

The Kindness Box.

Enhancing the Visitor Experience

INM452 Interaction Design 2021/22

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Main Report

A. The Chosen Space: London King's Cross railway station

The chosen open-air space for the interactive technology is King's Cross railway station (referred to as King's Cross or the station). King's Cross is a major transportation hub with travellers and commuters from all over the United Kingdom and Europe. This is evident based on the six London Underground lines arriving at the station, two national mainlines with direct services to Heathrow, Gatwick and Luton airport and Eurostar services at King's Cross St Pancras. The station, alongside its adjoining station St Pancras, ranks third in entries and exits among all UK railway stations. (Dataportal, 2021)

The space is unique as there is a diverse range of visitors at the station, with a mix of visitors being there for different purposes. Some visitors are rushing to get on trains for work or for personal reasons. Other visitors are sitting or browsing around for their train platform to be announced. A less transient group is also present: students and workers who work daily near the area and may linger around during breaks. ([Appendix Location Map](#))

As the station can be seen as an impersonal transitory place for most visitors to get from point A to point B, an opportunity for kindness to be facilitated in the space is presented. This allows more warmth in the space, makes the space seem and feel friendlier, thus enhancing the overall visitor experience. This will be done through The Kindness Box.

B. The Interactive Technology: The Kindness Box

[Link to final high-fidelity prototype](#)

The Kindness Box (the Box), is in the form of a digital kiosk that can also be interacted with physically. The main functions of the Box are two-fold. The first function includes a play on a standard vending machine that allows users to give a form of kindness to other visitors in the space, and potentially share it to other people through their own channels like social media if they wish to do so. At the same time, other users are also able to receive a form of kindness from past users of the machine.

A standard vending machine would usually only allow the user to receive an item in exchange for a form of payment or money. Also, vending machines tend to have one specific purpose, i.e., offering only snacks or a selection of drinks.

In comparison, the Box allows visitors to offer or receive both tangible and intangible items. This would also be done purely out of the users' own willingness. Some items can be given freely (a smile through a photo to spread positivity) and others include an option of paying it forward (buying a cup of coffee for the user that chooses to be a receiver). ([Appendix Main Page](#))

Essentially, visitors in the space who are strangers become connected through acts of kindness made possible through interactions on the machine. The first function (**Part A**) allows users to choose between being able to **1. Give kindness or 2. Receive kindness**. Following this initial choice, various entry points allow users to choose their own unique path.

1. Give kindness

Kindness can be shown or given in various ways. The Box shows four main categories that are available for visitors to choose from to give: Positive Affirmations, Food & Drink, Entertainment or Donate to Charity. For Positive Affirmations, visitors are able to cheer other users of the Box through four main input methods: Text, Video, Audio, or Personal Postcard ([refer to prototype](#)). Positive affirmations, a form of self-affirmation, can sustain a person's self-worth and may give individuals a broader view of the self. (Cascio, 2016)

Different prompts are provided for each input method, such as "I am deliberate and afraid of nothing," and "I am doing my best." These prompts will help the user engage if they are unsure of what to say.

For the Food & Drink category, users are able to use the contactless payment feature to donate an amount of money that will be used to buy an item for the user that chooses to receive. For Entertainment: Users can sing a song, tell a funny joke or give a user a book as a gift. The Donate to Charity category allows users to donate to their choice of charity from the options available.

2. Receive kindness

If users choose the option to receive kindness, the Box will show four main categories the users can receive: Positive Affirmations, Food & Drinks, Entertainment, or Support & Resources. The content received from the "givers" are used for Positive Affirmations. For the Food & Drink category, the user's choice of food or drink will either come out from underneath the machine (pack of crisps, cookies, soda), or a coupon or voucher will be printed out that will be able to be used at various restaurants and shops within the station.

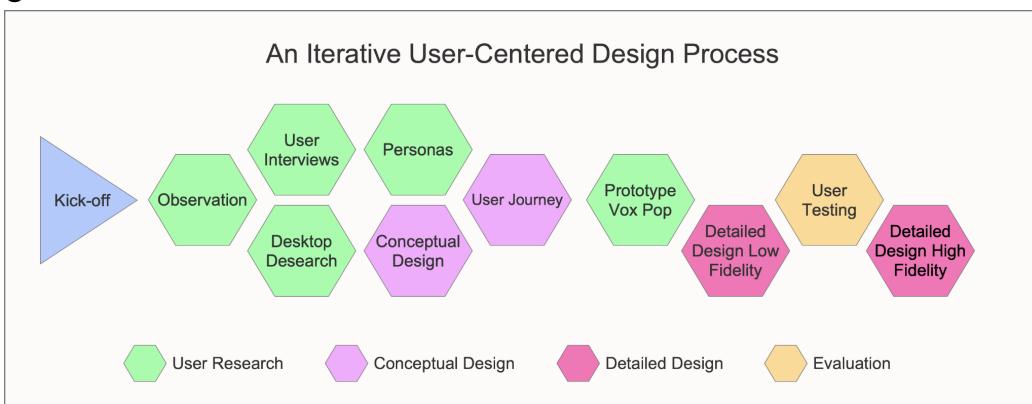
For Entertainment, users can receive several types of content left by other users. For example, receiving a video of users singing, telling a funny joke or choosing a book to read ([Appendix John's Future User Journey](#)). For Support & Resources, informational resources like crisis hotline numbers and shelter contacts will be displayed.

Users who choose to create content through the input methods will also receive a QR code that will be displayed on the screen and be printed out ([Appendix QR Code Page](#)). This QR code will allow the user to digitally keep a copy of the content they have created, like their video or personalised postcards.

After users have received or given their chosen form of kindness, the total quantified impacts of the Box are shown on the screen ([Appendix Impact Page](#)). For example, how many jokes have been shared and how many coffees have been bought for a stranger. These impacts will also be shown on the screen when it is idle ([Appendix Slideshow of Hi-fi](#)) with the purpose of both attracting future users as well as spreading kindness passively.

The second function (**Part B**) involves motion sensors that detect visitors near and around the box and respond through visual cues in the form of animations on the Box's large digital display ([Appendix 3D Visualisation & Elevations](#)). Visual design aids are also used through the use of physical stickers on the ground that act as a complement to the interactive and constantly changing display, both when idle and in use. The reflective stickers will be placed on the floor to greet and guide users to the box, and the closer you get to the machine, the colour will become more vibrant. ([Appendix Stickers](#))

C. Design Process



Kick-off, Desktop Research and Finalising Space

At kick-off, aspects of the brief that appealed to each member were discussed (post introductions) and a sticky-note-on-the-wall exercise was conducted to create a list of potential spaces and themes to base the project on. ([Appendix Kick-off Brainstorm](#))

Designing a system that would enable people to engage in acts of kindness was the focus as the team was interested in creating positive social impacts for the community. Each member's different and personal definitions of kindness resulted in a broad and collective notion of kindness for the technology. The Box aims to define kindness across a spectrum of the simplest to the most generous acts of kindness.

The station was chosen for several reasons — the significance of the railway and tube in British and European life, its diversity in visitors, and for its large multi-functional spaces indoors and outdoors.

Observations

Observational visits spanned different times and days of the week. On weekday mornings, King's Cross had the bustle of rush hour passengers and long-distance passengers. Groups of people were concentrated in different areas and were engaged in different activities.

Indoors, at the main hall, a band of people were typically seen looking up towards train time displays. At benches placed away from the centre on either side of the hall, several passengers are commonly waiting for their trains — either having a snack, reading newspapers, on a call or seemingly ambling about on their phones. The perimeter of the hall is lined by restaurants, cafés, and shops. At the shops and on the mezzanine floor with restaurants, people were more relaxed.

Just outside King's Cross is a large courtyard akin to a town centre. Visitors usually wait for their friends, groups of rail staff can be seen having their lunch on the benches, and university and high school students can be seen gathering. Weekends seemed to show a greater proportion of long-distance arrivals and departures, evinced by individuals and families with luggages.

While King's Cross, unlike a museum, is a place that people come only to be elsewhere, it still sees a healthy proportion of people who spend time relaxing and lingering, who may engage with an interactive installation not primarily required for their travel.

User Interviews

In the first round of user interviews, four open-ended questions were asked to visitors at the station. To conduct the interviews safely, questions were put up as slides on an iPad to be displayed to people. ([Appendix Interview slides](#)) The subjects were approached with these open-ended questions:

- What does kindness mean to you?
- Is King's Cross a kind place?
- How could someone have been kind to you at King's Cross?
- How could you have been kind to someone at King's Cross?

15 people were interviewed in this phase, and they spanned a wide range of people: middle-aged travellers, seniors, university students, the homeless, employees of cafés and the railway, and international travellers. Respondents found it surprising to talk about kindness in the context of King's Cross.

Respondents didn't put King's Cross and kindness together. While some thought it wasn't kind, most seemed to use the word "neutral". Employees believed it was a kind place and shared anecdotes of them helping passengers only hours before they talked to us.

Kindness clearly wasn't a top-of-mind concern for people while at King's Cross, but when prompted with the questions, many acknowledged they could have been more polite to the people they encountered at the station that day.

"I could've been extra polite to the guy in Starbucks" ([Appendix Transcription of Interviews](#))

On the flip side, people had also encountered people being unduly cold and felt it would not have taken much for them to be warmer. One of the respondents we spoke to, who said she was homeless, felt that it is not just about money but the acknowledgement of people as fellow human beings.

"The way people just walk past you, look at you, it's not about money. It's about having a heart. Talking to a person. You know what I mean?" ([Appendix Transcription of Interviews](#))

The interviews shaped two personas and user journeys that helped guide the design, John Heading and Helen Sharpe, who are frequent visitors to King's Cross and look forward to positive experiences when they travel. Actual quotes from the interviews were included in the final personas. John often visits the city with his family on weekends, in addition to commuting in for work during the week. ([Appendix Persona: John](#)) Helen looks forward to memorable and pleasant interactions on her travels. ([Appendix Persona: Helen](#)) They both believe it doesn't take much to be kind.

([Appendix Existing User Journey - John](#))

([Appendix Existing User Journey - Helen](#))

Conceptual Design

The idea of a Vending Machine of Kindness (later renamed to the Box) was developed after considering a variety of solutions. A vending machine is a common sight in public spaces and a familiar mechanism for the delivery and transaction of small material goods. The intention was to use the familiar, or typical, vending machine to deliver the unfamiliar, or novel — encouragement to proactively engage in an act of kindness at a railway station.

Berlyne (1971) proposed an inverted U-shaped relationship between typicality, novelty and aesthetic preference — meaning people are more accepting of objects with moderate novelty over objects that may fall at either end of the typical-novel spectrum.

Berlyne's findings were further validated by Hung and Chen (2012) who also found that trendiness, complexity, and emotion influenced the sense of novelty with complexity and emotion showing an inverted-U relation ([Appendix Relationship Graph](#)) in influencing aesthetic preference.

The transient nature of a large number of visitors at the station, and the varying window of time a traveller would have to engage with kindness, meant that a two-way simultaneous interaction between visitors would be challenging. The Box would allow for a more inclusive time-shifted interaction between visitors.

Through a rapid sketching exercise ([Appendix Paper Sketches](#)), a variety of designs were created for how the machine could work, what it would do, and how it might look and function. While the core concept was defined, aspects like physical design, function, key tasks on the machine and visual design were developed iteratively.

Vox-pop with Box Prototype

Two large corrugated cardboard boxes were assembled together to resemble a vending machine. This crude prototype allowed visitors to imagine a presence similar to the Box, and allowed us to gather data on what visitors were interested to take and willing to give. ([Appendix Cardboard Prototype](#))

The prototype had two simple questions and writing materials (pens) for passers-by to respond to. The two questions were:

1. *If there was a vending machine of kindness at King's Cross, what would you take from it?*
2. *If there was a vending machine of kindness at King's Cross, what would you give to it?*

The box was placed and left at key spots around King's Cross — at the entrance, near the benches adjacent to a pedestrian crossing in the courtyard, and near the King's Cross bus stop. The responses spanned both physical items and actions. ([Appendix Photos](#)) The responses went beyond words on paper with one couple leaving a box of cookies on the "give" side, and writing "cookie" as the response, which was later taken by someone in need. This showed that the Box was beginning to make positive impacts even in the research and prototyping stage. ([Appendix Cookie](#))

The box's nature as a large object allowed the team to observe how people at the station react to a type of machine or kiosk that asked for their engagement. People's intrigue (reading from a distance), initial hesitation to engage, the tendency to walk away and then feeling pulled back to write on the box, ridding inhibition after seeing others respond, inviting a friend to come write on the box — informed the design development.

Two user journeys were developed, one for John Heading requesting something from the machine (Take Kindness > Entertainment > Book) ([Appendix Future User Journey - John](#)), and another for Helen Sharpe to spread her kindness by sharing a message of affirmation (give kindness > Positive Affirmation > Video) ([Appendix Future User Journey - Helen](#)).

Detailed Design and Evaluation

The act of giving messages of affirmation was chosen as the user flow to design and test since it was the furthest away from requesting a physical item from a vending machine. Wireframes for the flow were developed in two alternative styles. Interactive prototypes of the design were developed in Axure for user testing. ([Appendix Axure Flow 1 and 2](#))

The team conducted moderated user testing with 8 participants, with most participants being shown the two variations of wireframes in alternating order. The participants were assigned the task of sharing a positive affirmation as a video message. A list of high priority improvements were identified for further detailed design ([Appendix User Testing Findings](#))

Most participants instantly understand what they could do with the machine. The fork in the road approach to the initial screen ("I want to give kindness" vs "I want to receive kindness") clarified the possible ways to interact with the machine.

The request for consent before content is created was appreciated by most participants. Before a photo or video was taken, users expected they would have the option to start it themselves with a three second countdown so they could gather their thoughts and be ready. Research indicated that evidence of others engaging with the machine would motivate users to shed their inhibitions and engage themselves ([Appendix User Testing Findings](#)).

The display of the impact of the Box at the end of their engagement was well received. Participants were eager to know how many people had contributed and how many had benefited from the Box. Users were also interested to be connected with the content, either to see responses to their message, to share it later, or delete it later. Some participants felt the ability to give in ways beyond money was powerful and that they might make it their ritual to use the machine every time they were at the station.

To accommodate those who may want to be anonymous while contributing and those who may be willing to share more, users were allowed to create messages as text, postcards, audio, and video. This would also allow people to engage depending on the time they had. Someone pressed for time and wishing to be anonymous could post a pre-set text message while someone else could make a 30 second video. ([refer to prototype](#))

Based on learnings from user testing, the design was refined for simplicity. Descriptions of buttons and screens were only used where most necessary to reduce clutter and help users focus on key actions. The content capture flow was refined to allow users better control on when capture began through the use of a countdown ([refer to prototype](#)). Information about the impact of the Kindness Box was also refined, and a brief About Me page was created for further clarity. The "givers" who choose to donate would pay through a contactless credit card reader for convenience. An audio earphone jack was also implemented so users can navigate with sound (screen reader). After a few minutes of inactivity, the screen will return to the home page to allow other users to engage.

D. Reflection

The Box gives people an opportunity to engage in an act of kindness in an impersonal space. This can create a more memorable experience for visitors of King's Cross and can act as a general reminder for people to be kind. Commuting can be a source of stress, especially for user groups that are older, with family, or are having a bad day. The Box is a physical reminder in the space that kindness can be easily given or taken.

The time-shifted aspect also complements the nature of visitors. Every visitor will have an equal chance at interacting, and positive social impacts will be evident beyond the visitor's time in the space (after they have exited the station). During user testing, participants clearly understood what the Box did (giving and receiving kindness) and could tell it was a special kind of vending machine. This creates an unexpected yet amusing experience in a public space.

However, the feasibility of offering Food & Drink to the "receiver" group could be a point of weakness. The delivery of physical goods is limited by partnerships with local stores and other third parties (when delivered through coupons) and by the size of the kiosk. The decision to only stock small goods like crisps and soda cans is another example of this, it will also require replenishing stock frequently.

With regard to content creation by the "givers" through the various customisable input methods (video, audio, personal postcard), the content needs to go through some form of validation before being made public. This will ensure content quality and that no obscene messages are displayed.

However, this could also be an area of improvement. As more and more content gets validated, a large screen display in a different area could be developed. This will allow the messages of positivity from diverse visitors to be displayed to a larger crowd.

Another potential area for improvement is allowing other people to access the Box from their home, for example, through an app. This will allow users to interact with the Box without having to physically be at the station. This could also potentially snowball into more Boxes in other large stations.

The use of sound was not included in the final design as we had concerns that it may be too distracting. However, the Box does give an option for the user to navigate with sound through the Audio Earphone Jack for people with visual impairments. For the same reason, we did not use flashy imagery to avoid distracting people who are nearby as it could give an impression that it is an advertisement and people will decide not to interact with our Box. Possible vandalism is also another area of weakness.

Overall, the group's constantly iterative and collaborative process (Gibbons, 2016) allowed for a novel concept to be developed in a short amount of time with a limited investment of resources. The focus on kindness created positive social impacts even during the research stage.

However, it can be said that the inability to test a fully-functional working prototype in a lab and in the space limits insight on acceptability and required improvements. The sampling was also limited — we would be able to get more insights if we tested across age groups, languages, accessibility needs.

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Appendix

Links to Working Prototypes

Low-fidelity prototypes

[Flow 1](#)
[Flow 2](#)

High-fidelity prototype

[Figma Prototype](#)

General Log

Focus	Activities
Kick-off	<ul style="list-style-type: none"> • Team introductions: discussed backgrounds, skills • Discussed aspects of the brief the team gravitated towards. • A shortlist of spaces were generated through a sticky note workshop • The team was passionate about designing a system that would enable people to engage in an act of kindness. • Decided to desktop research kindness and a bit about the City of London
Desktop Research	<ul style="list-style-type: none"> • The team conducted light research on public spaces in London as well as articles about kindness in the context of the city and urban life • Examples of other installations were looked at • Each team member created a short-list of spaces
Finalizing Space	<ul style="list-style-type: none"> • Each team member pitched a couple spaces with a rationale for why they nominated the space • The team brainstormed remotely using the online collaboration platform, FigJam • A schedule and project plan was created • King's Cross railway station was finalized
Observation	<ul style="list-style-type: none"> • Conducted observations and interviews at Kings Cross • Team developed a sense for the general flow of people and how different areas were used at different times
User Interviews	<ul style="list-style-type: none"> • The team conducted person-on-the-street interviews with visitors at King's Cross, in different areas • Four open-ended questions about kindness and kindness at King's Cross were asked • Developed 2 personas
Conceptual Design	<ul style="list-style-type: none"> • Brainstormed solutions

	<ul style="list-style-type: none"> Defined personas and sketched ideas Arrived at the idea of a Vending Machine of Kindness
Vox pop with prototype	<ul style="list-style-type: none"> Over 20 responses for what visitors would give or take from the Kindness vending machine were sought A cardboard box was used as a prototype Decided on key elements delivered and accepted by the machine
Detailed Design - Low- Fidelity	<ul style="list-style-type: none"> Developed user journeys Workshopped user flows Developed low-fidelity clickable prototype with two design styles
User testing	<ul style="list-style-type: none"> 8 moderated interviews were conducted with working prototypes that included two design variations Prioritized list of changes were identified
Detailed Design	<ul style="list-style-type: none"> Developed 3D elevation of The Kindness Box in context of the station Developed a visual style Developed high-fidelity clickable prototype

Location Map

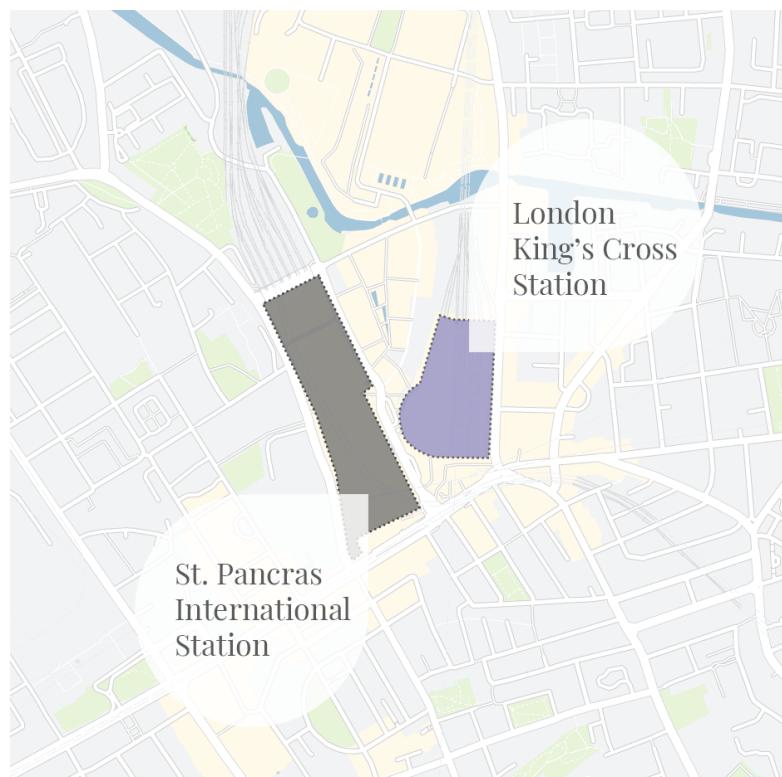
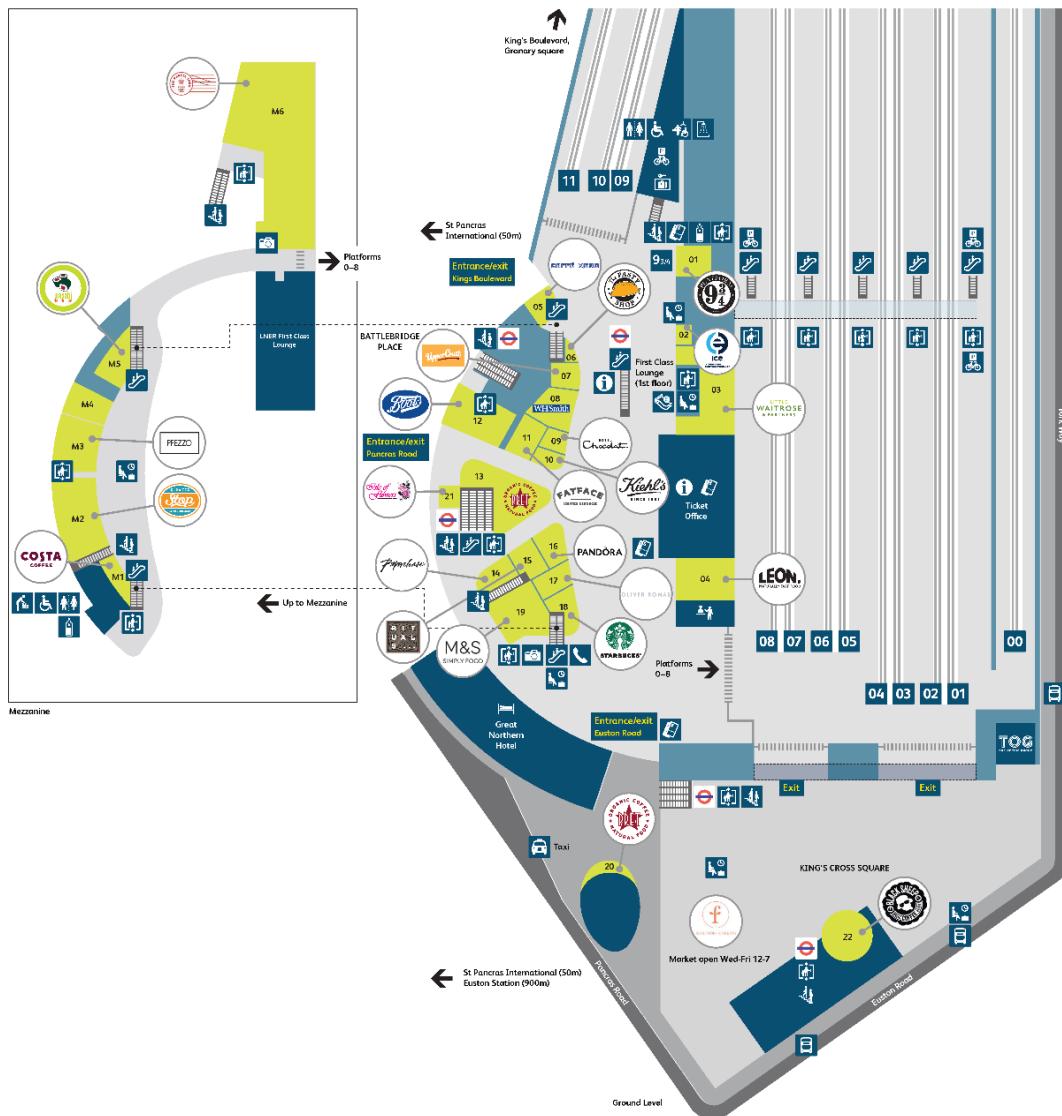


Figure 1. Aerial map of the Kings Cross area

King's Cross

Station map



Services and facilities	
Accessible toilets	
ATM	
Baby change	
Bike park	
Buses	
Changing place	
Escalators	
Information	
Left luggage	
Lift	
Photobooth	
Platform 9 3/4	
Platform numbers	
Police	

Food, drink and shopping	
Boots	12
Caffe Nero	05
Costa Coffee	M1
FelFilioe	11
Girofle Stop	M2
Harry Potter Shop	01
Hotel Chocolat	09
International Currency Exchange	02
Isle of Flowers	21
Kiehl's	10
Leon	04
Little Waitrose	03
M&S Simply Food	19
Oliver Bonas	17
Posty Shop	06
Popechouse	14
Pandora	16
Pret a Manger	13
Pretzio	M3
Black Sheep Coffee	22
Rituxis	15
Starbucks	18
The Parcel Yard pub	M6
Upper Crust	07
Wasabi	M5
WHSmith	08
Coming soon	M4

If you need help please speak to one of our staff or call our helpline on

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 @NetworkRailKGX

Figure 2. Indoor map of the King's Cross station

Kick-off Brainstorm



Figure 3. Post-it note exercise where team brainstormed the different locations of open-air spaces

Paper Sketches

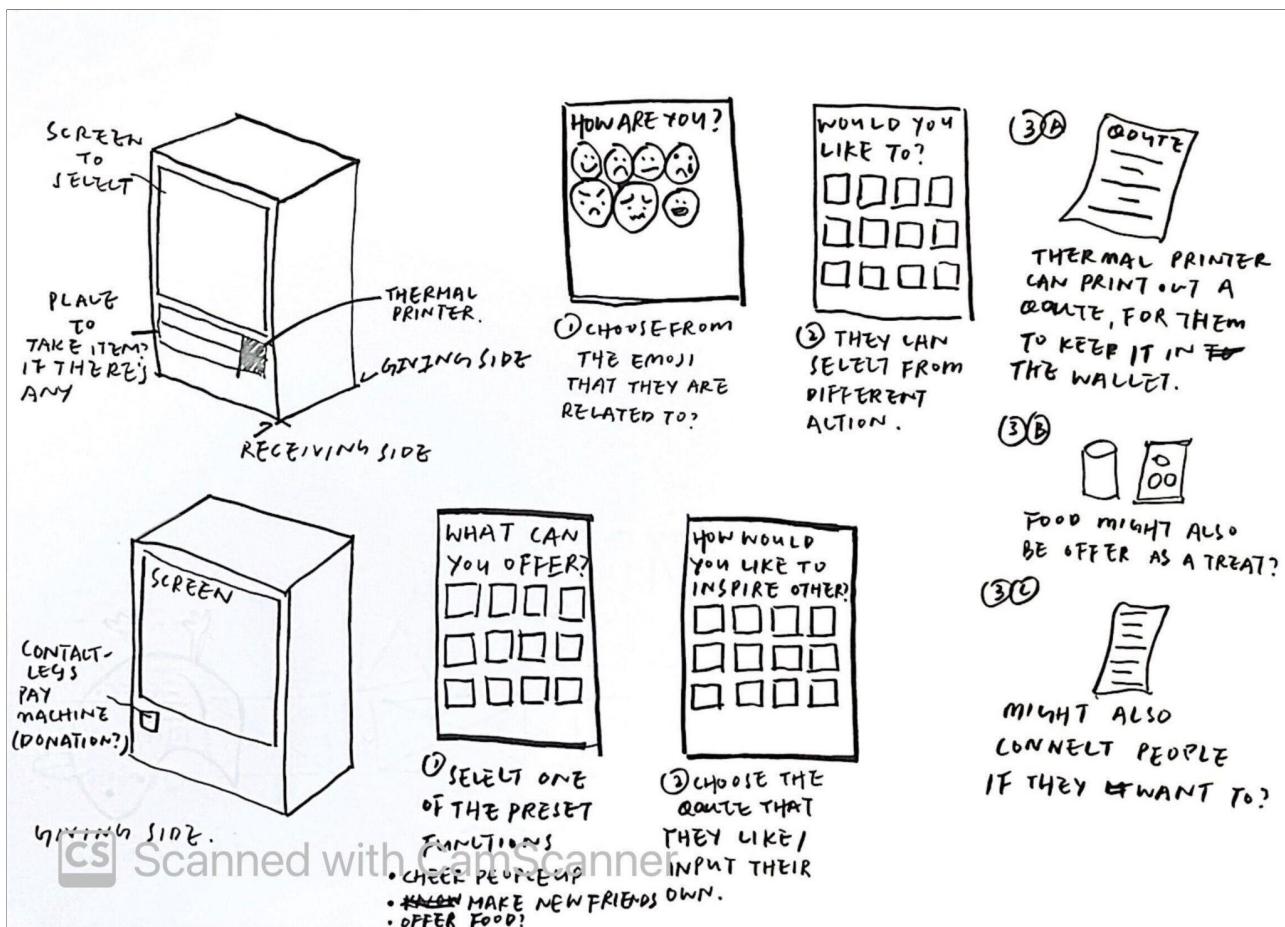


Figure 4a Paper Sketches of the Vending Machine — Karen

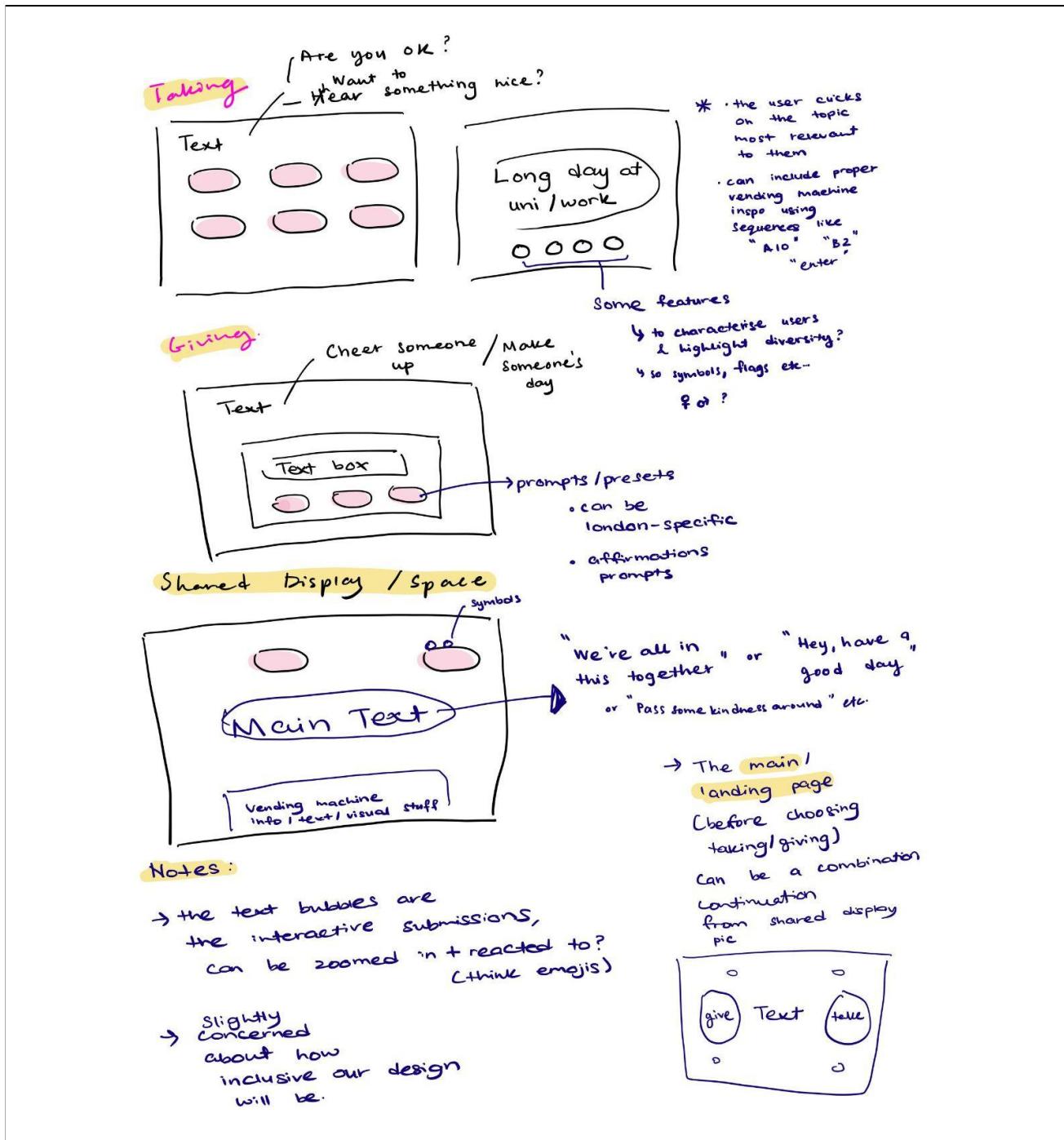


Figure 4b Paper Sketches of the Vending Machine — Iriani

Group 8

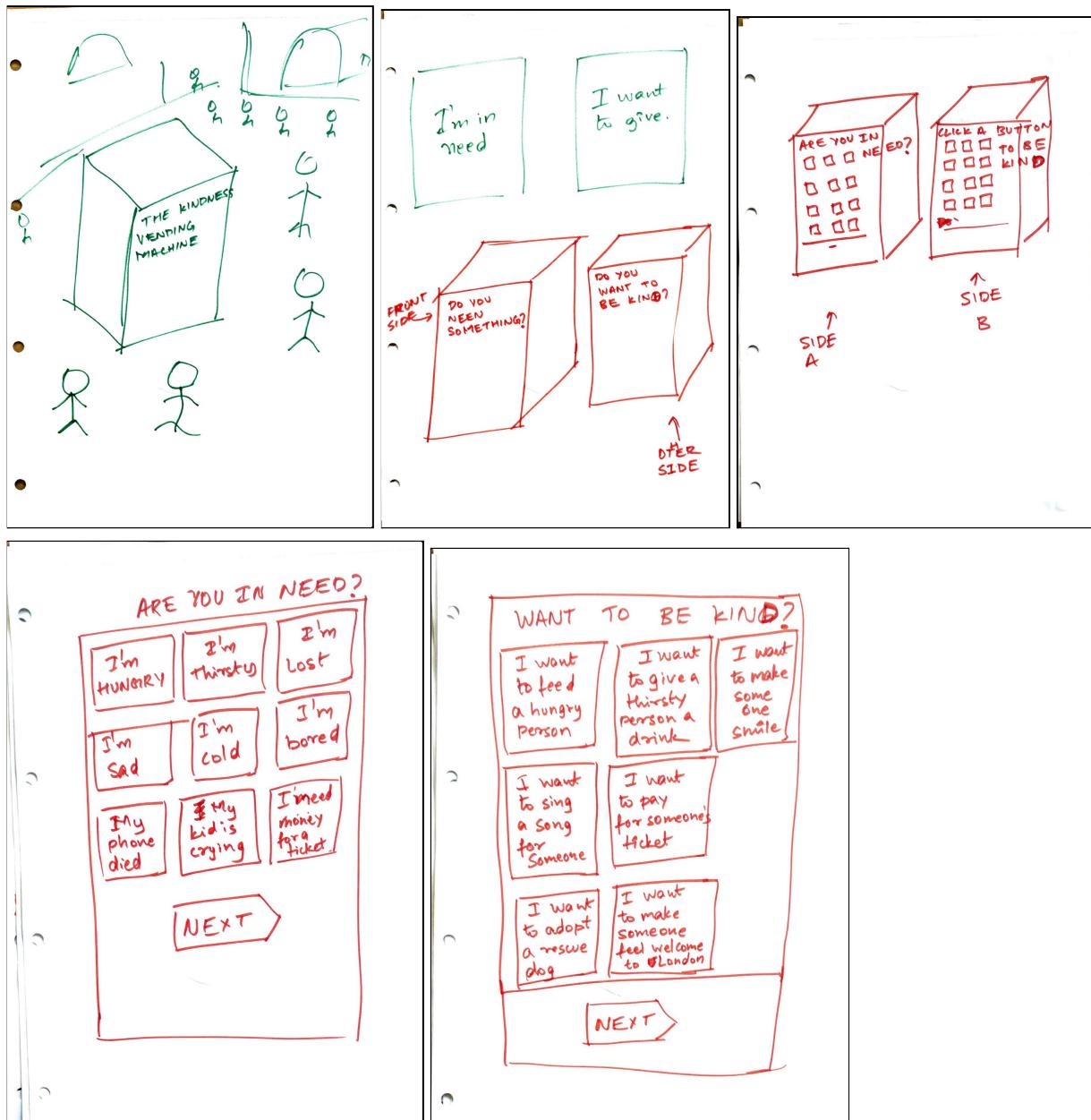


Figure 4c Paper Sketches of the Vending Machine — Sriram

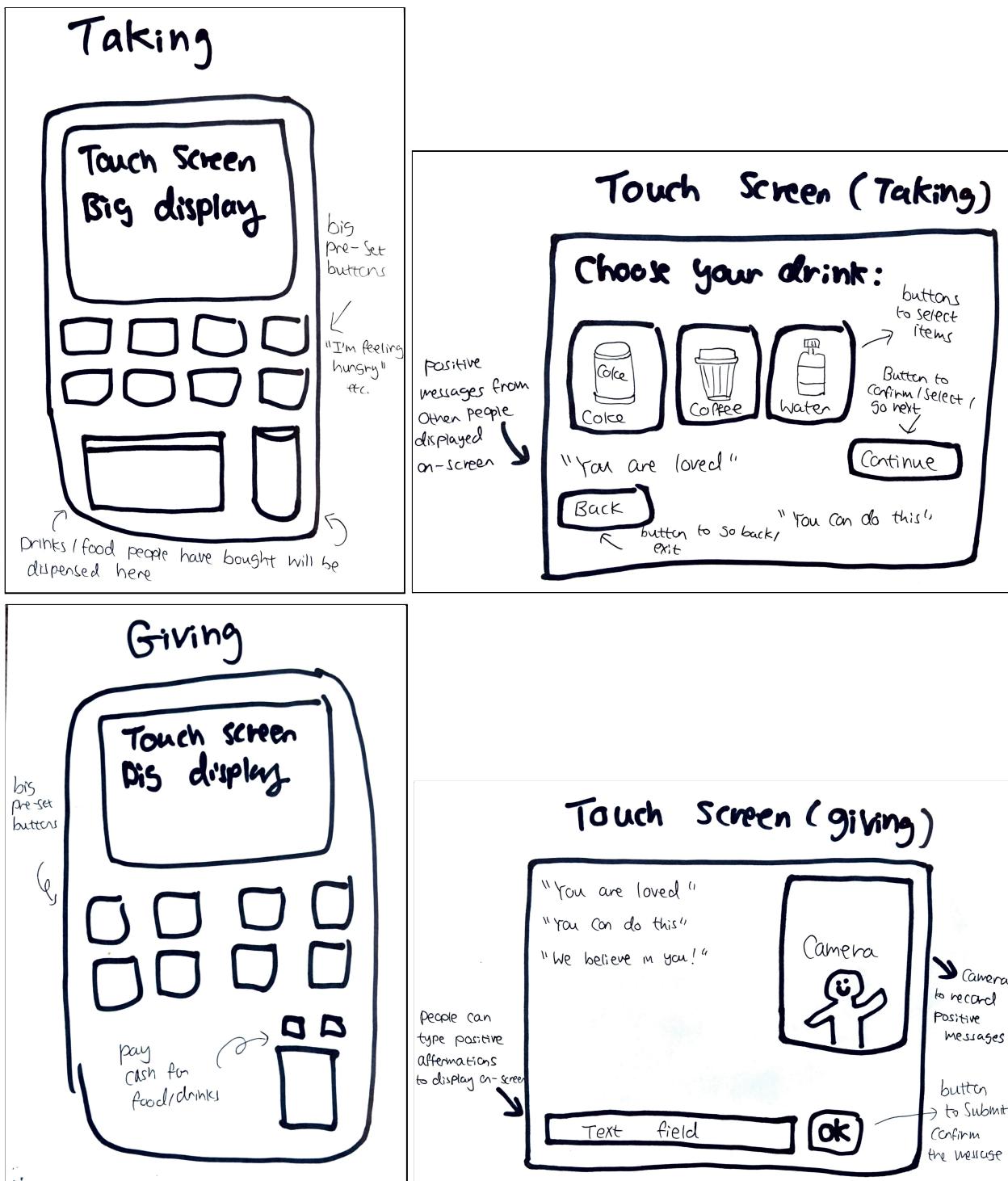


Figure 4d Paper Sketches of the Vending Machine — Erica

Interview Slides

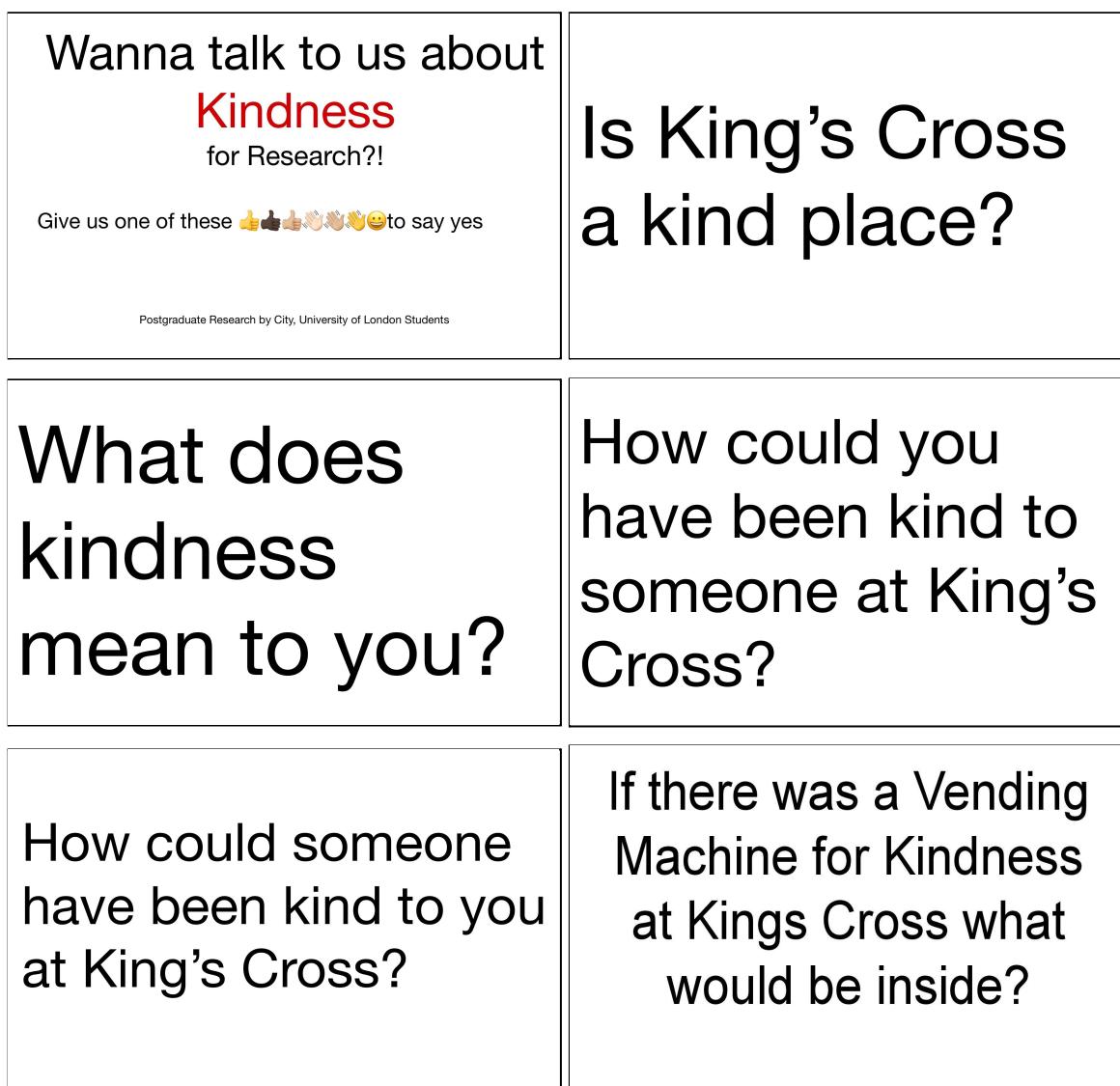


Figure 6. Slides of questions used to interview in Kings Cross

Transcript of Interviews

Day 1 (8/11/2021):

Audio 1:

Kindness is: Somebody who cares about other people/spaces?
Not especially kind, miserable -- not much kindness around King's Cross
Smiling and saying hello -- not difficult is it?
People asking for money -- reduced though recently maybe because of the pandemic?

Audio 2:

Being good to one another
Um, I haven't found it to be an unkind place, it's so-so
I've been shown where to go, being polite in letting me sit down
Possibly helping someone if they're a little lost
Outside of Kings Cross -- the homeless (to be kinder to them)

Group 8

Audio 3:

Thinking about how other people feel

King's Cross isn't a kind place, I don't think it's unkind, it's neutral

No one's been rude/unkind

I normally feel like if you're a station, compared to the streets, I'd be more likely to ask someone for information

I don't know, I don't really have conversations with people, I could've been extra polite to the guy in Starbucks, or maybe my answer would be different if it was rush hour. Now it's quite calm, everybody has space.

Audio 4:

Kindness means the whole world. Without kindness the whole world wouldn't move.

Kings Cross is definitely a kind place. I know the people that walk with me, they're all kind, people love us here.

Somebody needs help, I'm going for it, I'd go above and beyond to get what they want. Helping people in need.

Example what you did today? This old lady, today, was lost. She lost her brother, I told her to sit near the platform, I got tea for her. I feel that.

Audio 5:

When someone has respect for you.

It's like a nice exchange. Kindness is when you feel comfortable around someone.

I feel like there's a lot of different things, I wouldn't say it's kind. I would say it's in the middle.

Complement the outfit, smiling at me, opening the door. I remember this one time I was walking past this guy and he got angry ... I was like, okay?

Good manners.

Saying thank you, common decency, you don't have to go over the top.

How to be kind: Compliment her outfit ... say have a nice day. Just small things. Giving someone a lighter, a fag or a zoot.

Give homeless people money... £10! There's only so much you can do, just acknowledge them. I feel like even if you don't have anything to give, just be nice to them.

Audio 6:

I'm homeless. I might not look homeless but believe me I fucking am. The way people just walk past you, look at you, it's not about money. It's about having a heart. Talking to a person. You know what I mean? Buy me a coffee or something, it's not about me. Buy me nappies and baby milk.

Audio 7:

Kabbalah Centre - Oxford Street (jew spirituality)

More smiling...

A video? Do notes on him - clearly not expected by people?

Taking care of each other

Audio 8:

Kindness is generosity.

The staff here are amazing, depending on how busy the people are.

Not personally, but I've seen people help the elderly with their luggages.

I've seen - especially in rush hour, I'm not in the most generous mood.

Audio 9:

Taking others into consideration.

No. I don't think London's a very kind place, generally speaking.

I work around here so... maybe a smile or a hello.

I could've helped someone I saw in need. Maybe an old person who's struggling to get off the bus, someone with a wheelchair, someone who needs help with access and exiting etc.

I don't generally find myself in a position where ... yeah, I'm not sure.

Cardboard Prototype



Figure 7. Photos of the cardboard prototype, including responses and the cookies.

Table of Responses from User Interviews

How could you be Kind at King's Cross?	
Tangible	Intangible
Tea	Smile
Coffee	Say Hello
Money	Hug
Cigarette	Help someone in need
Lighter	Help someone who is lost
Nappies	Help the homeless

What would you give/take from a Vending Machine of Kindness?

Give	Category	Take	Category
smile	emotional reward	coffee	drink
appreciation of diverse perspectives	emotional reward	chocolate	food
universsal basic income	monetary reward	peace	emotional reward
laughter	emotional reward	love	emotional reward
hope	emotional reward	drink	drink
coke	drink	snack	food
confidence	emotional reward	coffee	drink
self love	emotional reward	cigarette	smoking
cookies	food	enthusiasm	emotional reward
driving lessons	knowledge	hope	emotional reward
spare change	monetary reward	someone to talk to	emotional reward
tap to give (money)	monetary reward	drink (irnbru)	drink
wisdom/knowledge	knowledge	someone to trust	emotional reward
coffee	drink	money	monetary reward
hug	emotional reward	nothing in return	nothing
hope	emotional reward	greeting "thank you"	emotional reward
smile	emotional reward	conversation	emotional reward
hug	emotional reward	food	food
dancing	knowledge	book	entertainment
donate to charity	monetary reward	lighter (for cigarette)	smoking
compliment	emotional reward	compliment	emotional reward
confidence	emotional reward		
kisses	emotional reward		
kisses	emotional reward		
hugs	emotional reward		
apple pie	food		

Draft Wireframe Design

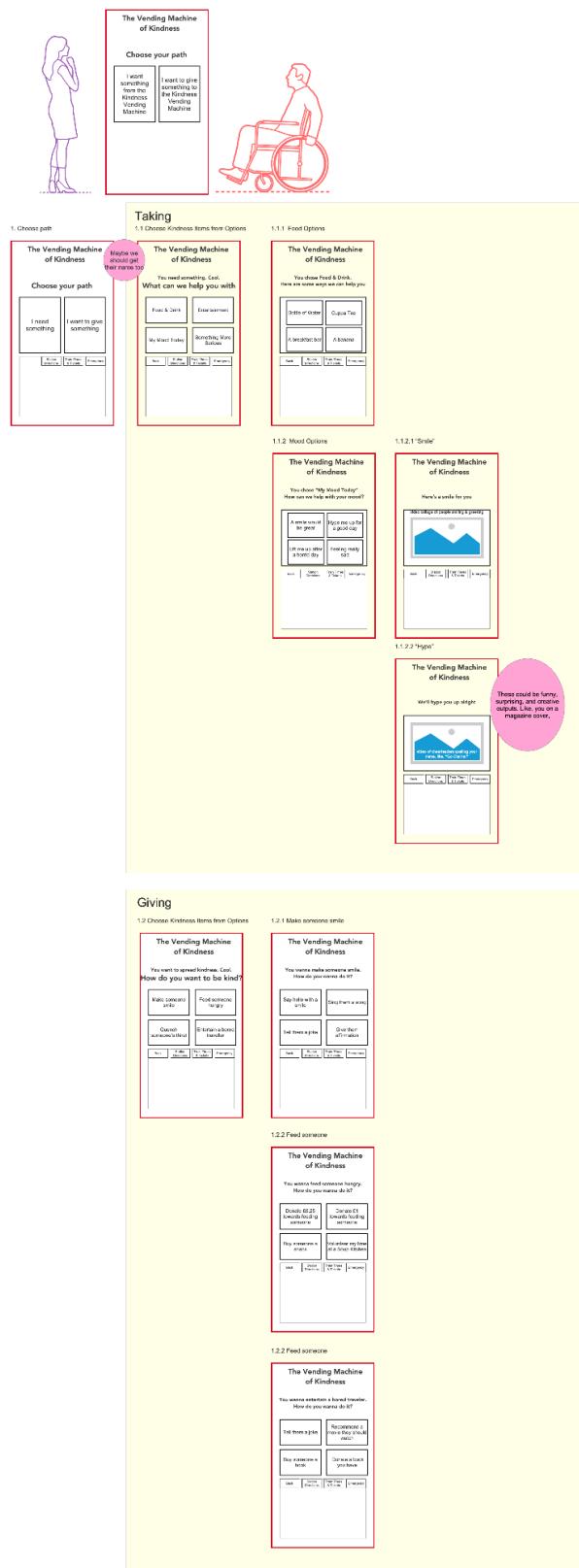


Figure 8. Draft Wireframe design was created from the interview and observation findings

Persona 1 — John Heading



Figure 9a. Persona for taking kindness was created from the interview and observation findings

Persona 2 — Helen Sharpe

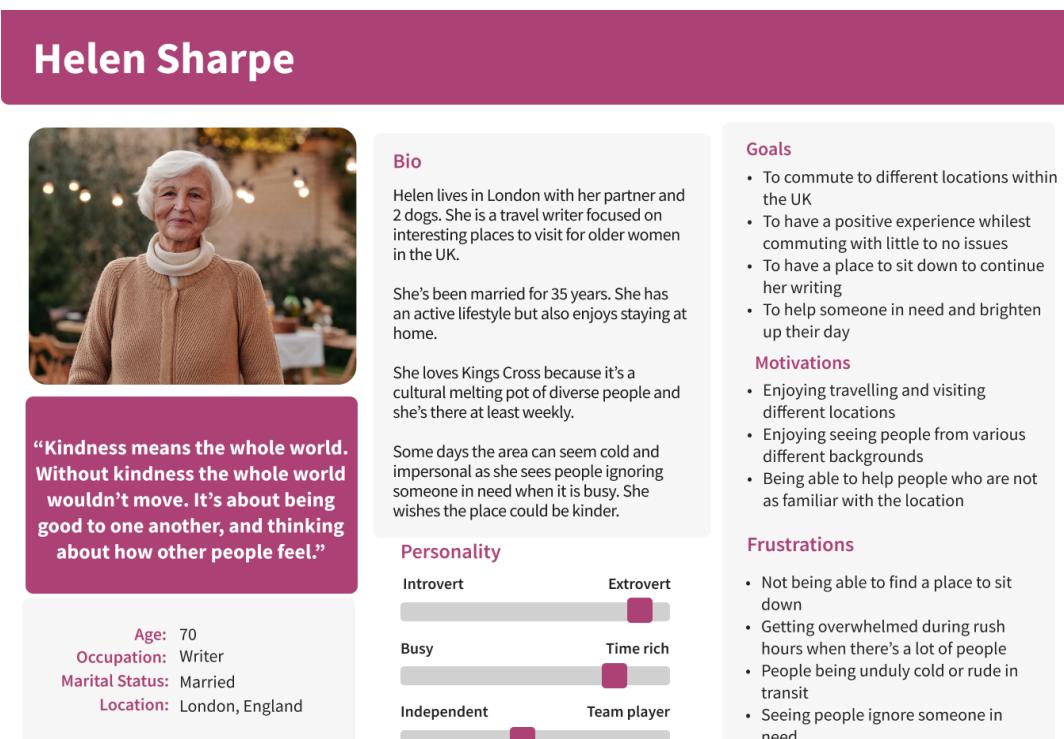


Figure 9b. Persona for giving kindness was created from the interview and observation findings

Existing User Journey 1 — John Heading

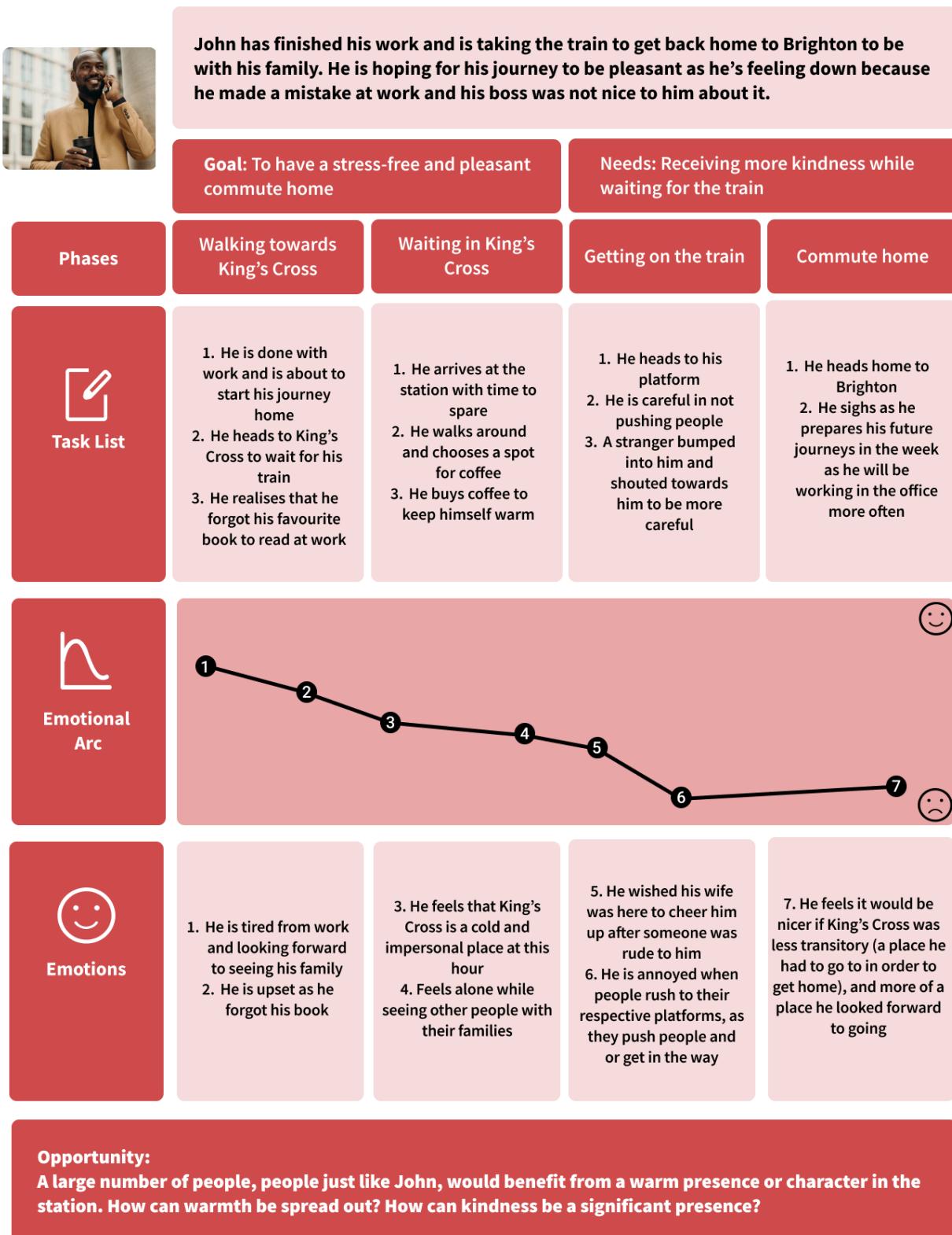


Figure 10a. User Journey was made with how John currently navigates around Kings Cross

Existing User Journey 1 — Helen Sharpe

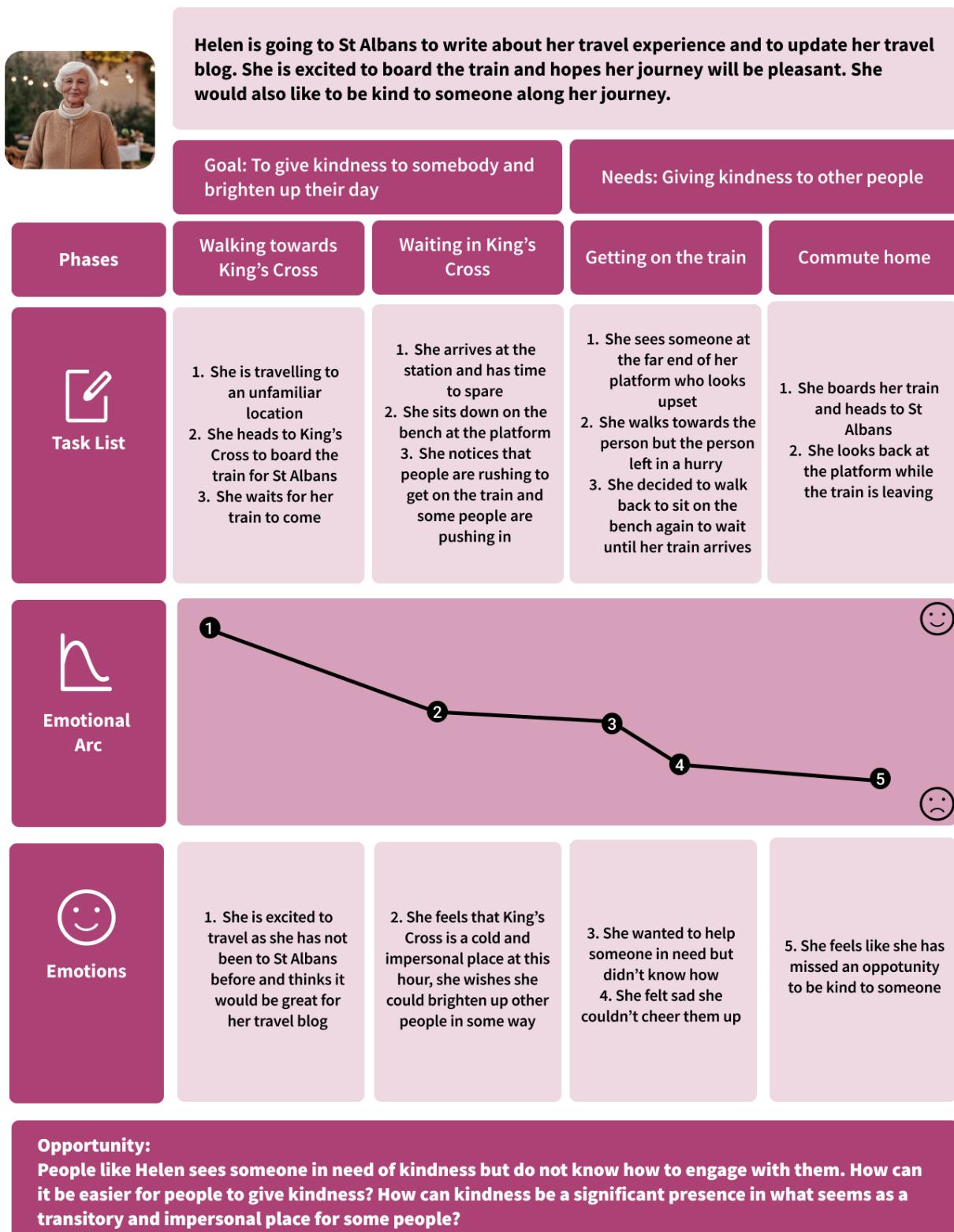


Figure 10b. User Journey was made with how Helen currently navigates around Kings Cross

Future User Journey 1 — John Heading

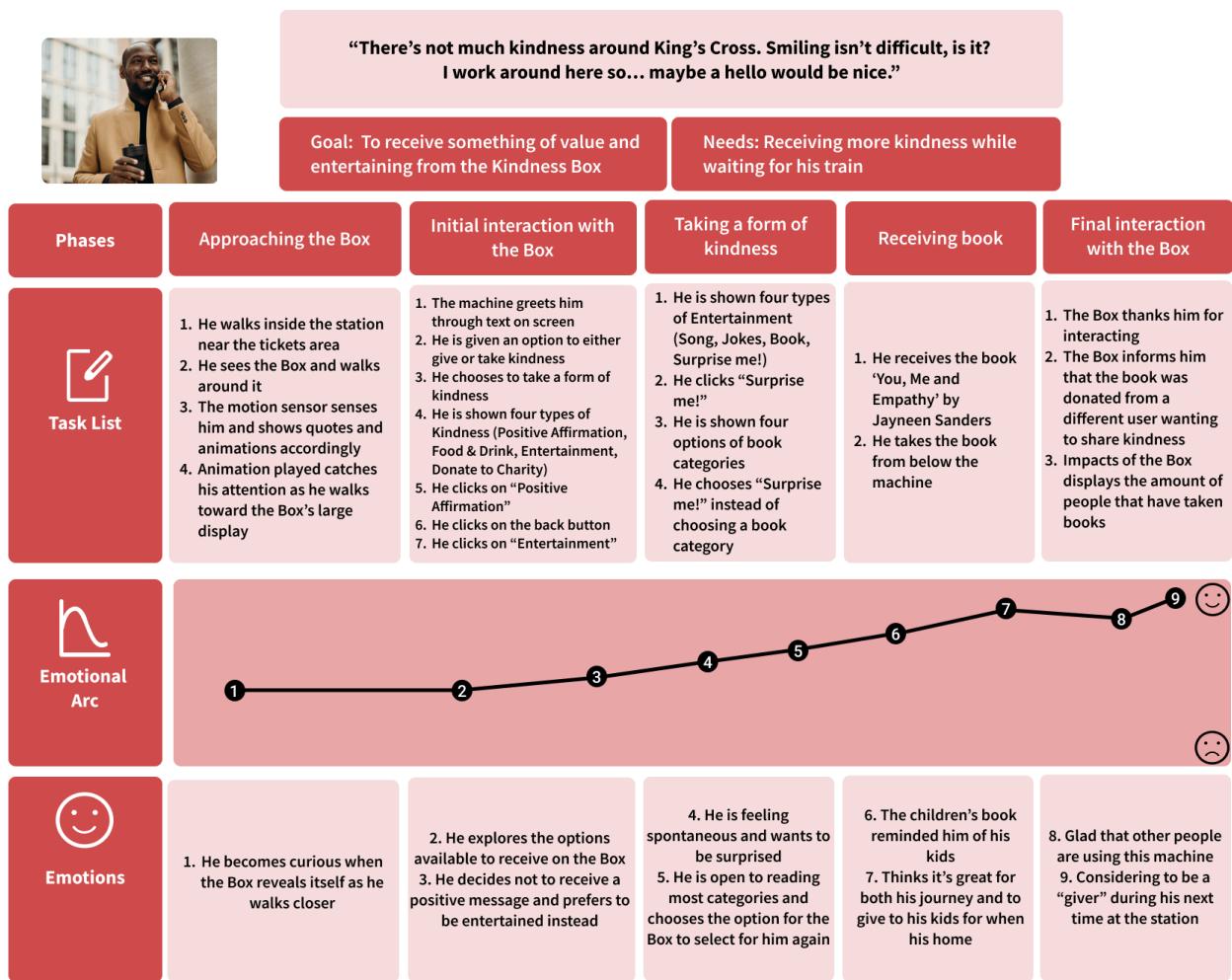


Figure 11a. Future User Journey of how John is going to navigate around Kings Cross

Future User Journey 2 — Helen Sharpe

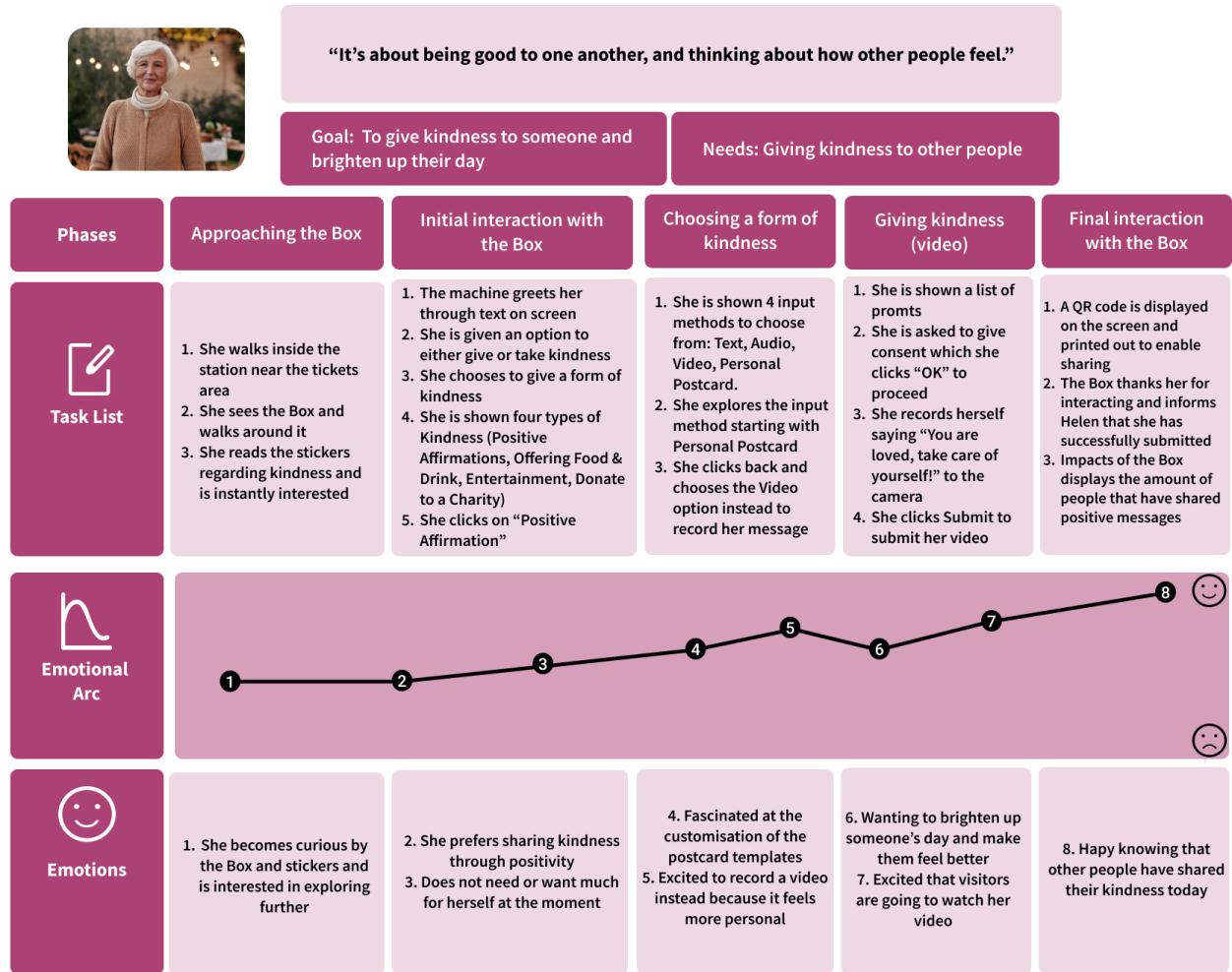


Figure 11b. Future User Journey of how Helen is going to navigate around Kings Cross

Low-fidelity Prototype (Wireframe)

Wireframe 1

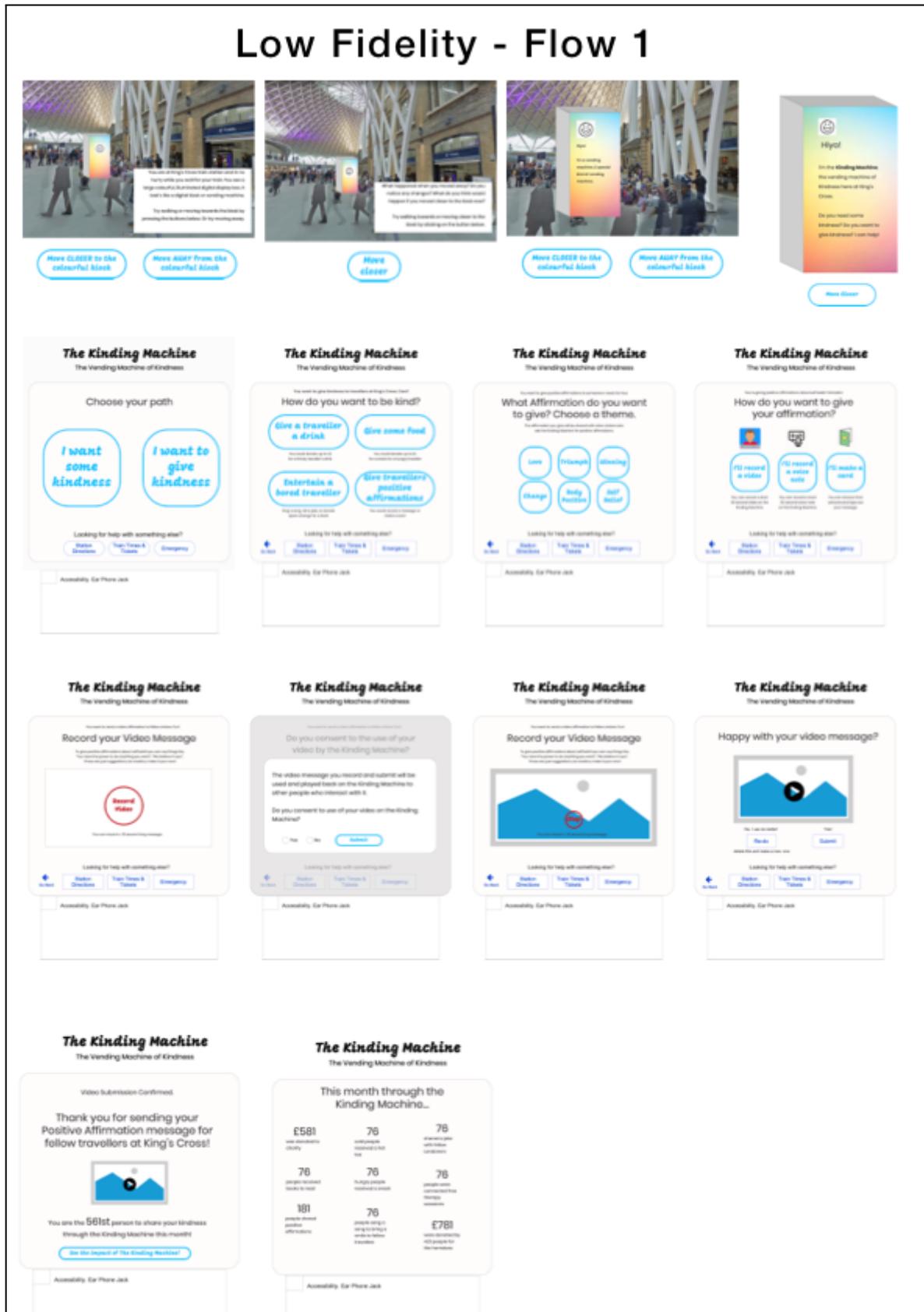


Figure 12a. Low fidelity Prototype envisioning the flow of giving positive affirmation as a video.

Group 8

Wireframe 2

The wireframes illustrate the user flow for 'The Kindness Machine' application:

- 1. Homepage:** Shows two options: "I want to give kindness" and "I need some kindness".
- 2. Offer Selection:** Four options: "Just Be", "Food & Drink", "Entertainment", and "Events to Attend".
- 3. Recording Method:** Options: Text, Audio, Video, or Personal Record.
- 4.1 Positive Affirmation:** A list of positive affirmations for users to choose from or type in.
- 4.2 Audio Recording:** A screen showing a recording interface with a red record button and a play button to preview.
- 4.3 Video Recording:** A screen showing a recording interface with a red record button and a play button to preview.
- 4.4.1 Happy Face Photo:** A screen for users to take a photo of their happy face.
- 4.4.2 Postcard Preview:** A screen showing a preview of a postcard template with a quote and a picture.
- 4.4.3 Postcard Preview:** A screen showing a preview of a postcard template with a quote and a picture.
- 5. Summary:** A wrap-up screen thanking users for sharing kindness and providing statistics.

Figure 12b. Low fidelity Prototype envisioning the flow of giving positive affirmation.

Draft High-fidelity Design



Figure 13. Draft High-fidelity design was created from the wireframes

User Testing Script

Research information:

Hello, my name is *name*, and I'm an M.Sc. Human-Computer Interaction Design student conducting this user testing for the Interaction Design module.

We want to find opportunities to let people engage in an act of kindness in an open space area using interactive digital machine. In this user test, I will be asking you to complete a series of tasks to test the functionality and capabilities of our application.

Before we start the interview, we would like to ask your permission to conduct this interview. We would also like to ask permission to record this interview and for you to share your screen whilst we conduct the interview and user testing.

In this interview we will ask you to complete a series of tasks and for you to walk us through each step that you take, any extra feedback you have as we go would be appreciated.

The answers given will be anonymised, and you are not obligated to answer any questions you wish not to answer. You are also able to opt out from the user testing at any time. I will start the user testing by asking you to perform basic operations. Please speak aloud what you are thinking whilst completing the operations.

Group 8

We will now send you the link to our file so if you could screen share (if permission given) your window and open the working application, we will start the interview process. The tool will ask for your permission to share your screen. You can choose to share just the window where you interact with the link provided instead of sharing your whole screen.

Background information:

You are in London's King's Cross train station during [time]. If you haven't been to King's Cross before, imagine you are at another major train station hub you have been in the past.

You notice something that looks like a vending machine or a kiosk, but it looks quite different and modern. It has an illuminated screen around it. You look at it from a distance and decide to walk towards it.

Task1: Move up to the big illuminated machine and get as close to it as possible. Explore what happens if you move away from it.

Task 1 Follow-up questions

- What was your initial reaction to the illuminated digital kiosk?
- What happened when you moved towards it?
- What happened when you moved away?
- How did the vending machine make you feel?
- Was there anything about your interaction that interested you?
- Was there anything about your interaction that concerned you?

Task 2

Now that you know this is a vending machine for kindness at the train station, you decide to interact with it more. You explore the machine and decide that you want to offer a message of affirmation for someone who might be low on confidence. You decide to record a video message and submit it.

Task 2 Follow-up questions

- Do you want/need prompts under the buttons?
- How do you like the phrasing? Are they clear to you?
- What do you think about the consent box?
- How long do you want us to keep your data?
- Did you experience any frustrations using this machine?

Outroduction/Debriefing script

Thank you for participating in the user testing. I would like to recap what you have answered during the user testing. This is so any misinterpretation can be corrected, and further information can be added. *Recap key points* Thank you for your time.

User Testing Findings

- Users may not approach the Box unless they see other users using it first or if the Box doesn't have messages to attract them
- Users had questions about how many could one person get in a day and if there were any limits.

Group 8

- While most users understood that what they receive would be free, a minority was not clear.
- Didn't want donations for food and drinks to be limited to £2
- Strong preference for seeing the impact of giving
- Preferred having prompts for affirmation messages
- Would like to share or email the content to themselves
- The links to "Station Directions, Train Times & Tickets, Emergency" are distracting. Users thought those were also part of the kindness machine, while they just meant to re-route users looking for those kiosks.
- Flow #1 was verbose and didn't help users focus on key actions. Yet helped some users understand options.
- The simplicity of flow 2 had a strong preference
- Users who didn't want to donate money chose to give affirmations
- Needed more instructions and control before the camera started recording. Needed better labelling of when the camera was recording.
- Users would not want the content to be sold to 3rd parties
- Lack of buttons on the final screen to restart or try another option of giving/taking felt like a dead end. Users wanted to have a way forward.
- The use of smileys to show the emotion of the Box when people walked closer and sad emoji when they moved away had an emotional reaction on users. It motivated users to move towards the Box.
- Examples of posts made by other users would encourage new users to engage
- On flow #2, users assumed they would be able to enter details for the recipient of the message. It was not clear who the message was being sent to.
- No visual slot for things to come out from the box, like a vending machine, leads to confusion; users were unsure how the Box would deliver goods.

Prioritised Improvements based on User Testing

Changes we will implement:

Page 0	<ul style="list-style-type: none">- Animation that's dynamic, not static.- The AI will recognise people walking towards the machine by focusing on movement in the zone closest to it (the concentric circles indicated below)- Include impacts when idle, with other people's responses as text/photo/video floating around- Include an "About" page- Slideshow- Smileys animation show up- Descriptions of what the box does- Impact video/photos
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Physical	 <p>On the floor, there are circles or concentric rings that denote the zone.</p> <ul style="list-style-type: none"> - For the rings, either flat stickers pasted etc, pastel shades - Words on the rings to aid with the clarity & description - "How do you feel? Do you need a cup of coffee? etc." • Printer prints out the QR code and postcards may be printed <p>Visual Design</p> <ul style="list-style-type: none"> - Shades of red to connect it with other iconic kiosks - But pastel to differentiate it from other official kiosks (such as ticket kiosks)
Consent	<ul style="list-style-type: none"> - A QR code system to help users control, share their content
Descriptions	<ul style="list-style-type: none"> - Pop up description? - Description underneath button? - Description at the top of the screen? (e.g. Please record a video)
Sharing options	<ul style="list-style-type: none"> - Towards the end, and before submit, after submit too - QR code + it'll be printed out - More connections is better (email + social media options), e.g., : "give your Instagram account handle, for example"
Input methods	<ul style="list-style-type: none"> - Needs to be vetted if it was customised (non-templates) - Add a note near the submit page: we need to vet, then it'll be posted!
About me page	<ul style="list-style-type: none"> - Small button that enlarges when clicked - QR code for home page — read our fine print (in both about me and in the flow)
Video/photo capture	<ul style="list-style-type: none"> - A start button/click photo button, so user can control when it happens - Prompt before user records themselves — like a 3, 2, 1
Home button	<ul style="list-style-type: none"> - Need a home button everywhere, on the final page, need a button to restart or redo.
Themes for input	<ul style="list-style-type: none"> - Applying prompts instead

Sticker Design



3D Visualisation

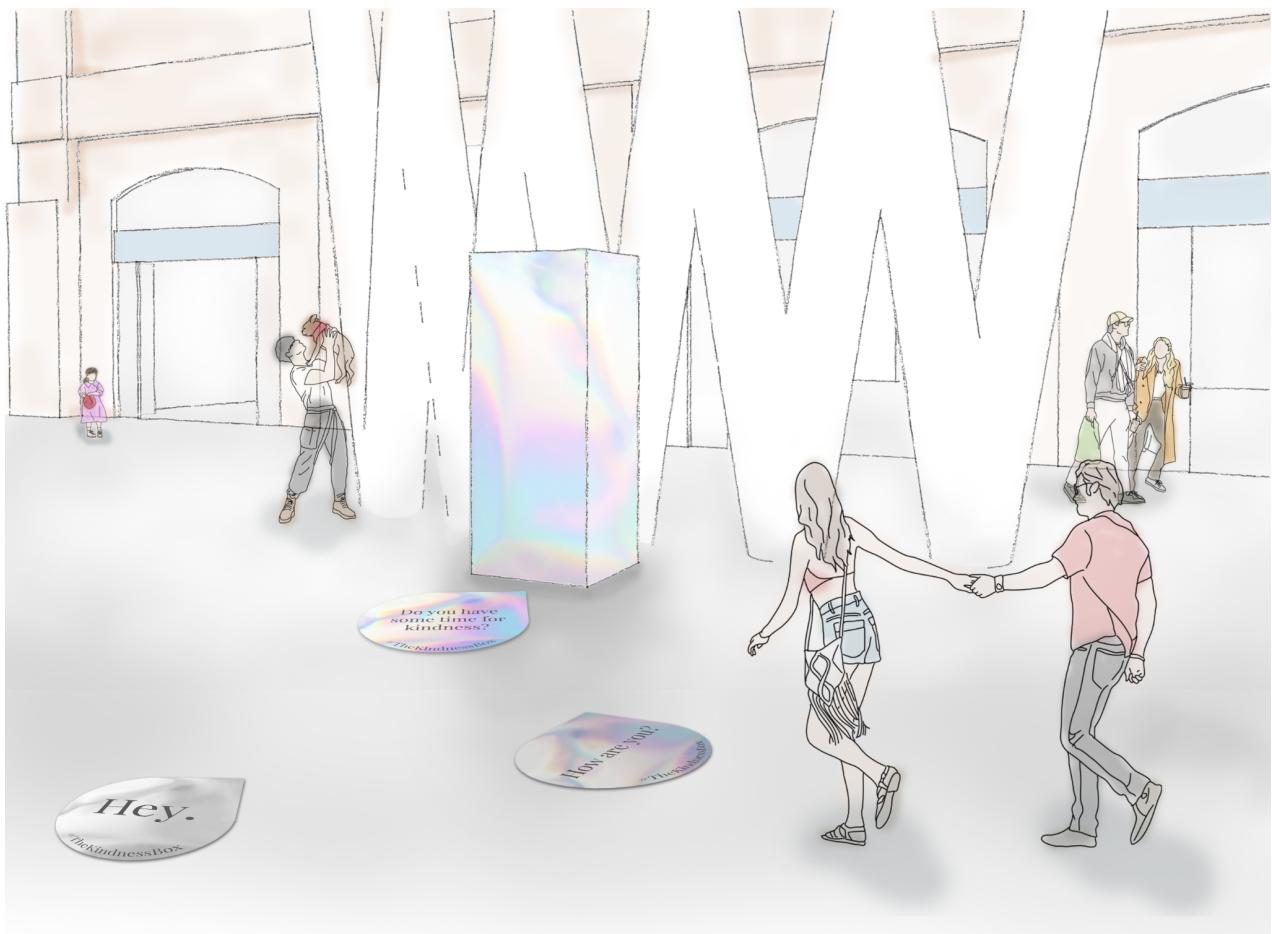


Figure 14. 3D Visualisation on-site with stickers on floor indicating machine's location

Elevations and 3D Visualisation

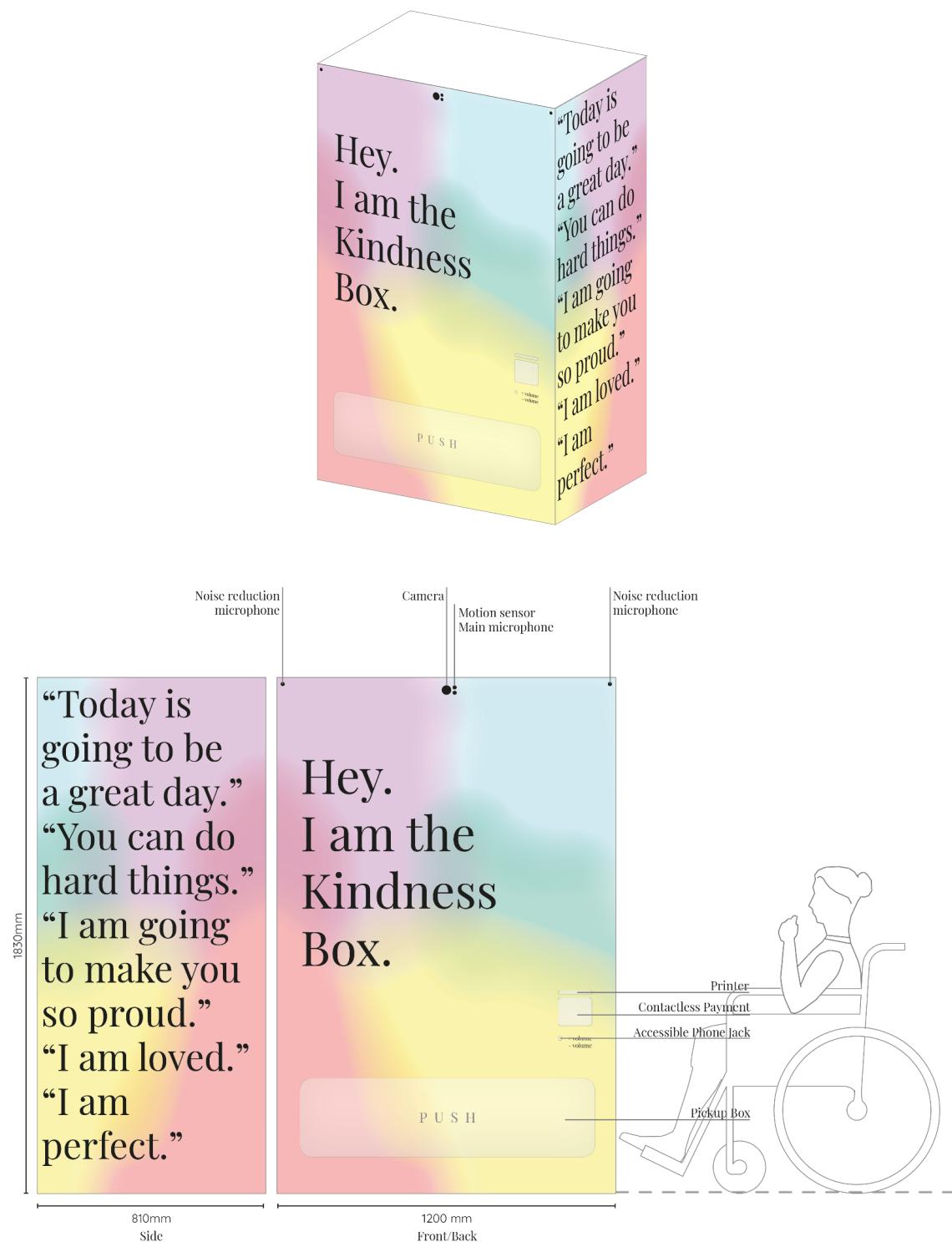
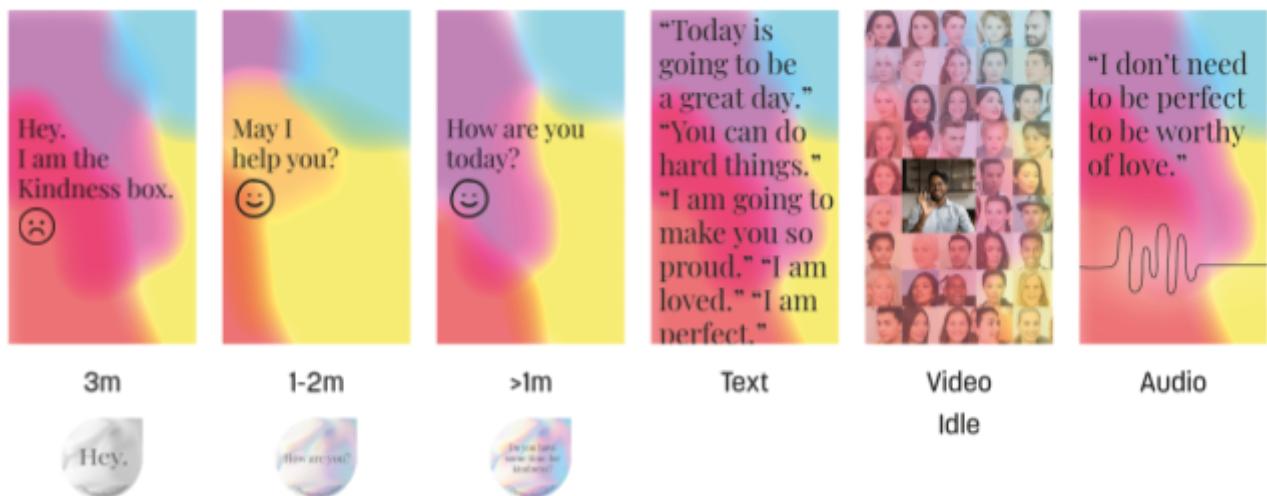


Figure 15. Elevations and 3D visualisation of the machine

Slideshow Screens and Motion Sensor Interaction



High-fidelity Prototype

<p>What can you offer?</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Positive Affirmations</p> <p>Record a message to someone and make their day.</p> </div> <div style="text-align: center;"> <p>Food & Drink</p> <p>Get someone a coffee.</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <p>Entertainment</p> <p>Sing a song, tell a funny joke, gift someone a book.</p> </div> <div style="text-align: center;"> <p>Donate to Charity</p> <p>Donate to a charity of your choice.</p> </div> </div> <p> </p>	<p>How do you want to record your message?</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Text</p> </div> <div style="text-align: center;"> <p>Audio</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;"> <p>Video</p> </div> <div style="text-align: center;"> <p>Personal Postcard</p> </div> </div> <p> </p>	<p>Would you like to share your audio?</p> <p></p> <p>You will receive a printed receipt with a QR code below. Keep it safe!</p> <p>Scan this QR code to get it sent to your email or other social media platforms and control how your audio would be used.</p> <p> </p>
Main Page	Choosing Input Method Page	QR Code Page

<p>See the impact of The Kindness Box.</p> <p>This month...</p> <p>£581 was donated to charity.</p> <p>40 hungry people received a snack.</p> <p>76 people received books to read.</p> <p>Start Again.</p> <p>● ←</p> <p>— Accessibility Ear Phone Jack</p> 	<p>See the impact of The Kindness Box.</p> <p>This month...</p> <p>29 people received a hot beverage.</p> <p>181 people shared a positive affirmation.</p> <p>31 people sang a song they like.</p> <p>Start Again.</p> <p>● ←</p> <p>— Accessibility Ear Phone Jack</p> 	
The Kindness Box Impact Page		

Relationship between Novelty and Typicality on Aesthetic Preference in Product Design

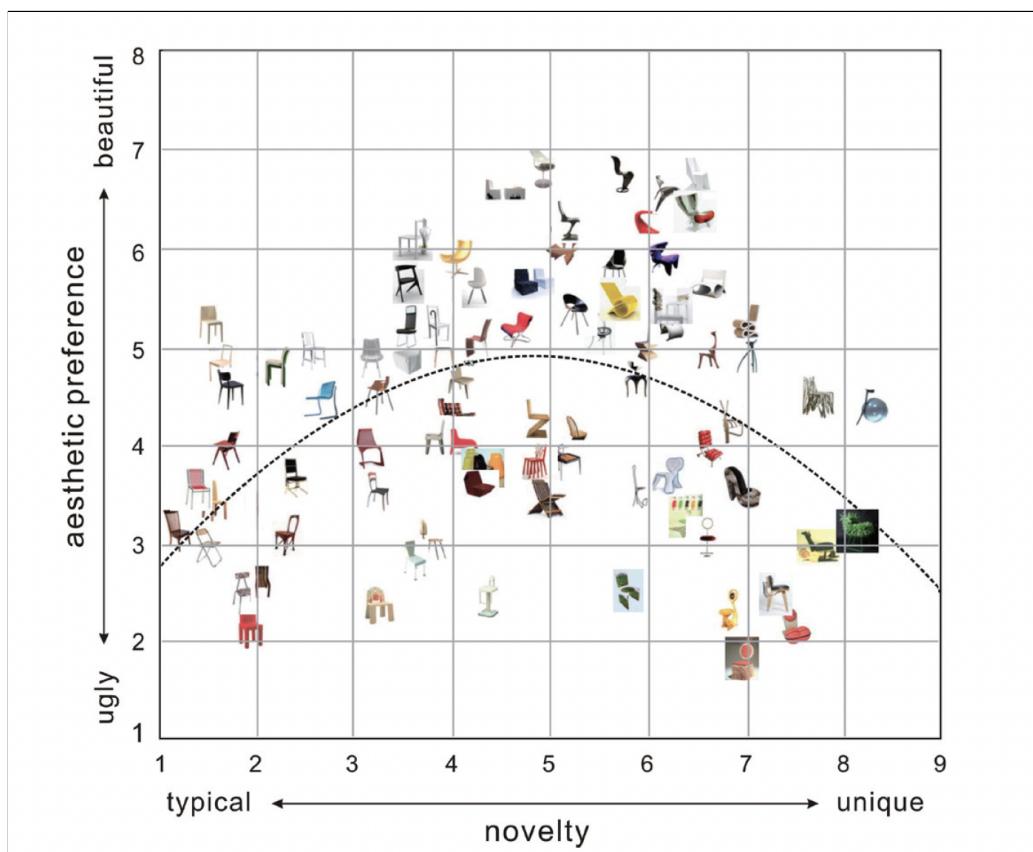


Figure 16. The effect of novelty-typicality on aesthetic preference in product design was shown to have an inverted-u relationship by Hung and Chen (2012). The study first measured respondents' attitude towards the designs by rating them on a bipolar typical to unique scale, and then measured respondents' aesthetic preference to each design. The study found that respondents had the strongest preference for designs that were moderately unique with designs on the ends of the spectrum falling short.

Statement on Team Contribution

This coursework has been a collaborative effort of Erica Wakui-MacFarland, Iriani Binti Amirudin, Ka Ching Karen Leung, and Sriram Venkitachalam. Brainstorm sessions, observations at the public space, vox pop interviews were all conducted collaboratively as a group. Remote collaborative workshops were conducted with each member's participation where initial ideas were discussed, designs were sketched, and decisions were made by consensus. All pieces of the coursework have each member's fingerprint. Please refer to the [general log](#) for further details.