



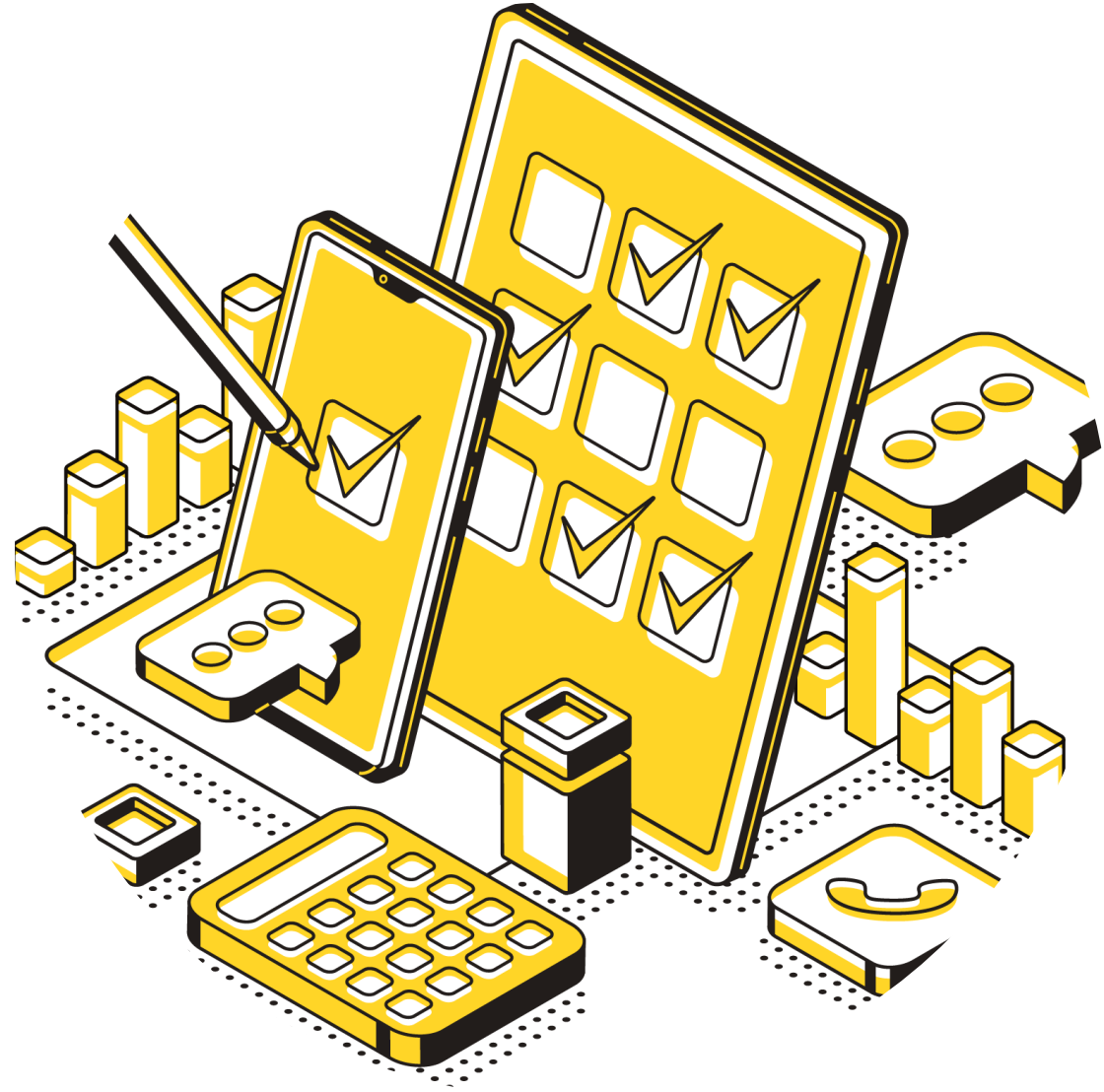
Web UX/UI development workshop

Workshop 2 –
Finding out users' problems

Gordon Lee

Product Designer
M. Phil. in communication

Email: gordonlee.cityu@gmail.com



● Today's agenda

- Website UX/UI design processes

- User research

Exercise: Among an area of interest, try to interview 3 people in the class to understand their painpoints/behavior.

- Data analysis

Exercise: Use affinity diagram to analyze the data from user research to find out their painpoints.

- Personas and user journey

- Problem statement

- Website solution and user flow





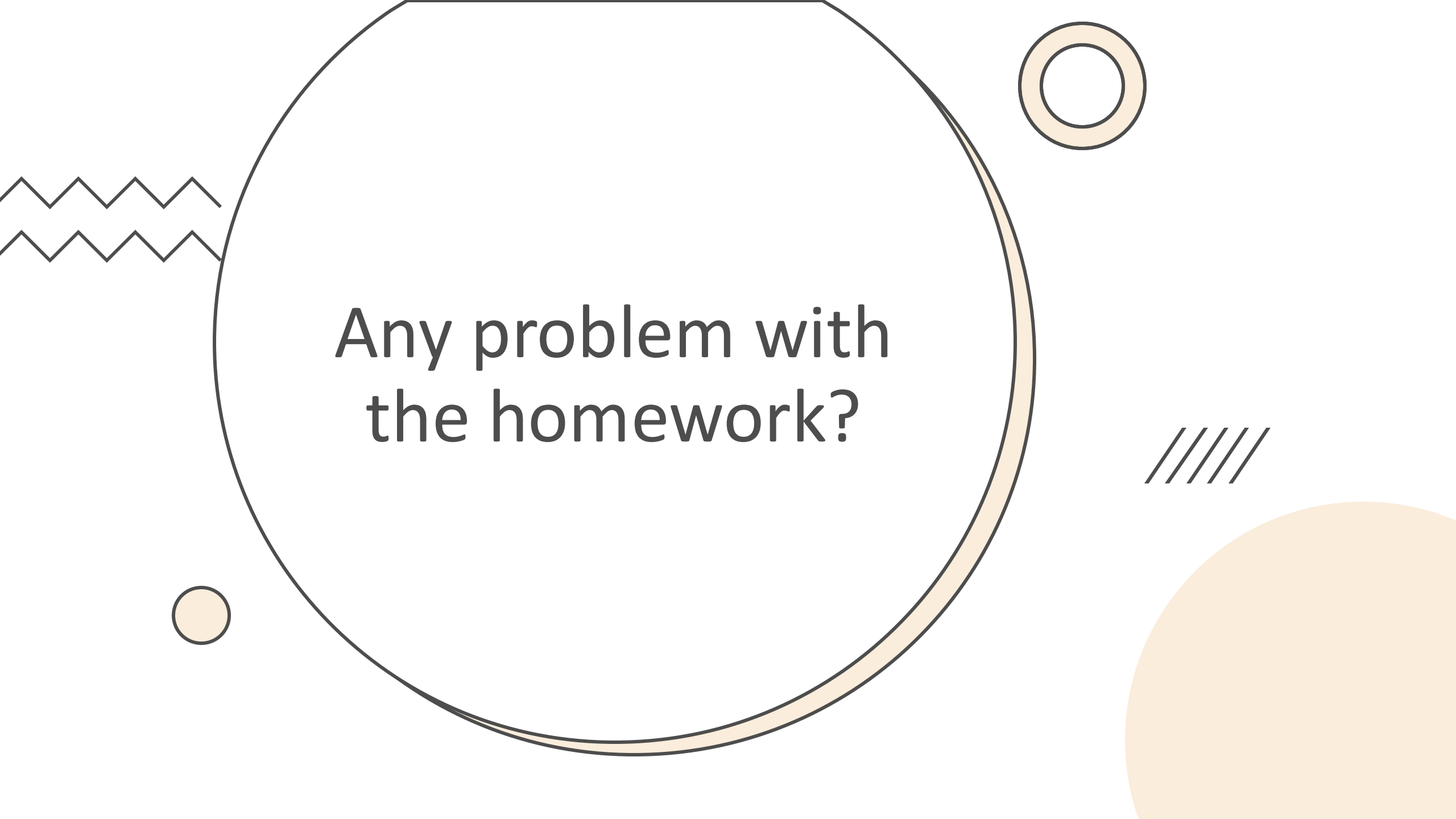
Remember
what we've
done last
week?

- Use case
- User scenario
- Site map

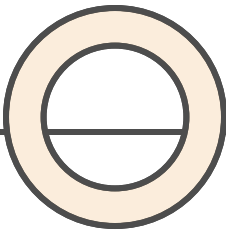
Have you submitted?

Please specify your name and email so that I could send the comment to you.





Any problem with
the homework?



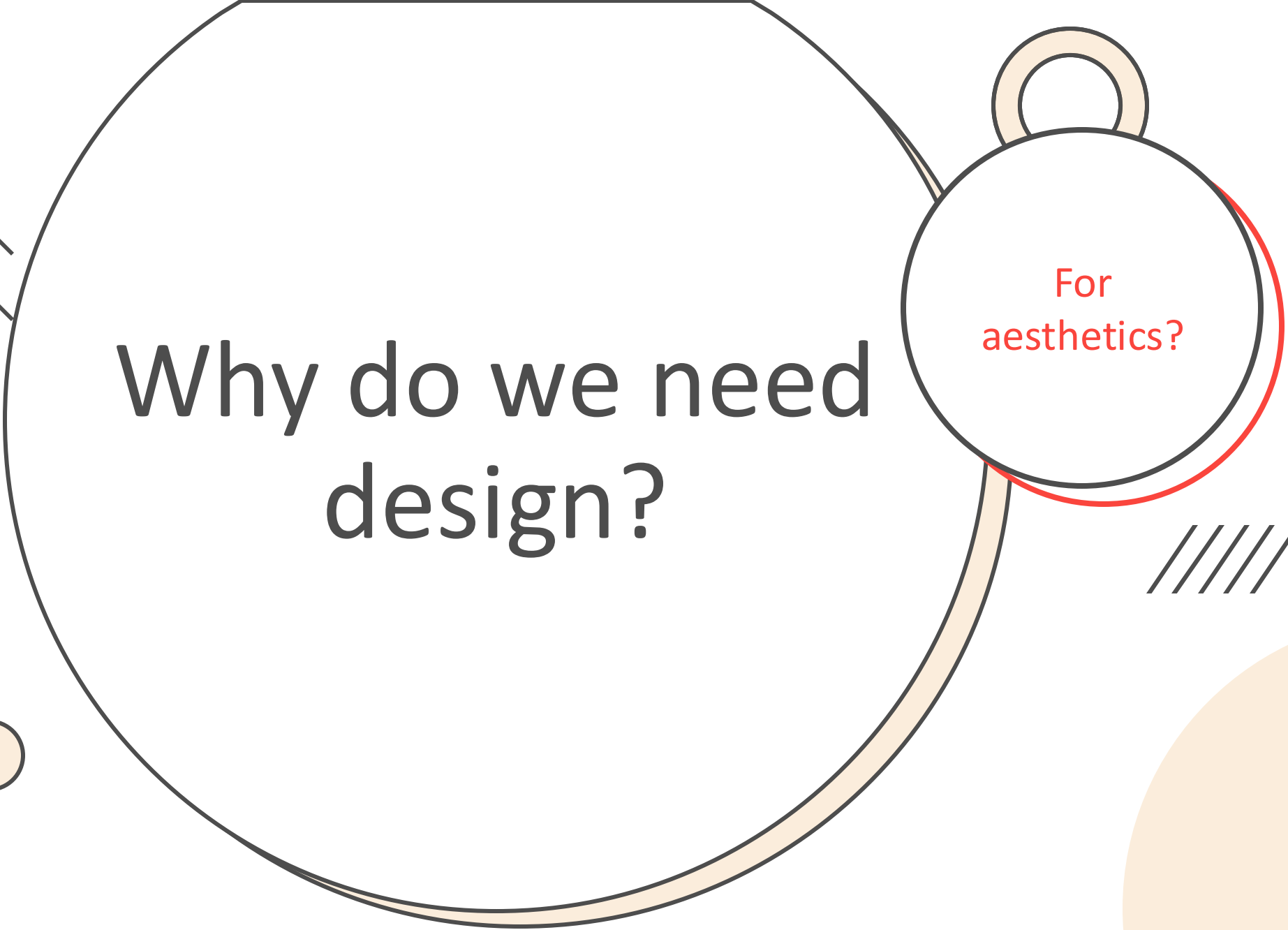
Website UX/UI design processes



A black and white photograph of Paul Rand, a man with glasses and a mustache, holding a pencil in his mouth. He is wearing a dark sweater over a collared shirt. The background is blurred, showing what appears to be a desk or workspace. The image is framed by a thin orange border on the left and bottom.

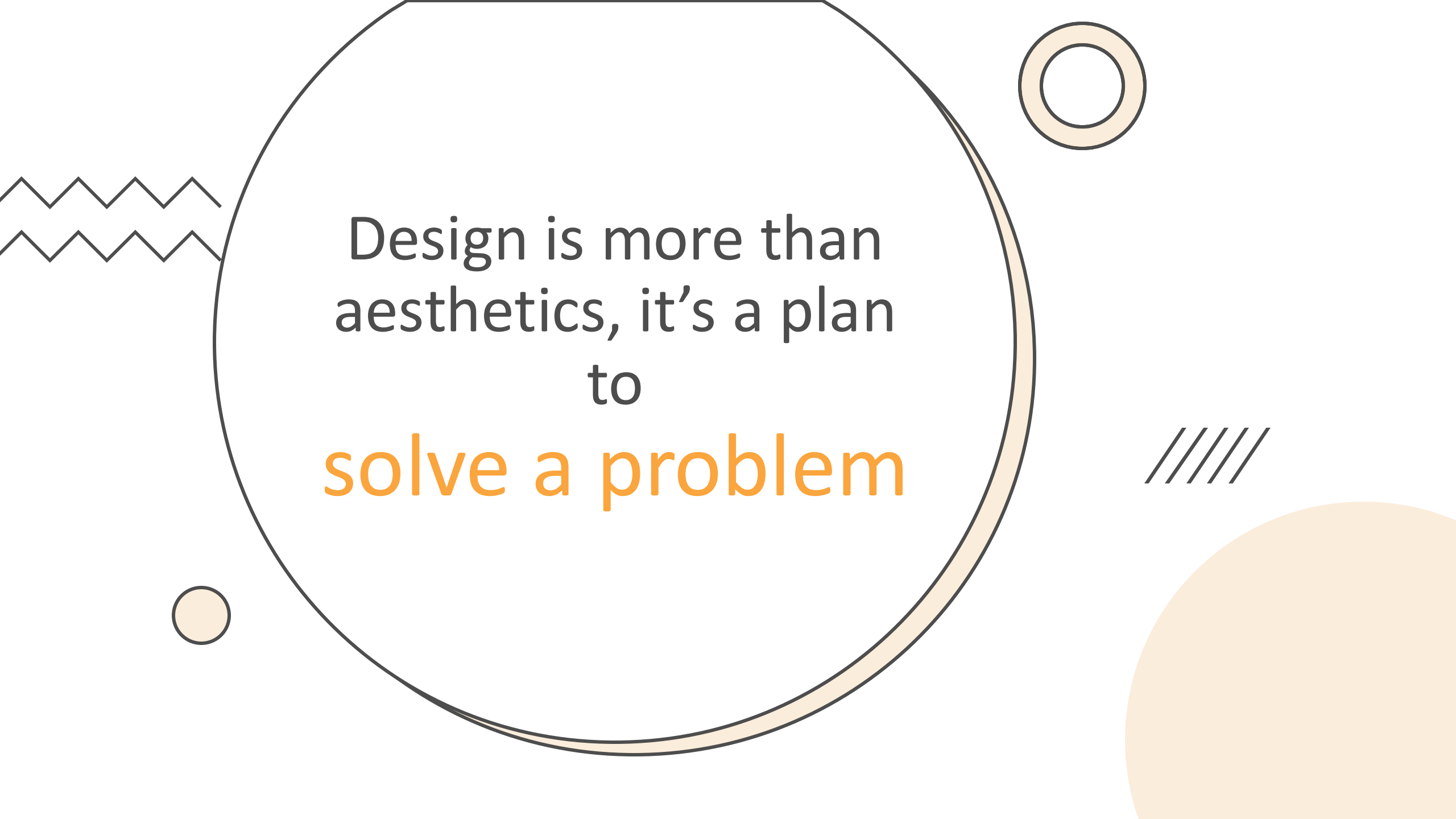
“Art is a noun, and design is a noun and also a verb. Art is a product and design is a process.”

Paul Rand
Logo Designer of IBM, UPS

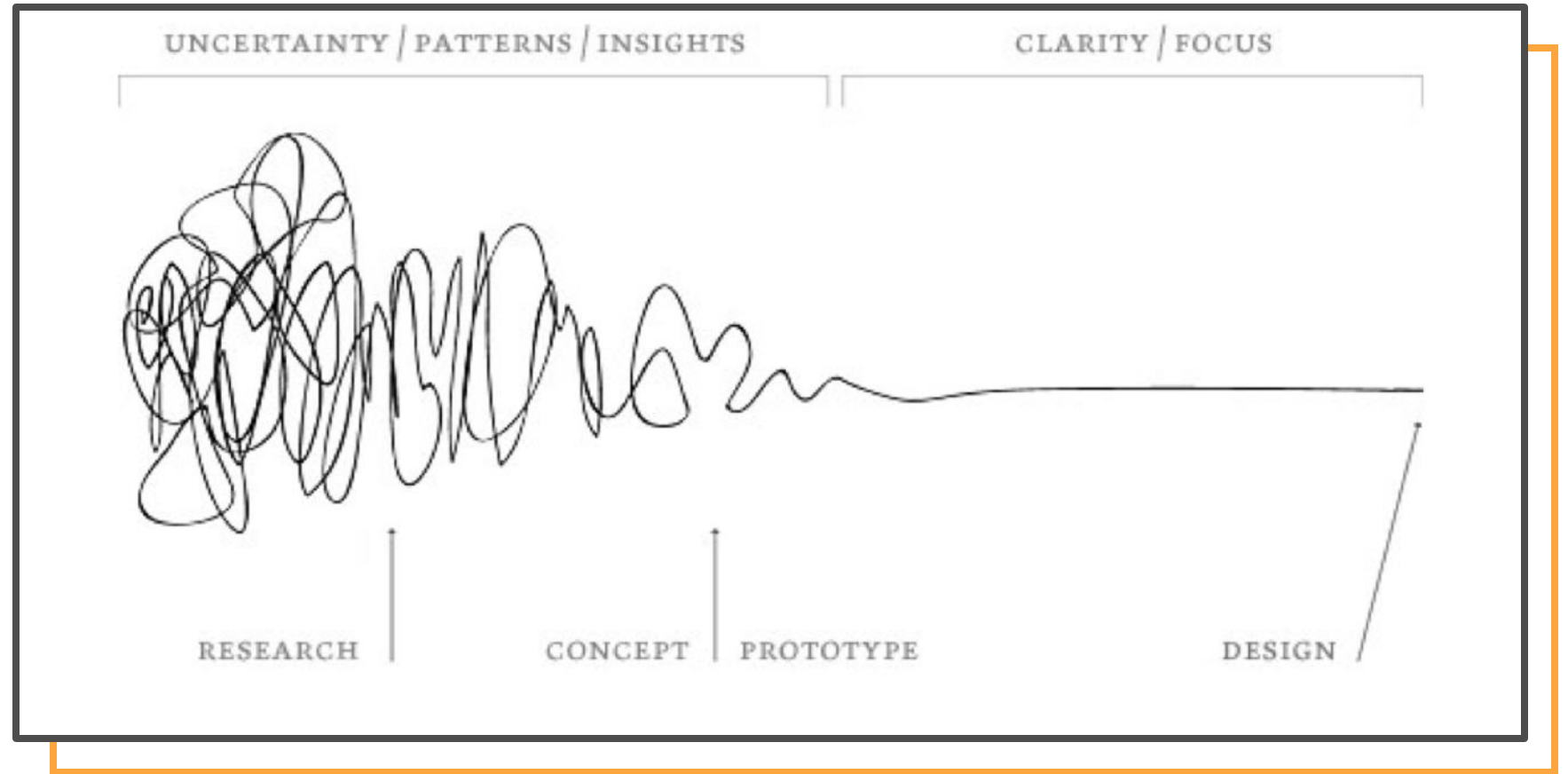


Why do we need
design?

For
aesthetics?



Design is more than
aesthetics, it's a plan
to
solve a problem



The design process





User-
centered /
Iterative

Process-
centered
design

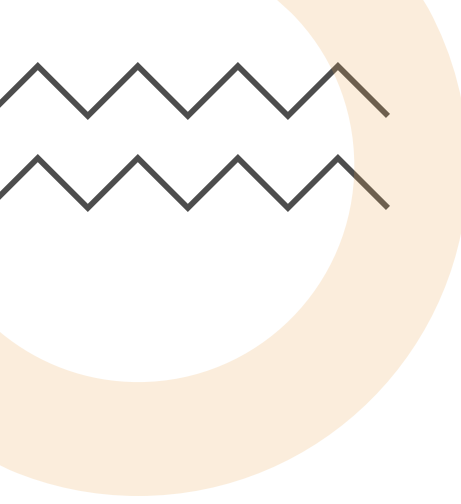
There are many
different models
when practicing
design

Empathic
design

Agile /
Lean UX

Waterfall





But they have a lot
in common...

- Research the problem space
- Focus on the opportunity and define the constraints
- Explore possibilities
- Decide the best solution





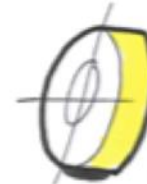
Start with WHY



#1

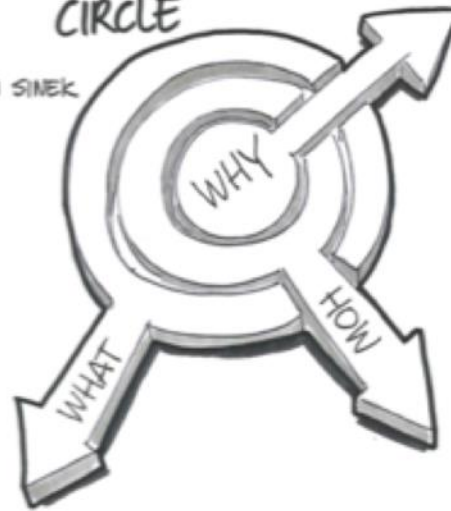
WHY DO YOU DO
WHAT YOU DO?

— PURPOSE —



THE GOLDEN CIRCLE

BY
SIMON SINEK



#2

HOW DO YOU DO THAT?

— PROCESS —



#3

WHAT DO YOU DO?

— PROOF —

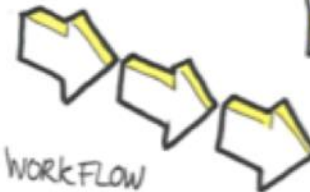
PRODUCTS



RESULTS



SERVICES



WORKFLOW

© MINDBIZ

WWW.MINDBIZ.NL



● Ask 5 “Whys”

We need a bigger Share button

Why: People aren't sharing the documents they create

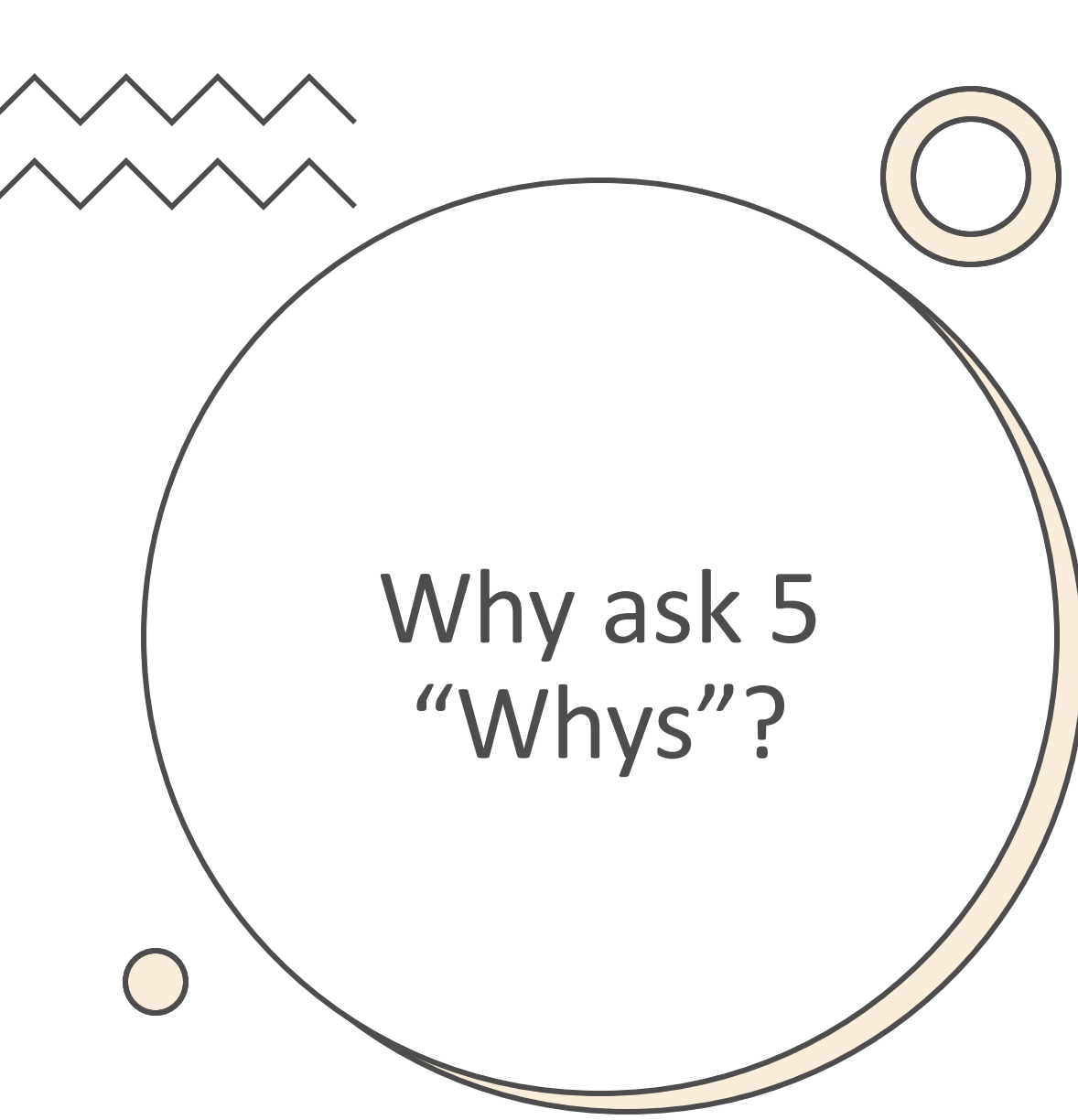
Why: People are nervous about sharing

Why: They're not sure who will see what they share

Why: We don't tell them who will see what they share

Why: We don't have that data in our system





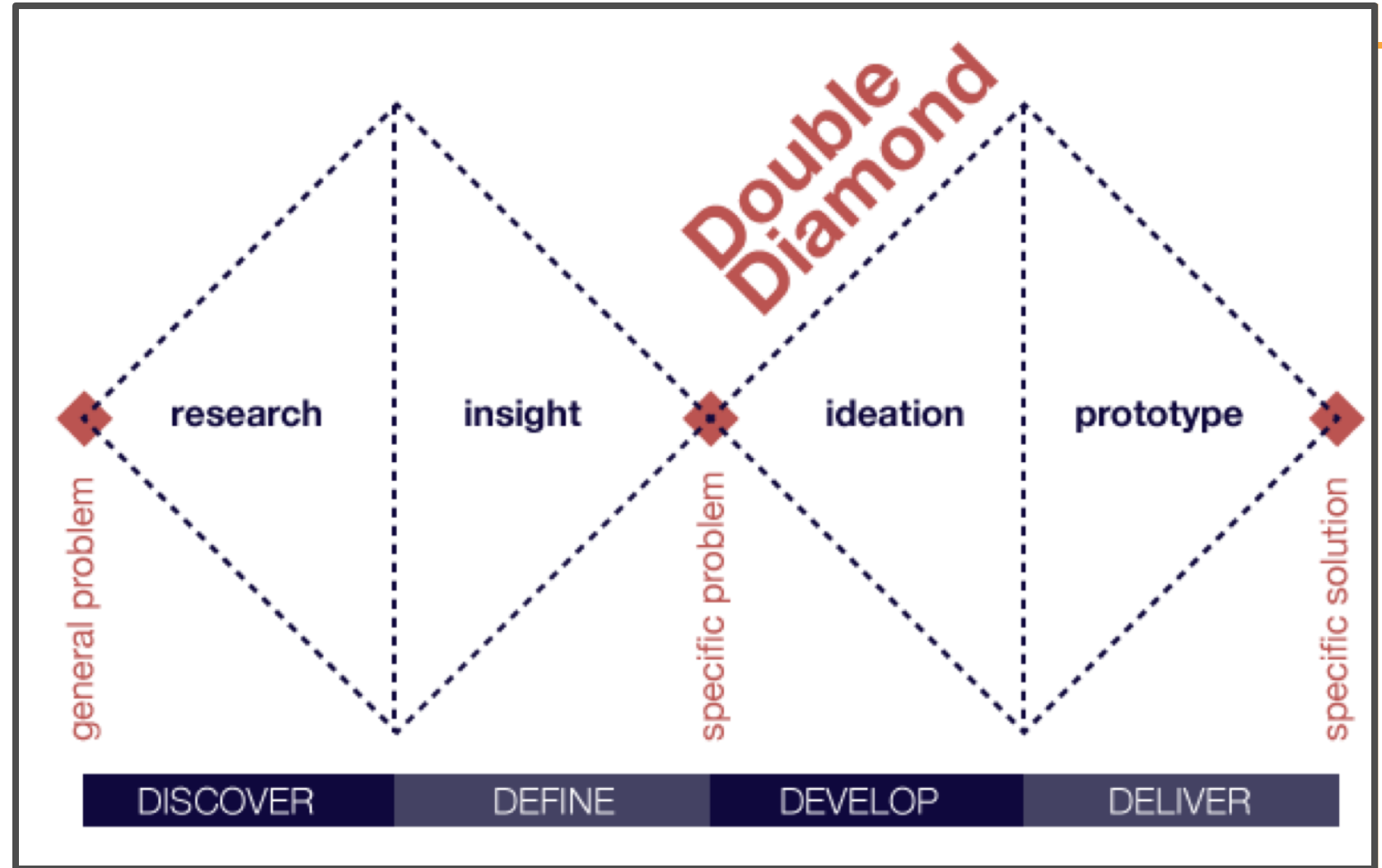
Why ask 5
“Whys”?

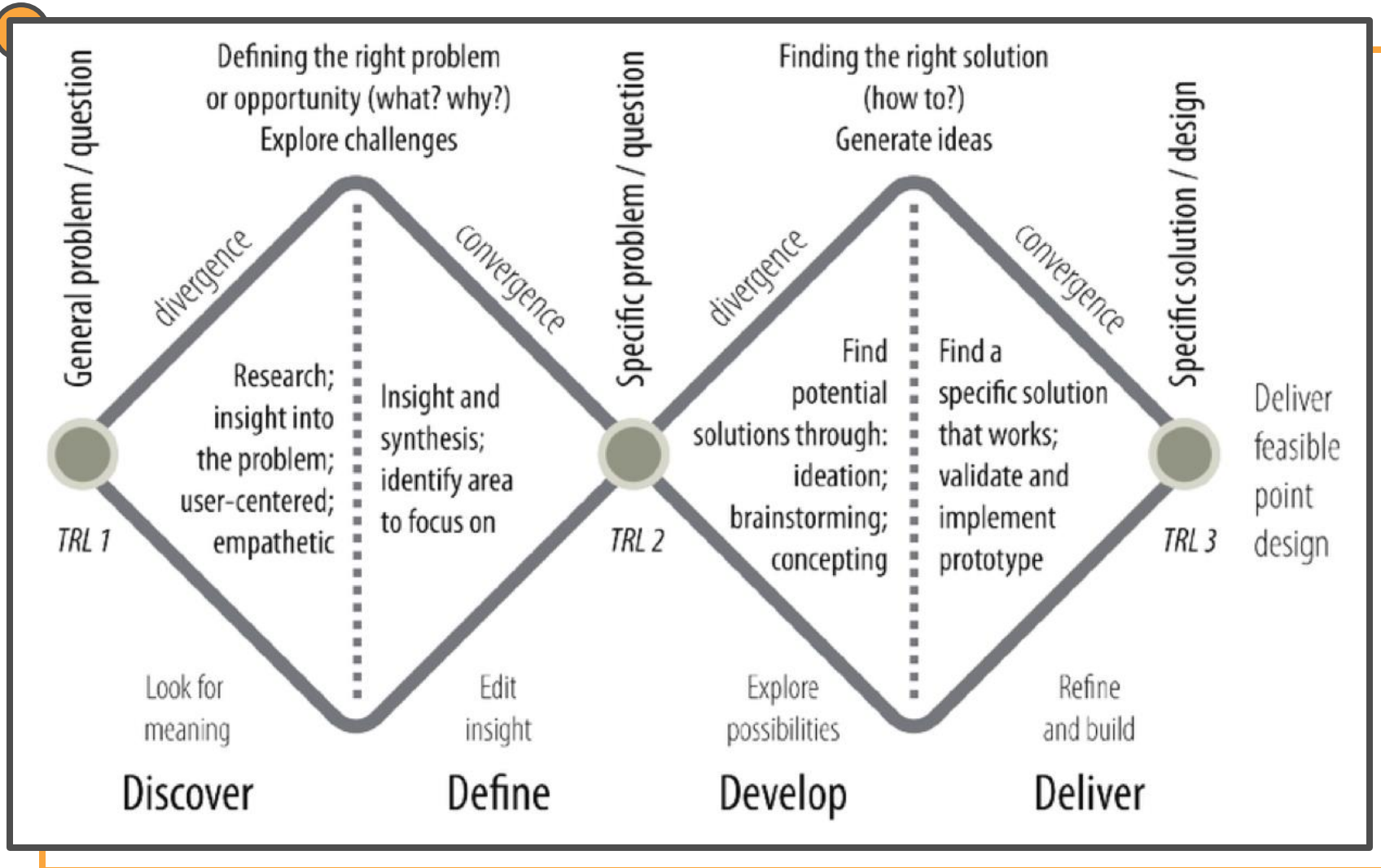
If we’re going to solve a problem,
let’s make sure it’s the right one





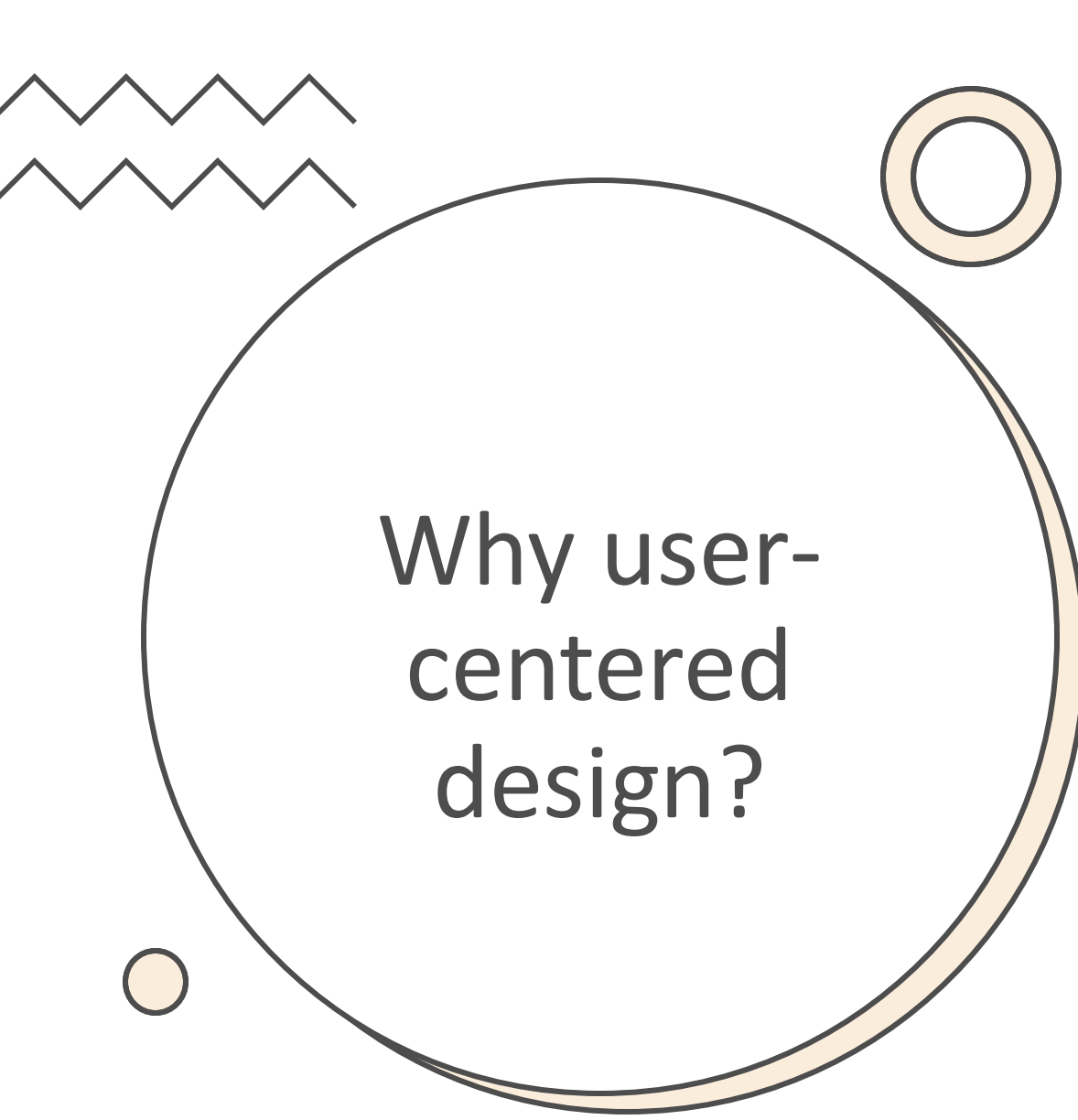
User-centered design process





Double diamond





Why user-centered design?

Make sure that

- You are solving the right problem for your users
- Your users will use your website
- You discover what goes wrong before investing too much







User research

User research

User research focuses on understanding **USER BEHAVIORS, NEEDS, and MOTIVATIONS** through observation techniques, task analysis, and other feedback methodologies



User research

Understanding

USER BEHAVIORS

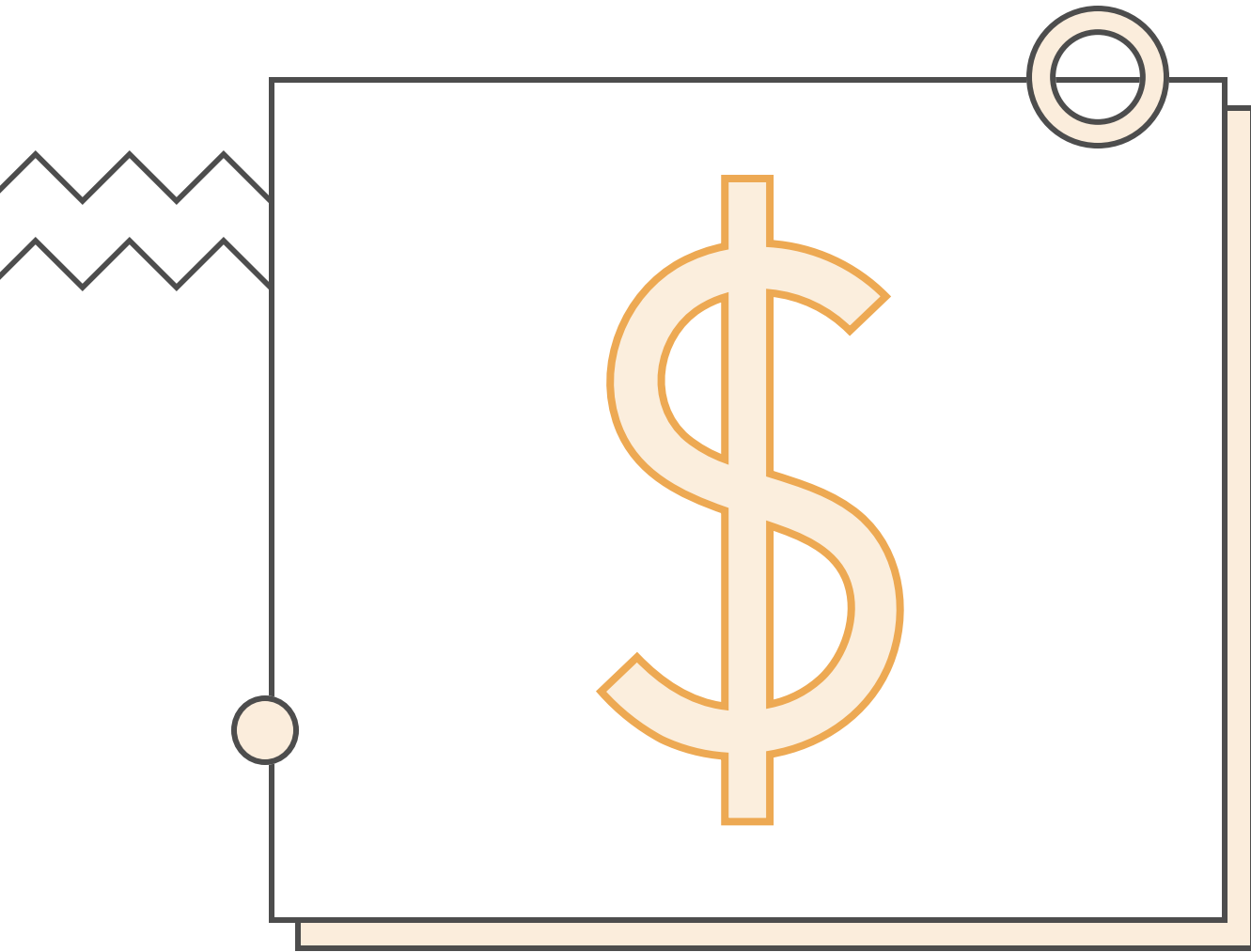
NEEDS

MOTIVATIONS



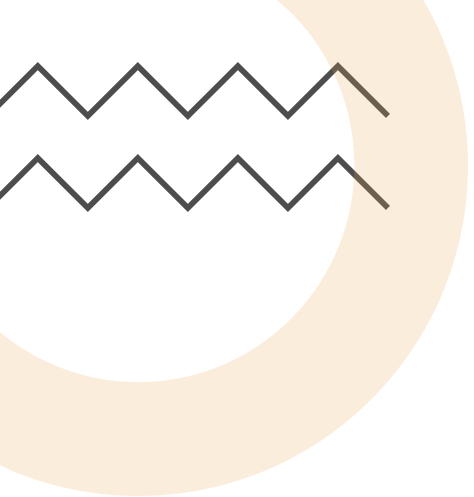


Why do we need to
understand our users?



Because they are
usually* where
the income from

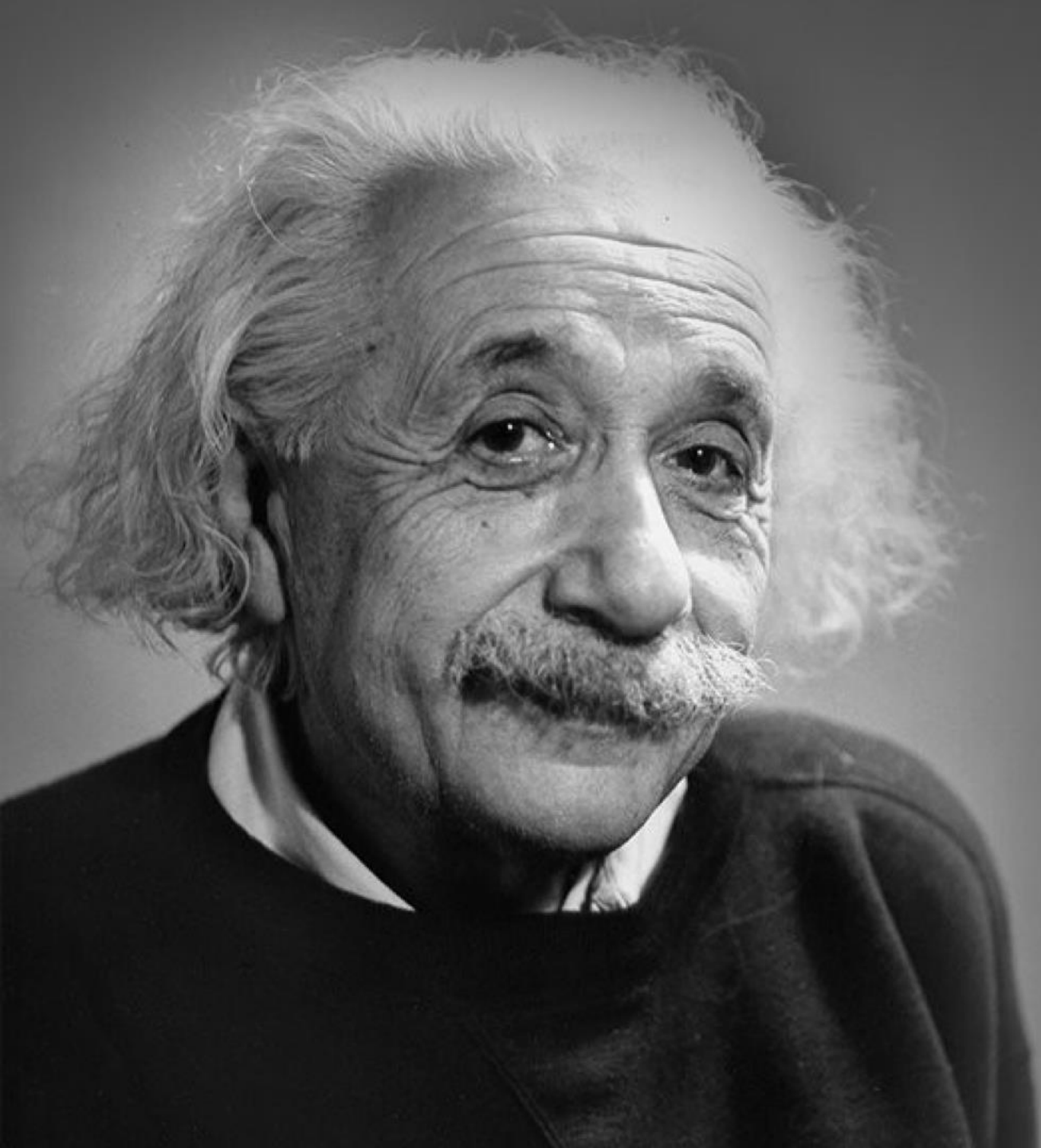




Why UX research?

- To ensure you're solving a problem that exists in peoples' lives
- To deliver design that is tailored to the needs of its intended audience
- To learn how users actually use our product
- To align the team
- To identify UX or product opportunities
- To gather data that support your (design) decisions
- To save money!



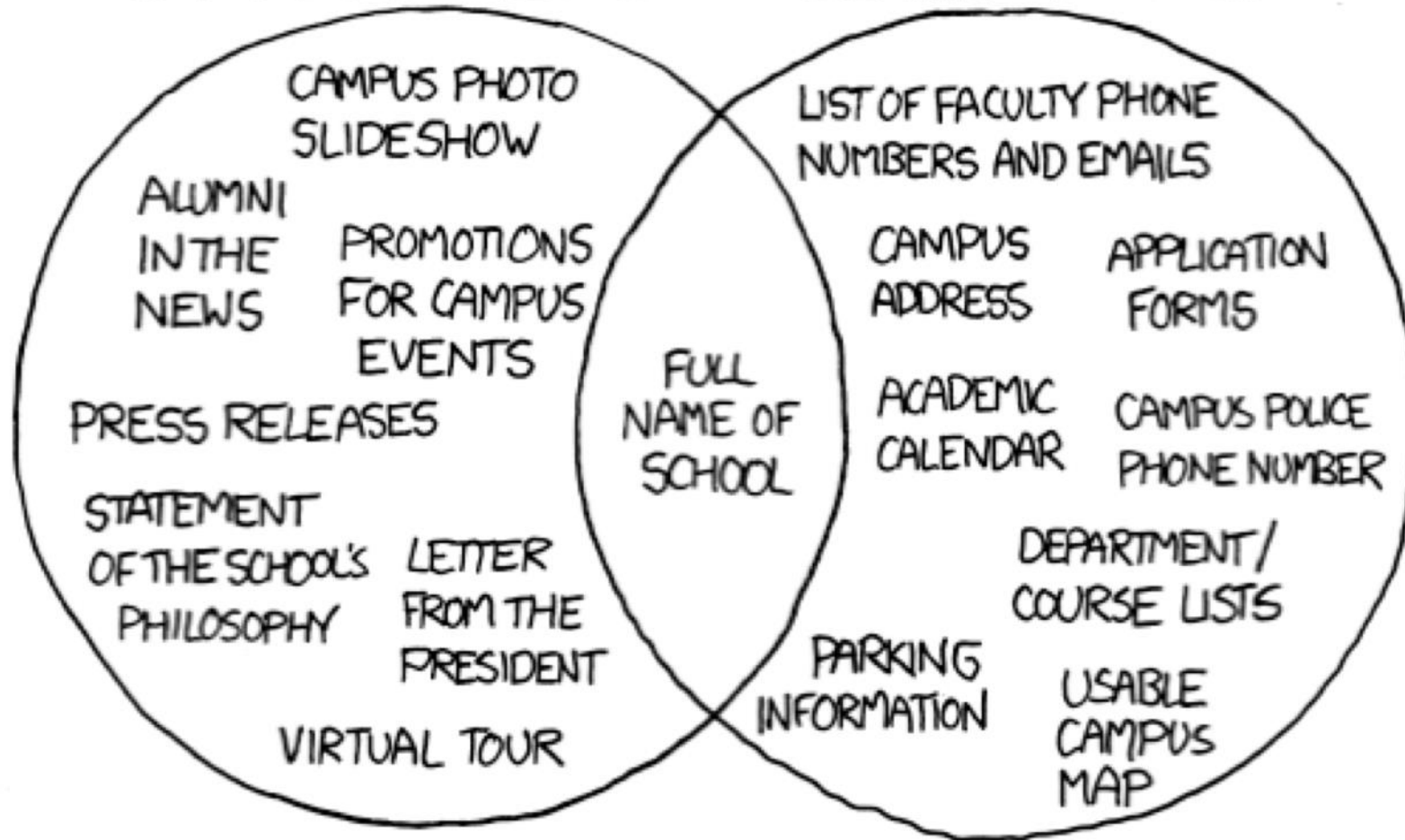


“If I had an hour to solve a problem, I’d spend 55 minutes thinking about the problem and 5 minutes thinking about solutions.”

Albert Einstein

THINGS ON THE FRONT PAGE
OF A UNIVERSITY WEBSITE

THINGS PEOPLE GO TO
THE SITE LOOKING FOR



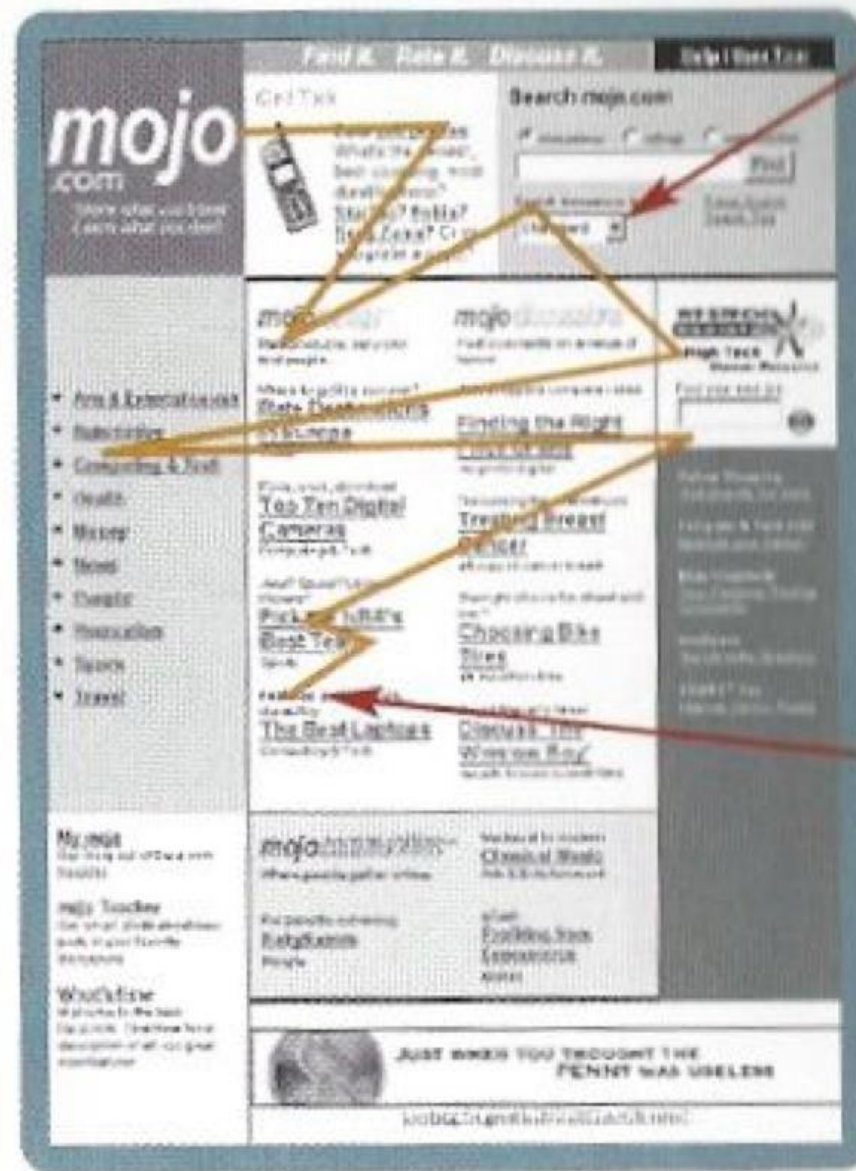
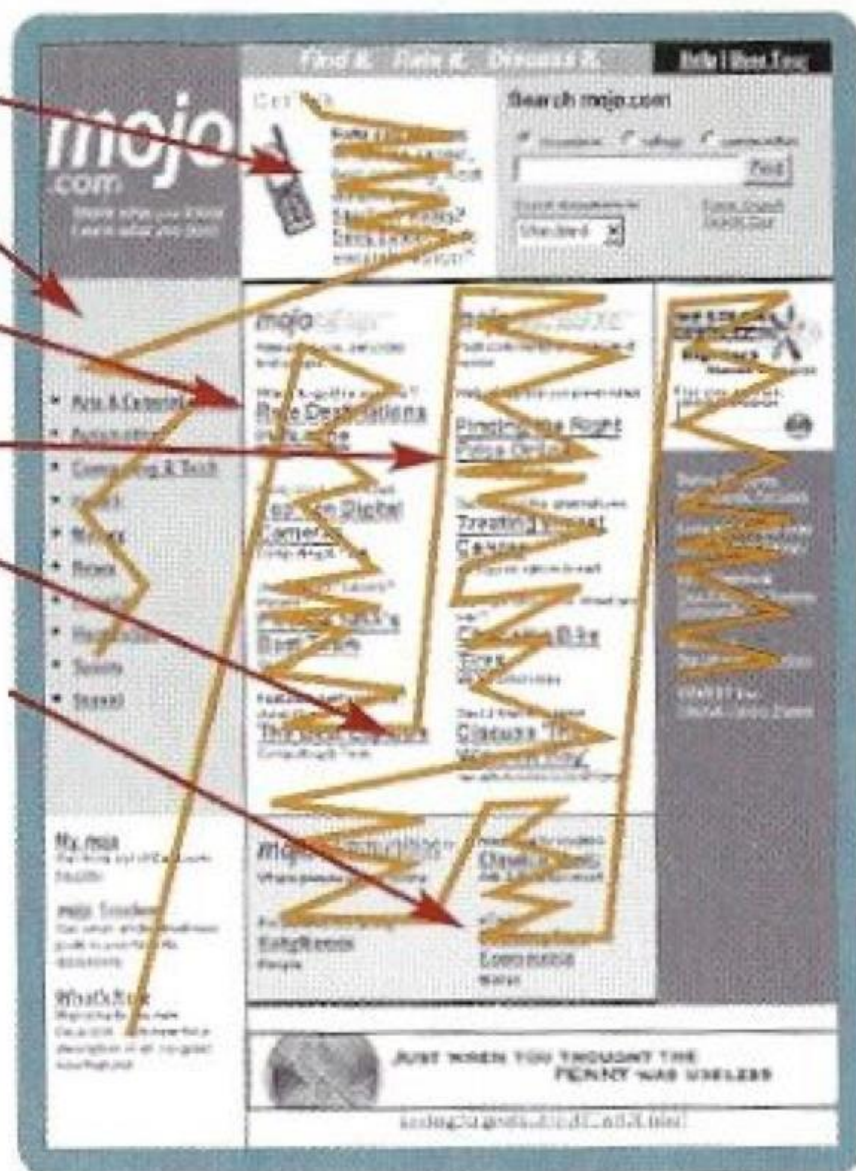
What I want from a restaurant website:

- ▶ Menu
- ▶ Specials and happy hour info
(Including social promotions such as Foursquare, Groupon, and Twitter specials)
- ▶ Address with a link to google maps
- ▶ Online reservation system that actually works
(instead of one where I make a reservation online, show up, and the hostess gives me a blank, confused stare when I tell her my name)
- ▶ Hours of operation, parking and contact info



WHAT WE DESIGN FOR... THE REALITY...

Read
Read
Read
Read
[Pause for reflection]
Finally, click
a carefully
chosen link



Look around
feverishly for
anything that

a) is interesting,
or vaguely
resembles what
you're looking for
and

b) is clickable.

As soon as you find
a halfway-decent
match, click.

If it doesn't pan
out, click the Back
button and try
again.



To align the team

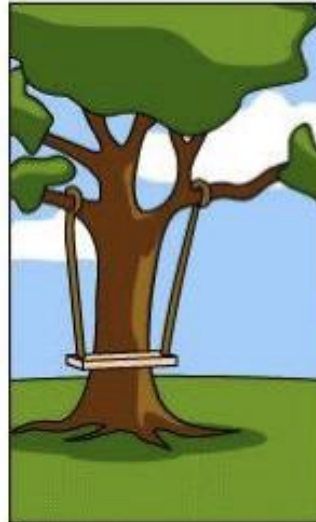


- Align the team's understanding:
 - i) clarify who the users are,
 - ii) clarify what the actual problems are, and
 - iii) provide qualitative data and/or quantifiable data on each problem's impact to customers/business so that the team can make informed decisions





How the customer explained it



How the Project Leader understood it



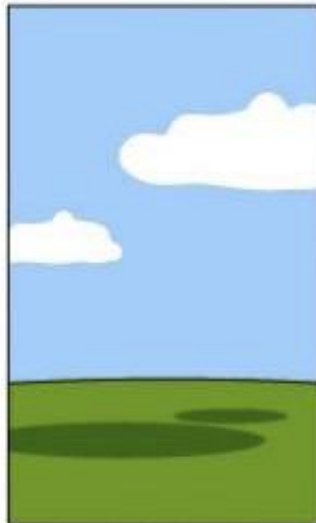
How the Analyst designed it



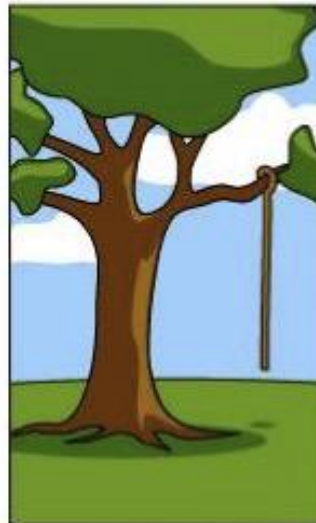
How the Programmer wrote it



How the Business Consultant described it



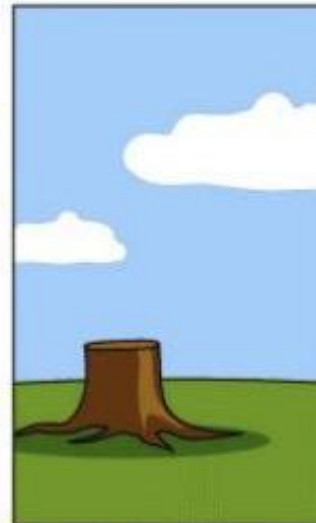
How the project was documented



What operations installed



How the customer was billed

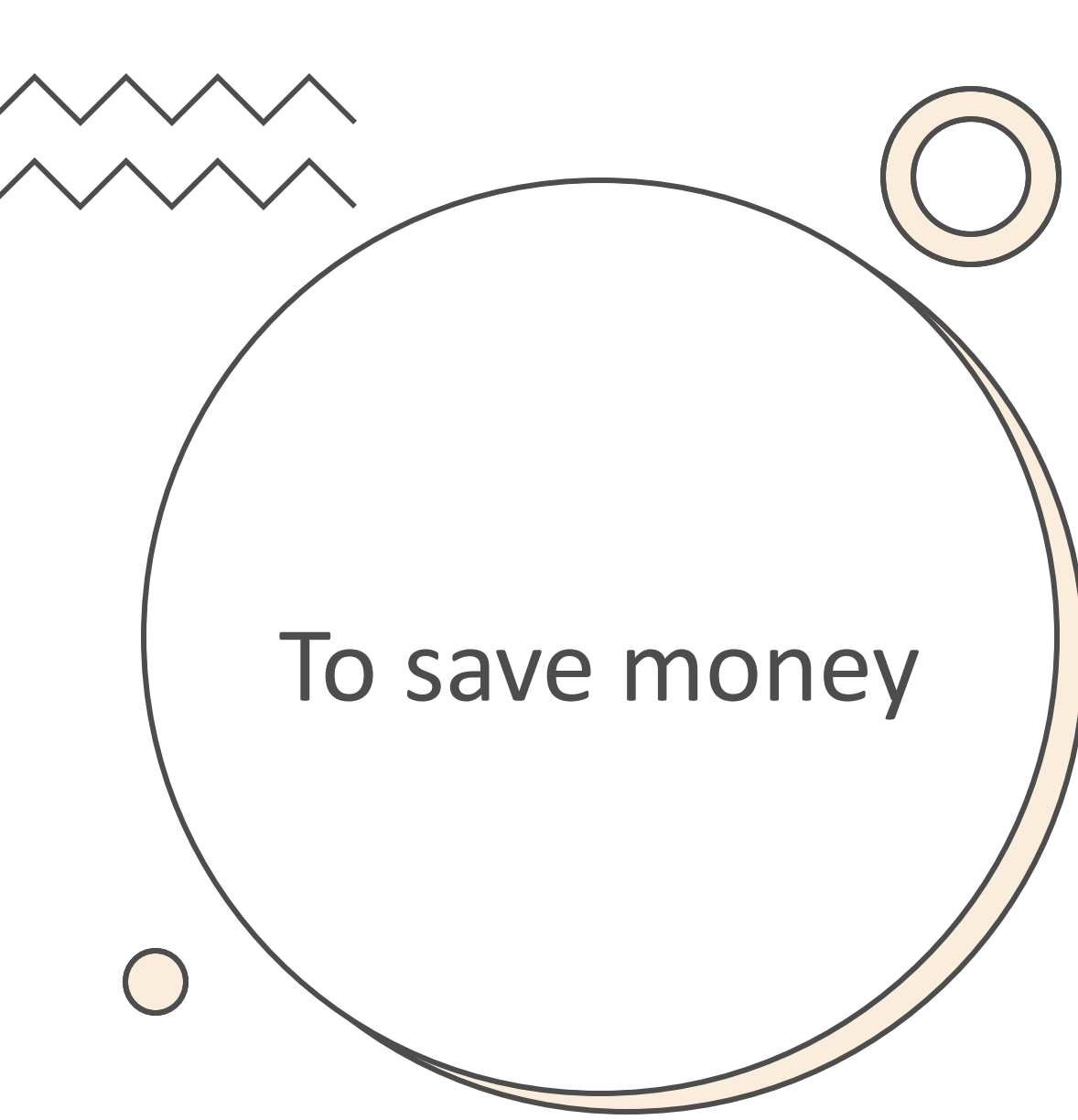


How it was supported



What the customer really needed

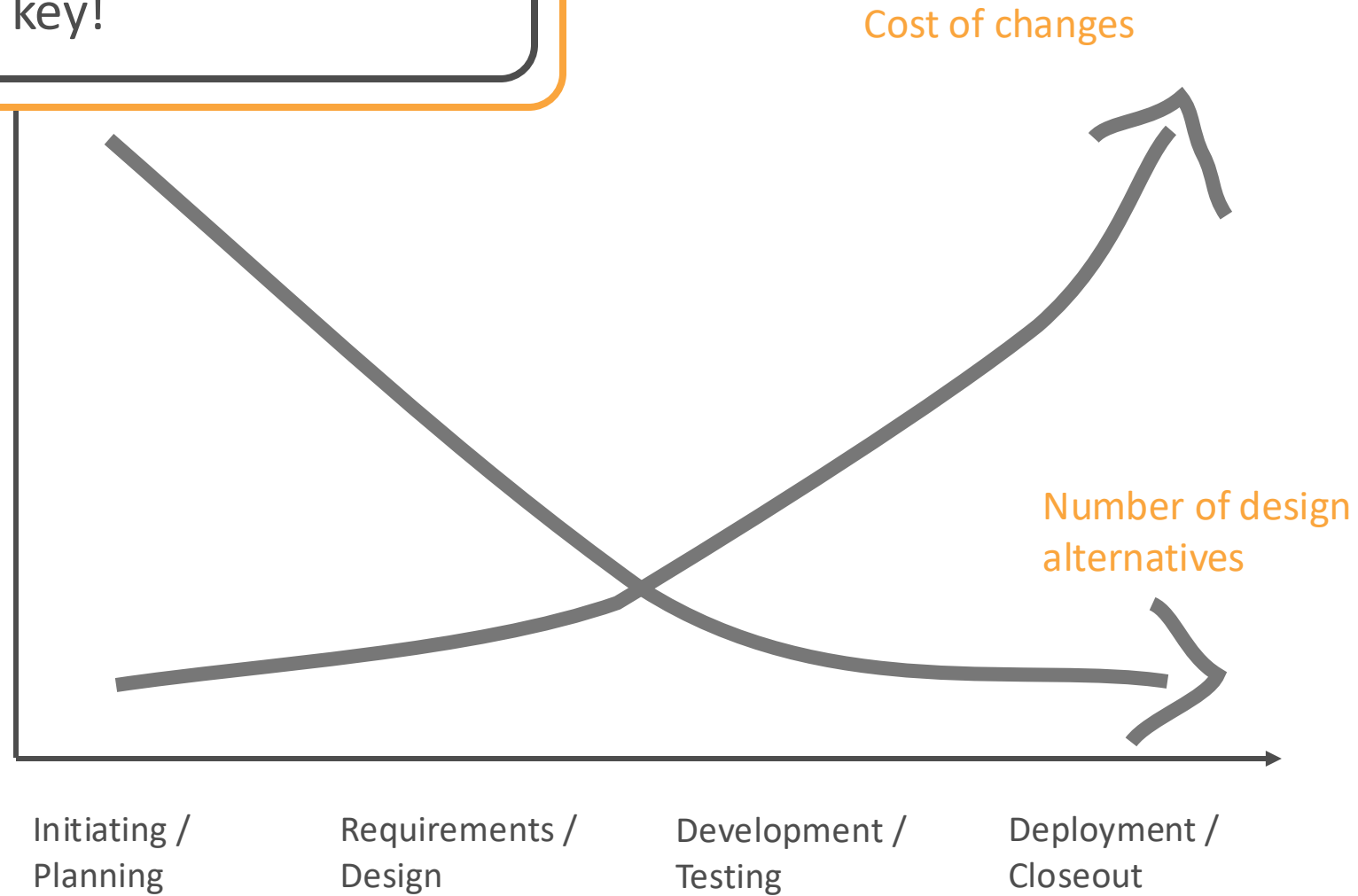


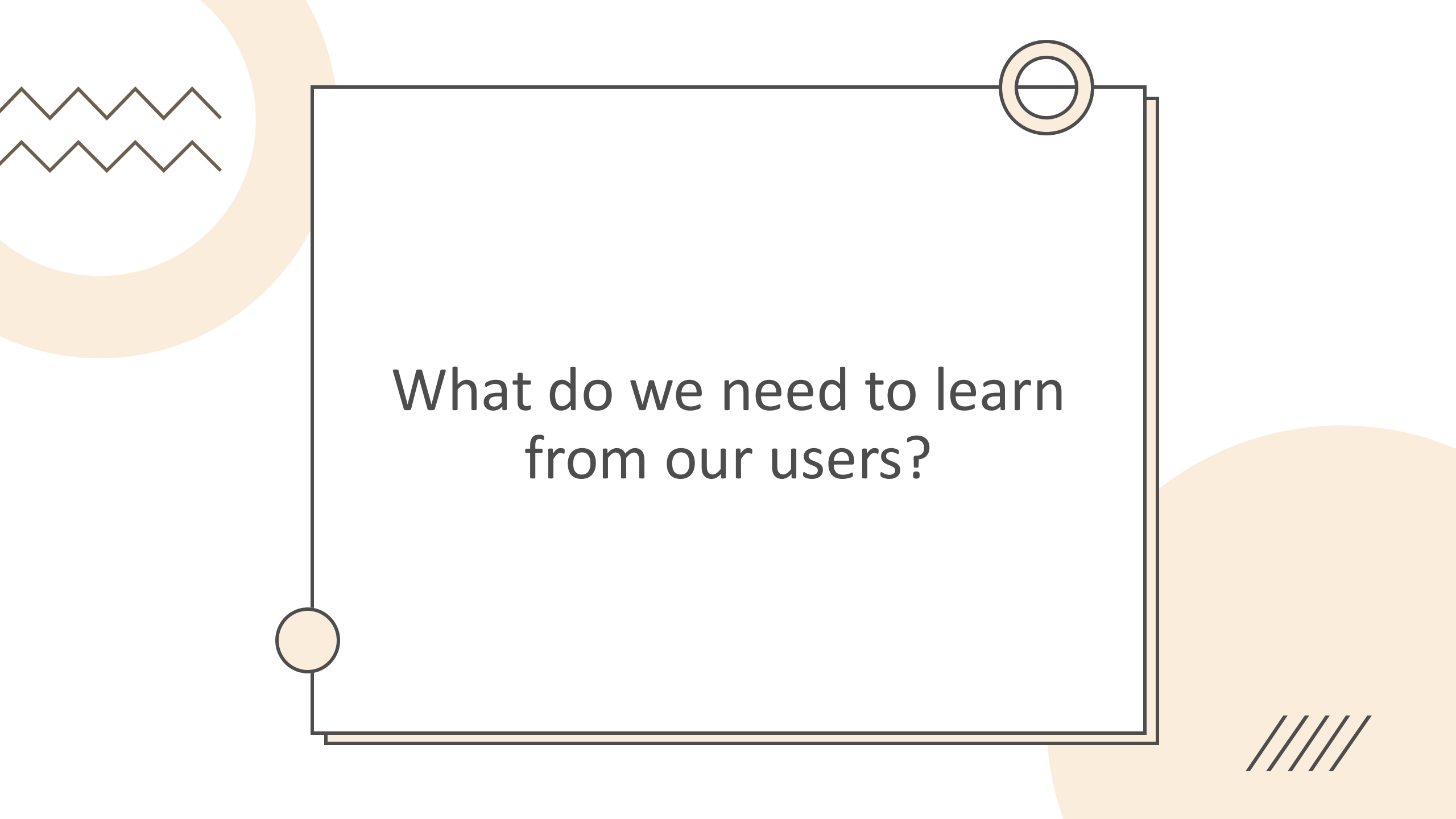


To save money

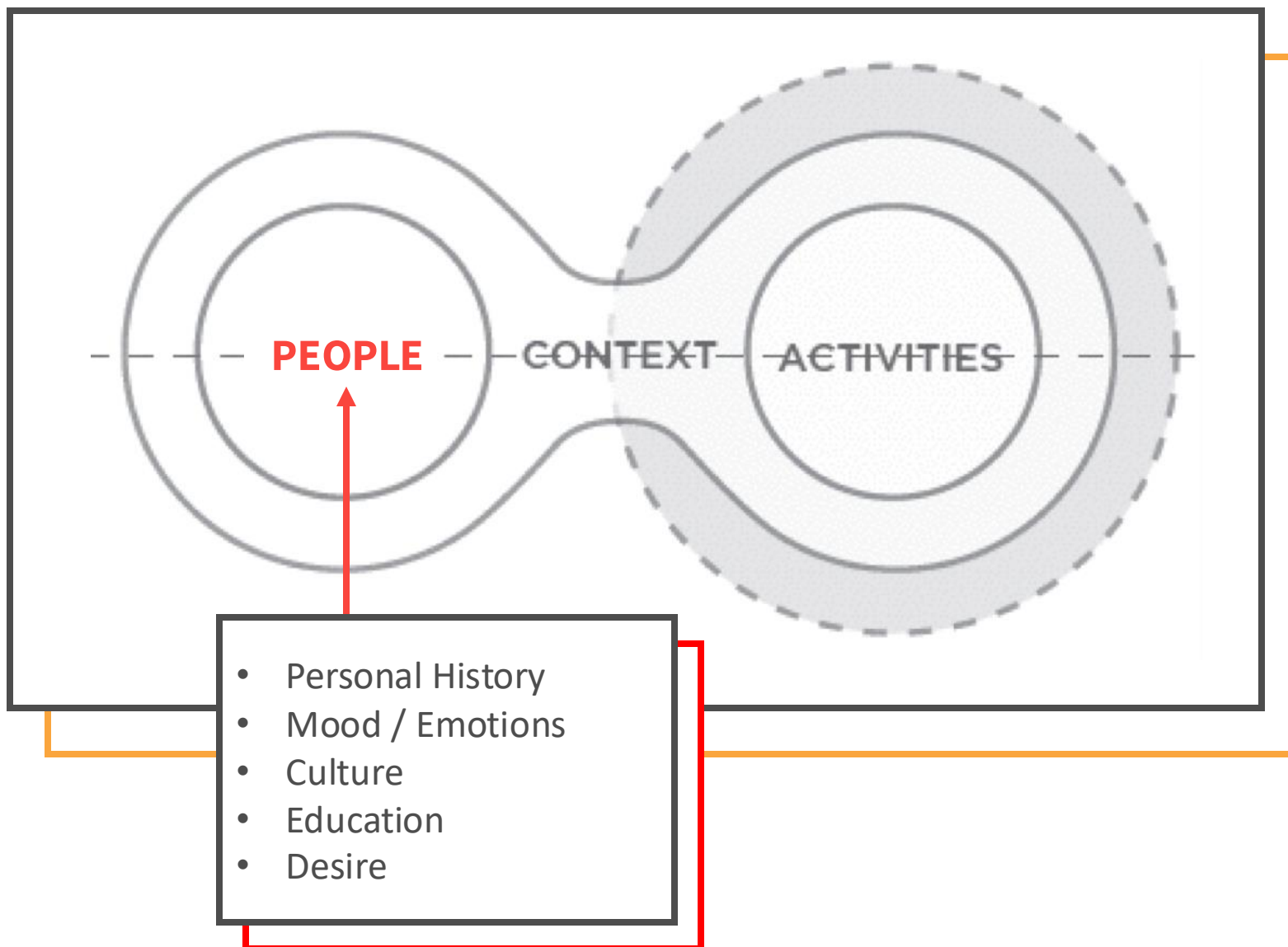
- Research up-front can help you avoid designing or building things that don't matter
 - Continual research can validate your ideas and save you time and money
- 

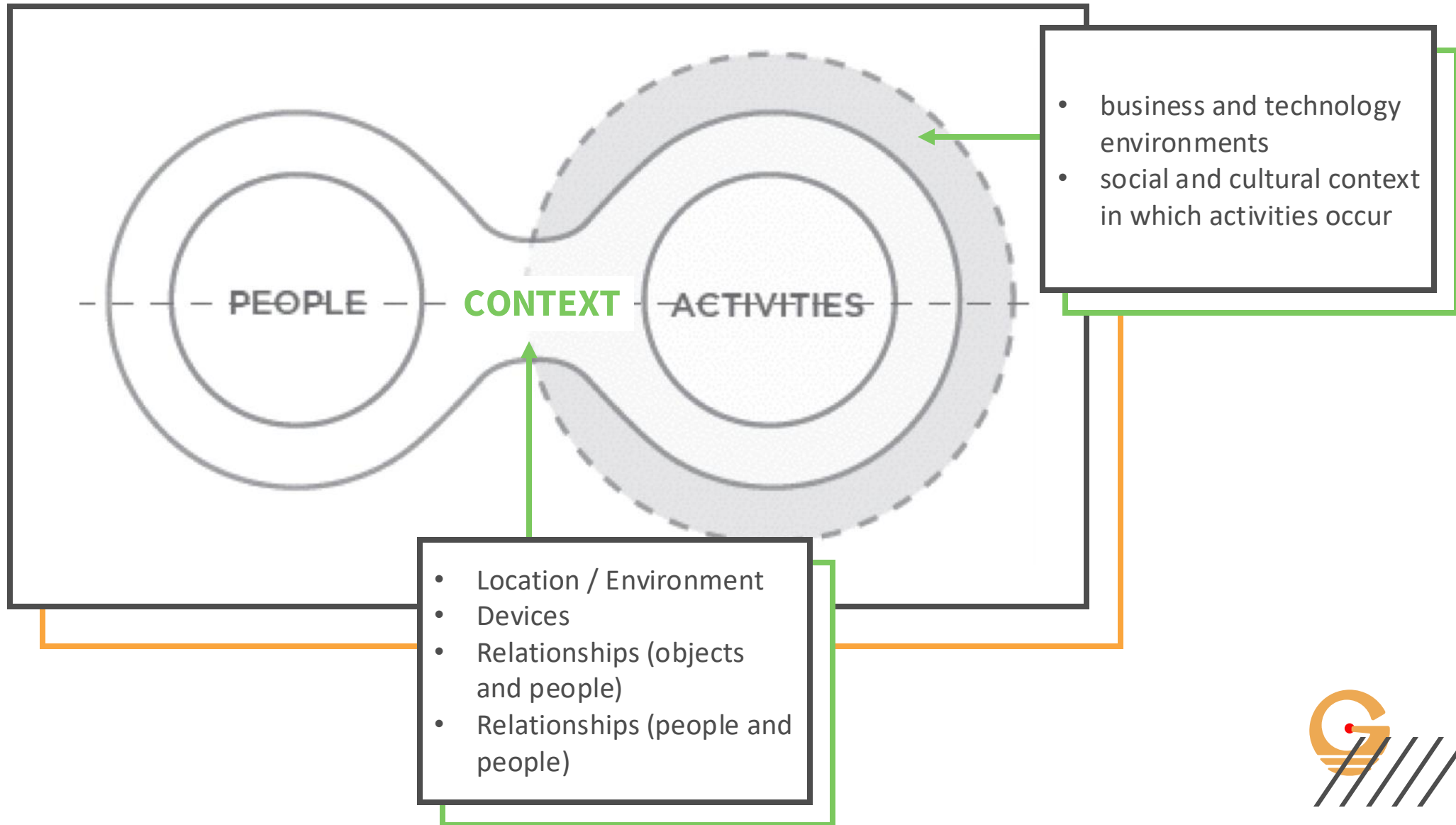
Cost of changes user involvement
Early & often is key!

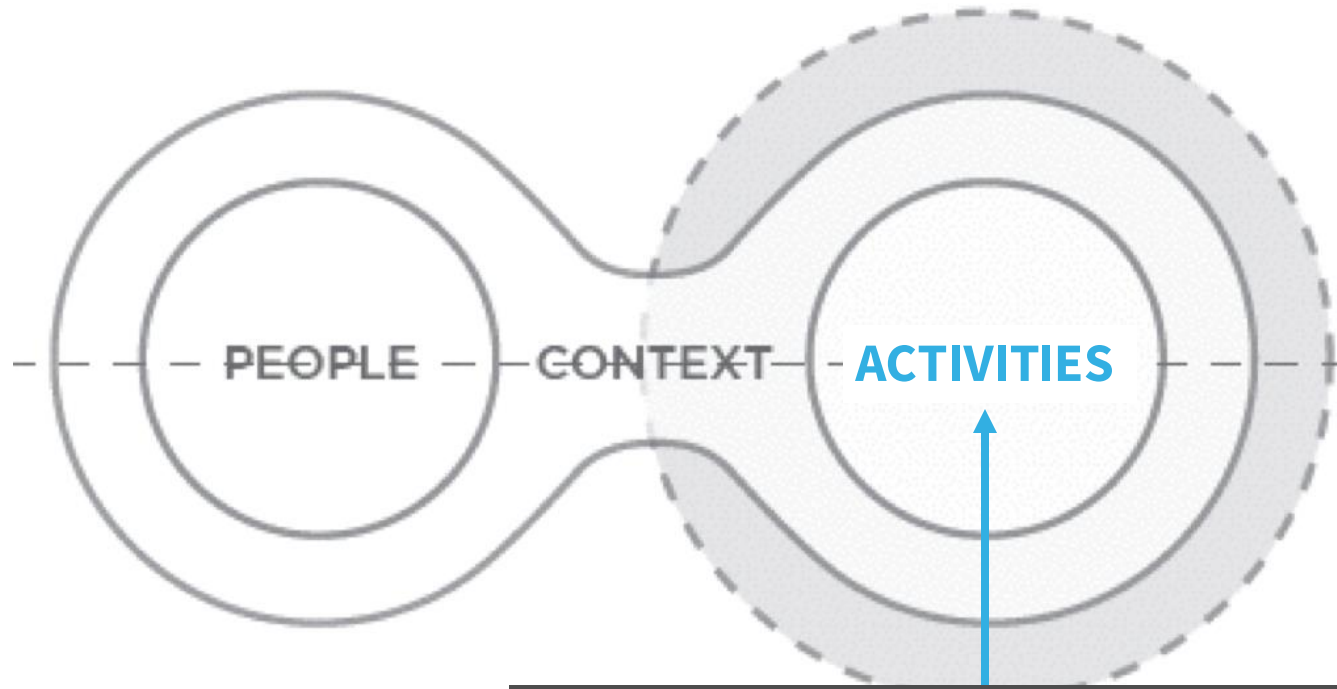




What do we need to learn
from our users?







- What is the user trying to accomplish?
- What tasks must the user complete to accomplish their goals?
- Are there any pain points in the current ways they go about these tasks?





Summary: What do we need to learn?

People

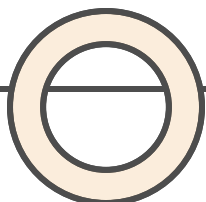
- **Needs** are shaped by personal history, mood/emotions, culture, education, desire, etc.

Context

- **Behaviors** are influenced by context.

Activities

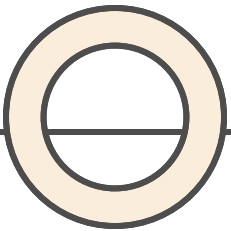
- **Motivations** are reflected through activities



How do we
obtain this
information?

User research focuses on understanding user behaviors, needs, and motivations through **observation techniques**, **task analysis**, and other **feedback methodologies**





Research methods



Diary studies



Ethnography /
Contextual inquiry



Usability test



Participatory design



User interview



Focus group





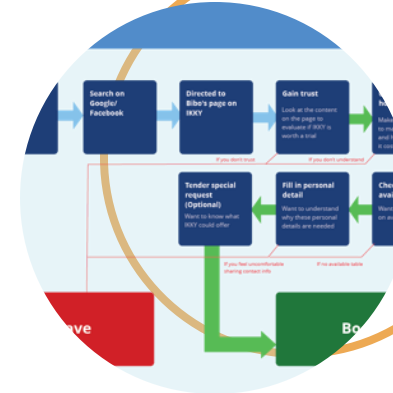
Eyetracking



Concept testing



Card sorting



Flow analysis



A/B testing



Survey





New
methods
are always
coming ...





Diary studies



Ethnography /
Contextual inquiry



Usability test



Participatory design



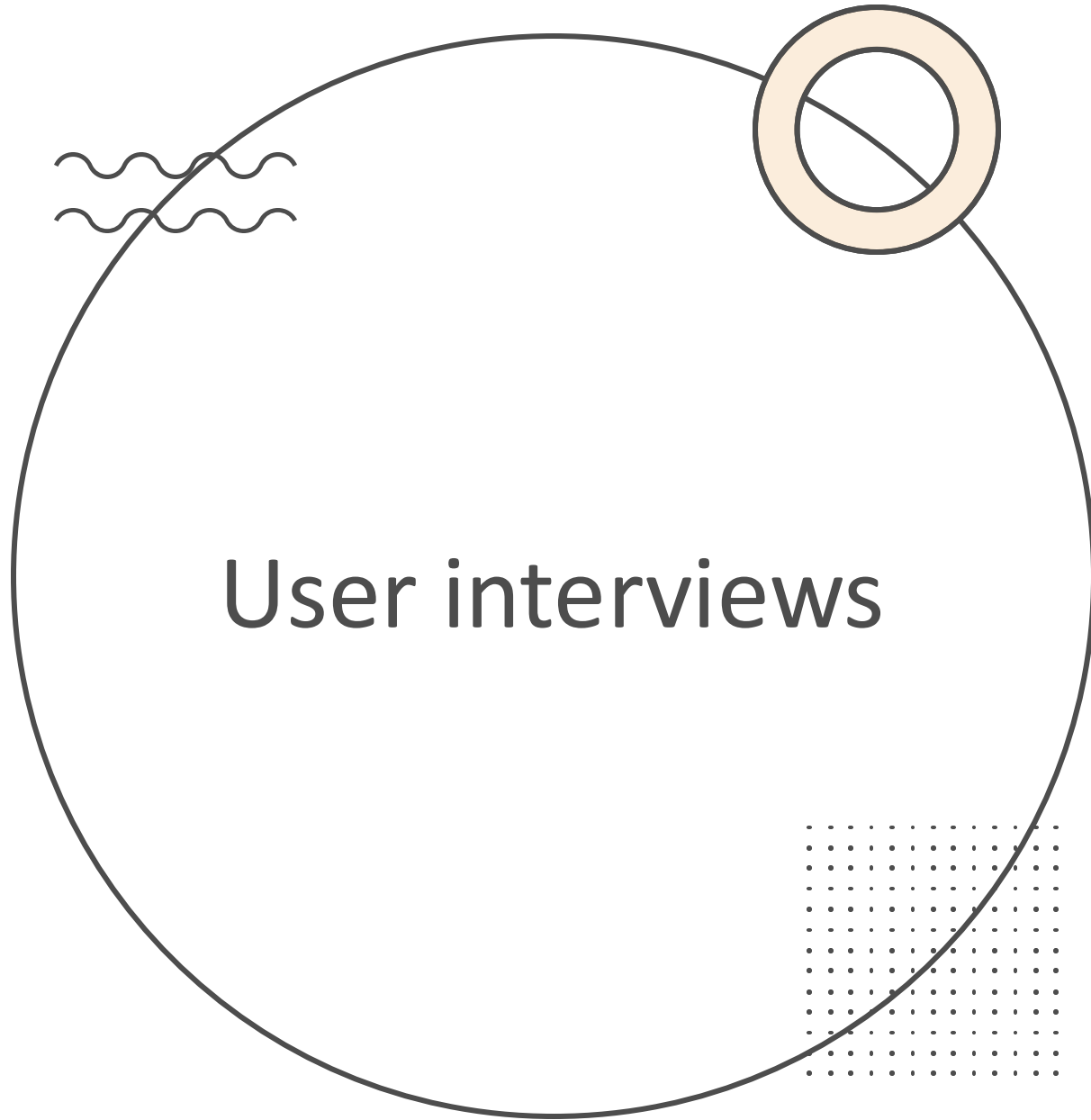
User interview

We will
focus on

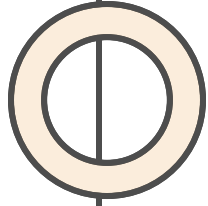




User interviews



- One-on-one conversations between researcher and participant
- Qualitative
- Tends to be more evaluative than generative
- Tends to be more attitudinal than behavioral



Benefits of user interviews

Very personal; increases
user empathy

Produces rich qualitative
information

Enables follow-up
questions



Challenges of user interviews

01

Making
participants feel
comfortable

02

Listening actively

03

Respecting
boundaries

04

Avoiding leading,
dead-end, and
compound
questions





Ask good questions



- Ask open-ended questions
- Ask about actual behavior, not intention
- Avoid leading questions
- Avoid compound questions
- Avoid pointing out specific issues



- Ask open-ended questions



“Do you like to use free weights at the gym?”



“What types of equipment do you like to use at the gym?”



- Ask about actual behavior



“How many times do you plan to go to the gym this year?”



“Describe your gym schedule last year.”



- Avoid leading question



“Would you say
cardio classes are a
better workout than
weight lifting?”



“What type of
exercise gives you
the best workout?”



- Avoid compound question

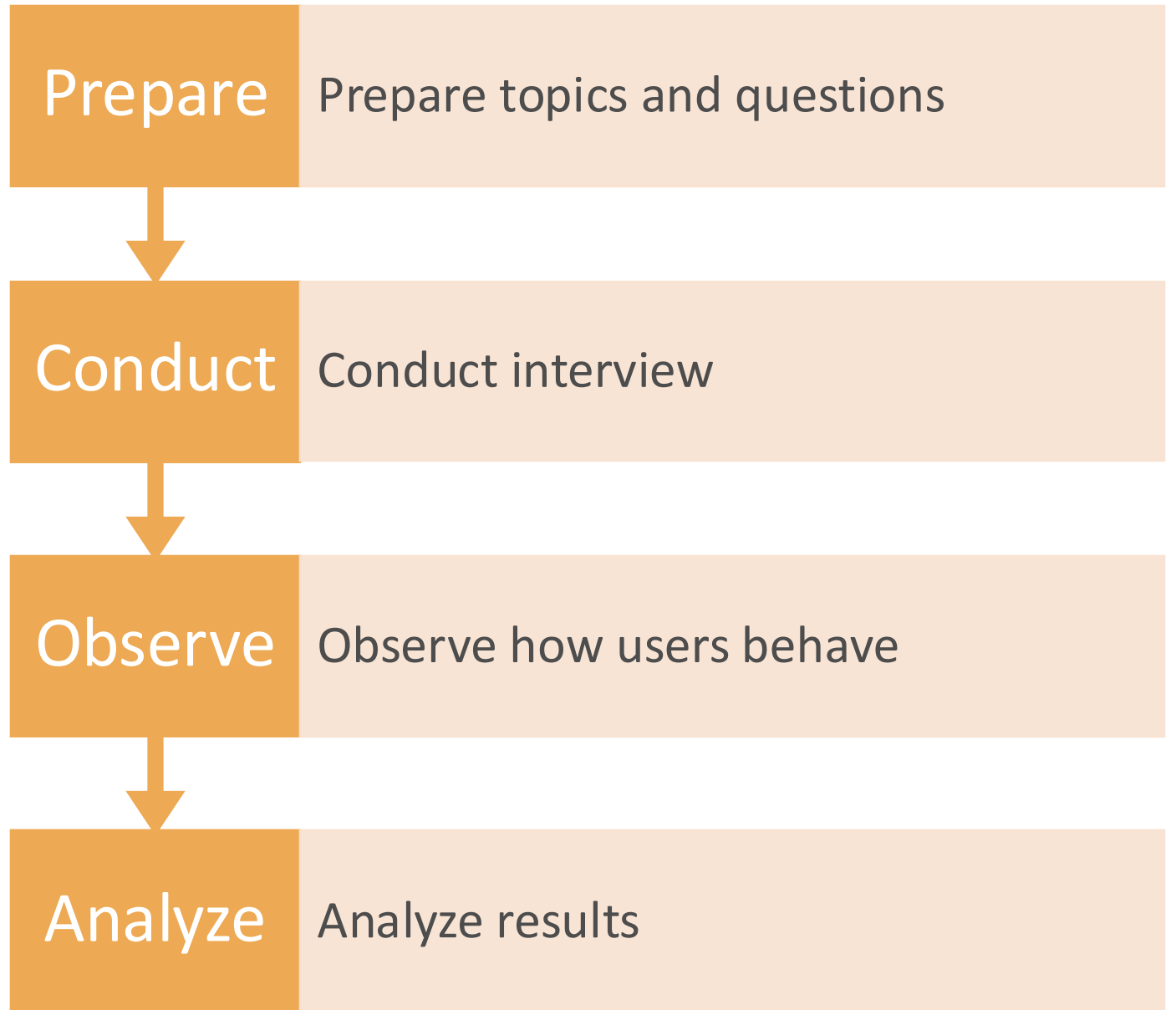


“When you’re at the gym, do you use free weights, or weight machines, or like, bands or straps, or ...?”





How to conduct a user interview?



What do we need to learn?

PEOPLE

CONTEXT

ACTIVITIES

- Personal History
- Mood / Emotions
- Culture
- Education
- Desire



What do we need to learn?

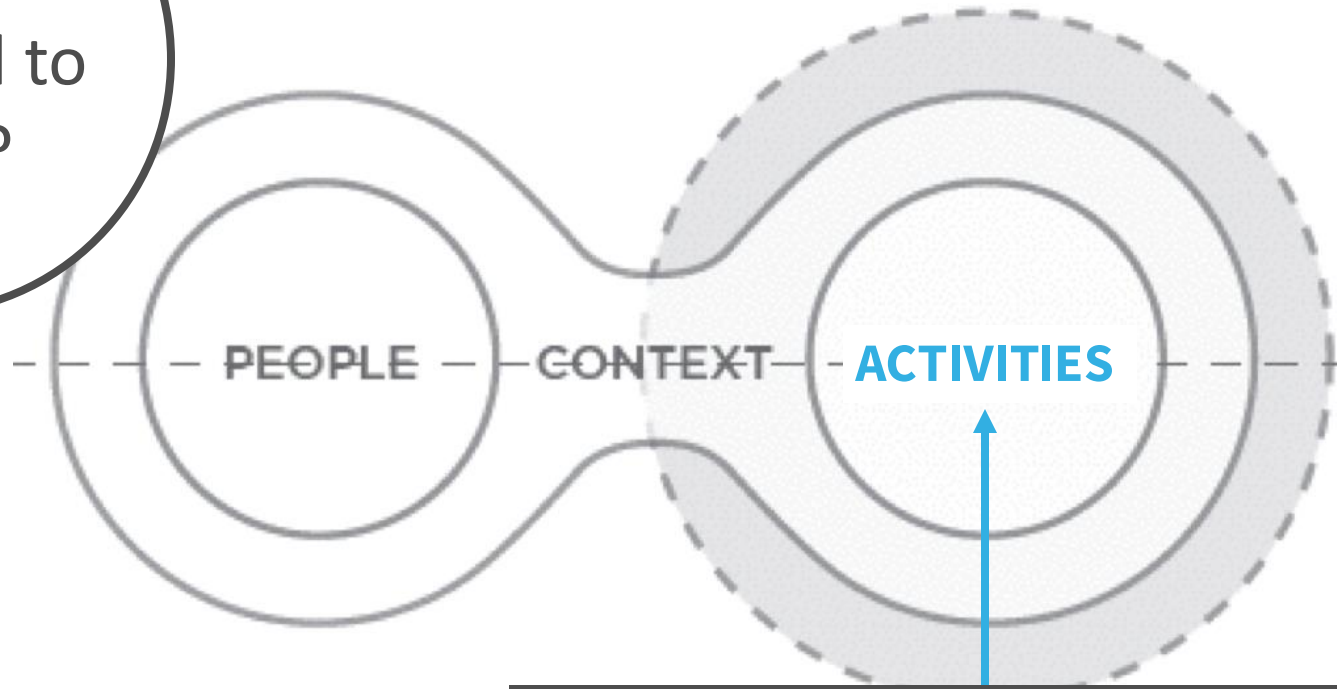
— — — PEOPLE — — — **CONTEXT** — — — ACTIVITIES — — —

- business and technology environments
- social and cultural context in which activities occur

- Location / Environment
- Devices
- Relationships (objects and people)
- Relationships (people and people)

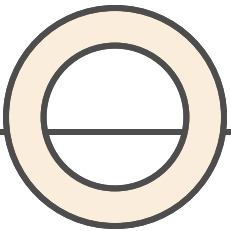
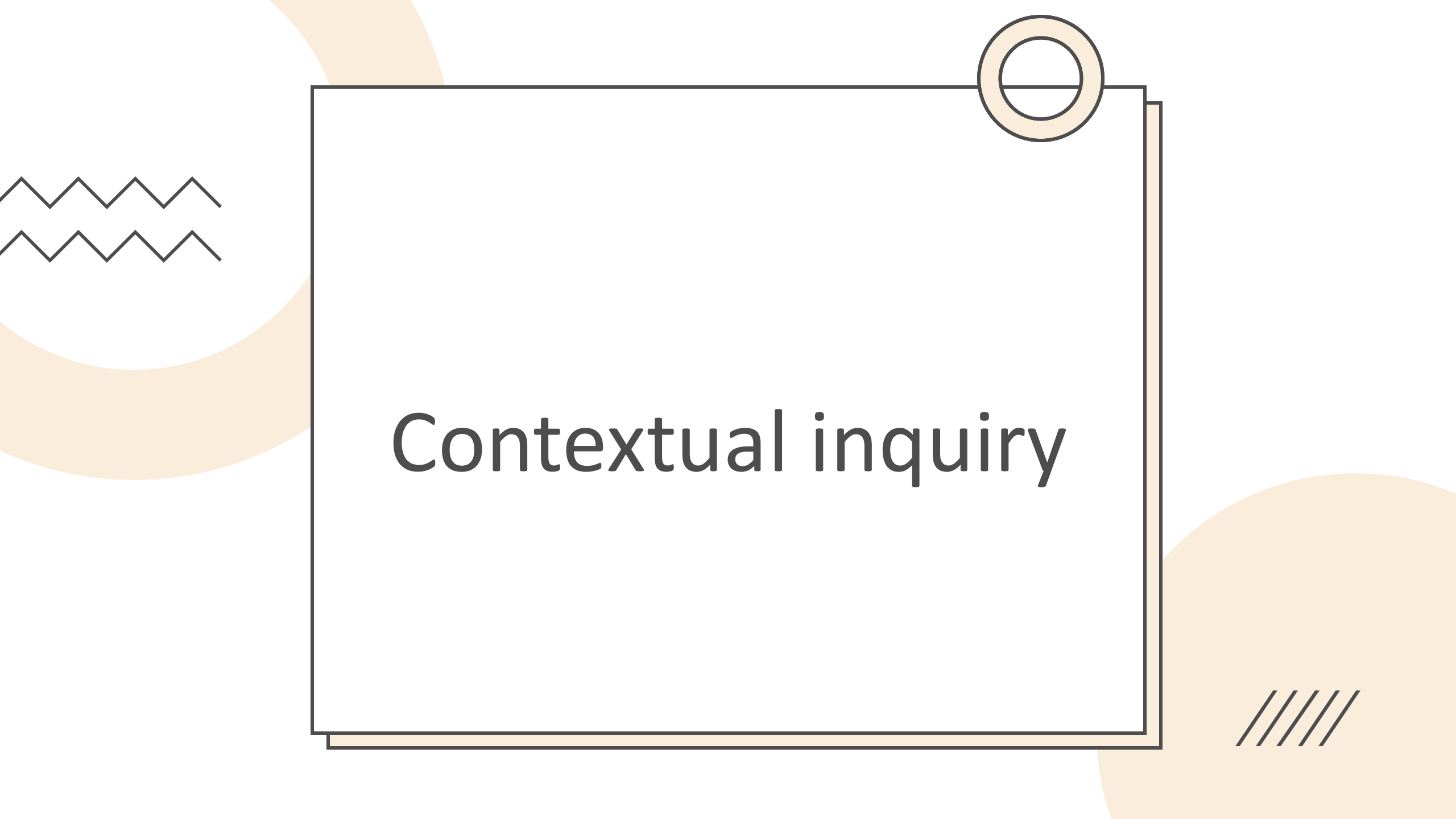


What do we need to learn?



- What is the user trying to accomplish?
- What tasks must the user complete to accomplish their goals?
- Are there any pain points in the current ways they go about these tasks?



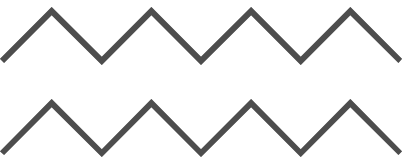


Contextual inquiry

Why we do contextual inquiry?



- Design should support and extend user's existing behavior
- Users are experts in how they do things
- More explicit than interviews, surveys, or other data



How to conduct contextual inquiry?



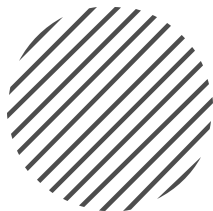
Gather relevant information about your subject

Observe: A contextual interviewer observes users as they work and inquires into the users' actions as they unfold to understand their motivations and strategy.

Post-observation Q&A's: The interviewer and user, through discussion, develop a shared interpretation of the work.

Repeat the above for multiple users

Synthesize your findings





Usually we do user
interview and context
inquiry at the same
time



How to do a user interview





Exercise: User research

- Get into a group of 3 people
- Each group would be assigned an area of interest from below,
- Prepare a list of questions within the group
- Interview the person in the next group to understand their **PAINPOINTS** or **BEHAVIORS**
- Group A please interview Group B, vice versa
i.e. Student 1 of Group A should interview Student 1 of Group B, and vice versa;
Student 2 of Group A should interview Student 2 of Group B, and vice versa;
Student 3 of Group A should interview Student 3 of Group B, and vice versa



- Areas of interest:
 1. Finding a job
 2. Apply for a course
 3. Travel planning
 4. Managing finance
- Ask the interviewees about their habits to discover their painpoints
- Time: 25 mins



So now we have
some data, what to
do next?



Data analysis



Write down your three most memorable points :

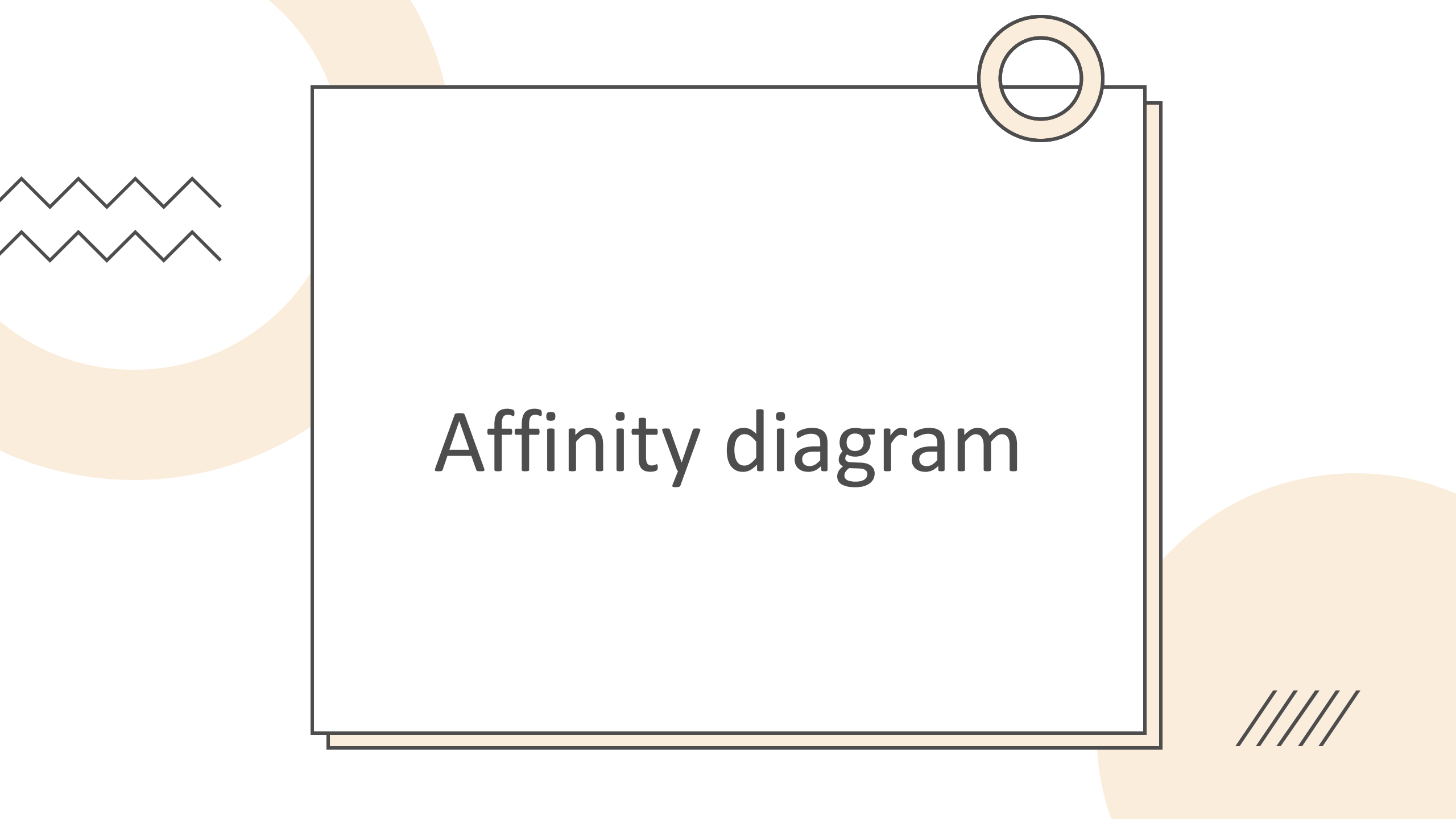
- 1) _____
- 2) _____
- 3) _____



Write down your three most memorable points :

- 1) _____
- 2) _____
- 3) _____

We may need some better methods

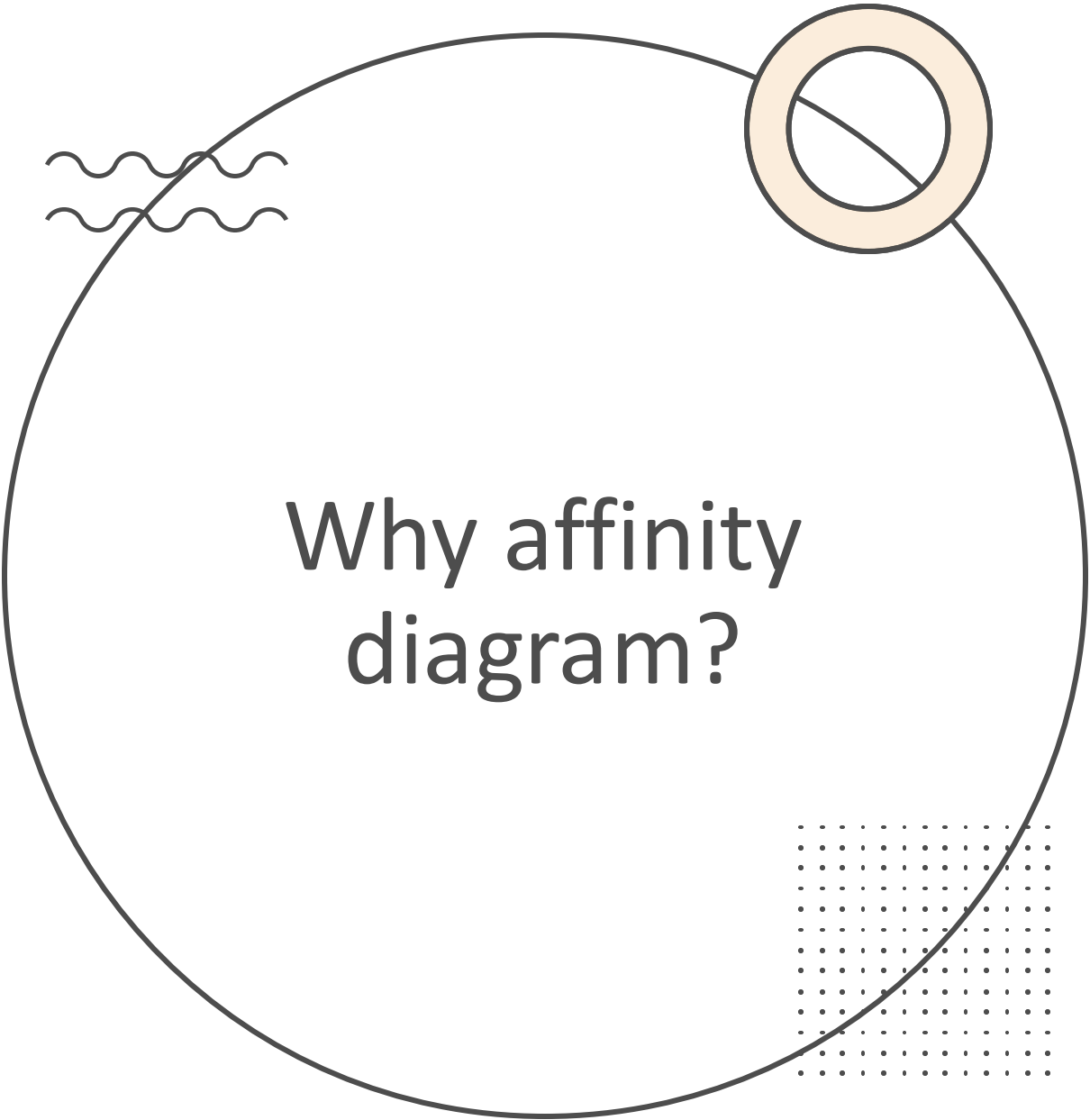
The graphic features a central white rectangular box with a thin black border, which has a slight drop shadow. In the top right corner of this box is a circular icon with an orange fill and a black outline, resembling a binder ring. The background is white and decorated with several orange-colored abstract shapes: a large semi-circle on the left, a smaller semi-circle at the bottom right, and a thick curved band at the top left. On the far left, there are two horizontal rows of black zigzag lines. On the bottom right, there are four parallel black diagonal lines.

Affinity diagram

Affinity diagram

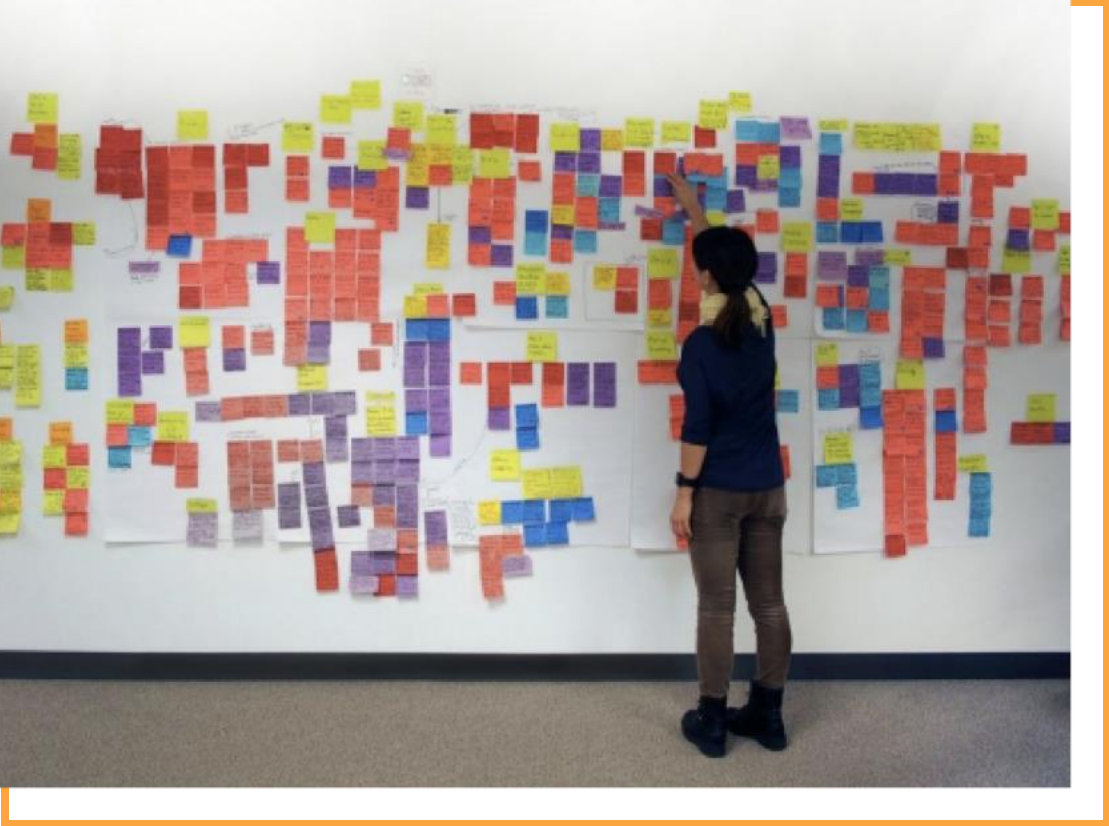
- A way to find patterns in qualitative data
- A tool that gathers large amounts of information (ideas, opinions, issues) and organizes them into groupings based on their natural relationships

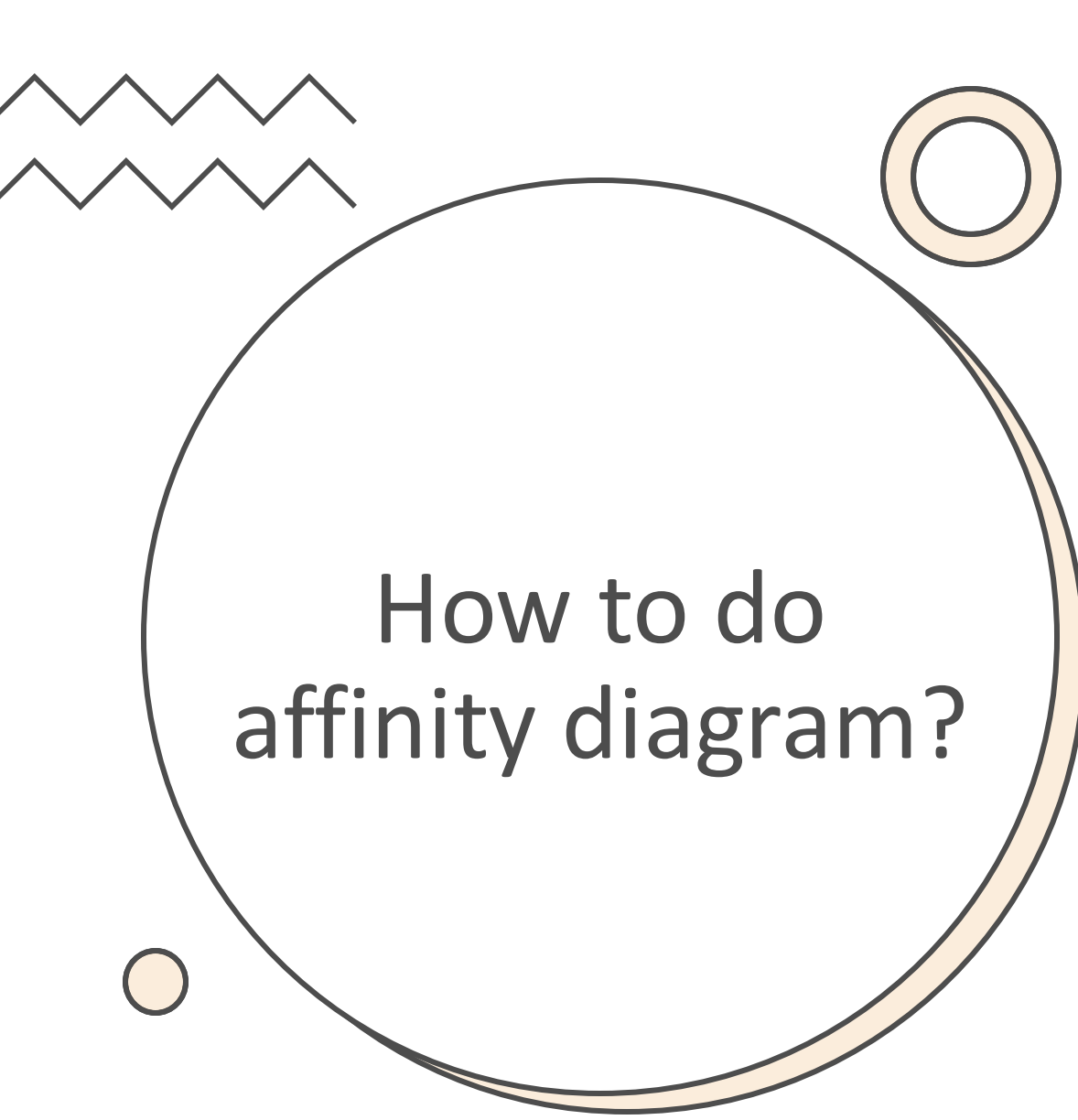




Why affinity diagram?

- To **consolidate** a large amount of information into groupings or clusters of ideas that have a natural relationship
- To find **patterns** or to reveal the underlying **themes** in qualitative data
- It's **simple** and **cost effective** technique for soliciting ideas and obtaining consensus on how information should be structured





How to do affinity diagram?

- Most effective when done as a team
 - Go for the **essence**, in silence, collaboratively
 - Create the affinity silently to allow each teammate's perspective to be reflected by the diagram
 - As a team, organize the data by the insights each grouping suggests about the problem. Add a group title using "I..." statements (from the user's point of view)
- 



Go for the
essence, in
silence,
collaboratively

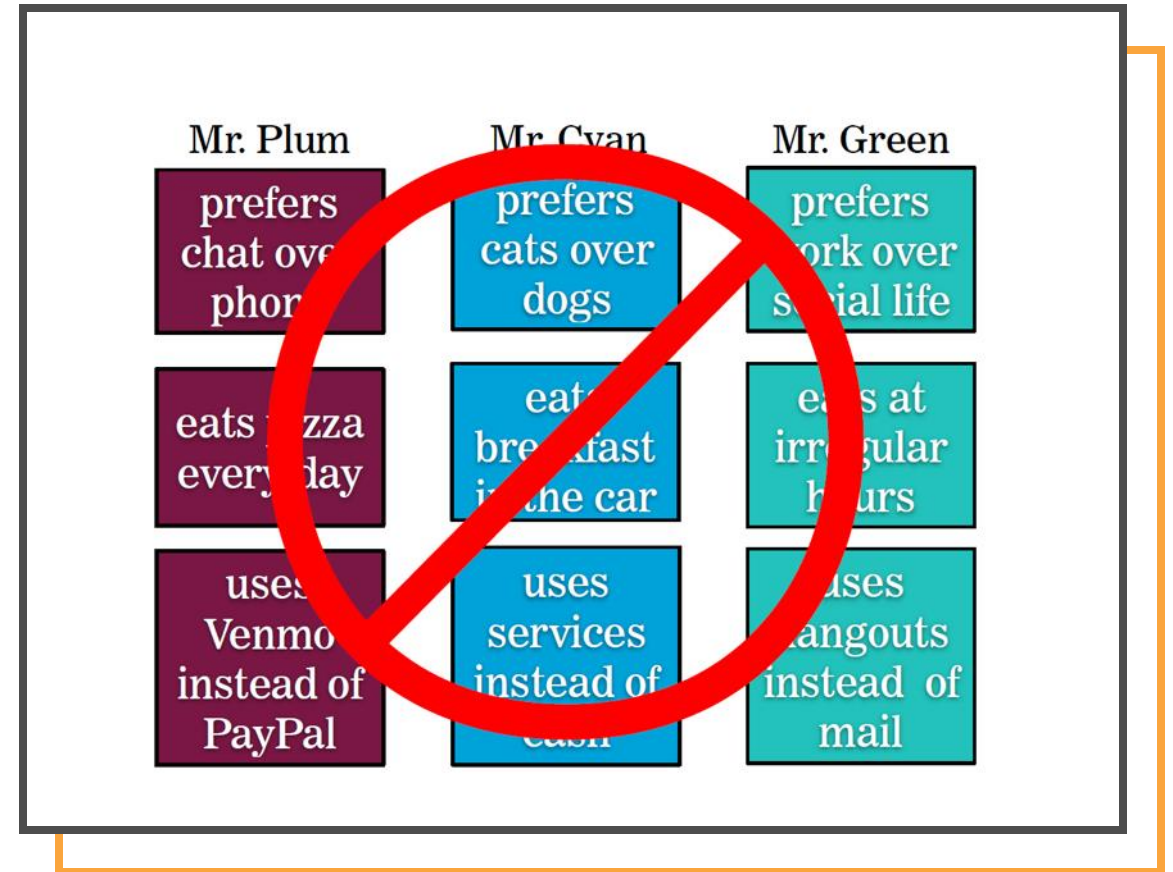
- Any group that the entire team can't abide by should be reorganized
- Any group with <3 data points is weak (not sufficient)
- Any group with > 10 data points is weak (can be broken down more)
- Any group formed entirely by data from one user is weak (biased)

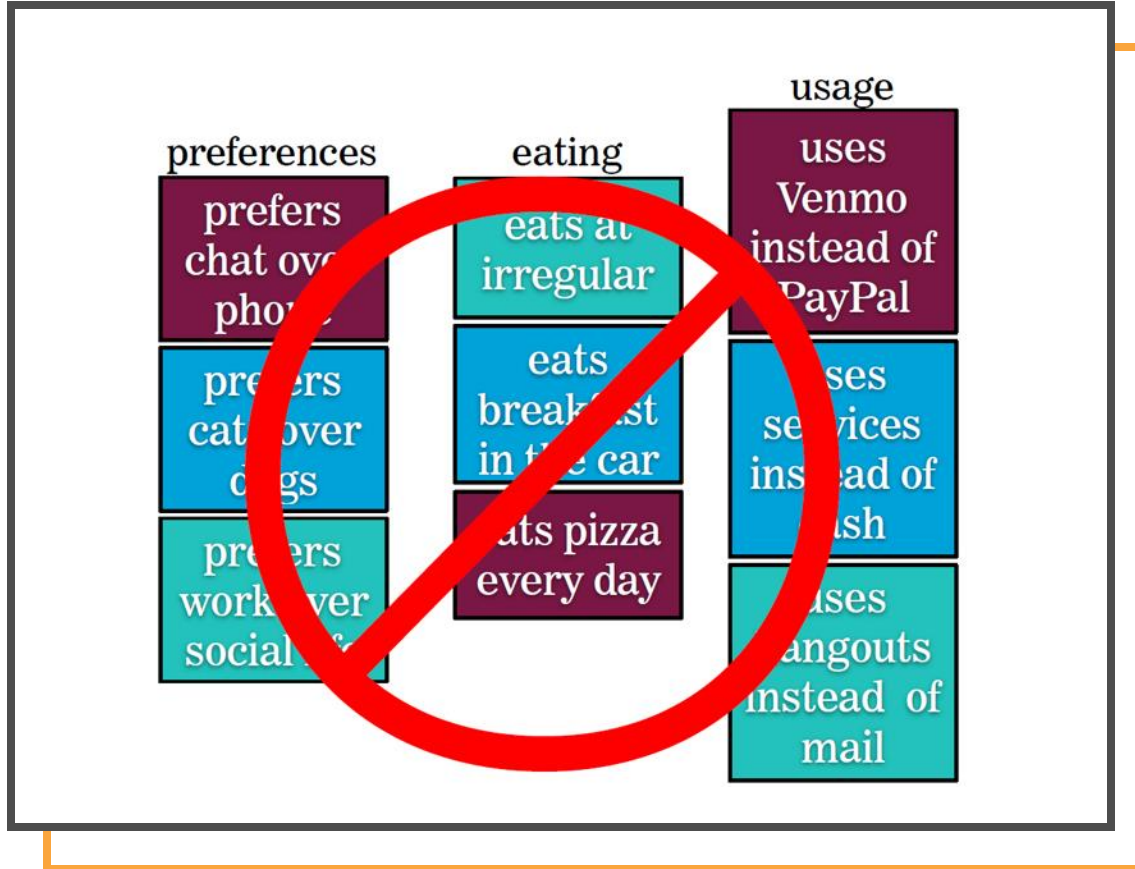




Go for the essence

Any group formed entirely by data from one user is weak (biased)





Go for the essence

- Groups are Task oriented (not words)
- Each group doesn't yield actual patterns





GO FOR THE ESSENCE

I don't take good care
of my health

eats at
irregular
hours

eats pizza
every day

eats
breakfast
in the car

I don't invest in
high maintenance
relationships

prefers
work over
social life

prefers
cats over
dogs

I am highly connected

prefers
chat over
phone

uses
hangouts
instead of
mail

uses
Venmo
instead of
PayPal

uses
services
instead of
cash





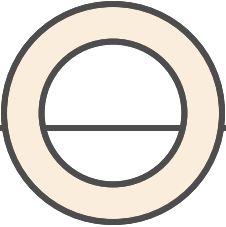
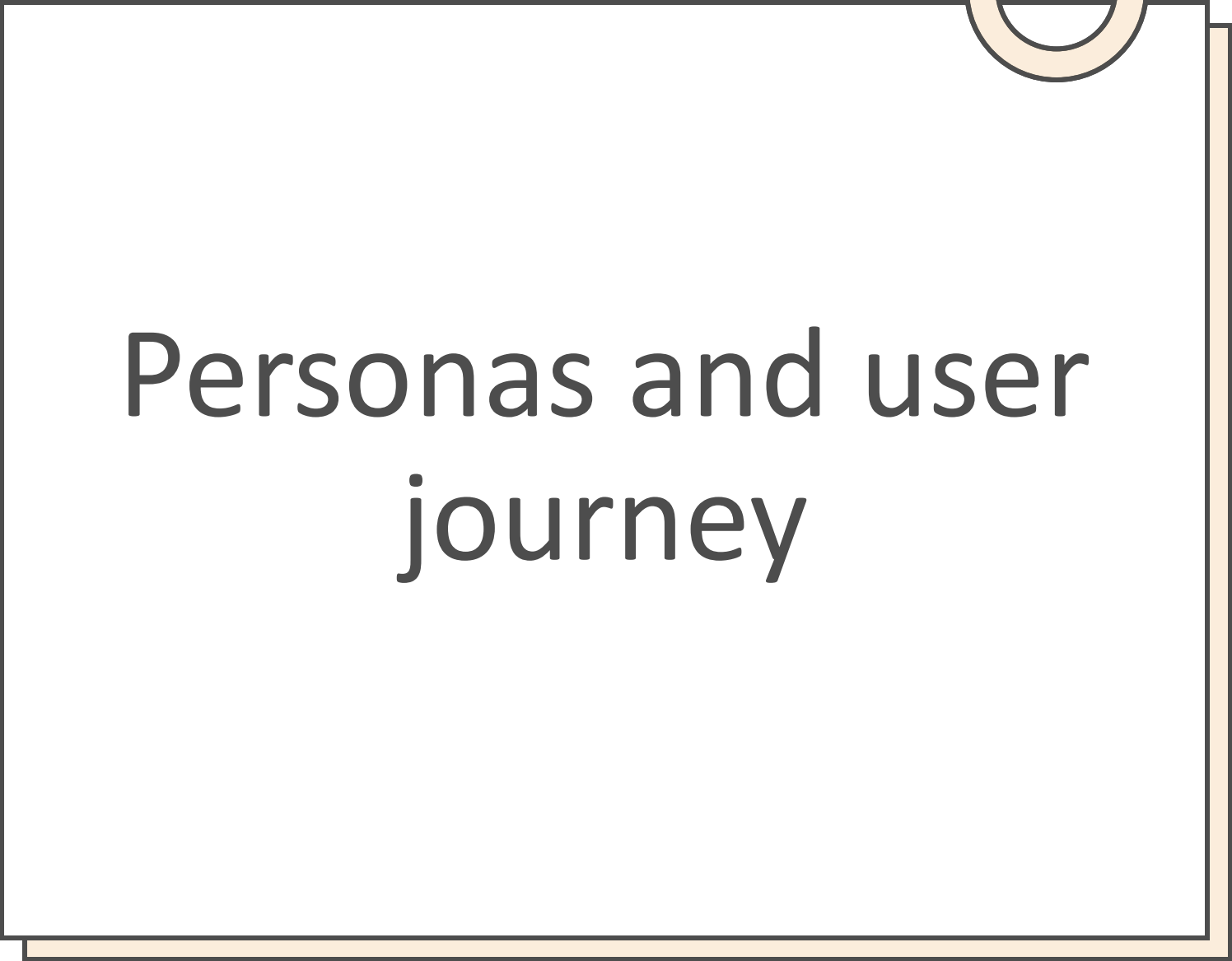
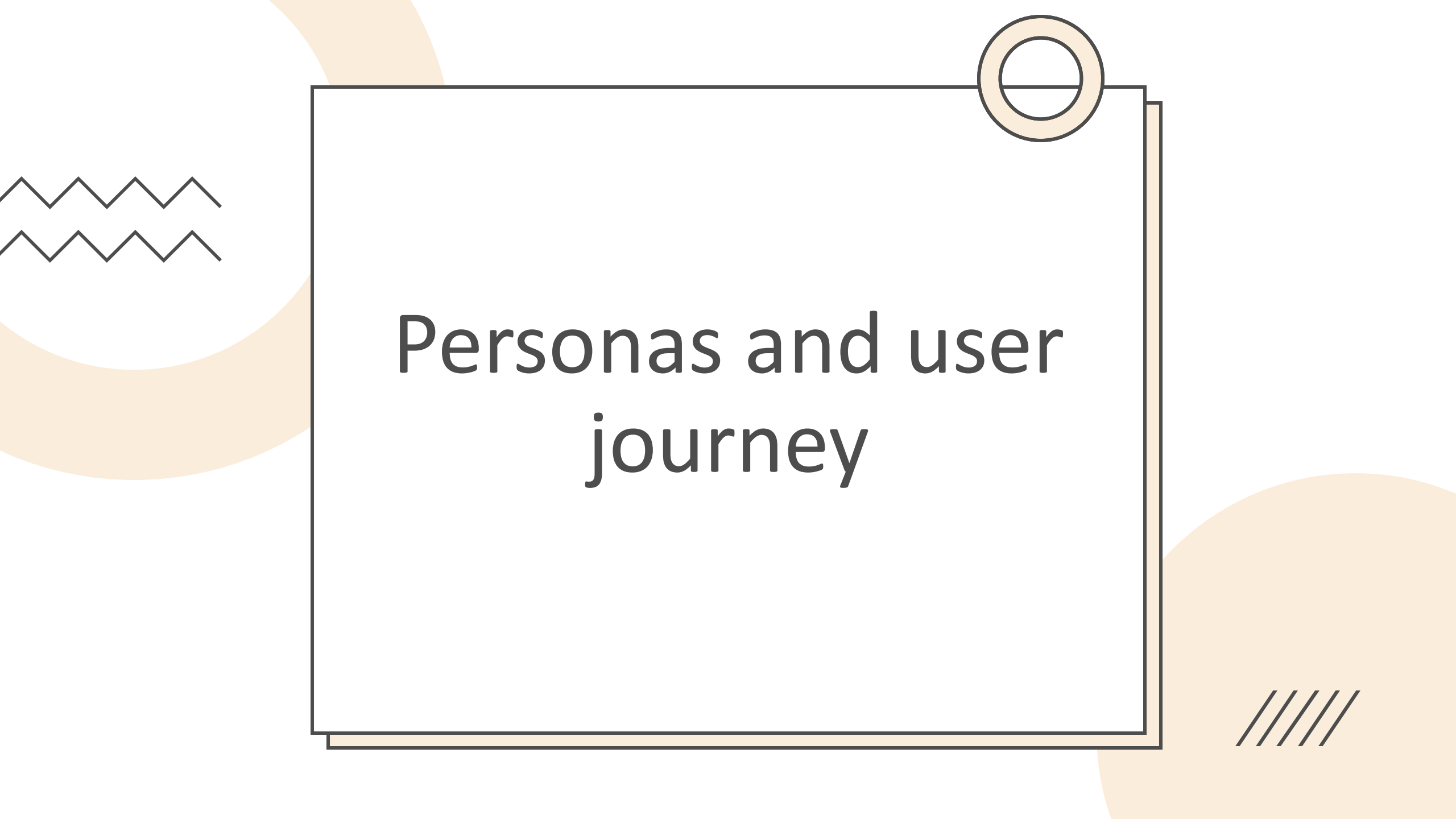
Exercise: User Research

- Review your user research data from this morning. Rewrite sticky notes if necessary for clarity / legibility
- Get back to your group
- Start grouping your sticky notes of the whole group by their natural relationship. Come up with group label (i.e. a problem statement) for each group
- Compare this with the 3 observations you wrote down earlier
- Time: 25 mins



Exercise: User Research

- Each team briefly present their area of interest and what they've found about the users
- This should include:
 - Users' painpoints
 - Users' needs



Personas and user journey



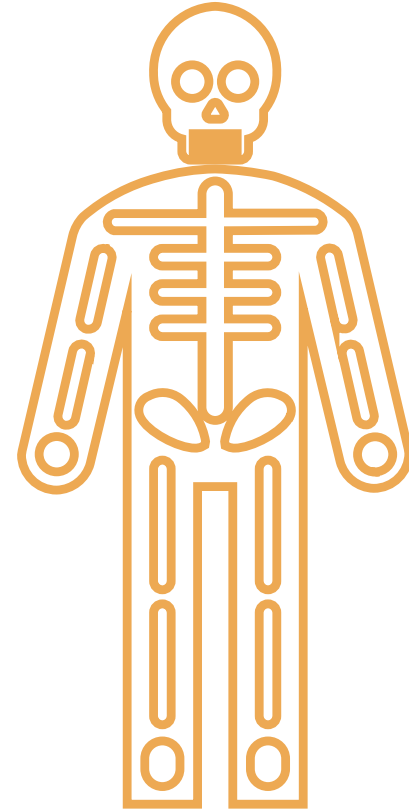


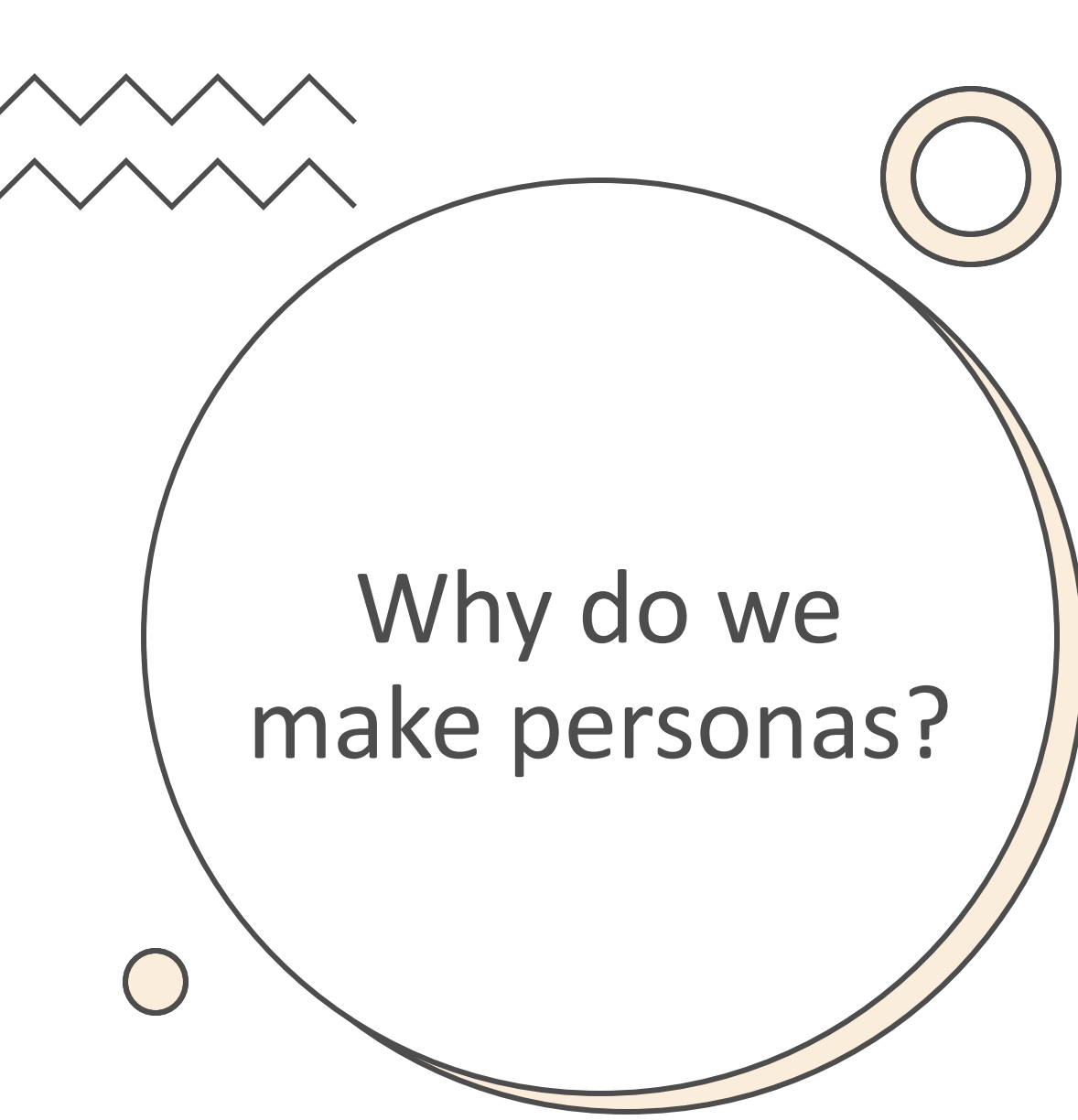
But users
can be very
different...



Personas

- Archetypes
- Groups of real people represented by a handful of personas
- Not necessarily the people who bring in the MOST revenue for a business





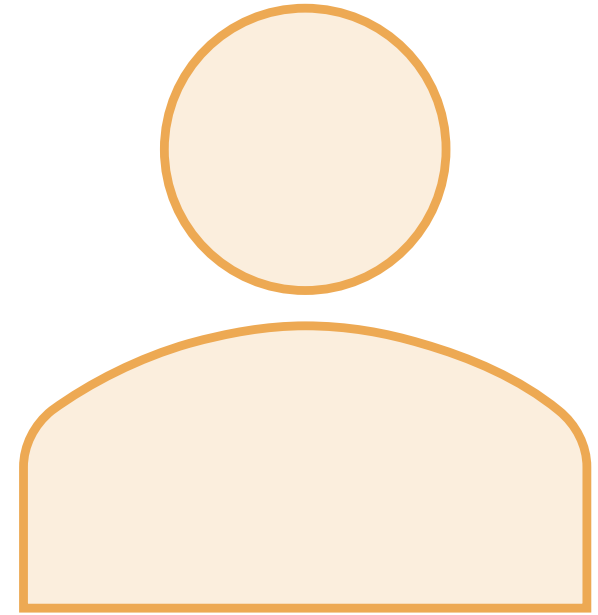
Why do we make personas?

- To remind us who our users are
 - To summarize user research
 - To focus design efforts on solving the users' problems
 - To make design less subjective
- 



What does a persona include?

- A name and photo
- Demographic information
- Goals and needs
- Preferences
- **...and whatever else is important**



Confident learner



Picture credits –
[Nerdcoregirl, Flickr CC](http://www.flickr.com/photos/nerdcoregirl/)
<http://www.flickr.com/photos/nerdcoregirl/>

Samantha Bell

“I’d love to keep in contact with my friends”

Sam is about to go abroad for her gap year, so her parents decided to get her a new camera, to make sure she’s able to record everything she gets up to.

She likes the camera as it looks so modern, and it’s able to do so much more than a lot of her friends’ cameras.

She loves being in contact with people all the time, and finds it’s a great way to kill time like when waiting for the bus. She uses a lot of the more advanced features – panoramic shots, online upload and .

When she encounters a problem she ignores it most of the time - she’s not sure if she even got a manual with the camera. When she has trouble she can’t ignore she speaks to her friends, or goes into a camera store – she wants to be talked through the problem.

First time user

Female, 27 year old, single
Student

Sam prefers to learn how to things by trying things out by herself. She isn’t worried about ‘breaking’ anything. If she does need help she would prefer to not to refer to a manual but “do it herself”.

Needs

In order of preference:

1. To share pictures with her parents
2. To share her pictures with her friends
3. To share her pictures with people she meets whilst travelling

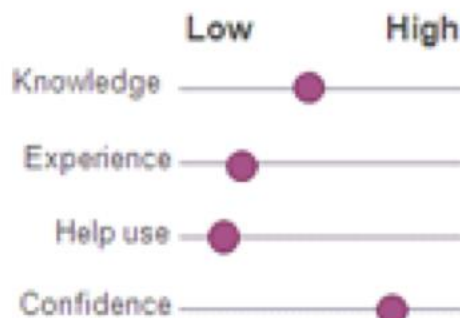
Ideal features

- Ability to take pictures
- Ability to upload images to personal site using 3G/Wifi
- Allowing others to access her pictures remotely
- Long battery life
- Ability to name and add comments to uploaded images
- Ability to create several albums, and upload pictures to each

Frustrations

- Lack of wireless/3G access
- Slow uploads
- Low battery life
- Need to be plugged in to upload images
- Slow shutter speed
- Want to be able to name/add comments to uploaded images
- Getting online is confusing
- Creating new albums

Key attributes



BRANDI TYLER

MUNRO
AMERICAN

PROFILE Narrow Feet

GENDER Female

AGE 36

LOCATION Los Angeles, CA

OCCUPATION Receptionist; \$38k



"It's SO difficult to buy shoes that fit my feet."

MOTIVATIONS

Brandi gets very emotional about shopping for shoes in retail stores because she rarely can find a pair that fits her narrow feet. Recently, she's turned to online shopping to avoid the hassle of shopping in stores. Brandi found Munro after Googling "narrow width shoes" and reading other reviews online about the company.

GOALS

- Needs an SS (4A) width shoe
- Would like to purchase several pairs to fit occasion, style, and color
- Hoping to find that she doesn't have to sacrifice style or options when searching by fit

FRUSTRATIONS

- Not being able to filter available shoes by width
- Getting far fewer options when she applies width filter
- No other recommended shoes when she's looking at a pair she particularly likes

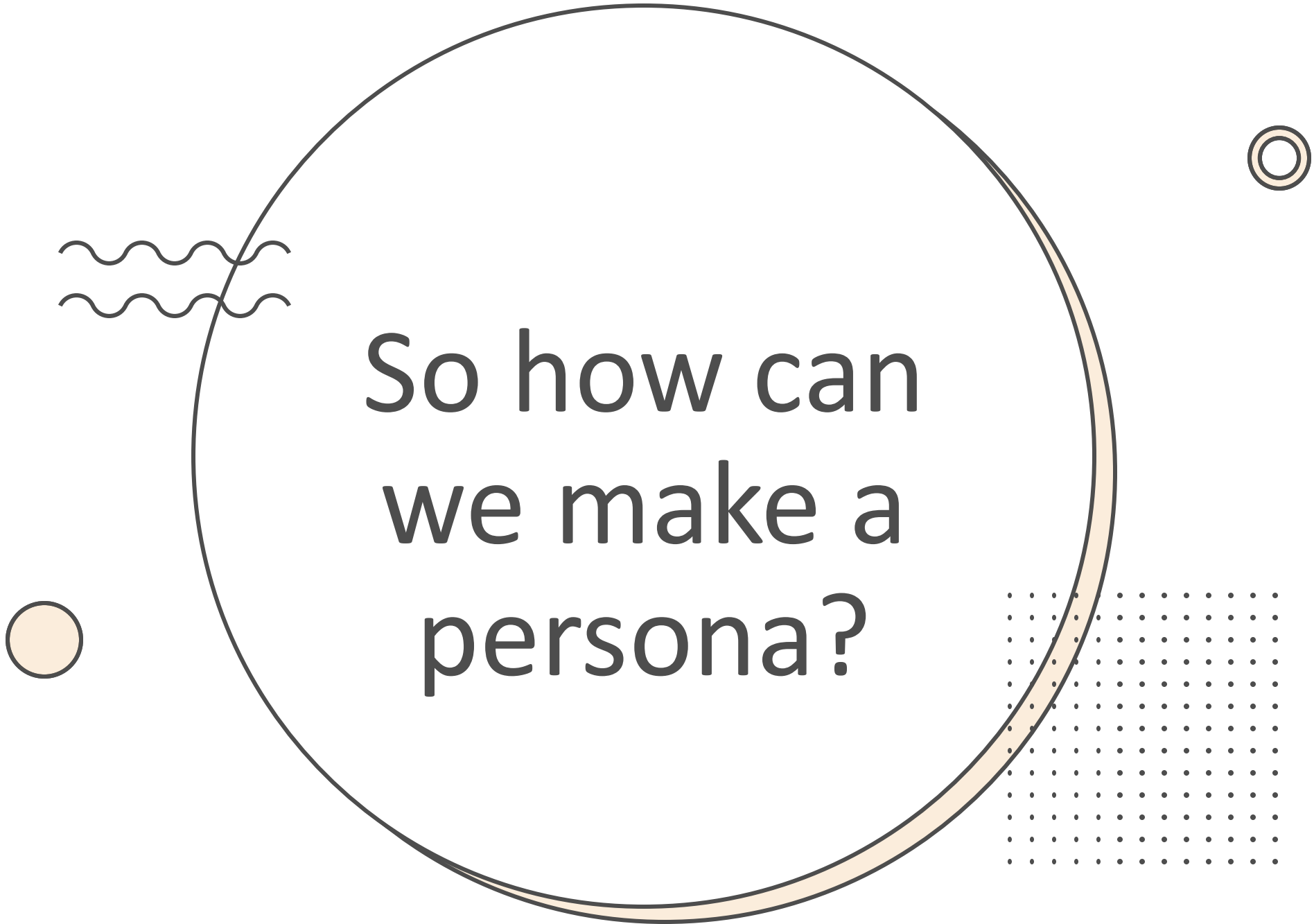
REAL MUNRO CUSTOMERS

"My whole life has been a choice between fit and style - when I was younger, I went for style & my feet killed me. As an adult, I tried for fit & the styles were for 95 year olds. This shoe is the 1st time I could get both."

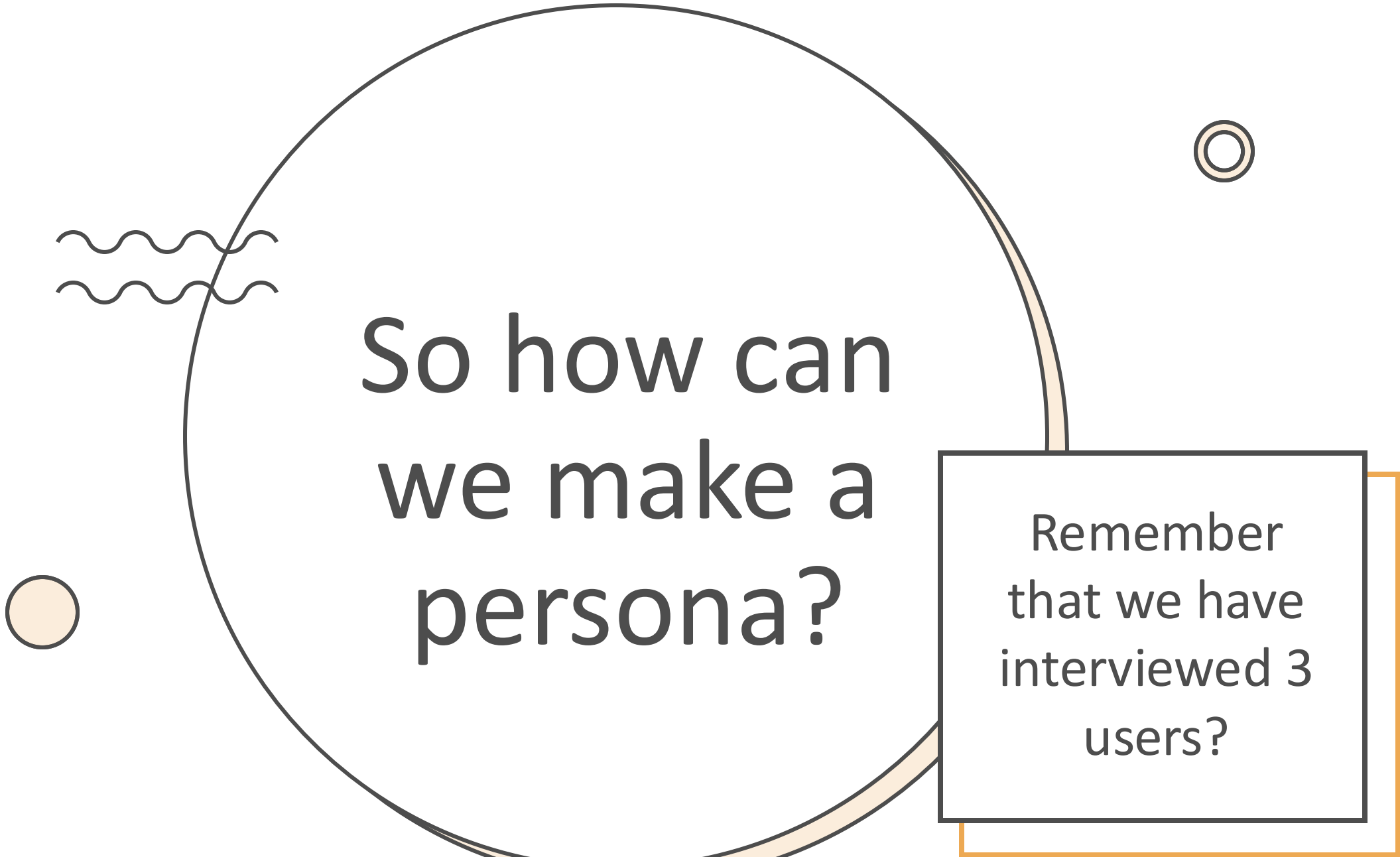
"I wear a 4A and I have struggled my entire life finding shoes narrow enough for my feet and more so in recent years. I stumbled onto this Munro brand sandal and was shocked to find it comes in up to a 4A width and it actually fit and is like wearing a glove! I now have two pairs in different colors."

"Love these slides so much I went out and bought two more pairs. I have very narrow feet and they fit perfectly. They're very stylish and I get compliments whenever I wear them."





So how can
we make a
persona?



So how can
we make a
persona?

Remember
that we have
interviewed 3
users?



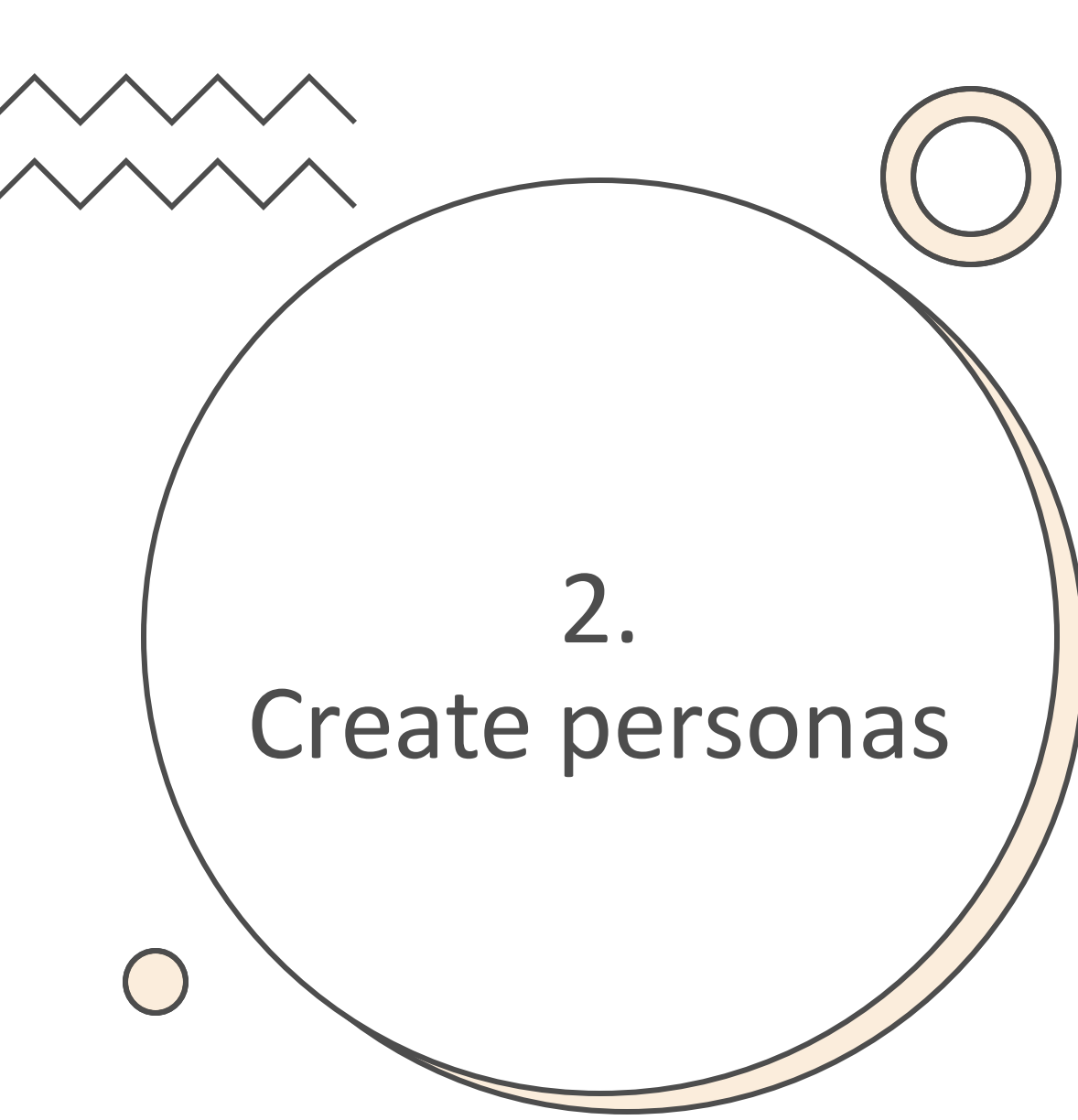
Steps of getting a persona





1. Post-it's and affinity diagram

- Write key points on Post-Its
 - Make sure they are:
 - Specific
 - Relevant
 - Universal
 - Create an affinity diagram
- 



2. Create personas

- What are the groups that naturally form?
 - What are their shared characteristics?
 - Frequency of use
 - Expertise
 - Geography
 - Not just demographic!
- 

2. Create personas

Computer and IT experience



Expert



Numb

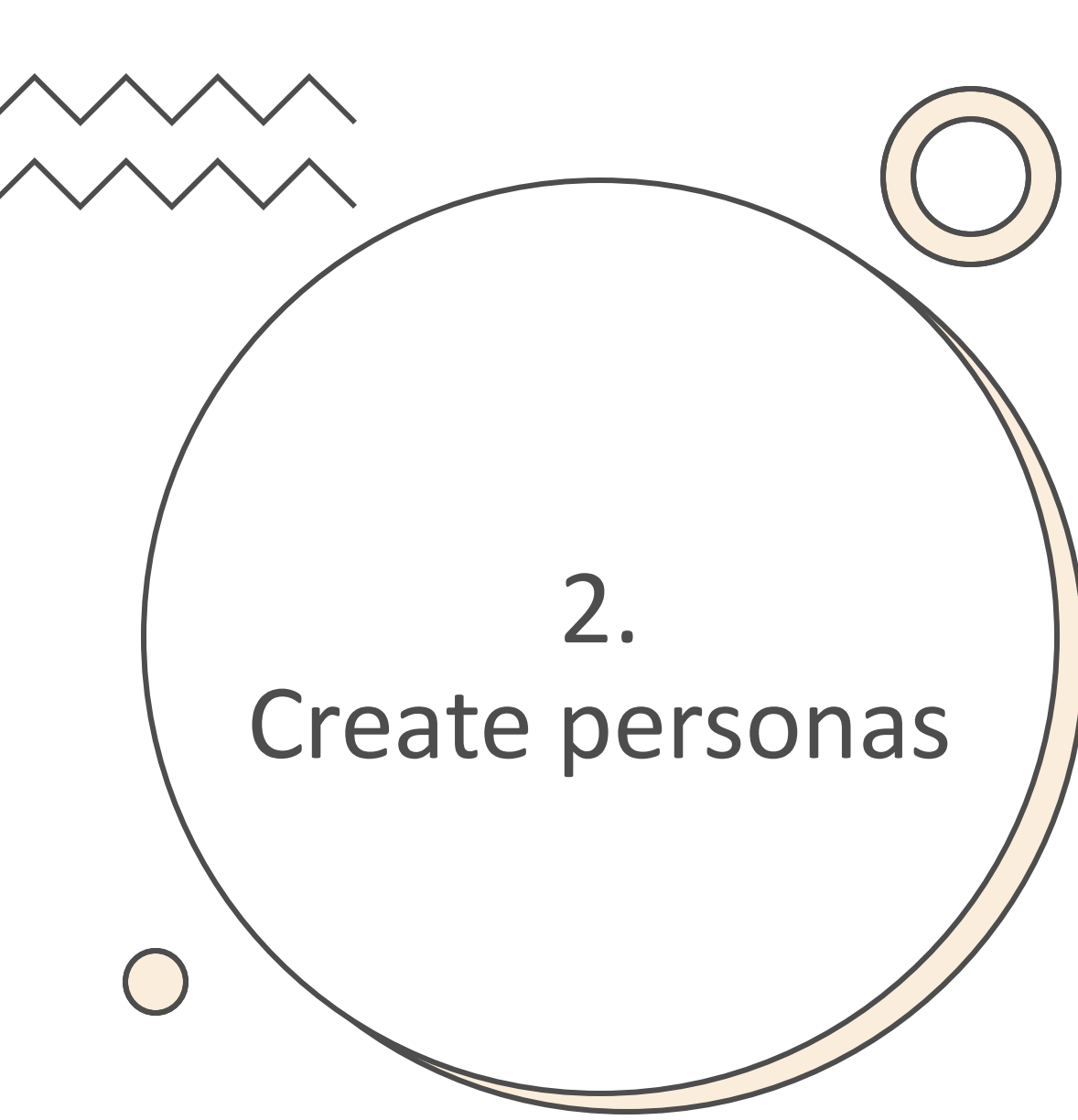
2. Create personas

Frequency of use



Once a
year

Every
day



2. Create personas

A persona should have:

- Name
 - Tagline
 - Who are they?
 - What are their goals and motivation?
 - What is important to them?
 - What are their pain points?
- 

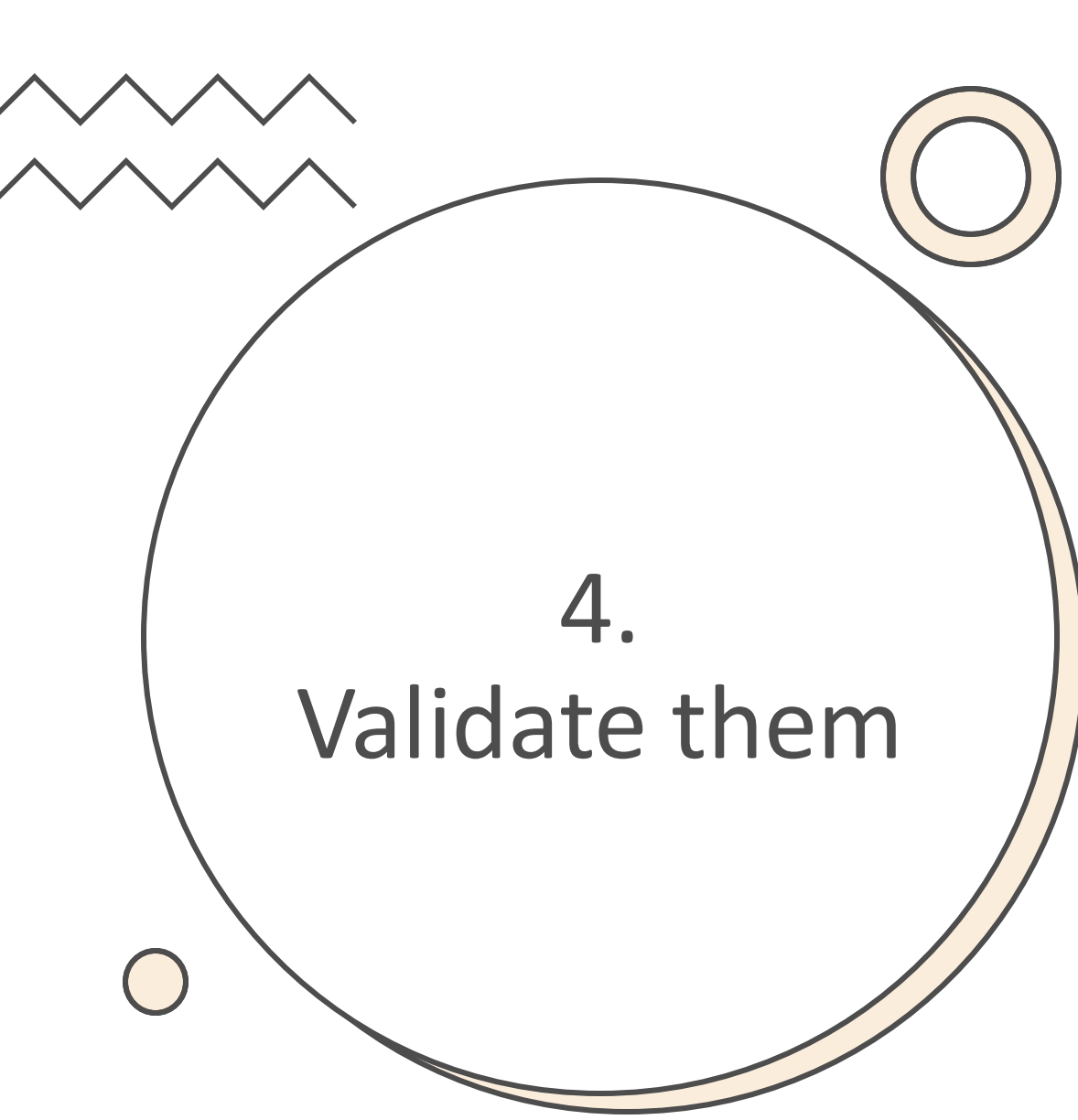
3. Prioritize personas



Primary

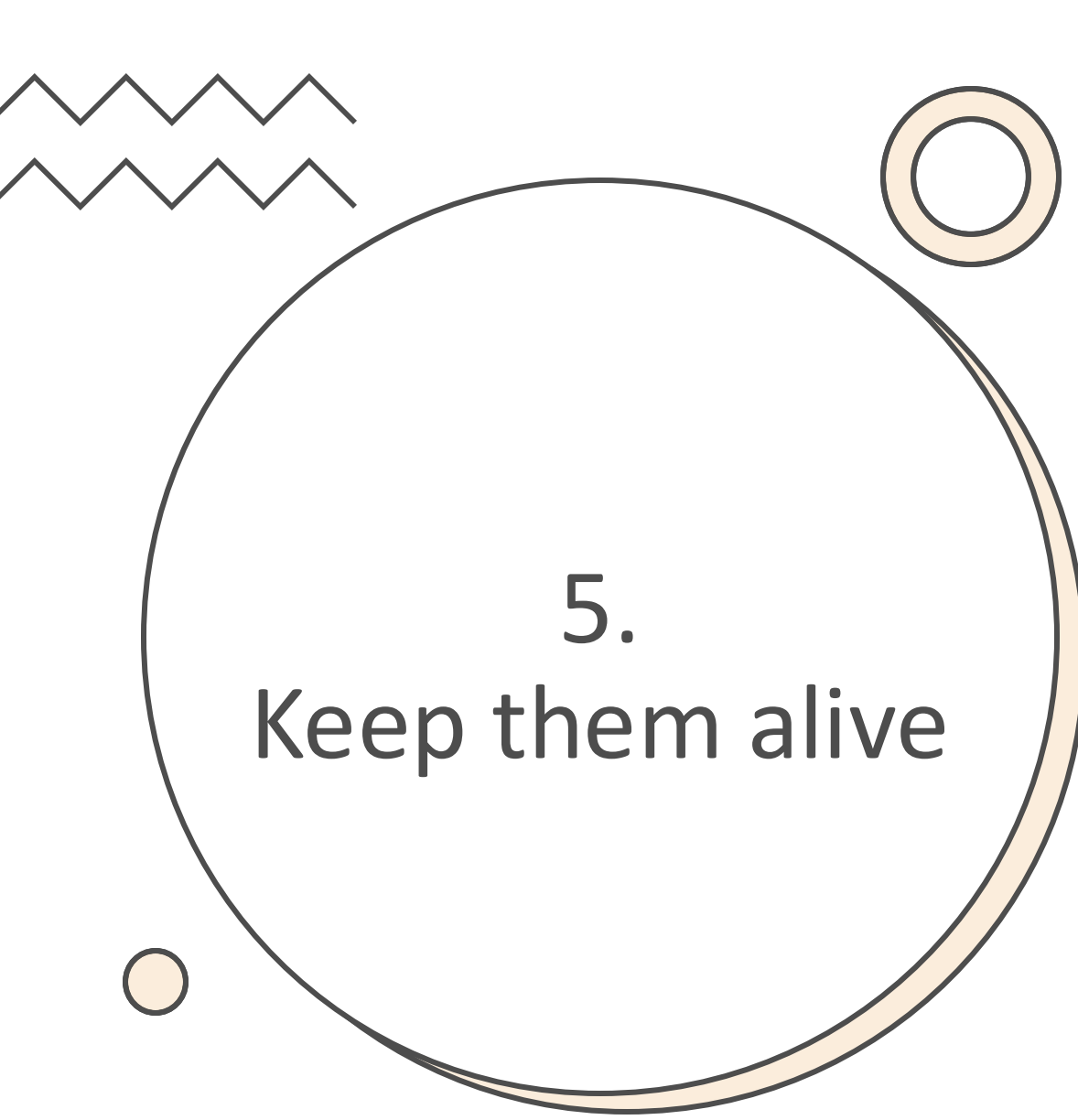


Secondary



4. Validate them

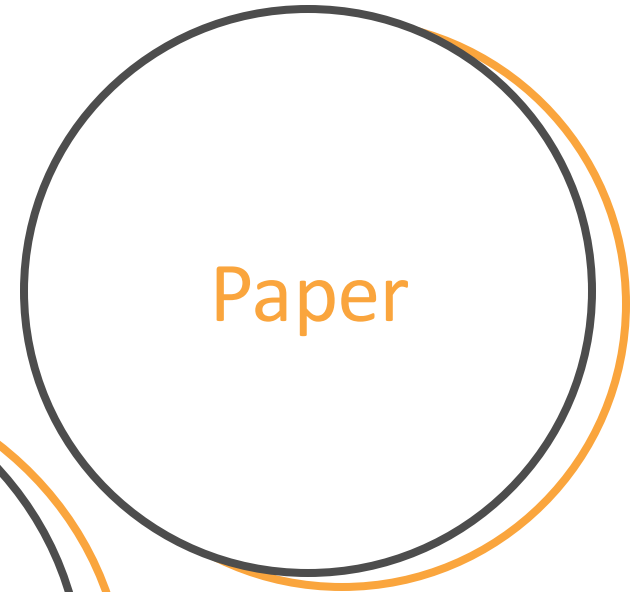
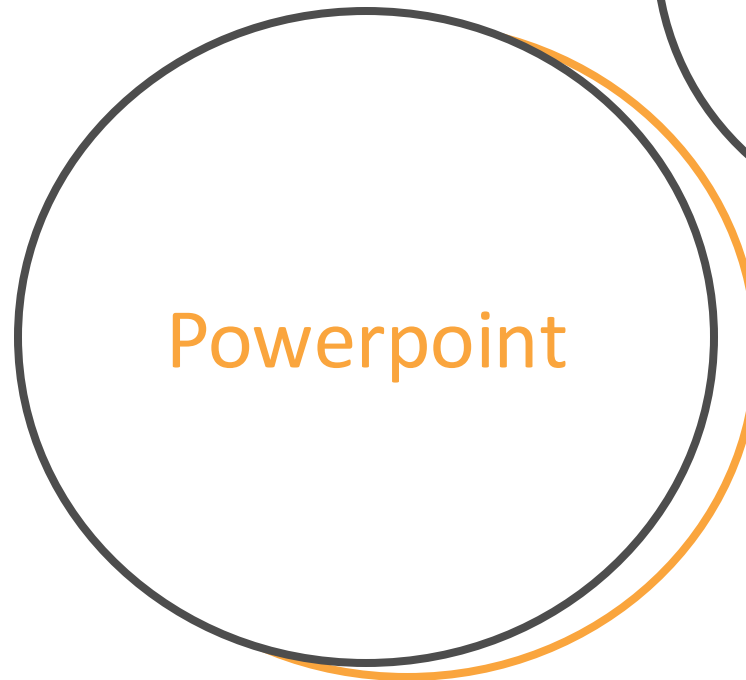
- Do a quick gut-check:
 - Are they based on research?
 - Do I know people like this?
 - Are they useful?
 - Run experiments (usually via conducting user research)
 - Role-play as a persona — still realistic?
 - Continually refine your personas
- 



5. Keep them alive

- Make posters and display them prominently
 - Refer to them in presentations and documentation
 - Use them in casual product discussions
- 

- Tools for making personas





User journey



What is user journey?

a strategic process of
capturing and
communicating complex
customer interactions

visually illustrate a
customer's processes,
needs, & perceptions
across their interactions
and relationships to satisfy
a need.





Alexander's Experience Map

Role: Founder of AdventureTrap & business owner

Age: 45 Relationship: Married with 2 children under 12

Background: Founded his company at the age of 22 and now owns two small businesses

"I want you to organise everything- boat, driver, chef - give me options"

"This is my budget- find me something nice"

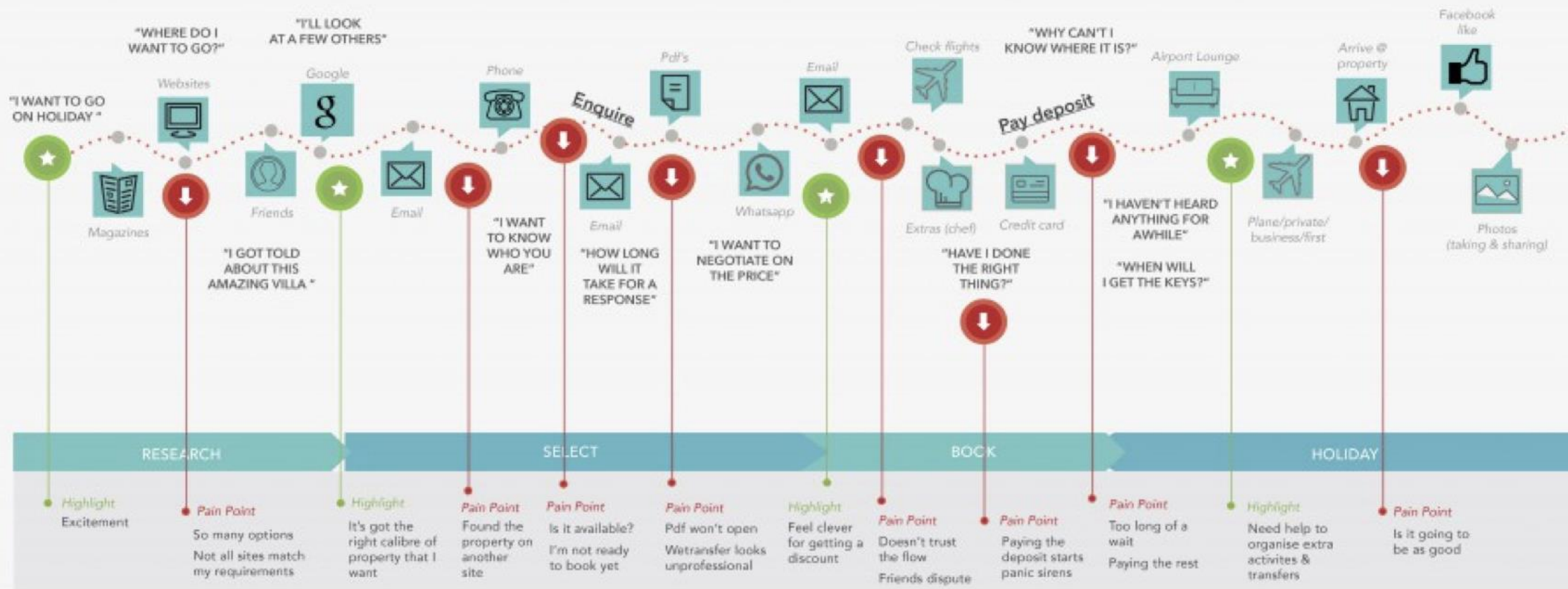
"I don't know who you are, so I'm not going to book with you"

RESEARCH

BOOKING

HOLIDAY

TOUCHPOINTS



RETURN HOME

USER PERSPECTIVES

USER PERSPECTIVES

NOTES & COMMENTS

- PDF's
- Concierge call back
- Discuss options
- Set price margins
- Clear terms

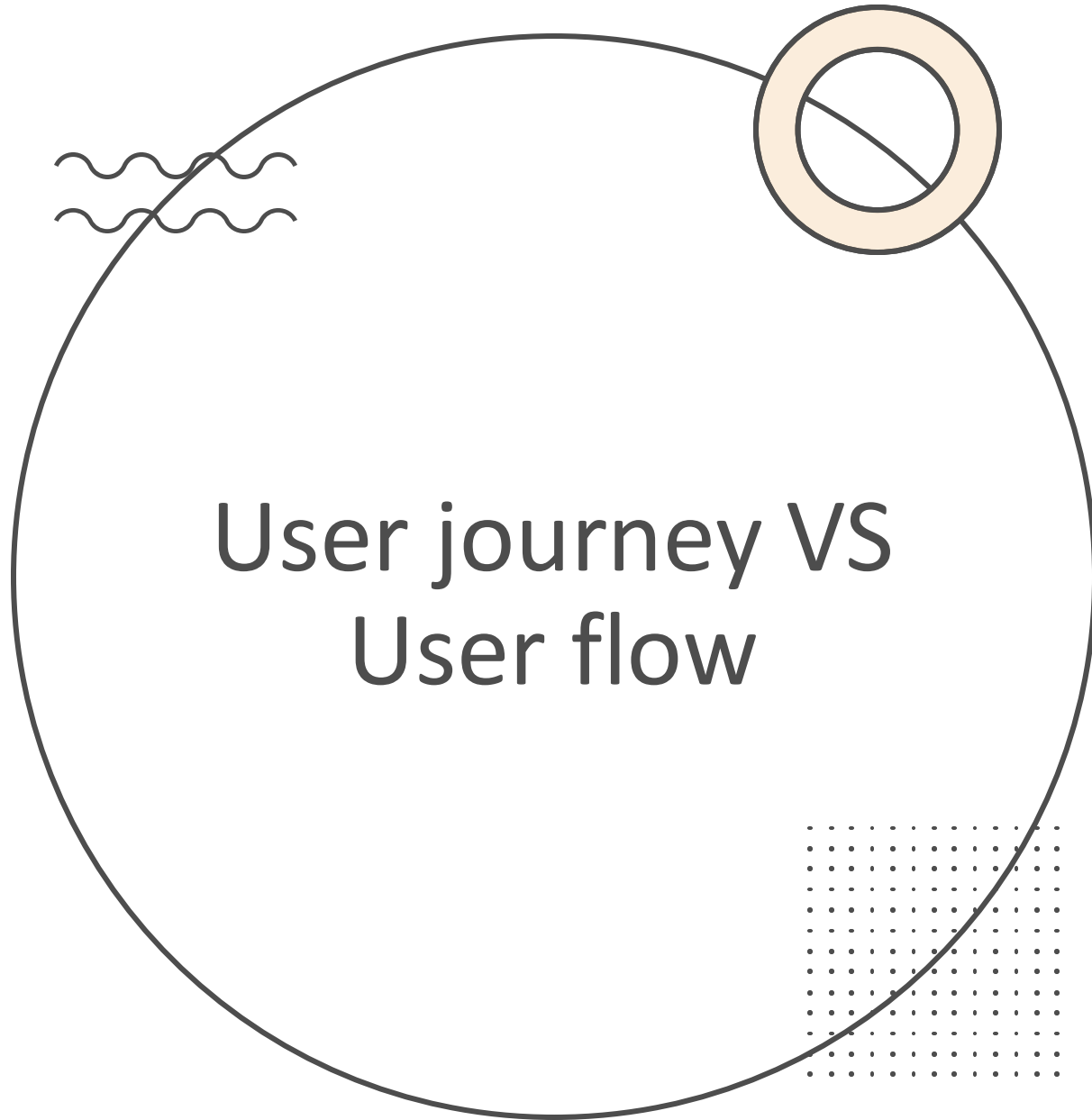
- Site looks professional
- Fast response
- Organic traffic
- Word of mouth (e.g at dinner parties)

- Exclusive supplier
- Build good relationships
- Direct line (whatsapp)

- Visible contracts
- Negotiation on money
- Give recommendations
- Hands on approach
- E.R gift as soon as booked

- Visibility on additional features
- Honesty when it comes to money
- Discretion is a big factor
- Tours of the villa's - to soothe

- Welcome pack
- Guide to the area,
- Emergency contacts
- Catalogue of villas for future (on return from holiday)



- Compared to user flows, user journeys:
 - concerned primarily with the **experience**, **emotions**, and **pain points** throughout the process, as opposed to task and decision steps
 - more focus on higher level
 - more aesthetically visual

Rail Europe Experience Map

Guiding Principles

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

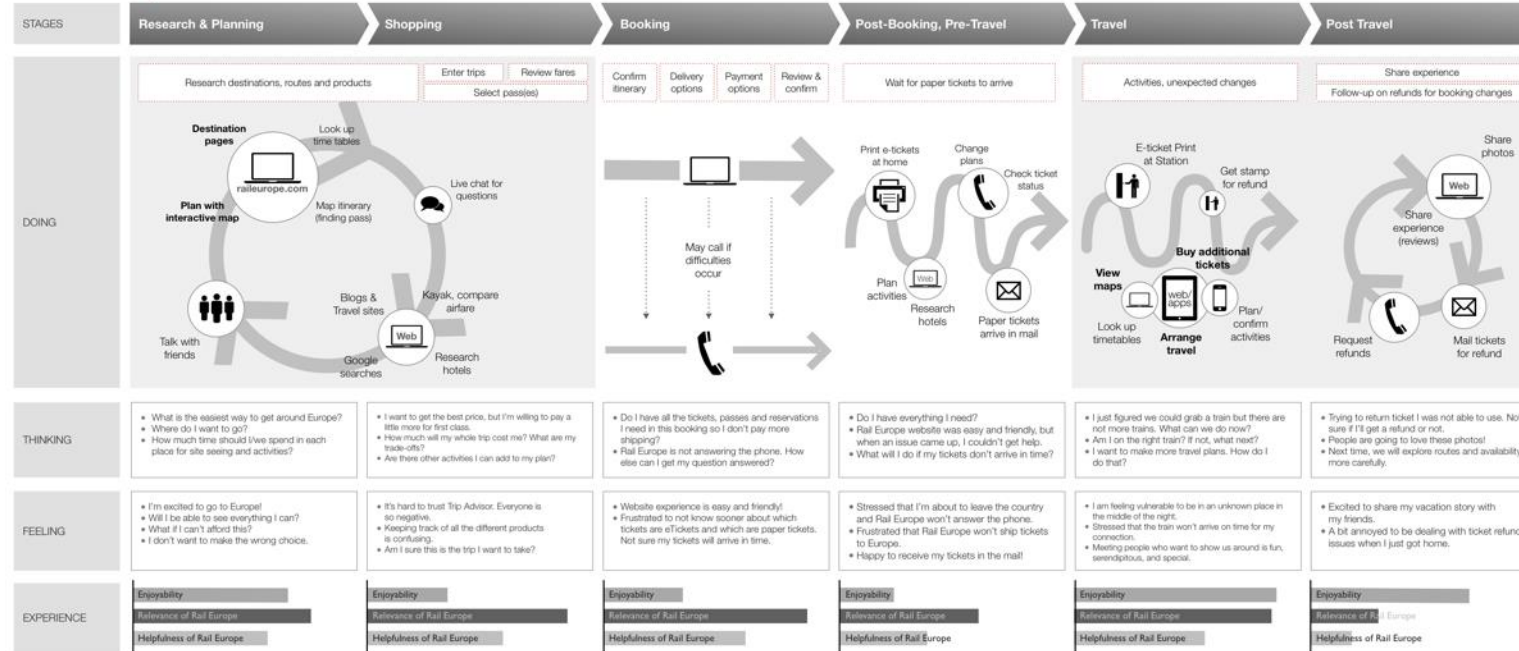
Rail booking is only one part of people's larger travel process.

People build their travel plans over time.

People value service that is respectful, effective and personable.

Lens

Customer Journey



Journey Model

Qualitative Insights

Quantitative Information

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	STAGE: Global	STAGE: Global	STAGE: Planning, Shopping	STAGE: Planning, Shopping	STAGE: Shopping, Booking	STAGE: 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.
STAGE: Global	STAGE: Global		STAGE: Planning, Shopping, Booking	STAGE: Booking		STAGE: Post-Booking, Traveling	STAGE: Post-Booking, Post-Travel

Takeaways

Information sources

Stakeholder interviews
Cognitive walkthroughs

Customer Experience Survey
Existing Rail Europe Documentation



Ongoing, non-linear



Linear process



Non-linear, but time based

adaptive path

Experience Map for Rail Europe | August 2011



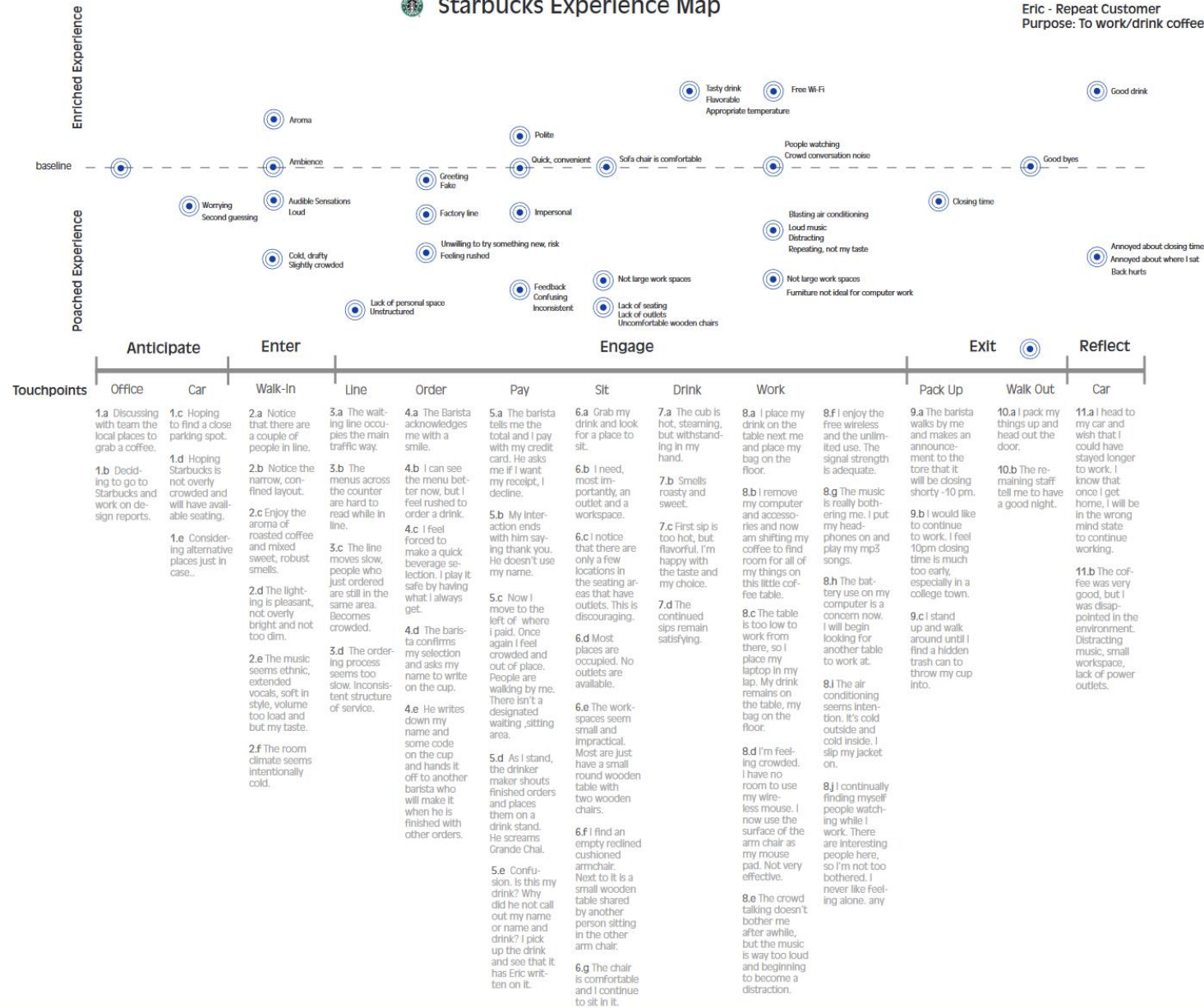


Starbucks Experience Map

Date: 3/22/10

Eric - Repeat Customer

Purpose: To work/drink coffee





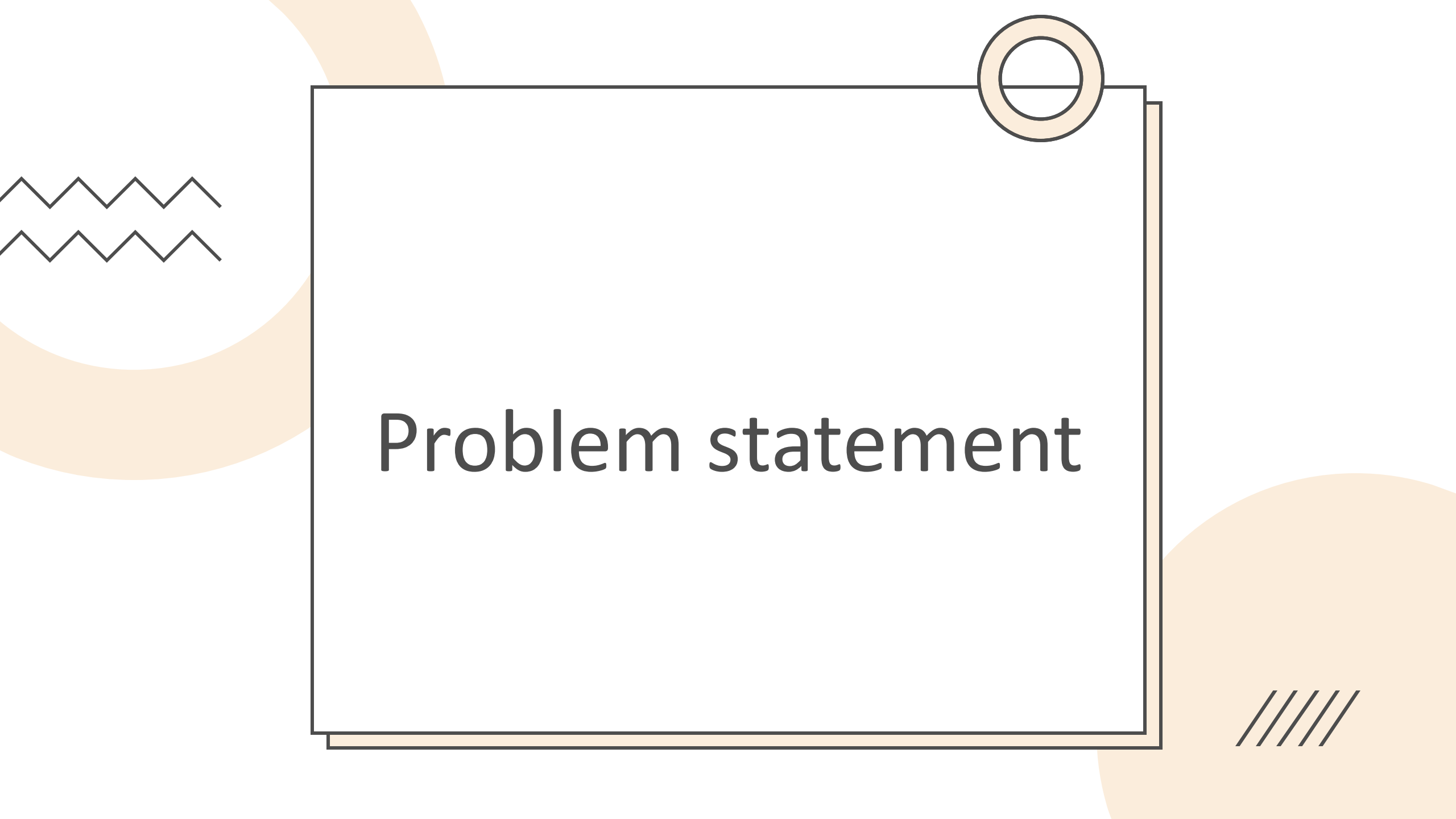
Designing the Experience - Example WOW



● Persona and user journey

- Each persona has a unique user journey
- User journey is made to visualize a persona's needs, pain points and moods throughout the process
- To figure out what is the most urgent pain points that we need to attend to





Problem statement



What is the
biggest
problem for
the user?





Problem statement

is a challenge for

because

_____.





Problem statement

Opening doors is a
challenge for dogs
because they don't
have thumbs





Website as a solution



- Can website provide a solution?

Please look at your journey map and persona

- Is the persona tech savvy?
- Is website involved in the current user journey?
- Can website do better than current methods?



Browser: <https://www.amazon.com> | 67% zoom | Search: amazon

NEW & INTERESTING FINDS ON AMAZON **EXPLORE**

amazon **The Halloween Shop**

Departments | Your Amazon.com | Today's Deals | Gift Cards & Registry | Sell | Help | EN | Hello, Sign in | Account & Lists | Orders | Try Prime | Cart

LOOK SUPER

Amazon Exclusive:
Super NES Edition + Super Mario Kart

new NINTENDO 3DS XL

Game Rated: **E** EVERYONE

Explore Amazon [Shop all departments](#)

AMAZON BASICS

SHOP BY ROOM

MEET ALEXA

COUPONS

DEALS ON ESSENTIALS

KITCHEN

Related to items you've viewed [See more](#)

NIGEL

The Art

CREATIVE Confidence

THE FIELD GUIDE TO HUMAN-CENTERED DESIGN

WIRED+CARE

Waiting for fls-na.amazon.com...







Homework: User research

- Do it with your group
- Choose an area of interest from the list (or from your own):
Work | Study | Travel | Finance | Relationship | Shopping | Home | Health
- Interview 5-10 people to understand and identify users' painpoints and behavior
- Devise a website development plan to solve the painpoints with personas, user journey and competitive analysis
- You may consider this as a part of your group project!
- Submit this to gordonlee.cityu@gmail.com
- On or before next lesson (Oct 30)