v1.0

UX Research

Kampus Merdeka – MSIB SEAL

Disusun oleh Prayudi Utomo

Table of Contents

1. Design Thinking
2. Design Sprint
3. UX Research

Design Thinking

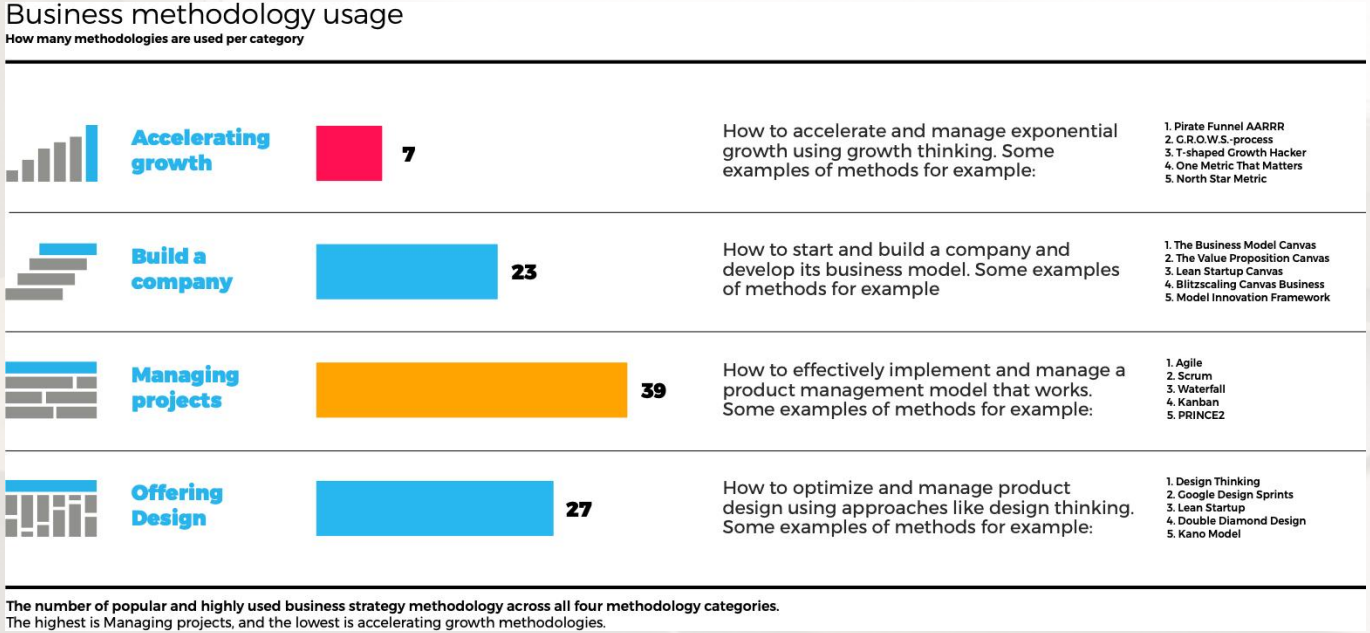
Design Thinking is a philosophy to internalize and a mindset to adopt. It is about structuring our thought process to understand and define the problem, conceptualize, actualize and test solutions.

Design Thinking Evolution

d. Institute of Design at Stanford	Empathize	Define	Ideate	Prototype	Test
IDEO	Discovery	Interpretation	Ideation	Experimentation	Evolution
Google ventures 2013	Understand	Diverge	Decide	Prototype	Validate
Google ventures 2015	Unpack	Sketch	Decide	Prototype	Test
InnoLoft	Define	Understand	Ideate	Build	Test
thoughtbot	Understand	Diverge	Converge	Build	Test

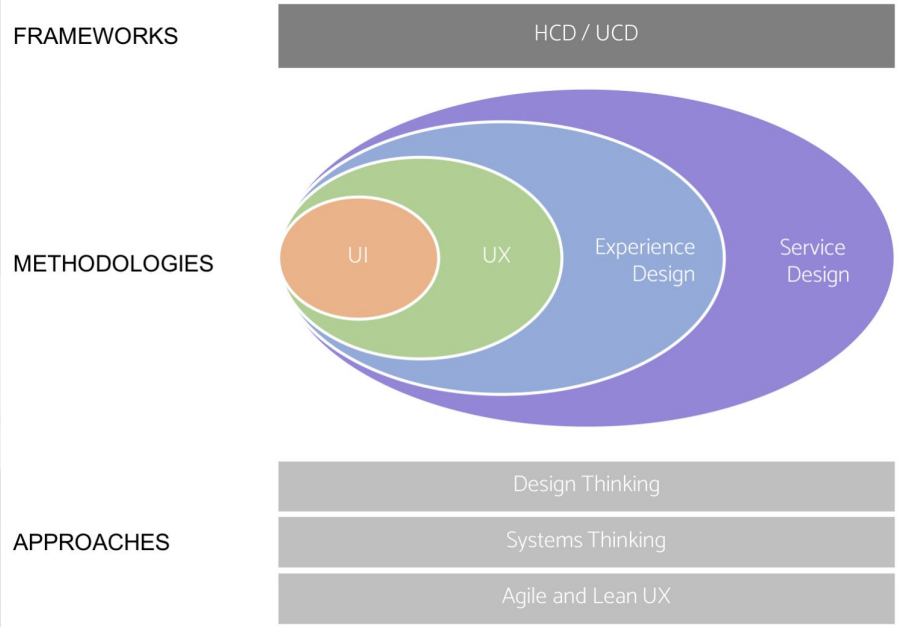
Sumber: https://medium.com/good-design/how-to-conduct-a-design-sprint-825b798a631b

Frameworks, Methodologies, & Approaches



Sumber: https://mygrowththinking.com/growth-thinking-vs-google-design-sprint/

Frameworks, Methodologies, & Approaches



"Design thinking is 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."

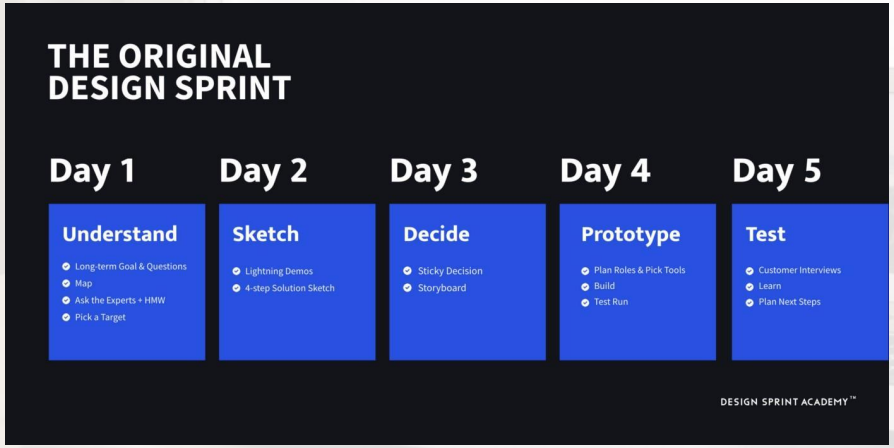
~Tim Brown, CEO of Ideo

Sumber: https://www.linkedin.com/pulse/human-centred-design-vs-thinking-service-ux-what-do-all-simonds/

Design Sprint

Design Sprint is a methodological process, based on design thinking, which tackles and solves the problems in the most efficient way within a specific time range.

Design Sprint Evolution



Sumber: https://medium.com/design-sprint-academy/design-sprint-3-0-1fb49b9889e2

When YES to Sprint?

1. At the start of new project to define product.
2. When product or team needs to get unstuck.
3. When time is critical to inject speed into development or decision-making process
4. After uncovering new insights to leverage new findings, data or research.

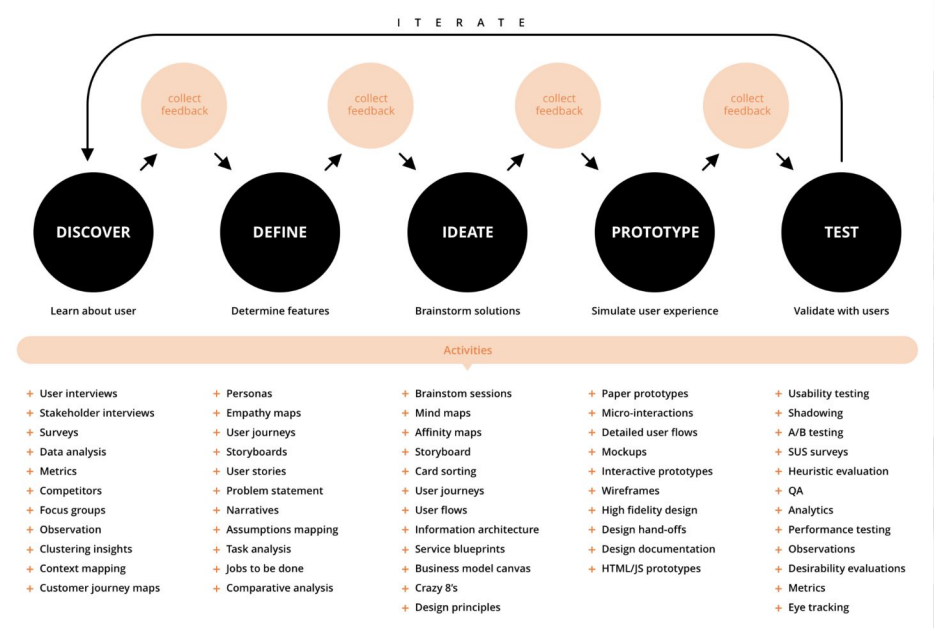
Sumber: https://designsprintkit.withgoogle.com/

When NO to Sprint?

1. You don’t have leadership support.
2. You don’t have User Research.
3. You don’t have Market Research.
4. You have clear product direction (just need dedicated design time).

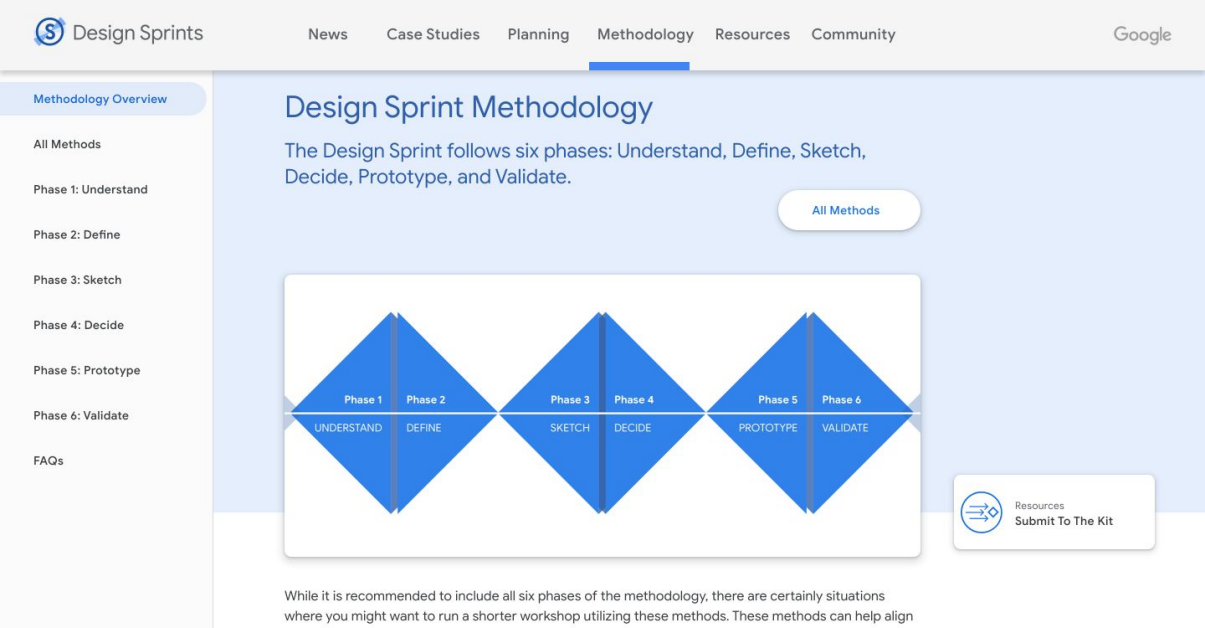
Sumber: https://designsprintkit.withgoogle.com/

Design Thinking and Methods



Sumber: https://researchloop.net/2021/02/06/the-curse-of-the-ux-design-process/

Design Sprint Kit



Sumber: https://designsprintkit.withgoogle.com/

Design Sprint - 1 Understand

Design Sprints

News | Case Studies | Planning | Methodology | Resources | Community | Google

- Methodology Overview
- Phase 1: Understand
- Phase 2: Define
- Phase 3: Sketch
- Phase 4: Decide
- Phase 5: Prototype
- Phase 6: Validate
- FAQs

Sprint Framework > **Phase 1: Understand**

Phase 1: Understand

In the Understand phase, you will create a shared knowledge base across all participants. Using the Lightning Talk method, knowledge experts across the business are invited to articulate the problem space from business, user, competitor, and technological angles.

All Understand Methods

Phase 1: Understand
HMW Sharing and Affinity Mapping
Core Method
Collected by Google

Phase 1: Understand
How Might We
Core Method
Collected by Google

Phase 1: Understand

Design Sprint - 2 Define

Design Sprints

News | Case Studies | Planning | Methodology | Resources | Community | Google

- Methodology Overview
- Phase 1: Understand
- Phase 2: Define
- Phase 3: Sketch
- Phase 4: Decide
- Phase 5: Prototype
- Phase 6: Validate
- FAQs

Sprint Framework > **Phase 2: Define**

Phase 2: Define

In the Define phase, the team evaluates everything they learned in the Understand phase to establish focus. This is done by defining specific context and desired outcomes of potential solutions. The phase concludes by choosing a specific focus for your Sprint, as well as goals, success metrics, and signals.

All Define Methods

Phase 2: Define

Success Metrics & Signals

Core Method

Collected by Google

Phase 2: Define

Design Principles

Core Method

Collected by Google

Phase 2: Define

Design Sprint - 3 Sketch

Design Sprints

News | Case Studies | Planning | Methodology | Resources | Community | Google

- Methodology Overview
- Phase 1: Understand
- Phase 2: Define
- Phase 3: Sketch
- Phase 4: Decide
- Phase 5: Prototype
- Phase 6: Validate
- FAQs

Sprint Framework > **Phase 3: Sketch**

Phase 3: Sketch

In the Sketch phase, the Design Sprint team generates and shares a broad range of ideas as individuals. You will start by looking for inspiration, such as solutions in alternative spaces. Then, each Design Sprint participant will individually generate ideas for consideration. From there, the team will narrow down ideas as group to a single, well-articulated Solution Sketch per person.

All Sketch Methods

Phase 3: Sketch

The Warm Up: Comparable Problem

Core Method

Collected by Google

Phase 3: Sketch

Boot Up Note Taking

Core Method

Collected by Google

Design Sprint - 4 Decide

Design Sprints

News | Case Studies | Planning | Methodology | Resources | Community | Google

- Methodology Overview
- Phase 1: Understand
- Phase 2: Define
- Phase 3: Sketch
- Phase 4: Decide
- Phase 5: Prototype
- Phase 6: Validate
- FAQs

Sprint Framework > **Phase 4: Decide**

Phase 4: Decide

In the Decide phase, the Design Sprint team finalizes the direction or concept to be prototyped. Each participant will share their Solution Sketch, and the team will find consensus on a single idea through decision-making exercises. The final direction will aim to address the Design Sprint focus.

All Decide Methods

Phase 4: Decide

Present Solution Sketches

Core Method

Collected by Google

Phase 4: Decide

Assumptions and Sprint Questions

Core Method

Collected by Google

Phase 4: Decide

Design Sprint - 5 Prototype

Design Sprints

News | Case Studies | Planning | Methodology | Resources | Community | Google

Methodology Overview

Phase 1: Understand

Phase 2: Define

Phase 3: Sketch

Phase 4: Decide

Phase 5: Prototype

Phase 6: Validate

FAQs

Phase 5: Prototype

In the Prototype phase, the Design Sprint team will work together to create a prototype of your concept. This is when many decisions are made around what exactly the concept is and includes. You will aim to create a prototype that is just real enough to validate, and you will do it really fast!

In the context of Design Sprint, we use the word “prototype” in a slightly different way than in standard product development. A Design Sprint prototype is a facade of the experience you have envisioned in the Sketch phase. You are building just what you need to make the prototype real enough to get an authentic response from a potential user in the Validate phase. This means mapping out the exact flow for the experience and only building the steps you want to test. There is no need to build a full functional back-end or to solve for every flow in your product.

You can think of your prototype as an experiment in order to test out a hypothesis. This means you have to think critically about what you will build in order to get the feedback you need to validate or invalidate your hypothesis. Anything can be prototyped in a day if it is clearly mapped out.

All Prototype Methods

Phase 5: Prototype

Storyboard

Core Method

Collected by Google

Design Sprint - 6 Validate

Design Sprints

News | Case Studies | Planning | Methodology | Resources | Community | Google

- Methodology Overview
- Phase 1: Understand
- Phase 2: Define
- Phase 3: Sketch
- Phase 4: Decide
- Phase 5: Prototype
- Phase 6: Validate
- FAQs

Sprint Framework > **Phase 6: Validate**

Phase 6: Validate

In the Validate phase, the Design Sprint team will put your concept in front of users - this is your moment of truth! You will gather feedback from users who interact with your prototype, and if relevant, you will conduct stakeholder and technical feasibility reviews. You'll end your Sprint with a validated concept– or an invalidated concept to improve on. Either way, you've made progress.

All Validate Methods

Phase 6: Validate

Usability Study

Core Method

Collected by Google

Phase 6: Validate

Cognitive Walkthroughs

Core Method

Collected by Google

UX Research

UX Research is the systematic study of target users and their requirements, to add realistic contexts and insights to design processes.

Table of Contents

1. Keyroles
2. Metrics
3. Methods
4. User Research
5. Market Research
6. Information Architecture
7. User Persona
8. User Journey

UX Keyroles

	Product Mgmt	Product Owner	Program Manager	Project Manager	Product Marketing	Business Analyst	(UX) User Experience
Focus	Market fit & features ("what & why")	Features	Program Efficiency	Project Delivery	Messaging & Launch ("how")	Business Rules	Intuitive User Interface ("how")
Key Activity	Market research, Prioritization, Requirements	Requirements Definition	Cross-Team Coordination	Coordination & Reporting	Outbound communication	Collect internal requirements	Workflows design, User research
Planning	Product roadmap	Product Backlog	Initiative Roadmap	Gantt Chart	Go-To-Market Plan (launch plan)	-	Style guide & user personas

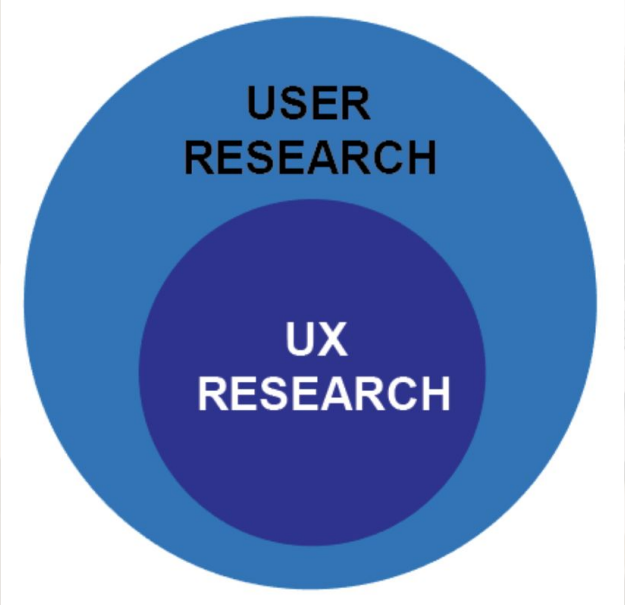
productfolio.com

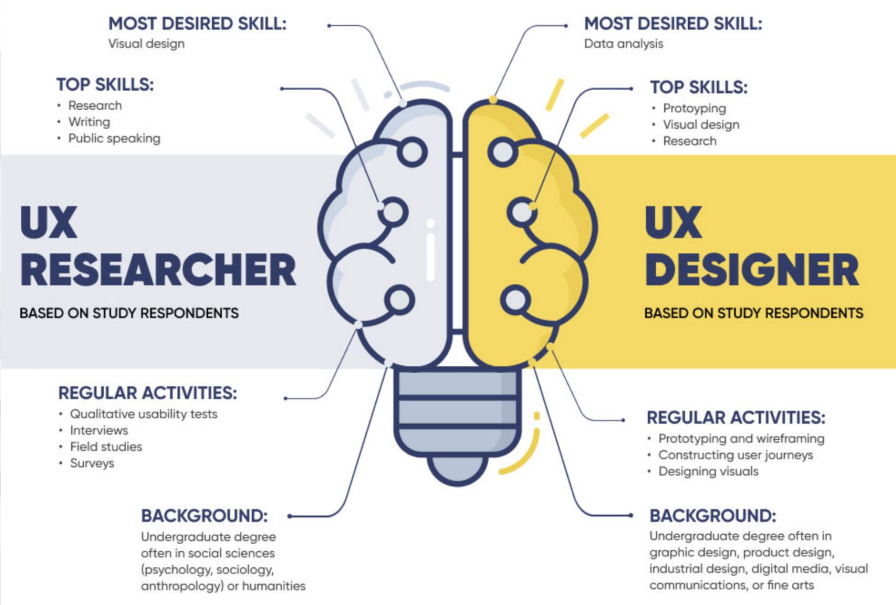
Deliverables:

1. User Research
2. Market Research
3. User Persona
4. User Journey Map
5. User Flow
6. Information Architecture

Sumber: https://www.nngroup.com/articles/which-ux-research-methods/

User Research and UX Research



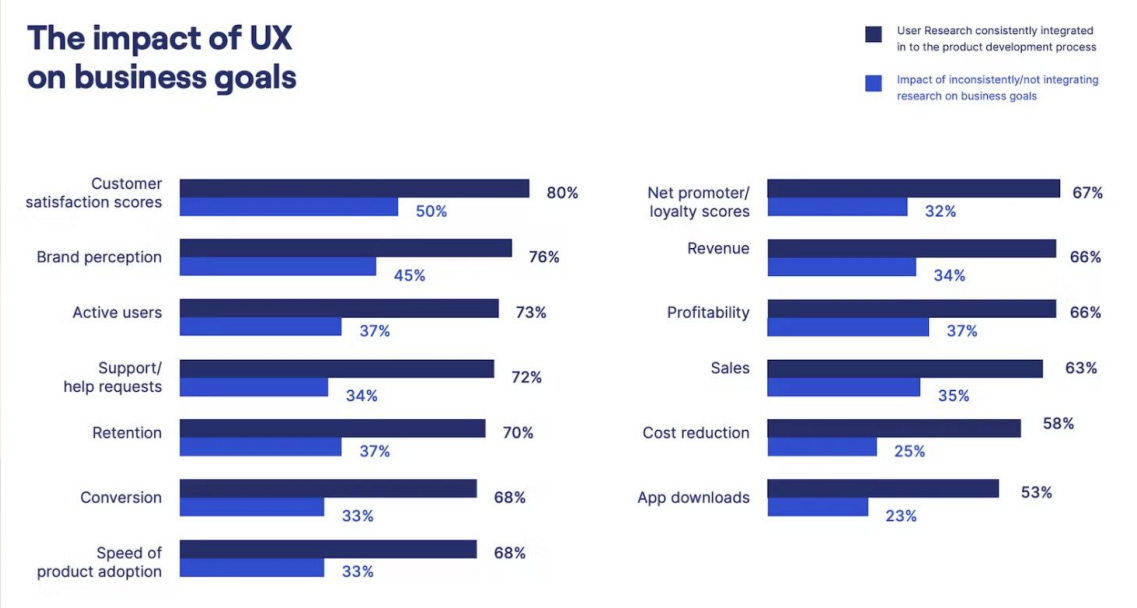


Sumber: https://www.netsolutions.com/

Research Questions

Sumber: https://www.nngroup.com/articles/which-ux-research-methods/

UX Impact Metrics



Impact metrics:

1. Active users
2. Brand perception
3. Conversion
4. Cost reduction
5. Customer satisfaction
6. Downloads
7. Retention
8. Sales
9. Support request
10. Revenue

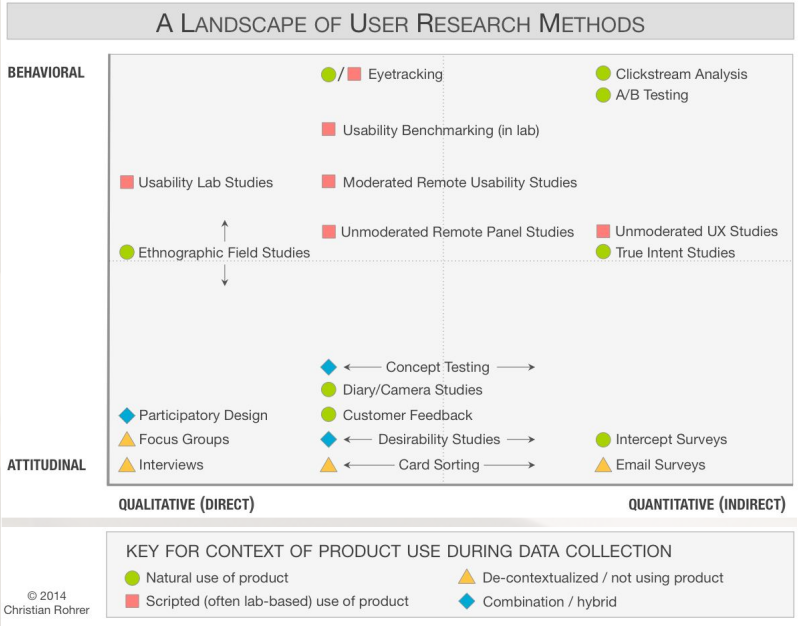
Sumber: https://www.userzoom.com/blog/integrate-ux-research-throughout-product-development-to-positively-impact-business-goals/

Research Methods Questions Answered

1. **Qualitative**
   I.e. Why or How to?
2. **Quantitative**
   I.e. How many or How much?
3. **Attitudinal**
   I.e. What people say?
4. **Behavioral**
   I.e. What people do?

Sumber: https://www.nngroup.com/articles/which-ux-research-methods/

A Landscape of Research Methods



Dimensions of User Research Methods:

1. Attitudinal vs. Behavioral
2. Qualitative vs. Quantitative
3. Context of Use

Sumber: https://www.nngroup.com/articles/which-ux-research-methods/

Research Methods Matrix

Research Methods Comparison Matrix

User experience has a wide range of research methods available. While it's not realistic to use the full set of methods on a given project, nearly all projects would benefit from multiple research methods and from combining insights.

Usability Testing	Survey or Questionaire	In-depth Interview	Card Sorting Exercise	Diary Study	Contextual Inquiry	Ethnographic Methods	Eye Tracking
A study where the goal is to identify strong and weak points of a product by having a user test it with minimal guidance or bias introduced by the researcher.	A structured questionaire that asseses knowledge, beliefs, attitudes, intentions and behaviors of a target audience.	A study where the goal is to learn more about the user of a certain product and determine user profiles, motivations and pain points.	A task where people organize information into categories that make sense to them.	A study that has users recording their experiences with the product over an extended period of time.	A semi-structured interview that obtains information about users as they interact with the product in their own environments.	A qualitative approach to capturing detailed, in-depth understanding of people's everyday life, practices, and cultures.	A method that collects data on where a user is looking, how long and in what order. Typically produces heatmaps and percentage of time spent looking at sections of a user interface.
QUALITATIVE VS. QUANTITATIVE							
Both	Both	Qual	Both	Qual	Qual	Qual	Both
WHEN IN PRODUCT LIFECYCLE? UNDERSTAND > PROTOTYPE > BUILD > LAUNCH							
Prototype, Build, Launch	Understand, Launch	Understand, Launch	Understand	Build, Launch	Understand, Launch	Understand, Launch	Build, Launch
TOP RESEARCH QUESTION(S)							
What roadblocks exist in the product?	How do users feel about a product?	What does a user think about a certain product?	How should a product be structured?	How do people use a product over time?	What is the context surrounding use of a product?	How does a user's environment shape their actions?	Can users discover a certain feature intuitively?
STRENGTHS							
Flexible timing, instant feedback and direct observation.	Quick turnaround, large representative data-sets and less ongoing labor.	Ability to ask follow-up questions and generate a rich understanding.	Quick, easy, inexpensive and well-known.	Long-term data from the user captures behavioral and attitudinal changes over time.	Very rich data that can only be obtained in a user's day-to-day life.	Insights are very diverse and deep that can't be gained from other means.	Very definitive and quantifiable data.
WEAKNESSES							
Long preparation time, possible bias associated with lab setting.	Low response rate, recall bias.	Time and effort intensive, outcome depends on interviewer's skills.	Data limited by researcher's choice of cards.	Good results depends heavily on the motivation and openness of the user.	Risk of disrupting user's environment and biasing the data.	The data can be very open-ended and the method can take a lot of time.	Doesn't work well with a broad scope and for those with certain eyewear.
COMMON MISTAKES OR MISCONCEPTIONS							
Too much focus on verbal feedback instead of behaviors.	Leading questions can influence the results.	Too much focus on what people want instead of their problems.	Researchers choosing cards or categories that create bias.	Underestimate work and time required from researcher.	Researchers can sometimes rely too much on what users say instead of what they actually do.	If the research team gets too large, it can bias the data.	Wrong conclusions could be drawn if the researcher always equates looking as attention.
TYPICAL DELIVERABLES							
Use cases, quotes, videos, stories and product recommendations.	Descriptive statistics, inferential statistics, charts and graphs.	Word clouds, personas, emerging themes, quotes and product recommendations.	Info architecture diagrams, cluster analysis, percentages of certain buckets.	Workflows, mental models, journey maps, personas and reports.	Workflows, task analysis, artifacts and diagrams of users' environments.	Personas, journey maps and people stories.	Heat maps, gaze paths and metrics.

Brought to you by John Hu, Donna Tedesco, Kathleen Stanko (intern), Alex McEvoy (content strategy), and Kevin Smith (design). Reviewed by Carolyn Wei, Ann Hsieh, Selena Chan, Nika Smith Auld, Rebecca Lehrman, Tara Franz, and Raman Hansi. January 23, 2019

The authors of this graphic make an important point: Nearly all research benefits from using multiple methods.

Each has unique strengths will that yield unique insights. Bringing those insights together gives you a much stronger picture of what you are trying to understand.

Sumber: https://verstaresearch.com/blog/8-morphing-methods-as-market-research-shifts-to-ux-research/

Market Research

Market Research:

1. Industry outlook
2. Market size
3. Market trends
4. Market share
5. Market segments
6. Competitor research
7. Buyer persona
8. Product pricing
9. Product marketing

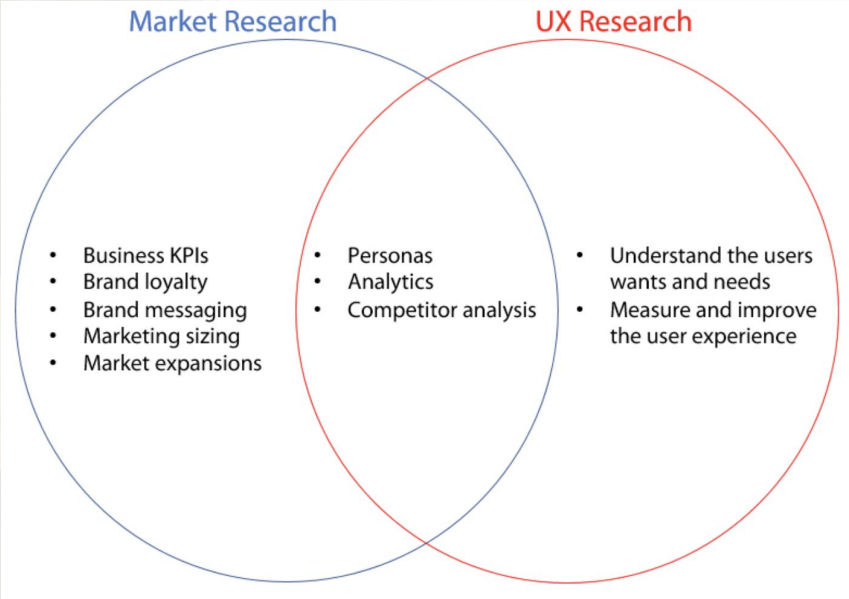
Sumber: https://www.questionpro.com/blog/how-to-do-market-research-for-startups/

Market Research and User Research

Market research vs	User research
Broad insights	**Deep** insights
Attitudes	**Behaviors**
Quantitative methods	**Qualitative** methods
Large samples	**Small** samples
High representativity	**Low** representativity
Informs **marketing** decisions	Informs **design** decisions
What people **buy**	How people **use** a product

Sumber: https://uxstudioteam.com/ux-blog/market-research-vs-user-research/

Market Research and UX Research



Market Research and UX Research:

1. Persona
2. Analytics
3. Competitor Analysis

Sumber: https://www.simpleusability.com/inspiration/2018/03/ux-research-vs-market-research/

Competitive Analysis

Video Conferencing for Schools

	Price	Length	Participants	Live stream	Record	Grid view	Breakout rooms	Join without account
zoom	Free basic plan	40 min (No limit with edu account)	100	✗ Pro only	To computer	49 people	✓	✓
Teams	Free basic plan	No limit	250	10k viewers	✗ Paid only	4 people (update to 9 soon)	✗	✓
Meet	Free until Sept 30	No limit	250	100k viewers	Google Drive	4 people (3rd party extensions available to allow more)	✗	✓
Webex	Free basic plan	No limit	100	✗ Paid only	To computer	25 people	✓	✓

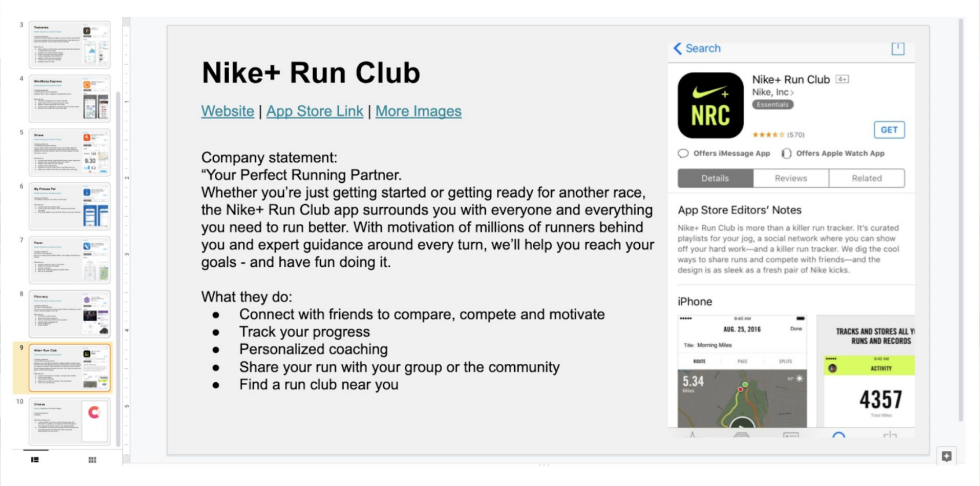
theedublogger.com/video-teaching-learning edublogs

	Competitor 1	Competitor 2	Competitor 3	Competitor 4
Website Search (Keyword)	Y	Y	Y	Y
Website Search (Advanced)			Y	
Physician Search	Y	Y	Y	Y
- Search by Name	Y	Y	Y	Y
- Search by Diagnosis	Y			Y
- Search by Procedure	Y			
- Search by Department	Y		Y	Y
- Search by Clinical Topic	Y	Y		Y
- Search by Basic Research Topic / Program		Y		Y
- Search by Facility			Y	Y
- Search by Team				Y
Researcher/Staff Search	Y	Y	Y	Y
- Search by Name	Y	Y	Y	Y
- Search by Diagnosis				Y
- Search by Department			Y	Y
- Search by Clinical Topic		Y		
- Search by Program				Y
- Search by Facility				Y
- Search by Team				Y
Past Employee (Alumni) Search			Y	
Researcher/Staff Advanced Search			Y	
Clinical Trials Search	Y	Y	Y	Y

Sumber: https://boxesandarrows.com/competitive-analysis-understanding-the-market-context/
https://www.theedublogger.com/video-teaching-learning/

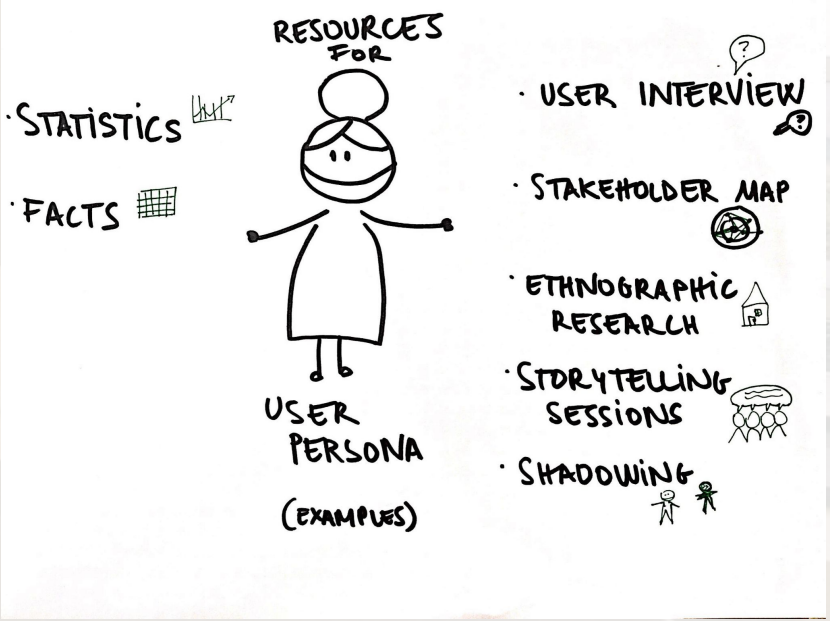
Competitive Analysis

	ENVOY	BIRD	Lime	lyft/UBER	zipcar
Grab and Go	✓	✓	✓		
Book in 2 Steps	✓	✓	✓	✓	
Reserve for Later	✓			✓	✓
Cars, Scooters, and Bikes	✓				



Sumber: https://xd.adobe.com/ideas/process/user-research/guide-to-competitive-analysis-ux-design/

User Persona



Developing a persona is to collect the research insights into a character that could be your user:

1. Facts
2. Statistics
3. Analytics
4. User Research
5. Etc

Sumber: https://miro.com/blog/introduction-user-personas/

User Persona

Persona Name: Sally Ryan

Sally Ryan

Goals
Wants family to be healthy and fit
Wants health optimised for all members with the best treatment available
Wants to raise kids that have had the best opportunities
Create a safe and happy environment

Relationship with Technology

Technology
Devices own and used

Browsers

Demographic
Female 33 years
Australia
Married
Marketing Manager

Social

Challenges
I feel so busy!
Not enough time with children
Trying to stay fit amongst responsibilities
Wants to remain relevant with career
Juggling different priorities
Wants to ensure that her kids get the best in everything

Habits
- Online shops
- Exercises regularly
- Catches up with girlfriends
- Date nights with husband
- Posts regularly on instagram and facebook of children
- Regularly follows viral posts, particularly health related posts and lifestyle

Realtime Board

Persona Name: Heather Franklin

Heather Franklin

Goals
Wants to remain independent at home
Wants to be able to self manage health
Wants to achieve ADLs
Tries not to get sick

Relationship with Technology

Technology
Devices own and used

Browsers

Demographic
Female 83 years
Coogee
Widowed

Lives alone in single story home
Has 2 daughters who live locally
Uses a 4WW
Goes to church group
Multiple medications
Sees GP fortnightly
Been in hospital twice in the last year

Challenges
Forgetfulness
Follow up appointments are challenging logistically
Hard to plan with daughters to help with things
Takes public transport and therefore, limited in where she can go

Habits
Poor internet usage
Owns an old smartphone that was set up by daughters
Reads the newspapers

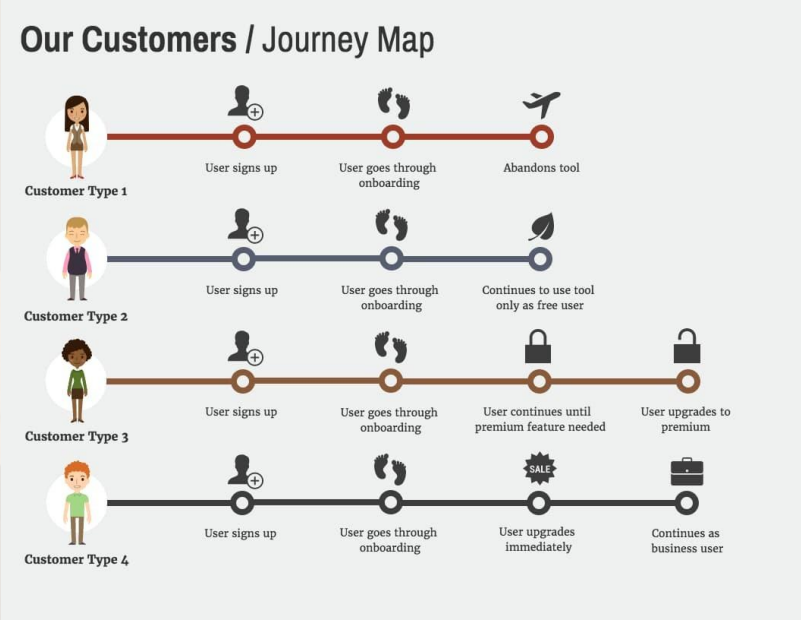
Realtime Board

Sumber: https://uxplanet.org/personas-and-user-journeys-in-health-b4f4596f428d

User Experience Map

Sumber: https://uxplanet.org/personas-and-user-journeys-in-health-b4f4596f428d

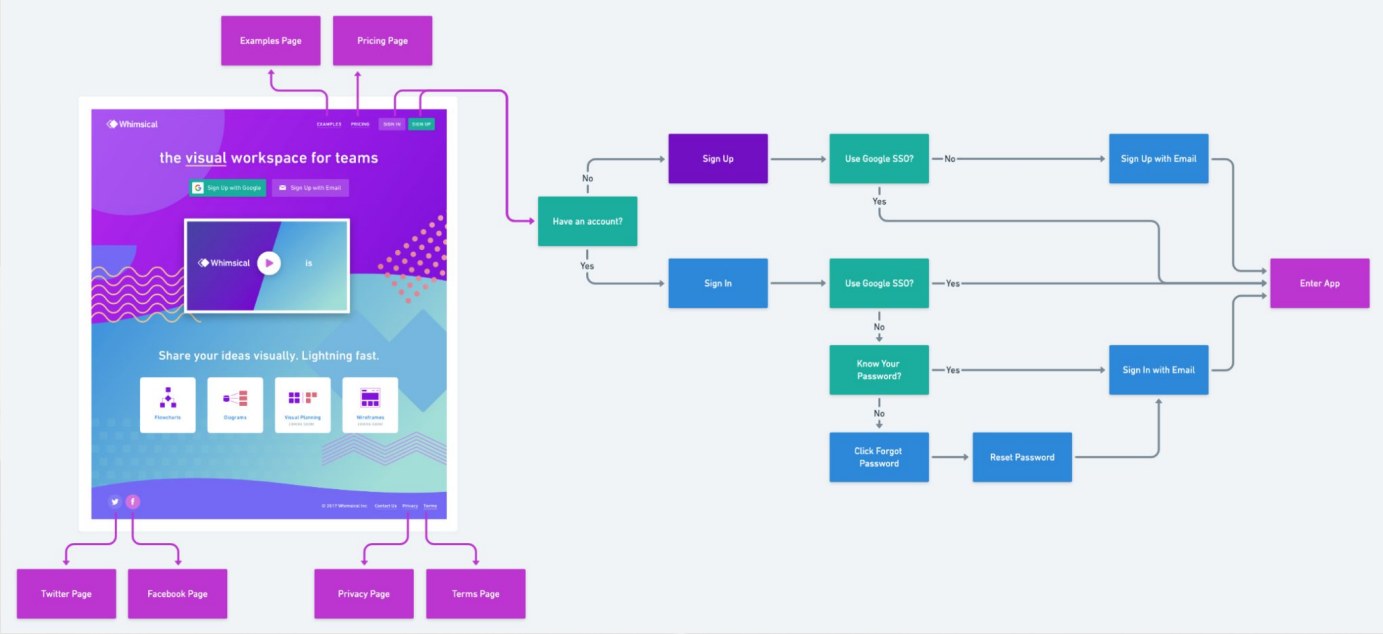
User Journey



1. Customer Type 1
   Sign Up - Activity A - Activity B
2. Customer Type 2
   Sign Up - Activity A - Activity C
3. Customer Type 3
   Sign Up - Activity A - Activity D
4. Customer Type 4
   Sign Up - Activity A - Activity E

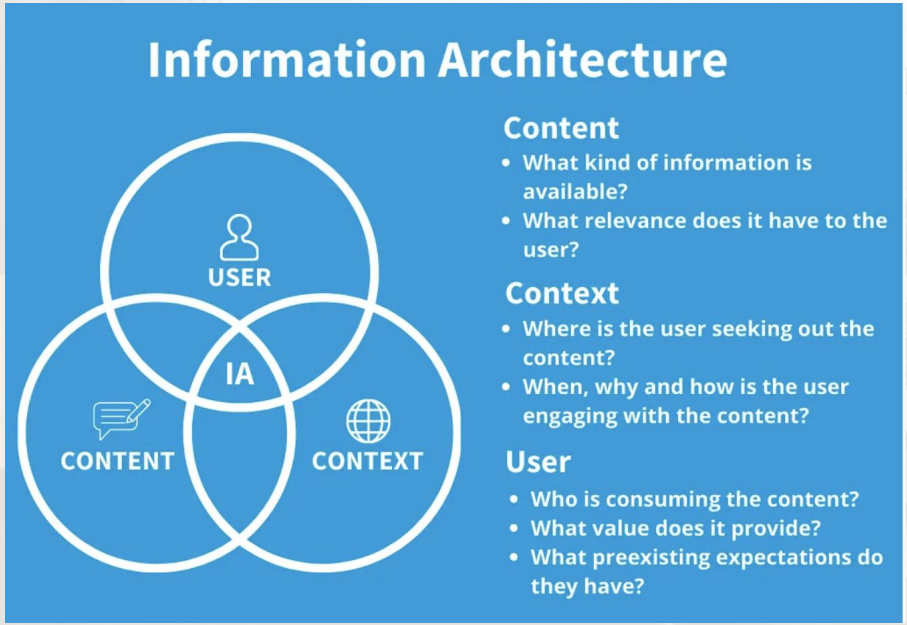
Sumber: https://buildsuccessfulstartups.com/user-persona-template/

User Flow examples



Sumber: https://whimsical.com/whimsical-user-flow-UxwcbKK2aq2c4atPHJNEC1

Information Architecture (IA)



Information Architecture (IA) is the art and science of developing structures of organization to present data and information.

Good IA is informed by:

1. Content
2. Context
3. Users

Sumber: https://www.interaction-design.org/literature/topics/information-architecture

Example of Information Architecture

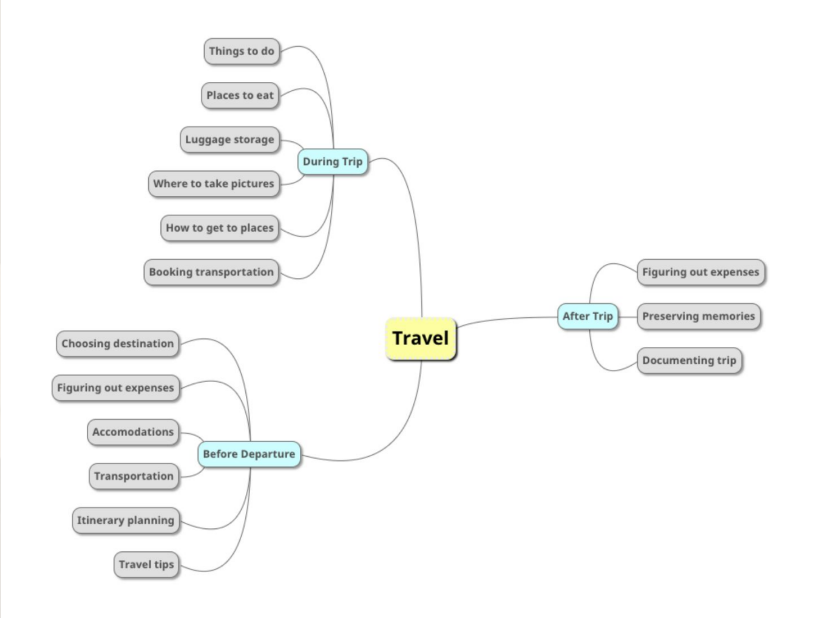
Content Audit

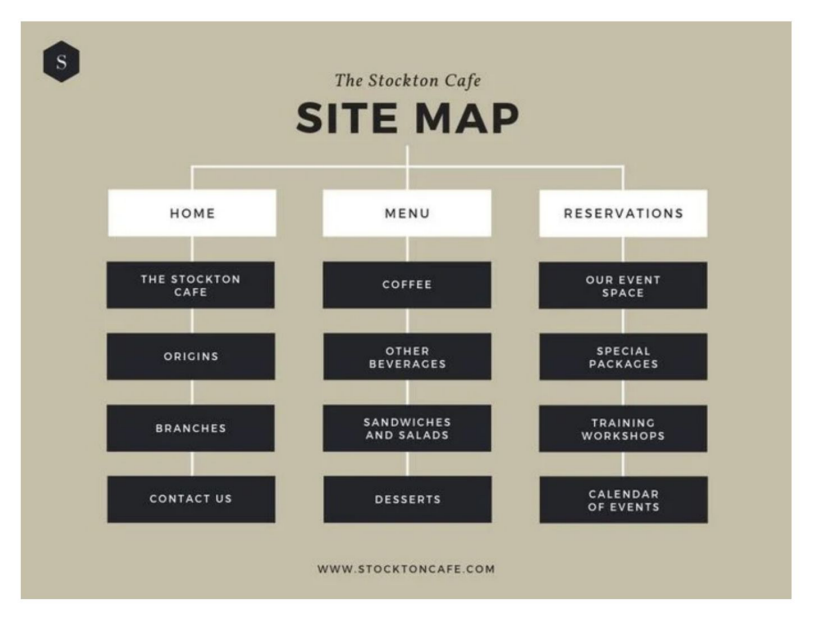
File Edit View Insert Format Data Tools Add-ons Help All changes saved in Drive

	A	B	C	D	E	F	G	H
1	Address	Page Title	Page Visits	Page Bounce Rate	Average Time on Page	Number of Social Shares	Conversion Rate	Page Score
2	http://www.johnssamplesite.com/	Welcome to John's Site	1405	74.06%	2:01	N/A	1.15%	C
3	http://www.johnssamplesite.com/blog/	Read John's Blog	2833	66.20%	2:44	N/A	1.41%	C
4	http://www.johnssamplesite.com/about/	About John's Software Company	1209	41.10%	3:56	N/A	2.02%	B
5	http://www.johnssamplesite.com/contact/	Get in Touch with John	783	45.42%	2:45	N/A	0.97%	D
6	http://www.johnssamplesite.com/solutions/	See John's Software Solutions	744	68.00%	3:03	N/A	2.50%	B
7	http://www.johnssamplesite.com/blog/2014/07/text-post-1/	John's Text Post #1	250	43.55%	3:01	21	0.23%	D
8	http://www.johnssamplesite.com/blog/2014/06/video-post-2/	John's Video Post #2	338	40.22%	6:30	23	0.33%	A
9	http://www.johnssamplesite.com/blog/2014/05/list-post-3/	John's List Post #3	459	38.56%	2:58	15	1.07%	B
10	http://www.johnssamplesite.com/blog/2014/04/infographic-post-4/	John's Infographic Post #4	485	38.88%	3:22	45	0.07%	C
11	http://www.johnssamplesite.com/blog/2014/03/video-post-5/	John's Video Post #5	502	41.02%	6:22	31	0.44%	C
12	http://www.johnssamplesite.com/blog/2014/03/list-post-6/	John's List Post #6	231	46.75%	2:18	16	0.98%	B
13	http://www.johnssamplesite.com/blog/2014/02/text-post-7/	John's Text Post #7	772	42.34%	4:02	29	0.51%	C
14	http://www.johnssamplesite.com/blog/2014/01/text-post-8/	John's Text Post #8	345	41.89%	3:21	21	0.44%	D
15	http://www.johnssamplesite.com/blog/2013/12/video-post-9/	John's Video Post #9	102	51.45%	7:01	14	0.26%	A
16	http://www.johnssamplesite.com/blog/2013/11/infographic-post-10/	John's Infographic Post #10	645	37.23%	2:44	43	0.05%	B
17	http://www.johnssamplesite.com/blog/wp-content/uploads/2014/08/image-1.jpg	image-1.jpg	N/A	N/A	N/A	N/A	N/A	N/A
18	http://www.johnssamplesite.com/blog/wp-content/uploads/2014/08/image-2.jpg	image-2.jpg	N/A	N/A	N/A	N/A	N/A	N/A
19	http://www.johnssamplesite.com/blog/wp-content/uploads/2014/08/image-3.jpg	image-3.jpg	N/A	N/A	N/A	N/A	N/A	N/A
20	http://www.johnssamplesite.com/blog/wp-content/uploads/2014/08/image-4.jpg	image-4.jpg	N/A	N/A	N/A	N/A	N/A	N/A
21	http://www.johnssamplesite.com/blog/wp-content/uploads/2014/08/image-5.jpg	image-5.jpg	N/A	N/A	N/A	N/A	N/A	N/A
22	http://www.johnssamplesite.com/blog/wp-content/uploads/2014/08/image-6.jpg	image-6.jpg	N/A	N/A	N/A	N/A	N/A	N/A
23	http://www.johnssamplesite.com/blog/wp-content/uploads/2014/08/image-7.jpg	image-7.jpg	N/A	N/A	N/A	N/A	N/A	N/A
24	http://www.johnssamplesite.com/blog/wp-content/uploads/2014/08/image-8.jpg	image-8.jpg	N/A	N/A	N/A	N/A	N/A	N/A
25								

Sumber: https://xd.adobe.com/ideas/process/information-architecture/information-architecture-examples/

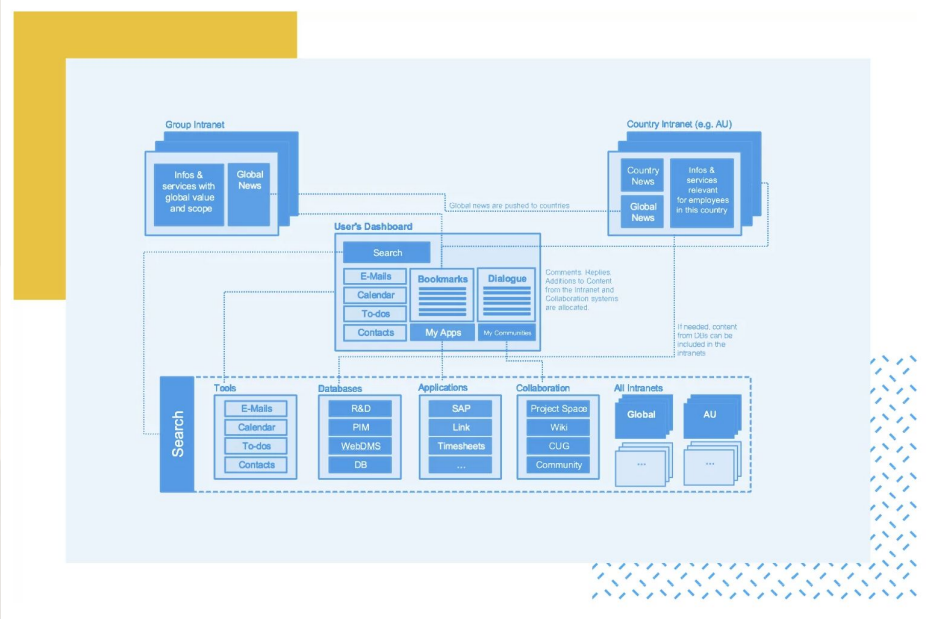
Example of Information Architecture





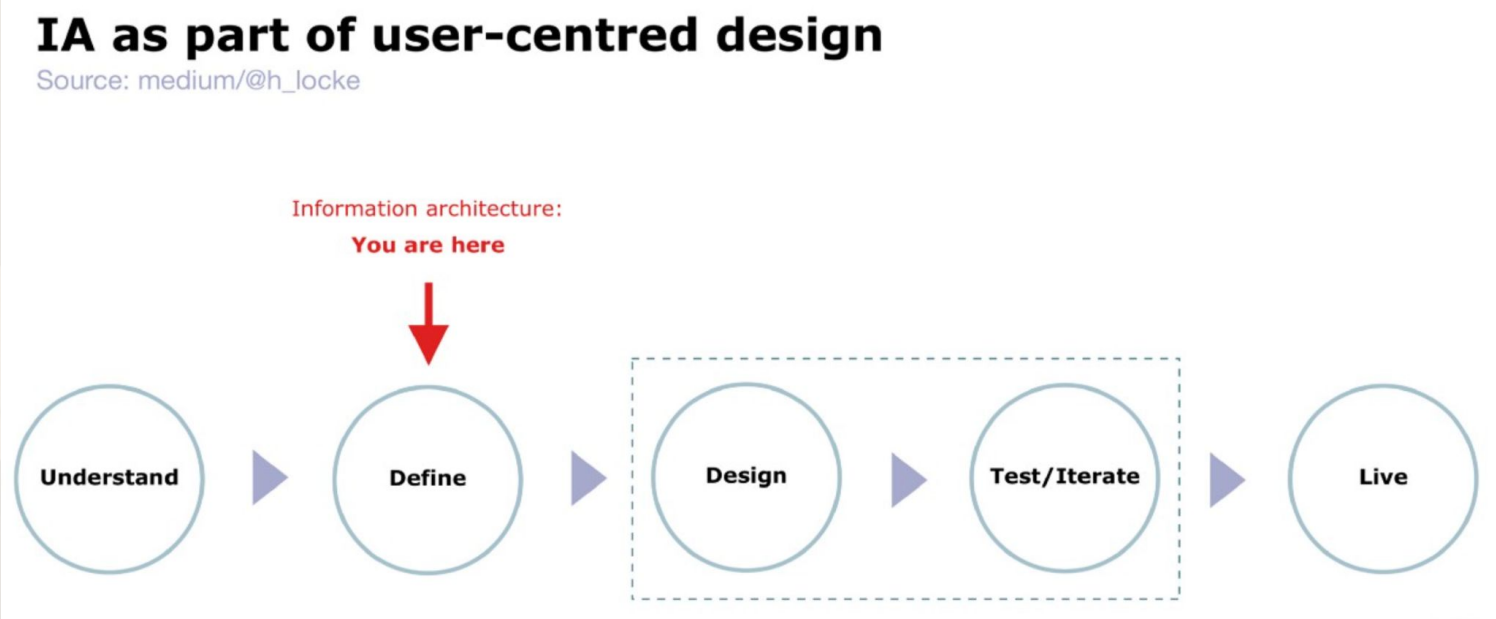
Sumber: https://blog.prototypr.io/ux-case-study-travelmind-travel-with-a-peace-of-mind-643a816af8db
https://www.canva.com/id_id/grafik/sitemap/

Example of Information Architecture



Sumber: https://www.justinmind.com/wireframe/information-architecture-ux-guide

Information Architecture



Sumber: https://xd.adobe.com/ideas/process/information-architecture/information-architecture-users-content-context/

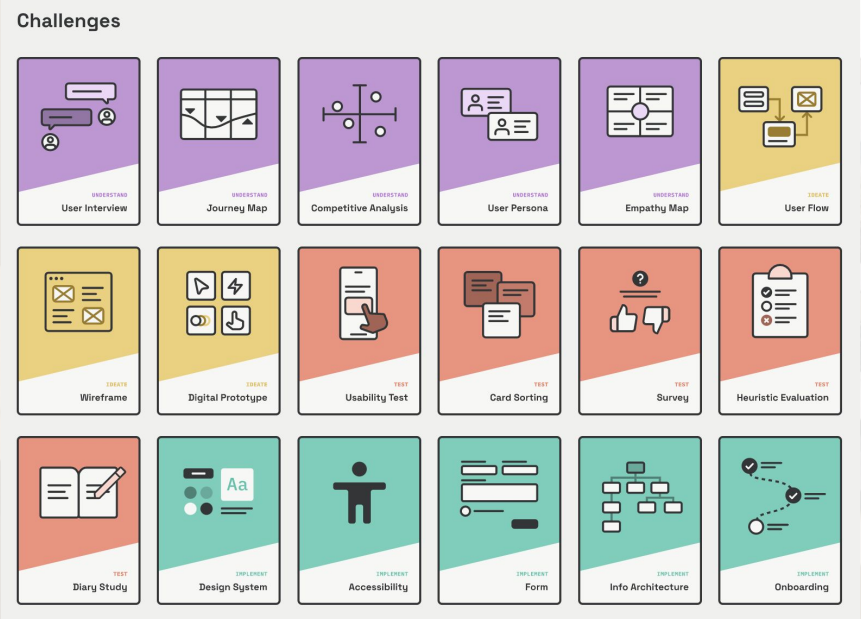
Keyroles

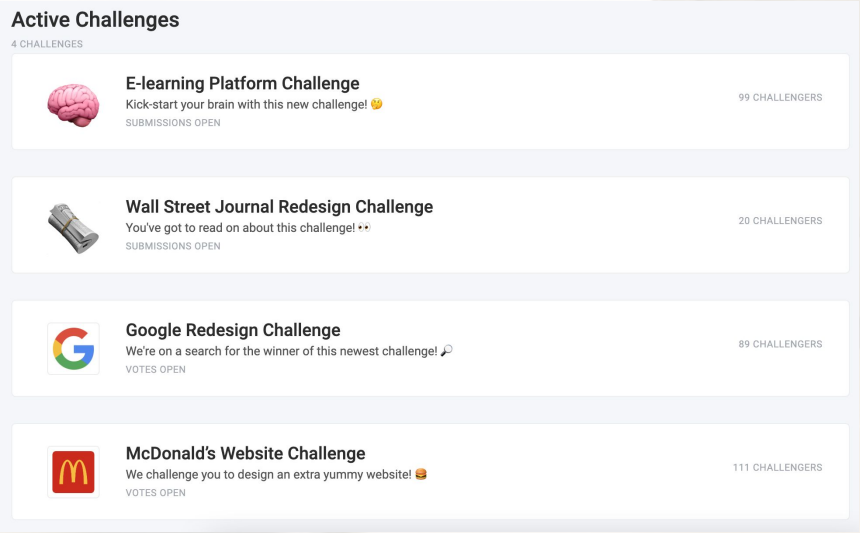
1. UX Researcher
2. User Researcher
3. Market Researcher
4. Information Architect

Deliverables

1. User Research
2. Market Research
3. User Persona
4. User Experience Map
5. User Journey Map
6. User Story Board
7. User Flow
8. Information Architecture

UX Challenge





Sumber: https://uxtools.co/challenges/diary-study/ https://www.uplabs.com/challenges/

Thank you