
Plastics Challenge

Designing plastics out of the supply chain

15 June 2018

SPRINT REPORT

Version 1.0



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Plastics Challenge

Introduction

1

Project context

This project was commissioned by SAP Leonardo.

The aim of this collaborative innovation project was to provide fresh solutions to meet the global challenge of plastic pollution through a user-centred design thinking approach and the application of new technologies. It focused on how people interact with plastic, from purchase through to use and disposal, as existing research identified that citizen-consumers are increasingly confused about what can be recycled.

The project's elements were:

- UK citizen-consumer behavioural insights
- SAP Leonardo's technology inputs
- collaboration with leading global businesses
- sustainability expertise

This report summarises the project so it may be shared under Creative Commons with partners, participants and interested parties.

Challenge

How can we harness the appetite among UK citizen-consumers for swift action on plastic waste and pollution to deliver fresh, impactful and systemic solutions?

DISCOVER AND DEFINE

- We're focused on reducing or eliminating single-use plastics
- We're drawing our inspiration from consumer behaviour
- We're looking at the role of new digital technologies such as the Internet of Things
- We're seeking hidden opportunities across supply chains
- We're creating concepts that can be made quickly and that are feasible, viable and desirable

Project phases

1.

ETHNOGRAPHIC RESEARCH

The ethnographic research explored the gap between consumer aspiration (less plastic in landfill) and public and business action on the ground. The research investigated real-life experiences and choices as citizen-consumers follow and interact with the cycle of production, as well as materials at their 'end of use' and 'end of life'.

2.

DESIGN SPRINT

The design sprint was organised over three days as an accelerator 'hackathon'. Its purpose was to enable innovators from industry, design and technology to work intensively to develop prototype products and services based on the ethnographic research.

3.

INCUBATION

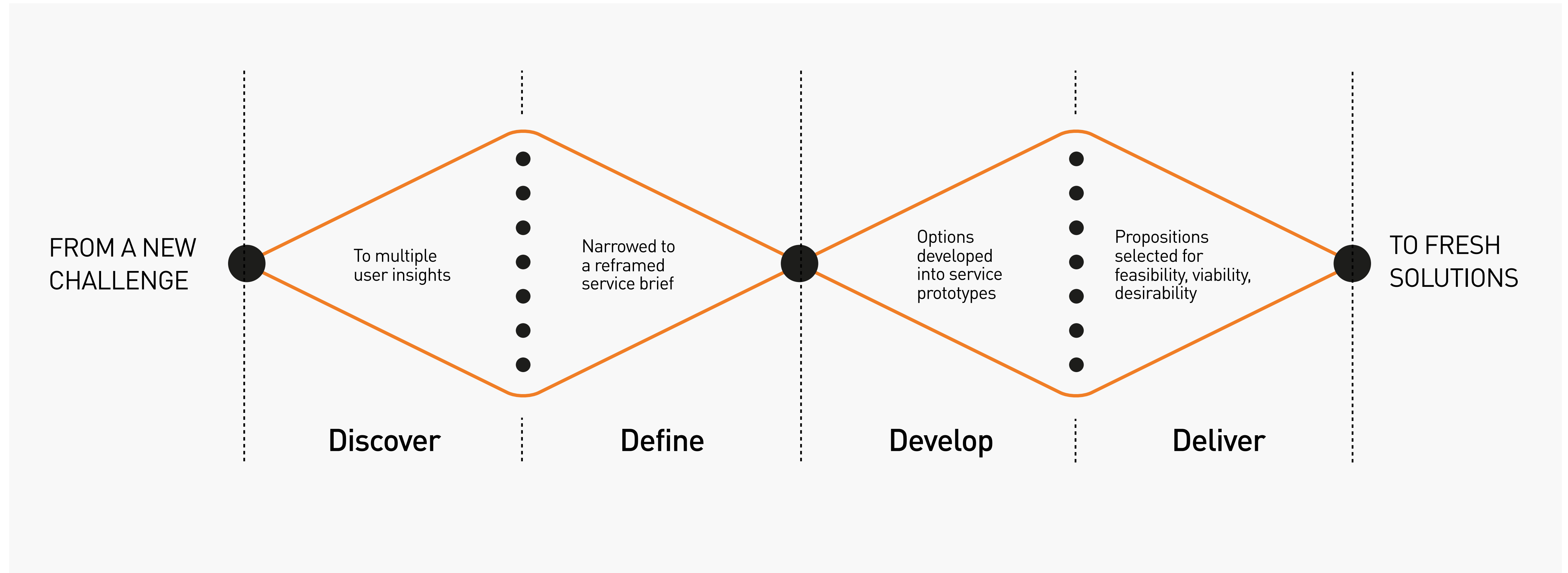
The incubation phase was the opportunity to take first steps to strengthen the business case of selected projects and to develop the propositions into a testable working version which could be shared publicly. It was the first real test of forward commitment from the individuals and companies involved.

4.

SHOWCASE

Design Thinkers Academy London will now curate a digital showcase to further support the projects, including production of a short documentary to best present the topic, process and the prototypes.

Project process



Design sprint delegates

Participants were selected for their expertise, experience and power to act, as well as their organisation’s relevance to the problem.

- Alejandro Pifarre**
Chief Principal, SAP Deutschland SE & Co KG
- Alex Ainsworth**
Marketing and Alliances Manager, Blue Fin Solutions
- Bengt Cousins-Jenvey**
Sustainability Consultant, Useful Projects, Expedition Engineering
- Carl Streatfield**
Presales Innovation Labs, SAP UK
- Carlos Diaz**
Packaging concept designer, More From Less (DS Smith)
- Celena Fernandez**
Head of Environment, Compass Group
- Charlotte Bullock**
Account Executive, SAP UK

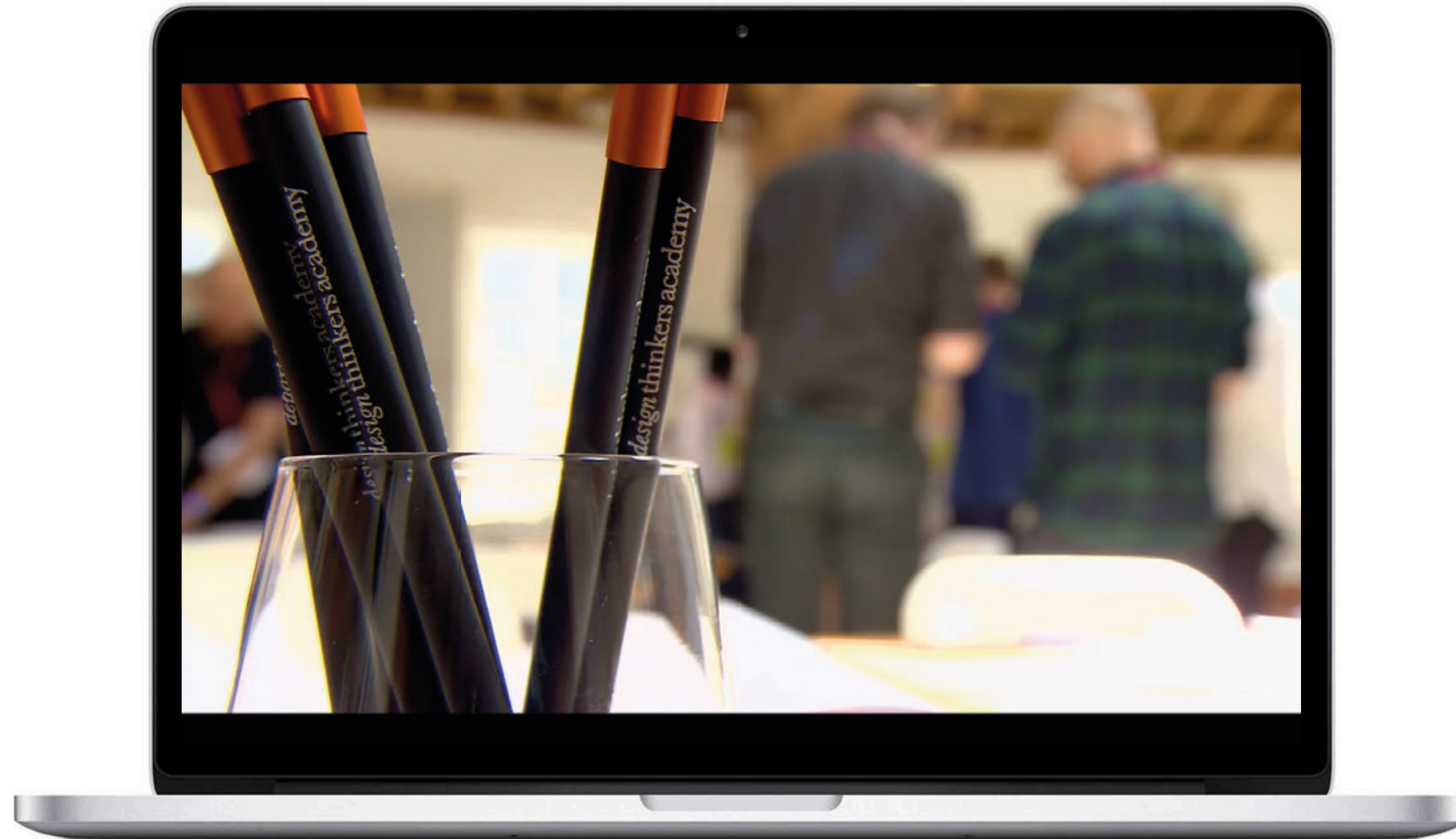
- Damian Ryan**
Director for strategy and impact, The Climate Group
- Dominic Pullen**
User Experience Design Manager, Orange
- Duncan White**
Head of Business Management, HSBC
- Gemma Brooks**
Senior Design Manager, Unilever
- Glyn Baker**
Global Business Development Lead, Visa Innovation & Strategic Partnerships
- Heather Harrington**
Pan-European PS e-Commerce Project Leader, P&G

- Jim Sullivan**
Head, Global Sustainability Innovation Accelerator, SAP, USA
- Jens-Peter Meeseburg**
Director, Head of Connected Car, Telia Company
- Jochen Rode**
Senior Development Manager, SAP, SE
- Jon Sparrow**
EMEA Practice Head - Analytics & Insight Services, SAP
- Katie Bradbury**
Packaging Manager, Deliveroo
- Mariella Stapylton-Smith**
Presales Associate, SAP UK

- Matt Champion**
Customer Innovation Director, SAP UK
- Natasha Pergl**
Innovation Consultant, SAP UK
- Nick Zagklis**
Solution Specialist, SAP UK
- Olumide Ojo-Oratokhai**
Packaging Development Manager, Tata Global Beverages
- Pamela Stathaki**
Sustainability Manager, GSK
- Paul Williams**
Innovation Portfolio Manager, Johnson Matthey
- Richard Parkinson**
Digital Innovation and Events Technical Lead, Howden Joinery Group PLC

- Tim Marsden**
Supply Chain IT Director, Coca-Cola European Partners
- Umar Khan**
Cloud Platform Solution Architect, SAP UK

Design sprint film



[Click to view the sprint summary film](#)

Password: SAPPCDelegates

Plastics Challenge Research

2

Research overview

The ethnographic research that forms the starting point for this report focuses on the gap between what citizen-consumers aspire to do, and what they actually do in their daily lives. For example, wanting to put less plastic into landfill but sometimes puts plastic bottles in the bin, so they end up in landfill.

Research question

How can citizen-consumer experiences of the plastic life cycle help us identify opportunities for innovation on plastic waste and pollution?

From individual behaviours to themes and personas

Our fieldwork with participants generated more than 800 pieces of data and stories. During our analysis we looked for patterns in people's behaviour, then grouped these into themes.



Research methodology

The plastic life cycle is a complex system. Generally, citizen-consumers do not think about it often or in depth.

The research approach was designed to understand and interpret behaviours and aspirations, so insights could be created. These insights were used as starting points to develop opportunities for innovators. Ethnography was used as a qualitative research method to investigate people's real needs, pain points and experiences.

A diverse demographic group of 24 citizen-consumers was recruited to participate in the research about awareness, use and disposal of plastics. Its focus was how people interact with plastic, from purchase, through to use and disposal.

We applied the ethnographic methodology to a research exercise with 24 respondents participating in a series of activities:

PLASTIC LAB 1: SENSITISING

At the first workshop, we explained the topic to participants and put it into context. We had initial conversations and reflections on each person's plastic consumption, from their first contact with a plastic and their purchasing decisions, to their use of plastic and its disposal.

12-DAY AUTO-ETHNOGRAPHIC STUDY: COLLECTING

Participants used a specialist ethnographic diary app to observe and report their daily interactions with plastic. They logged stories, pictures, geolocations and a rating for each interaction. Researchers communicated with participants throughout to guide them through the process.

PLASTIC LAB 2: REFLECTING

All participants were invited back to a second workshop. In small groups, they reflected on the individual experiences had recorded on the diary app. These reflections were collectively used to generate a deeper understanding of what is right or wrong with plastics, and how things may be changed.

HOME VISITS: ILLUSTRATING

We visited a selection of participants at home to further immerse ourselves into their daily encounters with plastic. We illustrated some of the research's key understandings with personal filmed stories.

Research themes

During analysis, patterns were looked for in people’s behaviour, then these were grouped into themes.

Data was collected, cross-referenced and broken down. Five themes emerged from analysis – these were the areas in which patterns were discovered in consumer attitudes and behaviour.

RESPONSIBILITY

Who is accountable for reducing plastic consumption?

Consciousness over the need to make a change as well as who must take action varies.

Should the responsibility fall on corporations and government or can individuals also change things?

CONFUSION AND MYTHS

How confused am I by what can be recycled and where?

There is a general confusion around the types of plastic that can be recycled, and this sometimes creates myths.

People have difficulty reconciling the many icons and guidelines they encounter.

LEARNING

How do I obtain and respond to information on recycling plastic?

People have very different ways of encountering information about recycling plastic.

Some make an effort to actively look up information, while others wait for manufacturers and public bodies to tell them what to do.

NECESSITY

How do I respond to excessive plastic packaging?

Consumers understand that there is a necessity for plastic packaging, but they often question whether plastic packaging is excessively used.

Convenience, choice, cost and hygiene all influence their behaviour and beliefs.

AWARENESS AND VISIBILITY

How visible is the plastic problem to me?

The awareness of the need to reduce and recycle plastics differs.

This is not just related to how much people know, but also to how visible the recycling system is to them, from bins on the street, to icons on packaging.

Persona types

The emerging themes were used as criteria to group the participants by their motivations and actions. Each group became a persona type: an expression of a particular pattern of attitudes and behaviours.

ENVIRONMENTAL EVANGELISTS

Environmental evangelists feel empowered to make changes in their lives, but their knowledge tells them that manufacturers and waste managers can do much more.

They refuse, reduce, reuse and recycle plastic, but hardly ever just bin it. They are highly aware of the existing recycling infrastructure, but think it could be improved and tell brands and authorities to change.



CONSIDERATE CITIZENS

Considerate citizens put serious effort into reducing plastics, and feel a clear responsibility to do their bit to save the environment from plastics.

They refuse, reduce, reuse and recycle plastic, but hardly ever just bin it. They are highly aware of the existing infrastructure for recycling and generally accept it for what it is, hoping it improves in future.



CONTENTED CONSUMERS

Contented consumers are happy to do their part by avoiding plastic waste, but feel their role and contribution is limited as a consumer and citizen.

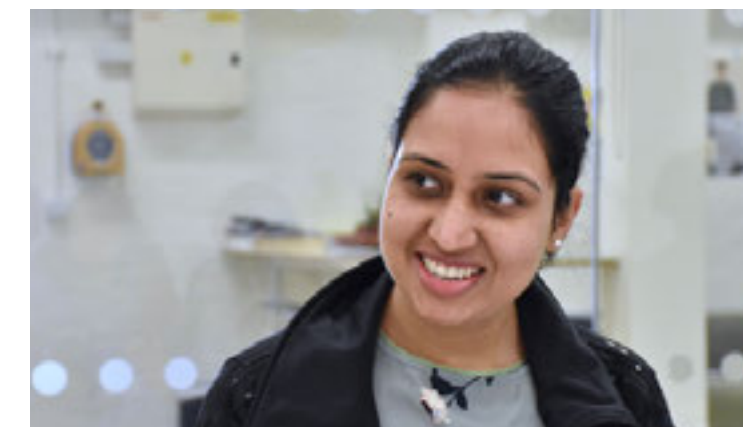
They mostly reuse and recycle plastics, but rarely refuse plastics or actively look for ways to reduce their usage. They also sometimes bin plastic if it's more convenient at the time.



LITTLE-BY-LITTLE LEARNERS

Little-by-little learners feel they need to do more to lessen plastic waste. Media coverage and friends' stories makes them realise that they can still learn when it comes to recycling.

They will not actively refuse or reduce plastics and rarely reuse plastic bottles, for instance. They are more focused on disposing of plastic responsibly, but when that is difficult, they just bin it.



RELAXED BEGINNERS

Relaxed beginners have heard of recycling plastics, but do not necessarily feel they must be actively involved. They are vaguely aware of the problems and how they could be part of the solution.

They don't think about recycling when buying products, but are happy to dispose of plastic responsibly if the opportunity is right in front of them.



Plastics Challenge

Design Sprint

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Agenda

DAY 1

DISCOVER AND DEFINE

- Context-setting
- Ethnographic immersion
- Customer closeness
- Persona development
- Customer journey mapping
- Framing the problem
- Redefining the brief

Immerse and reframe

The first day set the stage for the challenge with a deep-dive into ethnographic research, testing assumptions with end users and reframing the brief.

DAY 2

DEVELOP AND TEST

- Refining the brief
- Inspiration
- Stimuli
- Ideation
- Idea selection
- Concept proposition
- Visualisation and prototyping
- Client testing

Make and augment

A reframed brief with fresh customer insights allowed us to get into a meaningful solution space. We generated ideas to create new user journeys, and used them to prototype ideas for user testing.

DAY 3

DELIVER

- Concept development
- Persuasive selling
- Business model canvas
- Jury panel
- Winners and next steps

Refine and evaluate

The final day consisted of concept refinement, pitch development, further thinking on the business model and concept evaluation by a jury panel of experts.

Context setting

Sustainability designer and chartered waste manager Sophie Thomas introduced why this is a particularly important challenge. She looked at the history of plastic, exploring its many dimensions and how usage has evolved over the past century.

Stats around manufacture and waste were of particular focus, with just 2% of plastic re-entering the manufacturing process. This means 98% is lost: through the recycling process, incineration or energy recovery, landfill and leakage into the environment.

Citizen-consumers measure plastic's greatest impact on the environment. It is sobering to learn that there could be more plastic than fish in the ocean by 2050.

Initiatives and legislation from government and other organisations gave delegates an idea of the direction of change, identifying potential solution areas.

Sophie Thomas' full presentation can be found in the supporting documents.

“If we carry on ‘business as usual’, by 2025 there will be one tonne of plastic to every three tonnes of fish in the ocean. By 2050, there will be more plastic than fish in the sea.”

Quote from Sophie Thomas' context-setting presentation

Citizen-consumer engagement techniques

Throughout the project we focused on real users to ensure that ideas were grounded in reality and that they meet user needs.

A selection of users attended the sprint so teams could discover their needs, and to give feedback to develop ideas.

STORY SLAM

A 'story slam' is a method for revealing ethnographic research. During this session, research experts shared user stories, journeys and pain points, as well as key insights and emerging themes.



CUSTOMER CLOSENESS

Delegates expressed their initial assumptions about their users. They then had the opportunity to interview them, building empathy and understanding of the people they would be designing for.



CLIENT TESTING

On day two of the workshop, teams shared their initial concepts with users to gain feedback. These user reactions helped teams evolve and continue building their concepts with user needs as the main focus.



Techniques for innovation

Over the three-day sprint, facilitators helped delegates gain knowledge and develop skills for activities, from project-related inspiration to pitch preparation.

INSPIRATION

Delegates shared examples of excessive and reduced plastic use. Sophie Thomas, a renowned sustainability designer, shared an inspiration exhibition, showing groups, organisations and products that have reduced their plastic consumption. SAP's Carl Streatfield showcased the potential role of new technologies such as machine learning.



IDEATION

In a rapid-fire set of activities, teams generated hundreds of possible concepts based on their reframed design brief. They evaluated their ideas against client and businesses value to create one final concept value proposition.



CONCEPT DEVELOPMENT

Teams evolved their concepts using design thinking tools, and were supported by designers. They developed pitch presentations following a persuasive selling masterclass.



Plastics Challenge

Team concepts

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Team 1



Bengt Cousins-Jenvey
Sustainability Consultant,
Useful Projects,
Expedition Engineering



Carlos Diaz
Packaging concept
designer, More From Less



Dominic Pullen
User Experience Design
Manager, Orange



Gemma Brooks
Senior Design Manager,
Unilever



Natasha Pergl
Innovation Consultant,
SAP UK

Team 1 persona type: **Environmental evangelist**

Guy, 40

Male

London

Well-educated, aware of human impact on the environment

'It's about finding something that works for all of us'



Motivations

- Likes to see progress
- Takes ethical issues seriously
- Wants to educate children to be more sustainable
- Non-plastic stuff is better stuff – going back to the 'good old days'
- Looks for natural solutions
- Convenience matters – has young family

Behaviours

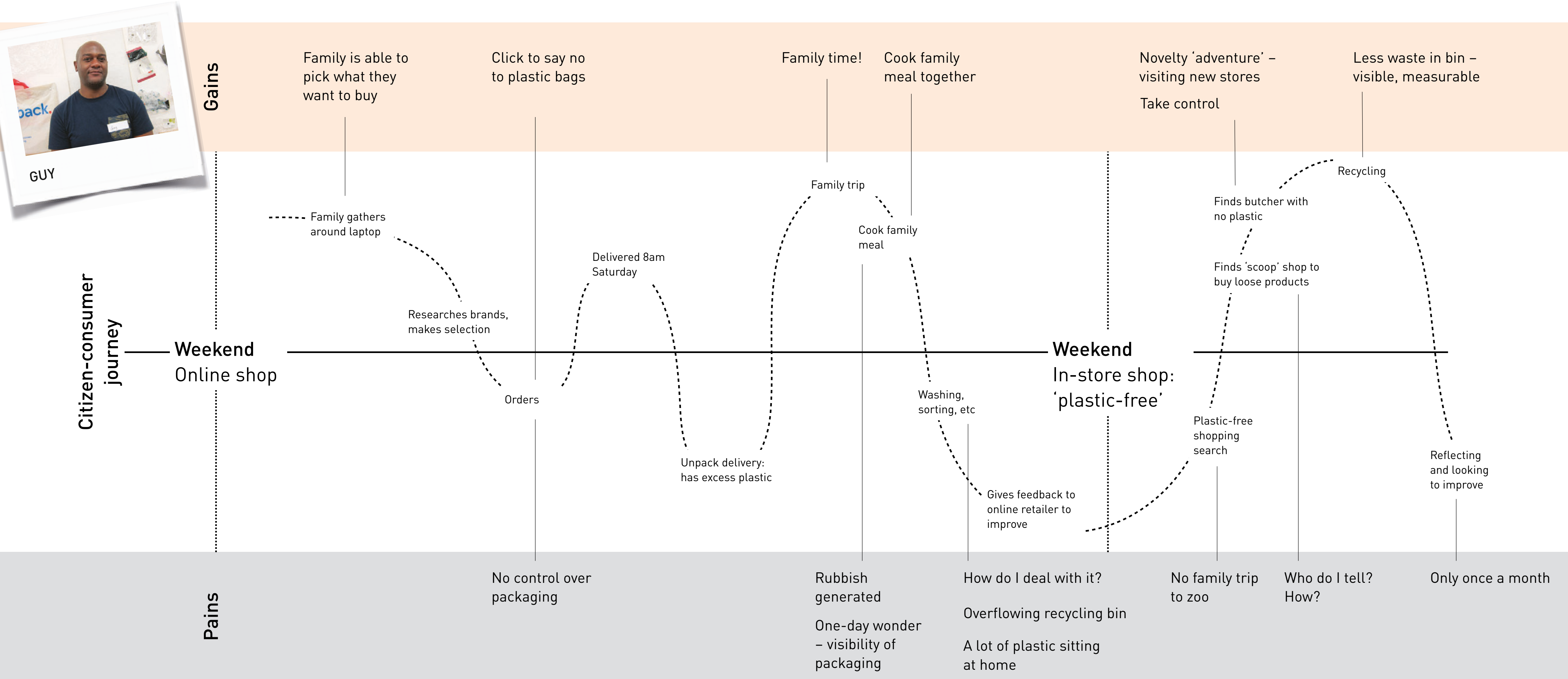
- Awareness of environmental impact of plastic 'waste' via social media feeds
- Community of change – wants to co-create a solution together
- Wants to pass lessons to future generations
- Sense of responsibility – practises good behaviours at home

Frustrations

- Too much packaging for online purchases – weekly food shop – no control over this
- Being plastic-free is not easy, and not achievable, but wants to reduce
- Difficult convincing kids to do something about it
- No way to measure total impact
- Single-use plastic is a social norm
- 'Eco-friendly' is seen as 'green wash'
- No simple rules to follow

The persona and customer journey is a composite of people and experiences.

Team 1: Guy's journey



Team 1: Opportunity and solution

Plastic Pioneers

“Information and action”

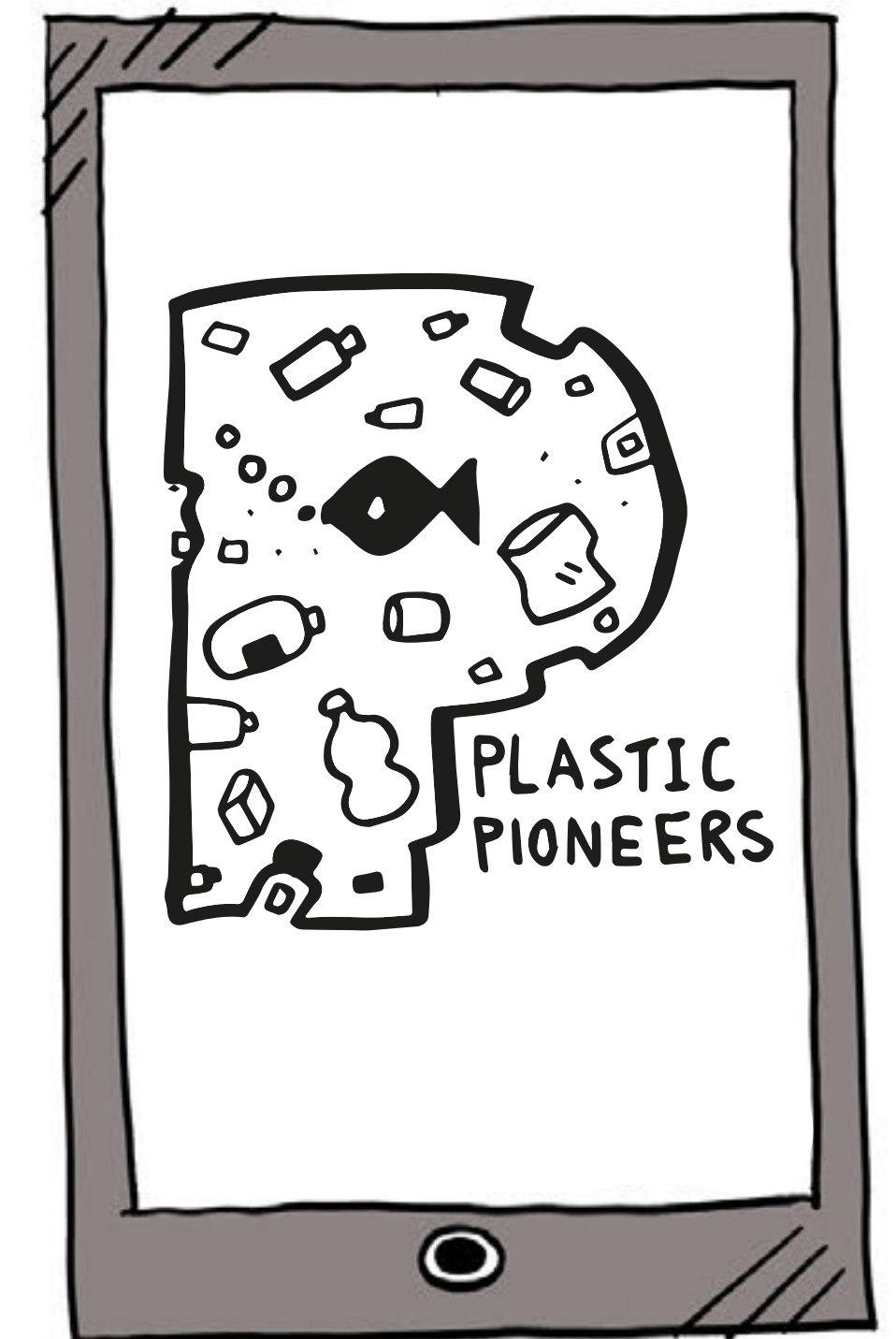
Opportunity statement

Given that an individual wants to make a difference, how might we help self-motivated conscious consumers and businesses to connect and be part of a community of change, so they can regain control over when, why and how they use single-use plastic?

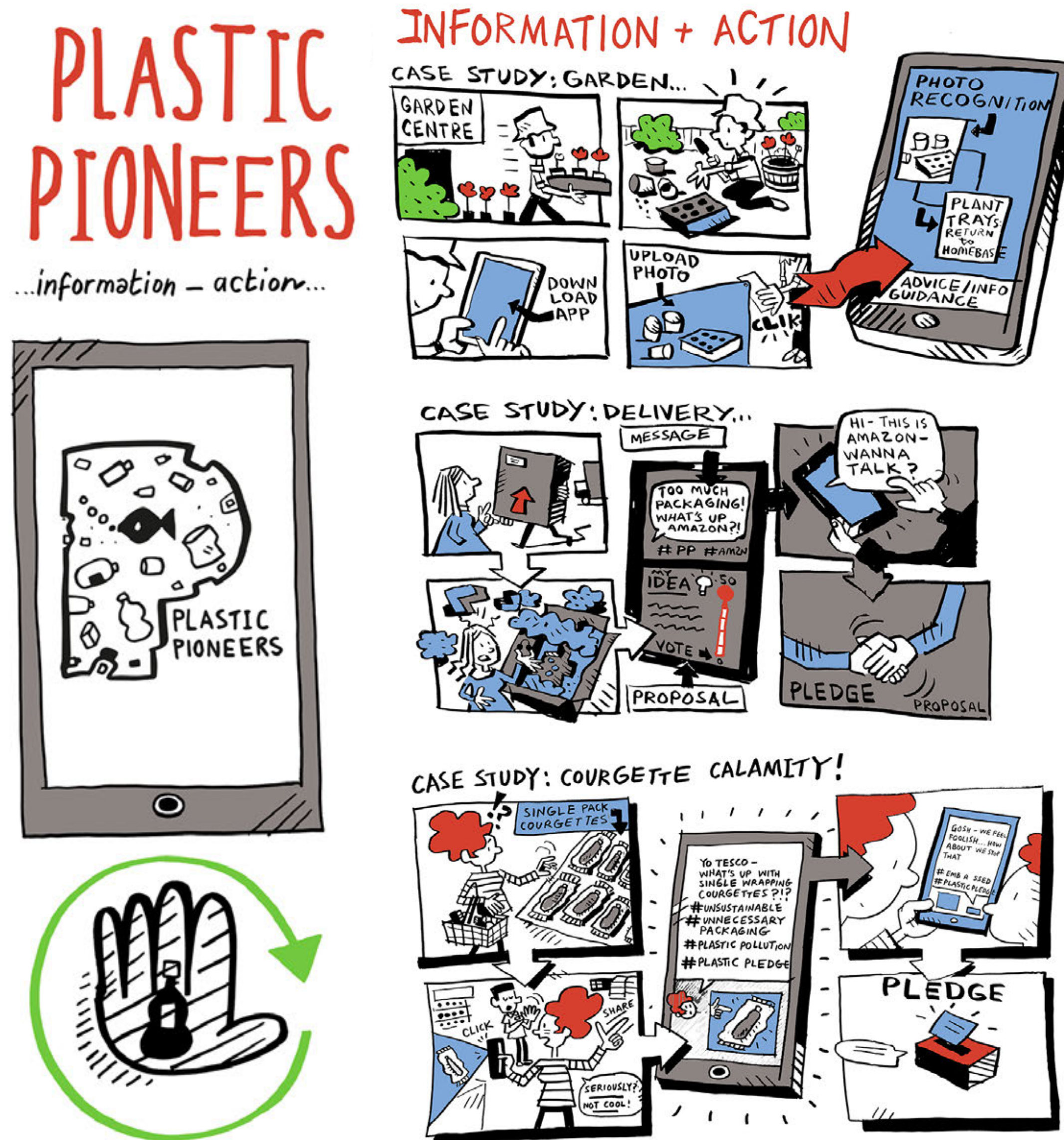
Description

Many plastic evangelists actively encourage others to change their behaviour and reach out to brands to encourage improvement around their plastic use.

Plastic Pioneers is an experimental community lab for engaged individuals to document plastic use, explore new usage behaviours and research packaging options, and consult with ideas and suggestions. Community engagement allows for brands and businesses to directly connect with early adopters, getting valuable data on the use of their products and services.



Team 1: Plastic Pioneers – illustration of concept



Team 1: Plastic Pioneers – pitch narrative

The world has a huge problem with plastic waste. The UK Plastics Pact, led by WRAP, is an amazing step to tackle this problem. It has an impressive list of collaborators, but there's something missing: citizen-consumers. There are people who are concerned about the environment: they're motivated and driven, they reuse, refuse and recycle, but they don't have access to tools that will help them make a meaningful change.

We have powerless pioneers. We want to establish a dialogue between these pioneers and brands by activating a digital community that would allow them to talk to each other.

The core idea is to bridge these two groups to drive innovation and co-creation. Brands test early ideas, concepts and packaging to see how the public perceives these ideas, allowing pioneers to be heard by the large corporations producing the plastic waste.

Pioneers are vocal and can make or break a product in the market. Why not involve them in this process and allow them to have a voice in the creation of new products?

We can use new technologies, such as image recognition and augmented reality, to make a simple application. Users take a photo of the product – for example, a plastic plant tray. The app recognises the product and gives the user information on how to recycle it, or if it can be returned to the garden centre to be reused. The app can also provide education around plastic: it has valuable uses, so shouldn't be demonised.

The concept's value is to accelerate innovation with a rapid hub where brands can test concepts and get a better glimpse of the public's reaction.

Team 2



Alejandro Pifarre
Chief Principal, SAP
Deutschland SE & Co KG



Alex Ainsworth
Marketing and Alliances
Manager, Blue Fin
Solutions



Duncan White
Head of Business
Management, HSBC



Matt Champion
Customer Innovation
Director, SAP UK



Pamela Stathaki
Sustainability Manager,
GSK



Paul Williams
Innovation Portfolio
Manager, Johnson
Matthey

Team 2 persona type: Considerate citizen



Kylie, 29

Female

South London

Mum of two

Carer, cleaner, volunteer

'How can you help me to do more?'

Motivations

- Kids – responsibility
- Future
- Purpose
- Moral compass: 'It's the right thing to do'
- Love/hate relationship with plastic
- TV shows and social media posts show dangers and solutions

Behaviours

- Researches different recycling options
- Willing to invest time to separate and reduce plastic
- Makes purchasing/shopping decisions based on the amount of packaging
- Shops little and often
- Responsible citizen
- Co-owns reuse organisation
- Tries to influence friends and family

Frustrations

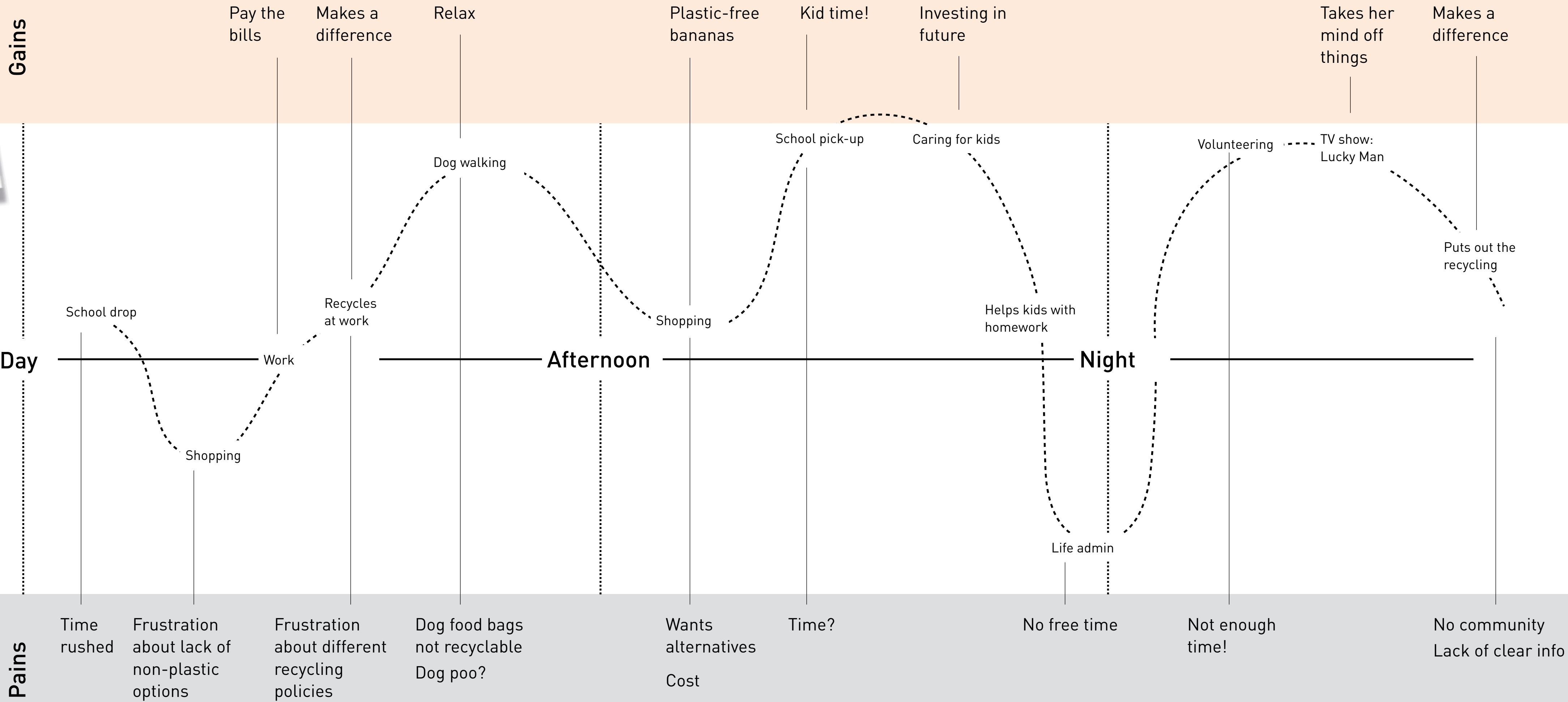
- Plastic is everywhere
- Feels like she doesn't have power – plastic is imposed on her
- Lack of options or alternatives
- Confusion between local authorities
- Confusion of packaging and labelling
- Lack of info on packaging
- Cannot determine how to recycle
- Lack of infrastructure
- Why do companies not focus on solutions more?

The persona and customer journey is a composite of people and experiences.

Team 2: Kylie's journey



Citizen-consumer journey



Team 2: Opportunity and solution

Alter Eco

“Making sense of plastic”

Opportunity statement

Given that there is a lack of information about plastic alternatives at our fingertips, how might we help empower motivated but frustrated citizens to reduce their plastic footprint, so they can contribute to a more sustainable future?

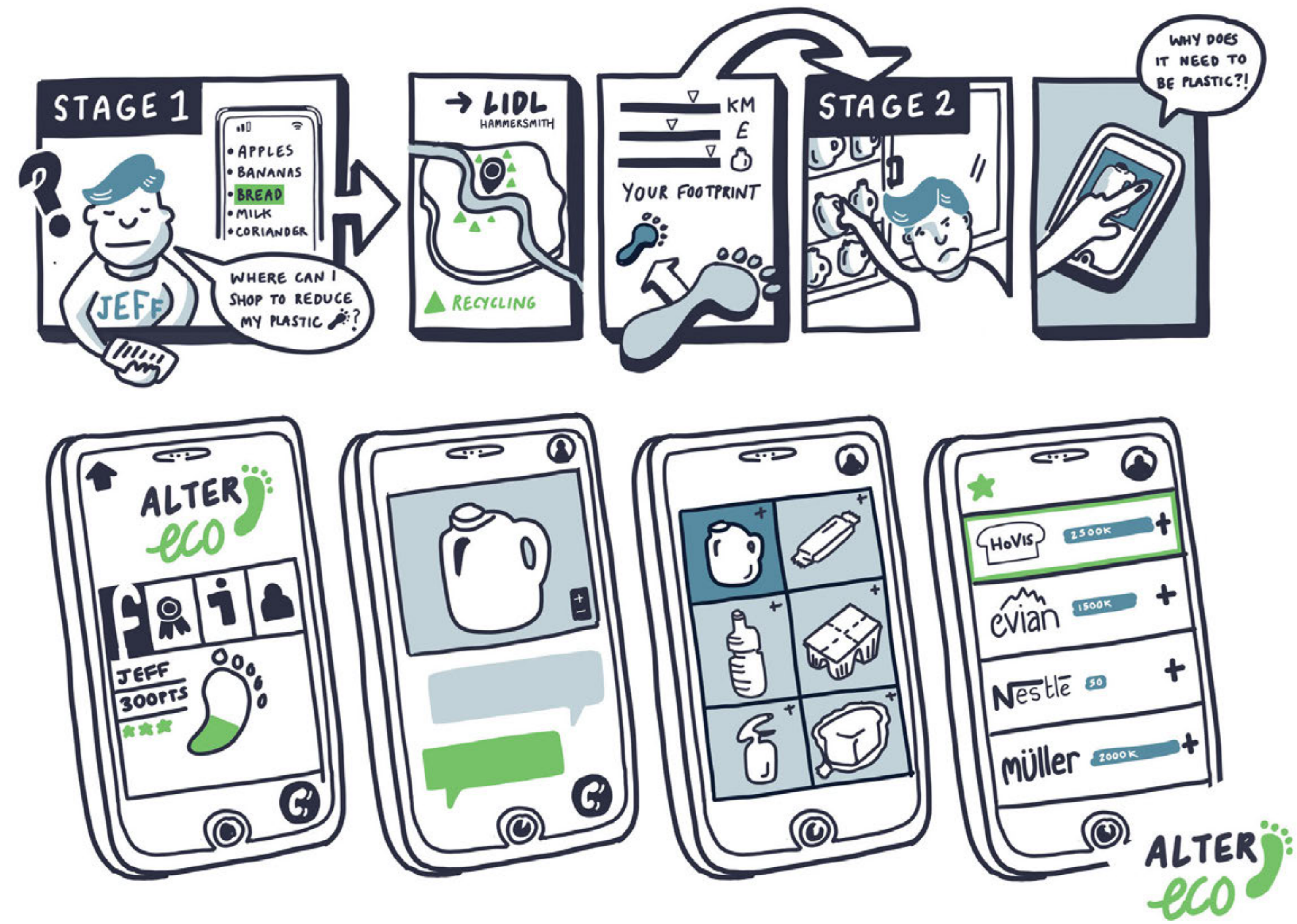
Description

Many consumers are concerned about plastic, but are unaware of their plastic footprint and what they can do about it.

Alter Eco is an app that helps users to understand their shopping list's plastic footprint, and allows them to directly engage with brands to understand the use of plastics in products. This conversation with brands can help consumers better understand their use of plastic, and places collective positive pressure on brands to make improvements.



Team 2: **Alter Eco** – illustration of concept



Team 2: Alter Eco – pitch narrative

‘Plastic is everywhere. Do you know my pet peeve? Fruit in plastic. How do you recycle it? Where does it go? I do what I can – I recycle and try to find alternatives – but I need help.’

This user is part of a vocal, frustrated yet committed community of considerate citizens. We have developed Alter Eco, a solution that empowers consumers and brands alike to make sense of plastic.

The front end is an app. It links to your shopping list using a photo or Alexa-type interface. It has location trackers, showing shopping solution options and council-specific recycling outlets. It has a toolkit to allow consumers choice and a dialogue capability to channel feedback to those that can affect change.

This app is socially interactive, geographically sensitive and conscious of the tradeoff decisions we have to make. It has the ability to directly feedback to product teams, distributors and infrastructure providers.

Alter Eco has benefits for brands and supermarkets, by helping to drive plastic plastic improvement and efficiency in the supply chain. It provides an outlet for consumers to use their voice and choose alternatives to plastic. It gives NGOs a vehicle to mobilise their activities across society using committed agents for change.

This solution is scalable: across countries, borders, industry and waste types. The model has the potential to be self-funding, although it will need initial seed capital. Most importantly, Alter Eco provides an enduring solution to an endemic problem.

Retailers, brands, NGOs and WRAP will need to be brought on board. This must be an ecosystem, not just an app. It has the potential to go further than plastic – into carbon, water, food waste or air quality. Think big. Start small. Act now.

Team 3



Celena Fernandez
Head of Environment,
Compass Group



Charlotte Bullock
Account Executive, SAP
UK



Damian Ryan
Director for strategy and
impact, The Climate
Group



Jochen Rode
Senior Development
Manager, SAP, SE



Olumid Ojo-Oratokhai
Packaging Development
Manager, Tata Global
Beverages

Team 3 persona type: **Contented consumer**



Steve, 60

Male

North London

Middle-class/comfortable

Educated professional

Married with adult children

Value-driven

Disciplined and educated
background

'It takes discipline'

Motivations

- Sense of duty
- Wishes to influence friends, family and local community
- Follows the rules/majority
- Family values
- Discipline is important
- 'It's the right thing to do'

Behaviours

- Rule-abiding
- Won't adopt radical change
- Doesn't tend to go the extra mile
- Conservative – retention of family values
- Not inquisitive/probing the scale of impact
- Follows routine/timeliness
- Motivated for action and (some) personal sacrifice
- Will reuse or recycle when possible

Frustrations

- System must benefit the whole supply chain
- Radical change seen as difficult
- Incomplete knowledge of the problem
- Shortage/lack of plastic-free options
- Lack of accessible information
- System is too complex

The persona and customer journey is a composite of people and experiences.

Team 3: Steve's journey



Citizen-consumer journey

Gains

Pains

Monday

Saturday

Influencing and following the rules

Proud of his own influence 'status'

Reuse water bottle

Reuse packaging for packed lunch/ drinking at work

Reuse of packaging (ice cream containers)

Consumer choice (packaged/ unpackaged)

Influencing friends (reuse)

Family/ community interaction

Office work

Food shopping

Hosts BBQ

Sorting and recycling

Lack of trust
Lack of 'consumable' information
Bin odour (fortnightly collections)

Minimal adoption (others not as disciplined)

Work facilities (eg, plastic coffee cups)

Frustration/lack of control over waste related decisions outside of home

Lack of plastic-free packaging options

Too much plastic packaging for meat and sausages

Team 3: Opportunity and solution

The Plastics Cloud

“Track. Benchmark.
Reduce your
plastic footprint”

Opportunity statement

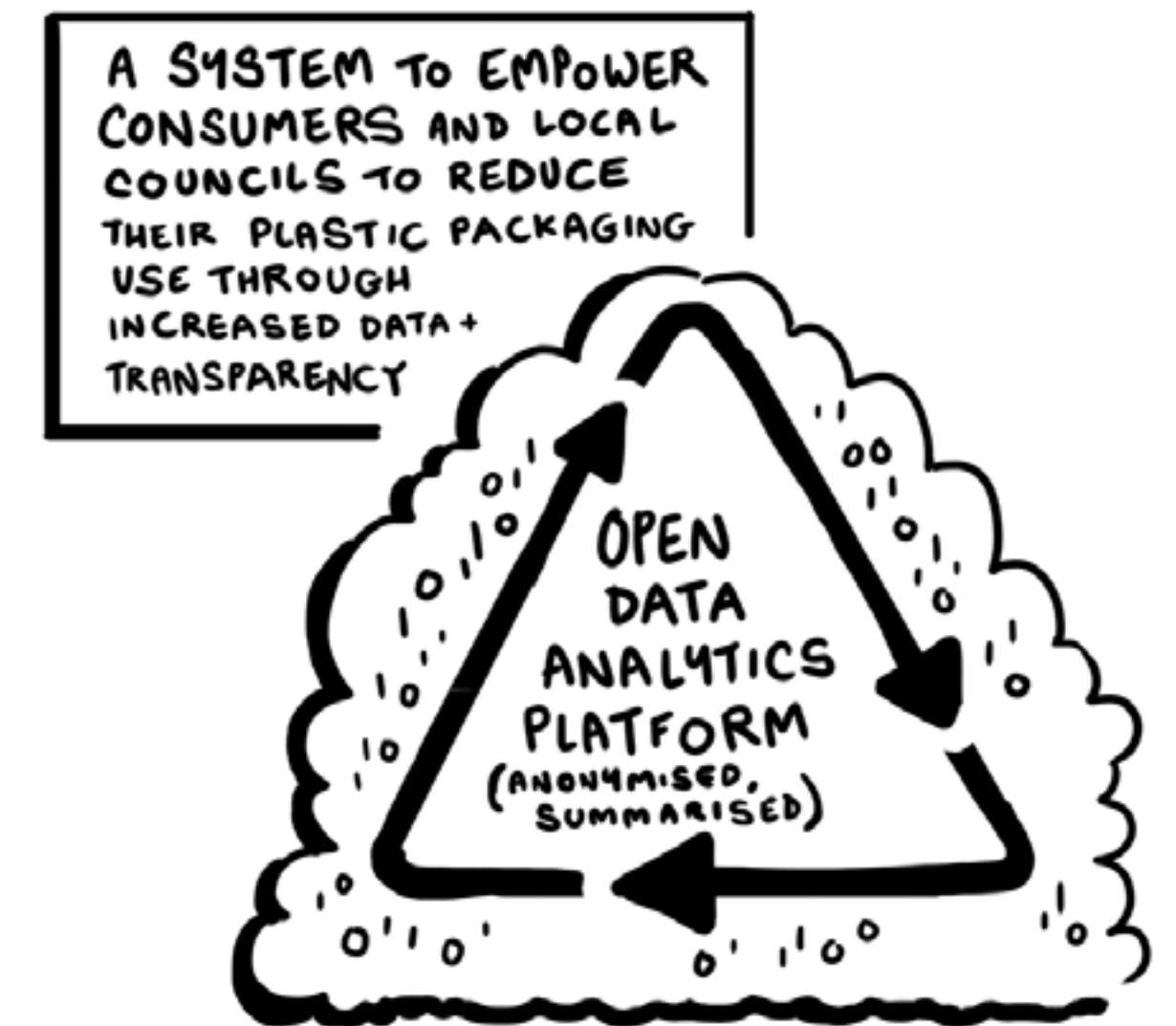
Given that household grocery shopping creates unnecessary consumption of single-use plastics, how might we help Richard – a 50 year old husband and father of two who works 9-5 – to reduce consumption of plastic packaging, without compromising on accessibility, convenience, quality or shelf life of produce, and not increase cost in any way, so he can maintain a comfortable lifestyle while minimising his plastic waste impact?

Description

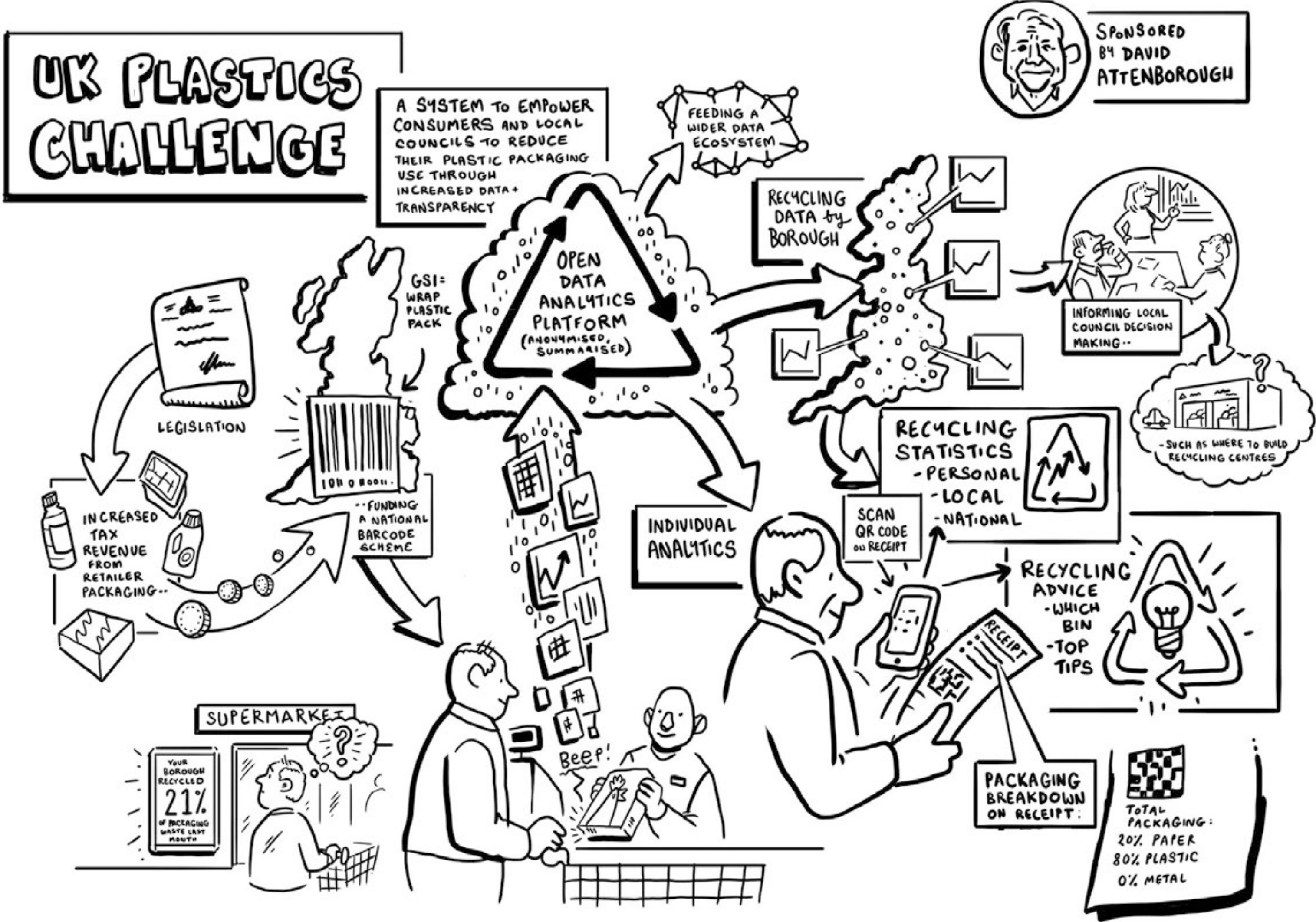
An enormous amount of plastics-use data is generated through consumer purchase behaviour.

An enormous amount of plastics-use data is generated through consumer purchase behaviour, but it is not collected, leaving council and waste management company decision-makers in the dark as to what is happening.

The Plastics Cloud gathers information about purchases and shares it with decision-makers, giving them real-time analytics. It uses customer behaviour to forecast trends in plastic purchasing and recycling, enabling services to meet demand. Data could be shared with consumers to help them understand their impact in terms of plastic.



Team 3: The Plastics Cloud – illustration of concept



Team 3: The Plastics Cloud – pitch narrative

Our solution is a system to empower consumers and local councils to reduce their plastic packaging use, through increased data and more transparency.

Manufacturers and brand owners upload the packaging type and information about the product's materials into a plastic database. At the checkout, consumers scan their purchases – this uploads the product information and logs their location into the open data Plastics Cloud.

End users and stakeholders both benefit from this system. Local councils will receive data about packaging in the marketplace, as well as being able to share information on waste collections within their boroughs. This can be used to inform waste policies and develop better infrastructure to facilitate recycling and composting.

This open data cloud provides greater transparency. Consumers will be able to make better purchasing decisions, as well as gaining recycling advice on what they're buying. Ultimately, they have better peace of mind that less plastic is going to landfill.

You can't manage what you don't measure. By using the Plastics Cloud, you can see data sets, whether that be data on users' shopping or waste data from councils. We can provide transparent information on plastic consumption, enabling stakeholders to reduce, reuse, refuse and recycle. Users can be part of the solution, without compromising their lifestyle.

Team 4



Carl Streatfield
Presales Innovation Labs,
SAP UK



Glyn Baker
Global Business
Development Lead, Visa
Innovation & Strategic
Partnerships



Jon Sparrow
EMEA Practice Head -
Analytics & Insight
Services, SAP



Katie Bradbury
Packaging Manager,
Deliveroo



Nick Zagklis
Solution Specialist,
SAP UK



Tim Marsden
Supply Chain IT Director,
Coca-Cola European
Partners

Team 4 persona type: **Little-by-little learner**



Pallavi, 33

Female

Kent

Mother of two

Moved to the UK two years ago
from New Delhi, India

Actively searching for a job

'400 years': the time it can take
for plastic to biodegrade

Motivations

- Too much plastic = lack of trust
- Fitting in as a new person in the UK
- Concerned about impact of plastic on her family (eg, toxins from plastic)
- Environmental/animal impact
- Choices (location) – transport links
- Cost and convenience

Behaviours

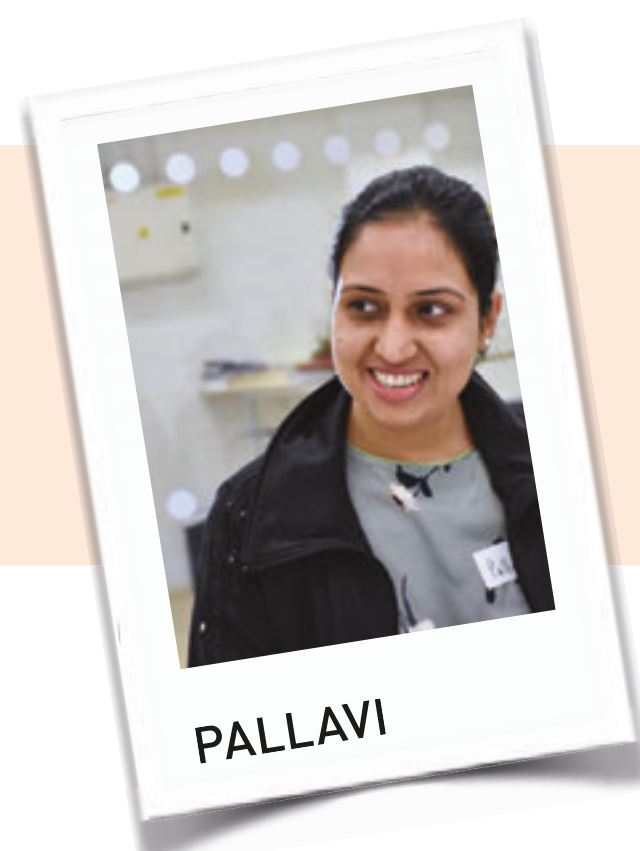
- Looks at labels and recycles now
- Uses government and council websites
- Shops locally, to reduce plastic footprint and cost
- Packaging is perceived to be food-centric
- Trust in 'recycling' – held up her part of the bargain
- Awareness increase and driven recycling

Frustrations

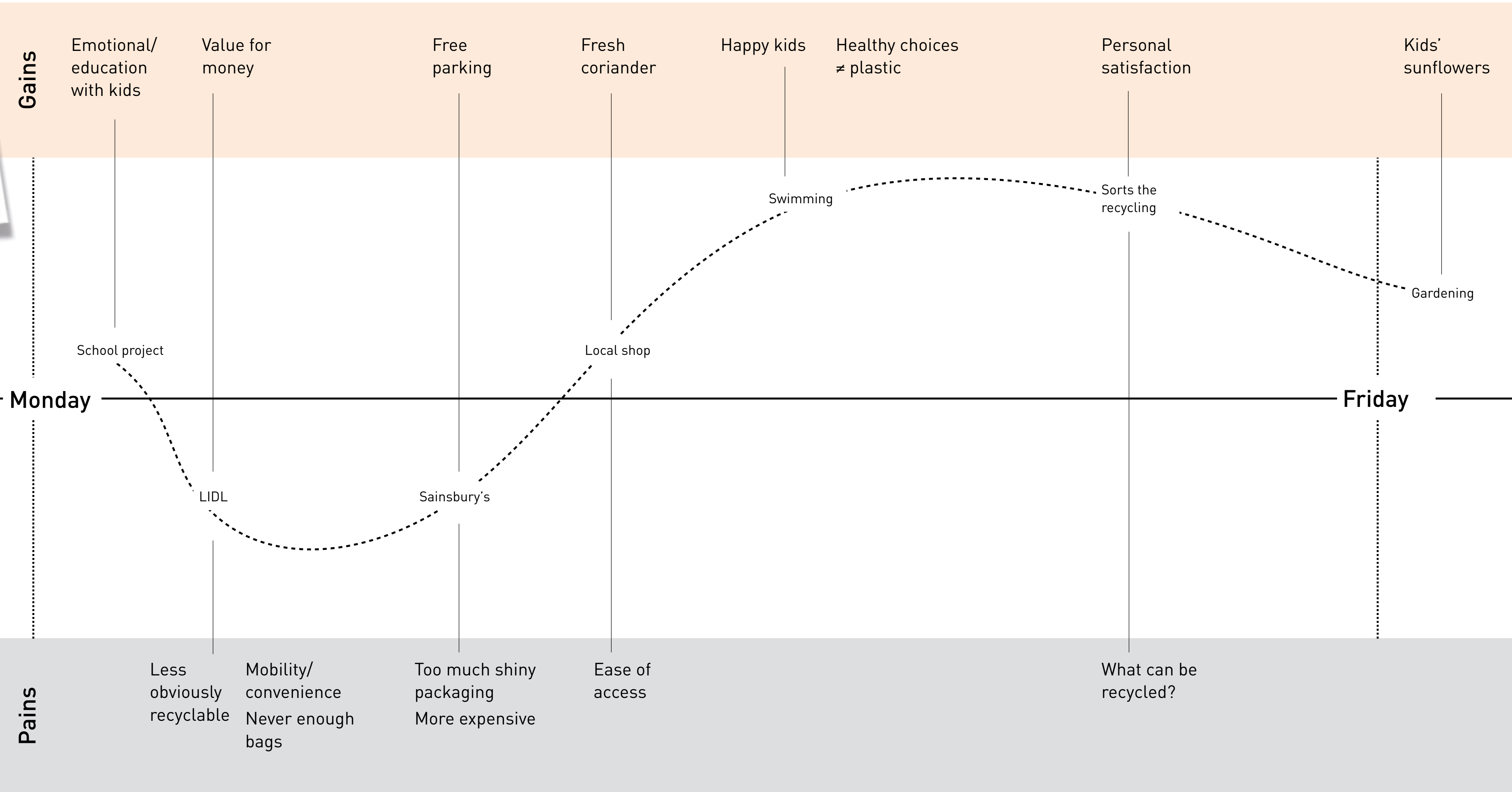
- Plastic packaging promotes messages to young children
- The amount of plastic used in the UK versus India
- Lidl's packaging has less recyclable content
- Lack of alternative options
- Extra cost of products with recyclable packaging
- Lack of retailer/government support

The persona and customer journey is a composite of people and experiences.

Team 4: Pallavi's journey



Citizen-consumer journey



Team 4: Opportunity and solution

Reward 4 Change

“Small changes
4 a big difference”

Opportunity statement

Given that her current location, local government policy and retailers are not driving a clear agenda, how might we help Pallavi, her family and other little-by-little learners to have better informed locally available choices without adding cost (be incentivised to continue to learn and change behaviours), so they can address environmental and health concerns (make small changes to address her environmental and health concerns)?

Description

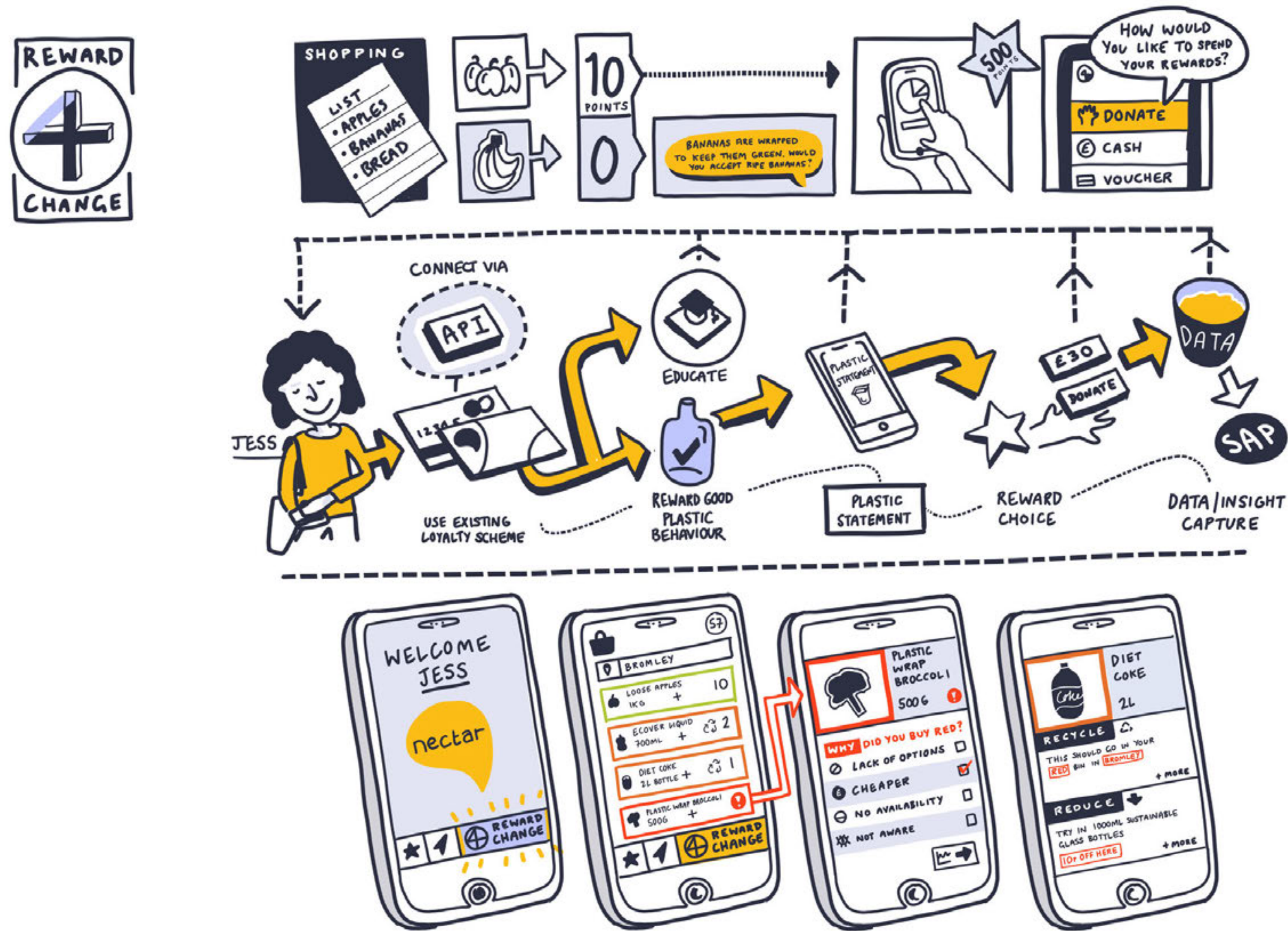
Many people would love to be rewarded for the changes they make around their plastic usage, but they often lack understanding or are unsure of the impact of their purchases.

Reward 4 Change is a plastics education and rewards programme that will be embedded into existing rewards programmes like Nectar. The API (application programming interface) uses a traffic light system (red, amber, green) for a product's plastic impact.

It awards points for green and amber products, and provides education and alternatives for red products. It creates a simple way to prompt behaviour change around plastics in existing well-used reward schemes.



Team 4: Reward 4 Change – illustration of concept



Team 4: Reward 4 Change – pitch narrative

‘Little-by-little learners’ represent 80% of the UK population, but just 15% actively recycles plastic. Research has shown that their biggest barrier is a lack of knowledge and motivation. Our solution looks to educate and reward to drive a positive change.

More than 92% of the adult population has at least one loyalty card. To help our customers to become educated and rewarded for change, our concept is to create a platform as a service piece of software, and embed it into existing loyalty card applications, such as Nectar or Boots Advantage Card.

Within the app, users click the ‘Reward 4 Change’ icon to be taken to their latest shopping list. Here, they see feedback on their latest shop, using a traffic light and points system.

Items with no packaging are ‘green’, those with recyclable packaging are ‘amber’ and items with non-recyclable packaging are ‘red’. Users receive bonus points for picking green items.

The user can tap a ‘red’ product to give feedback to the retailer on why they chose it, giving valuable insights and data. By clicking an ‘amber’ item, it gives recycling information based on the user’s location. The app gives ideas on how to reduce your plastic footprint, with suggestions on alternative products, for example, switching plastic bottles for glass. This takes the customer through a journey of education and rewards them for change.

This is a simple solution that builds on existing technology to both educate and reward consumers.

The collected data gives the retailer huge opportunities, which addresses the issue. It leverages off the current media interest and complements the UK government’s 25-year plan.

It’s also an amazing opportunity from a tech perspective, demonstrating SAP Leonardo’s capabilities and up-selling other opportunities that exist within its portfolio.

Team 5



Heather Harrington
Pan-European PS
e-Commerce Project
Leader, P&G



Jens-Peter Meeseburg
Director, Head of
Connected Car, Telia
Company



Jim Sullivan
Head, Global
Sustainability Innovation
Accelerator, SAP, USA



Mariella Stapylton-Smith
Presales Associate, SAP
UK



Richard Parkinson
Digital Innovation and
Events Technical Lead,
Howden Joinery Group
PLC



Umar Khan
Cloud Platform Solution
Architect, SAP UK

Team 5 persona type: **Relaxed beginner**



Claudio, 26

Male

East London

Young, working, single male

‘Someone else needs to change the products so it’s convenient for me’

Motivations

- Same price/cheaper for better solution
- Convenience is very important
- Simplicity – shouldn’t impact on normal day/work routine
- Ease of recycling at home – collection
- Healthy environment
- Incentivise for recycling plastics
- Welcome to the idea of reusing plastics
- Willing to change ways and make an effort to recycle more

Behaviours

- Already recycles if convenient
 - does their part for the environment
- Not willing to change brands
- Shops with reusable bags
- Sees the issue and would like to be more active in being part of the solution
- Ego-driven
- Buys in bulk for convenience
- Expects others to fix the issue
- Searches for information
- Prefers branded food/drinks

Frustrations

- Cost versus brand – conflict
- Others don’t act
- The manufacturers are going to have to change
- Not enough education on recycling
- Lack of knowledge – too many different types of plastic
- Difficult to recycle when not at home
- Will not carry recycling with him
- Most foods come in plastics, makes it difficult to recycle all the time

The persona and customer journey is a composite of people and experiences.

Team 5: Claudio's journey



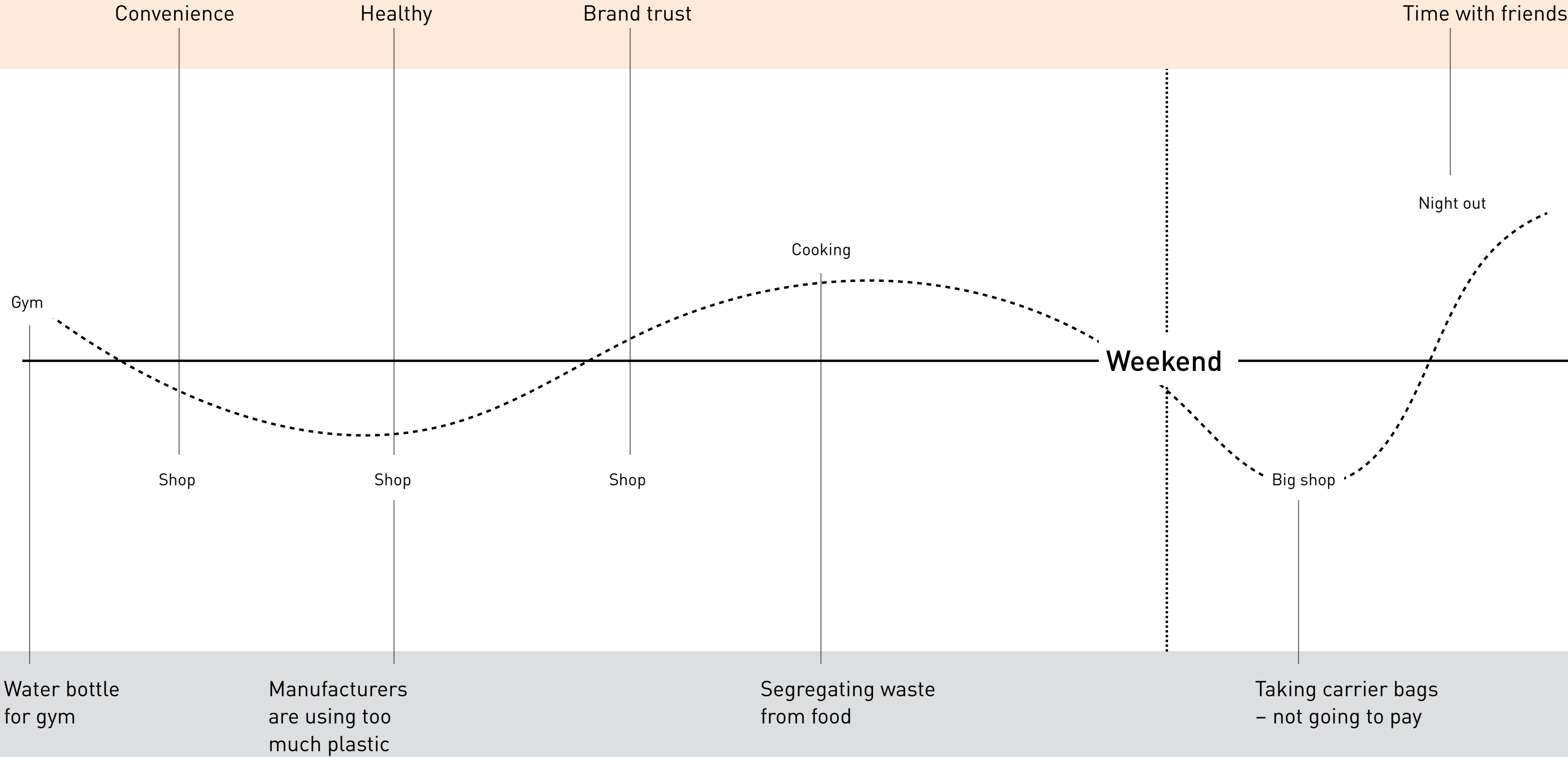
Citizen-consumer journey

Gains

Pains

Week

Weekend



Team 5: Opportunity and solution

Water for Life

“Subscription-based filtered drinking water”

Opportunity statement

Given that there is a lack of options and awareness around non-plastic alternatives to packaging, how might we help Claudio and other young, carefree, independent individuals to conveniently access clean, healthy water, wherever he is, so he can continue to live a healthy lifestyle and remain part of the mainstream group (while helping him to be sustainable without him knowing)?

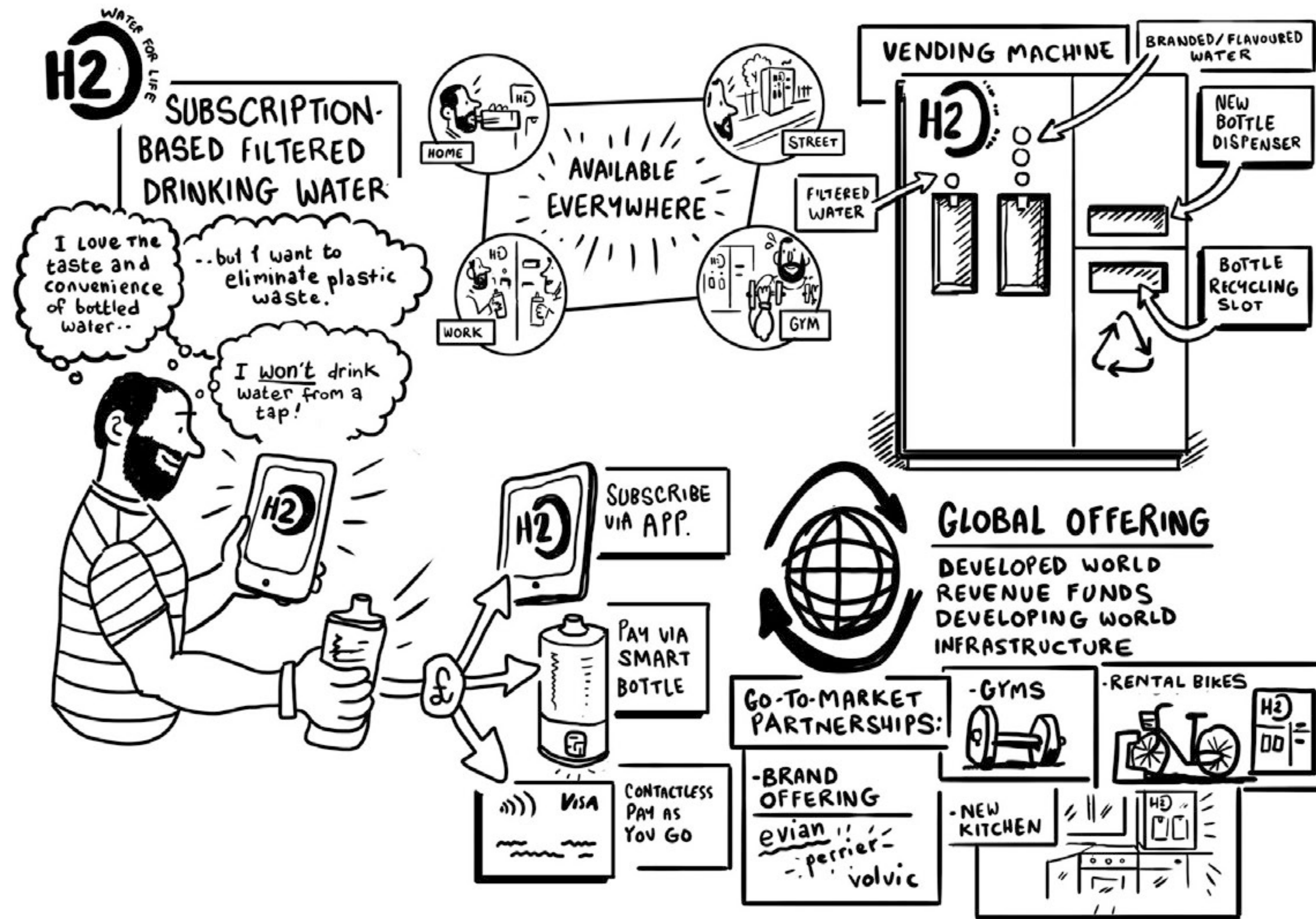
Description

Plastic bottles used for the delivery of water are one of the most visible sources of plastic in the UK today. While bad in terms of plastic, globally they provide many people a safe alternative to dangerous local water, or access to water in areas where it is scarce.

Water for Life is a subscription-based filtered drinking water ecosystem. Individuals can access water anywhere, and be assured of the quality of their water. The system encourages reuse of bottles and provides a recycling point, closing the plastic loop around water. There are brand opportunities (Santander Cycles) around vending touchpoints, and the system could extend into many markets around the world.



Team 5: Water for Life – illustration of concept



Team 5: Water for Life – pitch narrative

Here's Claudio. He's young, dynamic and active. He has a focused active, healthy lifestyle, and drinking water is important to him. However, he drinks his water from single-use plastic bottles. When he's out, he doesn't recycle the bottles. We see a lot of single-use plastic waste that doesn't go into the recycling chain.

With Water for Life, we propose a subscription-based service offering high-quality water when you're out, in a convenient way. By using vending machines, you can refill bottles, you can buy water and you can deposit your bottle.

An average day for future Claudio: he registers for the app, finds a vending machine, gets his first bottle and fills it. He goes to work and the gym – these locations have activity-specific products. For example, the gym has water with electrolytes.

Claudio doesn't want to carry around an empty bottle, so he places it in the vending machine to be recycled. When he next gets water, he receives a new bottle, but it's kept within the closed system.

The subscription model reduces the churn and retains brand loyalty, keeping it relevant to the consumer's life.

The app shows the intake of water and the nearest machine's location. This service could be taken abroad – if the user has already paid for a subscription, they can drink bottled water when they're away, too.

The technology exists, and we have a prototype. We'd like to see it in real life next.

Additional concepts

Additional concepts: Mug Pay

Mug Pay

“The coffee cup that pays for itself”

Description

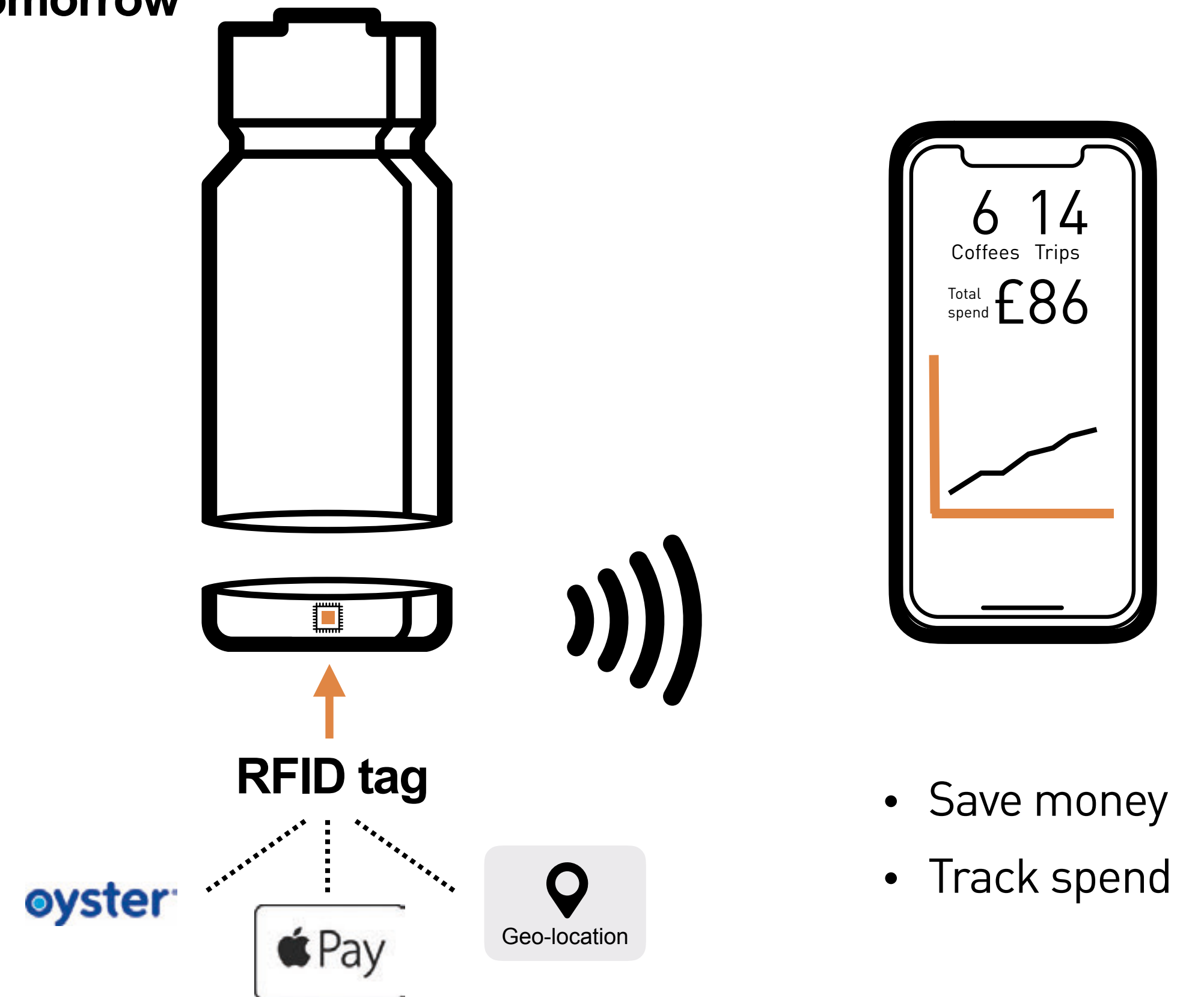
Many cups are single-use and there is little incentive for customers to take their own to a coffee shop.

This solution allows for a pay chip to be added to any reusable mug. This makes the reusable mug more precious to the individual, incentivising them to carry and reuse the mug, adding convenience when paying, and could be integrated with various loyalty cards.

Single-use Today



Reuse Tomorrow



Additional concepts: RecycleMate

RecycleMate

“Local recycling info”

Description

Out of all the recycling guidance and icons found on packages, the instruction to “check locally” is what frequently stumps consumers.

This solution tells you exactly what can and can't be recycled, where you are. Using a phone's camera and image recognition technology, RecycleMate identifies the type of plastic and gives the consumer clear guidance on how to dispose of it.



Additional concepts: **Sprint ideas bank – ‘Darlings’**

Smart bin

Would it be possible for the bin to automatically sort recyclables? Almost like a Coinstar machine?

Smart sort scanner

Would it be possible to include scanners on public bins to determine what packaging is for the trash and what should be recycled?

RFID tagging

How might RFID or other tagging be used in packaging to allow for smart sorting & tracking of waste?

Packaging learning

Could supermarkets and others make a bigger point of educating customers as they gradually reduce their use of plastics?

Coloured bottles

Could colours be integrated into recyclability of various plastics, taking the packaging brief out of the hands of marketing department?

Packaging with stories

Could augmented reality and blockchain allows tracking of reusable packs, and letting us see their life journey?

Eco quick buy button

Could a one-click ‘green buy’ option make – low carbon, less plastic, etc – products easier and more convenient to buy?

Reuse and refill-only supermarket

Could we spread the refill-only supermarket model more broadly?

Logo standardisation

Could we better standardise consumer-facing recycling logos to improve visibility and ultimately what can be recycled?

Consumer data pays

Would gathering more data about purchase and disposal of plastics be of value to companies in a way that could provide funds for a plastics solutions?

Self-clean bottle

What kind of self-cleaning bottle tech might be used to allow for multi-use versus single-use of plastic bottles?

Self-recycling plastic

Might it be possible for plastic to ‘heal’ itself, and renew its structures, allowing for new life without going leaving the user?

100% recyclable

Might there be opportunities for new plastic materials that are completely recyclable, requiring no virgin material?

Smart home recycling

How might we utilise Smart home technology to support, low waste smart purchasing and total recycling?

Unique packaging

Would making online product packaging that is unique and different to point of sale in-store encourage purchase of more sustainable products?

Plastics Challenge

Reactions and summary

5

Jury panel

A jury panel of high-level experts, drawn from across technology, design and environment industries, reviewed the teams' concepts. The jury selected one winning concept and provided feedback on all of the ideas.

Jens Amail
Managing Director of UK & Ireland, SAP

Julie Hill
Chair, WRAP

Tony Burton
Vice Deputy Chair, Big Lottery Fund

Maggie Buggie
Global Head, SAP Leonardo

Matt Sexton
Strategy Director, Futerra Group

Sophie Thomas
Founder, Thomas Mathews

Deyan Sudjic
Director, Design Museum

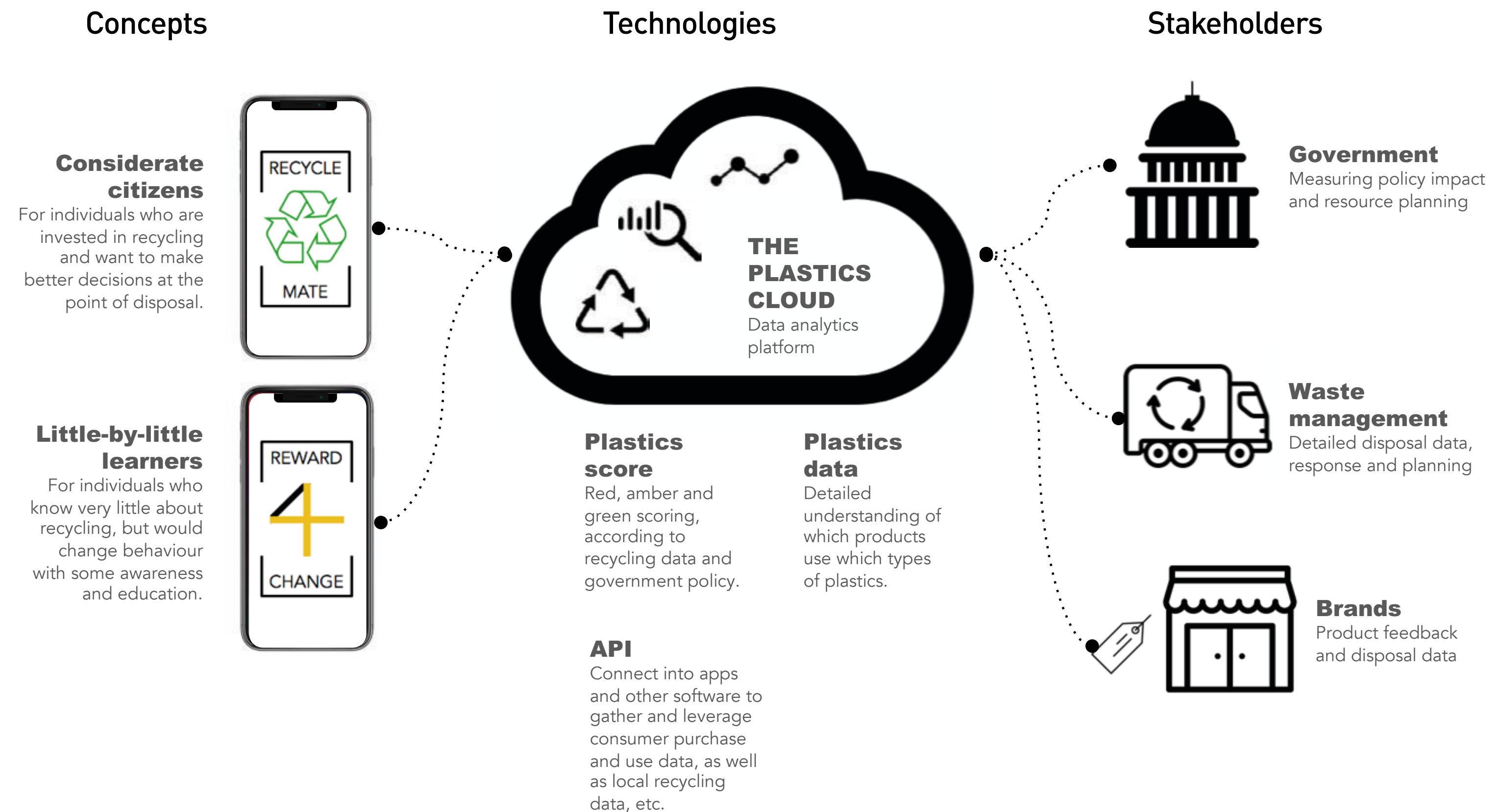
Oliver Smith
Head of Food & Land Use,
WWF-UK

Courtney Holm
Global IT Programme Manager, Unilever



Jury feedback

The jury agreed that elements from each team could benefit by being combined into a bigger system. This diagram illustrates how concepts could work alongside each other, as well as examples of how stakeholders could draw insight for commercial benefit or public good.



Our new design thinkers

The delegates developed very strong service concepts based on the real clients' needs, and were immersed in valuable design thinking skills and methods that they can take back into their businesses.

- 11 SAP employees
- 15 companies
- 5 fresh concepts to reduce plastic waste!

Design Thinking skills

The Design Sprint delivered business solutions while also building in-house design thinking capability and culture. Learning outcomes included:

- Connecting and building empathy with end-users
- Finding, recording and synthesising behavioural insights
- Developing user narratives building on existing persona and customer journeys
- Identifying user 'pain points' and converting these into evolved service concepts
- Co-creation including rapid ideas development with multidisciplinary teams
- Prototyping ideas to test and iterate with end-users
- Replaying and aligning new concepts within a business or market strategy



Next steps

Incubation

Testing and strengthening propositions into compelling and shareable prototypes. This phase will include:

- Development of working prototypes and business models for chosen concepts
- Connections with business partners interested in giving their support
- Development of additional directions within individual business contexts
- Collaboration with leading global businesses on the issues of plastic

Showcase

Publicly celebrating each project, as well as the project as a whole, under Creative Commons

Research and sprint photography



Research and sprint photography



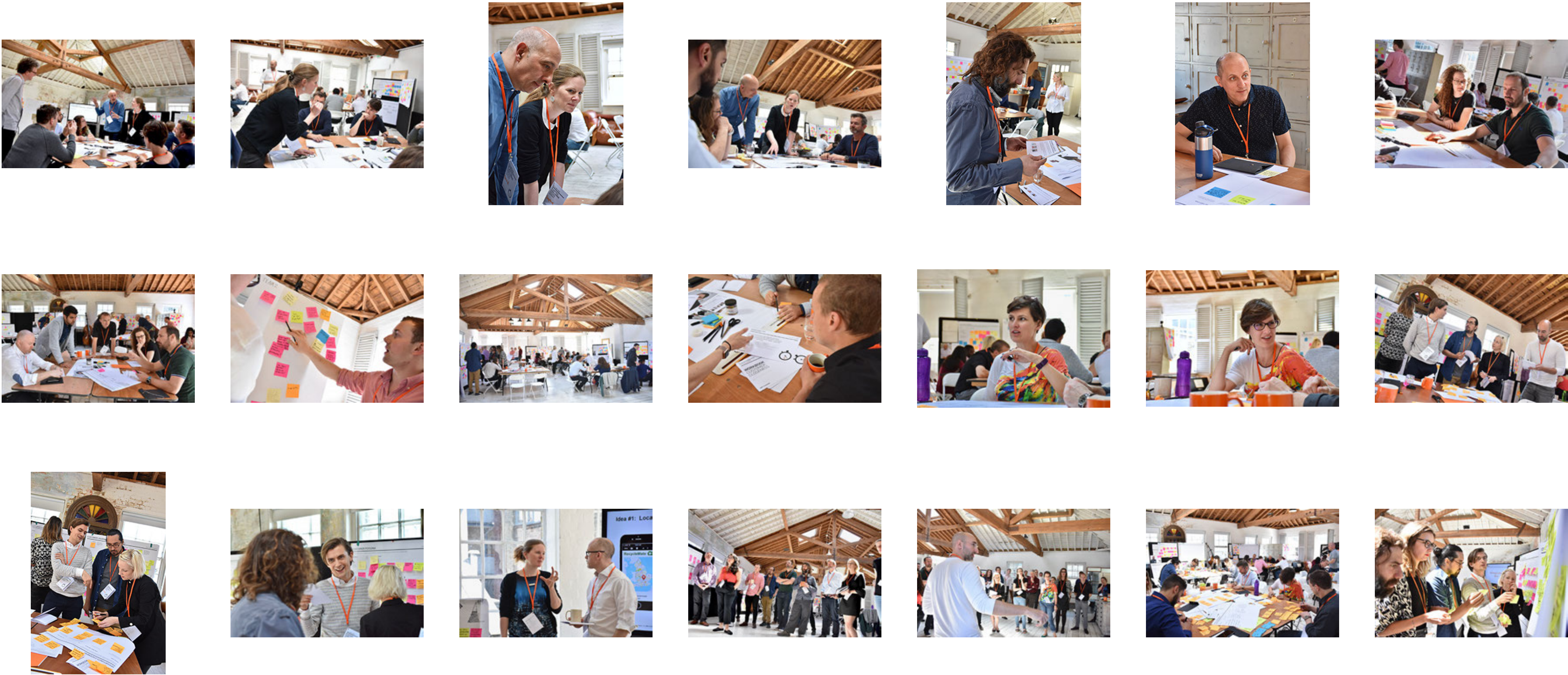
Research and sprint photography



Research and sprint photography



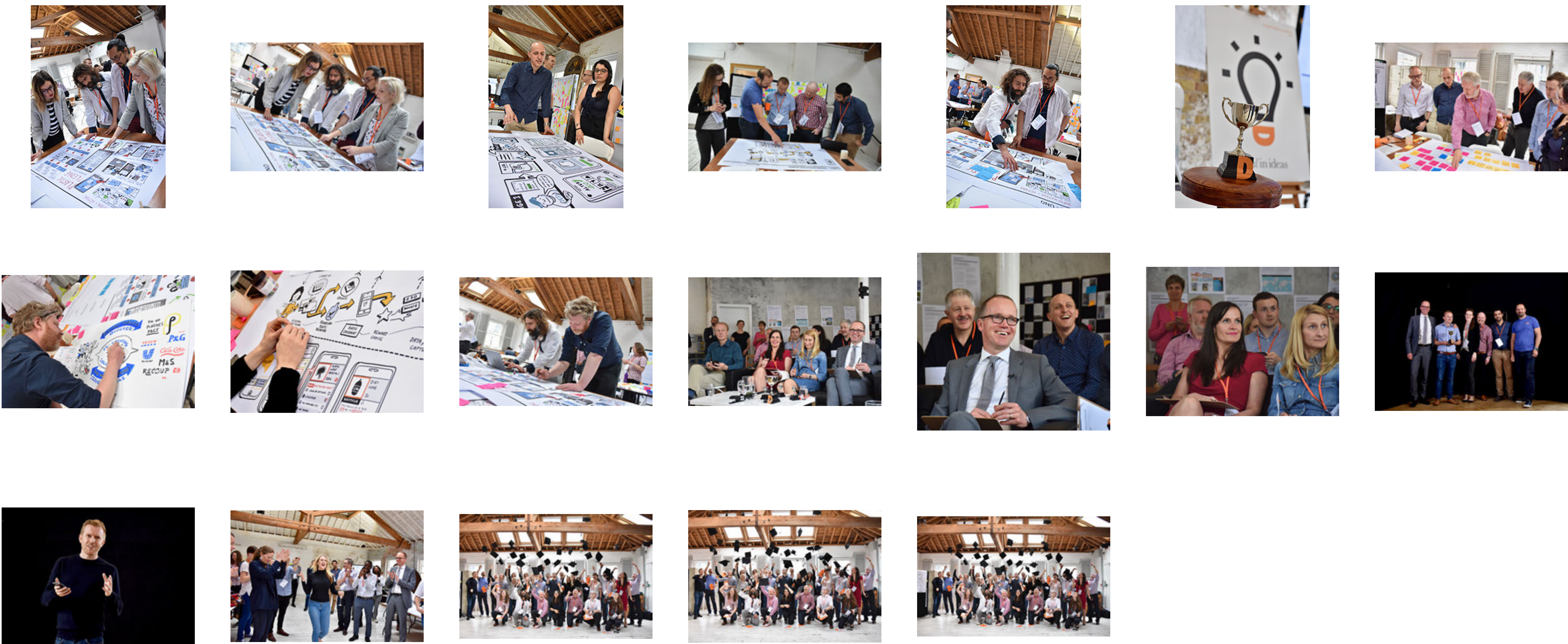
Research and sprint photography



Research and sprint photography



Research and sprint photography



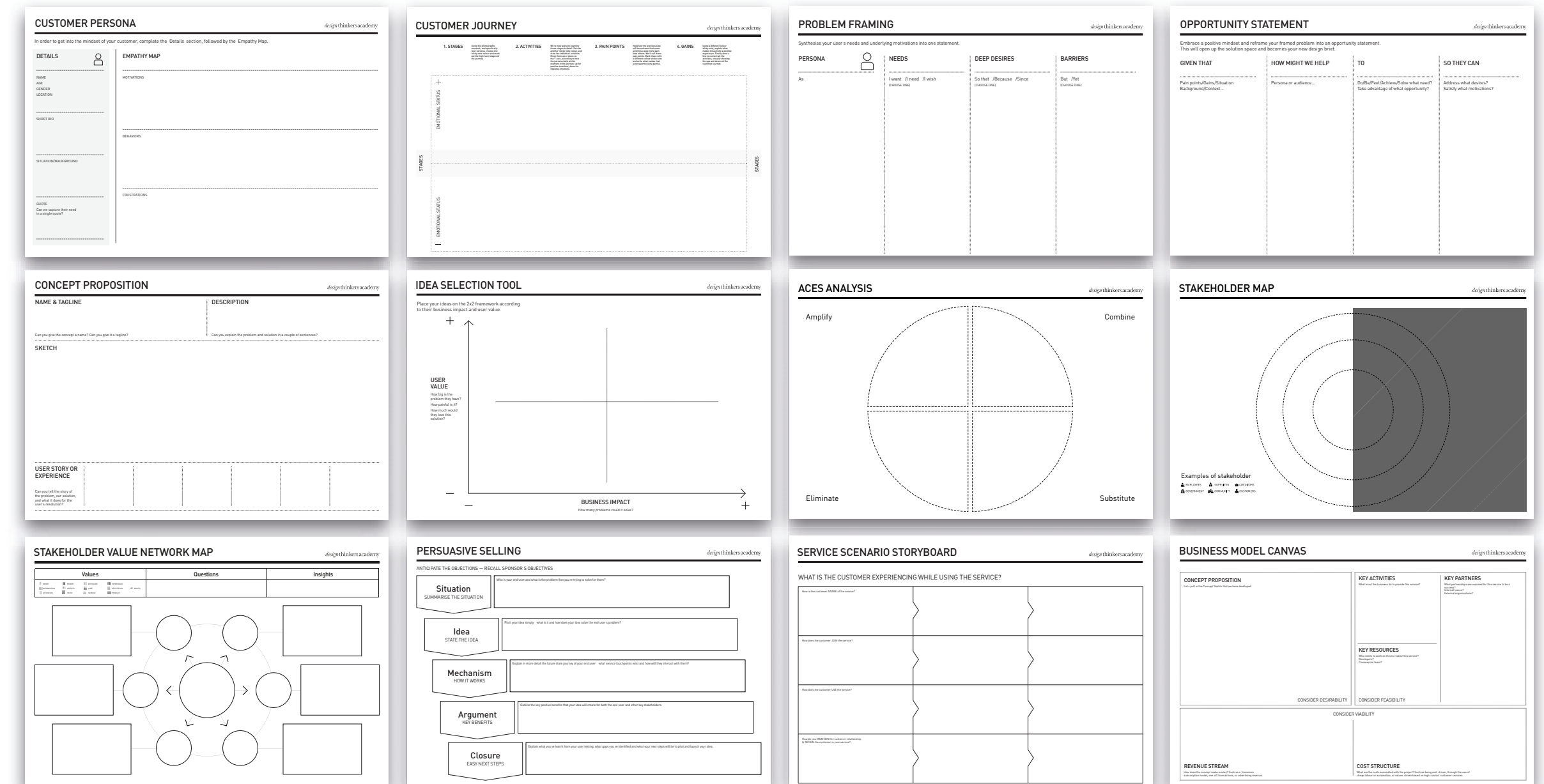
Sprint toolkit

During the sprint, delegates used design thinking tools to support the design process.

Delegates started by understanding the customer needs and reframing the problems. They identified clear opportunities and developed possible solutions, before evaluating, evolving and pitching their final concepts.

Tools include:

- Customer personas
- Customer journeys
- Problem framing
- Opportunity statement
- Idea cards
- Idea selection
- Concept proposition
- Service scenario storyboard
- Stakeholder value network map
- Business model canvas
- Persuasive selling



Innovation partners

SAP® Leonardo

SAP Leonardo takes a user-led approach to uncovering insights, co-creating ideas and accelerating new technological innovations to market with our clients. Chairman Hasso Plattner has been instrumental in spreading knowledge on design thinking within business and has helped build D-Schools at the universities of Stanford and Potsdam. This project is the first time SAP Leonardo has brought its global clients and design thinking expertise together for a global challenge.

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design thinkers academy

The Design Thinkers Academy London (DTA) is a design business for change-makers. DTA trains teams and supports companies to innovate. DTA helps its clients to generate fresh ideas and turn them into new products and services around the needs of users. DTA believes in the practical power of design to make a positive difference and sees itself as a change agent.

For further information contact
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Plastics Challenge

Thank you

15 June 2018

SPRINT REPORT

Version 1.0

