

Experience Research Toolkit

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Purpose of this deck:

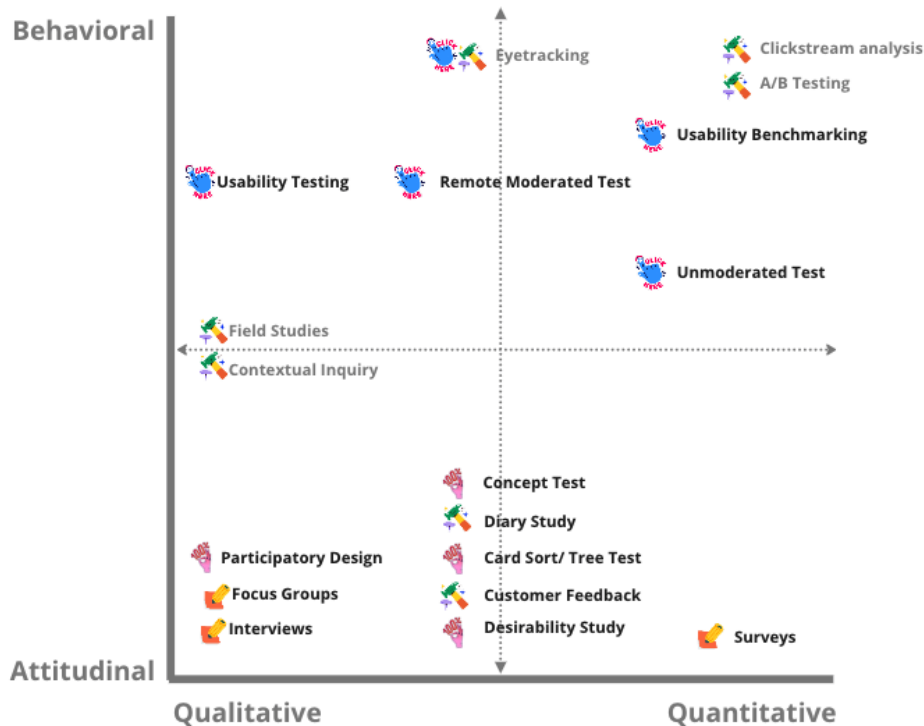
Understand the Experience Research (XR) methods and toolkits and how it can be utilized across design and product to rigorously and efficiently answer our questions.

Agenda

- 1 **Have we done enough XR?**
- 2 **Which XR method should I use?**
- 3 **XR methods – What, How, When**

XR Methods

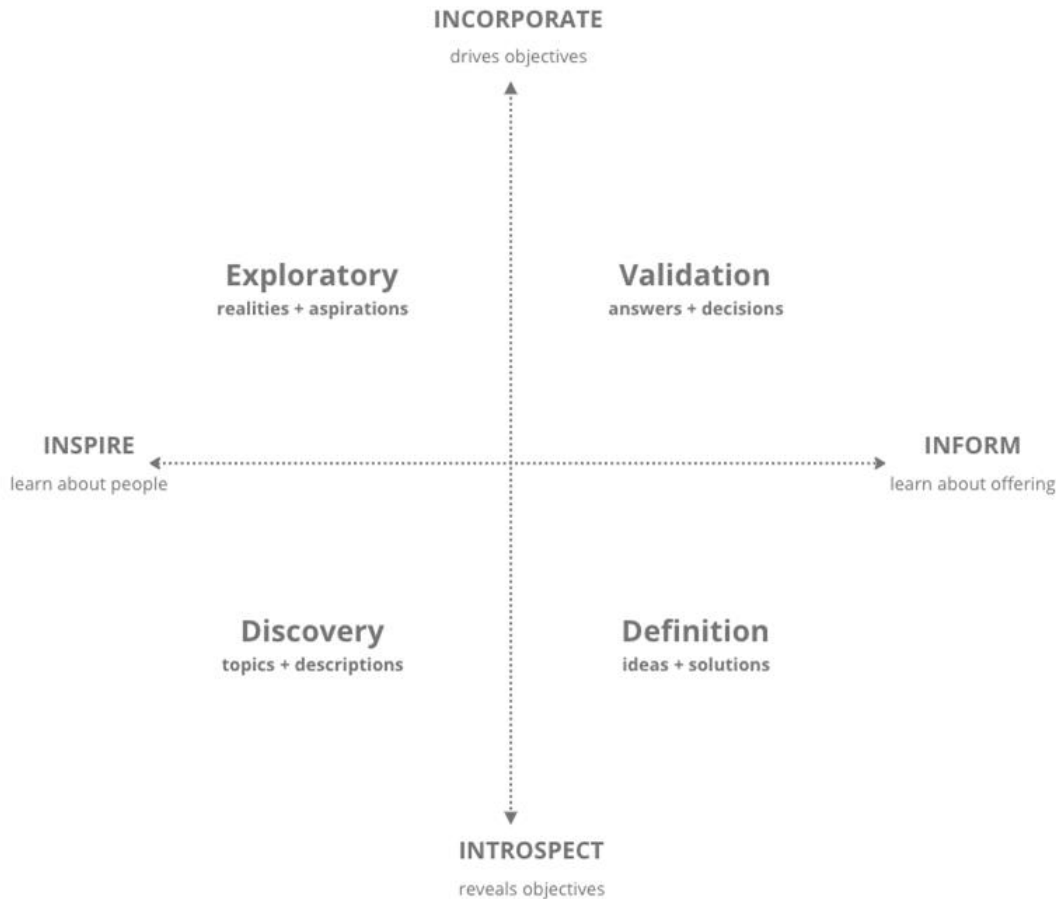
Have we done enough XR?
Which XR method should I use?



Question: Have we done enough XR?

Answer: Triangulate on different lenses: what people say, what they do, get deep into few, aggregate in large scale

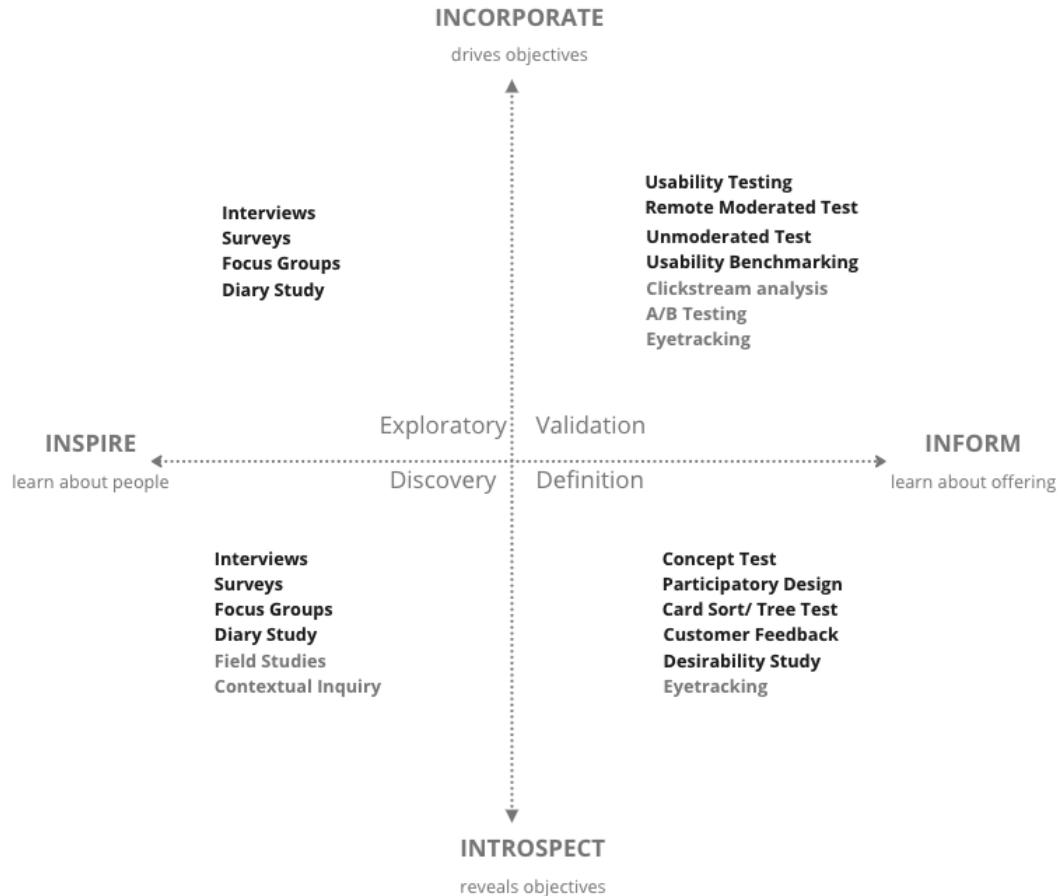
- People Behavior / Attitude:**
Observing people's behavior - combined with - *listening to* people's stories & attitudes, adds to robustness of findings.
- Qualitative / Quantitative:**
 Digging deep into soft data (answering *Why? What? How?*)- combined with - aggregate data from a large sample of people (*How often? How many?*) assures depth & representativeness



Question: Which XR methods should I use?

Answer: Select your methods based on where in the product life cycle you are & what type of research questions you have

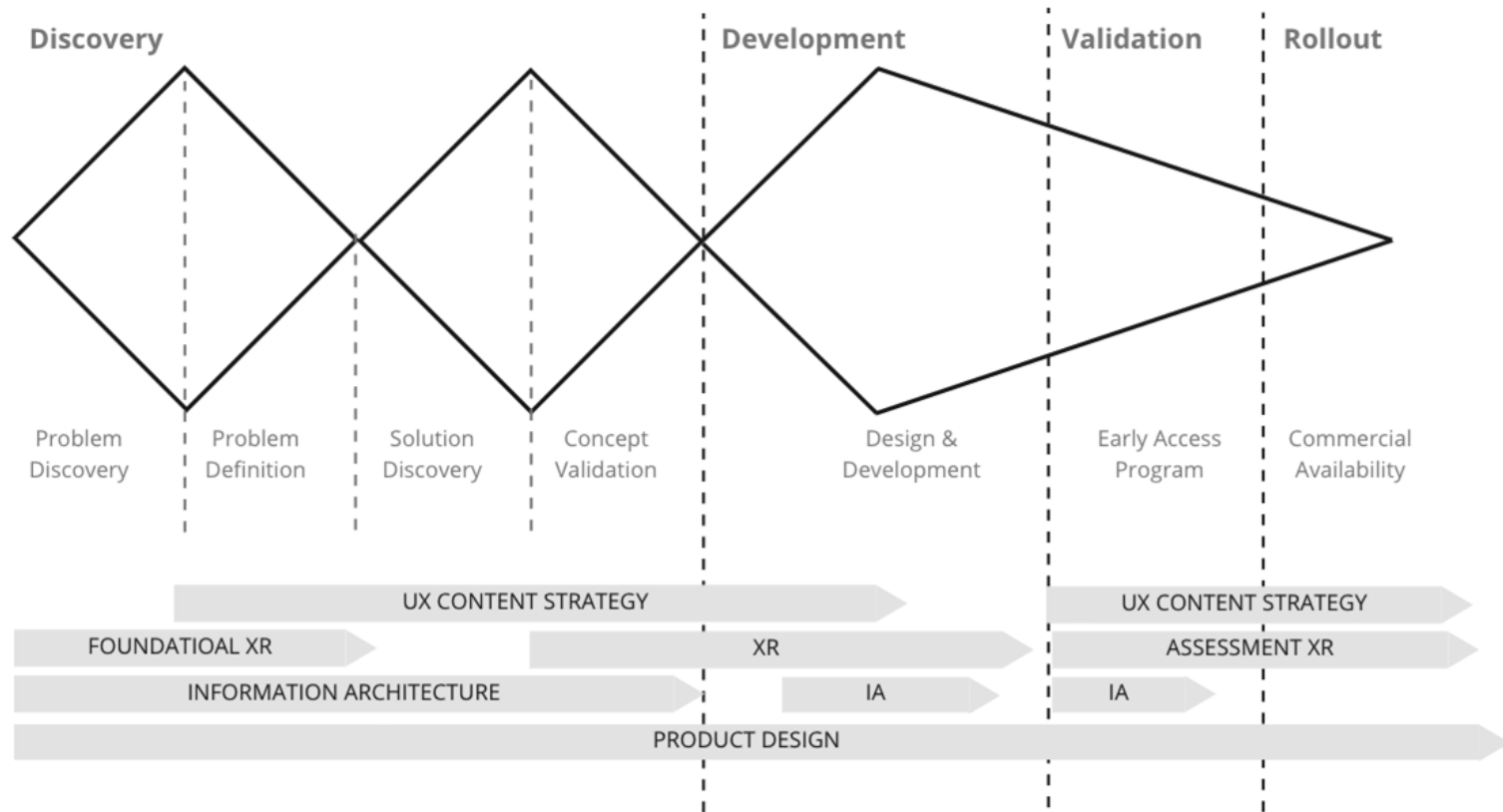
- **Introspect / Incorporate:** Are you *expanding* on potential people's problems & project's objectives or *focusing* on how incorporate specific objectives?
- **Inspire / Inform:** Are you learning about people to get inspired or learning about offerings & products



Question: Which XR methods should I use?

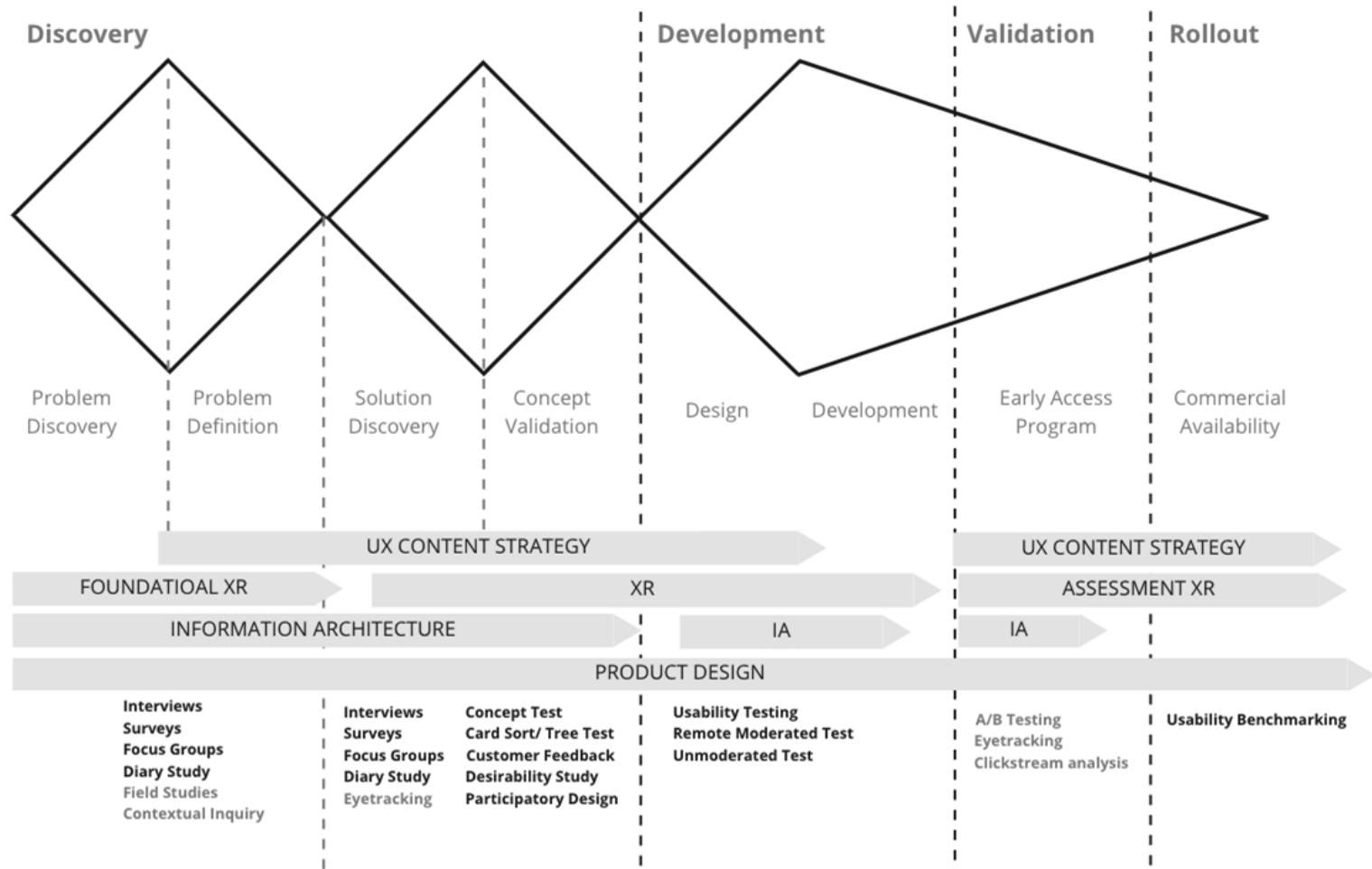
Answer: Select your methods based on where in the product life cycle you are & what type of research questions you have

- **Introspect / Incorporate:** Methods like interview help you *extract* people's problems & mental models. Methods like surveys help you *focus* on problems that are more impactful
- **Inspire / Inform:** Methods like Diary study is good for learning about people and methods like concept testing help learning about product ideas



Question: Which XR methods should I use?

Answer: Select your methods based on where in the product life cycle you are & what type of research questions you have



XR Methods

**What, How,
When**

Interview

Contextual Inq.

Diary study

Co-creation

Survey

Concept test

Card sort/Tree test

Usability test

Bonus methods:

Walk a mile immersion

Whats in ur radar

Heuristic review

Usability benchmark

System Usability Score

In Depth Interviews (IDI)

What?

A technique for gathering info through direct dialogue; involving careful investigation, curiosity, objectivity, & empathy (5 to 6 user per group):

- One-on-one 30 min to 1 hr session with representative audience; In-lab or in-context
- Focus on past experiences stories; subtly elicit people desires, struggles, & opinions through carefully crafted questions
- Can be Open flow, Semi-Structured, or Structured (closely follow the script)
- Low risk: given a right participant, you could sit down, shut up, turn on the recorder, and get useful data just by letting them talk [Just Enough Research]

“Converse like a talk show host, think like a writer, understand subtext like a psychiatrist, have an ear like a musician.”

- Lawrence Grobel

In Depth Interviews (IDI)

How?

DO NOT

- Don't bias the questions, e.g., "do you like our app better than others?")
- Don't ask people to predict what they will do in the future, e.g., "will you use our product?"
- Don't overcrowd participants, especially in sensitive topics e.g. debt (if participant is uncomfortable, ask observers to leave or reschedule)

DO

- Make it conversational & natural e.g. "tell me about a time..."
- Start with easy & open questions (especially in the beginning of the session)
- Probe to get to mental models & "why". That's where the insight lives, e.g., "why would you say that?" (see 5-Why practice on how to extract an *Insight* from a *Finding*)
- Parse what is *meant* from what is *said*

In Depth Interviews (IDI)

When?

IDI is a strong tool for discovery inquiries:

- Directly gaining sense of people & their views of the world; empathy by proximity
- Digging deep (learn what you don't know that you don't know), listen to stories of past experiences, people share problems that you were not even aware of
- Probing for more info; fluidity
- Multiple channel of information (observing facial expressions, body gestures, verbum)

When Not?

IDs does not answers 'how many' & 'how often' questions:


- Not ideal for answering 'how many' and 'how often' questions
- Takes time of moderator and team to execute
- More expensive (higher incentive per participant)
- Essential that participants are very representative of the user base

Contextual Inquiry

What?

Watch and listen to people in their own environment, without interfering:

- Inquire about people experiences right in the context as they are happening, saving you from assumptions on how and why things are done
- Minimize your impact to maximize your discoveries
- Unobtrusive observation
- When left to their own devices, people likely say and do things they are not aware of and would not be able to articulated, even if prompted



“What people say, what people do, and what they say they do are entirely different things”

– Margaret Mead

Contextual Inquiry

How?

DO NOT

- Do not lose focus on the key goals
- Don't disrupt the flow of people behavior (fight the urge for control as things get unpredictable)

DO

- Approach as a novice (fly on the wall); Observe in unobtrusive manner
- Pay attention to people tasks, workflows, tools, workarounds, peripheral objects, sounds
- Have research question or design challenge in view as you collect information
- Go to the site prepared (consent form, recording equipment)
- Introduce self, Ask people to do their tasks in a normal way, inject questions in opportune moments
- Walk in their shoes. live in their skins, see through their eyes [2]

Contextual Inquiry

When

Contextual inquiry reveals rich data:

- Reveal what people actually do and say in their context
- Deepen the empathy as researchers see the issues people encounter in the context
- Challenge our assumptions about people, their environments and how they interact

When not

Contextual inquiry can be expensive:

- Hard to have several observers (e.g. compared to interviews)
 - Ideally rotate observers
- Expensive (e.g. to travel to site)
- May not be logistically feasible e.g. audience do not allow researchers to be present on site
- Lower chance to ask questions right away
 - Ideally set up interview sessions after

Diary study

What?

Capture people feedback over time (longitudinally) as they are doing their daily routines

- Participants are asked to log (diaries) their daily activities as they occur
- Data is self-reported over time by participants
- Gives contextual insights about long time user behaviors (e.g. waiting for a bus)
- Can be interval-contingent (e.g. fill the diary at regular intervals), events-contingent (e.g. fill it after online purchase), or signal-contingent (e.g. fill it when received a text)



“Write hard and clear about what hurts”

- Ernest Hemingway

Diary study

How?

DO NOT

- Do not disturb daily activities of participants when possible
- Use use one format: variety keeps things fresh and interesting (e.g. ask to upload videos & tag)

DO

- Provide clear instructions on logging period and how to log data, give examples
- Send reminders and track progress
- Over-recruit (participants may give up halfway)
- Use a mix of qualitative and quantitative questions
- Post study interview if possible to understand the logs and clarify ambiguities
- If they are busy ask them to log snippets during the situation and provide more details when possible

Diary study

When?

Use diary study to collect feedback over time:

- Collect feedback on habits and usage of products over time
- Collect feedback on behavior change over time e.g. learnability of a product
- Cross channel customer journey
- Collect contextually rich feedback, when budget & time does not allow for contextual inquiries

When Not?

Do not use diary study when time & budget is very restricted:


- Do not use when very short turn around; Synthesis will be time consuming as a large amount of data in different formats will be collected
- Participants may leave in the middle of the period; affects the timing
- Requires effort from the research: constant monitoring of logs to assure respondents continually log their behavior
- Not recommended when there is not budget to incentivize the participants

Participatory design/ Co-creation

What?

Design for people with people:

- Designers collaborate with participants and stakeholders to guide the design process
- Stakeholders with different roles and representative users align and offer diverse insights
- Designers get more holistic views of what a product or service should include
- Responds to people's own priorities and concerns



“An individual can’t create anything itself. All of our dreams come true with the cooperation and co-creation of other souls.”

- Hina Hashmi

Participatory design/ Co-creation

How?

DO NOT

- Avoid getting bogged down in unrealistic pursuits. List tangible outcomes to tightly manage the workshop.

DO

- Work backwards to make a plan: determine what you want to achieve, then design the steps to it.
- Warm up with improv games.
- Use techniques like “ecosystem map”, “empathy map”, & “crazy eight” to extract more ideas
- Encourage curiosity, inclusivity, and active listening – it takes time to become collaborative partners.
 - To stimulate collaborative efforts use techniques such as the “5 Whys”

Participatory design/ Co-creation

When?

Participatory design empowers inclusivity & ownership:

- It is empirical and based on actual observations of people pain points and how they cope with them
- Encourages inclusivity and co-learning
- Leads to local ownership and responsibility for identified strategies
- Allows representative participation of stakeholders in dealing with problems

When Not?

Participatory sessions are difficult to facilitate:

- Risk of being dominated by few people while minority or shy participants' viewpoint is not expressed - Need a skilled facilitator
- Not suitable for controversial opinion since respondents may not be comfortable expressing opinion due to no anonymity in the group discussion setting
- Require caution and skill when scaling the findings to elsewhere

Survey

What?

Surveys collect self-reported data in various forms:

- Collecting data from a predefined group of people using standardized questions. The questions can be asked in person or over the phone, or distributed on paper or collected online.
- Crucial to have a representative sample
- Questions can be open-ended or close-ended (e.g., scale)

“It’s much harder to write a good survey than to conduct good qualitative user research—something like the difference between building an instrument for remote sensing and sticking your head out the window to see what the weather is like...”

– Just enough research

Survey

How?

DO NOT

- Don't combine two or more questions into one
- Keep the survey short & simple - avoid survey fatigue
- Avoid loaded or leading questions
- Don't ask people to recall the distant past, or to predict the future.
- Be careful of nonresponse bias, when finding ways to improve response rate

DO

- Honor participants' time
- Be clear on the objectives and decisions the results will inform and the actions you might take
- Start with the answers you need, and then write clear questions

Survey

When?

Quickly gain general details about the population of interest:

- Collect general insights about the audience to help prepare for a more focused, in-depth study
- Answer questions like 'what % of consumers'
- Investigate the characteristics, behaviors, or opinions of a group of people (e.g. demographics characteristics)

When Not?

As an alternative to qualitative in depth research:


- Not an alternative to talk to real people
- Only use when experts oversight crafting questions, selecting right audience, and analysis
 - Survey be easily misunderstood and misused
 - A bad survey won't tell you it's bad
- Not interrupt people's lives and activities

Concept evaluation

What?

Get early reactions to product concepts & low fidelity designs from representative consumers:

- Predict the success or failure of a finished product early in the process
- Critical early step toward discovering if a new product or service will meet the needs and expectations of potential customers



**“Managers should not trust
a model they don’t
understand”**

– Tom Redman

Concept evaluation

How?

DO NOT

- Don't compare too many variations; Only the best ideas; Don't evaluate ideas that you would not implement
- Don't use high fidelity designs; You will get detailed feedback on designs instead of ideas

DO

- Have a clear idea of what is being tested (e.g. concepts, naming, logo, messaging)
- Focus on concepts and ideas; Leave usability questions to Usability Evaluation with high fidelity
- If possible, test the concept in a competitive context, to understand the unique benefits (or probe on *how they are meeting that need right now*)
- Keep an eye on if/ how new product would *fit into their current life* and journey

Concept evaluation

When?

Incorporate audience feedback early on :

- After ideation sessions when there are several solutions available
- Getting initial thoughts and assumptions about solutions validated
- Avoid the risk of moving forward with an idea that is not tested
- Reveal features and ideas that you have not considered
- Need actionable, scoped, quick feedback on ideas

When Not?

Concept test is not a usability evaluation:

- Do not use to answer discovery question and problem definition questions; feedback in concept tests will be directed to and around the concepts presented only
- Don't use to answer questions like 'ease of use', 'task success', 'usability evaluation'.
- Expertise is needed to assure we are asking the right questions

Card sort + Tree test

What?

Tree testing and card sorting are two widely used methods for creating & validating information architecture in sites and apps (15 to 20 users):

- In a card sorting session, a participant is given a set of topics and asked to put them in groups. The researcher can choose if there are default groups for the user to start with (closed card sort) or not (open card sort).
- In tree test, a participant is given a task and a website navigation and asked to find the section to complete the task. The clicks and final selection are tracked to see if they could find the page & how hard it was.
- Can be moderated or unmoderated

"its core, all business is about making bets on human behavior. "

*- "the power of 'thiCk' data," the Wall
sTreeT Journal*

Card sort + Tree test

How?

DO NOT

- Don't have too many cards
- Don't underestimate the difference between card sort (grouping) and tree test (findings); use each method in the right time and context

DO

- Randomize the order, if possible
- Provide an estimate of how long the session will take
- Use open card sort for gathering ideas (e.g. name discovery) and checking what goes together; use close-card sort (or tree test) to validate the labels
- To evaluate an existing IA & extract current pain points, use a tree test

Card sort + Tree test

When?

Create or improve the info architecture as consumers would group or find them:

- Card Sort: When team is not sure how to organize the information, e.g., build the structure for a website or work out where a new category should sit
- Tree test: Test the proposed site structure, categorization and labels and understand where and why people get lost in content.
- Use card sort in the early stages of a website redesign. Tree test typically is done after a card sort.

When Not?

Card sort is not a replacement to usability testing:

- Don't use card sort instead of a usability evaluation. Card sort provide insight to how people make sense of info, but it lacks context of the site or app. Testing findability in the context of a high fidelity prototype is also essential.

Usability evaluation (+ Think aloud)

What?

An evaluation format where people perform given tasks using a prototype or product, while narrate their experience:

- 5 to 6 representative participants will be provided with a scenario and tasks using a prototype or product
- Participants are typically asked to think aloud. Narrating the thought process helps the team pinpoint where the success and failure points are and diagnoses the causes.

“Five sessions will usually reveal 85% of the issues with a design”

- Faulkner, 2003

Usability evaluation (Think aloud testing)

How?

DO NOT

- Do not create the feeling that they are being tested
- Do not ask biased questions
- Leave the direct and closed questions to the end of the session

DO

- Assure participants understand what 'think aloud' is. Explain with examples if needed
- Utilize 'think aloud' to understand mindset, intentions, and expectations of people, which will in turn help you decipher what specific attributes of design are causing certain reactions and why
- Capture usability issues, their severity, task success, time on task, num of errors (per need) and prioritize the issues.

Usability evaluation (Think aloud testing)

When?

Great method for evaluating high fidelity prototypes:

- Use it to evaluate if things are easy to use, easy find, people can do the tasks easily, and content is easy to understand
- Low-investment opportunity
- Make quick impacts on the efficiency, effectiveness, and satisfaction of a solution
- Uncovers usability issues

When Not?

Usability evaluation is not suitable for discovery and exploratory questions:

- Usability evaluation is not a right method for 'why & How' discovery questions
- Usability evaluation is not a right method for evaluating concept ideas

Other observation techniques

Walk-a-Mile-Immersion ethnographic exercise

A way of building empathy for people through first hand experience:

- Use the special equipment someone uses & perform the task
- Artificially alter one or more of your senses
- Live among people in different society
 - Example: special glasses and glove to simulate physical impairment; print photos of car accident to simulate the feeling

What's-on-your-radar participatory exercise

An exercise in which people plot items according to personal significance:

- Use a radar diagram so people can organize items within given scope based on how important or relevant they consider them to be (items in center are most significant)
 - Example: asking user to plot their personal health habits to inform the design of a wellness program

Other evaluative techniques

Heuristic review

An auditing procedure based on 10 rules of thumb for good design:

- Drawing from experience, experts use the following principles of good design:
- 1) Match mental model; 2) Minimize perceived complexity; 3) Use consistent form, words, and actions; 4) Provide a sense of place; 5) Account for environmental constraints; 6) Anticipate needs; 7) Use clear and concise language; 8) Give feedback about actions and status; 9) Prevent errors and provide graceful recovery; 10) Strive for minimal aesthetics

System Usability Scale (SUS)

A short survey for quantifying feedback from subjective assessment of usability:

- SUS is a 10 questions Likert scale focusing on what people feel after using something
- It leverages a proven measure of usability
- Standardizes team's evaluations
- Bipolar and symmetrical: contains an equal number of evenly distributed positive and negative choices, e.g. "found the product unnecessarily complex" versus "thought the product was easy to use"

Other techniques

Usability Benchmarking

Summative XR method to compare a set of metrics between states of product to gauge performance changes.

- A benchmark study doesn't care about why: it's a raw measure of user performance
- Measure if design & XR efforts made a quantifiable difference over time (prove the ROI of UX efforts)
- Longitudinal, quantitative comparisons (for example, tracking the time it takes to complete a task before and after a significant change to the user interface)

Focus groups

Informal technique to assess user needs and feelings before or after implementation :

- Bring together 6 to 9 users to discuss products, ideas, or concerns about the features
- Not for evaluating interface usability
- Can get spontaneous reactions and ideas, or ask how people perform activities that span many days
- Only assess what customers say
- Need an expert moderator

Thank You