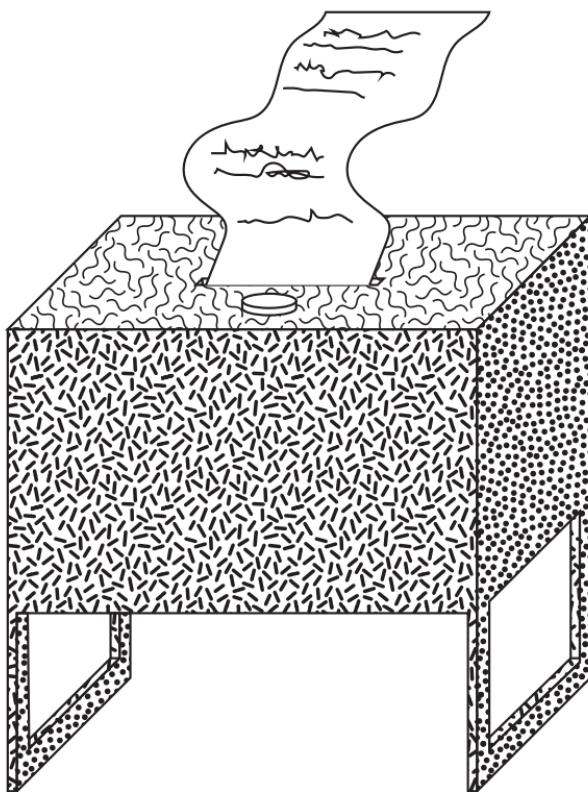


Connected High Street

Workbook #02

Connecting the High Street through
prototypes and methods



Connected High Street Workbook #02

Connecting the High Street through
prototypes and methods

Editor

Michael Shorter

Design

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Contributors

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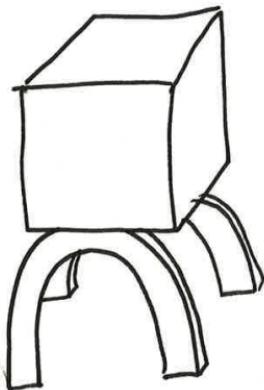
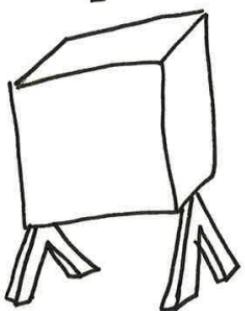
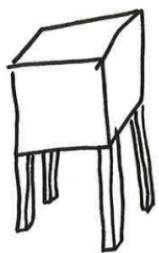
A Collaboration between the University of Dundee, University of Edinburgh and Northumbria University. Support also received from Future Cities Catapult.

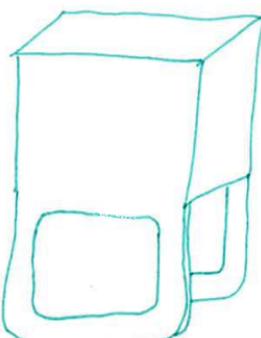
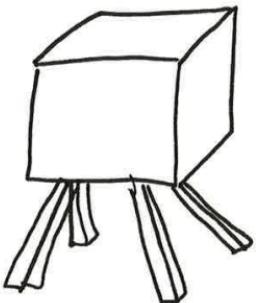
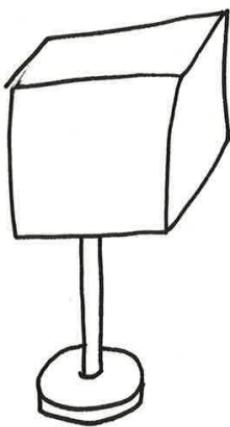
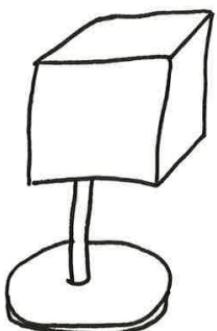
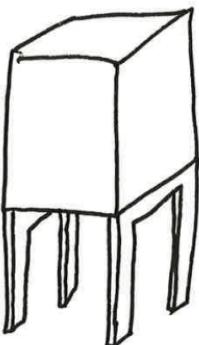
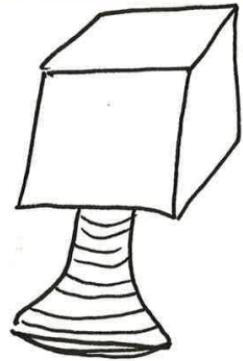
Introduction:

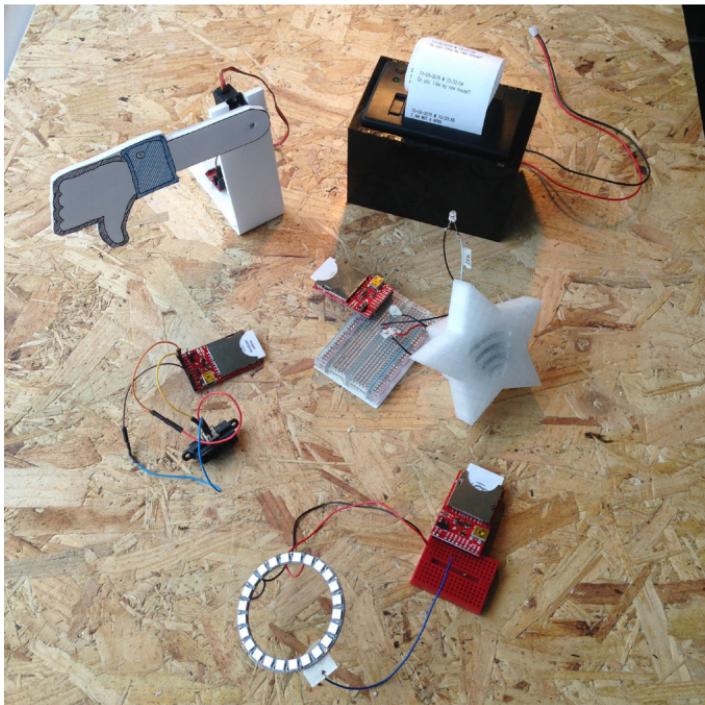
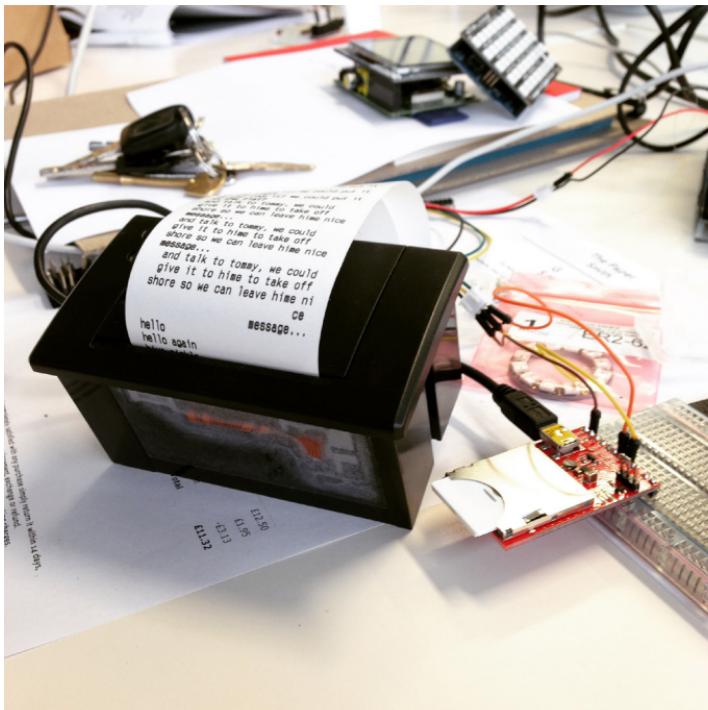
Connected High Street

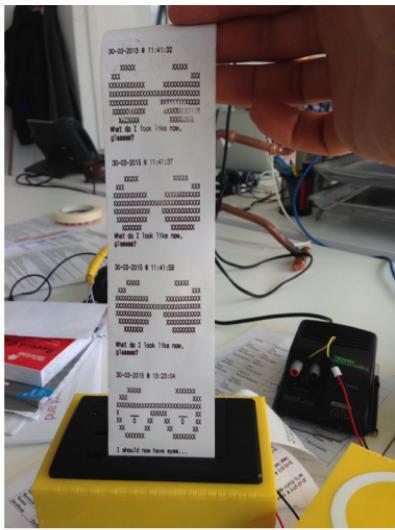
Building Internet of Things Demonstrators

We knew we were going to work with local shops in Dundee. We also knew that the internet of things (IoT) is a concept that they would possibly be unfamiliar with. To help these local independent shops get their heads around what the IoT can do we decided to build a series of demonstrators. These demonstrators illustrated various inputs and outputs available through internet-connected objects. We wanted these demonstrators to be simple, generic devices that had a focus on function rather than context.

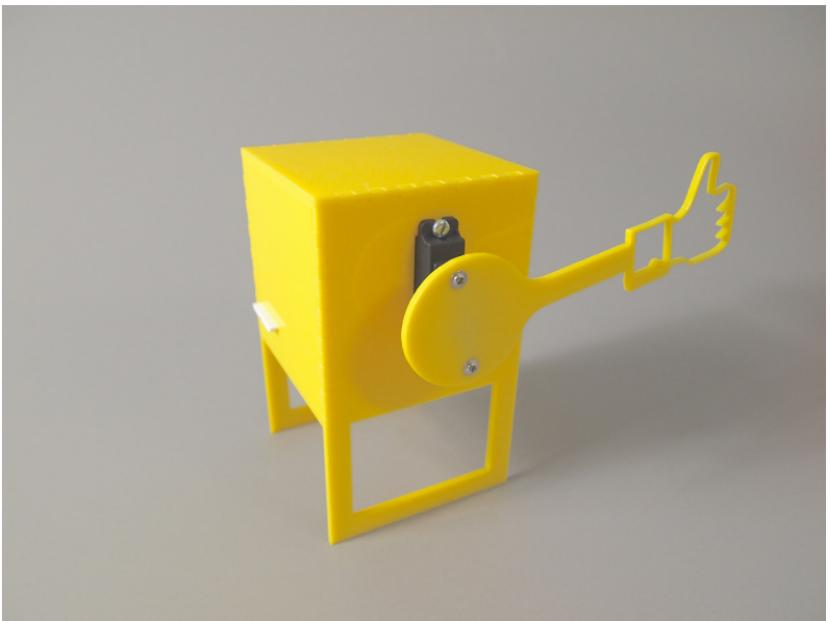








It was decided that these demonstrators should all be powered by the Electric Imp. The Electric Imp is a small SD card sized IoT hardware device. The programming of it is all done in the cloud so the device can be updated remotely. It is also VERY easy to connect to different wifi networks making it easy to move around to different venues and connect it up. Five demonstrators were created and housed in little yellow boxes, this made them visually look like they were all part of the same project. We invited many local shop owners and business people to a meeting about the project in the Folk Cafe in Dundee. At this meeting we discussed the IoT, showed them the demonstrators and told them we wanted to build some cool stuff for them. One of the key stories we told them was of the connectedness in Indian Chowks and other shopping contexts that we had encountered and how we wanted to bring this to the Dundee High Street.



Click a 'like' or 'dislike' button on a website and the thumb will move on a servo motor to give either a thumbs up or thumbs down.



An IR sensor records when its beam has been broken and uploads the data to a graph online.



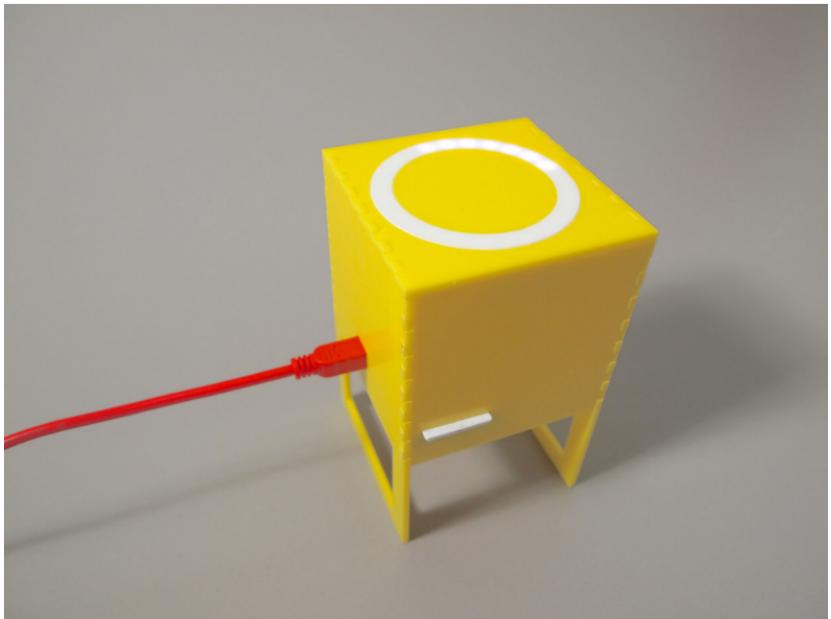
A NeoPixel ring of LEDs spins round the white circle. Depending on what is trending online on twitter in Dundee the ring changes colour.

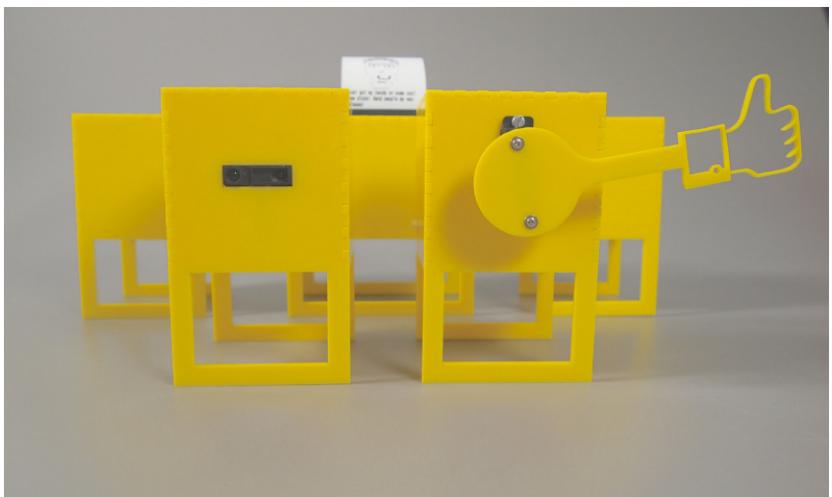
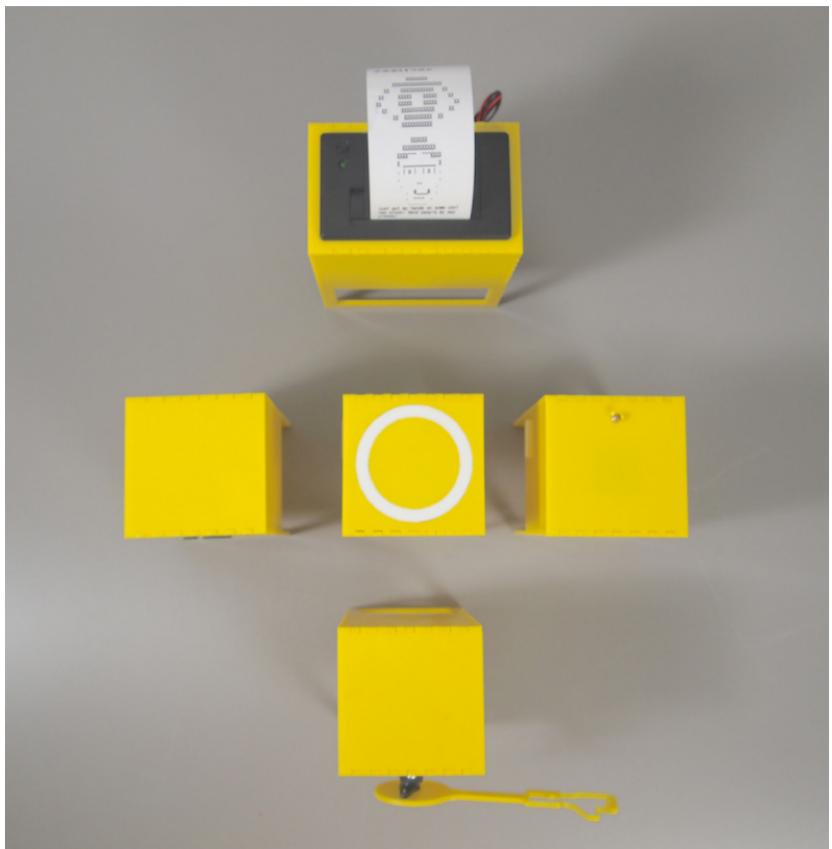


An RFID reader detects when a particular card has been swiped and records the data to an online graph.



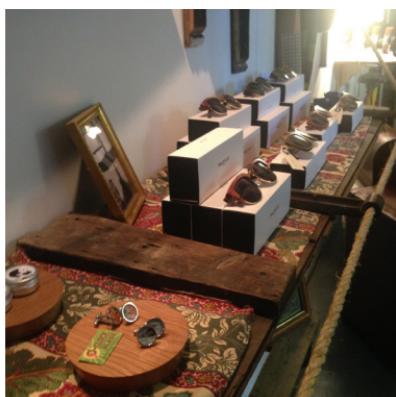
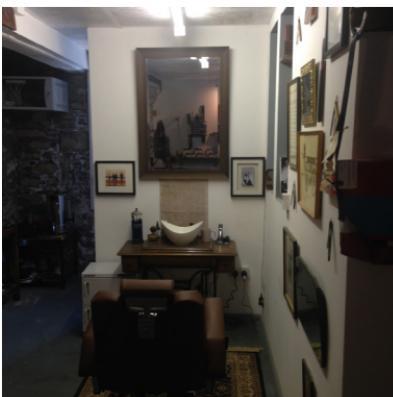
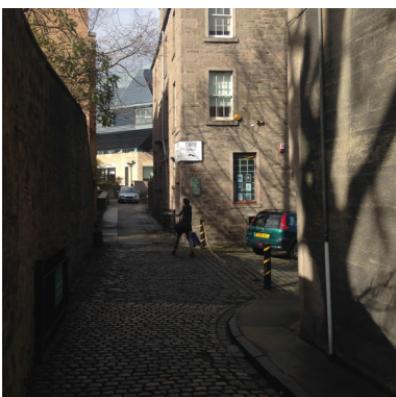
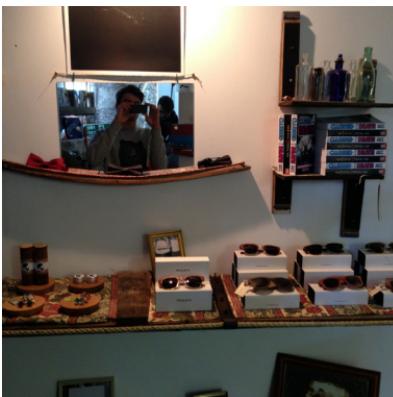
A message can be typed on a web interface and sent to this thermal printer instantly.

















PARLOUR CAFF



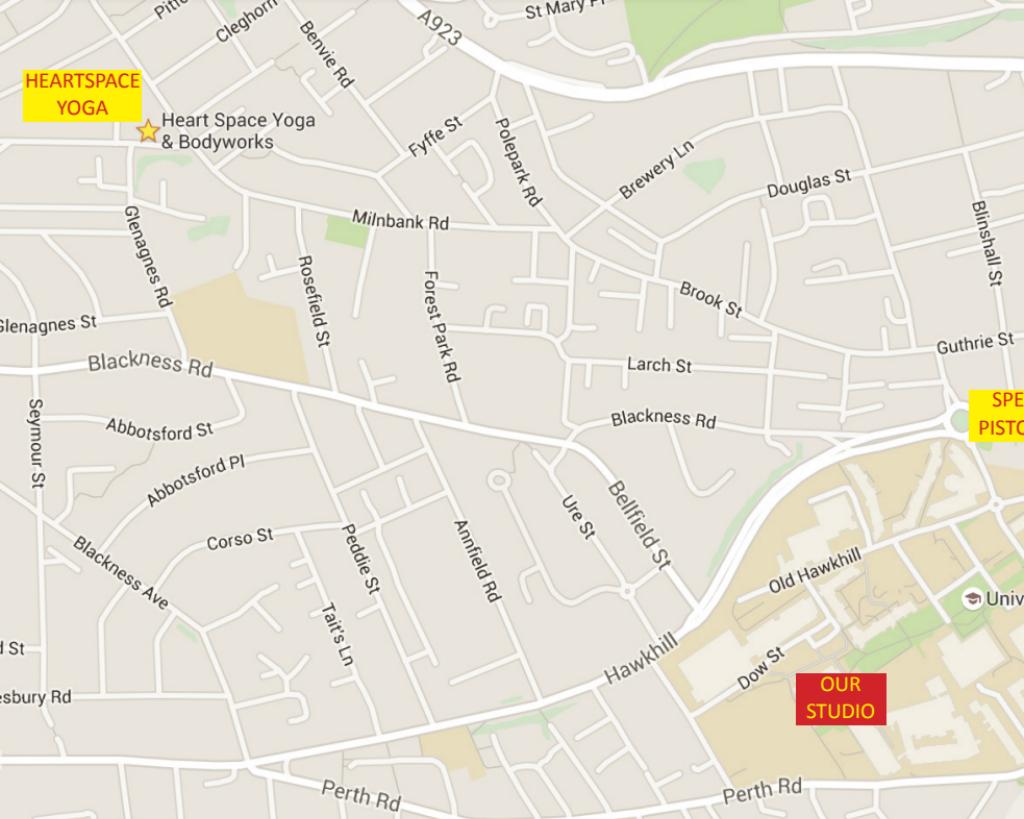


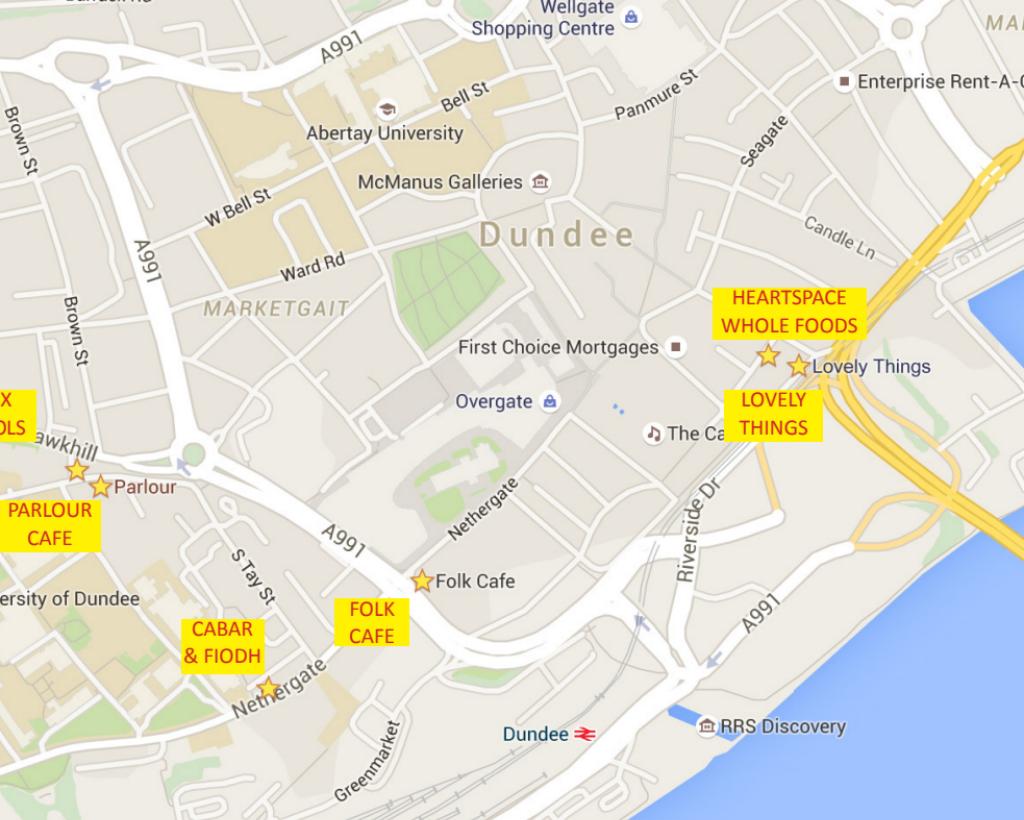
**HEARTSPACE
YOGA**

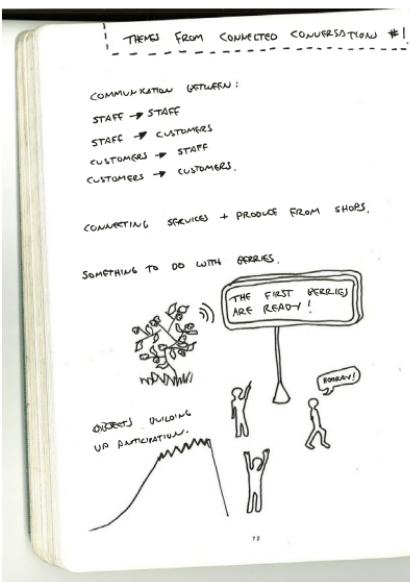
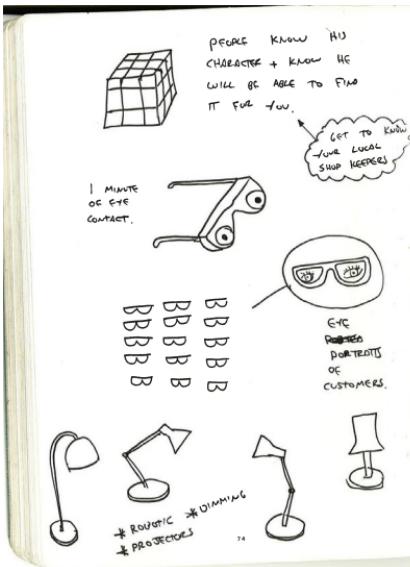
Heart Space Yoga
& Bodyworks

**OUR
STUDIO**

SPE
PISTO



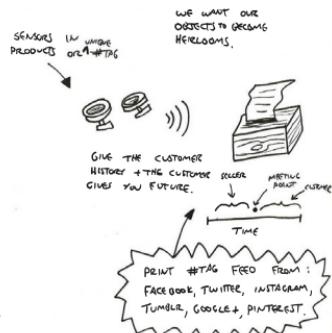




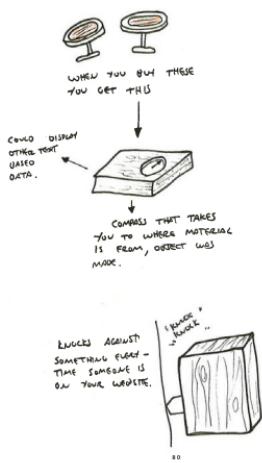
A GABER + FIODH.

MADE IN THE PALM OF A HAND.

TIMOTHY OCKENDEN



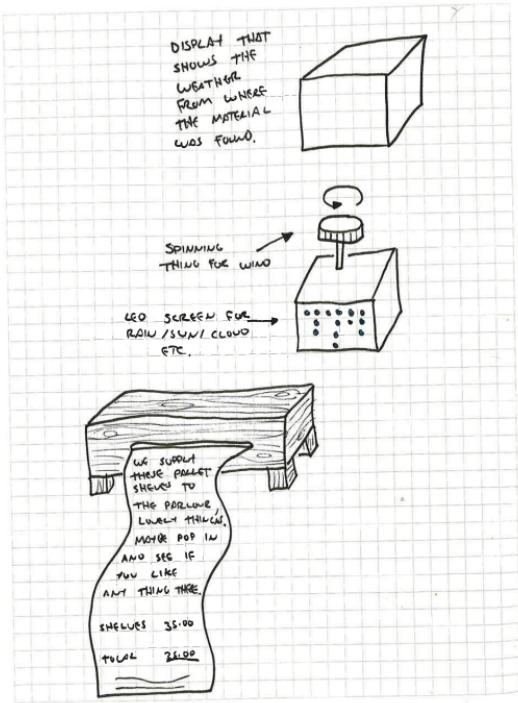
79



80



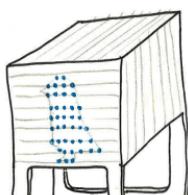
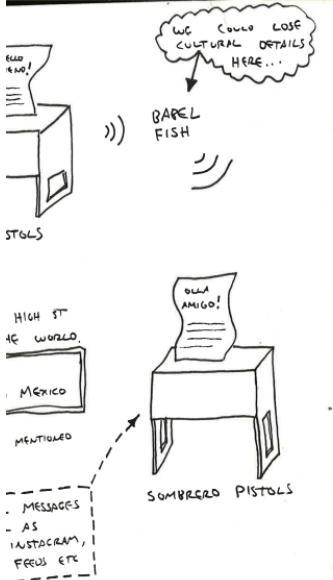
81



82

After our collective discussion with the shops we decided it was needed to go and visit the keener members of the meeting's shops and businesses. From this we not only got a follow up discussion from the meeting at Folk Cafe but we could also get a better knowledge of their shops.

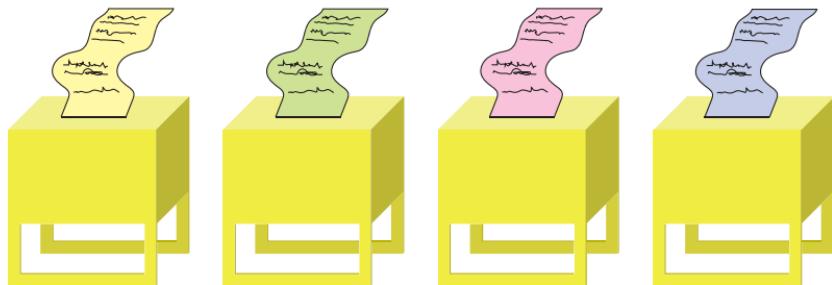
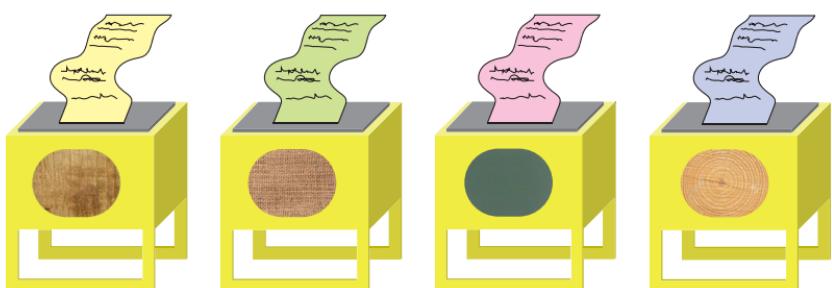
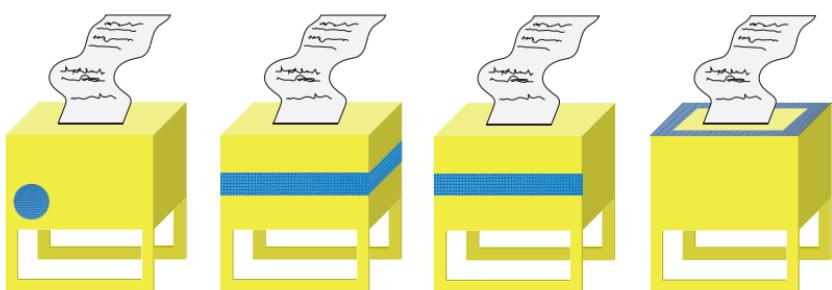
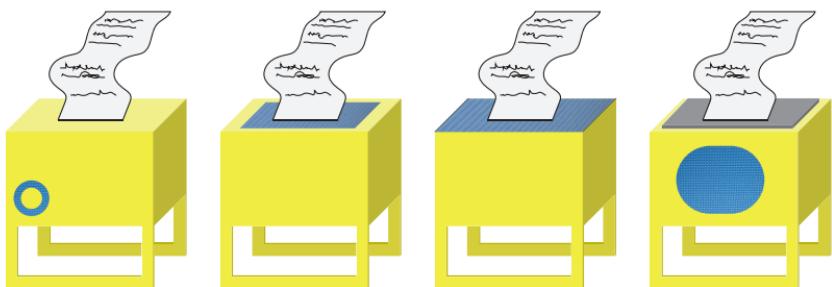
Most of the shopkeepers were chiefly taken by the receipt printer demonstrator. They could all instantly see useful applications for this. In order to make something quickly for them to live with and that could act as a stimulus for further discussion and design opportunities the team got to work sketching out some ideas around these printers. Several designs were very specific for individual shops and others more focussed on connecting all the shops together.



TapWriters

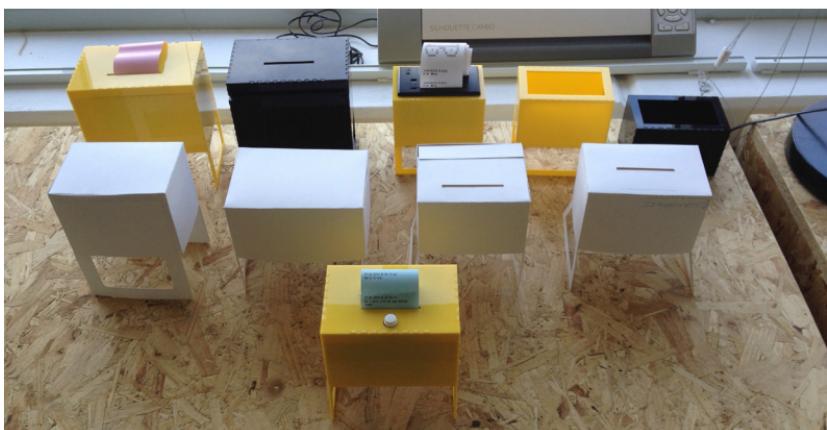
The TapWriter. The TapWriter was not an answer to a problem but more of a question in itself. We wanted to create a simple IoT device for each shop as a way to draw the shopkeepers into a rich discussion around what kinds of IoT would benefit their ways of working, selling and creating an experiential environment through their businesses. Our rationale was that if they lived with a device they would be in an informed position to critique it and to better envisage what kinds of device could enrich their shops. The Tapwriter was designed with no particular purpose, we wanted the shopkeepers to figure this out for themselves.

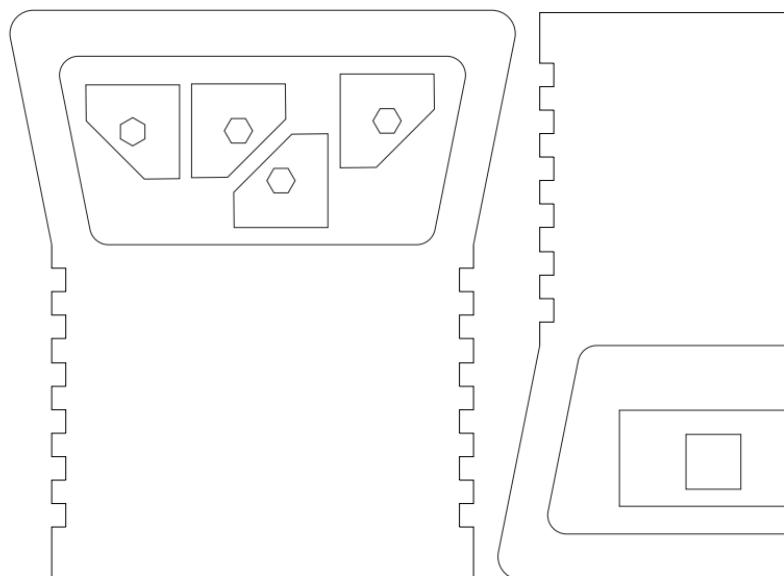
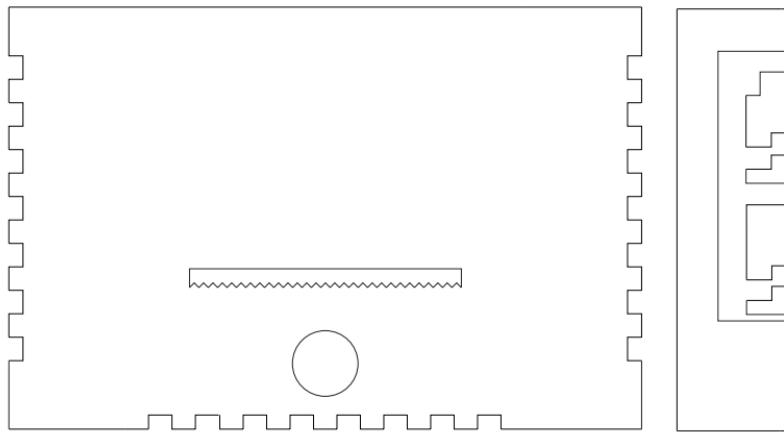
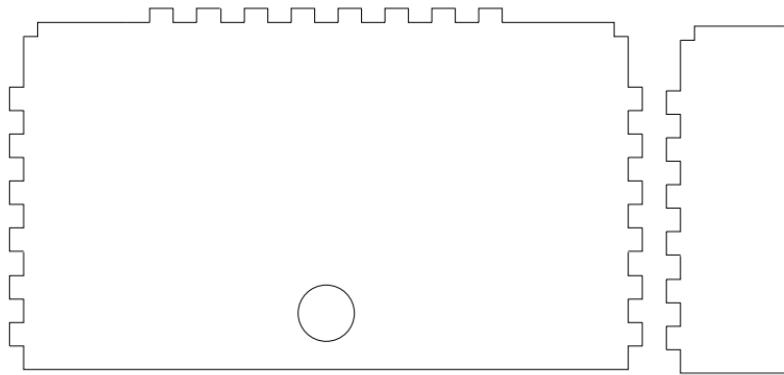
The TapWriter is an internet connected thermal printer that has two input functions. Firstly messages can be typed online at www.tapwriter.net - when sent the message prints out anonymously on all of the printers including your own. If the shopkeeper did not have time to type something on a website they could just press the button, or 'tap' as we call it, on the object itself. By 'tapping' a shop logo prints out on all the printers in ASCII form.

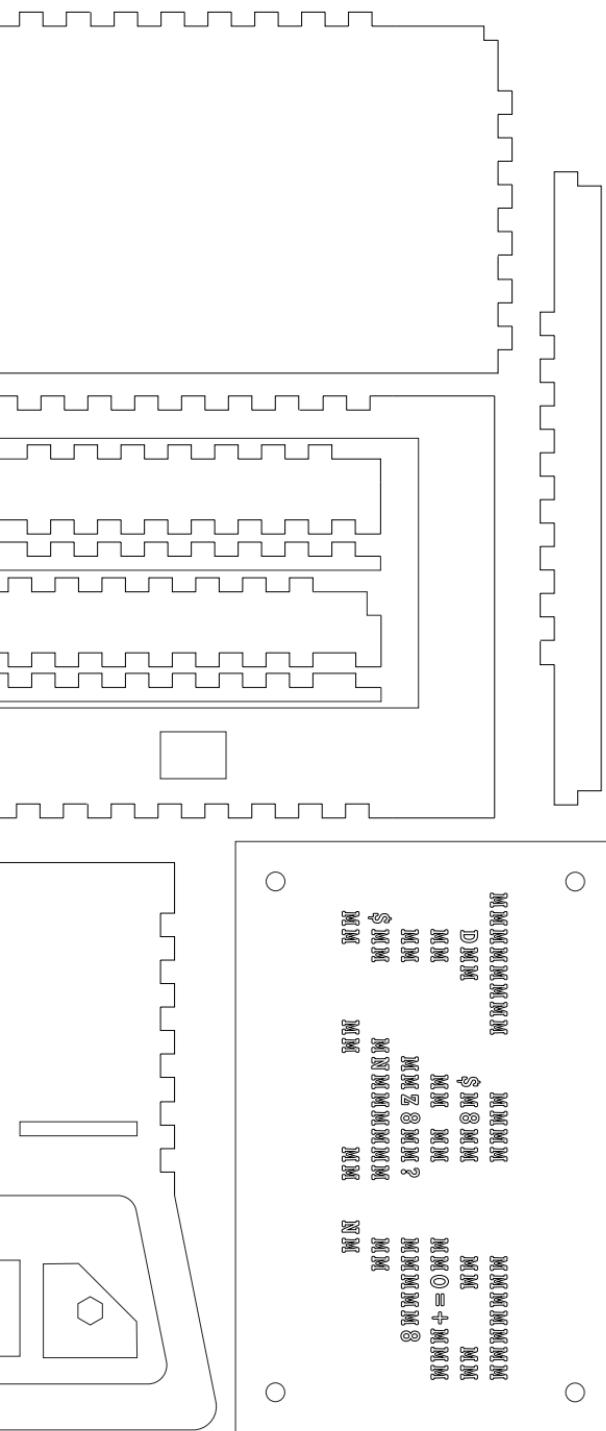


Digitally only the last 100 messages are logged - meaning that as new messages are created by shop owners older ones are deleted from the log. The only complete records of all messages sent are the physical til rolls that emerge from the tapwriters themselves, which show all of the conversations.

In terms of design we initially wanted the printers to be customisable for each shop. We created a removable lid that could be remade from something more meaningful for each shop. The image on the left illustrates some of the customising options we explored. Below is a screen shot from the original web interface. The next spread of pages contains the laser cutter file used to produce the final TapWriter design.

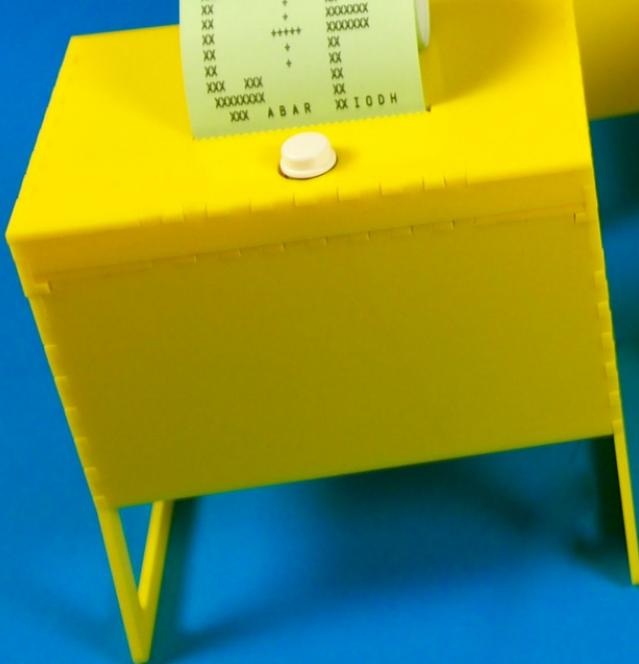


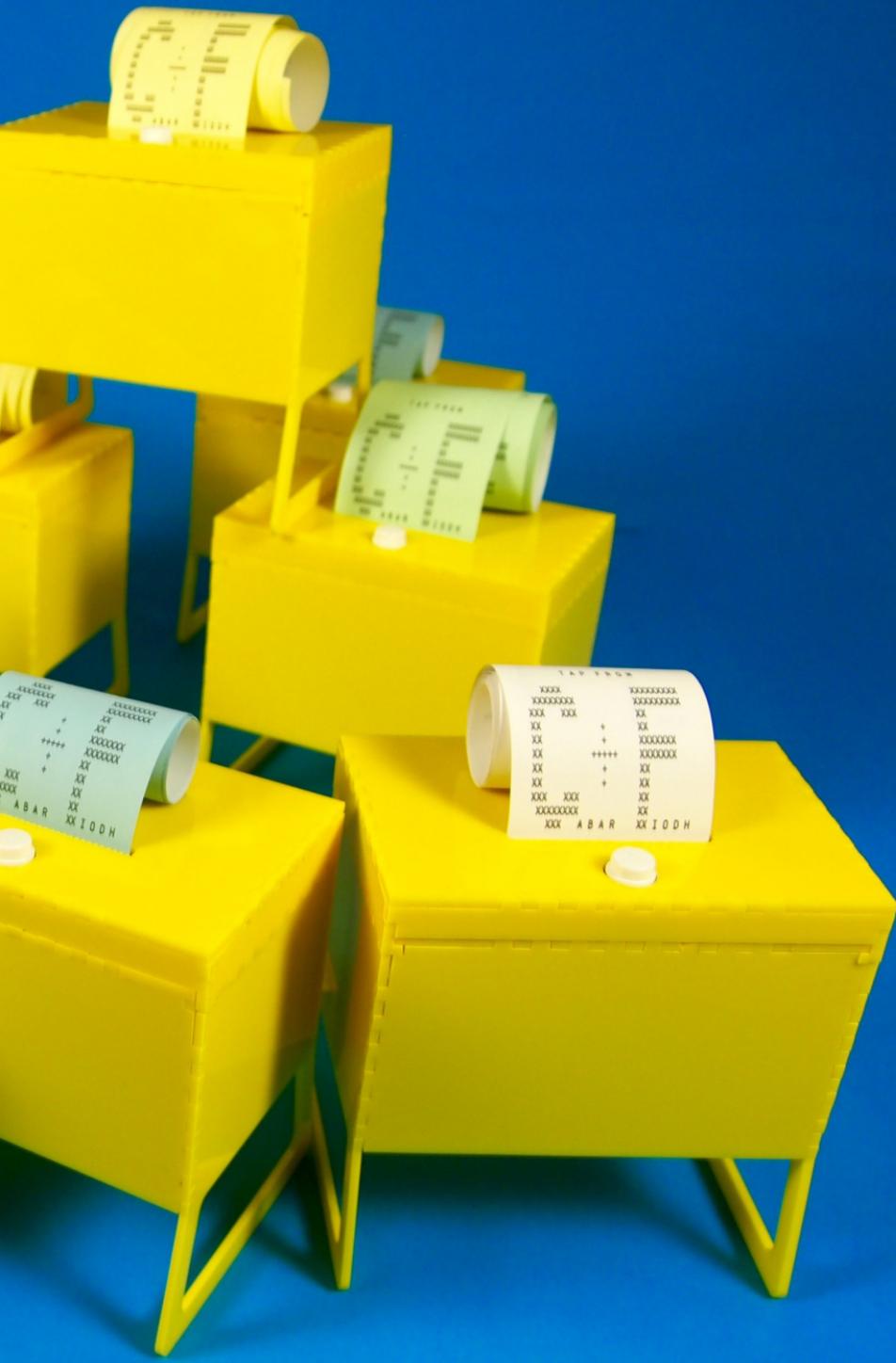














We decided that we wanted to create another network of shops. We had an opportunity to install the TapWriters in Mexico City. The locations for these Mexico TapWriters were: XXXXXXXXXXXXXXXXXXXXXXXXX.

Before Mexico the network in Dundee was, in our opinion, a good size - i.e. less than 10. We reasoned that a greater volume could lead to a large amount of anonymous messages being printed out, which may have been overwhelming, not to mention the sheer amount of till rolls needed to maintain a larger network.



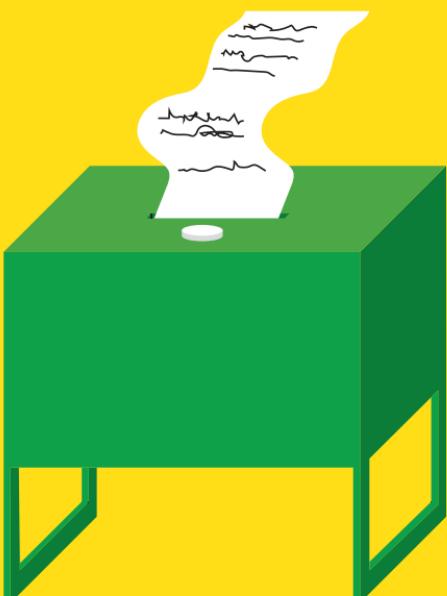
We created a new web interface with the help of Tim Brooke and Paul Hamilton from Future Cities Catapult in London. This new web interface allowed messages to be sent to Dundee, or to Mexico City or even both cities simultaneously. There was a bit of a language barrier to over come if the messages were to be sent to both countries. A Google translate function was built into the interface enabling each message to be sent in both English and Spanish. N.B. The messages would print out in both languages.

M M M M M M M M . . . M M M M . . . M M M M M M M M . . .
 . . D M M . . . \$ M 8 M M . . . M M . . . M M . . .
 . . M M . . . M M . M M . . . M M O = + M M M . . .
 . . M M . . . M M Z 8 M M ? . . . M M M M M 8 . . .
 \$ M M . . . M N M M M M M M M M . . . M M . . .
 M M . . . M M . . . M M . . . N M . . .

Tap Writer es una pequeña red social en Internet que conecta entre sí las impresoras de diversas tiendas de la Ciudad de México. Tiene dos funciones: puedes mandar un mensaje de texto por www.tapwriter.mx o puedes enviar un 'tap.' Este último se envía haciendo click en el botón tap y la aplicación mandará el logo de la tienda donde tú estás a todas las otras tiendas en la red.

Los mensajes enviados a cada tienda son anónimos.

Si tienes alguna duda o problema,
por favor, ponte en contacto con
Jon Rogers al teléfono 0044 7885
673826 o al correo electrónico
j.rogers@dundee.ac.uk

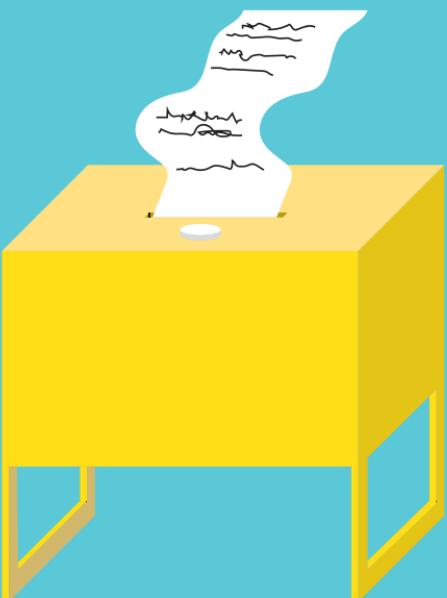


[t a p w r i t e r . n e t](http://tapwriter.net)

Tap Writer is a tiny social network of internet connected printers for shops in Dundee. There are two functions; you can either send a text message via www.tapwriter.net, or you can send a tap. Send a tap by tapping the button; it will send a logo of the shop you are in to all the other shops.

Every message sends to every shop and is anonymous.

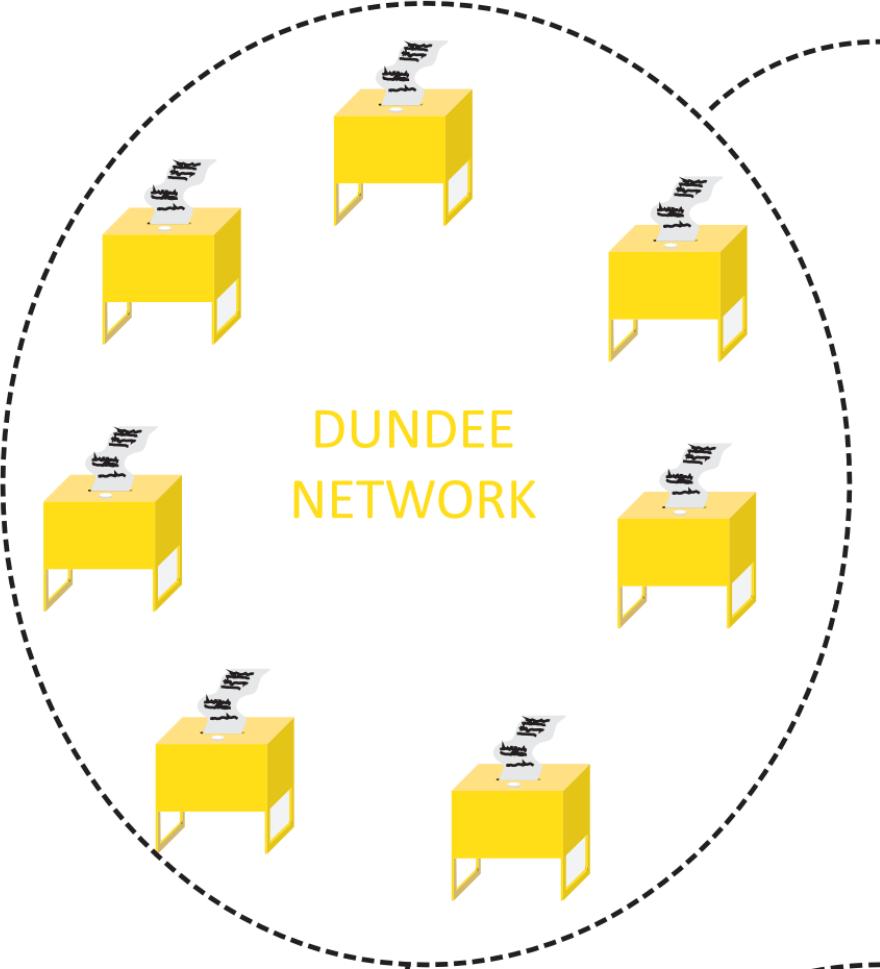
If you have any queries or issues
please contact Mike Shorter on
07821054433 or at
mail@mrsshorter.co.uk



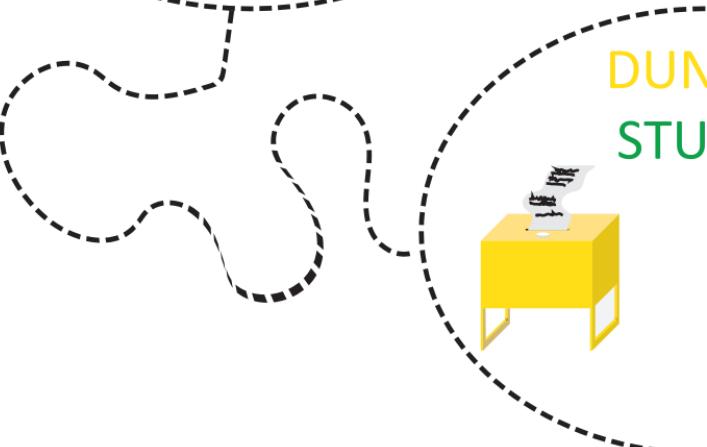
Testing the Mexico City network before packing them up for their long haul flight. We decided that eight was the ideal number of printers per network. There is something nice about calling them 8 bit networks.







DUNDEE NETWORK



DUN STU

MEXICO CITY NETWORK

IDEE
DIO





device name or id

Create New Model

▼ Unassigned Devices 0

▼ Active Models

▼ Http to NEO	
mxJon	
Nora	
▼ Printer Agatha	
Agatha	
▼ Printer Albert	
Albert	
▼ Printer Bertha	
2364384dead3dbe	
▶ Printer Jago	
▼ Printer Jesus	
jesus	
▼ Printer Joaquin	
joaquin	

Printer Jago

Printer Jago ▾

Build 28 ▾

✓ Check

► Build

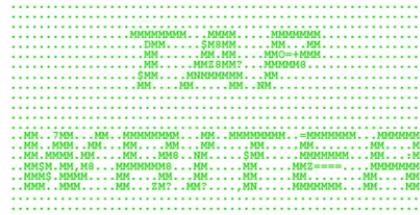
Agent

```
22 and leave setting...
30 ocal ImpURL = "https://agent.electricimp.com//"
31 ocal Jago_Imp = "eEP1iVp1rrEJ"; // "1"
32 ocal Jesus_Imp = "-URWIjlQJ4an"; // "2"
33 ocal Jonas_Imp = "BjG8K0-lYZW0"; // "3"
34 ocal Jorge_Imp = "A7H1By7t7eEc"; // "4"
35 ocal Jose_Imp = "Gt9LLae8Nt7_"; // "5"
36 ocal Juan_Imp = "WnDb7rECuGvU"; // "6"
37 ocal Julio_Imp = "gxKVA7pi8KV9"; // "7"
38 ocal Joaquin_Imp = "PSQ5Kf5chNlNI"; // "8"
39 ocal Bertha_Imp = "7s_kxsJqgZ0d"; // "9"
40
41 ocal TAP_ID = "1"
42
43
44
45 ocal Imp1Header = { "text" : "text" }
46 ocal dataString = "hello back at ya jon"
47
48
49 / a list of message parameters we support
50 / we really only need the keys, but put in dummy values
51 sgParams <- {
52   justify = "left",
53   bold = false,
54   underline = false,
55   deleteLine = false,
56   reverse = false,
57   updown = false
58
59
60 mageData <- null
61 mageSize <- 0
62 mageStart <- 0
63 mageEnd <- 0
64
```

Both the Dundee and Mexico City network had a TapWriter based in the Dundee Studio. This meant that we could keep an eye on what was going on as well as keep a physical log of messages being sent.

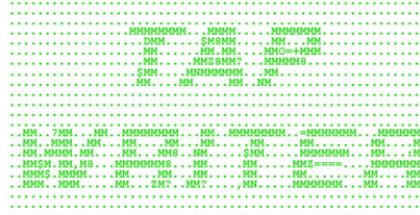


```
Device
100 // reset printer to devault mode and print settings
101 function reset() {
102     // reset the class parameters
103     this.modeByte = 0x00;
104     this.reverse = false;
105     this.updown = false;
106     this.emphasized = false;
107     this.doubleHeight = false;
108     this.doubleWidth = false;
109     this.deleteLine = false;
110     this.justify = "left";
111     this.bold = false;
112     this.underline = false;
113     this.lineSpacing = 32;
114
115     // reset the image download pointer
116     this.imageDataLength = 0;
117     this.loadedDataLength = 0;
118     // and the image parameters
119     this.imageWidth = 0;
120     this.imageHeight = 0;
121
122
123
124
125     // send the printer reset command
126     uart.write(ESC);
127     uart.write('@');
128
129     |   uart.write(ESC);
130     |   uart.write('R');
131     |   uart.write(07); // 7 Spanish I; 11 Spanish II; 12 Latin Ame
132
133
134
```



Tap algo...

Enviar a las tiendas

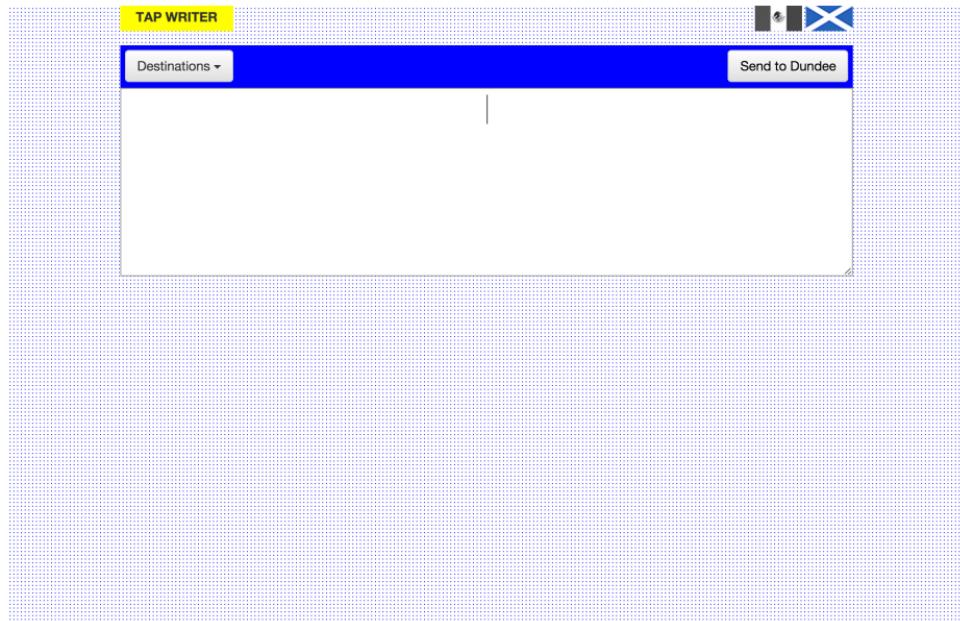


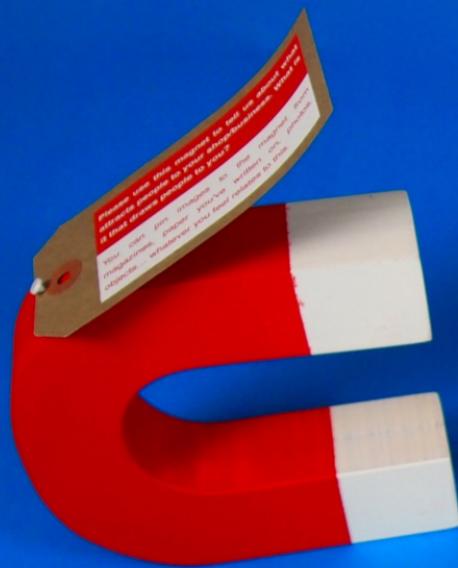
Tap something...

Send to Shops

The screen shots on the left are the two initial web interfaces for both the Dundee and Mexico City Network. Below is the combined web interface that has the built in Google Translate function as well as the drop down menu to say where you want your message to be sent to.

This new web interface also displayed the message differently before sending. Before the message was displayed on one continuous line, this was fine but we wanted the users to be able to be a bit more creative with their content. The new interface displayed the message as it would be shown on the receipt paper, this allowed for ASCII art to be created easily.





EVIDENCE

NOTE

Please use this bag to collect relevant evidence (for example any objects, examples of colours, tactile materials, shapes, textures) to show what makes your shop test unique or what represents your shop. These objects will be returned safely after documentation.

If you have any queries please call 07821054433.

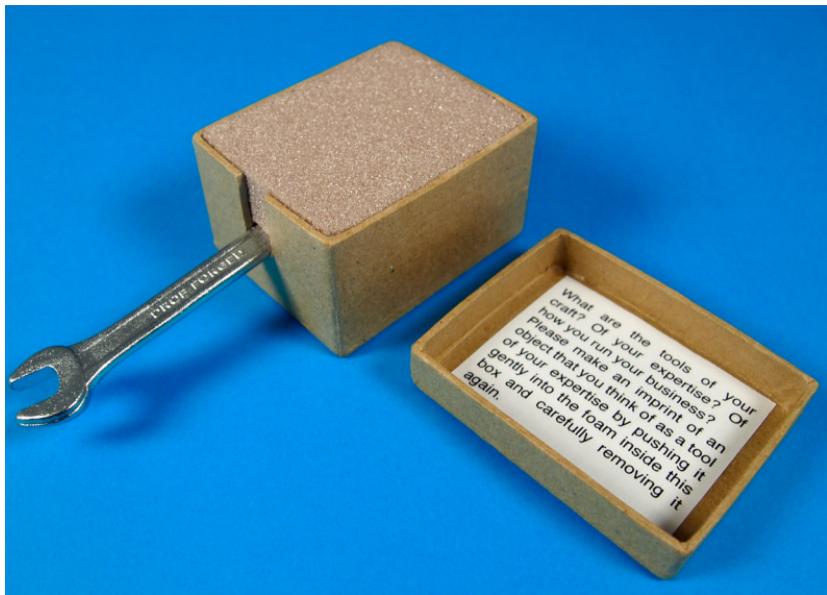
Submitting Agency (AIA shop name): Why Have You

Evidence Bag Sealed By:

Date Sealed:

Age of Item	Description of Item





Design Probes were created and given out to the Dundee network to give the shop owners (and their staff) creative ways to reflect on how they felt about different facets of their businesses.

These probes included 'Tool of Expertise' (above), 'Postcards to and from the Future' (top right), 'Magnet' (bottom right), 'Heraldry' (next page top left), 'Keystone' (next page bottom left) and 'Evidence Bag' (next page right).

'Tool of Expertise': we asked shops to make an impression (by pushing an/multiple object(s) into impression foam) of something representing a/many tool(s) of their trade and, as such, a representation of their expertise.

'Postcards to and from the Future': There were two postcards. One was a postcard from themselves to their future self and the other was a postcard from their future self to their current day self.

'Magnet': We asked the shops to pin things to an oversized wooden magnet to represent what they think attracts customers to their shop.

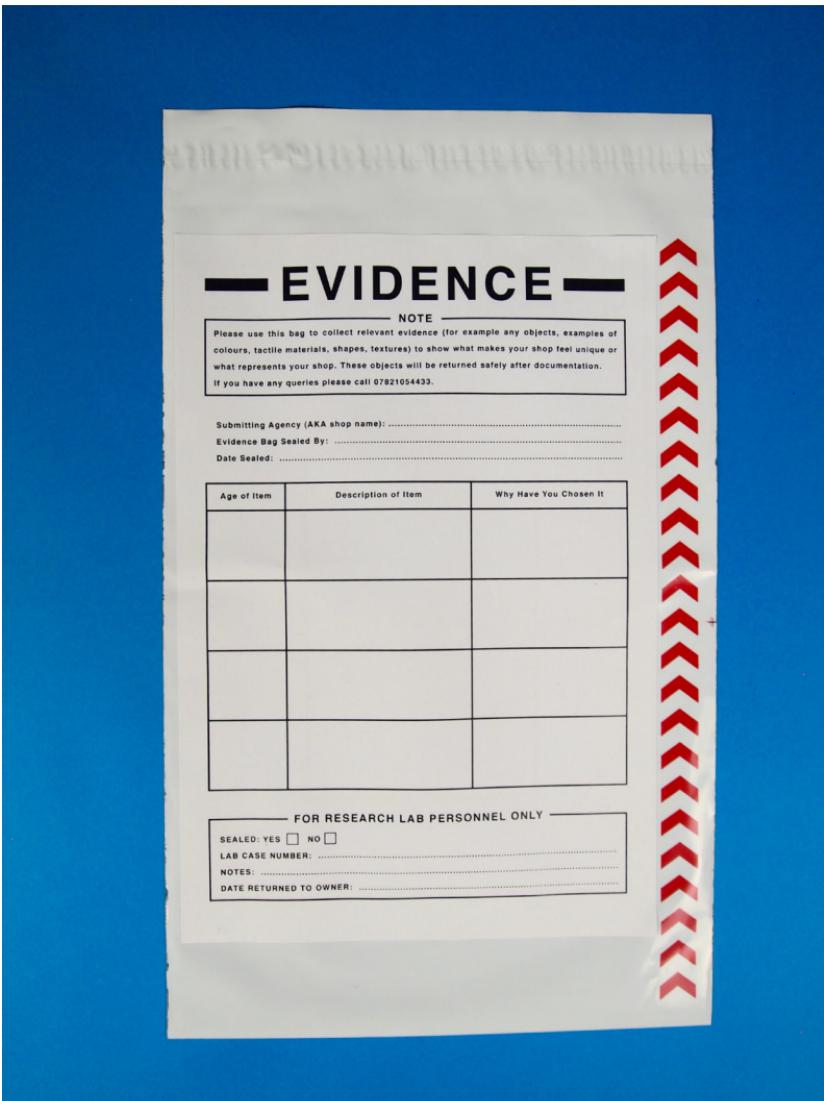


'Heraldry': Shops were asked to draw, write or attach images/objects onto a piece of fabric onto which a heraldry shield had been drawn. Each quarter of the shield held separate questions to respond to: who are you for?, what tradition is your business building on?, what do you stand for? and what inspires you?



'Keystone': This small fake stone has a hidden compartment in it. We asked the shops to hide something that is the secret to their business in here. They had the option of super gluing it shut if this was top secret.

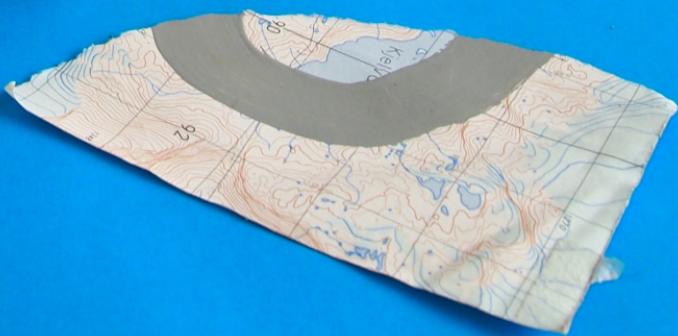




'Evidence Bag': We asked the shops to put items into the bag that illustrate what makes their shop unique; these 'items' could be objects, samples of colours, textures or materials.

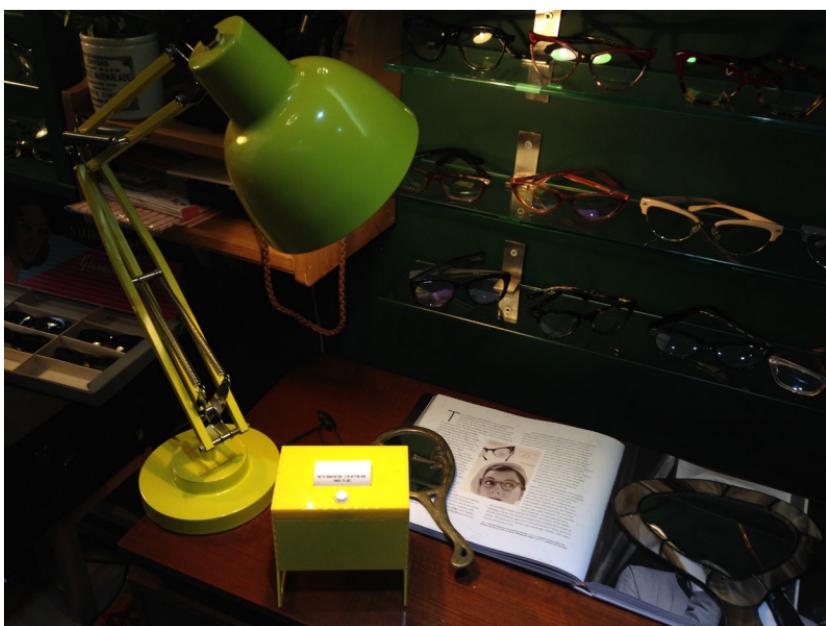
The probes are still being collected but below is an example of a completed probe pack from Cabar and Fiodh.





Probes are a conversational tool and thus far they have functioned as such - but in their conventional use they were not a success with one shop. For Heartspace Whole Foods (Jayne is pictured below talking them through the cultural probe pack) the owner wanted to use them as prompts for an interview - which was conducted between the owner and Jayne, using the probes as talking points to stimulate the discussion. This brought out interesting insights, so much so that recorded interviews were conducted with each shop using their completed probe pack as conversation stimuli.





Insights and Future Development

Examples of early uses of the Dundee TapWriters:

Ordering Food - Richard at Spex Pistols would send messages to the Parlour Cafe to tell them what he wanted for breakfast so they could have it ready for when he went over to pay. He also asked them to 'surprise him' and to prepare him a mix of what they recommended that day.

Discussing stock - Cabar & Fiadh and Lovely Things would discuss and announce what stock they each had.

Sending discount vouchers - Lovely Things would send out batches of discount vouchers to other shops offering deals on candles and other goods. Interestingly Lovely Things created special deal vouchers for the other shops to give to 'their favourite customers that day' as well as general ones for anyone. Heartspace Yoga also offered free yoga sessions via the TapWriters.

Discussing politics - During the recent 2015 General Election some shops would anonymously send out their own political rants about campaigns.

Sending jokes - There has been a lot of light comments being made over the TapWriters and attempts to make each other laugh. Knock knock jokes have been used a great deal, other examples include messages of 'morning you beautiful people' and everyone saying good night to each other.

Sending song lyrics/poetry - This is network anonymous but by knowing Richard from Spex Pistols love for Johnny Marr I have a suspicion who all the Smiths song lyrics are coming from...

'Taps' are very popular - Every time someone taps there will be burst of them hot on its heels. This turns out to be a very simple and easy way of letting people know they are out there.



Requested features:

ASCII art - the users wanted the ability to send photos through an ASCII art filter.

Direct Messaging/blocking - Sometimes the users just wanted to send a message to a specific person. There were users who would send a lot of messages, some users suggested that they may want to block these people.

Who is it for - There was a slight confusion as to where to keep the device in their shops as some of the messages were directed to the shop keeper and some to the shop's customers. There was talk of building some sort of pin board to display the messages.

The interconnections and relationships between Dundee and Mexico City still need to be analysed and users asked questions about this.

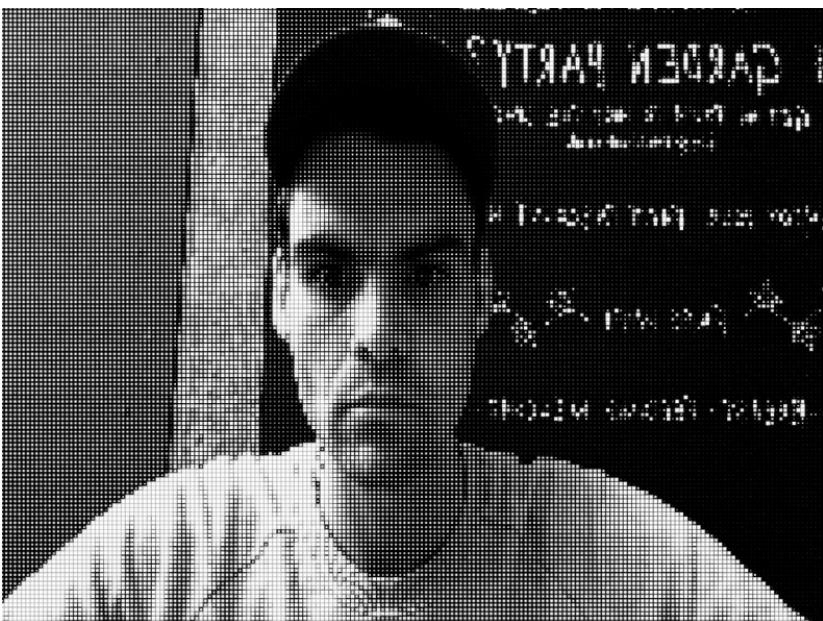
Future Prototypes

One of the main aims of deploying the TapWriters in the local shops was to help us to build a relationship with them so we could work further with them. Through a combination of the TapWriter deployment and the design probes we have gained a deeper insight into how the shops operate and what they want from the future of their businesses.

Through constant conversations with some of the shop keepers we have decided upon a number of prototypes to build and develop further, two examples include:

Howold.net Mirror for Spex Pistols (N.B. name of design subject to change)

This idea engages strongly with the sense of self research strand explored earlier on in the project. We want to build an internet connect mirror that will live on the wall in Spex Pistols. It will draw on both the shop owner's curatorial way of creating an atmosphere through music and artefacts (that relates to different time periods and fashions of vintage glasses in his boutique) and the potential for playful, personal experimentation of self image and style. Our idea centres on potential experiences within shops when a shopper is alone (In this case when Richard the owner is upstairs working in his mezzanine studio for instance). When a customer tries on a pair of glasses and looks in the mirror the stereo in the shop will begin to play certain, related music. This music will be determined by using Microsoft's Face API. This API recognises faces and guesses what sex they are and how old they are. The music played will be from the teenage years of how old the mirror thinks you are. For example, if a customer puts on some glasses and the mirror thinks you are 30 Blur or Oasis may start to play from the stereo. Trying on different glasses will alter the perceived age of the wearer and alter the music accordingly. Our aim is to develop, through co-creative design, the idea using different additional recognition technologies in tandem to the Face API in order to explore the possibilities of creating audio and visual content/environments that relate to stylistic eras of particular glasses in the boutique.



One of Spex Pistols marketing campaigns is to take photos of customers wearing glasses and to processes the images using a particular filter (see photos of Jon, Jayne and Mike alongside Johnny Marr!). Another of our ideas takes this aspect of Richard's practice further whereby as certain glasses are tried on images of other people wearing the same or similar styles would appear in the mirror – and the mirror could also permanently display this filter to enable anyone to see themselves through a Spex Pistols style lens as it were!.

Furthermore – as Richard, the owner of Spex Pistols is very into music (he regularly holds small gigs from local musicians in his boutique and shares them online for example) and takes a curatorial approach to his playlists. When no one is in the shop the mirror could have a different purpose - he could place photographs of his idols in front of the mirror to trigger certain playlists. We have a number of other ideas for Spex Pistols, which we will share in the coming months.

Being a Black Sheep

In the English language,

'black sheep' is an idiom used to describe an odd or disreputable member of a group, especially within a family. The term stems from the genetic effect in sheep whereby a recessive gene occasionally manifests in the birth of a sheep with black rather than white coloring; these sheep stand out in the flock.

In other words 'Black Sheep' are interesting – individual.

No-one wants to be thought of purely as a follower – as someone who just trails along with the crowd and doesn't have a strong individual identity. There is recognisably a comfort felt in our consumer, capitalist, western society by people 'fitting in', or 'getting it right' and belonging to a tribe/group in terms of how they look, eat, dress, shop, purchase, live – but – we argue that no-one wants to be thought of as a

Recommendations for You in Books



More Items to Consider See More



Recommendations for You in Music



A paid app for free,
every day

Play to support
cancer research



Inspired by Your Browsing History See More



Additional Items to Explore See More



Best-Selling Light Jackets for Men

- 1
- 2
- 3
- 4
- 5

Mega Best Sellers

Best-Selling T-Shirts for Women

- 1
- 2
- 3
- 4
- 5

Mega Best Sellers



Buy a £20 Amazon.co.uk Gift Card
Get a £5 promo code



Exclusive Price Offer

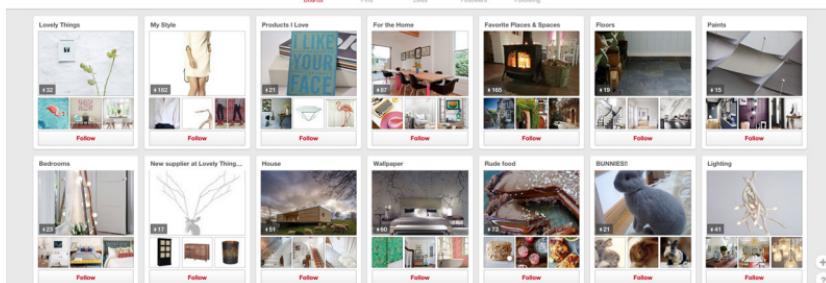


Lovely Things

© Dundee, Scotland www.lovelythings.com.co.uk

Lovely Things. A stylish interiors and gift shop in Dundee providing an interior design service as well as styling on Facebook and Instagram accounts.

30 Boards 1,168 Pins 27 Likes 85 Followers 61 Following



run of the mill sheep – everyone wants to be an individual – but commonly acts like a sheep nevertheless. Anyway, enough talk of sheep. What if the IoT and commerce stopped thinking about ‘following’, ‘trends’, ‘fashions’ and started designing for and enabling the Black Sheep in (arguably) all of us? What would it mean if online recommendations, for example, didn’t tell you ‘what others who had bought the same thing as you have’ liked or bought – but instead told you what no-one else who had bought the same items as you had spotted? What if the IoT could reveal purchases to you that you would like – but that no-one else who shared your taste had seen or bought? We want to create an alternative experience to that of amazon’s ‘if like this, you will also like this’. We want to create a recommendation system that enables you to be different – that tells you ‘you bought X - everyone else who bought this product did not buy Y’.

Lynne from Lovely Things not only runs a design boutique but also acts as an interior designer for clients and her role in the shop regularly results in her acting as a personal gift shopper for customers – collating items from her own shop and from others around Dundee to make personalised hampers. People trust her opinions and taste. A big part of her marketing is done through Instagram and Pinterest.

Etsy

Etsy is a peer-to-peer (P2P) e-commerce website focused on handmade or vintage items and supplies, as well as unique factory-manufactured items. These items cover a wide range, including art, photography, clothing, jewelry, food, bath and beauty products, quilts, knick-knacks, and toys.

The site follows in the tradition of open craft fairs, giving sellers personal storefronts where they list their goods for a fee of US\$0.20 per item.

As of December 31, 2014, Etsy had 54 million users registered as members, and the online marketplace for handmade and vintage goods connected 1.4 million active sellers with 19.8 million active buyers. At the end of 2014, Etsy had 29 million items listed on its website.

Lynne at Lovely Things, like all small independents cannot

compete with the stock range of huge industrial commerce (megastores, supermarkets, amazon), but she does have the skill and design eye to pull together eclectic mixes of products for personalised hampers for specific clients and the flexibility to tap into the huge stock on sale through Etsy. What would it mean:

if (like the one man businesses we met in Nehru Place when we were in India) Lynn could act as a recommender for items on Etsy and would receive a small fee for doing so?

if we could broker relationships between her and sellers/makers of her curatorial choosing on Etsy to enable her to obtain goods from Etsy at an expedited rate?

if we could create a search engine for her that would recognise someone's taste, but show her items that they would most probably like, but that none of their friends had?

Etsy, as a place where many items are one offs or limited runs affords a type of sophisticated search that could truly offer something new for the craving people have to assert their individuality. There is the potential to give small independent sellers such as Lynne the advantage over large industry.



lovelythingsonline [FOLLOW ▾](#)

Lovely Things Lovely Things - a stylish interiors and gift shop in Dundee. Interior design service. An eclectic mix of furniture, soft furnishings and accessories.
www.lovelythingsonline.co.uk

114 posts 109 followers 64 following



Can we make a social network? For real...

*A blog post by Jon Rogers taken from
www.productresearch.dundee.ac.uk*

It is 6am and I've woken up a little early. The sun does funny things in Scotland. It doesn't get hot like the most of the rest of the world and while it forgets to get up in the winter, it forgets to go to go down in the summer. So it's been light for a few hours... And I started to think about this: What is a social network? I'm asking this question because I'm going to build one or rather I've started to build one and now I want to tell people about it. Building social networks is something I've been doing all my life in the real world – as have you. At some point in the mid to late 1970s in the blistering heat (15C) of a long hot summer my best friend in the whole world, Toby, and I became 'blood brothers'. I think we struggled a little with pricking our fingers to actually get blood, but we knew that the blood marked the friendship of the highest kind. We formed a network from the exchange in blood. Or at least, we formed a bond over the idea that we could exchange blood. That exchange marked us as special. We were a new form of kin.

Some forty years later at the very moment I'm writing this post, I have on my twitter account around one thousand five hundred and twenty five 'followers'. That's seems a lot – particularly as before twitter being followed was either a little creepy, or marked you out as having a particularly special relationship with a god.. my this one and a half thousand followers is nothing like Katy Perry who has seventy million followers. SEVENTY MILLION. That's, like, nearly ten times the number of people who watched the Doctor Who Christmas special! How does someone do this? For me I have no idea who all but twenty five of my followers are but I imagine they are sitting there waiting with baited breath on my every 140 chars that comes through my fingers onto the screen. ... And that's just twitter -what about facebook?

Real Madrid footballer Cristiano Ronaldo has overtaken Shakira to become the most followed person on Facebook.

Said the BBC in March 2015, as apparently the footballer Ronaldo has over one hundred million likes. That's a LOT of likes. I'm not sure I've liked that many things in the world in my forty four years of existence – and I like a lot of stuff (marmite, beer from barrels, fish in batter, swimming in the north sea, The Tiger That Came To Tea, France and the colour coding on resistors – beach towels with colour codes from resistors would be AMAZING.. but I digress, sorry).

But what does having that many people follow or like you really mean? For toby and I, long before the web or of having heard of social networks, at a time when a friend was invited to your birthday party and a like was something less than a love, our network of two was sealed in an ancient bond that could never be broken. At least until we went to different universities, got jobs, got married, moved countries and had kids...But I've not become a blood brother with anyone since and that's quite an amazing thing.

That physicality and cultural significance of an (albeit interpretation) ancient ritual made our friendship special. Blood is a precious limited resource and only one person got to be my blood brother.

The web has enabled us to escape the limitations of the physical world. Friending someone or liking something is all very easy. There's no contract. No precious resource. No end. No friction. It's all so very easy. But it all feels a little bit hollow. Sometime in the late 1980s I shouted "all back to mine" in the local pub when my parents were on holiday. I was seventeen and it was more than a bit scary having most of the village of Benson (population 4,000) walk the one mile to my parents' house at midnight. I didn't know anyone so I mostly hid upstairs and waited for them to leave. It was dawn

when they did and I spent the rest of the day clearing up and realised that cigarette burns were hard to cover up... That the house was broken and that I was pretty much doomed. What would happen if Ronaldo did the same? All back to my facebook page for an after hours party? Would there be any mess to clear up? Would anything happen? Would it be any point? Would it create any difference in the real world – the world that Ronaldo and his one hundred million likes occupy? My point being is that physical social networks are very very different to digital ones. Duh! Of course they are I hear you scream. Yet you say this, but most of what we're doing with IoT technology is building one thing that can connect to the web. Rather than building networks that are powered by and ARE the web, we're simply adding dead nodes to an existing system. My call to action is to design entirely new forms of physical networks that are a part of, and not an aside to, the web.

Have you thought of building your own bridge between these worlds. Could we make physical/digital social networks that the Internet of Things (or the web with things as I continue to call it) technology can enable? I don't think that connecting household appliances to the web is particularly social, exciting or interesting – do you?

So why not build our own physical social network. Which we've done. Or at least we've started to do. And I'll share this with you here.

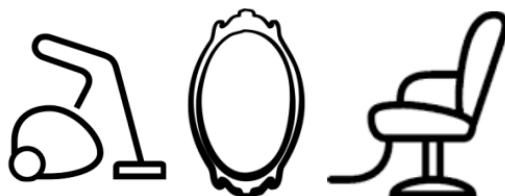
We have built the world's smallest social network. It's a network of small till-roll printers that are connected to the web powered by the amazing Electric Imp. We're calling them Tap Writers. Because you tap at a screen and it comes out on paper – on all of the rolls at the same time. It's changing a printer from a printing appliance into a social media device – where paper is the media rather than Facebook's or Twitter's screen. This limits resources (Katy Perry and Ronaldo would run out of paper pretty quickly if they had this network). We've created a social feedback mechanism by having a single button

that you tap as a form of ‘receipt’ – a deliberately ambiguous interaction that is neither a ‘like’ or a ‘thumbs up/down’. It’s simply a response that is printed across the small network. We’ve installed seven in small shops, cafes and a yoga centre in Dundee. And we’re watching to see what happens. We want eight in a network and are looking for the next place in Dundee to join.

So how does it work? Mike’s been playing with the till rolls connecting to Imp using a bit of code from instructables. An amazingly powerful feature of Imp is that it handles Http messaging and it’s super straight forward to have all of the printers connected in a network. So this is great technically. Yet the thing that got me most excited is the scalability that Imp provides. With so few components in the TapWriters and the cost and scalable tools Imp has for mass production, we’re almost ready to go live with a product... a physical social network that connects people through paper.....

It’s quite exciting to have a social network. Next up we want to take it international so we’re heading to Mexico City to install another eight there with a Spanish translation built in. So watch this space as this early trial has made me decide that we need to further this and we need to look at how we can design for physical, human and real networks – that are limited by resource and therefore force us to make choices about who we want in our network and what and when we say things. They do I think take the Internet of Things into a much more social space that I’m calling the Web With Things. Want to take part in this experience? Get in touch – we’d love to talk to you about what we’re doing. Over the next twelve months we’re going to further this and build a number of physical social networks to find out if we can do this and what it will be like. We’ll share the results as we go and let’s see where this takes us... I promise if you join us I won’t be asking for any of your blood but I might be asking you to get physical with a few of your friends.

Transgressions: Spectacles, Mug, Mirrors and Trying Things On



VACUUM CLEANER

MIRROR

CHAIR



NURSE

GUIDE

AMBASSADOR

CARRIER

ROBOT



Overview

Following on from the Hide and Seek exploration the team wanted to better understand the limits of further transgressive practices. We designed 4 small exercises that aimed to understand the protocols and jurisdiction of shopping. Of particular focus was the potential for customers to move things between or into shops, on the assumption that within an Internet of Things for the High Street there would be more mobility between shops, across networks and involving shoppers and shop owners / assistants.

Argument / motivation

- The high street is more than a place for shopping it is where we construct our identities
- Transgressive behaviours in the High Street as a way to define who we are
- Transgressive behaviours are about understanding a context and trying to breach it.

Exercise 1: How easy is it to take a personal mug from home and use it in high street coffee shops?

Favourite Coffee Mug

People usually think it would be ok to bring your own mug into small coffee shops, but not into big chains like McDonalds.

One person said it is not about the shop but about the person. If the person is self-confident it will be fine.

Thoughts: the attitude argument reminds the way shoplifters say that shoplifting is a matter of attitude. If you act the right way, you can get away with anything.

It was ok to bring our own mug to Costa. Behaviour was treated as normal although commented among the baristas. Entering Patisserie Valerie with our own coffee was no problem either. The situation felt quite uncomfortable and disruptive though.



Felt like we were breaking up with the rules.
Embarrassment was avoided by leaving a
tip.

Thoughts: perhaps shop attendants don't mind because they are focused on the human not on the corporate aspect. Is this the future of the high street? Shops provide a space for people to do what they want and maybe get them to buy something or maybe just "experience" the brand.

Exercise 2: How easy is it to buy an item of clothing in one shop and try it on in another?
Try my new dress on

Buying dress from new look and asking to try in another shop.

Not allowed at Jaeger. Shop attendant seem to have thought that something malicious was going on. No answer why we shouldn't do it. We had no problem to try our cheap new look dress at White Stuff. Attendant even said that I looked good in the dress.

Thoughts: perhaps shop attendant at White Stuff as well as at Patisserie Valerie expected us to consume something else in the shop. Jaeger may be an “old model” of selling, while White Stuff understand about conviviality, they understand that once people are feeling at home, they may spend more time and perhaps consume more? Perhaps the future of the High Street is to explore this conviviality and just “bring people in”.

General thoughts: We understand the implicit rules in the high street. Sitting in a coffee shop and bring our own coffee transgresses these rules. If everything was allowed, where would the transgression be? We are designing not a technology but a set of rules that people will invariably try to transgress.

Exercise 3: Shopping with your own mirror

How easy is it to use a personal mirror from home to shop and try on clothes in the high street?

Argument: That using your own mirror to trying clothes on, gives you a better idea of how valuable the item be to you.

Motivation : This personal space will offer the chance to experience a familiar image of self in a public environment.

Breach: An experience which is often missing online.



Action #1 We asked people on the street to give us their advice on which shop they think would us use our own personal mirror to check how the clothes/products look on us.

Reflections :

Most of the people thought that it wouldn't be of an issue to get in small stores but not in big chains (Small stores: White Stuff, the Grassmarket, stores behind George Street or Victoria Street. Big chains: H&M, Primark)

One person said that small stores like Jenners have integrity.

Referring to a hipster store another one said: "They want to be different and they will let you in".

Some people thought that we shouldn't have problem at all. They don't care. (They: staff members in big chains)

Another thought was that the Security Staff will stop us in big chains like Primark or H&M.

A old woman said "None will let you in"

Hypothesis: We thought that it wouldn't be a problem to get in big stores, but it would be of an issue to enter a small store with our mirror. It might be an insult for the shopkeeper.

Action #2

Taking the mirror into: a jewellery shop, a small mens clothing store, Zara

All the three stores allowed us to use our mirror. In the jewellery store it almost felt natural for the staff to use our mirror.

However the presence of Chris holding the mirror to Nantia was an issue - Chris' presence made it harder to enter a mentally private space to reflect on the ear rings.

The shopkeeper in the small mens clothing store was curious to ask if we brought the mirror from home.

It felt almost natural to say: "We did. We know how we look in our own mirror!"

We struggled with acting. One "actor" was holding the mirror and the other one put on clothes and checking a pair of earrings/ clothes. In Zara: People were looking at us and observing our actions. Looking at my own mirror and having other people around was an invasion of my personal space.

Thoughts: Although, bringing your own mirror was an uncommon activity, there was no reaction against it.

The interesting insight is how we felt, as customers.

It felt like "home".

**Exercise 4:
Exchange
a pair of
glasses for
an hour**

We asked a shopkeeper if we could exchange for an hour our pair of glasses with one from the store. The shopkeeper found the idea funny and went inside to ask the manager.

The answer was “No, you cannot”.

Reflections: I really liked the idea trying on a pair of glasses under my rules.

Can we imagine the high street as a catwalk, where people wear things that they want/rent, for a certain time?

Preperation for Shoplifting Experiment.



**HIGH
STREET
CONFESIONS**

**TELL US
YOUR
STORY**

Edit this form

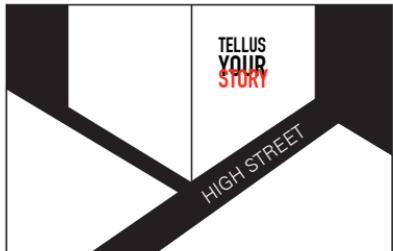
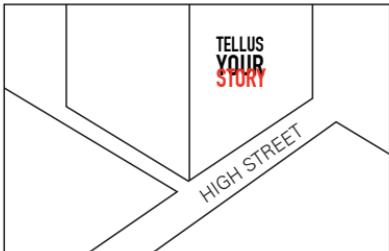
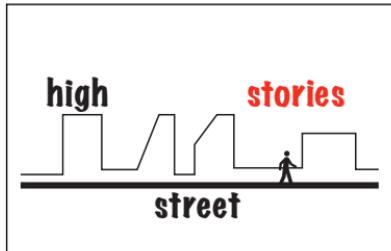
High Street Confessions: Shoplifting

We are researchers from the University of Edinburgh and Northumbria University interested in the messiness of being human. In this research we are looking at alternative ways that people use the high street. In this survey we are focusing on shoplifting and how this could be seen as disruptive, transgressive, playful, etc. We would appreciate if you could tell us your story. Although anonymised excerpts of your statements may be used in written publications, your identity will not be revealed under any circumstances. Please contact larissa@entretags.de if you have any questions.

Please tell us about your experience related to shoplifting. Have you ever done it?

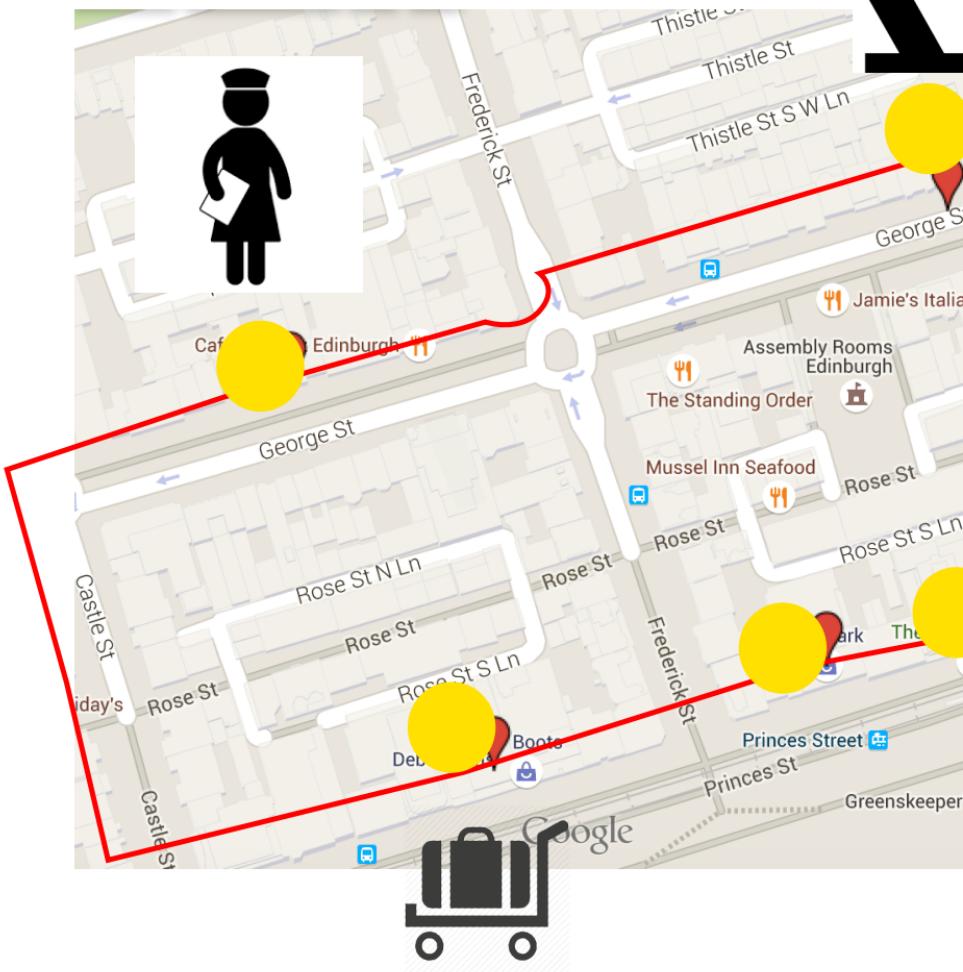
Do you have any experience of shoplifting with others? What happened? Could you give us an insight into the times in your life, people and places when this happened?

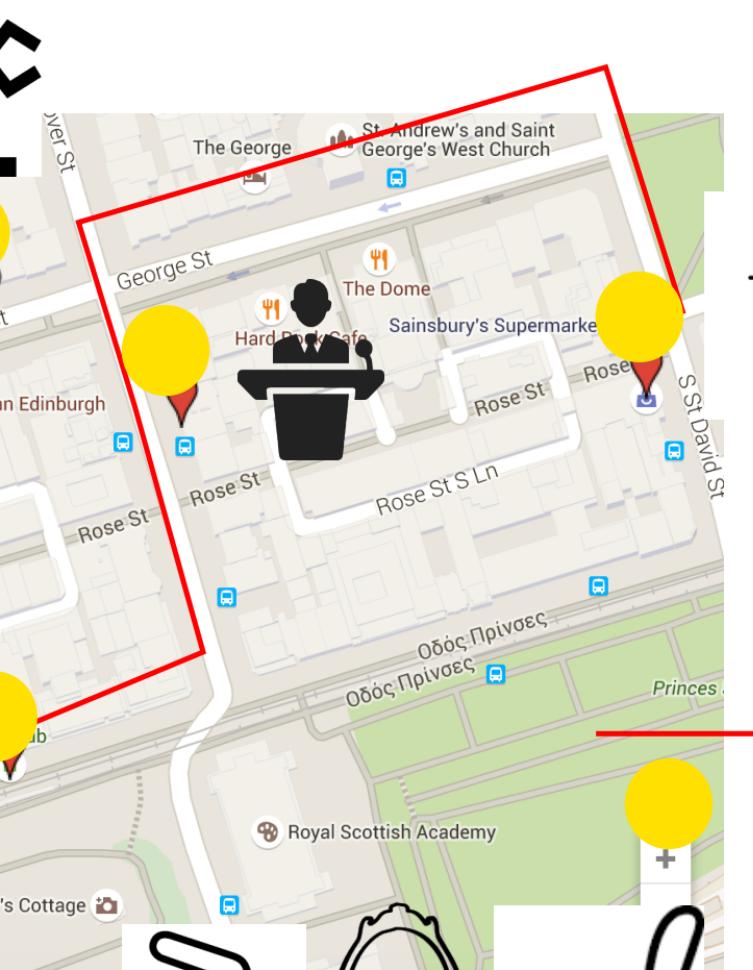
Do you/Did you have a tactic or strategy for shoplifting? Could you tell us about it?





Back Side





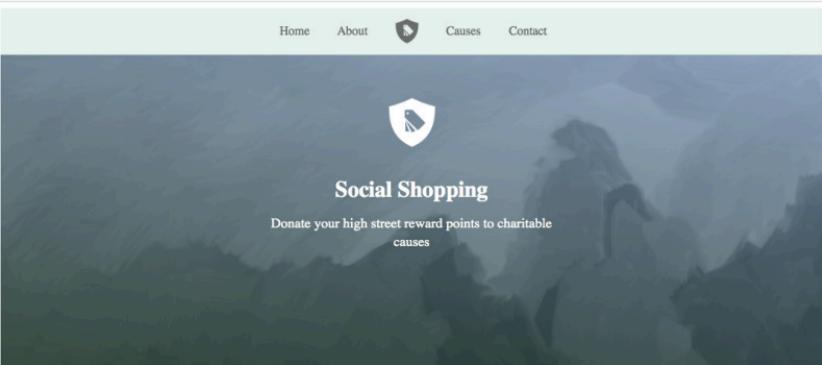
walking path

walking path

"weird" objects



staff roles



CAUSES IN NEED OF YOUR POINTS



Edinburgh Foodbank North

Trussel Trust are aiming to raise £150.0 and so far they are 6% towards their target with £9.07 donated.



Edinburgh South Foodbank

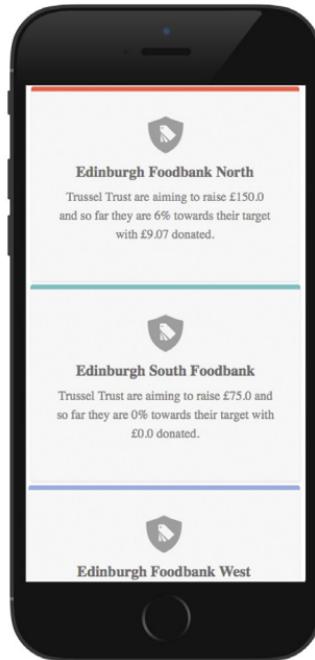
Trussel Trust are aiming to raise £75.0 and so far they are 0% towards their target with £0.0 donated.



Edinburgh Foodbank West

Trussel Trust are aiming to raise £30.0 and so far they are 78% towards their target with £23.45 donated.

Social Shopping website design beta



Social Shopping app design beta

Social Shopping Website

Social Shopping is designed to emmulate the already succesfull donation websites, kickstarter.com and justiving.com. The key functionality of these sites is the abilityto create a cause and allow people to donate to it; sharing their activity across social media.

The Social Shopping website has been developed using Ruby on Rails, Bourbon. io and JQuery. It is held under revision at GitLab and is deployed to Heroku for testing. It supports a RESTful API for the app.

iOS App

The social shopping mobile application, written for iPhone in Swift, allows the user to scan a unique barcode and donate the associated reward points to a charity of their choosing.

On first launch the device is uniquely registered on the system. The user is then able to browse the available causes and select which one they wish to doante their point to. This is then saved in the phone to speed up future donations, however they can reselect a cause at anytime. The user can view a live feed of donations being made by other people and post their donations to social media.

Social Shopping User Study

We are currently recruiting for participants to take part in our study on loyalty schemes (e.g. Sainsbury's Nectar Card, Boots Advantage Card, Tesco Clubcard, etc). The aim of the study is to understand how people currently use loyalty cards and may want to use them in the future.

Participants will be an active user of one or more loyalty cards/schemes or have used cards in the past, but have stopped using them.

The study proceeds in three parts:

An interview: where we'll ask the participant about their current and past use of loyalty cards.

A diary: where they will document their use of their cards for up to two weeks.

A workshop: where will get their thoughts on an application we have designed that allows them to donate their points to charity (max 90 mins).

Planned Questions

Card ownership
What card(s) do you have?
Where do you keep the card(s)?

Card Use
For each card:
When did you first obtain the card? Why?

How do you collect points on it?

What did you have to do to start collecting points?

Do you use the card never with no/some/every purchase?

Do you share this card with anyone else? E.g. have others ever paid for the purchase for which you received points? Have you ever given your points to someone else?

How do you know how many points you have collected?

Do you know the value of the points?

Do you know what they can be redeemed on?

How do you redeem points? When? (e.g. saving vs. instant redemption) and how frequently. What do you redeem on – products vs treats (food bills vs pizza express)

Do you take part in any other non-card based loyalty schemes? (e.g. receipt vouchers, etc.)

Are there any cards that you have stopped using?
Why?

What value do you place on the rewards? Essential vs throwaway.

Data Collection

How important is collecting points to your shopping, in terms of where you shop and how much you spend, for instance? E.g. would you be more likely to shop with retailers who offer card schemes?

What interests do you think companies have to offer loyalty schemes?

Do you know what data companies collect through the card and how they use it?

How do you feel about retailers collecting data about you?

How would you like them to use the data?

Donations

Are you aware of any companies that donate to charity? Are there any companies you think should donate to charity?

How do those companies donate to charities?

Do you donate to charity? To which ones? What do you donate? How often? Why?

Are you aware of foodbanks?

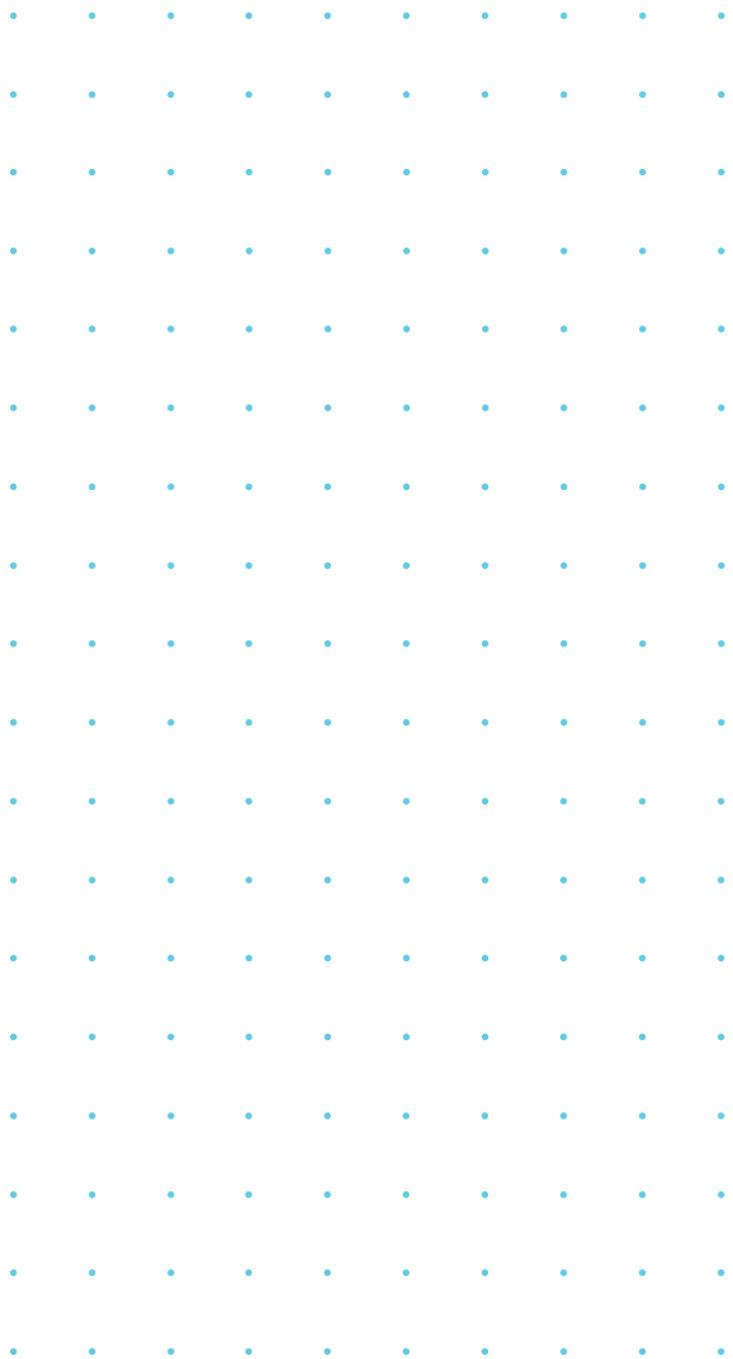
Have you ever donated to a food bank and how?

Have you ever cause to use a foodbank or know of someone who has?

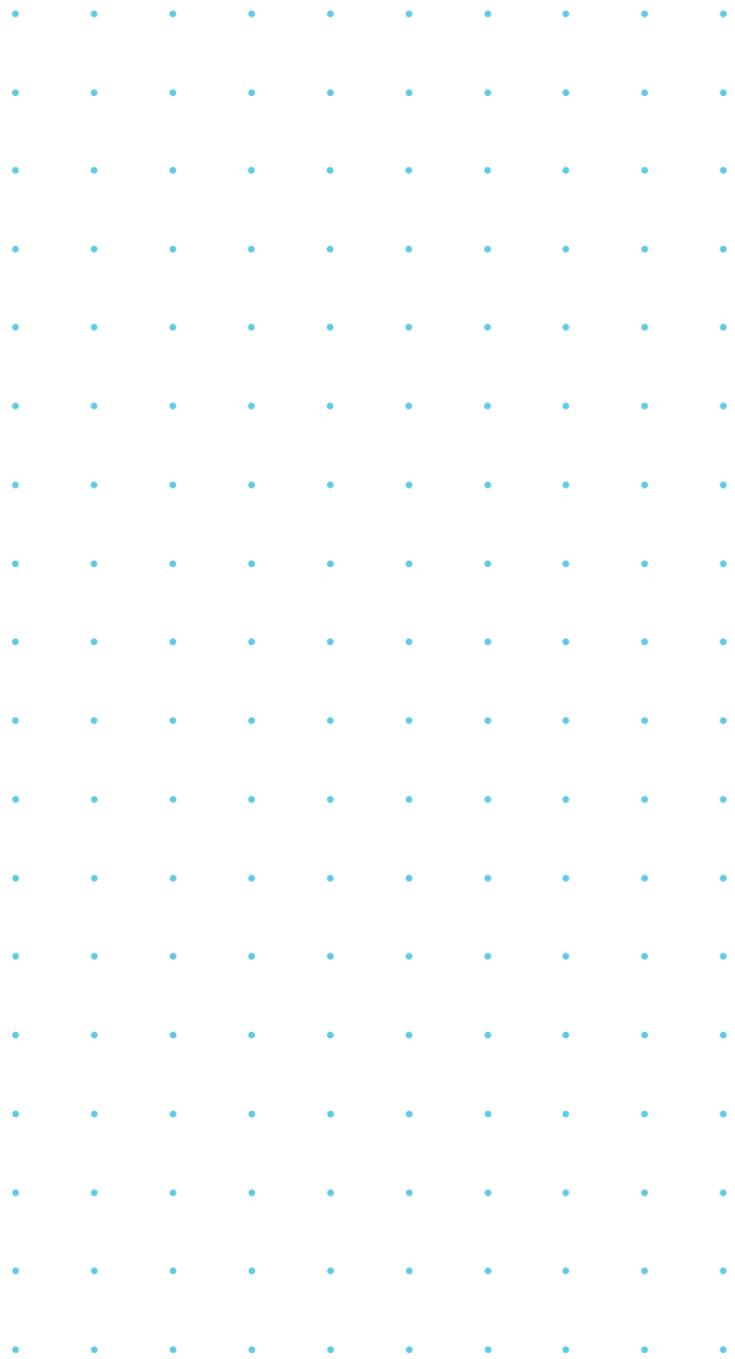
Do you ever put lose change resulting from a transaction into a charity till donation tin? If so what tends to be the amount?

More generally, what would you say is the role of companies in society apart from selling goods or services? Do you think companies have a social responsibility to their workforce / customers / the communities they operate in / society at large? What does that look like? E.g. should companies do good or avoid harm?

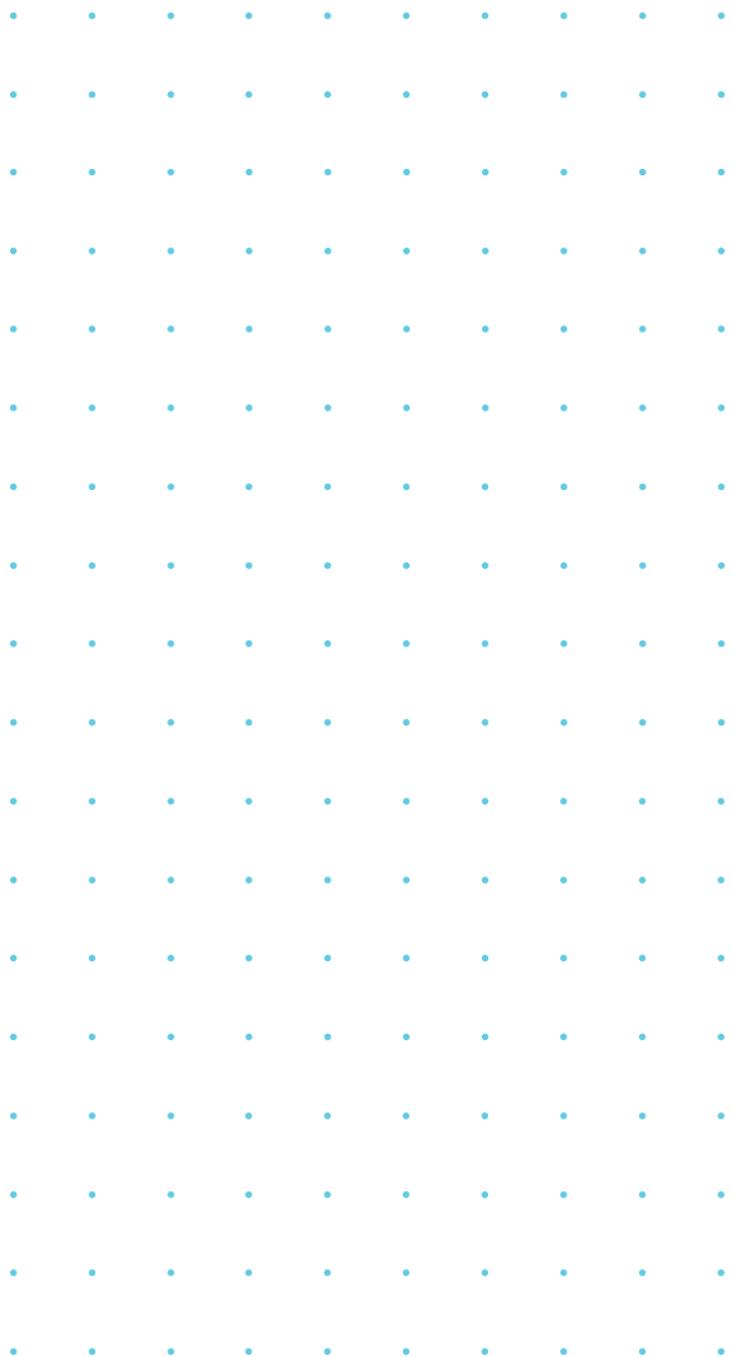
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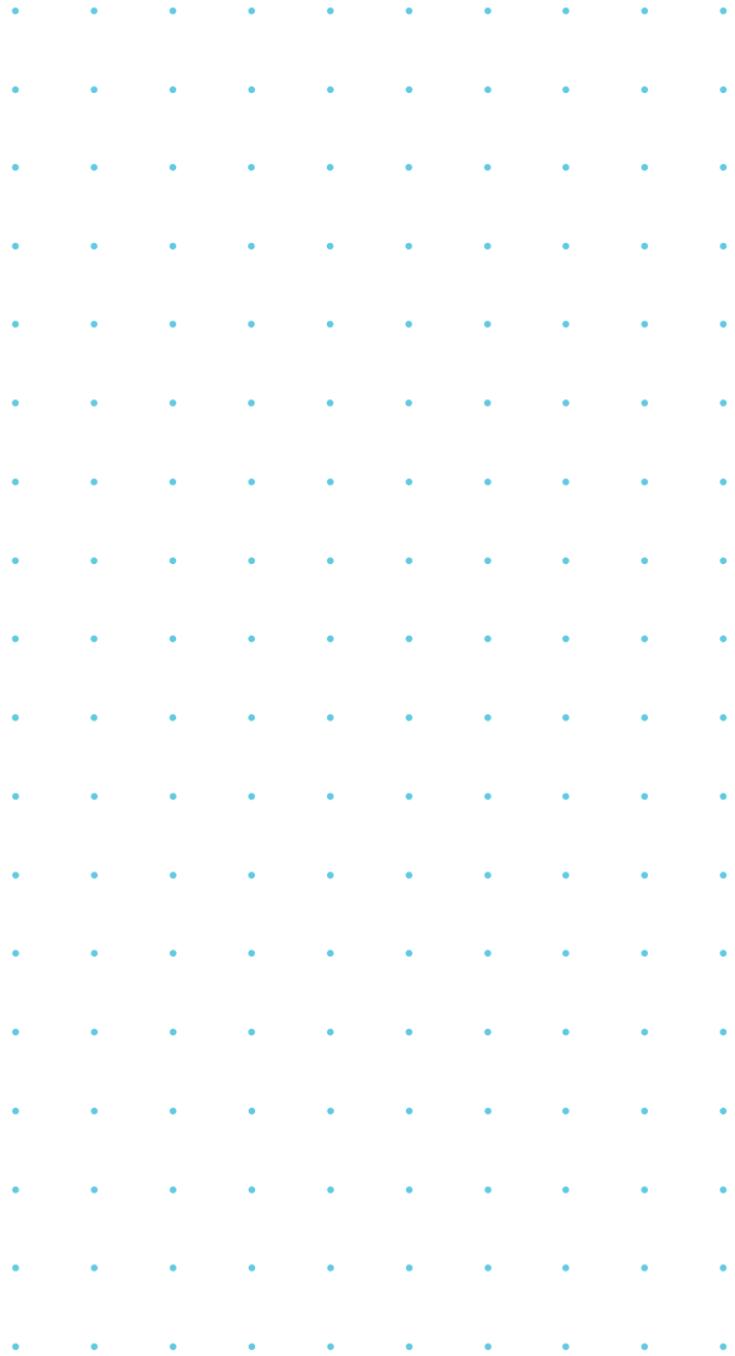
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