# User Experience Design Process
Module 3

**116U01E734**

**User Experience Design**

**July-Dec 2024**

# User Research and Journey

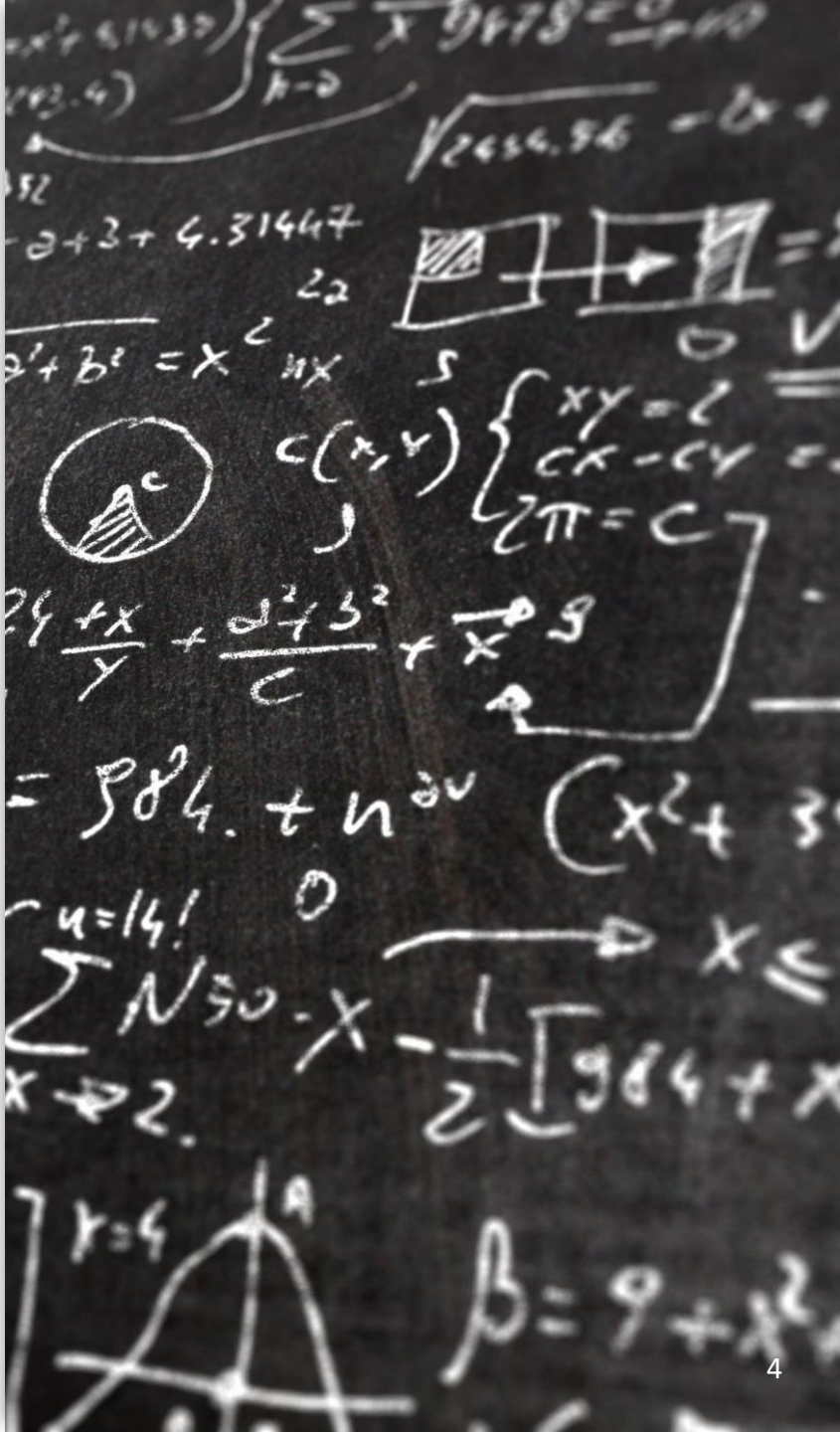
- Defining the UX Design Process and its Methodology, Understanding user needs, Flow chart, Six stages of UX Design process.
- The four quadrants of empathy map, emotional mapping using an empathy map, Design Thinking, Wicked problems, Ideation.

# Defining
# UX Design Process

- Research
- Design
- Prototype
- Validate

# Defining UX Design Process

- **Research and define problem**
  - **Understand the users' needs**
  - **User Centric Design**
    - Involves speaking to or observing real users (or people who represent your target users) to figure out what problems they have and what they desire and require from a solution
  - **Qualitative**
    - which involves learning about users' thoughts, feelings and opinions
  - **Quantitative**
    - measurable data such as how many times a user clicks on a certain button or how long it takes them to complete a particular task



# Defining UX Design Process

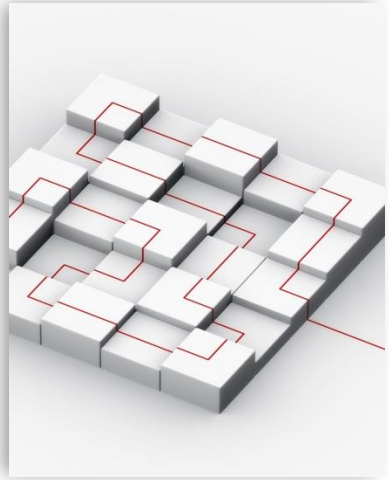
- **Define the user problem**
  - a short summary of the problem you're going to design a solution for
  - To understand approach to solve the problem, problem statement is divided into a series of "How Might We?" questions.

# Defining UX Design Process

- **Design**
  - Come up with potential solutions to user problem
  - Choose one solution that is most feasible and most likely to meet the users' needs bringing to life by designing
  - Might include sketching out initial ideas for how the new feature will work considering things like:
  - what functionality it will provide
  - where it'll sit in the app
  - how the user will get to it.

# Defining
# UX Design Process

- **Design**
  - After the initial ideas sketched out the information about architecture of the new feature (i.e. how it will be structured and organised in terms of content and information) is consider
  - User flows, a chart or diagram which depicts the path a user will take to complete a certain task is mapped out
  - For new features, create user flows to determine how the user will complete tasks is created,
  - Create wireframes (very low-fidelity wireframes) or digitally using a variety of wireframing tools are created to further firm up the design of your new feature.



# Defining UX Design Process

- **Prototype**
  - After laying out the blueprint for new product or feature, the details of the design are fine tuned by creating a more lifelike model of how the product will look and function.
  - A simulation that shows how users will interact with the finished product.
  - Can be interactive and clickable, allowing stakeholders (and sample users) to interact with them as if they're a live product.

# Defining UX Design Process

- **Prototype**
  - The purpose is to give something to the user to test before spending time and money in developing design into a living and breathing product.
  - Enables to make sure that the solution proposed is user-friendly and accessible.
  - Ensures that users are able to interact with it in the way originally intended.

# Defining UX Design Process

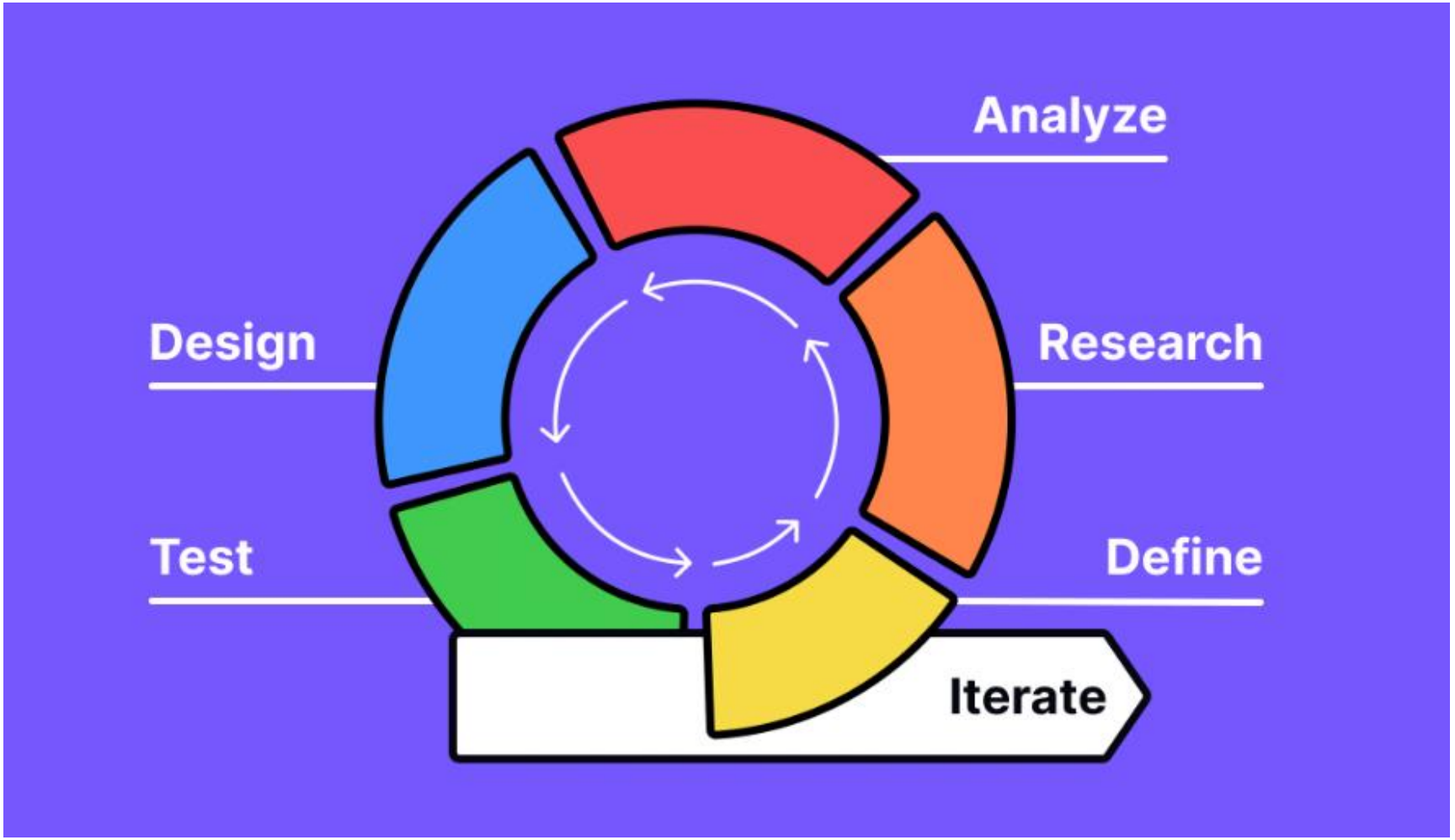
# Defining UX Design Process

- **Validate**
  - Test  designs to make sure they're effectively solving the user problem and that they're a joy to interact with.
  - This step in the process requires UX testing (or usability testing) on real or representative users.
  - Gives the chance to identify problems with designs and fix them before development, ultimately saving time, money and disgruntled users.

# Defining UX Design Process

- **Validate**
  - UX testing allows to validate or invalidate designs, determining whether to move forward to the development stage or return to the design stage to make adjustments..

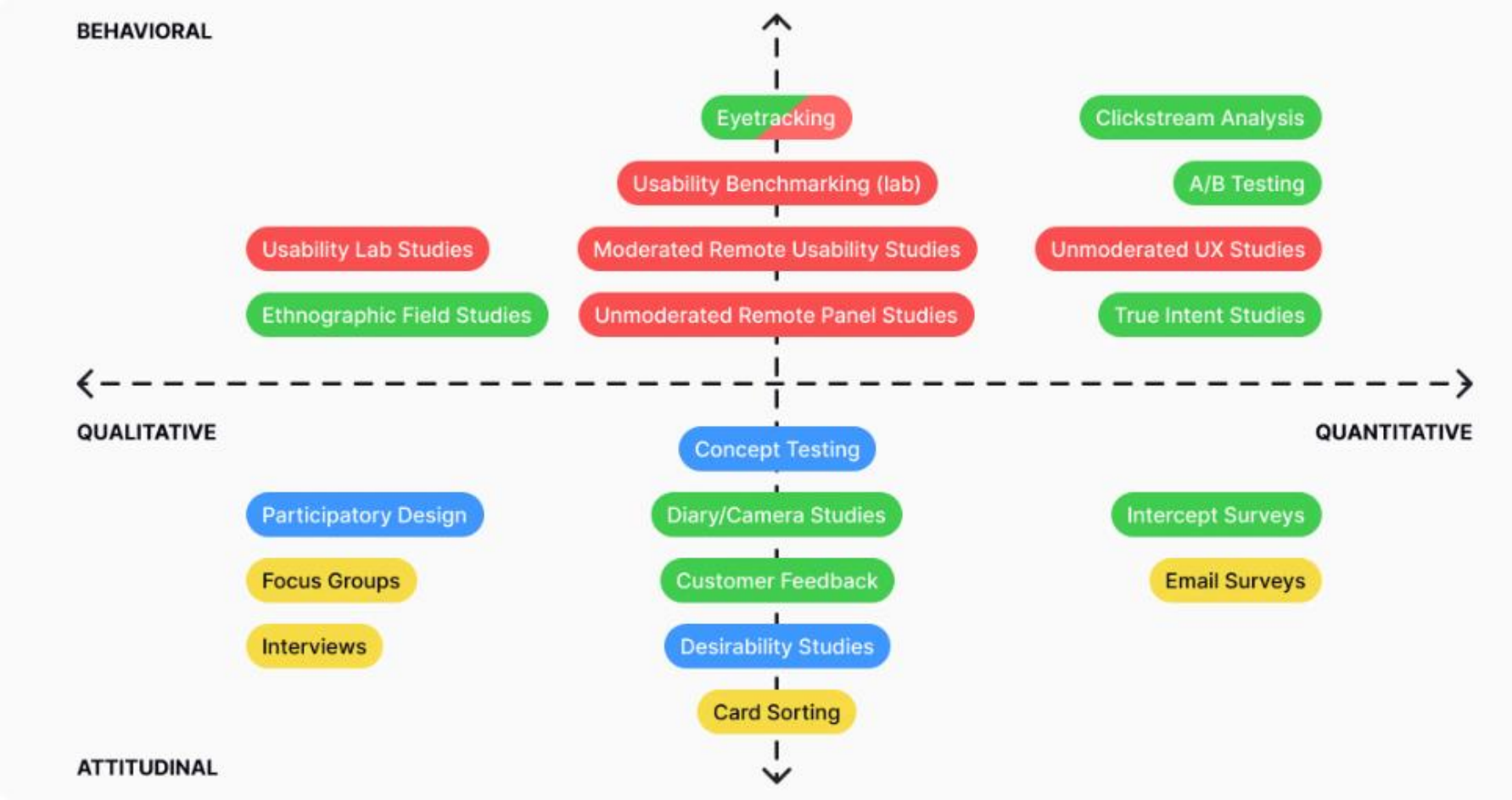
# 6 Stages of  UX Design Process



# 6 Stages of UX Design Process

1. **Defining and understanding your product**
   - Main focus is to define how the final product should work and how it solves the users' problems.
   - Interviews with key stakeholders are a great way to get the project started.
   - This includes talking with management across departments—from sales, to finance, to marketing, and more.
   - Having these essential conversations helps UX designers identify business goals, and enables them to focus on building UX designs that help hit them.

# Conducting product and in-depth user research



# 6 Stages of UX Design Process

2. **Conducting product and in-depth user research**
   - Identify specific user issues and problem areas
   - Learn about what needs improving, directly from users

**Types of UX research conducted:**

- **Qualitative**: this type of UX research returns insights that can be observed but not computed
- **Quantitative:** this type of UX research returns numerical insights, such as time taken to complete a task
- **Moderated**: in this type of research the researcher is present
- **Unmoderated**: in this type of research the researcher is absent

# 6 Stages of UX Design Process

Different UX **research techniques** used to understand user's experience:

- **User interviews:**
  - Involves communicating directly with users to hear their thoughts on product.
  - Helps uncover key insights, and can help with the development of user personas.
- **Usability testing**:
  - Involves testing a design using real users.
  - Typically involves getting users to perform a task, then asking them questions about the experience.

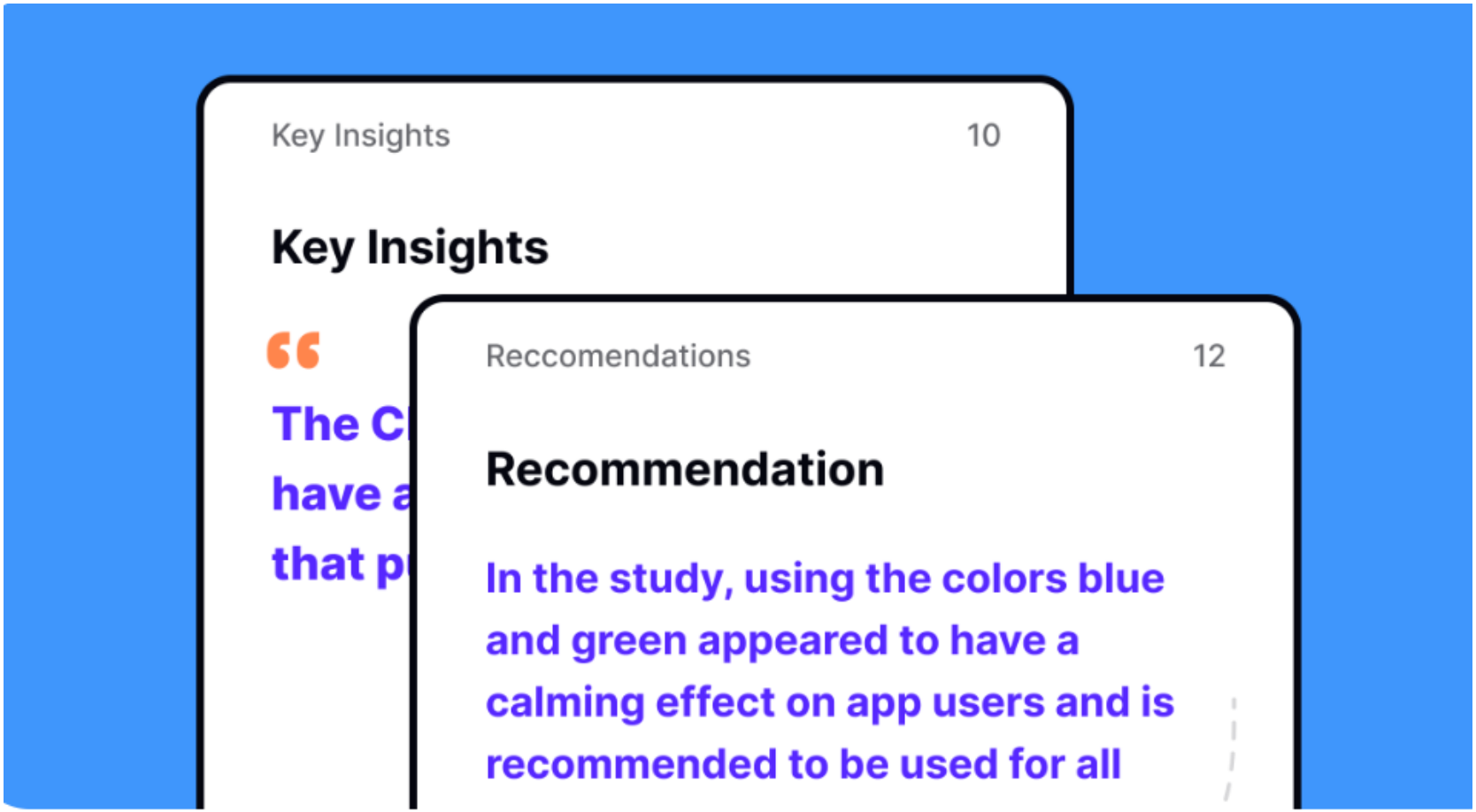
# 6 Stages of UX Design Process

Different UX **research techniques** used to understand user's experience:

- **Heatmaps and click testing**:
  - Involves analyzing how users interact with product or website.
  - Gives insights into where they're looking on the product site, and how more easily be guided to performing a desired action.
- **Surveys**:
  - Enables to gather insights on a wide variety of business-related topics.
  - Give the opportunity to share their thoughts in a low-pressure environment.
- The best methodology  depends on what developers are looking to uncover
- *Is it general feedback you're after?*
- *Need to find insights on how to improve an existing feature?*

# 6 Stages of UX Design Process

## 3. Analyzing research results



# 6 Stages of UX Design Process

## 3. Analyzing research results

- Analyze information to highlight the key takeaways from research
- How to use them in the design phase to test design concepts later on
- Look to identify pain points
- From Qualitative research: Quantify the levels of satisfaction for appropriate understanding
- From Quantitative research: Understand number (time spent to analyze information, percentage of revisits etc.)
- Develop user journeys maps to visualize how user interacts with product, to visualize the user flow and experience and identify friction points to resolve.

# 6 Stages of UX Design Process

4. **Designing your ideal product**

- Ready to develop new-and-improved product, feature, or user flows
- Consider creating wireframes and prototypes—these enable to test designs before investing too much time and energy into building them
- **Skelton Plane** (of 5 S planes)

# 6 Stages of UX Design Process

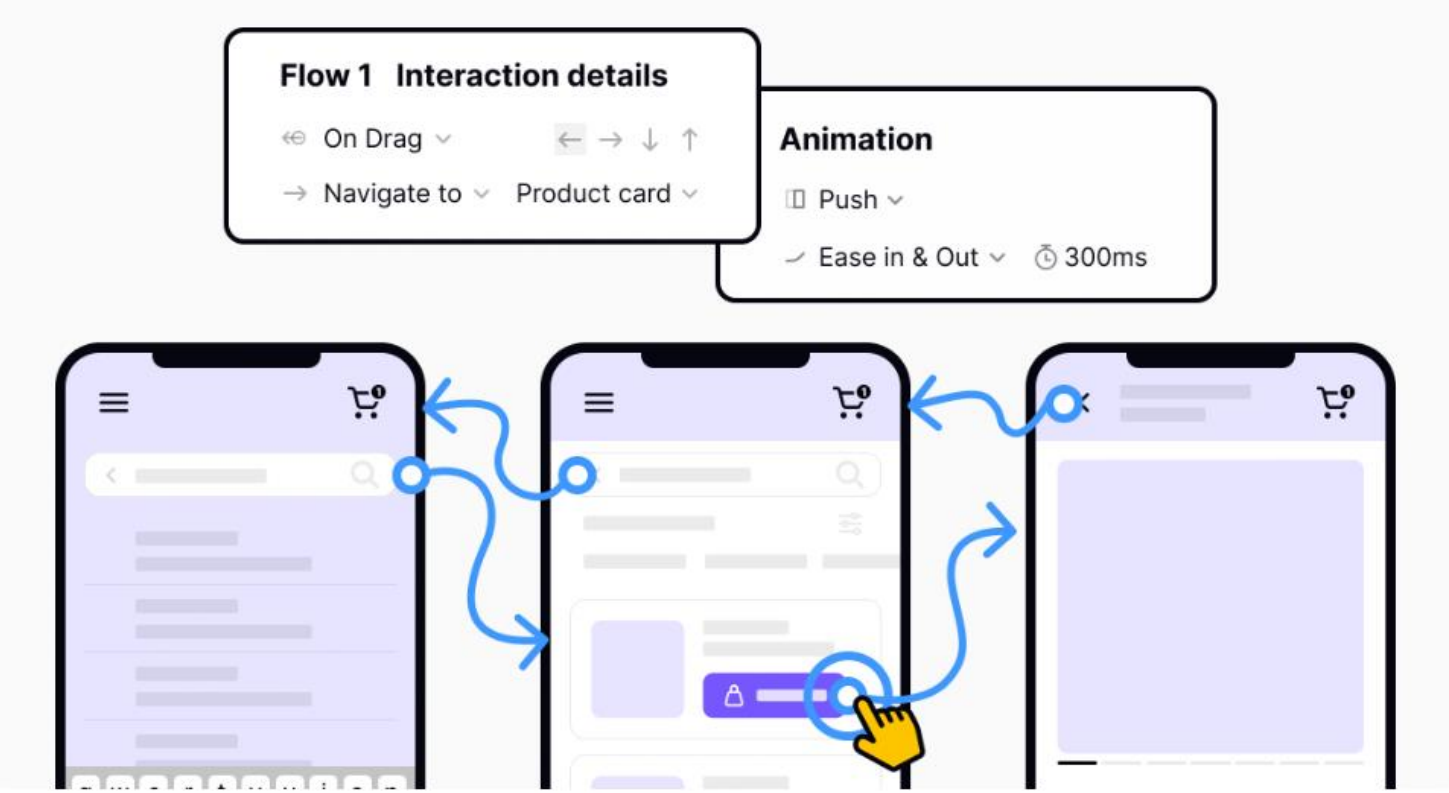
## 4. Designing your ideal product

- **Wireframes**
  - A visual creation designed to represent the skeletal framework of your design.
  - Enables to give an idea of what is being built, without having built it.
  - Used to test information architecture, navigation functions, and more.

# 6 Stages of UX Design Process

## 4. Designing your ideal product

- **Prototypes**



# 6 Stages of UX Design Process

## 4. Designing your ideal product

- **Prototypes**
  - After wireframe is designed and tested create a prototype.
  - Are closer to the final version of design
  - Enable to test interaction and functionality
  - Follow some UX design principles that can help ensure building a great product.

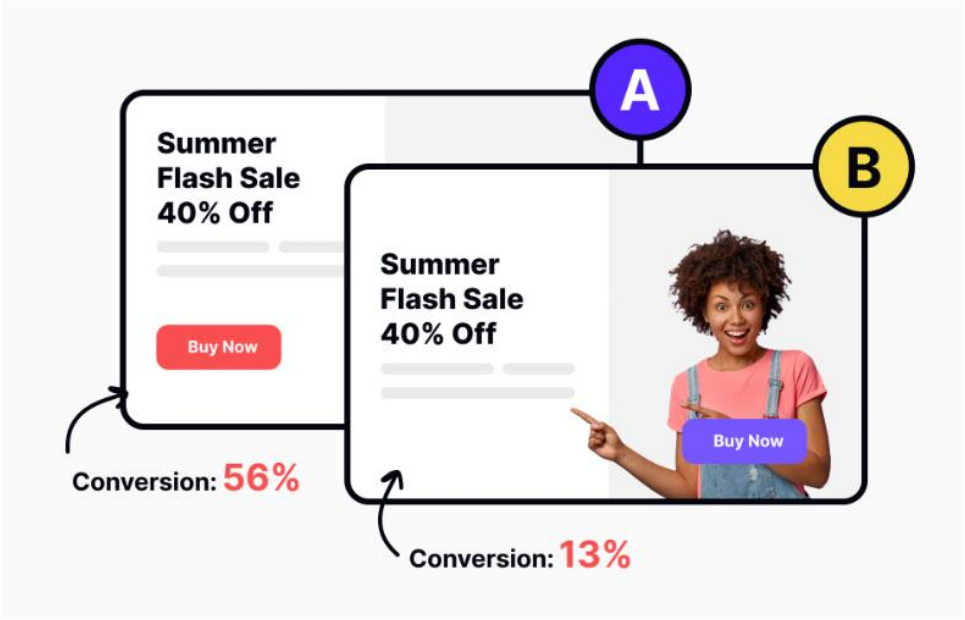
# 6 Stages of UX Design Process

5. **Testing and noting your findings**

   **A/ B Testing**

# 6 Stages of UX Design Process

## 5. Testing and noting your findings

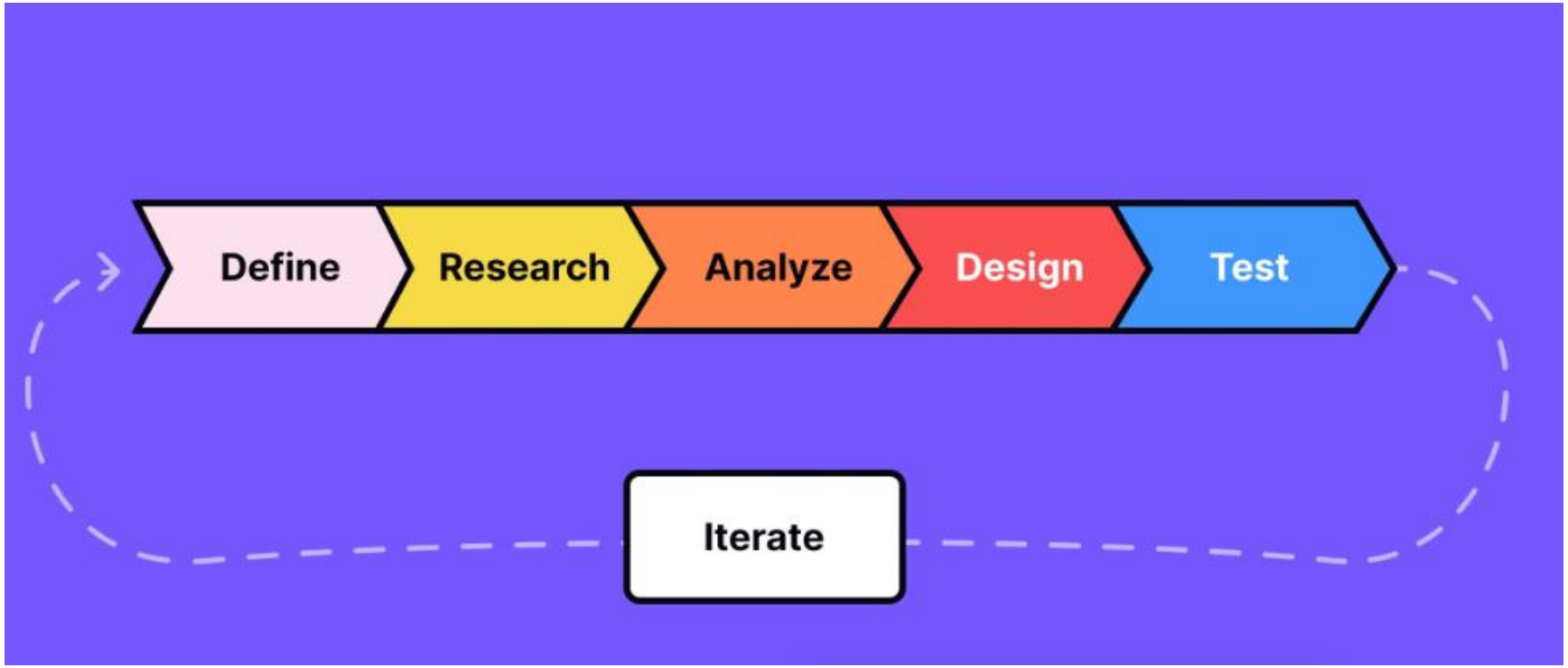


# 6 Stages of UX Design Process

5. **Testing and noting your findings**
   - Use different user testing methods to validate design and understand whether insight-driven developments are actually meeting users' needs

# 6 Stages of UX Design Process

## 6. Iterate and continue for relevant processes



# 6 Stages of UX Design Process

6. **Iterate and continue for relevant processes**
   - UX research and design is a never-ending cycle
   - there's always room for improvement.
- Because:
   - Product and users will likely change over time,
   - As a business grows need to keep offering a high-quality user experience increases
   - Every change made to the product should be made with users in mind—and that's done with UX research.

# User Design Process: Empathy map

- A square divided into four quadrant with the user or client in th middle

# UX Design Process

- Empathy map:
  - A collaborative visualization used to articulate what we know about a particular type of user.
  - Used throughout any UX process to establish common ground among team members and to understand and prioritize user needs
  - **In user-centered design,** empathy maps are best used from the very **beginning of the design process**.
- An efficient tool used by designers to:
  - understand user behavior
  - visually communicate those findings to colleagues
  - unit the team under one shared understanding of the user

**An attempt to limit miscommunication and misunderstanding about target audiences, including customers and users**

# UX Design Process

- Empathy map:
- During user research a lot about your users is learnt by analyzing
  - what they say
  - What they do
  - through more subtle clues like body language and facial expressions.

  An empathy map visualizes all these findings and present the data gathered about users during the research phase in a condensed, easily digestible format

# Empathy Maps


- The four empathy map quadrants look at the user **says**, **thinks**, **feels**, and **does**.

- **Says:**
  - This section contains direct quotes from the user that have been gathered from the research phase or previous data.
- **Thinks:**
  - it is more focused on what a user is thinking and doesn't choose to say out loud.
  - Use qualitative research to ask what matters to the user and what is on their mind.
  - Looking at why they might be hesitant to share their thoughts out loud can reveal even further insight into the user and how they relate to the product or experience at hand

# Empathy Maps


- **Feels:**
  - This section addresses the user's emotional state and answers questions like "What is the user feeling during this product experience?" and "What worries or excites the user?"

An easy way to organize this information is to list the emotions being elicited followed by a short description of what is making the user feel this way. For example; "Overwhelmed—too many decisions to make," or, "Anxious—doesn't want to waste their time.

# Empathy Maps


- **Does:**
  - captures what the user physically does and how they do it
  - what actions does the user take and how do they take them?

# Empathy Maps

- **Merits:**
- Helps us understand our user's needs and goals in a more accurately and organized way.
- Allows to see the complexity of their needs at times (for example, when they say one thing and do another), and find solutions that meet them where they are.
- Be read and understood quite easily, making them a great tool for communicating information about the user to other members of the design team.

# Empathy Maps

- **Merits:**
- It's critical to help others on your team and in your company to cultivate a deeper understanding of the user's behaviors and empathy for their needs.
- Ensures that users' needs will take centerstage in design decision making, since everyone contributing to the product's development can work to serve the same set of personas that reflect the same set of needs and goals.
- Be used to collect data directly from the users.
- Used alongside user interviews, survey answers, etc., you can also have a user fill in an empathy map themselves. This often reveals aspects of the user that may have remained unsaid or not thought of.

# Empathy map

- **Limitations:**
- Empathy mapping may grow with the field; however, it isn't a replacement for journey mapping, scenarios, or user flows—all of which play an equally important role in the design process
- While empathy mapping is a cost-effective and easily transmittable way to create for and cater to the user, it cannot stand alone

# Empathy Maps

- **Across the quadrants in Empathy map:**
  - Some of these quadrants may ***seem ambiguous*** or overlapping- it may be **difficult to distinguish** between *Thinks* and *Feels*
  - if an item may fit into multiple quadrants, just pick one
  - Encounter inconsistencies —seemingly positive actions but negative quotes or emotions coming from the same user
  - 4 quadrants exist only to push our knowledge about users and to ensure we don't leave out any important dimension.

# Empathy Maps

- **One User vs. Multiple-Users**
  - Empathy maps can capture one particular user or can reflect an aggregation of multiple users.
  - One-user (individual) empathy maps are *usually based on a user interview* or a user's log from a diary study

# Empathy Maps

- **Aggregated Empathy Maps**
  - Represent a user segment, rather than one particular user.
  - Usually created by combining multiple individual empathy maps from users who exhibit similar behaviors  who can be grouped into one segment.
  - The aggregated empathy map synthesizes themes seen throughout that user group and can be a first step in the creation of personas.
  - Can be one way to visualize what we know about a persona in an organized, empathetic way

# Empathy Maps

- **Aggregated Empathy Maps**
  - Can also become ways to summarize other qualitative data like surveys and field studies
  - Can be used to communicate a persona, instead of the traditional ‘business card’ approach.
  - As more research is gathered about that persona, can add new insights or remove those that have changed or been invalidated.

# Empathy map creation

- From the given actions/ observations, classify into 4 quadrants of empathy map (Says, Thinks, Feels ad Does)

1. Where should I start?
2. What is the best for me?
3. Fear
4. Unsure to trust
5. Checks the website
6. Why is this so hard?
7. I want something reliable
8. Excited
9. Postpones big decisions More research

# Empathy map creation

- From the given actions/ observations, classify into 4 quadrants of empathy map (Says, Thinks, Feels ad Does)

10. Postpones big decisions More research

11. Lists Pros and Cons
12. Compare products
13. What else am I missing?
14. What size is best?
15. Asks friend
16. What brand do you like?
17. Where should I start?
18. What is the best for me?
19. Fear

# Empathy map creation

- From the given actions/ observations, classify into 4 quadrants of empathy map (Says, Thinks, Feels ad Does)

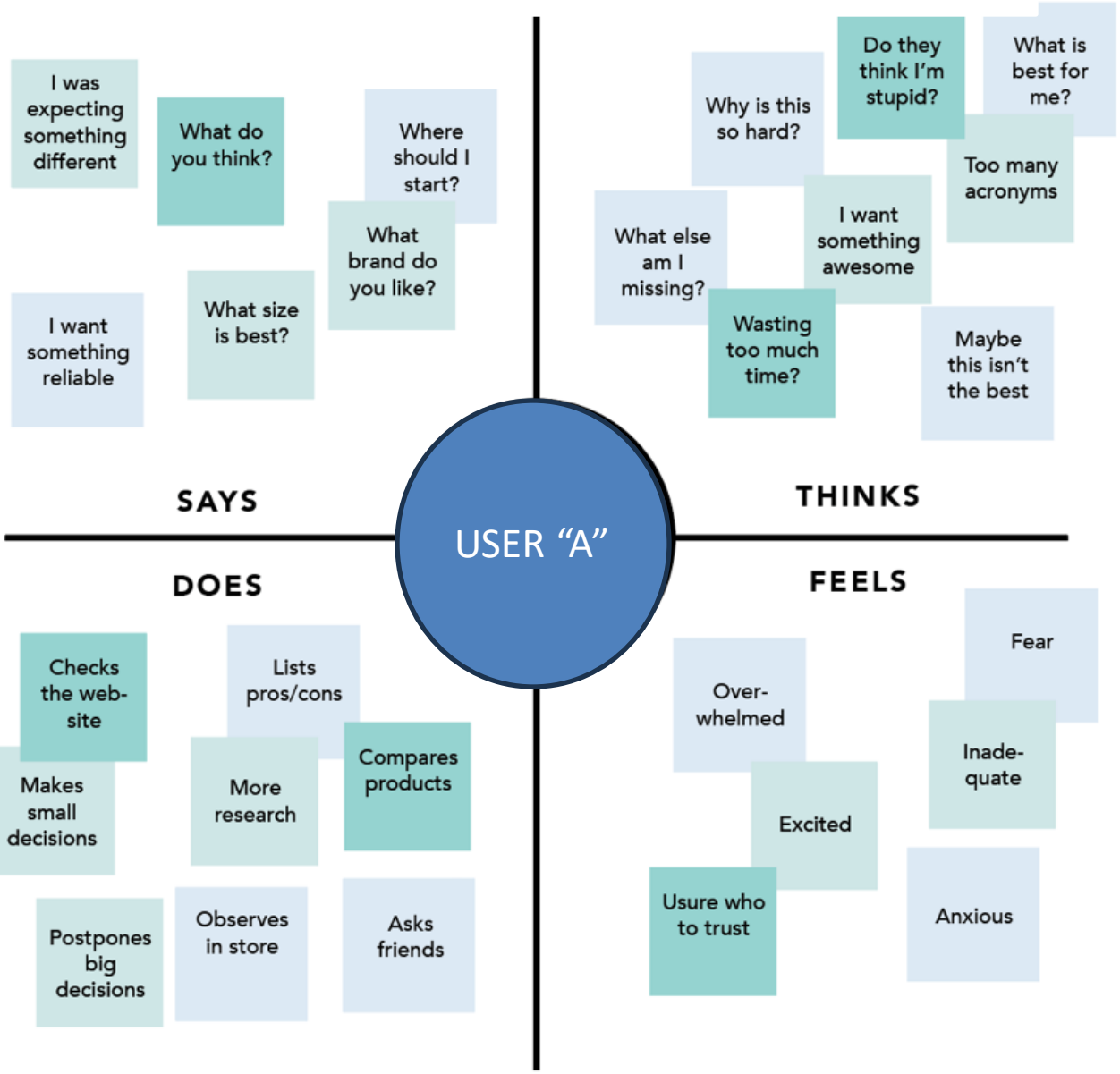
20. Unsure to trust
21. Checks the website
22. Why is this so hard?
23. I want something reliable
24. Excited
25. Postpones big decisions
26. More research
27. Lists Pros and Cons
28. Compare products

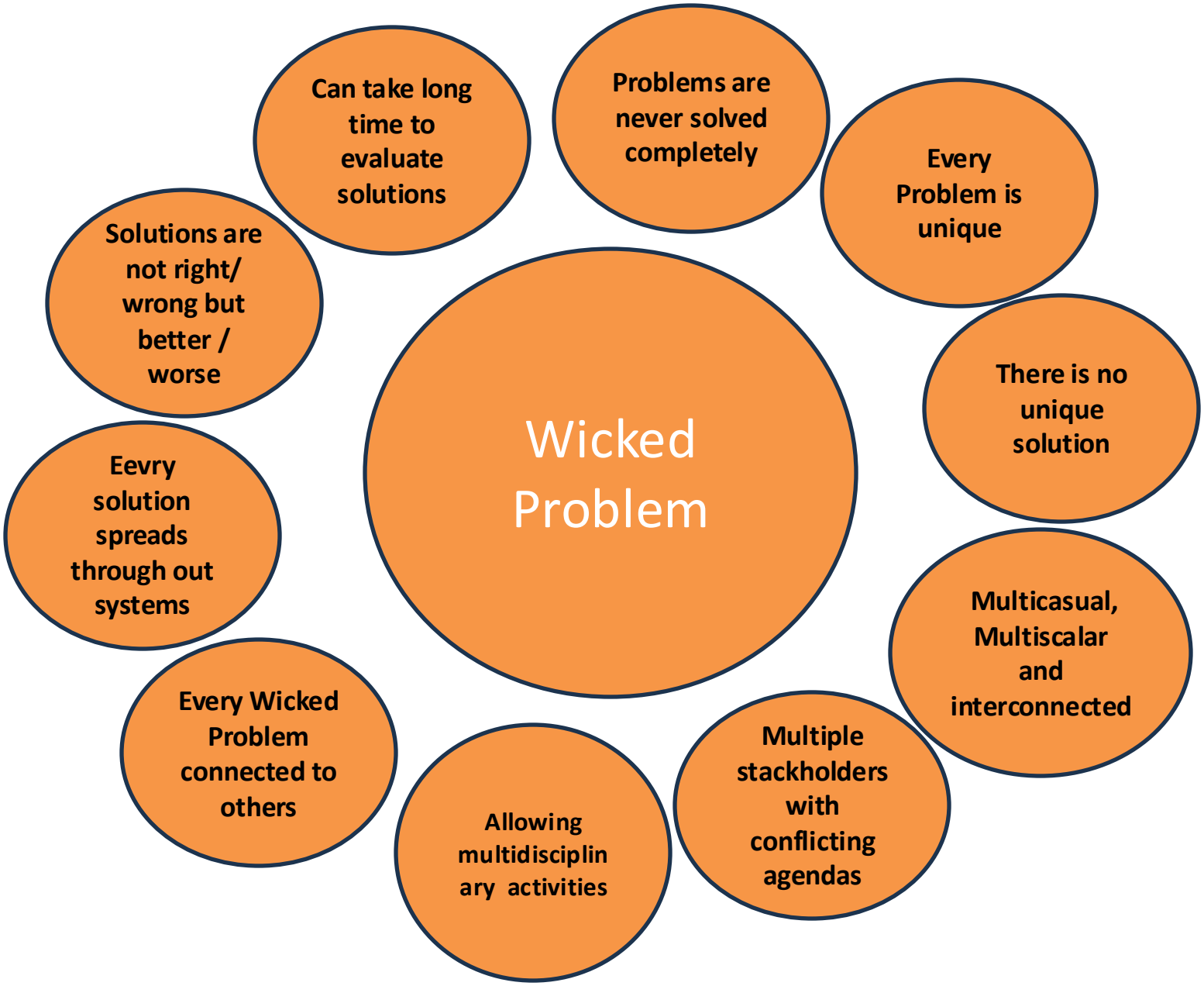
# Empathy map creation

- From the given actions/ observations, classify into 4 quadrants of empathy map (Says, Thinks, Feels ad Does)

29. What brand do you like?
30. May be this isn't the best
31. Anxious
32. Wasting too much time in searching?
33. Over –whelmed looking at the features
34. Do they think I am stupid?
35. What else am I missing?
36. What size is best?
37. Asks friend

# Sample Empathy Map




Wicked Problem
Can take long time to evaluate solutions
Problems are never solved completely
Every Problem is unique
Solutions are not right/ wrong but better / worse
There is no unique solution
Eevry solution spreads through out systems
Multicasual, Multiscalar and interconnected
Every Wicked Problem connected to others
Multiple stackholders with conflicting agendas
Allowing multidisciplin ary activities

# Wicked problems

1. **Problem is never solved Completely**
   - User Interfaces, systems evolve with time as technology, requirements, users' expectations may change over time; hence the user experience
   - With evolution different issues may arise hence requires different solutions

# Wicked problems

2. **Every Problem is unique**
   - **NO** two systems and hence solutions are similar
   - Though UI design may follow a pattern, problems lead by

# Wicked problems

3. **There is no unique solution**
   - Though the steps and pattern to solve a problem are well researched and practice **NO unique** solution exists
   - User Interface design is very creative work and will vary from designer to designer based on the experience, ability, availability of technology, cost, time, interests of various stake holders

# Wicked problems

**4. Multi-scalar, Multi-causal, interconnected**

- Most of the problems are dependent on various factors
- such scope could be local. Regional or global
- more than one factors may affect at a time
- Depends upon number of other factors such as time, circumstances, educational background etc.

# Wicked problems

5. **Multiple stakeholders with conflicting agendas**

- Various stakeholders may expect totally contradicting outcomes and hence satisfying all of them or any of them at all times is not possible

# Wicked problems

**6. Allowing multidisciplinary activities**

- The solution may involve application of various domains such as psychology, technology, accounting and finding out team members having background with such a vast variety of disciplines is difficult

# Wicked problems

7. **Every wicked problem is connected to other**

- The problems are interlinked and if you try to solve one the other may cropup

# Wicked problems

8. **Every solution ramifies (spreads) throughout the systems**

- The suggested solution may have effect on other part of the system
- Selecting appropriate solution is difficult

# Wicked problems

9. **Solutions are not right/ wrong but better/ worse:**

- All the solutions provided will have some merits and limitations in the given constraints and hence no solution will be right or wrong, the degree to which the option can solve the problem may vary and hence the user experience

# Wicked problems

**10. Can take long time to solutions**

- Solving the problem in the first approach may not be possible
- The evolution is the system through number of iterations may provide the expected results and hence the user satisfaction may increase over time if appropriate steps are taken for improving the system

# Wicked problems

1. **Problem is never solved Completely**
2. **Every Problem is unique**
3. **There is no unique solution**
4. **Multi-scalar, Multi-causal, interconnected**
5. **Multiple stakeholders with conflicting agendas**
6. **Allowing multidisciplinary activities**
7. **Every wicked problem is connected to other**
8. **Every solution ramifies (spreads) throughout the systems**
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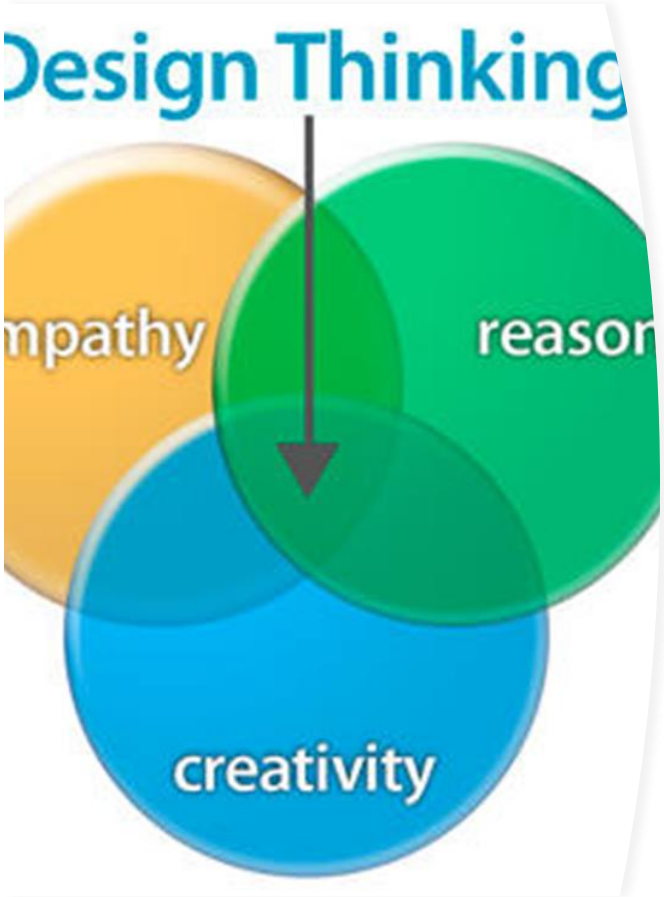
# Design Thinking

# Design Thinking




- "A human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success."

- Non-linear, iterative process that teams use to **understand users**, **identify problems**, and **create solutions**

- Often used to address ill-defined or unknown problems

# Design Thinking

**5 Stages of the design thinking process:**

1. Empathize:
   - Understand the needs of the users by conducting research, observing, and consulting with them.
   - Helps teams put themselves in the users' shoes and understand their experiences, motivations, and problems.
2. Define:
   - Identify the needs and problems.

3. Ideate:
   - Generate ideas via brainstorming or worst possible idea.

# Design Thinking

**Stages of the design thinking process:**

4. Prototype:
   - Transform the idea into a tangible solution by building a product that tests ideas and changes.
   - Can include mock-ups of every feature and interaction in the final product, allowing teams to check if the idea works and verify the user experience.

5. Test:
   - Test the solution.

# Wicked problems

- “A social or cultural problem that is difficult or impossible to solve because of its complex and interconnected nature”
  - because
    - often ill-defined
    - information is confusing
    - involve stakeholders with different perspectives
    - have no "right" or "optimal" solution

**Wicked problems cannot be solved by the application of standard methods as they demand creative solutions**

# Ideation.

# UX Design Process

- Empathy map:

- , emotional mapping using an empathy map, Design Thinking, Wicked problems, Ideation.

# UX Design Process

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# References


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