

Universal design

and its application to a blended grocery shopping experience

Partner Musgrave & SuperValu



Institute of
Art, Design +
Technology
Dún Laoghaire



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Design

Overview

1. Background to Partnership
2. The Brief
3. Universal Design Principles
4. Design Process
5. Research Outcomes
6. Key Learnings

Background to Partnership



A good fit for innovation...

- Design Thinking
- User Experience Design
- Design for Change
- Cyberpsychology
- Speculative Design Futures & Emerging Technologies



The Brief



How Might We...

create a more enjoyable shopping experience for the following shopper types:

- Wheelchair users
- Visually impaired
- People living with autism
- Elderly shoppers (65+)

in order to make **SuperValu** the go-to supermarket for all their grocery needs

*“There are 7.4 billion people in the world. Our ambition is to create products that are **physically, cognitively, and emotionally appropriate for each of them**. It starts with seeing human diversity as a resource for better designs...”*

Kat Holmes Microsoft Inclusive Design 2016

Universal & Inclusive Design Key Principles

Universal Design

- Equitable Use
- Flexibility in Use
- Simple and Intuitive Use
- Perceptible Information
- Tolerance for Error
- Low Physical Effort
- Size and Space for Approach and Use

Inclusive Design

- Recognise exclusion
- Learn from diversity
- Solve for one, extend to many



Centre for
Excellence in
Universal Design

Design Process

customer research

empathy experiment

customer journey

problem definition

to-be scenarios

variety of solutions

testing & iteration

Primary
research

Pre-Covid

Real world
context &
customers

Industry
R&D

Focus on
Universal
Design

As-is scenario



FRUSTRATION

"The shop is busier than I would like because of the delay"



SELF CONSCIOUS

"I don't like to use aids, I think I'm in denial!"



SELF CONSCIOUS

"I would like to go down that aisle but I'll block it for others."



SELF CONSCIOUS

"I need to get waffles but can't reach, I'll have to ask someone."



HAPPINESS

"I need to get something for when the grandkids come around"

Rory Bradley, Primary Customer Research

As Is Journey

	Before	During	After
Pre-Covid	<p>Doesn't make lists Shops every week Shops for 2</p> <p>😐 👤 👤</p>	<p>Tries to recall what she needs Picks up offers Gets staff recommendation</p> <p>😊 🤔 ❤️</p>	<p>Realises she forgot some things Makes a mental note</p> <p>🤔 😞</p>
During Covid	<p>Makes a list Gives it to neighbour / friends Calls SuperValu</p> <p>📝 📱</p>	<p>Can't shop herself Worried she's missing out. Misses the social interactions</p> <p>🚧 😞</p>	<p>Delivered to her door with out contact. Gets her shopping but not anything new.</p> <p>🚚 😐</p>
Opportunity	<p>Lists Online shopping</p>	<p>Reviews and updates Chat / social</p>	<p>Reminders Freebies or offers.</p>

Lauren Day, Primary Customer Research

When I shop at SuperValu I want to include my child in the shopping experience. I would like an application that does not try and hide the issue but embraces it and turns the experience into something positive. Where both the parent and child can enjoy the shopping experience together and where the child can learn too.

“When I go to the supermarket I want to be able to shop on my own, so I can have a relaxing experience”

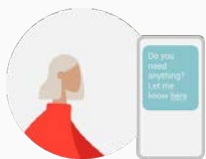
Customer Problem Statements

When I use the SuperValu app I want to connect with other shoppers and see what they recommend so I can try new foods without the risk of wasting time, effort and money.

How might SuperValu help Marie find new products she'll love so that she can stay healthier and independent for longer?

Customer Problem Statements

To-be scenario – Shopping Buddies



Corrina's daughter sends her a SMS message using the SuperValu Shopping Buddies app.



Corrina clicks the link and can pick a big shop or some regular items she would like.



Her daughter picks up the items when doing her own shopping and can drop them over to her mother.



Corrina has her staples so she can enjoy getting out and doing a small top-up shop with less stress.

Rory Bradley, Primary Customer Research



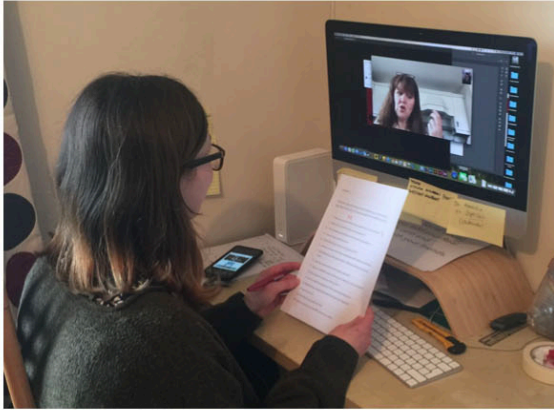
Alexandra Casique , Primary Customer Research



User trying to scan a product and place it in a basket.

User trying to use the tactile floor on the store.

Alexandra Casique , Empathy Experiements & Testing



Lauren Day, Remote Testing

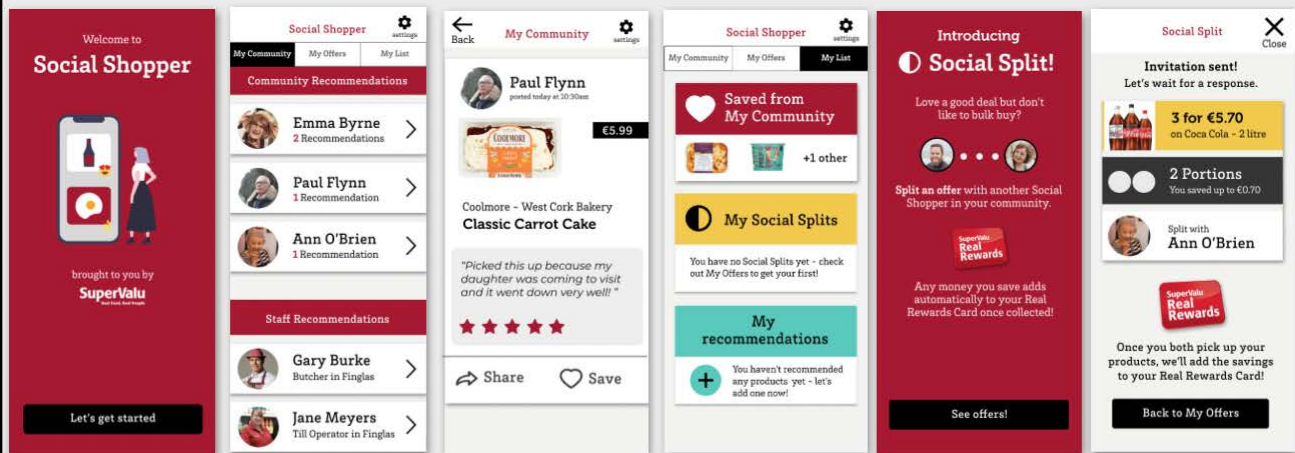
“ I think it would be good if you could see recommendations from friends and then also recipe ideas, like if they had a recipe idea for that product? ”

Participant 2 (who really hates social media)

Research Outcomes

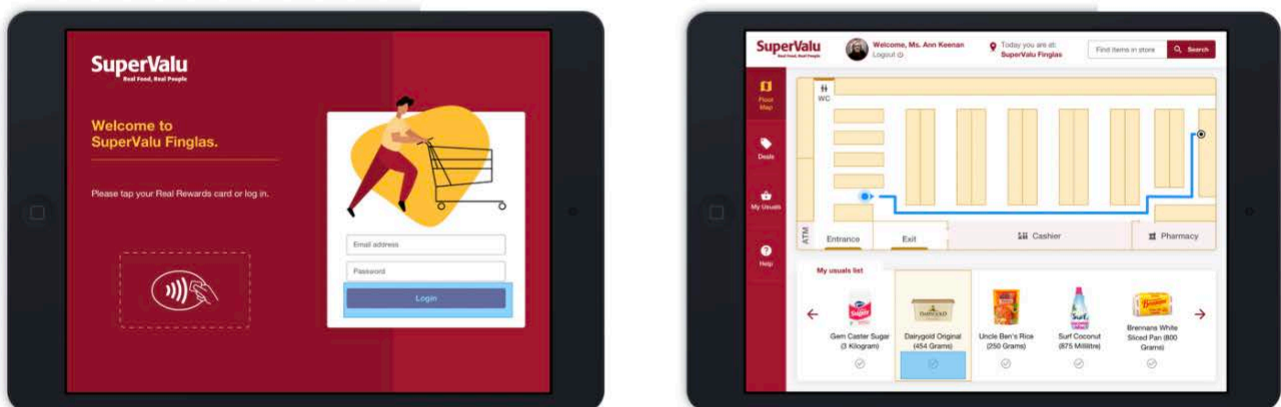
- **A Variety of Design Solutions** were produced for each target group
- **Students were divided into groups** each one focused on a specific target shopper group

Elderly 65+ Social Shopper App



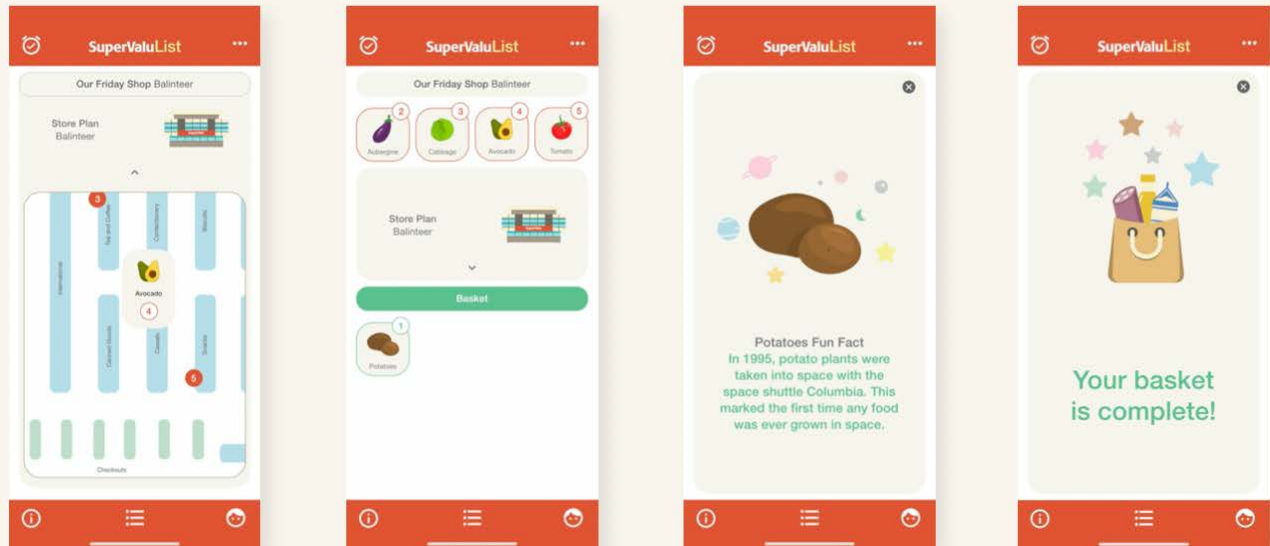
Lauren Day MSc UXD Student

Visually Impaired & Wheelchair Users In-store navigation, trolley mounted iPad display



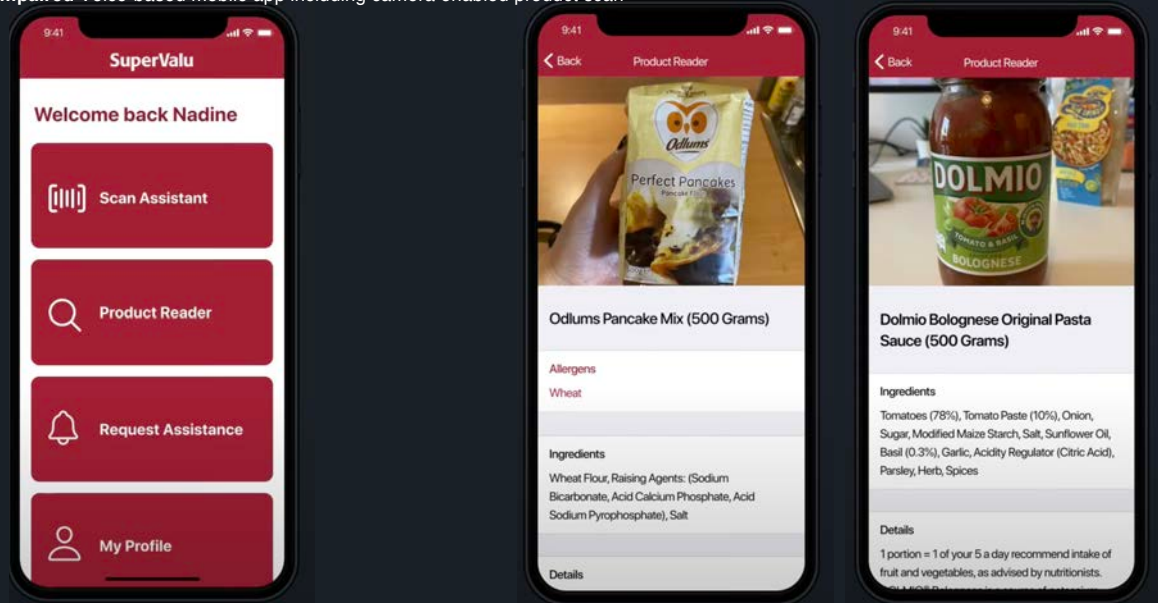
André Goncalves MSc UXD Student

Families living with Autism Gamified Shopping App for children



Rory Mc Cormick MSc UXD Student

Visually Impaired Voice-based mobile app including camera enabled product scan



Vicky Anderson MSc UXD Student, [Link](#) to voice-based prototype

Visually Impaired SuperValu Shopping Assist App for employees

The screenshot displays the SuperValu Assist app interface. The top section, titled 'Appointments', shows a list of scheduled visits: Mary Brown at 13:00 (Small Trolley Shop), Erin Steed at 16:00 (Large Trolley Shop), and Sean O'Reilly at 17:30 (Basket Shop). The right panel, 'Appointment Details', contains a form with the following information: Customer Name (Mary Brown), Reason for Assistance (Blind), Type of Shop (Small Trolley), Time Requested (13:00), and How long? (1 Hour). An 'ADDITIONAL INFORMATION' section includes a text box stating: 'I will be bringing my young son in his buggy and my service dog with me during this appointment.' At the bottom right is a red 'Confirm Appointment' button. An orange notification banner at the bottom reads: 'Monday, April 13', 'SV SUPERVALU ASSIST', 'Assistance Request', and 'New assistance request received for a small trolley shop today at 1pm. Swipe for more details'.

Vicky Anderson MSc UXD Student, [Link](#) to voice-based prototype

This block shows a video interview snippet. At the top left is the logo for the 'Centre for Excellence in Universal Design'. At the top right is the hashtag '#UNIVERSALDESIGN' and the Twitter handle '@UDGC_IRL'. The video shows two people: a man on the left and a woman on the right. Below the video, a text overlay reads: 'DONAL: What were you studying last year when you this design idea' and '>> I was the first year of my masters in UX'.

DONAL: What were you studying last year when you this design idea
>> I was the first year of my masters in UX

This block is an award certificate. The title is 'Technology and ICT - Winner'. Below it, it says 'Congratulations Vicki Anderson'. The recipient's affiliation is 'Institute of Art, Design and Technology (IADT)'. The certificate features a photo of Vicki Anderson holding a camera. Logos for 'ENTERPRISE IRELAND' (with the tagline 'where innovation means business') and the 'Centre for Excellence in Universal Design' are at the bottom.

Vicky Anderson MSc UXD Student, [Link](#) to voice-based prototype

*"It's the **richness of the outputs** when there is open collaboration, also how Musgrave benefit from "fresh eyes" and the techniques taught in IADT. Key from industry-side is that **brief aligns with problems that the business is trying to solve**, plus the **internal stakeholders are involved** in the process the whole way through.*

Siobhán Hennessy Head of Shopper Experience
Musgrave Retail Partners

Key Learnings
need design for
public good

IADT
Public Design Lab

Universal & Inclusive Design
benefits everyone

- **Practice-based Learning**
builds **empathy** and is difficult to do it remotely
- **Critical & Creative design**
thinking and making can lead to **new ideas** and innovative approaches
- **Digital Society**
will exclude large sections of our population unless **universal & inclusive design** become a requirement like GDPR
- **Partnerships**
between education and industry provide valuable opportunities and benefits for all by tackling **wicked problems**...

Thank you!

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