

Rouse Hill
TOWN CENTRE

by The GPT Group

FOOTSTEPS

An interactive information visualization

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Portfolio Documentation



FOOTSTEPS

An information visualization to help improve customer experience in Rouse Hill Town Centre.

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What is Footsteps

Gift Card usages



Footsteps is an interactive information visualization designed for The GPT Group's Rouse Hill Town Centre (RHTC). By taking data from the gift card reference, it displays the paths or footsteps that customers took to spend their RHTC gift cards. While it doesn't show the actual path or complete journey each individual took on their visit, it does show which stores the customers like to spend their gift cards at. From this visualization we can find out which is the most popular stores and the reasons why visitors come to RHTC. This can encourage customers to ignore their routine and visit various stores by following other's footsteps.



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Design Process

Research & Analysis

Before designing anything, research & analysis was conducted through onsite visits and online research to better understand RHTC. The aim was to gather various information such as target audience, transportation, point of interest as well as existing problems and solutions.

The following is some of the results of the analysis:

Currently there is no Rouse Hill train station so buses are the main source of public transport. Many bus stops are located outside RHTC that comes every 10 - 30min. There are also taxi services, bike racks and an underground carpark.

Due to difficulty with public transport, the majority of customers are most likely locals. According to Statistics, residence of RH has:



Average people per household: 3.4



Average vehicles per dwelling: 2.1

This means many locals are families with children and own at least 2 cars. The majority of the age range in Rouse Hill is under the age of 20 and therefore mostly students and families visit RHTC.



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Design Process

Research & Analysis

RHTC is divided into 4 quadrants:

- Green
- Blue
- Orange & Yellow
- Red & Brown

This separation represents the section of the parking lot located underneath and doesn't appear to have any effect on the placement of shops. There is a large big name store in each quadrant.



Looking at the roads, it's clear that this is not a typical shopping centre but rather village style open air shopping experience. As a result customers and shops are subjected to different weather conditions. There aren't many areas suitable for displaying information or placing interactive displays long term without fear of rain.

Directions are reliant on street signs which further emphasis the village style immersion as well as the occasional map. There are interactive directories placed in the four corners and a several ad displays along the roads/walkways.



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Design Process

Initial Mockup

After the research & analysis, ideas were brainstormed and mockups created. This is the initial idea and emphasis on encouraging customers to visit other stores.



Location of the stores are based on the RHTC map for accuracy and the start point of the footsteps will be at the bus stops which will be considered the main entrance. All footprints will start from the entrance leaving a trail until it reach it's store according to the data. The path is not representation of the real world and thus should not be used as directions. Each time a footprint reach it's destination, it'll disappear and increase the hue of the store. The more footprints that reach the store, the brighter the store will be.



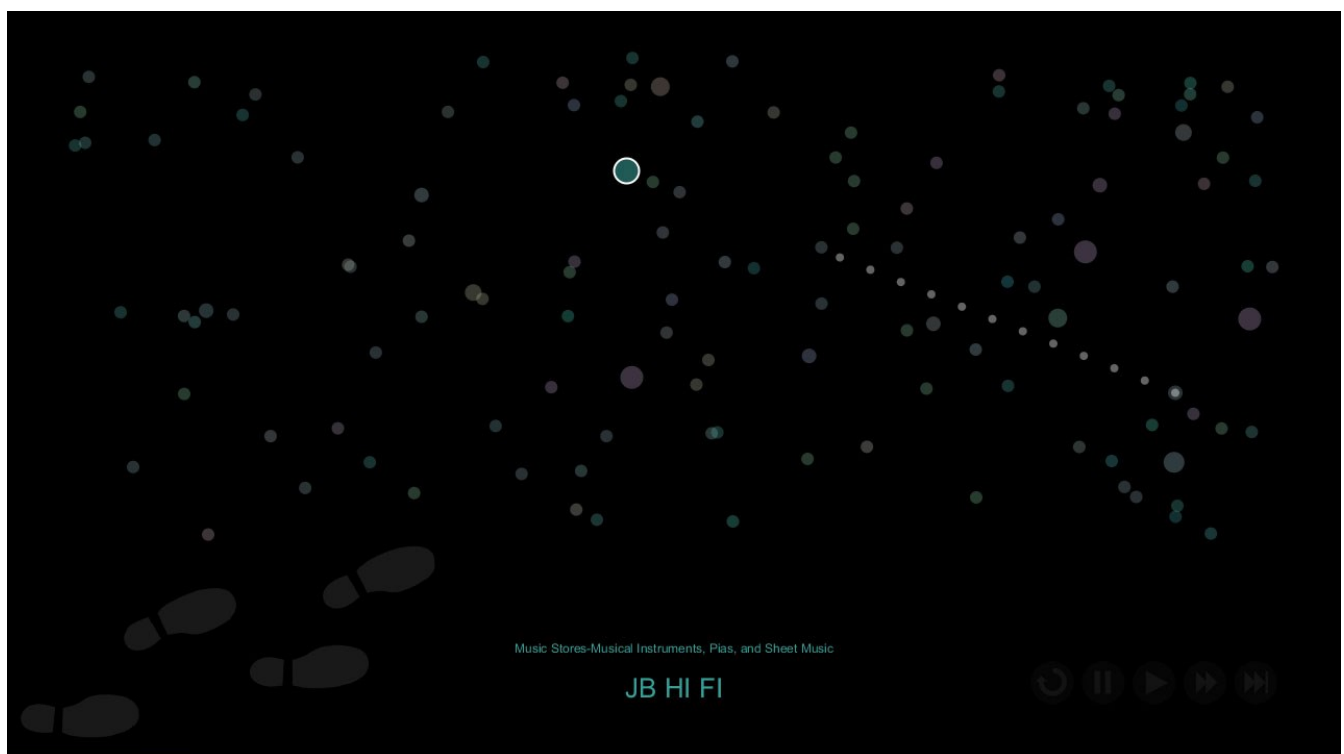
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Design Process

Final Mockup

After going through the data and starting to program, there were a few problems and as such the final mockup changed to an abstract view. This is the final mockup of footsteps.



Stores are represented by dots and colours are determined depending on the store type. Starting location, store's location as well as store type colour is generated randomly. The trail initially moves from the starting location towards the selected store highlighted white according to the data. Once it reach the store the trail disappears making the store grow bigger and less transparent then the new trail starts from this store onto the next. There are 5 buttons at the bottom right corner and they are in order from left to right, reset, pause, play, fast forward and skip.



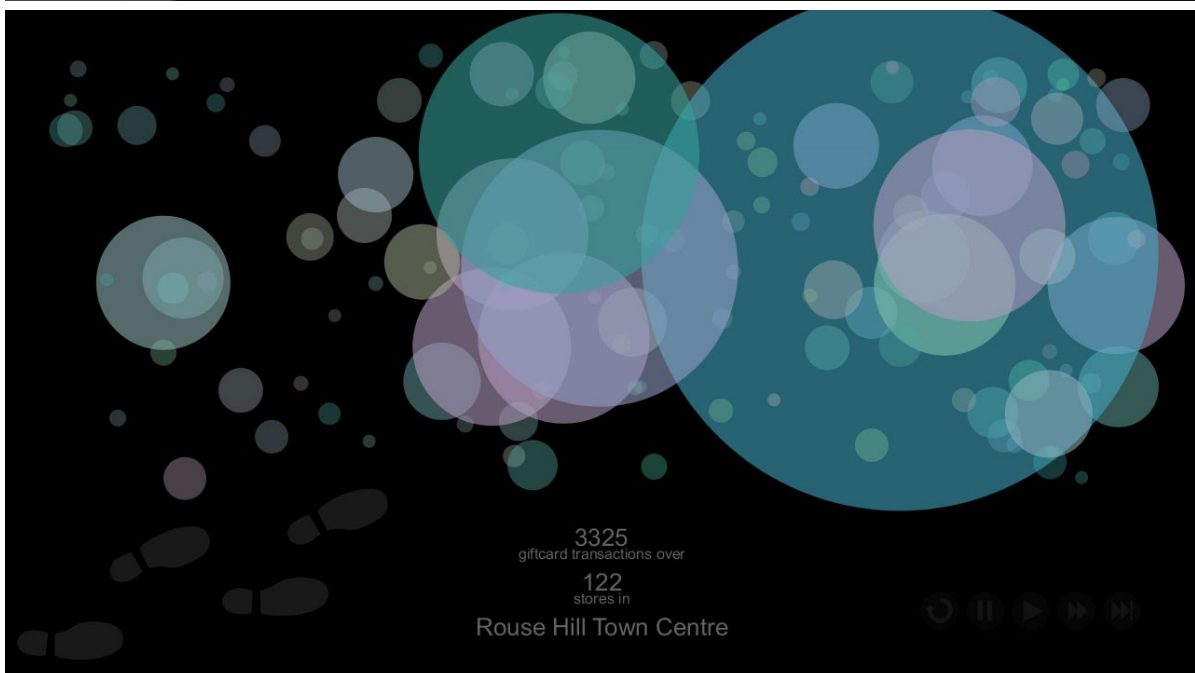
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Interactive Prototype

First Prototype

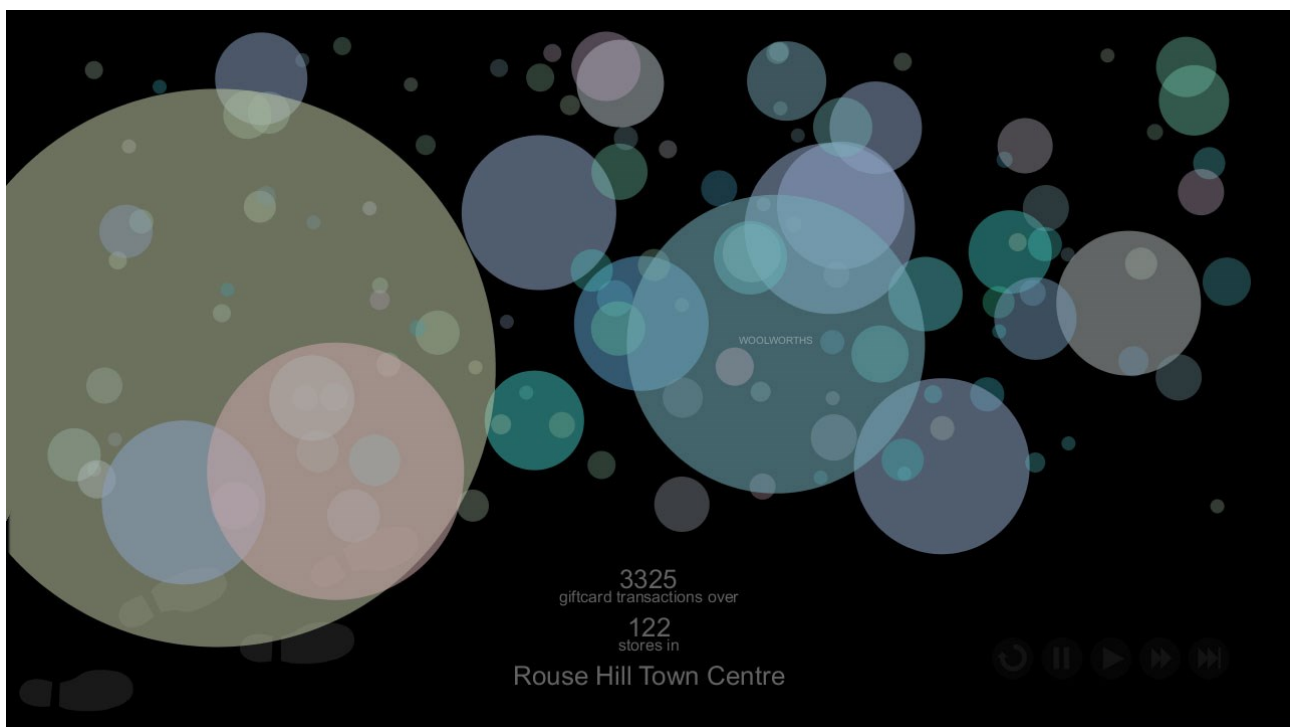


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Interactive Prototype

First Prototype



This is the end result of the first prototype. I have placed a limit on how non transparent the stores can be in order to see the stores that are covered. At the end when all the data has been gone through and trails ended, it displays the total number of transactions and store type in RHTC. When hover over the stores, its name is displayed.

Due to the data being somewhat messy and not all transactions used within RHTC, this prototype used a strict data selection process. It only took data with the keywords “Rouse Hill NSW” and it’s variants and as such might have left some data out.



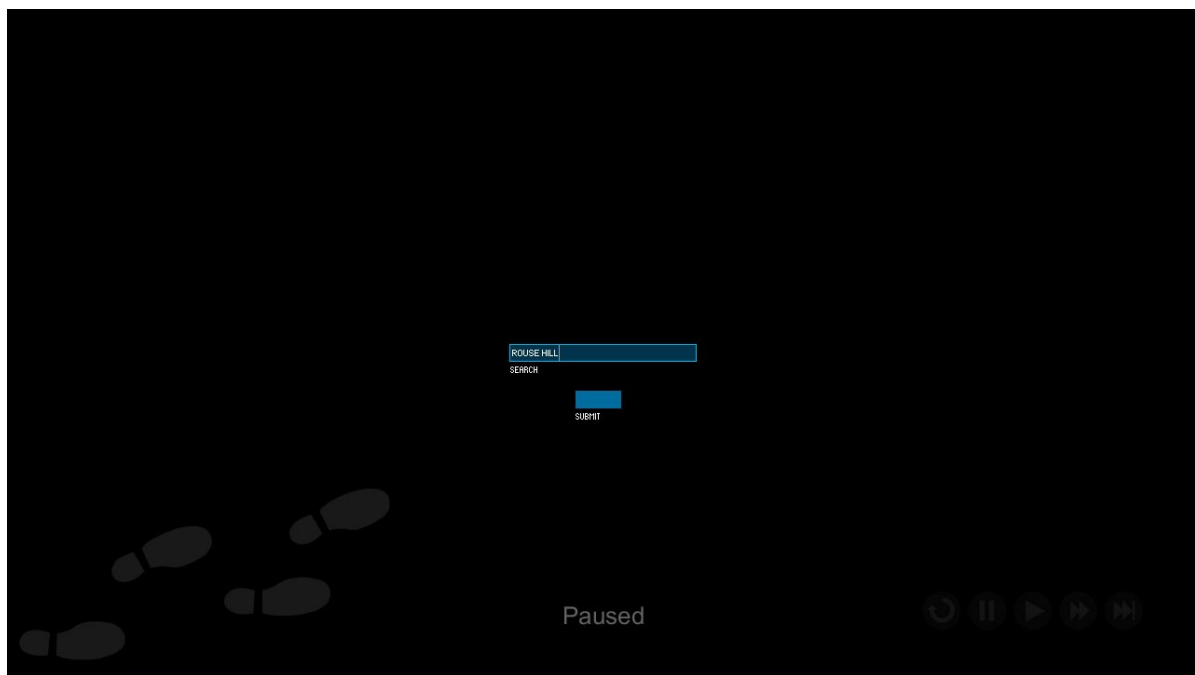
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Interactive Prototype

Second Prototype



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Interactive Prototype

Second Prototype



This is the end result of the second prototype. Since the previous prototype might have left out data, I decided to implant a search function to allow personalized keywords to be used. However once again since the data table is somewhat messy, it will only search very specific keywords and with the right capitalization. For example, “Rouse Hill” is not the same as “ROUSE HILL”. It is not my intention to design a working search engine and thus I didn’t pursue this prototype any further.



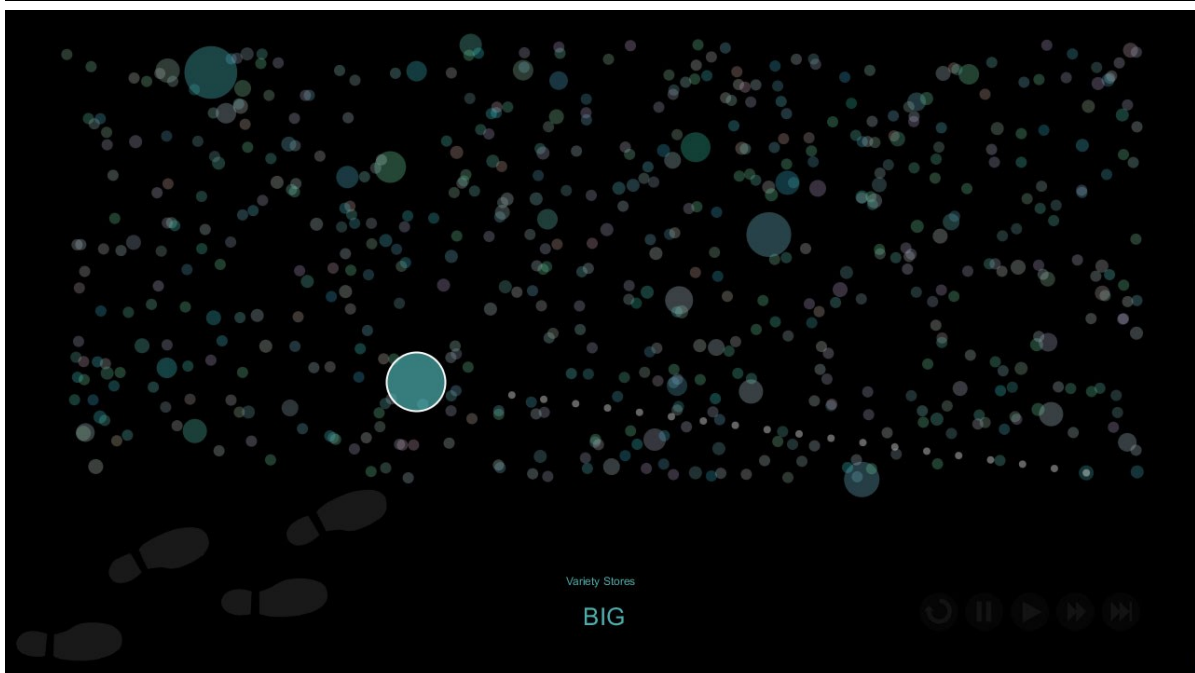
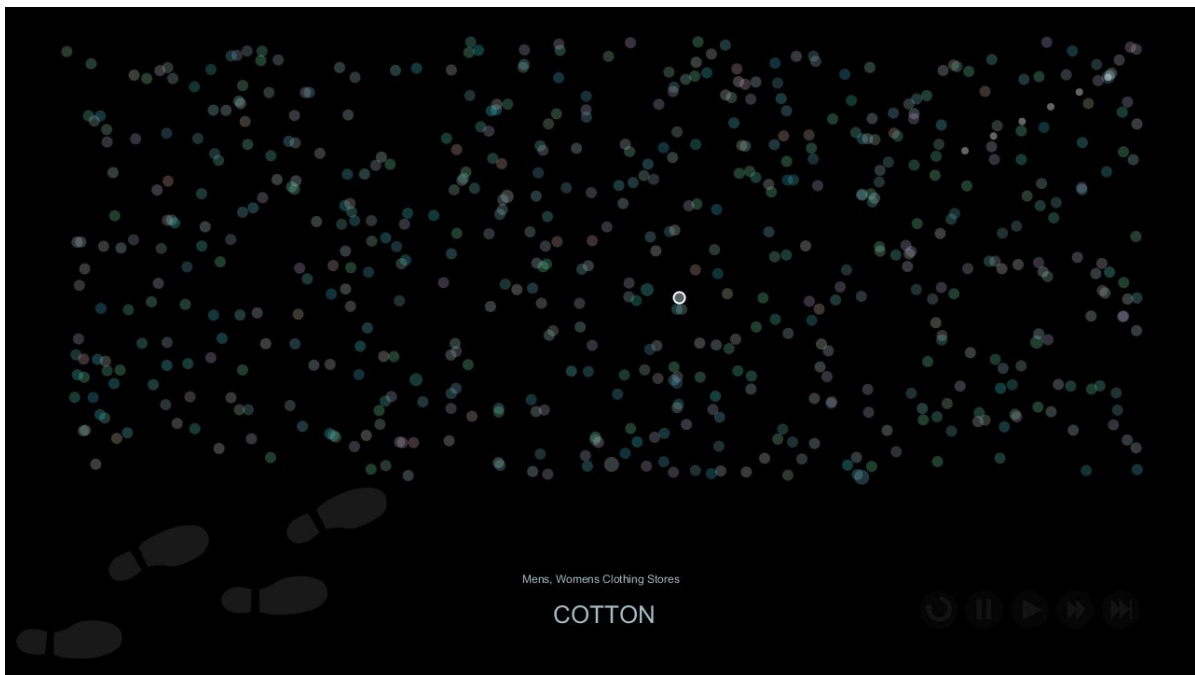
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Interactive Prototype

Third Prototype



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Interactive Prototype

Third Prototype



This is the end result of the third prototype. This functions just like the first prototype except with an updated data table. This updated table has cleared the store names to be more readable as well as removed the location of the store as such whether the transaction was used within RHTC or not is unknown. However unlike the first, it will read all the data from the table, although there are also blanks once in a while due to gaps in table.



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Implantations

Delivery Method

Since RHTC is open aired with limited spaces safe for electronic display and store directories placed in hidden corners, the most ideal delivery method with such physical limitation include phone or web applications. However due to the large amount of data this prototype goes through, it's not feasible to display or interact with on a small phone screen. If a suitable location is found that is safe from the weather and not in hidden corners, displaying this on a large screen would be ideal to subtly encourage customers to follow other people's footsteps and visit different stores. Otherwise a web application will be the easiest way to delivery this visualization.

This is of course evaluated using existing delivery methods, if technology or remodelling is not a concern then delivery through solar panel flooring is a fun and quirky method. There are certain solar panel floorings that can be customized to display anything electronically. By showing footsteps on the floor itself, it gives an immersion that someone is actually walking that path turning a passive visualization into a physical interactive experience where customers can physically follow other people's footsteps.

