

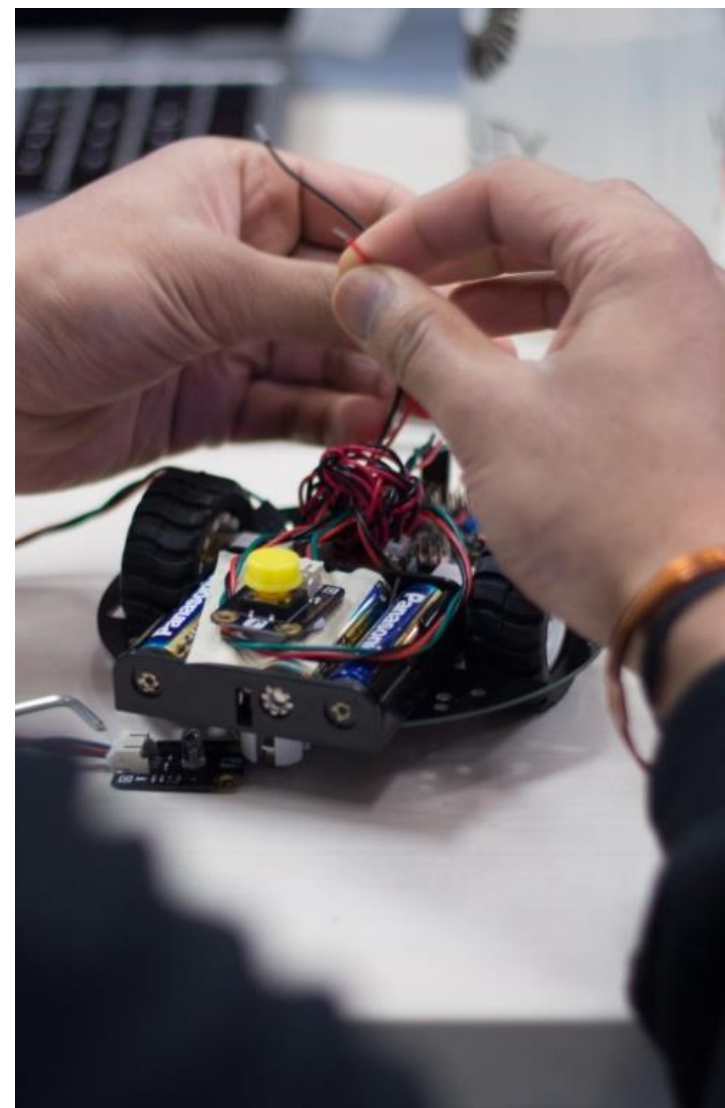


# Smart Retail Hackathon

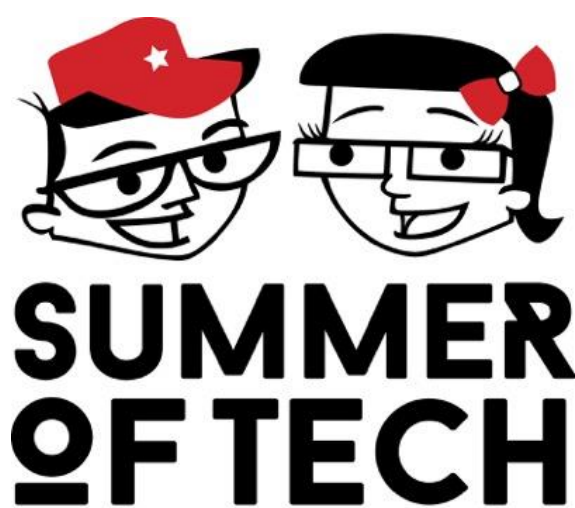
## How to build a solution in a day

Designers and developers worked together in groups of four and five to take on the challenge of building a smart retail solution. This needed to address consumer or business challenges in the retail business and make use of one or more applications and some IoT hardware.

- **Learn** Students were briefed on the capabilities of the Umajin app builder and got to see and play with a range of IoT elements from Intel, Kontakt.io, TouchCode and DFRobot over breakfast
- **Design** A design led process starting with brainstorming, personas and customer requirements and ending with project selection was completed before lunch
- **Build** In the afternoon the students completed designs, software, hardware – culminating in a presentation in the evening including live demos of the smart shelves, robots, new retail processes and wayfinding they had created



Special thanks to the amazing students, Summer of Tech, 1st Assembly, Victoria University, Massey University and the WPP retail group for their inspiration.

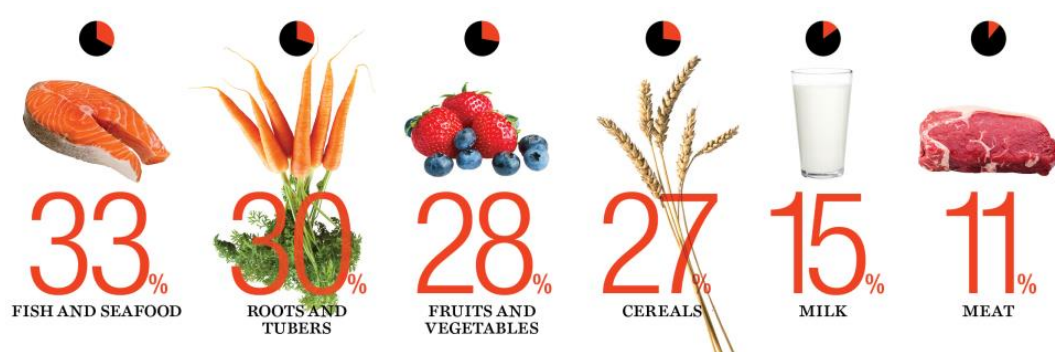




# ReSTORE

## ReOrder, RePrice, RePurpose

Huge amounts of food are wasted at supermarket, specialty food retailers and restaurants. The ReStore concept is a combination of smart shelf or refrigerator an internal app and external app which aims to change this scenario.



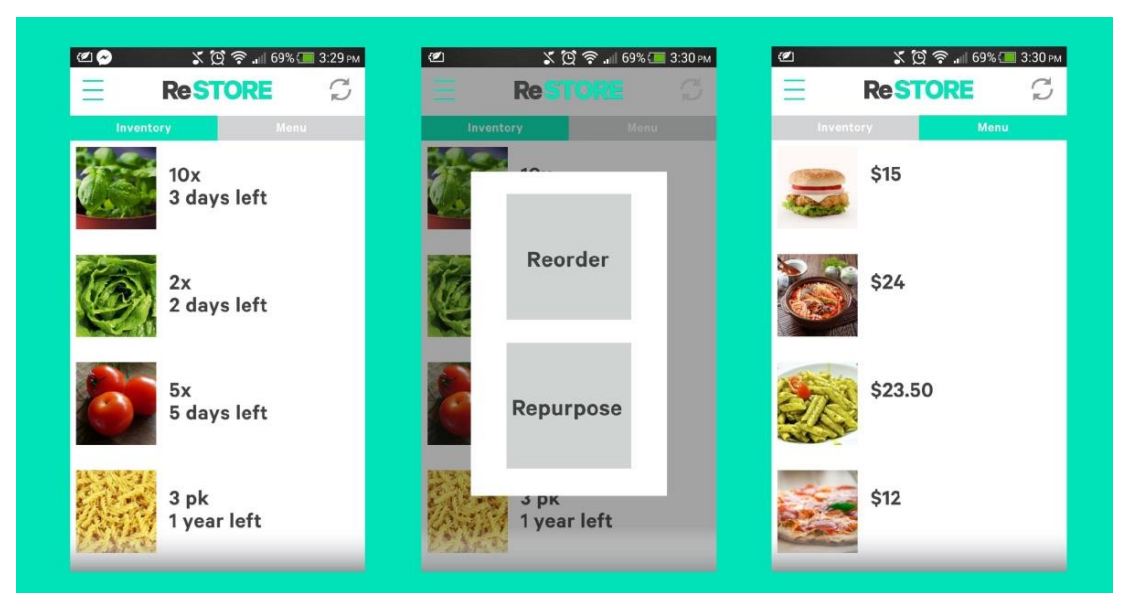
The system involves concepts for a range of possible hardware at different price points. These would help manage both fresh or packaged goods stored in spaces controlled for light and or temperature. This would feed information back to the cloud system.

There would be two apps, one for the business to manage the food and one for consumers to be matched with repurposed specials.

## The Team Build

The team built a sample smart storage box with distance sensors on top which was able to measure the presence of items on the shelf.

They also created a ReStore application which was able to modify the feed of data to show a user interacting with food by ordering or picking food to be repurposed.



The next stage of the project would to be a cloud store for managing the reordering and matchmaking of consumers to repurposed food specials.





airCafe

## Café Retail for loyalty

The airCafe team created a concept which utilized two applications, touchcode cards and beacons.

Two intertwined products:

airCafe | POS

airCafe

The twin applications make loyalty rewards, standing orders and ordering before you arrive at the café a snap.



TouchCode voucher redemption.

## The Team Build

The two applications created were able to connected using a common state on the server and using a peer to peer real time message to alert both the barista about the incoming request and the customer on their order being ready.

**“Key information for the Café staff is presented like the drinks and food ordered, any food allergies and any preferences.”**

The TouchCode cards were utilised as a physical reward which could be part of a marketing campaign to bring people into the Café that cannot be easily faked like a QR code.

Beacons were also used to notify the Café app that customers were nearby or in the retail environment.



# Trosket

## Connect the Physical & Digital

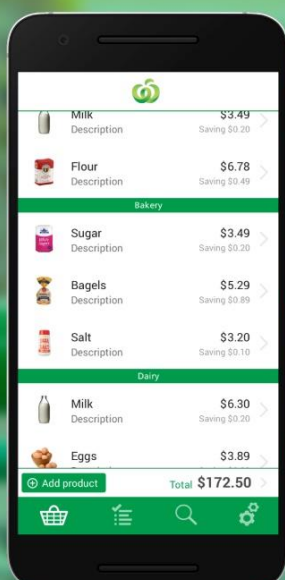
The Trosket (Trolley / Basket) was a real motorised platform. This represented a full sized robotic shopping trolley.

The Trosket was able to both follow a shopper and provide real time information of the total value of their purchases – but also manage checking out the order and it could be extended to even support wayfinding to take the lead and help shoppers locate hard to find items in the store.

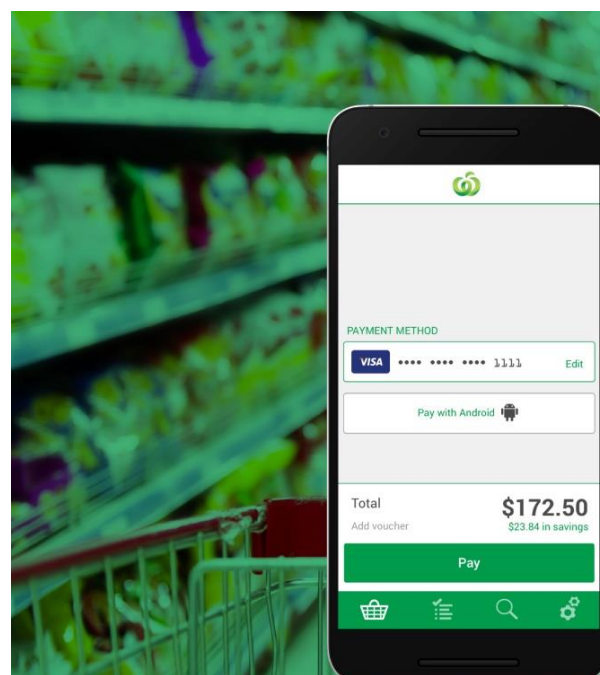
## The Team Build

The Trosket could successfully turn and navigate under direct control of a users phone. A plan was in place to allow autonomous following of the phone it was paired with. The RFID reader was too complex to integrate in the timeline so a button was used to signify adding a random product to the cart which notified and update the shopping application.

**“The Trosket approach can address large shops and quick convenience purchasing, the system can operate as an autonomous trolley or as a simple handheld basket.”**



Items update on your app as you place them in the trolley or basket.



As you leave the store, a beacon prompts you to complete your purchase.





# Smart Shoppers

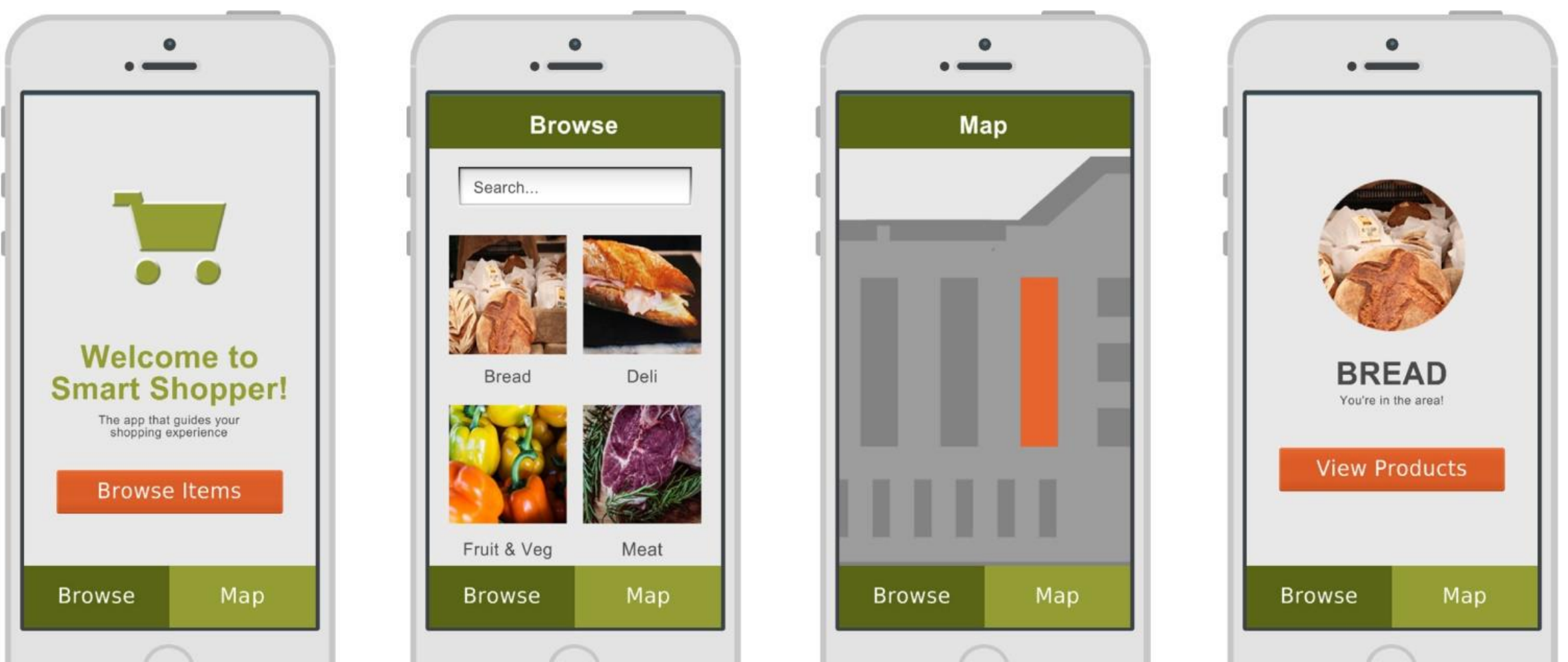
## Navigate SuperStores

Big box stores, hardware warehouses and supermarkets can be very difficult to get around and find items.

Shopping lists can be created and maintained. This is used to generate a recommended path through the store and to let customers know where they current are located. They can also see specials and offers available to them.

## The Team Build

SmartShoppers created a data bound product catalogue. Selecting a product would show a map and which section of the store it was in. Then the app would let the shopper know their location in relation to beacons placed around the environment. Each beacon represented a different section of the store.





# IOT XPRESS

## Smart wearable for users who need more assistance

The project concept was to provide a wearable or smartphone app which can augment the shopping experience for customers.

There was particular focus on those with the need for visual support, or for people who speak other languages by using audio feedback.

This system would also provide anonymous data back to the retailer on peoples shopping behaviors.



## The Team Build

Two concepts were created. One was a low power embedded MP3 player which could play the recorded audio on demand. This would be integrated into a wearable. It could be triggered by an app on an android phone which used either a visual button or reading an NFC tag as a demonstration.

The other concept was to use the customers smartphone – but without a visual interface. By wearing headphones the user could get information about nearby products using Beacons.

