



natalie schade
designing simplicity

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Ugli

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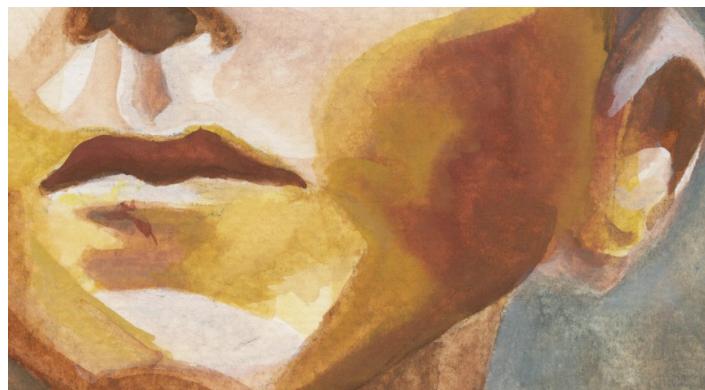


[Designer Statement](#)

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[Additional Skills](#)

[Fine Art \(Drawing and Painting\)](#)
[Editing](#)
[Ethnographic Research](#)
(include contextual here)



apollo

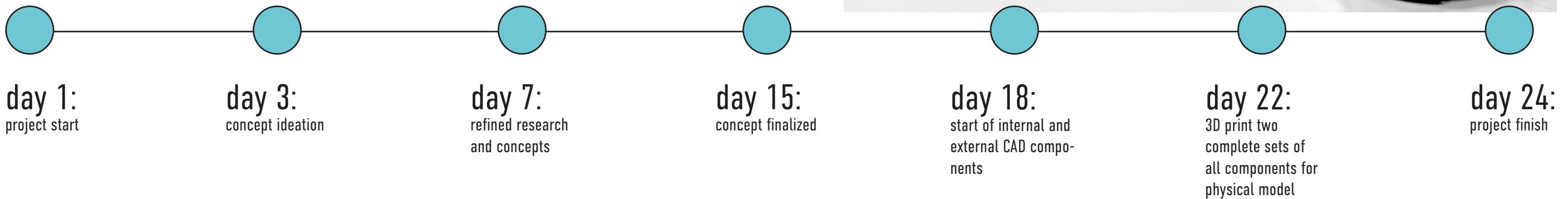


project brief

Apollo is a family of voice activated IOT devices, built for hospitals. The apollo system streamlines and perfects hospital procedure for doctors, patients, and nurses. NFC technology encrypts data and ensures the security of patient information when transferred between devices.

There are three members of the apollo family; the doctor device, the patient hub, and the computer connector. All three devices can transfer data only when placed on top of each other.

project timeline



research focus

the growth of healthcare technology in the public sector

- In 2012, 250 million mobile phone users downloaded health apps & is expected to increases at a rate of 33.5% between 2015 & 2020.
- 80% of physicians use smart phones and medical apps.
- **60% of daily notes taken by health care professionals are shown to have some form of error or mismatch.**
- By 2018 30% of all interactions between humans and machines will happen through conversation.
- 72% of physicians access drug information from smart phones.
- 63% of physicians access medical research from tablets.
- 44% of physicians communicate with nurses and other staff through smart phones.
- There is a rising interest in Virtual Assistants (VA's) in hospitals.

research

why can't we use the amazon echo in hospitals?

The **amazon echo is not HIPPA certified**, because it is not secure enough for patient records and information.

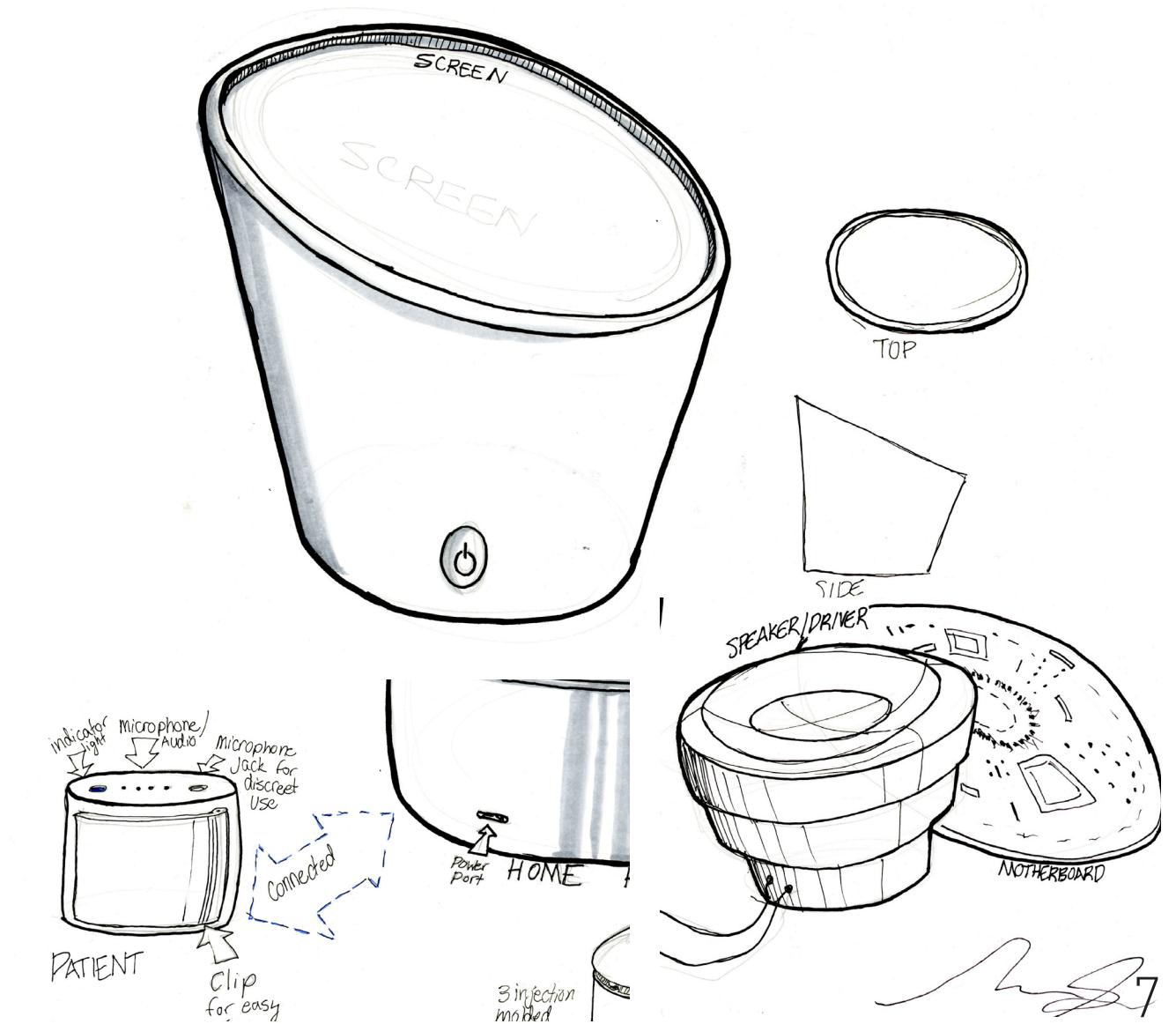
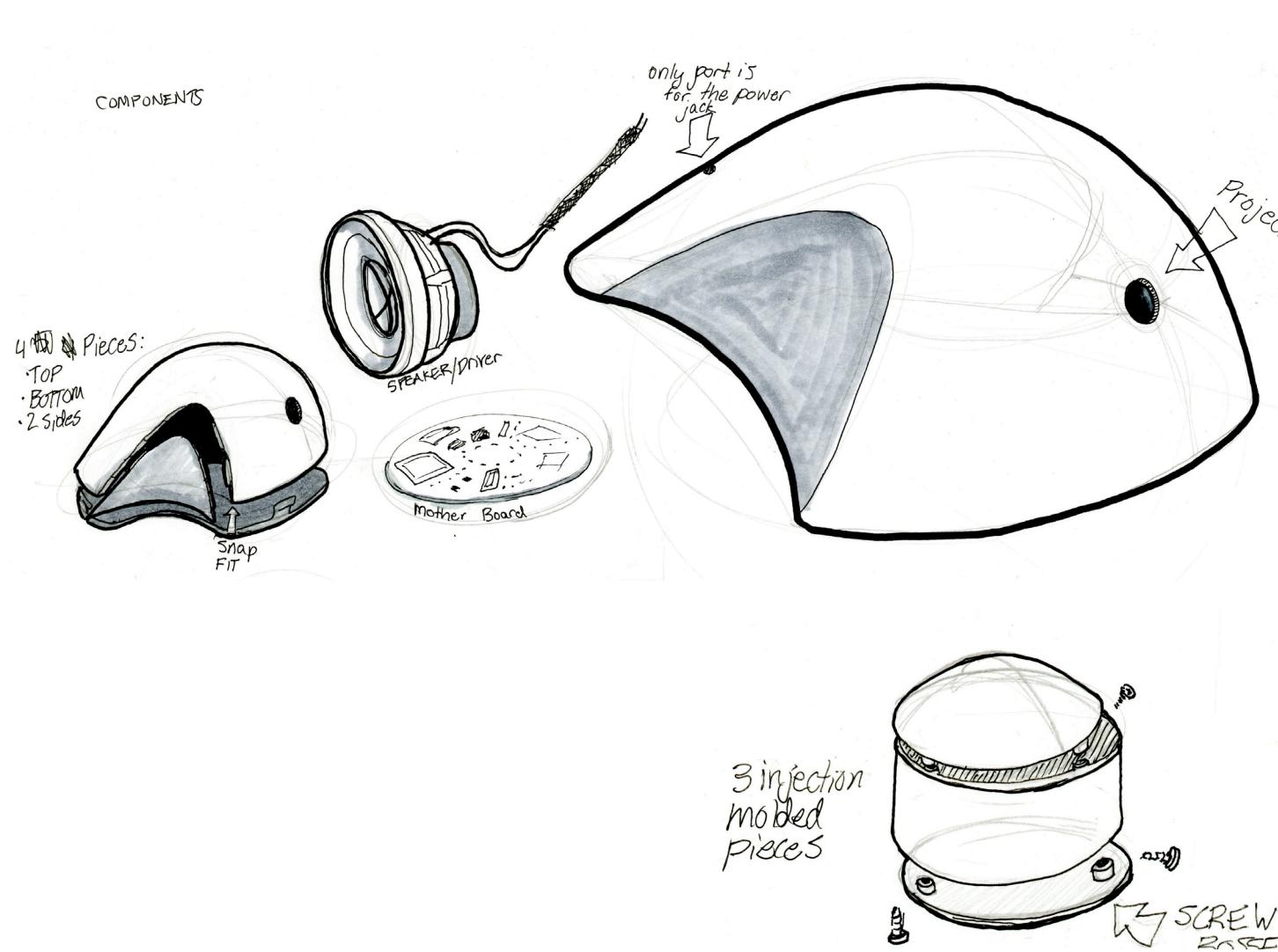
ideation: moodboard



details and form

ideation: sketching

apollo sketches



three devices



patient hub

The main Patient hub would sit alone in a patient's room. It is powered by plugging into a main power socket, connected via micro USB.

doctor's device

The Doctors device, smaller than the main hub is able to fit into a Doctors pocket. It is rechargeable using NFC technology, by sitting on top of either the main hub or computer connector.

computer connector

The computer connector adds an extra layer of security when transferring data to an external computer outlet. It is connected via micro USB.

interactions between devices

doctor to doctor device transfer

To begin the transfer of data, the devices are placed back on top of each other.



doctor to computer data transfer

The devices are connected via NFC technology, allowing maximum security when transferring to an external computer.



patient hub to doctor device

The LED lights start pulsating when a secure data transfer is established.



production processes

material:

ABS
(Acrylonitrile
Butadiene
Styrene)

benefits:

- Strong Impact Resistance
- Strong Heat Resistance
- High Tensile Strength
- Shock Absorption
- Scratch Resistance
- Low Cost

Silicone Rubber
(Polysiloxanes)

- Grippy, Tactile Feel
- Strong Heat Resistance
- High Tensile Strength
- Shock Absorption
- Low Cost

uses:

The exterior of Apollo will be made from ABS, and the light strip will be made from a semi-transparent ABS. Its characteristics make it a perfect material for use in a hospital setting over a long period of time.

Silicone rubber is an elastomer (rubber-like material) composed of silicone, a polymer—containing silicon together with carbon, hydrogen, and oxygen. Silicone rubber is widely used for products such as computer feet, and 'grippy mats'.

manufacturing processes:

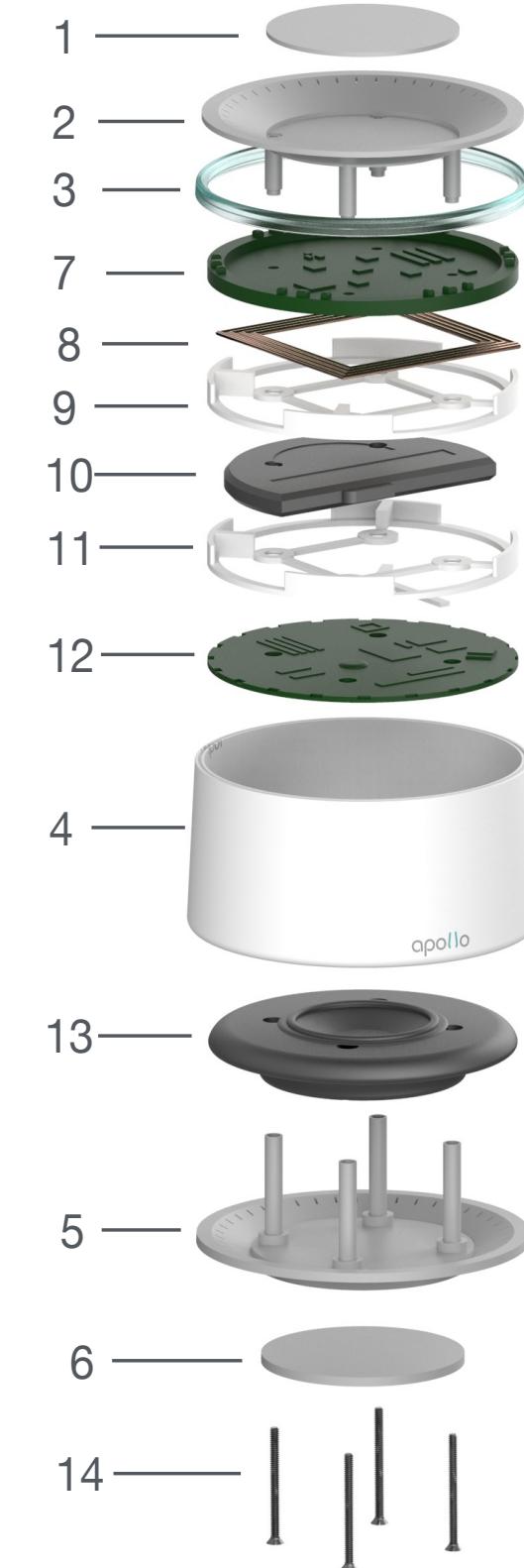
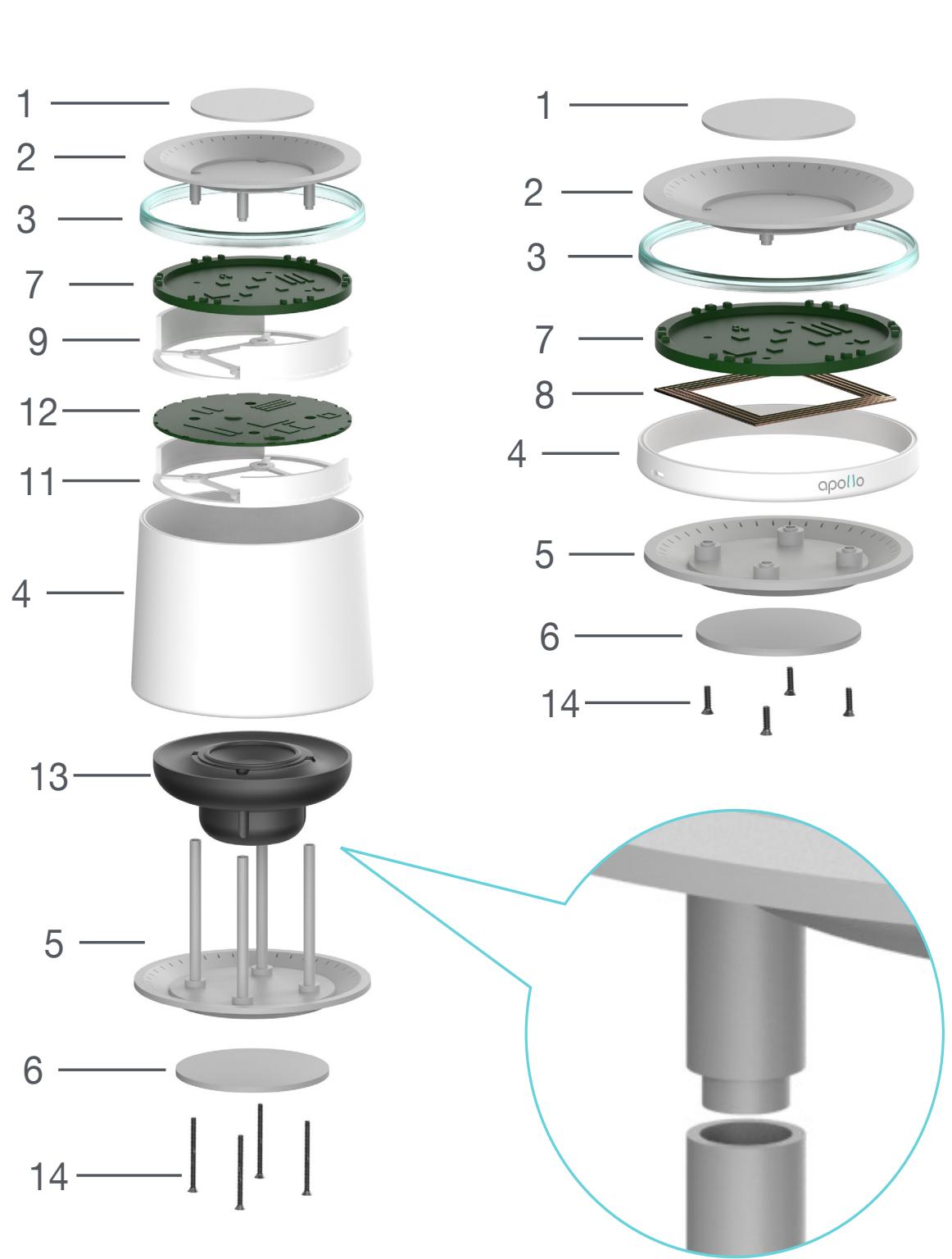
plastic injection molding

benefits: Ability to create complex geometry and detailed features, both on interior and exterior parts. High Efficiency and strong, durable parts. Reduced costs in comparison to other manufacturing techniques

ultrasonic welding

benefits: Visually appealing, as it leaves minimal to no seam on products. Ultrasonic welding eliminates the need for screws or snaps. Has a fast turn around (depending on size of weld) and is very strong for application.

bill of materials



	External Components
1	"Boss Cap"
2	"Housing Lid"
3	"Light Strip"
4	"Housing Shell"
5	"Housing Base"
6	"Rubber Foot"
	Internal Components
7	"LED Dressed Motherboard"
8	"Induction Coil"
9	"Top Spacer"
10	"Battery"
11	"Bottom Spacer"
12	"Motherboard"
13	"Speaker"
14	"Screws"



This is a doctor meeting where the doctors are sharing information concerning shared patients between their personal devices.



a family of devices designed to streamline and enhance the hospital experience for doctors, nurses, and patients.

This nurse is uploading information to his computer from a doctor device through the computer connector.

that pesky dryer lint

frisch



project timeline

week 1:
project start, finding
a problem within the
home, primary and
secondary research



week 2:
research and concept
ideation and refinement,



week 3:
refined research
and concepts



week 4:
finalize concept,
as well as CAD and
physical model



week 5:
project finalization



15

according to the US fire administration, “2,900 home clothes dryer fires are reported each year and cause an estimated 5 deaths, 100 injuries, and \$35 million in property loss.”

frisch addresses the ever annoying problem of dryer lint by forcing the consumer to remove the lint prior to the start of every load, saving water and extending the life of dryers everywhere.

frisch [adj] new-laid, crisp, new, clean, wet, brisk, fresh



project goals

painpoints

- People don't like to clean their dryer lint
- Correcting the problem without redesigning the entire dryer
- Making the solution waste-less or at least less wasteful than the current system
- People are supposed to clean the dryer lint out of the dryer at the front every time, and out of the dryer hose every six months. Not a single person who responded to the survey ever cleans their dryer hose.
- 1 out of every 15 people who answered the survey are not even aware of how to clean dryer lint from a dryer.



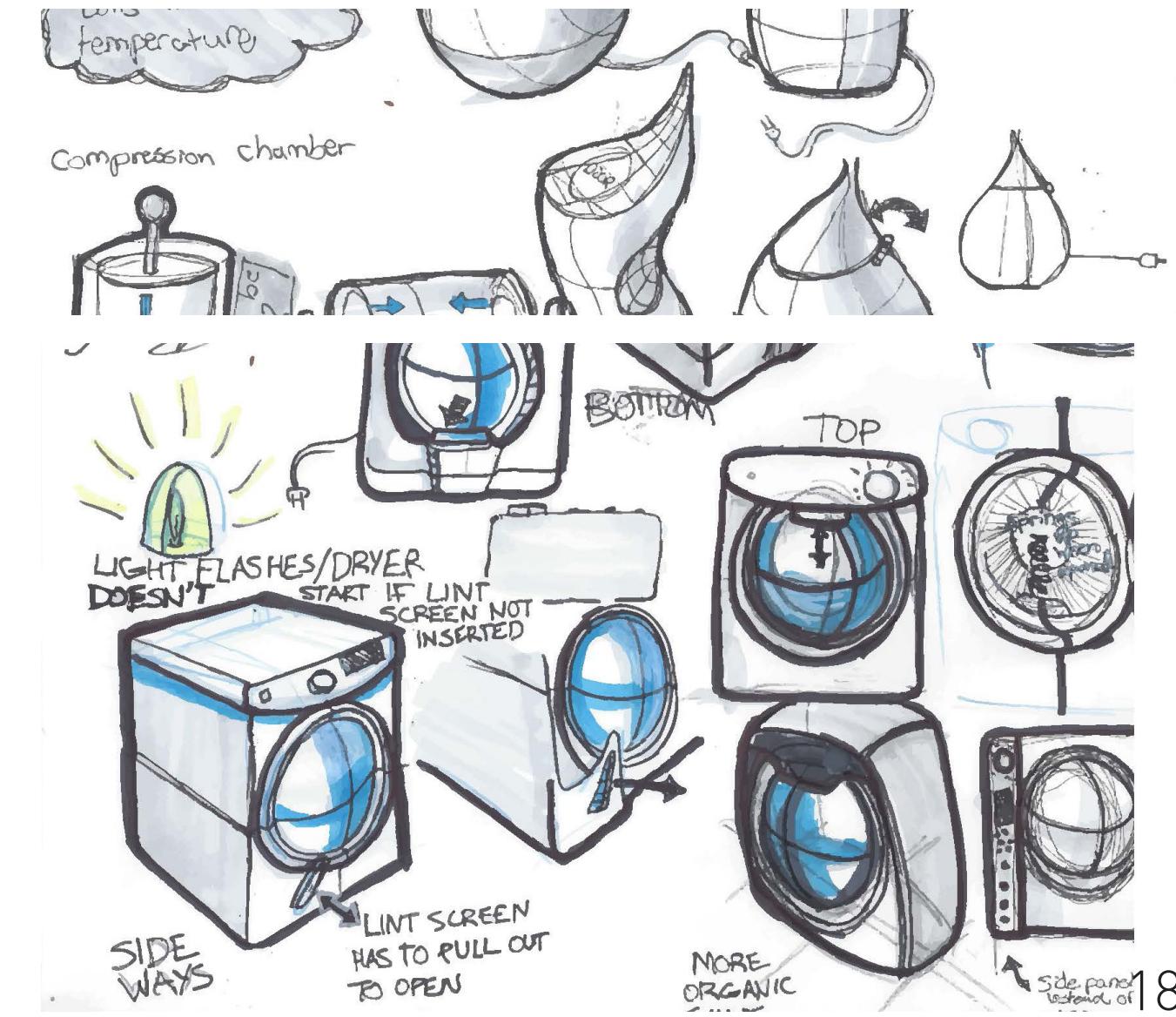
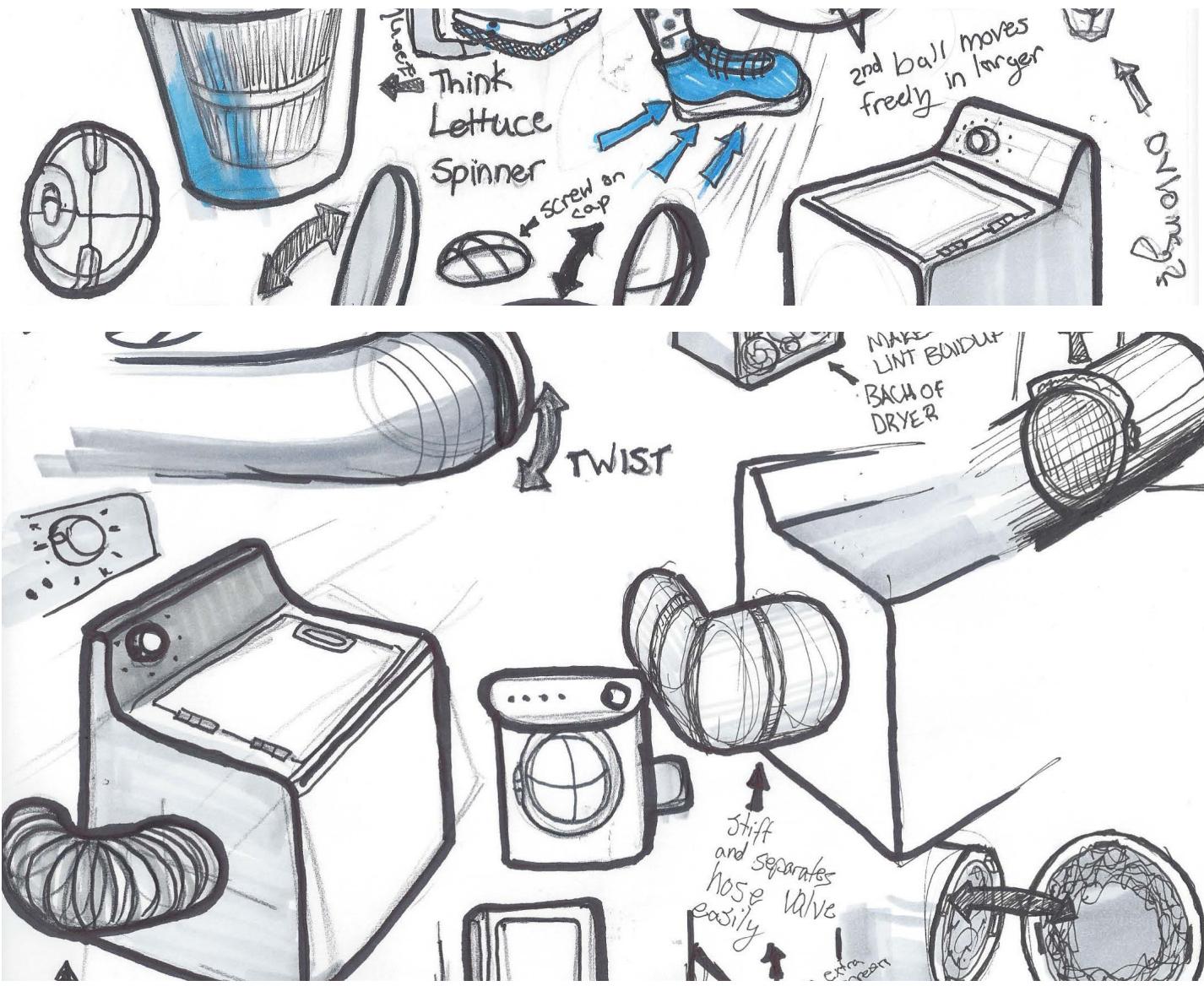
"2,900 home clothes dryer fires are reported each year and cause an estimated 5 deaths, 100 injuries, and \$35 million in property loss."

-US fire administration

personas

ideation

Sketching



exploded view and bill of materials

cad model



the future of food



project goals

Ugli redefines the definition of 'ugly' food.

50% of produce grown in the US is thrown away due to outrageous cosmetic standards created for fresh produce. Yet at the same time, food deserts spread throughout the US, and unhealthy eating habits are at an all time high due to limited healthy food alternatives.

Ugli is an autonomous food truck concept that works to reduce the amount of food waste in the US, and gives people access to fresh produce in both cities and food deserts.

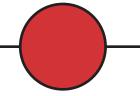


project timeline

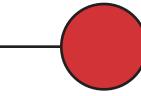
week 1:
project start



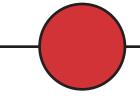
week 2:
concept ideation



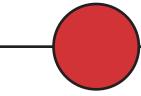
week 3:
refined research and concepts



week 4:
concept finalized



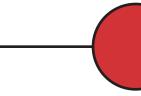
week 5:
start of internal and external CAD components



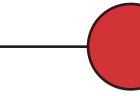
week 6:
3D print two complete sets of all components for physical model



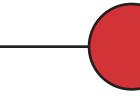
week 7:
project finish



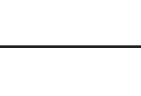
week 8:
project finish



week 9:
project finish



week 10:
project finish

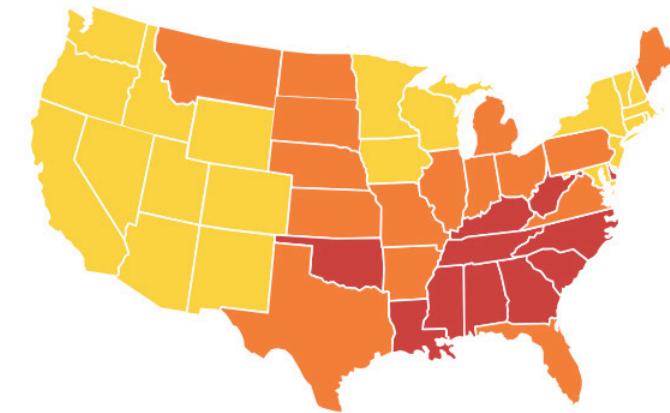


key areas of interest

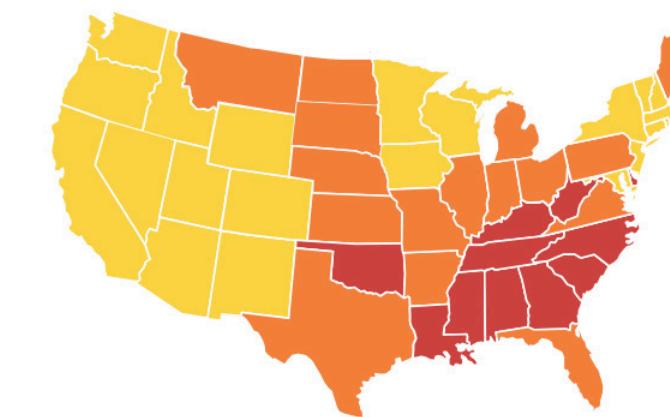


food deserts and obesity

● low ● medium ● high



. food desert chart



. obesity chart

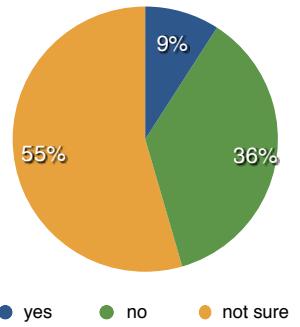
ugly food waste

research: secondary

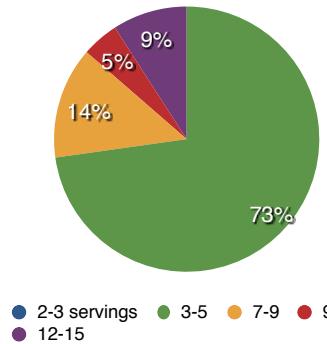
initial mockup

survey one

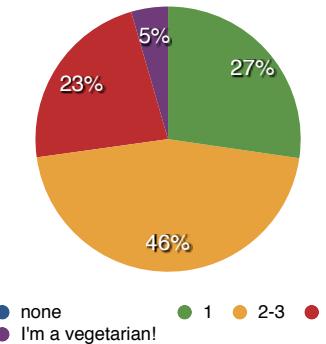
two surveys
45 participants



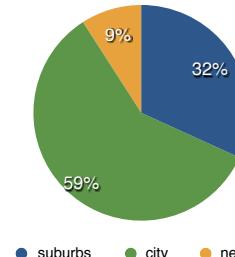
Does it affect the people in your community?



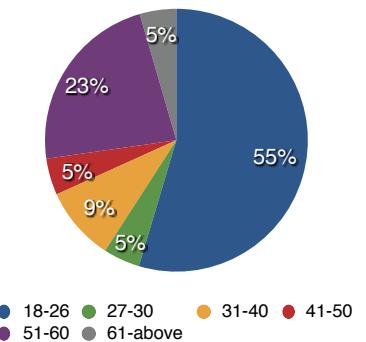
What do you think is the average amount of fruit and vegetable servings that American Government says the average grown adult should eat?



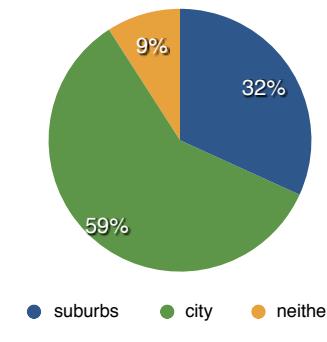
How many servings do you think you're eating?



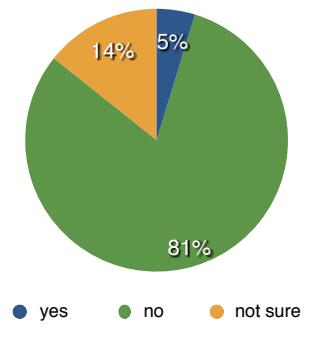
Where do you see yourself living in the next 8 years?



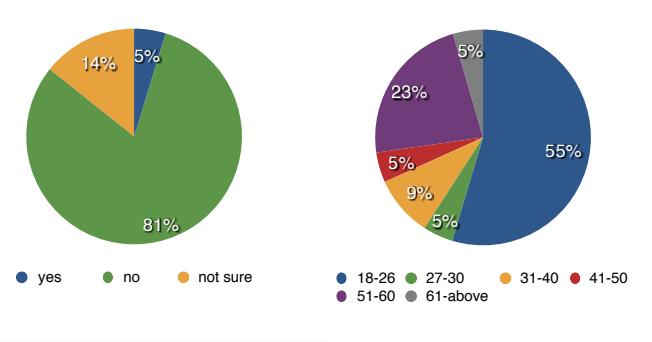
How old are you?



Where do you see yourself living in the next 8 years?



Do you think your living in a food desert?

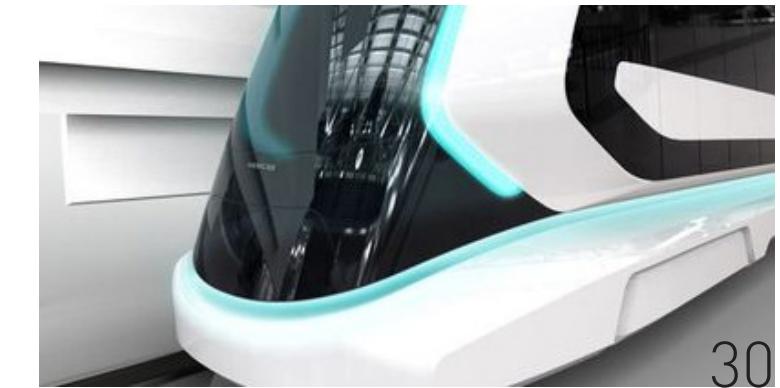
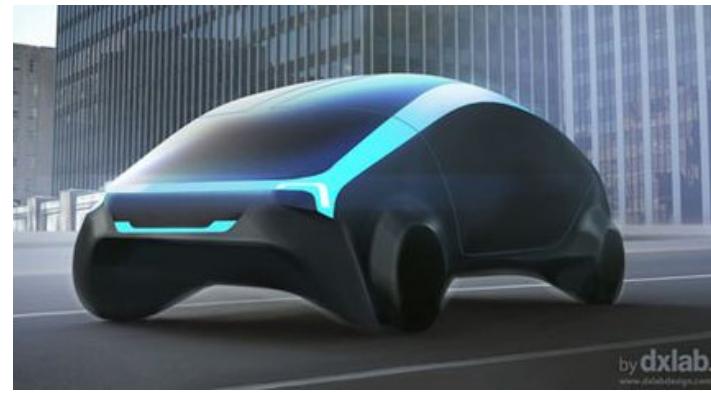


Do you think your living in a food desert? How old are you?

second mockup

survey two

details and form design



sketching

interactive screen

cad: internal components and power train

cad: interior and exterior

production processes

material:

ABS
(Acrylonitrile
Butadiene
Styrene)

benefits:

- Strong Impact Resistance
- Strong Heat Resistance
- High Tensile Strength
- Shock Absorption
- Scratch Resistance
- Low Cost

uses:

level of sustainability:

manufacturing processes

put carbon fiber process,
mention that we couldn't
use steel tooling because
production was too small
to justify costs

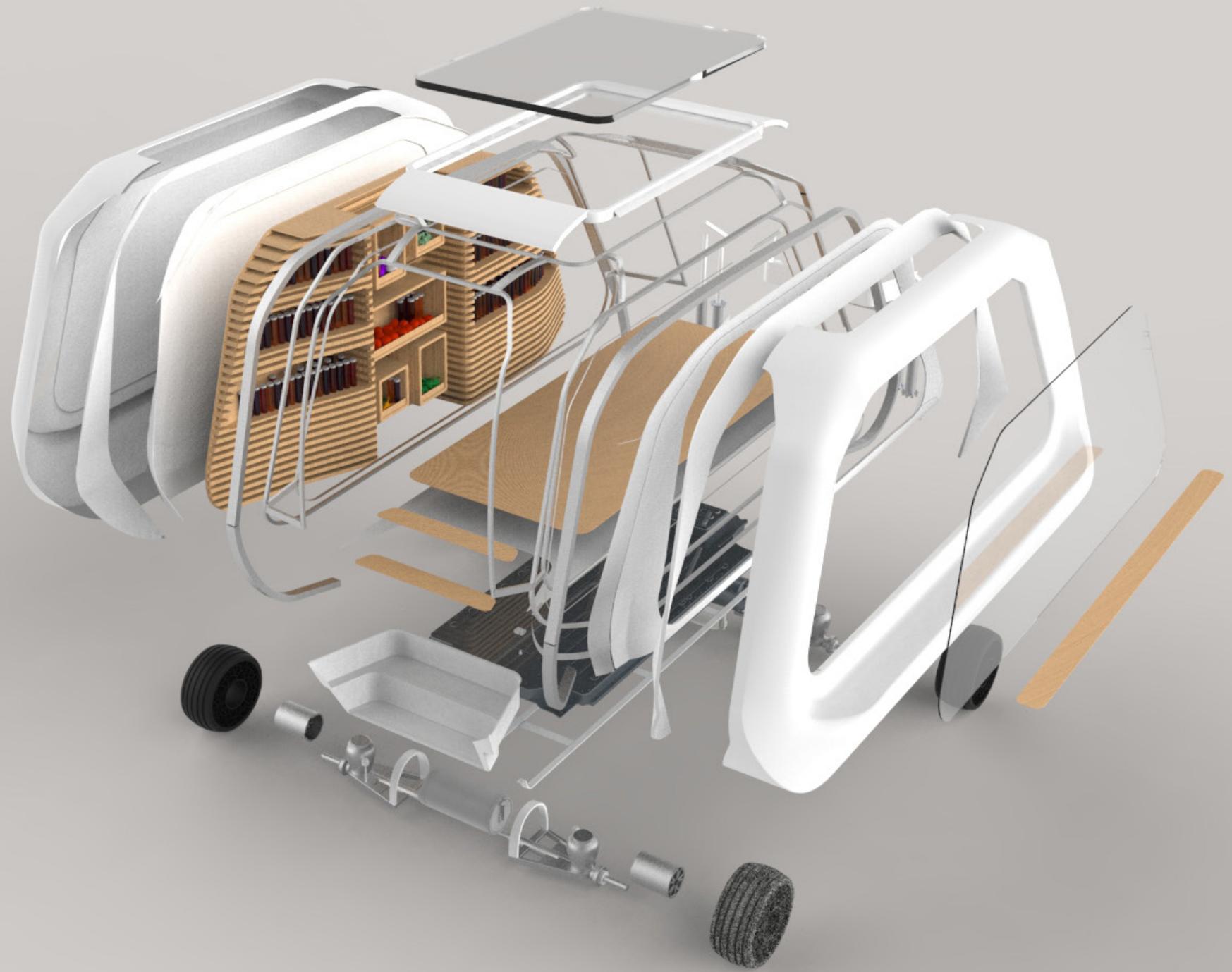


Ugli, autonomous juicery of the future

text concerning the ugly produce and
juicery portion of the Ugli concept as well
as the stickers and packaging of the juice
bottles.

exploded view and bill of materials

change rendering and
add bill of materials



in context view

interior in context view



physical model



designer's statement

Life is stressful. Design should never induce anxiety in a consumer. Stress builds up over time and I believe that the products we use should decrease that stress, not add to it. I create user centered products that help people reduce stress in their daily routines.

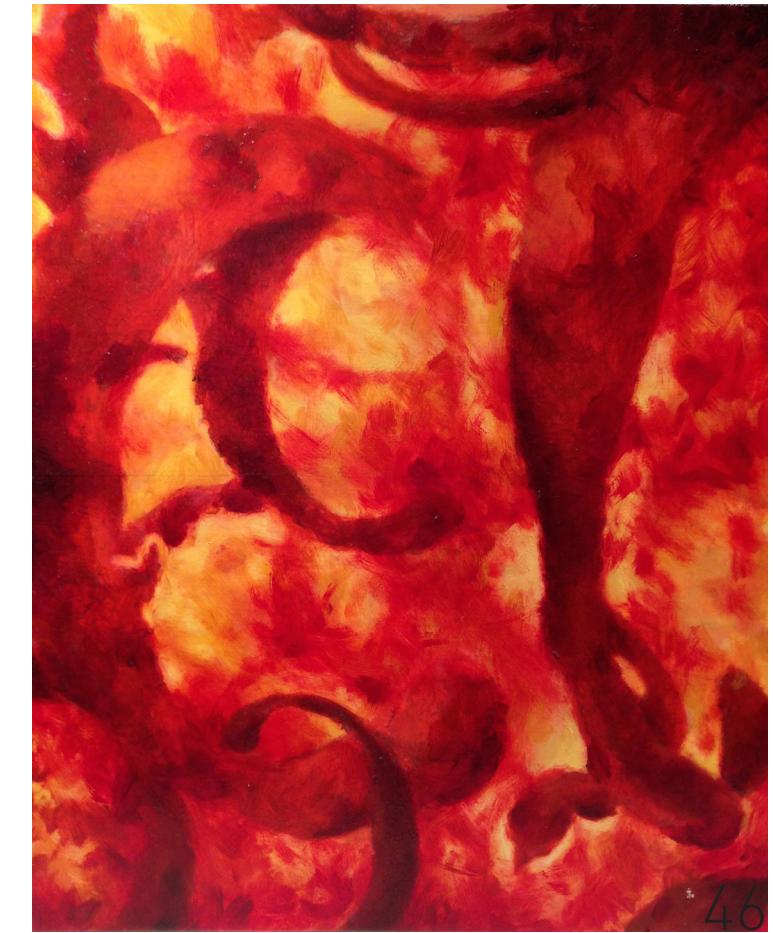
Industrial design has the power to discover what people need and want, and then go beyond that knowledge. Ultimately my goal is to create products people could not imagine they needed beforehand.



hello, i'm nat 45

alternate skills

fine arts: painting and drawing



contact information



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