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Applications of an **Adaptive Evaluation approach** to assess SEWA's Women's Enterprise Support System

The MOVE Evaluation (2021-2024)

February 21, 2024

This workshop is part of a learning and evaluation grant from the Bill and Melinda Gates Foundation.

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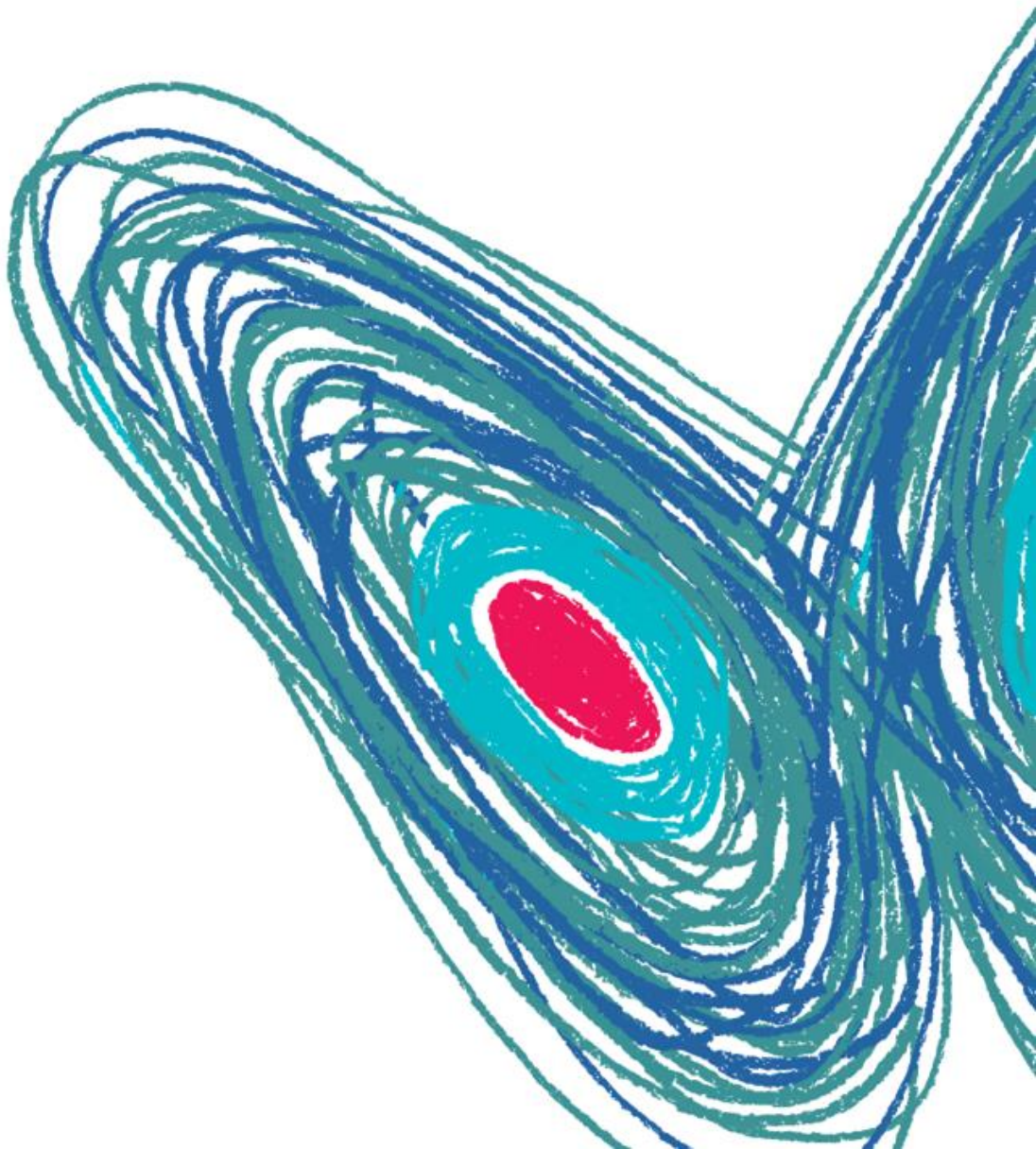
Context

SEWA and the Women's Enterprise Support System



- 90% of women working outside the home are part of India's informal economy
- The **Self-Employed Women's Association (SEWA)** is a trade union in India founded in 1972 with **~2.9 million informal women workers as members**
    - Jobs include farm workers, construction workers, street vendors, artisans, etc.
- SEWA has **more than 140 collective social enterprises** to further livelihood opportunities for women and improve their agency
- But **women collective enterprises face many challenges** in intermediary functions, such as branding, compliance, HR, financial services, etc.
- SEWA created a **Women Enterprise Support System (WESS)** to help its enterprises become sustainable and empower its women members

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Goal of the Evaluation

To assess the role of a **Women's Enterprise Support System** (WESS) on the **Sustainability of SEWA's enterprises** and **Women's Empowerment**

This evaluation is highly **complex**— *COVID-19 & several intervention modules, enterprises, and geographies*

WESS has many interventions modules—
8 were covered by the MOVE project

- **Branding and Communication**
- **Digital Marketing**
- **Capacity Building** (on leadership, ownership, governance, etc.)
- **Legal and Tax Compliance**
- **Investments Support (Includes Working Capital)**
- **Human Resources**
- **Mentorship**
- **Business Development**

We are evaluating services to 8 Social enterprises working across 5 sectors in 5 different states

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Social Enterprise	Location	Sector
Lok Swasthya Mandali	Gujarat	Health products & services
Tapi Megha Mandali	Gujarat	Agriculture
Home Care	Gujarat	Domestic Work

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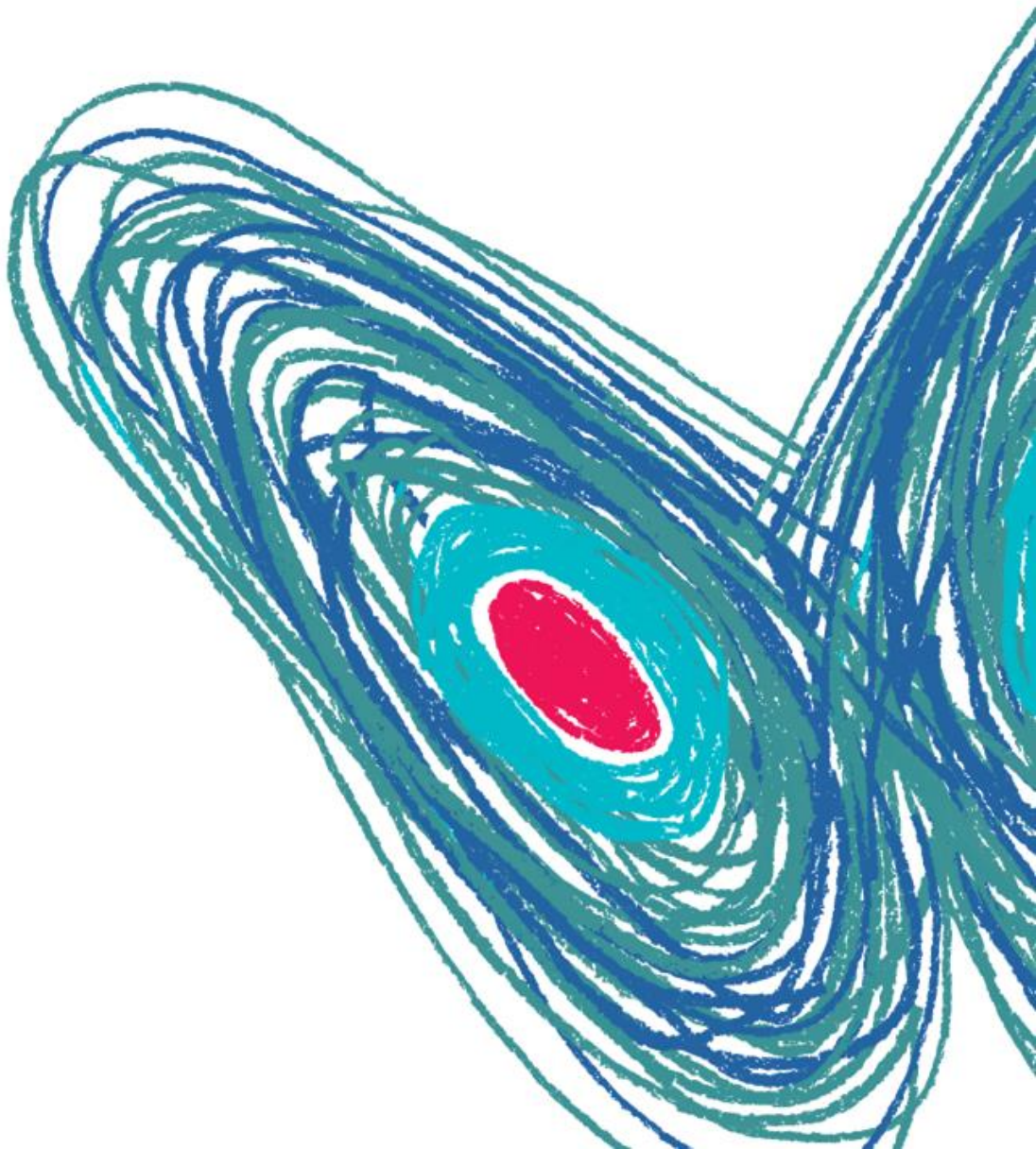
Social Enterprise	Location	Sector
Bihar Credit Coop	Bihar	Financial Services
Delhi Credit Coop	Delhi	Financial Services
Karn Bhumi	Bihar	Agriculture
Ruaab	Delhi	Artisanal products
Sarthak	Uttarakhand, Punjab	Financial Services

An ***Adaptive*** **Evaluation** is **designed for high-complexity situations**

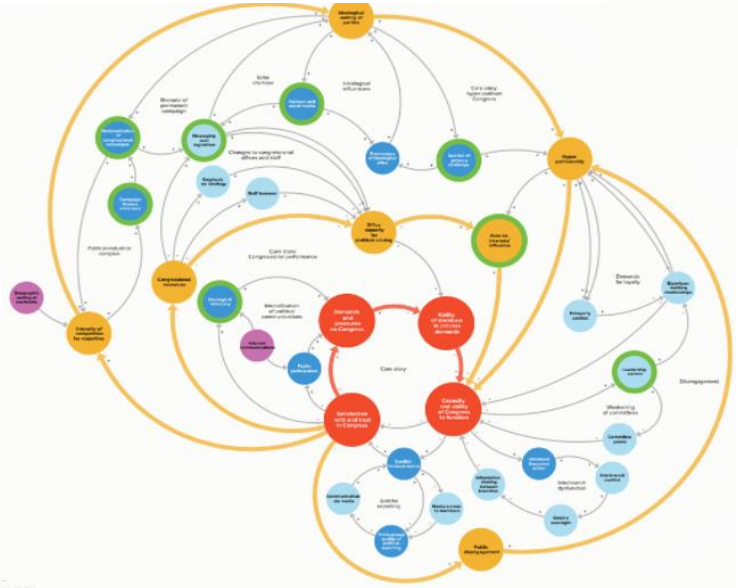
Adaptive Evaluation

A Complexity-based approach to Systematic Learning for Innovation and Scaling in Development

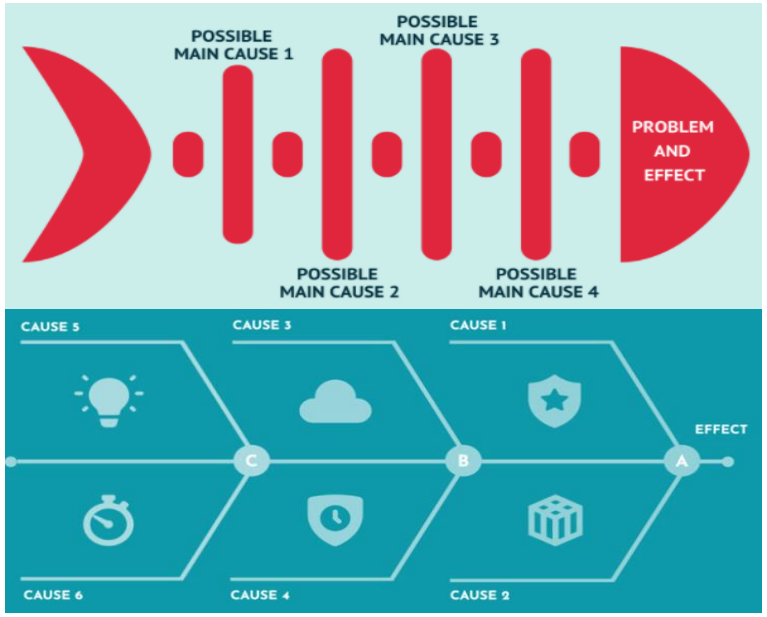


An Adaptive Evaluation uses three main approaches to assess innovation and scaling

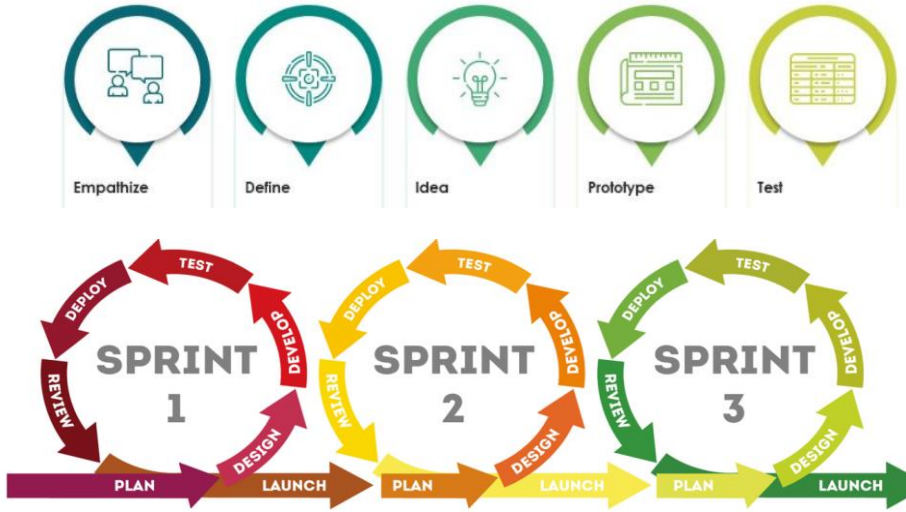
Systems-Based Approaches



Theory-Based Approaches



Iterative Approaches



Source: A Complexity-based approach to Systematic Learning for Innovation and Scaling in Development I *Gokahle & Walton, 2023*

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The Adaptive Evaluation Process in Practice

The MOVE Project follow each of these steps

Literature review of history, theories, and evidence

Systems Mapping/ Diagnostic via a participatory workshop
- **FLAME** for the organization level
- **System actor** maps

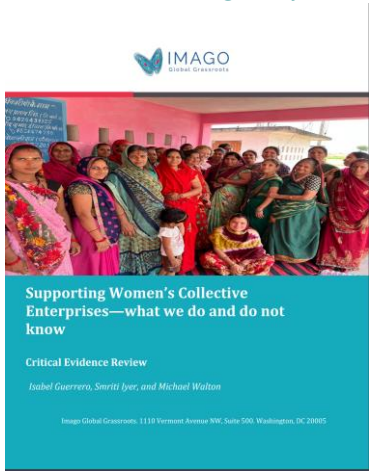
Building a Theory of Change derived from the system including fleshing out hypotheses to test for each intervention

Theory Testing[1] i,.e, testing hypotheses with unfolding qual + quant data/evidence
- **Process Tracing**

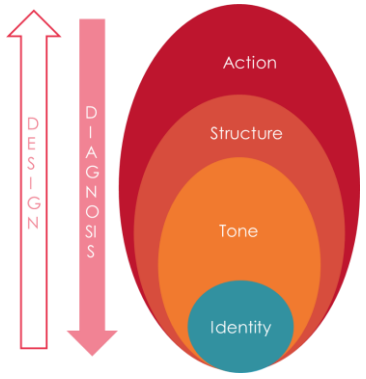
Prototyping
For steps in ToC not working, brainstorming solutions to make it work and testing them
- **Agile**
- Design thinking

Theory Building ,i.e, updating theories of change based on evidence
- Outcome Harvesting

Literature review on cooperatives, accelerators and women's agency

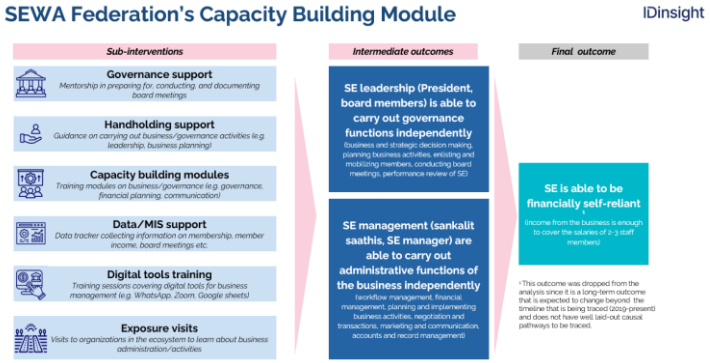


System Map + **FLAME Analysis** of each social enterprise in the evaluation

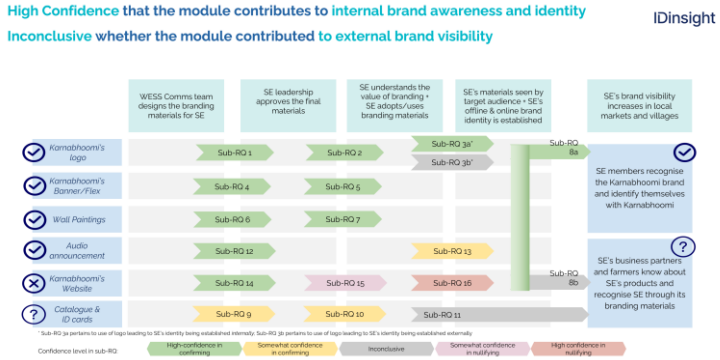


Process Tracing of specific cases in which a particular WESS module is applied to a particular enterprise

High-level ToC's of each module, built in a participatory manner with SEWA's WESS



Theory Testing of all modules, with some examples of prototyping



1 Here, we assess the ***strength of logic***, i.e., the ability of a piece of evidence to affirm/negate a causal step using the four process tracing tests: Straw-in-the-wind, Hoop, Smoking Gun, and Doubly Decisive, with the majority of the tests being Hoop tests. We also assess the ***strength of evidence***, i.e, data quality (for example, reliability, bias, representativeness etc.). **Verdicts** (i.e, confidence levels that a causal step is working as theorized) are assigned based on both the strength of evidence and the strength of logic. Verdicts are revised as evidence unfolds in the spirit of Bayesian updating

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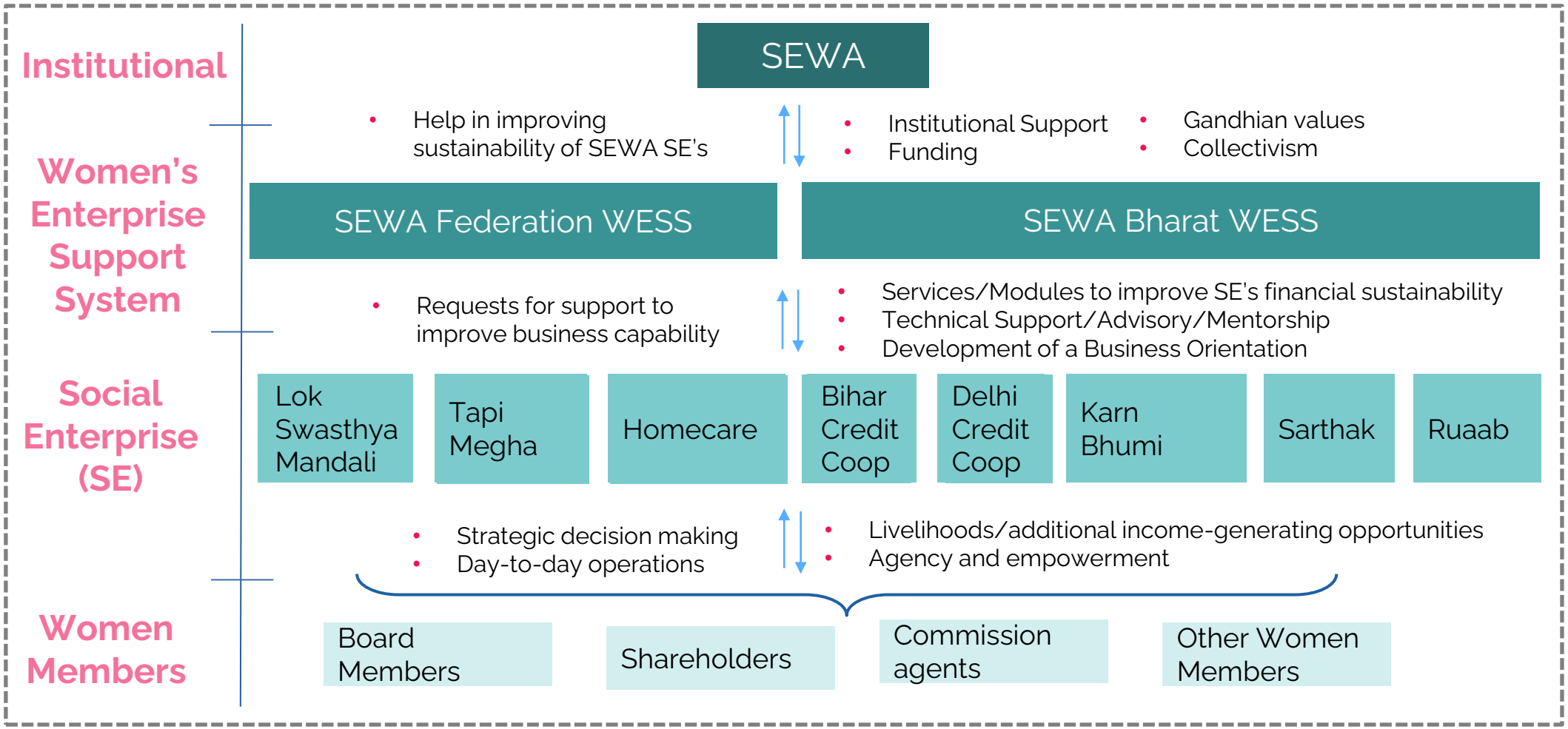
The Women Enterprise Support System (WESS)

High-Level Systems Map



3 levels of the adaptive evaluation: WESS Level, SE Level, and Members Level

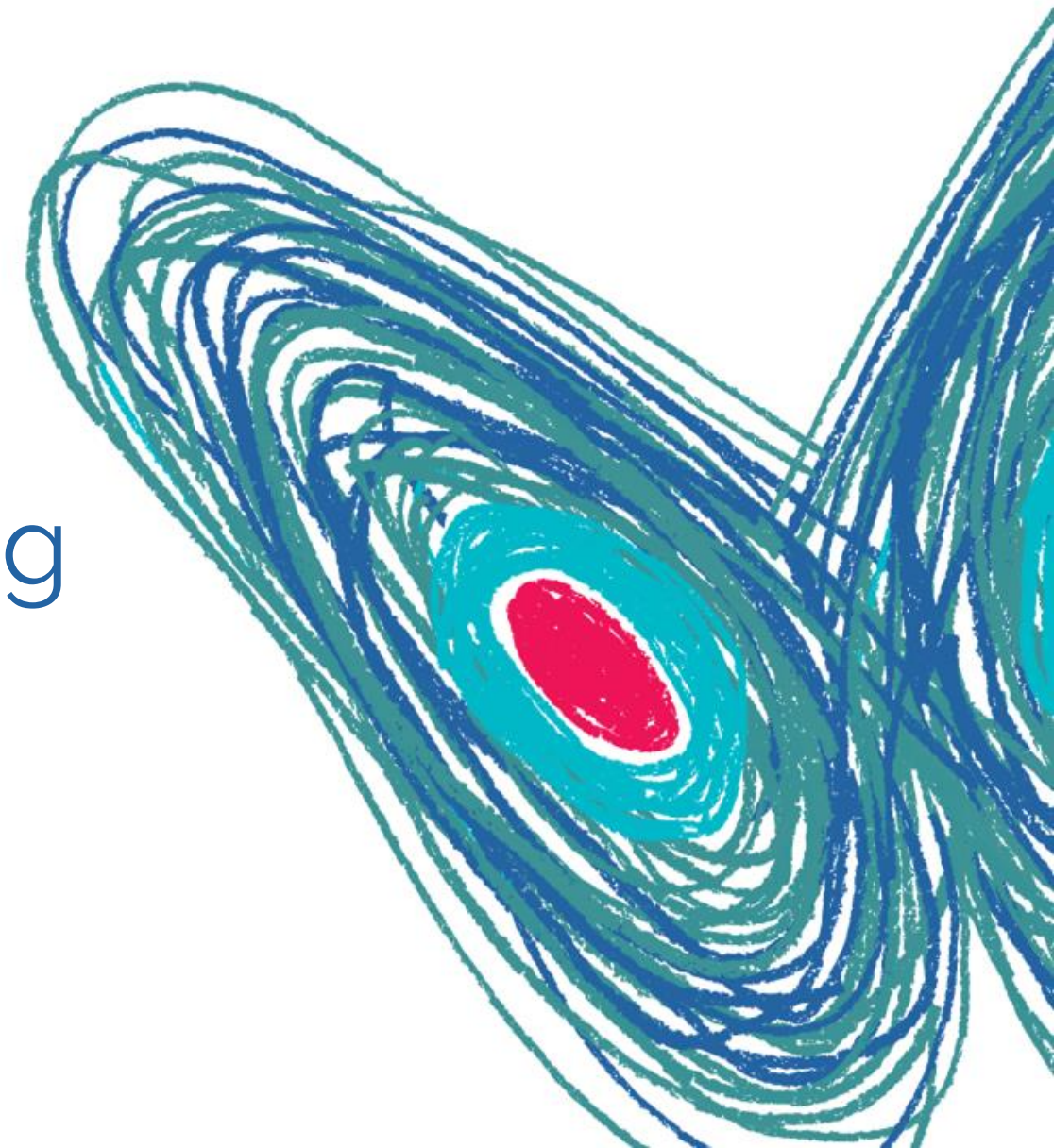
The Women Enterprise Support System (WESS)

High-Level Theory of Change

We can assess **the contribution of WESS modules** to **intermediate outcomes closely** related to the modules

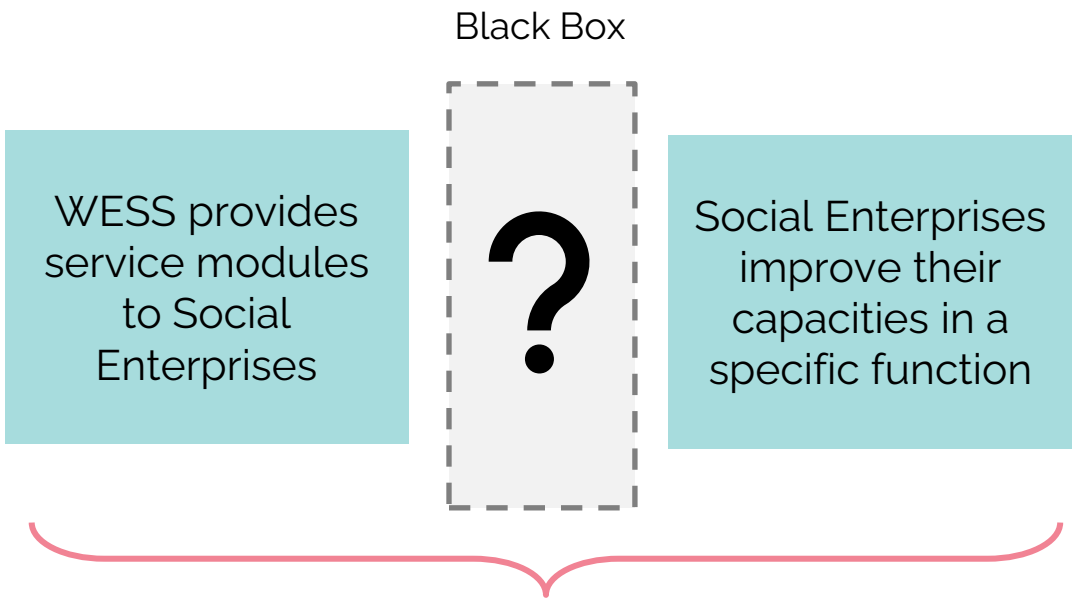
We are **tracking the final outcomes.** Tight attribution to WESS is not possible due to complexity. We will conduct an overall assessment of SE experiences to account for external influences and the complexity

SE-Level Process Tracing
Illustrated Examples



Process Tracing **cases** help **test the causal mechanisms** that enable WESS services to improve the capacities of social enterprises.

Process Tracing** unpacks the black box (i.e. causal mechanism) **behind WESS Modules



We assess **the contribution of WESS modules** to **intermediate outcomes closely** related to the modules

We present two illustrative process tracing cases of the twelve in the MOVE project

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The **Retrospective Case** of **Business Development Support** to **Karn Bhumi**

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The **Prospective Case** of **Agile** Support to **Lok Swasthya Mandali**

SEWA Bharat WESS

The **Retrospective** Case of Business Development Support to Karn Bhumi

Karn Bhumi (KB) used the **WESS Business Development Service** to support its **Output Marketing business** of procuring and selling paddy.

Karn Bhumi
Farmer Producer Company Limited

Sector	Agriculture
Location	Bihar
Year Founded	2018
Entity Type	Farmer Producer Organization
# of Shareholders	780
Main Business Line	• Inputs: Selling high-quality farm inputs (seeds, fertilizers) to members • **Output Marketing: Purchasing harvest for aggregated sale**

- Output Marketing began in response to farmers' request for fairer returns on their harvest relative to middlemen offers
- The **primary outcome is social—to connect farmers to market for better earning** by **procuring and selling larger volumes of harvest** to benefit more farmers
- The **secondary outcome is generating higher revenues** from this purchase and sale of the produce
- The main intervention of WESS was threefold
  - Facilitate KB's interaction with a technical expert for pre-planning
  - Assist in raising working capital
  - Support in paddy procurement and sales

Key Question

What is the confidence level that WESS' support to Karn Bhumi in output marketing for the paddy cycle (Aug 2022- Feb 2023) contributed to Karnbhumi procuring and selling higher quantities than in the previous cycle, in turn increasing its revenue?

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High Confidence that causal mechanism for Business Development support positively contributed to KB's Output Marketing service

Confident	Confident	Inconclusive	Somewhat Confident	Somewhat Confident	Somewhat Confident	Confident
WESS's **pre-planning work** with KB on demand mapping led to: **(1) Procurement targets** **(2) Price Setting** for Sales target	WESS helped: **(1) Form an estimate of working capital requirements** **(2) KB apply for a working capital loan,** which KB received	KB **purchased moisture meters for assessing the quality of output procured** as advised by WESS's facilitation of technical experts	**KB created sales and purchase registers for monitoring by managers** as advised by WESS's facilitation of technical experts	**KB created SoPs for procurement, storage, and transportation of harvest** as advised by WESS' facilitation of technical experts	KB (1) **identifies buyers** and (2) **purchases a pre-decided quantity of output and sells it**, based on targets set in pre-planning	KB is **able to buy and sell more than previous cycle.**
• WESS provided guidance on demand mapping • Demand mapping was carried out	• WESS provided guidance on loan application, and connected them to SEWA FeD • KB got loans	• Unclear whether moisture meters are discussed in meetings • Reciepts show dated purchases	• Registers exist and are shared with managers • Some indication entries are made regularly	• SoP's exist • Only 1 of 2 SE staff say WESS dealt with SoP issues well • Meetings with WESS sometimes cancelled	• Buyer Lists exist • WESS helped conduct buyer scoping • Output sold at pre-decided prices	• KB procured and sold 2x more than last cycle
• Interviews with KB Stakeholders • Buyer List • Demand Mapping table • Price Analysis Table	• Meeting minutes of WESS- SE interactions • Interviews with KB Managers • Loan MOU	• Meeting minutes of WESS- SE interactions • Available Moisture meter receipts • Not enough receipts data	• Sales and Purchase Registers • Interviews with WESS /KB • No record on the frequency of entries'	• SoPs • SE Manager interviews • External Stakeholder interviews	• Sales and Purchase Registers • Buyer List • No data on quality measurement at the time of purchase	• Financial Monitoring records • P&L statements

Evidence → Indicator of the **strength of logic** to affirm/negate causal step

Source → Indicator of the **strength of evidence**, i.e,. reliability, bias, representativeness etc. of the data

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Evidence from a follow up implies a **high confidence that KB incorporated lessons from process tracing**, leading to new hypotheses to test

Takeaways from the Retrospective Process Tracing

High confidence that WESS Support led to improved outcomes for KB's Output Marketing

However, they were few potential areas for improvement

- While KB was able to achieve it sales and procurement targets, it did not generate a profit
  - KB procured at a pre-decided rate
  - As a result, it was not able to update prices in lieu of changing rates in market
- It was unclear if there was consistent use of moisture meters
- While sales and purchase registers exist, it was unclear if they are updated regularly

Follow Up for the next procurement cycle (Dec 23 – Jan 24)

KB was able to incorporate feedback to generate improvements in design

- KB was able to generate a profit
  - The selling price was set dynamically to ensure that KB does not sell at a loss
  - The volume remained high
  - The usage of the weighing machine was fair and without fraudulent practices
- Moisture meters are now used- readings are carefully recorded and maintained
- Sales and purchase registers exist are updated regularly. Similarly, data is regularly maintained around payments to farmers

Theory Building → New Emerging hypotheses

- Despite low margins, can output marketing help acquire customers for KB's input business, which has better margins?
- Will this experiment increase their procurement, enabling larger sales to state authorities and offering better margins to farmers?

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The **Prospective** Case of Agile Support to Lok Swasthya Mandali

Lok Swathya Manadali (LSM) used **Agile support** for its agent-based sale commission

Sector	Health Products & Services
Location	Gujarat
Year Founded	1990
Entity Type	Healthcare Cooperative
# of Members	1800
Main Business Line	• Produces and sells ayurvedic medicine; • Runs pharmacies • Performs community service of increasing health awareness

- LSM Staff began the agile management process with identifying a challenging problem to address
- They agreed to **work on capacity building of their sales commission agents (Sakhi's)** who sell allopathic and ayurvedic medicines
- The **sales commission channel contributes little to Sakhi's income**, and this **has the most potential for improving members lives**
- This began a year long process over four agile sprints with evaluation informing decision-making throughout

Key Question

What is the confidence level that Agile support to LSM in improving the capacity building of its sales agents will result in increased number of sales agents, and higher average sales by Sakhis?

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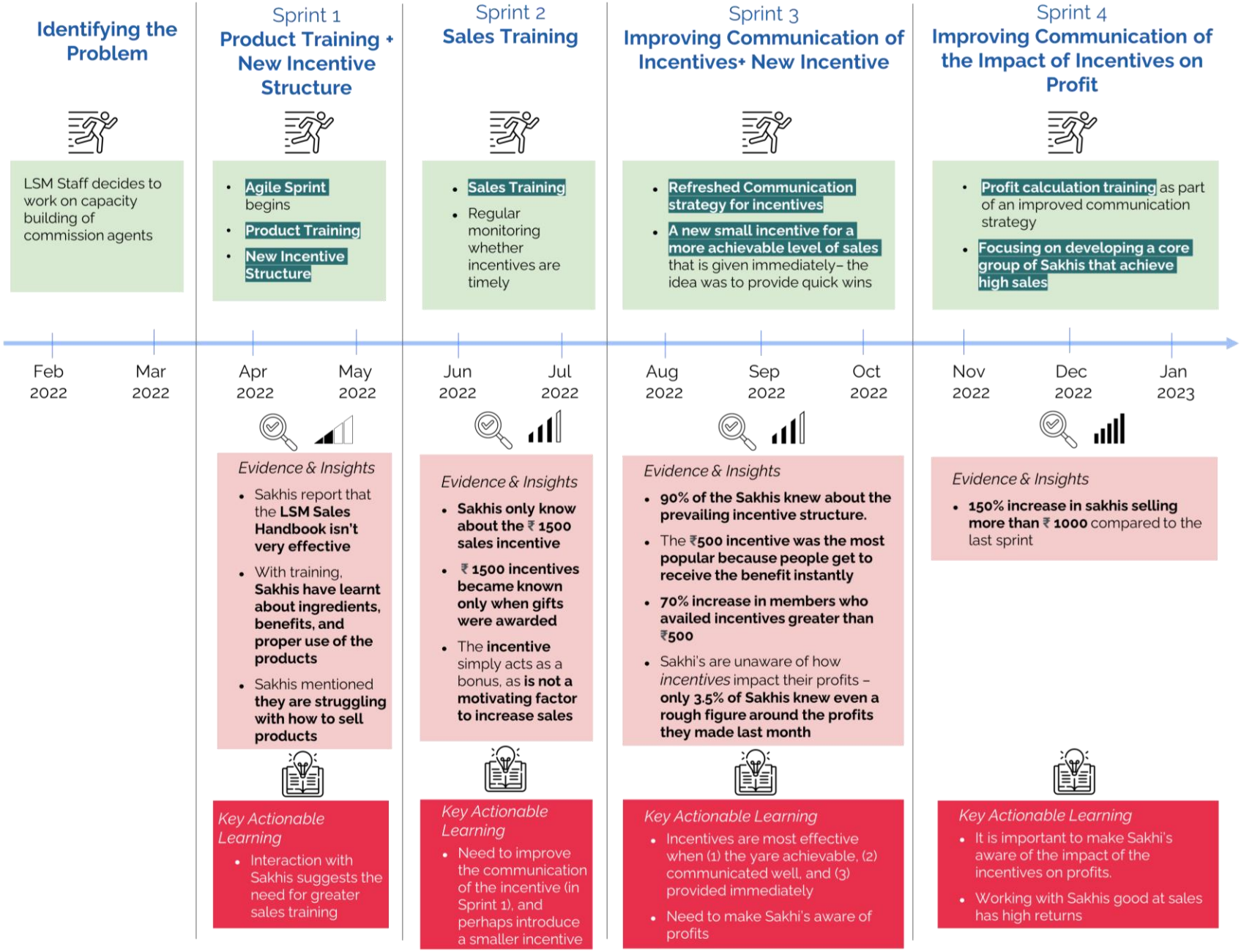
Prospective Agile and Process Tracing for SEWA's Health Cooperative - LSM



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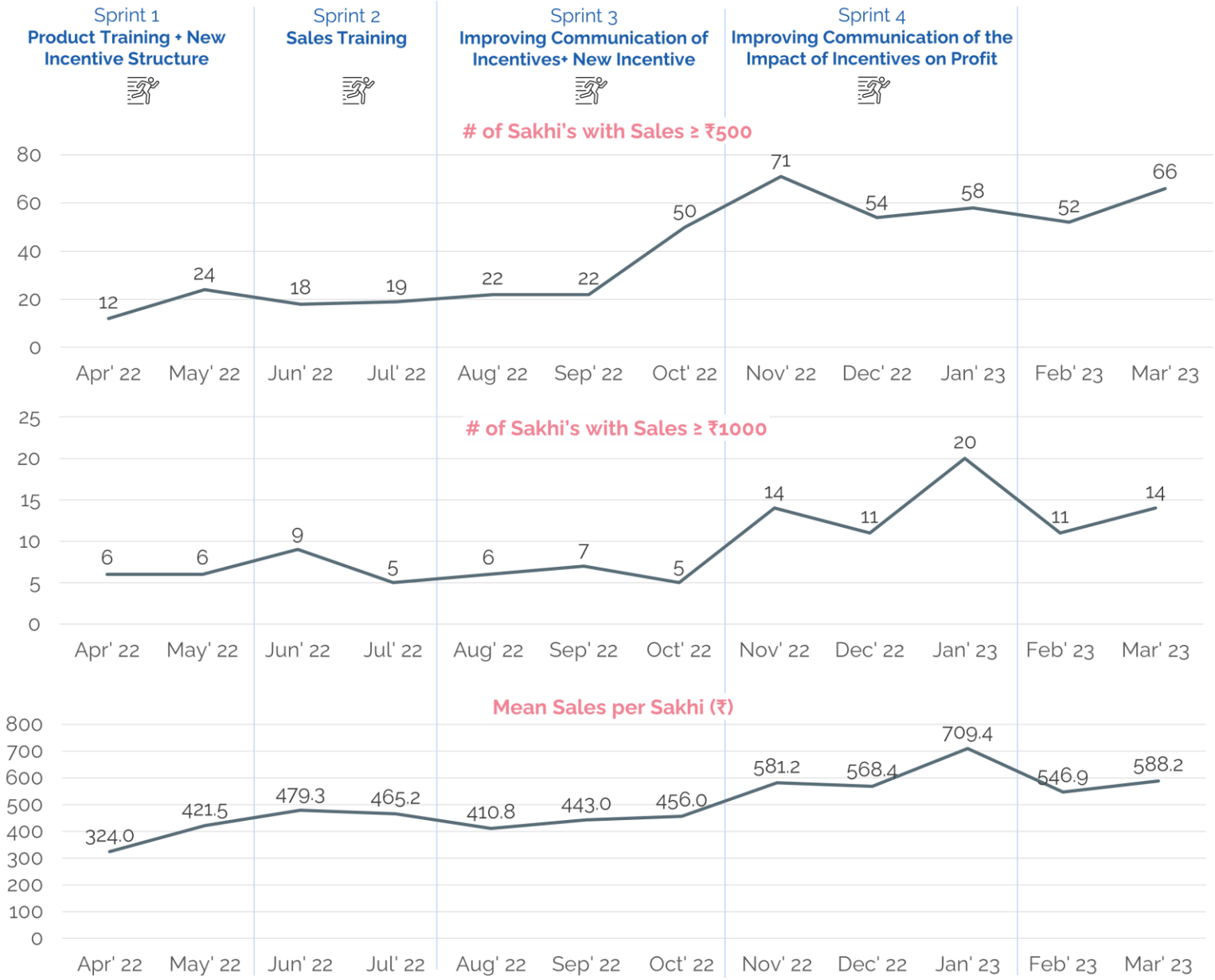
High Confidence that the causal mechanism for Agile support positively contributed to LSM



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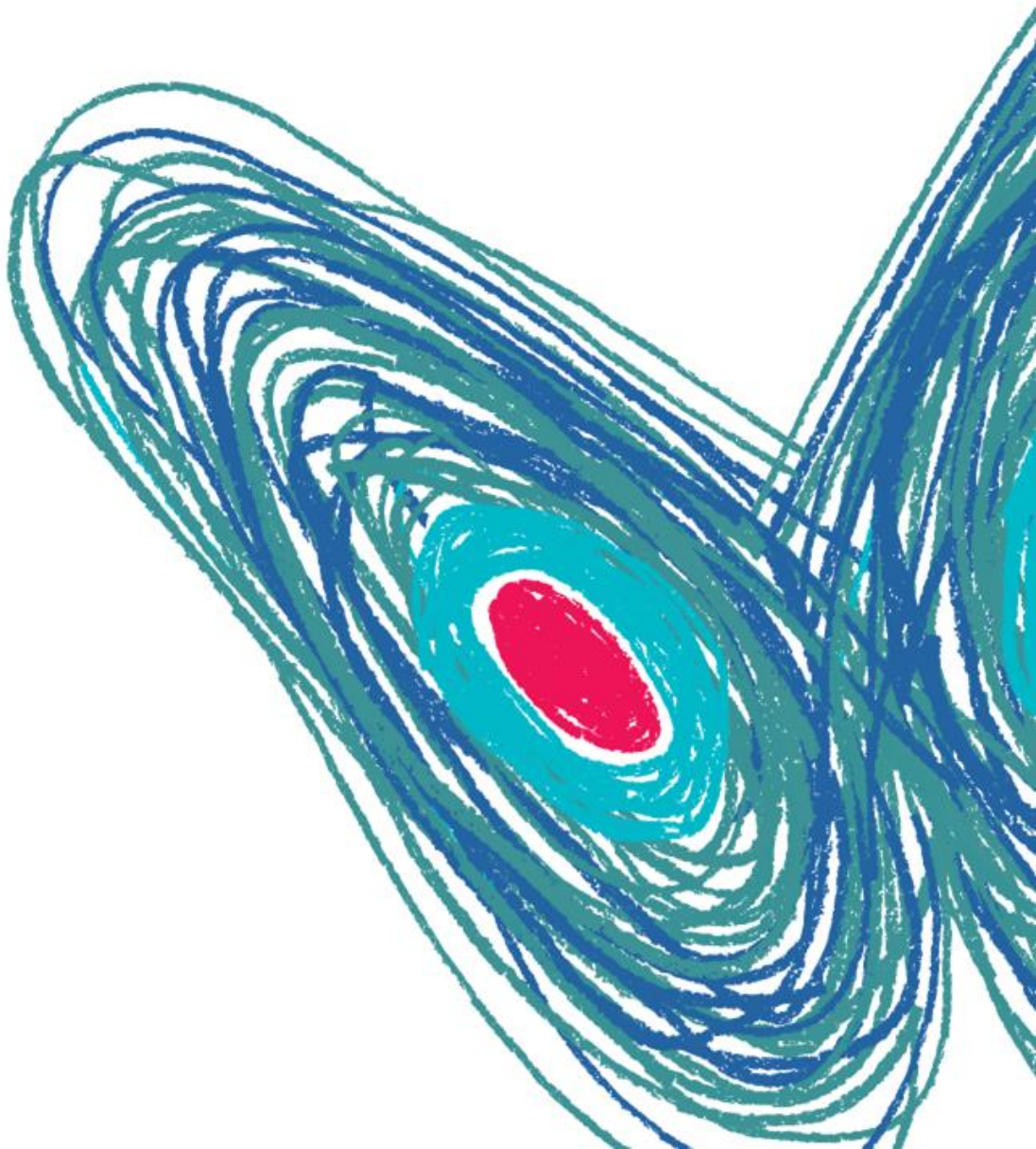
Technical Appendix
Process Tracing Methodology



Process Tracing An Introduction

- Process Tracing involves **testing each step of the theory of change**
- It investigates **causal mechanisms** using **logical-based tests**, that is, if-then assertions, or necessity and sufficiency assertions
  - Mathematically, this is derived from set theory on presence or absence of a mechanism
  - This is *different* from statistical tests of causality between variables across large n cases
  - It is akin to judges examining a court case, detectives solving a mysterious crime, or documentary filmmakers making sense of a scandal/event/historical phenomenon
- It helps identify **specific areas for improvement** in the process, lending itself to adaptive learning, including updating of theories
- It helps **unpack how an intervention works** and **gives us the causal mechanisms/procedures/ recipes** that can be used to scale to another entity, region, or context, via expansion or replication
  - Which parts of the mechanism are truly necessary, have an important disciplining effect on the intervention design, and lead towards a minimum viable intervention
- It is a **within-case method** applied to a specific case

Source: Process Tracing Methods: Foundations and Guidelines I *Beach & Pedersen, 2012*

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Process Tracing Imago's Application in Adaptive Evaluation

1. Initial **Theory of Change (ToC)** is built through
   - System diagnostics workshops
   - Participatory engagement with implementation teams on the ideal process

2. This leads to **Theory Testing**: each step of the causal chain and associated hypotheses are tested with evidence
   - We use *multiple sources of evidence,* e.g., documents, interviews, administrative data, quantitative surveys, etc.)

3. All the pieces of evidence for each step of the causal chain are assessed together (to allow for triangulation), based on two criteria
   - Strength of Logic – the degree to which the evidence can affirm or negate the causal step. Formal process tracing tests on each piece of evidence help inform on overall view on this **(see next slide on process tracing tests)**
   - Strength of Evidence- the quality of the evidence, the degree to which it is reliable, unbiased, and representative

4. The strength of logic and strength of all pieces of evidence are used together to form a **verdict** on the level of confidence on the presence or absence of a causal step
   - These are revised as new informative pieces of evidence unfold and come in, in the spirit of Bayesian updating
   - Formal Bayesian updating is not used, but we find it generates similar verdicts as the process above

5. The verdicts on each causal step are used to form a **final verdict** on the presence of the entire causal mechanism (ToC)

6. If the verdict is that the causal step is absent, and this is judged to be a critical step in the causal mechanism, the evaluation team brainstorms ideas for improvement and prototypes them, wherever possible

7. This leads to **Theory Building**—a revised ToC based on the overall verdicts and results of protoyping. Theory Building can involve revising the entire causal mechanism or revising specific causal steps

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Process Tracing 4 Process Tracing Tests

		Sufficient for Affirming Causal Inference: No	Sufficient for Affirming Causal Inference: Yes
Necessary for Affirming Causal Inference	No	**1. Straw-in-the-Wind** a. **Passing**: Affirms relevance of hypothesis but does not confirm it. b. **Failing**: Hypothesis is not eliminated but is slightly weakened c. **Implications for rival hypothesis** **Passing**: *slightly* weakens them **Failing**: *slightly* strengthens them	**2. Smoking Gun** a. **Passing**: Confirms hypothesis b. **Failing**: Hypothesis is not eliminated but is somewhat weakened c. **Implications for rival hypothesis** **Passing**: *substantially* weakens them **Failing**: *somewhat* strengthens them
	Yes	**3. Hoop** a. **Passing**: Affirms relevance of hypothesis but does not confirm it. b. **Failing**: Eliminates hypothesis c. **Implications for rival hypothesis** **Passing**: *somewhat* weakens them **Failing**: *somewhat* strengthens them	**4. Doubly Decisive** a. **Passing**: Confirms hypothesis and eliminates others. b. **Failing**: Eliminates hypothesis c. **Implications for rival hypothesis** **Passing**: *eliminates* them **Failing**: *substantially* strengthens

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