

MASTERCLASS SERIES

in Systems Thinking



Systems- and Complexity-informed Evaluation: Range of Purposes, Questions, and Methods

SPEAKERS

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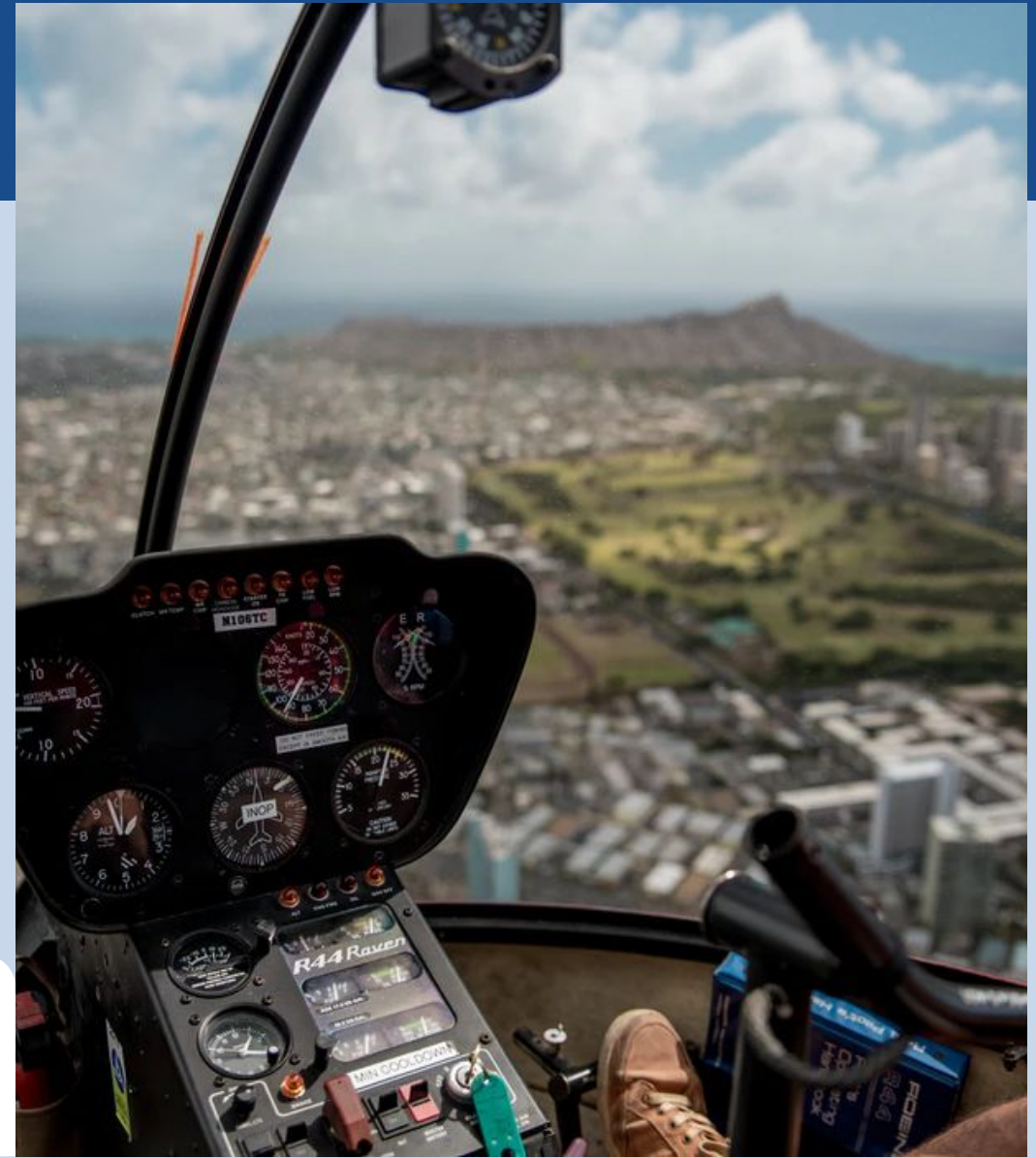
MODERATOR

Shekufeh Zonji, Global Technical Lead, ECDAN

APRIL 23, 2024



BOSTON
COLLEGE



The Systems Thinking for Early Childhood Development (ECD) Initiative is a partnership between ECDAN and Harvard University and supported by Porticus.



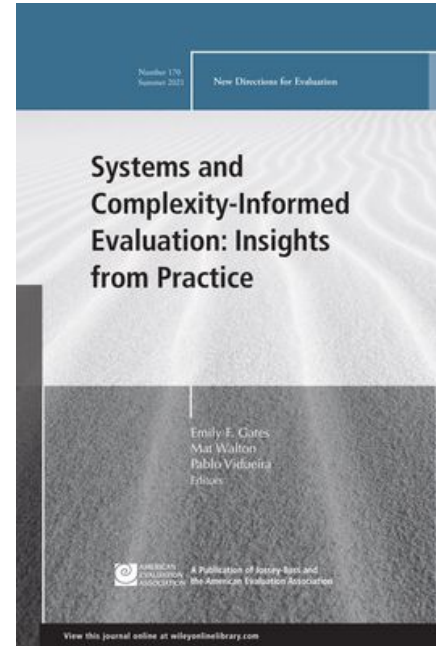
HARVARD T.H. CHAN
SCHOOL OF PUBLIC HEALTH

My Why

Evaluation to support changemakers in addressing complexity of social problems and influencing systems change



Key Publications



[Link](#)



[Link](#)

Evaluative Inquiry for Systemic Change



w/Pablo Vidueira
(Spain/Food Systems)



1. **Scan the terrain: why here, where to?**
2. Evaluation planning tool
 - Identify **purposes** and **questions**
 - Explore **method** options
3. **So what, what next?**

1. Scan the Terrain

Does anyone else feel like we could do better?

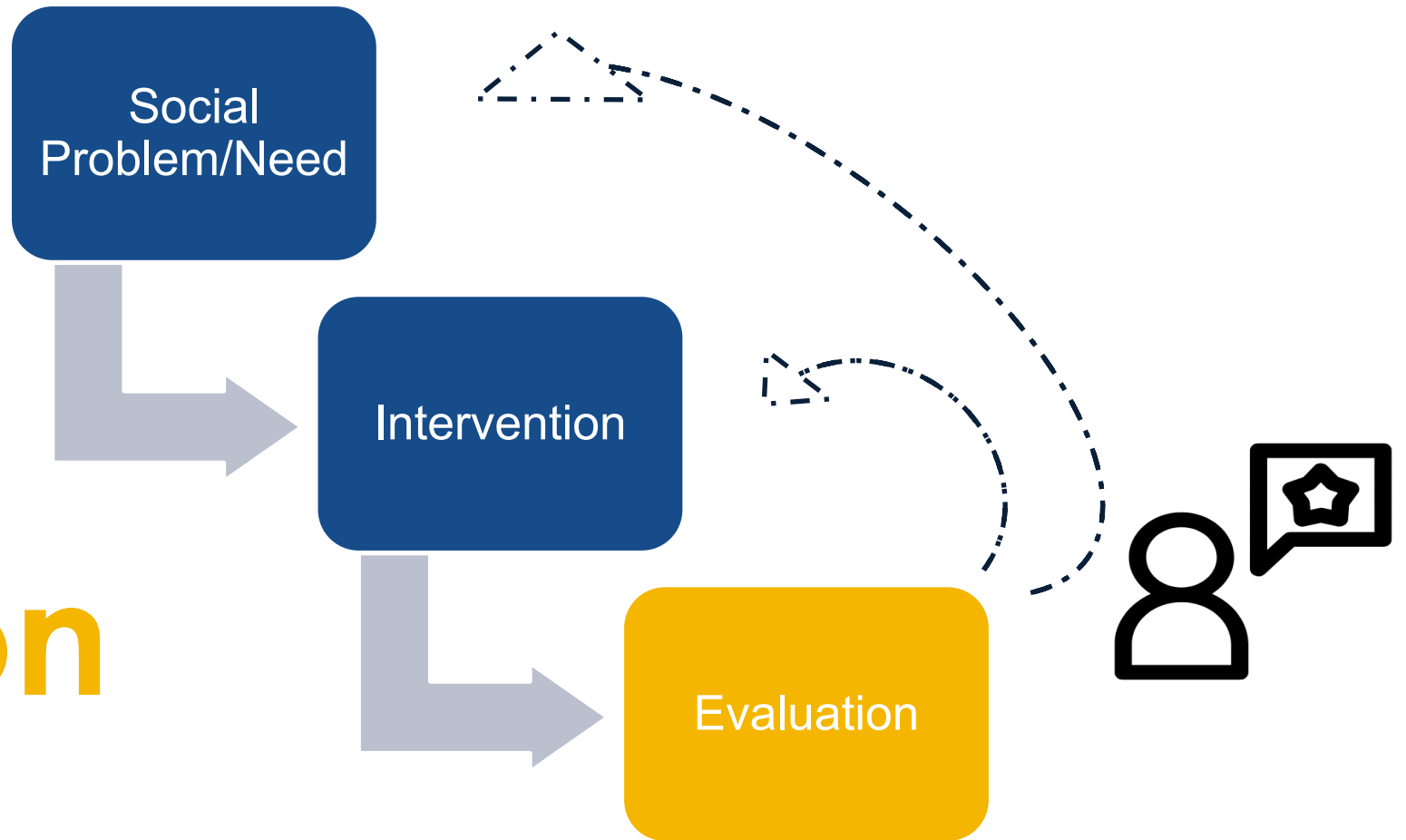


freshspectrum

([image link](#))

Conventional

Evaluation

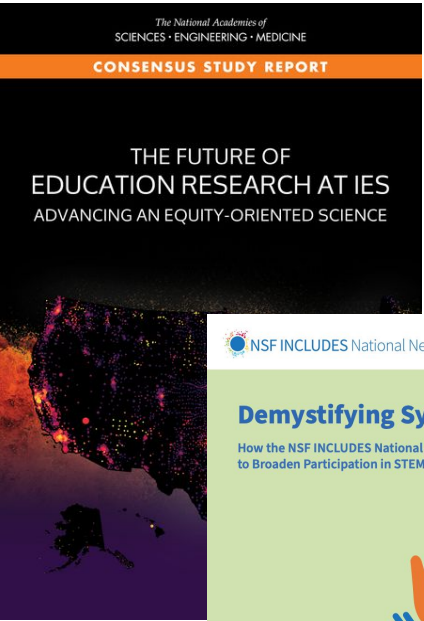


(Shadish, Cook, & Leviton, 1991; Schwandt & Gates, 2021)

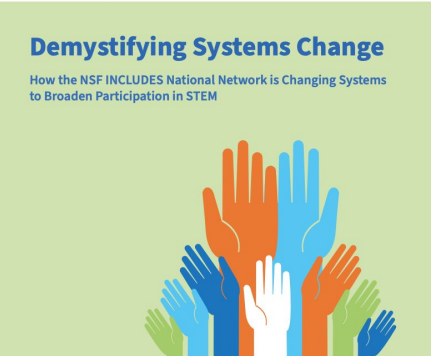
Evaluation

Why:	Assess whether an intervention works and how well to address a specific problem or need; support incremental social change
Who:	Funders as commissioners and clients Evaluators as experts trained in social science methodologies Participants as data sources and evaluation users
What:	Intervention as activities to generate pre-determined outcomes
How:	Determine intervention value based on evidence and criteria Focus on linear change process : needs assessment, design, implementation, outcomes, and impacts
So what:	Inform evidence-based policy and practice

(Adapted from Schwandt & Gates, 2021)



NSF INCLUDES National Network includesnetwork.org



SUSTAINABLE INVESTING > SOCIALLY RESPONSIBLE INVESTING

What Is Environmental, Social, and Governance (ESG) Investing?

What impact is your investment making?

By THE INVESTOPEDIA TEAM Updated February 06, 2024

Reviewed by JEFREDA R. BROWN

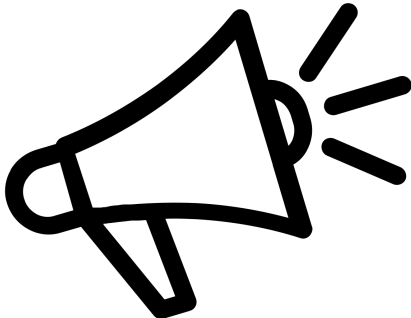
Fact checked by ARIEL COURAGE



REIMAGINING the PURPOSE & PRACTICE of EVALUATION



Government
Investors
Advocates
Development & Sustainability
Philanthropy



How do we know the systems change we work for is happening?

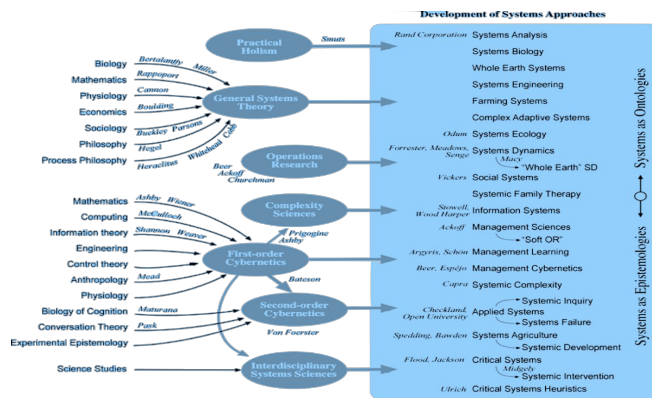
Bill & Melinda Gates Foundation teams up with UNDP to find out
FEBRUARY 6, 2023



	Evaluation
Why:	Design or redirect interventions to change large-scale systems and shift systemic conditions
Who:	Those involved in and affected by a system or situation Evaluators as collaborators and facilitators
What:	Iterative intervening to multi-solve : address multiple leverage points and root causes across scales and depth
How:	Draw on systems and complexity approaches Embed evaluation into a change process to collaboratively develop value
So what:	Inform mutual accountability, learning , and adaptation Disseminate within and across fields

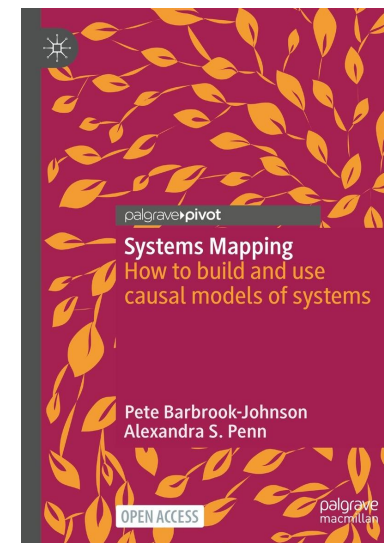
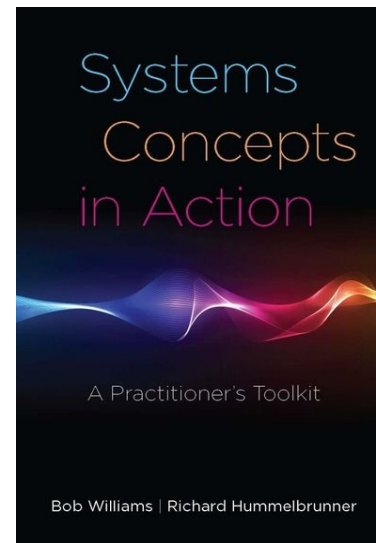
Systems and Complexity Approaches

Fields

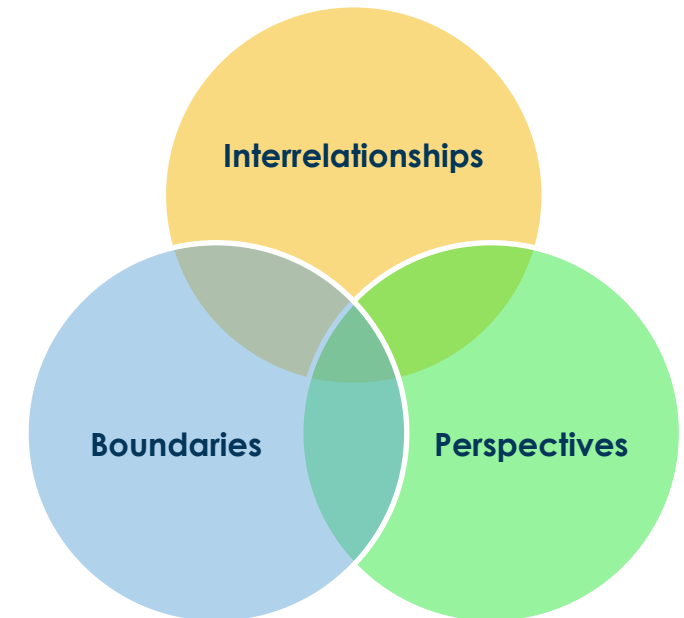


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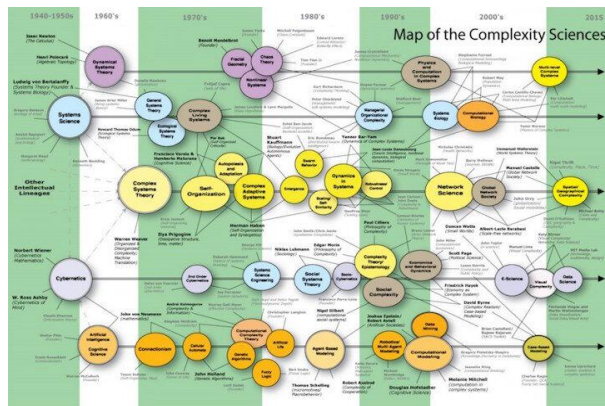
Methods



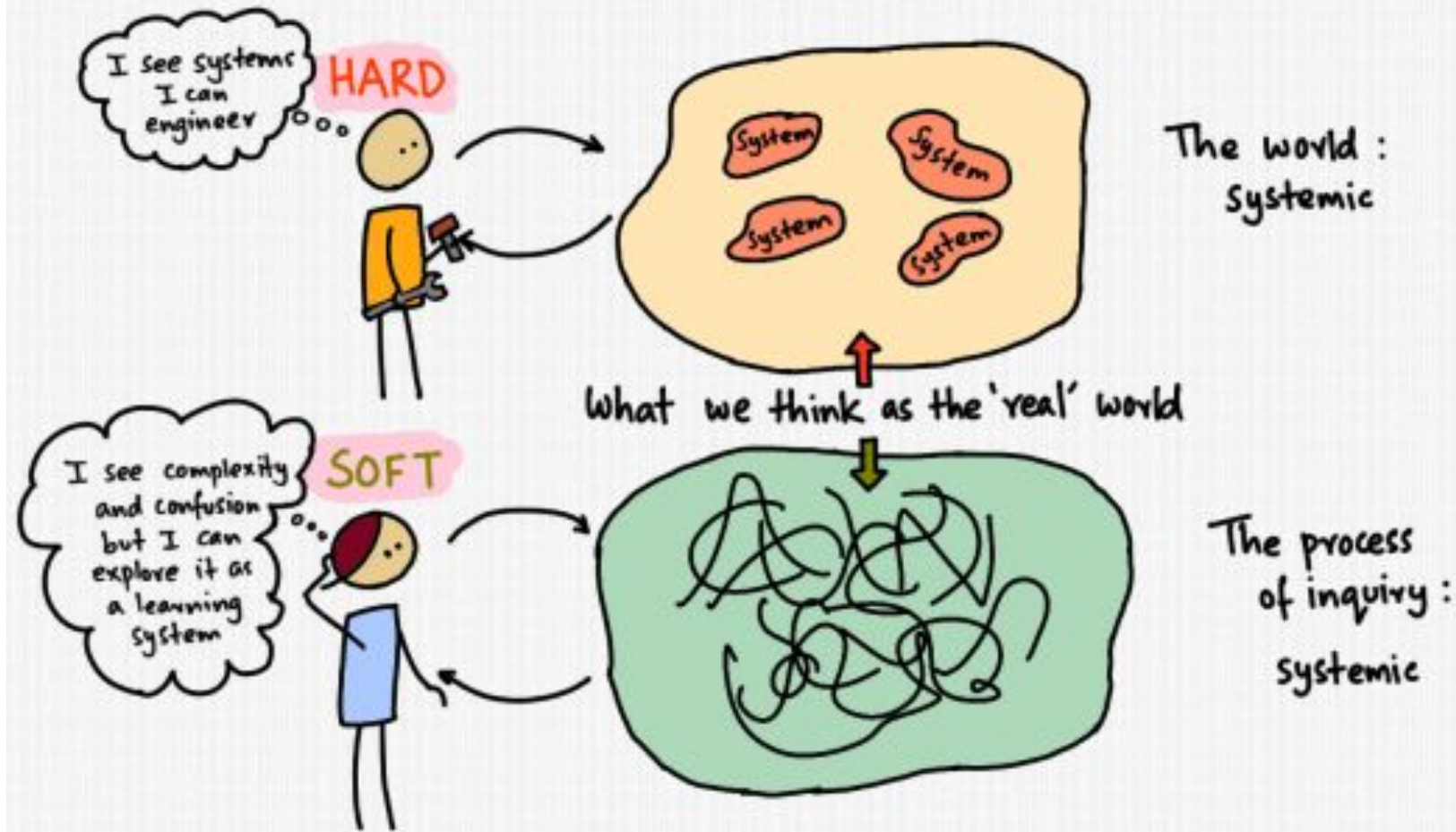
Concepts



and many more...



([Link](#))



**Systems as
Real-world
Entities**

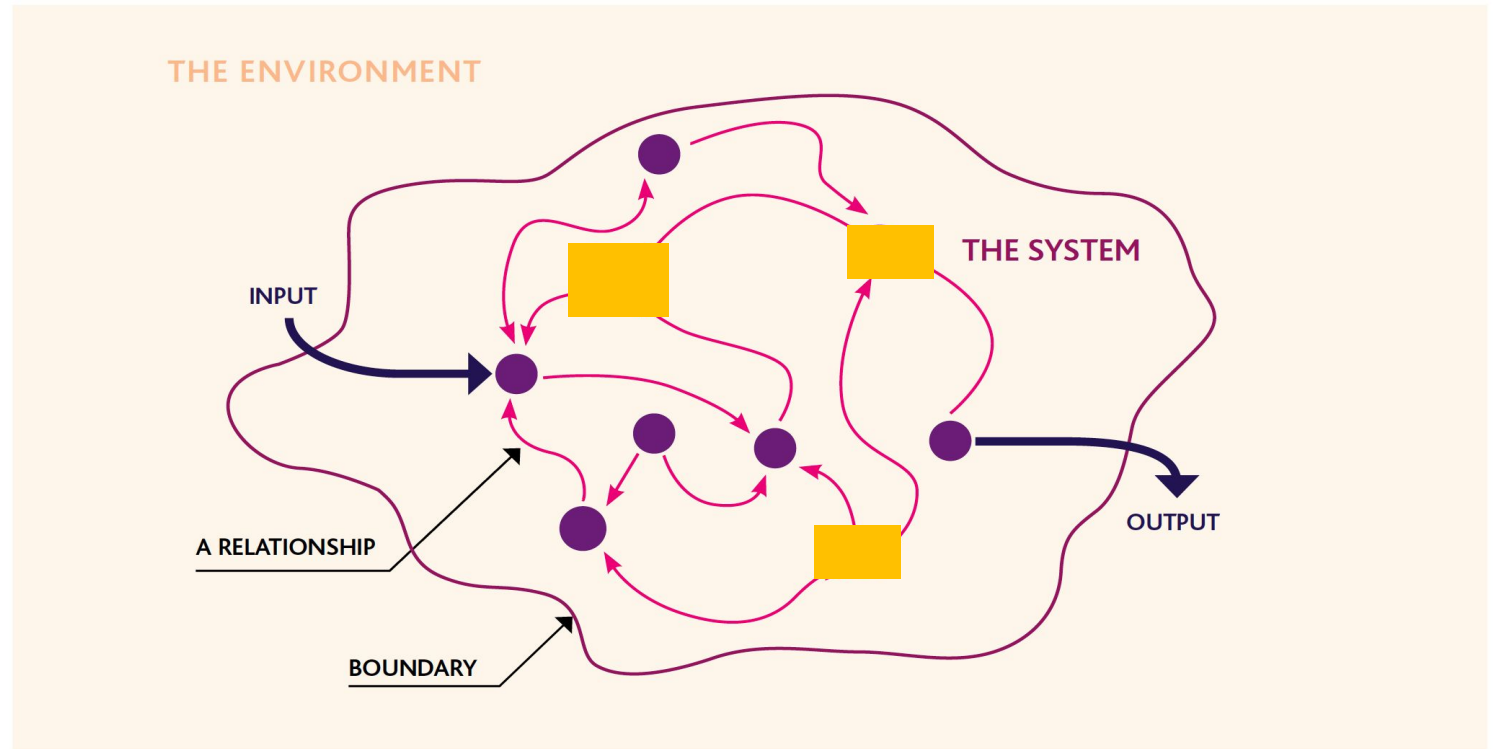
**Systems as
Constructs to
Learn about
the World**

Systems Change

Figure 1: Example of a system⁵

Changes to system structure and conditions that give rise to social problems, needs, or disparities

(Gates & Vidueira, 2025)



(Modified from Abercrombie et al., 2015) ([link](#))

Child as system

Ex: biological, psychological, and social factors shape child development

Parenting as system

Ex: economic, education, cultural, health, and other factors shape parenting

Child welfare as system

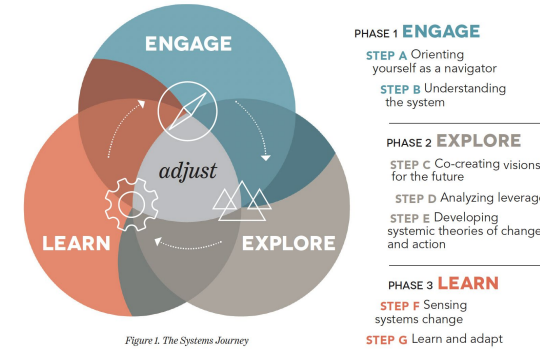
Ex: policies and services that interact to provide safety and care to children

Options for Systems- and Complexity-informed Evaluation

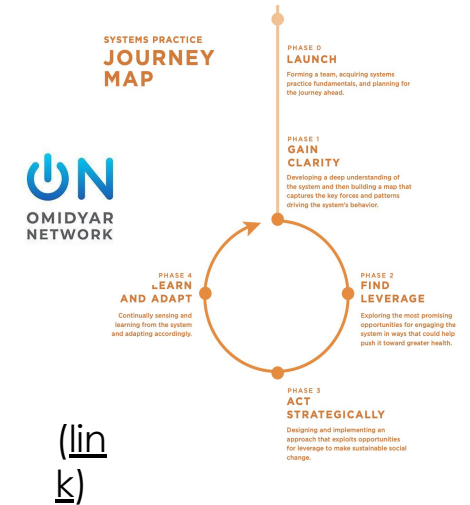
Follow an Evaluation Approach



Follow a Systems Change Guide

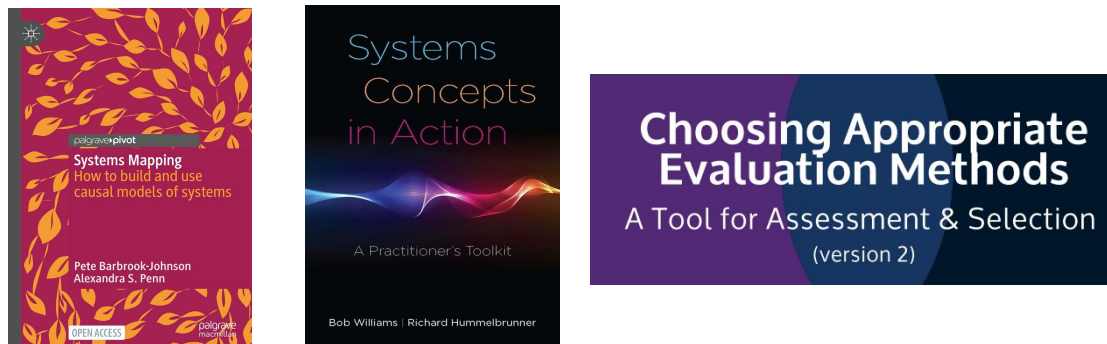


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([link](#))

Apply One or Several Methods



Apply Concepts or Principles



Principles for Effective Use of Systems Thinking in Evaluation

Systems in Evaluation TIG

A Topical Interest Group of the American Evaluation Association

Revised September 9, 2018

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Health

Harvard University



2. Evaluation Planning Tool



Download/print copies:

- 1) Blank table for notes to apply to your work
- 2) Full table with options and resources

Identify **context** to apply this to.



Purposes	Questions	Method Options	Method Spotlight	Resources (select)
Accountability	Situation or System of Interest			
Learning				
Adaptation	Change Process			
	Outcomes and Impacts			
	Future Scenarios			
	Multi-dimensional Value			

Identify Purposes

- Accountability
- Learning
- Adaptation

Purposes	Questions	Method Op
Accountability • External • Internal	Situation or System of Interest	Actor Mapping Social Network Power Cube Rich Pictures Causal Loops Participatory
Learning • Single Loop • Double Loop • Triple Loop	Change Process	Leverage Framework Theory of Change Problem-driven
Adaptation • Improvement • Innovation • Adaptation	Outcomes and Impacts	Outcome Harvesting Most Significant Changes Success Criteria Qualitative Contribution
	Future Scenarios	Futures Consulting Futures Workshops Horizon Scanning Scenario Mapping STEEP V Analysis
	Multi-dimensional Value	Critical Systems Analysis Evaluative Deliberative Value for Innovation Collective Sensemaking

Identify Purposes

Accountability

Internal



“North Star”

Shared Vision and Principles

Desired System

Imagined Future

External

Commissioners and funders

Policymakers and leaders

Wider Public

Those Involved and Affected

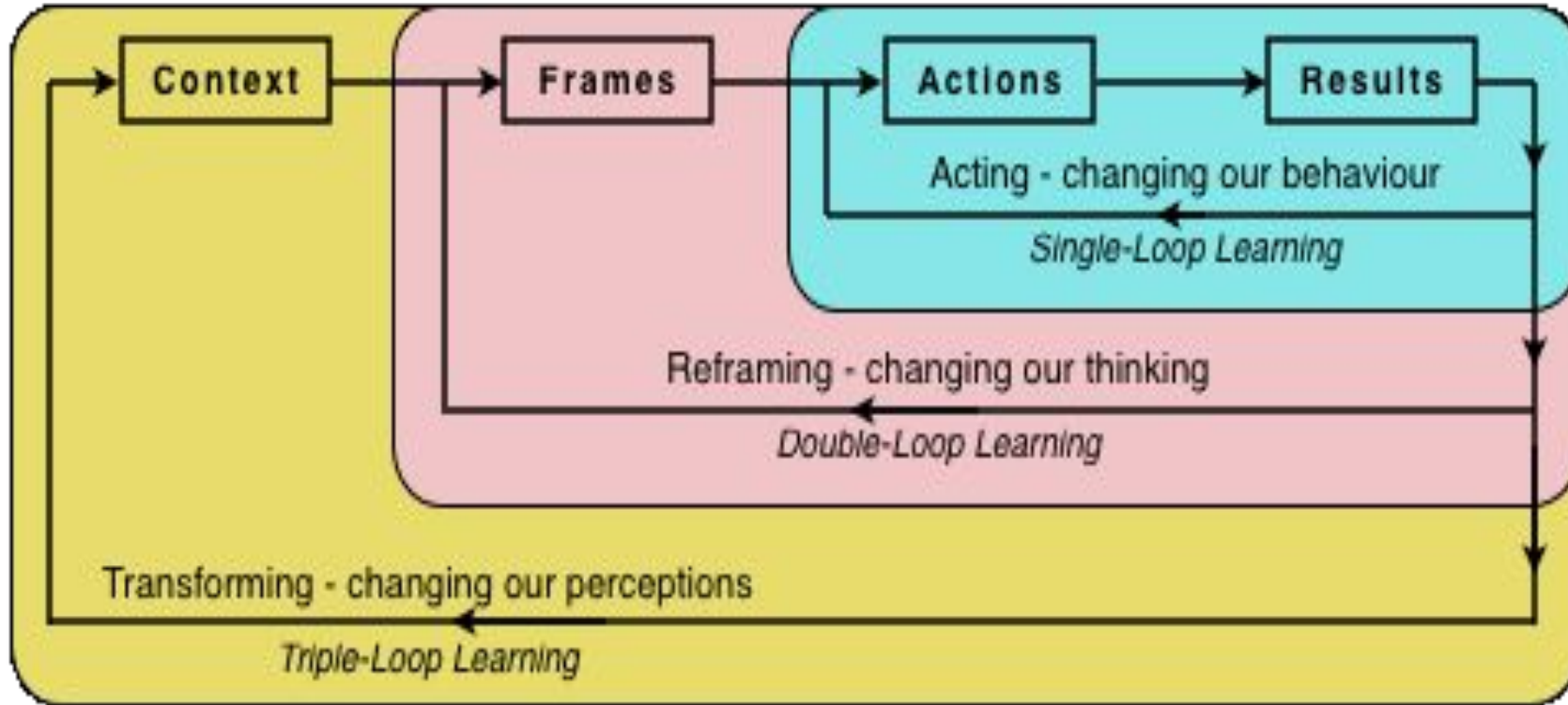
Center Equity

Future Generations and Environment



Identify Purposes

Learning



Single loop:

Are we doing things right?

Double loop:

Are we doing the right things?

Triple loop:

What makes this the right thing to do?

([link](#))

Identify Purposes

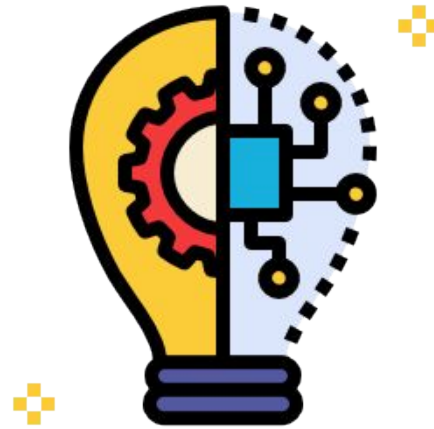
Adaptation

Improvement



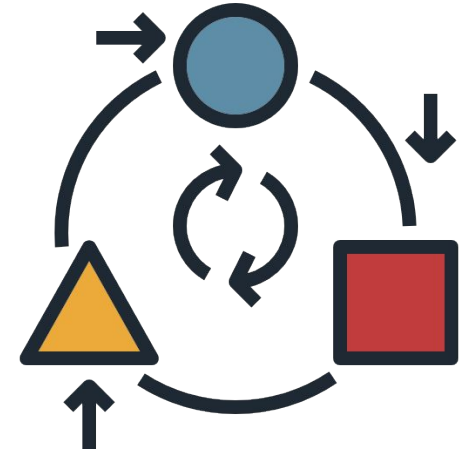
Getting better
within current goals
and processes

Innovation



Creating new
goals, processes,
and possibilities

Adaptation



Adjusting to
internal and
external changes

Identify Purposes

Reflect on **your context** to apply this process to.



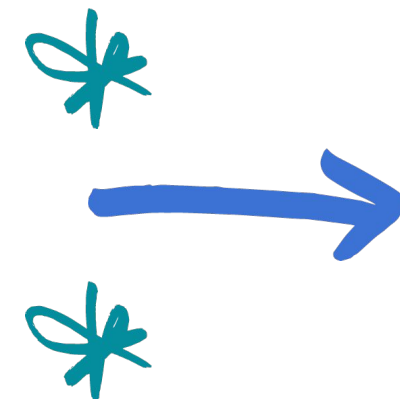
Circle or star the **primary purposes**:
accountability, learning, and adaptation.



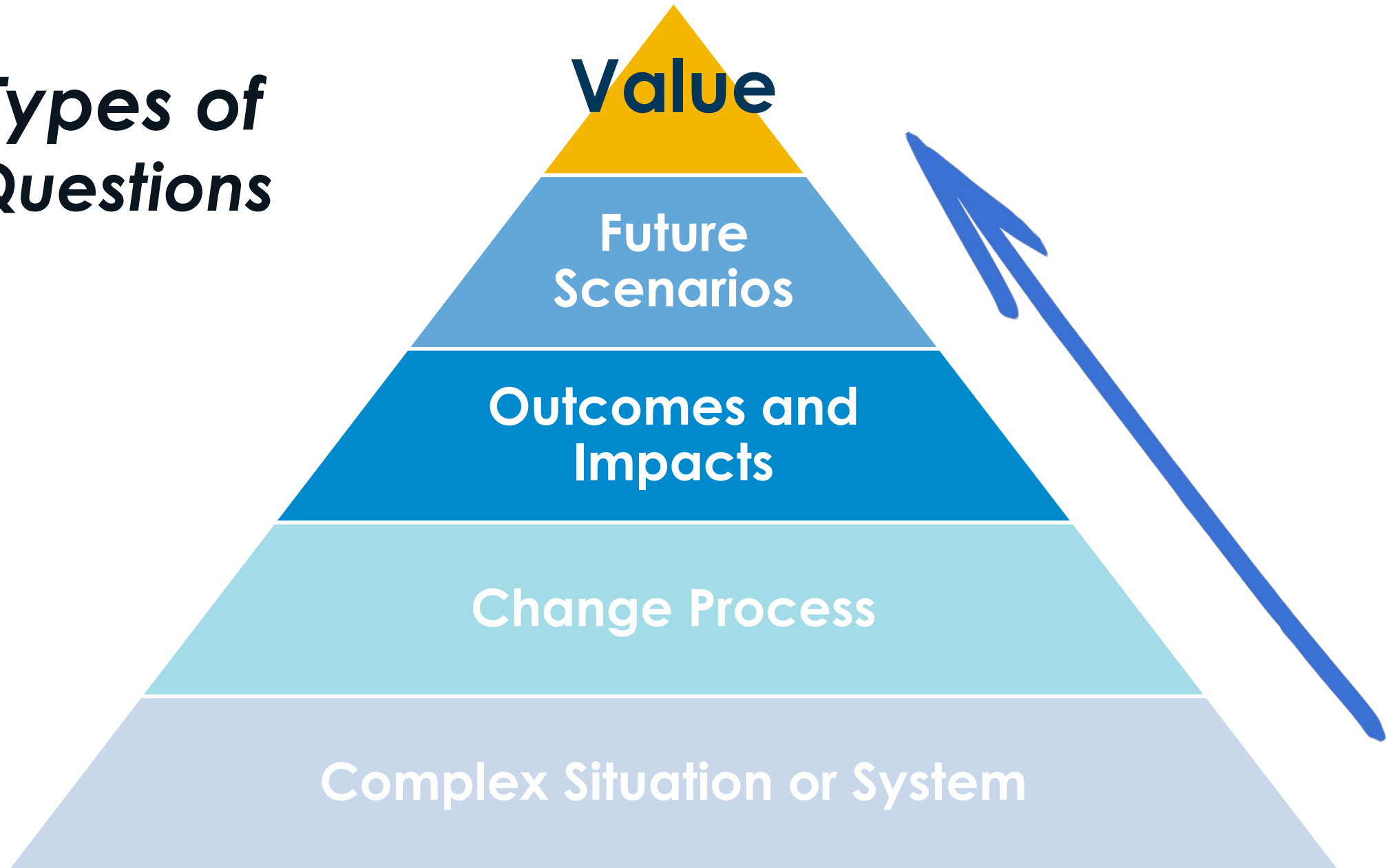
Put an arrow or question to indicate what you'd
like to **learn more about or discuss** with others.

Explore Questions and Methods

Purposes	Questions	Method Options	Method Spotlight	Resources (select)
Accountability Learning Adaptation	Situation or System of Interest			
	Learning Process			
	Outcomes and Impacts			
	Future Scenarios			
	Multi-dimensional Value			



Types of Questions

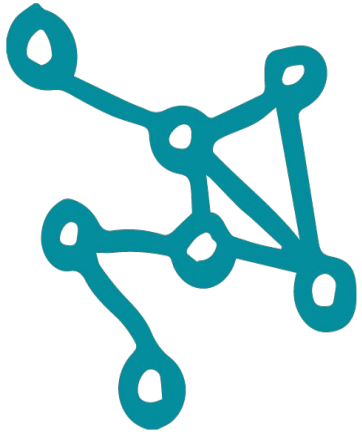


Explore Questions and Methods

Situation or System



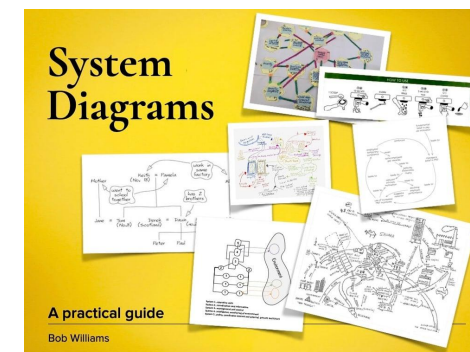
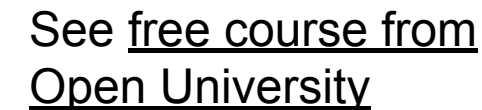
Situation: loosely bounded, real-world set of circumstances



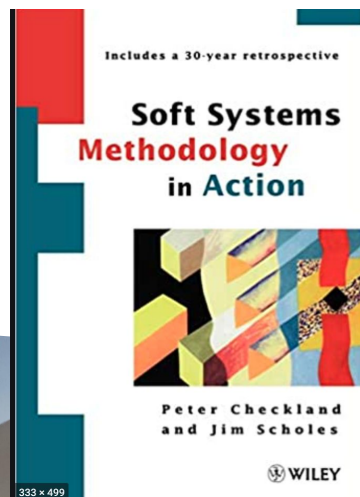
System: interdependent entities that function as a whole; distinguished by boundary from their environment.

How do different people **experience the situation** and what needs to change?

What **system relationships, dynamics, or conditions** need to change?



Example Rich Pictures



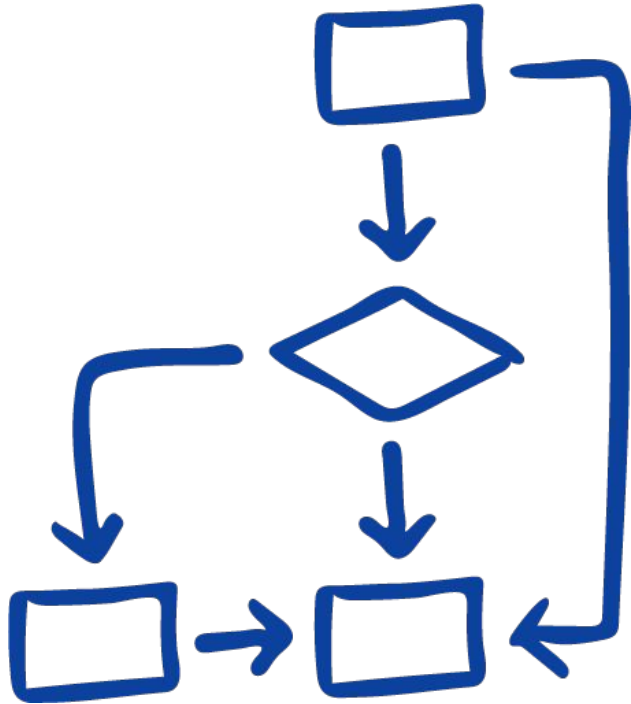
(Gates, 2023; Checkland & Scholes, 1999)

Change Process

Purposes	Questions	Method Options	Method Spotlight	Resources (select)
Accountability	Situation or System of Interest			
Learning				
Adaptation	Change Process			
	Impacts			
	Future Scenarios			
	Multi-dimensional Value			



Change Process



- What are potential **leverage points** to influence change?
- How do we **theorize changes**?
In what context, through what mechanisms, toward what outcomes?
- How do relationships between actors **generate system-level outcomes**?

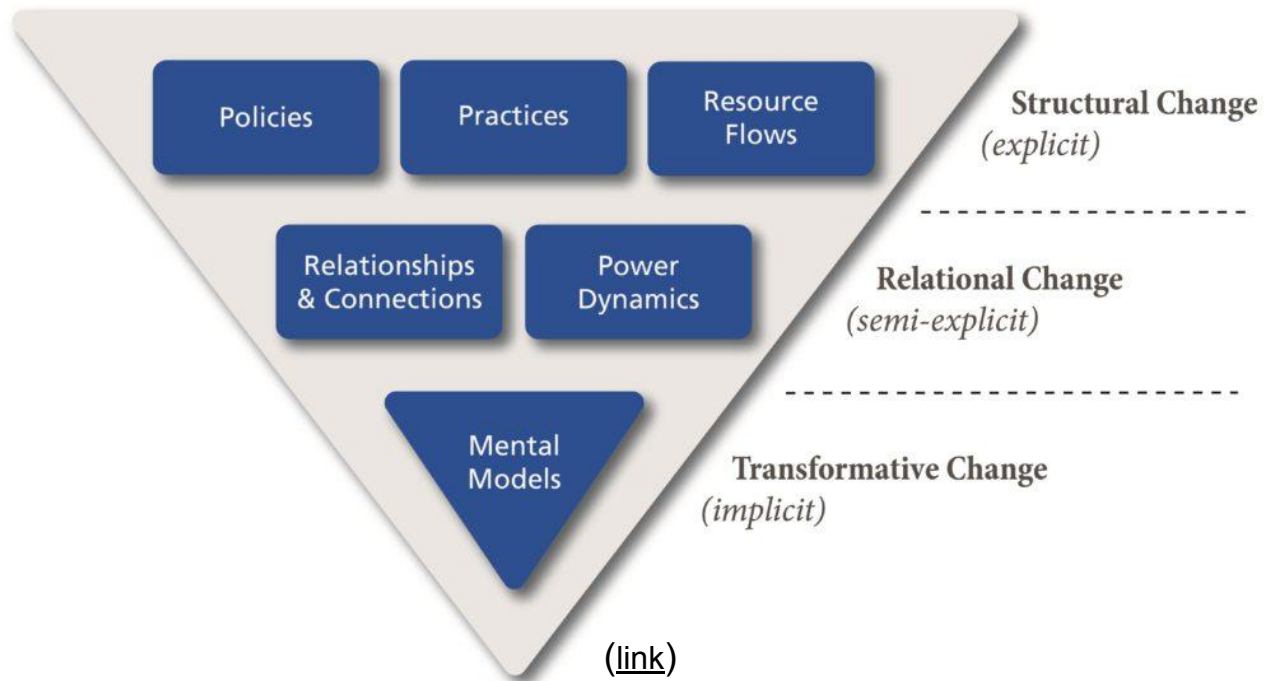
Method Options

Leverage Points

+

Theory of Change

Six Conditions of Systems Change

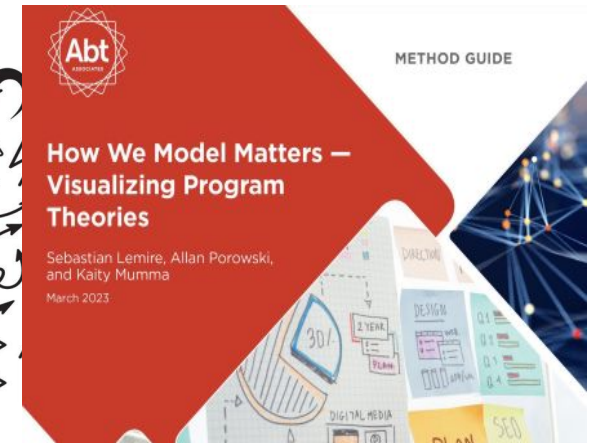


Hivos ToC Guidelines THEORY OF CHANGE THINKING IN PRACTICE



A stepwise approach

www.hivos.org



Hivos
people unlimited

([link](#))

([link](#))

Example

Actor-based Theory of Change

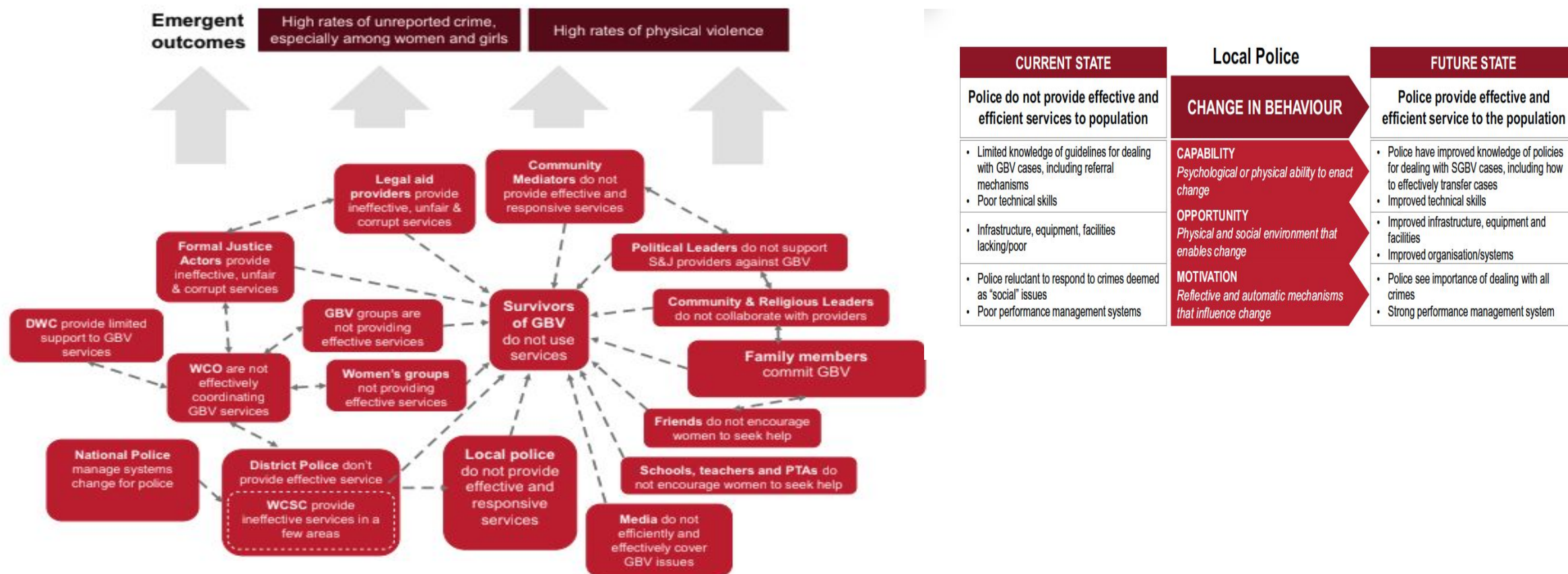


Figure 1. IP-SSJ actor-based system map. IP-SSJ = Integrated Program for Strengthening Security and Justice.

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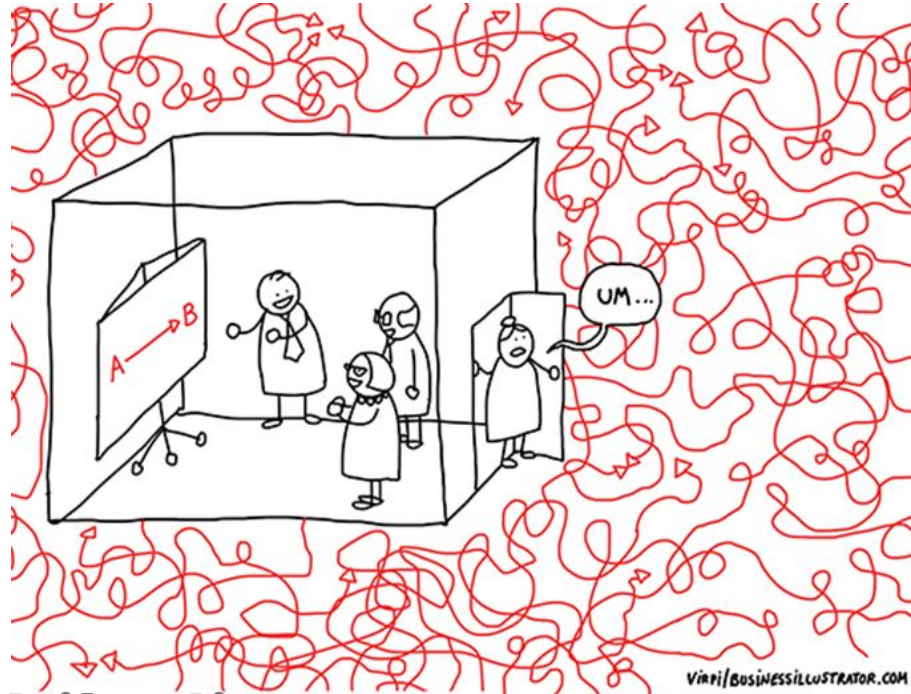


Outcomes and Impacts

Purposes	Questions	Method Options	Method Spotlight	Resources (select)
Accountability Learning Adaptation	Situation or System of Interest			
	Change Process			
	Outcomes and Impacts			
	Future Scenarios			
	Multi-dimensional Value			



Outcomes and Impacts



Attribution

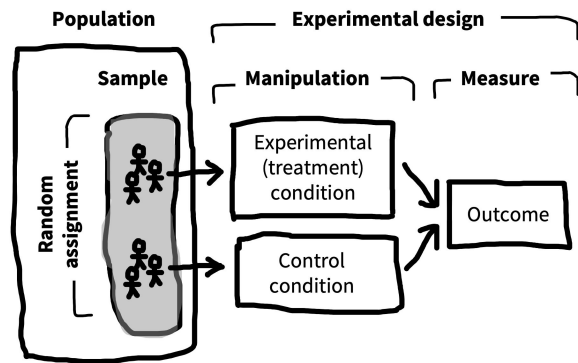
What works? What difference did the intervention make?

Contribution

- **How** did the intervention make a difference (or not)? For whom, in what circumstances?
- What initiatives, factors, or conditions **together contribute** to the outcomes? How so?
- How do **participants narrate** their experiences and changes?

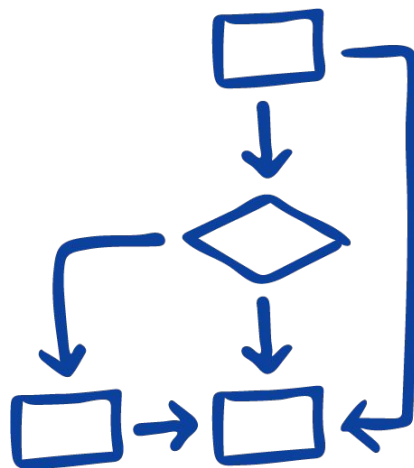
Method Options

Participant Stories



Experimental

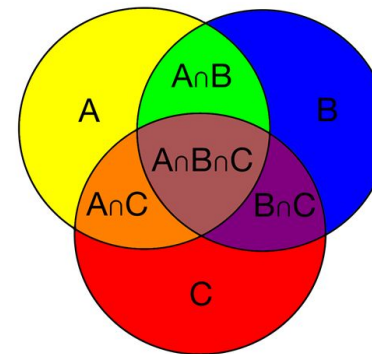
Theory-based



- Contribution Analysis
- Process Tracing
- Success Case Method



- Outcome Harvesting
- Outcome Mapping
- Most Significant Change
- Significant Instances of Policy and Systems Improvement (SIPSI) Technique

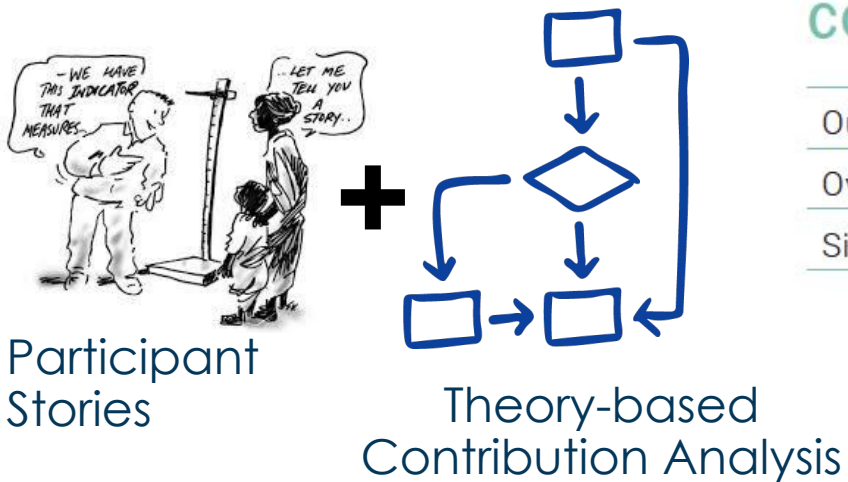


Configurational

- Qualitative Comparative Analysis

Example

Significant Instances of Policy and Systems Improvement (SIPSI) Technique [\(link\)](#)



(Dart & Davies, 2003)

COMMUNITY MATERNAL AND CHILD HEALTH HUBS CASE STUDY

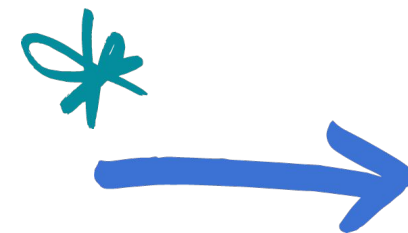
Outcome domain	Good start in life	Evidence of outcome	Medium-high
Overall outcome rating	Medium-high	Level of contribution	Medium
Significance	High	Evidence of contribution	Medium

The new **Community Maternal and Child Health Hubs** are showing early instances of change in terms of supporting more at-risk women.

The hubs, as an extension of existing Logan Hospital services, **offer women a community-based space**, which includes midwives and other health professionals, **for receiving continuous care throughout their pregnancy**.

Future Scenarios

Purposes	Questions	Method Options	Method Spotlight	Resources (select)
Accountability Learning Adaptation	Situation or System of Interest			
	Change Process			
	Outcomes and Impacts			
	Future Scenarios			
	Multi-dimensional Value			

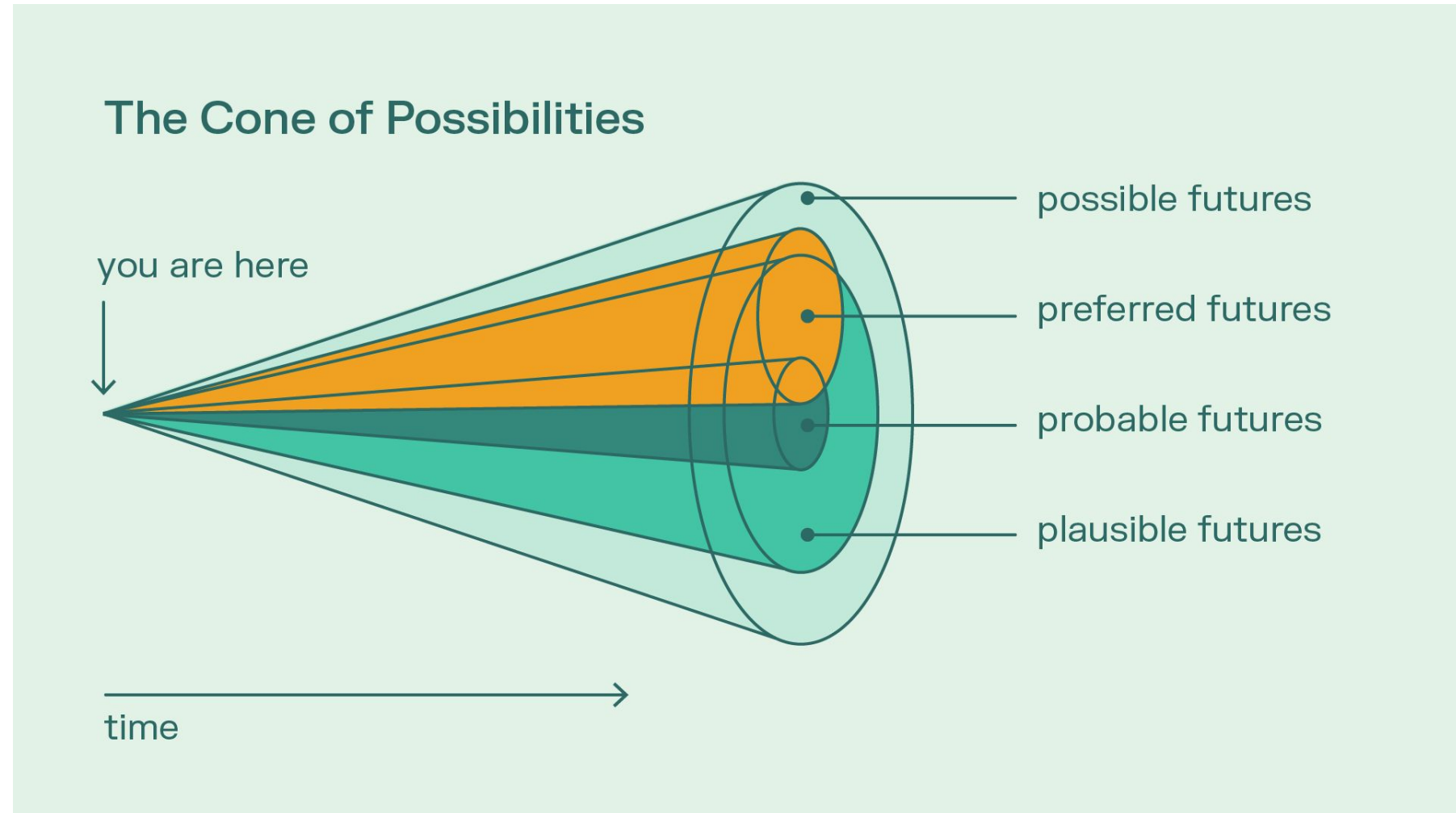


Future Scenarios

*How should future scenarios **shift what we** do now and next?*

*What are possible and **preferred futures**?*

([link](#))



Method Options

WE MUST WRITE A BETTER ENDING

Using Strategic Foresight In Social Movement Organizing

By Karli Ferriolo

[\(link\)](#)



[\(link\)](#)

The Futures Toolkit



Tools for Futures Thinking and Foresight
Across UK Government

[\(link\)](#)

STRATEGIC FORESIGHT TOOLS IN A NUTSHELL

	Tool	Description	Time; participants
EXPLORE	 Driver Mapping	Explore the drivers, emerging issues and wildcards that are the building blocks of the future.	 3 hours +  5–8 people
	 Verge	Explore change through a human or cultural lens.	 1 hour 10 mins +  3 people +
	 Futures Wheel	Visually explore and understand the direct and indirect impacts and implications of a driver, issue or scenario.	 1 hour 15 mins +  3 people +
	 SWOT	Explore the strengths and weaknesses of an idea, strategy, organisation or team, the opportunities open to it and the threats it faces, and understand how to respond.	 1.5 hours +  1 person +
CREATE ALTERNATIVE FUTURES	 2x2 Scenarios	Create four contrasting scenarios based on two high-impact, high-uncertainty drivers of change.	 4 hours +  5–8 people
	 Archetypes	Create different alternative futures by exploring patterns of change.	 4 hours +  4 people + per group (16 people for 4 scenarios)
	 Branch Analysis	Create future scenarios by considering key questions and the impact of different events.	 3.5 hours +  5–8 people
	 Visioning	Create your preferred future and understand the tactics, strategies or policies needed to bring that future about.	 2.5 hours +  5–8 people
UNDERSTAND IMPLICATIONS	 Backcasting	Understand what needs to happen for a particular scenario or desired future to emerge.	 2 hours +  5 people +
	 Wind Tunnelling	Understand which strategies are most resilient, and what to prepare for in the event of a particular scenario.	 2.25 hours +  5–10 people
	 Three Horizons	Understand how the dynamics of a scenario change over time, and explore the transition.	 2.5 hours +  3 people +
	 Roadmap	Generate a plan that defines the major steps or milestones needed to move towards your vision or preferred future.	 1.5 hours +  5 people +

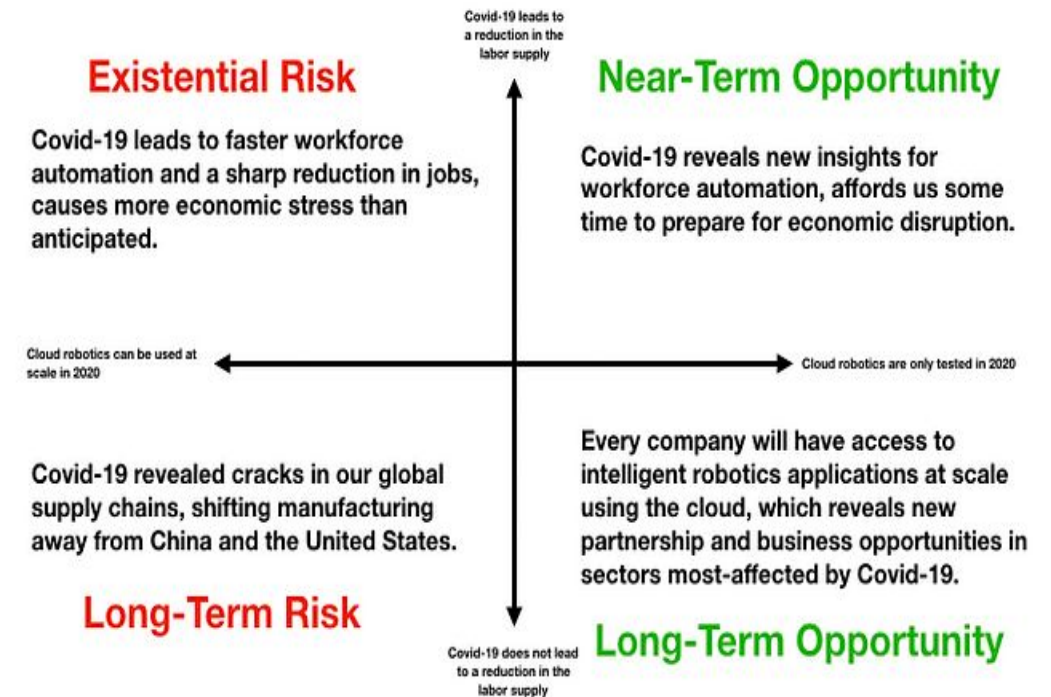
Example

Drivers of Uncertainty + Scenario Matrix

External Uncertainties - Examples

Economic		Social	
US economy experiences growth	↔	US economy experiences slowdown	Rise of religiosity ↔ Decline of religiosity
China's economy grows	↔	China's economy shrinks	People crave private interactions ↔ People crave public interactions
Covid-19 leads to a reduction in the labor supply	↔	Covid-19 does not lead to a reduction in the labor supply	Anti-vax movement grows to include Covid-19 vaccination ↔ Demand for Covid-19 vaccine curbs anti-vax movement
Technological		Regulatory, Politics, Activism	
With a lack of test kits, the U.S. government partners with Google, Amazon and Apple to use surveillance technology to predict early clusters of outbreaks around the country	↔	Consumer data is not used to predict early clusters of outbreaks	Governments regulate personal biometric data reporting and use ↔ Governments regulate more generally as they do today
Cloud robotics can be used at scale in 2020	↔	Cloud robotics are tested in 2020	Social distancing catches on ↔ Citizens don't agree to social distancing
		Rise of nationalism	↔ Decline of nationalism

Critical uncertainties: drivers that are important but which have an uncertain outcome

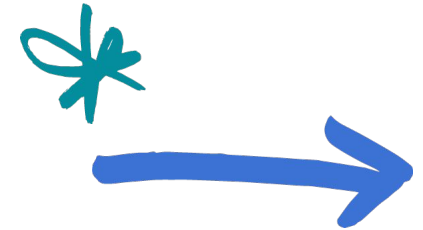


Scenarios: stories about alternative ways the environment might develop in the future.

([link](#))

Multidimensional Value

Purposes	Questions	Method Options	Method Spotlight	Resources (select)
Accountability Learning Adaptation	Situation or System of Interest			
	Change Process			
	Outcomes and Impacts			
	Future Scenarios			
	Multi-dimensional Value			



Explore Questions and Methods

Develop Value

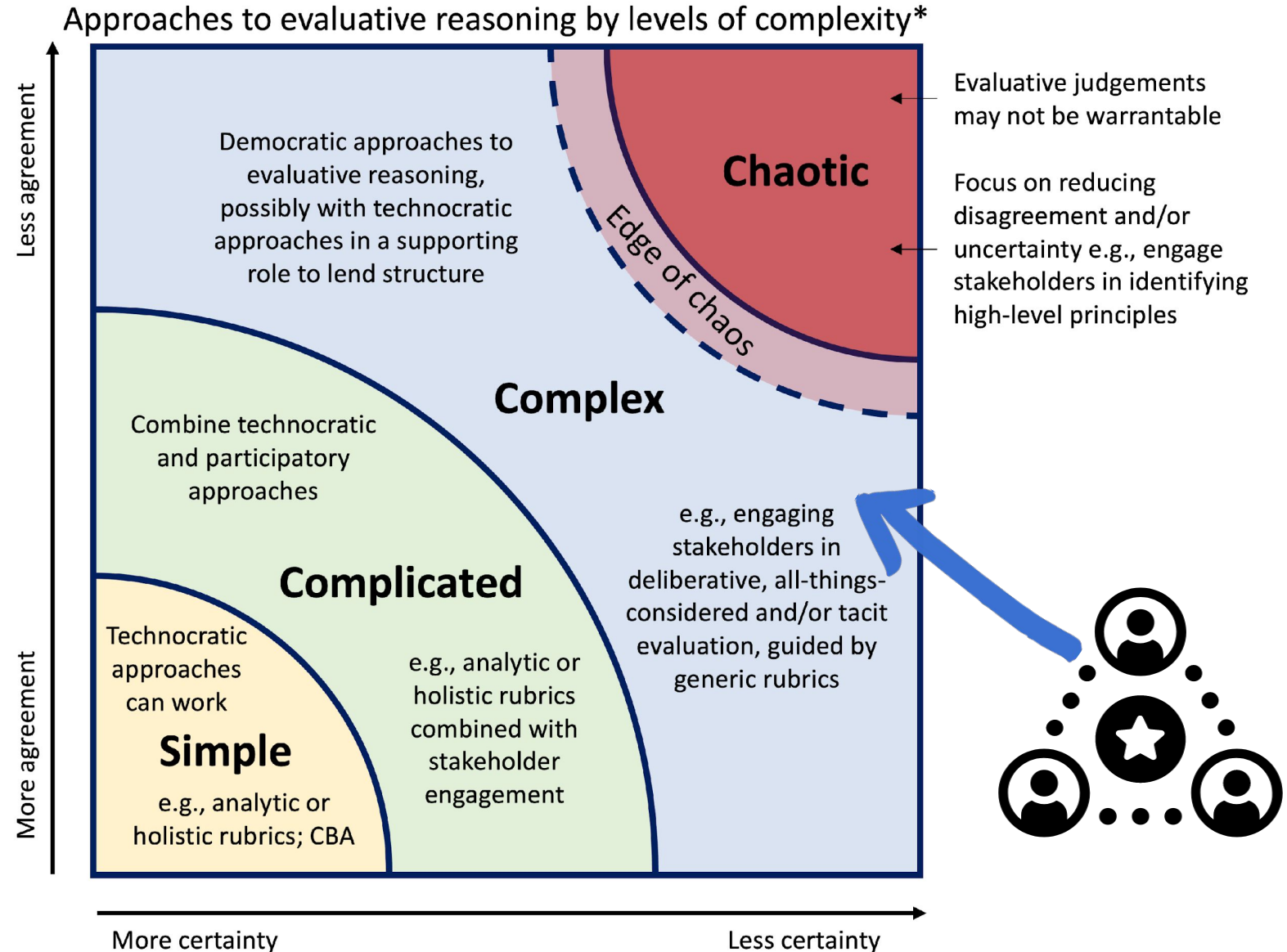
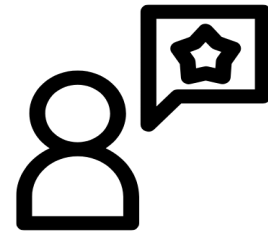
What **multi-dimensional value** do our efforts bring?

How can **we develop our value proposition?**

What are **risks** and **negative consequences** and how can we mitigate them?



Method Options



Example

Evaluative Rubrics

Are the processes in place working?	How are our partners contributing to systems change?		Is the system changing?
A1 Design	B1 Stakeholder-informed policies	C1 Policymakers reform, implement and enforce	D1 Bold policy and regulatory frameworks
A2 Implementation	B2 Investor and financial pressure	C2 Financial actors use their influence	D2 Accountable financial sector
A3 Monitoring and Adaptation	B3 Progressive businesses leading	C3 Businesses transform	D3 Responsible businesses and industries
A4 Communication and Learning	B4 Worker and producer voice	C4 Workers and producers claim rights	D4 Workers and producers exercise power
A5 Organisation and Network Capacity	B5 Exposing and thwarting harm		
	B6 Multi-stakeholder movements pressure		

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Harvard University



Identify Questions and Methods

Reflect on **your context** to apply this process to.



Circle or star the **primary questions and methods** of interest/relevance.



Put an arrow or question to indicate what you'd like to **learn more about or discuss** with others.

3. So What, What Next

Evaluation Planning Tool



Purposes	Questions	Method Options	Method Spotlight	Resources (select)
Accountability - External - Internal Learning - Single Loop - Double Loop - Triple Loop Adaptation - Improvement - Innovation - Adaptation	Situation or System of Interest	Actor Mapping Social Network Analysis Power Cube Rich Pictures Causal Loop Diagrams Participatory Systems Mapping	Rich Pictures	See handout
	Change Process	Leverage Points Theory of Change Problem-driven Iterative Adaptation (PDIA)	Actor-based Theory of Change	---
	Outcomes and Impacts	Outcome Harvesting Outcome Mapping Most Significant Change Success Case Method Qualitative Comparative Analysis Contribution Analysis Process Tracing	Significant Instances of Policy and Systems Improvement (SIPSI) Technique	---
	Future Scenarios	Futures Cone Futures Wheel Horizon Scanning Scenario Matrix STEEP V Analysis	Scenario Matrix with Axes of Uncertainty	---
	Multi-dimensional Value	Critical Systems Heuristics Evaluative Rubrics Deliberative Valuation Value for Investment Collective Sensemaking	Evaluative Rubrics	---

Thank You



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Citation Info:

Gates, E.F. (2024, April). *Systems- and Complexity-informed Evaluation: Range of Purposes, Questions, and Methods* [webinar]. Early Childhood Development Action Network Systems Thinking Masterclass Series.
<https://ecdan.org/systems-masterclass/>

References (direct hyperlinks excluded from list)

Abercrombie, R., Harries, E., & Wharton, R. (2015). Systems Change: A Guide to What It is and How to Do It. Retrieved <https://www.thinknpc.org/resource-hub/systems-change-a-guide-to-what-it-is-and-how-to-do-it/>

Befani, B. (2020). Choosing Appropriate Evaluation Methods: A Tool for Assessment & Selection. https://www.cecan.ac.uk/wp-content/uploads/2020/11/Final_Choosing-Appropriate-Evaluation-Methods-1.pdf

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