



Theory of Change in Program Evaluation

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Presentation Overview

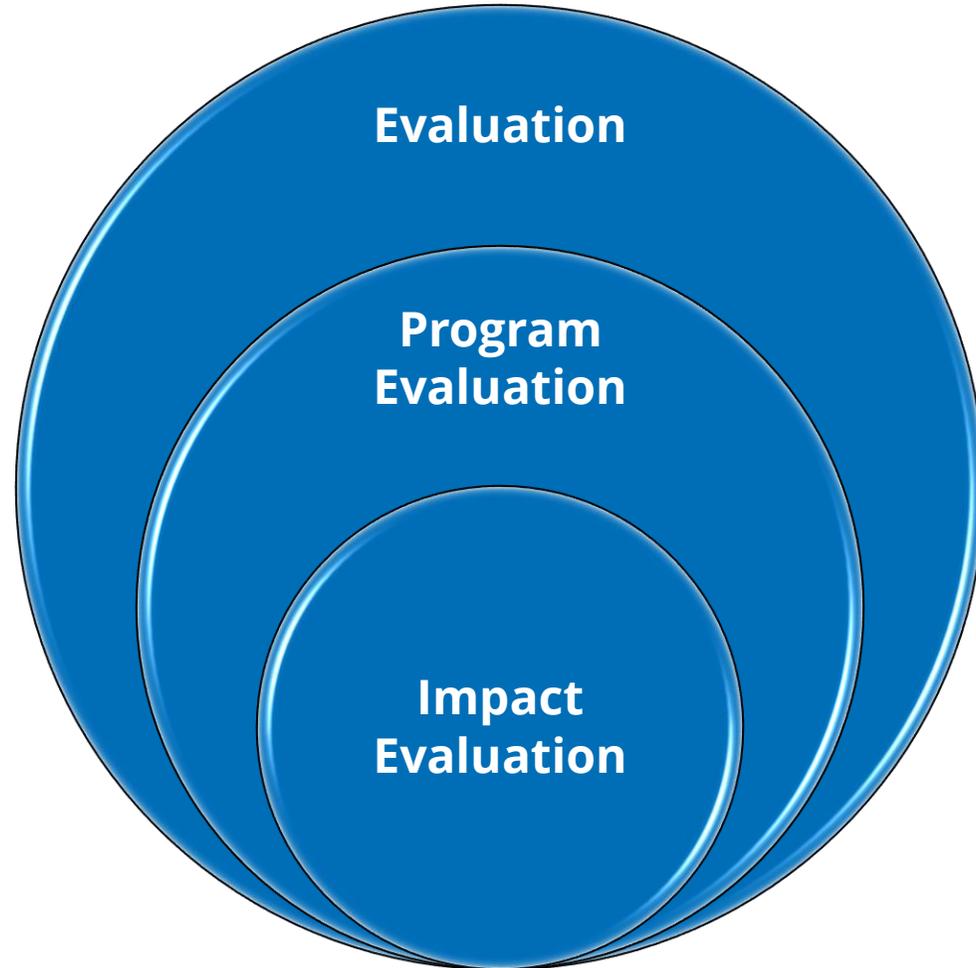
1. Review Evaluation and Where Does Theory of Change Fit In?
2. Building a Theory of Change in 6 Steps
3. Why is Theory of Change Important?
4. Case Exercise



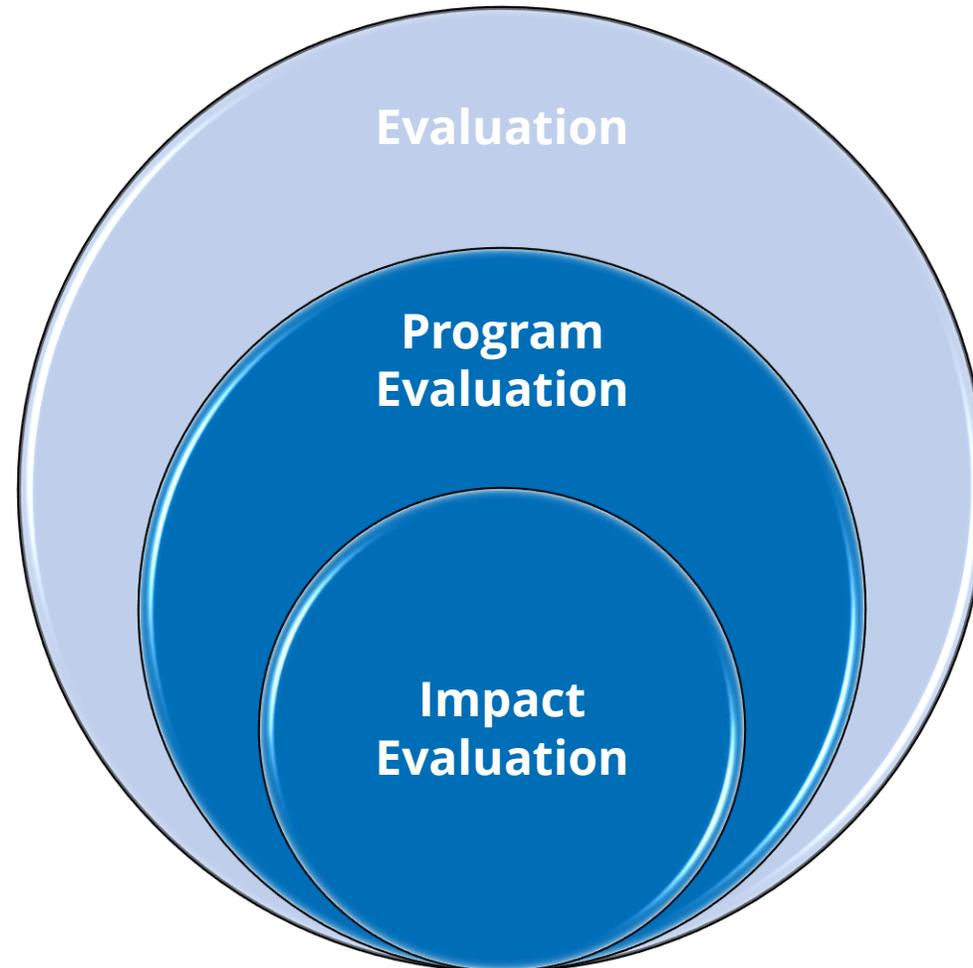
WHAT IS EVALUATION AND WHERE DOES THEORY OF CHANGE FIT IN?



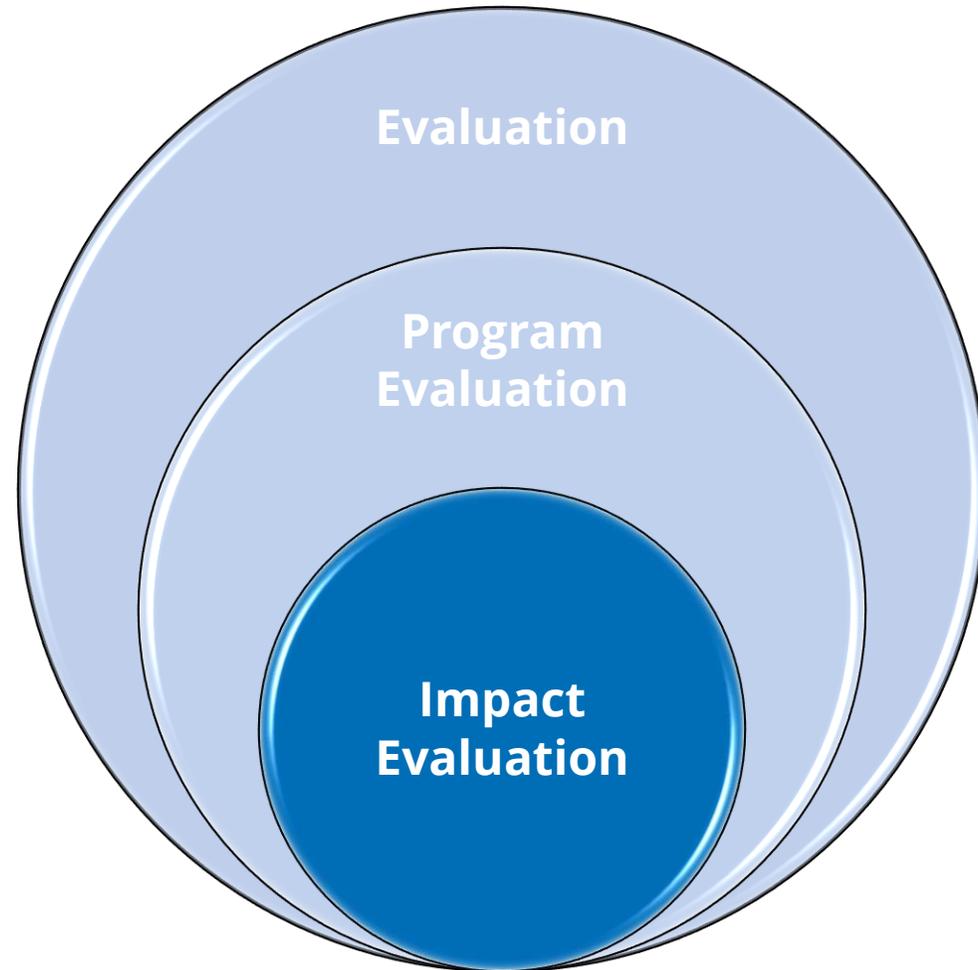
What is Evaluation?



Program Evaluation



Program Evaluation



Components of Program Evaluation

Components of Program Evaluation	Implicit Question
Needs Assessment	What is the problem?
Program Theory Assessment 	How, in theory, does the program fix the problem?
Process Evaluation	Does the program work as planned?
Impact Evaluation	Were its goals achieved? The magnitude?
Cost Effectiveness	Given magnitude and cost, how does it compare to alternatives?



BUILDING A THEORY OF CHANGE (IN 6 STEPS)



What is a Theory of Change (ToC)?

Definition

- A theory of change is a structured approach used in the design and evaluation of social programs to explore change and how it happens. It maps the logical chain of how program inputs achieve changes in outcomes.
- Building a theory of change with solid theoretical foundations and widespread buy-in requires organizations to invest time and resources into a process with **multiple steps** and participation at all levels of the program.



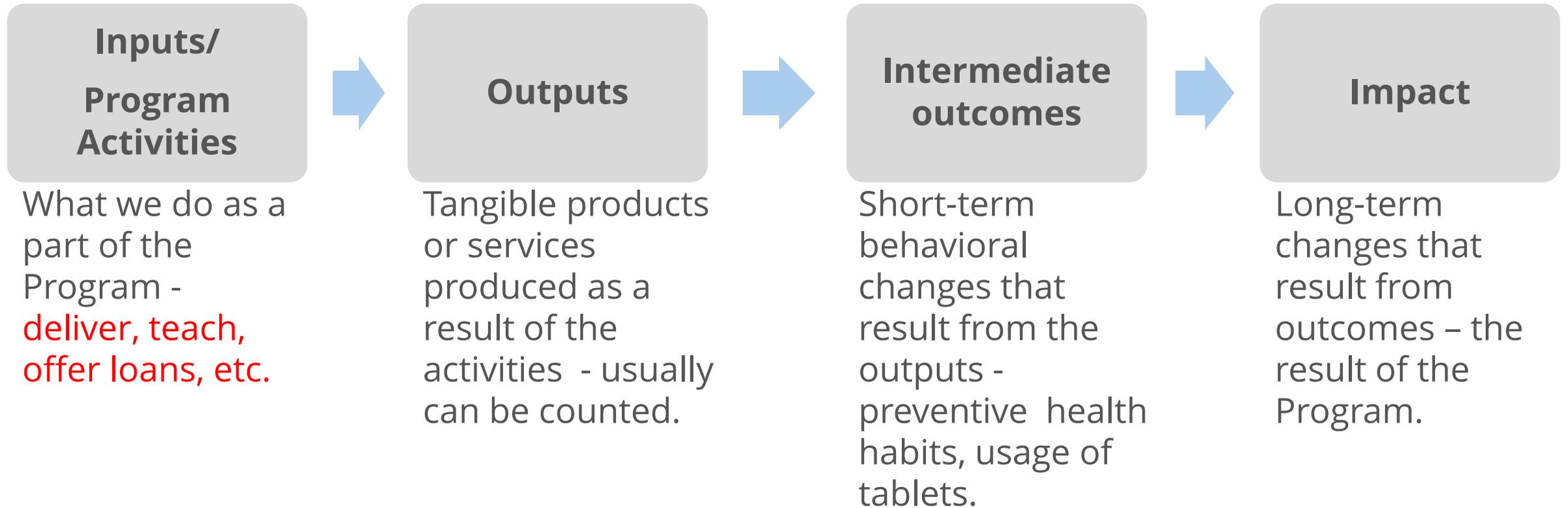
Causal Hypothesis

Q: How do I expect results to be achieved?

A: If [inputs] produce [outputs] this should lead to [outcomes] which will ultimately contribute to [goal].



Theory of Change Components



6 Steps to Building a ToC

1. Situation analysis – Specifying the context
2. Set the Program goal
3. Design the Program/product
4. Map the causal pathway
5. Design SMART indicators
6. Make assumptions explicit



EXAMPLE: IMMUNIZATION INCENTIVES



Step 1: Situation / Context Analysis

What it is:

- Identifying beneficiaries
- Needs, opportunities, barriers to progress
- Map relevant stakeholders
- Analyze broader political and economic context

Purpose:

- Design the right product, identify markers for success

Map opportunities, risks, broader context



Step 1: Situation / Context Analysis

- Seva Mandir program to increase immunization rates in rural Rajasthan, tested with RCT, Banerjee, Duflo, Glennerster, Kothari, 2010
- Every year, between 2 and 3 million people die from vaccine-preventable diseases
- 44 percent of children aged 1-2 years old have received the basic package of immunizations
- In rural Rajasthan, this rate is as low as 22%





Underlying Issues / Consequences

Supply side constraints:

- Average household is within 2 kilometers of the nearest clinic
- High absenteeism at government health facilities – 45% of Auxiliary Nurse Midwives are absent on any given workday (difficult to complete the treatment, 5 visits needed)

Demand side constraints:

- Cultural resistance, distrust in public health institutions
- People don't value immunizations: short-term cost for long-term (and invisible) benefits
- Limited income: parents can't afford to take a day off



Step 2: Setting Programme Goals

Increase full immunization rates

Increase perceived benefit of immunizations



Step 3: Design the Program

What are some solutions that achieve the program goals?



What are some Solutions?

Strengthening the existing government program

- More regular camps
- Stronger mechanisms to address staff absenteeism in clinics
- Tracking of unimmunized children and providing immunization

Information campaigns

- Explain benefits of immunization
- Address lingering doubts regarding problems arising out of immunizations

What about giving people incentives?

- Is this feasible?



Program Solutions

Supply side solutions: Regular Immunization Camps

- A mobile immunization team conducted monthly immunization camps in each village
- Camps held on fixed date once a month from 11 am-2pm
- Social workers informed mothers of the camp and the benefits of immunization



Program Solutions



Demand side solutions: Incentives

- Parents were offered 1 kilogram of lentils per immunization received
- Parents were offered a set of steel plates after the child was fully immunized



Step 4: Map the Causal Pathway

Step-by-step laying out the theory connecting your program to the goal

Series of if.../then... statements forming results chain:

Q: How do I expect Increased full immunization rates to be achieved?

A: If **[inputs]** produce **[outputs]** this should lead to **[outcomes]** which will ultimately contribute to **[goal]**.

A: If **incentives** produces **more children brought to camps** this should lead to **more vaccinations administered** which will ultimately contribute **to increased rates of full immunization**





Step 5: Develop SMART Indicators

Quantitative and qualitative

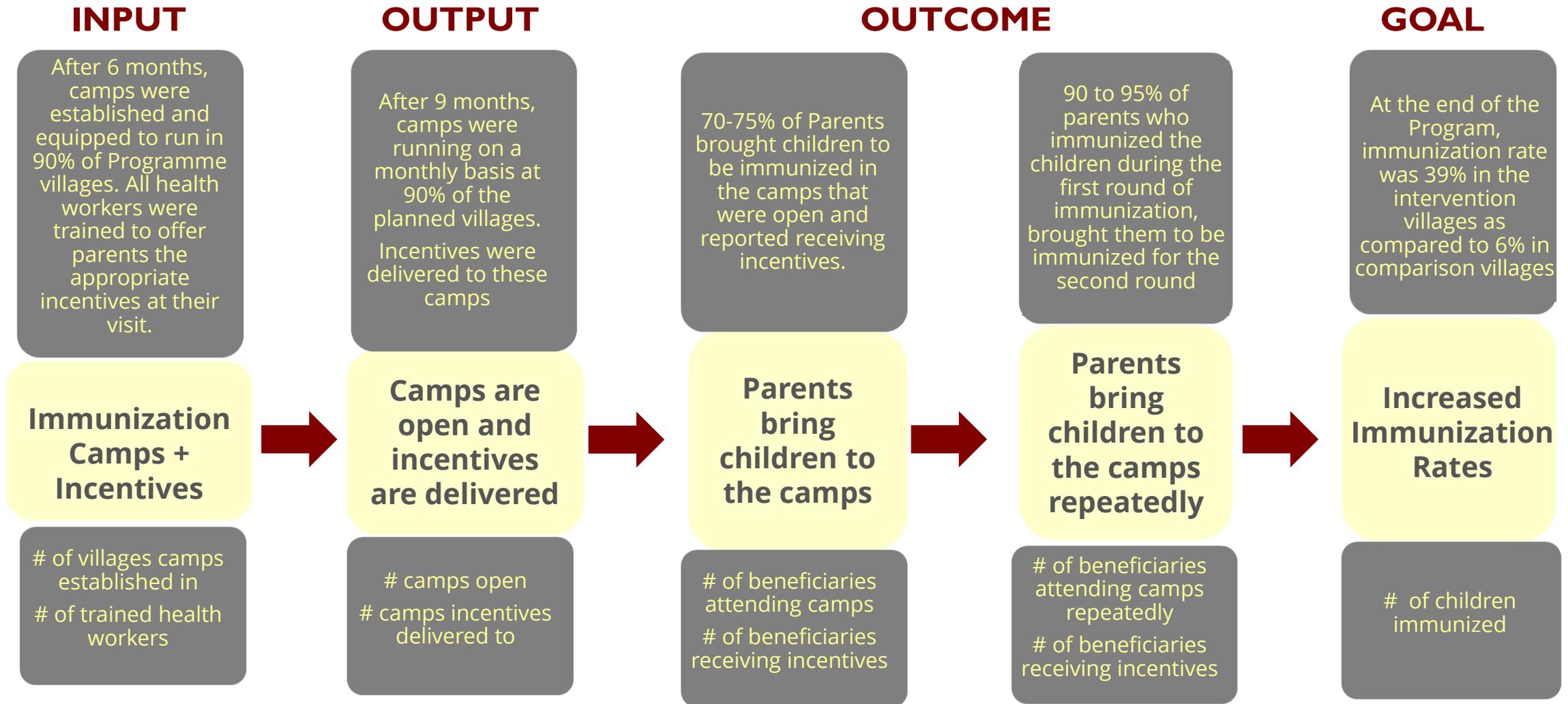
Standard of comparison (i.e. baseline v. endline)

SMART

- Specific - Ask (answer) one question at a time
- Measurable - Quantifiable, accurate, unbiased, sensitive
- Achievable - Is the indicator realistic?
- Relevant - Is this the most relevant program indicator given the needs
- Time-bound – Measured over a period of time



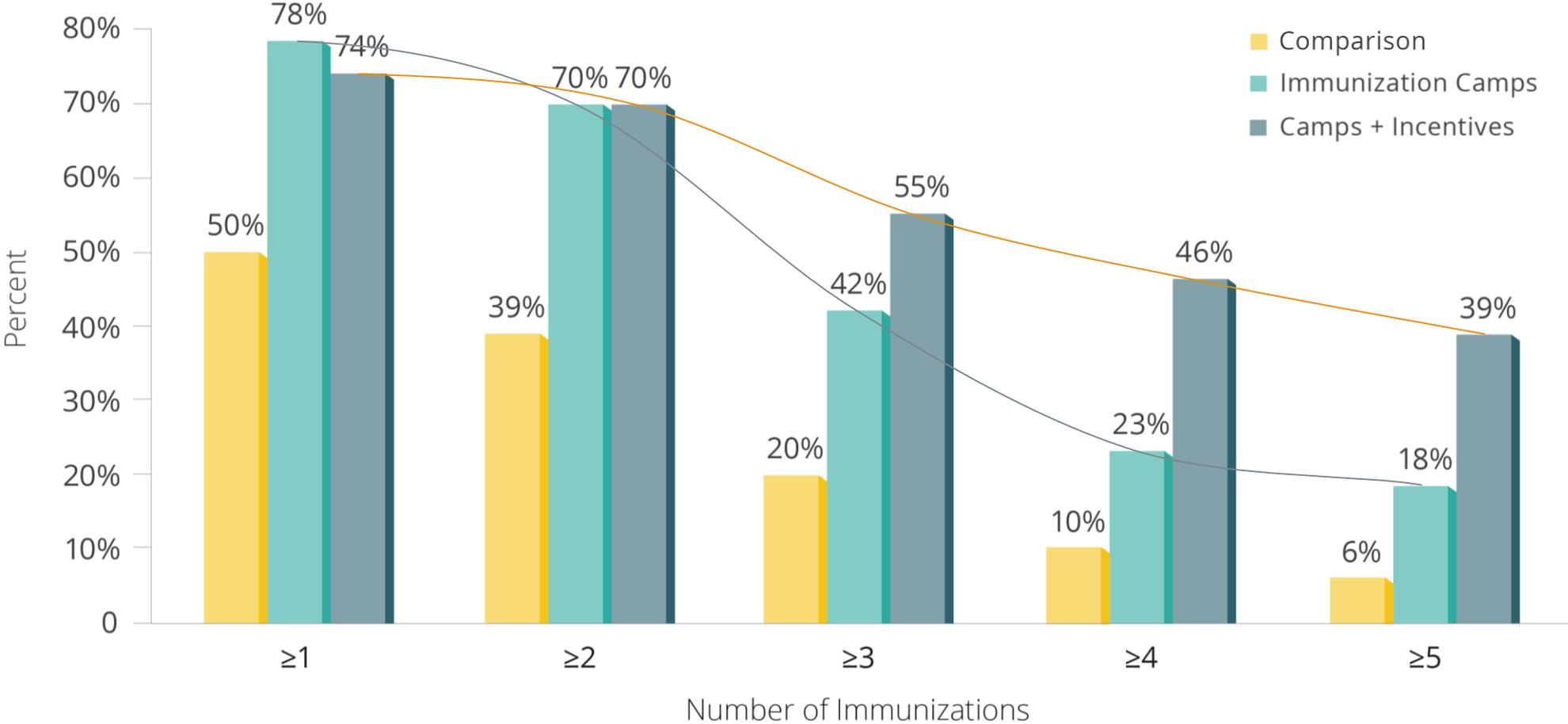
Step 5: Building a Theory of Change



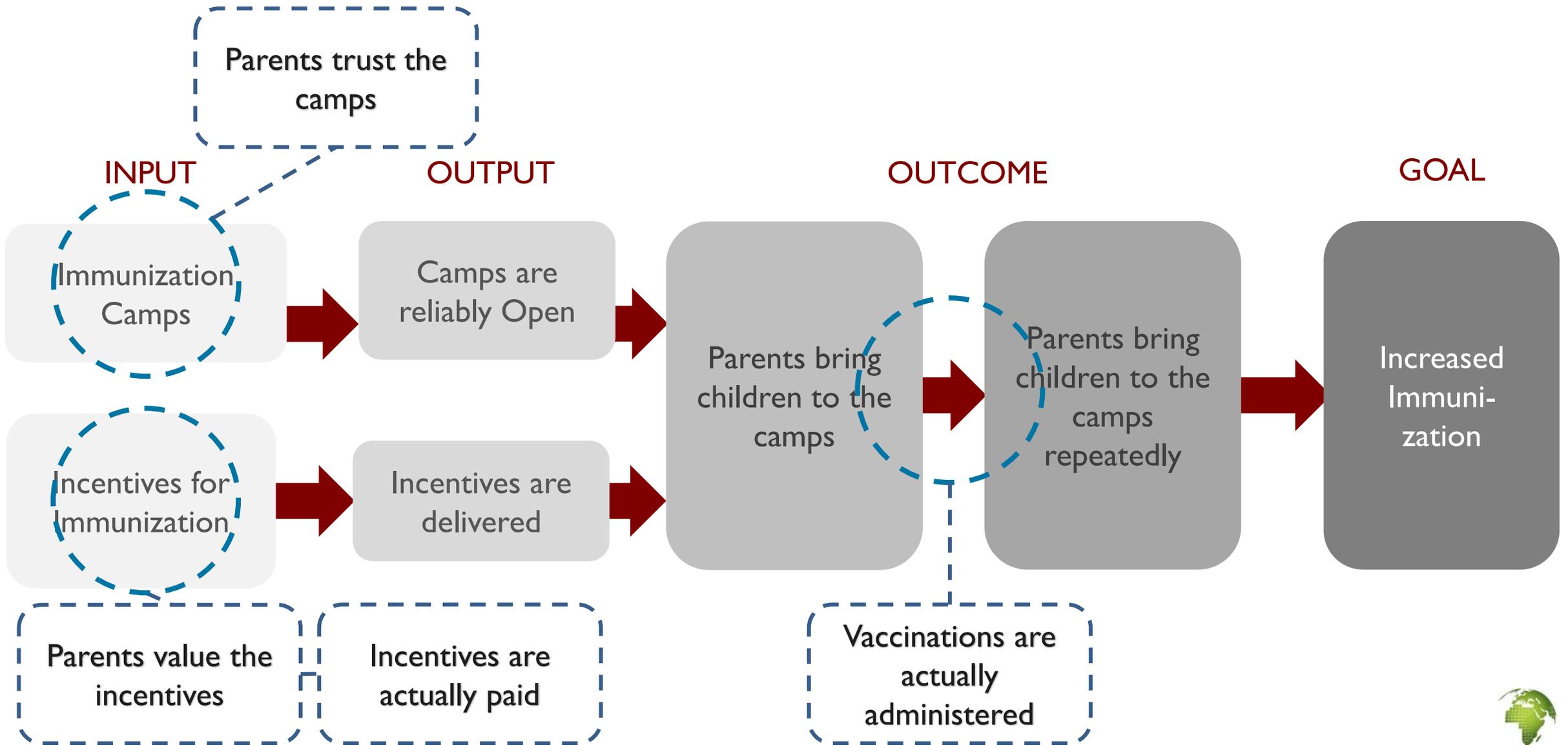
Situation/Context Analysis: High health worker absenteeism, low value of immunization, limited income and time



Did we reach the goal?



Step 6: Make Assumptions Explicit



WHY IS THEORY OF CHANGE IMPORTANT?



Why is Theory of Change Important?

For evaluators, reminds us to consider process

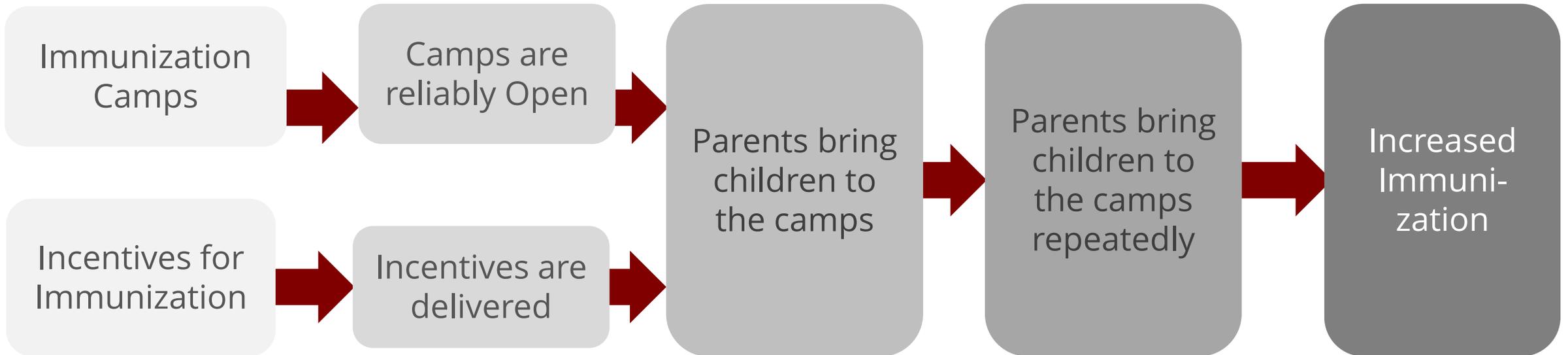
For implementers, it helps us be results oriented

INPUT

OUTPUT

OUTCOME

GOAL

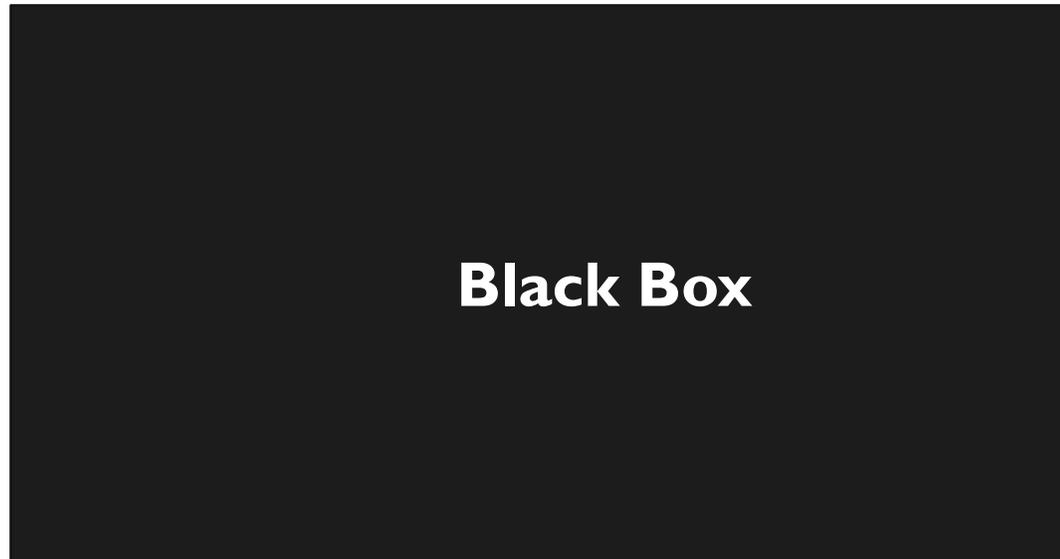


Solving the Black Box Problem

Low immunization rates



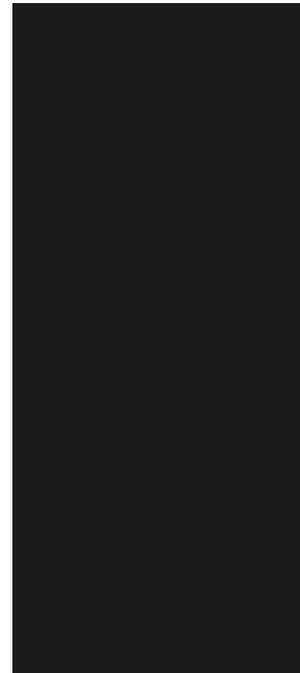
Intervention



No increase in full immunization

Needs
Assessment

Intervention
design/Inputs



Final outcome



Theory Failure vs. Implementation Failure

Successful intervention



Implementation failure



Theory failure





Photo Credit: Varkey Foundation

CASE EXERCISE: DISTANCE LEARNING IN NORTHERN GHANA

Implementing Partner – The Varkey Foundation

Researchers: Jamie Johnston – Stanford University

Christopher Ksoll – Mathematica Policy Research



How can we deliver high-quality teaching to rural students?

- Students in rural areas significantly underperform [\(OECD 2013, GES 2012, World Bank 2012\)](#)
- In remote rural areas, shortage of trained primary teachers [\(World Bank 2012\)](#)
- Teaching quality matters for student learning [\(Glewwe et al. 2011, McEwan 2015\)](#)
- Structured pedagogy interventions appear to have largest, most consistent positive effects on learning [\(Ganimian & Murnane 2016, Snilstveit et al 2015, Kremer et al., 2013\)](#)
- Little known about effectiveness of interactive distance instruction models





MGCubed Satellite Class Program

Varkey Foundation MGCubed Program

- 72 schools equipped with technology package
- Broadcasts live lessons daily to remote classrooms
 - 6 trained studio teachers broadcast to 12 classes at a time
 - 1 hour math and 1 hour English, 5 days a week
- In-person teachers trained as “facilitators”
- Targets most marginalized students within schools
 - Girls and boys in Grades 2-5
 - Identified as marginalized by schools according to criteria (distance to school, number of siblings, truancy, age)

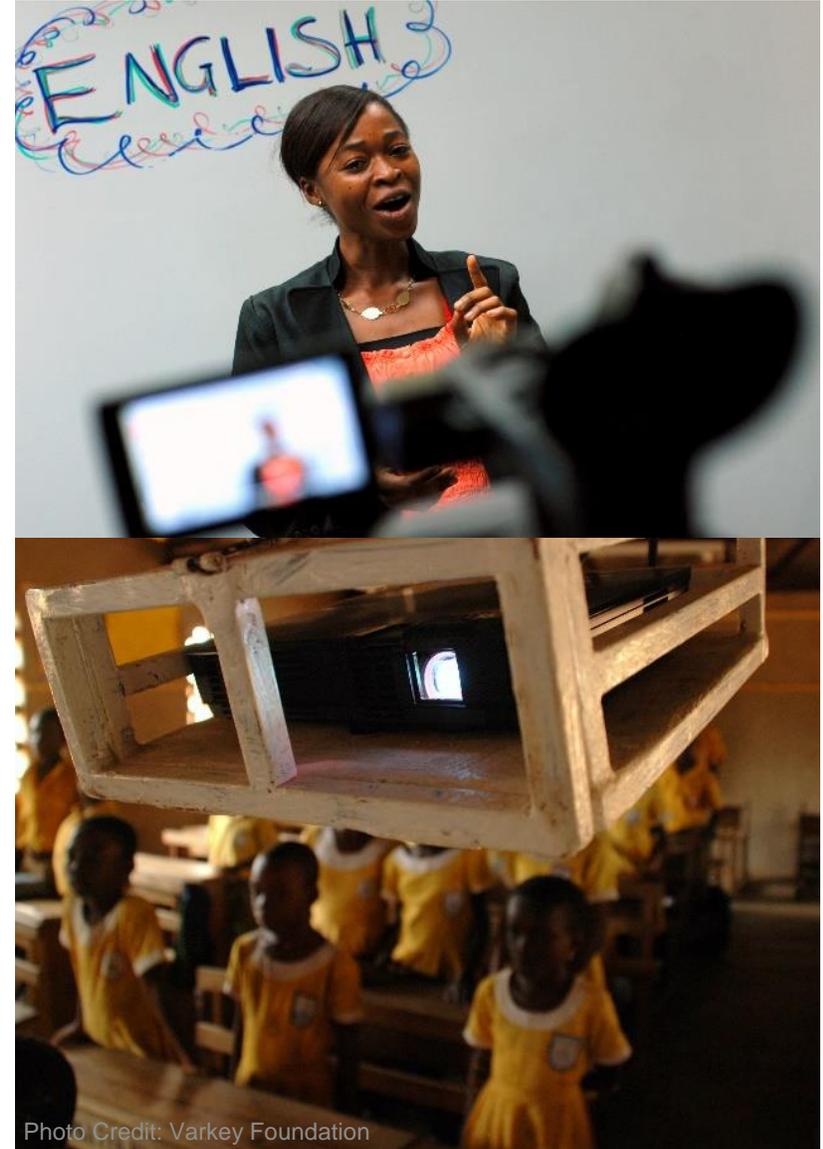


Photo Credit: Varkey Foundation

Girls' After School Program

- Provides after-school sessions to in-school girls and out-of-school girls in community (who have left school)
- 1 hour per day, 4 days a week
- Engage girls in topics including
 - Early pregnancy
 - Early marriage
 - Girls' rights
 - Financial literacy
- Provides access to adult female role models
- Boys' monthly after-school program started in response to demand for similar program



Photo Credit: Varkey Foundation





Step 1: What is the situation/context

Step 2: What are the program goals?



Step 3: Program design

- Varkey Foundation MGCubed Program
- 72 schools equipped with technology package
- Broadcasts live lessons daily to remote classrooms
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Step 4: Map the causal pathway

Step-by-step laying out the theory connecting your program to the goal

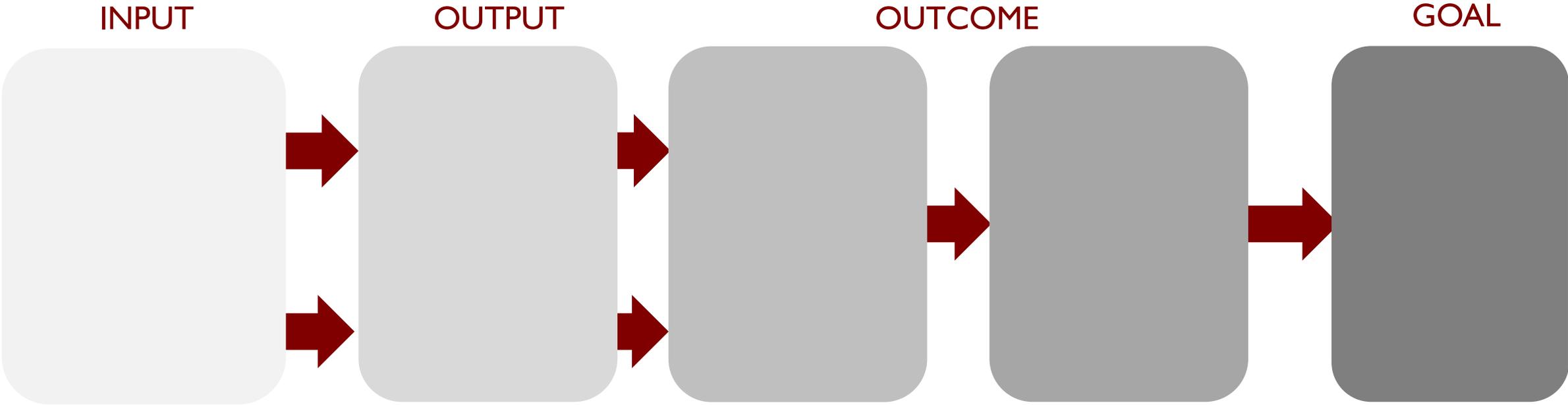
Series of if.../then... statements forming results chain:

Q: How do we close the education performance gap for rural, marginalized, Ghanaian girls.

A: If **[inputs]** produce **[outputs]** this should lead to **[outcomes]** which will ultimately contribute to **[goal]**.

Write if/then statement here

Step 4: Map the causal pathway



Step 5: Design SMART Indicators



Step 6: Make assumptions explicit



MGCubed Theory of Change

