

Strengthening systems change practices with AI: Systems sensing, evaluation and real-time learning

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The Learning Series

What is your AI focus?

The Implementors

Focused on how to best use AI, including identifying use cases, hands on experiences, prompt engineering, tool selection, and workflow integration. Often, though not always, focused on efficiency.

The Solution Architects

Designs AI tools that target specific gaps related to systemic change problems. Often focused on augmentation – going beyond what humans could previously accomplish.

The Systems Visionaries

Exploring the “what if” scenarios for entire systems, reflecting on what becomes possible as AI disrupts the system and creates new fragilities to change.

Horizon 1 (Today)

Horizon 2 (Experimenting toward tomorrow)

Horizon 3 (Vision for the future)

The Impact Guardians

Navigating the “techno-cautious” path, focusing on governance, civil rights by design, mitigating algorithmic bias, and ensuring AI is safe and fair.

Three Learning Sessions on AI and Systems Change

Topic

Activities with AI

1

Initial understanding of systems & complexity



We will practice deepening learning about a complex, dynamic system

2

Developing, refining, and adapting strategies



We will practice expanding thinking and pressure testing strategic choices

3

Ongoing learning, sensemaking, and evaluating



We will practice deepening our complexity lens in our learning practice and pattern finding

Augmenting human capability: Systems sensing, evaluation, and real-time learning

Complexity Exceeds Human Comprehension

- **Cognitive limits:** Working memory holds ~7 items. Complex systems have thousands of interacting variables.
- **Pattern-matching:** We draw on past experience, importing assumptions into systems that don't follow prior logic.
- **Anchor bias:** We fixate on visible data. What is too obvious or universally shared disappears from our analysis.
- **Positionality:** We are inside the systems we study. Our position shapes — and limits — what we can see.
- **Nonlinear causality:** Effects become causes. Interventions create feedback loops no one designed.

This is not a skill gap. It is a structural limit of human cognition when navigating genuine complexity. Sensing tools — human and AI — are not supplements. They are necessities.

Systems Sensing: Listening Deeply to What the System Is Telling You

“We can’t control systems or figure them out. But we can dance with them.” — Donella Meadows

- **Beyond analysis:** Systems sensing expands Systems Thinking through embodied, felt-sense knowing, not just mapping, but listening.
- **Dialogue with the invisible:** When we engage in systems sensing, we enter into dialogue with less visible layers: patterns, relational dynamics, and possible root causes.
- **Humble engagement:** It calls for letting go of what we think is true to engage the system’s deeper wisdom. With this, wise intervention becomes more evident.

Systems sensing is not a method. It is a way of being in relation with the system.

What Sensing Provides

- Embodied, relational knowing
- Context that only insiders can hold
- Wisdom from being in the room

What AI Adds

- Scale: more data than any team can hold
- Breadth: patterns across contexts
- Disruption: challenges anchoring and hidden assumptions

Synthesis: Human relational knowing + AI analytical reach helps us go further

AI doesn't dance with the system. It helps you hear more of the music.

Human bias: We see through our position and experience. Our view is shaped by who we've learned from and what we've never been asked to question.

AI bias: AI is also biased, as it is trained on particular texts, with bias toward certain actors, geographies, knowledge systems. It defaults to “balance” as a position.

Why these biases are okay:

- Just like we can ask ourselves about our biases, and seek out alternative perspectives, so can we do so with AI:
 - Ask: “Who holds this perspective? What are its ideological, legal, or social foundations?”
 - Then ask: “Give me three perspectives that would answer this very differently — and explain why.”
- Remember: the AI cannot share perspectives that it isn't trained on. Ask yourself whose voices are missing and need to be brought in through other means.

Examples

Example 1: Making Sense of High-Volume Information

Source: Simmons, Lynn et al. (2025) — Imaginable Futures Systems & Impact Framework

60+ conversations · 1,500 pages · 3 geographies: US, Brazil, Kenya · 1 month to insights

The approach:

- ◆ A structured Systems & Impact Conversation Guide gave the AI analysis its coherence
- ◆ Traditional coding: 60–80 hrs per cycle.
- ◆ With AI: ~20 hours per geography total — preserving momentum without sacrificing rigor

Examples of what it revealed:

- **US:** How energy shifted in the child care system as federal attention waned
- **Brazil:** The gap between national education policy intent and classrooms
- **Kenya:** The overlooked “adoption layer” blocking innovation uptake in youth livelihoods systems

Example 2: AI as a Disruptor of Analyst Anchoring

Source: Lynn & Phoothong (2025) — 10-Year Retrospective, Thai Seafood and Fishing Industries

AI's most important contribution wasn't analysis. It was challenging the analyst and surfacing additional patterns across over 130 documents and 60 stakeholders insights.

Example 1: The invisible condition:

A shared, systemic understanding of the problem existed across all stakeholders from the start. It was so universally held that no one named it as a causal factor. It was ambient. The analyst's initial read barely surfaced it.

AI disrupted that by flagging how frequently this shared definition appeared, and how many other dynamics depended on it. ***What everyone knows, no one names.***

Example 2: The comfortable narrative:

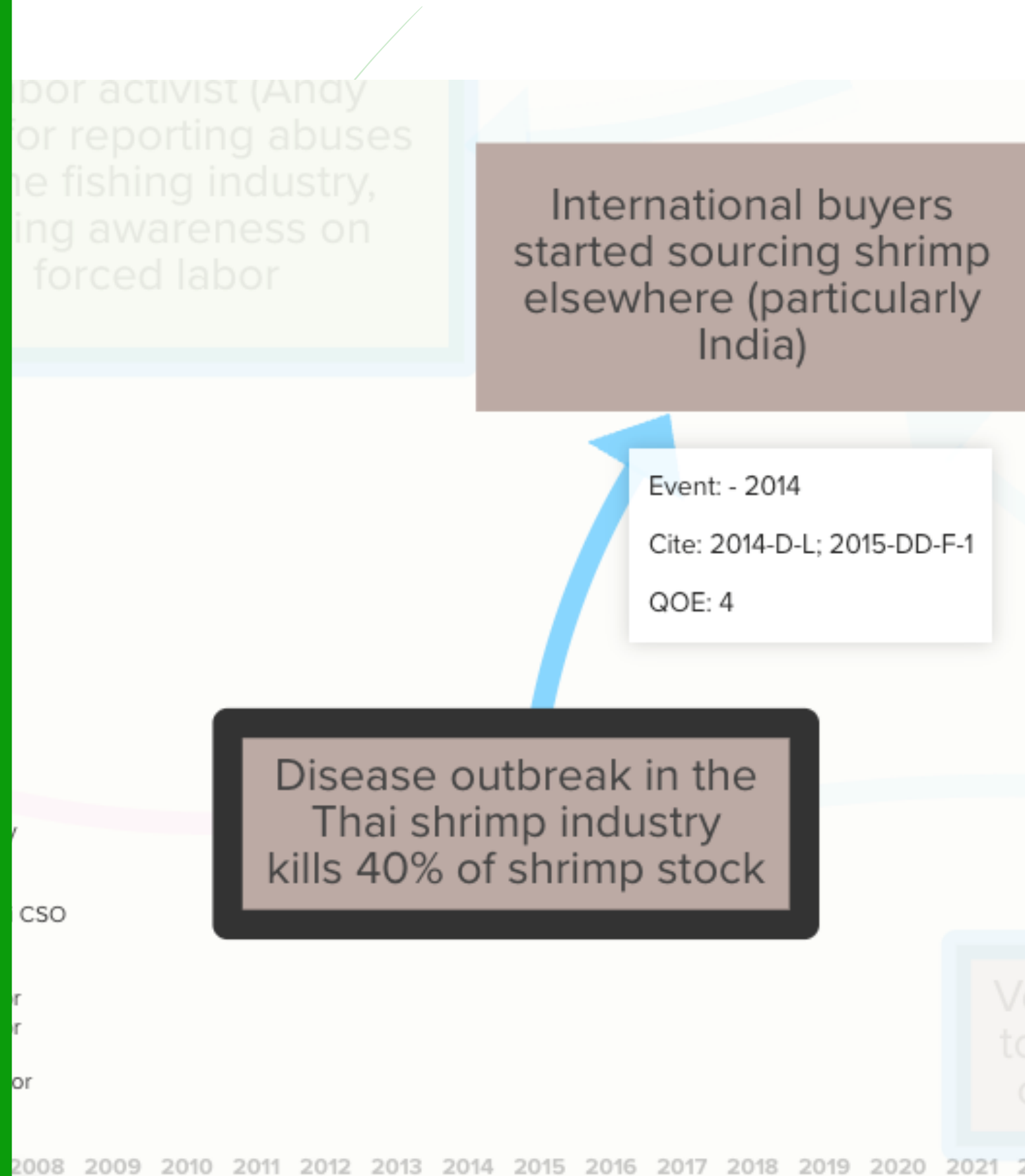
Over and over, interviewees stated: "Philanthropic funding built Thai CSO capacity."

AI surfaced evidence that CSOs were already active and effective in specific ways before funding expanded. Further, it surfaced evidence to show two enabling factors for increasing their capacity: philanthropic funding AND the emergence of a new legal framework in Thailand.

It shifted the results from a funder-centered story to a more nuanced understanding that was easy to miss because it challenged a preferred narrative.

Example 3: AI as an evidence-building partner

Source: Lynn & Phoothong (2025) — 10-Year Retrospective, Thai Seafood and Fishing Industries



Building the evidence-base for causal connections

A 10 year retrospective of how change happened in a complex system using a causal pathways methodology faced a challenge:

How to build the evidence base for casual connections through an iterative review of evidence, not a one time pass, when the evidence included:

- Data from 130 documents and 60 stakeholders
- A causal map with 378 elements and 355 connections

The strategy: The AI seeker

AI was used to seek confirming and disconfirming evidence across all data each time a new element or causal link was identified.

It enabled the map to be built iteratively over time, returning to earlier data to check new insights as they came in.

Example 5: AI as Real-Time Thought Partner

The setup:

- The team is AI ready - aware of its role, prepared to engage with it, open to being challenged
- AI is primed with system and strategy context before the session
- Fed real-time insights as the team conversation unfolded
- Asked mid-session to challenge assumptions and offer systemic perspectives

This is AI as a disruptive collaborator, not a search engine.

Discernment: How to assess and improve the quality of the AI participation

First, make sure you prepared it to provide the best quality responses possible. It needs to:

1. Understand the systems lens you want to bring
2. Understand what a credible source is and how you want it to cite its sources
3. Have clear instructions on how to get to its conclusions - what is its thinking pathway
4. Have clear instructions on the type of response you want - depth, length, tone

Consider training it on your work and prior learnings, so you are building on what you know and being challenged, not repeating the knowns.

Second, apply “Discernment”: thoughtful evaluation of AI results

To go deeper: <https://anthropic.skilljar.com/ai-fluency-framework-foundations>

1. Look for accuracy, appropriateness, coherence and relevance of the results. In particular, question anything that is too “agreeable”.
2. Look at how the AI arrived at its outputs - look for quality of sources, quality of reasoning, pathway from start to finish.
3. Evaluate how the AI is interacting. Is it too agreeable? Is it challenging you or confirming everything? Is it giving depth or shallow statements?

When you initially train your AI, take time before your systems sensing session to have a conversation and see how it is responding. Refine your training (potentially multiple times).

Questions?

What is one upcoming moment when you could use AI to in real-time sensemaking?

Follow-up resources available at:
<https://www.policysolve.com/ai/tog>