

The Systems Change Lab (SCL) at Mississippi State University's Social Science Research Center is made up of a team of researchers and partners who address complex problems using systems change methodologies.

















https://scl.ssrc.msstate.edu

What is a complex problem?

Societal problems, such as breakdowns in services for families across multiple organizations and sectors, are said to be complex because there are so many factors that shape them, and no one answer can fix them. They are context-specific and require the input and cooperation of many people.

	Simple Problem: Following a recipe	Complicated Problem: Sending a rocket to the moon	Complex Problem: Raising a child
Degree to which the solution is formulaic	Formulas are essential.	Formulas are critical.	Formulas have limited application.
Degree to which the solution can be replicated	Recipes are easily replicated.	One successful rocket increases assurance that the next will work.	Raising one child gives experience, but no assurance of success with another.
Dependence of the solution on expertise	Expertise helpful, not required.	High levels of expertise in multiple fields needed.	Expertise can help but is neither essential nor sufficient.
Standardization of the outcome	Produces a standard outcome.	Each outcome is similar in critical ways.	Every outcome is unique.
Certainty of the outcome	There is a high degree of certainty in the outcome.	Once the original issues are solved, there is a reasonable degree of certainty in the outcome.	The outcome is uncertain.

Adapted from Glouberman and Zimmerman (2002) as quoted in Snyder, S. (2013), "The Simple, the Complicated, and the Complex: Educational Reform Through the Lens of Complexity Theory", OECD Education Working Papers, No. 96, OECD Publishing.

WHAT IS A SYSTEM?

• "A system is a set of interconnected parts serving a common purpose." (Valdez, et al., 2024)

• Can be a single family, organization, or groups of them, but always with high degree of complexity

• For example, the interaction among the families of young children in Mississippi and all the organizations and providers who work to improve children's outcomes comprise the early childhood system.



WHAT IS A SYSTEM?

• We often say that a system is broken, but all systems are functioning to achieve SOME outcome whether it is the desired one or not.

• To change the outcomes it is producing, you have to understand the parts of the system, how they are interacting, and what's holding the problem in place





• Systems are held in place by six elements, or conditions

• Each layer differs in terms of its explicitness, impact, difficulty to change

Groundwater approach—Systems Thinking

(Love & Hayes Green, 2018)

- If one fish belly-up dead in a pond, analyze what's wrong with it
 - If the fish is a student doing poorly, ask if maybe it didn't study or get the right supports at home
- If half the fish in a pond are belly-up dead, analyze what's wrong with the pond
 - Maybe it's the school that is the problem
- If half the fish are dead across five ponds, analyze what's wrong with the groundwater
 - Maybe there are unseen mental models and power dynamics across the entire school system impacting outcomes



Artwork by Jojo Karlin (jojokarlin.com)

"Systems change occurs when the parts of a system and the relationships between them are intentionally changed to produce significantly different and improved conditions and results." (Valdez, et al., 2024)

WHAT IS SYSTEMS CHANGE?

How can we bring about systems change?

1) Embrace System Complexity

• There is no simple series of steps that you can follow, but there are some elements and methods you can use to address complex problems.

Source: Valdez, A., Bell, A., Derby, K., Dolle, J., Fitzpatrick, R., Rovins, M., Walrond, N., Willis, J. (2024). *Systems Change at WestEd Six Guiding Principles*. WestEd. https://wested2024.s3.us-west-1.amazonaws.com/wpcontent/uploads/2024/07/11175121/WestEd-Systems-Change-Six-Guiding-Principles_FINAL-ADA.pdf

2. INVEST IN SYSTEMS CHANGE LEADERSHIP

Backbone supporters facilitate the work and help set the stage for productive dialogue. They must:

- Understand system change processes and methods
- Facilitate collective sensemaking and action



RELATIONAL WORK OF SYSTEMS CHANGE

(MILLIGAN, ZERDA, KANIA)

- Backbone supporters must also:
 - Attend to relational and power dynamics and ensure respectful member interactions
 - Build consensus and create information feedback loops





3. IDENTIFY Those closest to the challenge: ACTOR MAPPING

Who are the actors/stakeholders in this system? (may be individuals or organizations)

Think about: those with lived experience of the system (end users), those with the power to make decisions, those who work in the system, those who benefit from it

What are the relationships among the actors?



Selecting Representatives among Actors

At times, you will have large groups of actors, such as child care providers or pediatricians, that you will want to select among for representatives to assist with systems change work.

Fair Selection Process:

- Use clear criteria and an open application process for all who qualify
- Ensure representatives reflect the full group's demographics.
- Allow members to nominate and vote for representatives.



4. Understand root causes of the challenge: Building a Shared Understanding

Creating a Shared View:

Once stakeholders are selected, bring them together to map the system and its challenges.

The EC Cruise Ship Analogy:

Each stakeholder sees the system from a different perspective—like looking through separate portholes on a ship. Some see turtles, others see algae, and some see a sunken ship. By sharing these views, you create a complete picture of the system.



Infrastructure

Resources

People/Organizations

BUILDING SHARED UNDERSTANDING: LANDSCAPE ANALYSIS

- Thinking Geographically
 - Identify all elements—human and non-human—within the system: what is the infrastructure of this system?
 - Examine the interactions among the elements
 - Gather available data about system outcomes
 - Can create a visual map of the system based on this information



Building Shared Understanding: Journey Mapping

Helpful to look at how end users move through the current system vs. the ideal way they should move through the system.

Can "map the gaps."



Building Shared Understanding: Additional Research

These efforts may point to a need for additional information gathered through research to fill in the missing information that's need to understand how the system currently operates and how it can best be improved.

Primary or secondary data collection—for example, may need to interview system leaders, survey end users, etc.

5. WORK TOGETHER TO ADDRESS THE CHALLENGE THROUGH SYSTEMS ALIGNMENT

• "...alignment occurs when all policies, practices, processes, resources, and roles in a system work together in similar or consistent ways..." to produce a desired outcome (Valdez, 2024)

• Will need to divide the work to try to address the areas identified for change, create smart goals for achieving the change, and remember to target all six conditions of systems change in the plan (policies, processes, resource flows, relationships, power dynamics, mental models).

S.M.A.R.T

SET AN ACTION PLAN TO ACHIEVE YOUR GOALS

SPECIFIC: What do you want to accomplish? Set specific goals instead of being vague in order to identify tangible results.

MEASURABLE: How are you going to measure your progress and results and know you've accomplished the goal?

ACHIEVABLE: What steps do you need to take in order to accomplish your goal? Your goals can be challenging, but still reasonable to attain.

RELEVANT: Why do you want to achieve this goal? Determine if you have the resources to attain the goal and if it aligns with your values.

TIMELY: How long will it take you to achieve this goal? What is your deadline? State a goal in order to hold yourself accountable.



Image from <u>https://listen4good.org/feedback101/what-is-a-feedback-loop-gathering-feedback-from-nonprofit-clients/</u>

6. USE CLOSED FEEDBACK LOOPS TO CONTINUALLY IMPROVE

• As you implement the changes to the system, use a feedback loop to continually to collect data from system stakeholders and refine the system to ensure ongoing system alignment.

• Closed feedback loops ensure you circle back with the stakeholders to inform them of the actions taken and to get additional feedback for continuous quality improvement.

RESOURCES & CONTACT INFO

- Article: Systems Archetypes by Mikayla Branz, Allie Farrell, Min Hu William Liem, <u>Ellis Ballard</u>
- Book: Systems Thinking for Social Change by David Peter Stroh
- Book: Community-Based System Dynamics by Peter S. Hovmand
- Book: Results Based Facilitation: Book 1 Foundational Skills by Jolie Bain Pillsbury
- Brief: Systems Change at WestEd– Six Guiding Principles
- Brief: Overview of Participatory Systems Change for Equity from WestEd
- Toolkit: Putting Systems Thinking into Place in Your Organization from FSG
- Toolkit: Systems Practice by the Omidyar Group

Heather Hanna: heather.hanna@msstate.edu