

Energy Hero



UX Design Project 2022

Created by
Rachel Lombard, Rebecca Bronczyk &
Tom Rea

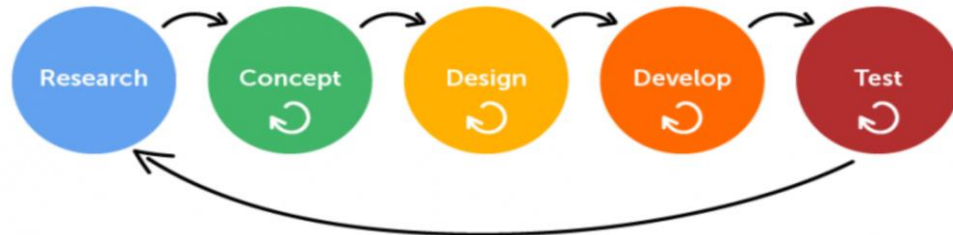
Introduction

Design Challenge

- We were tasked with designing a technology led intervention to encourage a positive behaviour change in students energy demand
- Our app will promote awareness around sustainability

Our Objectives

- Our goal is to work towards reducing energy consumption
- To design an app and meter device to help students measure their daily energy consumption
- To make it easy to understand and use
- We followed the user centered approach by going through different stages which led us to making a prototype





- **Transport** is one of the biggest energy demands in Ireland
- It accounts for **34.5%** of energy consumption
- The second largest demand is **households**
- It accounts for **19.3%** of energy consumption
- **Heat** is the **largest mode** of energy use with **44%**
- People are more likely to change their behaviour when **incentives are involved**



Observational Work



- We were tasked as a team to observe people in our home environment to collect data by using field notes
- Our aim was to see how people interacted with any functionalities that relied on energy consumption, this could include turning on and off lights, or how many devices they used
- With the data collected, we designed an app and device to encourage and change behaviour in student energy consumption

Our findings

- We found that a majority of students use multiple devices at one time
- Many students weren't aware of their energy consumption and didn't keep track of it
- Students are dependent on technology in their daily lives so learning or being reminded of energy saving techniques are important

Conceptual tools

Personas and scenarios

- Our target audience are students who rely heavily on technology and technical products
- Students use more than one device at a time resulting in a lot of energy consumption
- Most students may forget or not know how to reduce energy so our app is the best way to help them learn and to remind them



They primarily live in house shares so that energy consumption awareness spread through the home by using our app will help reduce energy

User requirements



Functional requirements of our app

- Android/iOS compatible so it can be easily accessed on a phone
- It will have software that will calculate how much energy is consumed and where it is consumed
- A login page that requires a username and password
- Spin the wheel to win a prize
- Leaderboard
- The household being able to connect a database or Homepage to see weekly consumption

Non Functional

- A reward and competitive system to motivate people to use the app and build a positive mindset around saving energy consumption
- A settings tab to set up reminders to turn off lights that are not being used

Energy  Hero



Sign Up

Or



Sign Up with Google



Sign Up with Apple

[Already have an account ? Log In](#)

Energy Hero



Log In

Or



Continue with Google



Continue with Apple

[Don't have an account ? Sign Up](#)

Energy Hero



Energy Hero

Weekly / Monthly
Figures

This Week

-15%

Daily energy saving
tips.

Tip : You can save energy by
turning the lights off ...

Energy usage
reduction

Navigation Bar



Analytics

Smart Meter

Settings

My Prizes

Energy
Hero

Hero

energy by
g off ...



Congratulations!
You're in the top 5%



Spin the wheel!
to win a prize



Congratulations!
You won:



Free coffee!

COLLECT
& see all your prizes





Hero

Analytics

Smart Meter

Settings

My Prizes

Energy
Hero



Energy Hero



My Prizes

How it works:
Click on redeem to activate code
&
show code to student center staff to
collect

Free Coffee

Code: 23489

[Redeem](#)

Free Pizza

Code: 23489

[Redeem](#)

Free Waffles

Code: 25799

Redeemed

Free Muffin

Code: 951347

Redeemed





Hero

Analytics

Smart Meter

Settings

My Prizes

Energy
Hero

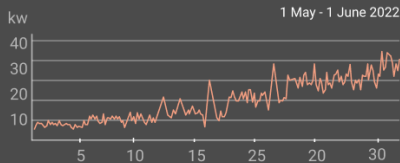
energy by
off ...



Energy Hero



Analytics



Rooms

#1	Living Room	15%
#2	Kitchen	10%
#3	Rachel's room	9%
#4	David's room	7%
#5	Tom's room	5%





Hero

Analytics

Smart Meter

Settings

My Prizes

Energy
Hero



Energy  Hero



Smart Meter

Turn on Smart Meter to synchronise



Previous synchronisations

Sun, 06.03

90kW



Sun, 27.02

100kW





Hero

Analytics

Smart Meter

Settings

My Prizes

Energy
Hero



Energy  Hero



Settings

Apartment A6



Change Photo

Change Username

Change Password

House/Apartment Members

School

Reminders

Smart Meter Set-up

Privacy & Security





Settings

Reminders

Before College Daily 9am

Slogan: Turn off kitchen hood and hob

Kitchen Daily 2pm

Slogan: Turn off kitchen hood and hob

Before Bed Daily 11pm

Slogan: Turn off Tablet and Laptop before bed

Sync Energy Meter Sun 2pm

Slogan: Sync your Energy Meter in the Energy Meter Menu

Create new reminder





Settings

Smart Meter Set-up

Type in Meter ID on Smart Meter
&
establish bluetooth connection

Meter ID: 12345

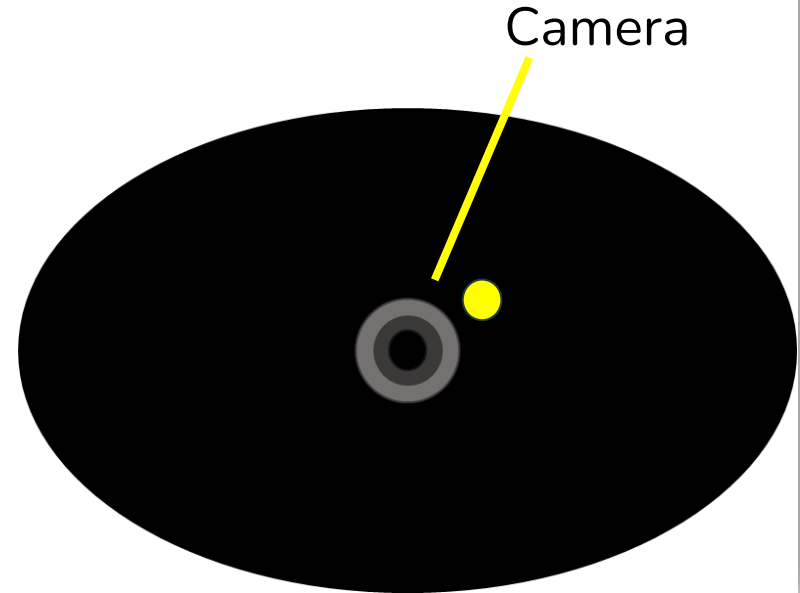
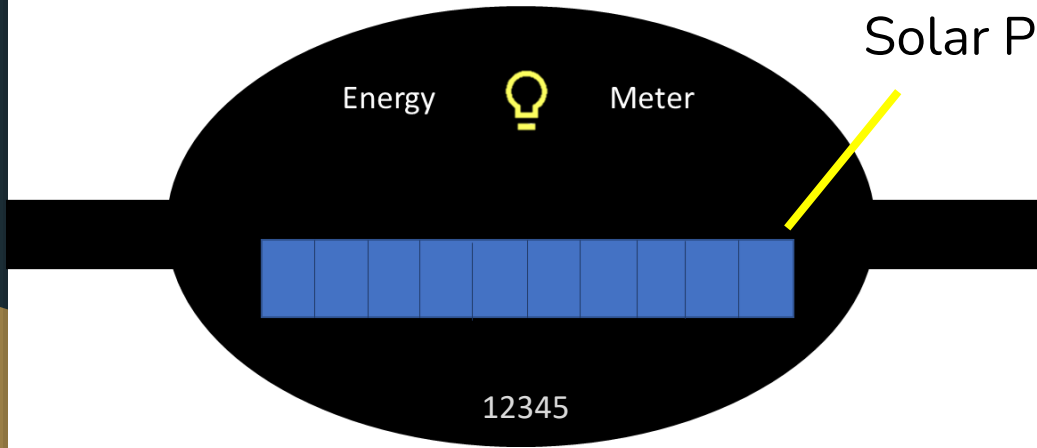
[change](#)

Bluetooth connection

[established](#)



Energy Meter



Evaluation

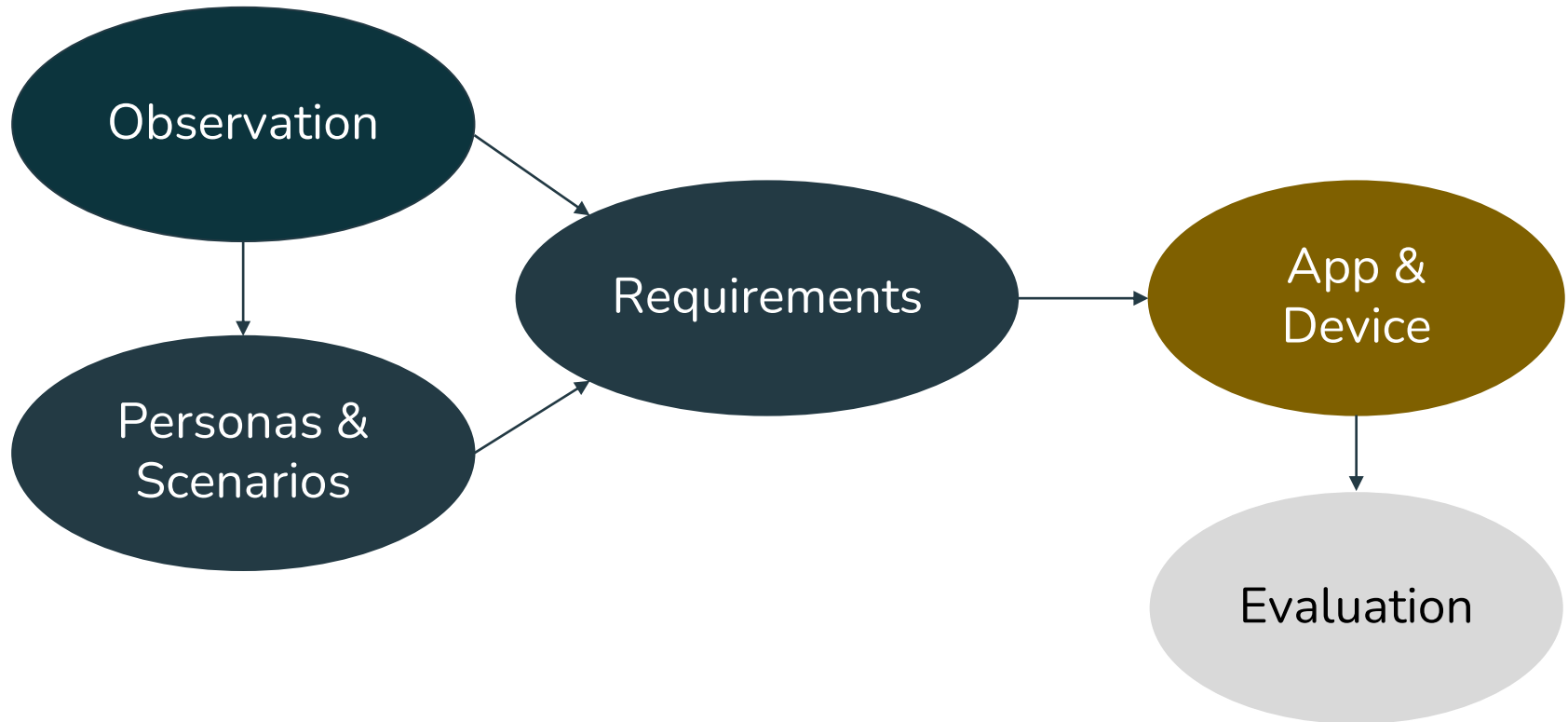
Analytical



Empirical



Summary





References and Sources

Slides:

UCD process image: <https://spring2innovation.com/design-thinking-vs-user-centred-design/>

Did you know facts: <https://www.seai.ie/data-and-insights/behavioural-insights/>

Did you know image: <https://images.app.goo.gl/qDmVteikxFUDS4eW6>

Pizza image: <https://images.app.goo.gl/PY5MdH6P9RjeDVo56>

Money image: <https://images.app.goo.gl/818gxSuPKWsu5P78A>

Requirements icon: <https://images.app.goo.gl/yuc94WrYH7Zfrn3W9>

Magnifying Glass: <https://pixabay.com/vectors/detective-searching-man-search-1424831/>

People: <https://pixabay.com/vectors/people-human-group-person-symbol-3245739/>

Thank you image: Google Doc web

Prototype:

Mug: <https://www.pinclipart.com/maxpin/ibRwxRi/>

Hens: <https://pixabay.com/photos/gallo-pens-colorful-hens-corral-5046896/>

Spinning wheel: <https://www.pinclipart.com/maxpin/TTwJoT/>