

MODULE 4

DESIGNING

Ben Woods

Module 4: Designing

- **Key Topics**

- Designing with customer insights
- Psychology and design
- Think like a designer
- Increasing creativity
- Using design methods to solve problems

- **Activities**

- Empathy Maps, Persona Design, Journey Maps, Sketching and Ideation

- **Ask yourself:**

- Have you used similar tools before?
- How can the activities described in this module be applied in your day-to-day work?

EMPATHY MAP

Empathy Map

- Allows us to categorize our interview findings in a human—entered manner.
- Helps us to create personas.
- You can use your post-it notes from the affinity-diagram, but these can also stimulate additional memories!

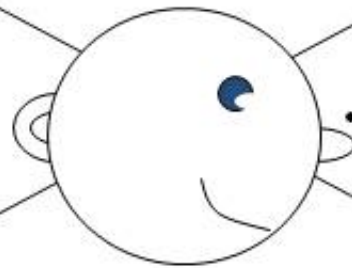
Empathy Map

THINK & FEEL?

- Life is constant battle between work that is affirming, rewarding, and creative with the fact that there are few avenues to create art sustainably long term
- Having a lot of varied experiences and not being “trapped” in a mundane life cycle matter most to him

HEAR?

- Influencers speak through successful work; not interested in the academic side of things as much as production of cultural significance
- Friends are hyper-literate and he must keep up culturally to understand their references
- If not his own boss, he works with people he’s comfortable addressing as peers



SEE?

- Photographic eye makes him very attuned to environment and aesthetic surroundings
- Market is all about discernment, both in being picky about careers and what he consumes
- Selective group of close friends that he trusts their opinions

SAY & DO?

- Strong opinions and unafraid to make value judgments
- Concerted attempt to cultivate a “non-traditional” look and individual style
- Generally not confrontational, but will defend topics of interest vigorously

PAIN

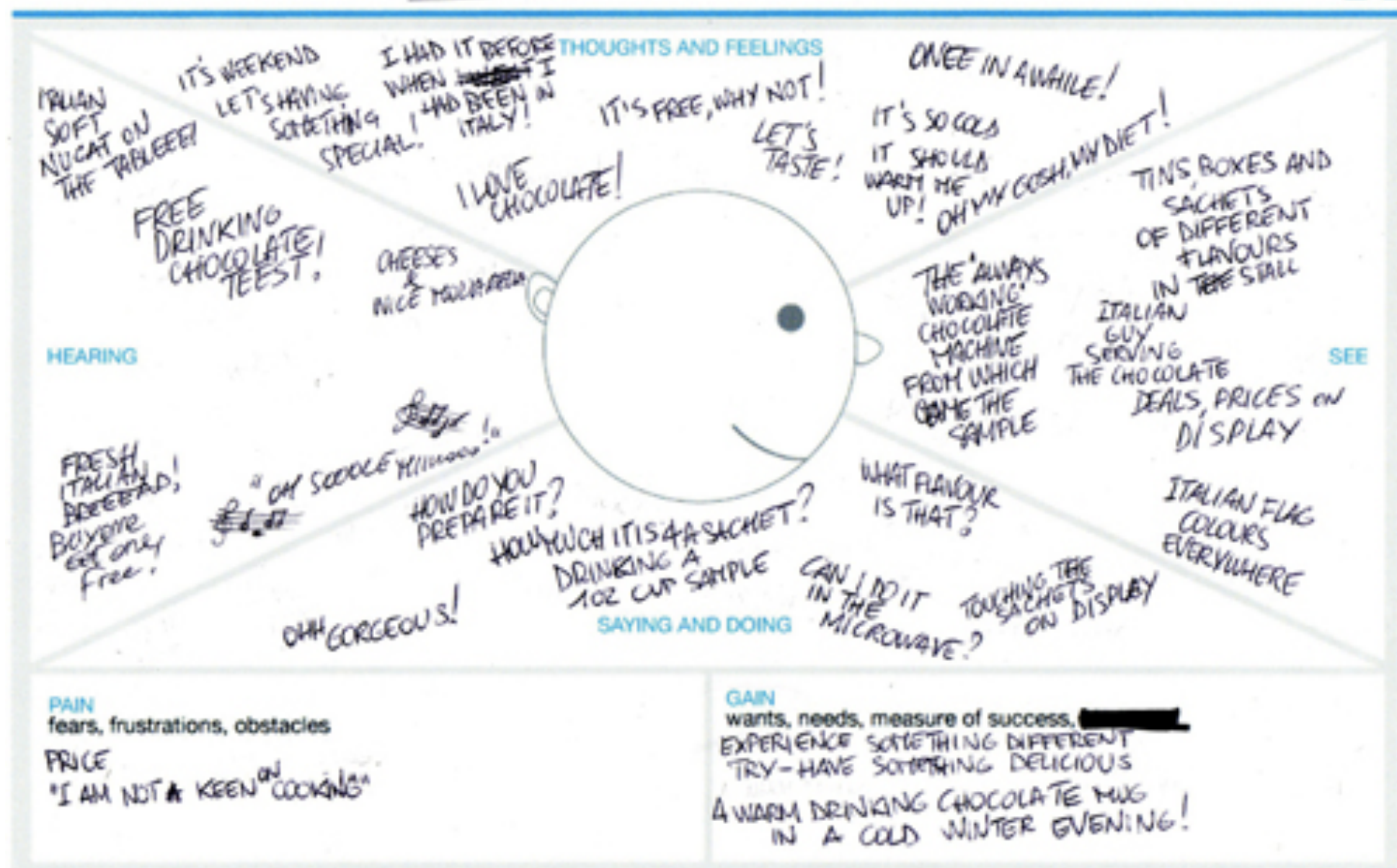
- Impressive work by peers just as likely to make him doubt his own skills as it is to inspire him
- Frustrated by having to compromise artistic vision to fit commercial goals in industry
- Obstacles include lack of viable careers

GAIN

- Needs fulfillment through unrestricted creativity and autonomy in life
- Measure success by opinions of respected peers and his own sense of worth
- Prestige weighs more than monetary success

EMPATHY MAP

"THE EXPLORER"



ACTIVITY: EMPATHY MAP

DEBRIEF

PERSONA DESIGN

What is a persona?

- A hypothetical user who would use your product – a ‘straw-man’
- We use them to answer questions while designing.
 - How would <persona> use this when <something>?
 - What is happening around <persona> when they are using this?
 - What needs would be met for <persona> with this project?
- A persona is NOT a demographic definition.
 - For example: Female, 31-45, college educated.
 - There may be several types of users in this demographic.

Persona Development

- Consider what you've learned through observation and interviews.
- Think about jobs, interests.
- What matters most to them?
- What kind of environment are they working in?
- What are their pain points?

What's in a good persona?

- Patterns you've observed.
- May include an actual quote!
- Realistic.
- Descriptive of now, not the future.

Alyssa Wilson

Age: 28

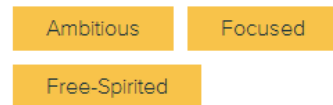
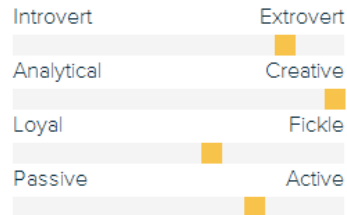
Work: Interior Designer

Family: Single

Location: New York, NY

Character: The Maestro

Personality



Brands



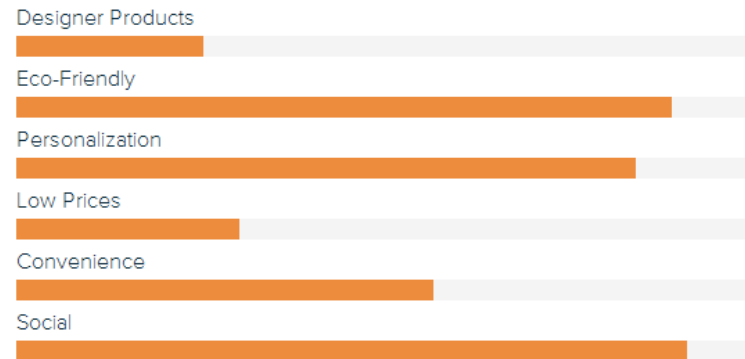
Bio

Alyssa is a blossoming interior designer who seeks to translate her passion for design into every space she works on. She approaches each project as a puzzle, and believes her job is to create the pieces that blend beauty, function and practicality, reflecting on the best possible look for the budget, way of life, and specifics of the location. She has been practicing interior design since 2008 and has a Master's of Interior Architecture from NYU.

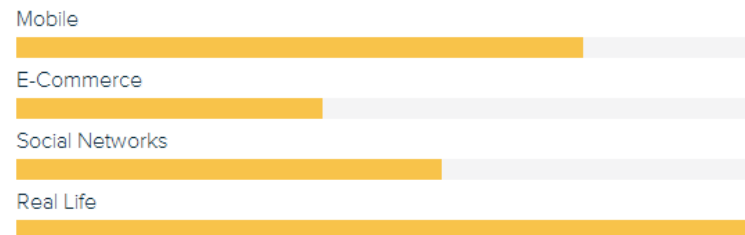


"I take great pride in helping others get inspired and unlocking their full potential!"

Motivations



Preferred Channels



Goals

- To grow a strong industry reputation
- To build relationships with long-term clients
- To get more leads and grow her business

Frustrations

- Getting poor results from marketing efforts
- Competing with more established designers
- Keeping in touch with clients and prospects

Juan Jose Abad



"Necesito los mejores ingredientes para realizar mis mejores productos de panadería y repostería"

EDAD 45

OCUPACIÓN Panadero

ESTADO Casado

LOCALIZACIÓN Zaragoza

NIVEL DE USO Alto

ARQUETIPO Director de orquesta

Atento

Dedicado

Trabajador

MOTIVACIONES

Incentivos

Miedos

Logros

Crecimiento

Poder

Social

OBJETIVOS

- Conseguir los productos de mejor calidad
- Realizar grandes pedidos a buen precio
- Conocer el catálogo de productos e información técnica

FUSTRACIONES

- Que la calidad no se corresponda con la indicada
- Productos anunciados no disponibles
- No conocer los tiempos de entrega

BIOGRAFÍA

Juan Jose lleva trabajando como panadero toda la vida, su padre fundó la panadería Abad en 1940.

No le falta experiencia y sabe que con ella, la manera de realizar productos excelentes se basa en la calidad de los ingredientes.

Madrega todo los días para tener el pan listo a la mañana en su panadería. Mientras que por las tardes, se encarga de la gestión de los productos que utilizan, e internet es una herramienta que le ahorra tiempo a la hora de consultar y encontrarva productos.

PERSONALIDAD

Extrovertido

Introvertido

Detección

Intuición

Pensamiento

Sentimiento

Juicio

Percepción

TECNOLOGÍA

IT / Internet

Software

Mobile Apps

Social Networks



NOKIA

Microsoft
Windows xp



Teach Me TINA

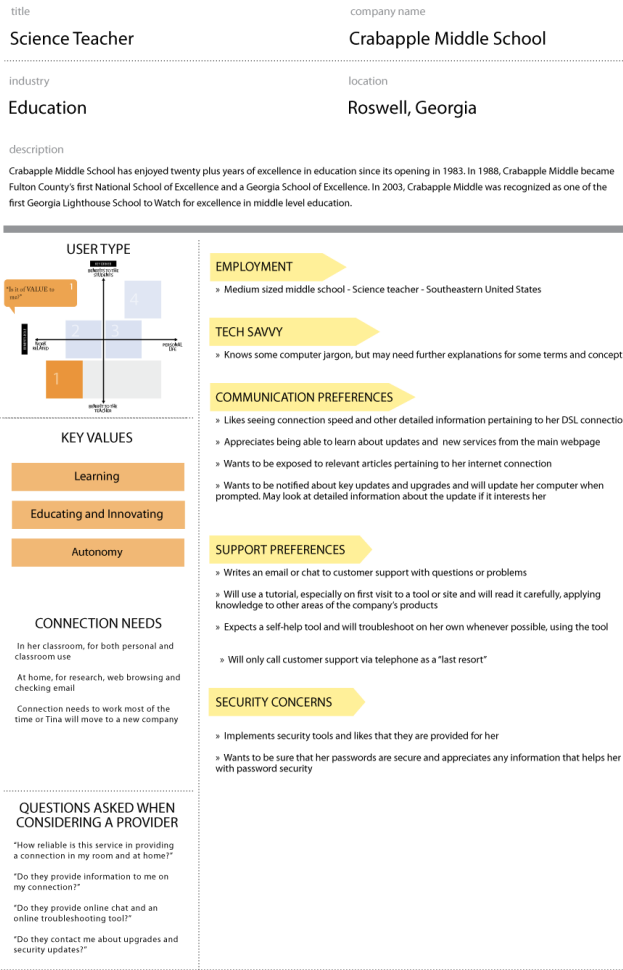
LEARNING FOCUSED Teacher

“Tell me more! I need Internet at home and in my classroom. So, it’s got to work. When I do have trouble, though, I want to be able to fix it quickly on my own.”

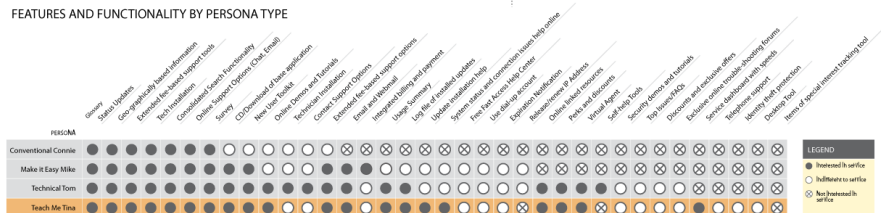
My school continuously strives to be a premier educational institution in the state of Georgia. Technology is now a part of our everyday lives, so I use technology and the Internet in my classroom. I use it for personal projects, but also for classroom projects with all of my students. When in a classroom with 30 middle school kids, I don't have time to call the DSL provider if I have trouble with the connection. So, I need to be able to troubleshoot problems on my own, right there on site. If I have too many connection problems, I will report it to our school principal and recommend that we use a different DSL provider. As Teachers, we don't have a lot of time to deal with extra problems, outside of our everyday chaos.

At home, I use the Internet to do research for the book I am writing. I am also an avid cook, so I connect almost every evening to pick out recipes and view the recipes I've saved online. When I am at home, I have a little bit more time to troubleshoot if needed. And, I do prefer to fix the problem myself, if possible.

This user has a high need for connection and a moderately high willingness to troubleshoot problems when they arise. She is interested in what is happening and why the function is being performed. She wants to learn about her computer and DSL. Tina will study simple wiring diagrams, try to check connections and will download DSL software. She wants to learn more computer jargon, but explanations may be needed. She may also use a chat for customer support, to learn how to fix her DSL connection in her classroom or at home by herself.



FEATURES AND FUNCTIONALITY BY PERSONA TYPE



Clark Andrews

AGE 26

OCCUPATION Software Developer

STATUS Single

LOCATION San Jose, CA

TIER Experiment Hacker

ARCHETYPE The Computer Nerd

Friendly

Clever

Go-Getter

Motivations

Incentive

Fear

Achievement

Growth

Power

Social

Goals

- To cut down on unhealthy eating and drinking habits
- To measure multiple aspects of life more scientifically
- To set goals and see and make positive impacts on his life

Frustrations

- Unfamiliar with wearable technology
- Saturated tracking market
- Manual tracking is too time consuming

Bio

Aaron is a systems software developer, a "data junkie" and for the past couple years, has been very interested in tracking aspects of his health and performance. Aaron wants to track his mood, happiness, sleep quality and how his eating and exercise habits affects his well being. Although he only drinks occasionally with friends on the weekend, he would like to cut down on alcohol intake.

Personality

Extrovert

Introvert

Sensing

Intuition

Thinking

Feeling

Judging

Perceiving

Technology

IT & Internet

Software

Mobile Apps

Social Networks

Brands



"I feel like there's a smarter way for me to transition into a healthier lifestyle."

Example



Will Wowsley

Male
Age 52
Medina, Ohio
Married
2 children
CIO at FeeBank.

"I am the CIO at FeeBank. We have multiple data centers to support our online services (website and app); and several office centers – at least one for each state – for support functions and shared services (marketing, finance, human resources, etc). So that's around 30-40 office buildings aside from our 1,200 branches. We are a regional bank with presence every state east of the Mississippi River.

Branches are relatively small, and associates are generally stationed in fairly static areas. That's not so with our corporate centers. There tends to be need for a lot of shared spaces, we have an auditorium at HQ, an on-site gym at the corporate centers, training areas, etc. – while these are nice, they probably only get used 10-25% of the time – but we are providing heating, cooling, and lighting to these locations 100% of the time. The folks at the corporate centers love their meetings and events. There are inevitably conflicts in when facilities are being used – someone will book a conference room then not show up; at the same time other employees are hunting for conference rooms because it appears that all of the conference rooms are occupied. Our leadership team expects me to solve this, since IT manages the facility booking system."

MY ASPIRATIONS

Own a tech startup.
Space travel.

MY FEARS

Being blamed for things that aren't my fault.
Not having the support of my leadership team.

MY NEEDS

Reliability.
Novel solutions – that work. 100% of the time.

MY TASKS

Ensure continuity of business.
Facilitate smooth operations through IT capabilities.
Keep our website, mobile app, and branches operational through our IT infrastructure.

MY FRUSTRATIONS

Bankers understand dollars and cents – not how the technology works. I spend a lot of time explaining things.
Unrealistic expectations.

MY MOTIVATIONS

The income is good.
Solving problems.

Making Templates

- <https://www.youtube.com/watch?v=B23iWg0koi8>

ACTIVITY: PERSONA DEVELOPMENT

DEBRIEF

THE PSYCHOLOGY OF INTERACTION

Don Norman

- <https://www.youtube.com/watch?v=Wl2LkzIkacM&t=2s>

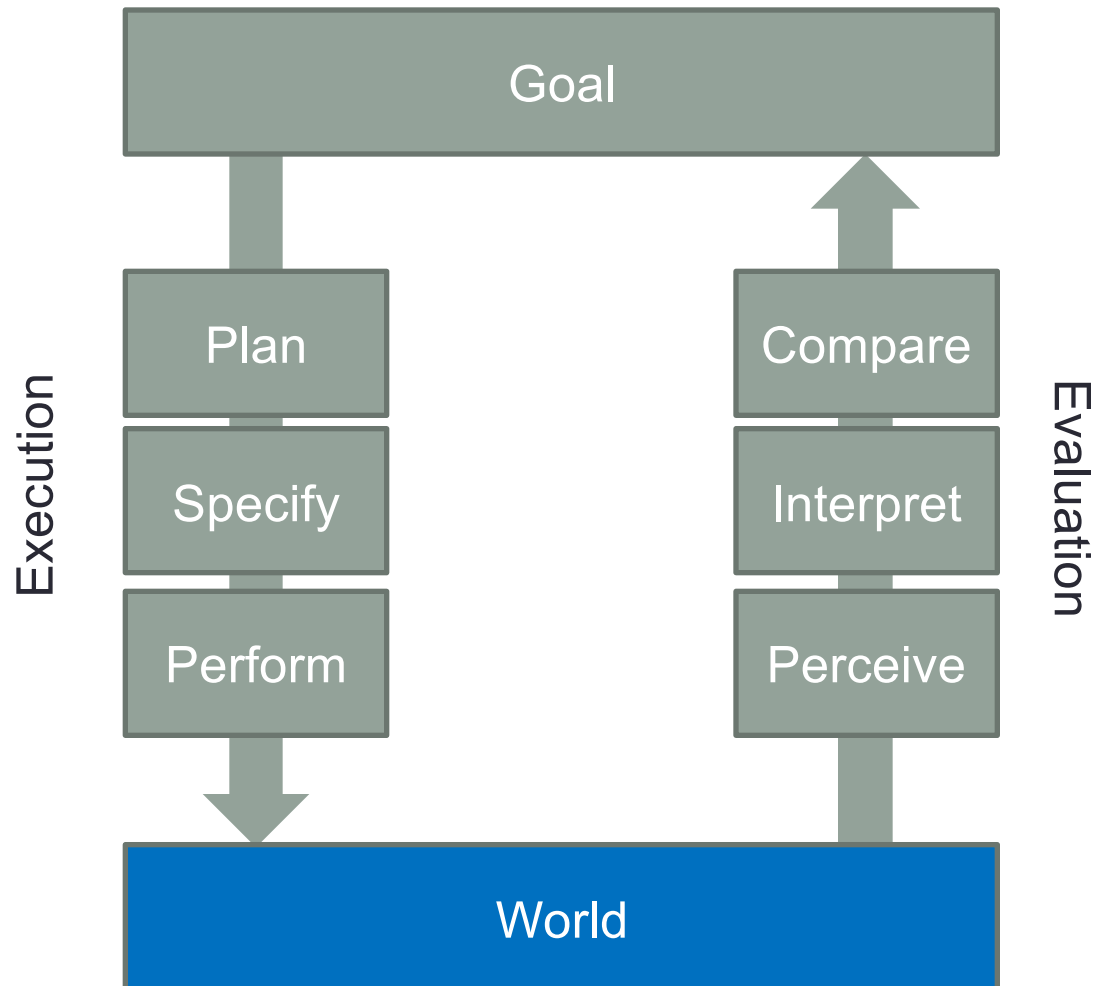


Don Norman Concepts

- **Affordances:** Attributes of an object, it's ability to serve a purpose.
- **Signifiers:** Icons, signs, etc. that give an indication of an object's affordances.
- **Constraints:** A physical (or virtual) feature that prevents error. For example, a car that requires depressing the brake for ignition. Or a dialogue box for software that must be addressed before something bad or permanent happens.



Seven Stages of Interaction



HOW EASY IS IT TO CONFUSE PEOPLE?

Cognitive Load

- SA
 - https://www.youtube.com/watch?v=IGQmdoK_ZfY
- CB
 - <https://www.youtube.com/watch?v=VkrrVozZR2c>
- Seeing the World as it isn't
 - https://www.youtube.com/watch?v=9II_D3Xt9W0

What is cognitive load?

- The amount of effort a person must expend mentally to understand something.
- Cognitive load is not only mental, it is physical.
 - Pupils Dilate
 - Pulse Quickens
 - Blood Pressure rises
 - Glucose floods the central nervous system
 - Your nervous system actually uses more glucose than most parts of your body.
 - High effort (Cognitive Load) is especially taxing - leads to drop in blood glucose.
 - Lower glucose tends to lead to negative emotions
- **Higher cognitive load equals harder to do (use)**

JOURNEY MAPS

Journey Maps

- Journey Maps:
 - May cover the lifecycle of a customer.
 - Involve multiple touchpoints.
 - Include more variables.
 - Include emotional responses.

Journey Maps: Components

- **Personas:** Who are we designing for? How will they respond in this scenario?
- **Timeline:** How long is the interaction with our product?
- **Emotion:** Illustrate frustration, peaks, valleys, joy, etc.
- **Touchpoints:** Where are the interactions with our organization? Can we increase them?
- **Channels:** Where does the interaction with the product take place? Store? Home? Subway?

Rail Europe Experience Map

Guiding Principles

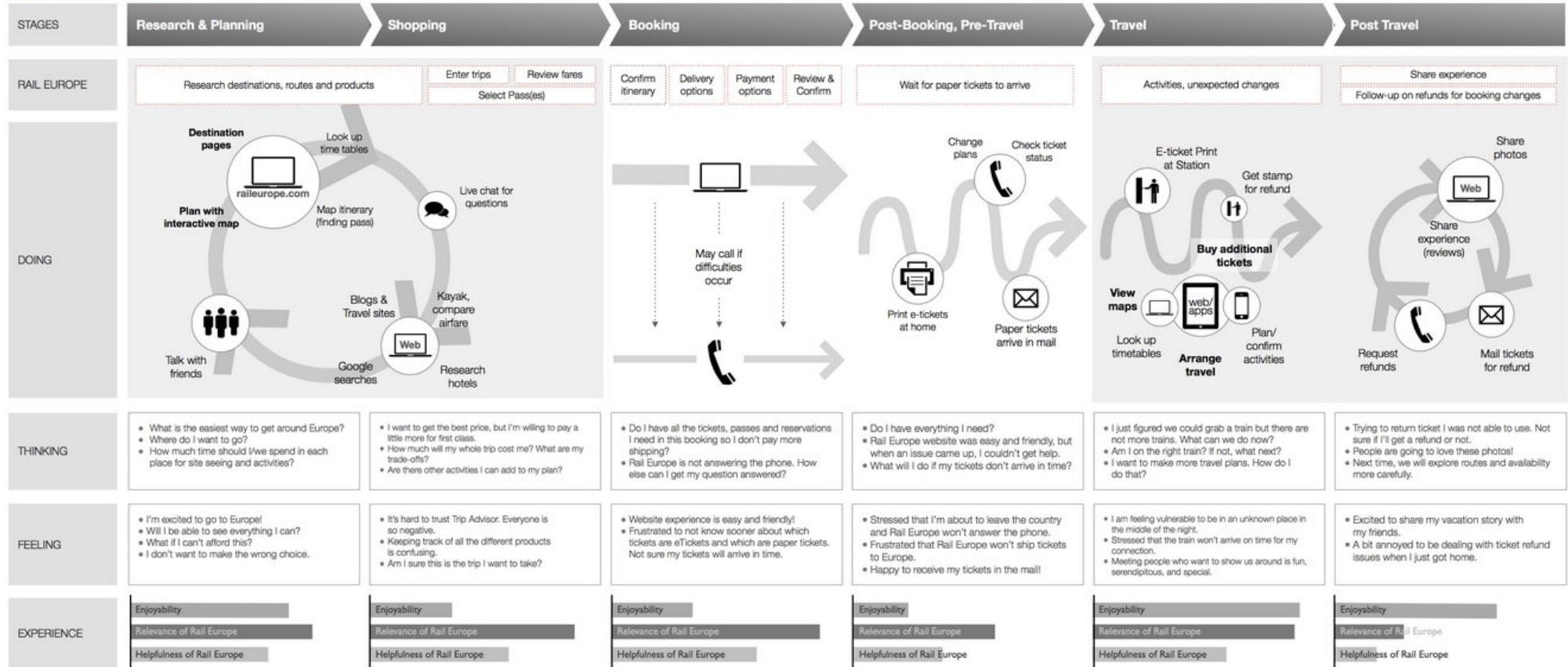
People choose rail travel because it is convenient, easy, and flexible.

Rail booking is only one part of people's larger travel process.

People build their travel plans over time.

People value service that is respectful, effective and personable.

Customer Journey



Opportunities

GLOBAL			PLANNING, SHOPPING, BOOKING			POST-BOOK, TRAVEL, POST-TRAVEL	
Communicate a clear value proposition.	Help people get the help they need.	Support people in creating their own solutions.	Enable people to plan over time.	Visualize the trip for planning and booking.	Arm customers with information for making decisions.	Improve the paper ticket experience.	Accommodate planning and booking in Europe too.
STAGE: Initial visit	STAGES: Global	STAGES: Global	STAGES: Planning, Shopping	STAGES: Planning, Shopping	STAGES: Shopping, Booking	STAGES: Post-Booking, Travel, Post-Travel	STAGE: Traveling
Make your customers into better, more savvy travelers.	Engage in social media with explicit purposes.		Connect planning, shopping and booking on the web.	Aggregate shipping with a reasonable timeline.		Proactively help people deal with change.	Communicate status clearly at all times.
STAGES: Global	STAGES: Global		STAGES: Planning, Shopping, Booking	STAGE: Booking		STAGES: Post-Booking, Traveling	STAGES: Post-Booking, Post Travel

Information sources

Stakeholder interviews
Cognitive walkthroughs

Customer Experience Survey
Existing Rail Europe Documentation



Linear process

Non-linear, but time based

Rail Europe Touchpoints by Channel

Stage	Research & Planning	Shopping	Booking	Pre-Travel (Documents)	Travel	Post-Travel
Channels						
Website	Maps Test itineraries Timetables Destination Pages FAQ General product & site exploration	Schedule look-up Price look-up Multi-city look-up Pass comparison	Web booking funnel - Pass - Trips - Multiple Trips	Select document option (from available options) - station e-ticket - home print e-ticket - mail ticket	Contact page for email or phone	
Call Center	Order brochure Planning (Products) Schedules General questions	Site navigation help	Automated booking payment Cust. Rep booking Site navigation help	Call re: ticket options Request ticket mailed Resolve problems (info, payment, etc.)	Call with questions regarding tickets General calls re: schedules, strikes, documents	
Mobile	Trip ideas	Schedules	Mobile trip booking		Access itinerary Look up schedules Buy additional tickets	
Communication Channels (social media, email, chat)	Chat for web nav help	FB Comparator Email questions Chat for website nav help	Chat for booking support	Email confirmations Email for general help Hold ticket	Ask questions or resolve problems re: schedules and tickets	Complaints or compliments Survey
Customer Relations						Request for refund, escalation from call center.
Non-REI Channels	Trip Advisor Travel blogs Social Media General Google searching	Airline comparison Kayak Direct rail sites	Expedia		Travel Blogs Direct rail sites Google searches	Trip Advisor Review sites Facebook



Non-linear, no time restrictions



Linear process



Non-linear, but time based

Journey map for selecting a new smartphone

Persona: Ben
Scenario: Ben's son broke his phone.

Research

Shop

Selection

Purchase

Contract

Use

Support

Post
Experience

Touchpoint

Web
Store
Review Sites

Website
Store
Ebay
Amazon

Digital Advert

Store

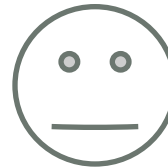
Store

Website
Device

Web Chat

Friends Family
Review sites for phone

Emotion



Thinking

I just bought stuff for Christmas. This will be the third phone in a year. Should he get a refurb for Christmas? Should he buy his replacement? Or maybe I give him mine and get a Pixel 2 for me.

Phones are expensive...And my phone is just over a year old and I have no complaints. Maybe I should get a refurb for my son.

My Carrier is running a special – get 1 Pixel 2, get a second for free. I can get that and give the second to my wife so she doesn't get jealous. Then put her old one on ebay.

I don't want to wait, I'll just go to the store... Although they are really slow... Sigh.

Ugh. I hate contracts. Although, my terms are pretty good.

This phone is quick, and takes advantage of faster network speeds that the old one couldn't

So.. How do I get my son's apps onto my phone?

Overall it's good. Some things could be better, but everything could be and it's not really their fault.

ACTIVITY: JOURNEY MAP

DEBRIEF

THINK LIKE A DESIGNER



Curiosity

A candid photograph of a group of people inside an elevator. The walls are metallic and reflective. A man in the center wears a black t-shirt with a green graphic. Another man on the right is holding a small digital camera up to take a picture. The scene is brightly lit, possibly from a window or door at the top. An orange banner with white text is overlaid at the bottom.

Find a better problem to solve

<https://flic.kr/p/6G3AHW>

Challenge assumptions



Challenge assumptions





Systems



Collaborate

CLASS ACTIVITY:
CAN'T COME UP WITH A GOOD
IDEA? COME UP WITH BAD IDEAS!

DEBRIEF

SKETCHING

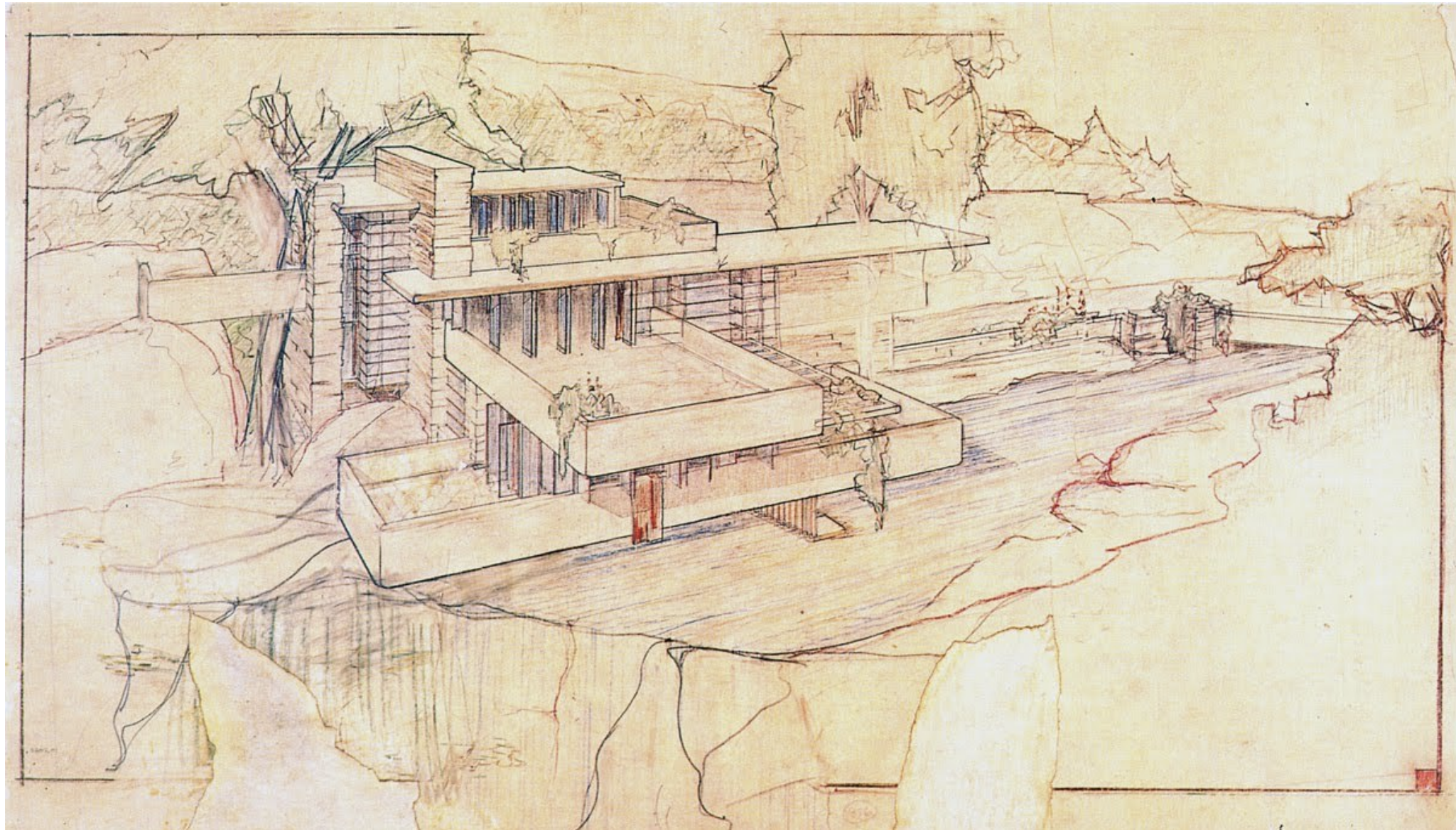


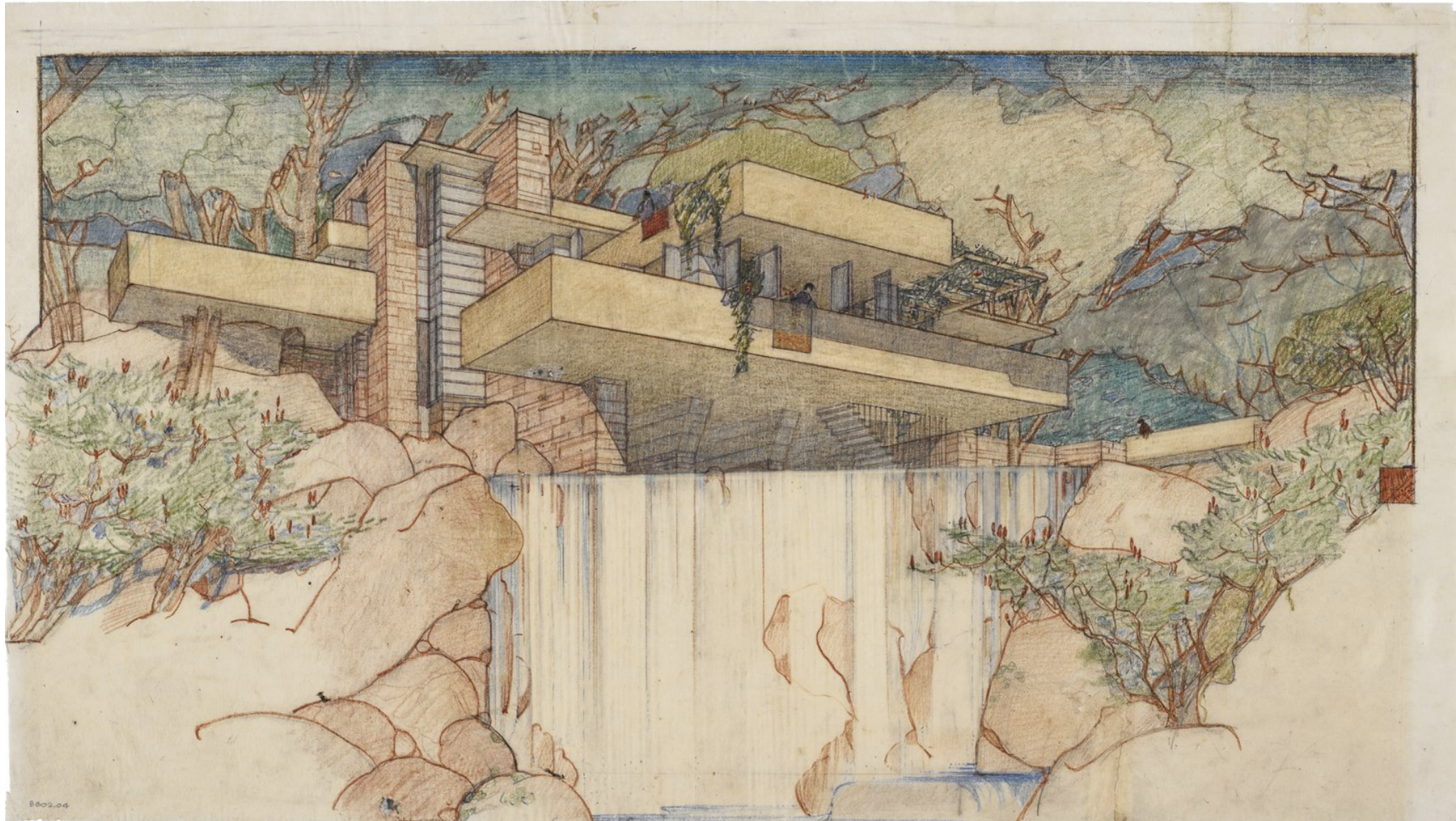


You can use an eraser on the drafting table
or a **sledge hammer on the construction
site.**

-Frank Lloyd Wright

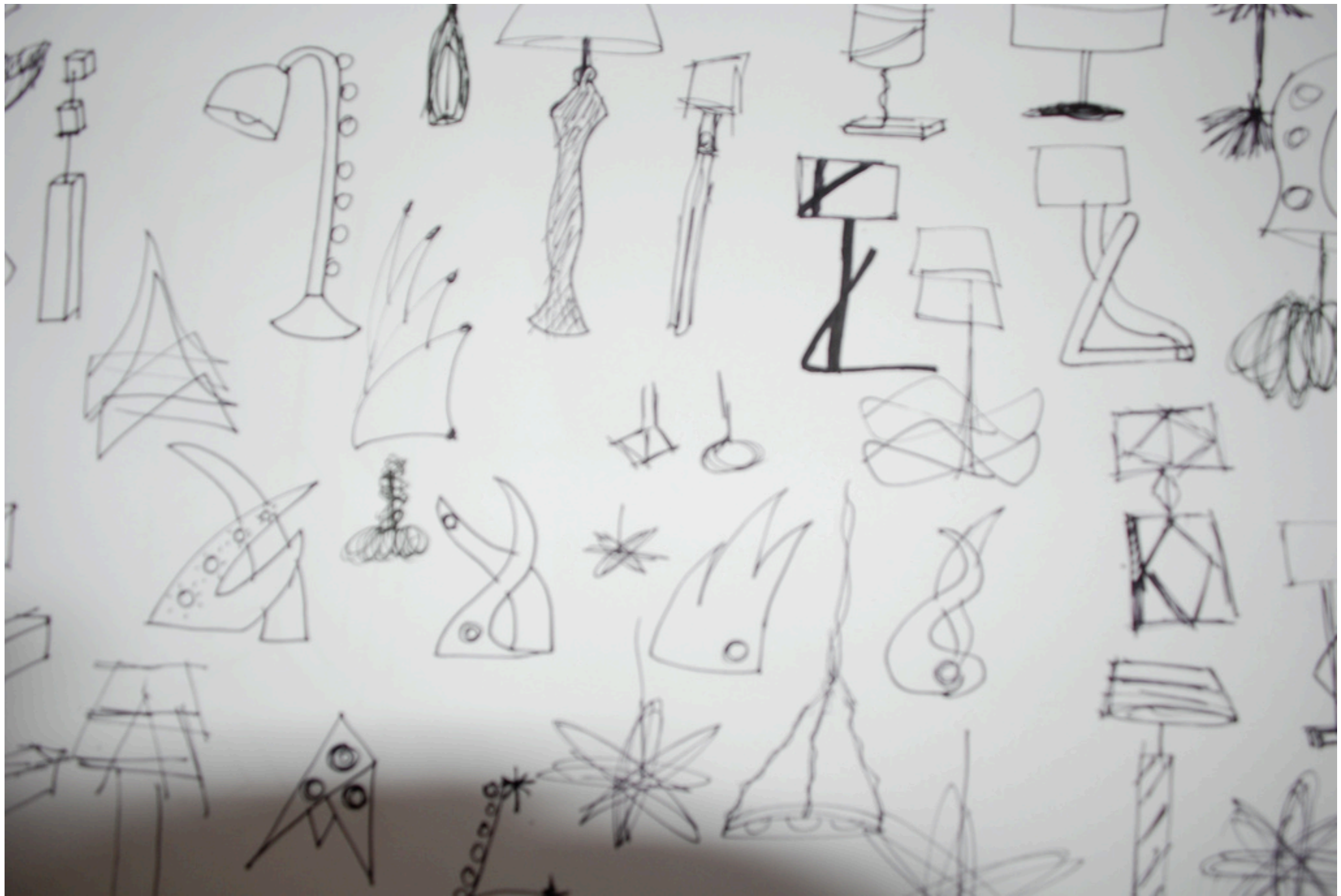






Southwest Airlines







Acrilic plastic ball is
rotational moulded
into a spherical shape

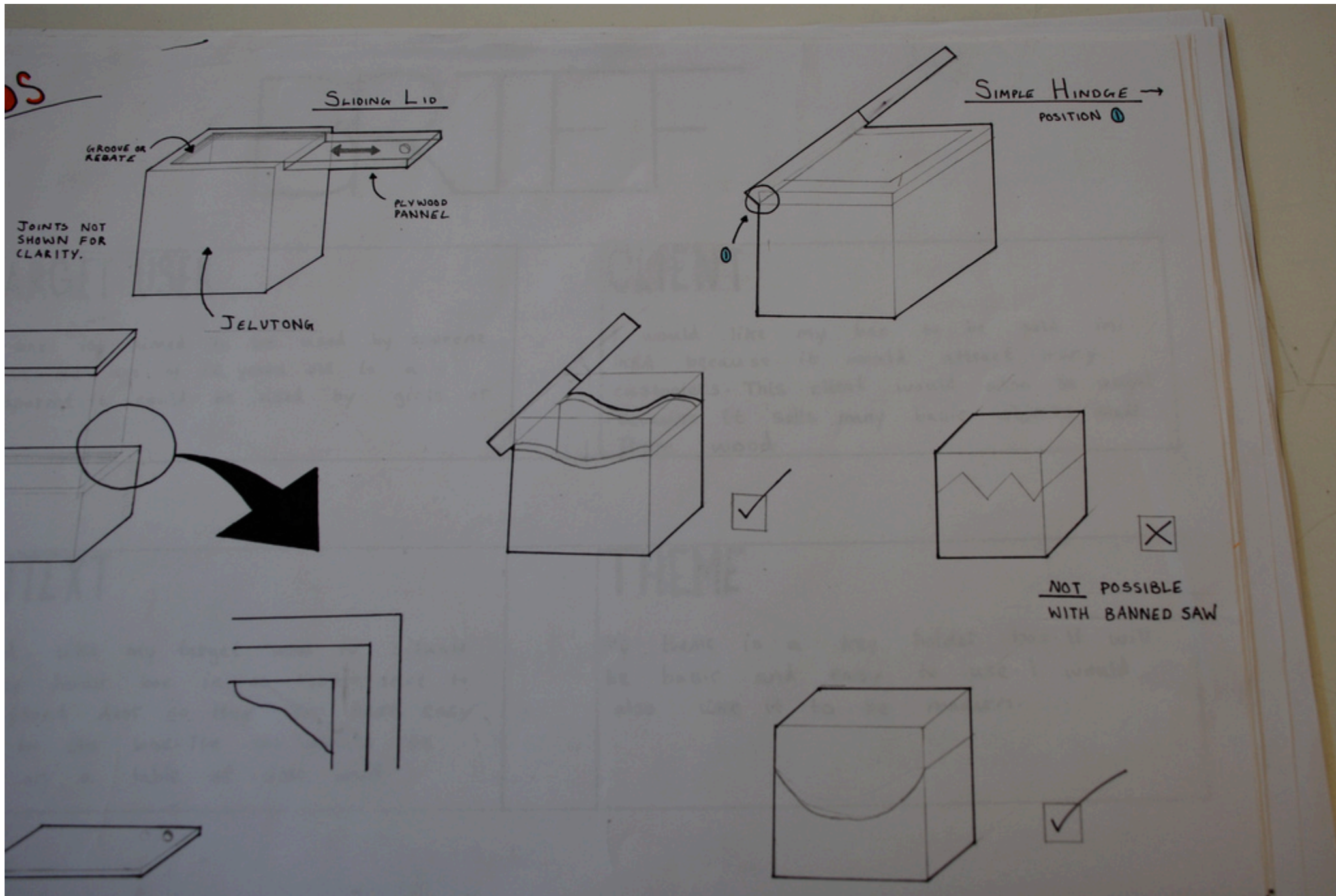
top part is
cut out
like
so and
tin
chaps
are
screwed
on

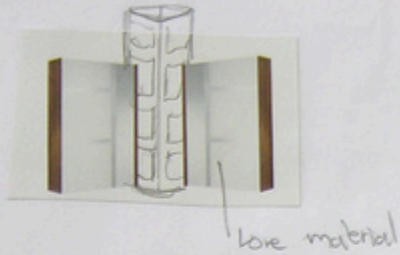
The top
part has a
hole drilled through
it for the cable

light
sensor

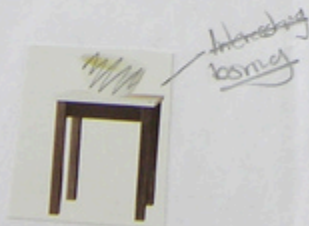
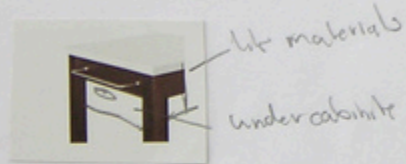
tin sheet

to show to replace





nice material



add side cabinets

like handles

same sides



get rid of sink



not add wheels

add middle



Link

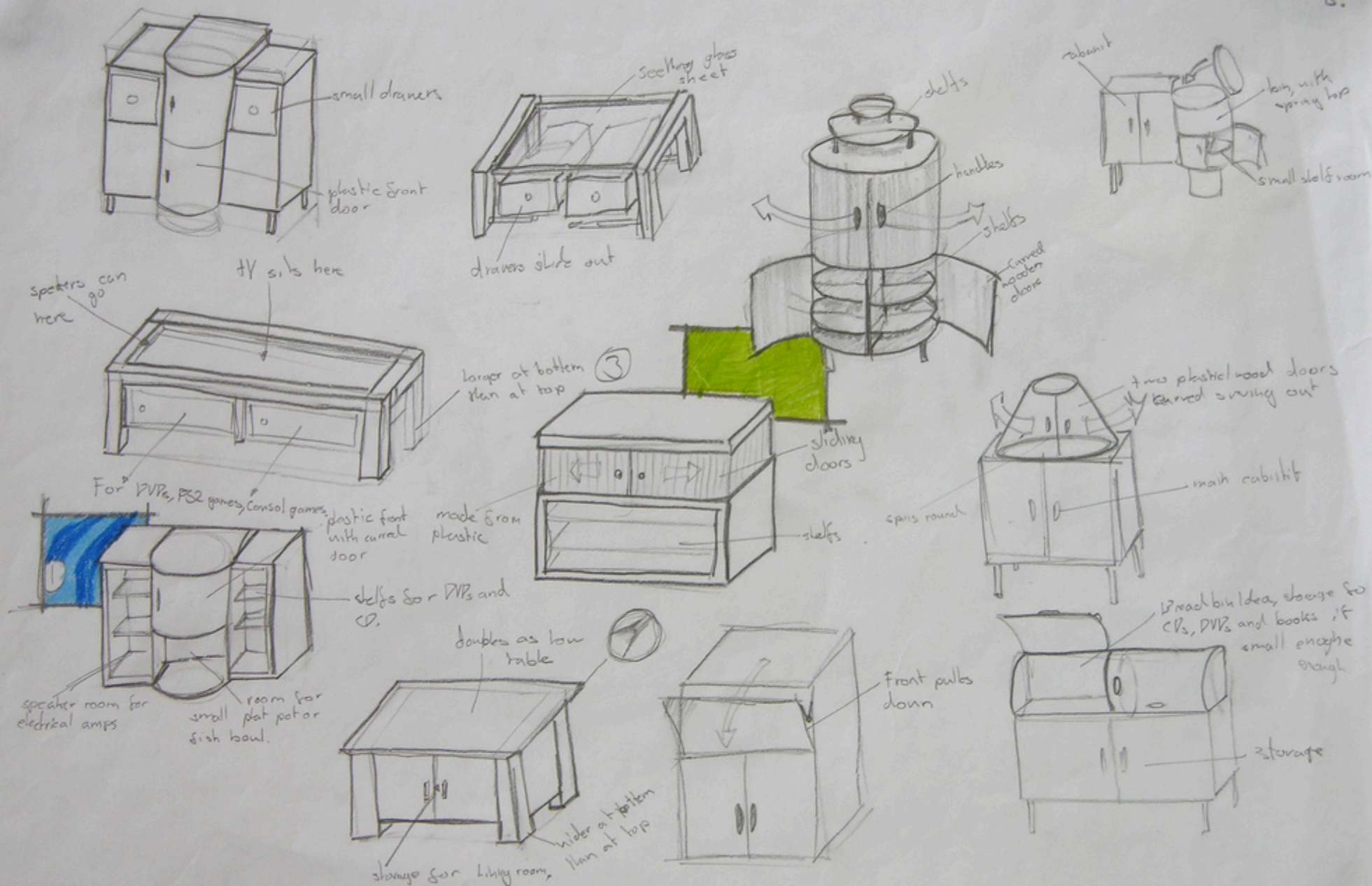
get rid of

like front

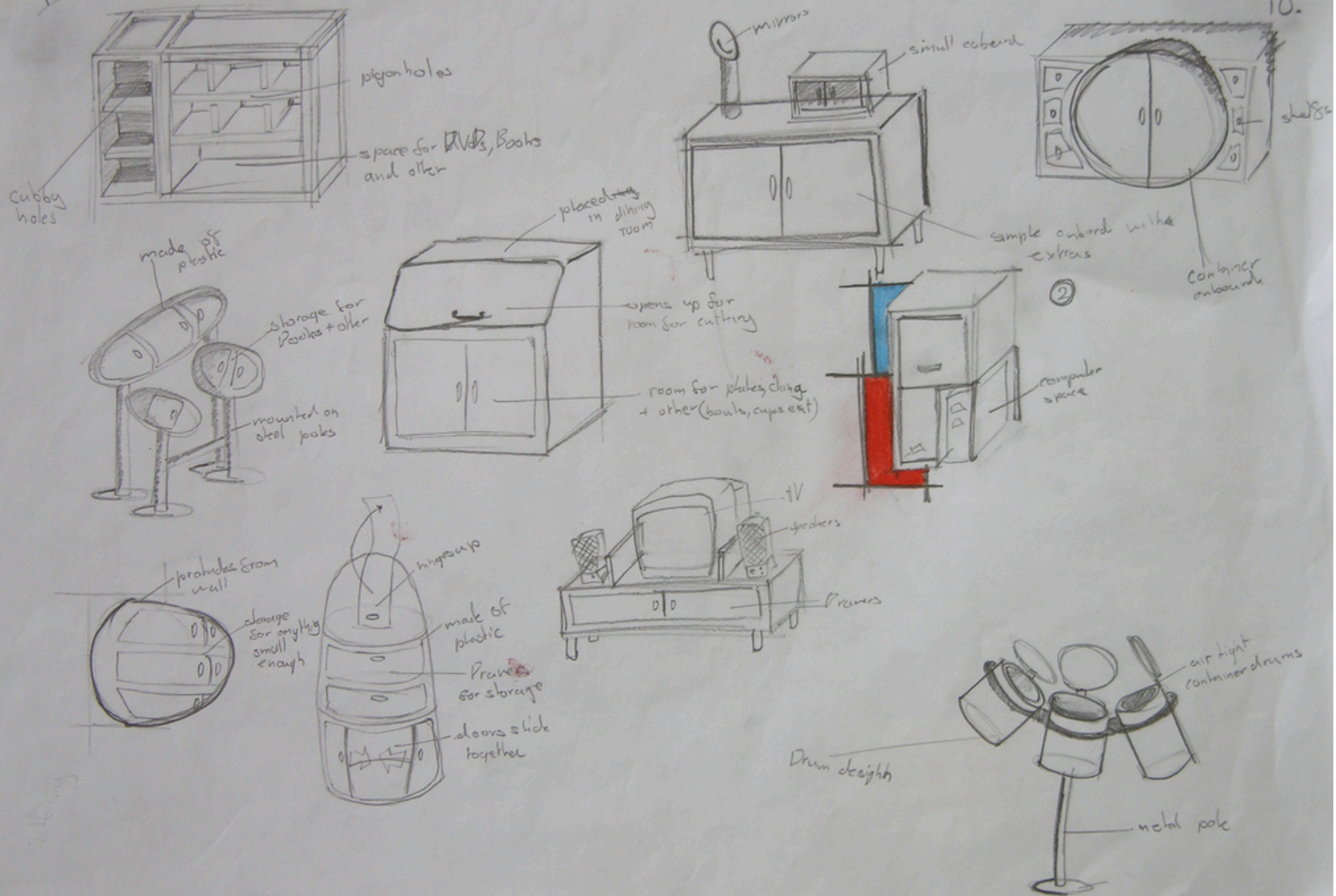


IDEAS ①

8.



IDEAS ③



ACTIVITY

SKETCHING AND IDEATION

DEBRIEF

Module 4: Wrap up

- **Key Topics**

- Designing with customer insights
- Psychology and design
- Think like a designer
- Increasing creativity
- Using design methods to solve problems

- **Activities**

- Empathy Maps, Persona Design, Journey Maps, Sketching and Ideation

- **Ask yourself:**

- Have you used similar tools before?
- How can the activities described in this module be applied in your day-to-day work?