

APRIL 2022

# PROMOTING AWARENESS OF DIGITAL POLLUTION

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IADT DL125 Certificate in Design Thinking  
Continuous Assessment Assignment 2



# Section A

# **Mindset and Approach**



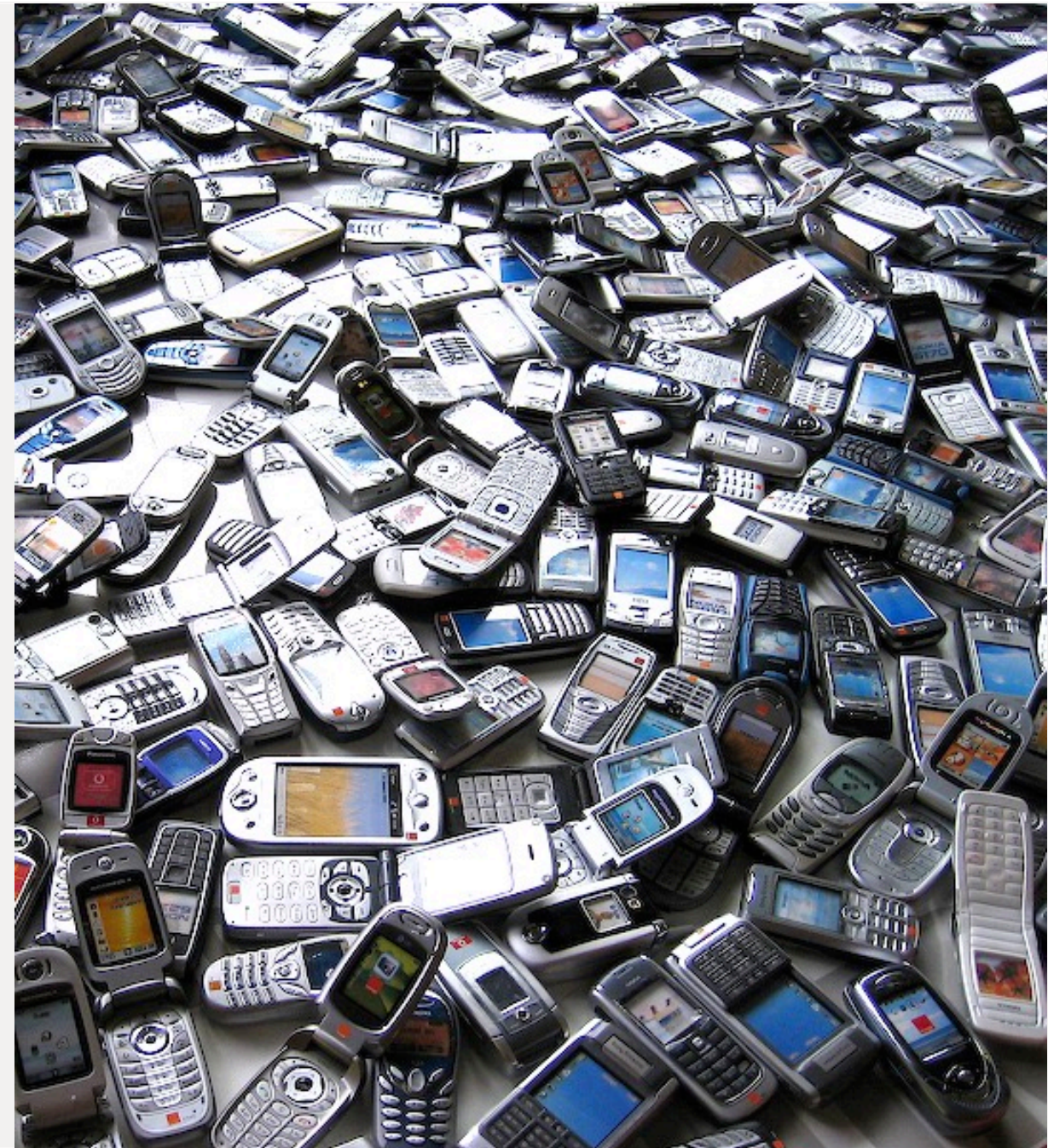
## Background

We are consuming new technology at a rapid rate.

Short-life consumables are adding to the digital wasteland as people seek up-to-date models.

Furthermore, we are generating low-quality data by abundance on a daily basis.

All of which will be an unsustainable draw on our energy resources and adds to our carbon footprint.





## Project Challenge

Find the human-centred aspect – discover how this problem affects people. Discover how does it tie-in with their behaviours?

## Project Aim

Explore people's understanding of digital pollution in relation to their digital habits, and their sustainable lifestyle practices.



# Section B

## **Understand and Define**

## Problem Identification

There are two main areas of concern that relate to digital pollution:

### #1

Obsolescence of materials & devices  
(with all their hazardous materials)

### #2

Energy  
(with two sources of carbon being generated)

- Everything related to storage
- Everything related to data transfer





**On eWaste:**

World produces 50 million tons of electronic & electrical waste every year – only 20% is formally recycled.

**UN Report (2019)**

**On Digital's Carbon Emissions:**

Digital Technologies account for more carbon transmissions than the Aerospace Industries.

**The Guardian / The Shift Project (2020)**

**On Video Streaming:**

If 70 million streaming subscribers lowered the quality of their video, it would reduce greenhouse emissions by up to 3.5 million tons.

**Yale / MIT Report (2021)**

**On Increasing Awareness:**

“We were blind to environmental issues for so long and needed to be thought about it.... digital blindness; we don't see it, so we need to be educated to see it”.

**Anneli Ohvri (2021)**

# Research Methodology

## 1. Empathise

- Carry out initial research on the subject area
- Map the Problem
- Draw up Stakeholder Map
- Create 'How Might We' statement

## 2. Define

- Survey audience
- Interview target audience x 3
- Note the observations
- Develop Personas x 3
- Create Empathy Maps x 3
- Carry out Market Research
- Analyse competition
- Develop Customer Journey Map

## 3. Ideate

- Define the 'Problem Statement'
- Categorise goals
- 'Jobs To Be Done' statement
- Brainstorm innovative solutions

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## 4. Prototype

- Storyboard the solution
- Create a prototype

## 5. Test

- Create info-doc for testers
- Gather feedback from interviewees
- Roadmap ideas for future improvement/development

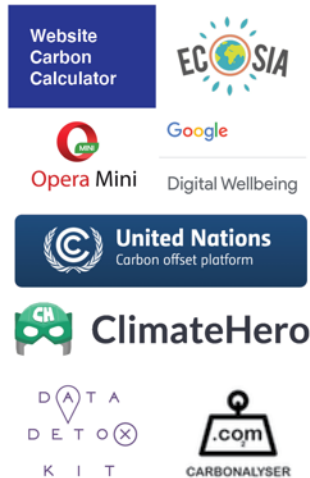


# Market Trends

## Online Tool/ Resource



- Free
- Highly accessible - available to all
- Integrates easily to daily practices
- Strong focus on individual effort



## Initiative/ Organisation



- Free
- Often based on 1 day/event in a calendar year
- Opportunity to build traction on social media
- Strong focus on the collective effort



## Service



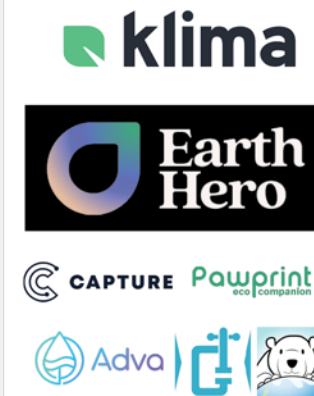
- Medium-cost
- Requires investment of time/finance
- Long-term benefits
- Personal & Professional benefits
- Not accessible for everyone due to location



## App



- Low-Cost
- Instant return
- Realtime feedback
- Strong focus on personal Carbon Footprint
- Offset & monitor green Projects



## Influencer



- Free
- Access through Social Media platforms only
- Strong focus on Food/Fast Fashion/Plastic/Lifestyle



## Competitor Analysis



### EXAMPLE 1

#### Online Tool/ Resource: **Ecosia**

A “green” web browser extension that offsets every web search by planting a tree. Watch your tree counter increase!



### EXAMPLE 2

#### Initiative / Organisation: **Digital Clean Up Day**

Annual 1-Day Initiative tied into the World Clean Up Day, encouraging people to take out their digital trash and save the environment.



### EXAMPLE 3

#### Service: **Digital Detox**

Digital Detox® is an internationally-recognized company focused on helping people be more present and improve the balance with technology use in their lives.



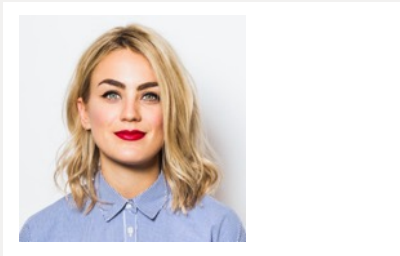
## Competitor Analysis



### EXAMPLE 4

#### App: **Klima**

Calculate your carbon footprint, then offset by funding climate projects. Track projects and reduce your footprint.

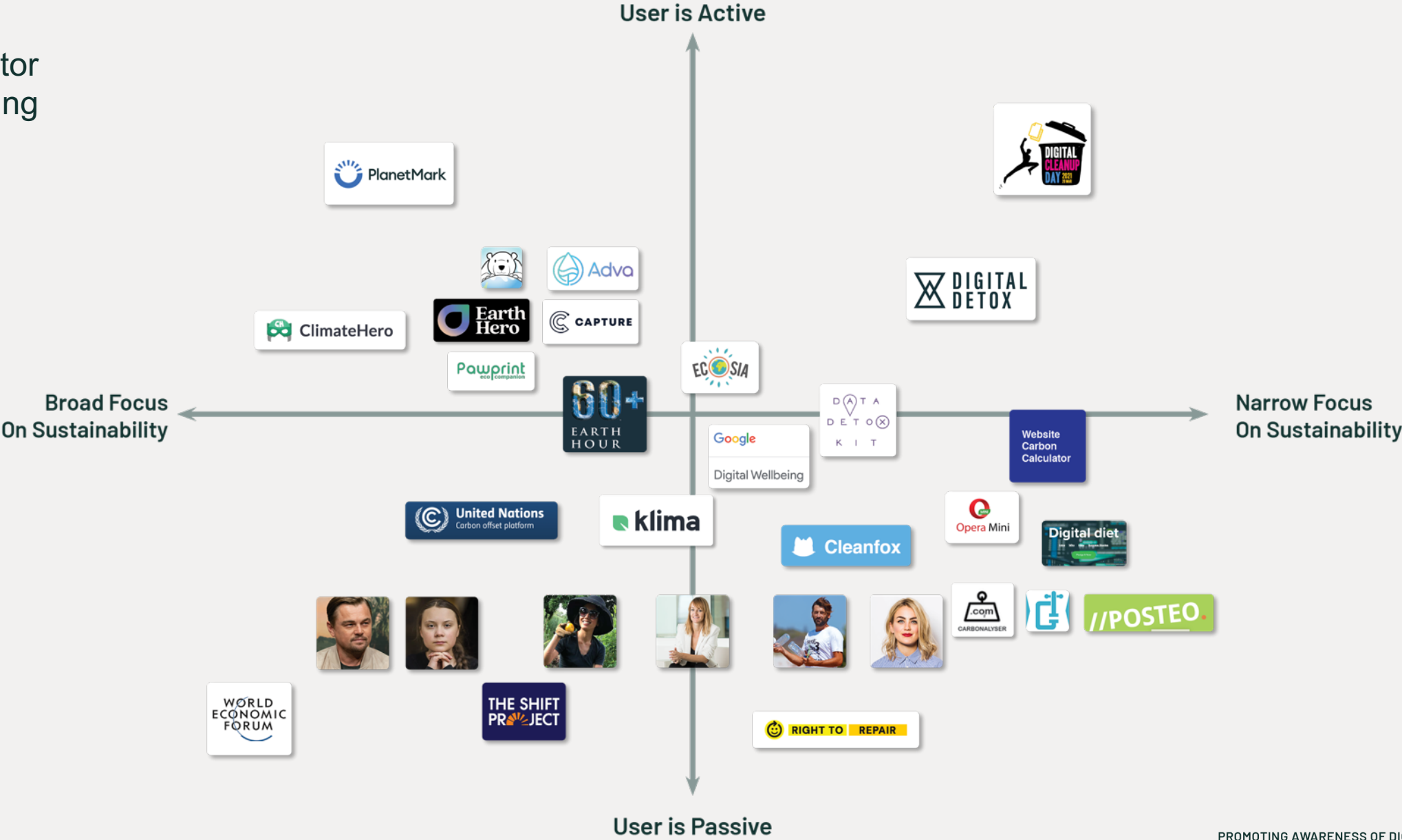


### EXAMPLE 5

#### Influencer: **Georgie Barrat**

Presenter of Channel 5's 'The Gadget Show'. Strong focus on Women in Technology & Sustainable Tech Use.

Competitor  
Positioning





## Customer Research

### Survey Insights

- 10 questions
- 30 responses
- Targeting people aged 18 – 34

**54%**

have access to 3G or 4G only, and say it is fast enough for their everyday needs

**73%**

admit they do not know how many gigabytes of data they consume personally/month

**40%**

feel that 'digital' has a moderate environmental impact

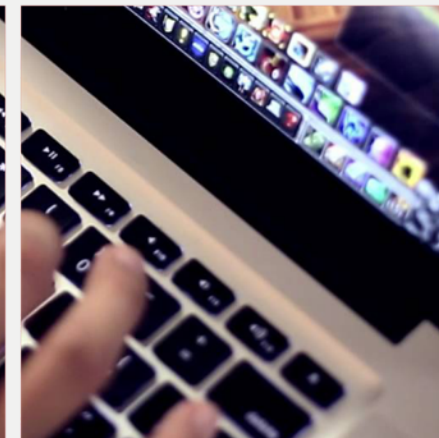
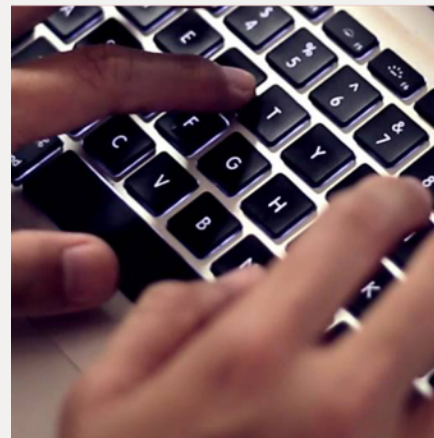


**6-12**

the amount of months that 50% of people admit to focusing time on organising their content

**60%**

say they have no personal habits, goals, or practices that help manage their digital life



**90%**

think it is important to be aware of how constant-use data is affecting the environment

## Customer Research

### Observations from Responders

#### QUESTION 7

Do you have any personal habits, goals, or practices that help you manage your digital life eg. 'I practice a digital detox day at least one day per year', or 'I always remove my social media posts that are more than 3 months old'?

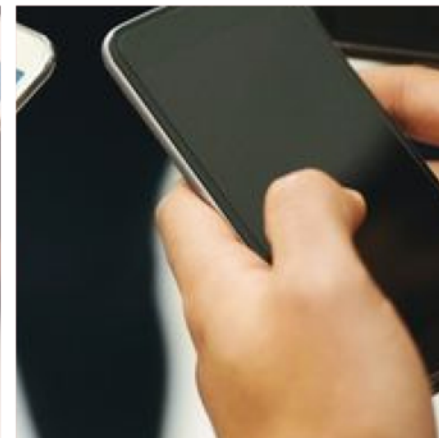
“

I turn myself off on annual leave religiously.

I have my phone on silent so if I'm busy it doesn't distract me. I often miss calls and will call back when I have the time.



I do not use my phone when I get to bed as I will look at items that aren't important.



I don't use Social Media. I am careful about having limits on my screen time on my phone. I always delete WhatsApp messages, unneeded emails also, so there is less to 'scroll back over'. We go camping every year to have no digital time.

”

## Customer Research

### Target Audience Interviews

- 3 interviews
- Identify 3 different age brackets
- Interview split into 2 parts:
  - Digital use & lifestyle
  - Sustainable living practices



**Sophie**

+ 24

+ Marketing Executive



**Liam**

+ 34

+ IT Professional



**Emma**

+ 29

+ Primary School Teacher



## Customer Research



### PERSONA INSIGHT

#### **Sophie**

Needs to get more organised with her digital life – she is a hoarder – only organising when her storage is maxed out.

Sophie wants to stop wasting as much time scrolling on TikTok – and spend more time with friends.

She wants to make some positive changes with her digital consumption, and access better information on practical steps to do so.

## Customer Research



### PERSONA INSIGHT

#### Emma

Needs to have her back covered and be responsible – as a mandated teacher she must be accountable for her digital footprint.

Wants to keep her digital life organised and uncluttered – unwanted content and underused services are deleted or cancelled.

She is environmentally conscious and wants to leave the world in a better place, but needs good info to help her.

## Customer Research



### PERSONA INSIGHT

#### Liam

Wants to track his streaming service logins better – it's a mess and plays on his mind.

Needs to develop better 'phone-break' techniques so he can read more and develop his attention span.

Needs to get a better sense of how his input is helping the big picture with environmental issues.



## Customer Journey Map **Sophie's Weekly Digital Consumption**

Weekday  
Morning



Weekday  
Afternoon



Weekday  
Evening



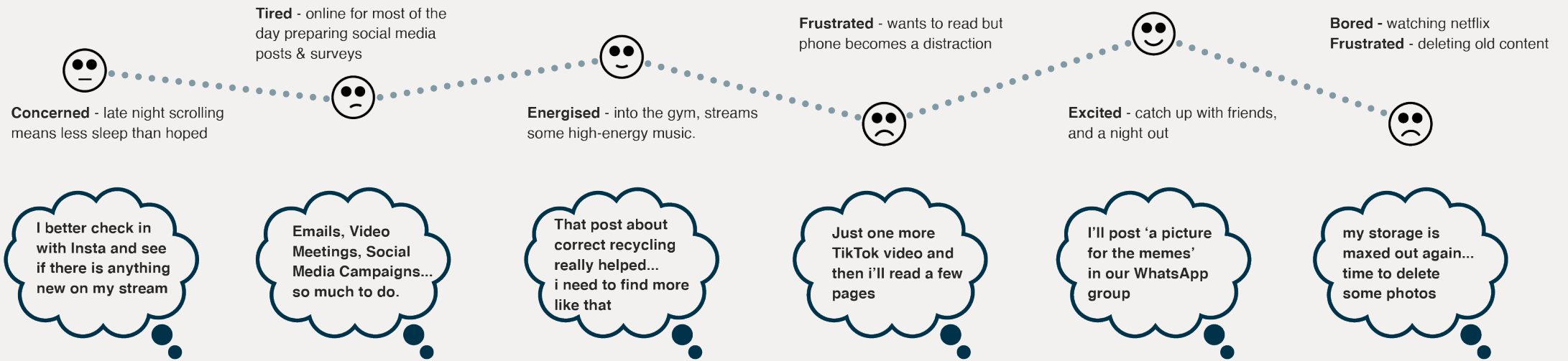
Weekday  
Night-Time



Weekend  
Saturday



Weekend  
Sunday



# Section C

## **Explore and Make**

## Problem Statement

How might we **increase awareness** among 18-34 year olds of the negative impact that **excessive data consumption** has on the environment, so they can **develop more sustainable 'digital-life' habits** for the future.

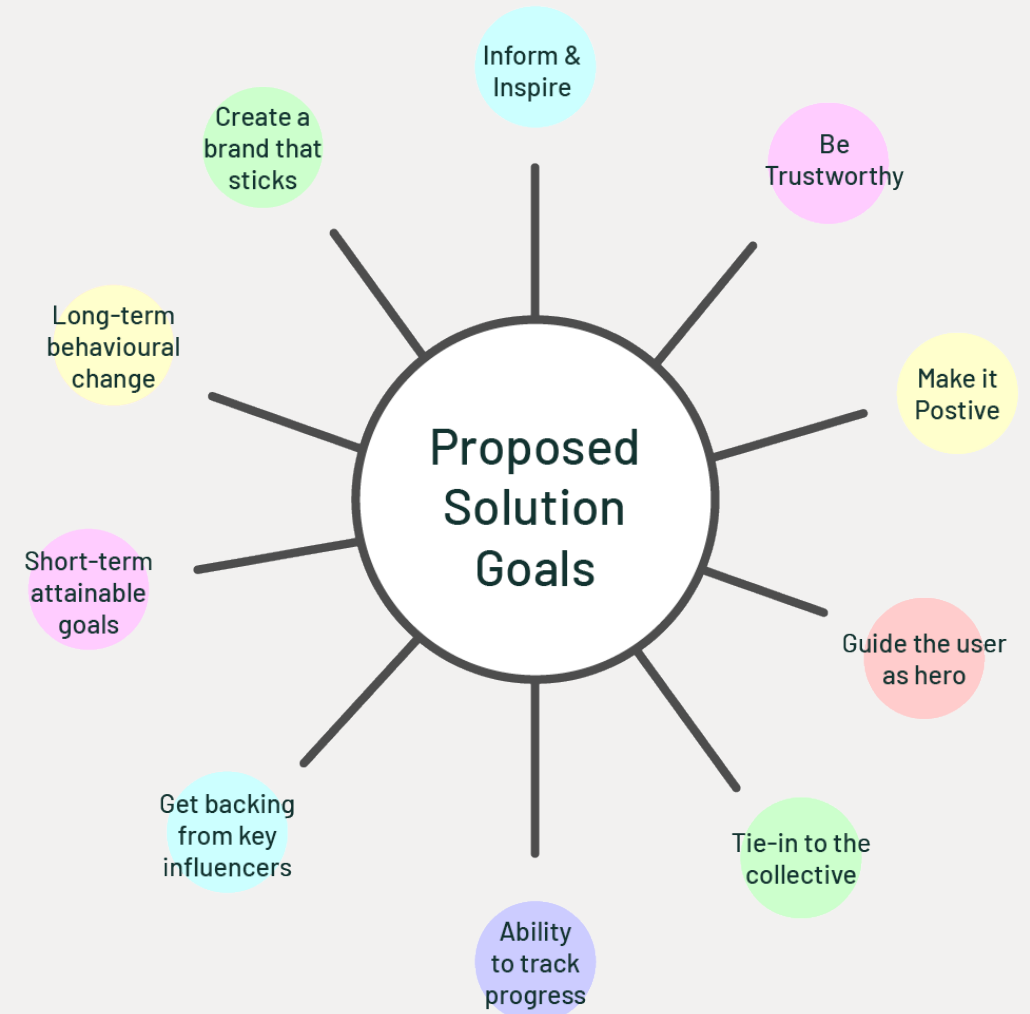


## Proposed Solution

### 2°Day Challenge

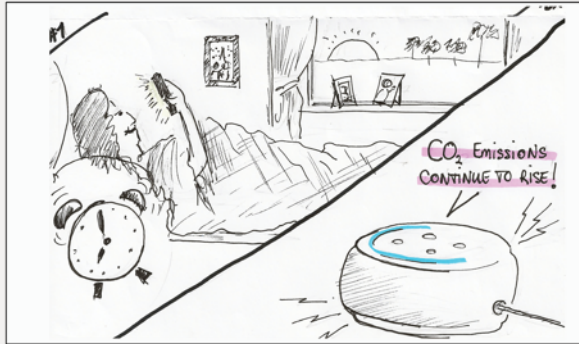
1 Goal / 12 Tasks / 24 Hours

1. Download the 2°Day Challenge app
2. Set the start time to begin the challenge
3. Complete 12 simple tasks within 24 hours
4. Each task is designed to address an issue of digital pollution
5. The user can decide which task they do next
6. The final task is to nominate a friend to take-part
7. On completion, the user can submit their name to a collective pledge wall
8. The experience closes-out by encouraging the user to delete the game





# Storyboard Sophie takes On the 2°Day Challenge



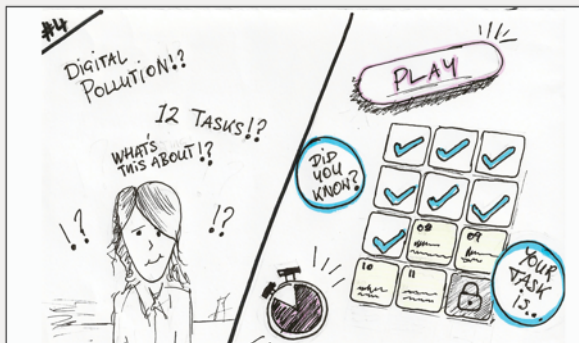
**01.** Sophie wakes up and check-ins with her social media platforms. The morning news comes on her smart speaker - once again, updates on the environment are not good.



**02.** Sophie tries to do what she can - recycling, walking to work, eating less meat. But she would like to do more to help.



**03.** Soon Sophie gets a new message from her friend Liam - he has nominated her to do the 2°Day Challenge. She follows the link and downloads the app.



**04.** Sophie is unsure what it's all about but it sounds fun, and wants to participate. Through the 12 Tasks Sophie learns more about Digital Pollution



**05.** Sophie has completed the challenge within 24 hours. Now she must nominate somebody else to participate too, and build on the collective spirit of the challenge.



**06.** Finally, Sophie deletes the app and considers how much she has learned about digital pollution, and promises herself to develop some new habits in her digital life.

## Prototype

### 2°Day Challenge

A game designed for short-term use on a smartphone.

1 Goal.  
12 Tasks.  
24 Hours.

Each task provides insights into an aspect of digital pollution. The task offers a practical step in how the participant can alleviate the problem.



# Prototype

## 2°Day Challenge

Complete 12 tasks and nominate a new challenger.

The goal is to learn by doing. Going through tasks 1-12, the participant learns how they can consume digital in a more sustainable way.

When the participant has completed the challenge – they are encouraged to practice their new learnings and delete the app.



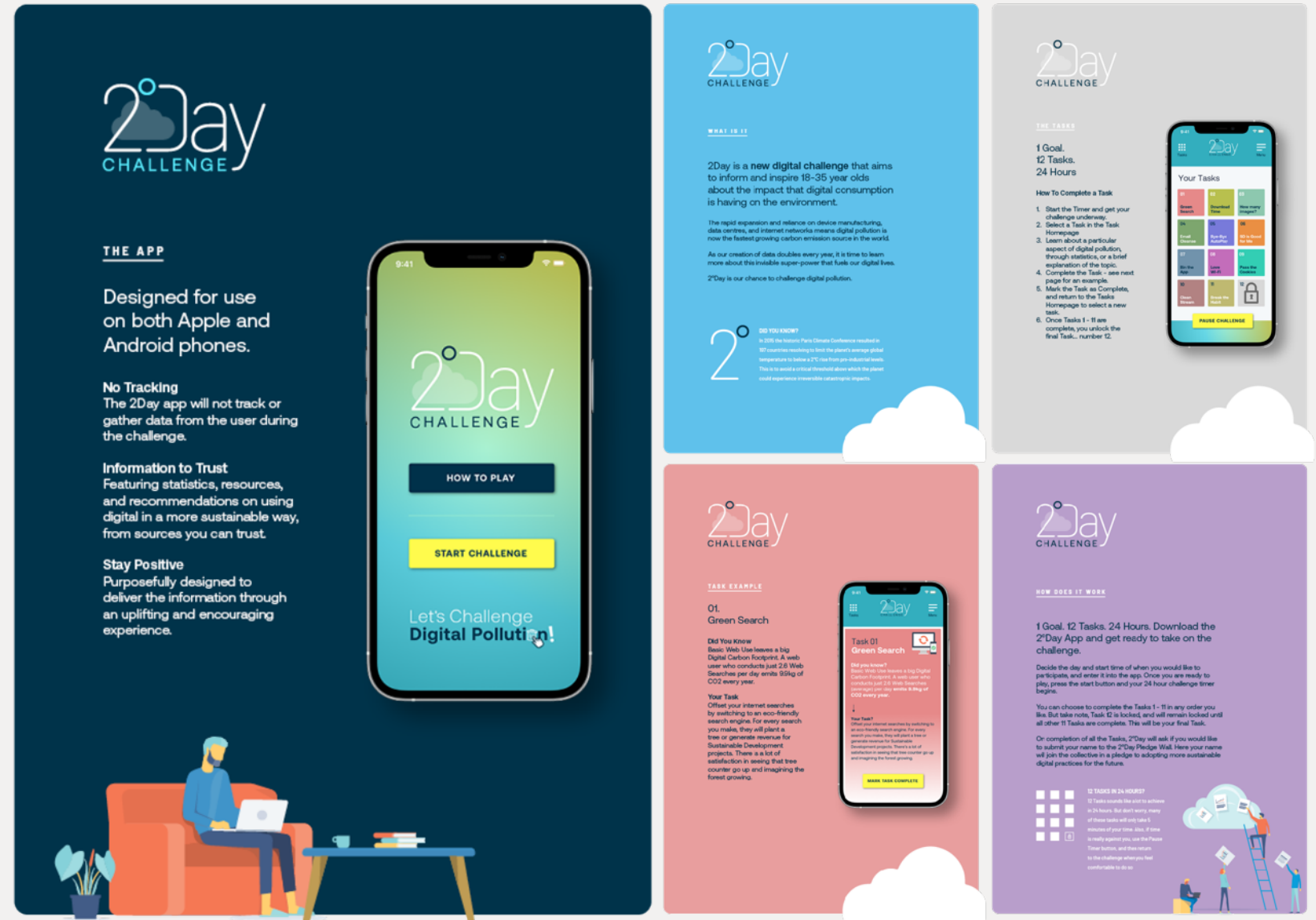
# Section D

## **Reflect and Iterate**



## Testing with Interviewees

- Information Document presented to each interviewee
- Designed to give a detailed overview of the idea.
- Reader should get a good sense of the brand, the product, and the purpose it serves.



## Feedback

Sophie

- Very positive
- Liked the 'nominate somebody' element
- Liked the 'delete to complete' element
- Some concern about whether an app was the correct vehicle for addressing digital pollution.



## Things I Like The Most

The fact that you have to delete the app

That you have to nominate somebody

“

People might be like 'oh an app to solve digital pollution', but what can you do. Everyone is online. Just to have a response I guess for any comments like that. (the ask of deleting the app is good here).

## Feedback

Liam

- Positive / Negative
- Liked the 'achievable challenges – they entice action'
- Liked the 'gamification – highly effective'
- Concern about whether it is easily understood – how to play, and how the individual effort makes a difference



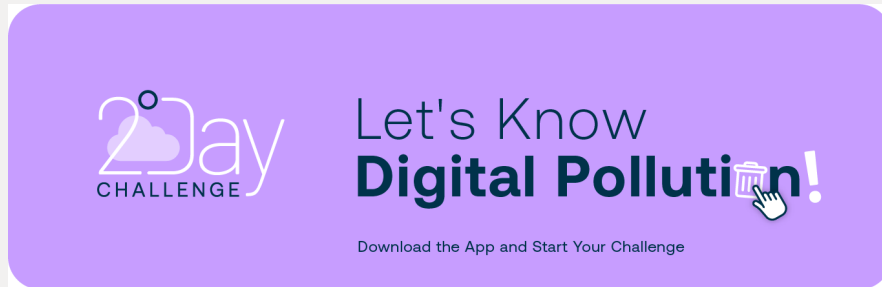
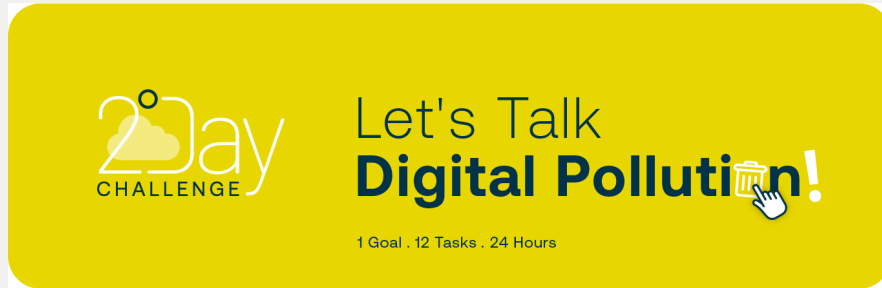
## Things I Like The Most

Gamification and rewarding good behaviour is proven to be highly effective.

## Things I Don't Understand

It needs to be clear how the individual effort can make a positive/negative impact. This is not just a problem for the government and big tech to sort. Everyone with a device is contributing to this.

## Next Steps



### STEP 1

## Test & Build Customised Journeys

- Build & Test the solution at interactive prototype level.
- Explore possibility of developing different task sets/journeys for each age group.

### STEP 2

## Online Support Influencers

- Get traction through support from 3 different influencers.
- Each influencer will appeal to a particular age group.

### STEP 3

## Promotional Campaign Bus Shelter Posters

- Develop advertisement campaign with eye-catching slogans that capture interest.
- Bring an element of the solution out of the digital realm.