

A person is walking from left to right, wearing blue jeans and gold high-heeled shoes. A large, white, stylized hanger graphic is overlaid on the image, with the word "HANG" written in white capital letters across its center. The background is a blurred grey pavement.

HANG

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ANALYSING
THE BRIEF

Aims:

- To investigate the cutting edge of technology, researching into who's doing what and why they're doing it.
- To look into the strengths and weaknesses of competing products
- Examine how technology has changed the chosen area, and how it might change in the new future

Outcomes:

To design a prototype of a new and exciting piece of technology, in order to demonstrate the concept which must convince the audience it is viable, useful and well conceived.

ANALYSING THE BRIEF

Understanding the brief

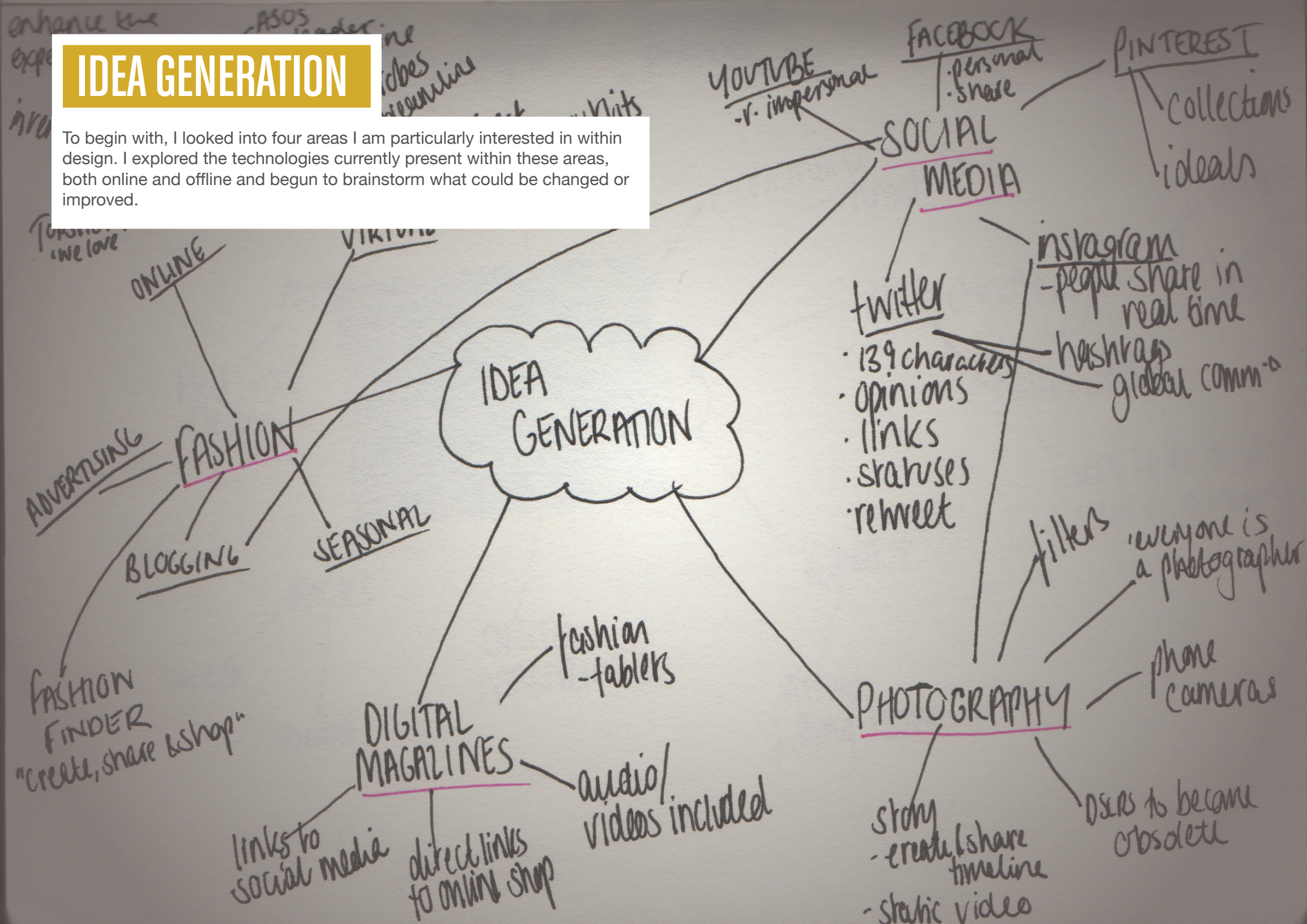
- INVESTIGATE the cutting edge of technology
- Who is doing what, how & why?
- Strengths & weaknesses of competing products
- What developments are near?
- How has technology changed chosen area
- Predict innovation
 - suggest new ideas

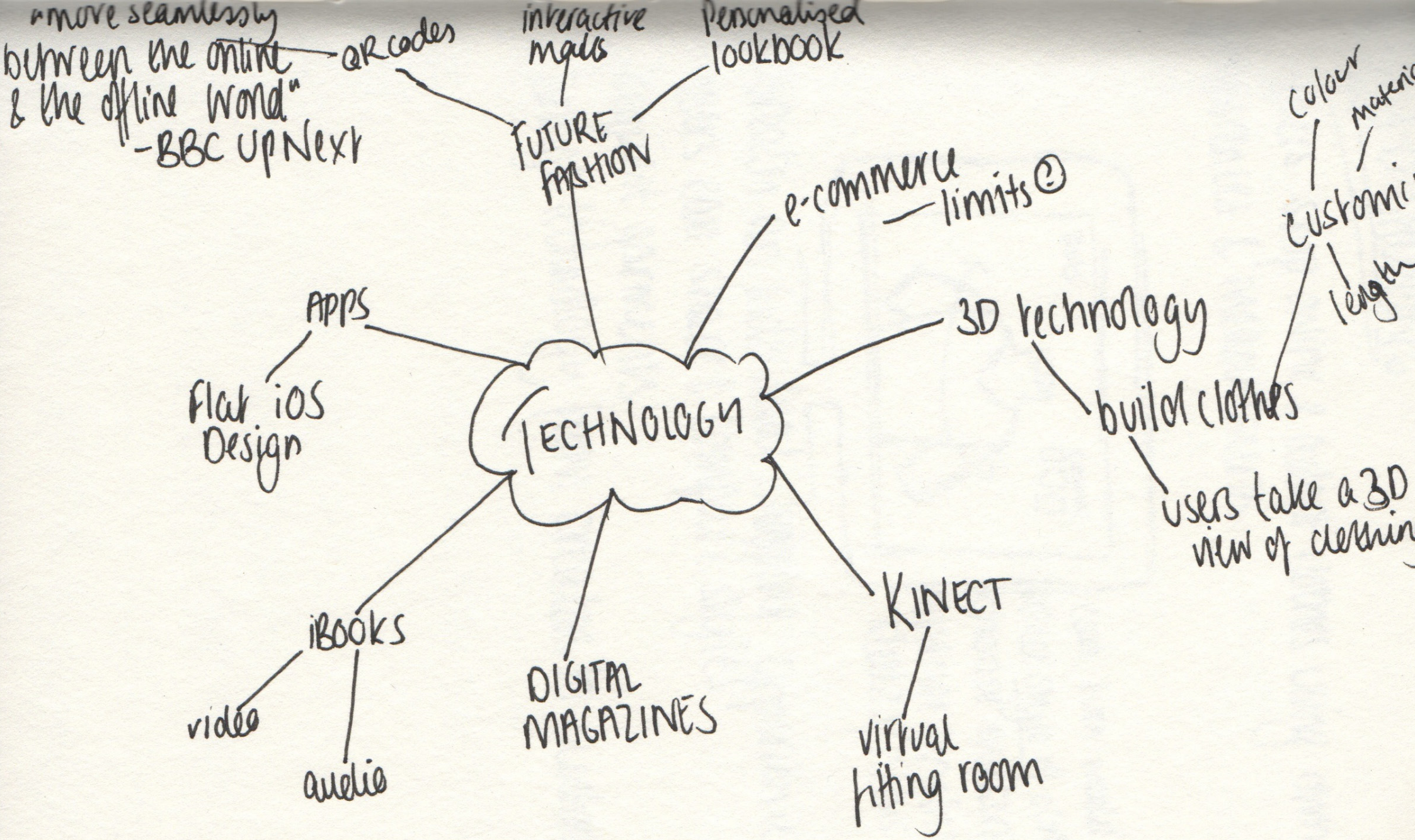
Aim

- Design a prototype to demonstrate the concept
- Must convince the audience my idea is viable, useful & well conceived

IDEA GENERATION

To begin with, I looked into four areas I am particularly interested in within design. I explored the technologies currently present within these areas, both online and offline and begun to brainstorm what could be changed or improved.

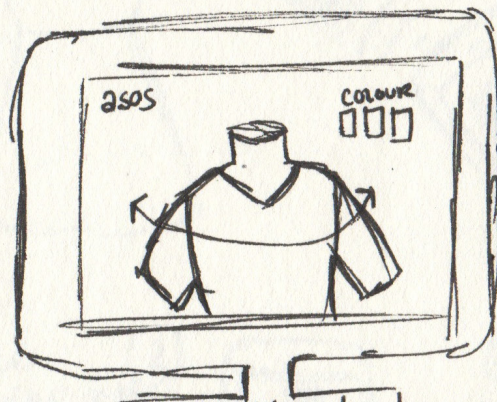






① 3-D SHOPPING

Users shop online & adapt clothes using own preferences & measurements



can turn model in 3-D
select style of clothing
choose material
change lengths of
sleeves/hems

- creates an individual shopping experience
- users can share & compare styles
- request garments
- brings technology from creators to customers.

CONCEPT ONE

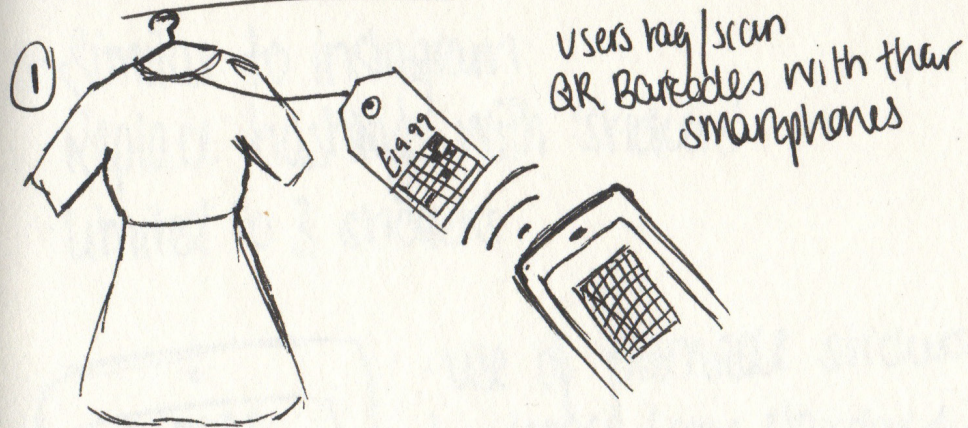
I initially came up with the idea of creating an online shop which adapts the clothes according to the user's own preferences and measurements.

The experience would allow users to see the clothes virtually on a model of the exact same measurements as themselves, allowing them to change the lengths of trousers, sleeves etc.

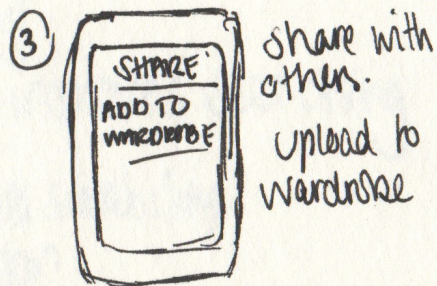
The concept behind this idea was bringing new technology to the consumer, rather than leaving it with the fashion designers. From researching my dissertation, I found that 3-D printing is beginning to be introduced within the fashion industry, with new fabrics evolving from this technology. A designer suggested the concept of ordering clothes online and printing them at home, how would this work?

I discarded this idea as a lot of virtual fitting rooms have begun to pop up online. With the difficulty of setting things up, including documenting your own exact measurements, this idea seemed useless as even though there are initial concepts available, I, as an avid online shopper, do not think they would be particularly useful to many people.

② HIGHSTREET SOCIAL



②
users
can view outfits
others have posted
which include this
item



- User can scan tags on clothes in shop
- Brings up outfit posts from other users to suggest ideas
- Can rate (👍/👎) each photo
 - top rated photos appear first
- Can add to virtual wardrobe when bought

CREATE A NEW SHOPPING EXPERIENCE

CONCEPT TWO

I created a concept which was based on the idea of creating a fashion focused application, but merging the use of phones into the physical shopping experience using QR codes.

Currently, all virtual wardrobe applications require you to take upload photographs of your own wardrobe in order to store them on an application. I wanted to find a way to streamline this process in order to allow people to not only browse through their clothes but also create outfits.

With elements of other social media such as Pinterest and Instagram, the application would allow people to share their own photos as well as photos they love on the app or directly to their social media channels.

③ A New Social Media - Polaroids

- Similar to Instagram
- Replace hashtags with 'stickers'
- Limited to 3 stickers



- use of premade stickers to choose from standardises tagging
- improves searching

- Weather suitability
- occasion

- focussed on fashion
 - outfit photographs only
- Users can create a profile & like/dislike photos

CONCEPT THREE

For this concept, I considered creating a new form of social media. Using Instagram as my inspiration, I thought captions and hastags could be replaced with stickers which users can attach to or place on the image while uploading.

Still relating to fashion, I considered adding a weather feature which allowed people to see the suitability of their outfit for the weather that day based on other people's outfit images.

After developing this concept slightly in sketches, I decided it was very similar to the already successful app Instagram.

FINAL CONCEPT

As well as creating an iPhone application, I wanted to merge the digital and physical aspects of shopping, taking heed from Burberry World Live.

What the idea is:

My concept starts with shopping in reality: when the user walks into the shop, they will be able to swipe their phone over a product label and the application will display the data which has been embedded into the tag inside the label. This is where online merges with offline: the data displayed contains online retail images of the product as well as detailed information on the product and customer reviews. This allows the user to make a more informed decision before purchase.

As well as this, users will be able to match the item to items already in their own wardrobe to create outfits and browse photos from other users who have tagged the particular product in their own profiles.

Why it's a good idea:

A concept aimed at fashion focused young adults, this idea blends perfectly with the increasing popularity of 'street style' and fashion blogging. Young females want to be able to copy others fashion easily and create outfits in a matter of seconds.

There are currently a range of apps available through the App Store that

provide 'virtual wardrobes', however, none of these allow automatic download of information - the user has to take the time to take decent photographs of each item of clothing. With this technology and application, the product information and professional images can be downloaded instantly onto the phone and saved when 'added to wardrobe'.

Potential uses:

The fashion industry is traditionally a low-tech industry, but brands are beginning to innovate and discover ways to use technology. As fashion takes a step towards technology, the ways in which they interact as brands with the consumer should follow. This app presents a unique and innovative way to merge online and offline retail experiences.

Potential users:

I would aim to produce this idea within a particular shop to start with, for example Topshop. This would then give all Topshop customers the opportunity to use the application, and if it is successful, the tags could be put into many different brands of clothing and expand as the norm in retail.

USP

My shopping experience has a range of unique selling points:

- It uses advanced technology to personalise the shopping experience in store
- Users can share outfit ideas and their own wardrobes with their followers
- Instant downloading of product information and images means personal virtual wardrobe can be created within minutes
- It begins to merge online and offline retail experiences, bringing a new aspect of digital innovation to the industry





CONTACTLESS CREDIT CARDS

“Imagine being able to buy those little things like a cup of coffee, sandwich or newspaper without carrying cash.

Contactless technology lets you do just that.”

The credit card and machines allow users to pay wirelessly for items (£20 or less) at the checkout using a secure system. While useful, the distance technology has raised concerns about privacy - could someone walk past us and take our credit card details while it's in our pocket? However, the technology is new and still being improved, it is fast and accessible to the public.



TILE

The world's biggest lost and found: an app which links to little 'tiles'. These tiles are tangible objects which are placed on or attached to the users items. The app allows users to trigger an alert or sound from the tile and lead them towards the tile/item. The app also allows a user to register an item as 'lost' - for example when a bike goes missing. This switches on all tiles from all users to see if they are near it and if found, presents the owner with a marked map to find the item.

Features:

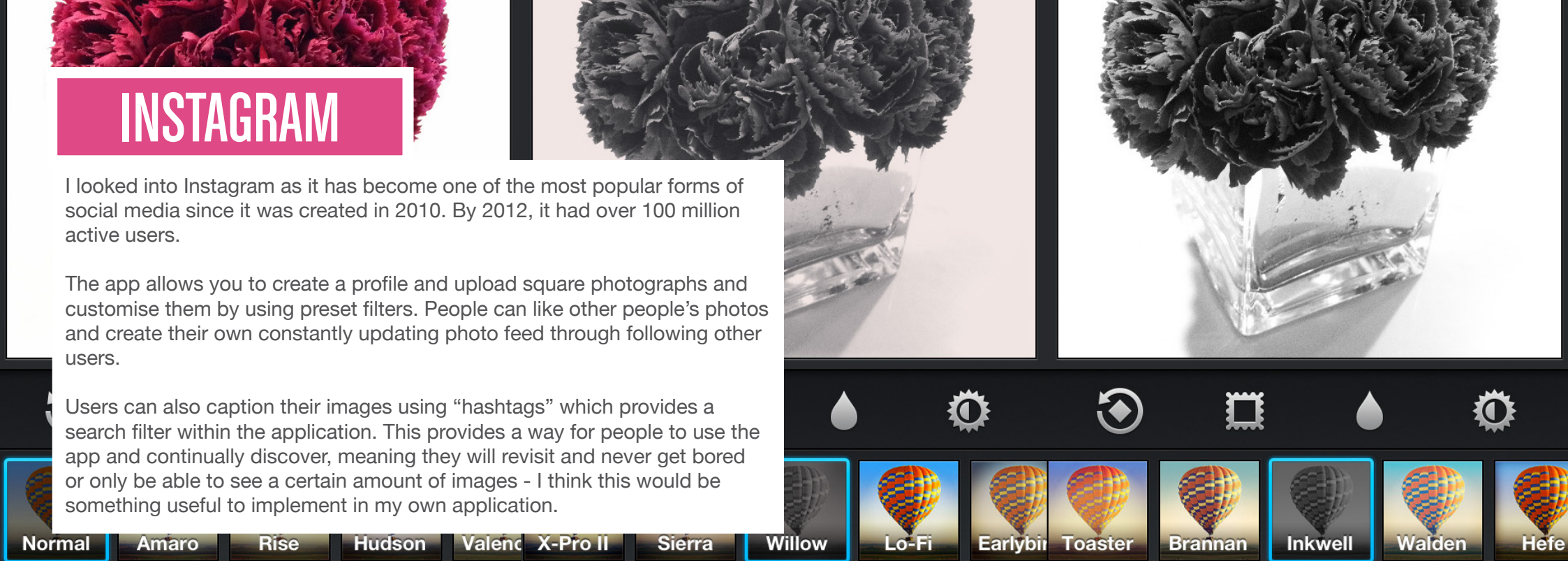
- Registering “lost items”
- Share access to tiles with family and friends
- App remembers where the tile was last seen

INSTAGRAM

I looked into Instagram as it has become one of the most popular forms of social media since it was created in 2010. By 2012, it had over 100 million active users.

The app allows you to create a profile and upload square photographs and customise them by using preset filters. People can like other people's photos and create their own constantly updating photo feed through following other users.

Users can also caption their images using "hashtags" which provides a search filter within the application. This provides a way for people to use the app and continually discover, meaning they will revisit and never get bored or only be able to see a certain amount of images - I think this would be something useful to implement in my own application.



Pinterest

Add +

About ▾



Sharon ▾

Pinners you follow · Everything: Food & Drink · Videos · Popular

PINTEREST



Vegan "Eggs" Benedict



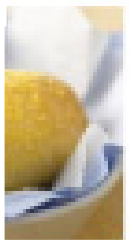
Amanda Baker onto Vegan Recipes to Try



Pinterest is another form of social media, and is aimed mainly at females. The site allows the users to create boards and 'pin' images they love to them, allowing them to categorise.

The app also allows users to send photos directly from the app to their friends and families or directly to Twitter or Facebook. By browsing through images, users can find people with similar tastes to themselves and follow their boards to receive updates.

Pinterest is described as 'addictive' by the majority of females who use it, as a user, you can spend hours browsing through images and pinning them, without seeing the same image twice - I would aim to make my application are useful as this by creating wishlists.



Favorite Recipes



POSE

Pose is an app designed to help women organise and plan their outfits. This application is targeted directly at fashion and shopping enthusiasts.

Users can take photos of clothes and accessories while they shop, uploading them with prices and store location to make every item shoppable.

While researching this application, I also examined the interfaces as I found them particularly clear and intuitive to use.

FASHION KALEIDOSCOPE

Fashion Kaleidoscope is an application similar to Pinterest but is aimed at fashion forward individuals. Users can browse thousands of images and save their favourite outfits and looks to their personal profile. All apparel appears with a price, and when the image is clicked on, several alternatives ranging from cheap to expensive appear for the user to browse.

APP REVIEW

From researching into a variety of apps, I found that all these apps provide a way to follow other users, which creates communities and relationships online. Personal profiles allow users to store information on themselves and customise the app within certain constraints to allow the user an online presence.

Within these profiles, users can save and collect their favourite items or images, so nothing is lost. People like to hold on to images and come back to them later, and the majority of apps allow this.

The majority of applications provide the user with some kind of constantly updating feed, showing them what the people they're following are up to. 'Popular' pages, which gather the most liked or pinned images allow users to discover, explore and expand their presence online.

Every single one of the apps allowed the user to share their updates on all forms of social media simultaneously.

These aspects of applications are obviously essential to success and the idea of gamification within the apps means that people continue to come back to the apps to see what people have liked on their profile and what the people they're following have posted.

121 REGENT STREET

121 Regent Street opened in September 2012 as Burberry's biggest flagship store at 44,000sq feet. Angela Ahrendts and Christopher Bailey wanted to accelerate retail-led growth and so created "Burberry World Live". The idea was to merge virtual and physical aspects of the brand and allow customers to immerse themselves in the experience.

The store has no cash registers to shift the focus of the shop from purchasing to browsing. Each product instore is tagged with RFID (radio-frequency identification) tags which means that when placed next to a mirror, multimedia content relevant to the product is triggered and displayed on the mirror.

Every so often, digital rain showers disrupt all screens and over 500 speakers throughout the store.

Through the use of iPads placed in store, visitors can customise the trimmings and finishes on their clothing.



THE WORLD OF KISSES

LIVE KISSES

ALL KISSES

BURBERRY KISSES

Burberry kisses is an online interactive campaign which was launched before Christmas to allow people to send digitised messages to their loved ones, sealed with their own lip imprint.

The campaign was created to promote Burberry's beauty range, but used webcams and touch screen technology to 'capture' the users lips. The user can then choose a lipstick colour to seal the envelope with, before it is sent across the globe digitally (using this map) to whomever you chose.

The world map of live kisses allows you to see all the kisses and messages that are being sent at that very moment across the world. The brand have focused this campaign on bringing people together, to allow them to gain a positive experience from the brand, rather than solely promoting new products.

SEND ANOTHER

[BACK TO HOME](#)

[Music](#) [Privacy & Cool](#)

GOOGLE GLASS

When researching into different emerging technologies, I also looked into the concept of using Google Glass for my project.

Google glass is a wearable computer that is currently in it's initial stages of development at Google. It uses a smartphone like interface, but is completely handsfree, and operated via voice commands. It is able to connect to the internet, take photographs, show you directions and share images and videos live.

This kind of technology could become widely used in the retail industry, and could have been an intriguing direction for my project as instead of creating an app, the information could be displayed on the glass and stored in the cloud.





FUNCTIONS

In order to better understand my concept, I began to use post-it notes to separate the sections of my idea and note details.

I briefly considered different types of technology I could use to implement my idea, before researching them further.

This flowchart was particularly helpful in allowing me to define the four main functions of the experience, and ensure the app had a main purpose, rather than doing several different things averagely.

The audience for my application and shopping experience is teens to young adults, and at this prototyping stage, females. I aimed to target people that shop at places such as Topshop, ASOS, H&M and use smartphones.

AUDIENCE

TEENS
→
YOUNG
ADULTS

TOPSHOP

H&M

ASOS

SMARTPHONE

TECHNOLOGY

RFID
TAGS

THE
APP

GOOGLE
GLASSES

SEWN INTO
LABELS

CLOUD -
PROFILE
STORAGE

FUTURISTIC

DISTANCE
MEASURE

SHARING
CAPABILITIES

METADATA
product info
alternatives

The four main aspects of my concept are:

1. My Wardrobe

This part of the application allows users to create a personal profile and generate a digital version of their wardrobe.

Users can scan in images taken from online shops automatically from the tags within the clothing labels.

2. Recommend

This part of the app has two paths: people can either see what's recommended to go with a particular product from their own wardrobe or view photos of other users wearing the same product and gain outfit inspiration in that way.

3. Searching

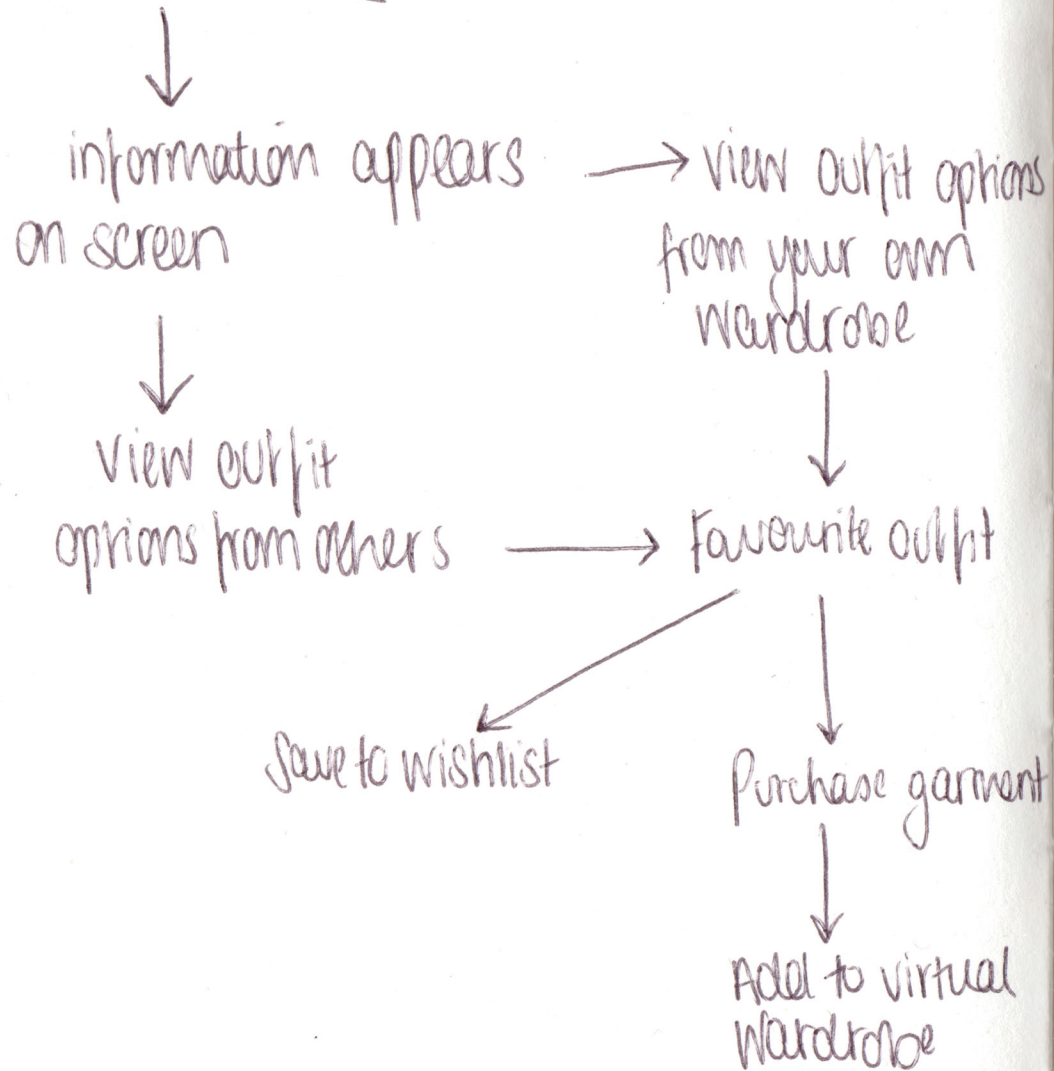
People can instead choose a type of outfit they want on the app and it will bring up a list of suitable matches from instore and online.

4. Profile

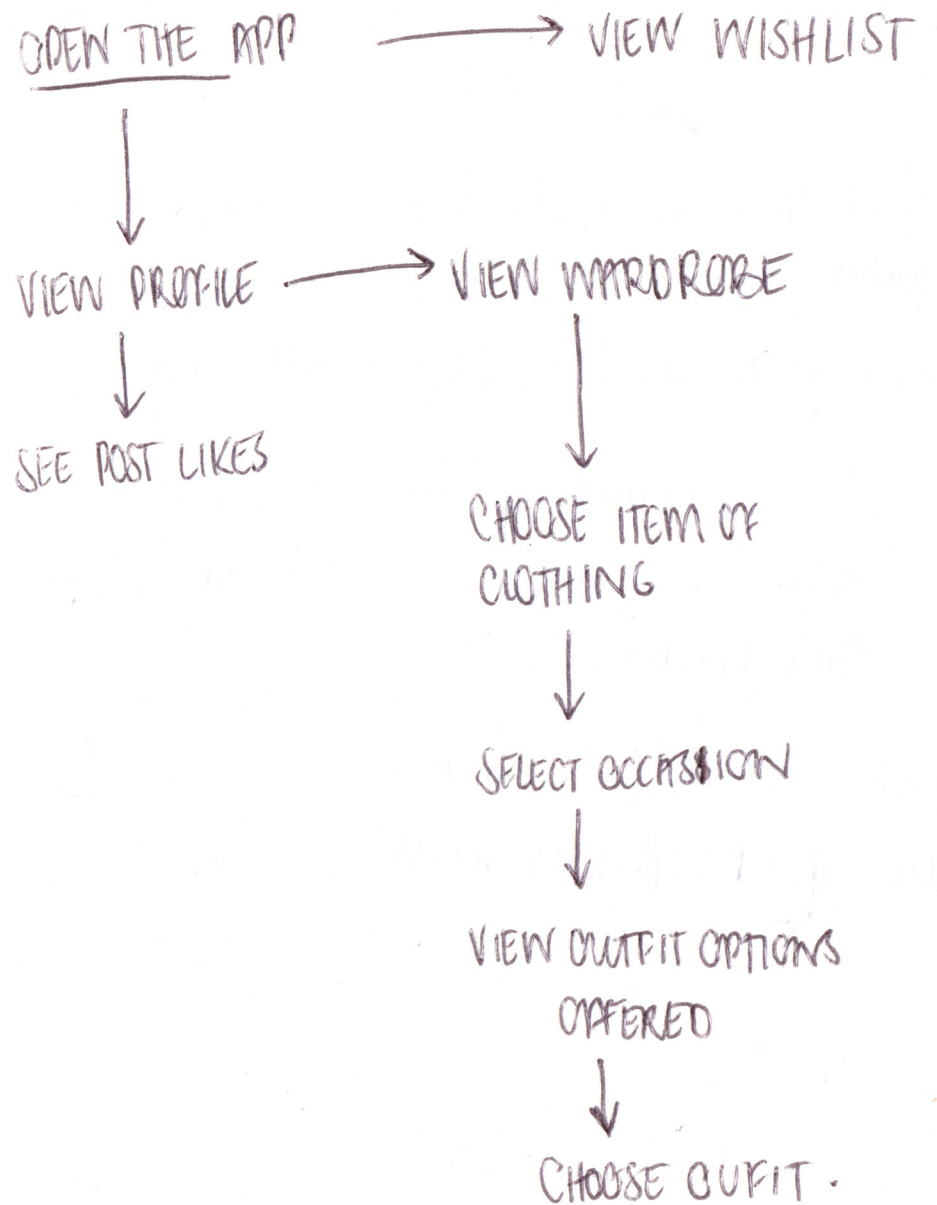
Also part of the wardrobe idea, people will be able to create their own profile which allows them to follow others and be followed, post photographs of their outfits and also create wishlists. Images from their wishlists and newly added wardrobe items will be able to be posted directly to social media.



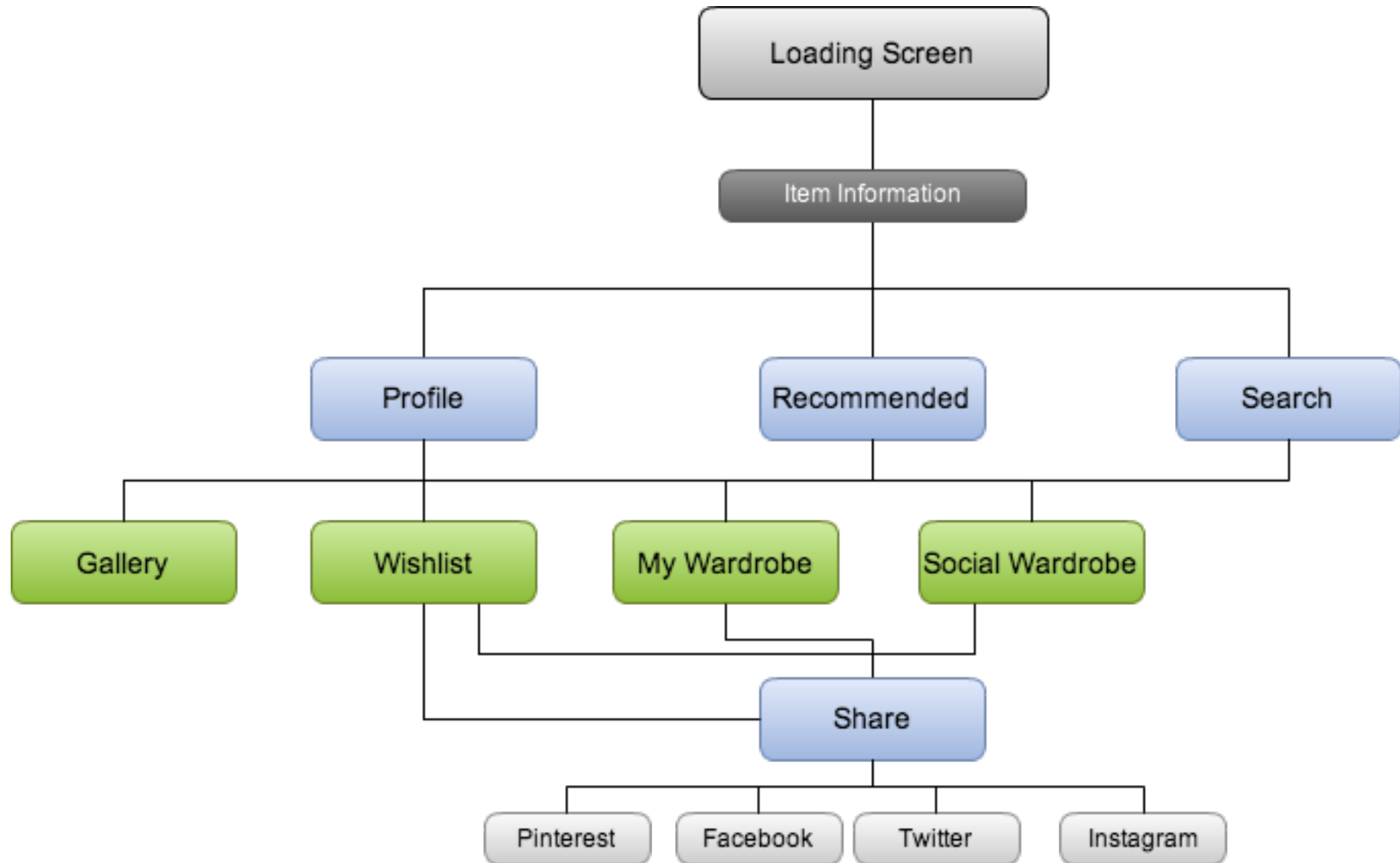
SCAN AN ITEM



OPEN THE APP



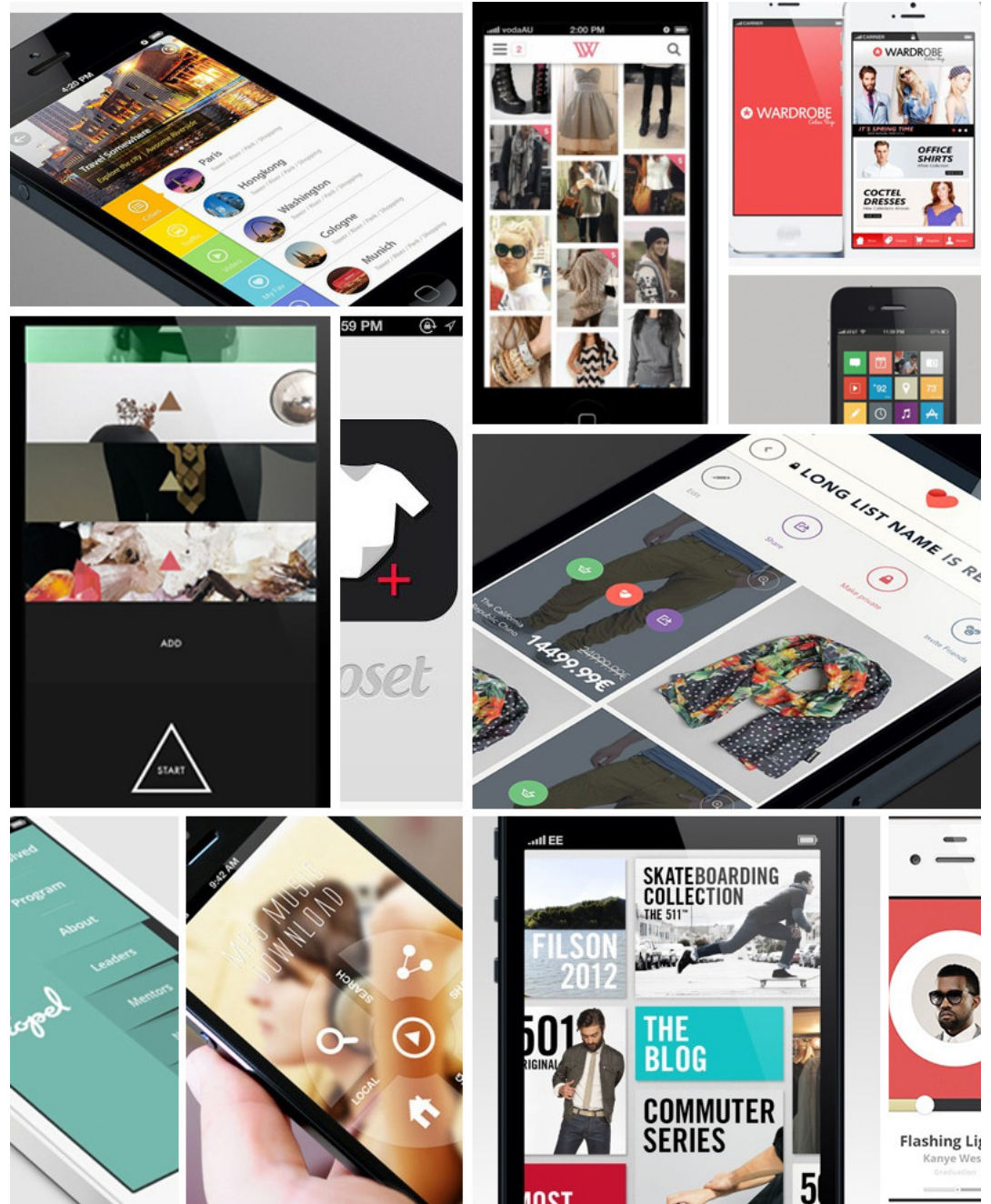
SYSTEM ARCHITECTURE



VISUAL INSPIRATION

I wanted my app to feel contemporary and fashionable to match the concept so I researched many different iPhone application interfaces for inspiration. With the recent update to iOS 7 I wanted to ensure I was complying with the new flat interface design as well.

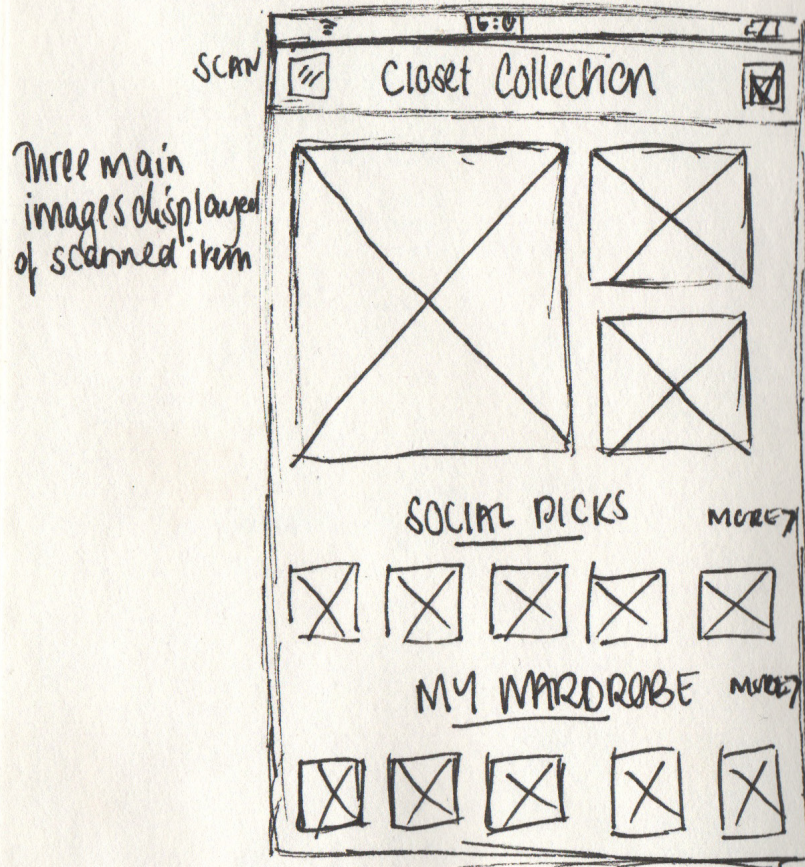
I wanted to challenge myself to create a vertical menu which I haven't previously produced to get a more in depth feel of how iOS applications work.



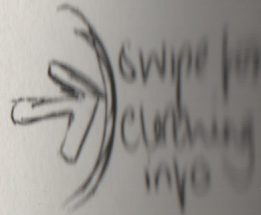
HOME PAGE - RECOMMENDED (when scanned)

SCAN
BUTTON

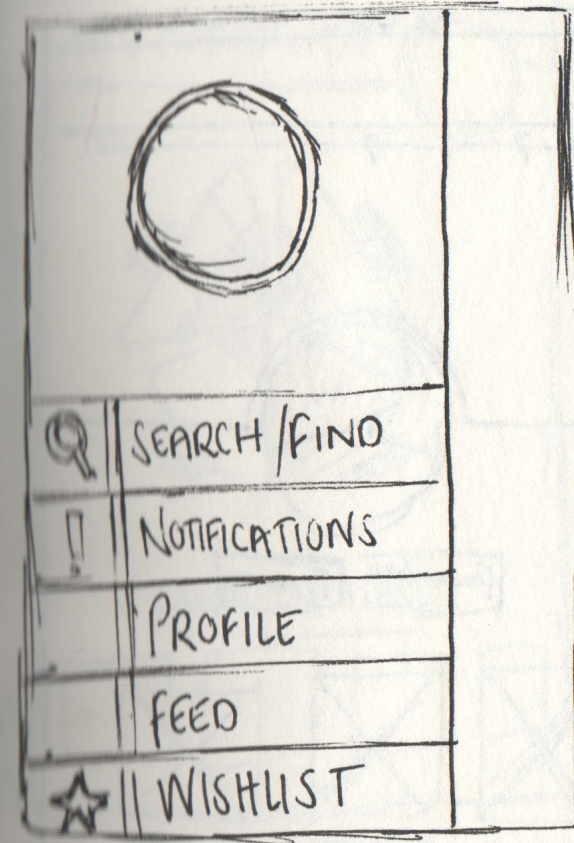
MENU



ADD TO
WARDROBE



← click to
enlarge images
can scroll
horizontally



- buttons for profile, settings, search
- item information

- Top 5 recommended social
- Top 5 recommended - own wardrobe

① MY WARDROBE

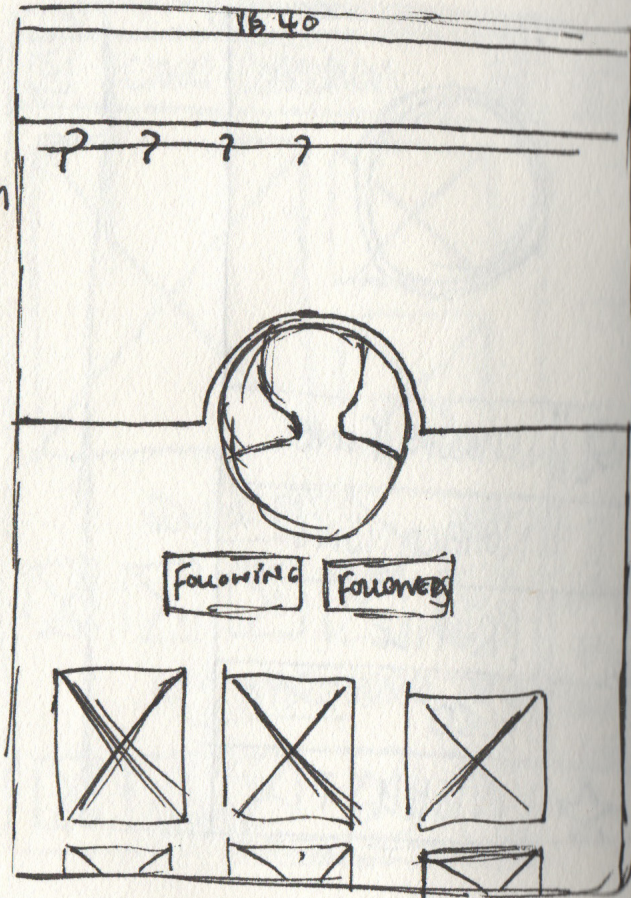
② SOCIAL WARDROBE

WIRE FRAMES

I began to visualise my application using wireframes. This was particularly helpful for understanding what buttons and features needed to be visible on individual screens. Here, I also began to think about how the app would move from screen to screen using hand gestures such as swiping and pinching.

PROFILE

Virtual representation of profile wardrobe



Scroll through my uploads

• Links to:

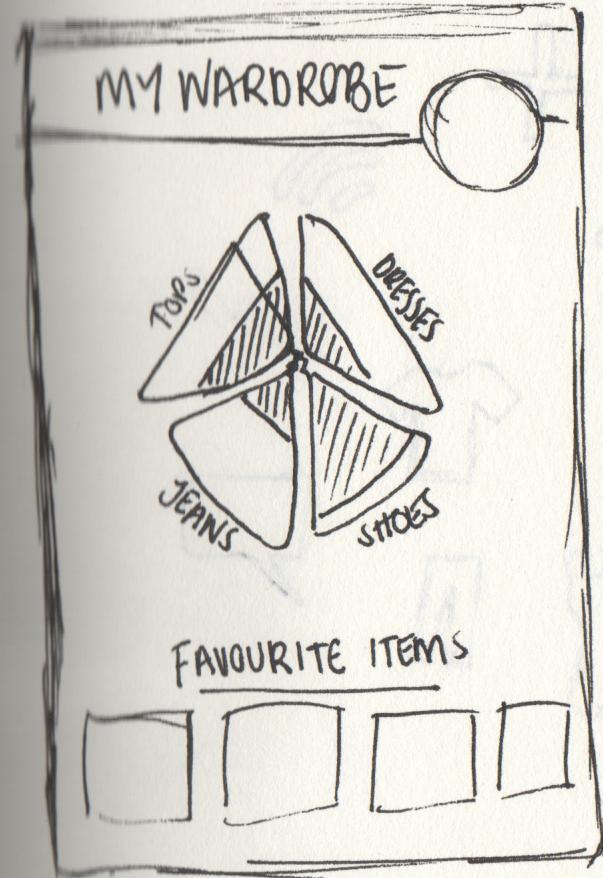
- ✓ settings
- ✓ search

✓ feed

• WISHLIST!

- & they are following
- my wardrobe

MY WARDROBE



• sections

- dresses/jumpers etc.

• Edit items?

• Categories?

- daytime - colour codes
- evening

• favourites

- choose 1 item
- occasion

→ outfit suggestions

QR CODE

Quick response code

- barcode attached to an item & records related information.

- fast readability & greater storage capacity

- Product tracking

- Item identification

- Time tracking

- Document management

- Marketing

- Read by scanner (i.e. camera)

- Provides 'quick & effortless access'

TECHNOLOGY

In my initial concept, I originally planned to attach QR codes to the hanging tags on the garments, but later realised I would want the data to be available after purchase in the owners wardrobe, as well as in the shop.

I also wanted to experiment with more technology than a simple QR code, and allow the interaction to become seamless using distance sensors. I began to look into a range of possible technologies, weighing up the pros and cons of each.

Although QR codes would be much cheaper to implement, they require wifi and need to be seen by a reader such as the phones camera in order

RFID TAGS

- Wireless, non-contact use of radio-frequency electro-magnetic fields to transfer data

- contain electronically stored information

- Can be embedded in the tracked object

- Can be read at short ranges via magnetic fields

② PRIVACY CONCERNS

- Read only or read & write

- Can only be read one at a time

- 2010: ↑ performance & reliability
 ↓ cost

to be read. I discarded the idea of QR codes once I had decided on a more seamless approach to scanning the objects.

I researched into the technologies behind contactless credit cards, arduino lilypads and RFID tags. After discarding QR codes, RFID tags seemed like the simplest option. However, they are not waterproof. They have also been linked to privacy breaches, although this a concern with any distance operated technology.

WEAR FIELD COMMUNICATION

- A set of standards for smartphones to establish radio communication with each other by bringing them into proximity with each other.
- Applications include: data exchange
: contactless transactions
- Communication possible between an NFC device and an unpowered NFC chip (tag).
- NFC is being majorly developed within commerce.
- Can be found to be waterproof.
- Unless all information is locally stored within the app, internet connection would be required
★ free wifi available in all Topshop stores

ARDUINO LILYPAD

- Sewable electronic pieces + programmable computer
- Can be stitched together with conductive thread to create interactive garments
- Can sense environmental info: lights / temperature
- Can act on the environment with LED lights, vibrator motors & speakers.

TECHNOLOGY

After investigating Near Field Communication technology, I decided to use NFC tags within my concept. NFC readers are typically embedded into smartphones, and can be turned on and off by the user. They are about 25mm in diameter and waterproof, meaning they could easily fit inside a clothing label and be washed. The memory capacity of the tag could be relatively small, as it would only contain a link to information to be displayed, so that the product manufacturer can update it when or if they need to at any time and it will be implemented on products already on sale in store.



HANG



BRANDING

I experimented with several different names for my application, I wanted people to be able to use it in a phrase as an adjective, in the same way "Google" and "Instagram" have.

I looked into what other fashion applications were called, these included "The Fitting Room", "Cloth" and "Pose". I explored several different synonyms and associated words. I finally chose "hang" as the name of my app, and chose the coathanger as a symbol.

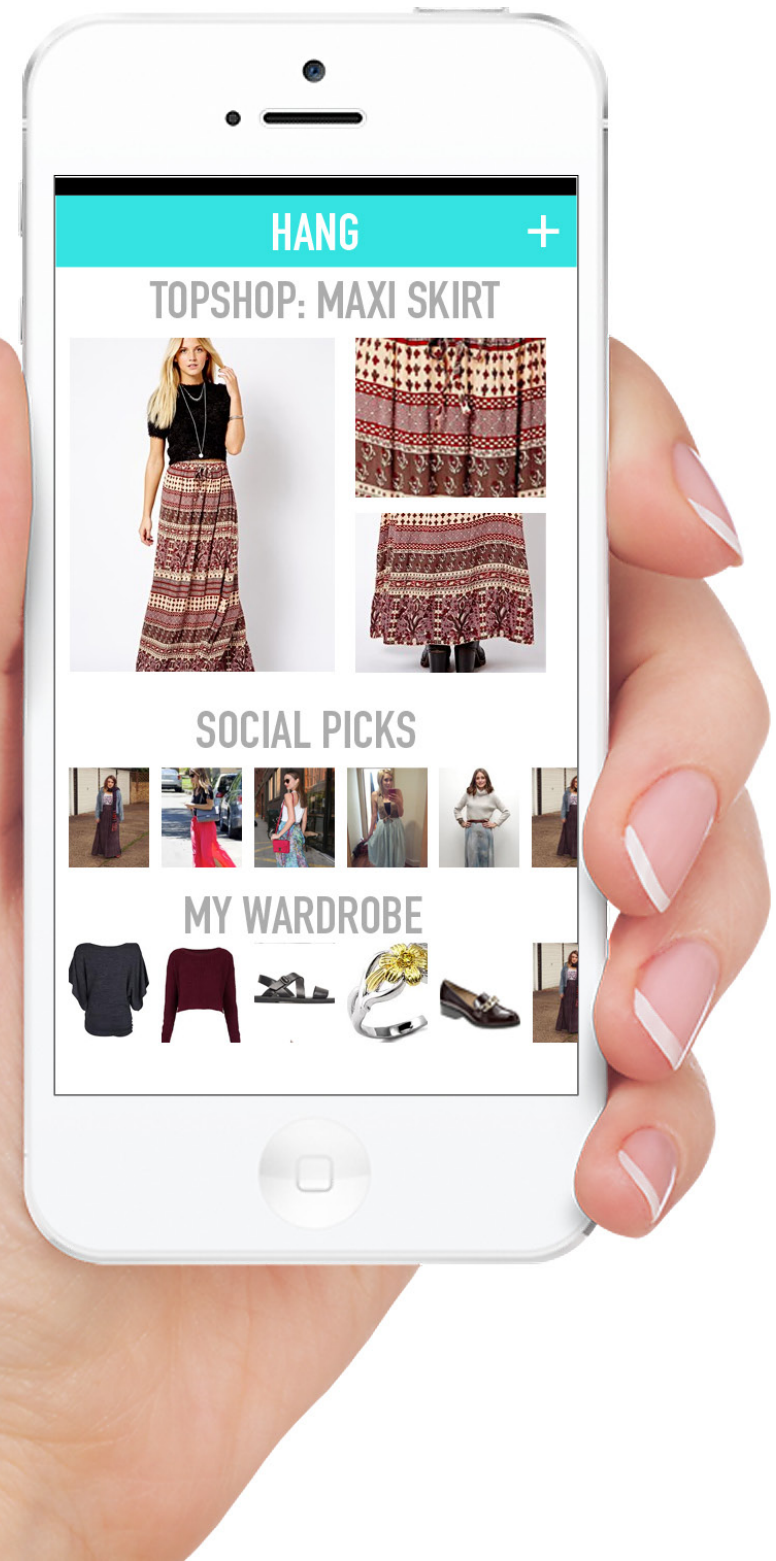
I experimented with using a signal icon with the coathanger to represent the technology used within the app, but opted for a simpler, more angular and flat approach to the logo in the end.

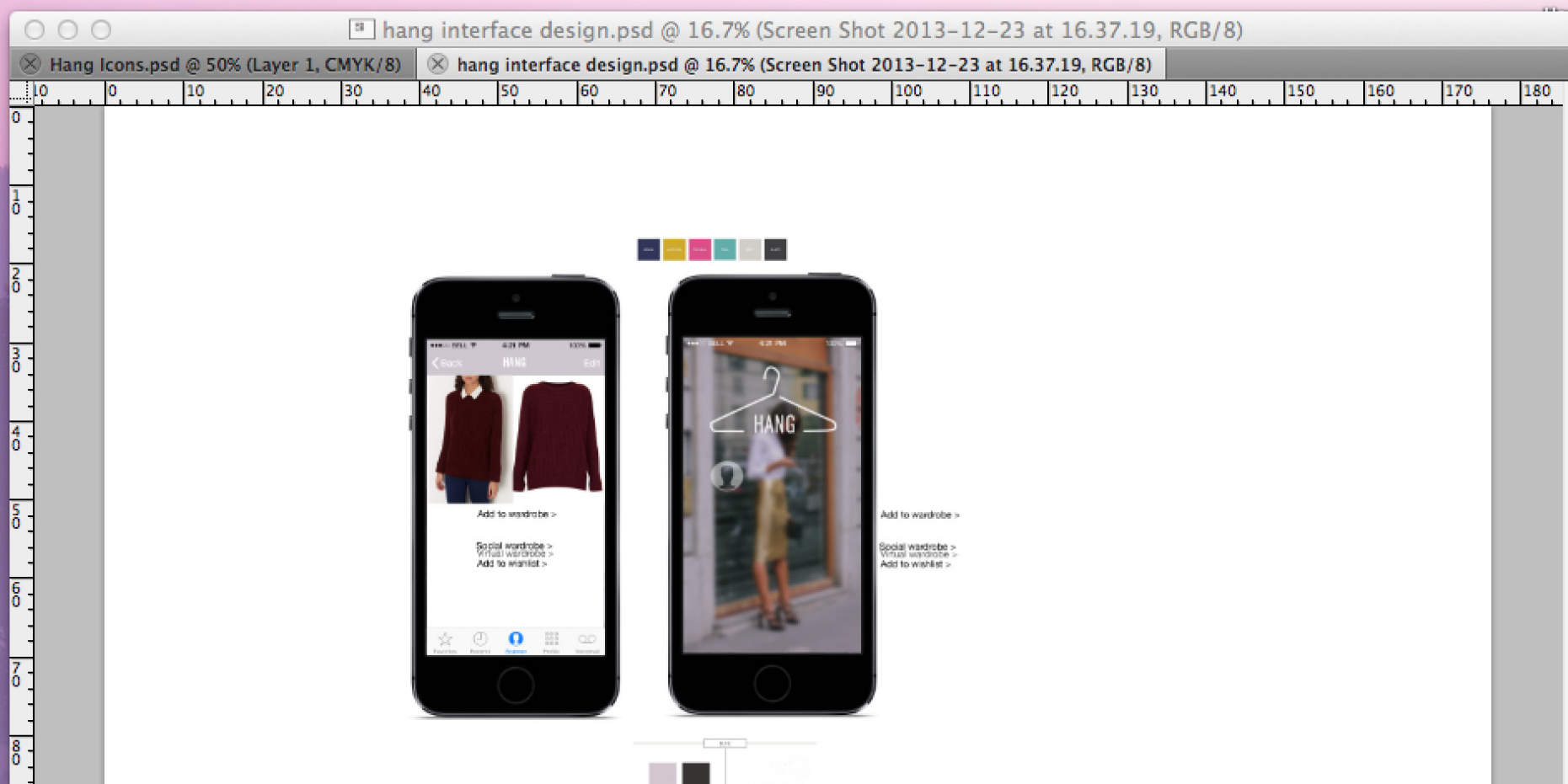
FIND ME FASHION

INTERFACE DESIGN

To begin with, I made a high fidelity version of my wireframes. I wanted an image based interface, but didn't want to overcrowd the screen. It was important I used only a couple of colours as the images of products could be any colour or pattern.

After creating a very minimal version of the application, I decided I wanted something more exciting and contemporary, something that was intuitive for any user, so began to investigate into more image based backgrounds.



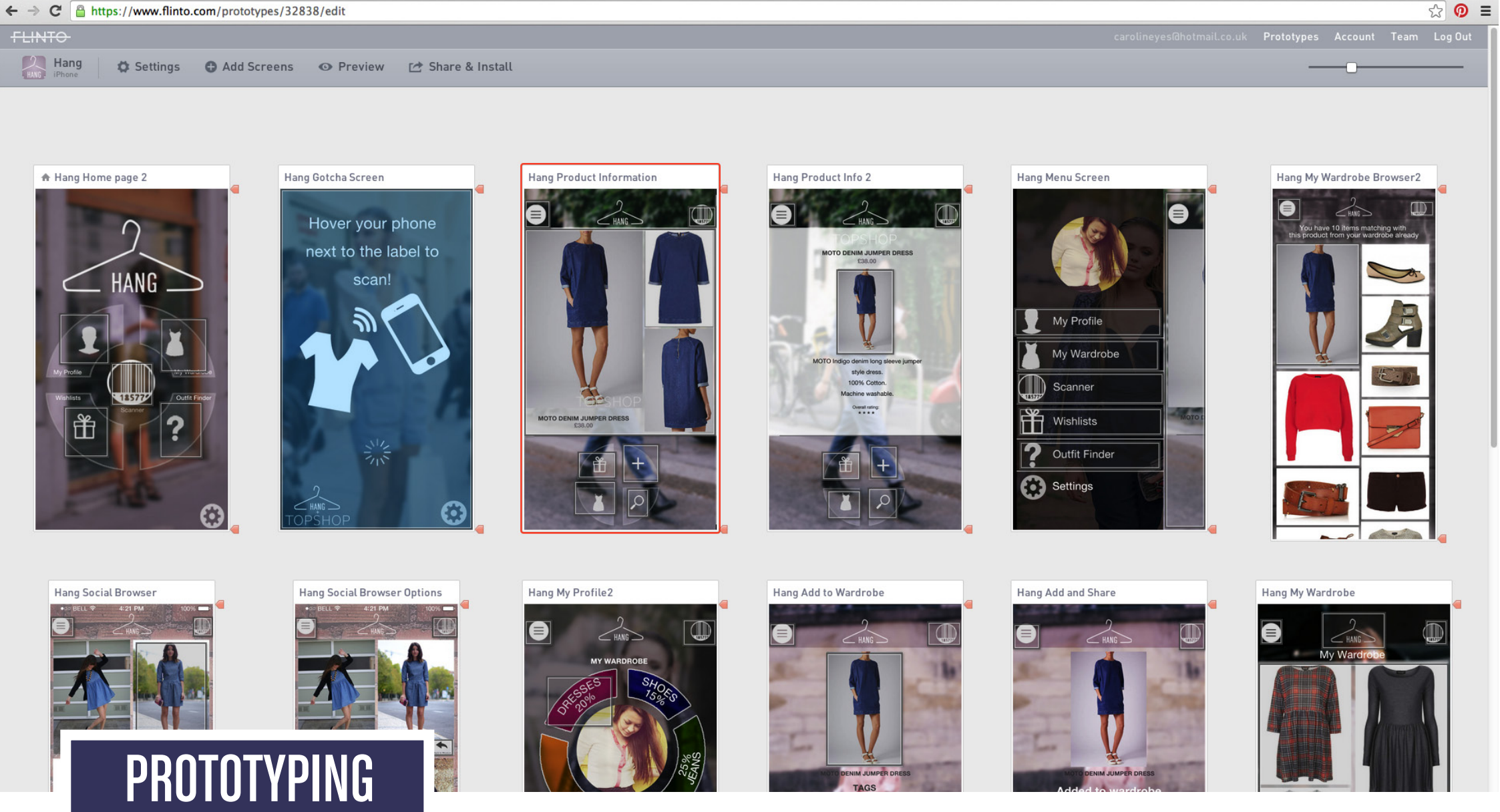


INTERFACE DESIGN

This screenshot shows my progression of interface design. I took the simplified version of my application and changed it completely. I looked at different colour schemes, and opted for one with only two colours. These colours aren't directly visible within the app, but help create dark overlays on top of the images I've used.

I looked into iOS 7 apps and found the use of frosting images present in a lot of them, so experimented with this. It made the text alot clearer and readable.

I also implemented the use of icons as I find these more memorable and accessible when using apps on my own iPhone.



To prototype my application, I experimented with different applications I was able to download including Prototyper and Flinto. Flinto was recommended by another student so I decided to use this.

Flinto is an online prototyping software which lets you upload images as screens and create links to different pages, with different

transitions. The prototype can be simulated on the computer or downloaded as a web app to an iPhone. This was a particularly useful feature as I have an iPhone 5 so was able to test the application out. However, the app only allowed clicking in order to change screens, which meant that some of the gestures I wanted, for example swiping to the right to bring up the menu.



USER TESTING

After prototyping the app on Flinto, I downloaded it to my phone and observed four different people to go through each screen, seeing what they thought was the right path through the app.

It was particularly useful as I gained feedback on the graphics and the user experience.

Feedback included: changing the original scanner page which included camera vision to find and swipe an NFC tag. It was said this distracted from the idea of swiping, it seemed like you had to take a photo of the product.

The four icons on the product information pages have no written labels, so I was keen to know if these icons were intuitive enough. The only one that caused some confusion was the browsing your own wardrobe page. To make it more obvious, I added some text above the images explaining the display.

It was also said some of the screens were hard to read due to white text being placed on a light or almost white background, so I darkened the images to make the text much clearer to the user.



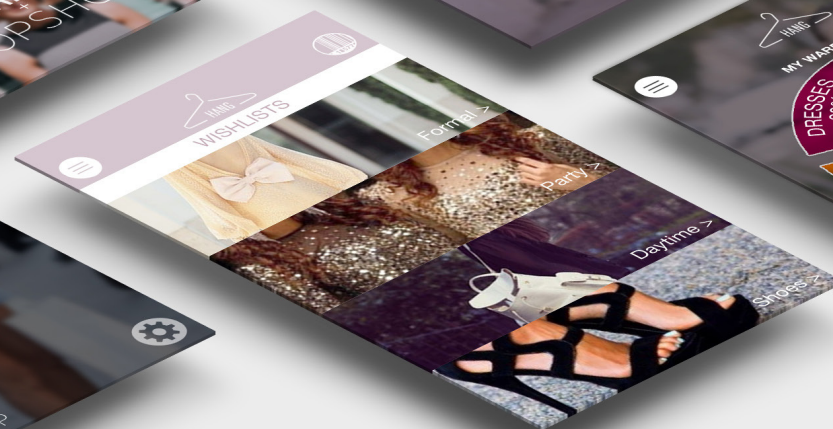
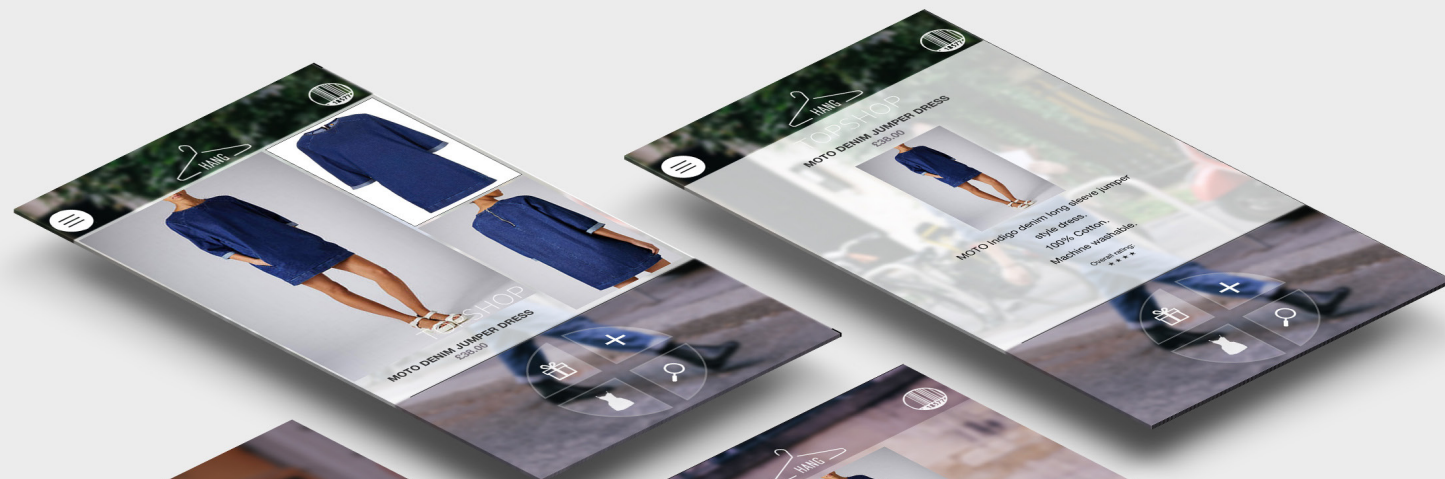


A new way to merge physical and
digital commerce platforms



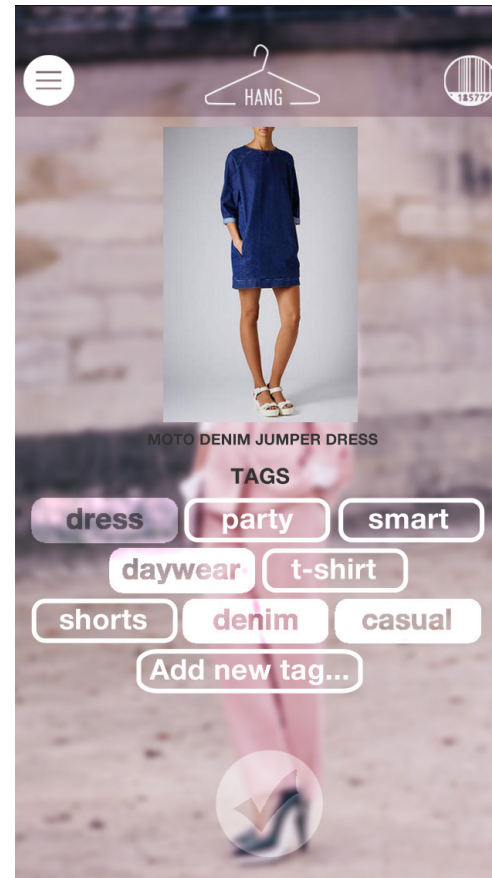
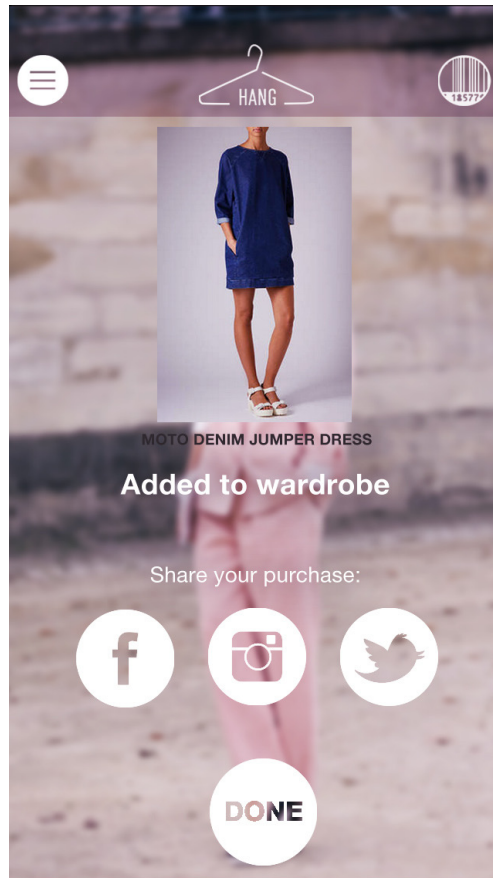


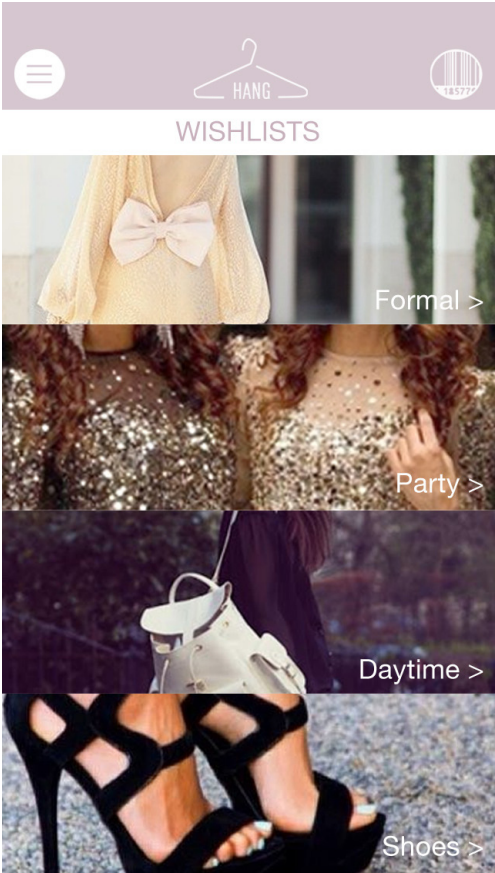
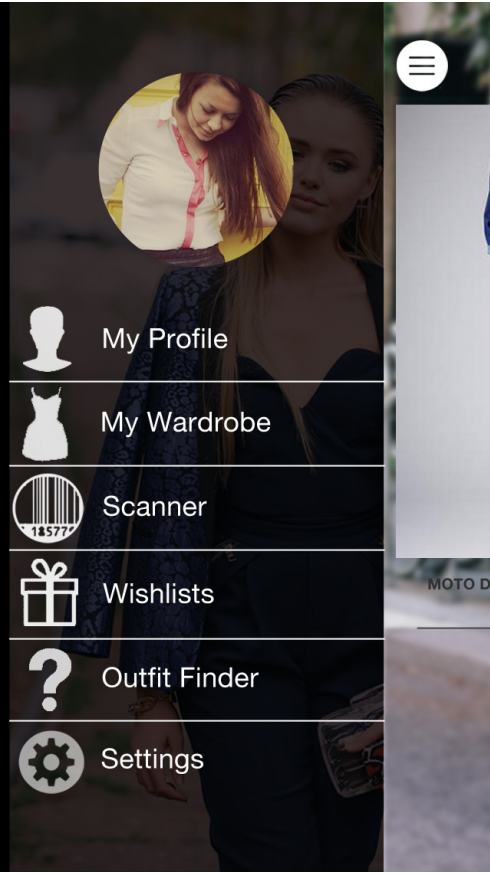
To use my app prototype, please scan this code on an iPhone 5 device.













What are you looking for?
Tap to choose the kind of outfit you want

dress

party

smart

daywear

t-shirt

shorts

denim

casual

jeans

formal

shirt

shoes

skirt

black

heels

jewellery

jacket

red

hat

coat

SEARCH



EVALUATION

I believe my concept is strong in many ways, not only have I managed to create a prototype which can be used on a phone, but have clearly thought through the entire experience from beginning to end.

The app would be a step forward within the fashion industry, by creating a new, seamless way to merge physical and digital commerce platforms. By debuting the concept with a brand like Topshop, it would be easy to capture my target audience as both their instore and online shops are particularly popular.

I have concluded the final interfaces are clear, with intuitive icons and large images. I darkened the interface backgrounds after the final presentation to ensure the white text was readable. Managing both innovative technology and good design was difficult within this task, as I had to make the directions clear. However, I was pleased with the final outcome having experimented with different interface designs, I have created a distinct, contemporary style.

Having never prototyped an application before, I was proud to have completed this task, and developed enough screens for it to become an almost fully useable interface. However, I was disappointed to find I could not implement touch gestures into the prototype. If I was to create the application again or have more time, I would try a different prototyping tool which would allow me to use gestures and move parts of the screen, rather than the whole thing. This would allow me to scroll across sections of the screen, for example wishlists on the profile page.

One thing I began to implement within the app was an outfit finder, where the user could choose up to 4 categories and browse through their own wardrobe and a shop's collection to find outfits that matched these keywords. However, I wanted to lessen the amount of things within the application, to make it easy to use and accessible - to do few things perfectly, rather than several things averagely. This was touched upon in

final presentation feedback, and was considered one of the more useful tools within the application, for both men and women. In terms of future developments, I would like to explore this option further and provide a balance in the app that makes it appeal to both male and female young adults.

Although I have prototyped this application to begin in Topshop stores, it could be implemented by any brand in the future as success grows as new technology such as NFC tags become more readily available and cheaper to install.

If I were to carry on this retail experience into next semester, I'd like to look at expanding the user of NFC tags. From recent social issues such as the collapse of a factory in Bangladesh, it is clear there is a need to alert to buyer to where their clothes have come from. The tag could include more details as to where the clothing was manufactured and ensure the buyer knows exactly where their clothes come from, making fashion companies act more responsibly in terms of manufacture. I would also order NFC tags and attempt to code the data onto the tag in order to prototype the whole experience, not just the application.

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Image References

All background images within the application design:
"Topshop Street Style Images." Photo. *Topshop Tumblr* 2013.
<<http://topshop.tumblr.com>>.

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