



MOBILE ENVIRONMENT

EVENT INSTALLATION

INTERACTION

BRAND IDENTITY

Luna Digital

Take home an attraction that fits in your pocket

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The following case study is conceptual work and does not represent Luna Park Melbourne

Abstract

Luna Park asked us to augment its fairground attractions with loopy, out-of-this-world, and zany digital experiences.

Through our research, we have identified an exciting opportunity to improve the experience and engagement of all attendees to Luna Park, in particular older demographics such as guardians or young adults. With Luna Digital we aim to tackle common complaints, entice new demographics and entertain all attendees of Luna Park through an exciting and interactive modern visual experience.

Utilising strategically placed media walls displaying dazzling real-time graphics and motion sensors alongside a gamified collection app Luna Digital will add a tasteful modern touch to the park's current offerings. Luna Digital will address physical bottlenecks at the park, provide all-age entertainment and create content that all visitors will want to experience and share with their friends and on social media.

CASE STUDY BY

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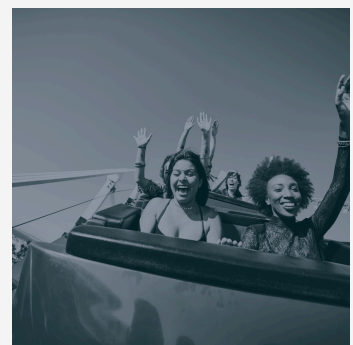


Introduction

Traditionally, many people perceive Luna park as being tailored almost exclusively towards children, with their guardians and younger adults sometimes expressing frustration online, through platforms such as Google reviews, with what the park has to offer them. Through developing a modern digital installation and smart-device app, we intend to create a colourful and exciting digital experience for all Luna Park visitors, with a particular aim to draw in new audiences who may not typically visit the park.

Through extensive research, we have identified a number of frustrations made by older attendees on online reviews (we have focused on online reviews for the time being due to the Covid-19 pandemic). The majority of older attendees to Luna Park usually attend to accompany their children and some of the most frequent complaints centre around the fact that there is little that appeals to them personally.

Luna Digital will offer a modular and highly customisable interactive experience that excites everyone, allowing us to cater to the needs and preferences of all age groups, not just younger children. Another frequent complaint by attendees is the waiting times for the popular rides. Luna Digital will be thoughtfully placed alongside queues so that attendees in line can be entertained while they wait.



In addition to the installation, Luna Digital will include an accompanying app where users are encouraged to explore everything Luna Park has to offer, scanning QR codes along the way that unlock new and exciting customisable visuals or 'looks'. By staggering the timing of these achievements or challenges Luna Digital will address bottle-necking at the park by spreading out users as they hunt for new looks.

The installation and app will allow users to explore Luna Park in a new and unique way, while still being able to experience the park's historic charm. Furthermore, by offering something new and exciting to attendees who are highly proficient in technology and social media, Luna Digital will lead to a boost of engagement in Luna Park's presence across platforms, as users will want to share their experiences involving the new installation.

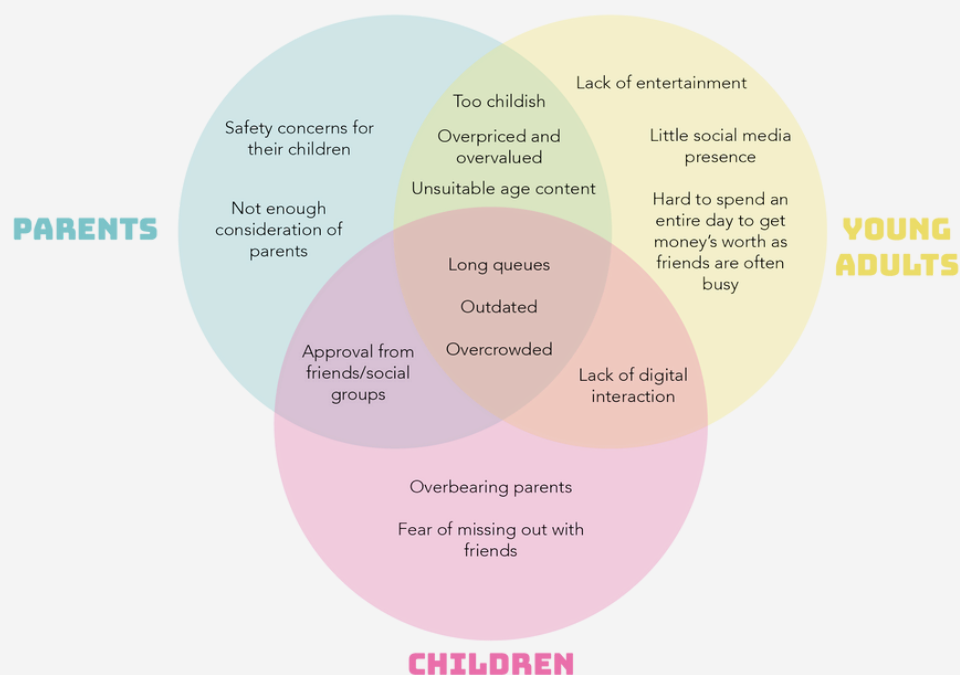
Aims

- | | |
|----|---|
| 01 | Provide an exciting digital attraction that apples to older audiences and is still suitable for all ages |
| 02 | Offer an interactive and customisable experience that increases customer satisfaction and repeat attendance |
| 03 | Increase engagement and recognition for the park through social media |
| 04 | Reduce frustrations around wait times and overcrowding |
| 05 | Encourage additional interaction with everything Luna Park has to offer |

Target user base

During our research, we identified **three main users** of the park: children, their guardians, and older non-guardian attendees.

Through collecting information from visitor reviews and closely inspecting our target user base, we identified the pain points that all users, across all ages, had most in common. These pain points include outdated features, long queues, and overcrowded areas. By identifying common pain points of the largest audiences, we are able to narrow down the objectives and design concept of our installation, in order to provide better solutions for these issues.



COMMON USER PAINPOINTS VENN DIAGRAM

During this process, we noticed that Luna Park is predominantly aimed towards children and their guardians, suggesting an opportunity to improve the satisfaction of older attendees. As the park is already suited to young families, we aimed to attend to the needs of young adults and older by providing entertainment that is more engaging to them. Therefore, in addition to the common pain points that affect every user base such as queue times, Luna Digital would also address the older demographic's frustrations such as unsuitable age content and the lack of digital interaction in the park.

Primary user persona



Secondary user personas



User Journey

The user journey maps out the interactions, expectations and feelings of a young adult interacting with Luna Digital. After identifying, comparing and contrasting the values, pain points and desires of the three main users of Luna Digital, a young adult was highlighted as the user with the most cross-over.

As defined in his user persona Justin is a 27 year old university student who is attending Luna Park with his friends. As a casually working student, a key desire for Justin is to enjoy a fun and engaging experience that proves to be worth his time and money. Additionally, a major pain point for Justin is feeling undervalued; hence, Luna Digital aims to create an experience that is more inclusive of young adults and guardians by integrating technology that affords visitors a memorable interactive experience.



USER JOURNEY: JUSTIN WALKER



	Step 1a	Step 1b	Step 1c
User action	Justin sees a photo on Instagram of a mutual at the Luna Digital installation	He becomes interested in paying a visit to the installation himself and share forwards the images to his friends	He talks to his friends about the interactive installation and they decide to purchase tickets online
Touchpoints	He clicks on the hashtag to find out more	Justin discovers that the installation is an interactive "sideshow" at Luna Park	On the website, Justin learns about the Luna Digital app and the various functions of the installation. He and his friends decide to download the app in preparation for their attendance later
Expectation & Goals	Justin aims to get his friends on board with his plans to visit the installation	He expects to have a fun day out at Luna Park because he has experienced it before; additionally, he is looking forward to seeing a new and modern attraction	He and his friends expect the app to be easy to use and navigate, plus importantly, worth the effort of downloading
Thoughts	He thinks the installation looks intriguing and would make for a great Instagram photo The tickets are expensive- especially for someone in Justin's position as a student doing casual work	Justin is excited about his first time interacting with the installation Justin feels like he isn't able to see his friends enough	Justin is mildly frustrated about downloading the app because he doesn't expect to use it again after visiting the installation
Recommendations	Adding promotions that come with every visit to the installation (especially during its launch, for a limited time). E.g. discounted tickets or one free ride for their next visit		Incentivising users to download the app to be used in conjunction with the interactive media wall (which will only function with the app)

USER JOURNEY: JUSTIN WALKER



Step 2a

Step 2b

User action

Justin and his friends arrive at Luna Park

They start their visit by going on all of their favourite childhood rides

Touchpoints

They use the map feature of the app to locate the rides they want to go on

Justin and his friends can scan QR codes at each ride to unlock different achievements

Expectation & Goals

Justin aims to unlock all the achievements in the app so that he can experience all of the different features on the media wall. He wants to make sure that the app was worth the download.

Thoughts

Gain

Pain

Justin finds it cool that he can unlock new achievements in a way that is similar to video games

He is eager to try the unlocked features. He feels a rush of excitement after every achievement is unlocked and completed

Justin and his friends find it annoying that to unlock some achievements, you need to spend money at food and drink vendors

Recommendations

Spin-the-wheel feature in the app that gives users the chance to win free and/or discounted food, drinks, and exclusive take-home prizes

USER JOURNEY: JUSTIN WALKER



	Step 3a	Step 3b	Step 3c
User action	While waiting for a ride queue to shorten, Justin and his friends go to an unoccupied media wall	Justin and his friends play around and experiment with different features of the media wall	Justin and his friends begin to realise that they are able to quickly unlock more achievements by going to areas of the park that are less crowded
Touchpoints	They scan the QR code that enables them to interact with the media wall using their phone		Justin uses the map feature on the app to efficiently locate the less-crowded areas
Expectation & Goals	They aim to get fun and creative photos to commemorate their time together at Luna Park	They notice other people at the media walls using different features and aim to unlock more features as the day goes on	They aim to unlock all of the features before the end of the day
Thoughts	Justin really enjoys the 'game' of finding and interacting with the wall	Justin is impatient so he thinks the installation is a fun and worthwhile activity to pass the time	
	Justin and his friends wish they had more time to do activities like visit the park and complete these activities		
Recommendations	Visitors can keep their user account with its unlocked features, incentives and achievements so that they continue with their installation quests when they come back to visit		

Gain

Pain

USER JOURNEY: JUSTIN WALKER



Step 4a

Step 4b

User action

- After returning home from his visit to Luna Park, Justin goes through the photos and videos he has taken from the installation experience
- Justin shares his experience with other friends who have not yet visited Luna Park's new installation

Touchpoints

- Justin posts his favourite highlights from the experience on Instagram, using the Luna Digital installation hashtag

Expectation & Goals

- Justin recommends visiting Luna Park to his friends, so he expects that they will be similarly satisfied when they go to experience it for themselves

Thoughts

- Gain
- Pain

- Justin believes that his time at Luna Park was well-spent, and that the new installation is a great attractions for all ages

Competitive analysis

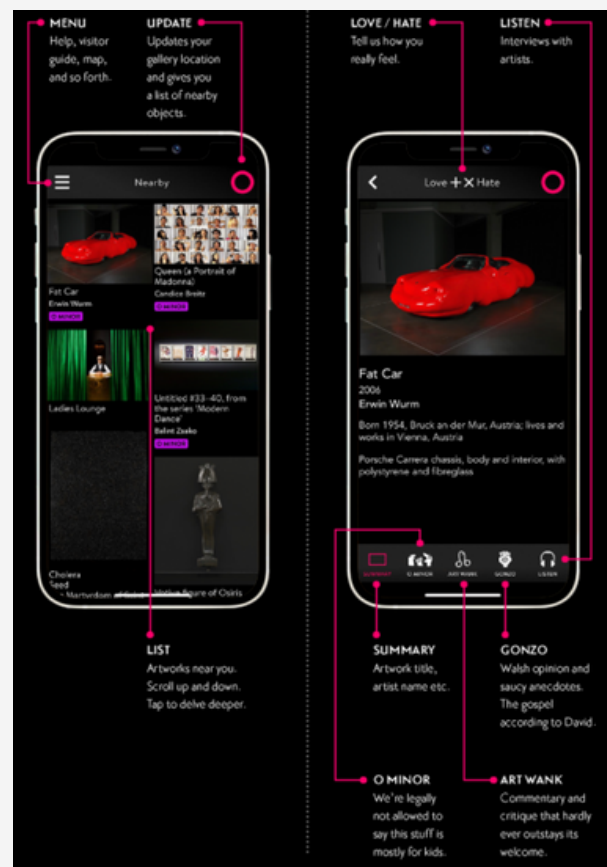
The O

Museum of Old and New Art

Commissioned by the Museum of Old and New Art (MONA), The O is a mobile guide app created by the company Art Processors. The O mobile guide is an integral part of the MONA visitor experience. The app uses “indoor positioning technology” (Art Processors 2019) which substitutes wall labels by providing information about the artwork visitors are nearby.

Other functions of the app is enabling visitors “join” a queue to an artwork on the app which helps to avoid crowding and long lines in the museum. The app also helps MONA accommodate to visitors with low vision or reading difficulties with its “VoiceOver and reader” (MONA 2020) functions.

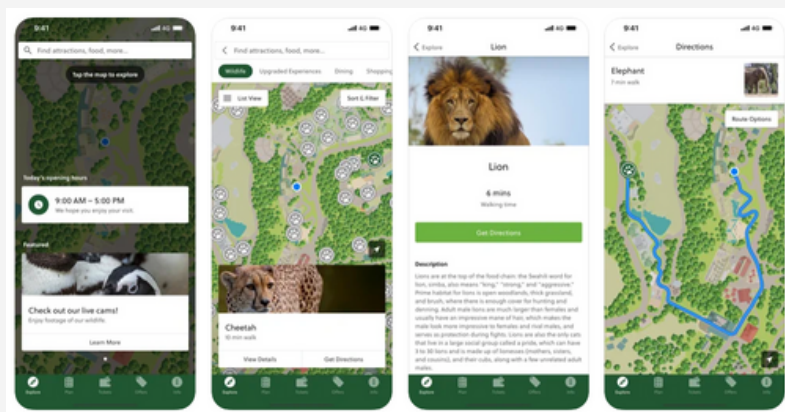
Luna Digital will take inspiration from The O's approach to mediate visitor spatial interaction around the museum. Similarly to The O, Luna Digital aims to reduce time spent waiting in line and crowding around certain areas. However, the Luna Digital approach will reduce perceived time spent waiting in line by providing the visitors with interactive entertainment.



Travel guide

San Diego Zoo

Luna Digital was programmed in TouchDesigner by our talented interactive designer, Geordie. This was our choice of programme as it excels at real-time graphics and interactivity. Users connect to a video panel with a QR code that instructs them to download the associated app. From the app, the user can choose between different presets that they can then customise on their phone. This data will be sent via OSC to the computer running TouchDesigner and appear in real-time. The app contains instructions on how to unlock different presets for the user, timed challenges that vary between users to spread attendees around the park and a map that shows them where to go.



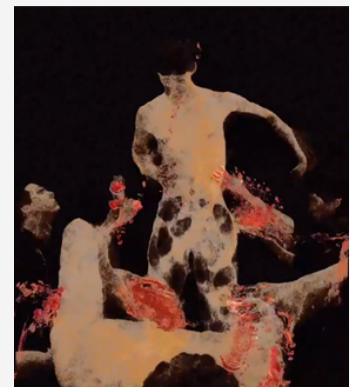
'Woogie_projects'

Kohui

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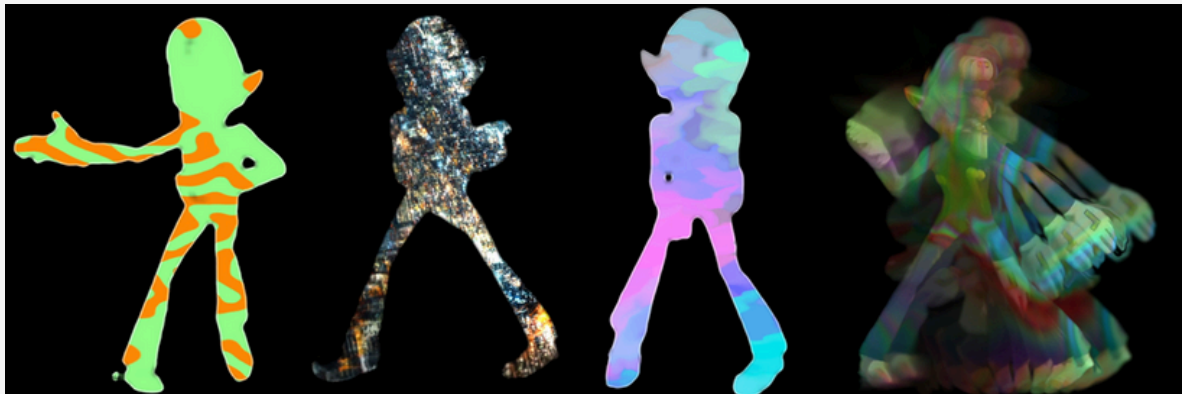
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Design approach

Interaction

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INTERACTIVE VISUALS PRODUCED IN TOUCHDESIGNER

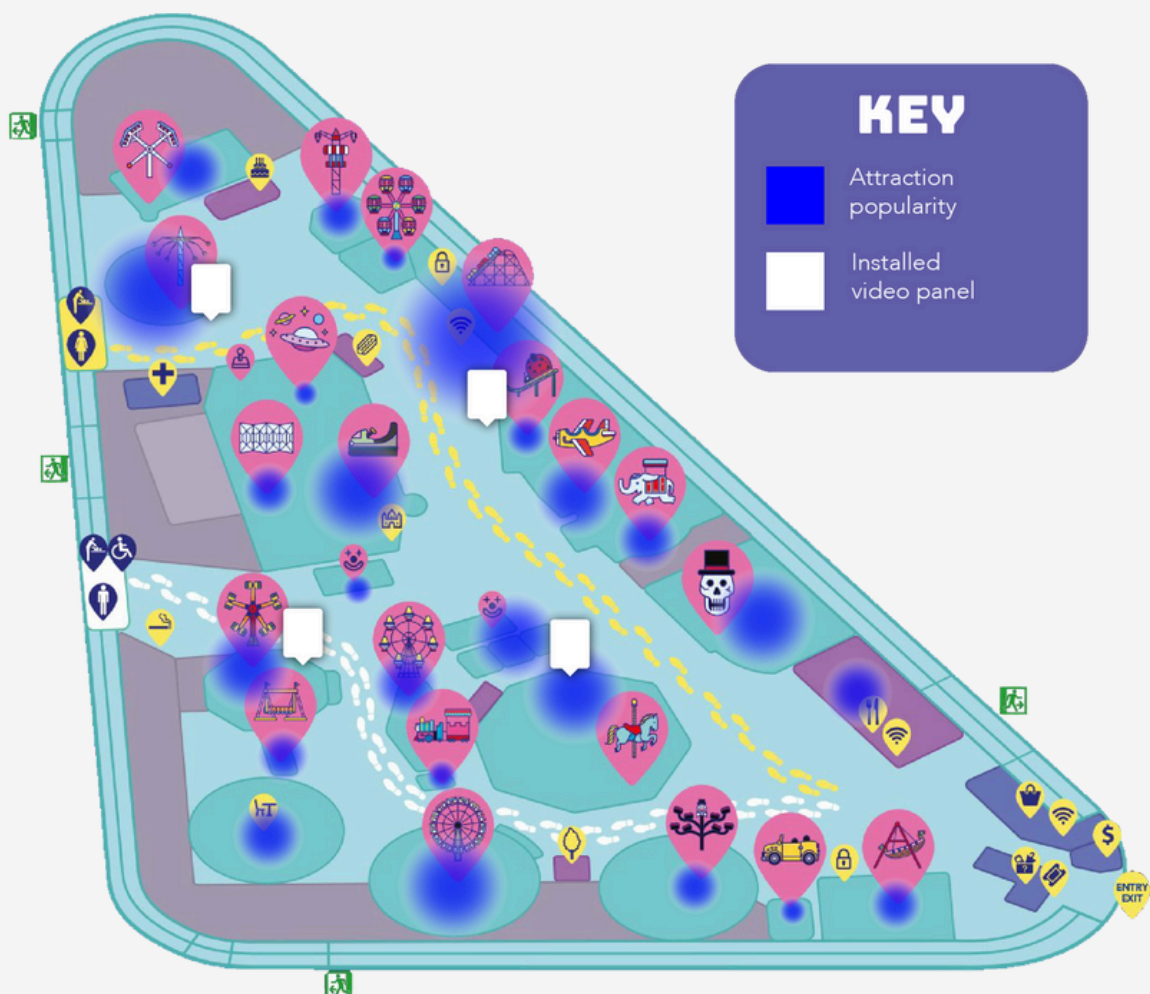
Luna Digital aims to provide an exciting and engaging experience for all visitors to Luna Park. The "project" combined two components that work together to enhance the Luna Park experience:

- 01 The key feature of the Luna Digital app: the challenges that visitors complete in order to unlock "Looks". Unlocking "Looks" drives the visitors to interact with component **02**.
- 02 The interactive media walls located throughout the park enable visitors to interact with the installation and use the unlocked features on the app. These interactions and unlocked features are documented and shared through various social media platforms.

Spatial design

With Luna Digital, we aimed to manage the flow of people throughout the park by strategically placing our four main video panels in the areas that typically experience the most congestion as well as the longest queues. After plotting the most popular attractions and common user pathways, we were able to identify the best locations for the installations.

By adding these panels in busy areas, users can join in on a new activity while they wait, which will reduce the risk of boredom. From a spatial perspective, the specifically-located video panels will naturally diverge overcrowded areas, reducing bottlenecks and allowing for a better traffic flow. Within the app, challenges will randomize and appear differently for every user, to encourage exploration throughout all areas of the park.



DENSITY MAP SHOWING MOST POPULAR ATTRACTIONS
[INTERACTIVE MAP TAKEN FROM LUNA PARK]

Brand identity

The Luna Digital application maintains Luna Park's brand identity by including the same pastel colour palette and flat design styles used in the park's own interactive map. In order to preserve the park's bright and colourful persona, we wanted the feel of the interface be fun and zany without being too childish. Styling elements included bold headings, san-serif body typefaces, and vector-illustrated line icons. The layout will be clean and simple, to ensure accessibility for all audiences. With large buttons and clear instructions, users are able to navigate the app with ease as they work through each interactive activity.



BUNGEE, 60

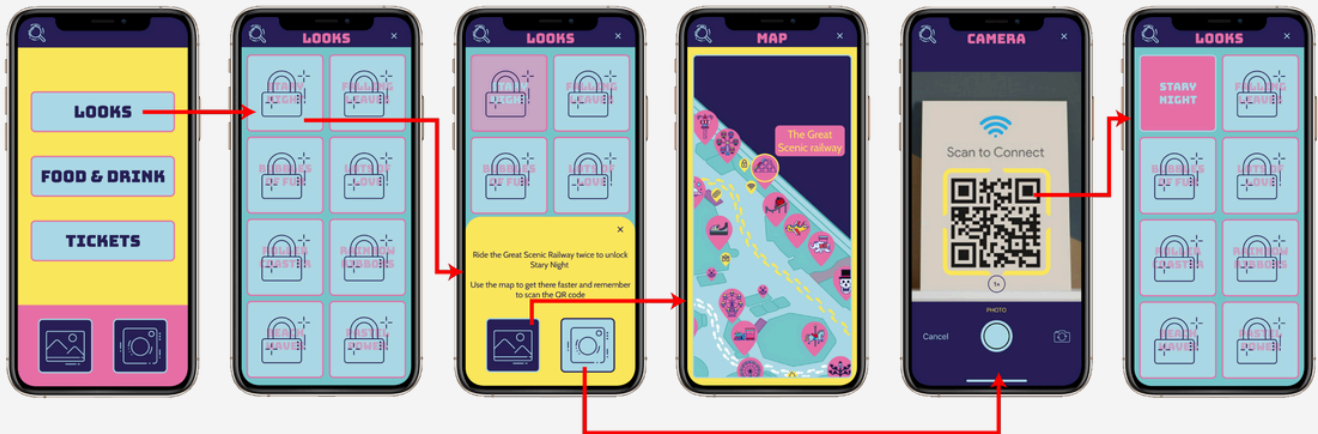
Heading

Open Sauce, 20

Body

HEX: #282157 RGB: 40, 33, 87 CMYK: 54, 62, 0, 66	HEX: #77C8CC RGB: 119, 200, 204 CMYK: 42, 2, 0, 20	HEX: #ACDAE7 RGB: 172, 218, 231 CMYK: 26, 6, 0, 9	HEX: #E772A9 RGB: 231, 114, 169 CMYK: 0, 51, 27, 9	HEX: #FDE95D RGB: 253, 233, 93 CMYK: 0, 8, 63, 1

App mockups

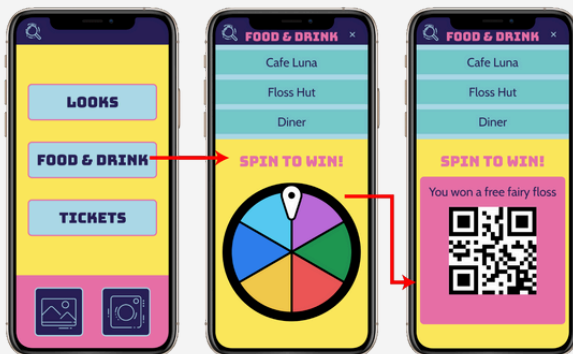


The "Home" screen provides clear sections for the three pages of the app and interactive buttons for the camera and map.

The "Looks" section enables visitors to interact with the features they want to unlock and view the challenge they must complete in order to do so.

By clicking the map icon users can open an interactive map so they can locate challenges.

Upon completing a challenge or part of a challenge visitors can use the camera to scan the QR code and unlock a "Look".

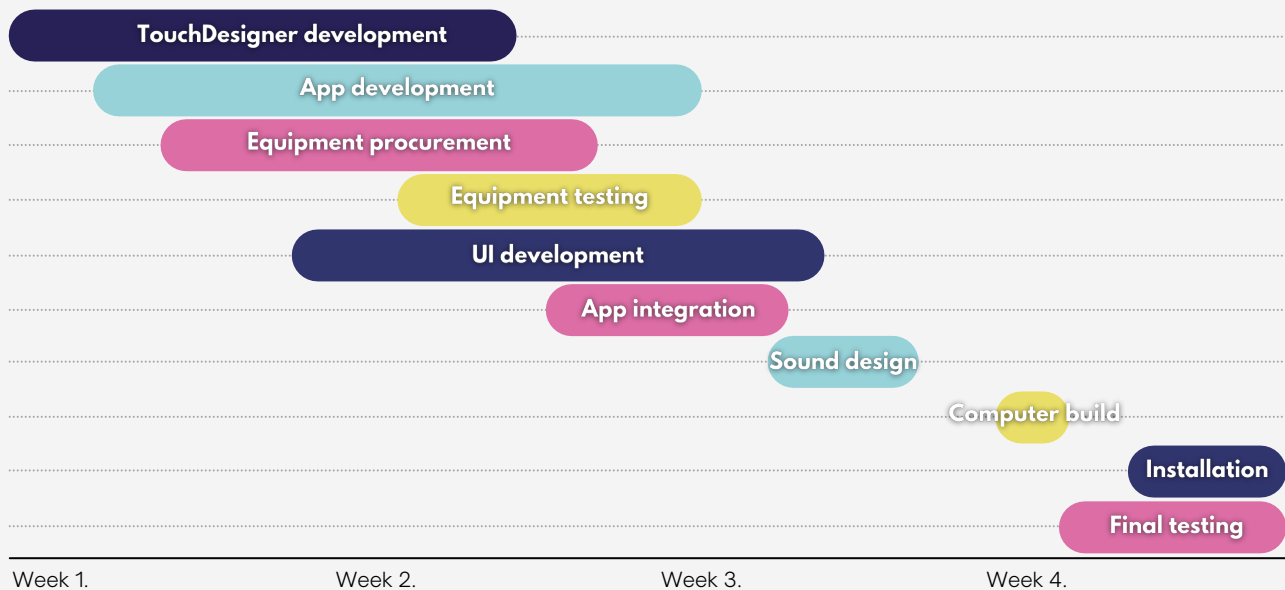


The App will offer simple interactive mini-games to encourage repeat business and extend time and satisfaction at the park.



The parameters page allows users to customise their "Looks", encouraging self-expression and fostering a sense of ownership, increasing the likelihood of user's sharing their experience to social media.

Timeline



Expected delivery times.

Budget

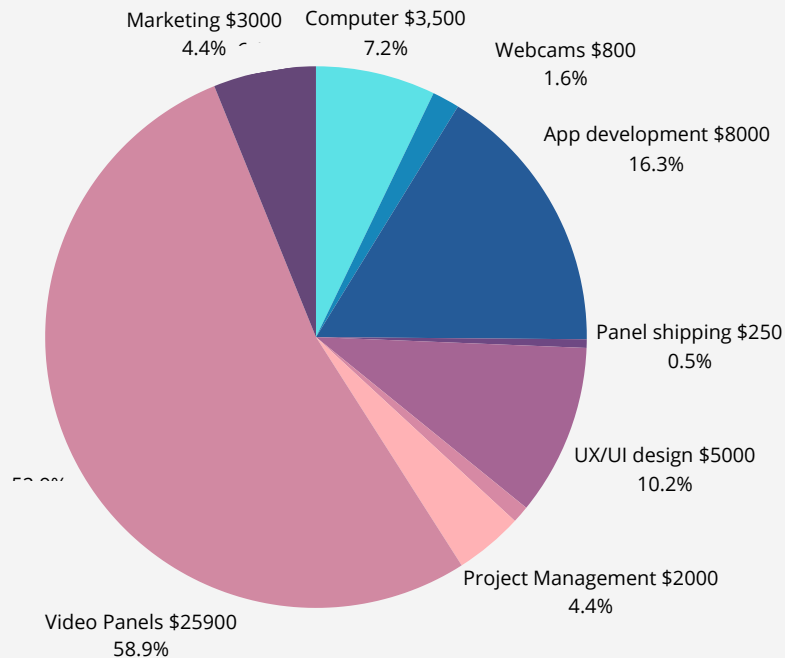
Costs can be broken into two main categories, development and equipment. Development costs ensure all features are thoroughly tested and deliver on the level of quality expected from Luna Park by its attendees.

The development phase of the app and installation components will occur concurrently and be managed fully by our team. Keeping our development fully in-house will enable us to guarantee a high level of interoperability and synergy across the multiple facets of the project.

The equipment chosen (see breakdown over page) ensures that the installation and its underlying components reflect the quality of the experience help reduce future maintenance costs. All equipment is rated for outdoor use, ensuring longevity and reliability.

We have recommended specific brands or components where they are important to features of the installation or have a strong reputation for reliability and serviceability.

Initial costs breakdown



TOTAL: \$48,950

- Computer
 - Intel Core i7-11700K 3.6 GHz 8-Core Processor
 - Corsair iCUE H100i RGB PRO XT 75 CFM CPU Cooler
 - ASRock Z590 Phantom Gaming 4/ac+ ATX LGA1200 Motherboard
 - Crucial Ballistix 32 GB (2 x 16 GB) DDR4-3200 CL16 Memory
 - Western Digital Green 1 TB 2.5" Solid State Drive
 - PNY GeForce RTX 3080 10 GB XLR8 Gaming UPRISING EPIC-X RGB Video Card
 - Phanteks Eclipse P360A ATX Mid Tower Case
 - Silverstone Strider Gold S V2 850 W 80+ Gold Certified ATX Power Supply
- Webcams x4
 - Logitech Streamcam (1080p 60fps)
- Video panels 4x 195cm x 97.5cm each
 - 200 x Sparkfun 64 x 64 LED Matrix panels
 - 4 x IEC power cords
 - Shipping
 - Testing
- App development process
 - Prototyping
 - UI development
 - UX development
 - Sound design
 - Installation integration
 - Testing
- Installation development process
 - Prototyping
 - TouchDesigner programming
 - Testing
 - App integration
- Project management
 - Administration
 - Research
- Panel installation
 - Contractor hire
 - Further testing
- Marketing
 - Advertising campaign
 - Guerilla-marketing support

“Post”-visit



We purposefully targeted young adults as our primary user for two main reasons:

- 1) They had the most painpoints
- 2) A lot of them are absolute pros at technology and love to share what they are up to on social media

Attendees can use in-app tools to share their experiences involving the new installation via different social media channels. The simultaneous launch of various social media and digital marketing strategies will additionally support this.

So, users such as Justin will help boost the park's engagement and digital presence across all platforms... even after closing time.

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