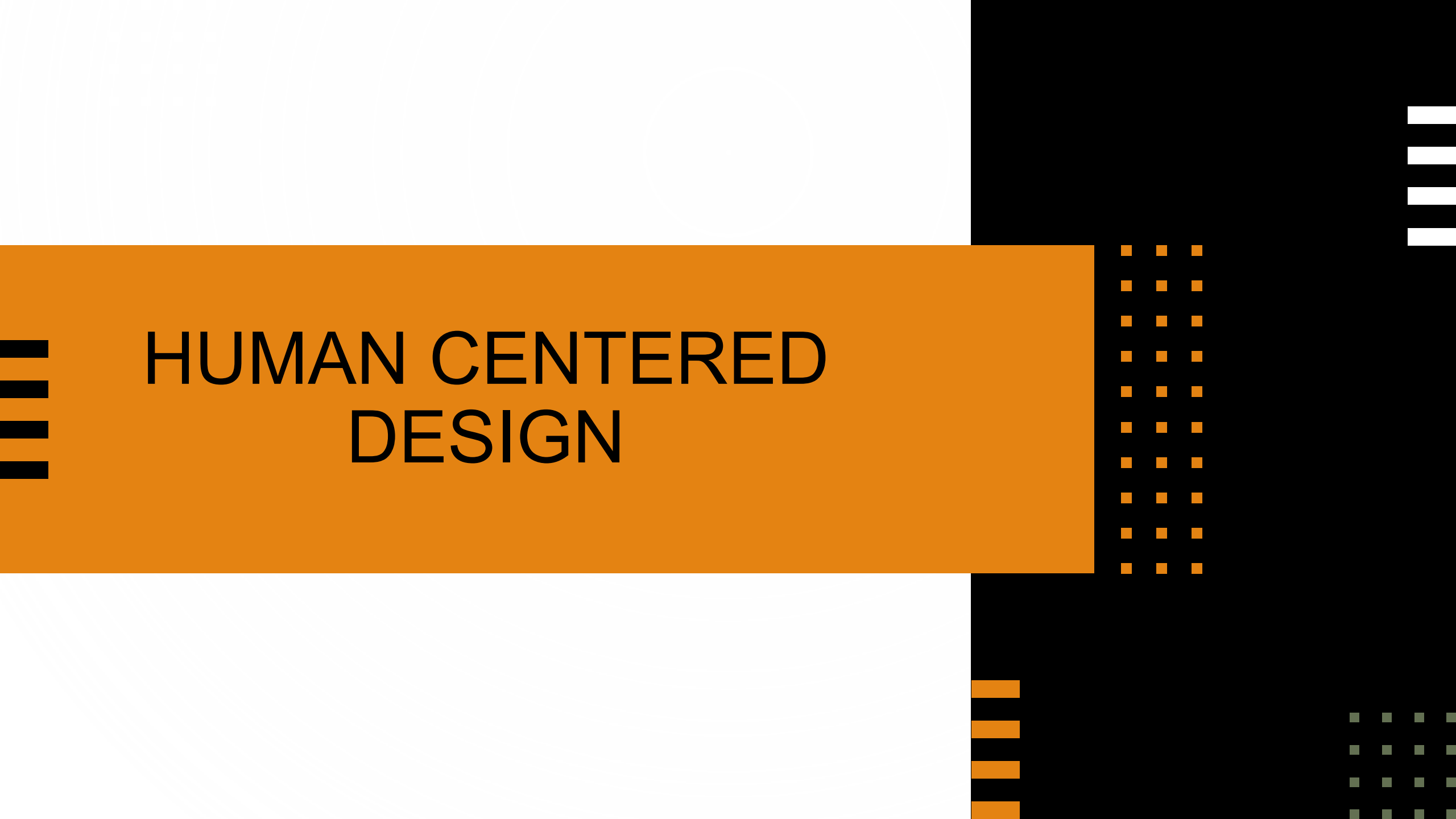


The Role of Human-Centered Design & Sampling for Your Pilot Project

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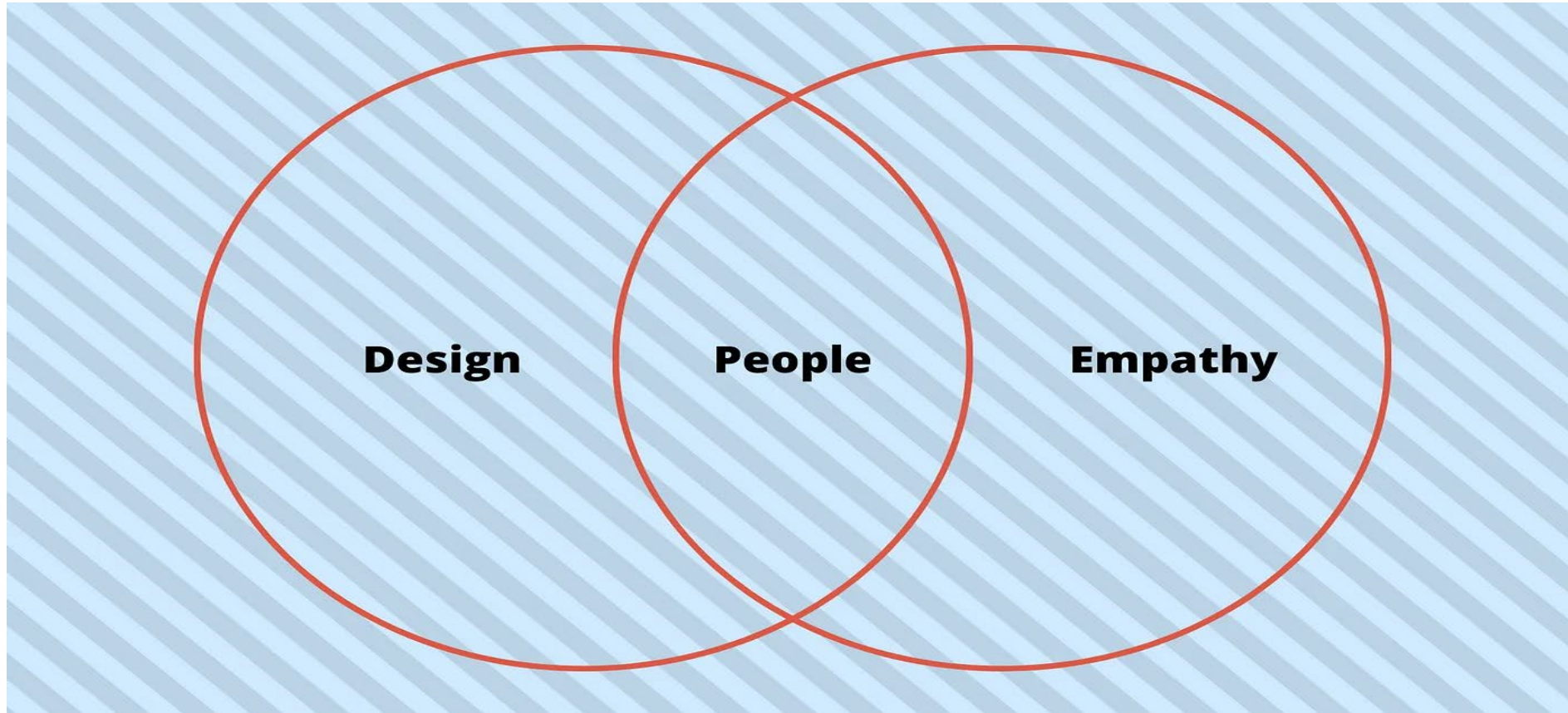




HUMAN CENTERED DESIGN

Human-Centered Design (HCD)

Human Centered Design



IT IS AN APPROACH OF PROBLEM-SOLVING MOSTLY USED IN DESIGN AND MANAGEMENT SECTORS BY DEFINING HUMAN PERSPECTIVES IN ALL STEPS OF PROBLEM-SOLVING

Human Centered Design

- ❑ Keeps the user at the center of the decision
- ❑ You can address complex challenges by putting people and communities at the center of the design process
- ❑ Focus on the need to continuously improve

- “Human-centered design (HCD) is a problem-solving approach for developing, refining, and testing products, programs, and services.”
- It is adaptive and flexible by employing a structure iterative approach for engaging stakeholders in rapid iteration cycle that diverge (create choices) and converge (make choices) until a concept is determined to be viable, feasible , and desirable by key stakeholders

Human Centered Design

- ❑ Emphasizes explorative research, to build understanding and empathy
- ❑ It brings diverse voices and perspective together

- How might we design a toilet for families living in areas with no sanitation infrastructure?
- How might we design pedestrian walkways that are usable?

❑ *Can serve as participatory and co-design approach*

Human Centered Design Applications



Empathize

Understand the people, problems, and opportunities



Define

Make sense of the research and define who your content is for and what it solves



Plan

Create a master plan for what content you'll create and how you'll deliver it



Prototype

Create the MVP version of your content to test and improve on

Inspiration

Ideation

Implementation

Test

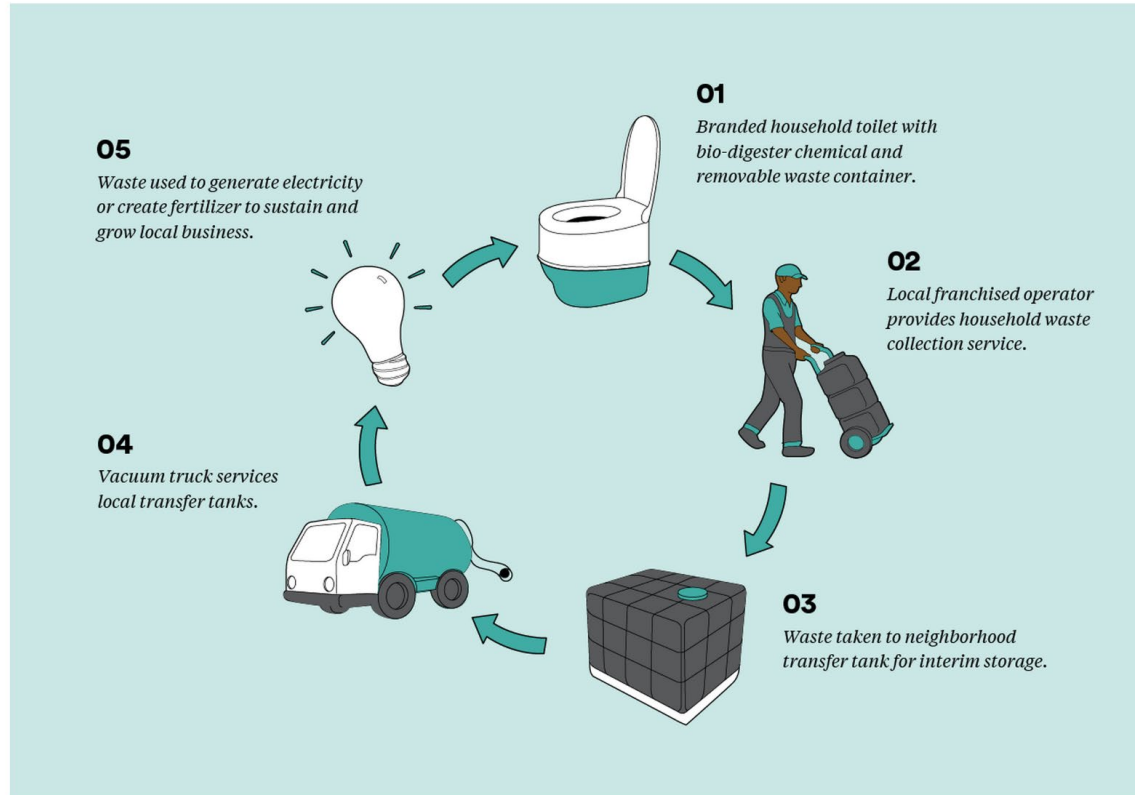
Human Centered Design



Image Source: UX Collective

Human Centered Design

Clean Team has installed over 600 toilets and is serving 4,500 customers in Kumasi, Ghana.



Clean Team's full service model includes a toilet and pickup of waste.



Human Centered Design

IN THIS KIT

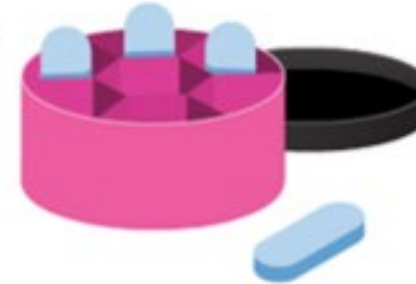
THE V BAG

Keep your makeup and your pills in this bag - no one will know you're on PrEP unless you tell them!



V ON-THE-GO

Every week, put seven pills in this pill case to help you remember to take one every day.



A BOTTLE OF PrEP

Take one pill daily at the same time every day to keep HIV away!



REMINDER STICKER

Stick this on something you use at the same time every day (like a mirror) to remind you to drink your pill (or cover the PrEP bottle so no one knows).

REMEMBER TO: wash your hands, wear a mask correctly and practice physical distancing



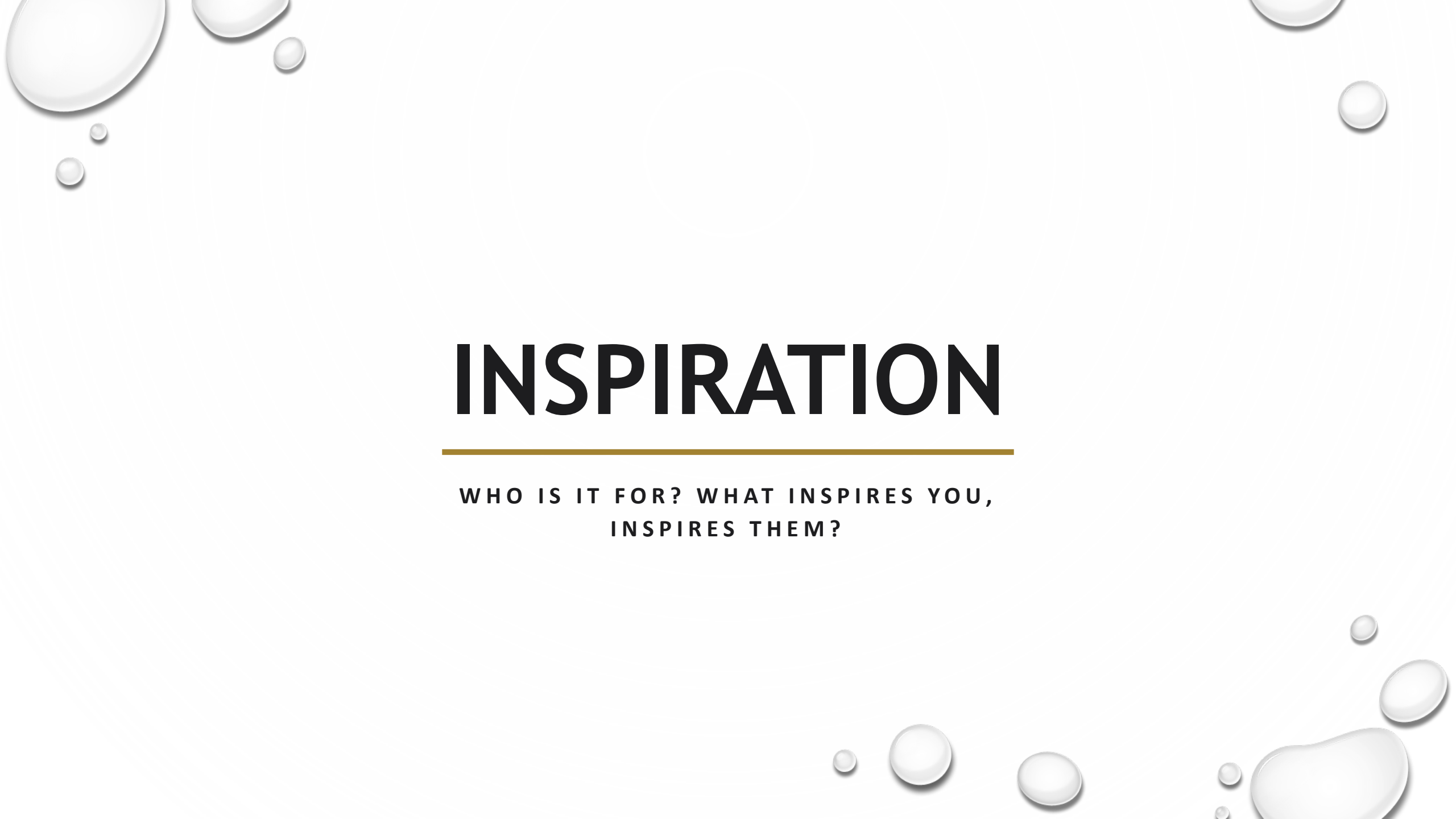
Human Centered Design



Since its launch, 9ja Girls has opened 13 sites across 9 states, serving 12,438 girls with modern contraception from January through August 2018. By 2020, this projection will be upwards of 69k.

9ja Girls was conceived alongside young people and a consortium of partners

The Adolescents 360 program, led by Population Services International (PSI)

The slide features a minimalist design with several realistic water droplets of varying sizes in the corners. The top-left corner has a large droplet and two smaller ones. The top-right corner has a medium droplet and a small one. The bottom-right corner has a large, irregular droplet and several smaller ones. The bottom-center has a medium droplet and a small one. The main text is centered and reads:

INSPIRATION

WHO IS IT FOR? WHAT INSPIRES YOU,
INSPIRES THEM?



What's the challenge? It is difficult to get ketchup out of a bottle.

**Frame challenge as question:
HMW: How might we get all of the ketchup out of a bottle?**

Empathize

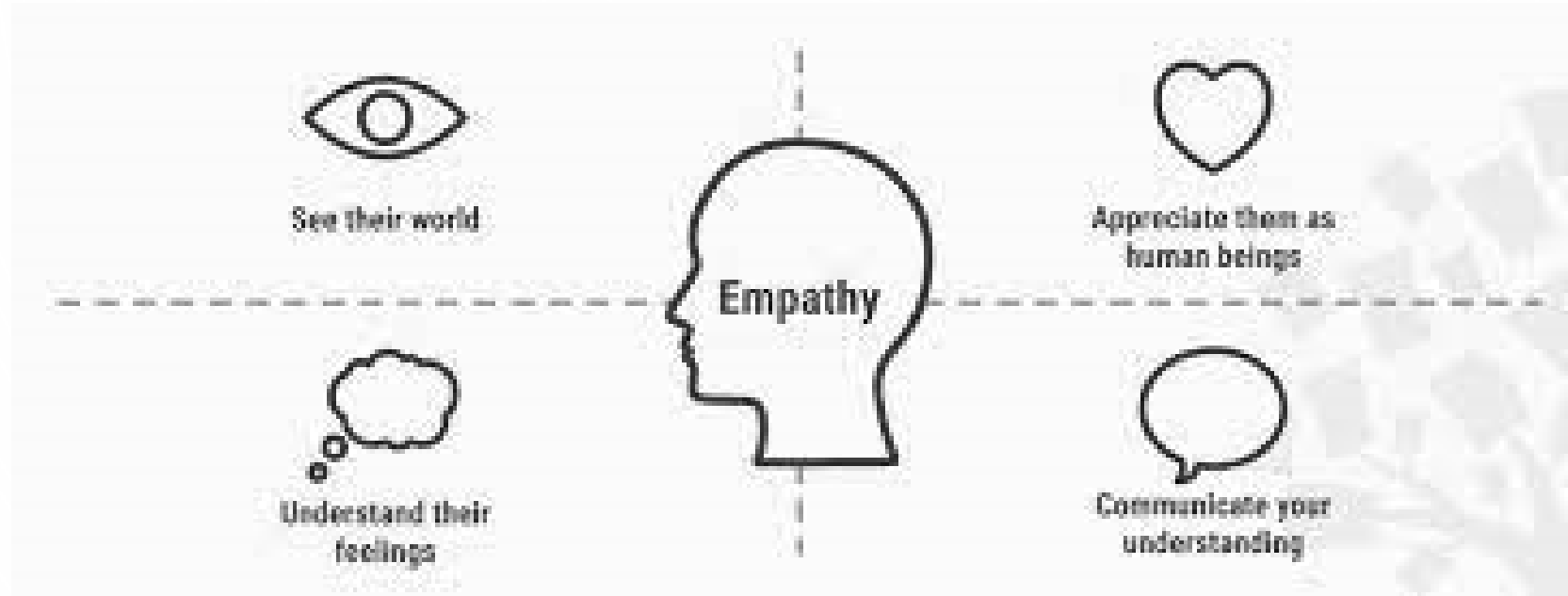
❑ **Research your users' needs**

- Gain an empathetic understanding of the problem you are trying to solve
- To develop the best possible understanding of potential users, their needs, problems, and opportunities

❑ **Actions:** Quantitative/qualitative research methods

❑ **Outputs:** Journey maps, archetype segmentation, actionable recommendations

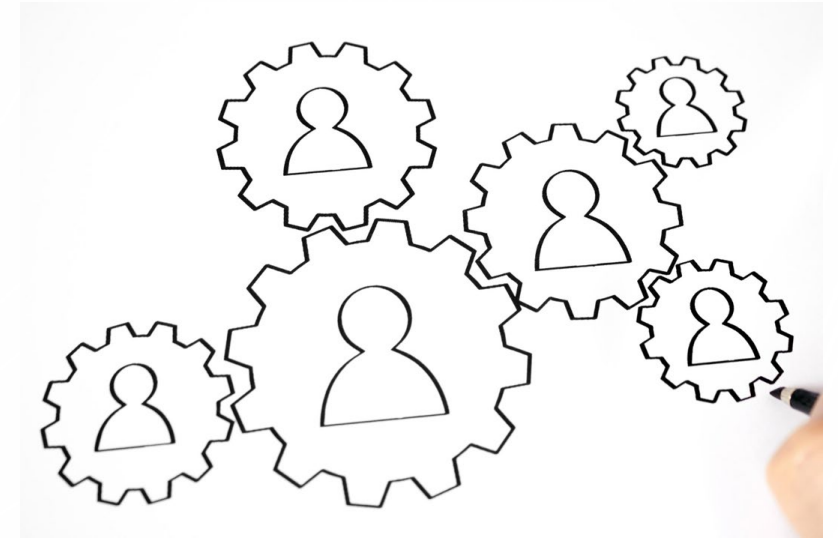
Empathize



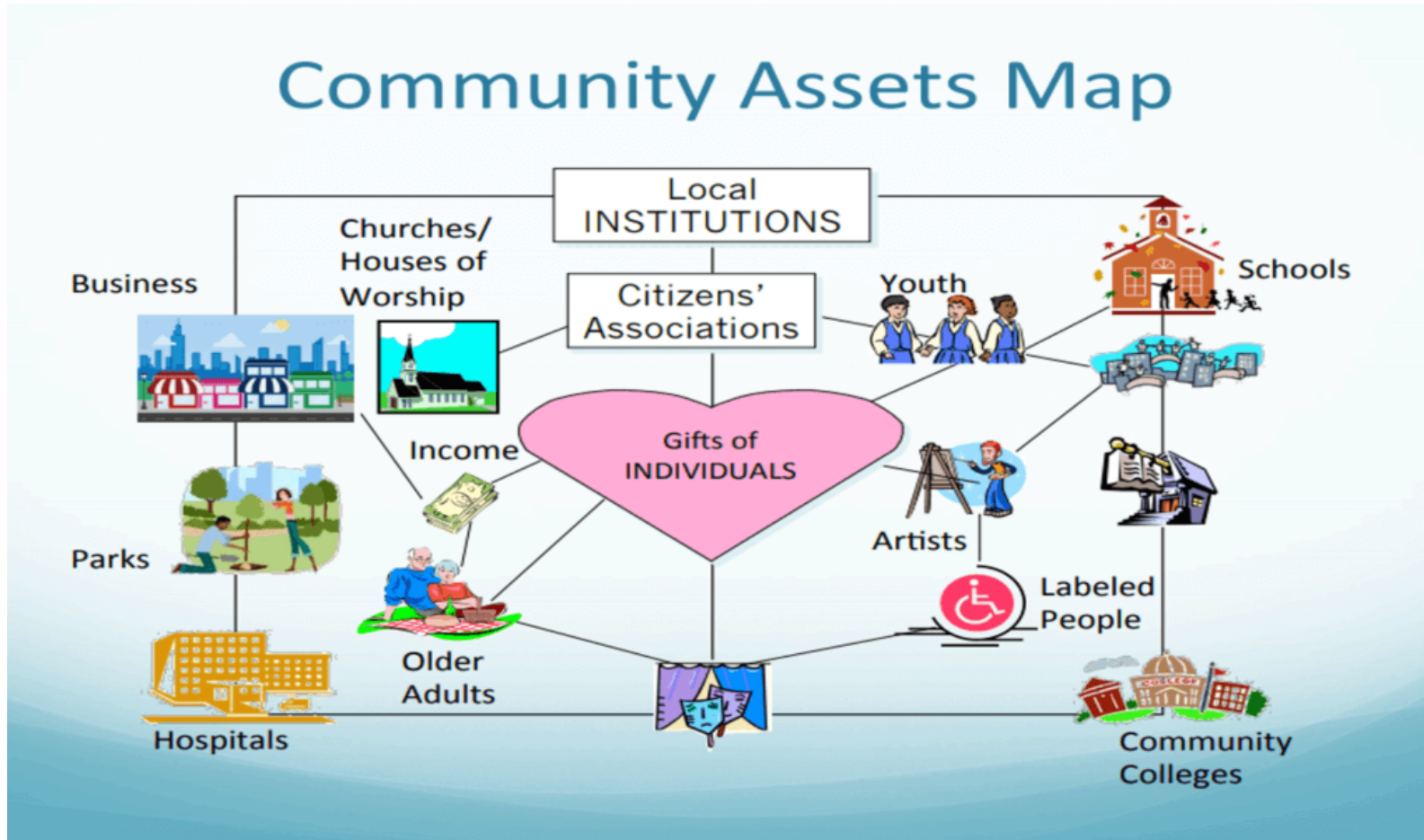
Community Mapping as a tool for Empathy

Community mapping is a participatory process where a community comes together to map its own assets, resources, barriers, and needs.

- Community mapping identifies and visualizes social networks, trusted institutions, and resource flows beyond geographic locations
- Records strengths, resources, and cultural strengths



Community Mapping as a tool for Empathy



User Journey as a tool for Empathy

- Helps to visualize how users move through services over time
- Highlight key moments and decision points across time and touchpoints

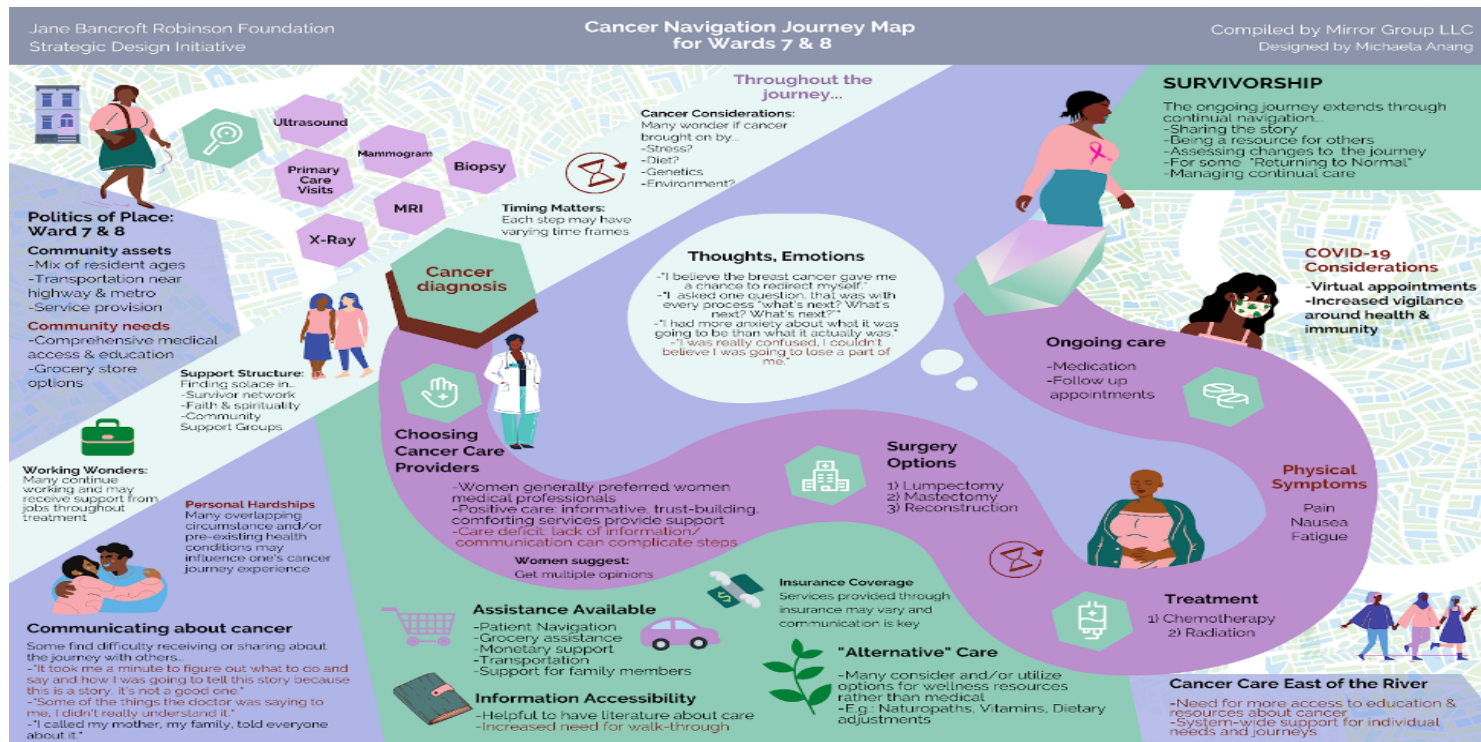
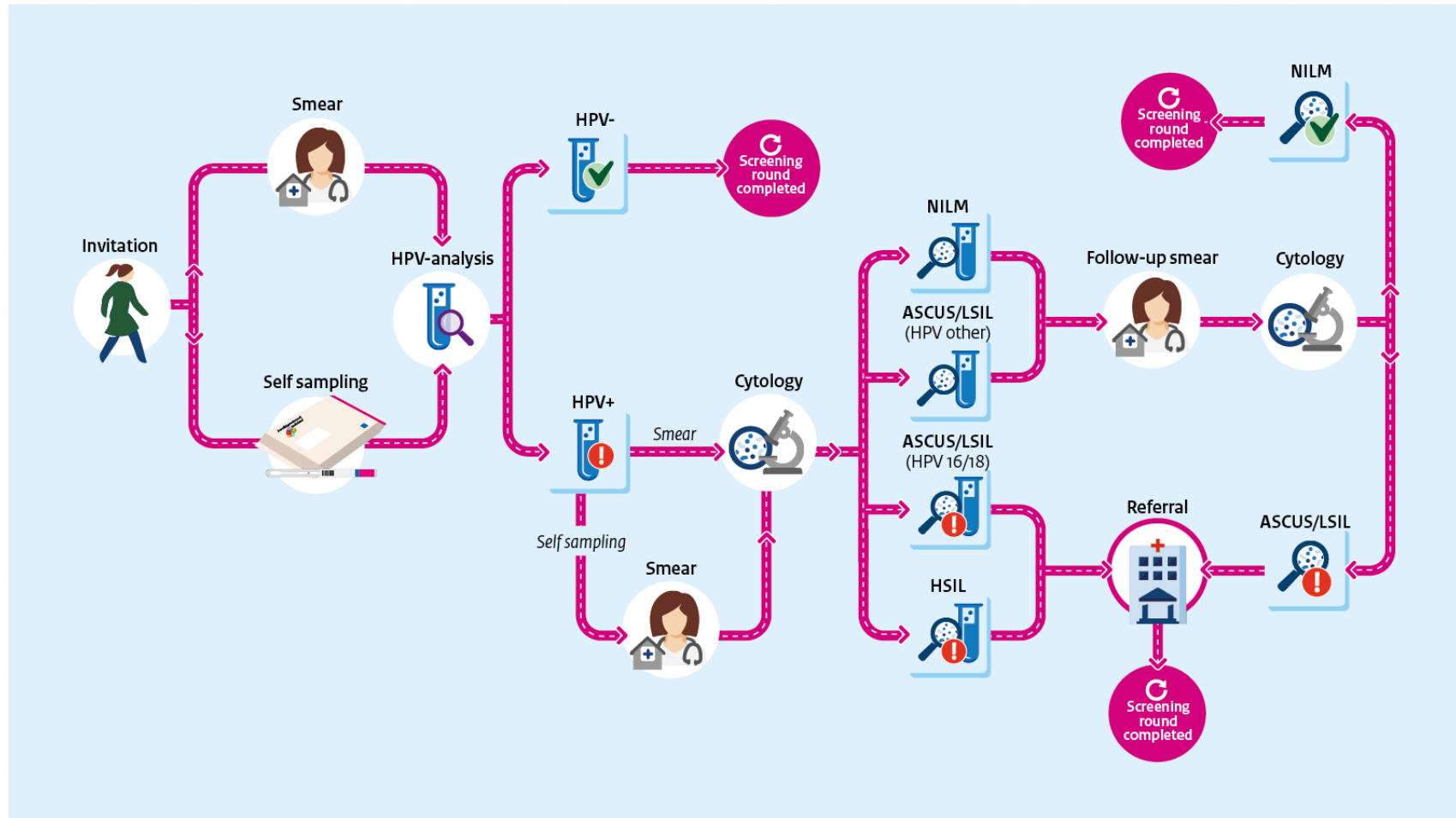


Image Source: <https://aea365.org/blog/dvr-tig-week-weaving-together-narrative-through-journey-mapping-by-marsha-williamson-manon-matchett-and-mindelyn-anderson/>

User Journey as a tool for Empathy



User Journey as a tool for Empathy

Core Components of a User Journey Map

- **Persona:** The specific user profile being mapped, including their motivations and goals.
- **Stages/Phases:** The high-level stages of the journey, such as Awareness, Consideration, Purchase, and Retention.
- **Actions:** The specific tasks the user performs at each stage.
- **Touchpoints:** The interactions between the user and the product or brand (e.g., website, social media, app).
- **Emotions:** The user's feelings (delight, frustration) mapped throughout the process.
- **Pain Points:** Specific areas of friction or difficulty the user experiences



IDEATION IS

THE COGNITIVE ACTIVITY OF PRODUCING NOVEL
AND EFFECTIVE SOLUTIONS (THAT IS, CREATIVE
IDEAS).



Define

Make sense of the research and define who your content is for and what it solves



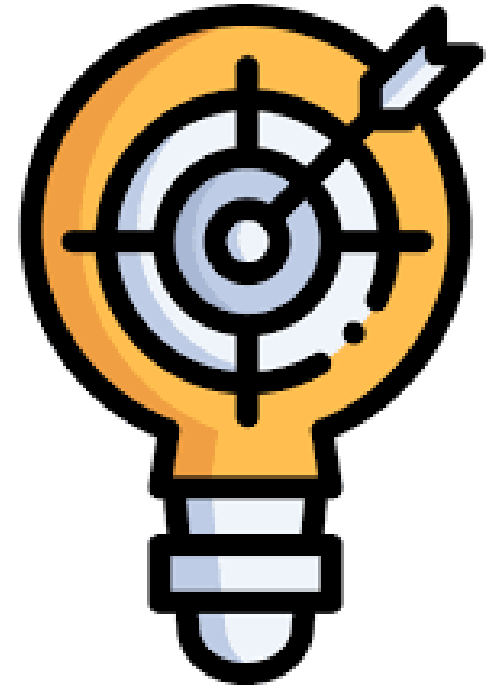
Plan

Create a master plan for what content you'll create and how you'll deliver it

Ideation

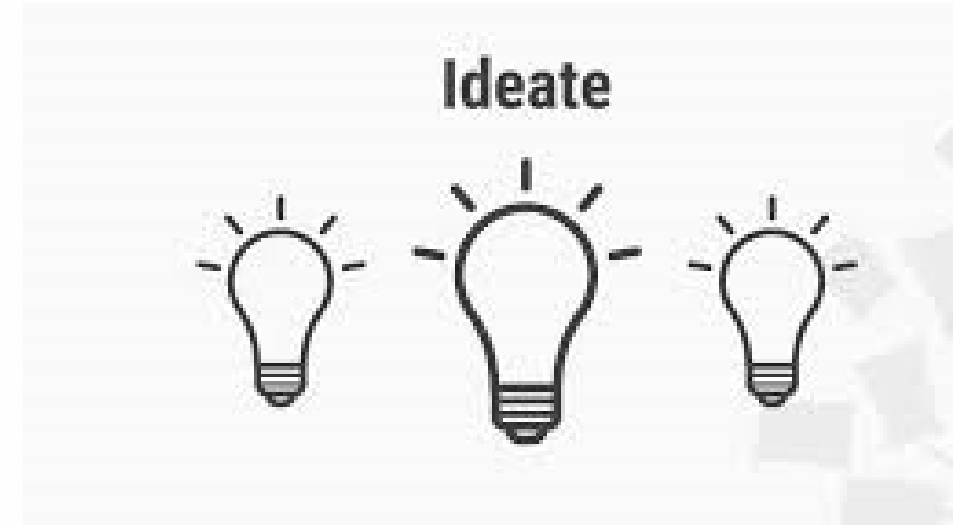
Define

- ❑ **State your users' needs and problems**
 - What have you learned from your observations
 - Focus on the needs and wants of the people you are designing for
- ❑ **Define the core problem based on the user's needs**
 - This prepares you for the ideation phase



Plan/Ideate

- ❑ **Challenge assumptions and create ideas**
- ❑ **Conduct a series of ideation activities**
 - What have you learned from your observations
- ❑ **Forms of ideation**
 - Brainstorming
 - Brainwriting
 - Worst Possible Idea



.Image credit: Interaction Design Foundation



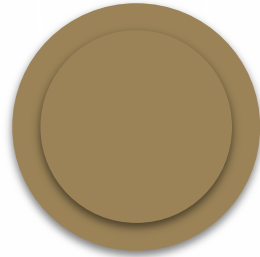
Prototype

- ❑ **Quickly create a simple prototype of the idea**
 - Think of your minimum viable product [MVP]
- ❑ **Forms of ideation**
 - What does success look like?
 - How can it be sustained over time

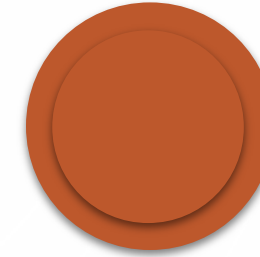
Test and Iterate

- ❑ **User-testing of the prototype**
 - Obtaining feedback from end-users
- ❑ **Iteration**
 - Incorporating the feedback
 - Ideally, continue iterating, testing, and integrating user feedback

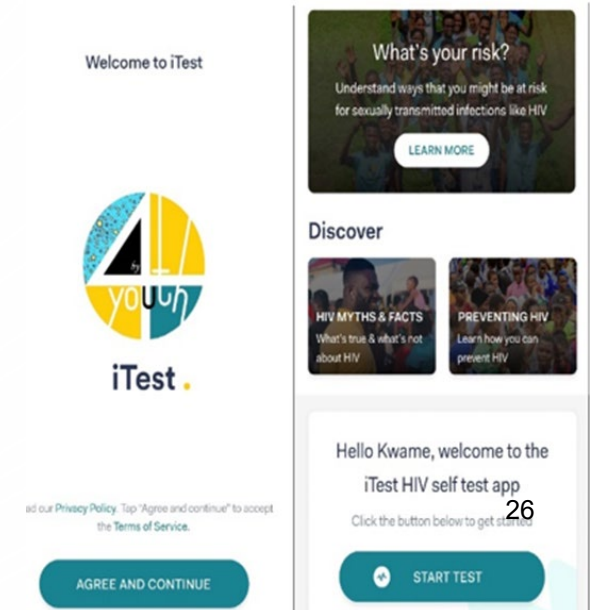
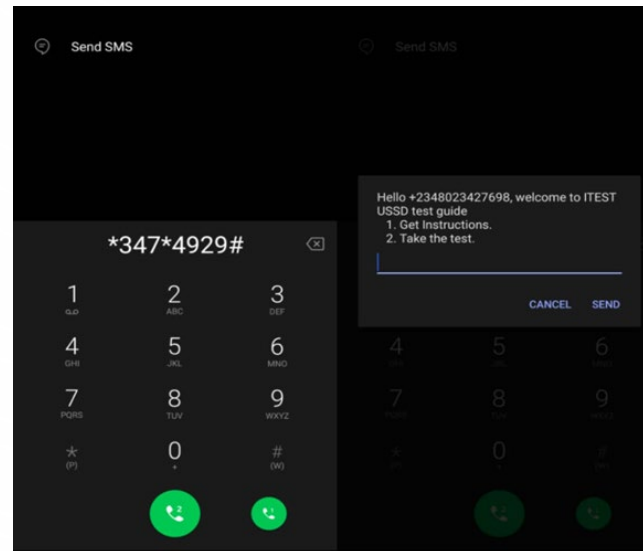
From 4Youth By Youth in Nigeria



Repacking of HIV Self-testing Kits for Nigerian Youths



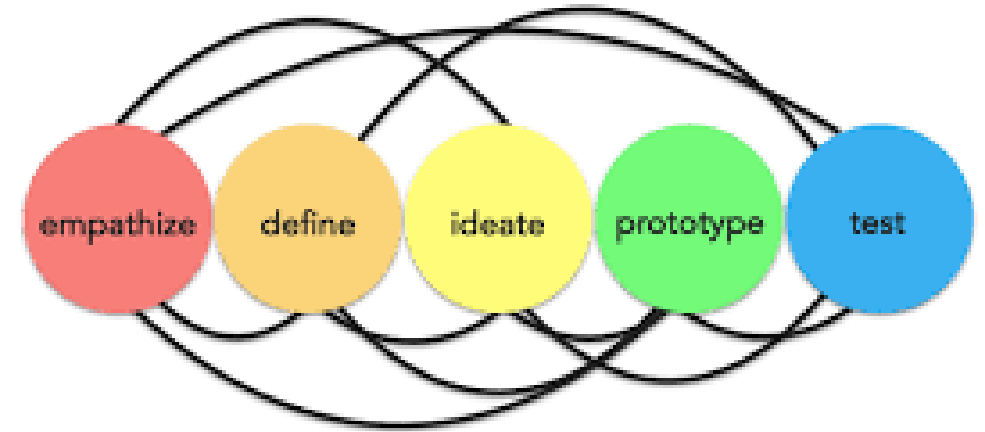
Creation of a photo-verification app and USSD tool



Considerations for HCD

☐ Identify and empathize with your “user”

- Who are your focus audience
- What are their wants, needs, concerns, and motivations
- Map your key focus audience



☐ Define the case for change

- Develop a narrative for the case for change
- Why is the current way we are doing things not effective?
- Why do we need to do things differently in the future?

☐ Define a vision

- How are your proposed strategies better



SAMPLING STRATEGY

• Quantitative



- ❖ Measure the prevalence of issues, verify hypotheses, and establish causal relations between variables
- ❖ Large samples, structured data collection, and predominantly deductive analysis

• Qualitative



- ❖ Explore and discover themes, develop theories, rather than verify hypotheses and measure occurrences
- ❖ Smaller samples, semi-structured data collection, inductive analysis

Foundations of Sampling

- **What is sampling?**

- The process of selecting units from the population of interest
- By studying the sample, we can generalize results to the population from which the units were chosen
- Research question drives the selection of your sample design



Advantages of Sampling

- Collecting data from the whole population is likely not feasible
- Reduces time to collect data
- Better administrative control
- Lower “non-response” error



The Theoretical Population



To whom do you want to generalize?

The Study Population



To what population can you get access?

The Sampling Frame



How can you get access to them?

The Sample

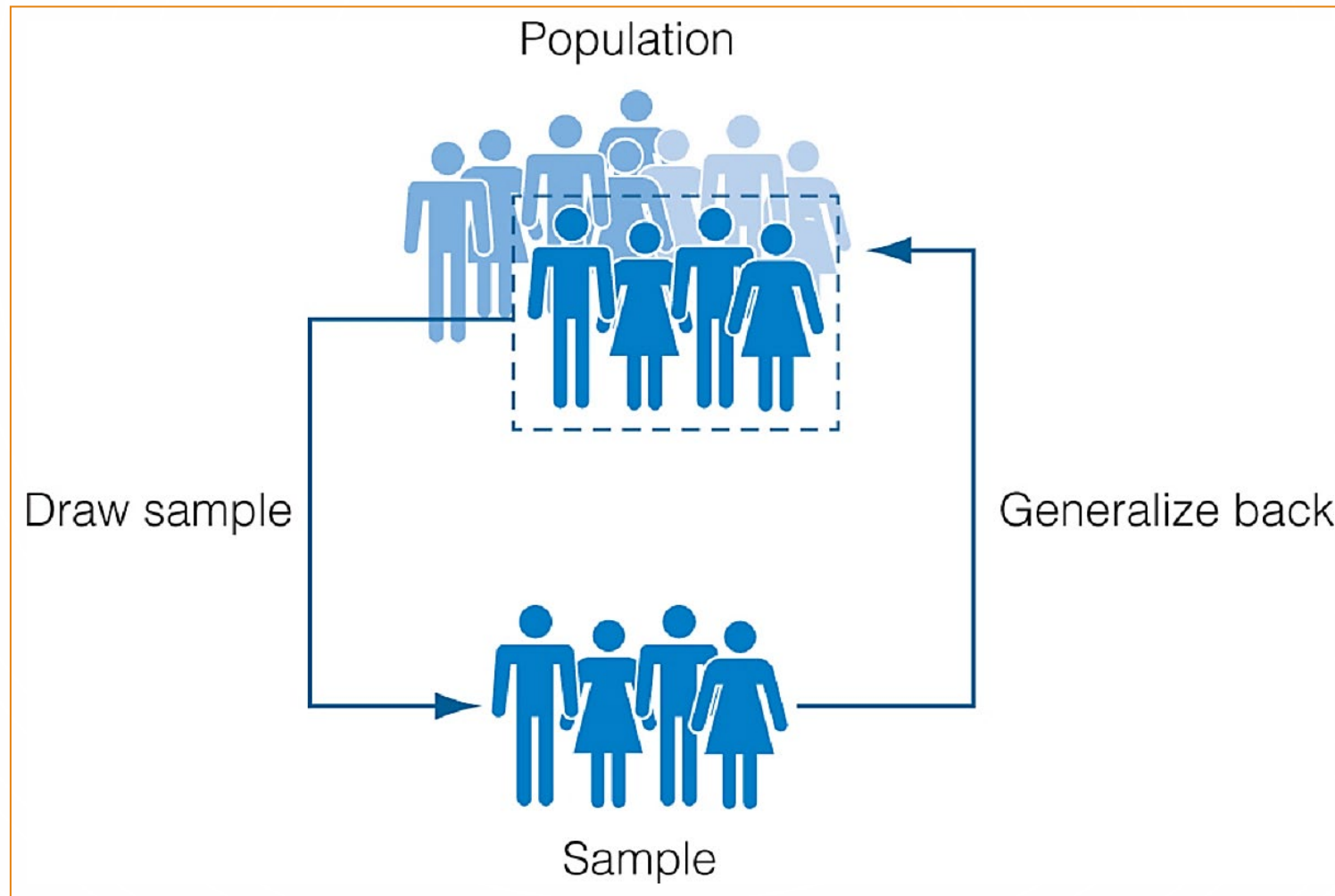


Who is in your study?

Trochim Figure 4.3

Trochim, W., Donnelly, J. P., & Arora, K. (2016). Research methods: The essential knowledge base. *Research methods: the essential knowledge base*.

SAMPLING IN QUANTITATIVE STUDIES



Trochim Figure 4.4

Trochim, W., Donnelly, J. P., & Arora, K. (2016). Research methods: The essential knowledge base. *Research methods: the essential knowledge base*.

Methods of Sampling for Quantitative Studies

TWO BROAD CATEGORIES OF SAMPLING

1. Nonprobability Sampling

- Sampling that does not involve random selection

2. Probability Sampling

- Sampling that does involve random selection

Non-Probability Sampling

- **Quota Sampling:** uses predetermined targets (quotas) for specific characteristics such as age, gender, or income
- **Convenience Sampling:** participants are selected based on immediate availability and accessibility
- **Purposive Sampling:** Participants are selected for a reason connected to the purpose of the research
- **Snowball Sampling:** Have respondents identify other respondents
- **Respondent-driven Sampling:** Uses participants' social networks to recruit peers, and applies mathematical weighting to adjust for the non-random nature of the sample

Probability Sampling

- **Simple Random Sampling:** Each element in the population has an equal probability of selection, and each combination of elements have an equal probability of selection
- **Stratified Random Sampling:** Population is divided into groups (strata) that differ in relevant ways, and then randomly selected from each of these subgroups
- **Systematic Random Sampling:** Your sample is based on a regular interval, rather than a fully random selection
- **Cluster (Area) Random Sampling:** Involves dividing the population into clusters, randomly selecting clusters, then sampling each element in the selected clusters
- **Multi-stage Sampling:** The combination of several sampling techniques to create a more efficient or effective sample than the use of any one sampling type can achieve on its own

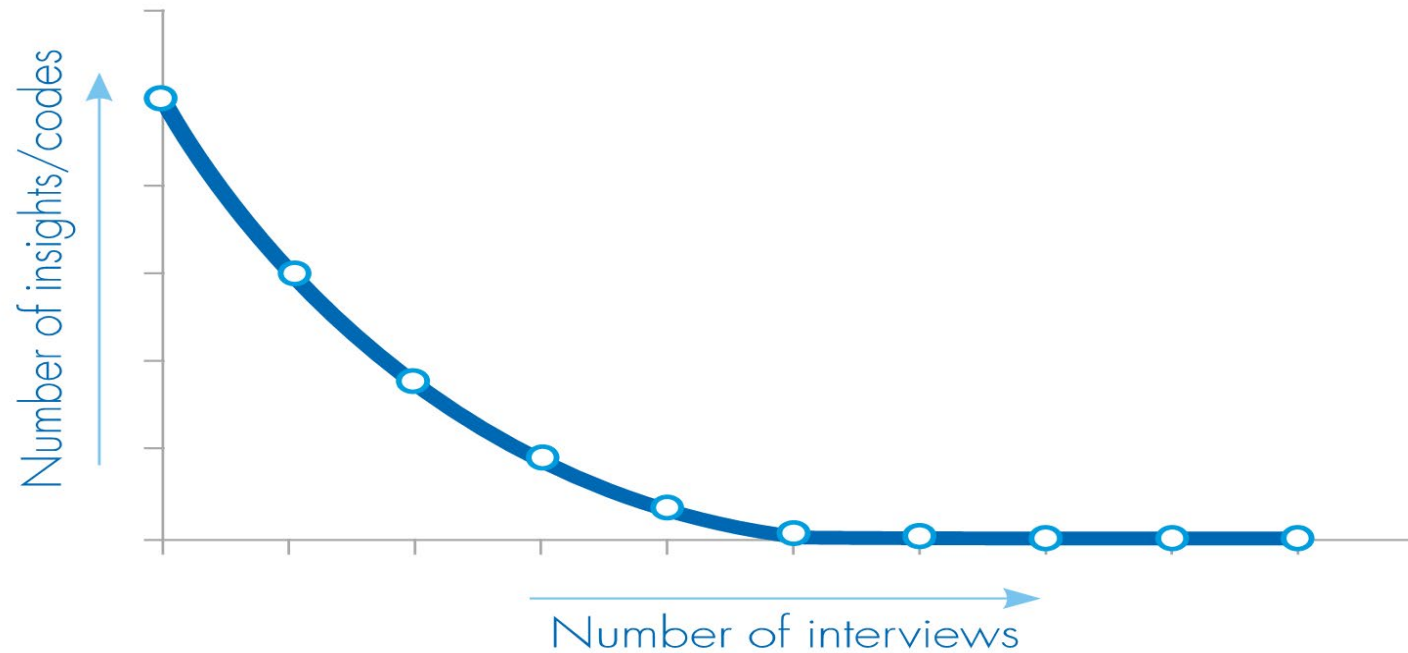
SAMPLING IN QUALITATIVE STUDIES

Methods of Sampling for Qualitative Studies

- ❖ **Purposive sampling:** selection based on the researcher's rationale in terms of being the most informative
- ❖ **Criterion sampling:** selection based on pre-identified factors
- ❖ **Convenience sampling:** selection based on availability
- ❖ **Snowball sampling:** the selection is by referral from other participants or people who know potential participants.
- ❖ **Extreme case sampling:** targeted selection of rare cases
- ❖ **Typical case sampling:** selection based on regular or average participants

- ❖ Data saturation means that no new themes, findings, concepts, or problems relevant for the study emerge through the data collection process

Figure 1: Data saturation pattern in qualitative research



THANKS!

QUESTIONS?

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Other Resources

<https://www.unicef.org/innovation/hcd>

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