

---

# HUMAN-CENTERED DESIGN FOR FINANCIAL PRODUCTS: WORKSHOP



**USAID**  
FROM THE AMERICAN PEOPLE

# HUMAN-CENTERED DESIGN FOR FINANCIAL PRODUCTS

---

DAY 1

12/15/2019



# WORKSHOP INTRODUCTION

---

DAY I

# WORKSHOP OBJECTIVES

At the end of this day and a half workshop, participants will have a greater understanding of:

- **Human-centered design** and their applications for improving financial inclusion goals
- **Behavioral economics** and how biases affect how your customers manage their income
- Evidence about **women's financial inclusion** and how to design products with a gender lens
- **Experimental and non-experimental methods** for testing prototypes and measuring their social impact

## — DAY I - AGENDA

9:00 AM – 9:30 AM

9:30 AM – 10:15 AM

10:15 AM – 10:30 AM

10:30 AM – 11:00 AM

11:00 AM – 11:15 AM

11:15 AM – 12:15 PM

12:15 PM – 1:00 PM

1:00 PM – 2:00 PM

2:00 PM – 2:30 PM

2:30 PM – 3:15 PM

3:15 PM – 3:45 PM

3:45 PM – 4:30 PM

4:30 PM – 5:00 PM

5:00 PM

### **BREAKFAST**

WELCOME & INTRODUCTIONS

WHAT IS HUMAN-CENTERED DESIGN?

DEFINING THE PROBLEM

COFFEE BREAK

CUSTOMER JOURNEY MAPPING

BEHAVIORAL ECONOMICS FOR FINANCIAL PRODUCT DESIGN

### **LUNCH**

UNDERSTANDING GENDER BARRIERS

CREATING PERSONAS

COFFEE BREAK

IDENTIFYING PAIN POINTS

SHOW AND TELL

**CLOSE DAY I**

## — WORKSHOP RULES

1. Don't be too quick to judge
2. Embrace unconventional thinking
3. Let's build something together
4. Focus on the main topic
5. One conversation at a time
6. Let's use visual tools
7. The more we propose, the better



# ICEBREAKER



# WHAT IS HUMAN-CENTERED DESIGN



DAY I





USER EXPERIENCE

PRODUCT  
DESIGN

DOES THIS PRODUCT  
WORK WELL FOR USERS?







**HUMAN-CENTERED  
DESIGN TO THE RESCUE!**

**INTRODUCING  
CLOCKY!**

## WHAT IS HUMAN-CENTERED DESIGN?

A problem-solving process that starts with the user in mind and culminates in new and innovative solutions

- Empathy is essential to the human-centered design process
- Generate a multitude of ideas and iterate them until you get something feasible
- Putting your ideas in the real world and measuring the results

## WHY HUMAN-CENTERED DESIGN?

### Incorporate consumer insights into product design

*Example: Among pension contributors in Colombia, each dollar spent on five, ten, and fifteen months of reminder messages led to an increase in retirement savings of \$10.71, \$17.36, and \$15.87, respectively.*

### Deepen your understanding of consumer choices

*How can gender norms affect liquidity preferences for men and women: In Kenya, offering free ATM cards led to reduced account usage among women with low bargaining power in the household.*

## WHEN TO USE HUMAN-CENTERED DESIGN?

The human-centered design framework can be used to tackle **consumer-side** challenges at any point along a product's lifetime:

*Piloting:* Which behavioral levers to use when reaching new segments?

*Retention:* Can new features improve a customer's journey?

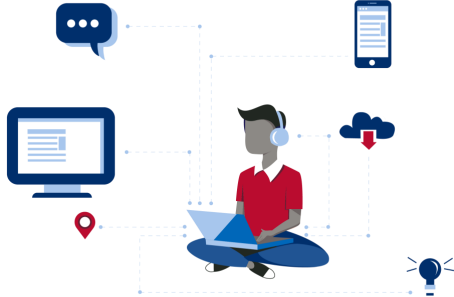
*Repayment:* How to tailor repayment terms more effectively?

# THE HUMAN-CENTERED DESIGN PROCESS: 3 PHASES

## 1. INSPIRATION



## 2. IDEATION



## 3. IMPLEMENTATION





# PHASE I: INSPIRATION

---

DAY I



# HOW WELL DO YOU KNOW YOUR CLIENTS' FINANCIAL LIVES?



# LEARN FROM YOUR CUSTOMERS USING QUALITATIVE METHODS

- Qualitative research: a method of observation for collecting non-numerical or quantitative data.
- Better understand the client's choice architecture: needs, desires, aspirations and assumptions about the world.
- Understand the social context in which behaviors are born, formed and engrained.
- Map relational dynamics between people, places, objects and institutions.

# HOW TO COLLECT QUALITATIVE DATA?

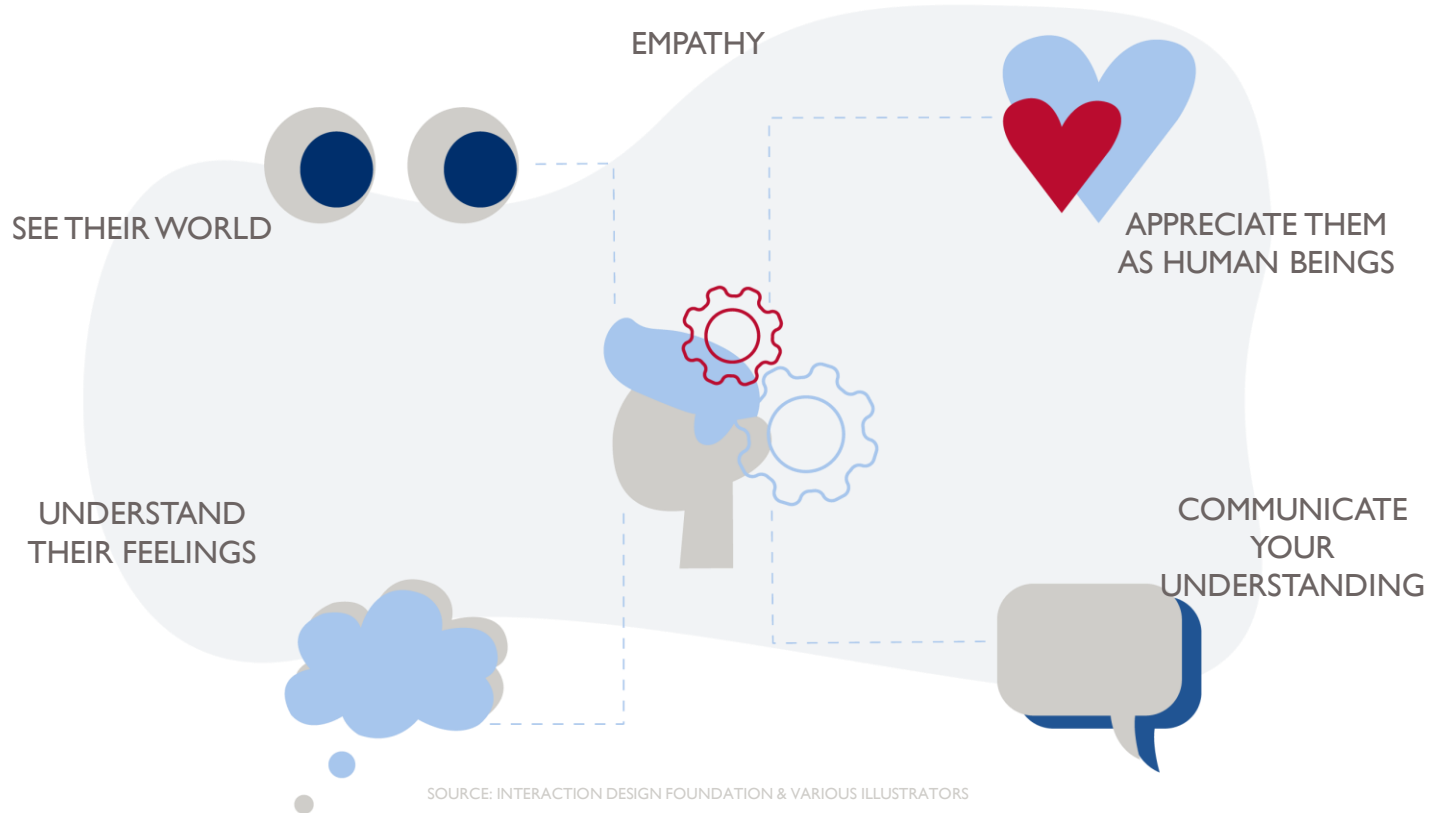
---



## CHALLENGES TO CONSIDER

- Literacy levels
- Trust in the surveyor
- Security and privacy concerns
- Income can be variable and unpredictable
- Are you using the right time horizons for planning?
- Is it easy for subjects to articulate barriers? Goals?

# EMPATHY AT THE HEART OF HUMAN-CENTERED DESIGN



# DEFINING THE PROBLEM

---

DAY I

## DEFINE THE PROBLEM...IN HUMAN TERMS

- How can we simplify the \_\_\_\_\_ experience.  
Examples: Gift-giving. Morning routine. Saving & spending.
- How might we improve \_\_\_\_\_?  
Examples: Exercise. Lunch. The first day of school. Walking downtown.
- How might we increase \_\_\_\_\_?  
Examples: Recycling. Walking. Intergenerational communication.
- How might we decrease \_\_\_\_\_?  
Examples: Bullying. Pollution. Homelessness.



## ACTIVITY

---

Now let's apply this to one of the problems your institution faces:

1. Each: write a problem on a sticky note
2. Present and explain your problem to your group
3. Choose the problem that interests everyone most





ILLUSTRATION BY HOANGPTTS

## COFFEE BREAK

# CUSTOMER JOURNEY MAPPING



DAY I

# WHAT IS A CUSTOMER JOURNEY MAPPING?

- An illustration of the steps a customer takes in their interaction with a product
- How the customer interacts with your institution at each stage
- The customer's goals for each action and how your institution can help

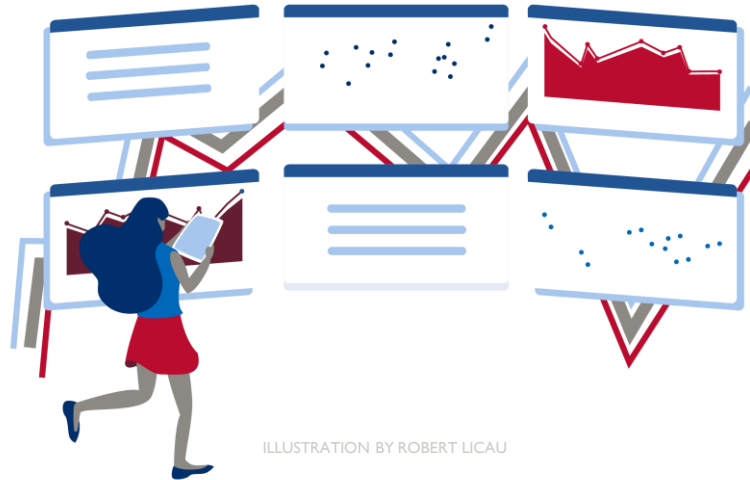
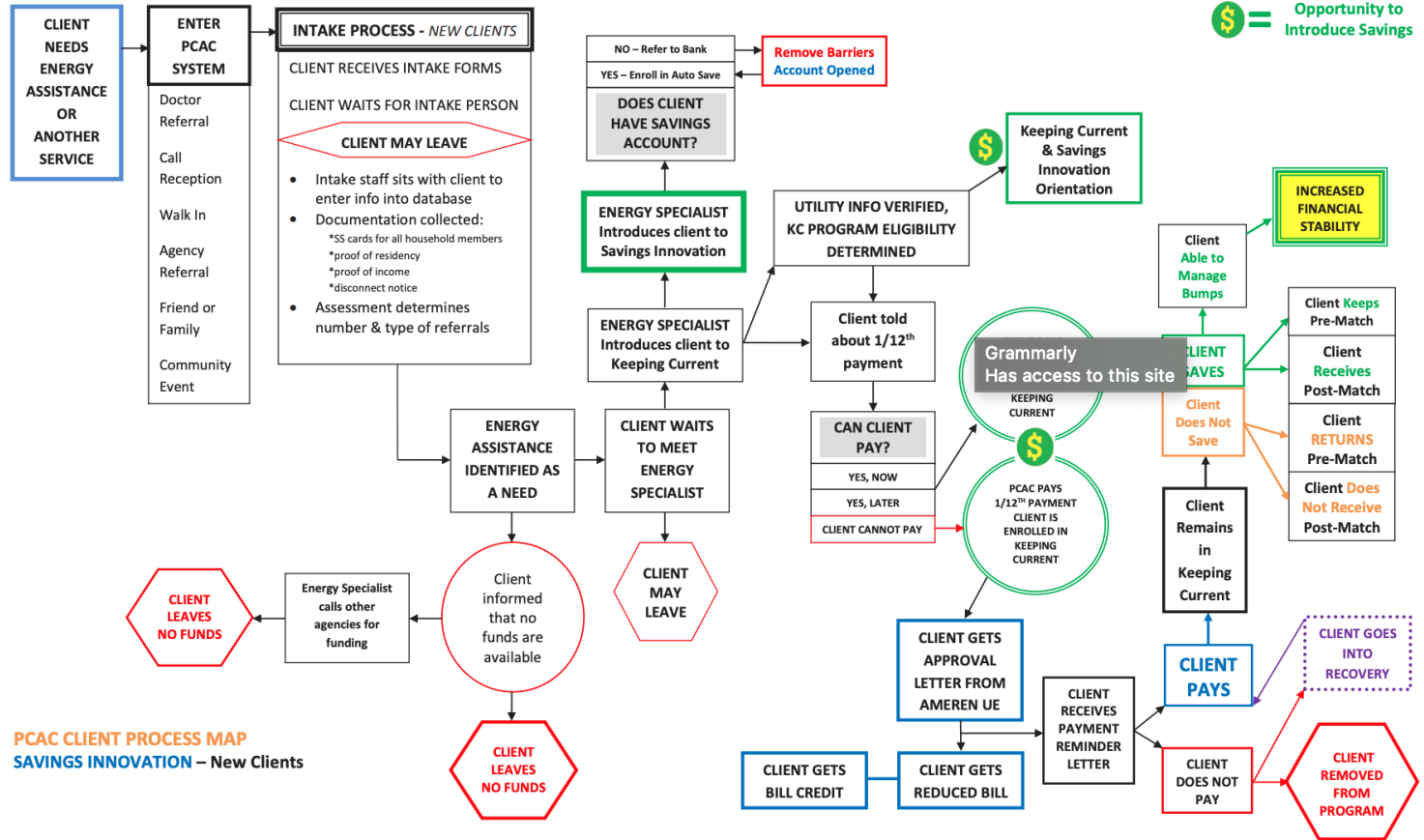


ILLUSTRATION BY ROBERT LICAU

## A CUSTOMER JOURNEY MAP IS USEFUL TO...

- Create a shared understanding of your service from the point of view of customers.
- Document customer options and needs at various points of contact between them and your organization.
- Identify inconsistencies in service delivery.
- Identify opportunities to address, whether with improvements and/or new ideas.

# EXAMPLE



## EXAMPLE: LUISA WANTS TO BUY A CAR

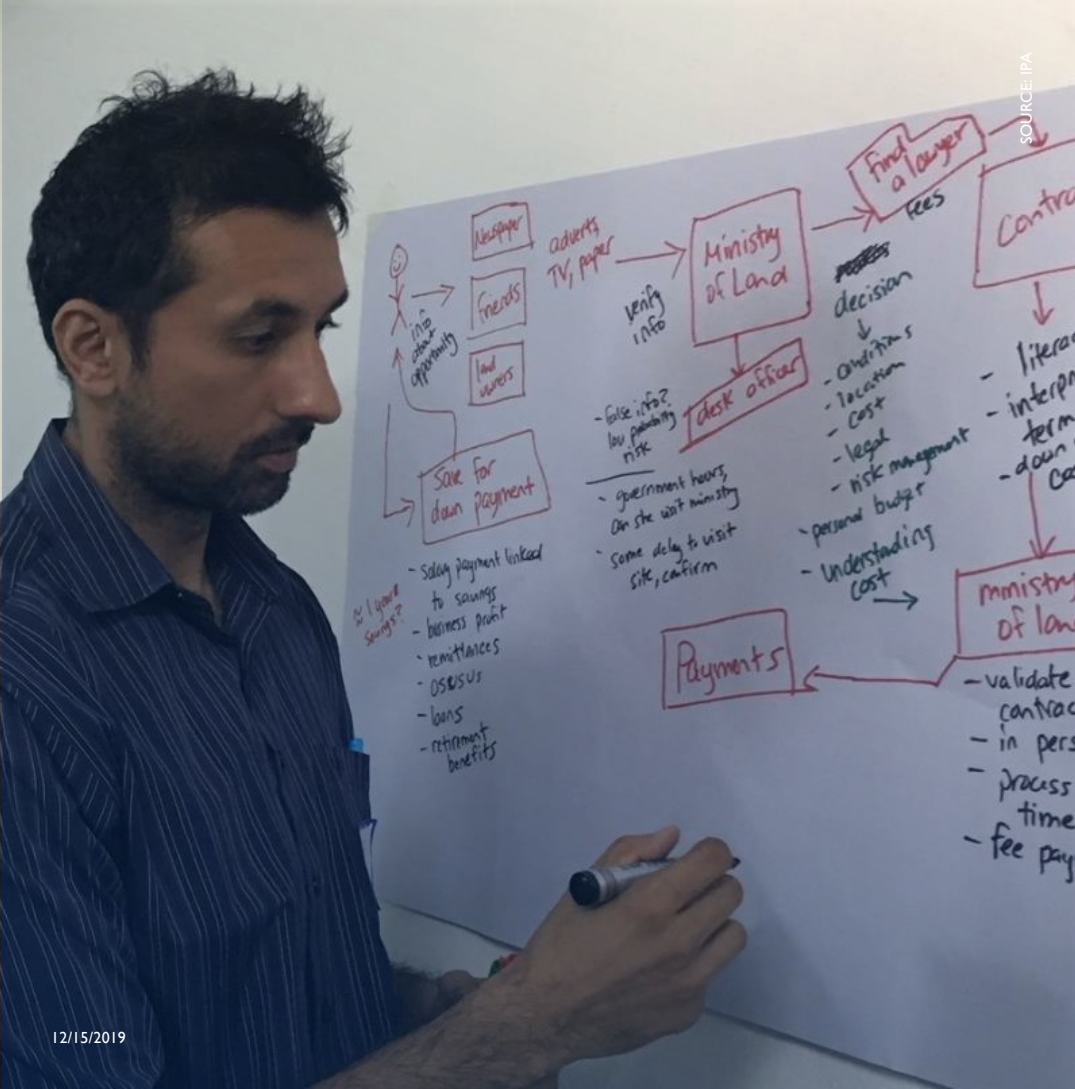


### What steps must she take?

- Collect information
- Compare options for Financing
- Consideration
- Purchase
- Repayment

### What do we include in the map for each step?

- Goals
- Personnel and materials involved



SOURCE: IPA



## CUSTOMER JOURNEY MAPPING: HOW DO YOUR CUSTOMERS CURRENTLY SOLVE THE SELECTED PROBLEM?

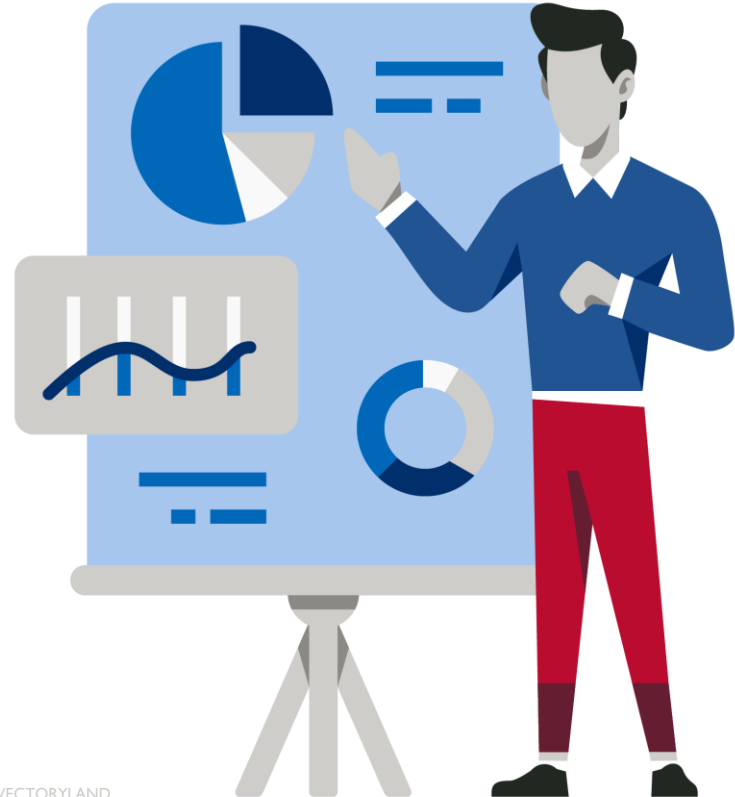


## SHOW AND TELL

---

Assign a representative and share with the classroom

- The problem selected
- The process mapped





# BEHAVIORAL ECONOMICS FOR FINANCIAL PRODUCT DESIGN

---

DAY I

# BEHAVIORAL ECONOMICS 101

Maybe the most important  
lesson of the day:

**Humans are irrational**



# PRODUCTS CAN USE “NUDGES” TO HELP PEOPLE ACHIEVE GOALS

“A nudge, as we will use the term, is any aspect of the choice architecture that alters people’s behavior in a predictable way without forbidding any options or significantly changing their economic incentives.”



*“The first misconception is that it is possible to avoid influencing people’s choices.”*

Dr. Richard Thaler  
University of Chicago Booth School of Business

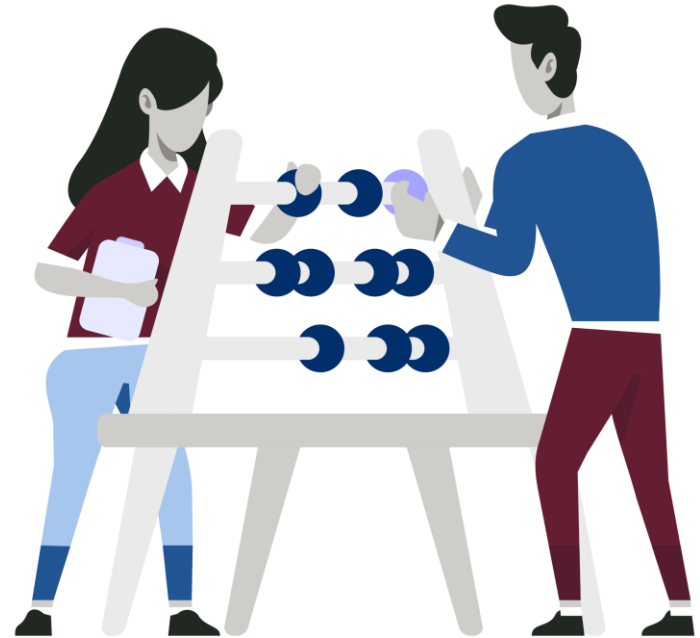
# IS IT A NUDGE?

IT'S A NUDGE	NOT A NUDGE
Home energy reports that tell you how much energy you use compared to your neighbors.	Adding a tax or financial penalty on excessive household energy use.
Asking citizens to make a plan to vote, asking when, where, and how they will get to their polling station.	Making voting mandatory.
Auto enrollment in your company retirement plan using payroll deduction.	A campaign for employee awareness of retirement savings options.

## NUDGES IN THE FINANCIAL HEALTH SPHERE

Behavioral biases can trip us up when trying to reach financial goals... nudges can help!

- Reaching a savings goal
- Paying off debt
- Household budgeting
- Product selection




# I. SELF-CONTROL

People often intend to use money for a specific purpose, but find themselves spending it on more tempting and gratifying things, instead.

## Real world application:

- Savings
- Sticking to plans/budgets
- Consumption smoothing

A blue, furry character (Cookie Monster) is shown from the chest up, holding a large stack of golden-brown cookies. He has large white eyes and a wide, black, open mouth. Above his head is a light blue thought bubble with a smaller bubble leading to it. The thought bubble contains the text: "If I limit myself to one cookie today, I can enjoy more cookies later."

If I limit myself to one cookie today, I can enjoy more cookies later.



IGNITERMEDIA.COM

# USING COMMITMENT DEVICES TO STICK TO A PLAN

Commitment devices are voluntary, binding arrangements that people make to reach future goals that may otherwise be difficult to achieve. Commitment devices provide a mechanism that forces people to act according to their self-set plans.

## **Hard Commitments**

Fines/penalties

Forfeited financial incentives

## **Soft Commitments**

Labels

Social pressure



## COMMITMENT CONTRACTS FOR SAVING

- A commercial bank offered a savings product that prevented clients from accessing their funds until they reached a certain goal, either an amount or time period, decided by the client.
- A year after the offers went out, clients offered the accounts had increased their account balances 80% more than those with normal accounts.
- Women with low bargaining power who were offered a commitment savings account increased expenditures on female-oriented durable goods such as sewing machines and kitchen appliances

## 2. PRESENT BIAS

People prioritize today's desires and needs over tomorrow's and, as a result, systematically fail to make choices that will only benefit them in the future.

Real world application:

- Retirement Savings
- Sticking to plans

Hershfield, Goldstein, Sharpe, et al. 2011:

---

*“People may fail, through a lack of belief or imagination, to identify with their future selves”*

Would seeing yourself as an older person inspire you to put away more money for retirement savings?

**It worked!**

**Subjects who saw their aged images were more likely to delay monetary rewards**

## LABELING AS A SOFT COMMITMENT DEVICE

Labeling products for specific uses is has little to no cost to the financial institution but can lead to changes in saving and spending behavior.

Labeling is a soft commitment device and does not have to be enforced by penalties or liquidity constraints.

## LABELING IN KENYA: **128% INCREASE IN HEALTH SPENDING**

- Members of savings groups were given a lockbox with a key and told to use it to save for health expenses.
- Other members contributed to a “Health Pot” in their savings groups, also to be used for health expenses
- Access to the money was not restricted in either intervention
- Labeled lockbox users increased preventative health expenditures by 67%
- “Health Pot” users increased preventative health expenditures by 128%

## LABELING FOR REMITTANCES: **15% INCREASE IN MONEY REMITTED**

- Lab games were conducted among Filipino migrants living in Rome.
- Labeling remittances for education raised the amount of remittances sent in the game by 15%.
- Labeling for education increased the likelihood that migrants remitted at all by 4.6%.
- Adding the ability to send money directly to a school only added a further 2.2% increase in remittances

### 3. INERTIA

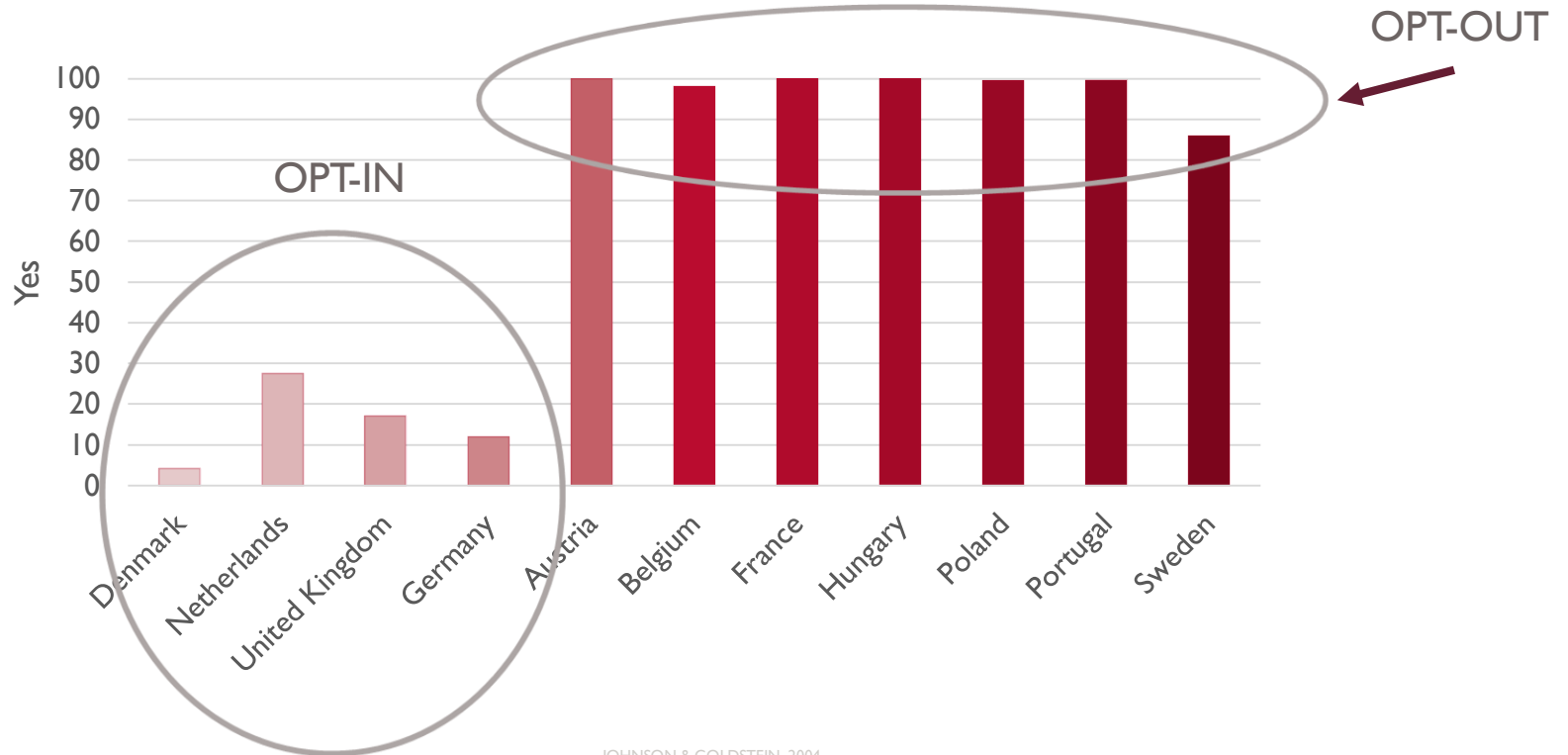
People have a strong preference for the status quo, regardless of whether it is better or worse for them than available alternatives

Real world application:

- Automated behaviors
- Defaults
- Savings & loan payments



# ORGAN DONOR CONSENT IN EUROPE



# DEFAULTS LEVERAGE CUSTOMER INERTIA FOR POSITIVE OUTCOMES

Default enrollment is a simple product design modification in which consumers are informed that they will be automatically enrolled in a product or service unless they choose to opt out.



## DEFAULTS FOR SAVING IN AFGHANISTAN

- Automatic enrollment or setting the default to “opt-out”, can significantly increase participation in retirement and savings plans.
- In Afghanistan, a large employer randomly assigned a group of workers to automatically deposit 5% of their paycheck into a mobile savings account (“opt-out”).
- Employees in this program were 40 percentage points more likely to accumulate short-term savings than employees who had to opt in
- More effective than a 25% savings match; equivalent to a more costly 50% savings match

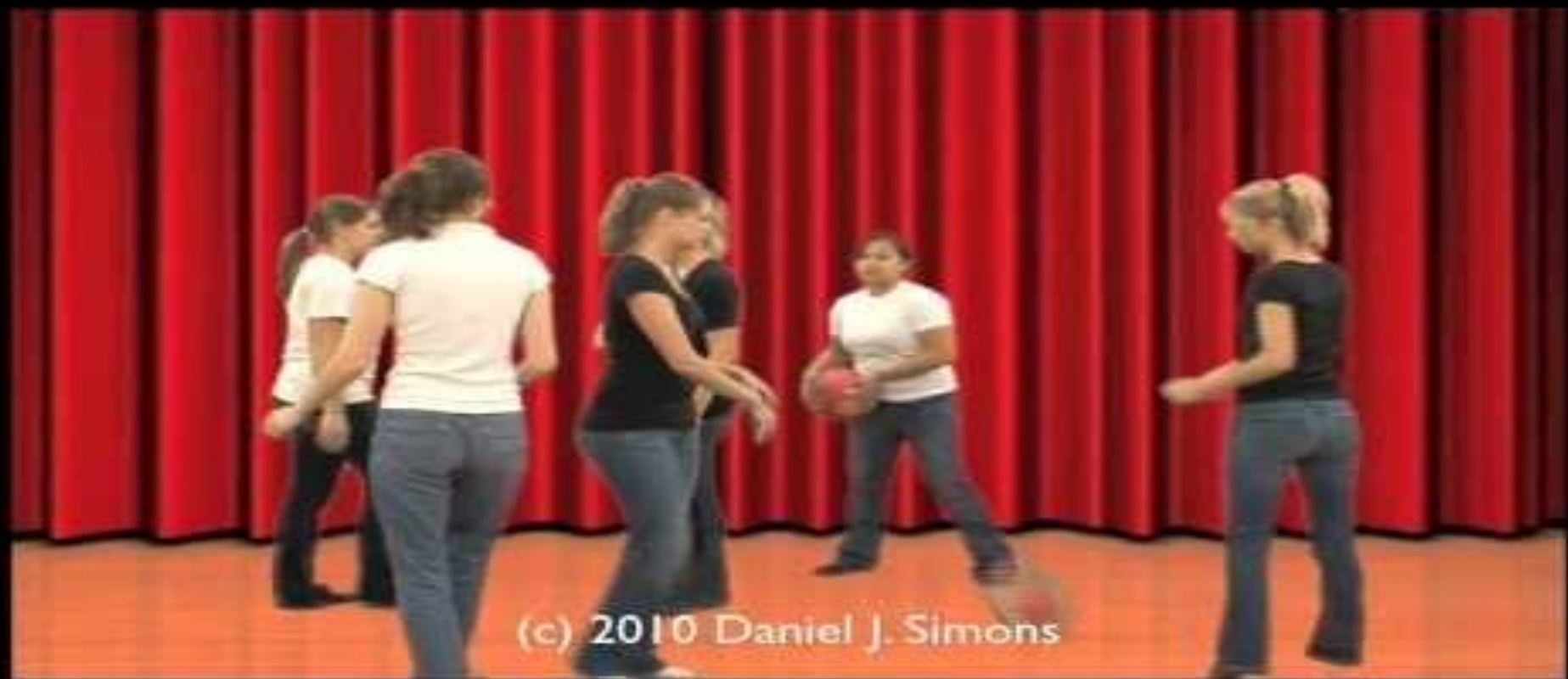
## 4. INATTENTION

There are limits to our attention. It can be difficult to remember the future in the face of all we have to deal with day-to-day.

### Real world application:

- Savings
- Payments
- Sticking to plans





## REMINDER MESSAGES TO COUNTERACT LIMITED ATTENTION

Reminders are a cost-effective tool in fighting procrastination and helping people follow-through on their goals. They can help individuals save more, repay loans, and follow through on important actions.

## REMINDERS LED TO AN INCREASE IN SAVINGS BALANCES

- In Bolivia, Peru, and the Philippines, clients with commitment savings accounts received messages reminding them of their savings goals
- Clients with reminders saved more and were more likely to reach their goals.
- Since the text reminders were so inexpensive to administer, this approach was cost-effective for financial service providers.

## MESSAGE CONTENT & TIMING MATTER

- Messages that mention both a savings goal and a financial incentive are most effective
- Messages that use positive versus negative motivation are equally effective
- Regularly scheduled monthly reminders were most effective. Extra reminders beyond this had no additional impact.
- Reminders by mail are not as cost-effective as email or text

## 5. CHOICE OVERLOAD

People have a difficult time deciding when faced with many options.

Real world application:

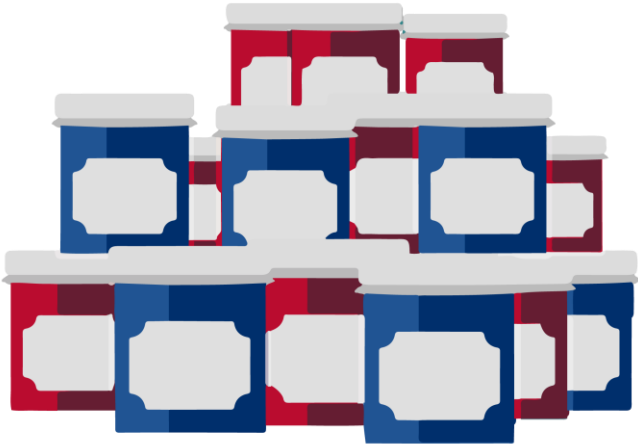
- Consumer protection
- Product selection
- Financial capability



FUENTE: Jack Atley/Bloomberg News

# THE JAM EXPERIMENT

60% of customers  
visited the booth



Only 3% of  
customers  
bought a jar

40% of customers  
visited the booth



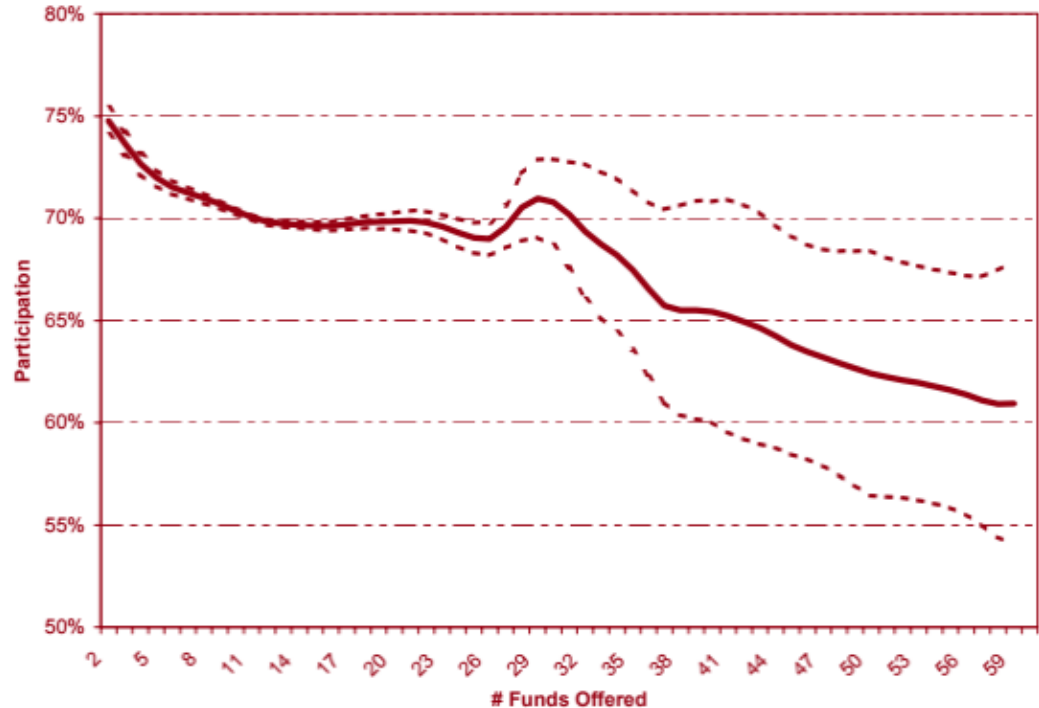
30% of  
customers  
bought a jar



# NUMBER OF PENSION FUNDS OFFERED VS. EMPLOYEE PARTICIPATION

**Less is more:** as options increase, people are less likely to choose one

Dotted lines represent 95% confidence intervals



## 6. BOUNDED RATIONALITY

**Human judgments are limited by available information, time constraints, and cognitive limitations**

Real world application:

- Consumer protection
- Product selection
- Financial capability

*Most of us are not experts in every field. How do we make decisions?*

- Rules of thumb are mental shortcuts that help us make decisions
- Reduce time and effort
- Based on rough approximations or experiences – not exact, but usually good enough

## IS THIS A DUCK?

It looks like a duck:

- It has a beak

It walks like a duck:

- It has webbed feet

It's a duck!

(except for when it isn't...)

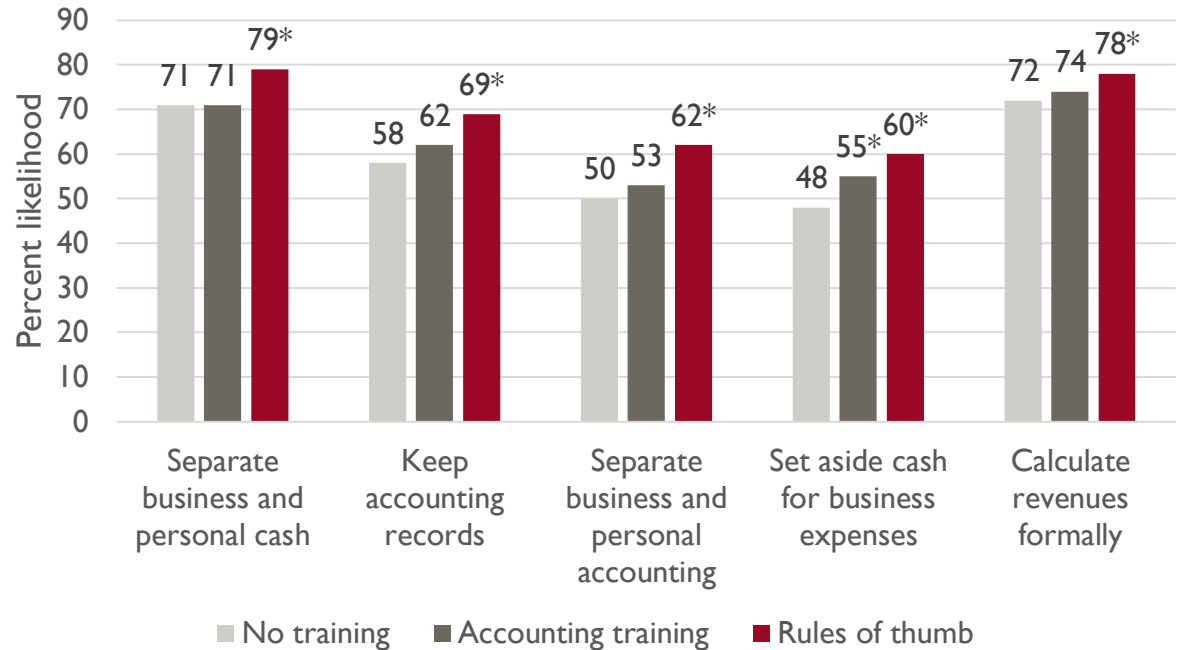


# USING RULES OF THUMBS FOR MORE EFFECTIVE FINANCIAL EDUCATION OUTCOMES

Replacing complicated financial education curricula with simple, easy to remember rules of thumb can increase the chance that concepts taught will be translated into behaviors

# INCREASE IN LIKELIHOOD OF HEALTHY BUSINESS PRACTICES

Rules of Thumb training more effectively increased the likelihood of healthy business practices (such as keeping accounting records) than conventional accounting training



\*statistically significant change

## — WHEN DO I APPLY NUDGES?

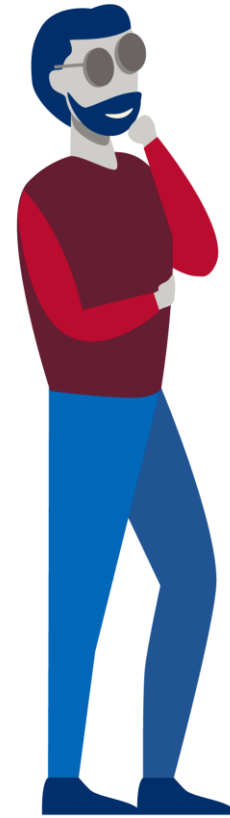


ILUSTRACIÓN DE HOANGPTS

## IS THIS A PROBLEM THAT CAN BE SOLVED WITH A NUDGE?

- I. Understand the problem you're trying to solve for. Talk to clients. Is the barrier behavioral or something else on the supply side?



## WHAT DO YOU WANT TO ACHIEVE?

2. Define the outcome you want to achieve and know how you will measure it.  
Create a theory of change leading to that outcome.





## SEGMENTATION MATTERS

3. People have different personalities. Nudges affect different personality types differently.



## IS IT WORTH IT?

4. Is the change you see worth the cost of implementation?  
Need more data on cost-effectiveness.





ILLUSTRATION BY HOANGPTTS

## LUNCH BREAK

# UNDERSTANDING GENDER BARRIERS

---

*“A woman is economically empowered when she has both the ability to succeed and advance economically, and the power to make and act on economic decisions”*

"Understanding and Measuring Women's Economic Empowerment Definition, Framework and Indicators" Anne Marie Golla, Anju Malhotra, Priya Nanda, and Rekha Mehra (2011)

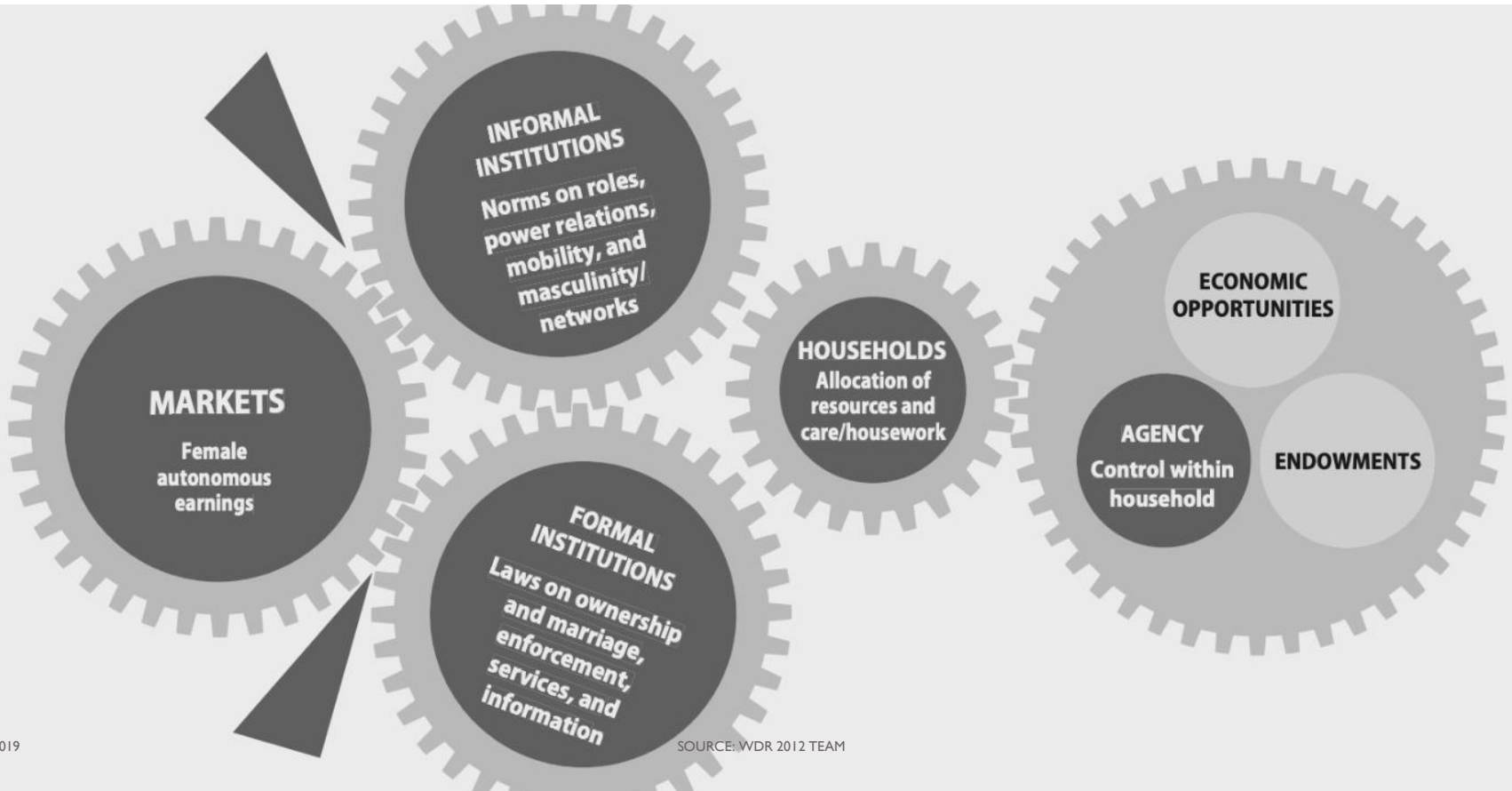
## WHAT IS AGENCY?

*“Agency can be understood as the process through which women and men use their endowments and take advantage of economic opportunities to achieve desired outcomes.*

*Thus, agency is key to understanding how gender outcomes emerge and why they are equal or unequal.”*

World Development Report, 2012

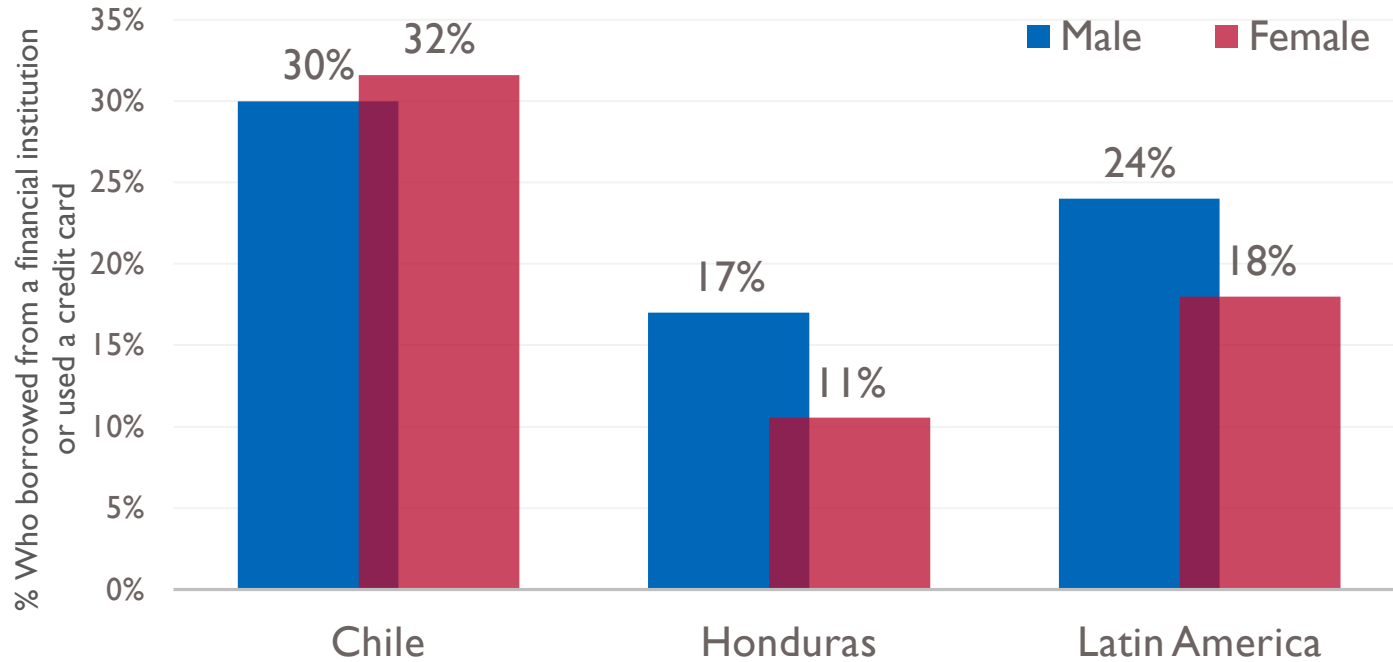
# HOW DO AGENCY AND EMPOWERMENT INTERACT?



# GENDER BARRIERS TO FINANCIAL INCLUSION

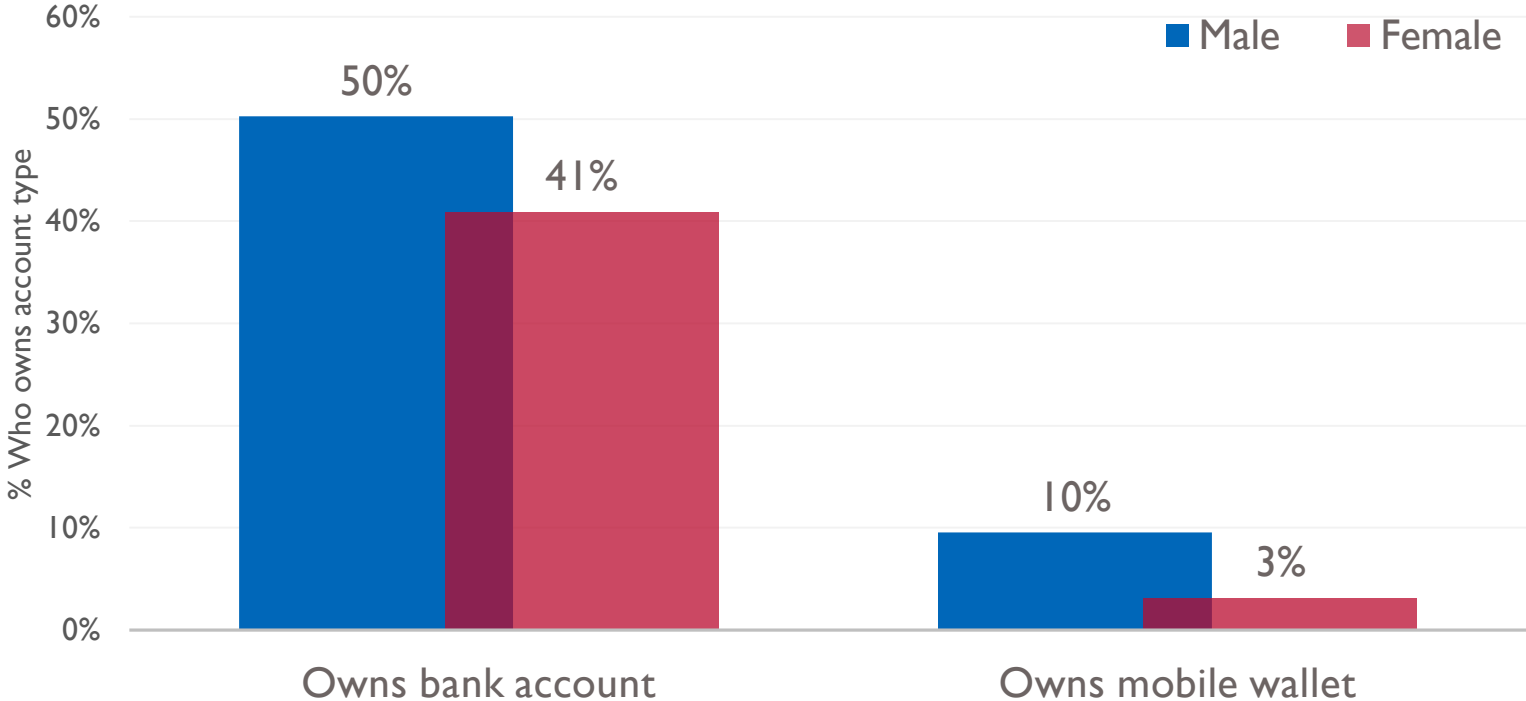
DEMAND SIDE BARRIERS	SUPPLY SIDE BARRIERS	LEGAL & REGULATORY BARRIERS
<ul style="list-style-type: none"><li>• Lack of bargaining power within the household</li><li>• Concentration in lower-paying economic activities</li><li>• Competing demands on women's time related to unpaid domestic work</li><li>• Lack of assets for collateral</li><li>• Lack of formal identification</li><li>• Reduced mobility due to time constraints or social norms</li><li>• Lower rates of cell phone ownership among women, needed to access many digital products</li></ul>	<ul style="list-style-type: none"><li>• Inappropriate product offerings</li><li>• Lack of gender-specific policies and practices for product design and marketing</li><li>• Inappropriate distribution channels</li></ul>	<ul style="list-style-type: none"><li>• Account opening requirements that disadvantage women</li><li>• Barriers to obtaining formal identification</li><li>• Legal barriers to owning and inheriting property and other collateral</li><li>• Lack of gender-inclusive credit reporting systems</li></ul>

## GENDER GAP IN FORMAL CREDIT USE





# HONDURAS



## POTENTIAL GENDER NORM BARRIERS

- Demands on time related to women's role in household
- Gender norms for business and labor choices
- Mobility restrictions
- Degrees of control over resources

## DIGITAL FINANCIAL SERVICES MAY BE BETTER AT ADDRESSING SOME GENDER NORM BARRIERS TO EMPOWERMENT

1. Facilitate better access to economic resources
2. Offer more privacy and control

## BETTER ACCESS TO ECONOMIC RESOURCES

Improve effectiveness of cash transfer programs targeting women

- In Niger, delivering cash transfers electronically increased the likelihood (from 8 to 47 percent) that the recipient, who was a woman, was solely responsible for obtaining the transfer
- Households in which women received cash transfers electronically had higher diet diversity and children consumed more meals per day

# PRIVACY AND CONTROL

Private accounts for women impact the decision to work

- In India, depositing work payments into female-owned bank accounts led to significant increases in both work and economic engagement especially among women particularly limited by prevailing gender norms.
- Women who received the treatment were 7 percentage points more likely to have worked for pay in the past year and had 30% higher earnings

# PRIVACY AND CONTROL

Product features can offer women more control over use of funds

- In India, women who received pay for work directly into a private bank account were more likely to make purchases with their own money
- Liquidity preferences: in Kenya, providing free ATM cards caused individuals with a stronger position in the household, the majority men, to significantly increase usage of the accounts, while individuals with low household bargaining power, the majority female, reduced account usage.
- In the Philippines, offering an illiquid savings account led to increased expenditures on female-oriented durable goods such as sewing machines and kitchen appliances for married women with low bargaining power

# CREATING PERSONAS

---

DAY I

# WHAT ARE PERSONAS?

Personas are a descriptive and qualitative tool

Personas represent an actual, in-depth profile of specific groups within your target audience:

1. Basic demographic
2. Financial and personal needs
3. Aspirations
4. Behavioral characteristics

*Not to be confused with target markets*



## WHY USE PERSONAS?

- Provide a lens through which to understand the experiences and perspectives that may govern a person's experience using financial tools and meeting their needs and goals
- We will use the personas developed here to anticipate biases and experiences for each persona along our client journey
- By understanding the assumptions we are making about our clients, it provides a space to develop hypotheses for more rigorous testing

# FACTORS THAT INFLUENCE FINANCIAL DECISIONS

	FACTORS	NEEDS	ASPIRATIONS
FINANCIAL	<ul style="list-style-type: none"> <li>• Income</li> <li>• Investments</li> <li>• Government benefits</li> <li>• Networks</li> </ul>	<ul style="list-style-type: none"> <li>• Basic living expenses</li> <li>• Unexpected expenses</li> <li>• Family support</li> <li>• Business expenses</li> </ul>	<ul style="list-style-type: none"> <li>• Raise living standards</li> <li>• Invest in education</li> <li>• Invest in income sources</li> </ul>
EMOTIONAL AND SOCIAL	<ul style="list-style-type: none"> <li>• Behavioral biases</li> <li>• Network size</li> <li>• Role: provider, contributor, dependent</li> <li>• Cultural views</li> </ul>	<ul style="list-style-type: none"> <li>• Privacy</li> <li>• Liquidity</li> <li>• Flexibility</li> <li>• Status</li> </ul>	

# BACK TO INSPIRATION

## Social and economic environment

What surrounds you in your family and community.

### Personality and attitudes

How you tend to think, feel, and act.

### Decision context

How a particular decision is presented.

### Knowledge and skills

What you know, and what you know how to do.

## Behavior

What you actually do.

## Personal financial well-being

How satisfied are you with your financial situation.

### Available opportunities

What options are open to you.



# ACTIVITY



## CREATING PERSONAS





ILLUSTRATION BY HOANGPTS

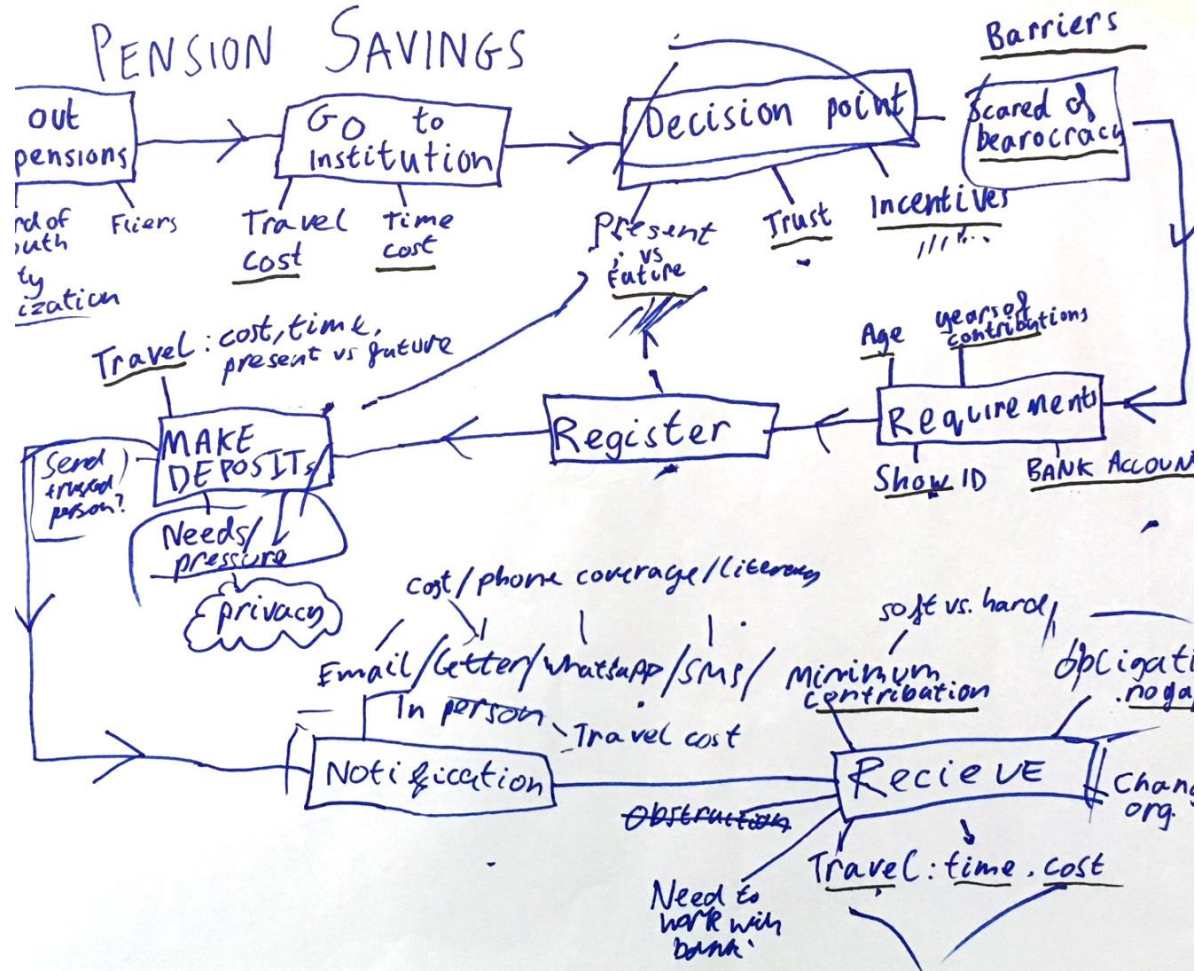
## COFFEE BREAK

# IDENTIFYING PAIN POINTS

---

DAY I

# BACK TO YOUR MAPPINGS...



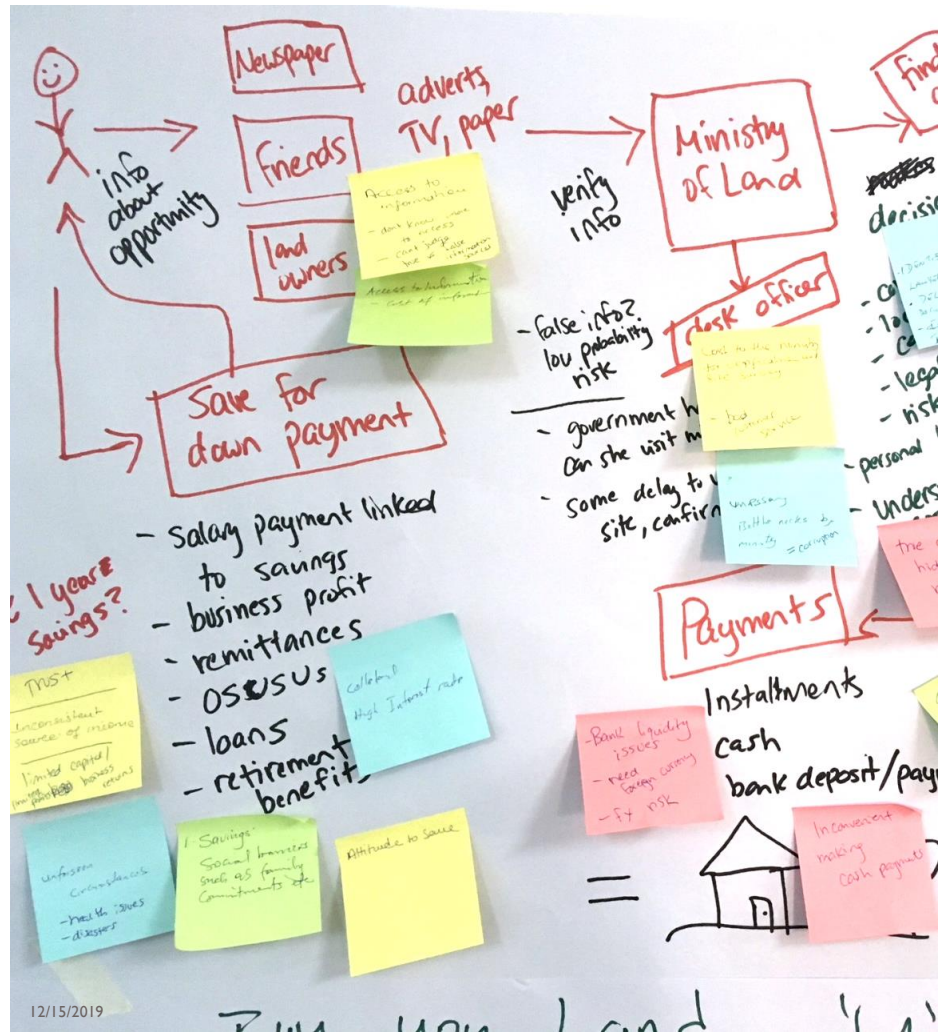


# TAKE THE JOURNEY IN YOUR CLIENT'S SHOES

---







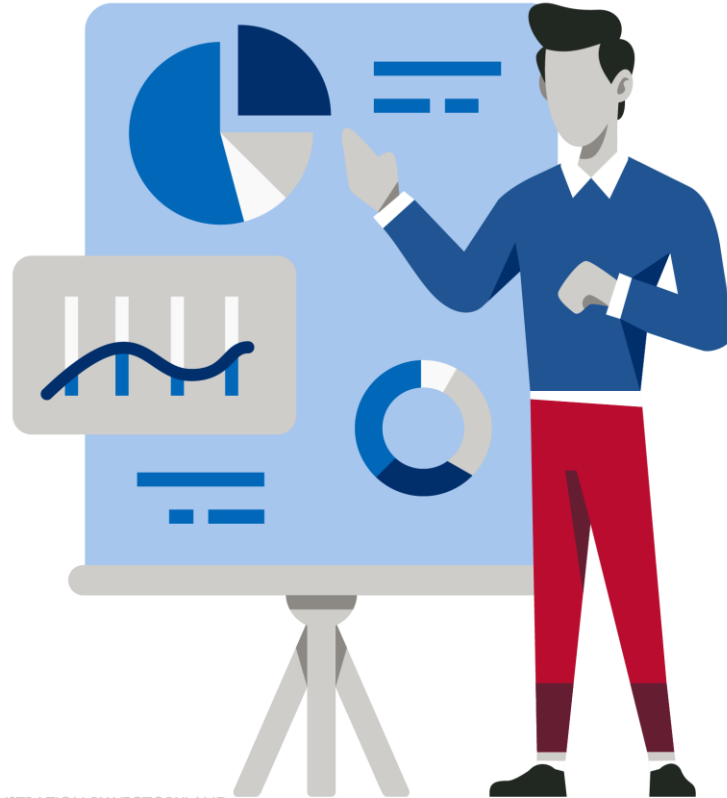
## ...AND COUNT THE PAIN POINTS

- Are they behavioral?
- Are they related to social norms?
- Are they related to the physical environment?
- Are they regulatory?
- Are they related to the customer's needs?
- Where is the human-centered design solution lack?



# SHOW AND TELL

---









**USAID**  
FROM THE AMERICAN PEOPLE

# HUMAN CENTERED DESIGN FOR FINANCIAL PRODUCTS

—  
DAY 2

## — DAY 2 - AGENDA

9:30 AM – 9:40 AM

9:40 AM – 10:25 AM

10:25 AM – 11:00 AM

11:00 AM – 11:15 AM

11:15 AM – 12:15 AM

12:15 AM – 12:40 PM

12:40 PM – 1:00 PM

1:00 PM

### **WELCOME AND SUMMARY**

IDEATION: PROTOTYPE DESIGN

PRESENTATION OF SOLUTIONS

COFFEE BREAK

IMPLEMENTATION: THEORY OF CHANGE

EVALUATION TO IMPROVE DESIGN

CONCLUSIONS AND CLOSING WORDS

### **END OF WORKSHOP**

# YESTERDAY AND TODAY

Back to the human-centered design process:

- Yesterday, we explored the **inspiration** phase
- Today we focus on the last two phases of the process: **ideation and implementation**

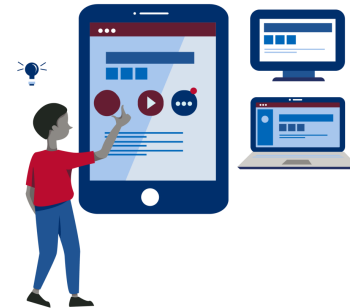
## 1. INSPIRATION

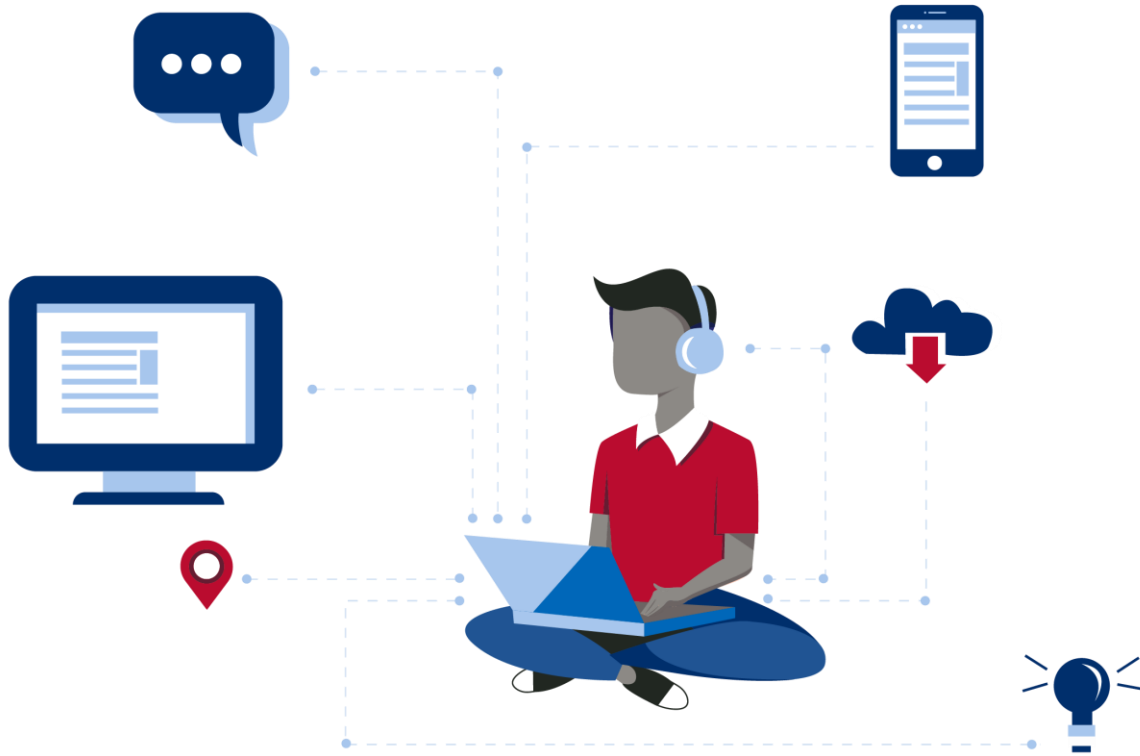


## 2. IDEATION



## 3. IMPLEMENTATION





## PHASE 2: IDEATION

—  
DAY 2



# HOW TO ADDRESS PAIN POINTS?

---

In 20 minutes, write down all the solutions and innovations you can imagine.

*There are no wrong solutions!*





# RANK YOUR POTENTIAL SOLUTIONS

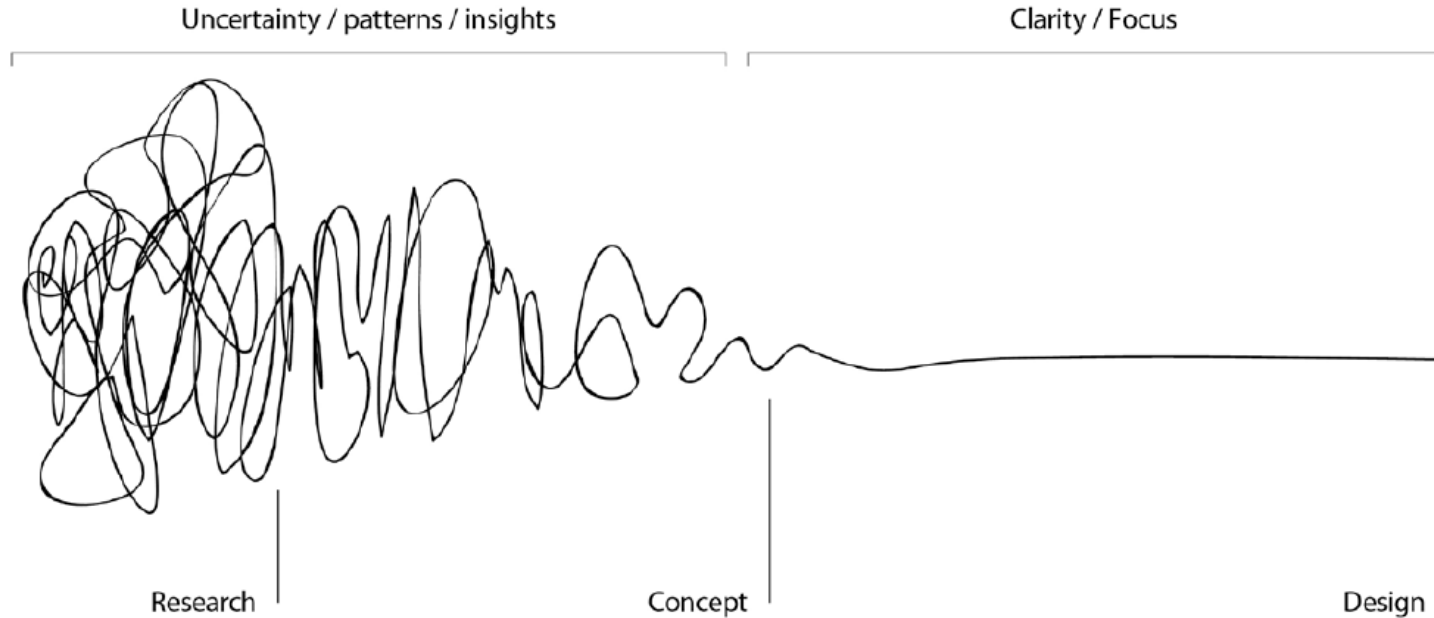
Rate ideas, assigning them ranges from “greater potential” to “lower potential”



## CRITERIA FOR EVALUATION

- Does this solution respond to the correct problem?
- Will this solution improve the customer experience?
  - Is there evidence to suggest that?
  - What value does it add for the customer?
- Is it feasible to implement?
  - Are there the tools to make it happen?
  - Who would be involved?
- Will this solution change the competitive landscape?
  - Is it different from the solutions that competitors offer?

# PROTOTYPE DESIGN



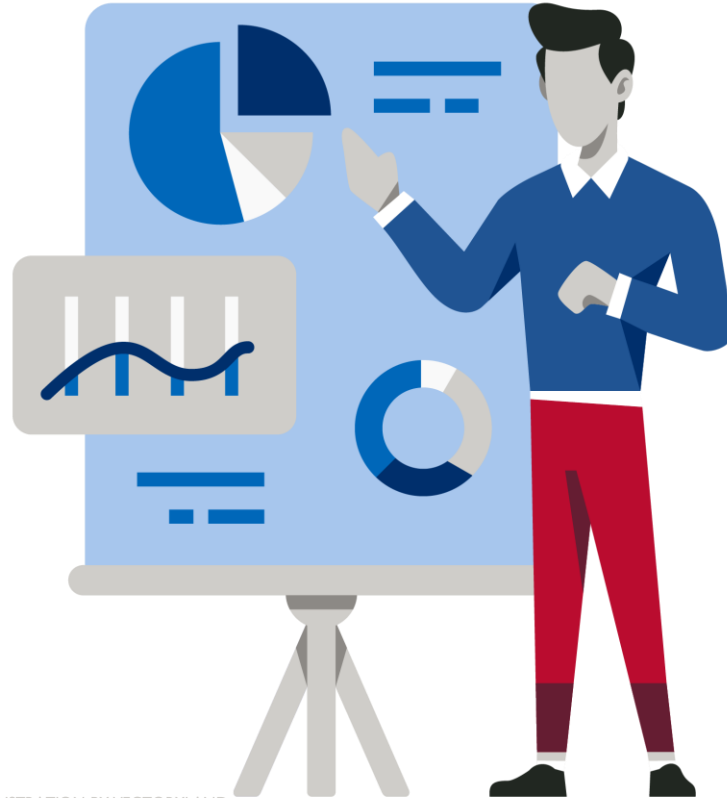
# PRESENTATION OF SOLUTIONS

- As a team, visualize the solution
- Prepare a short presentation to share with the group, including:
  1. Definition of the problem
  2. Inspiration for the solution
  3. An explanation of the solution
  4. Why should we implement this solution?



# SHOW AND TELL

---





## PHASE 3: IMPLEMENTATION

---

DAY 2

## WHERE TO GO NOW?

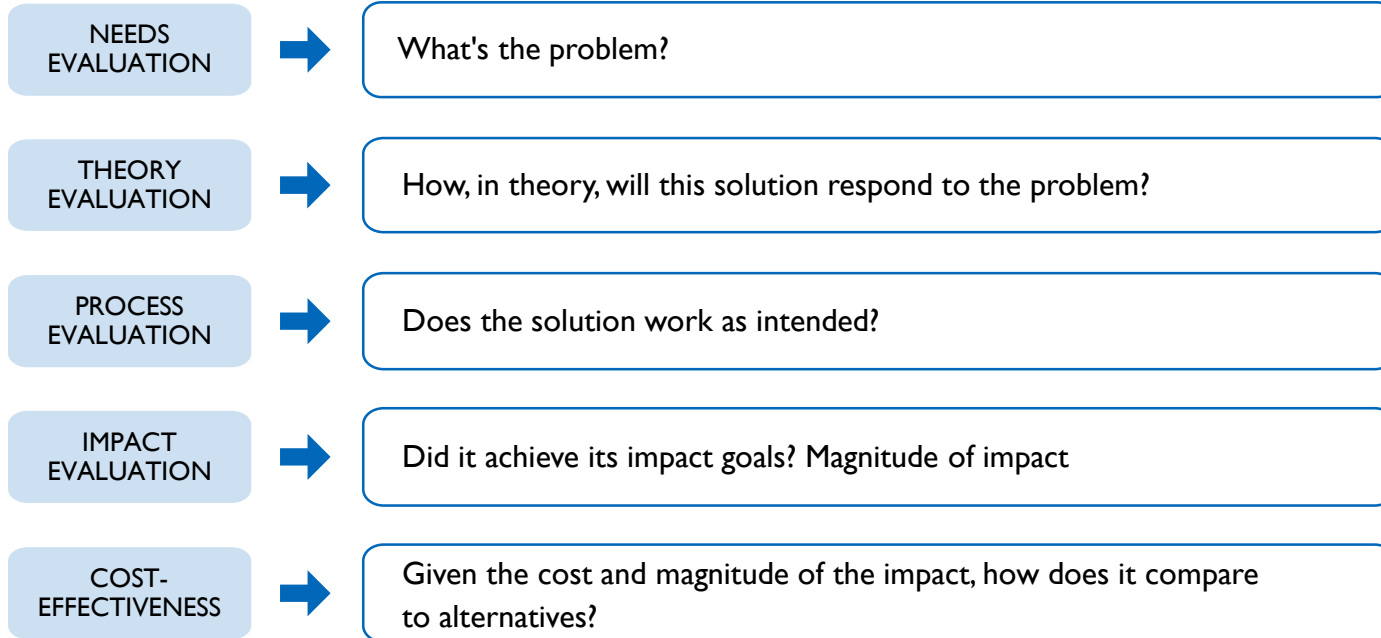
- We know the problem we want to address (Inspiration)
- We have a solution to go with it (Ideation)
- How do we know it's working?

## HOW DO WE KNOW IT'S WORKING?

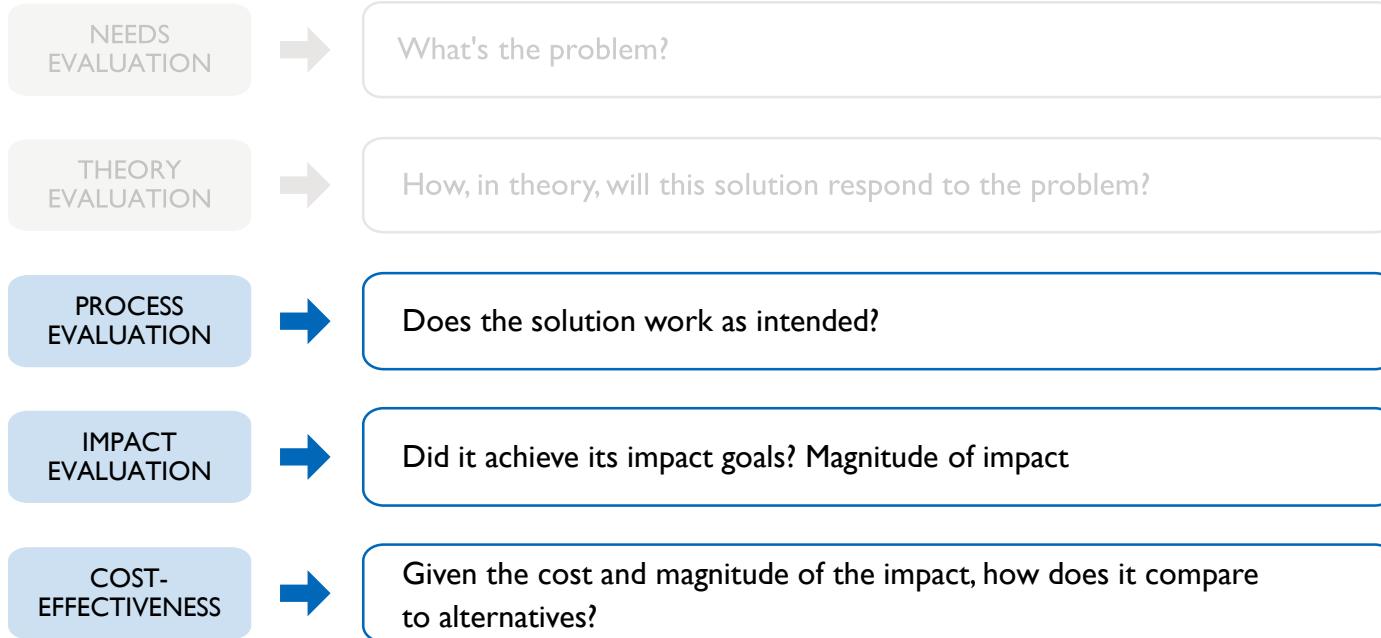
1. Start by mapping the path to change for your given solutions
2. Design the appropriate learning agenda
3. Evaluate and iterate



# TYPES OF EVALUATION



# TYPES OF EVALUATION



## CAUSAL HYPOTHESIS

### Question:

How do we expect these results to be achieved?

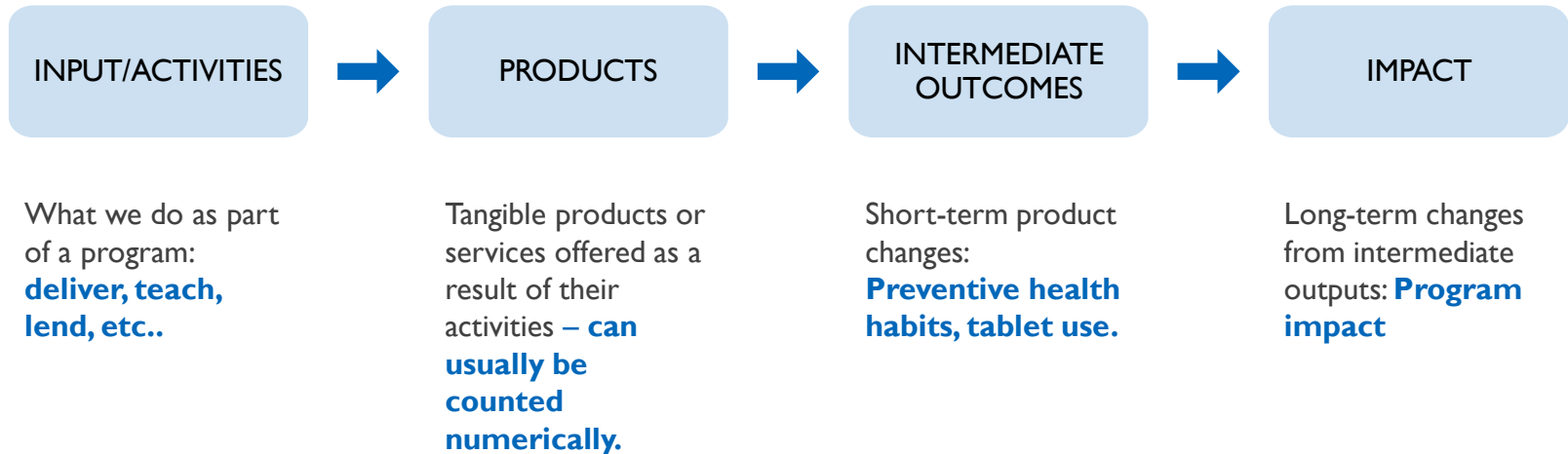
### Response:

**If** [*Inputs*] **produce** [*results*] this **will lead to** [*Impacts*], which will **contribute** to [*goal*].

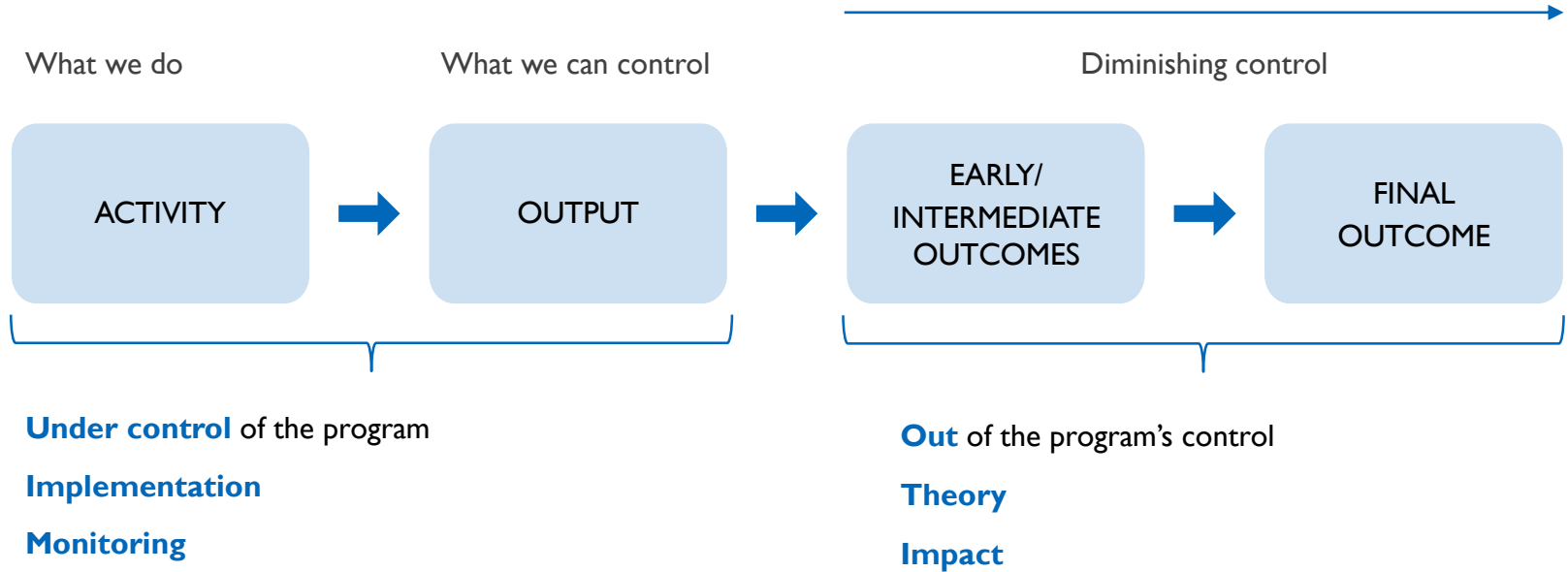
# THEORY OF CHANGE

- A theory of change is a strategy used in the design and evaluation of social programs to explore how any desired change will be achieved
- It is a mapping of the logical chain of how the supplies to the program or product will result in changes for the beneficiaries

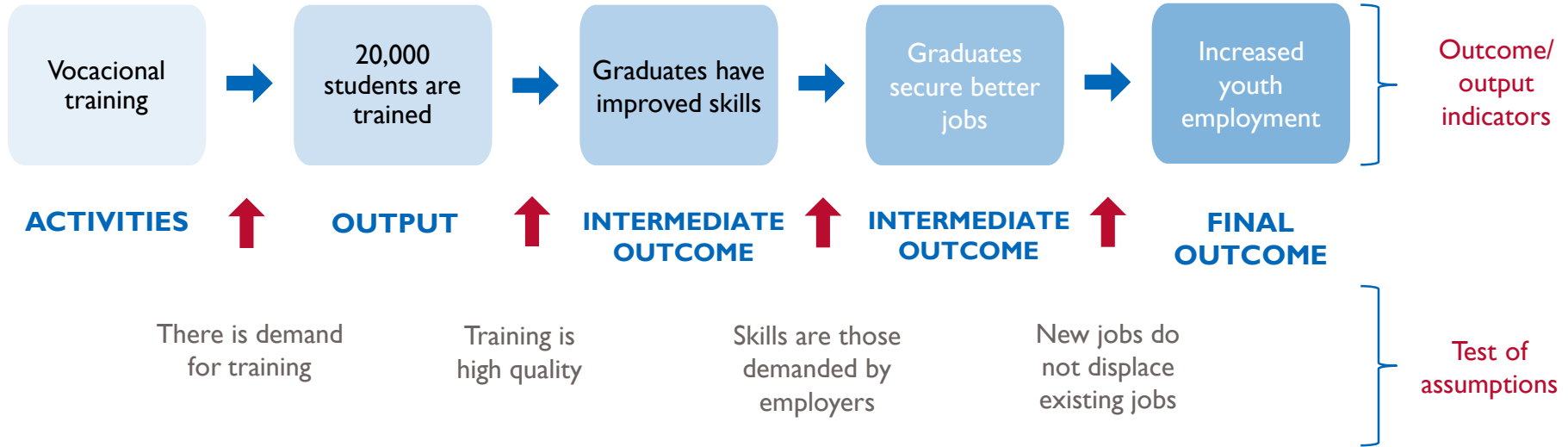
# COMPONENTS OF A THEORY OF CHANGE



# COMPONENTS OF A THEORY OF CHANGE



# A PROPOSED PROCESS FOR THE LEARNING AGENDA







# ASSUMPTIONS PART I

CATEGORY	CONCEPT <i>"Boxes" from the ToC or assumptions (numbered)</i>	INDICATOR(S) <i>Generally ignore for final outcomes/outputs</i>	DATA SOURCE <i>Survey? Admin data? Others? (Be specific)</i>	TIMELINE/ FREQUENCY <i>When is it collected? e.g., once at the end, weekly, quarterly, etc.</i>
ASSUMPTION				
ASSUMPTION				
ASSUMPTION				
ASSUMPTION				

## ASSUMPTIONS PART II

CATEGORY	CONCEPT	STRATEGIES	LEARNING OPPORTUNITIES	TIMELINE FREQUENCIES
		<i>What can we try to make it hold?</i>	<i>What question will we ask about this assumption?</i>	<i>How will we answer the question?</i>
ASSUMPTION				
ASSUMPTION				
ASSUMPTION				
ASSUMPTION				

# LEARNING AGENDA: PRIORITIZING A RIGHT-FIT PLAN

**Usefulness**  
(Learning +  
accountability)

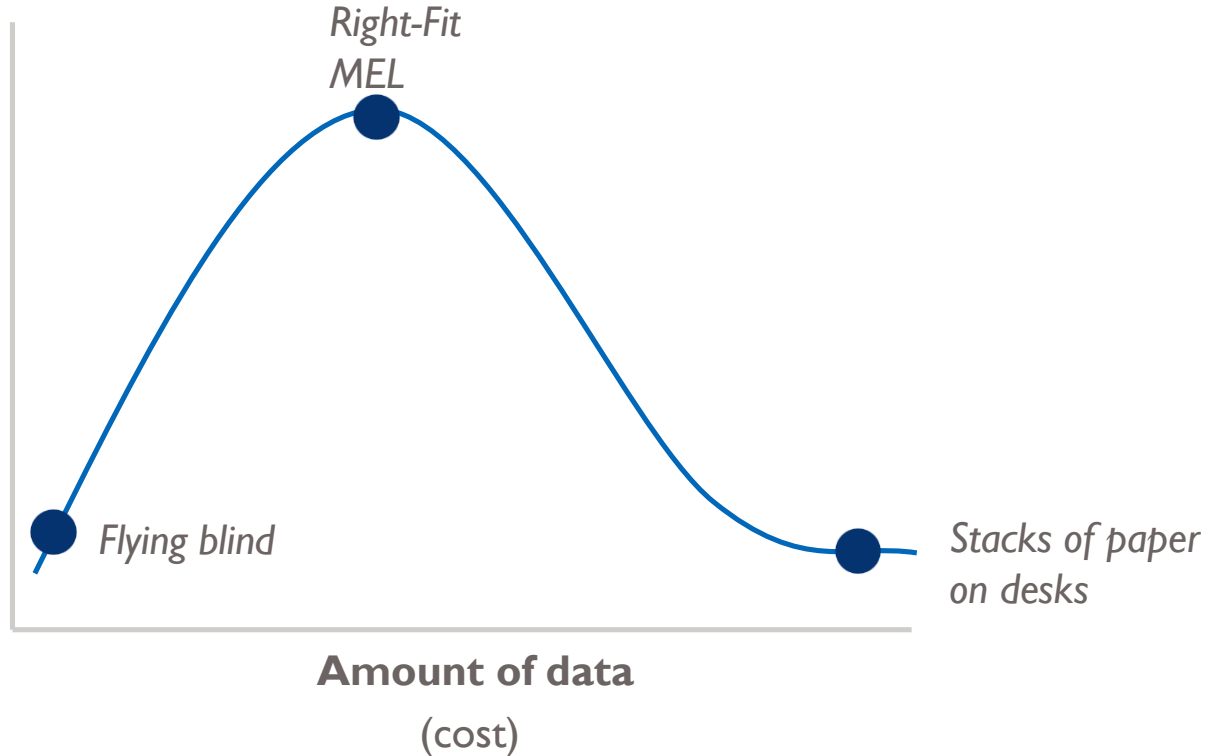




ILLUSTRATION BY HOANGPTS

## COFFEE BREAK

# RIGOROUS EVALUATIONS

---

DAY 2

## ATTRIBUTING OUTCOMES TO THE INTERVENTION

- The **counterfactual** represents the state of the world that program participants would have experienced in the absence of the program (i.e. had they not participated in the program)
- **Problem:** Counterfactual cannot be observed
- **Solution:** We need to mimic or construct a counterfactual

## SELECTING A COMPARISON GROUP

- Select a group that is exactly like the group of participants in all ways except one: their exposure to the program or product being evaluated
- Any difference that subsequently arises between them can be attributed to the program rather than to other factors.

# I. EVALUATIONS TO IMPROVE PRODUCT OR PROCESS DESIGN

---



## A/B TESTS

- These are randomized tests, but more agile
- Designed to improve the design of a product or program, product take-up, and/or the use
- A good practice among Tech and marketing companies

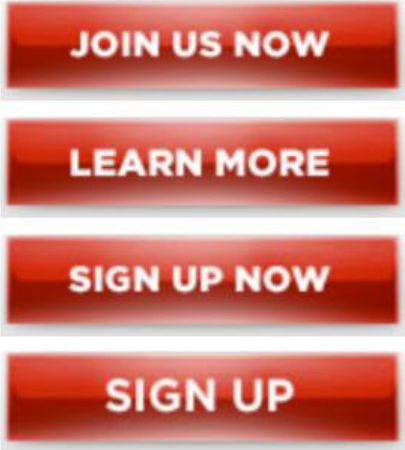
# YOU'VE ALREADY PARTICIPATED IN MANY A/B TESTS WITHOUT KNOWING IT



SOURCE VVO



# THE \$60 MILLION TEST





OBAMA'08

**CHANGE**  
WE CAN BELIEVE IN



**JOIN THE  
MOVEMENT**

Email Address

Zip Code

**LEARN MORE**

PAID FOR BY OBAMA FOR AMERICA



CONTINUE  WEBSITE

THE \$60 MILLION TEST

# BENEFITS OF A/B TESTING

## **Big data**

- Administrative databases vs. household surveys (\$\$)

## **Low-cost implementation**

- Low cost, scalable interventions, leverages technology

## **Faster results**

- Focus on short-term results such as product take-up and utilization

## LIMITS OF A/B TESTING

### **They can be atheoretic**

- Allows you to perform many tests without theory of change

### **Limited results measurement**

- Limited to data already captured by institutional data

### **Large samples required**

- To measure small changes, large populations are required

### **Small effect size**

- Small, incremental changes; small marginal impact

# CASE STUDY: MICRO-PENSIONS



**DNP** Departamento  
Nacional  
de Planeación

**Main question:** Can an SMS campaign increase the amount saved by informal sector workers in Colombia through its BEPS micro-pension account?

**When:** September – December 2016

**Method:** A/B Test with SMS reminders

**Sample:** 175,750 BEPS users received SMS; control group of 245,720 users received nothing

**Design:** 20 Treatment Groups, receiving different combinations of SMS reminders and other content

## CASE STUDY: MICRO-PENSIONS

1. *Text messages increased savings among users who were actively saving before receiving messages. Not as effective at motivating non-savers.*
2. *Making phone calls increased the number of account holders who made at least one transaction regardless of prior messaging treatment. Interactive calls (both human and prerecorded) were most effective.*
3. *For active account holders, each dollar spent on five, ten, and fifteen months of messaging led to an increase in retirement savings of \$10.71, \$17.36, and \$15.87, respectively.*



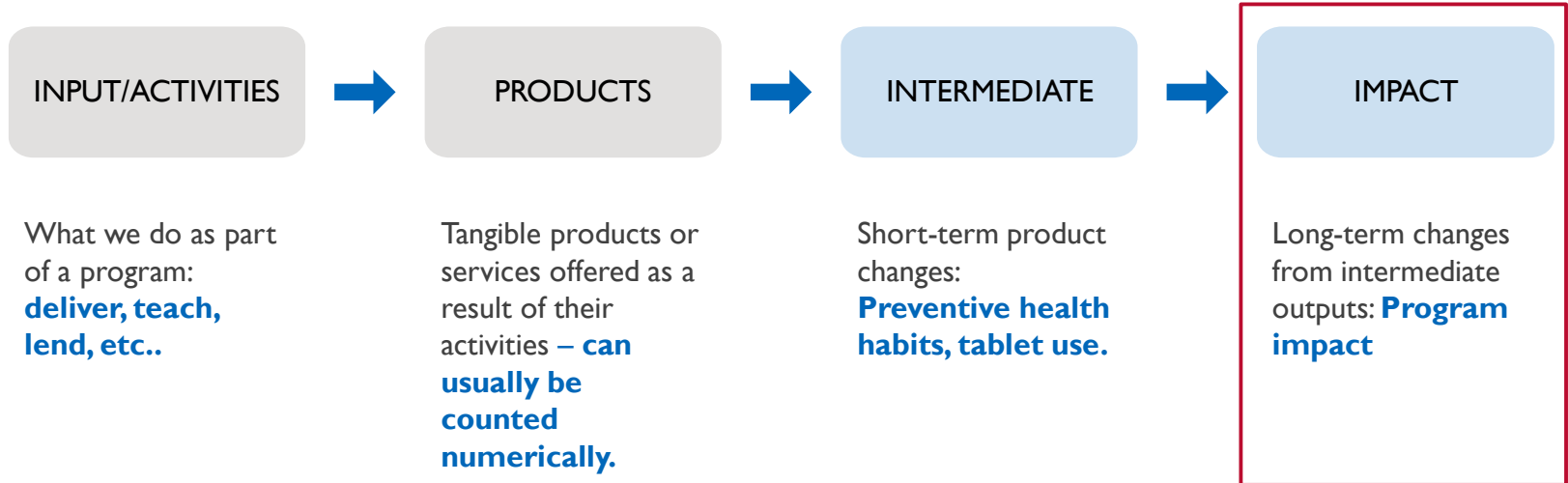
# INDICATORS

PERSUASION	TIMING	INFORMATIONAL/EDUCATIONAL
Goodness	Time of day	Information about the bank
Coolness	Day of the week	Information about the process
Happiness	Personalized timing	Information about reliability
Negative persuasion	Frequency	Interest rates
Vision for the future	Duration	Cost of credit
Self-consciousness	Random timing	Prudential information
		Waiting times

# INDICATORS

ATTENTION	
Attention to savings	Income level
A universal goal	Predictable future expenses
A pre-identified goal	Unanticipated future expenses
A random goal	Common expenses
Balances	Individualized expenses
History	A task
Low balance alert	A personalized task
Term of income	Peer group
Income uncertainty	

# IMPACT IN THE THEORY OF CHANGE



## RAPID-FIRE RCTS VS. WELFARE IMPACT RCTS

- Both use randomized sampling
- Both assign variations in product or experience randomly

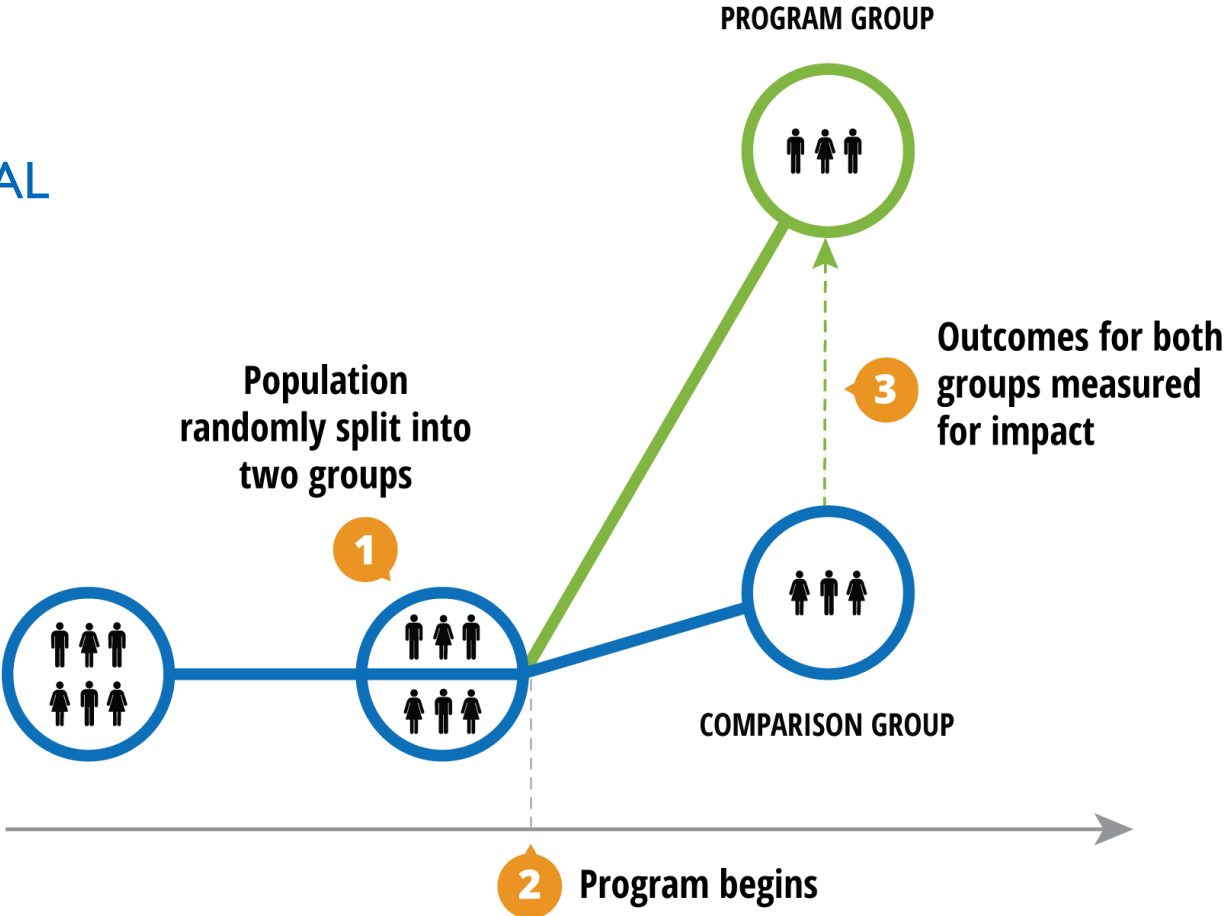
### RAPID-FIRE RCTS FOR PRODUCT DESIGN

- Usually a **low-cost modification** to an existing product
- Largely **administrative** data (internal databases such as usage logs, transaction histories, or click rates)
- Limited to first-order outcomes like **take-up and usage** of the product in question

### WELFARE IMPACT RCTS

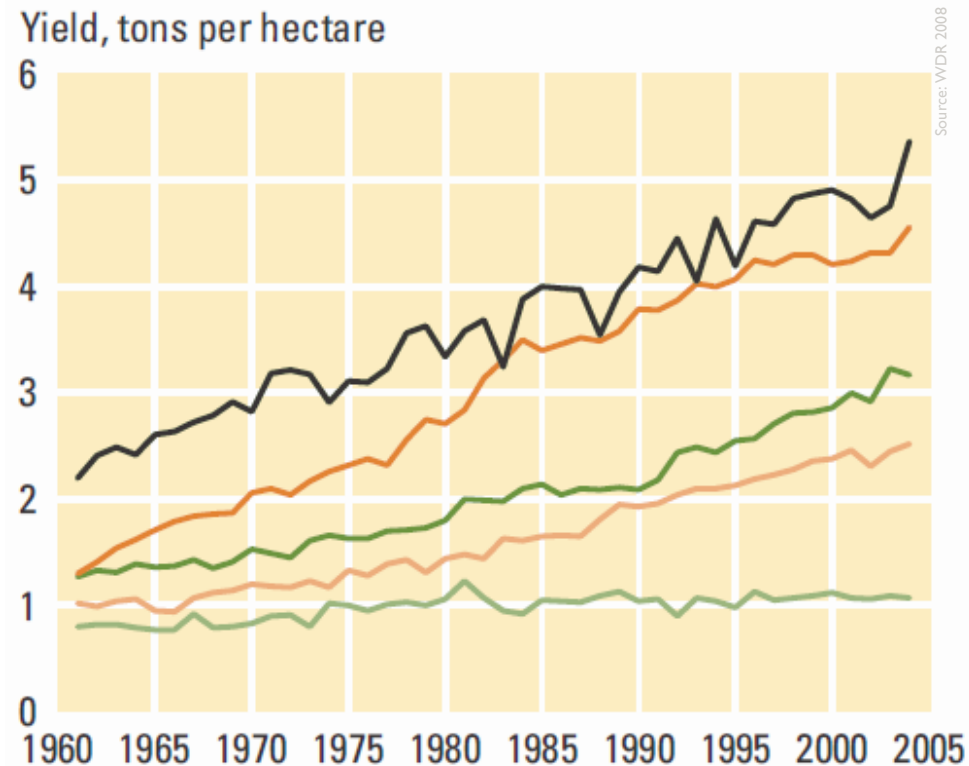
- A modification to an existing product or an entirely new product
- Administrative and **survey** data (including household surveys)
- **Welfare** outcomes such as income or consumption, as well as usage of complementary and substitutable products

# RANDOMIZED CONTROL TRIAL EVALUATIONS



## 2. IMPACT EVALUATIONS





**PROBLEM:  
LOW CROP-YIELD  
IN AFRICA**



### 3 POTENTIAL HYPOTHESES

1. Farmers don't have enough capital to invest in more crops
2. Farmers don't invest more for fear of unpredictable rain
3. Farmers do not use the right fertilizers and that is why yields remain low



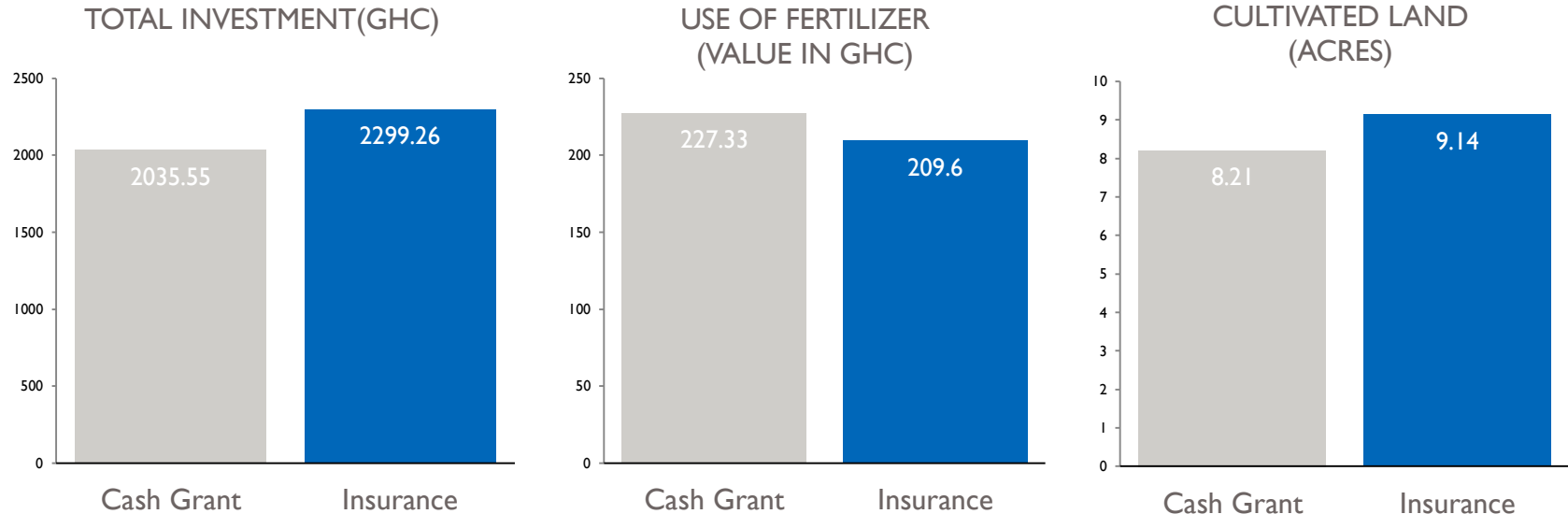
## IMPACT OF FERTILIZER : EARNINGS INCREASE

### IMPACT OF ORGANIC AND INORGANIC FERTILIZER ON IN GHANA'S NORTHERN REGION (2010)

TREATMENT	MAIZE YIELD (KG/HA)	ADDED COST (CEDIS/HA)	ADDED PROFIT (CEDIS/HA)
Control	450	0	0
NPK + Ammonia	2210	200	516
Commercial OF + N	3274	408	733
Commercial OF + NPK	3160	380	717

# IMPACT OF RAINFALL-INDEXED INSURANCE

Farmers with a rainfall-indexed insurance product invest more



## RESULTS

- Rainfall-index insurance product leads to a significant increase in investment by farmers
- A capital injection doesn't have the same impact: the barrier is risk
- Fertilizer use boosts profits
  - Why don't they buy more fertilizers then?
  - What are the barriers to acquisition?

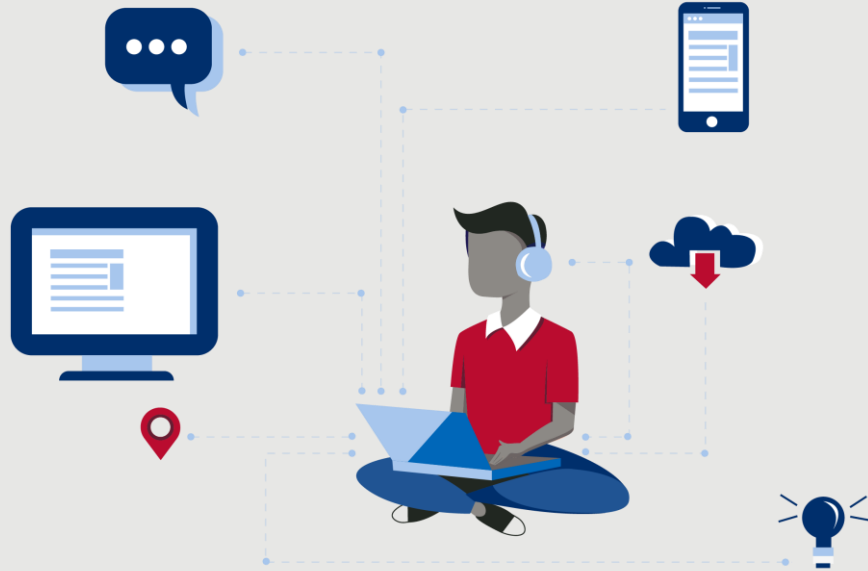
# FINAL TAKEAWAYS

---

During **inspiration**:

- Can my clients teach me something new about this problem?
- What behavioral biases could be at play?
- What segments are affected?
- What does their journey look like and how many pain points can I count?





During **ideation**:

- How many ideas can we come up with to solve this problem?
- Which are most feasible?
- What would that solution look like in real life?

During **implementation**:

- How will this solution lead to something new?
- What assumptions have I made? How can I measure them?
- Can we refine this solution based on those insights?
- Is there scope to evaluate the impact on our customers?



---

THANKS!



**USAID**  
FROM THE AMERICAN PEOPLE



**ipa**  
INNOVATIONS FOR  
POVERTY ACTION



# HANDOUTS





## ASSUMPTIONS PART I

CATEGORY	CONCEPT	INDICATOR(S)	DATA SOURCE	TIMELINE/ FREQUENCY
ASSUMPTION				
ASSUMPTION				
ASSUMPTION				
ASSUMPTION				

## ASSUMPTIONS PART II

CATEGORY	CONCEPT	STRATEGIES	LEARNING QUESTIONS	LEARNING APPROACH
ASSUMPTION				
ASSUMPTION				
ASSUMPTION				
ASSUMPTION				

# HCD IN YOUR DAILY WORK



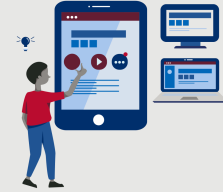
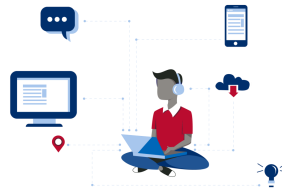
---

## During **inspiration**:

- Can my clients teach me something new about this problem?
- What behavioral biases could be at play?
- What segments are affected?
- What does their journey look like and how many pain points can I count?

## During **ideation**:

- How many ideas can we think up to solve this problem?
- Which are most feasible?
- What would that solution look like in real life?



---

## During **implementation**:

- How will this solution lead to something new?
- What assumptions have I made? How can I measure them?
- Can we refine this solution based on those insights?
- Is there scope to evaluate the impact on our customers?