We Need More Systems Thinking:
A Framework for Understanding, Mapping, and Solving Complex Problems

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What is Systems Thinking?

• A **set of tools, mindsets, and processes** that have developed to **better address complex and dynamic challenges**
• Helps to **uncover underlying patterns, beliefs, structures, root causes, and mental models** that cause an issue to persist

When should we apply Systems Thinking?

- The problem is poorly understood and **there is little consensus among experts and stakeholders** about what to do
- There are **many interconnections within the problem**
- The problem **interacts with the broader environment**
- We **want to have long-term change**

1. Getting Started

Developing a "Guiding Star": Goal Setting for Systems

• Start by **setting a 'Guiding Star' for your system**; what does it accomplish if everything works the way it's supposed to?
• **Goal setting for systems is a bit complicated. Why?** Because systems are **always changing**!
• There is **no concrete end-state** for a system

Format example:
The Guiding Star is a [name of system] that produces [desired condition].

Examples:
• *A system that provides safe and reliable access to water for people living on the Navajo Nation.*
• *A system where Americans with diabetes can access and take full doses of insulin at an affordable cost.*

Developing a Framing Question: What is the Challenge?

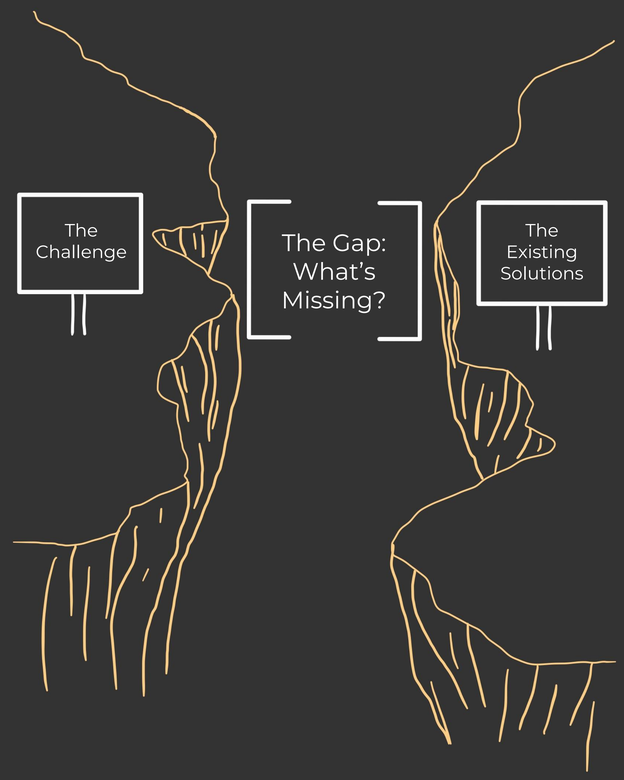
• For highly complex systems, it can **be unclear what the challenge even is!**
• A '**Framing Question**' can be a helpful guide

Format example:
- What forces account for [current state/condition of the system]?

Be careful not to:
• Bake-in solutions
• Make untested/contemptuous assumptions
• Ask "H*ow can we…?"* questions (this can impact how we interact with the system!)

Examples:
• *What forces account for the lack of access to safe and reliable water on the Navajo Nation?*
• *What forces account for the high levels of nurse burnout in Quebec hospitals?*

Imagine this treacherous canyon represents a problem you are trying to solve.



Systems Thinking asks:
"How can we bridge the gap better?"

Acknowledgements to:
undergraduate poster showcase
Building 21
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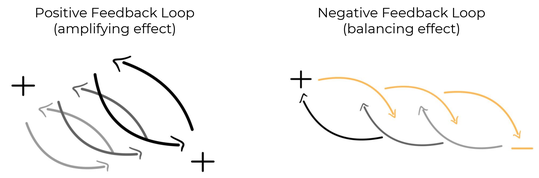
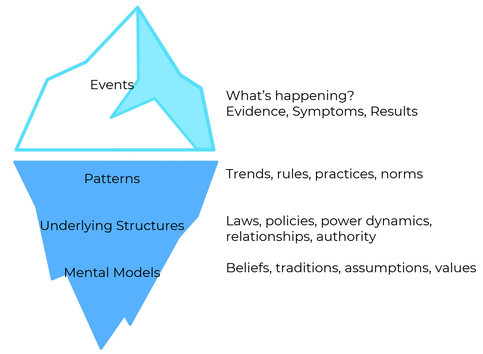
Scan to learn more about **Map the System** – a global Systems Thinking competition!

2. Tools for Understanding Challenges

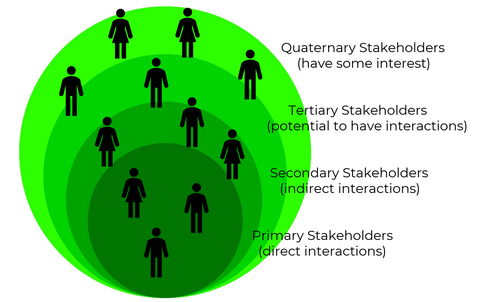
Causal Loop Diagrams



Iceberg Model



Onion Diagram



3. Identifying Gaps and Levers for Change

Considering the Challenge and the solutions that already exist, **what interventions can close the gaps?**

What Levers Can We Pull?
(+ *examples considering Water Access on the Navajo Nation*)
Scaling up = changing laws + policies
Ex. Shifting towards water cooperatives rather than profit-driven companies
Scaling out = implementing programs or services
Ex. Training programs + bursaries for people pursuing a career in the water sector
Scaling deep = changing mental models
Ex. Being 'better relatives' + addressing lateral oppression

Now, you should have some idea of where the opportunities for impact are – and you are much closer to creating real, lasting systems change!

References
Johnson, Anna, et al. "Student Guide to Mapping a System, Third Edition." *Map the System Canada*, Skoll Centre for Social Entrepreneurship, https://www.mapthesystem.ca/resources.
The Omidyar Group. *Systems Practice*, Creative Commons, Mountainview, CA.