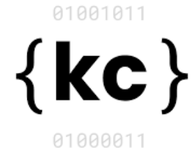
USABILITY TESTING & EVALUATION

Joshua David Beyravana

18 November 2024

QUICK INTRO

I’m Joshua, a human-computer interaction designer



RESEARCH

GENERATIVE RESEARCH

- User interviews
- Contextual inquiry
- Ethnographic study
- Stakeholder interview
- Focus group
- Competitive analysis
- Diary study
- Survey and questionnaire
- ...

EVALUATIVE RESEARCH

- Heuristic Evaluation
- Usability Testing
- User Feedback
- NPS
- A/B Testing
- SUS
- Heatmaps
- Task Completion Rate
- ...

EVALUATIVE RESEARCH

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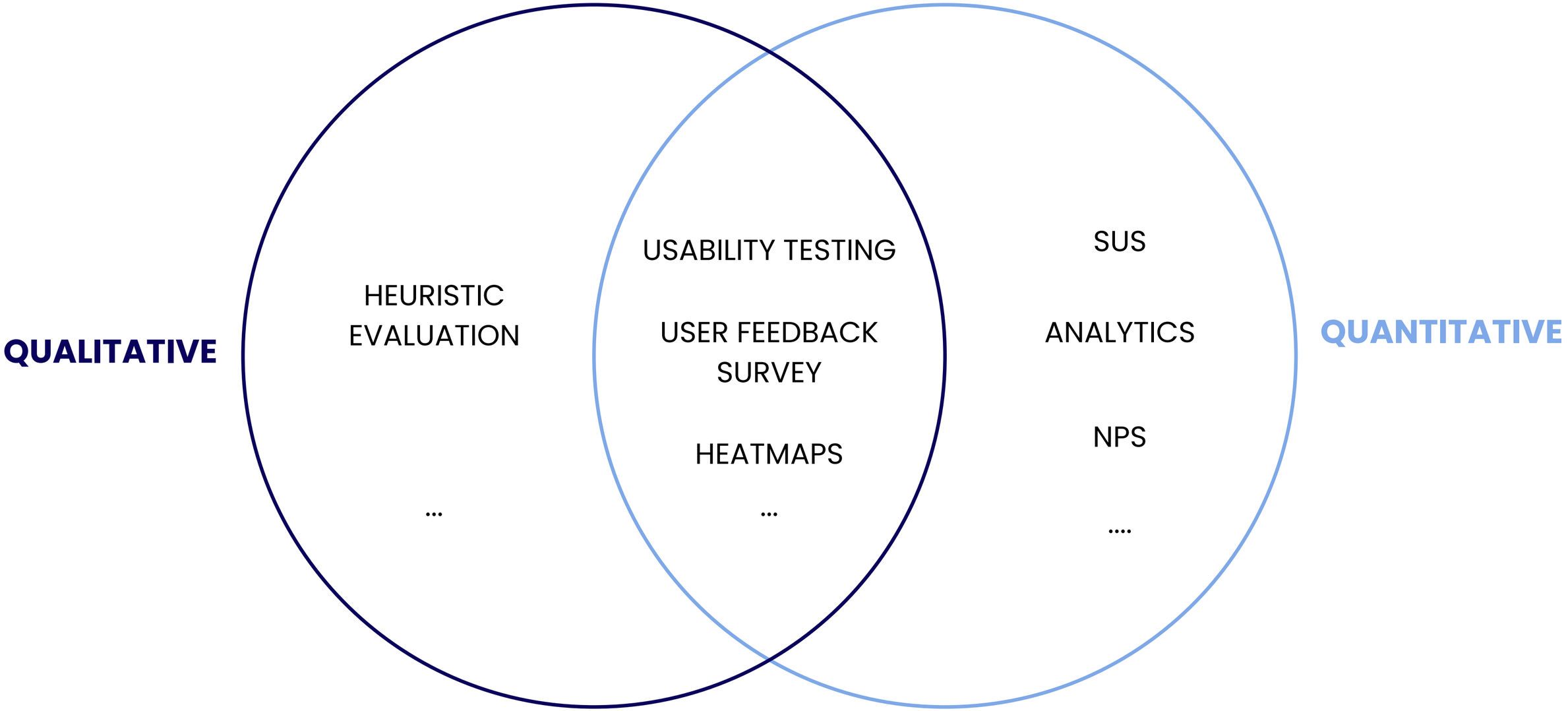


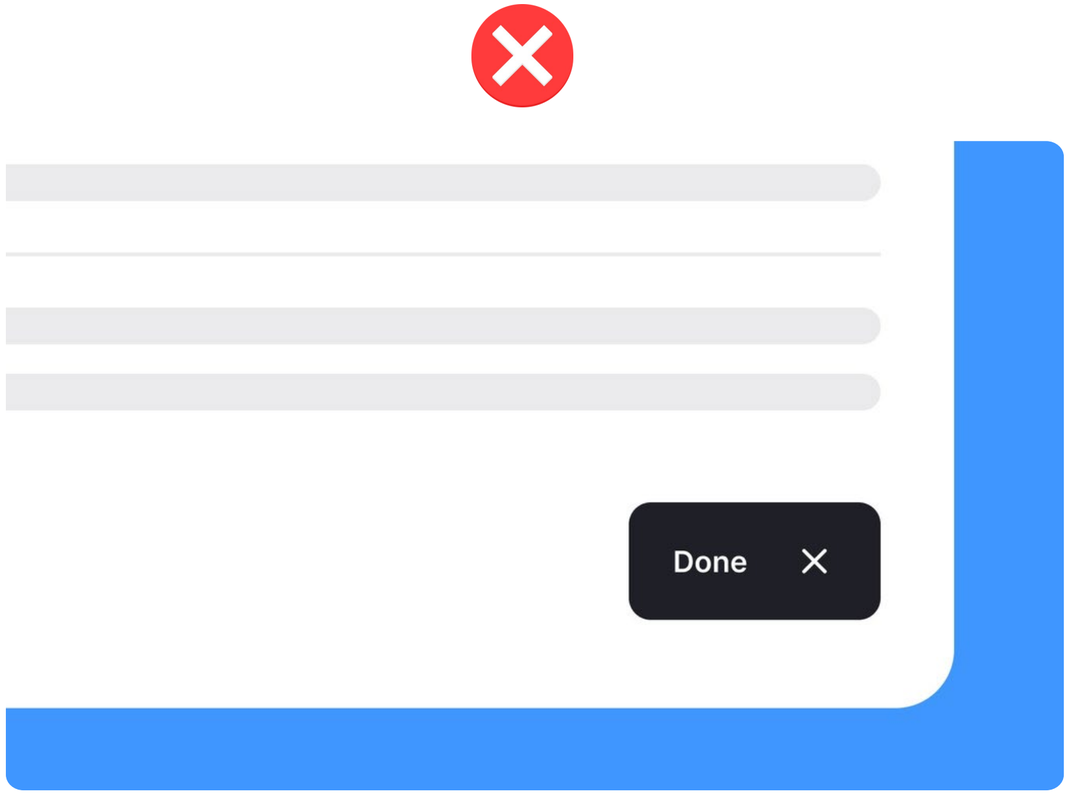
HEURISTIC EVALUATION

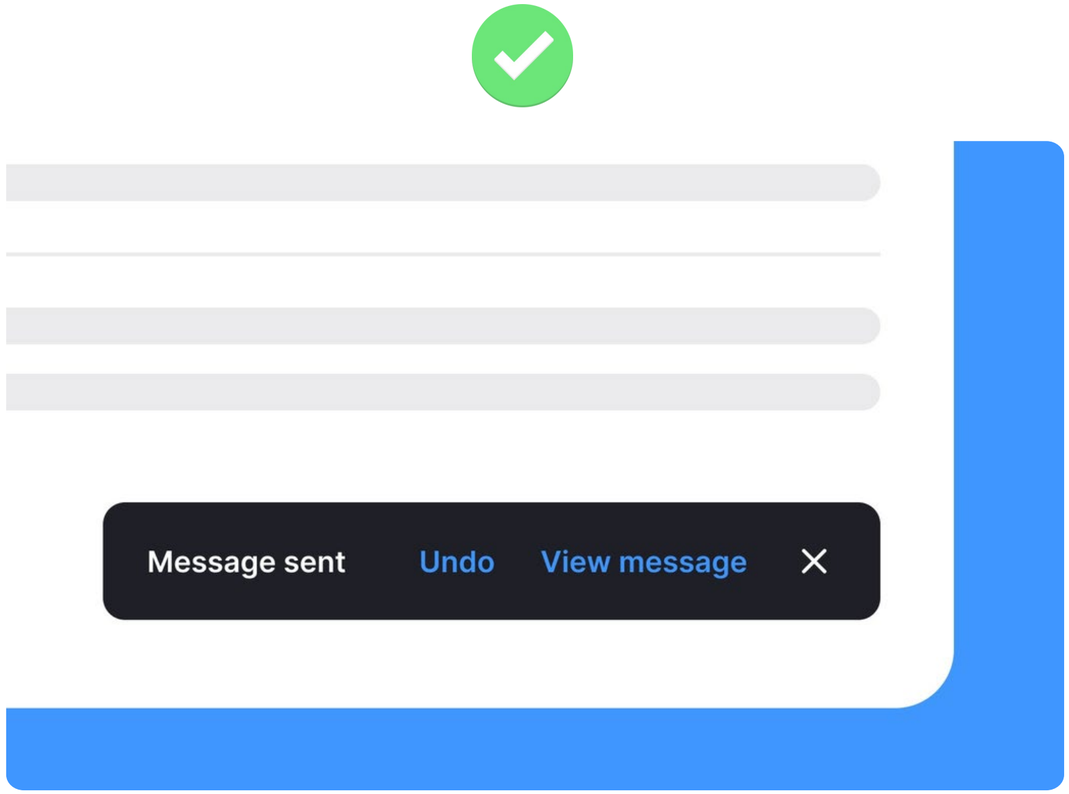
HEURISTIC EVALUATION

VISIBILITY OF SYSTEM STATUS	RECOGNITION RATHER THAN RECALL
MATCH BETWEEN SYSTEM AND REAL WORLD	FLEXIBILITY AND EFFICIENCY OF USE
USER CONTROL AND FREEDOM	AESTHETIC AND MINIMALIST DESIGN
CONSISTENCY AND STANDARDS	HELP USERS RECOGNIZE, DIAGNOSE, AND RECOVER FROM ERRORS
ERROR PREVENTION	HELP AND DOCUMENTATION

VISIBILITY OF SYSTEM STATUS

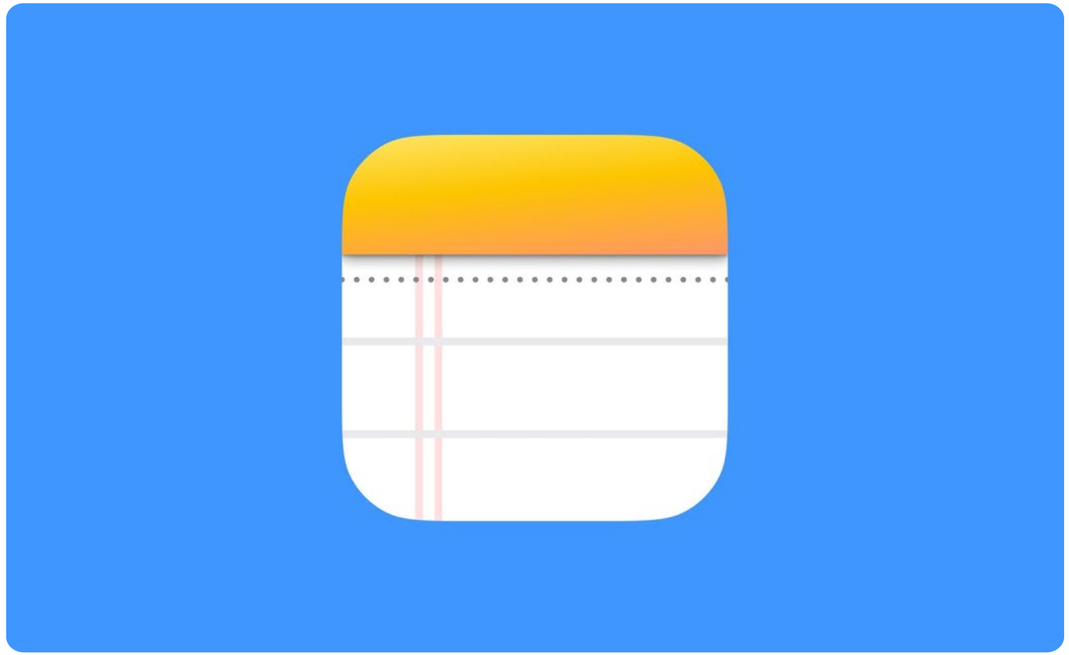
It’s important for users to understand what’s happening when they take an action.





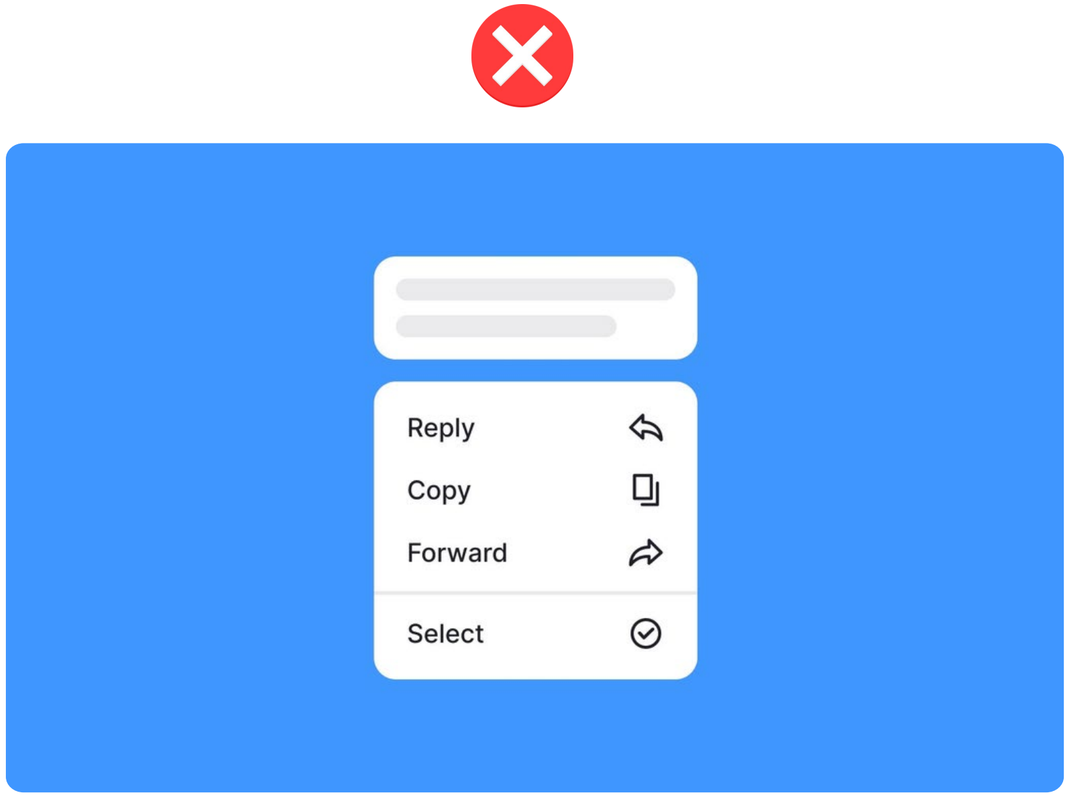
MATCH BETWEEN SYSTEM AND REAL WORLD

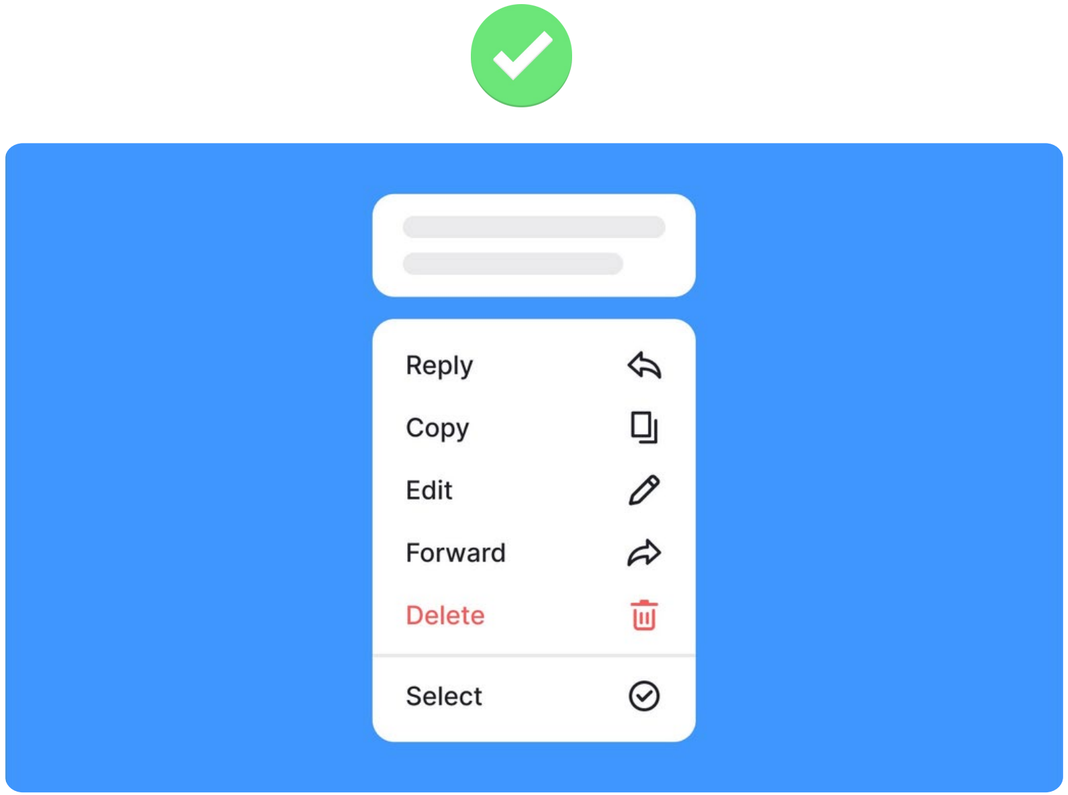
The system should speak users’ language, with words, phrases, and concepts familiar to the user



USER CONTROL AND FREEDOM

User naturally makes errors. Provide an “emergency exit” so they can leave the unwanted state





CONSISTENCY AND STANDARDS

Creates visual, functional, internal, and external standards

Health & Sports

Meditation | Workout | Yoga | Pilates

Hobby & education

Photography | Personal growth | Dancing

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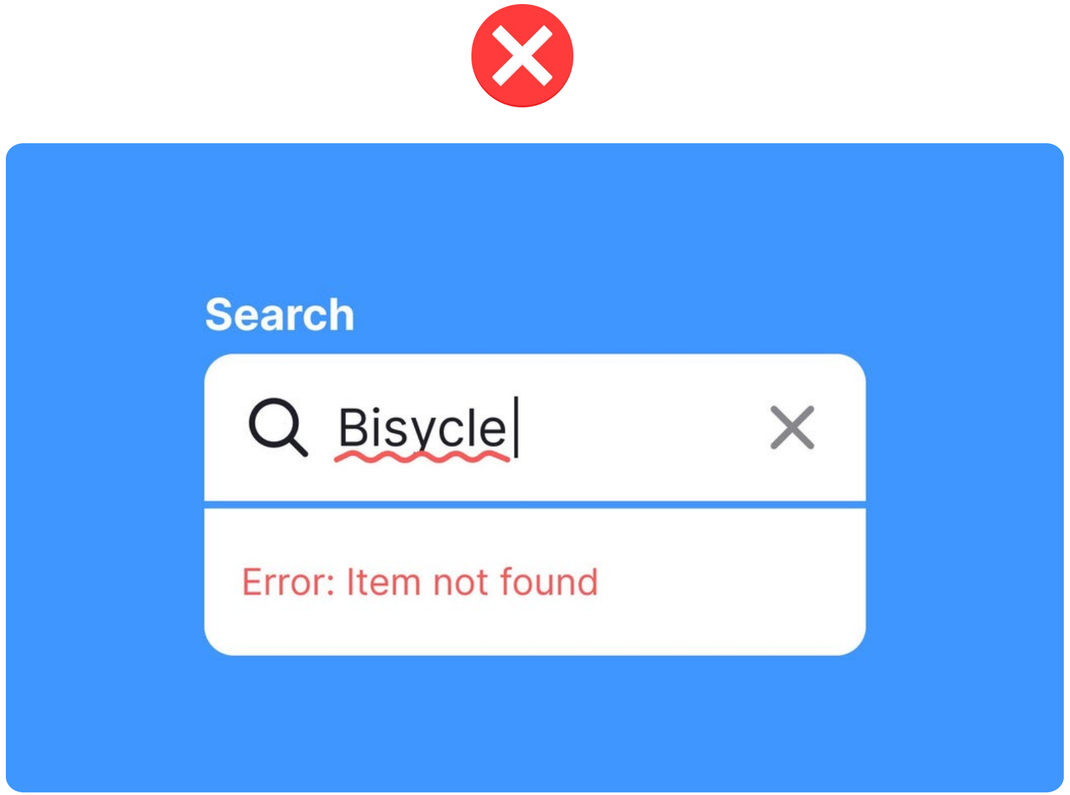
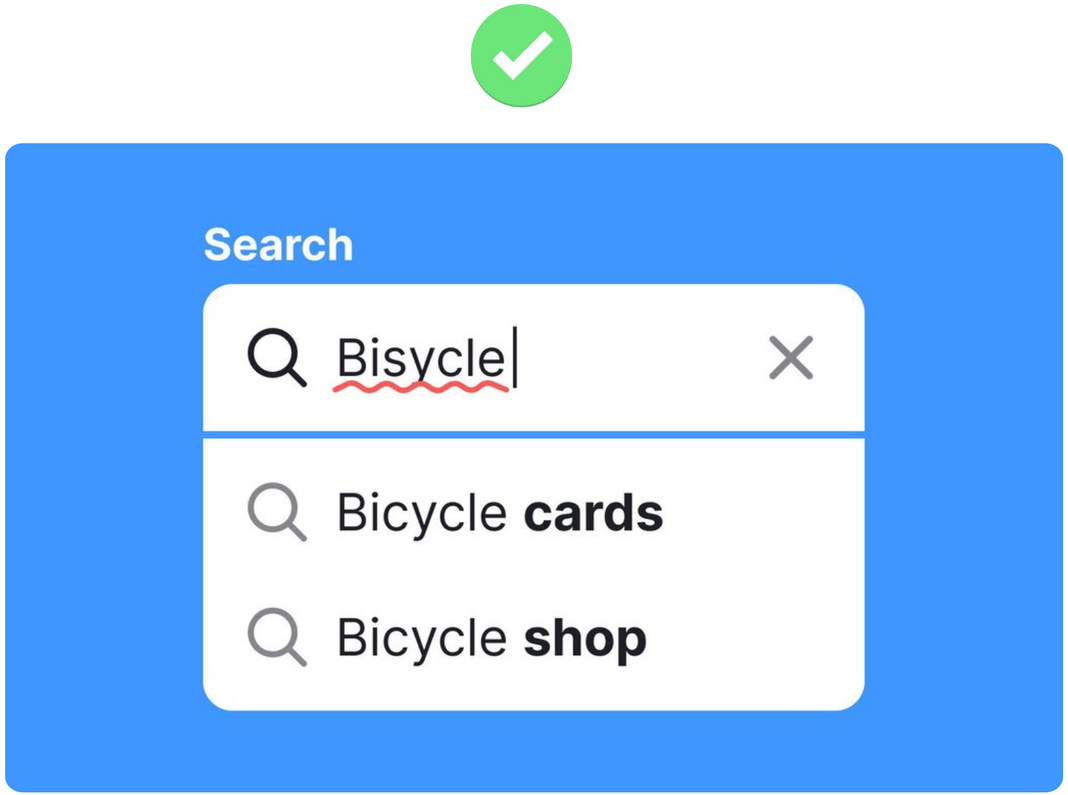
ERROR PREVENTION

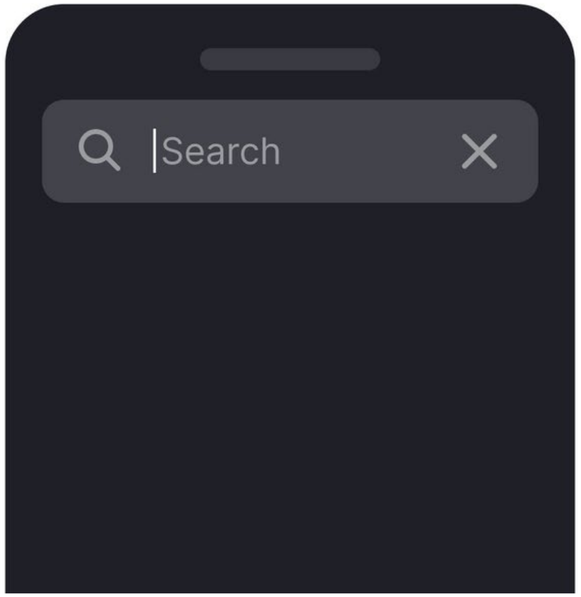
Showing suggestions, providing smart defaults, and applying constraints when necessary

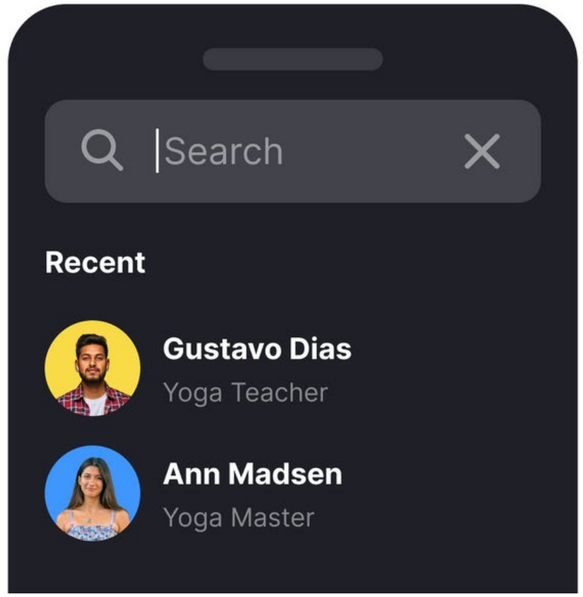




RECOGNITION RATHER THAN RECALL

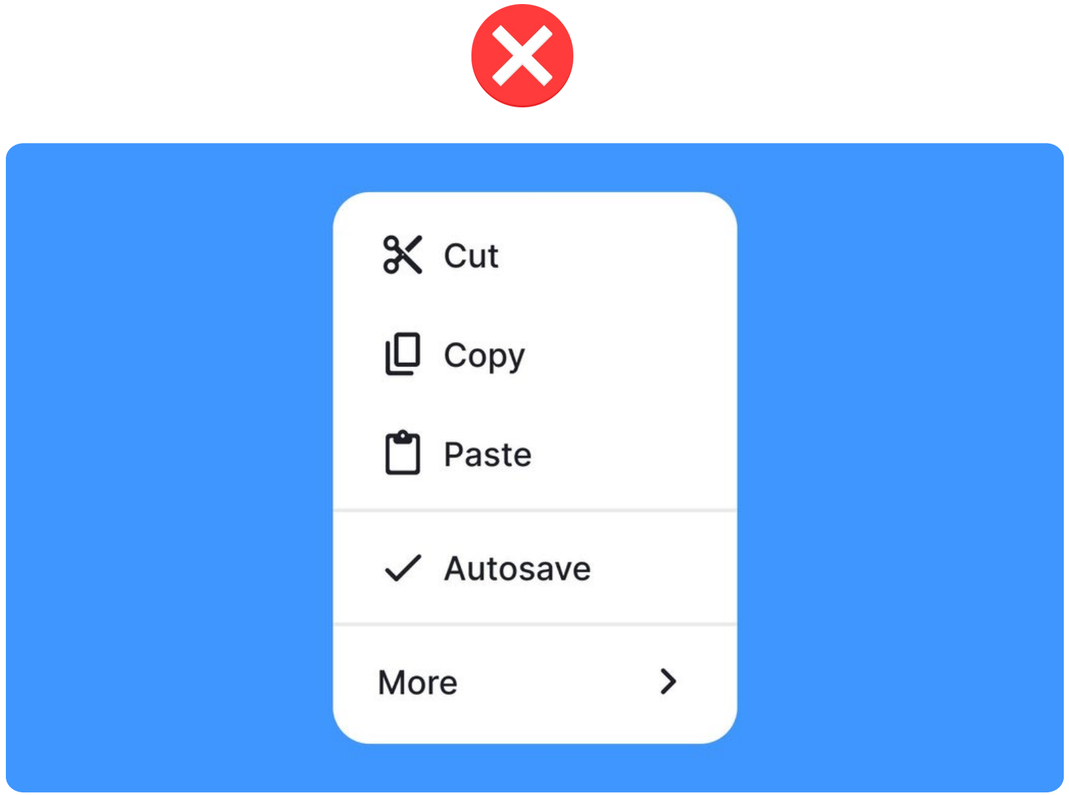
Minimize the load on a user's memory by making actions, elements, and options clearly visible

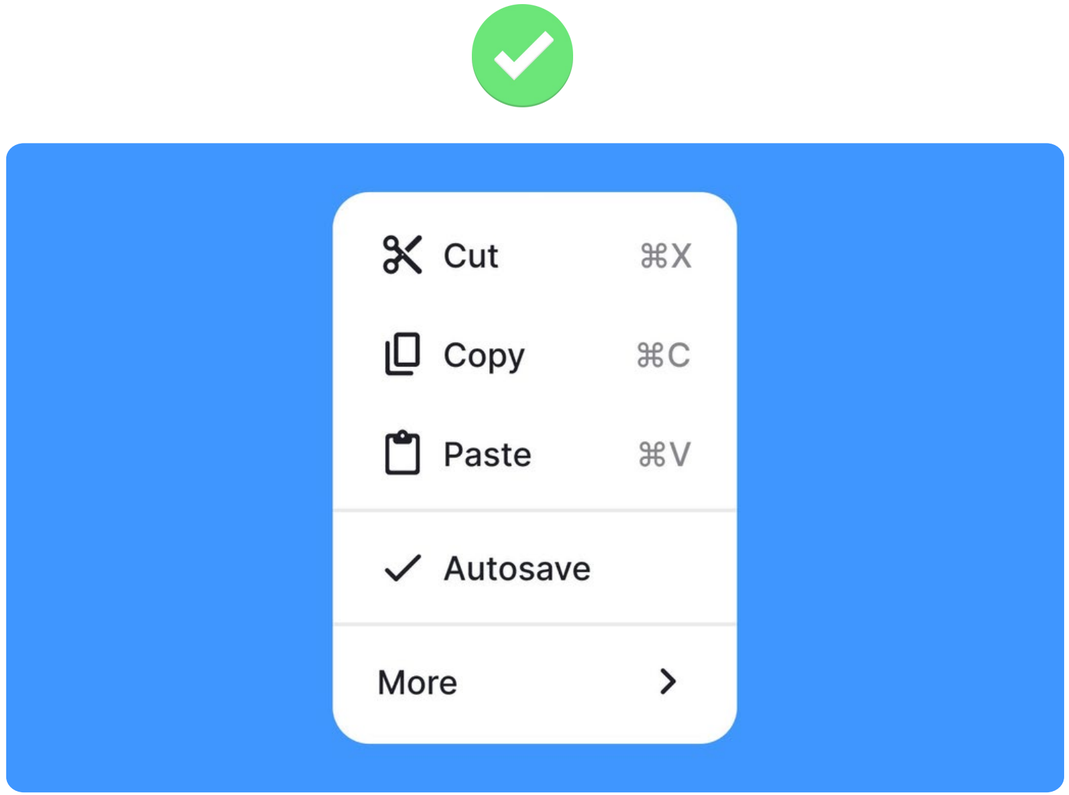




FLEXIBILITY AND EFFICIENCY OF USE

Versatile enough to accommodate the different needs of both advanced users and newcomers



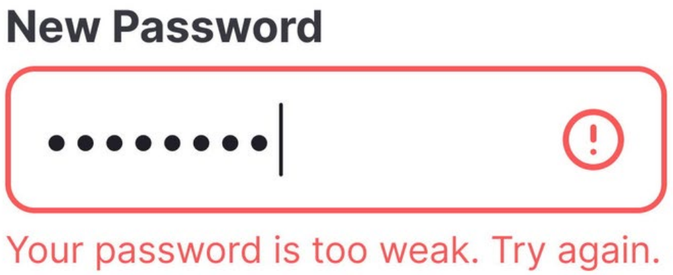


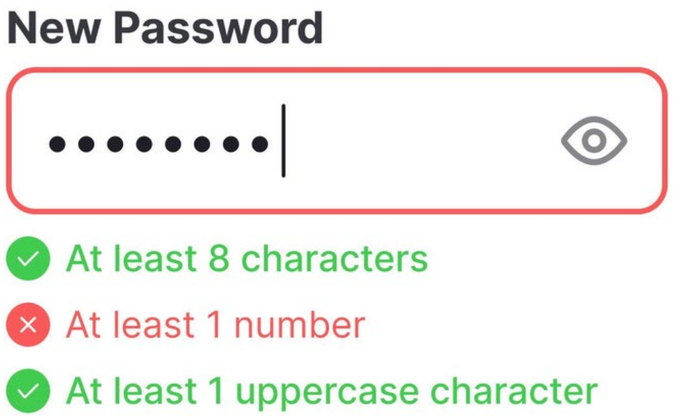
AESTHETIC AND MINIMALIST DESIGN

Interfaces should not contain irrelevant information or elements which don’t add value

HELP USERS RECOGNIZE, DIAGNOSE, AND RECOVER FROM ERRORS

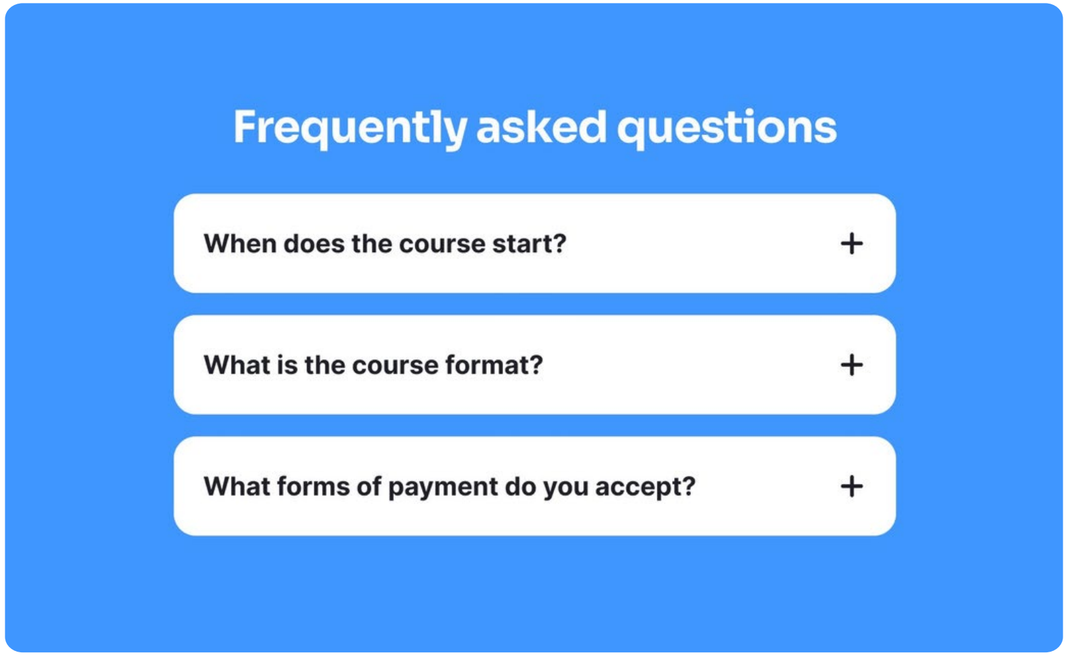
Alert users in concise and simple language, clearly indicate the problem, and provide some solutions





HELP AND DOCUMENTATION

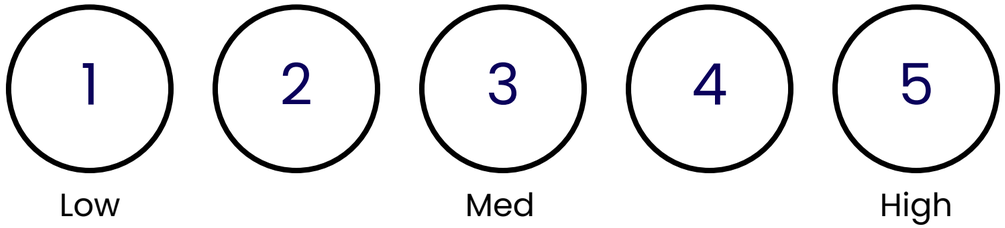
Easy to find additional information when needed

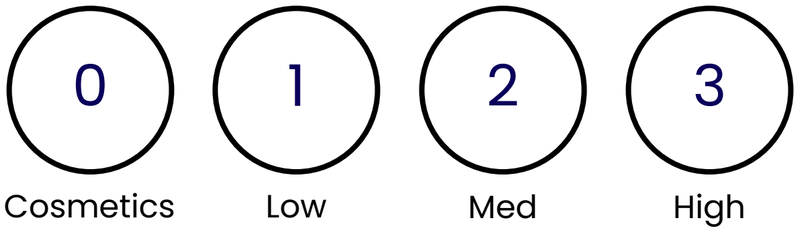


CONDUCTING HEURISTIC EVALUATION

DEFINE YOUR GOALS	What interface aspects you'd like to evaluate for the usability issues?
GATHER MATERIALS	What docs, prototypes, and user research results that can help to understand the context?
CONDUCT EVALUATIONS	How many and who are the experts? When to conduct the evaluation?
RATE ISSUES	How severe do the issue in the evaluation based on impact, frequency, and user frustration?
COMPILE FINDINGS	How would the findings be merged? How could we merge an overlapping issue? What needs to be prioritized?
SHARE RESULTS	How should the compilation be synthesized and reported?

RATING SCALE





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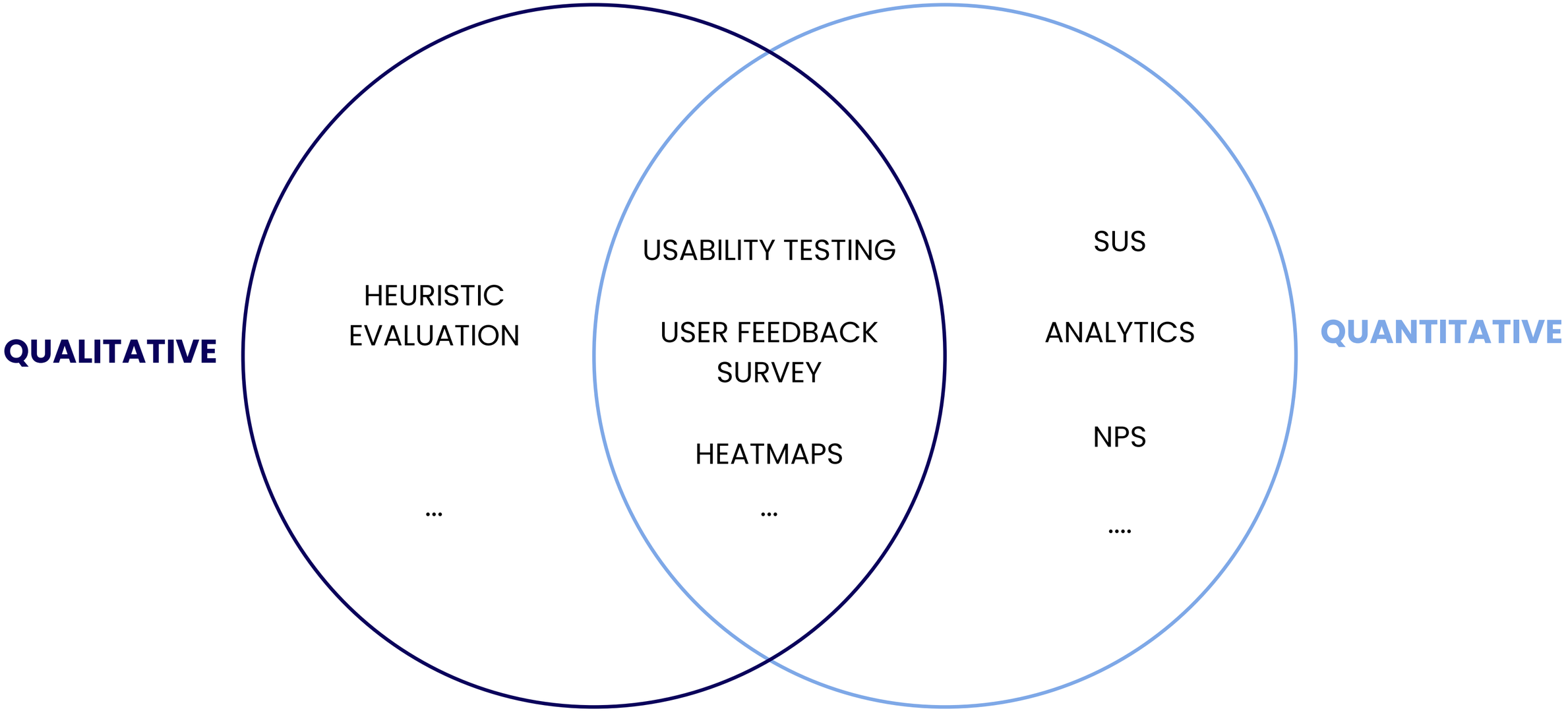
HELP AND DOCUMENTATION
Easy to find additional information when needed

HEURISTIC EVALUATION

✅ **EXPERTS HAVE KNOWLEDGE OF APPLICATION DOMAIN AND USERS**
✅ **FEW SUBSTANTIAL ISSUES TO CONSIDER** ➡️ **NO REAL USER INVOLVED**

⛔ **DIFFICULT AND EXPENSIVE TO FIND EXPERTS** 💸
⛔ **IMPORTANT ISSUE MAY GET MISSED, UNIMPORTANT ISSUE MAY GET RAISED** 🤦
⛔ **EXPERT HAVE BIASES**

EVALUATIVE RESEARCH



ANALYTICS

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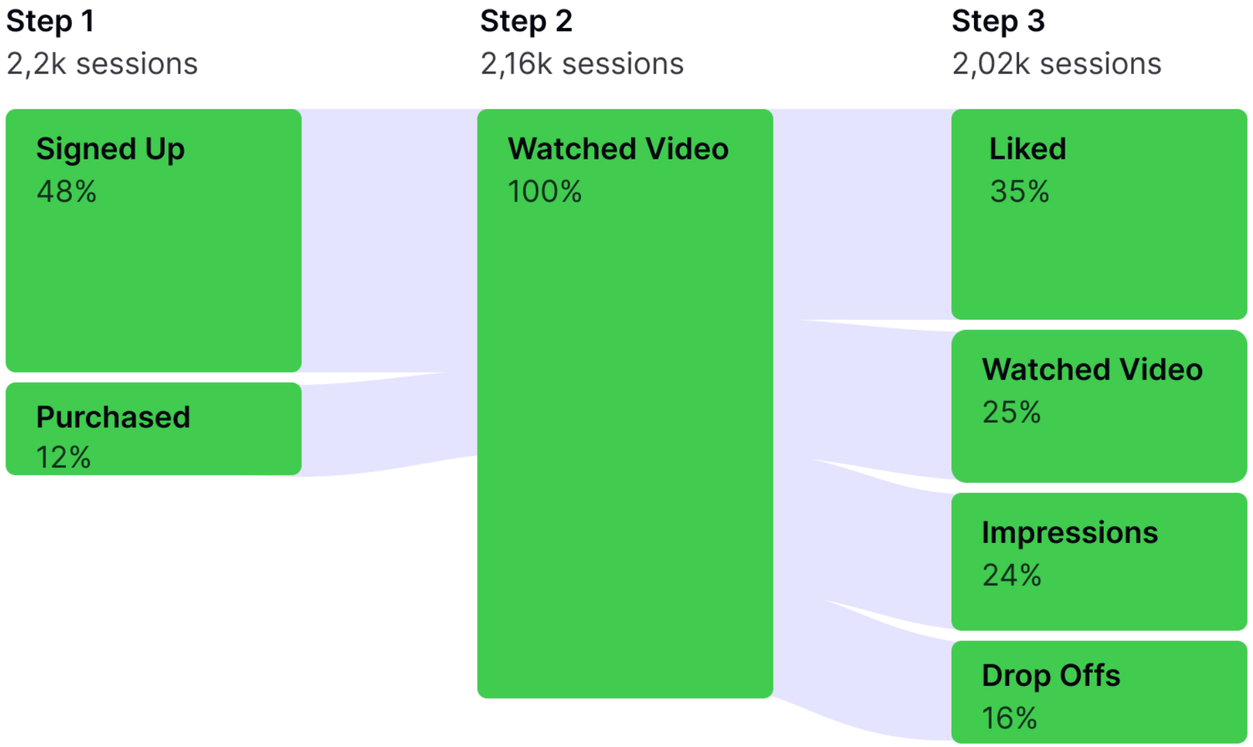
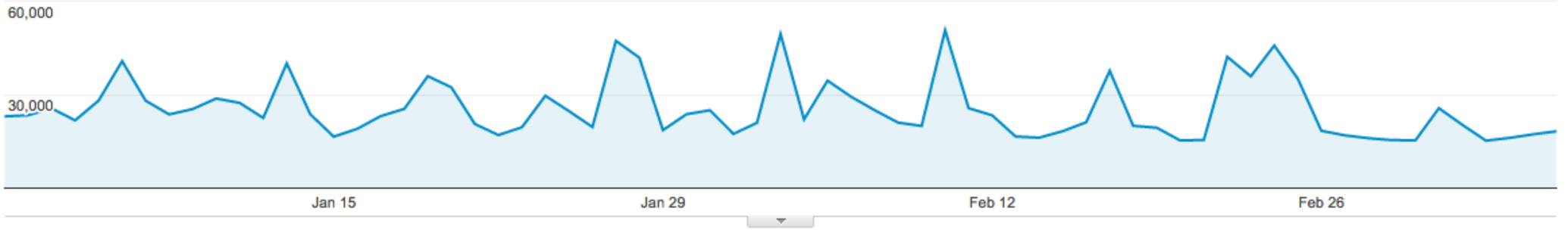


- STANDARD PAGEVIEW DATA
- **BEHAVIOR FLOW REPORT**
- **GOALS AND FUNNELS**
- **EVENT TRACKING**
- **TIME TRACKING**

- Audience
  - Overview
  - Active Users BETA
  - Cohort Analysis BETA
  - Demographics
  - Interests
  - Geo
  - Behavior
  - Technology
  - Mobile
    - **Overview**
    - Devices
  - Custom
  - Benchmarking
  - Users Flow
- Acquisition

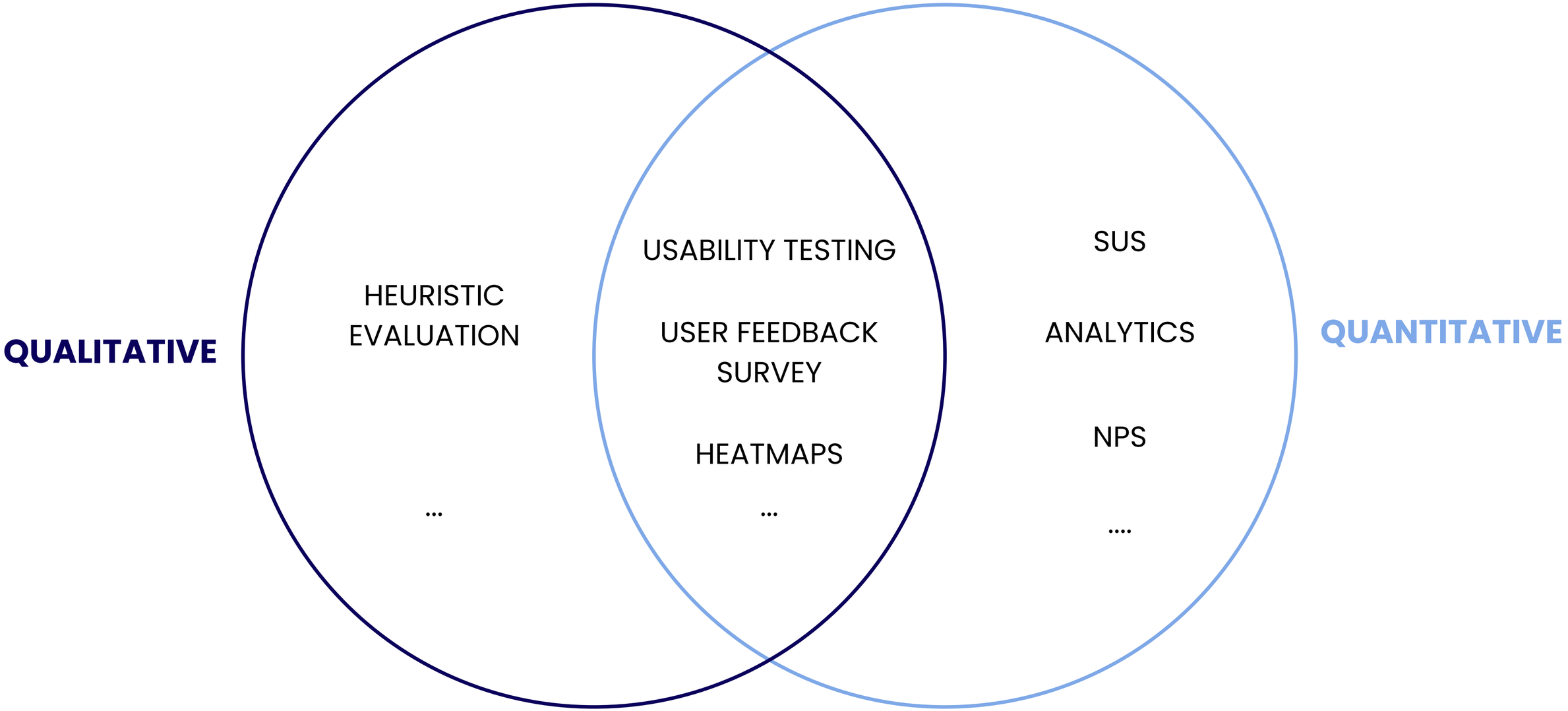


Primary Dimension: **Device Category**

Plot Rows | Secondary dimension | Sort Type: Default | advanced

	Device Category	Acquisition			Behavior			Conversions Goal 2: Newsletter - About		
		Sessions	% New Sessions	New Users	Bounce Rate	Pages / Session	Avg. Session Duration	Newsletter - About (Goal 2 Conversion Rate)	Newsletter - About (Goal 2 Completions)	Newsletter - About (Goal 2 Value)
		1,573,268 % of Total: 92.85% (1,694,456)	57.14% Avg for View: 57.15% (-0.03%)	898,899 % of Total: 92.82% (968,413)	80.42% Avg for View: 80.43% (-0.01%)	1.62 Avg for View: 1.62 (0.03%)	00:01:13 Avg for View: 00:01:12 (0.35%)	0.32% Avg for View: 0.31% (3.02%)	5,105 % of Total: 95.65% (5,337)	$0.00 % of Total: 0.00% ($0.00)
☐	1. mobile	**815,171** (51.81%)	58.39%	475,943 (52.95%)	85.16%	1.36	00:00:50	0.25%	2,067 (40.49%)	$0.00 (0.00%)
☐	2. desktop	**529,084** (33.63%)	57.33%	303,324 (33.74%)	73.58%	2.00	00:01:41	0.42%	2,197 (43.04%)	$0.00 (0.00%)
☐	3. tablet	**229,013** (14.56%)	52.24%	119,632 (13.31%)	79.37%	1.71	00:01:28	0.37%	841 (16.47%)	$0.00 (0.00%)

EVALUATIVE RESEARCH



USABILITY TESTING

USABILITY TESTING

- THE PROCESS OF EVALUATING HOW EASY IT IS TO USE A PRODUCT, SUCH AS A WEBSITE OR AN APP, BY WATCHING REAL PEOPLE OPERATE IT AND GATHERING THEIR FEEDBACK.
- THE GOAL IS TO IDENTIFY ANY PROBLEMS OR AREAS WHERE THE USER EXPERIENCE CAN BE IMPROVED
- DURING A USABILITY TESTING SESSION, PARTICIPANTS ARE TYPICALLY ASKED TO PERFORM A SET OF TASKS ON THE PRODUCT BEING TESTED. AT THE SAME TIME, THE RESEARCHER OBSERVES AND TAKES NOTES.
- CAN BE CONDUCTED IN VARIOUS WAYS, SUCH AS IN-PERSON, REMOTE, MODERATED, OR UNMODERATED

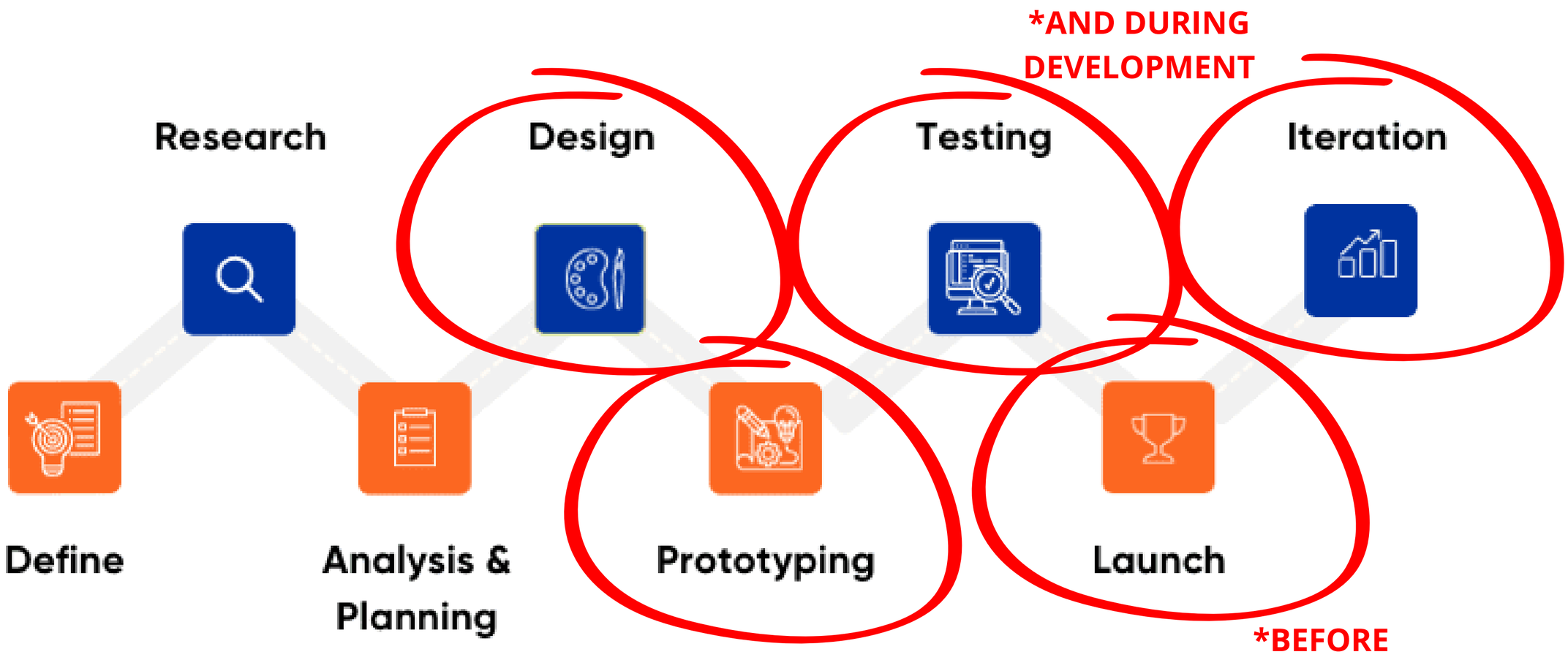
WHY USABILITY TESTING

TO IDENTIFY USABILITY ISSUES

TO ENSURE USER SATISFACTION

TO INFORM DESIGN DECISIONS

TO INCREASE ADOPTION AND REVENUE


*AND DURING DEVELOPMENT
Research
Design
Testing
Iteration
Define
Analysis & Planning
Prototyping
Launch
*BEFORE

USABILITY TESTING

PLANNING

EXECUTION

SYNTHESIS & REPORTING

PLANNING

PLANNING USABILITY TESTING

SELECT REPRESENTATIVE USERS, DEVELOP REPRESENTATIVE TASKS

PREPARE THE PROTOTYPE/TESTING PRODUCT

EVERY PARTICIPANT GETS THE SAME TASKS

DEVELOP BRIEFING SCRIPT, PRELIMINARY UT, POST-UT AND DEBRIEFING SCRIPT

CRAFT INFORMED CONSENT FORM

SCHEDULE 30-60 MINUTES FOR EACH PARTICIPANT TO CONDUCT USABILITY TESTING

TYPICALLY AT LEAST TWO TESTERS ARE NEEDED TO CONDUCT;
ONE AS A FACILITATOR, ONE AS A NOTE TAKER AND SUPPORT

FACILITATOR

- SETTING UP THE TESTING ENVIRONMENT
- RECRUITING PARTICIPANTS
- EXPLAINING THE TASKS TO PARTICIPANTS
- COLLECTING DATA ON THE PARTICIPANTS' PERFORMANCE
- DEBRIEFING THEM AT THE END
- ANALYZING THE RESULTS TO IDENTIFY ANY ISSUES OR OPPORTUNITIES FOR IMPROVEMENT

PARTICIPANTS

- **RECRUIT ~5 PARTICIPANTS IS ENOUGH**
- **PARTICIPANTS WHO HAVE PRIOR EXPERIENCE WITH THE PRODUCT BEING TESTED OR KNOWLEDGE OF ITS DESIGN AND DEVELOPMENT MAY NOT BE SUITABLE AS THEY MAY EXHIBIT BIASED OPINIONS OR BEHAVIORS.**
- **DISCLAIM PARTICIPANTS: WE'RE TESTING THE PRODUCT, NOT YOU. EVERY SINGLE THING THAT YOU'LL DO IN THIS TESTING IS VALID**

ETHICAL CONDUCT TO PARTICIPANTS

- **INFORMED CONSENT: BEFORE TAKING PART IN THE STUDY, PARTICIPANTS MUST BE FULLY INFORMED ABOUT THE STUDY'S NATURE, RISKS, AND BENEFITS. THEY MUST ALSO GIVE THEIR INFORMED CONSENT.**
- **VOLUNTARY PARTICIPATION: PARTICIPANTS SHOULDN'T BE FORCED OR PRESSURED TO PARTICIPATE IN THE STUDY. THEY MUST BE FREE TO WITHDRAW AT ANY TIME WITHOUT ANY PENALTY.**
- **CONFIDENTIALITY: PERSONAL INFORMATION OF PARTICIPANTS SHOULD BE KEPT CONFIDENTIAL AND NOT BE SHARED WITH ANYONE OUTSIDE THE RESEARCH TEAM.**
- **DEBRIEFING: AFTER THE STUDY, PARTICIPANTS MUST BE TOLD ABOUT THE STUDY'S PURPOSE AND ALLOWED TO ASK QUESTIONS.**
- **RESPECT FOR PARTICIPANTS: PARTICIPANTS SHOULD BE TREATED RESPECTFULLY AND WITH DIGNITY THROUGHOUT THE STUDY, AND THEIR BELIEFS AND VALUES SHOULD BE TAKEN INTO ACCOUNT.**

UT PLAN

PRODUCT UNDER TEST

Technology:

teknologi apa yang akan diuji? aplikasi? produk tangible?

Feature(s) tested:

- *daftar fitur yang akan diuji*
- *....*

BUSINESS CASE

Background:

dari POV bisnis, mengapa perlu produk ini diujikan?

Benefits:

- *daftar manfaat secara bisnis untuk UT ini*
- *....*

TEST OBJECTIVES

Goals:

- *daftar tujuan mengapa UT ini dilakukan dari POV product development*
- ...

PARTICIPANTS

Participants number: #

Key character/persona:

- *karakteristik user 1*
- *karakteristik user 2*
- *....*

EQUIPMENT

- *daftar alat dan bahan untuk UT ini*
- ....

TEST TASKS

Tasks:

- *task yang diujikan 1*
- *task yang diujikan 2*
- *...*

Post Task & Test Questionnaire:

- *kuesioner 1*
- *survey 1*
- *....*

SUPPORT

Facilitator:

Observer:

Tech support:

LOCATION & DATES

Tanggal, Jam: ...

Lokasi:

PROCEDURE

langkah-langkah UT-nya apa saja?

PRODUCT UNDER TEST

Being tested :
Aplikasi GOJEK mobile Android

Fitur saat test :
Go-Food

BUSINESS CASE
Why:
- Kebutuhan validasi experience User menggunakan aplikasi mobile khususnya informasi merchant & pembayaran merchant offline (QR Code).

Benefits:
- Meningkatkan traffic pengguna.
- Meningkatkan transaksi.

TEST OBJECTIVES

Goals:
Apakah user dapat dengan mudah mengetahui cara Mencari jenis makanan kesukaan user, Mencari jenis makanan yang ditentukan, Mencari penunjuk arah ke merchant terdekat , Mencari merchant minuman sehat dari kategori, Melihat informasi merchant yang direkomendasikan, Pembayaran melalui QR statis, Pembayaran melalui aplikasi, Mengetahui status pembayaran yang sudah dilakukan.

- Apakah flow yang diimplementasikan pada aplikasi sudah sesuai dengan mental model dari user?.

PARTICIPANTS

Bandar Lampung: 5 orang

Key Character/Persona :
- 5 orang mahasiswa (usia 18 – 23 tahun)

EQUIPMENT

- Smartphone
- Desktop
- Aplikasi lookback

TEST TASKS

1. Mencari jenis makanan kesukaan user
2. Mencari jenis merchant yang sudah ditentukan
3. Mencari penunjuk arah ke merchant terdekat
4. Mencari merchant minuman sehat dari kategori
5. Melihat informasi merchant yang direkomendasikan
6. Pembayaran melalui QR statis
7. Pembayaran melalui aplikasi
8. Mengetahui status pembayaran yang sudah dilakukan

Post Task & Test Questionnaire :
- Post task
- Post test (SUS & NPS)

RESPONSIBILITIES

Facilitator, Observer
Hafiz, Iqbal

Tech Support/Observer
Ginar

LOCATION & DATES

Lokasi : MBK Food Court
Waktu : Sabtu 8 Des 2018

Procedure

The main step of procedure UT

BRIEFING SCRIPT

- **INTRODUCE WHO YOU ARE AND WHAT INTENTIONS OF THIS USABILITY TESTING ARE**
  - **FOR INEXPERIENCED PARTICIPANTS, INTRODUCE HOW THIS USABILITY TESTING WOULD GO**

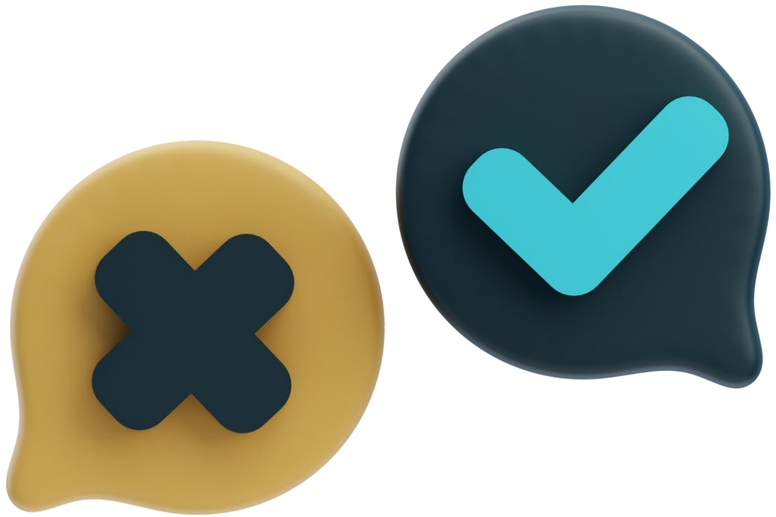
- **DELIVER INFORMED CONSENT FORM AND GET THEIR APPROVAL**

- **STATE THE EXPECTATIONS & DISCLAIMERS:**
  - **“THE TESTING IS TO THE PRODUCT, NOT YOU”**
  - **“WE NEED YOU TO THINK OUT LOUD”**
  - **CONDITIONS THEY ARE ABOUT TO HAVE DURING THE SESSION**
  - **REWARDS THEY WILL GET AFTER THE SESSION**

PRELIMINARY USABILITY TESTING

- **BACKGROUND CHECK**
  - **DEMOGRAPHY, JOB, AGE, ORIGIN, ETC.**
- **SCREENING INTERVIEW**
  - **WHAT KEY USER PERSONA THIS PARTICIPANT WOULD FIT INTO?**
  - **ARE THEY CAPABLE TO PROCEED TO CONDUCT THIS USABILTY TESTING?**
- **BEHAVIORAL & ATTITUDINAL INTERVIEW**
  - **HOW THEY ACT AND THINK IN DAILY BASIS?**
  - **HOW THEY ACT AND THINK TOWARDS THE OBJECTIVES OF THE PRODUCT BEING TESTED?**

INFORMED CONSENT FORM



- **BECAUSE WE WOULD LIKE TO RECORD AND LOG EVERY SINGLE ACTION THE PARTICIPANTS WILL BE PERFORMING IN USABILITY TESTING, WE MUST ASK FOR THEIR CONSENT TO CONDUCT USABILITY TESTING.**

- **BUILD THEIR TRUST TO US AND MIND THEIR PRIVACY!**

- **INFORMED CONSENT FORM AT LEAST CONTAINS:**
  - **PARTICIPANT'S NAME OR INITIAL**
  - **PRIVACY POLICY STATEMENTS**
  - **THEIR CONSENT APPROVAL**

UT TASK & SCENARIO

- **TASK = SPECIFIC ACTION THAT PARTICIPANTS PERFORM WHILE INTERACTING WITH THE PRODUCT BEING TESTED**

- **SCENARIO = ELABORATED TASK WITH CLEAR INSTRUCTIONS AND PROBES TO PERFORM SPECIFIC ACTION**

UT SCENARIO

TASK 1: {nama task}

GOAL: {tujuan task ini untuk apa}

SCENARIO: {skenario untuk UT}

PRE CONDITIONS:
- **{semua kondisi sebelum Task 1 dijalankan}**

TASK 2: {nama task}

GOAL: {tujuan task ini untuk apa}

SCENARIO: {skenario untuk UT}

PRE CONDITIONS:
- **{semua kondisi sebelum Task 1 dijalankan}**

TASK 1: Memasukkan item ke keranjang

GOAL: Melihat kemudahan user untuk memasukkan item ke keranjang di homepage

SCENARIO: Anda hendak memasukkan bayam ke keranjang untuk dibelanjakan

PRE CONDITIONS:

- User sudah login
- User sudah mulai dari homepage

WRITE CLEAR AND CONCISE TASKS AND SCENARIOS

Task 2/12

Please write a review for a car rental company on the app.

Task 2/12

Find and rent a car for a weekend trip within a budget of $150 for the entire weekend

WRITE CLEAR AND CONCISE TASKS AND SCENARIOS

Task 3/12

Configure the SSL certificate and TLS protocol settings for a $10,000 international wire transfer on your mobile banking app account.

Task 3/12

Transfer $50 to a friend's bank account using the mobile app.

CONSIDERATIONS TO DEVELOP EFFECTIVE TASKS

- START BY DEFINING THE MOST IMPORTANT GOALS THAT USERS WANT TO ACCOMPLISH USING YOUR SITE OR APP. THIS CAN HELP YOU IDENTIFY AREAS WHERE USERS MAY ENCOUNTER ISSUES, STRUGGLE, OR EXPERIENCE FRICTION, PROVIDING VALUABLE INSIGHTS INTO HOW YOU CAN IMPROVE THE USER EXPERIENCE.

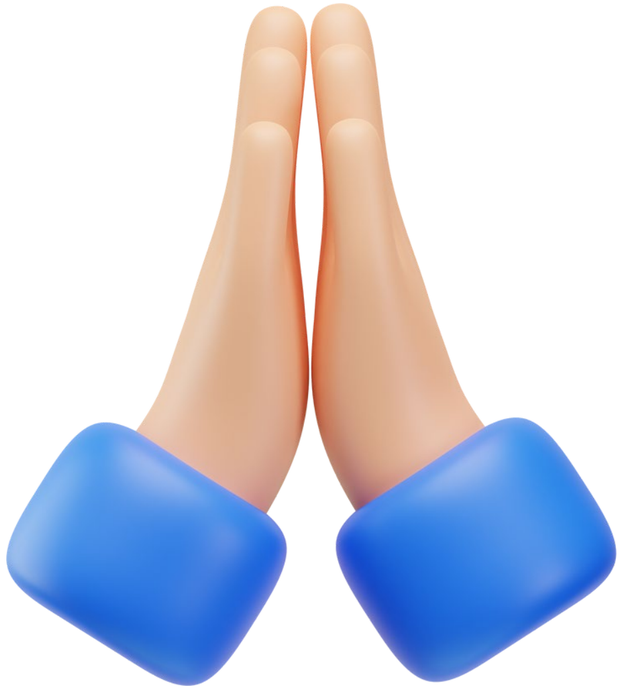
- ADD CONTEXT TO ENGAGE USERS WITH THE INTERFACE. FOR EXAMPLE, INSTEAD OF ASKING PARTICIPANTS TO "SEARCH FOR A PRODUCT," PROVIDE A SCENARIO WHERE THEY ARE LOOKING FOR A SPECIFIC PRODUCT TYPE FOR A PARTICULAR USE CASE.

- KEEP TASKS CLEAR AND CONCISE. PARTICIPANTS SHOULD UNDERSTAND WHAT THEY NEED TO DO WITHOUT CONFUSION OR AMBIGUITY. AVOID USING TECHNICAL JARGON OR OVERLY COMPLEX LANGUAGE THAT COULD MAKE TASKS CHALLENGING TO UNDERSTAND.

- INCLUDE A MIX OF TASKS COVERING DIFFERENT FEATURES AND FUNCTIONS OF THE PRODUCT. THIS CAN HELP IDENTIFY AREAS WHERE USERS MAY STRUGGLE OR ENCOUNTER ISSUES.

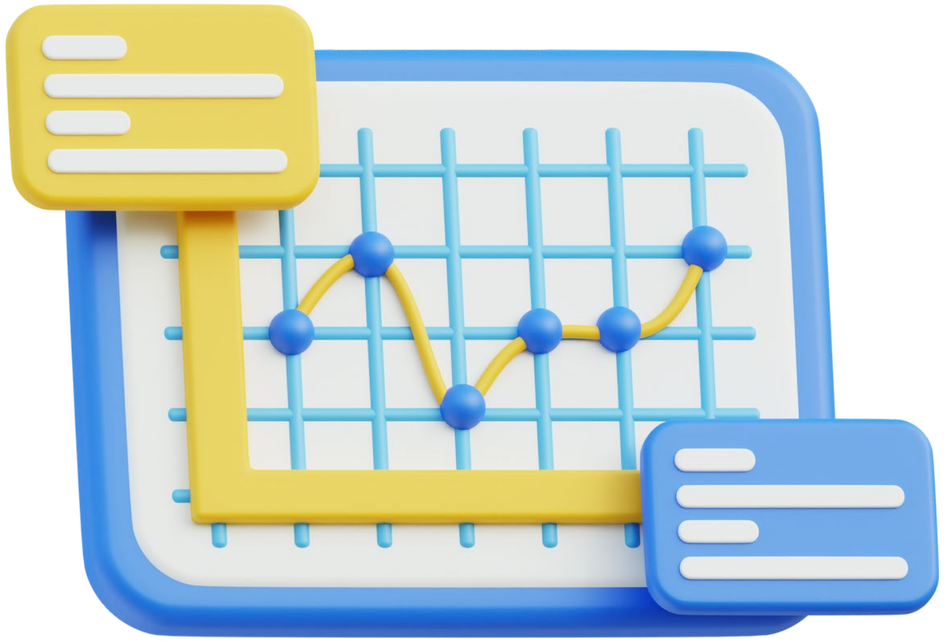
- TEST BOTH COMMON AND UNCOMMON SCENARIOS. WHILE IT'S ESSENTIAL TO TEST TASKS THAT ARE LIKELY TO BE PERFORMED FREQUENTLY BY USERS, LESS COMMON TESTING TASKS ARE ALSO IMPORTANT. THIS CAN HELP IDENTIFY ISSUES THAT MAY ONLY OCCUR IN SPECIFIC SCENARIOS OR EDGE CASES

DEBRIEFING SCRIPT



- **STATE THAT THE TESTING HAS BEEN DONE**
- **POST-UT INTERVIEW**
  - **HOW WAS THE EXPERIENCE?**
  - **ANY PAIN POINTS DID YOU ENCOUNTER?**
  - **WHAT COULD BE IMPROVED FOR THIS PRODUCT BEING TESTED?**
- **DELIVER POST-UT QUESTIONNAIRE AND SURVEY (IF ANY)**
- **SAY THANK YOU AND GIVE THE REWARDS (IF ANY)**

POST USABILITY TESTING QUESTIONNAIRE



- **SINGLE EASY QUESTION(S)**
- **SYSTEM USABILITY OF SCALE**
- ....

SINGLE EASY QUESTION

Task No. #: {task name}

- Did you successfully complete the task? 
- How easy was it for you to complete the task?

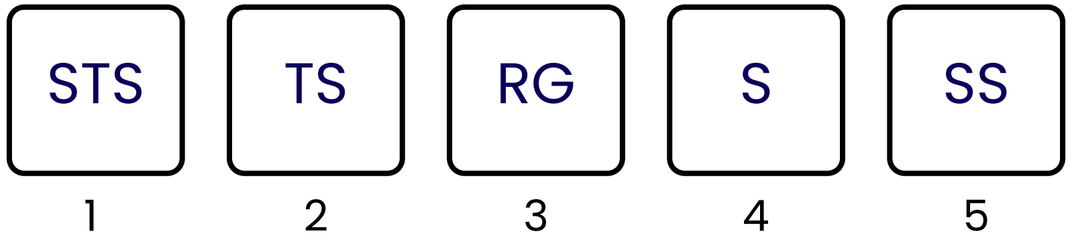
Very Unlikely 1 2 3 4 5 6 Very Likely

- Any comments?

SYSTEM USABILITY SCALE (SUS)

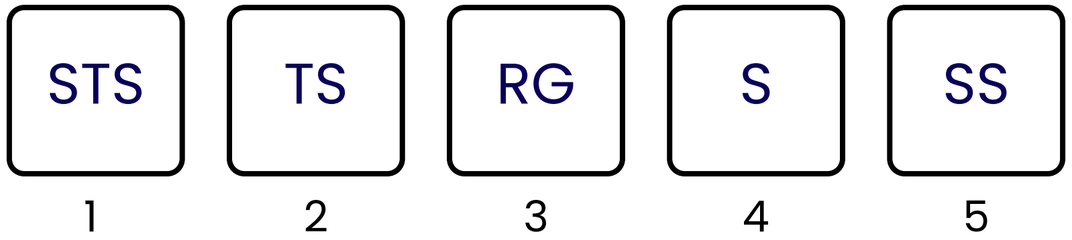
Saya berpikir akan menggunakan sistem ini lagi	STS	TS	RG	S	SS
Saya merasa sistem ini rumit untuk digunakan	STS	TS	RG	S	SS
Saya merasa sistem ini mudah digunakan	STS	TS	RG	S	SS
Saya membutuhkan bantuan dari orang lain atau teknisi dalam menggunakan sistem ini	STS	TS	RG	S	SS
Saya merasa fitur-fitur sistem ini berjalan dengan semestinya	STS	TS	RG	S	SS
Saya merasa ada banyak hal yang tidak konsisten (tidak serasi pada sistem ini)	STS	TS	RG	S	SS
Saya merasa orang lain akan memahami cara menggunakan sistem ini dengan cepat	STS	TS	RG	S	SS
Saya merasa sistem ini membingungkan	STS	TS	RG	S	SS
Saya merasa tidak ada hambatan dalam menggunakan sistem ini	STS	TS	RG	S	SS
Saya perlu membiasakan diri terlebih dahulu sebelum menggunakan sistem ini	STS	TS	RG	S	SS

Saya berpikir akan menggunakan sistem ini lagi



SUS Score = Xi – 1

Saya merasa sistem ini rumit untuk digunakan



SUS Score = 5 – Xi

Saya berpikir akan menggunakan sistem ini lagi	STS	TS	RG	S	SS	Xi – 1
Saya merasa sistem ini rumit untuk digunakan	STS	TS	RG	S	SS	5 – Xi
Saya merasa sistem ini mudah digunakan	STS	TS	RG	S	SS	Xi – 1
Saya membutuhkan bantuan dari orang lain atau teknisi dalam menggunakan sistem ini	STS	TS	RG	S	SS	5 – Xi
Saya merasa fitur-fitur sistem ini berjalan dengan semestinya	STS	TS	RG	S	SS	Xi – 1
Saya merasa ada banyak hal yang tidak konsisten (tidak serasi pada sistem ini)	STS	TS	RG	S	SS	5 – Xi
Saya merasa orang lain akan memahami cara menggunakan sistem ini dengan cepat	STS	TS	RG	S	SS	Xi – 1
Saya merasa sistem ini membingungkan	STS	TS	RG	S	SS	5 – Xi
Saya merasa tidak ada hambatan dalam menggunakan sistem ini	STS	TS	RG	S	SS	Xi – 1
Saya perlu membiasakan diri terlebih dahulu sebelum menggunakan sistem ini	STS	TS	RG	S	SS	5 – Xi

Saya berpikir akan menggunakan sistem ini lagi	STS	TS	RG	**S**	SS	Xi – 1
Saya merasa sistem ini rumit untuk digunakan	STS	TS	**RG**	S	SS	5 – Xi
Saya merasa sistem ini mudah digunakan	STS	TS	**RG**	S	SS	Xi – 1
Saya membutuhkan bantuan dari orang lain atau teknisi dalam menggunakan sistem ini	STS	**TS**	RG	S	SS	5 – Xi
Saya merasa fitur-fitur sistem ini berjalan dengan semestinya	STS	TS	RG	**S**	SS	Xi – 1
Saya merasa ada banyak hal yang tidak konsisten (tidak serasi pada sistem ini)	STS	TS	**RG**	S	SS	5 – Xi
Saya merasa orang lain akan memahami cara menggunakan sistem ini dengan cepat	STS	**TS**	RG	S	SS	Xi – 1
Saya merasa sistem ini membingungkan	STS	TS	**RG**	S	SS	5 – Xi
Saya merasa tidak ada hambatan dalam menggunakan sistem ini	STS	TS	RG	**S**	SS	Xi – 1
Saya perlu membiasakan diri terlebih dahulu sebelum menggunakan sistem ini	STS	TS	RG	S	**SS**	5 – Xi

Saya berpikir akan menggunakan sistem ini lagi	STS	TS	RG	**S**	SS	Xi – 1
Saya merasa sistem ini rumit untuk digunakan	STS	TS	**RG**	S	SS	5 – Xi
Saya merasa sistem ini mudah digunakan	STS	TS	**RG**	S	SS	Xi – 1
Saya membutuhkan bantuan dari orang lain atau teknisi dalam menggunakan sistem ini	STS	**TS**	RG	S	SS	5 – Xi
Saya merasa fitur-fitur sistem ini berjalan dengan semestinya	STS	TS	RG	**S**	SS	Xi – 1
Saya merasa ada banyak hal yang tidak konsisten (tidak serasi pada sistem ini)	STS	TS	**RG**	S	SS	5 – Xi
Saya merasa orang lain akan memahami cara menggunakan sistem ini dengan cepat	STS	**TS**	RG	S	SS	Xi – 1
Saya merasa sistem ini membingungkan	STS	TS	**RG**	S	SS	5 – Xi
Saya merasa tidak ada hambatan dalam menggunakan sistem ini	STS	TS	RG	**S**	SS	Xi – 1
Saya perlu membiasakan diri terlebih dahulu sebelum menggunakan sistem ini	STS	TS	RG	S	**SS**	5 – Xi

Saya berpikir akan menggunakan sistem ini lagi	STS	TS	RG	**4**	SS	Xi – 1
Saya merasa sistem ini rumit untuk digunakan	STS	TS	**3**	S	SS	5 – Xi
Saya merasa sistem ini mudah digunakan	STS	TS	**3**	S	SS	Xi – 1
Saya membutuhkan bantuan dari orang lain atau teknisi dalam menggunakan sistem ini	STS	**2**	RG	S	SS	5 – Xi
Saya merasa fitur-fitur sistem ini berjalan dengan semestinya	STS	TS	RG	**4**	SS	Xi – 1
Saya merasa ada banyak hal yang tidak konsisten (tidak serasi pada sistem ini)	STS	TS	**3**	S	SS	5 – Xi
Saya merasa orang lain akan memahami cara menggunakan sistem ini dengan cepat	STS	**2**	RG	S	SS	Xi – 1
Saya merasa sistem ini membingungkan	STS	TS	**3**	S	SS	5 – Xi
Saya merasa tidak ada hambatan dalam menggunakan sistem ini	STS	TS	RG	**4**	SS	Xi – 1
Saya perlu membiasakan diri terlebih dahulu sebelum menggunakan sistem ini	STS	TS	RG	S	**5**	5 – Xi

Saya berpikir akan menggunakan sistem ini lagi	4	Xi – 1
Saya merasa sistem ini rumit untuk digunakan	3	5 – Xi
Saya merasa sistem ini mudah digunakan	3	Xi – 1
Saya membutuhkan bantuan dari orang lain atau teknisi dalam menggunakan sistem ini	2	5 – Xi
Saya merasa fitur-fitur sistem ini berjalan dengan semestinya	4	Xi – 1
Saya merasa ada banyak hal yang tidak konsisten (tidak serasi pada sistem ini)	3	5 – Xi
Saya merasa orang lain akan memahami cara menggunakan sistem ini dengan cepat	2	Xi – 1
Saya merasa sistem ini membingungkan	3	5 – Xi
Saya merasa tidak ada hambatan dalam menggunakan sistem ini	4	Xi – 1
Saya perlu membiasakan diri terlebih dahulu sebelum menggunakan sistem ini	5	5 – Xi

Saya berpikir akan menggunakan sistem ini lagi	4	4 – 1	= 3
Saya merasa sistem ini rumit untuk digunakan	3	5 – 3	= 2
Saya merasa sistem ini mudah digunakan	3	3 – 1	= 2
Saya membutuhkan bantuan dari orang lain atau teknisi dalam menggunakan sistem ini	2	5 – 2	= 3
Saya merasa fitur-fitur sistem ini berjalan dengan semestinya	4	4 – 1	= 3
Saya merasa ada banyak hal yang tidak konsisten (tidak serasi pada sistem ini)	3	5 – 3	= 2
Saya merasa orang lain akan memahami cara menggunakan sistem ini dengan cepat	2	2 – 1	= 1
Saya merasa sistem ini membingungkan	3	5 – 3	= 2
Saya merasa tidak ada hambatan dalam menggunakan sistem ini	4	4 – 1	= 3
Saya perlu membiasakan diri terlebih dahulu sebelum menggunakan sistem ini	5	5 – 5	= 0

SUBTOTAL = 21

SUBTOTAL = 21

SUS SCORE = SUBTOTAL x 2,5

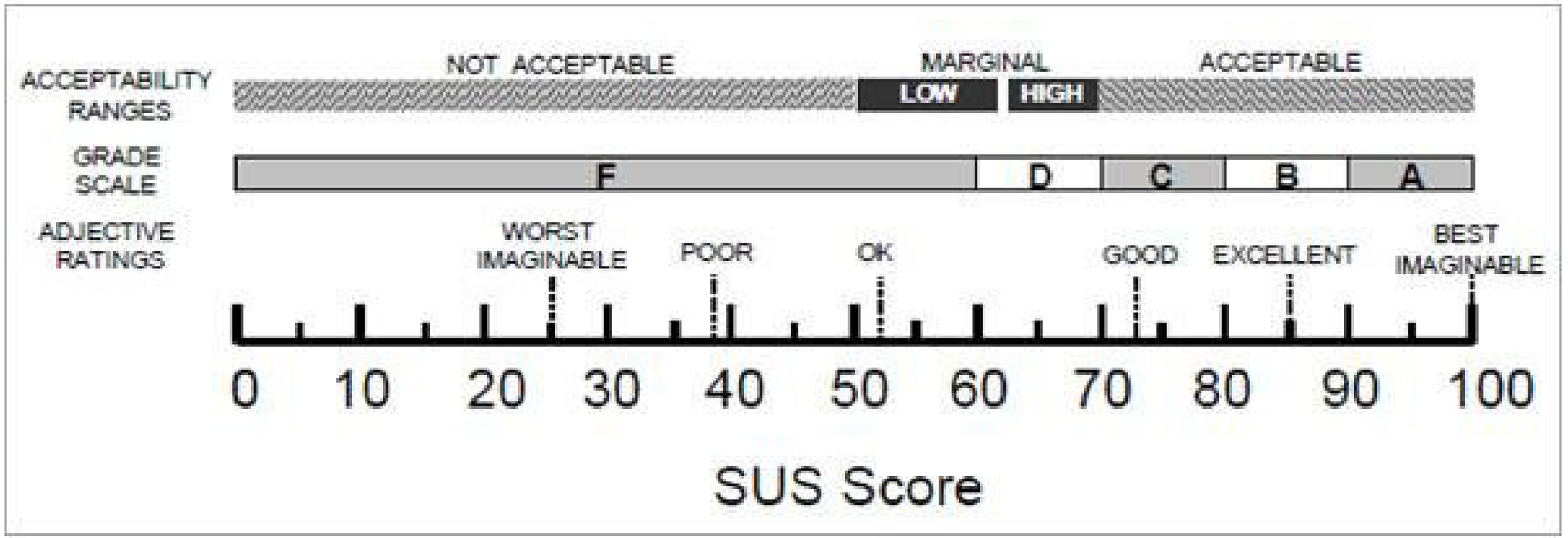
= 21 x 2,5

= 52,5

*ini baru satu partisipan

SUS SCORE FINAL = avg(SUS SCORE)

The average score of SUS is 68



Below than 68, the system is considered UNACCEPTABLE

USABILITY TESTING

PLANNING

EXECUTION

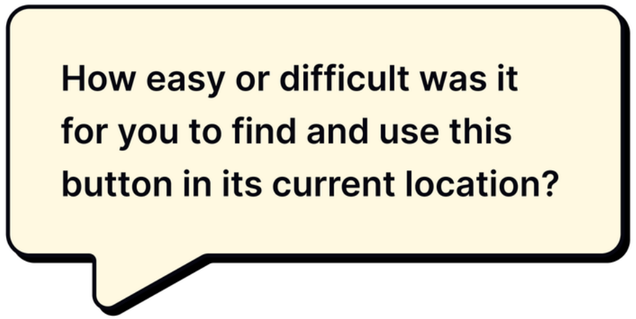
SYNTHESIS & REPORTING

EXECUTION

THINKING ALOUD

- A POPULAR WAY TO LEARN ABOUT WHAT PEOPLE ARE THINKING WHEN THEY USE A PRODUCT
- A FACILITATOR ASKS A PARTICIPANT TO EXPLAIN THEIR THOUGHTS AND ACTIONS AS THEY COMPLETE TASKS
- THE FACILITATOR MAY ASK QUESTIONS LIKE "WHAT ARE YOU THINKING RIGHT NOW?" OR "WHAT ARE YOU TRYING TO ACCOMPLISH?"

TALKING WHILE TESTING



- **IT'S CRUCIAL TO ENSURE THAT PARTICIPANTS FEEL COMFORTABLE AND PROVIDE HONEST FEEDBACK**
  - **"PLEASE FEEL FREE TO SPEAK YOUR THOUGHTS OUT LOUD AS YOU GO THROUGH THE TASKS."**
  - **"THERE ARE NO RIGHT OR WRONG ANSWERS — WE JUST WANT TO UNDERSTAND HOW YOU INTERACT WITH THE PRODUCT."**
  - **"WE APPRECIATE YOUR TIME AND FEEDBACK — IT WILL HELP US IMPROVE THE PRODUCT FOR FUTURE USERS."**

- **AVOID LEADING QUESTIONS**
  - **"DID YOU FIND THAT TASK EASY?"**
  - **"WAS IT FRUSTRATING WHEN THE SYSTEM DIDN'T WORK?"**
  - **"DID YOU NOTICE ANY DESIGN FLAWS DURING THE TASK?"**

BOOMERANG TECHNIQUE

FOR EXAMPLE, IF A USER EXPRESSES UNCERTAINTY ABOUT A BUTTON'S FUNCTION, NEVER ANSWER THEM!

INSTEAD YOU COULD ASK,

- **"WHERE DO YOU THINK IT MAY LEAD?" OR**
- **"WHAT WOULD YOU NORMALLY DO IN THIS SITUATION?"**

USABILITY TESTING

PLANNING

EXECUTION

SYNTHESIS & REPORTING

SYNTHESIS & REPORTING

SYNTHESIS & REPORTING

ANALYSIS

SYNTHESIS

REPORTING

ANALYSIS

Analysis will help teams clearly understand users' pain points and make rational decisions

QUANTITATIVE DATA

QUALITATIVE DATA

QUANTITATIVE DATA

QUESTIONING YOUR QUANTITATIVE DATA

THE SUCCESS RATE OF A SPECIFIC TASK

TIME USERS SPEND TO COMPLETE A TASK

THE BOUNCE RATE OF A WEBPAGE

USERS' DEMOGRAPHIC PROFILE

FEATURES THAT USERS USE THE MOST

USER SATISFACTION WITH A FEATURE OR PRODUCT

USER NEEDS THAT ARE NOT MET BY THE PRODUCT

CRITICAL FEATURES THAT REQUIRE THE GREATEST ATTENTION

DIFFERENT EXPERIENCES OF DIFFERENT USER GROUPS

BEGIN WITH ANALYSIS

Analysis will help teams clearly understand users' pain points and make rational decisions

QUANTITATIVE DATA

QUALITATIVE DATA

QUALITATIVE DATA

QUESTIONING YOUR QUALITATIVE DATA

WHAT DO USERS LIKE MOST ABOUT THIS PRODUCT?

WHAT DO THEY LIKE LEAST ABOUT THIS PRODUCT? WHY?

WHICH FUNCTIONS ARE MORE VALUABLE?

WHICH FUNCTIONS GET UNNOTICED?

DO THEY HAVE AN EMOTIONAL RESPONSE TO CERTAIN FEATURES? WHEN?

ARE THEY SATISFIED WITH THE PRODUCT? WHY?

HOW DOES THE PRODUCT FIT INTO THEIR DAILY LIVES? HOW IMPORTANT IS THIS PRODUCT TO THEM? WHY?

WHAT ARE THE MAJOR PATTERNS OR COMMON RESPONSES NOTICED IN USERS' BEHAVIOR?

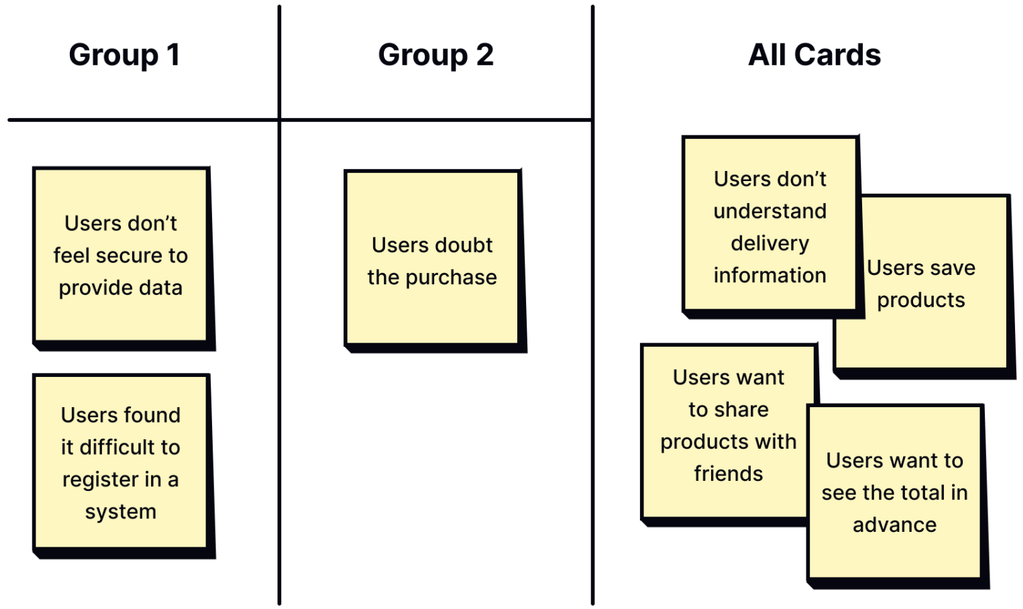
SYNTHESIS & REPORTING

ANALYSIS

SYNTHESIS

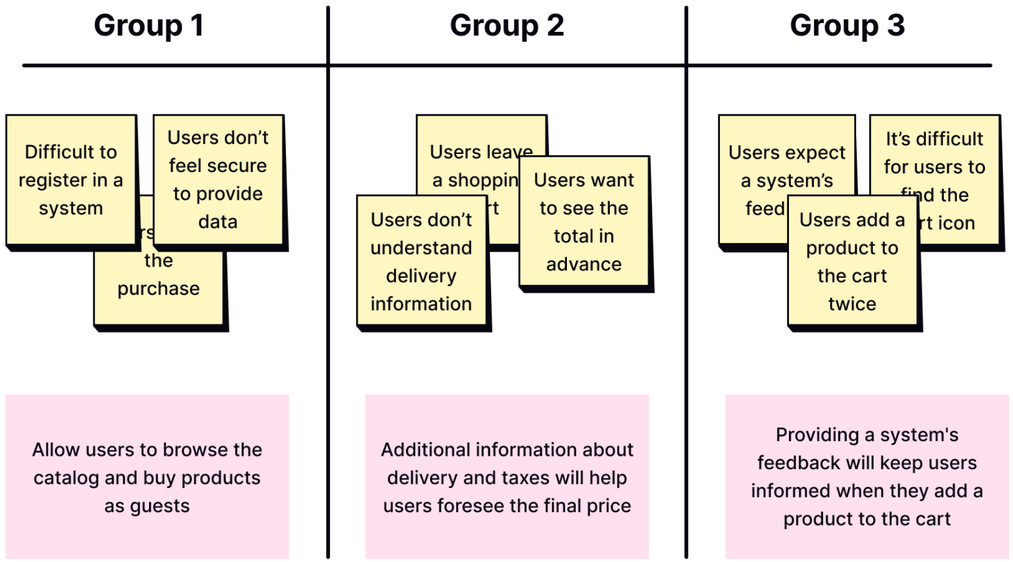
REPORTING

SYNTHESIS



- **COMPILE ALL RESOURCES (RECORDINGS, KEY PRESSES, NOTE, ETC) AND EXTRACT THE FINDINGS**
- **CATEGORIZE THE FINDINGS INTO DESIGNATED GROUPS OR CLUSTERS (BEHAVIORAL VS ATTITUDINAL, ETC).**
- **TYPICALLY, USE AFFINITY MAPPING METHOD TO HELP THE SYNTEHSIS**
  - **BASICALLY, YOU CAN USE EVERY IDEATION PROCESS TO HELP YOU SYNTHESIZE**
  - **AGAIN, USABILITY TESTING IS ONE OF THE RESEARCH TECHNIQUES.**

MAKE RECOMMENDATIONS



- PROVIDE ACTUAL RECOMMENDATIONS BASED ON THE KEY INSIGHTS AND SUPPORTING DATA
- YOU CAN BRAINSTORM TOGETHER AND TURN YOUR INSIGHTS INTO “HOW MIGHT WE” QUESTIONS
- **INSIGHT AND RECOMMENDATIONS HELP YOUR TEAM DEFINE WHAT TO FOCUS ON AND CAN BE POTENTIALLY TURNED INTO DESIGN SOLUTIONS**

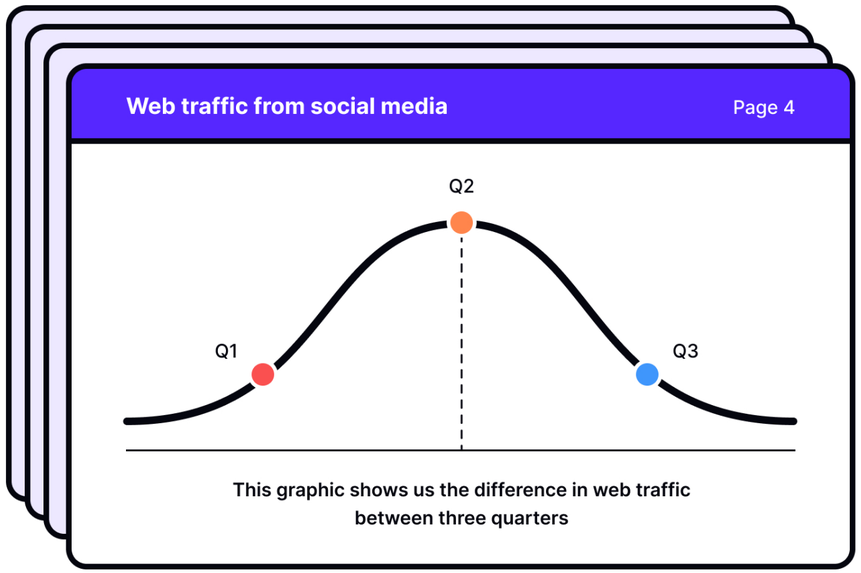
SYNTHESIS & REPORTING

ANALYSIS

SYNTHESIS

REPORTING

REPORTING



- REPORT IS ESSENTIAL TO COMMUNICATE FINDINGS OF YOUR RESEARCH EFFORTS TO STAKEHOLDERS AND RECOMMEND A COURSE OF ACTION

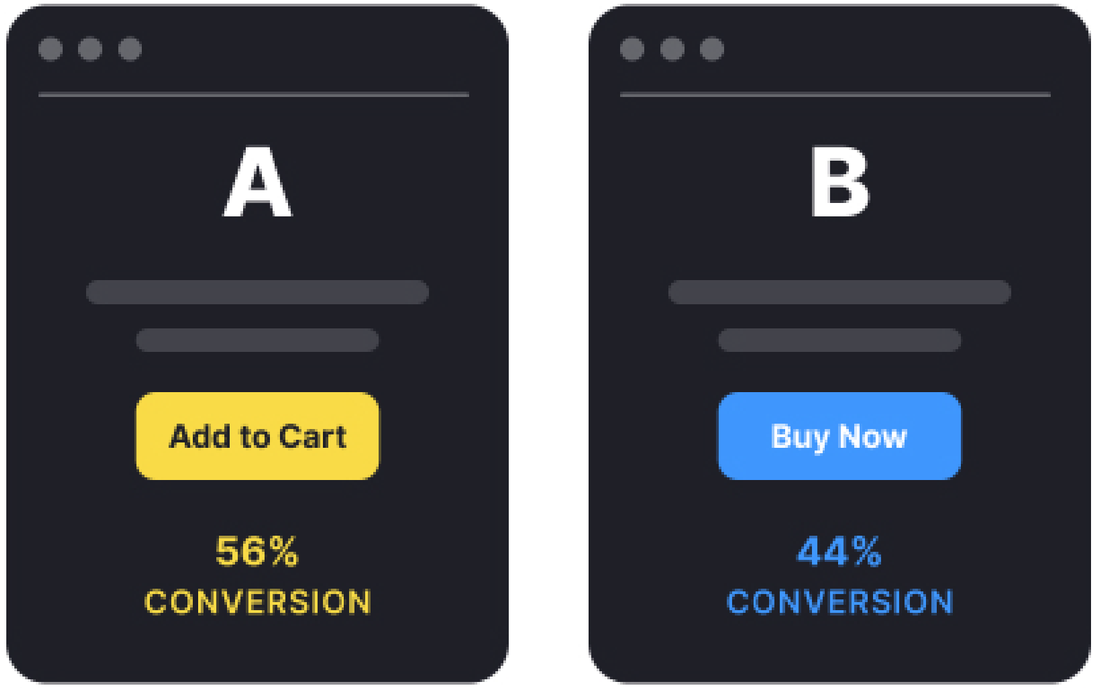
- **PARTS OF THE REPORT:**
  - **RESEARCH GOALS**
  - **KEY METRICS**
  - **METHODOLOGY**
  - **SIZE AND NATURE OF THE PARTICIPANTS INVOLVED**
  - **KEY INSIGHTS**
  - **RECOMMENDED FUTURE ACTIONS**

DEMONSTRATION

OTHER TESTING & EVALUATION

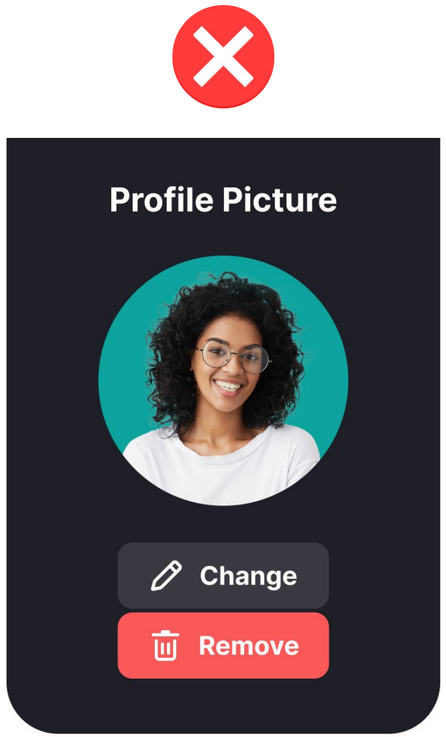
A/B TESTING

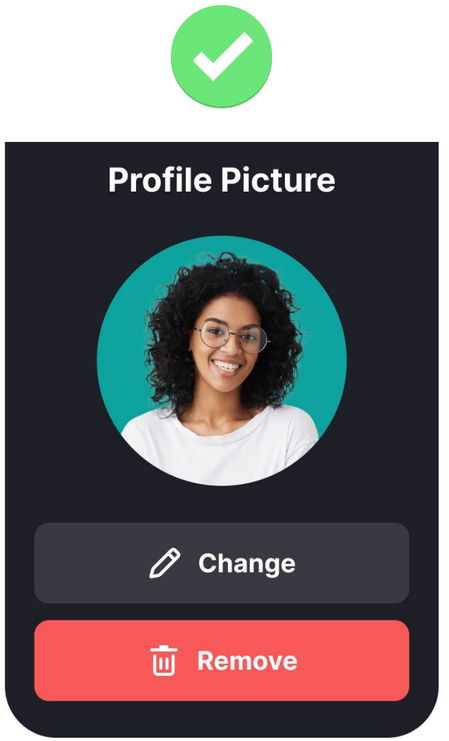
A testing method used to compare 2 versions of a design, copy, concept, or solution to determine which perform better in terms of user engagement, conversions, or other key metrics



FITT'S LAW

"The closer and larger a target, the quicker and easier it is to interact with it"





Fitts' Law is useful for evaluating systems for which the time to locate an object is important, for example, smartphones, handhelds, and mobile devices

That’s all folks!

Happy testing!

www.Instagram.com/joshuadbeyravana

www.linkedin.com/joshuadbeyravana