eve

one good apple
saves the bunch

eve

The story of ĕve

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Hey,

Passionate about user centric products and experiences. Sustainable focus & circular design are core requirements for projects I deliver.

Accolades

2018 Orangebox & W2W Competition Winner

2020 EDEN Design Competition Second place

2020 National Student Entrepreneur Awards Final 50

B. Sc Product Design

Professional Diploma UX

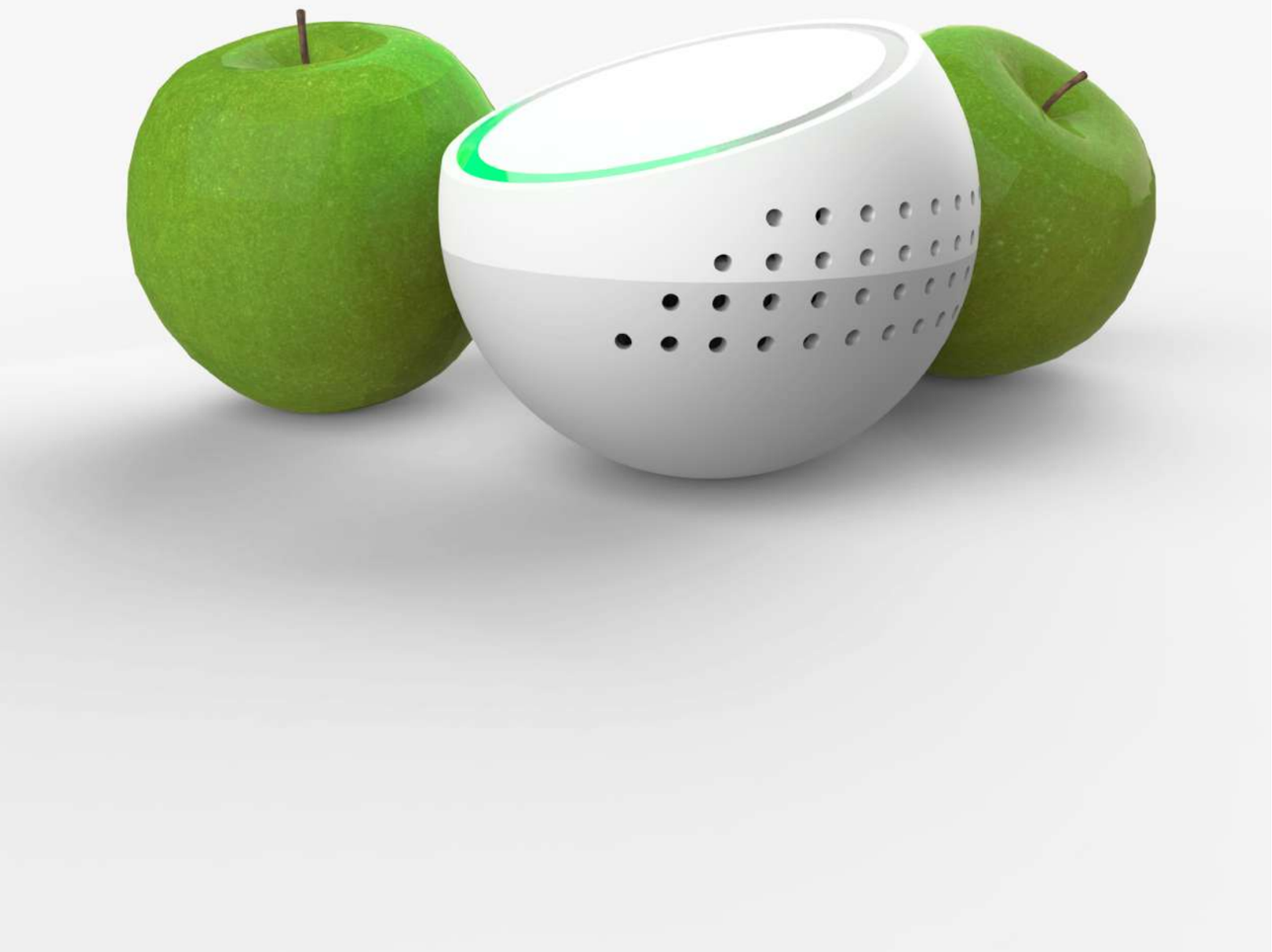
I’m Harry

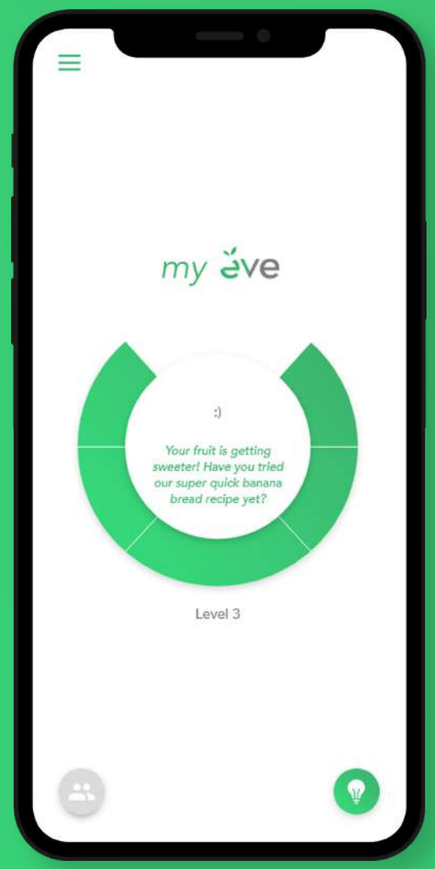
How
might
we

Design
an accessible
solution to
help people

Manage
the fruit they
buy to reduce
their waste and
save money?

eve is a comprehensive sensor-based solution for preventing fruit waste. Eve involves a sensor that detects fruit ripening within a fruit bowl and wirelessly communicates this information to household members so they know when to use their fruit before it expires. Eve consists of an apple-sized device that visualises ripening through a continuous ring lighting system.

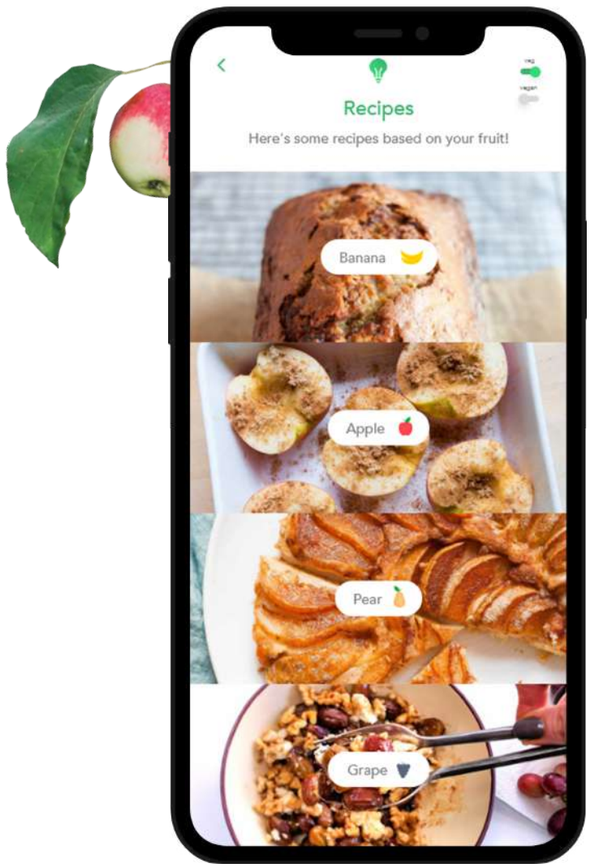



my ave
:)
Your fruit is getting sweeter! Have you tried our super quick banana bread recipe yet?
Level 3

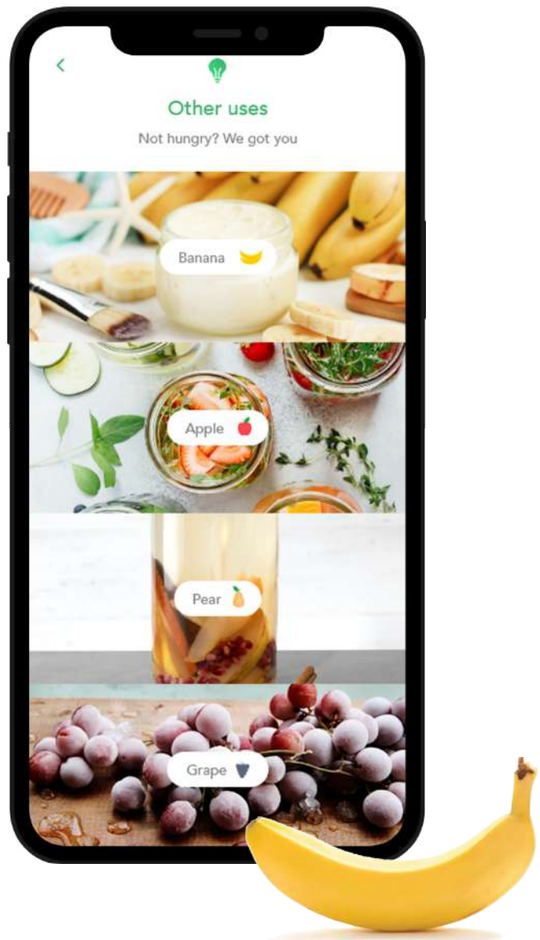
“Alexa,

talk to Eve”

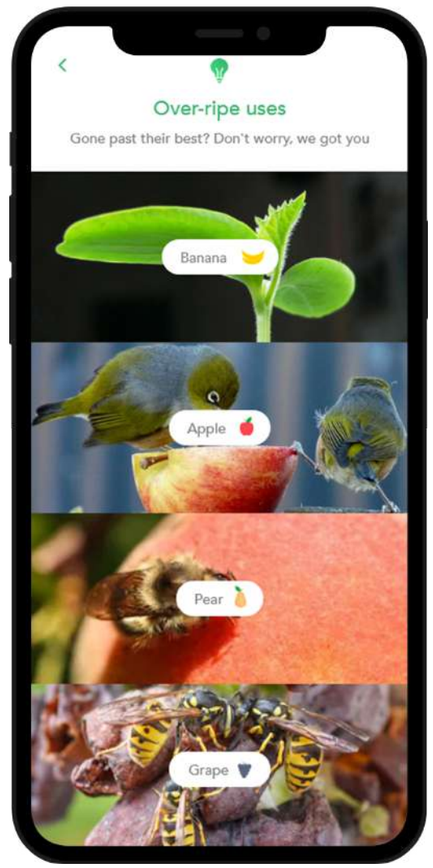
Recipes



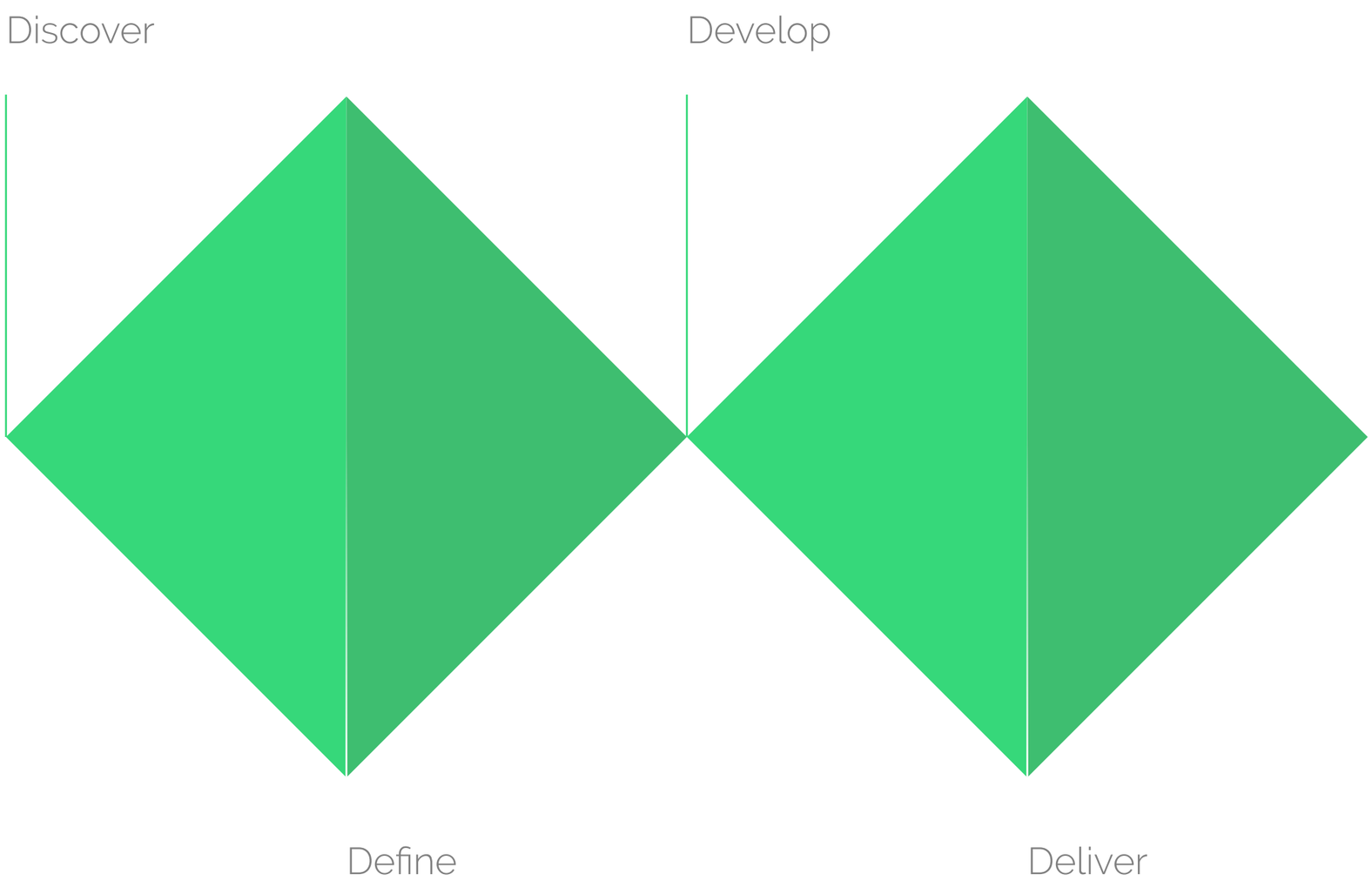
Other uses



Over-ripe uses



Process



Double Diamond

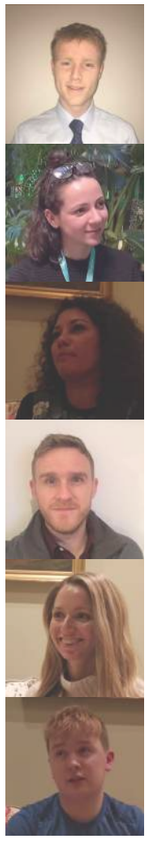
Discover

Tools

Recruitment screener

Interview script

Video + audio recording



They adopt a mentality of ‘new week, new me and they’ll go and spend the guts of €100 on fruit, veg and healthy dishes and then it’s sitting there in the bowls and they end up throwing it out.”

(Interviewee 7)

I like having a full fridge for that comfort feeling, but it would put you off rummaging through it.”

(Interviewee 1)

That’ll do; I don’t really feel like spending a lot of time cooking tonight. I’ve had a long day.”

(Interviewee 3)

By just putting fruit in your basket you feel good about yourself, you feel like you’ve automatically gotten your 5-a-day.”

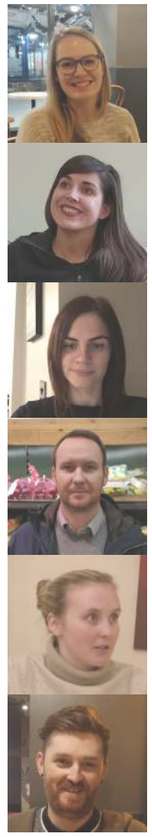
(Interviewee 8)

Convenience is there so you don’t really have to think about the snack you bought, that’s irrelevant, it’s just that there’s something better and instantly available.”

(Interviewee 10)

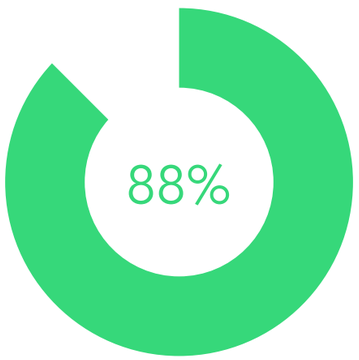
I’m hardly going to make to make a cup of tea and then go, yeah, I feel like an orange.”

(Interviewee 6)

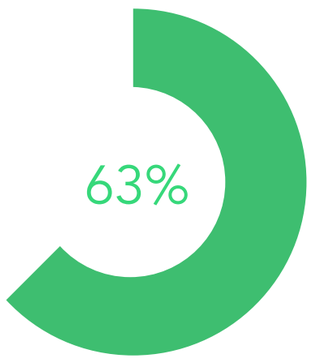


Discover

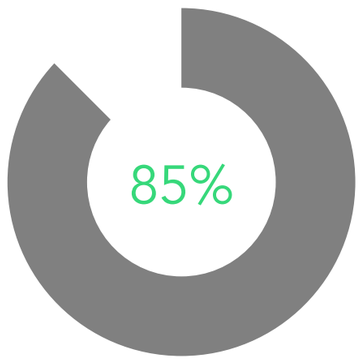
32 respondents



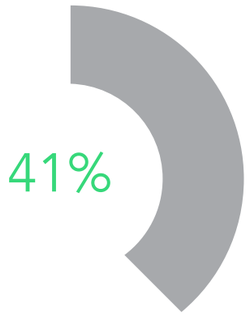
Of urban renters didn't have an organic waste bin.



Said the main reason they throw out food is from expiry.



Say fruit and vegeta-bles are their most wasted food type.



Believe food waste should be addressed from an evironmental standpoint. Of that 41%, 84% came from an urban household.

Felt food waste is a top priority prob-lem to address in Ireland. Of them, 72% came from an urban household.

Online survey

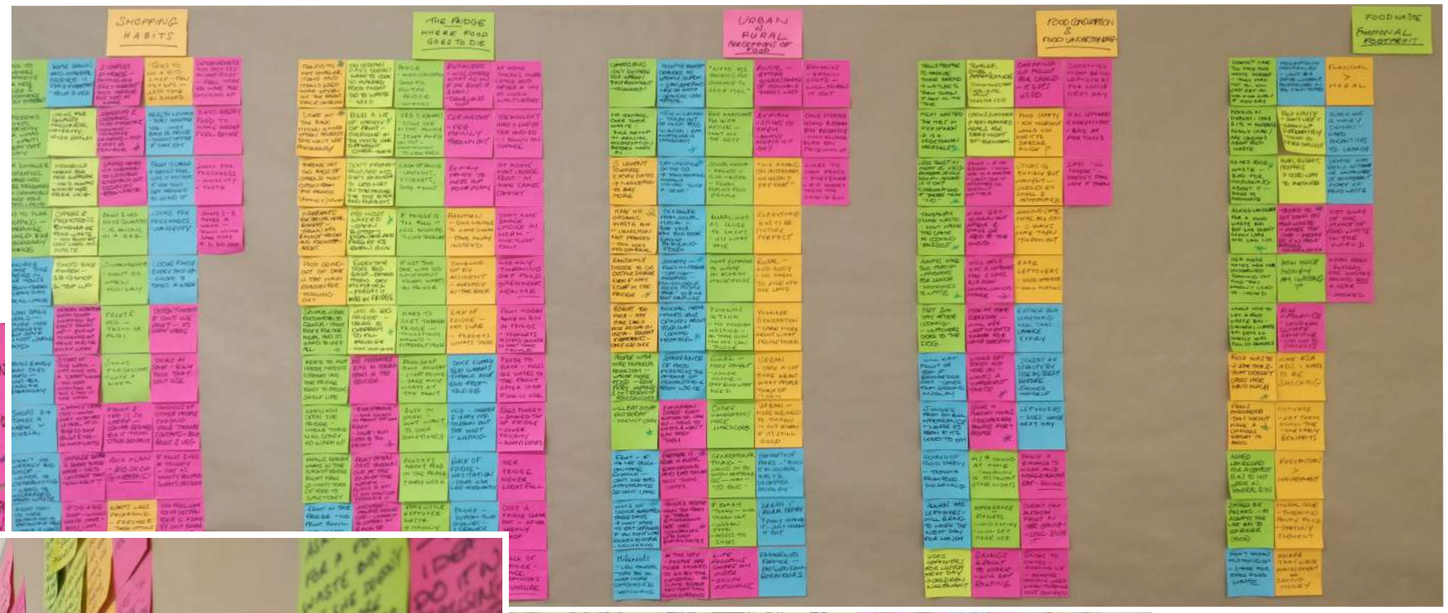
Define

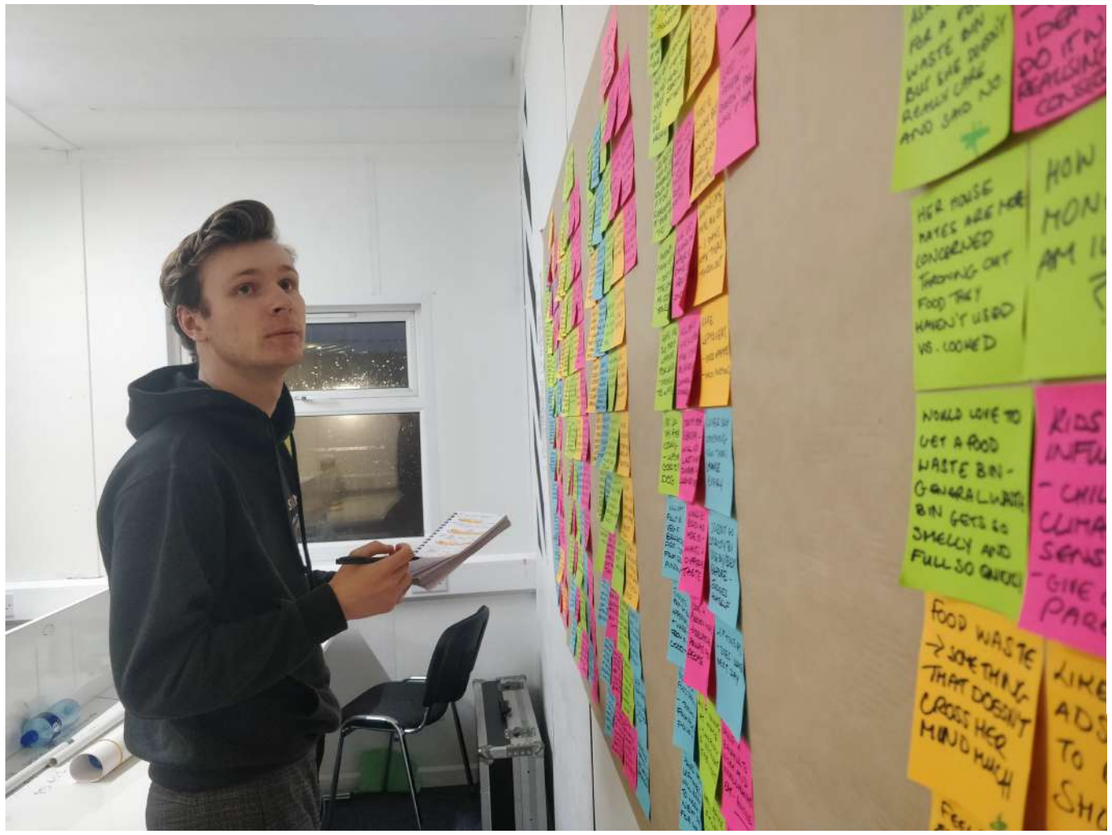
Methods

Each note translated directly from interviews

Colour represents people

5 key categories derived





Affinity mapping

Define

Intention Vs. Reality

The urban person desires a healthy, trendy lifestyle. They do a weekly shop every weekend without a structured meal plan. They shop for the perfect week they aspire to live leading to an abundance of fruits & vegetables bought with hollow intention.

Impact:

This ‘new week, new me’ mentality results in food waste of fruits & vegetables that are neglected when the person chooses the comfort option in the instant, they need something to fulfil their desire.

Power of appearance

The urban person has a perceived standard of what ‘fresh’ looks like. Influences from peers & social media create a false reality of how food should look building higher standards for them as they aspire to follow their online personalities.

Impact:

The urban person is more likely to neglect perfectly usable food that doesn’t look as fresh. This judgement is primarily based on appearance and again, returns to their access fresher substitutes.

Anxious overbuying

The urban person feels more pressured to buy fruit & veg when shopping out of fear of judgment from others on the contents of their basket. They buy more fruit & veg to balance their basket content ratio of healthy to unhealthy food.

Impact:

The urban person is far more likely to choose the comfort substitute over the fruit or veg at home. Why? It was bought from their desire as opposed to their perception of what others think they should be eating.

Define

Sustainable **Susan**

Demographics

- 28
- Dublin
- Graphic designer
- Apartment Complex

Frustrations

- No brown bin provided by landlord
- Throwing out expired food
- Overbuying groceries
- Forgetting fruit for work

Goals

- Learn to be as sustainable as possible
- Discovering accessible new ways to be green
- Balancing busy work life with other interests
- Find convenient ways to lower her food waste

User Story

As Susan, I need a convenient, accessible way to help me reduce the fruit I waste so I can lower my environmental impact while also saving myself money!

Key Scenario Of Use

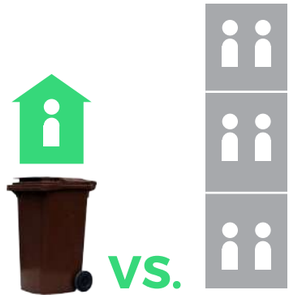
Informing people. like Susan, the rate of expiry at which their fruit is ripening while also encouraging the implementation of a healthier diet into a busy lifestyle.

Due to Susan's busy work-centric lifestyle, she finds it hard to manage and use the food she buys but doesn't want to reduce the variety of fruits in her diet.

User persona

Define

Market trends & analysis



Urbanisation

Food waste already comprises 50 to 70 percent of municipal solid waste in several Chinese cities, including Beijing and Shanghai. *(Smartcitiesdive, 2019)*

68% of the world's population will live in cities by 2050. *(UN, 2018)*

In Ireland, purpose- built apartment blocks are excluded from the free brown bin policy due to the government viewing them as commercial properties. *(Irish Government, 2017)*

Fruits & Veg

Fruits & vegetables have the highest wastage rates globally of any food type at 40-50%. *(UN, 2018)*

In the U.S., the fruits and vegetable market segment claimed 39.4% of the revenue share in 2018 and is expected to only increase its share due to the increase of health-conscious consumers. *(Grand view, 2018)*

Sustainability

A recent survey carried out by Forbes in the U.S. market showed 77% of individuals wanting to learn more about sustainable lifestyles. *(forbes, 2019)*

However, there is an evident say/do gap with sustainability in people's lives. If consumers can see how much money they can save through food waste prevention they will reconsider.

Ireland

Ireland wastes 1 million tonnes of food annually. 51% of this food waste comes from the household segment.

Irish households waste about 33% of the food they buy.

This costs Irish households on average between €400 to €1000 annually. *(CSO, 2016)*

Target Market

My target market is urban apartment dwellers.

Apartment blocks are excluded from the free brown bin policy.

There are 172,096 total apartment blocks in Ireland.

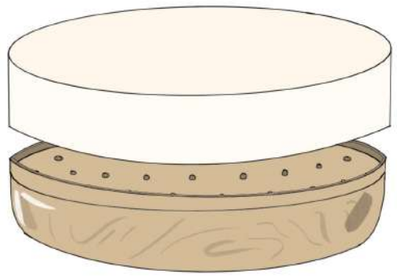
This dwelling segment is the highest growing in Ireland with a rate of 15% over recent years. *(CSO, 2016)*

Develop

1

Chosen concept

Develop



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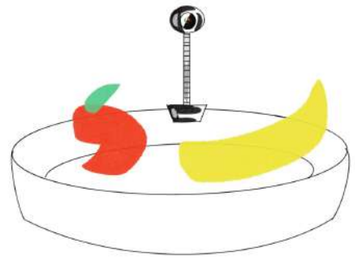
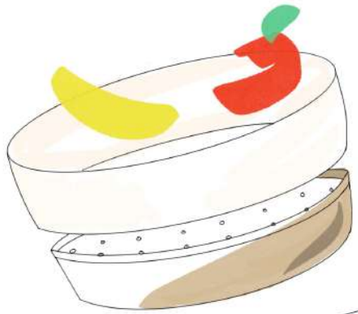
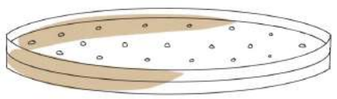
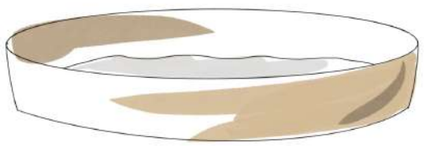




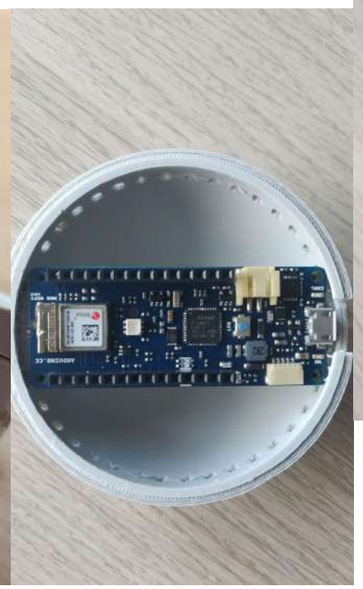




3

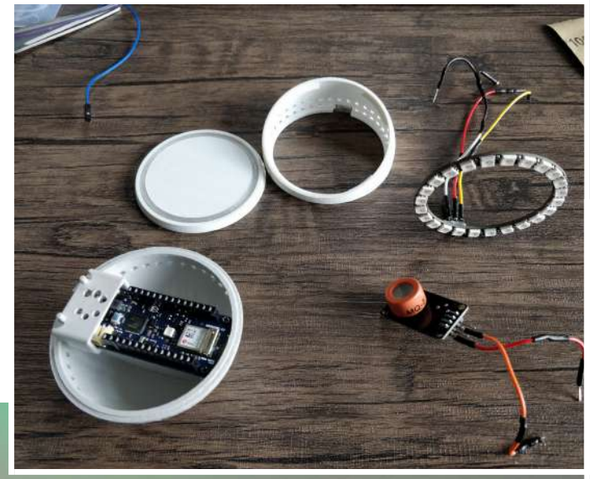
Other concepts

Develop



The form of eve is to mimic the size of an apple. The 3D printed prototype developed from multiple iterations and assembly options. Finalising the form, eve was developed to minimise parts and to optimise assembly on the z-axis.

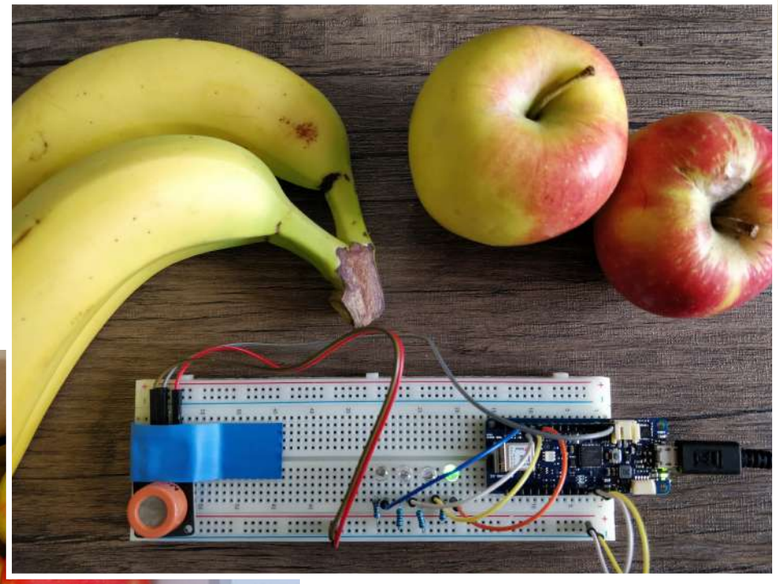
Develop



Assembly

Develop

To validate my concept, I tested daily for 7 days the ripening output of 'an average fruit bowl'. The results enabled me to define 4 unique ripening output ranges to correlate with the LED ring display.



The 4 unique levels of ripeness derived were then consistenly tested with fruit to validate the detection of ripeness and how it communicates to the users.

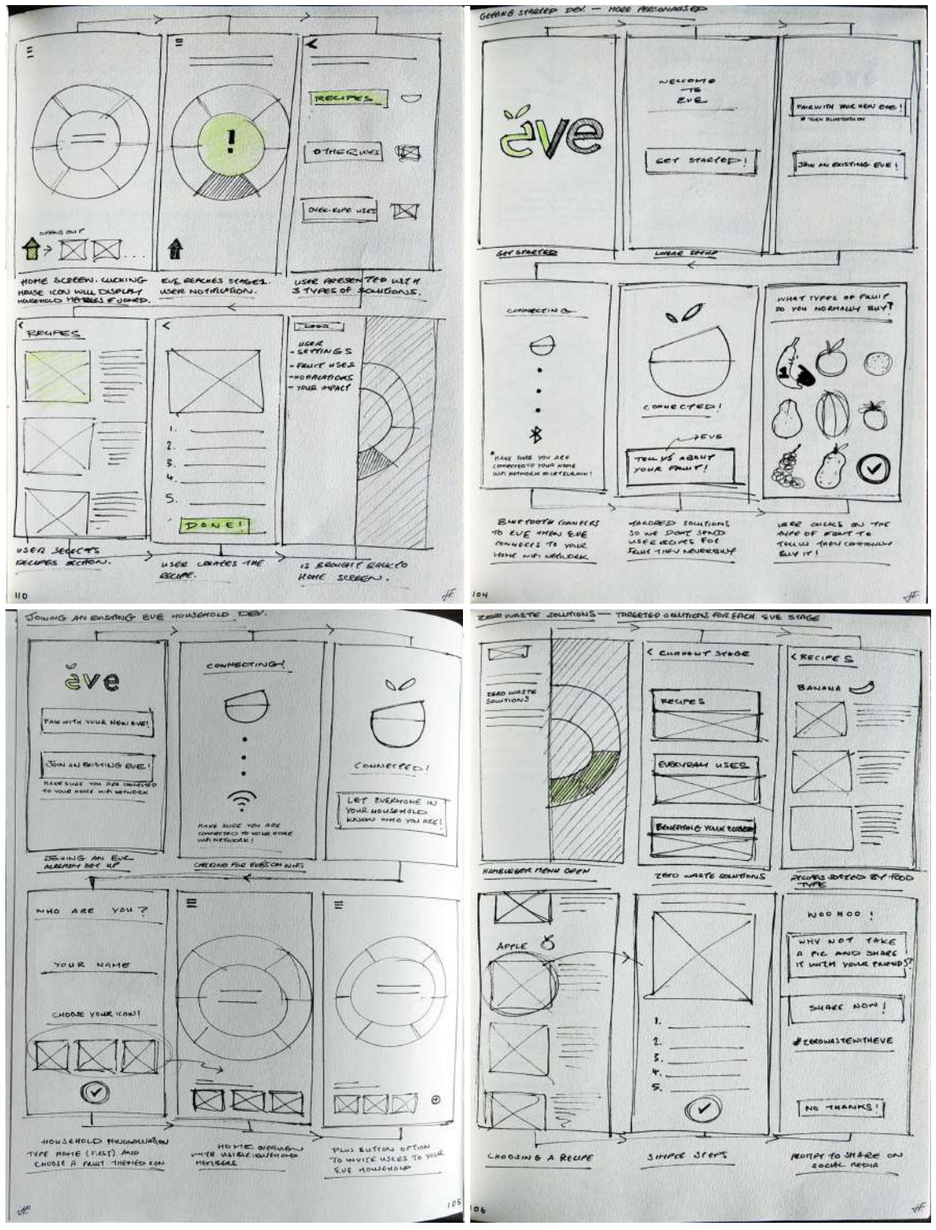
Validation testing

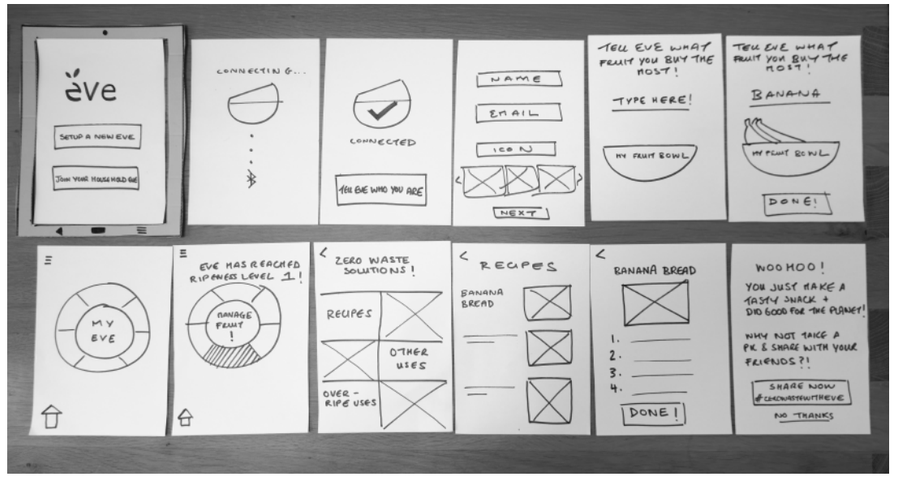
Develop

After brainstorming the app concept and outlining what I believed it needed to do, it was then time to validate my understanding with that of others. The point of this exercise is to enable your users to design you user flows for you and to undertsand how it works in their perspective minds.

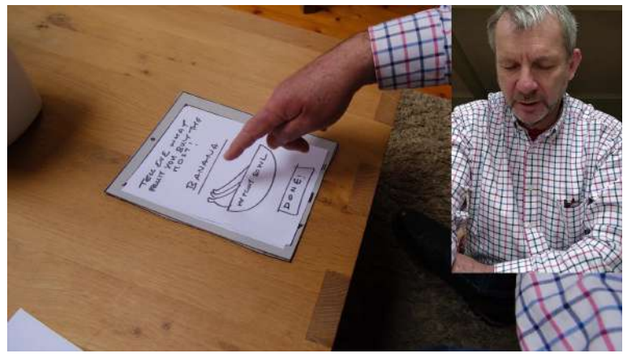
Card sorting

Develop

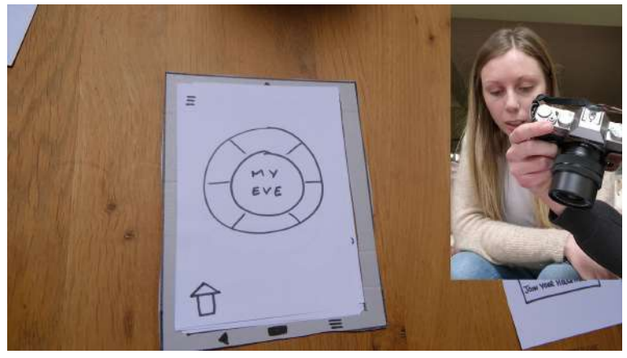




Usability test 1



Usability test 2



Wireframes & Paper prototype

What do you normally have in your fruit bowl?

This helps Eve help give you useful fruity ideas!

Tap the fruit icons that you most commonly buy

Take me to Eve

Level 3

Step 6

Mash in the bananas. Peel the bananas and add them to the bowl. Using the end of the whisk or a dinner fork, mash them into the batter. If you prefer an entirely smooth banana bread, mash the bananas separately until no more lumps remain, and then whisk them into the batter.

Done!

Halfway there!

Zero waste solutions

Quick & easy ways to use up your fruit

Recipes

Other uses

Over-ripe uses

Banana recipes

Tasty treats & healthy snacks

Banana bread

50 min

Banana pancakes

5 min

Banana smoothie

5 min

Banana chips

25 min

Eve detected ripeness

LEVEL 3!

Tip 1

Did you know apples are really high in antioxidants? These are really important to keep you on the go!

not in the mood? we got you...

Tip 2

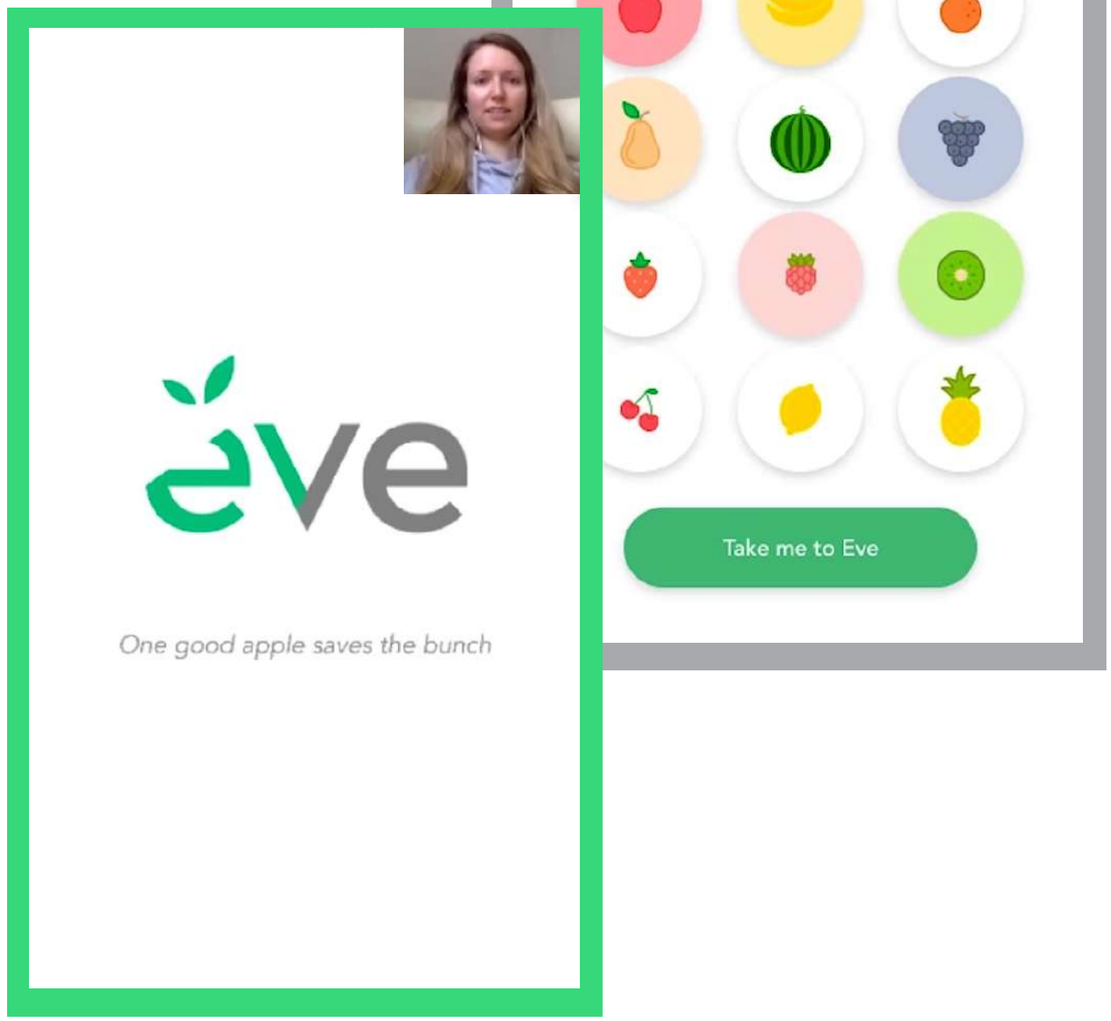
It's true, our banana bread recipe is super quick, easy and super tasty. You got this!

I got this!

my eve

Your fruit is getting sweeter! Have you tried our super quick banana bread recipe yet?

Develop



1

2

Two usability tests with the high fidelity prototype were conducted to identify the ease of usability of the mobile app and validate design choices made with key users of eve.

Task

1. Setup a new eve

2. Make a banana bread

Usability testing

Develop

My vision is to expand to eve range to offer a portfolio of sustainable food waste prevention and management systems.

User natural organic substances, the eve bowl extracts the ripening hormone released by the fruit in your fruit bowl prolonging its shelf life by up to 2 weeks while have zero impact on taste.

Deliver

Interactive prototype

Deliver

One good apple

saves the bunch

eve

By Harry French