



SETTING

PROJECTS IN CONTEXT

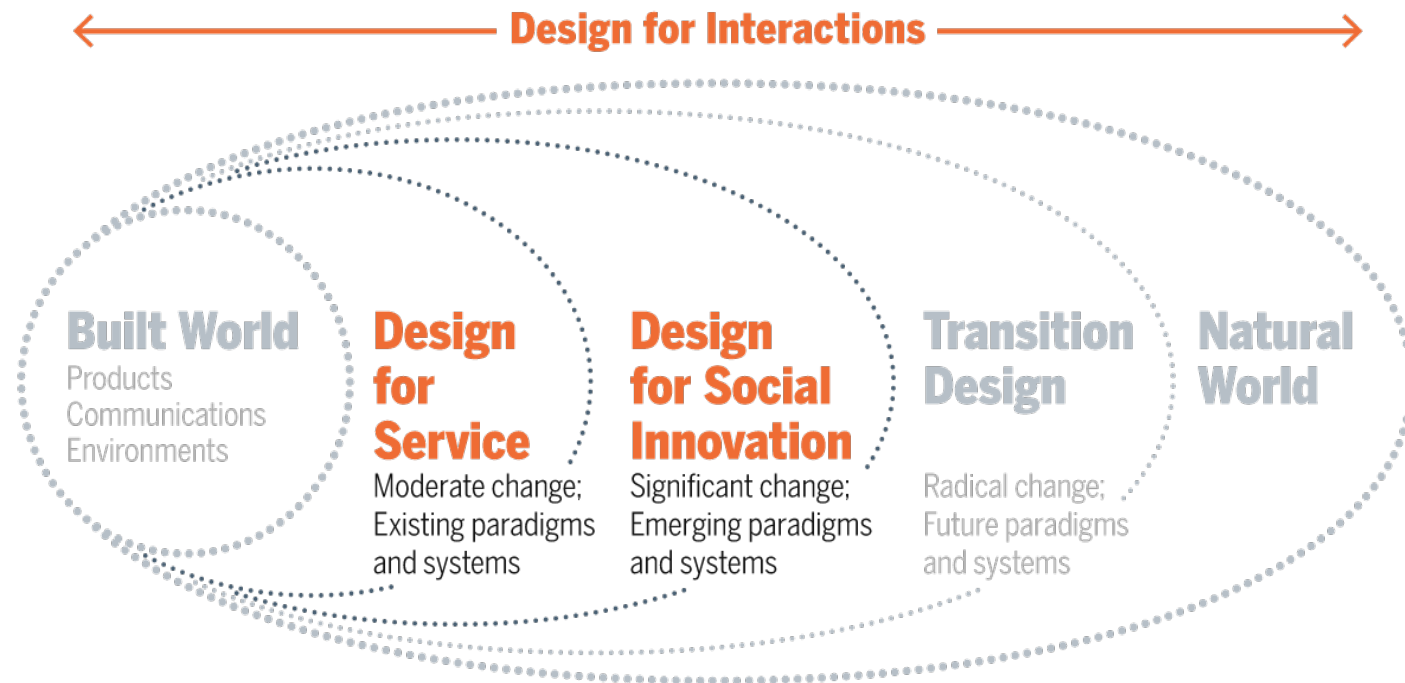
NIS AND OBM

Alma Leora Culén
February 23, 2022
IN3010Transition Design

Presentation Outline

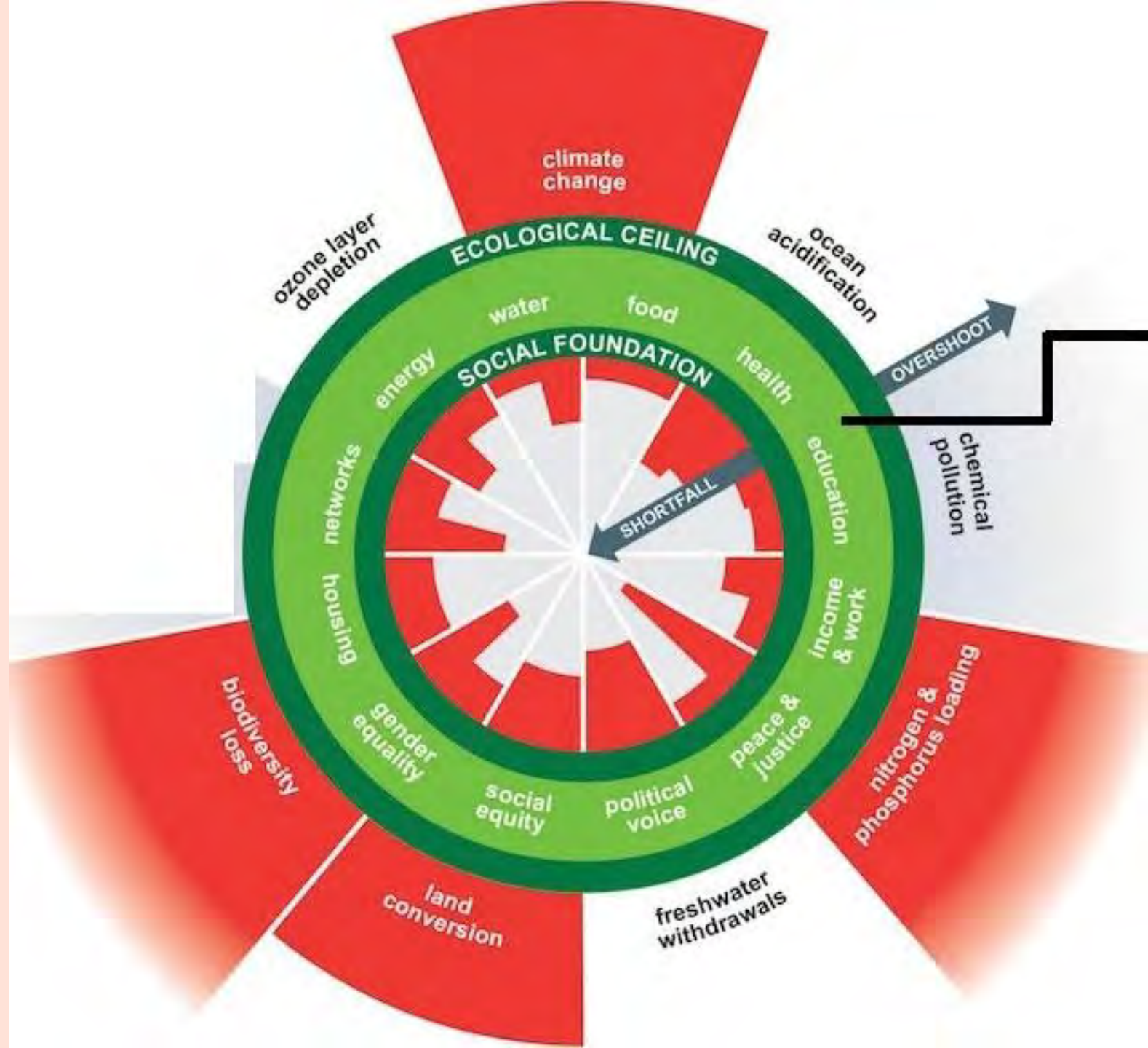
Based on my previous, related work

- Introduction (motivation and aim)
- Background (previous work)
- Method
- Findings



Source: Terry Irwin, CMU

Introduction



1) NIS

Fashion

Based on the paper with Swati Srivastava
**GEN MZ TOWARD SUSTAINABLE FASHION PRACTICES -
ALTERNATIVE SERVICES AND BUSINESS MODELS**

2) OBM

Toys

**GROWING UP
IN A COMPLEX
WORLD**

FUN

LITTLEBITS

CREATIVITY THROUGH
TECHNOLOGY

NIS

Clothing – young people (high school)

What You Wear May Be Hazardous to the Planet – Apparel as an Environmental Hazard

11/12/2017 06:51 pm ET | Updated Nov 22, 2017

THE APPAREL INDUSTRY

By the Numbers

68 POUNDS

The amount of clothing that the average American discards each year, 85% of which ends up in landfills or incinerators.

4%

The percentage of global landfills that are filled with clothing and textiles.

700 GALLONS

The amount of water it takes to produce a single cotton T-shirt.



2.6%

The percentage of global water used for growing cotton.

99%

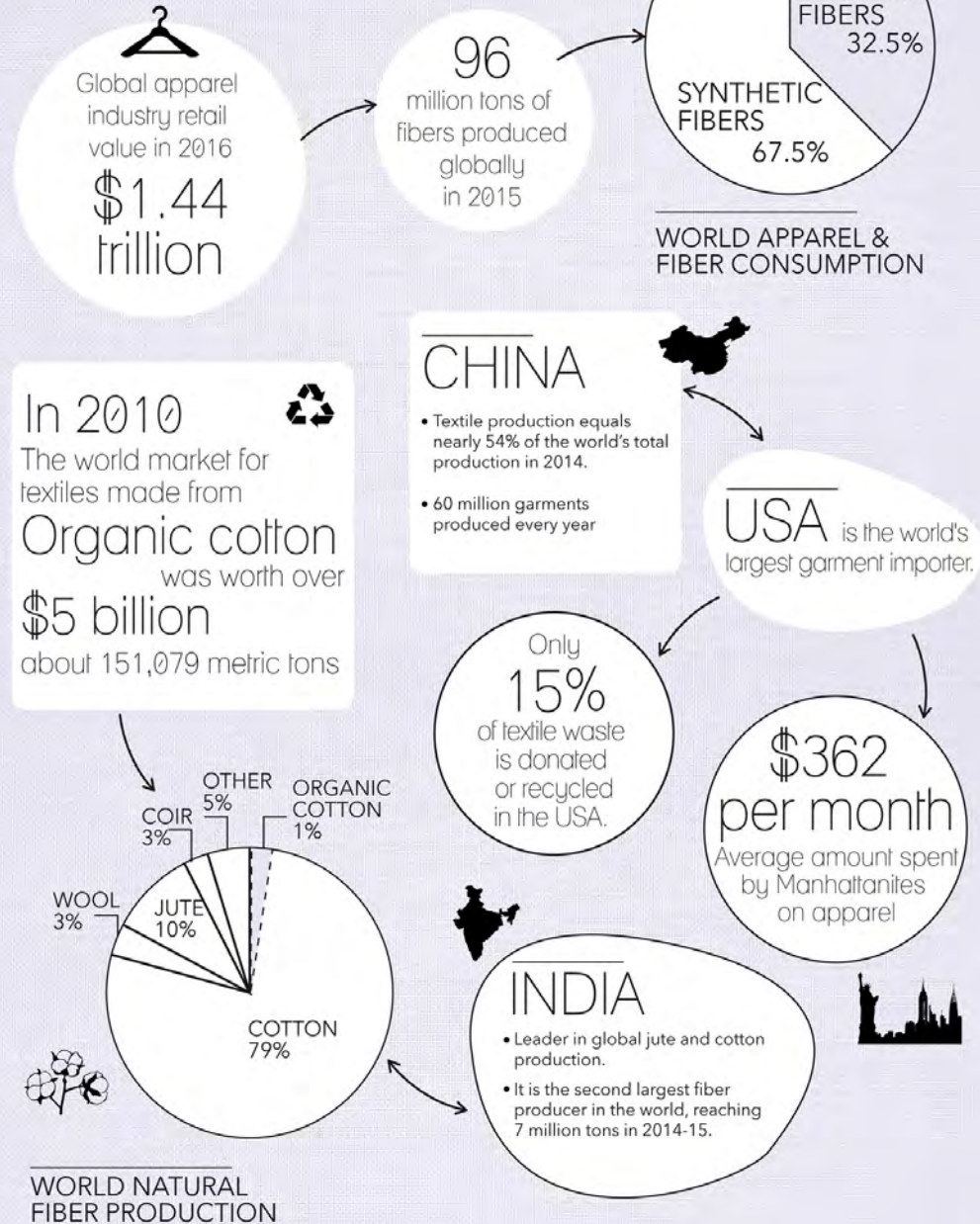


The estimated percentage of used clothing that is recyclable.

CONSCIOUS COMPANY MAGAZINE - <https://consciouscompanymedia.com/the-new-economy-your-clothing-isnt-as-sustainable-as-you-think/>

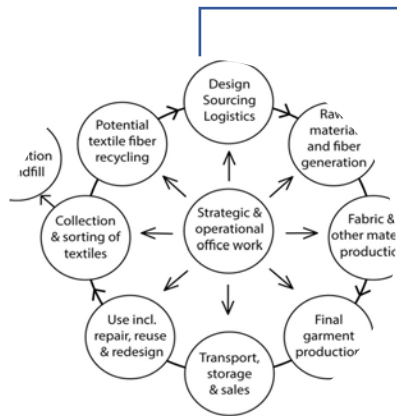
85% of clothing ends up in landfills.

WHAT YOU NEED TO KNOW ABOUT THE FASHION INDUSTRY





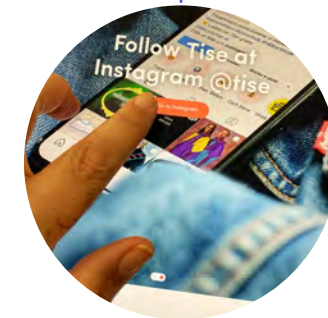
Re-think unsustainability of fashion industry



Life-cycle stages of fashion and its use



Business models



Services (ICT support)

Life cycle stages

Growing plants or making fiber
Manufacturing
Distribution
Disposal

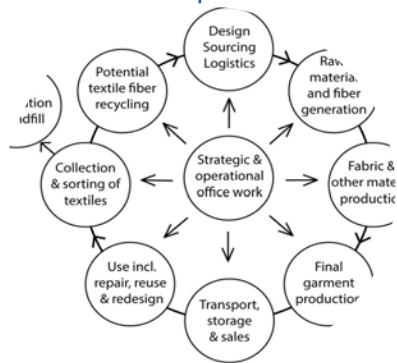


Use

User awareness
Behavior



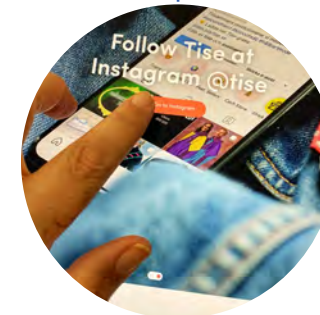
Re-think unsustainability of fashion industry



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Services
(ICT support)



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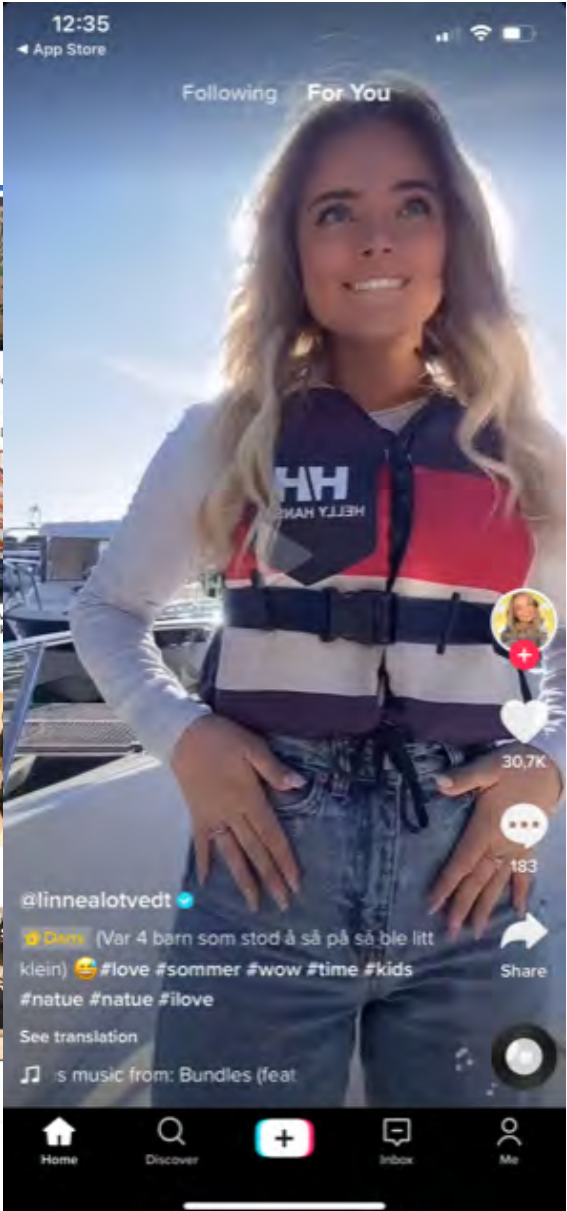
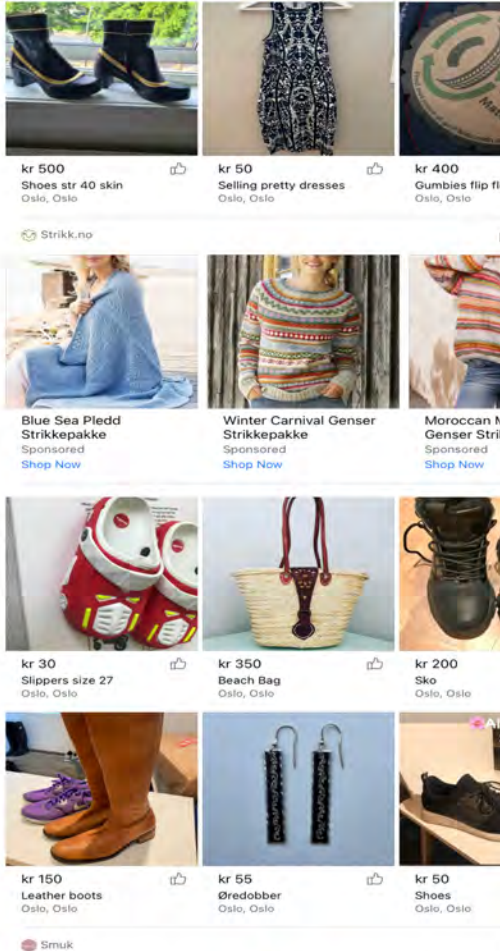
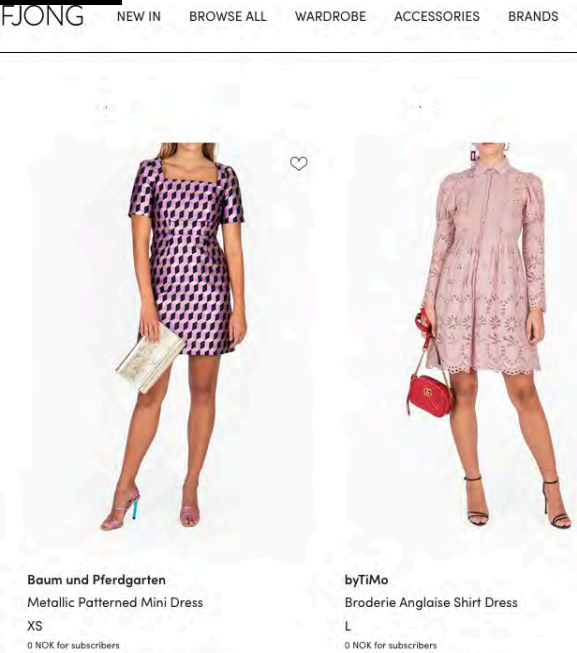
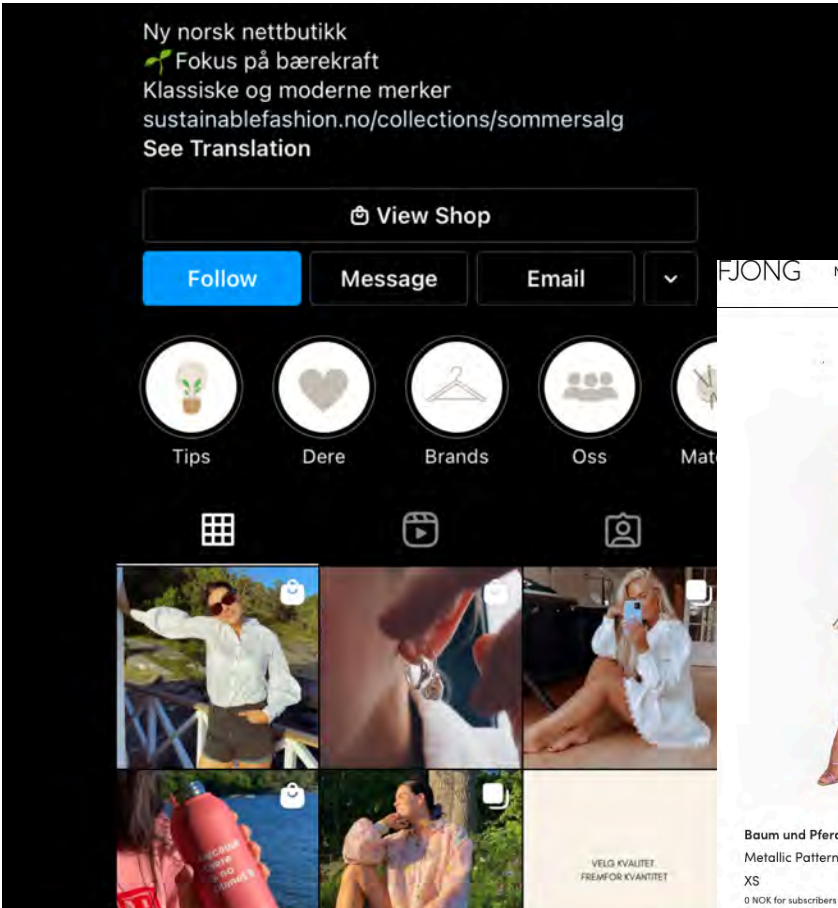
A smiling woman with blonde hair, wearing a light-colored button-down shirt, holds a wooden crate filled with folded clothes. She is in a boutique or clothing store, with racks of clothes and shelves of accessories in the background. A semi-transparent orange banner is overlaid across the middle of the image.

GEN MZ! Why? They consciously seek solutions to global problems!

MZ generation (Gen MZ) is a combination of Millennials and Generation Z.
Millennials are a broad category that differs depending on who you ask, usually, anyone born from 1980 to 1995
Gen Z covers anyone born from the mid-1990s to the early-mid 2000s.



Gen MZ created alternatives for shopping, using shared economies (Fjong), Instagram, TikTok Facebook, and YouTube to shop, and influence others





SUSTAINABLE HAUL 🌱 reformation, re/done, vintage

1,089,782 views • Nov 8, 2018

48K 295 SHARE SAVE ...



bestdressed ✓
3.78M subscribers

<https://www.youtube.com/watch?v=Wvp50gSvVNw>

SUBSCRIBE

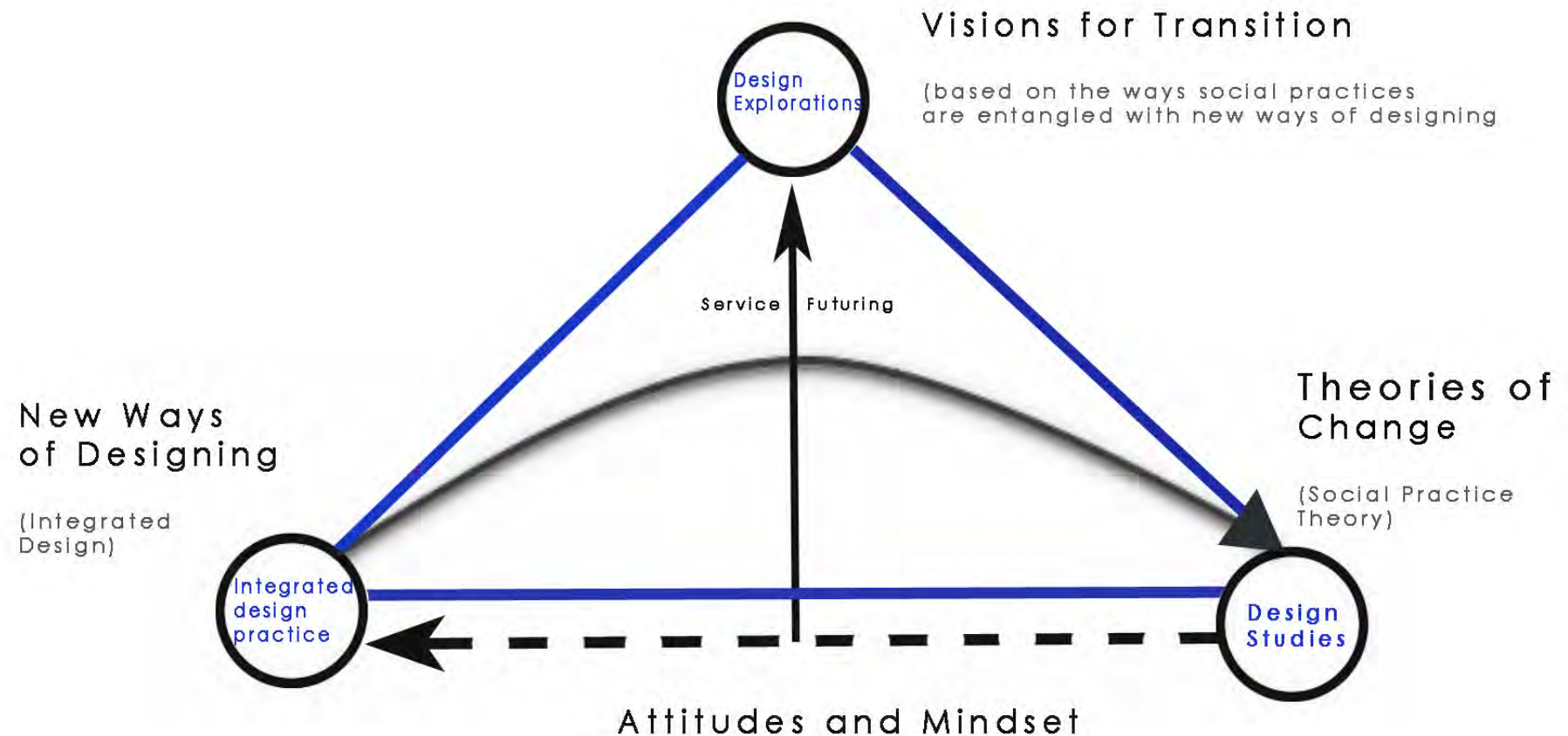
How to proceed

- 1) Look into your mindset and posture
- 2) Frame your research and design context
- 3) You are designing for **change** – so know where you want to be after the change (vision)
- 4) Look for examples of previously published work that relates to defined context
- 5) Look for design exemplars (by others) and design ideas for your projects (within the context you decided on)
- 6) Proceed with methods of choice to define what you will do, and how the change might be supported
- 7) Be pragmatic in design, but also use critical thinking to assess

Designing for change

To counter the challenges within the fashion industry:

- Slow fashion
- Consumers' behavior change (Becker-Leifhold, 2018; Brewer, 2019)
- Transition design (Kossoff, 2015; Irwin, 2018)



FRAMING

There is a knowledge GAP!

Gen MZ's perspective and possible influence on the future of more responsible consumption is not fully explored.

CHANGE

Find out the opportunities for design for change and explore

After explorations, make up your mind as to what is worthwhile and proceed to see what theories of change could apply (to make your design more likely to gain acceptance at the social level, consider design and designers responsibility)

Previously published work

- McDonald and Oates, (2006)¹ – Gen MZ's preferences for green
- Niinimäki and Hassi, (2011)² – importance of personal and cultural factors
- Hanss and Böhm, (2012)³ also studied Norwegian consumers and their attitudes to fashion industry
- Khandual and Pradhan, (2019)⁴ – upcycling, no waste

¹'Sustainability: Consumer Perceptions and Marketing Strategies', Business Strategy and the Environment, 15(3), pp. 157–170.

² Emerging design strategies in sustainable production and consumption of textiles and clothing', J. of Cleaner Production, 19(16), pp. 1876–1883.

³ Sustainability seen from the perspective of consumers', International Journal of Consumer Studies, 36(6), pp. 678–687.

⁴ Fashion Brands and Consumers Approach Towards Sustainable Fashion', in Muthu, S. S. (ed.) Fast Fashion, Fashion Brands and Sustainable Consumption. Singapore: Springer (Textile Science and Clothing Technology), pp. 37–54.

Relevant work within Sustainable Interaction Design

Pierce and Paulos, (2011)¹ – disposal and re-use, users' involvement *from within* the communities of practice

Odom et al., (2009)² – attachment, meaning, function, materials

¹ Secondhand Interactions: Investigating Reacquisition and Dispossession Practices Around Domestic Objects, CHI '11, pp. 2385–2394.

² Understanding why we preserve some things and discard others in the context of interaction design, CHI '09, pp. 1053–1062.

Zygo

SERVICE VISUALIZATION

Zygo

Provides you with durable, affordable, second hand goods & familiar young aspiring community of people, helping each other manage a self reliant life

PLAN & MANAGE TRANSIENT, SELF RELIANT LIFE

Get resources & information tailored to your needs

PEOPLE

YOUTH AT HOME



BUSY FRUGAL NOMAD



STEADY INDEPENDENT MOVER



FAMILIAR

POSSESSIONS



ENGAGE IN HONEST, SECOND HAND MARKET

Designed for reduced efforts and hassles

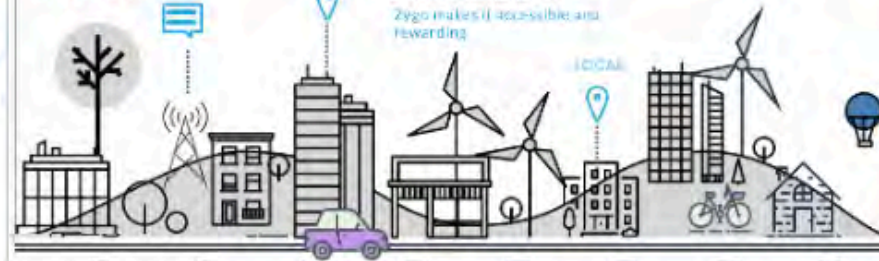
ASSIST & EMPOWER

Connect with your local, driven and young community

PLACE

MAKE AFFORDABLE & GREEN CHOICES

Zygo makes it accessible and rewarding



PRINT ADVERTISEMENTS



Figure 3: Display of brand identity and values through print medium

MOBILE APP PROTOTYPE



RADIUS

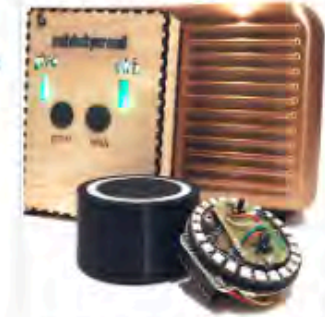


Figure 2: Digital prototype to aid the user's internal negotiations before engagement

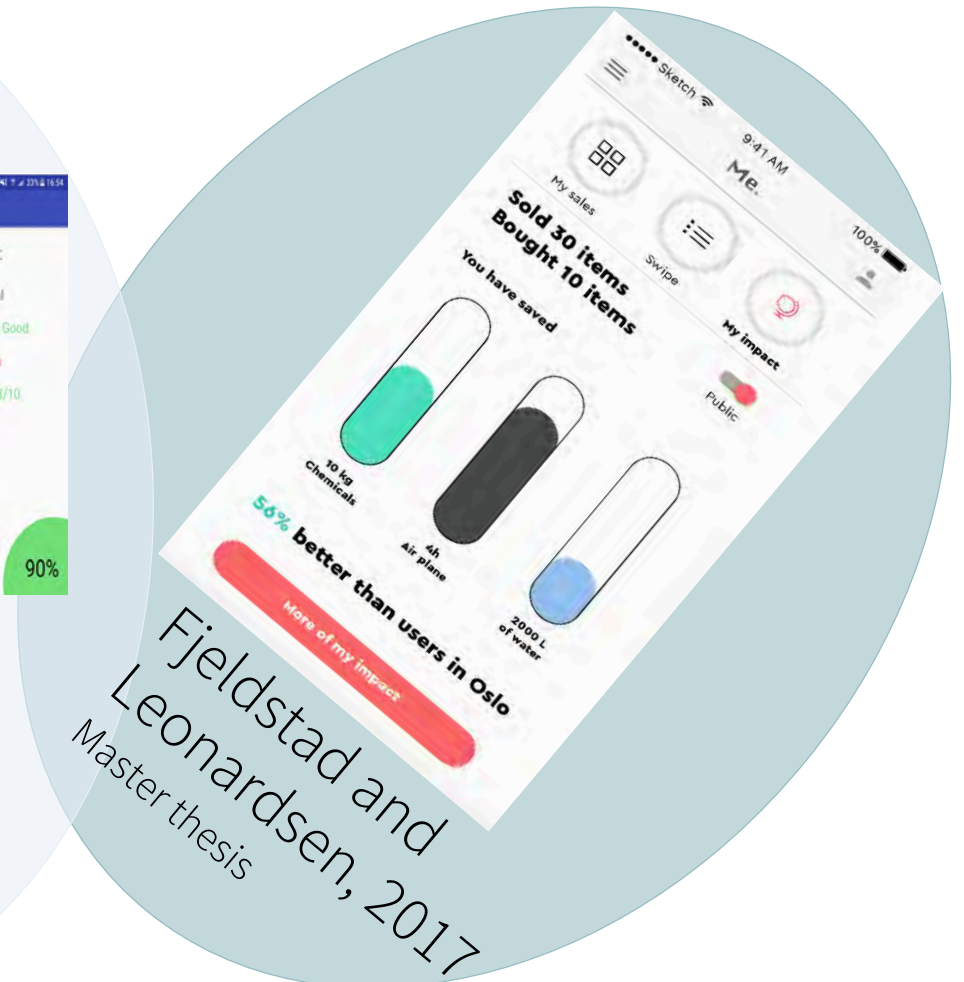
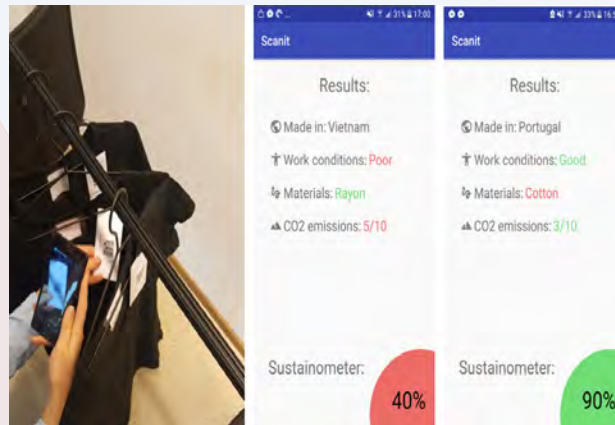
CONCEPT VIDEO



Figure 4: Animated customer journey video

Figure 5: Service visualization, depicting value landscape of Zygo

4) Related design projects that we supervised



Hilde, 2019



Specific community
Transparency of making
Transparency of time use
Determine the price yourself
Communicate clearly with users
Communicate about designer
No store – events sale

Hilde Maria & Ida Falch (HAIK)

Method – qualitative approach

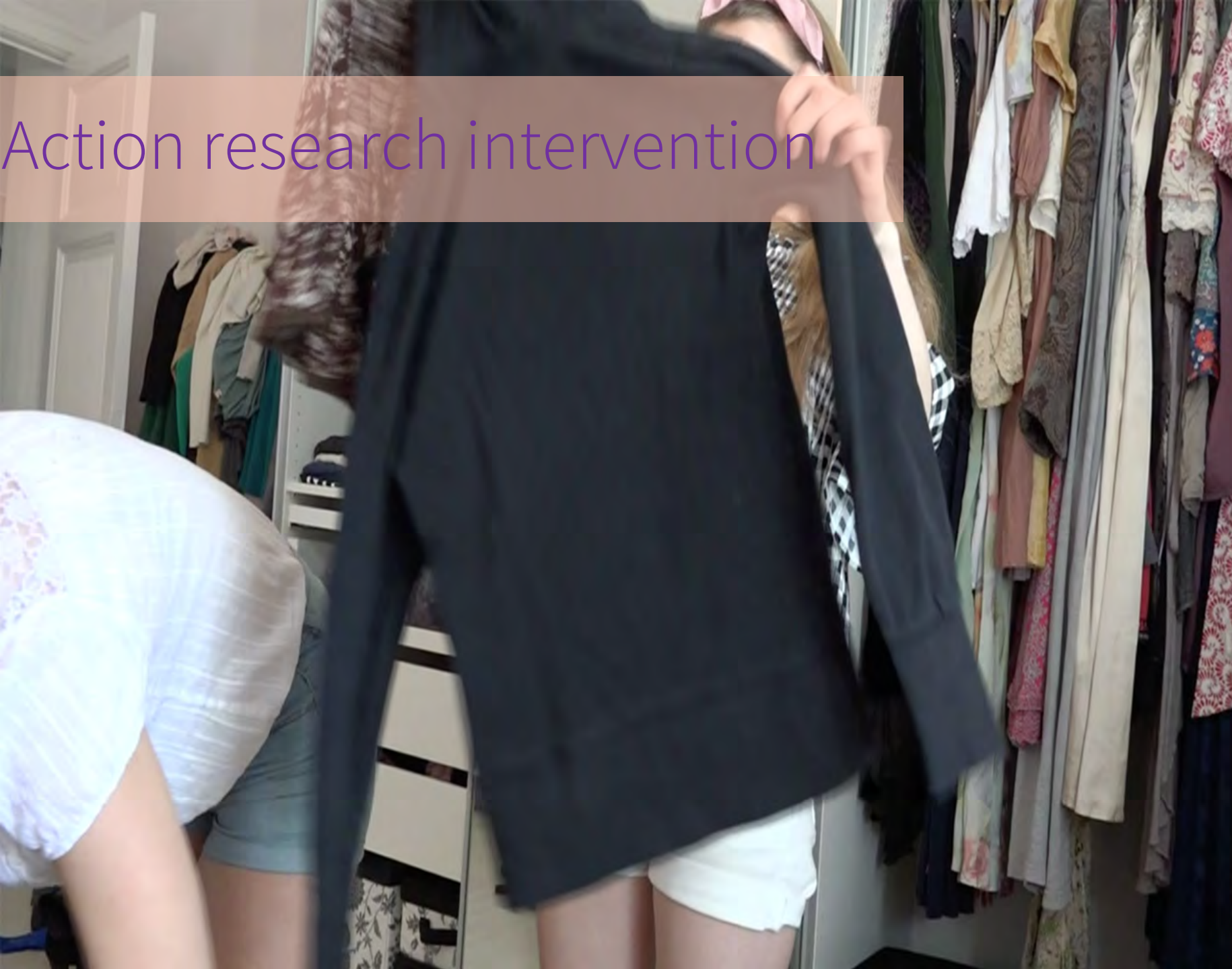
Methods:

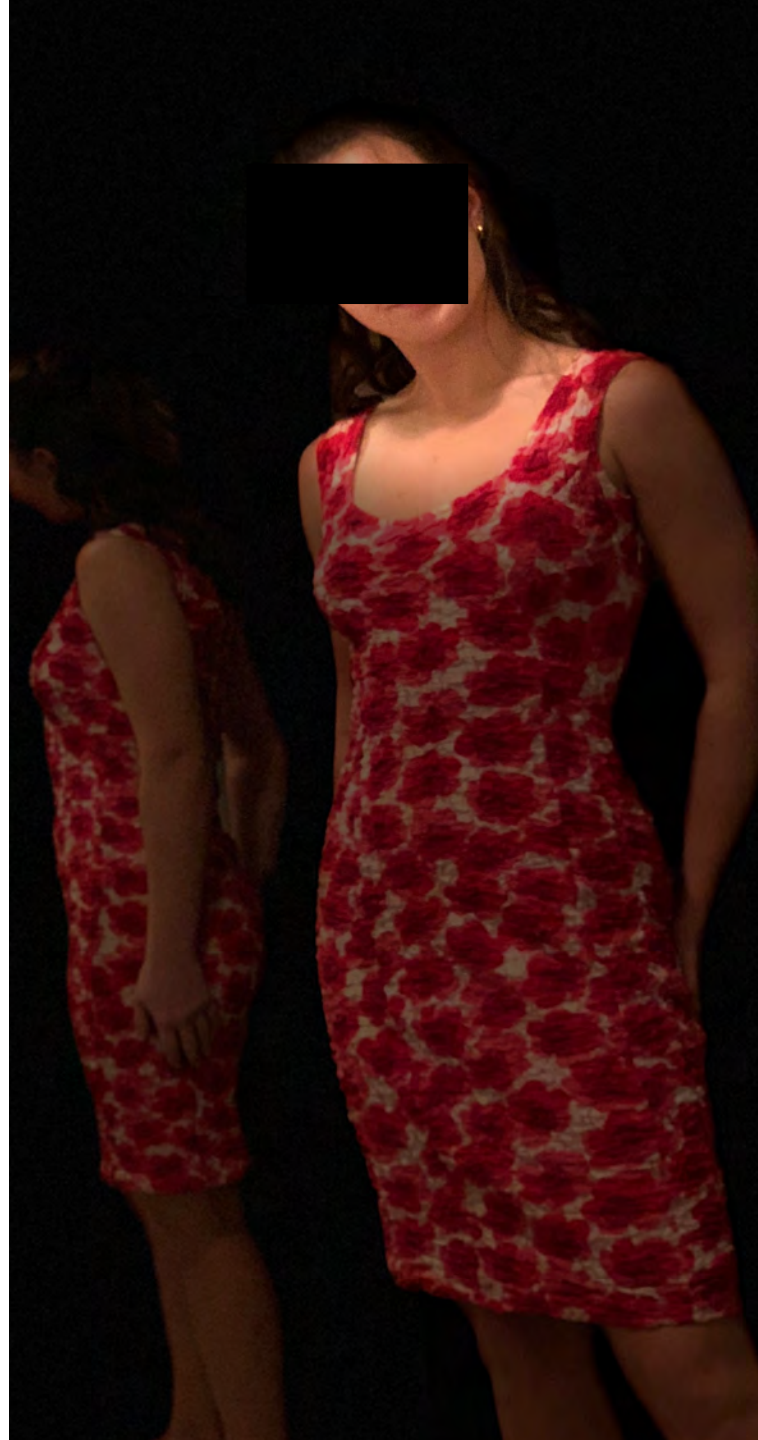
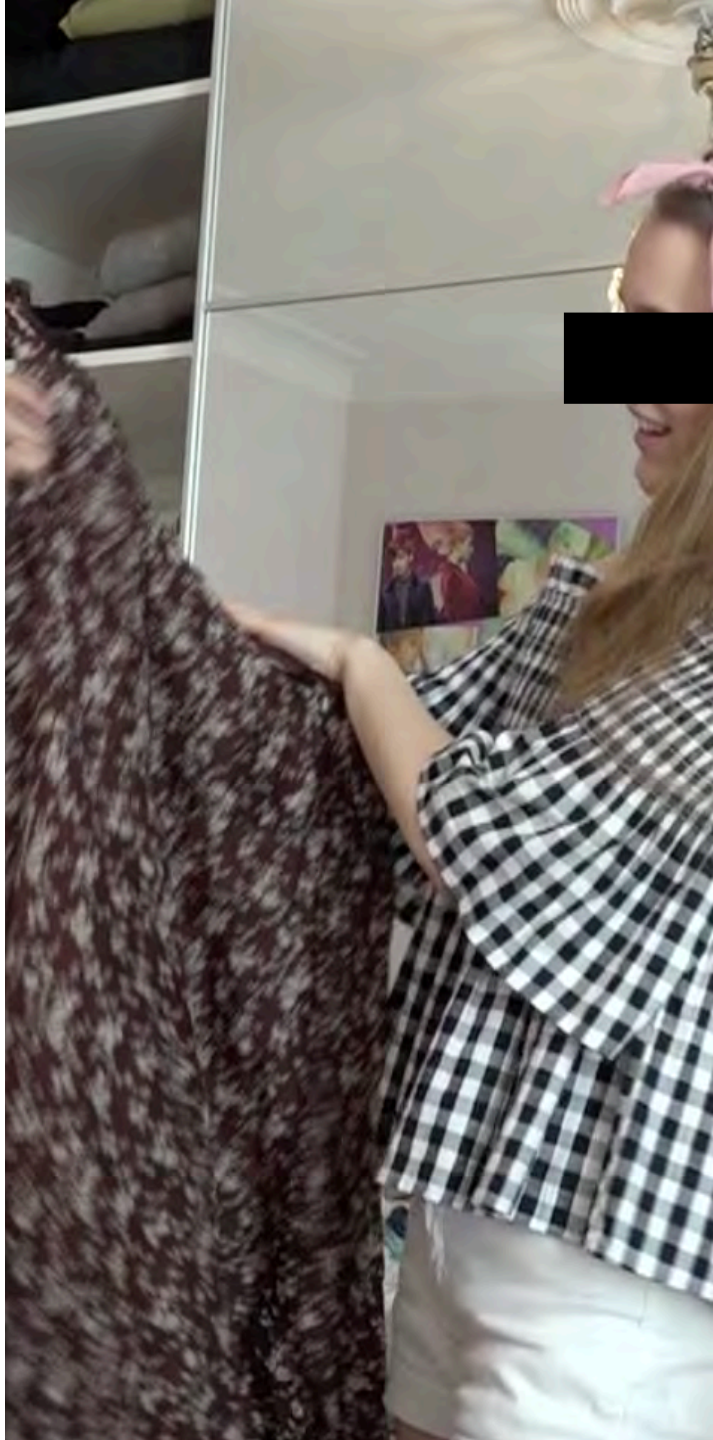
- *Action research intervention* (4 participants, all female, notes taken, the first session featuring 2 participants videotaped with consent, others not videotaped. Thus, video analysis was not done, just the analysis of notes.)
- *Open questionnaire* (replacing interviews during corona virus pandemic – 10 participated out of 25 invited of both genders and gender approximately balanced)

Participants:

Gen MZs, already engaged with sustainability, perhaps through the course in transition design, education in design, or documented engagement otherwise.

Action research intervention





Open questionnaire

Clothing practices – Rapport - Nettskjema

<https://nettskjema.no/user/form/submission/report.html?id=199627>

Rapport fra «Clothing practices»

Innhentede svar pr. 28. april 2021 13:01

- Leverte svar: **10**
- Påbegynte svar: **0**
- Antall invitasjoner sendt: **0**

1. What do you think about when buying a new piece of clothing?

- The quality of the fabric. Where the product is made. How i intend to use the clothes
- Do I really need it? Which material, and how is the quality? Does the fabric feel cheap or exclusive. Care instructions. I always check the seams. Where is it made? Does it fit my bodyshape and is it comfortable. Does it bring me joy. Price. I mainly prefer second hand. 90-95% of what I buy
- I think about usage (how much will I use new piece of clothing), I think about price and price in relation to how much I like the clothes. Now, I also think a bit more about sustainability and if I really need the new clothing and if its worth it.
- Does it fit well and look good/appropriate
- The quality of the fabric (i.e. not synthetic, but rather nature fibers), how many times/how long I can wear it, is it a trend or more long lasting
- Whether it's something I really need.
- Fit, fabric, durability, price and source
- Sustainability, how it looks on me :)
- If it works with my wardrobe, if its a little unique
- 1. Whether I need it or not 2. The price 3. How does it go with the rest in my closet Ideally I would like to think more about the production of the product, but that always seem so abstract.

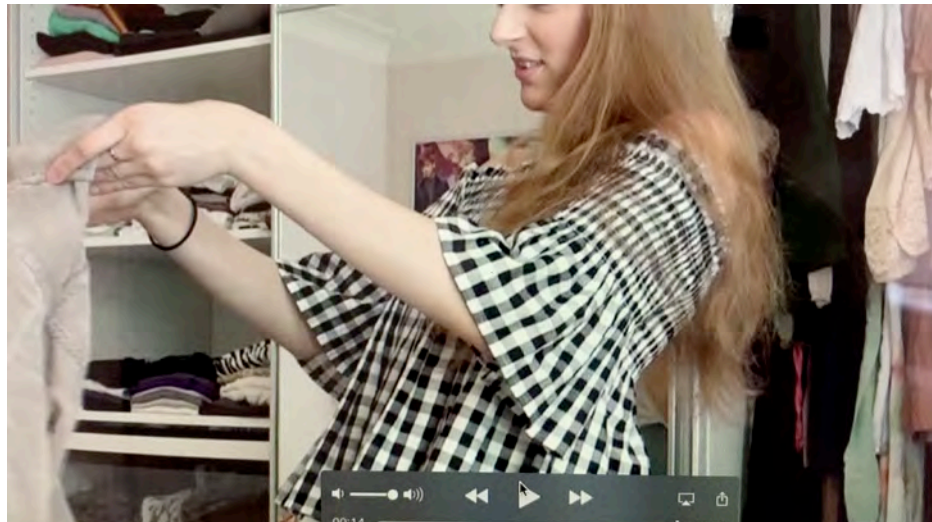
2. Do you have pieces of clothing that you have used for a long time? How old is the oldest piece you have? What motivates you to keep it?

14 open questions (often with sub-questions)
Fully anonymous
Randomized order of answers for each question

Findings

Action research intervention

- Participants 1 and 2 engaged with clothing in-person, before the pandemics. Their way of being sustainable in the context was to not add any new items to their wardrobes.
- Participant 3, the video conferencing participant, had a green brand preference and no interest in buying/renting or trading/borrowing. The items she wanted were selected from giveaways.
- Participant 4 was happy with many free things and of the four participants, she spent the longest time selecting items. She took most of the giveaways: *“This is great, I can give some of these to friends also, they look new. I love stuff like this and what turns out not to fit me, I have someone else to hand it down to.”*



Looking at a viscose dress, Participant 1 said: “*Maybe this? No, this is not me.*” - in agreement with research highlighting the personal dimension of fashion.

When asked if anything would make any of the options more appealing, she replied in the negative: “*Gosh! I have so much stuff myself,*” pointing to the overconsumption problem.

Participant 2 responded similarly.

Participant 3 chose sustainable garments for personal use.

Participant 4 was going to potentially share, engage in re-design and upscaling, confirming the literature findings that Gen MZ is open to such opportunities (Participants 1 and 2 also mentioned re-construction and upscaling).

Jointly, participants

- showed no interest in the shared consumption (borrowing, renting, or trading) of ordinary, everyday clothing. Rental for special occasions was seen as potentially positive. They were worried that garments could get accidentally ruined, or that picking up and returning items would be inconvenient: “If I think of borrowing, I think that things would be a hassle with returning and so on, so it is best to buy [own].”
- were not sufficiently interested in buying secondhand clothes, consistent with the findings from the Conserve and Consume student project, but were not closed to the idea – actually, better services would be important in prolonging life-time of clothing
- participants provided clues as to what services would be desirable from their perspective - discussed in implications for design.

Open questionnaire

Analysis categories

1. understanding the unsustainability
2. creating sustainable practices
3. what interested participants most concerning sustainable fashion.

Findings

1. *Transparency* of production is still one of the main barriers (*“Ideally, I would like to think more about the production of clothing, but that always seems so abstract.”*).

Sustainable everyday practices around clothing understood as *buying only when there is a real need* for an item of clothing.

Secondhand stores are the main venue *for disposal*, but not for acquisition. Here, there is room for improvement of linking between the two, as also discussed in the context of durable goods in Zygo or the work by Pierce and Paulos.

2. *Luxury fashion and luxury rentals* seen as *good sustainable alternative practices*.

Upcycling, restyling, or reconstructing were viewed very positively, but the question of skills was brought up by most participants. However, the majority was open to learning, being part of the community doing such things etc.

3. Need for a *systemic change* (*“I think the entire fashion industry needs a major systemic overhaul, from the rate of change with fashion houses outputting a minimum of two collections a year to fast fashion existing at all. I’m curious to see what kind of model can be built that keeps fashion interesting without making it financially inaccessible to the working class on the one hand and destroying the environment on the other.”*

‘Hauls’ on the internet *are problematic*.

Greenwashing and *mistrust* of green brands are problematic. *Regulatory work is desired*.

Focusing on Style (rather than trends) seen as a way to avoid the *fast fashion trap*.

Emerging technologies are interesting and might have *an impact towards more sustainable practices*.

Implications for design

Luxury rentals made sense economically, and related services need to provide quality, *age-appropriate rentals and platforms*.

Many participants said that they would use secondhand clothes for *DiY re-construction*, or at least easy upcycling or restyling. Skills for this need to go beyond the ability to fix a missing button.

Workshops to gain or improve skills can be a service on offer. Such practices have a potential to increase the attachment and prolong life of textiles.

Trading for items that would better match favorites – closed services like Zygo could be used to search for items to trade

Styling advice for a small fee “*Maybe even, an idea would be to make an app where a stylist would help people to select clothes from their own wardrobe that fit well together – sometimes the potential of this is missed.*”

A service offering a *wardrobe reduction* by selecting sustainable items whenever possible would be desirable

Appropriate *age group pathways linking*

Installation and space

Several people interact among themselves and with technology/materials

Interactions should be designed to approximate the intent - tested in many versions

How clear and explicit the intent should be made

If element of fun through games is desired, find out what type of gamification could work well

(Hauls – make your own haul – for example, playing the sustainability game with clothes found at the installation); in space (like a library), things like geo-caching; role-playing games; clothes shifting games; detectives etc....)

OBM

Growing up in the complex world

(paper with Katie)

ACCUMULATIVE
INSTALLATION

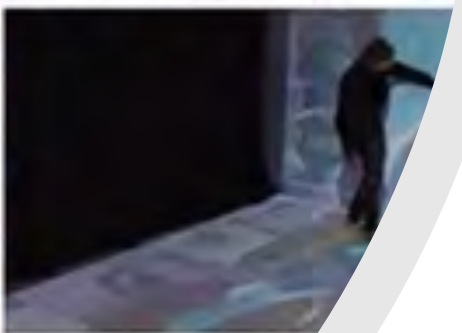
G R A T E

TO

xzaliya

FULL BUT FAR
COME BACK TO EARTH

and 9th



MAY
27

Public + Hosted by

Critical and Speculative Design

Speculative and critical design for children

1. To enable children to understand (at the appropriate level for their age) complex issues concerning the world around them
2. Scaffolding sustainable practices *I think that the question that we human beings must face is that of what do we want to happen to us, not a question of knowledge or progress.* Umberto Maturana. 1997. Meta design: human beings versus machines
3. Support critical thinking practices *One of the things that modern society has damaged, along with ecosystems and species and the global climate, is thinking* Timothy Morton. 2010. *The ecological thought*. Harvard University Press.

Challenges

Speculative and critical design for children not implemented because

1. Children have no analytical capabilities before the age of 9
2. Overprotection
3. Watering down

Challenges

The space of implementation

1. Events might have many visitors at the same time – do not think a single child
2. Parental engagement and engagement with others
3. Special circumstances, such as pandemic (closeness, touching the same objects)

Two examples

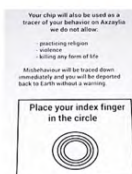
APPLICATION PROCESS REMIGRATION TO XYZ

▶ SCAN YOUR DNA USING THE TABLET



YOUR FINGER'S UNIQUE PATTERN TELLS US
ABOUT YOU AND BASED ON THAT YOU ARE
HERE ALLOWED TO XYZ OR NOT.

▶ IF YOU CAN GO, PRESS YES, AND THEN A CHIP IS IMPLANTED TO YOUR FINGER.



Methods - moodboarding



News / World
Endangered Asiatic black bear photographed on North Korean border for the first time

By News Staff | 12:30pm May 10, 2019



ENDANGERED



The Day: Last Loa Water Frogs

to breed the species in captivity because their habitat



World Bank/Curt Camermark



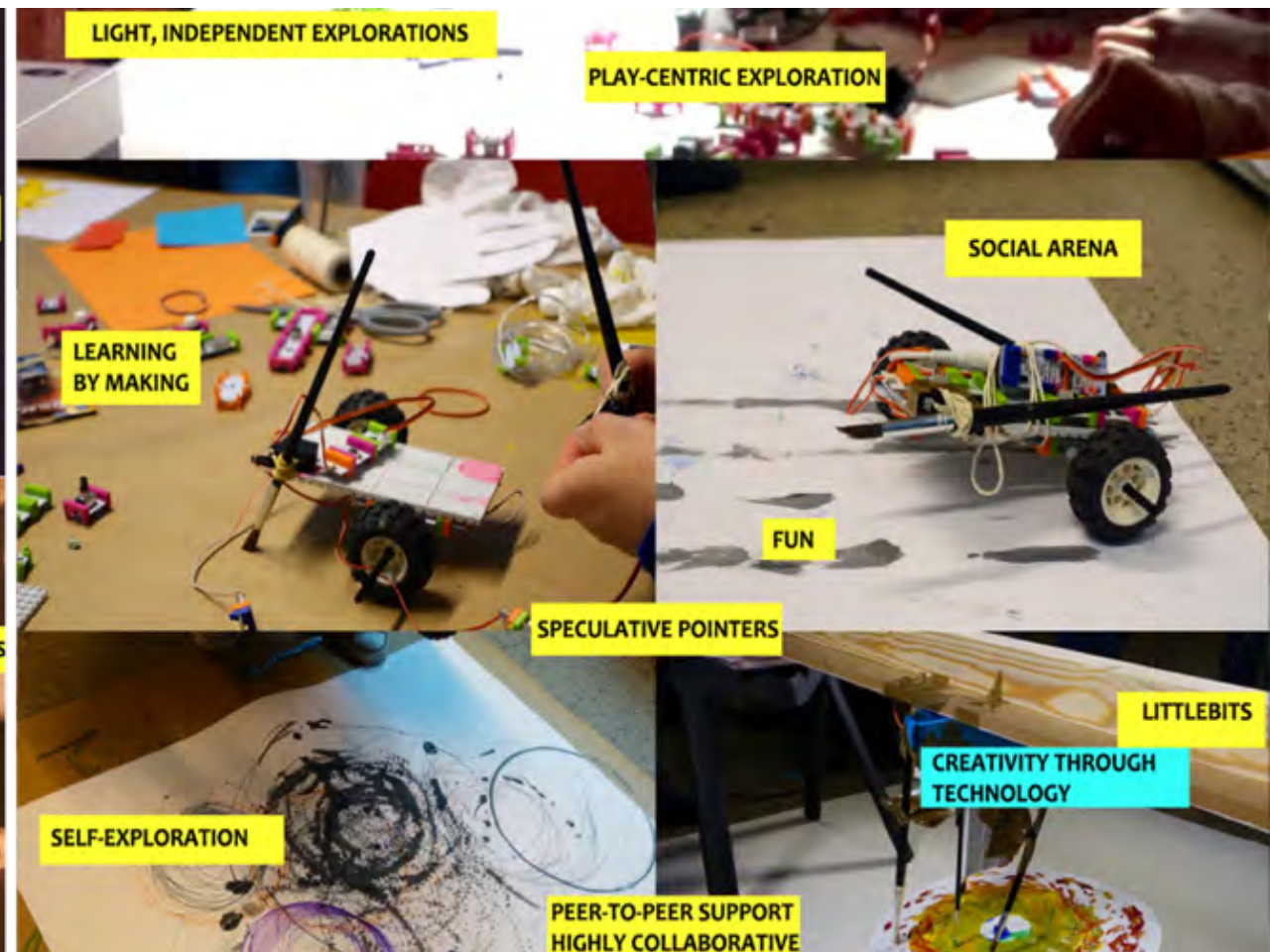
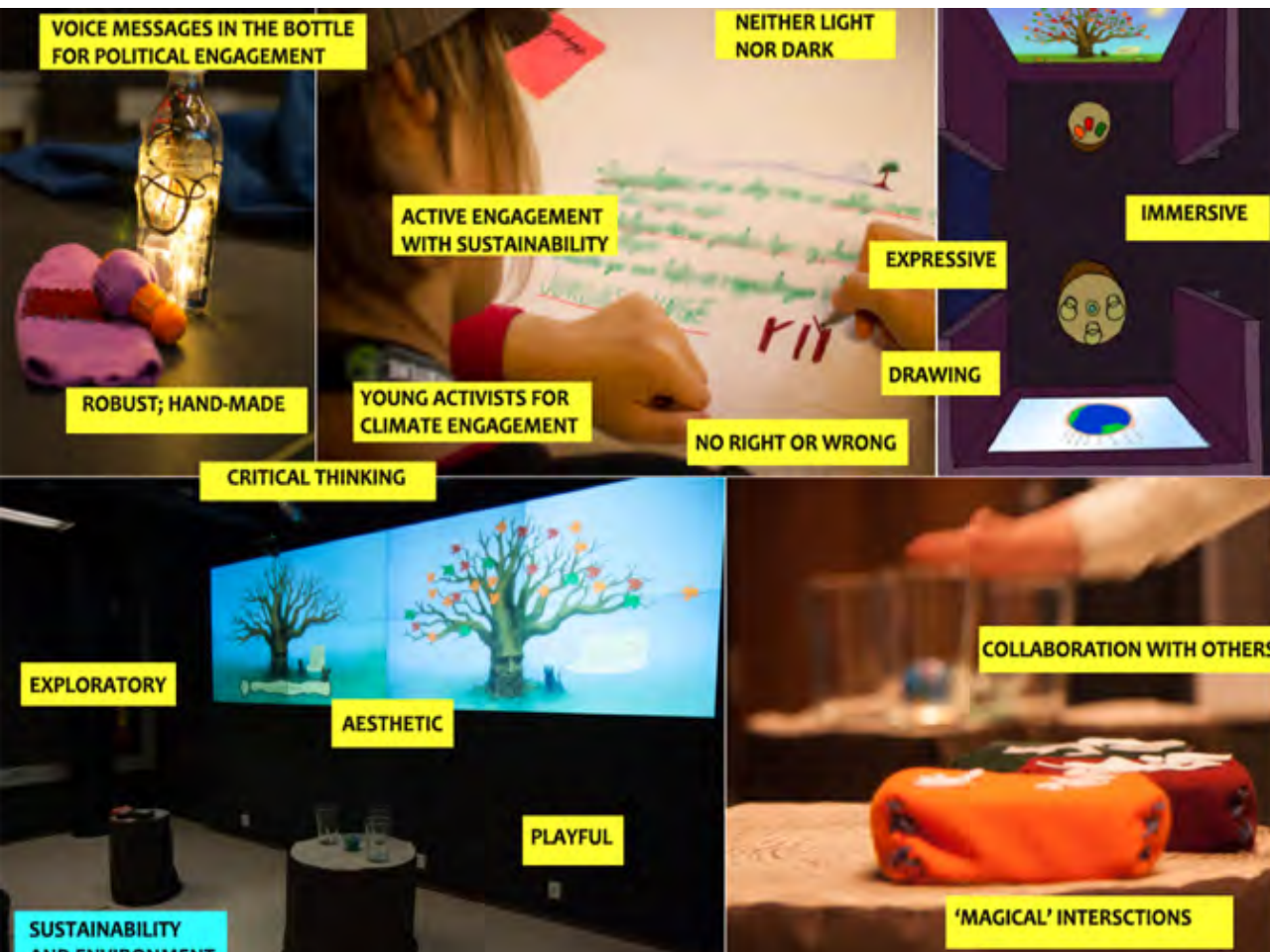
Bees: how important are they and what would happen if they went extinct?

August 14, 2019 12:00 PM EDT

Darkness scale

Compare the moodboards

Methods – annotated ideas or finished prototypes



Framework

Four-component framework for making speculative installations for children:

1. Darkness scale
2. Scaffolding participation
3. Speculative pointers
4. Making links between the present and the future (a form of critical thinking that many kids can engage with at an early age)

Contributions

1. The framework
2. Scaffolding critical thinking at an early age
3. Possibly a transformative space

Thanks!

Ask questions whenever!