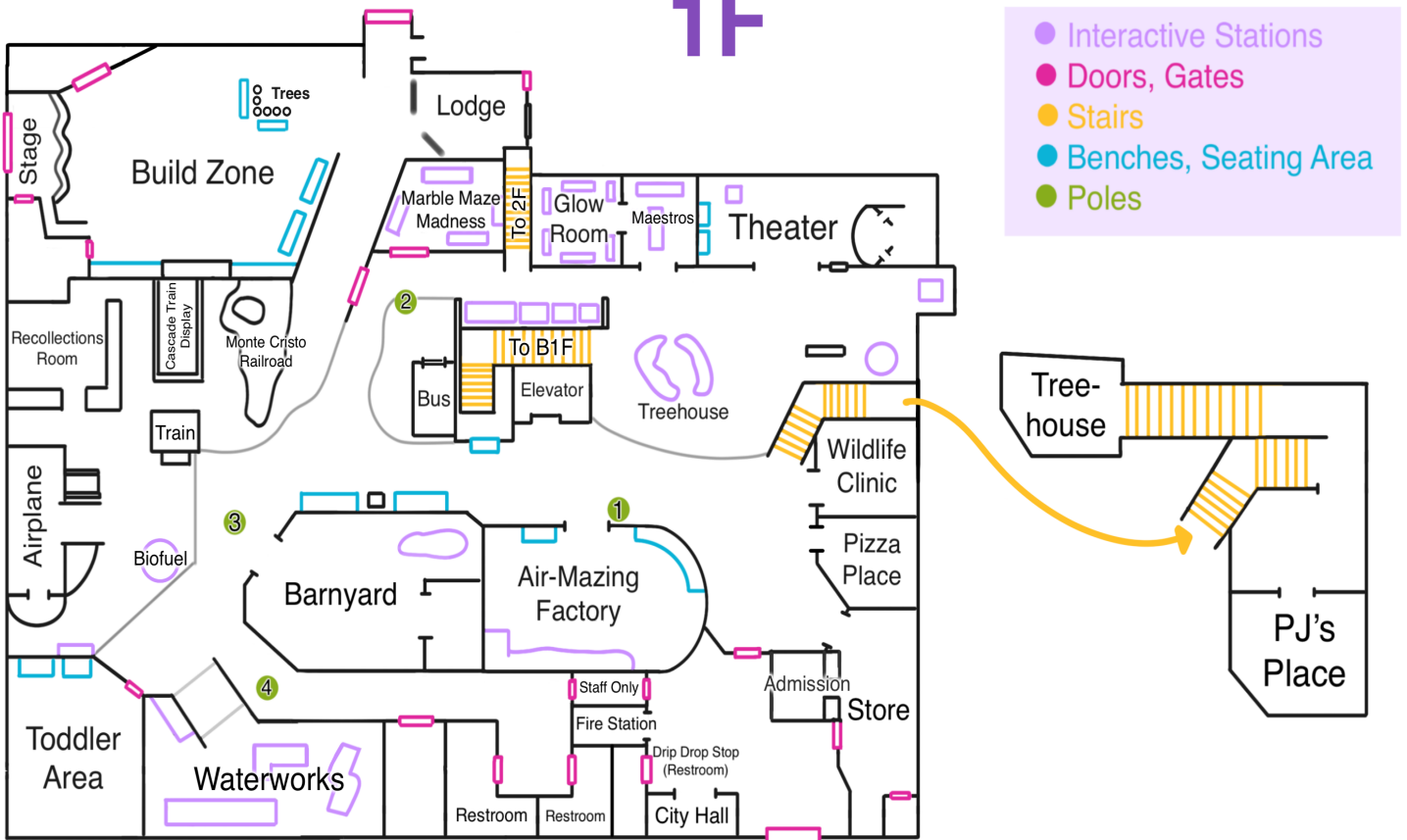
The data collection within the project exists in three main forms. First, there is the team's observational data, which was recorded via specific areas of observation and takes the form of written notes. These notes are then digitized for longevity. The second form is a visual data collection. This takes the form of 360 video, pictures, and sketches/drawings/blueprints. The third form is a survey. This survey was developed by triangulating questions from the museum's past research with questions that are meant to provoke deeper, more detailed answers.

These types of data were placed in three categories: **Scene, People, and Interactions**. Scene is defined as the museum space. The scene involved visual data collection: sketches, drawings, photographs, and video footage. It also involved things such as signage, elements of the space like lighting and organization, and sound. The People category focused on who was in the museum; what were they wearing, how were they expressing themselves, what size groups were they in, what was their ethnicity, etc. The third category Interaction was looking at the experience of the museum via the perspective of visitors. It looked at things like Interactions, Emotions, Intention, and Behavior.

In order to obtain the data, it was necessary to work with the Education Director at the Imagine Children's museum, Teddy Dillingham, to find dates that maximized potential data collection. These dates were communicated via a google calendar. Then, it was planned out what type of data would be collected via different visits.

To best sketch and diagram space, **Monday, October 28th from 9:30 am - 12:30 pm** was chosen as a visit time due to the museum being closed for general maintenance on this day. Thus, sketches and drawings could be made without the issue of others blocking the space. This is also true for 360 videos and photographs.

Main Floor 1F



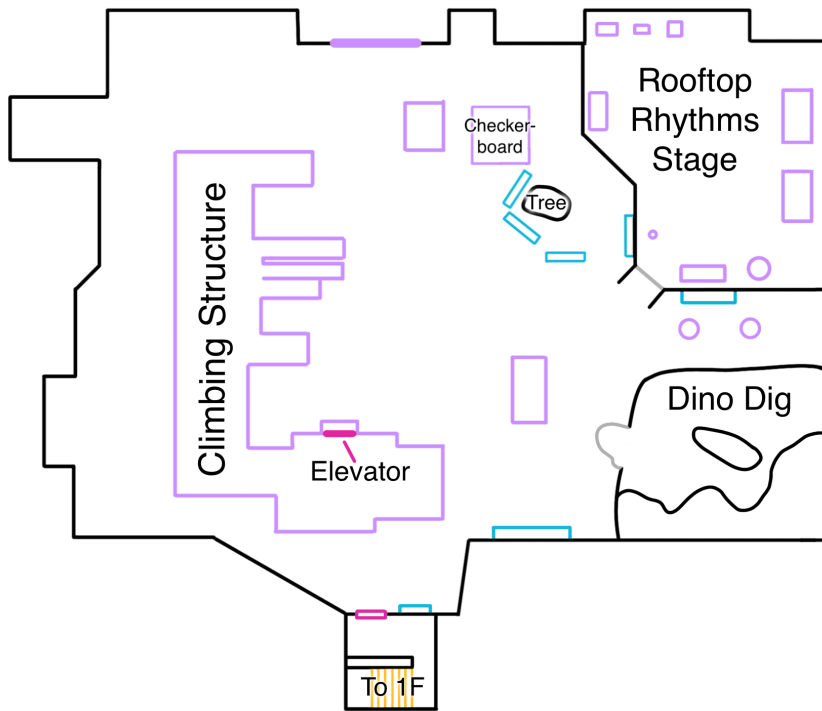
Color Key

- Interactive Stations
- Doors, Gates
- Stairs
- Benches, Seating Area
- Poles

Pole Signs

<p>3 Metal</p> <p>Restrooms <i>Baños</i> x 2 (1 facing Imagine-Air) (1 facing the barnyard)</p> <p>Drinking Fountain <i>Bebederos</i></p>	<p>4 Metal</p> <p>Restrooms <i>Baños</i></p> <p>Drinking Fountain <i>Bebederos</i></p>	<p>1 Metal No signs</p> <p>2 Wood No signs</p>
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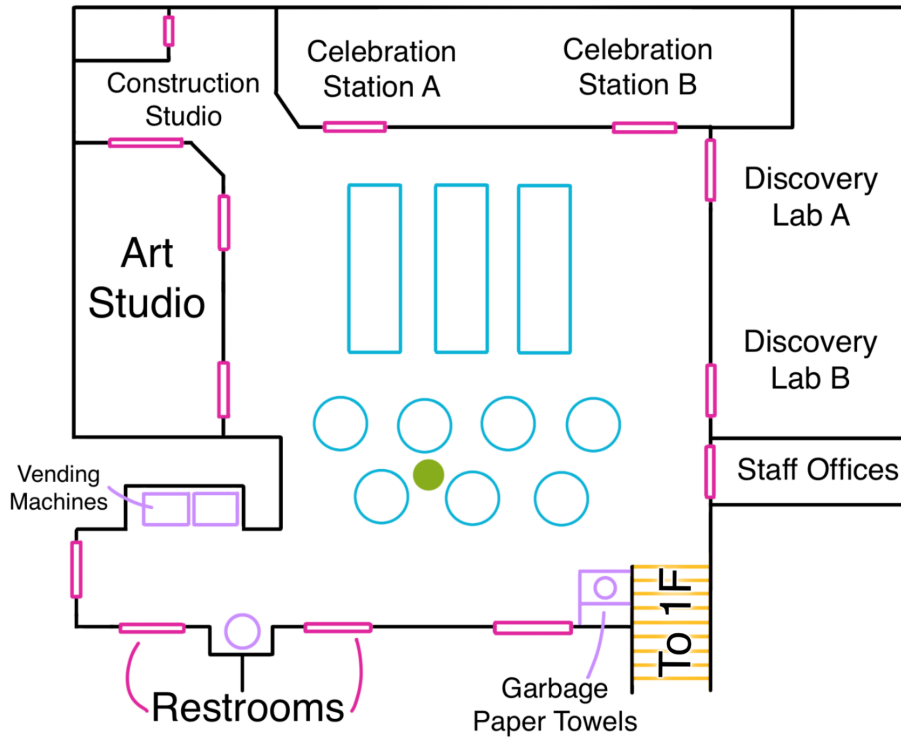
Rooftop Adventure - 2F



Color Key

- Interactive Stations, Playground
- Stairs
- Doors
- Benches, Seating Area

Cafeteria Area B1F



Color Key

- Cafeteria Items
- Doors, Gates, Panels
- Stairs
- Seating Area, Tables
- Poles

Pole Signs

- Restrooms
Baños
- Food & Drink
Snack Area Only
- Please Clean Up
Before You Leave





In order to immerse the team in the museum experience for field notes, site visits were planned at strategic times: 12:40 – 3 pm on Friday, October 18th, Free Admission night on Friday, October 18th, 5:30–7 pm, Tuesday, October 22nd from 2:30–4:30 pm, and 10 am –12 pm on Wednesday, October 23rd. These dates were chosen to allow the team to see the museum at minimum and maximum capacity, or low and high traffic, to allow for a wider breath of observational data.

See a Mother with three kids is traveling down the main walkway, east, towards the Airplane. Children are speaking to her but she says “We need to use the restroom first.” She looks around, looking for a sign. She sees the sign, and heads over towards the sign, and goes to the left, where it points. She slowly goes down the hallway towards the bathroom, as if unsure of where to go. OC Could this be because of the height and angle that adults are looking comparative to their children? I noticed myself looking lower to the ground, and not “seeing” anything that was above 6 feet. I feel like this is because children draw the eye to their level. This makes me feel like signage on the ground could be helpful.

A mother has lost her child. She moves through the museum, calling out his name. Other adults look up, and look around, but don’t say anything, continuing to play with children. Mother doesn’t approach museum workers, and continues looking round. About 10 minutes later, see a staff member does a round on the museum floor, looking into exhibits, and making eye contact with parents. OC I feel like I see the staff less during this visit than I have other visits. I wonder how stressed they feel to try and make rounds in the museum while still maintaining the front desk.

The lightning feels dark; lighting comes from strips of small spot lights, as well as some larger lights about. They’re 6-8” W x 4” H. The lighting falls over the exhibit space signs in a way that adds depth. The lighting seems to have a yellow cast. The lights seem to be a mix of new/old. OC I wonder if this adds to why it’s difficult to see the signage; since it seems so dark, and it’s difficult to see anything that’s not directly lit. Perhaps adding more light would assist in making the whole museum be more navigable?

Stations

Station	Scale/Layout	Color	Signage/Objects	Light	Location	Ambiance/Feel
AirMazing Laboratory	Large, Open-layout, high-ceiling, (8-10 kids)	Mostly gray, streaks of blue	Wall signs, space description, activity instructions,	Bright spotlights, neutral	First floor, next to the entrance, easy to find	Mechanical, open
Piccolo Cafe	Small, semi-open space divided by furniture (>8 kids)	Red, orange, illustrative	Lots of labels, small objects for activity	Warm recessed lights	First floor, next to the entrance, easy to find	Illustrative, small
Wild Life Clinic	Small, semi-open layout, (>8 kids)	Light blue, green	Lots of furniture, activity instructions	Neutral recessed lights, bright	First floor, next to Piccolo Cafe	Confined, enclosed
Theater	Medium size, Open, for the most part, divided by the stage and audience, (20 kids)	Dark, red, yellow	Wall signage of museum information, labels	Dark, spotlights/stage lights for the stage	Back of the first floor, behind the treehouse	Theatrical, secluded, hidden
Bank Vault	Two main rooms, (>15 kids)	Greyish with a blue undertone, very illustrative	Museum information, labels,	Bright in one room, very dark in the vault	Back of the first floor, next to the Theater	Illustrative, Neon, Retro

Our Process for Coding, and Coding Scheme

Coding the data was a three fold process. First, it was decided to code via the AEIOU model, (Activities, Environment, Interactions, Objects, and Users). This was easily applied to all of the visual data, and observational notes, as well as the survey. Utilizing AEIOU was helpful as it was able to more clearly identify what was an activity versus what was an interaction, as well as identifying objects within the space that were relevant to specific use. It gave a much deeper picture of both the museum as a whole, as well as providing some insight to individual exhibits.

Activities Environments Interactions Objects Users

Music Area

(OC 2 parents on phone calls/phones; less than down stairs?)

Parents and children are using mallets and sticks to strike metal bars and bowl shapes. The shapes make noise when hit. Parents show children that different sized shapes can make different sounds.

Mother and daughter at a xylophone. Daughter plays with her mother, watching and matching the strikes and timing she sees her mother do. Ther interaction lasts a single minute.

Behaviors

Kids run path between playground structure and music stage

- Generally, at the playground structure, kids do the following activities
 - Sliding down slides
 - Run up stairs
 - Run from one end to another
 - Climb other side of play structure

Run up the slides

Adults/older teens enter playset by 2 specific entrances

- Staircase on the South end of the playset
- Short climb wall on the west side of the playset

Children and older adults sometimes enter playset together

Pathway for children to go to music stage is to slide down from playground structure and run west to east to stage

Used in 2-5 minute stints

Adults interact with less objects than children

Adults recording time via images or video

- Adults on phones
 - Scrolling



Rachel Raymo...
12:30 PM Nov 7

Resolve

After we had decided on a coding scheme of Behaviors, People, Emotions, we found that the data needed to be coded again. Therefore, we decided to look for the 3 "use cases" that popped out at us.



Rachel Raymond
12:33 PM Nov 7

These 3 use cases were an unengaged parent, child under 8, and engaged parent. After we had codified this again, we began to analyze the data.

Reply...

In coding the visual data, the team utilized the AEIOU model to sort all of the materials first. After sorting these visual materials into their different categories, the groupings allowed for specific tagging patterns to become apparent. These tagging existed only within each AEIOU category. However, they allowed for a thread within the data to begin being revealed. This specific threading of data, however, did not translate to our observational and survey notes. There is a two prong idea as to why this may be the case; **1) as observers, the design team took note of everything that was seen within their time spent there. While it can be said that the data could be coded using the same system, within the specific notes taken, it would not have the same revealing effect. 2) Pictures can say a 1000 words. Written observations and surveys can only give the perspective of the observer within their memory, no matter the amount of diligent training surrounding the practice.** Images allow for the moment to be captured, allowing it to be seen over and over again.

People Behavior Emotions

With all of this said, the observational notes and surveys were coded by going through the AEIOU process again, to try and make more granular the data collected. By breaking the data down by with this specific tagging structure, patterns began to emerge surrounding “People, Behavior, and Emotion” within the observational notes and survey. Since the data was meant to be eventually used to cultivate museum experience Personas, it was decided to bring this tagging structure in to break down some of the data further. By using these tags, it was felt it would better yield results to analyze, specifically as it relates to what people were doing in the museum, (people and behavior) and what could understand that they felt via quotes (emotions). Once the data had completed tagging with this system, it was decided that adding another set of tags that combined specific users with actions and objects was needed, in order to help distinguish possible use case scenarios.

Therefore, the last set of tags used within the observational notes and survey was specifically to help better identify possible use case scenarios. Through the use of the AEIOU model and previous tags, a pattern had been gleaned from the data that related to visitors being “Engaged with Phone” or “Not engaged with Phone”, or simply a “Child”. By highlighting these specific users, actions/behaviors, and objects, patterns surrounding use case scenarios appeared allowing grouping of the observational notes and survey data at a higher level. Ultimately, it was thought that this code could help the design team better consider the visitor’s experience in the context of the museum, as posed within their initial question of “What is the experience of a visitor to the Imagine Children’s Museum?” as well as serve as a basis for use case scenarios.

Engaged with Phone Not Engaged with Phone Child

Parents miss signs and ask volunteers where the bathroom/drinking fountains are.

Kids quietly building things out of foam pieces with other kids.

Children are running around freely; some parents are not following them directly from behind
Dad taking picture of children

Parents are standing by and watching their children

1 woman helping the children build

Adults recording time via images or video

- **Adults on phones**
 - Scrolling
 - Typing
 - Phone calls
- **Adults focus on children/phone during activities**
 - Scrolling up to 5 minutes
 - Typing up to 1 minute
 - Phone calls up to 15 minutes

Going through the memos and coded data, the design team began to discover some patterns. The AEIOU method was able to break down what had been witnessed into basic parts of activities people were doing, the environments they were in, their interactions with objects, and who they were. This allowed the design team to see that **while there are many activities in the museum, the most interesting activities were not facilitated by the exhibit design.** A pattern emerged that found most adult visitors engaged in their mobile devices, as seen by Rachel's notes that state "**Adults on phones: Scrolling, Typing, Phone calls**". That being said, this same analysis showcased that adult visitors were allowing their children space to play, and that they were excited to utilize their phone as a means of recording special moments. It showcased that no matter **the interpretation of phone use, the adult experience of the museum utilizes a phone.**

Utilizing the AEIOU model in order to code the visuals, a visual pattern emerged within the museum. This visual pattern related to how many different types of visuals (meaning signs, typography, colors, etc) were within the museum. **Looking through the coded AEIOU notes, it became clear that there could be navigation issues within the museum,** as seen in Cynthia's observation "parents miss signs and ask volunteers where the bathroom/drinking fountains are." Therefore, a pattern of "where is the bathroom" began to emerge within both sets of notes. This was analyzed further to become "where are the signs," as well as "when was that event/what is that event?" **The team understood these patterns as an overarching area of opportunity that a museum visitor experienced in relation to finding and understanding museum related information.**

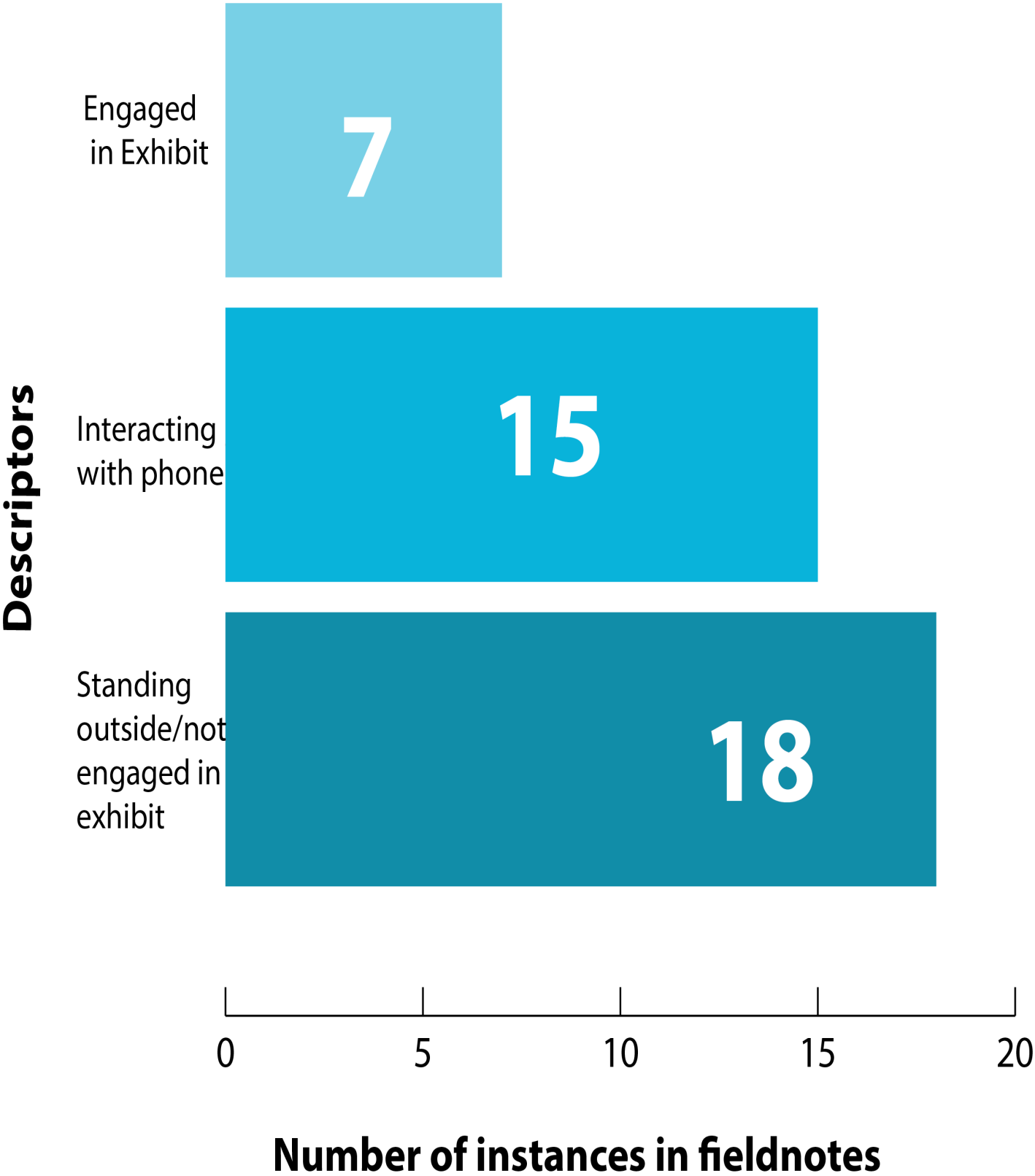
Data Analysis

Engaged in Exhibit meant that adults were involved in the child's interaction.

Interacting with phone meant that adults were involved on phone in any capacity.

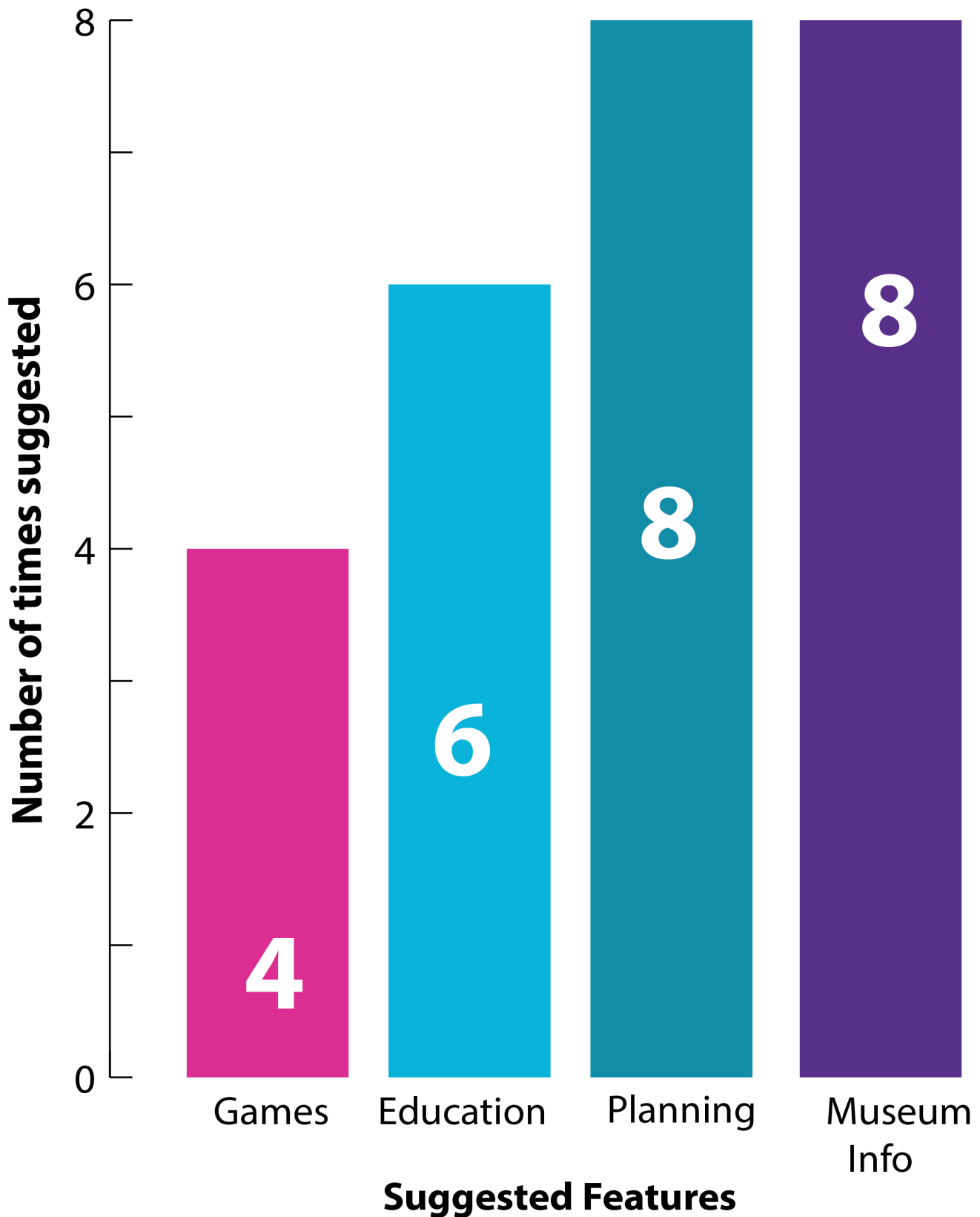
Standing outside/not engaged meant that adults were not involved in their exhibit or phone.

Adult Experience Descriptors in the Imagine Children's Museum

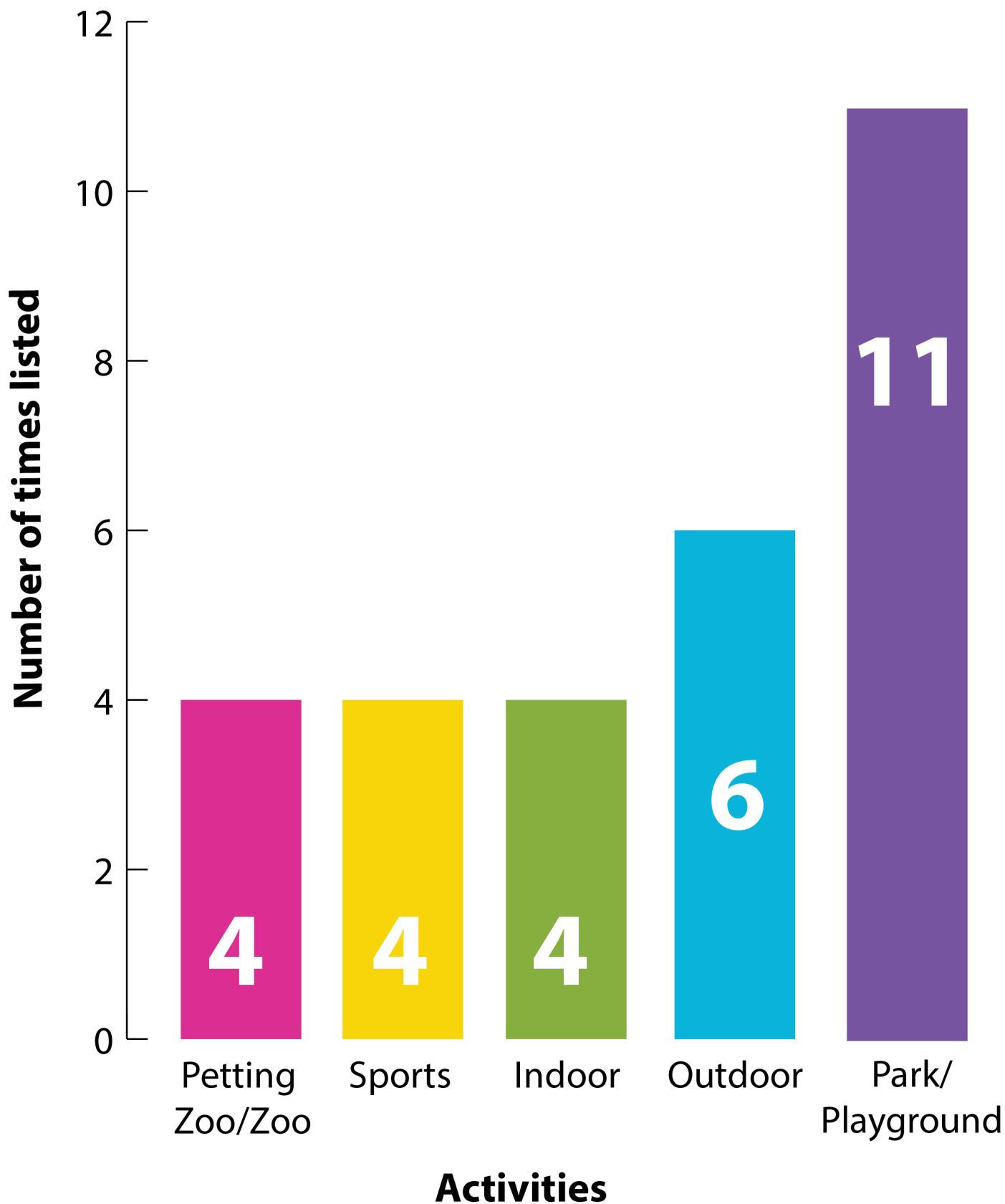


Data Analysis

What features could you imagine an Imagine Children's Museum smartphone app having?



Besides visiting the museum, what other activities do you do with your children / the children you take care of?



Data Analysis

How many times was restroom navigation mentioned in the research field notes?

Three times

But when surveyed about museum improvements, navigation was never brought up.

In the research conducted, the term “**photo**” or “**picture**” was mentioned **27 times**.

The term “**phone**” was mentioned **51 times** within the observational fieldnotes.

Looking at the analysis of the data, the team was able to find four main findings from their research.

Mobile devices are a significant part of the museum experience; for good and bad

There are opportunities for a more cohesive digital and on-site museum experience

Navigation of the museum is challenged by a lack of a branded system in relation to signage

Lack of interaction with children's play and un-engagement have a symbiotic relationship

Mobile devices are a significant part of the museum experience; for good and bad

What features could you imagine the smartphone app having?

Ability to check-in, not waiting in line, no trouble finding parking places (navigation not needed), list of special events

Source: survey data

“Adults on phones: Scrolling, Typing, Phone calls”

“Some moms took photos of their kids playing Some moms were Facetiming”

“Adults will watch, other adults will play, and some will go on their smartphone.”

Source: coded fieldnotes

Mother and daughter are playing on the playground. Daughter runs and hides. Mother tries to “find” her by taking a picture of her everytime she can see her. (OC Like a photo hide and seek?) Overheard: “Paparazzi!” “Got your picture!” Laughter. “Paparazzi’s camera is dying!”

Source: observation from fieldnotes



“Kid wanted to role play with their parents of them having dinner but the parents kind of just sat there and stayed on their phone the whole time.”

Source: observation fieldnotes



Lack of interaction with children's play and un-engagement have a symbiotic relationship

There are opportunities for a more cohesive digital and on-site museum experience

Imagine
children's museum

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Today's Hours
9:00 a.m. - 5:00 p.m.

Regular Hours
 Monday: CLOSED
 Tuesday: 9:00 a.m. - 5:00 p.m.
 Wednesday: 9:00 a.m. - 5:00 p.m.
 Thursday: 10:00 a.m. - 5:00 p.m.
 Friday: 10:00 a.m. - 5:00 p.m.
 Saturday: 10:00 a.m. - 5:00 p.m.
 Sunday: 11:00 a.m. - 5:00 p.m.

Directions
Click here for Google maps

Admission
 Children (12 mo. and under): FREE
 Admission (adults & children): \$13.00
 Thursday: 3pm - 5pm: \$6.50
 EBT Card Holders: \$3.00

Parking

Clay Day Creations
Friday, December 6 & Sunday, December 15

Admission
All children must be accompanied by a grown-up 18 years or older.

Children 12 months and under	Free
General Admission (kids and grown-ups)	\$13.00
Thursdays 3:00 p.m. - 5:00 p.m. <small>Coupons not valid</small>	\$6.50

Memberships

Two Fun	\$110
Military Family Fun (Active duty I.D. Required)	\$125
Grandparent Fun	\$135
Family Fun	\$165
Family Extravaganza	\$195

Discovery Lab
A

Amazing Enrichment!
Check website for Museum programs

Navigation of the museum is complicated by a lack of a branded system in relation to signage



"See a Mother with three kids is traveling down the main walkway, east, towards the Airplane. Children are speaking to her but she says 'We need to use the restroom first.' She looks around, looking for a sign. She sees the sign, and heads over towards the sign, and goes to the left, where it points. She slowly goes down the hallway towards the bathroom, as if unsure of where to go."

Source: observation from fieldnotes

Co-Design Session

After some initial examination of their findings, the team decided that returning to have a collaborative design session with their community partner would be beneficial. The intention behind the co-design session was twofold. One, it allowed the design team to see what the community partner understood about their visitors and what they felt their needs were. Two, it allowed the design team to see how successful their initial analysis had been in identifying areas of opportunity. On top of all of this, by inviting the museum into the design process, it placed the museum as collaborators in the design process. This ensures that design concepts will be impactful, as they were generated from partnership, not a perception of museum wants/needs.

The collaboration happened on November 6th, 2019 from 2:30 pm - 4:30 pm. Ideas surrounding the “Before Visit Experience,” “During Visit Experience”, and “After Visit Experience” were discussed. Within the “Before Visit Experience”, the museum brought up parking as a major factor. The team also brought up the website experience. When moving on to the “During Visit Experience”, the team brought up pain points that were within the museum, such as signage and staff member experiences with explaining museum navigation to visitors.



The team then asked the museum staff to begin ideating ideas surrounding how to bring these aspects of the museum to the next level. This is where ideas surrounding a central hub, a universal design language and signage system, and information announcement system were brought about. The team then transitioned to having everyone ideate on thoughts surrounding the “After Visit Experience” of the museum. This is where ideas surrounding an app and social media were brought up.



With the data coded, findings solidified, and a collaborative design session is completed, the design team began to think about what the current visitor experience is in the museum and how this experience would change with new design concepts.

This prompted them to begin thinking about experience mapping, where they utilize design tools such as personas, use case scenarios, and user journey's to identify what a visitor experiences are right now.

A persona is a fictionalized design user within a design context. They're used as a means of understanding a design's user base, examining things such as their motivations and areas of opportunity within an experience. Potential design solutions can be put through the "eyes" of a persona in order to allow designers to see if their proposed idea works for the design user. Persona's are always built out of collected data. The persona's used within this project were built out of the survey results, observations, and areas of opportunity that the designer's collected through their research process. Immersed Ina and Frequent Frances are meant to represent not only two visitors that are often seen at the museum, but two visitors groups that the museum actively lobbies their activities, marketing, and overall message to. These personas were presented to the museum staff and confirmed via a point system as being important visitor experiences.

Use case scenarios are focused pathways through an experience. They feel like short stories, and a designer use them in conjunction with a persona to examine a specific experience within a design context. Use case scenarios allow a designer to think about the specific behaviors, interactions, and areas of opportunity within an experience. The use case scenarios within this project allowed the design team to better imagine and understand their personas within the design context. They pulled in data from survey's to color in behaviors and activities that the personas may do in the museum, like taking photos within the museum, or trying to navigate the space.

User Journey Map



Curious Cristi

Persona Details

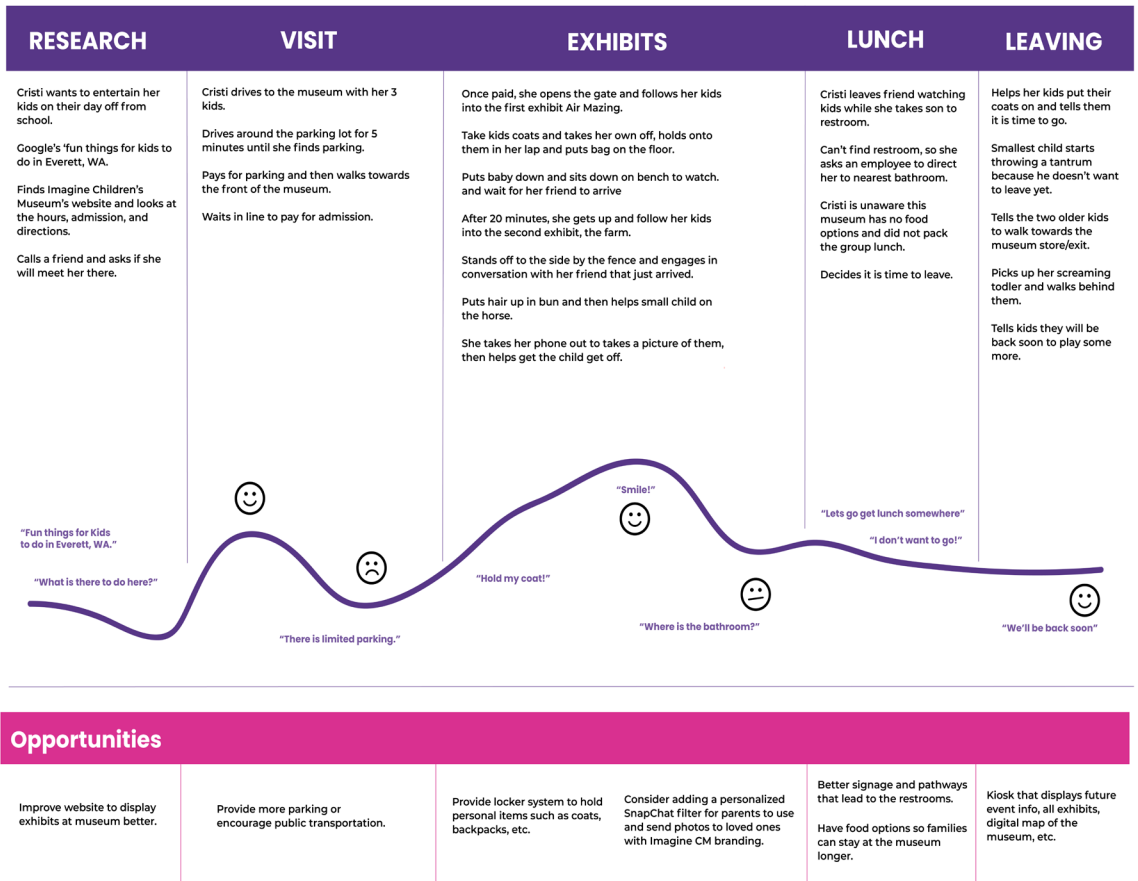
- + Working mom of 3
- + Hands off parenting style

Scope Summary

First time at Imagine Children's Museum visitor journey.

Goals

Entertain her kids on their day off from school, while still encouraging and facilitating learning.



Opportunities				
Improve website to display exhibits at museum better.	Provide more parking or encourage public transportation.	Provide locker system to hold personal items such as coats, backpacks, etc.	Consider adding a personalized SnapChat filter for parents to use and send photos to loved ones with Imagine CM branding.	Better signage and pathways that lead to the restrooms. Have food options so families can stay at the museum longer.

Journey maps are a timeline of touch points that a someone may have within an experience. By being visualized, it helps showcase what is happening over time, and allows for a designer to get a sense of the interactions that happen within the experience. Visualizing journey maps also allows for the experience to be "mapped" in other ways, such as emotion. Journey maps come together with personas and use case scenarios to create the bigger picture of how an experience is unfolding, but from the perspective of someone within the experience. On the side of each of the personas, there is a specialized journey map that helps illustrate that personas specific experience.

To ensure that they understood a generalized experience within the museum, the design team started their experience mapping by creating a generalized journey map of an average experience at the museum (see above). From there, they moved on to personas, use case scenarios, and then a speculative journey map, of where the museum experience could go.



Immersed Ina

“My kids love exploring and learning new things!”



Works full time, commutes, but has some schedule flexibility.



Enjoys spending time outdoors when the weather is nice.



Documents her life via her camera. Researches & plans outings on phone.

BIOGRAPHY

Ina is a mother of 2 children under 10. Her first visit to the museum was via free admission night. During her visit, Ina and her children enjoyed the Art Studio, where they made charcoal drawings. This kind of quality time is important to Ina, as well as educational activities. She also likes to play with her kids; their favorite activity is going to the park to take photos. Ina is also wants her children to grow as people, and is interested in environments that allow them to build community. She believes the museum fits many of her playtime needs.

MOTIVATIONS:

- + Imagine Children’s Museum is local and close to Ina.
- + Weather is rainy and cold.
- + Believes childhood passes quickly and wants to document important moments she spends with her children.

“SAY CHEESE!”

HURDLES:

- + Finding navigational signs.
- + Planning out visit.
- + Showcasing educational connections in exhibits and curating at home activities.
- + Cost of membership vs. time to use it.

“FUN THINGS TO DO IN EVERETT, WA. FOR KIDS”

MUSEUM JOURNEY

Lets go to the museum!



research

Google’s ‘fun things for kids to do in Everett, WA.

Finds Imagine Children’s Museum’s website and looks at the hours, admission, and directions.



arrival

Ina drives to the museum with her 2 kids. Drives around the parking lot for 5 minutes until she finds parking.



main floor

Ina plays with her children in some of the exhibits, but loves taking photos on the horse in the Farm.



navigation

Looking for the stairs up to the playground, Ina has to ask staff for help.



art studio

Ina and her kids go to the art studio to do an art project. She wonders how she could do this at home.



playground

Ina is surprised at how large the playground is. She weaves in and out of the playset taking photos of her kids.



leaving

Ina realizes it’s getting late. Her littles is heartbroken. She wants a membership, but doesn’t know how often they could come.

We will try to come back!



Frequent Frances

"I like it here because my child enjoys it."



Works part time, is a stay-at-home mom most days.



Is very active on social media, especially Instagram.



Dislikes waiting in line with her kids.

BIOGRAPHY

Frances is a mother of 4, but only one of her children is under the age of 12. She comes to the museum at least five times a month to entertain her youngest daughter. During their visits, Frances encourages the daughter to play on her own or with other kids. She is unaware of learning through play and does not know how to facilitate activities that encourage this concept at home. Frances does not like chaos in her home, so she comes to the museum to let her daughter play and roam freely.

MOTIVATIONS:

- + Has a membership to Imagine Children's Museum.
- + Wants child to interact with other kids.
- + Imagine Children's Museum is an easy way to entertain her child for hours.

"I NEED A BREAK."

HURDLES:

- + Facilitate learning through play at home.
- + Finding parking.
- + Waiting in line with her child.
- + Cost of membership vs. time to use it.

"GO PLAY WITH THOSE KIDS!"

MUSEUM JOURNEY

We try to come 5x a month.



membership
Comes to the museum at least five times a month with a membership.



arrival
Has trouble finding a parking spot and has to wait in line longer than expected.



main floor
Lets her daughter roam around and explore freely. She keeps her eyes on her while being on her phone.




lunch time
Looks through social media while daughter eats her lunch.



leaving
Frances is unengaged and starts feeling tired. Tells her child she will bring her back for the next workshop event at the museum.

What is going on next week?



Use Case 01 – Immersed Ina

Ina is a mother of two. She's 34 years old. She's married and works full time. She and her husband both have jobs that they commute to. However, sometimes she is able to take time off during the week. Otherwise, she spends a lot of time playing with her children after work or on the weekends. They love to go to parks, and she encourages educational play.

The weather has been cloudy and cold lately so Ina and her family do not want to go to the park. Ina looks to the internet and Google's 'fun things for kids to do in Everett, WA'. She finds Imagine Children's Museum and clicks on their website. She looks at the hours, admission, and directions, and decides that this would be a good place to take her kids. While she doesn't live far away, she does need to drive. Looking online, she sees it'll be \$50 for her and her children to gain entrance to the museum and park for more than three hours. Clicking around on the website, she realizes that she can't buy tickets in advance to pick up at the door. She decides to just go ahead and make her way to the museum, packing some snacks on the way out.

When Ina and her children arrive at 10 am, Ina is surprised by the line to get in. She and her children enter the museum after paying for admission and her children run to the first exhibit Air Amazing. After a while, they move around the main floor, letting the children lead the way. Ina remembers seeing photos of a playground but it takes her a moment to find signage to find the stairs. Reaching the playground after helping her children up the stairs, she is met with a blank wall. Steering the kids around to the other side, she sees that the playground is large, and that there is a dinosaur cave and music section. Although the weather is not ideal, her kids want to play outside anyways.

Her children take off towards the play structure. She sees that it is big enough to get inside and follows them. They play together and Ina takes out her phone. She plays a game they made called "Paparazzi", where she follows her children and plays a type of hide and go seek while taking pictures.

Ina and her children head to the Rooftop Rhythms section of the playground. Both kids are excited to play with the xylophones. While the xylophones are clearly marked with notes, Ina doesn't know any songs she can show them how to play. She shows them a scale and after a couple of minutes they go back to the play structure. She sees an elevator and she approaches it. She realizes that it's for emergency use only when she gets in front of it. This forces her back around the playground. She grabs her children and takes the stairs down to the bottom level.

After using the restrooms and selecting a spot to sit, she and her kids have some snacks. She checks her phone and realizes it's been 3 hours. She's surprised because it's passed so quickly, but it makes her glad she bought all day parking. The Art Studio is near by, and she's excited to make something with her kids.

Today in the Art Studio, they are doing a changing leaf project. As Ina and her children make their masterpieces, Ina pulls out her phone to take some pictures of her kids and their work. She's having a great time and wonders if they can do an activity like this at home. Her children are also able to socialize with other children doing the same Art Project. Watching her kids build their social skills and community make Ina happy she came.

Seeing that the time is nearing 3 pm, she begins to pack up the kids and go. Her youngest doesn't want to leave, making a bit of a fuss. Seeing the display she considers getting a membership, but realizes that she would need to come monthly to get her monies worth gives her pause. She decides to think about it. She gets her children in the car and begins to drive home. She asks her children if they enjoyed their day and they said "Yes! I love it!!" As they drift to sleep, she realizes how packed of a day they've had. The kids will definitely go to bed early tonight.



Use Case 02 – Frequent Frances

Frances is a mother of four children, but her youngest is under the age of 12, who comes up to her and ask her if they can go to the museum on a Friday. As a member of the museum, she tries to bring her daughter to the museum at least five times a month, so she agrees to bring her there.

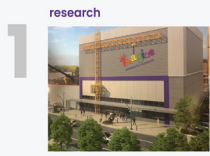
When Frances arrives in the parking lot, she has trouble finding a parking spot since it's the beginning of the weekend. She eventually finds a spot after several minutes of driving around the area. However, it takes longer for them to get into the museum as they wait in line outside. After getting through the admission line, they hang up their jackets on the coat hangers in the Fire Station room.

After going through the admission gate, Frances encourages her daughter to roam the museum exhibits freely. Since they come to the museum often, they have no trouble navigating the place. However, she keeps an eye on her daughter so she doesn't lose her. She goes on her phone while her daughter plays in one of the exhibits, unsure of how she can facilitate learning through activities, especially at home. Frances watches her daughter play independently room.

When lunchtime comes around, her daughter tells her that she's hungry and needs to go to the restroom. They go downstairs to the cafeteria area, where they have their bathroom break and eat their packed lunch. Frances scrolls through her phone as her daughter eats, waiting for her to be done so she can continue playing.

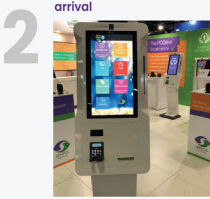
After a few hours, Frances starts feeling tired and says that it's time to go home. She feels that she wasn't engaged with her daughter as she would have liked, but because they come to the museum often, her daughter interacts with the same exhibits every time. When she hears that there will be a workshop event happening next week, she tells her daughter that they will return to participate in the event.

intial contact



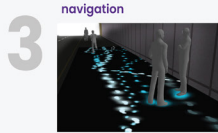
research

More advertisements
Better visibility
Buy tickets online



arrival

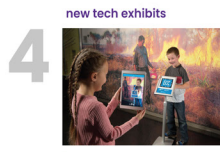
Garage parking off site with a shuttle ride over to the museum with Marco- the bus musician.
Automatic doors
Interactive sign outside by the welcome desk where people can see the event schedule for the day.
Use one of the checkout windows for online sales, equipped with facial recognition intended to increase child safety.



navigation

Interactive floor paths
Slides to go to different floors
Kiosk with exhibit maps divided by skills child will learn.
Augmented Reality map that shows different activities.
Augmented Reality scavenger hunt to collect badges around the museum.

museum experience



new tech exhibits

Heat reactive exhibits
AR App where kids can build their creations in the museum space.
Tactile play spaces with AR touches.
Educational games through AR.



bottom floor exhibits

Planetarium Room
Co-op Room like in Star Wars
Interactive light zone
Kahoot Team Play
Team Game Room with VR
Art Room with natural light

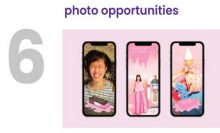


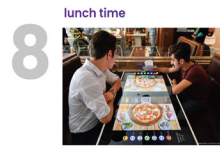
photo opportunities

Photo filters on Snapchat
Special landmarks to take photos with/of.
Photopass like Disneyland



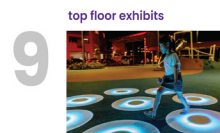
bathroom break

Bigger restrooms with gender neutral bathroom.



lunch time

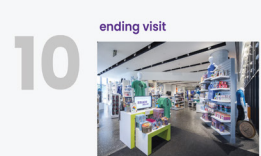
Interactive food court
Healthy and sustainable food options
Recycle, Compost, and Landfill garbage cans.
Parent room with coffee machines, TV's, couches, and phone lockers.
Quiet room
Comfier chairs for parents



top floor exhibits

Motion graphics wall for outdoor area.
Outdoor playground become interactive.

final contact



ending visit

Local brands
Pre-Order items
Items used in events for sale.
Imagine Children's Museum merch.



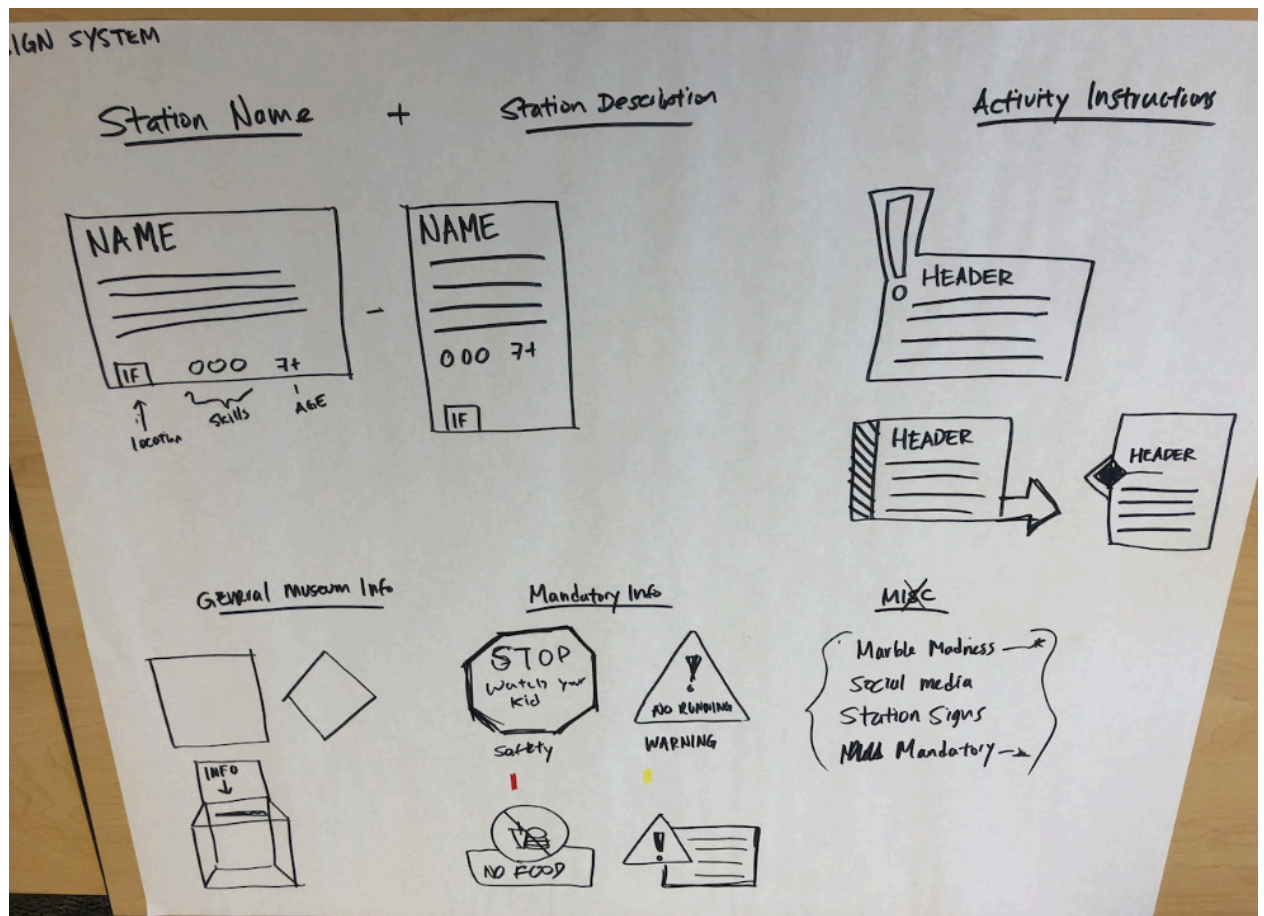
gift shop

Membership changes
10 visit passes
Shuttle back to parking garage.

In the speculative journey map seen above, the Imagine Children's Museum was reimaged. The journey is broken down into three categories: intial contact, museum experience, and final contact. This map allowed the design team to begin thinking about the future of the museum, with suggestions like online ticketing, or tech cooperative play exhibites, while thinking about concepts that could be tangible within the next few years, such as a central hub kiosk of information, or photo filters on snapchat.

The ideas that emerged out of the analysis, co-design session, and experiencing mapping process revolve around design concepts that relate to the on-site museum experience and the museum's digital experience.

The on-site museum experience is about creating a Universal Design system. This system could be used to assist in creating sign cohesion within the museum environment, helping with navigation, and facilitating interactions between adults and children.



To create cohesion within the design system for signage, the team utilized color, text, shape, and visual representations to ensure all visitors are able to read the signage. The solid color and bold text allows for easier readability. In this system, each floor of the museum can be defined by a color, illustrating organization throughout all signs and design solutions.

ADMISSION

All children must be accompanied by a grown-up 18 years old or older.

CHILDREN 12 MONTHS AND UNDER **FREE**

GENERAL ADMISSION (KIDS & GROWN-UPS) **\$13.00**

THURSDAYS 3:00 PM - 5:00 PM (COUPONS NOT VALID) **\$6.50**

MEMBERSHIPS

TWO FUN	\$110
MILITARY FAMILY FUN (MILITARY ID REQUIRED)	\$125
GRANDPARENT FUN	\$135
FAMILY FUN	\$165
FAMILY EXTRAVAGANZA	\$195

LOWER LEVEL PLANTA BAJA



- ART STUDIO ESTUDIO DE ARTE
- CONSTRUCTION STUDIO ESTUDIO DE CONSTRUCCIÓN
- EATING AREA ÁREA PARA COMER
- CLASSROOMS AULA
- RESTROOMS BAÑOS

LOWER LEVEL PLANTA BAJA



- VENDING MACHINES MÁQUINAS DE REFRESCOS
- DRINKING FOUNTAINS BEBEROS
- RESTROOMS BAÑOS

MAIN LEVEL PRIMERA PLANTA



- SEASHORE TODDLER AREA ÁREA DE JUEGOS PEQUEÑOS
- WATERWORKS JUEGOS DE AGUA
- AIRPLANE AVIÓN
- MONTES CRISTO RAILROAD FERROVÍAS
- RECOLLECTIONS ROOM GRANJA

DRINKING FOUNTAINS BEBEROS
RESTROOMS BAÑOS

MAIN LEVEL PRIMERA PLANTA



- AIRMAZING JUEGOS DE AER
- RISE AND SHINE FARM GRANJA
- PIZZA BUS AUTOBUS
- THE LODGE EL ALBERGUE
- BUILD ZONE ZONA DE CONSTRUCCIÓN

DRINKING FOUNTAINS BEBEROS
RESTROOMS BAÑOS

MAIN LEVEL PRIMERA PLANTA



- MARBLE MADNESS GRANJAS
- SLOW ROOM BIEN EN LA SEGURIDAD
- MAESTROS FORMAS MAGNÉTICAS
- THEATRE TEATRO
- OPTICAL ILLUSIONS ILUSIONES ÓPTICAS

MAIN LEVEL PRIMERA PLANTA



- MUSEUM STORE TIENDA DEL MUSEO
- NICCOLIO ITALIAN CAFE CAFE ITALIANO
- WILDLIFE CLINIC CLÍNICA DE VIDA SALVAJE
- GREENHOUSE CASA DE LABOR
- RJ PLACE SALA DE LECTURA

UPPER LEVEL SEGUNDA PLANTA



- ROOFTOP RHYTHMS RITMOS EN LA AZOTEA
- TALL TIMBER LOOKOUT PUERTO DE OBSERVACIÓN
- CHALKSTONE ZONA DE TIZA
- CHECKERS JUEGO DE DAMAS
- DINOSAUR FOSIL DIG DIG DE EXCAVACION DE FOSILES DE DINOSAURIO

FOLLOW US ON SOCIAL MEDIA



TAG US AND USE THE HASHTAG **#imaginechildrensmuseum**

DONATIONS

Thanks for the generous donors who continue to support our organization.



Did you know?
The price of admission covers less than half the actual cost of your visit.

WILDLIFE CLINIC CLÍNICA DE VIDA SALVAJE


The Wildlife Clinic features 16 animal crates where furry puppet friends await an examination, grooming or snuggle from a vet. Study real x-rays and listen for heartbeats with a stethoscope as you learn about caring for a sick or injured pet or wild animal. After the diagnosis, a stop for medicine in the pharmacy will ensure each plush pal is on the mend.



COMPASSION RESPECT EMPATHY
GOOD FOR AGES 3+

**DRINKING FOUNTAINS
BEBEROS**

**RESTROOMS
BAÑOS**



ELEVATOR MUST STAY LOCKED

Please contact a staff member for assistance.

Elevators are available to all visitors with special needs.



NO FOOD OR DRINK ON THE MAIN LEVEL

PLEASE CONSUME FOOD AND DRINK IN THE LOWER LEVEL EATING AREA.



STOP

PLEASE LEAVE ALL ITEMS INSIDE THE EXHIBIT AND PICK UP AFTER YOURSELF.

INSTRUCTIONS

Calling all doctors!

Can you tell? Our animals are not feeling well. Please use your skills to find a cure, and make them flap their wings or purr!

You can help them, we know you will. Your love and concern is their best "pill"!



Furthermore, the signage could assist in helping adults understand the learning being practiced in the installations and exhibits. When observing the museum, team members realized that existing signage surrounding this subject matter was difficult to read didn't feel engaging. Looking into early childhood development, reflecting on observations of visitors to the museum, and conversations with museum staff, the team decided that adding symbols that described the learning being practiced within the space, as well as redoing the signage to be more legible would be viable options to assist in adult engagement. As seen with the above example of the wildlife center, adding the symbols that illustrate the ideals of compassion, respect, and empathy give an adult a starting off point on what kind of play happens within the space. By adding an instruction sign, this starting point can be further realized.





ROOFTOP RHYTHMS

RITMOS EN LA AZOTEA

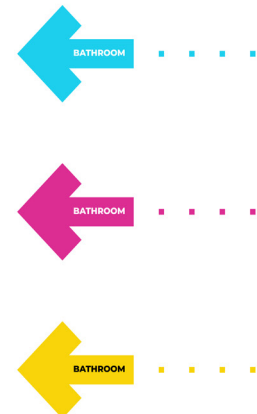
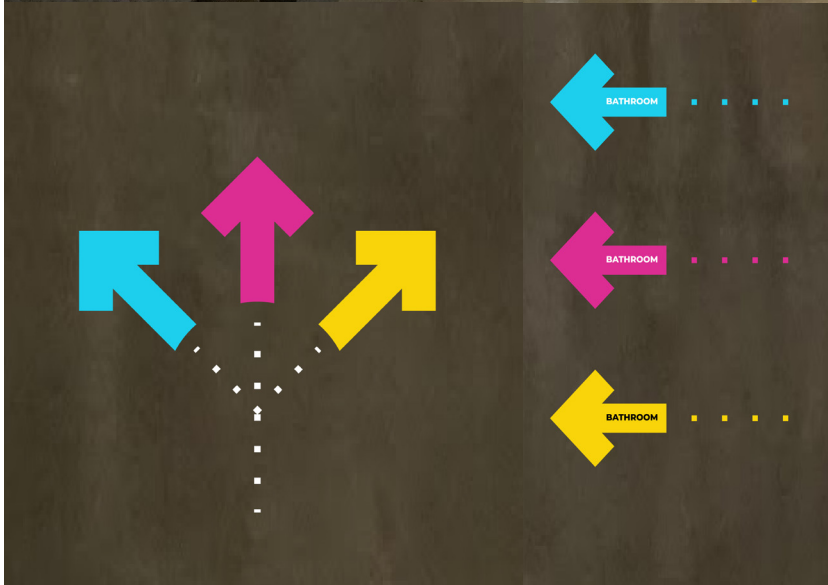
Get your groove thing on! At Rooftop Rhythms you can learn how to play your favorite songs, or make up your own! With a stage and xylophones, children are able to explore music and self expression, as well as math and fine motor skills.

GOOD FOR AGES 1+

Additionally, team members felt that adding specific signage that encouraged play between adults and children would be beneficial. For example, team members realized that adults and children didn't spend much time interacting with the xylophones in Rooftop Rhythms section. Therefore, the suggestion is to add sheet music signage of specific songs with accompanying color coding of xylophone keys offers adults an easy way of showing children how the instrument works, which creates moments of exploration and

Design Concepts

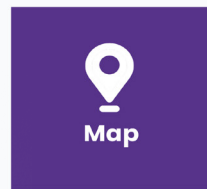
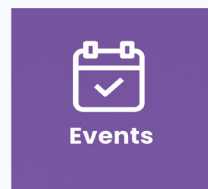
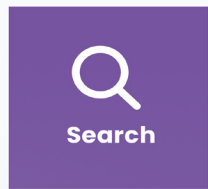
Navigation on-site at the museum is a challenge for visitors. Due to the vivid colors and exciting nature of the installations and exhibits, the lack of branded museum signs made the wayfinding signs difficult to find. Thinking to the observations of low traffic versus high traffic times within the museum, and referring to the design system, the design team felt that adding floor signage would assist visitors in finding the restrooms. This is due to adult visitors eyes being more likely to be looking down, towards the children they are with. By adding this signs, visitors in low traffic times may have an easier time navigating the museum, elevating the need to ask for assistance.



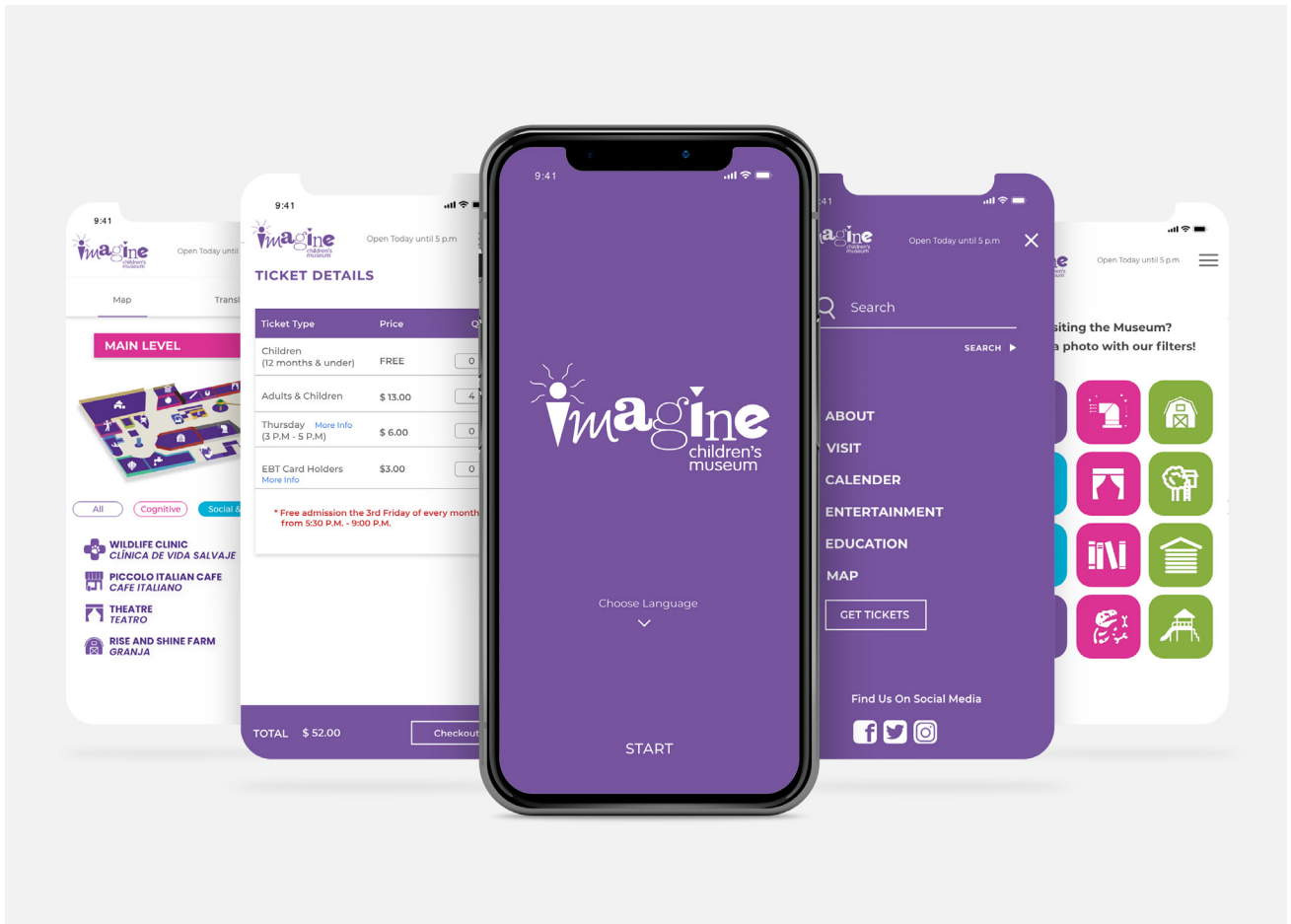


MAIN LEVEL ▼

-  **MUSEUM STORE**
TIENDA DEL MUSEO
-  **PICCOLO ITALIAN CAFE**
CAFE ITALIANO
-  **WILDLIFE CLINIC**
CLÍNICA DE VIDA SALVAJE
-  **TREEHOUSE**
CASA DEL ÁRBOL
-  **PJ PLACE**
SALA DE LECTURA
-  **MARBLE MADNESS**
CANICAS
-  **GLOW ROOM**
BRILLA EN LA OSCURIDAD
-  **MAESTROS**
FORMAS MAGNÉTICAS
-  **THEATRE**
TEATRO
-  **OPTICAL ILLUSIONS**
ILUSIONES ÓPTICAS
-  **SEASHORE TODDLER AREA**
ÁREA DE NIÑOS PEQUEÑOS
-  **WATERWORKS**
JUEGO DE AGUA
-  **AIRPLANE**
AVIÓN
-  **MONTE CRISTO RAILROAD**
TRENES
-  **RECOLLECTIONS ROOM**
GRANJA
-  **DRINKING FOUNTAINS**
BEBEROS
-  **RESTROOMS**
BAÑOS
-  **AIRMAZING**
JUEGO DE AIRE
-  **RISE AND SHINE FARM**
GRANJA
-  **EVERETT BUS**
AUTOBÚS
-  **THE LODGE**
EL ALBERGUE
-  **BUILD ZONE**
ZONA DE CONSTRUCCIÓN
-  **ELEVATOR**
ELEVADOR



An idea that had developed out of the co-design session between the design team and the museum was a central hub in the form of a kiosk. This would assist with an area of opportunity felt by the museum and its visitors regarding event announcements and navigation. As seen in this mockup, the kiosk would sit in a main walkway of the museum. It would have an updated map to assist in finding restrooms and exhibits, but would also showcase exhibits by skills learned. Furthermore, an event calendar could be accessed to see the days or months events. The team also imagined that eventually, a social media aspect could be integrated with the development of an Imagine Children's Museum app.



In terms of the digital museum experience, when the museum had first pitched the project, they had data that suggested a digital app would be a beneficial design. This was confirmed by the research done by the design team as 65% (11/17) of visitors surveyed would use an app if available. In terms of how the app should function, the team looked at the suggested features from the visitors, and built screens from there. They decided that the following features were the most important.

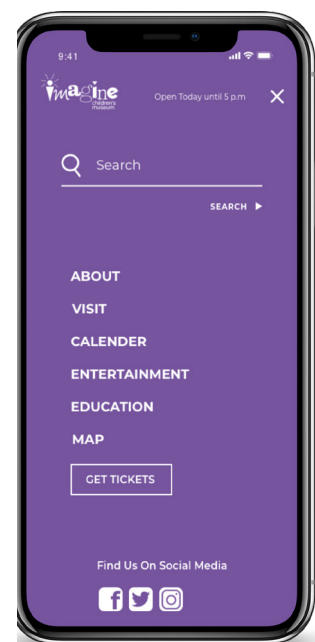
Home Screen
Visiting information
Calendar connected to an **Event List**
Entertainment (page to select filters to take photos with)
Education
Map

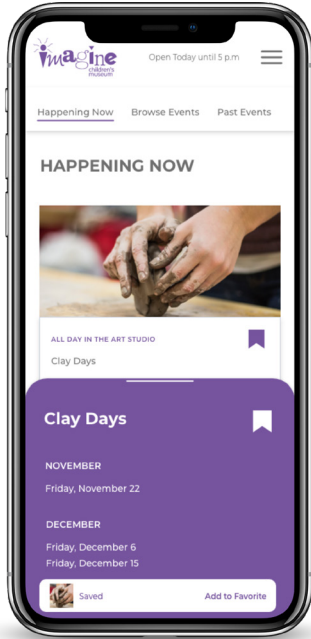
Overwhelmingly, visitors were interested in planning and museum information, which is where these screens are centered. Some visitors wanted features that would get them more involved with their children's experience at the museum, such as suggested exhibition interactions. Others wanted Imagine Children's Museum educational games. As the team began working on the screens, they examined the website of the museum. It was felt that it was information heavy, and so the app should focus on specific areas of interest to allow for visitors to use it with more ease.



The home screen allows for the visitor to select a language upon entry, before looking at a main screen with the current events.

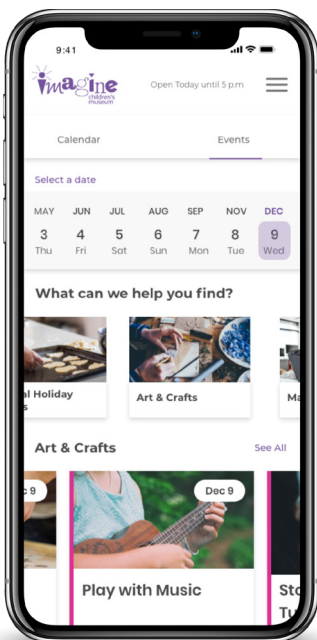
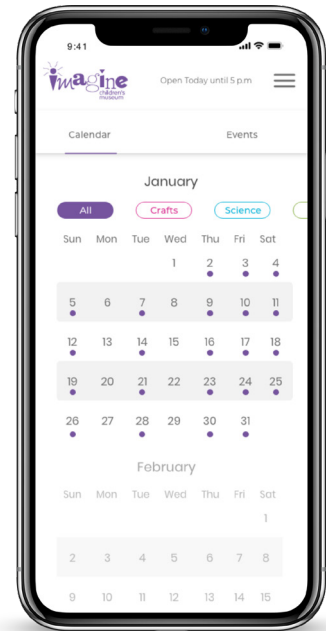
From the menu, visitors are able to look at a calendar. The calendar displays a month at a time. Events types within the calendar are color coded, allowing them to pinpoint specific interests. Visitors also have the option of looking at all events going on at the museum.



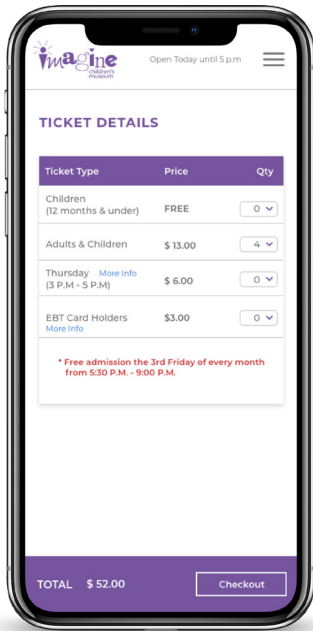


The main screen allows visitors to look at a the current events and past events. Since visitors were looking for more museum information, these screen allows them to access this knowledge easily for planning a visit.

The calendar displays a month at a time. Events types within the calendar are color coded, allowing them to pinpoint specific interests. Visitors also have the option of looking at all events going on at the museum.

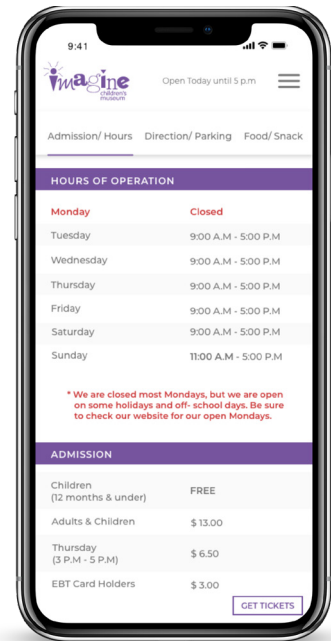


Events tab displays a month at a time. Events types within the calendar are color coded, allowing them to pinpoint specific interests. As noted in the data analysis, museum information and planning were important features for visitors. By allowing them to see items by event type or by week, this imagined app meets all visitor planning needs.

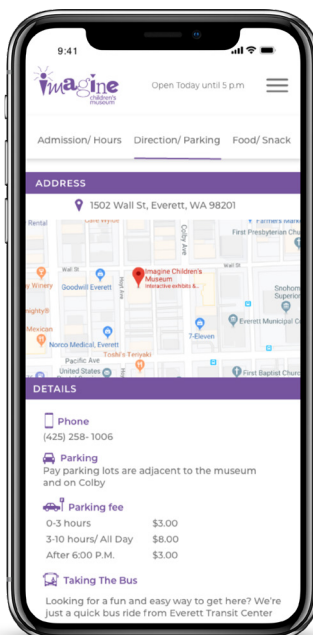


The application also has the option of looking up **ticket prices and buying tickets**. When examining where the museum could go with its digital experience, the design team identified an opportunity to allow online ticketing for faster check-ins.

The application also has the option of the **hours of operation**. The hours of operation can change depending on the day, making this screen an important planning feature.



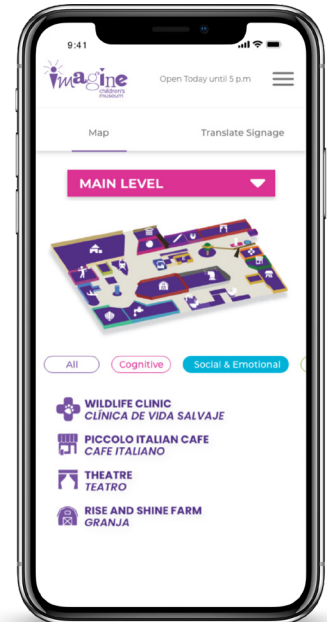
The application also has the option of **looking for parking**. While parking was not identified by visitors as an area of opportunity via survey, it was brought up in the co-design session. The museum is eliminating some parking to expand, and therefore being able to communicate parking information will be important to future visitors.





In terms of education and entertainment, the team created screens inspired by the updated signage in the museum. Like the signage showcased at the Wildlife Center, the app would allow for adults to select locations and read about possible interactions and questions that they could ask the children they are with.

Building off of this idea, it was also important to allow visitors explore the museum by learning experience. The design team felt that looking at exhibits with specific early childhood development outcomes such as cognitive development or social and emotional development was key to facilitating better adult and child interactions within exhibits. It was also felt that this was an opportunity to have a sign translation system as well, utilizing a phone's camera to scan the new signage and translate via the language selected upon downloading.



Additionally, while in the museum, the design team noticed that adults utilized taking photos with their phone as a means of documenting fun moments. This inspired them to think of photo filters that visitors could apply to their photos to make these moments a more customized experience. This feature furthers the "After" experience of the museum, as the saved photo becomes a precious keepsake for visitors.

Next Steps

The next steps for the museum are to examine the design concepts and see how they fit with the museum's goals. With the museum expanding, these design concepts represent an opportunity to revamp the existing systems within the museum, and continue to make the museum experience better. Some of these ideas require hiring of a developer or design firm to fully realize. That being said, the museum should conduct more research with their visitors surrounding the ideas presented. This can look the following ways.

- 1.** Conducting a survey presenting the ideas, and asking for visitors to imagine their effect.
- 2.** Installing low cost prototypes of the signage, wayfinding stickers, and central hub and conduct surveys for visitor feedback.
- 3.** Showing visitors the app prototype screen and asking visitors if their needs are being met by the current app feature suggestions.

Final Thoughts

Through this design process, the IMD design team feels that they have addressed major concerns revealed both by the museum and its visitors. As the museum continues to grow, it is important to iterate on the visitor experience digitally and on-site. Through the use of these design concepts, the museum will continue to develop and iterate their museum experience, and better meet the needs expressed by the visitors and observed pain points.

Team **Takeaways**

Through this project, these student designers have discovered the importance of ethnographic study within the design process. Through the use of a real client with real design context, the team was able to explore how research better reveals both areas of opportunity and design solutions. This became especially important due to the partnership built between the community partner and design team. By having this partnership be apart of the design process, this project allowed the team to more deeply learn about the relationship between designers and their clients by showcasing the importance of collaboration and partnership. The experience has been transformative and will inform their design process as they grow as designers.

Special **Thanks**

The Design Team would like to extend a heartfelt thank you to the Museum Staff that took time out of their days to work with them on anything from design solutions, to the best place to take notes, to helping them find visitors to interview. Without the staff's assistance, the project would not be as fruitful as it is. **Thank you!**