User Research and Journey

Module 2

116U01E734

User Experience Design

July-Dec 2024

User Research and Journey

2.1 Types of users, problem formulation for users (stakeholders), need finding, planning and execution for a user centered design.

2.2 5S model, User research, user research goals, heuristic analysis, user personas, identifying and recruiting users for the research.

2.3 User research methodologies - Qualitative and Quantitative analysis, user interviews, focused group discussion, expert reviews, tools for user research.

2.1 Problem formulation for users

- A problem statement or a user need statement, briefly sums up the problem or pain point users need to be solved with proposed design.
- By creating a problem statement; designers' team, including stakeholders and clients; agrees about who the design is for, the plan to resolve the problems currently faced by them in completing the tasks in hand.

A problem statement sums up the user pain-point or problem the designers seek to solve with the proposed design

Problem formulation of users

- A problem statement is an actionable summary of the user, their goals, and what is needed to solve to meet those goals
- It should focus on actual difficulties faced by the users rather than indicating or suggesting a solution

Designers need to evaluate alternatives to solve the problems effectively.

Types of User

- A user is a person or entity that engages with a product, service, or system in some way, such as by using it, interacting with it, or consuming it.

- The user types:
  - New users
  - Experience Users
  - Experts
  - Age group, Gender, Physical Characteristics
  - People with special needs

Need findings, planning & execution for user

- Need finding:
  - Every end user may have different expectations from the system
  - Satisfying all types of users is impossible
  - Satisfying any one type of user at each instant is also difficult

  - Various methods to identify users' needs

Need findings, planning & execution for user

- Various methods to identify users' needs
  - Customer surveys. ...
  - Talk to your staff or colleagues. ...
  - Focus groups are a great way to discover customer needs. ...
  - Talk to as many people as possible. ...
  - Interviews to identify customer needs in marketing. ...
  - Customer visits. ...
  - Data—an exceptional tool on how to research customer needs. ...
  - Keyword research

Need findings, planning & execution for user

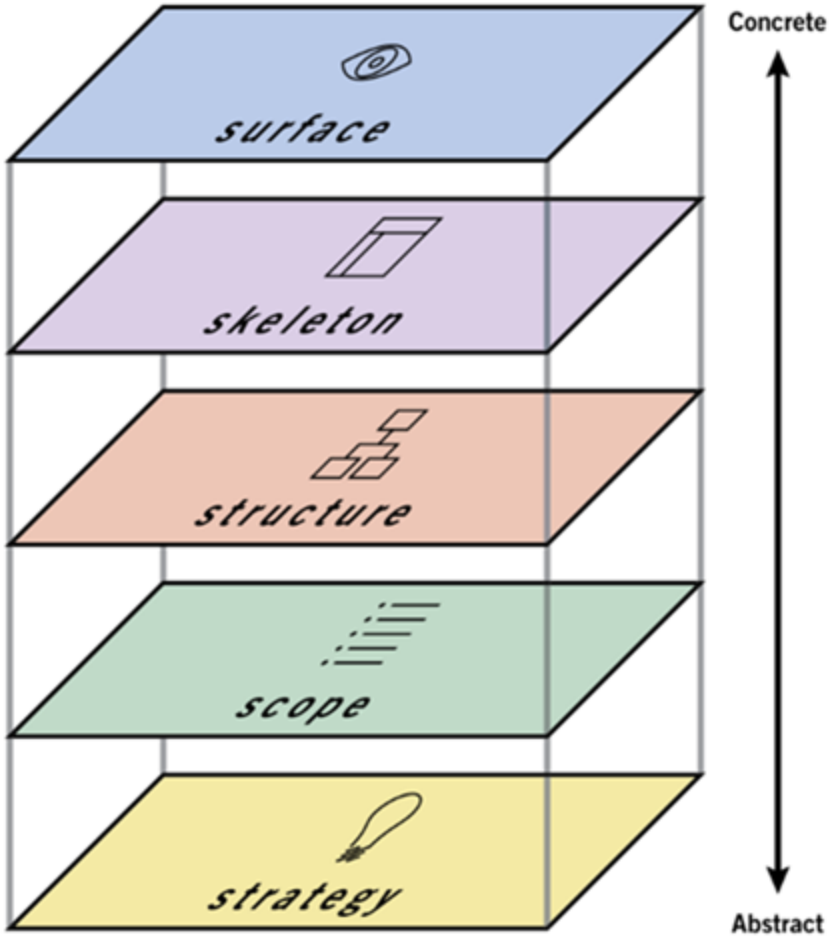
- Planning:
  - Once the users needs are identified, the design steps are to be planned and executed
  - Identifying the feedback mechanism of the users experience

Need findings, planning & execution for user

- Execution for a user centered design

2.2 5 S model: Five Planes

- The Surface Plane
- The Skeleton Plane
- The Structure Plane
- The Scope Plane
- The Strategy Plane



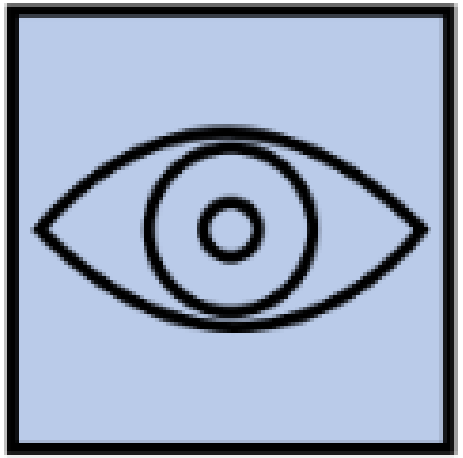
Five Planes

The Surface Plane

The Interface:

Actually what a user will see

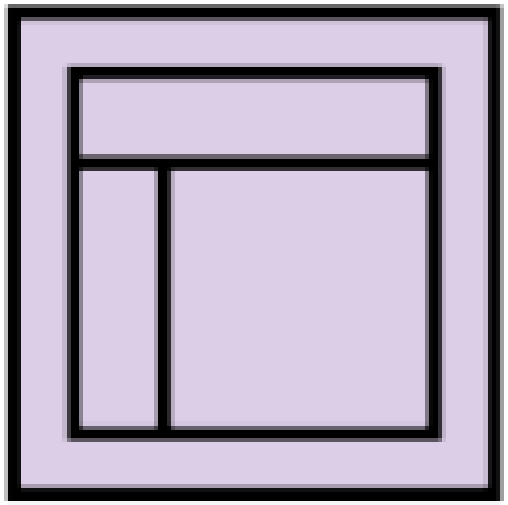
- some images to click on
- some sort of function performed
- some images as illustrations , photos of the product, logos



Five Planes

The Skeleton Plane

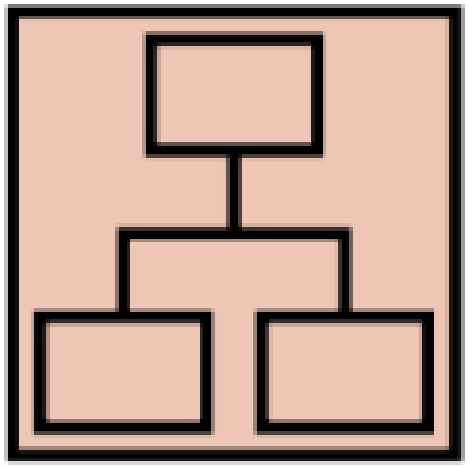
- The skeleton of the site/ application: the placement of buttons, controls, photos, and blocks of text.
- Designed to optimize the arrangement of these elements for maximum effect and efficiency so that user will not need to search for things
- A concrete expression of the more abstract presentation of the system
- Defines placement of the elements/ controls



Five Planes

The Structure Plane

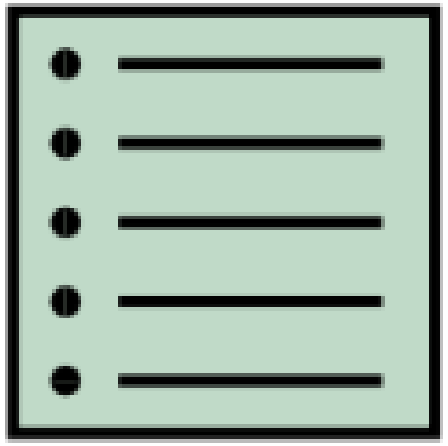
- Defines how users has reached to a functionality / control and where could go when the task is finished.
- States what functionalities are provided by the system
- Presents the information in hierarchical manner the way in which the various features and functions of the site fit together.



Five Planes

The Scope Plane

- The features and functions stated in structure are constitutes the scope of the site
- Whether that feature or any feature is included on a site is a question of scope.
- The scope is fundamentally determined by the strategy



Five Planes

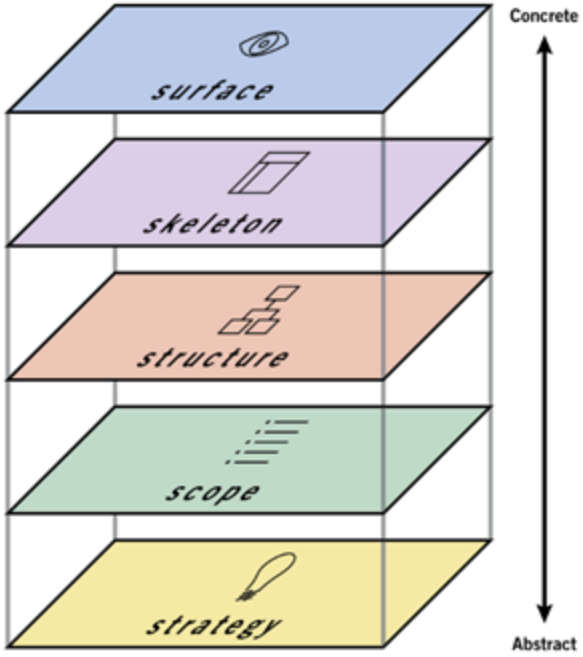
The Strategy Plane

- This strategy incorporates
  - What the people using the system want to get out of it
  - What the users want to get out of the system

Five Planes

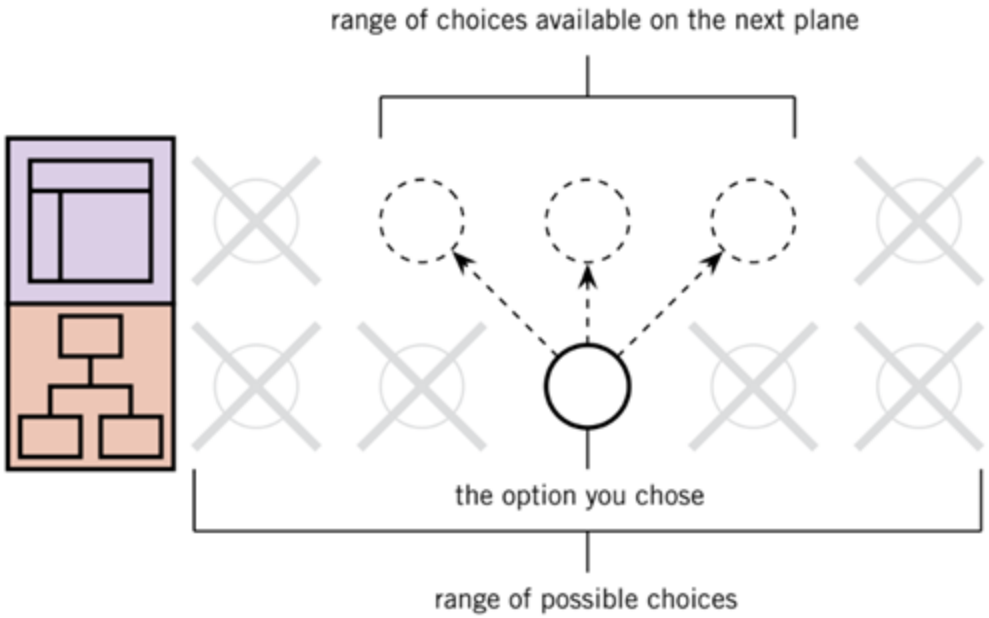
The Development Strategy Bottom-UP

- Decide the strategy: business goals
- Identify the features and functionalities to be provided along with interaction styles
- Prepare a plan/ hierarchy of providing these feature for improved user experience
- Formulate template or presentation style
- Select appropriate picture, icon, colours etc. for aesthetically pleasing, easy to use system

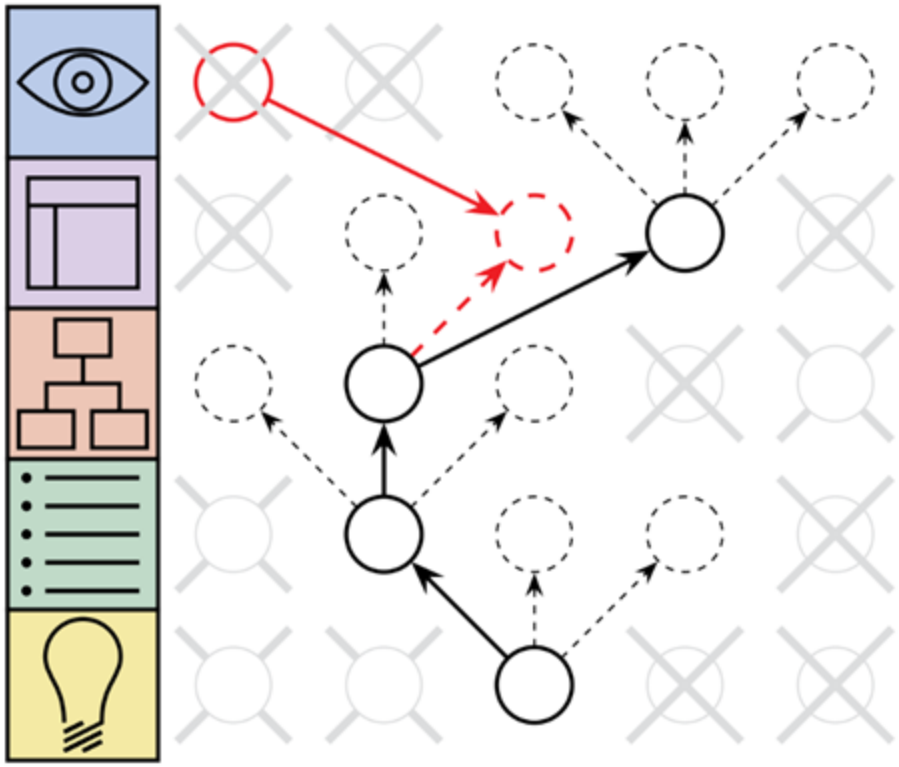


Five Planes

- Choice on each plane will affect the choice on the plane **ABOVE** it

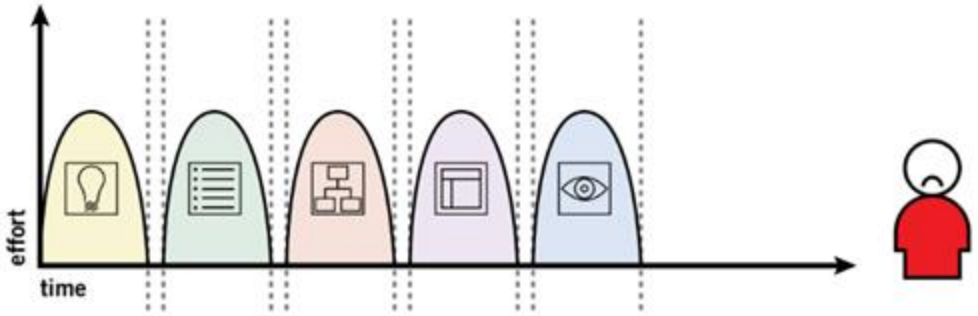


Five Planes



Ripple effect means choosing “out of bounds” on an upper plane will require rethinking decisions on lower planes

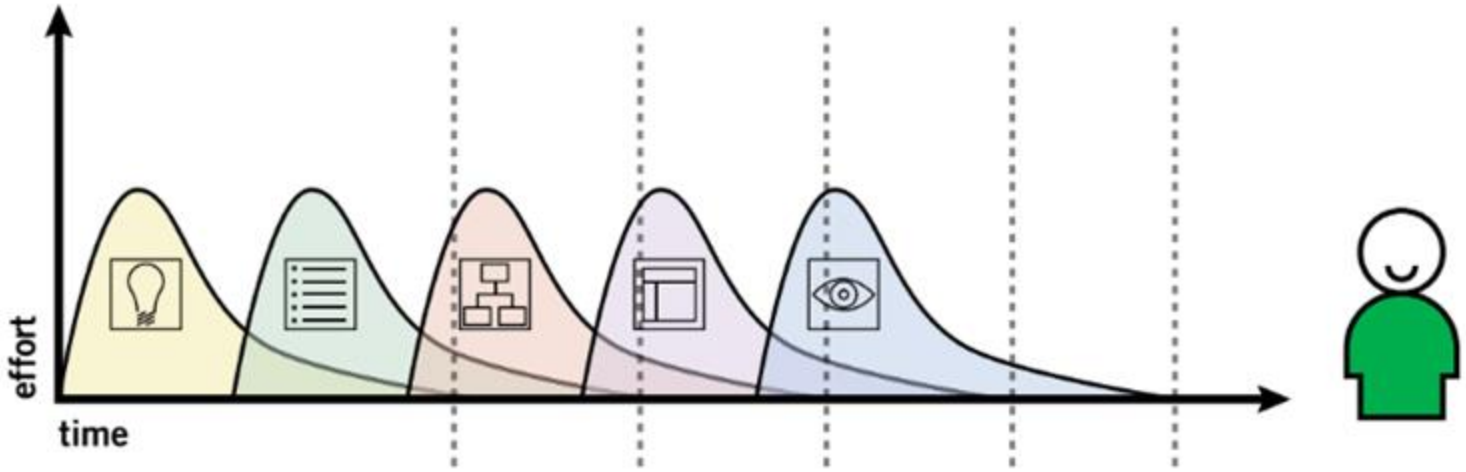
Five Planes



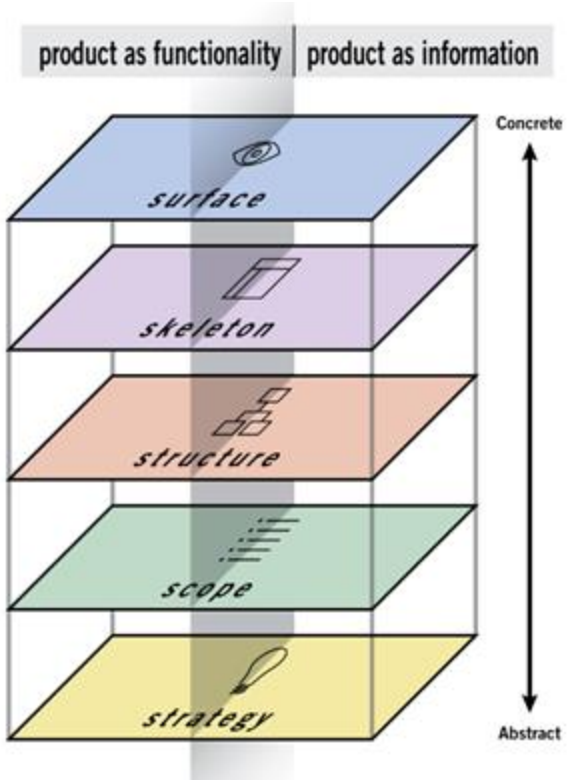
Planning work on each plan to finish before work on the next can start leads to unsatisfactory results

Five Planes

Better approach to have overlapping stages in which coarse adjustments are possible to improve user satisfaction



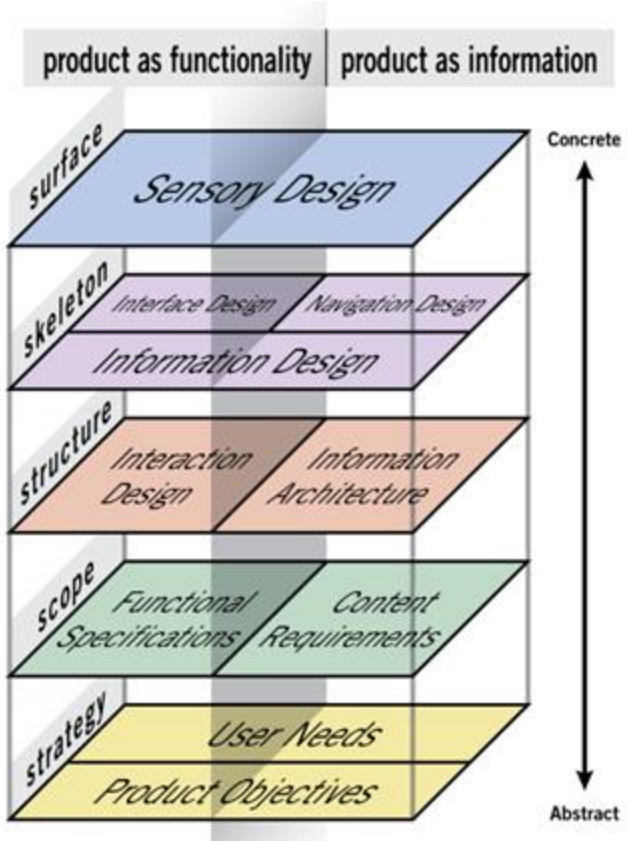
Five Planes



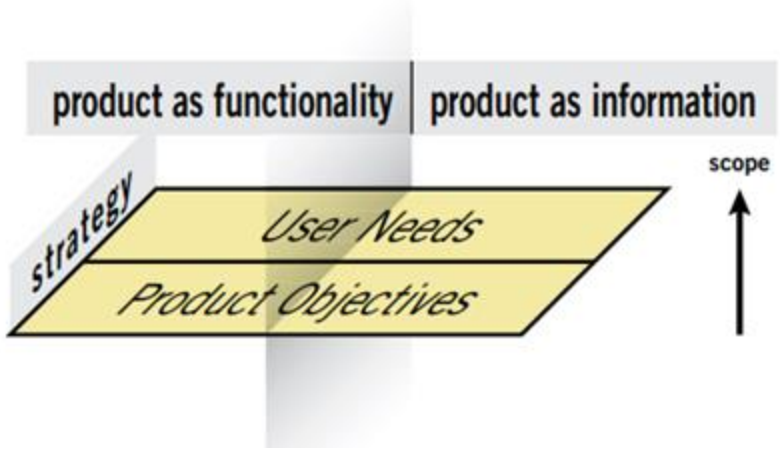
Interaction design
Information design & Information architecture.

Product could be function oriented or information oriented

Elements of User Experience



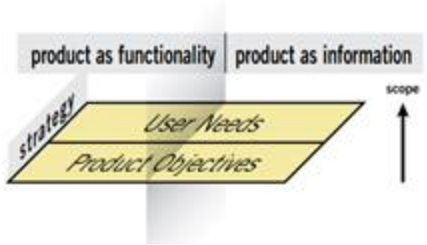
Strategy Plane



Identify:

- What do we want to get out of this product?
  - the product objectives coming from inside the organization
- What do our users want to get out of it?
  - objectives imposed on the product from outside

Strategy Plane



Product Objectives:

- Business Goals:
    - objectives imposed on the product from outside

User Research

- A systematic study of target users and their requirements.
- Helps designers understand:
  - the problem they're trying to solve
  - who the users are
  - what they need from the design
  - users' needs
  - Attitudes
  - pain points,
  - behaviors (processes like task analyses look at how users actually navigate the product experience—not just how they should or how they say they do).

User Research

- UX researchers use various methods to uncover problems and design opportunities, which can be fed back into the design process
- Helps to identify
  - problems and challenges
  - validate or invalidate designers' assumptions
  - find patterns and commonalities across target user groups
  - Thoroughly study users' needs, goals, and mental models.

User Research

- From the data gathered during user research phase
  - Who your users are
  - What their needs are
  - What they want
  - How they currently do things
  - How they'd like to do them

  could be understood within the context of your product or service

User Research

- UX research ensures that the system to be designed is with the user in mind for creating a successful product.
- Design better products
- Create products and services that people want to use
- Design a system based on real insights and facts—not guesswork

User Research Goal

- The purpose is to:
  - Put design project into context
  - Help in understanding the problem trying to be solved
  - Identify
    - who the users are
    - in what context they'll be using the product or service
    - what they need from the designer

Heuristic Analysis

- The heuristic analysis is a method of discovery, learning, and problem-solving
- In UX heuristic analysis is a usability method for finding usability problems in a user interface design
- Involves a set of evaluators who are to examine the interface and to critique its usability based on the recognized usability principles

Heuristic Analysis

- Heuristic evaluation is performed by having an individual evaluator inspect the product
- The product evaluators are only allowed to interact with each other after everyone completed the individual evaluations and have their findings aggregated

Heuristic Analysis

- Purpose is to:
  - Improve the usability of a product
  - Create efficiency i.e. the speed at which the product can be used as a direct response to better usability
  - Verify the quality of components like
    - Learnability
    - Discoverability
    - Memorability
    - Flexibility
    - User satisfaction
    - Error prevention

Heuristic Analysis

User Personas

- User Persona is a partly fictional character that is created by a company to represent the different kinds of customers or target audience that will use their product or services.
- A persona is a archetypal character that is meant to represent a group of users in ***a role who share common goals, attitudes and behaviors*** when interacting with a particular product/service.
- The creation of a representative user based on available data and user interviews.
- Though the personal details of the persona may be fictional, the information used to create the user type is not but based on gender, age, group

Persona

- Capture user characteristics
- Not real people, but synthesised from real user characteristics
- Should not be idealised
- Bring them to life with a name, characteristics, goals, personal background
- Develop multiple personas
- A precise descriptive model of the user
- How they think? What he wishes to accomplish? And why?
  - Personas based on behavioral data gathered from actual users through ethnographic interviews
- When to create?
  - Formalized during modelling phase

Reasons to create persona

- Scenario: without persona designing a car for different people for different goals

Ramesh's Goals
- Go fast
- Have fun

Sita's Goals
(Housewife)
- Be safe
- Be comfortable

Ram's Goals
- Haul big loads
- Be reliable

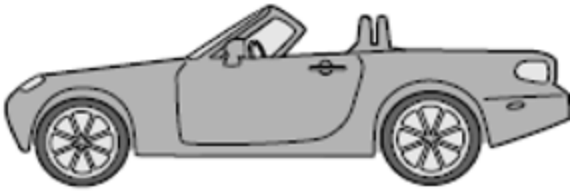
Reasons to create personas
continued…

- Scenario: Everyone goals to be satisfied

- Problem : If you try to design an automobile that pleases every possible driver, you end up with a car with every possible feature, but that pleases nobody.

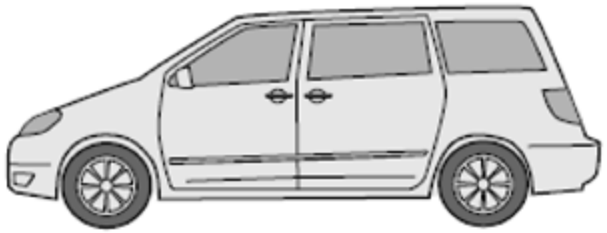
Ramesh's Goals

- Go fast
- Have fun



Sita's Goals (Housewife)

- Be safe
- Be comfortable



Ram's Goals

- Haul big loads
- Be reliable

Strength of Personas

- Personas as a design tool for
  - Understanding user needs
  - Differentiating between types of users
  - Prioritizing users
- Determine
  - what a product should do and how it should behave
  - Goals and tasks provide the basis for the design effort
- Communicate with stakeholders, developers and designers

2.3 User Research Methodologies

- User research methodologies - Qualitative and Quantitative analysis, user interviews, focused group discussion, expert reviews, tools for user research.

User Research Methodologies

Understand a clear picture of what users think and why they do what they do so that the system will be effective, efficient and enjoyable for the intended users

Two approaches

- **Quantitative**:
- focused on numbers and mathematical calculations)
- **Qualitative**
- Concerned with descriptions and insights approaches.

User Research Methodology

- Quantitative data from analytics platforms should ideally be balanced with qualitative insights gathered from other UX testing methods, such as focus groups or usability testing.
- Qualitative user research
  - A direct assessment of behavior based on observation
  - Understanding people's beliefs and practices on their terms
  - Methods including contextual observation, ethnographic studies, interviews, field studies, and moderated usability tests.
  - Outcomes are easy to understand
  - Cost effective approach to find and fix problems during the design phase before building the actual system

- The analytical data will show patterns that may be useful for deciding what assumptions to test further.
- Emotions are not quantifiable hence qualitative analysis is appropriate

User Research Methodology

- Types of user research to be used will depend on the
  - Type of site, system or app being developed
  - Timeline
  - Environment

User Research Methodologies

Commonly user research methods

User interviews: Researchers talk with participants to collect data

Surveys: Participants answer a series of questions.

Focus groups: Participants discuss specific topics.

A/B testing: Comparing two versions of a design.

User Research Methodology

Use Interviews:

- One-on-one discussions with users
- Show how a particular user works
- Enable to get detailed information about a user's attitudes, desires, and experiences.
- Enables the observation of users in their natural environment, giving a better understanding of the way users work.

User Research Methodology

- **Surveys:**
  - A series of questions asked to multiple users of the system that help to learn about the people who use the system

User Research Methodology

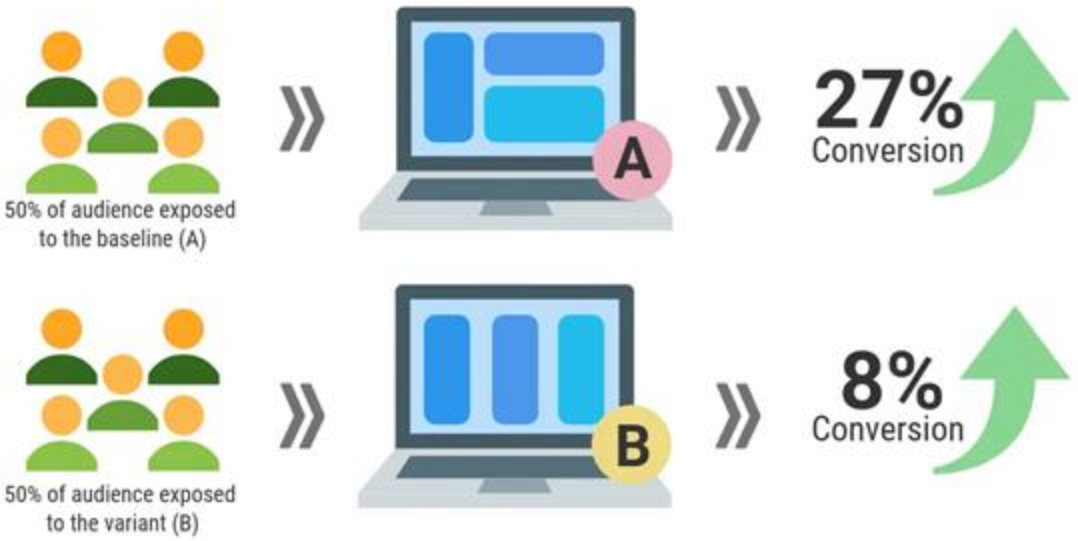
User Research Methodology

Focus Groups:

- Moderated discussion with a group of users, allowing insight into user attitudes, ideas, and desires.

User Research Methodology

- A/B testing:
  - Two different designs are presented to the user and a comparison is done about user responses



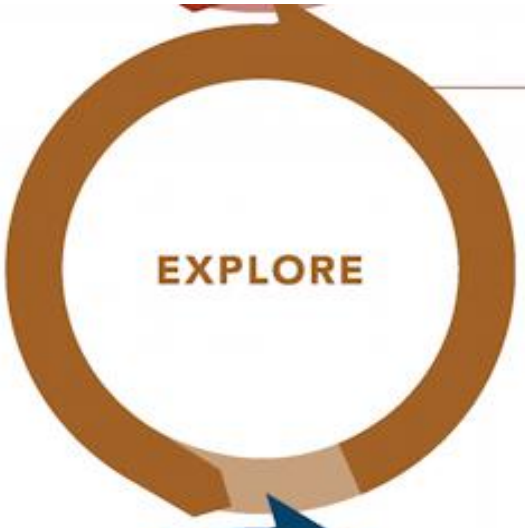
User Research Methodology

UX ACTIVITIES IN THE PRODUCT & SERVICE DESIGN CYCLE

METHODS	ACTIVITIES
Field studies/user interviews	Find allies
Diary studies	Talk with experts
Stakeholder interviews	Follow ethical guidelines
Requirements & constraints	Involve stakeholders
Sales & support interviews	Hunt for data sources
Support call monitoring	Determine UX metrics
Competitive testing	

User Research Methodology

UX ACTIVITIES IN THE PRODUCT & SERVICE DESIGN CYCLE



METHODS	ACTIVITIES
Competitive analysis	Follow Tog's principles of IXD
Design review	Use evidence-based guidelines
Persona building	Design for universal access
Task analysis	Give users control
Journey mapping	Prevent errors
Human-centered design	Improve error messages
Design diversity exploration	Provide helpful defaults
Pluralistic walkthrough	Check for inconsistencies
Prototype feedback & testing	Map features to needs
Write user stories	Make software updating easy
Card sorting	Plan for repair and recycling
	Avoid waste
	Consider diverse contexts
	Look for perverse incentives
	Consider social implications

User Research Methodology

UX ACTIVITIES IN THE PRODUCT & SERVICE DESIGN CYCLE

METHODS	ACTIVITIES
Qualitative usability testing	Protect personal information
Training research	Keep data safe
User group outreach	Deliver both good and bad news
Social media monitoring	Track usability over time
Forum post analysis	Include diverse users
Benchmark testing	Track usability bugs
Accessibility evaluation	Make training information
Test instructions & help	

User Research Methodology

UX ACTIVITIES IN THE PRODUCT & SERVICE DESIGN CYCLE

METHODS	ACTIVITIES
Surveys	Pay attention to user sentiment
Analytics review	Reduce the need for training
Search-log analysis	Communicate future directions
Usability bug review	Recruit people for future research
Feedback review	
FAQ review	
Conference outreach	
Q&A at talks and demos	

Reference

- https://careerfoundry.com/en/blog/ux-design/problem-statement-ux/ accessed on July 4, 2024
- Jesse James Garrett, The Elements of User Experience: User-Centred Design for the Web and Beyond, 2nd edition
- https://www.toptal.com/designers/user-research/guide-to-ux-research-methods accessed on July 4, 2024
- https://careerfoundry.com/en/blog/ux-design/the-importance-of-user-research-and-how-to-do-it/#what-is-user-research accessed on July 4, 2024
- https://userpeek.com/blog/heuristic-analysis-in-improving-the-user-experience/ accessed on July 4, 2024
- https://chisellabs.com/glossary/what-is-user accessed on July 5, 2024