

RE:FLEX

innovation . materials



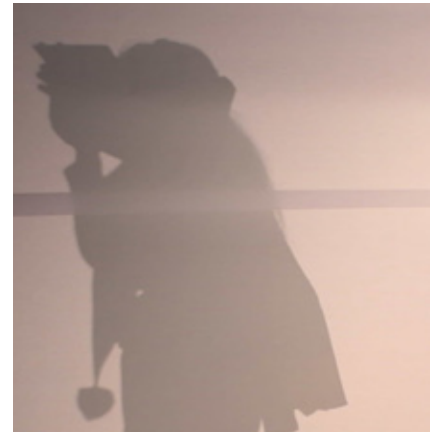
STROOM

recycling . electronics



SEXUALITEA

experience . fetish



OBJECTO CEPTION

experimentation . perception



CODEX

mechatronics . aliens



SMART RODS

software . teaching



REALNESS

chair . drag



DRAG DESIGN

writing . gender

2019
11 weeks
4 people

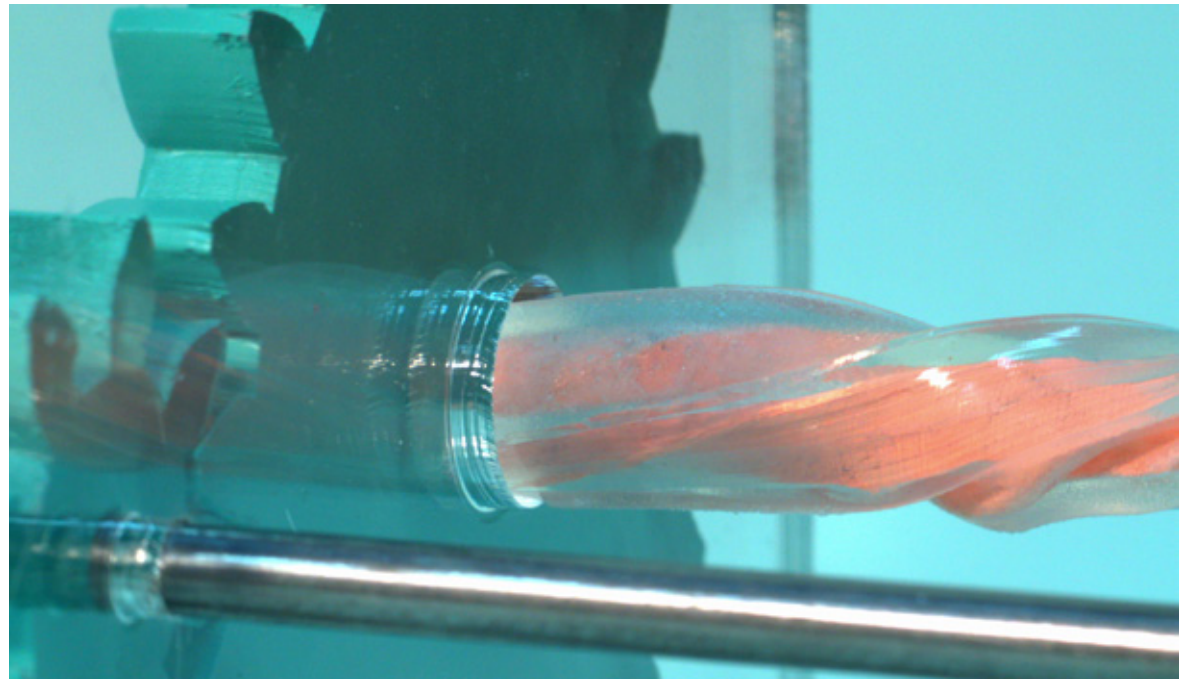
RE:FLEX

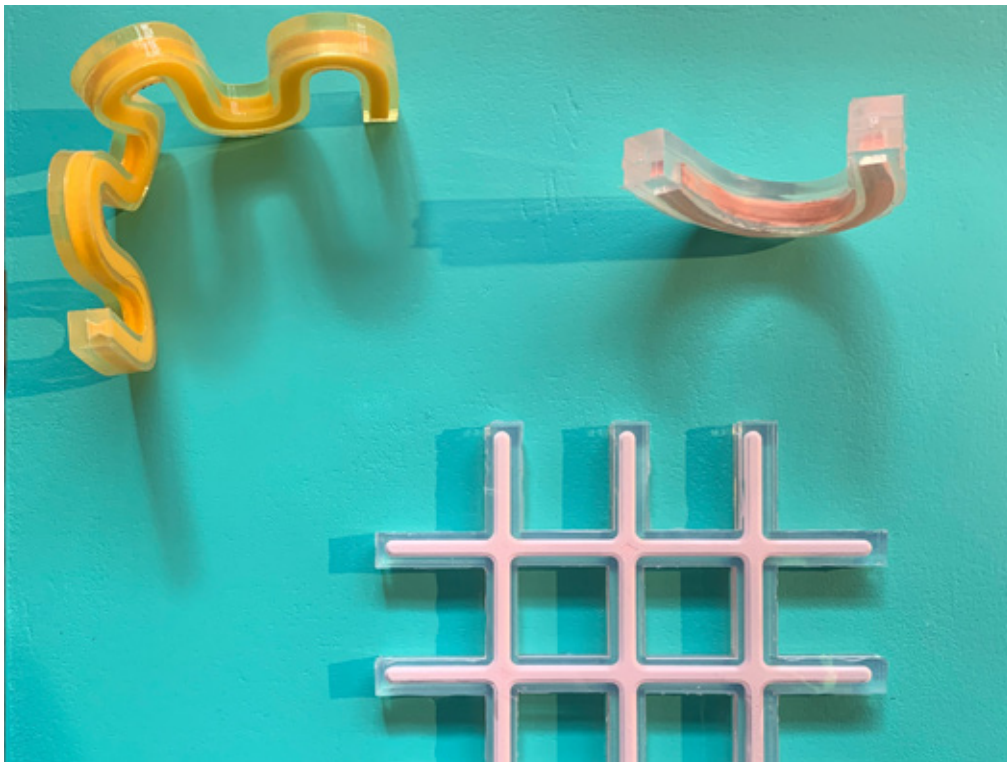
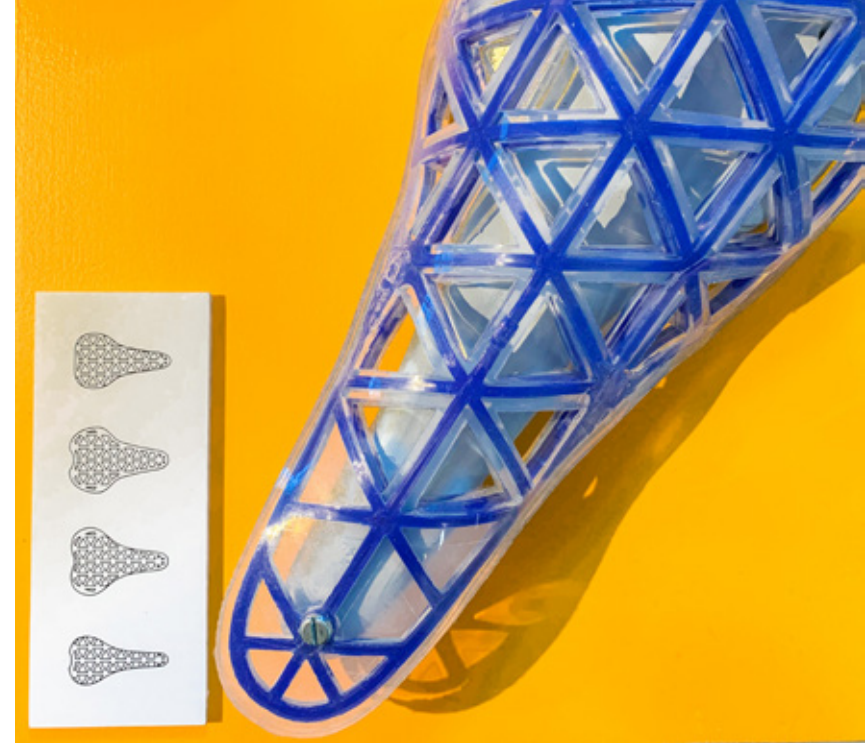
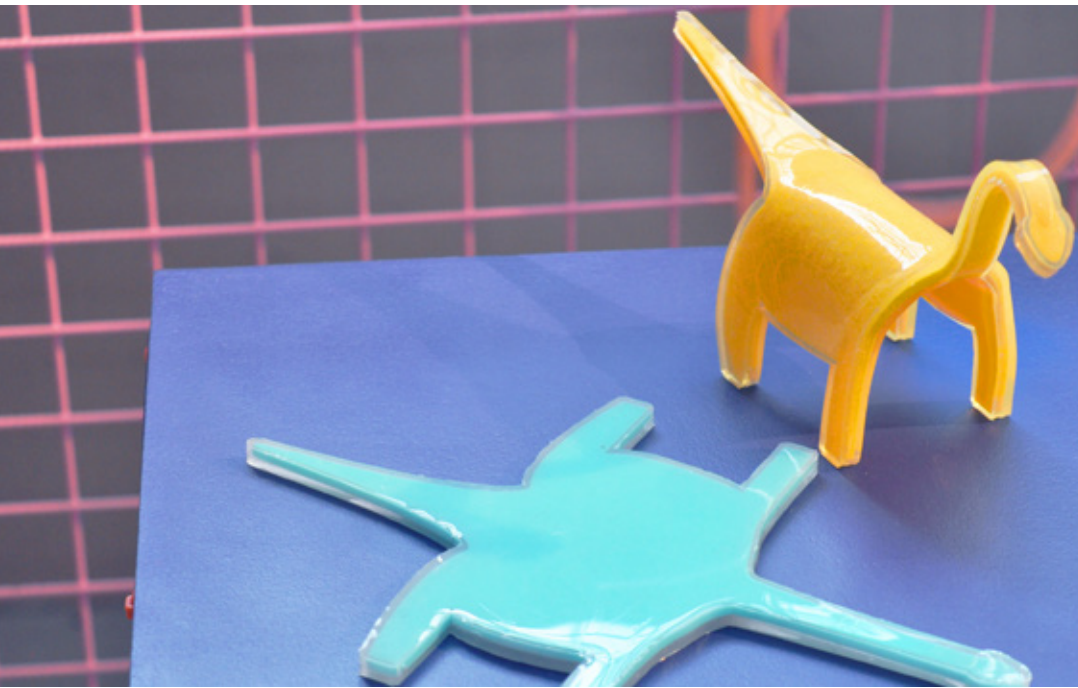




A reflex is an action that is performed without conscious thought in response to given stimuli. Re:flex is a reconfigurable, programmable material that changes its shape in response to heat.

Natural materials and structures constantly respond and adapt to changes in the environment. This makes organisms resilient to change. Yet our built environment is static, and does not morph in response to changing conditions as natural structures do.





The idea of a living, breathing material world has captured the imagination of people for centuries. Advancements in smart material technology have allowed us to pursue this vision of active matter. However, where are these materials in our everyday lives?

Inspired by natural processes of homeostasis, we set out to create an intelligent material that could be embedded into the everyday. Re:flex is a thermally responsive material: you can heat it, deform it into a temporary shape, and cool it down to freeze it in place. When heated again, it remembers and returns to its original shape.



With re:flex, we imagine a world where the materials we use are no longer inert, allowing objects to be reshaped by users to suit their needs.

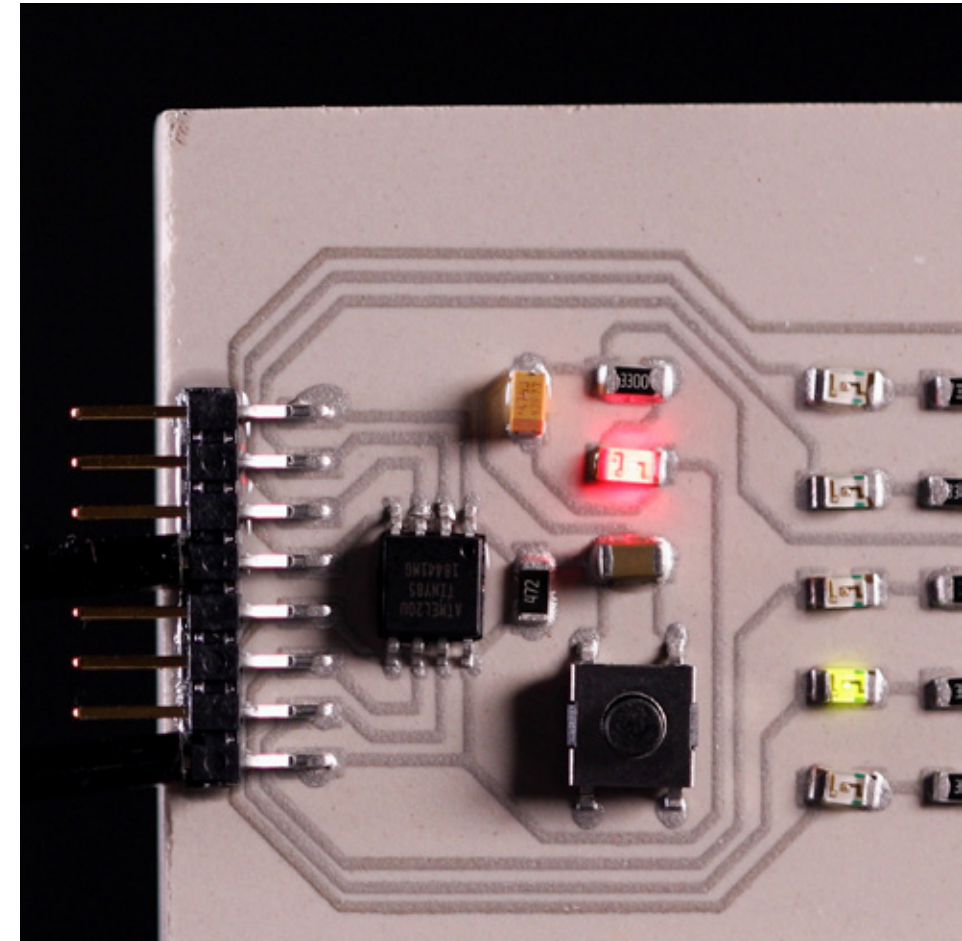
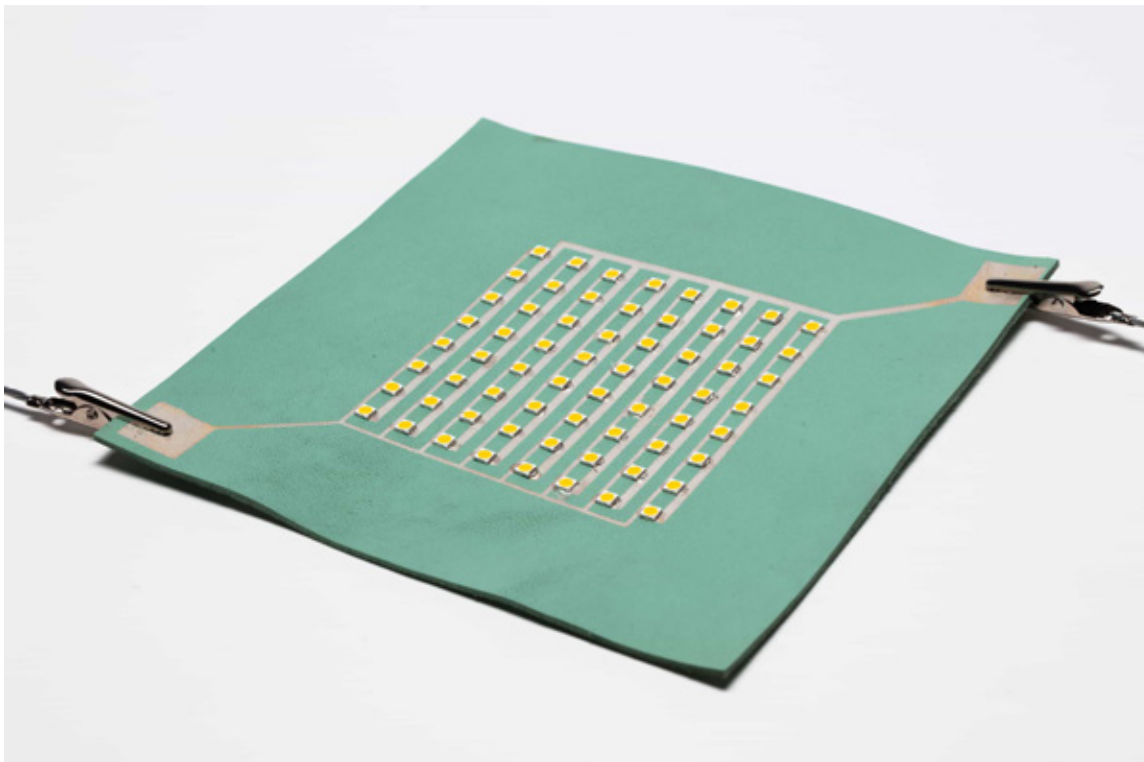
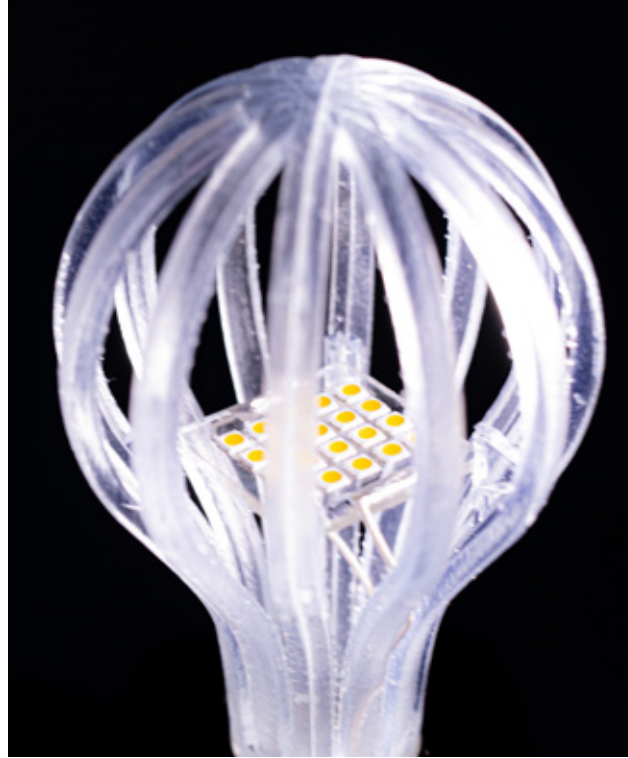
Re:flex received a patent award from the Royal College of Art and was a finalist of the London Mayor Entrepreneur Competition 2019. In the same year we were invited to exhibit re:flex at the Dutch Design Week in Eindhoven and we presented it at the Antenna Conference for the “world’s best design graduates” which is organised by Design Indaba.



2019
22 weeks
solo

STROOM



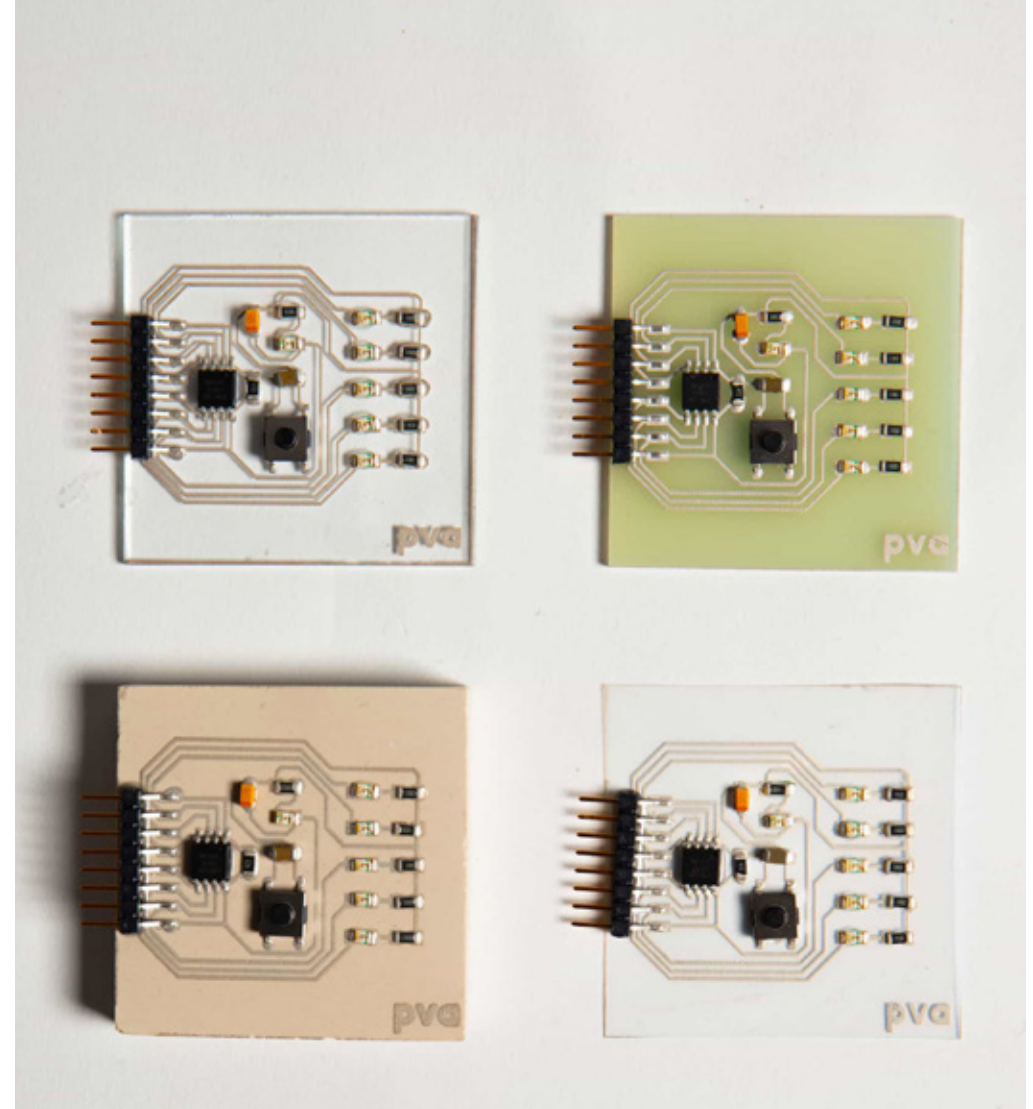


Stroom is an innovative process for making circuit boards that can take themselves apart in a liquid. It makes it possible to recycle materials efficiently and to reuse electronic components. Stroom circuit boards can also be built on many different materials, opening doors to new aesthetics and interactions with technology.



Circuit boards are currently made like LEGO® that have been glued together: the only way to recycle them is to destroy them. Stroom is a process that employs alternative techniques to produce highly recyclable circuit boards. In other words: change the way you make, to change the way you break.

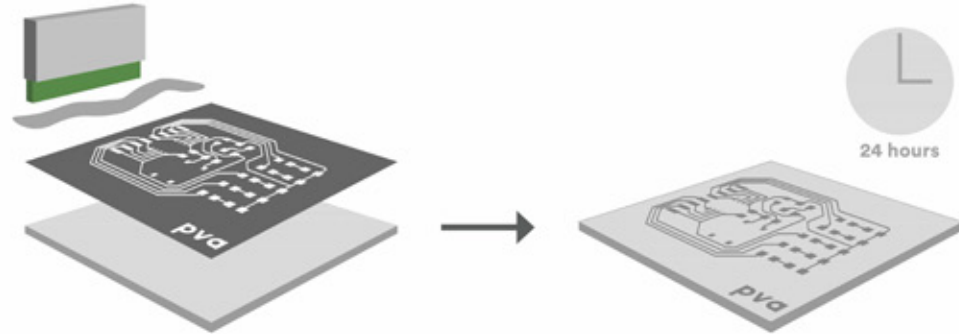
Stroom certified circuit boards can take themselves apart. This process is safe, non-destructive, and more sustainable. It makes it possible to efficiently separate materials and to reuse electronics components in new products.



Stroom paves the way for a future in which hybrid materials can incorporate circuits without compromising their recyclability. It brings radically new forms and aesthetics to electronics, transforming the way we interact with technology.

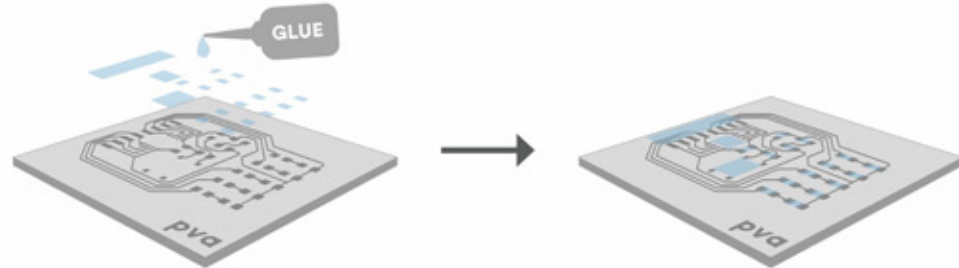
01

screen print circuit traces
using silver conductive ink



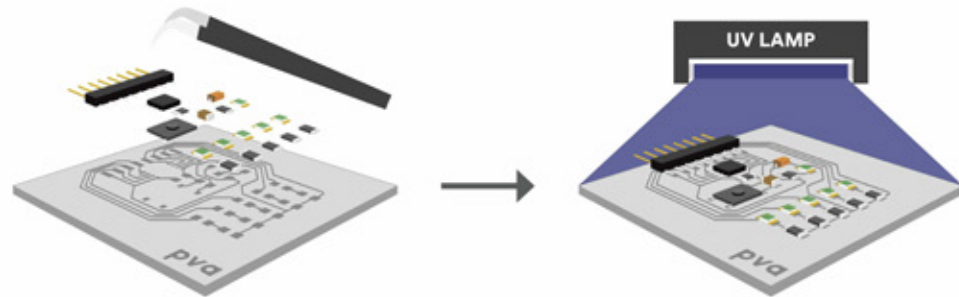
02

apply UV curing glue
at component locations



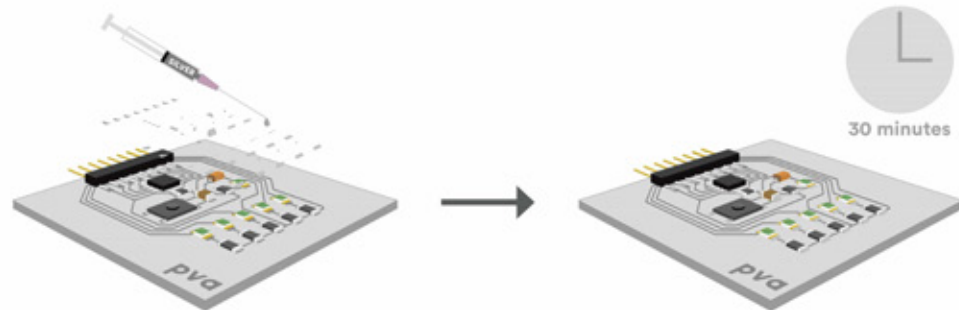
03

place components
then cure glue with UV lamp



04

cold solder components
using silver conductive paint





2018
4 weeks
solo

SEXUALITEA

I

the canvas of sexuality

sexuality, just like this plate, is complex & diverse. pick what you like, discover new tastes, don't be afraid to try new things!

this plate contains all the flavours present in the second and third plate, since they both represent elements of sexuality.



2

digging deeper...

there are different ways of giving and receiving pleasure between you and your partner. get to the core of it!

peach sponge cake with orange bitters, dark chocolate hard shell and dulce leche core / vanilla panna cotta, raspberry purée, rose flavoured icing / floating island, vanilla coulis, salted caramel glazing



3

desire + obstacle = excitement

Jack Morin (The Erotic Mind, 1996) developed this equation to describe the origin of peak sexual experiences. how does that work for you?

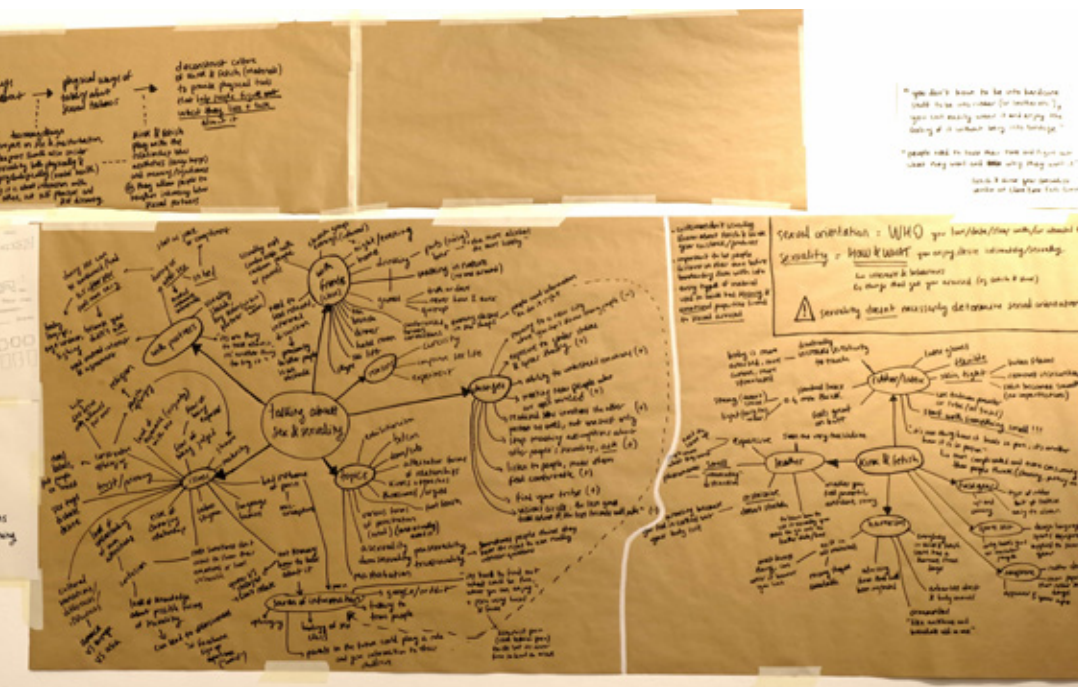
chocolate fondant, passion fruit coulis with espelette pepper, white chocolate cage covered with gold dust



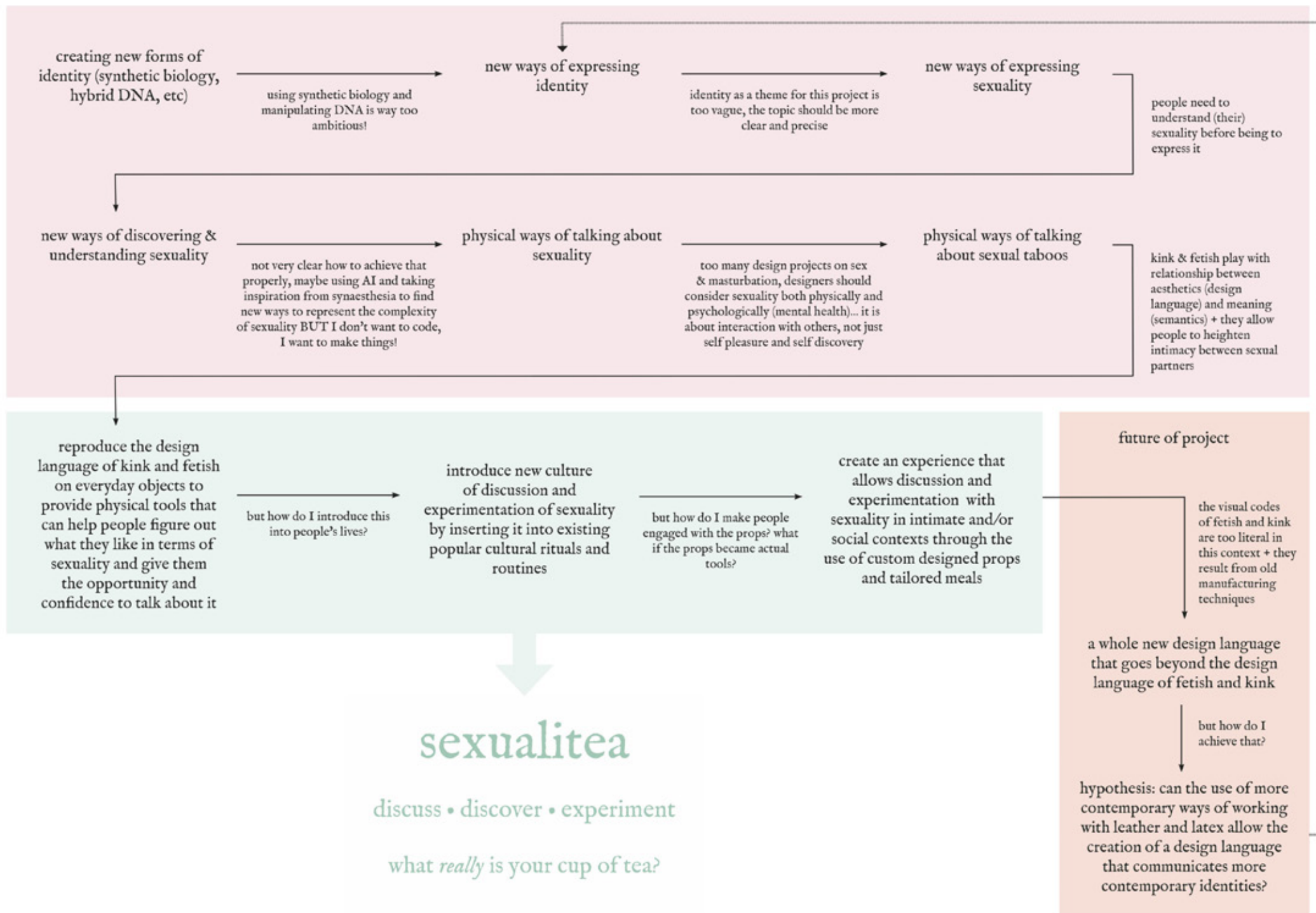
Discuss, discover, experiment: what really is your cup of tea? Sexualitea is a unique experience where discussing sexuality meets afternoon tea.

Sexualitea is inspired by kink and fetish, i.e. the use of props, accessories and role play to increase intimacy between partners. Latex replaces all the fabrics and leather harnesses adorn all the objects on the table. These materials are described as very enjoyable by those who actually wear them, yet their association to more 'hardcore' practices tend to keep most people away from them. Sexualitea allows people to start interacting with these sensual materials, by making them more accessible.

Participants can engage even more with the topic of sexuality through the food that they are served: a three course dessert meal, which subtly represents different aspects of sexuality. The plates are designed to be interactive, so customers can decide for themselves how they want to consume them.



The research output of this project leads to a wider discussion about how a design language can tie relationships between meaning & form. In the world of kink & fetish, the aesthetics of objects communicate very clearly the tastes and intentions of people. How can we reproduce this exceptional ability of design language in a non-sexual context? Can we create new languages to communicate more contemporary representations of identity?



2017
2 weeks
4 people

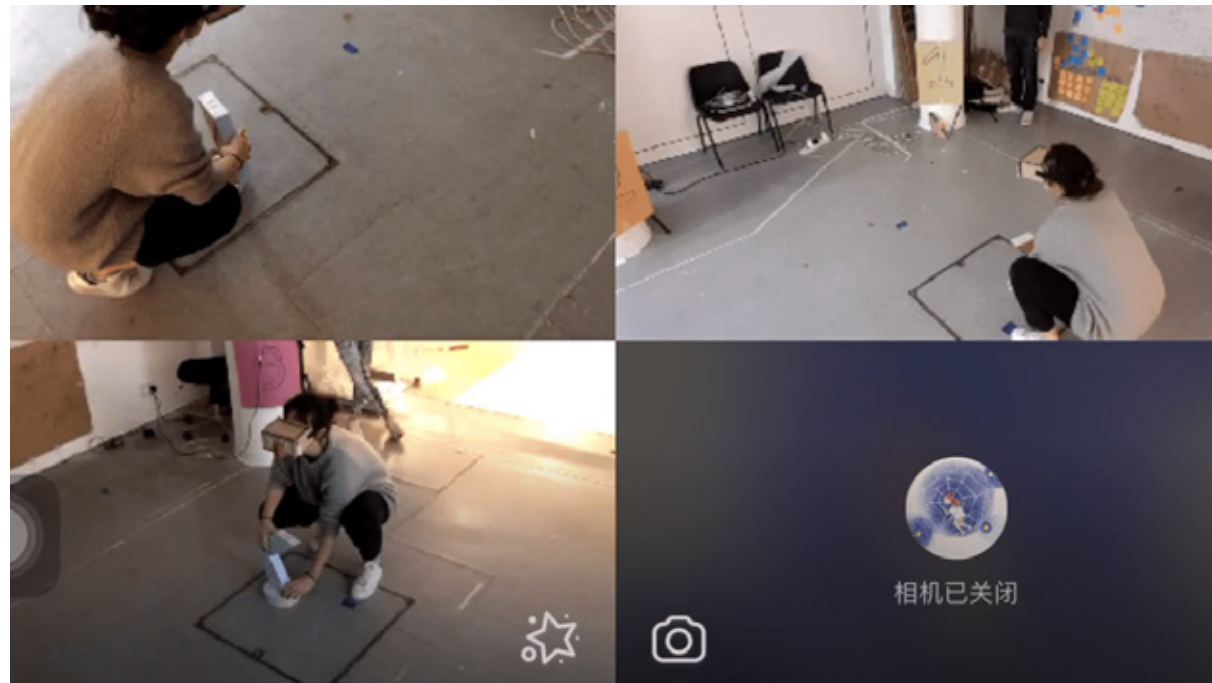
OBJECTOCEPTION ▶

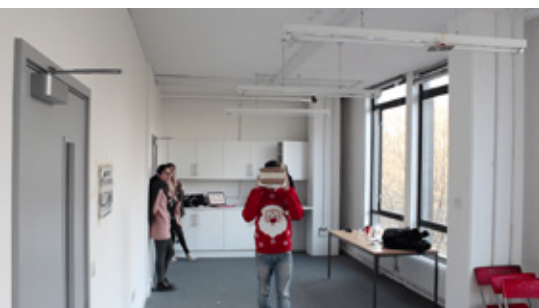
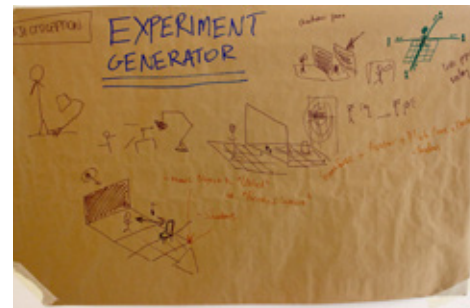




Objectoception (neologism): the perception of oneself in space through the perspective of objects. This project applies the philosophical concepts of phenomenology and object-oriented ontology to experimental design processes. Phenomenology is the study of the subjective experience of the world (seeing things as humans). Object-oriented ontology is the idea of a world where humans and objects are equal.

Our most advanced experiment aims to test whether by removing direct vision, but with physical feedback, participants can experience a dissociative effect while performing a functional task. The participant wears a headset showing three different third person perspectives of themselves in a defined space, and is asked to collect parts necessary to assemble a fake lamp. Each time a part is placed correctly with the right orientation, a spotlight turns on.





The outcome of this experimental process was to propose the concept of TNT, the TangibleNetworkofThings. In a world where technological processes are increasingly automated, humans are frustrated and anxious about losing control. But what if it was about giving up our insatiable desire for control and moving towards a dialogue with objects? The next generation of the Internet of Things is a tangible framework which facilitates meaningful discussions between humans and technology.



H: Blurred vision affects \odot and thus motor functions
W: Isolate vision as a factor of \odot
I: Blurring insufficient - Affected agility more than balance



H: Blocking audio-visual input + reconfiguring limb connections will affect balance
W: See if we can make someone unbalanced via distortion of \odot
I: Should only use one variable at once



H: Without direct vision but physical feedback participants will experience a 'puppet effect'
W: Trying to integrate interaction to the experience to get closer to objectoception
I: Puppet/videogame effect - Distrust of senses - Lost control of movement - Felt 'sorry'



H: Confuse rubber hand with their own (famous experiment)
W: To see if we can trick \odot
I: Must be believable + well executed



H: Participant will trade balance for money until a certain point
W: Can we extend \odot to factors external of our bodies?
I: Participant stopped when the risk caused loss of something more valuable



H: The user will act dissociated with their body if viewed from a 3rd person perspective
W: Can we simulate OBE (Out of Body Experience)?
I: Improve 3rd person navigation - Left/right confusion



H: Participants sense of \odot will be affected by a 3rd person view
W: To see how an object's perspective affects someone's \odot
I: Last meter challenge - People want to 'connect'



H: Can we connect people and objects using shadows to remove perspective
W: See whether an object in another dimension can affect someone's \odot
I: FAIL



H: If \odot is affected and blocked, decision making is also affected
W: How much would people's decisions change when their \odot is distorted due to seeing themselves through the eyes of the objects?
I: Chosen viewpoints were good but participants dissociated object from camera



H: Without direct vision people will adapt \odot to most convenient perspective available when performing a task
W: Combine external \odot with an interactive task better than hot/cold game
I: Participants have feelings external to self but needs better rules and feedback

experimental design process

\odot = Proprioception, or the ability to sense stimuli arising within the body regarding position, motion, and equilibrium

Q1 What if our awareness of \odot was tied to external objects?

Q2 What if people and objects were connected at a \odot level?

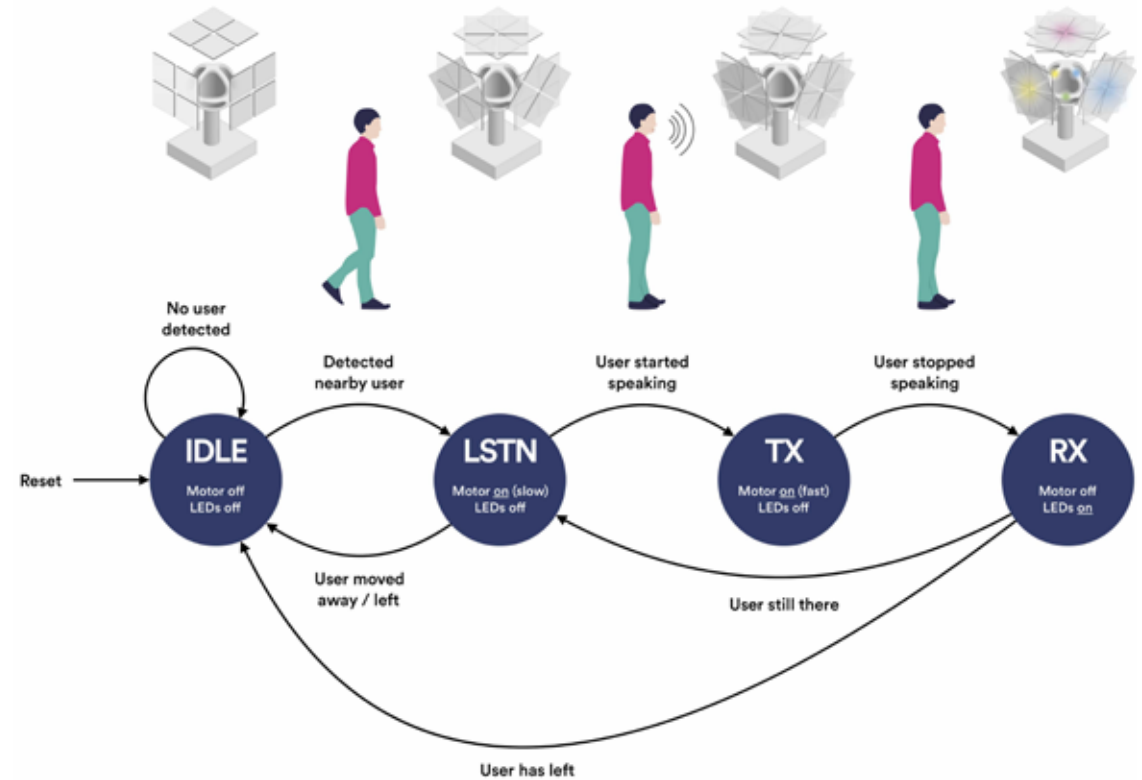
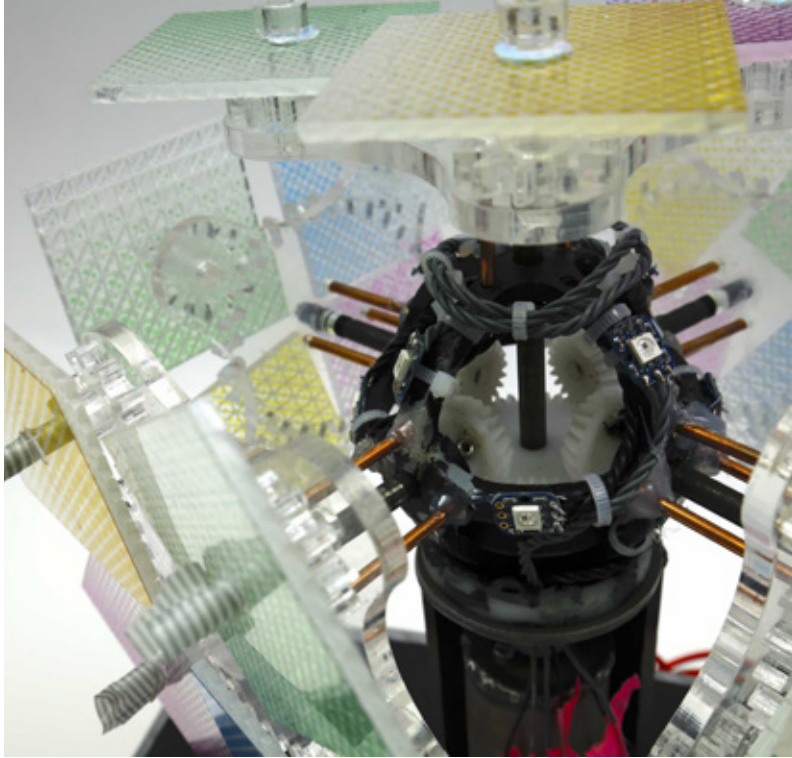
Q3 What if you could become one with an object?

Legend: H = Hypothesis / W = Why? / I = Insights



CODEx

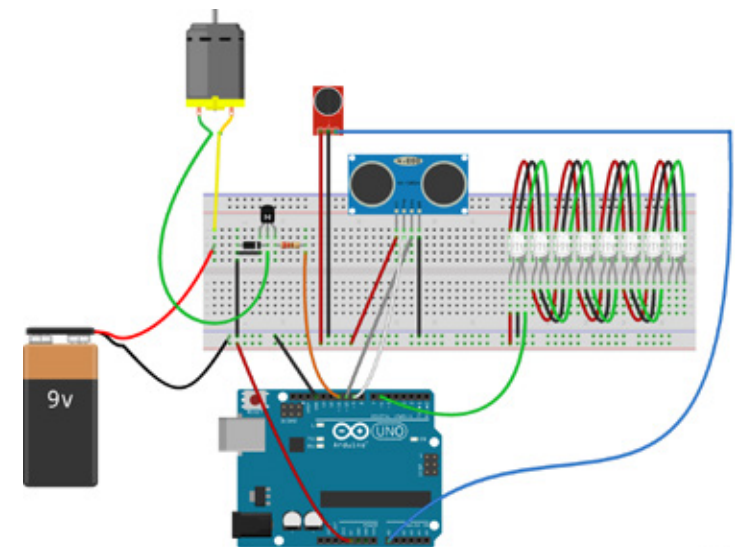
2018
8 days
4 people



Codex is a COmmunication Device for EXtraterrestrial beings.

The plans to build Codex were sent to us from outer space, by extraterrestrial beings trying to communicate with Earth. According to their plans, the device is capable of recording human speech, and can translate it into extraterrestrial language, which is made of movement and light patterns.

This project is our attempt at recreating the basic function of the Codex, in order to create a prototype that will hopefully allow us to reply to those who sent us the plans. I participated in creating the concept and the narrative around this artefact, contributed in the design decisions, 3D printed different iterations of the 'core' element of the structure, and finally wrote the Arduino program necessary to use the microphone and ultrasound sensor, activate the motor and control the LEDs.




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app.smartrods.co.uk

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+

 SMART RODS

CLASSROOM



EXERCISES

DEMO ▾



LIVE


NUMBER BONDS TO 10




00:01:19

BOARDS


STATS




Demo User




George Constantinides



Charlotte Neale



Charlotte Mary



Lauren Gazard

SMART
RODS

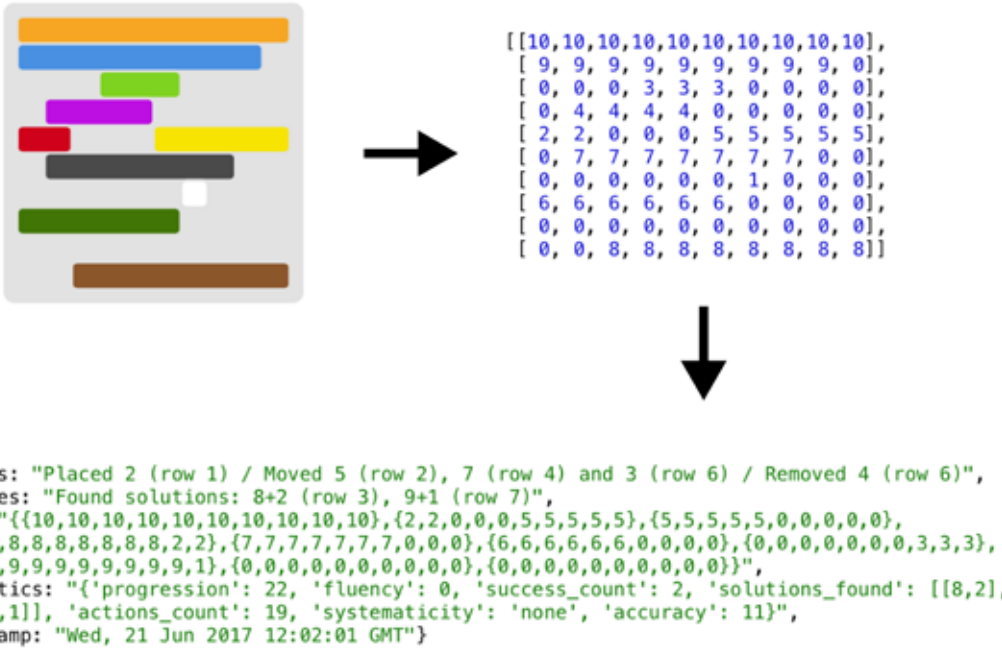
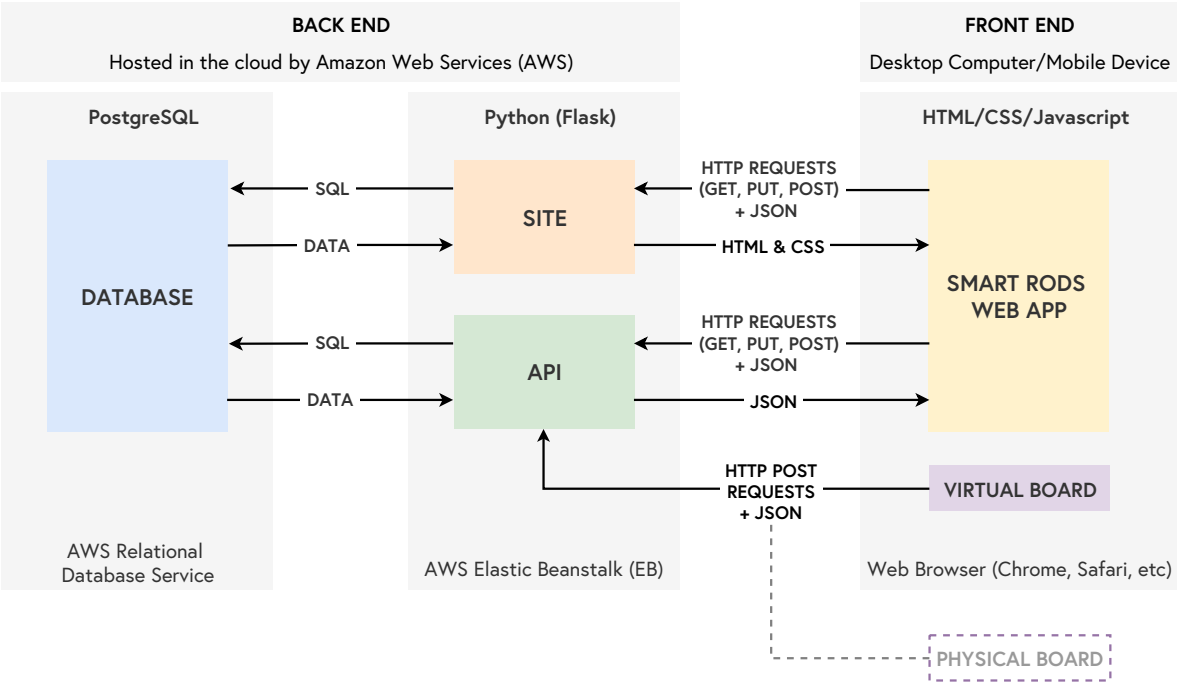
2017
8 weeks
solo

Smart rods is a web application that connects to physical tools used to learn mathematics in primary school, in order to help teachers track the progress of their pupils.

Cuisenaire rods are small coloured rods used to represent numbers and mathematical operations. They have proven particularly successful in helping to teach the foundations of mathematics in year 1 and 2 classrooms, by offering a more interactive and enjoyable learning experience to children.

In the recent years researchers have shown growing interest in enhancing education through the use of digital technologies: this project investigates the improvements that software can bring to classroom activities using Cuisenaire rods. Teachers who are familiar with the Cuisenaire method were interviewed in order to formulate design specifications for the application as well as obtain feedback at various stages.

The product was implemented as a web application written in Python & Javascript which communicates with ‘smart’ Cuisenaire rods (physical or virtual). It allows teachers to monitor pupils in real time, and provides statistics on their performance. In the future the application could be extended to support different types of exercises, and converted to a standalone mobile application for children to use at home.

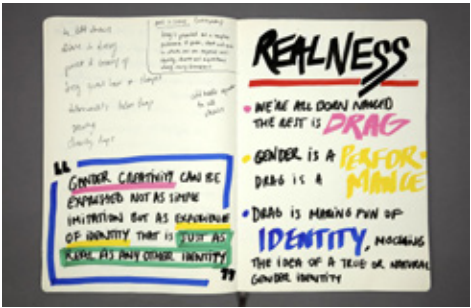


REALNES



2017
4 weeks
solo





This chair is a throne for a drag queen, that celebrates the power of Realness.

Realness is a term frequently used in drag culture, whose signification has evolved over time. In the past it was about creating the perfect imitation of a woman, to the point where it would be impossible to see the man underneath. Today it expresses the fact that your experience of gender, identity, style, or anything else, is as legitimate as any other, as long as you feel that it is real.



2018
8 weeks
solo

DRAG DESIGN

designers,

LET'S
DO
DRAG!

By Pierre Azalbert
Innovation Design Engineering
Royal College of Art

CHS Dissertation 2018
Tutor: Matthew Wraith
Word Count: 9,726

A MANIFESTO OF DRAG DESIGN

"Equality will not be realised until non-dichotomous, truly new ways of relating to others are envisioned and acted upon."¹⁰¹

Introducing: Drag Design

There is a problem in our society regarding how we perceive and portray gender. Too many people still see gender as a binary construct, and as something determined at birth. These outdated notions are oppressive and not representative of how a lot of people think about their own gender today (at least in the Western World). Yet gender is 'one of the first aspects that you notice and mentally process when you meet someone new (Dion, Berscheid, & Walster, 1972)¹⁰²'. We need to realise that gender is part of everyone's lives, as individuals and as a society!

This problem does not only apply to human beings, since the products we buy and the advertisements we see are gendered as well. They are also full of gender stereotypes which perpetuate unrealistic images of our society. Despite increasing efforts to attain gender equality and equity, we still see designers 'producing designs that highlight the differences between men and women (Hyde, 2005)'¹⁰³. Designers must start to recognise gender as a fluid spectrum of options, not as a discrete, dichotomous structure. If we are what we buy, what happens when we can't buy anything that corresponds to what we are?

¹⁰¹ Schacht.

¹⁰² van Tilburg and others.

¹⁰³ Ehrhardinger, Räsänen, and Seltvick.

I propose to create Drag Design, a provocative movement whose aim is to destabilise the outdated gender norms currently used in design and advertising by taking inspiration from drag queens. Drag performers are indeed known for having the power to 'force the audience to consciously examine the complexities of gendered categories'¹⁰⁴. Drag Design contests, transgresses and subverts gender norms by drawing parallels between the techniques used in drag to play with gender, and the processes employed by designers to create new products and advertisements.

Drag Design is a Contestation

...of the stereotypical, outdated representations of gender that are currently present in products and advertisements.

Drag Design wants to get rid of the 'binary conception of gender [which] provides only for a "he" and a "she"'¹⁰⁵. Drag Designers must consider the position of their users when conceiving a product or an advertisement; they must stop relying on the idea of a 'dichotomous gender, supposedly based on biology' and avoid making 'no provisions for individuals to choose the gender categories that apply for themselves'¹⁰⁶.

Drag design believes in the idea that we live in a world where we are we buy, but it also wants the opposite to be true: we should be able to buy what we are. People should feel free to choose the gender that they like, and they should feel free to buy the products that they want. No one should feel like a product or an advertisement does not apply to their gender.

¹⁰⁴ Egner and Molnes.

¹⁰⁵ Hanson.

¹⁰⁶ Hanson.

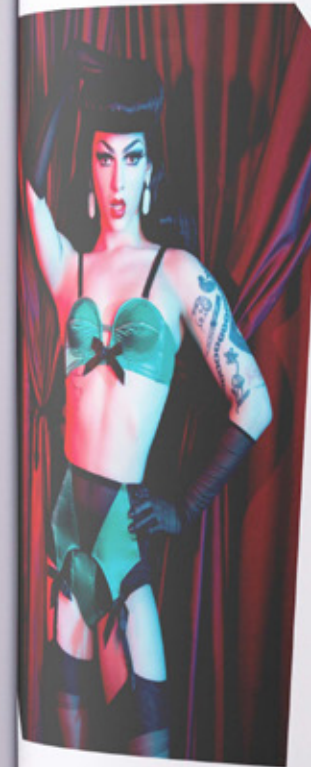


Illustration by Dicks, modeling by Playful Promise lingerie brand (Switzerland, 2017)

It is a provocative community that explores the negative space at the intersection of gender, product design and advertising using drag as an inspiration to generate emotion and challenge opinions around gender and sexuality.