Durham County Retreat

Systems Thinking Introduction

Michael Goodman | Feb 25, 2020

Systems Thinking
WELCOME

Overall Objectives

- Understand what systems thinking is and its importance
- Learn a few basic Systems Thinking tools
- Gain hands on experience applying systems thinking to Challenges facing Durham County

Topic Agenda

- Why Good Intentions are Not Enough
- Observations about Systems
- Conventional Vs. Systems Thinking
- Why Systems Thinking?
- Fundamental Systems Thinking Framework & Case
- Team Iceberg Exercise
- Introduction to Mental Models & Exercise (Time permitting)
- Q&A

Why Good Intentions are Not Enough

In the News

Homeless shelters perpetuate homelessness

Get tough prison sentences fail to reduce fear of violent crime

What do these stories have in common?

Food aid increases starvation

Drug busts increase drug-related crime

Job training programs fall short of increasing employment

Failed Solutions Have Common Characteristics

- Address symptoms vs. underlying problems
- Obvious and often succeed in the short run
- But short-term gains undermined by long-term impacts
- Negative consequences are unintentional
- If the problem recurs, we do not see our responsibility

Good Intentions Are Not Enough

When you are confronted by any complex social system … with things about it that you're dissatisfied with and anxious to fix, you cannot just step in and set about fixing with much hope of helping. This is one of the sore discouragements of our time.

If you want to fix something you are first obliged to understand … the whole system.

Lewis Thomas
Physician, poet, etymologist, essayist, educator, policy advisor, researcher
Dean Yale Medical School & NYU
President Memorial Sloan-Kettering Institute

Distinguishing Conventional From Systems Thinking

Definitions

System

an interconnected set of elements that is coherently organized in a way that achieves something (Donella Meadows)

Systems Thinking

the ability to understand these interconnections in such a way as to achieve a desired purpose

Observations about Systems

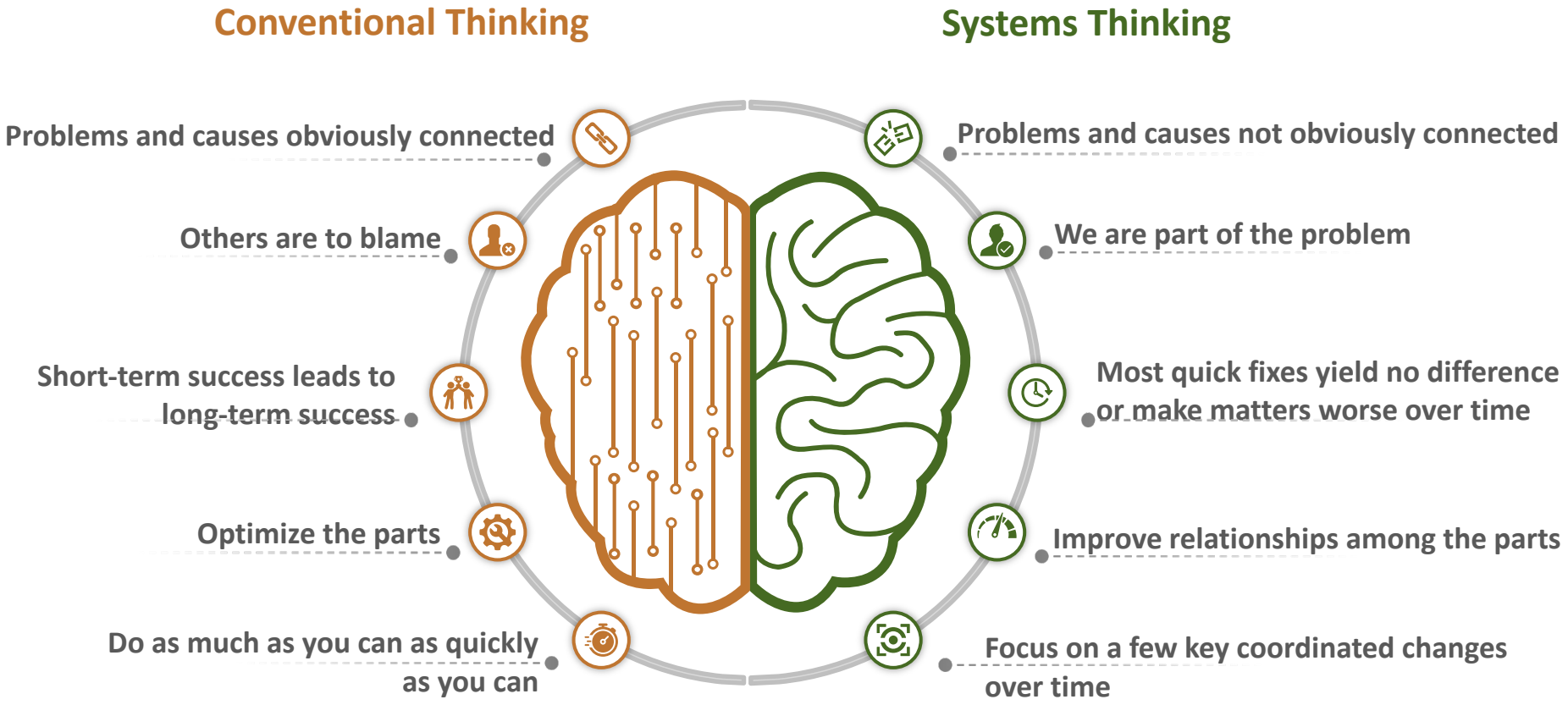
- Many of today's problems were yesterday's solutions.
- **The Law of Unintended Consequences** - Systems are seductive… what looks obvious to do often generates non obvious consequences… but NOT right away.
- **The Law of Worse Before Better** - What works in the short term typically makes things worse in the long term and what works in the long term often makes things worse in the short term.
- **The Law of Compensating Feedback** – The harder you push on the system the harder the system pushes back.
- We are prisoners of systemic forces to the extent we are unaware of their existence and don't appreciate their power.

Observations about Systems

Cont.

- Systems naturally resist change despite how well-intended the efforts to improve performance.
- Systems are “perfectly” designed to produce the results we are getting.
- We spend enormous time, effort and money fixing problems we don’t really understand.
- Real leverage points in the system are displaced both in time and in space from the symptoms.
- *Collective awareness of the system can produce the shifts needed to produce real, sustainable change… when see it, we no longer have to be controlled by it.*

Conventional vs. Systems Thinking



Systems Thinking... *Why?*

- Helps us to recognize hidden & unintended consequences
- Enables us to think deeper and wider about effective strategies in complex systems
- Can be helpful when thinking about strategy & change - the short term as well as the long term
- Expands the choices available to us & enables us to focus on higher leverage strategic interventions

What makes for good systems thinking issues?

The problem/issue is chronic

- There is a known history – we have data and are knowledgeable about the issue
- Prior attempts to solve the problem have failed
- Multiple perspectives exist on why we have the problem & what should be done
- We believe there is more to be learned about the issue
- We have some control or influence over the situation including access to the key stakeholders

Focusing Questions

Issues are best formulated as a focusing question that starts with the words **Why** or **How Come** but not ***How To***.

Examples:

- *"Why, despite our best efforts, have we been unable to end homelessness in our county?"*
- *"Why despite all our investments have we not been able to improve the educational performance of our schools as we much as we expected?"*
- *"Why, despite the county's various programs, are we seeing the trends we're seeing in hunger and food insecurity?"*

Team Exercise #1A
Focusing Question

*What is the **focusing question** for your table?*

Remember: Issues are best formulated as a focusing question that starts with the words **Why** or **How Come** but not ***How To***.

Capture table's question on your flip chart.

AVOID for now questions about HOW we might get there?

Admire the problem

Team Exercise #1B
End Result

*What are the **end results** you'd like to see created if the problem/issue your team is working on was fully addressed/fixed? (What would it look like if the issue no longer existed?)*

- ❑ *Make notes for yourself on following page.*
- ❑ *Identify top 2-3 results as a team & capture on your flipchart.*
- ❑ *Be ready to present your table's focusing question & end results.*

Again- AVOID for now questions about <u>HOW</u> we might get there?

Admire the problem

Team Exercise #1 – End Result Worksheet

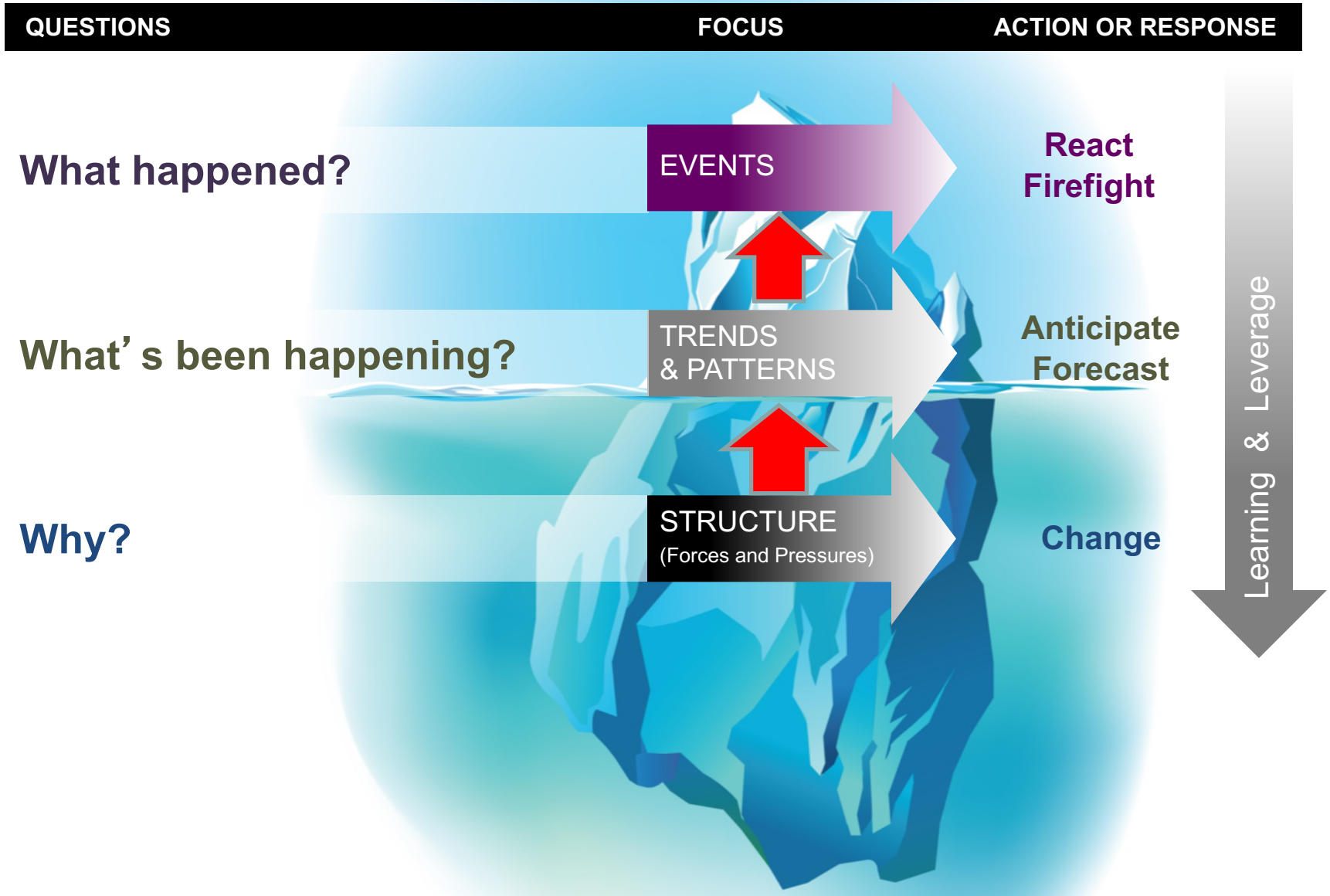
What are the end results you'd like to see created if the problem/issue was fully addressed/fixed?
What would it look like if the issue no longer existed?

Notes

AVOID for now questions about <u>how</u> we might get there? Admire the problem.

The Fundamental Framework of Systems Thinking

Deepening Our Understanding of Problems: The Iceberg



What is your experience re. where people tend to spend most of their time, attention & resources?

Poll #3

A. Mostly focused on top of iceberg (80-90-% of time)

B. Fairly well-balanced (50-50 more or less)

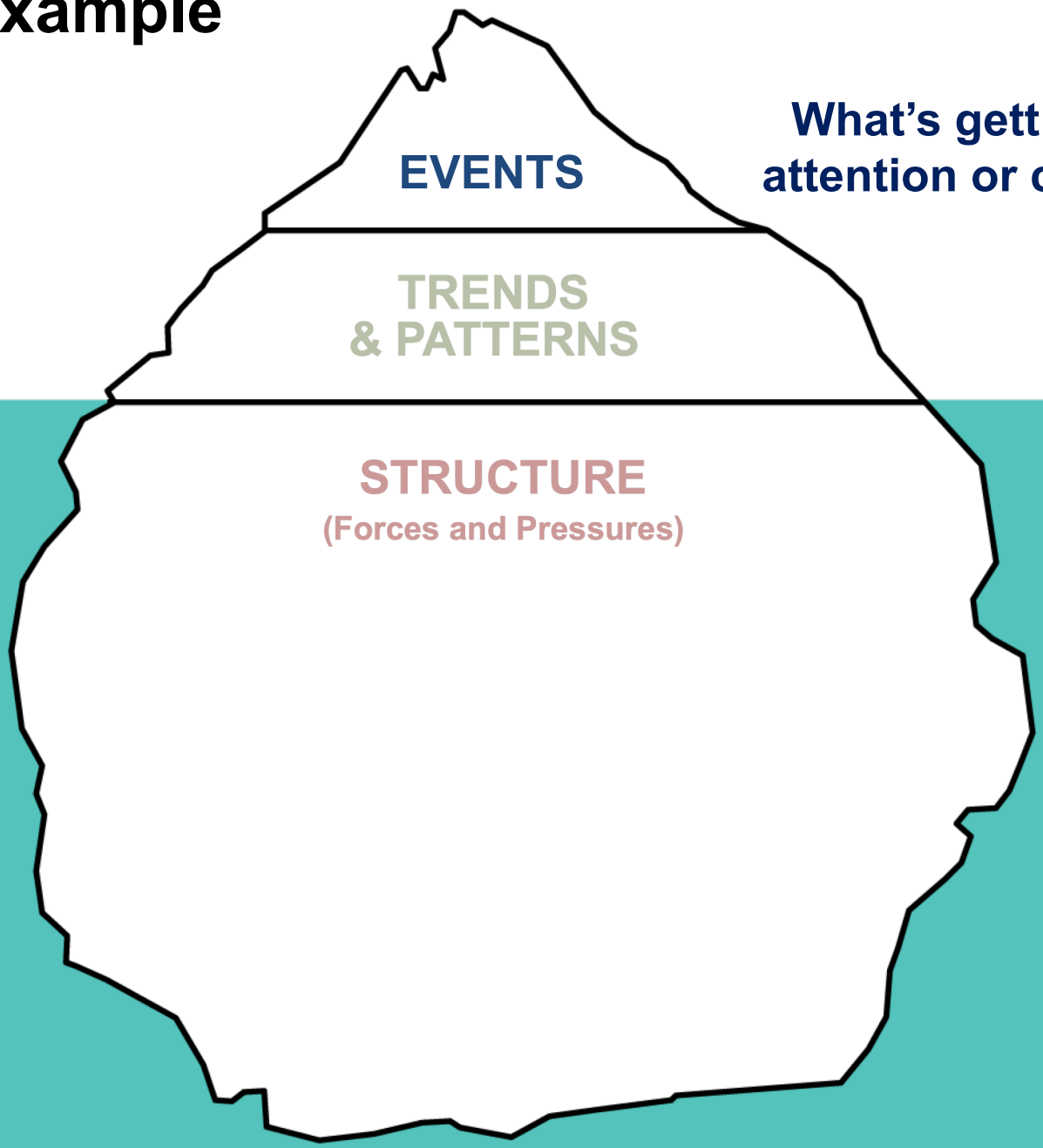
C. Mostly focused on the bottom of iceberg (80-90%)

Sources of Pressures or Forces

Additional Elements of Structure that Generate Forces & Pressures

- State/local regulations & laws
- General economy
- Local economy
- Financial resources/capital (e.g. access to funding)
- Technology (e.g. access & availability)
- Political climate
- Human capital (e.g. skill level, education)
- Demographics (including migration patterns)
- Availability & access to services (health, education, etc.)
- Level of collaboration among service providers & agencies
- State/local leadership (private/public)
- Housing availability & quality
- Built (infrastructure) capital
- Quality of life factors
- Natural capital
- Social capital (e.g. connections within community, among businesses and to resources outside the community)
- Cultural capital (mindsets, attitudes, level of public trust) (Mental models)

Case Example



What's getting our attention or concern?

Case Example

Ending Homelessness in Calhoun County (Battlecreek, MI)

Focusing Question

Why, despite our best efforts, have we been unable to end homelessness in Calhoun County?

Calhoun County, MI: estimated 1,400-1,600 people homelessness among population of 100,000

Homeless Coalition* meetings again fail to deal with the problem: disagreements, competition, and lack of knowledge cited

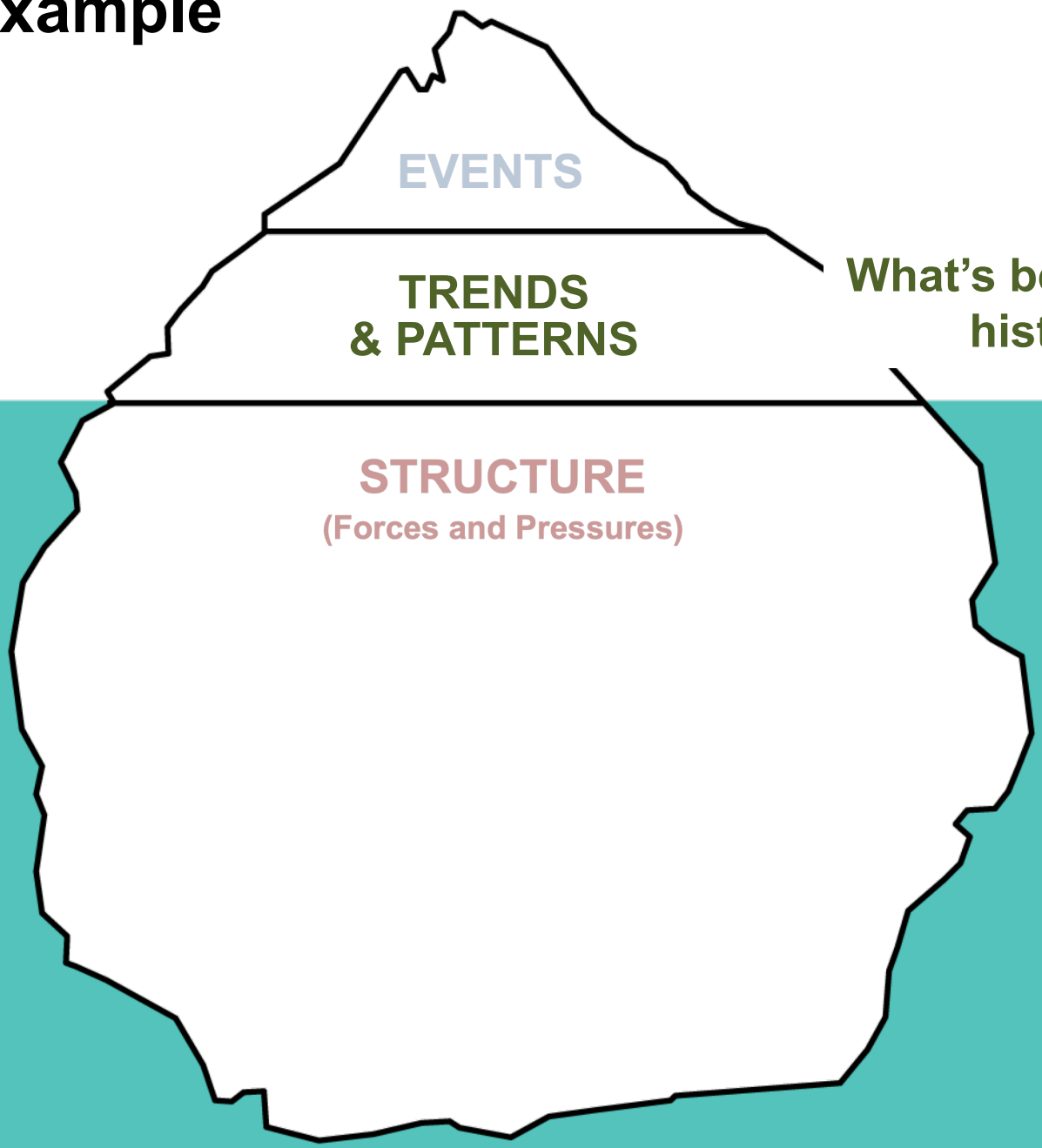
Opportunity to receive funding to develop ten-year plan to end homelessness

75% “episodically” homeless
25% “chronically” homeless
32% women
68% men
33% mental illness
48% drug and/or alcohol addictions

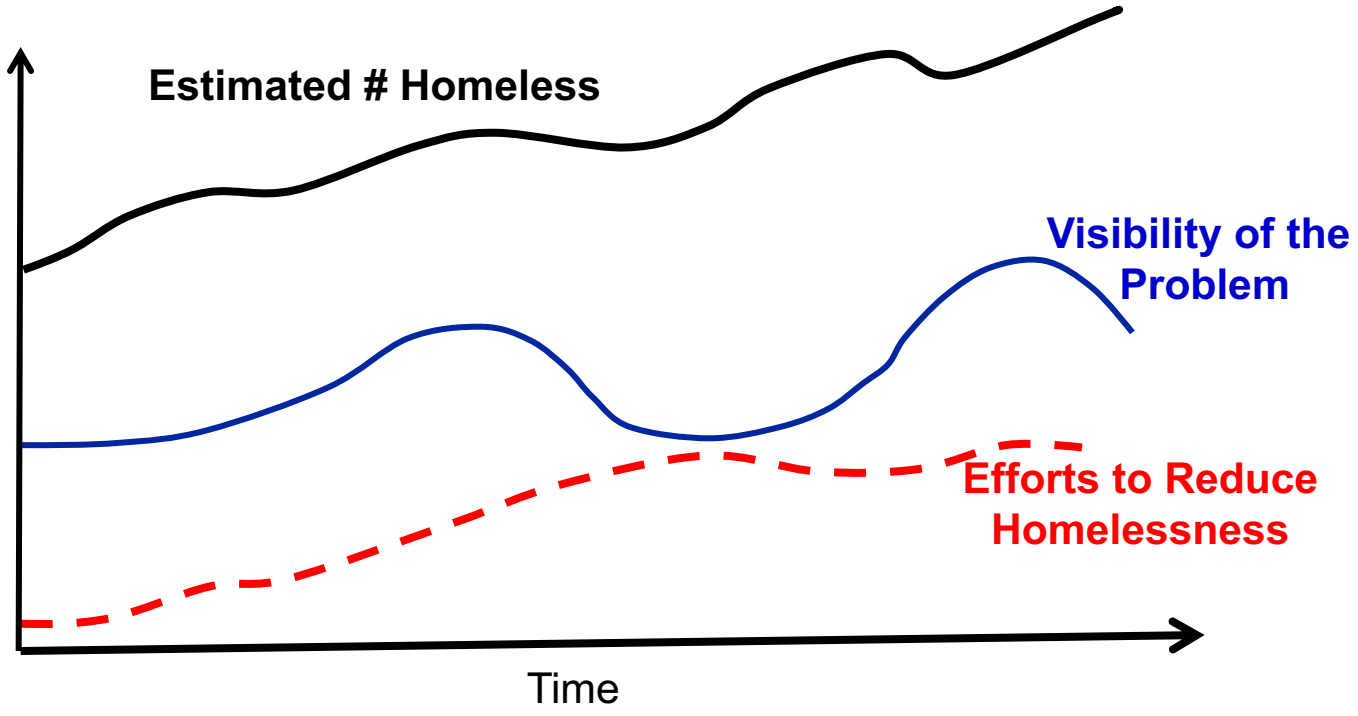
Systems thinking integrated with community building process – involving political and business leaders, service providers, and homeless people – to produce the plan

**A collaborative workgroup of the Coordinating Council of Calhoun County involving 40 providers of services, consumers of those services, funders & city/county reps.*

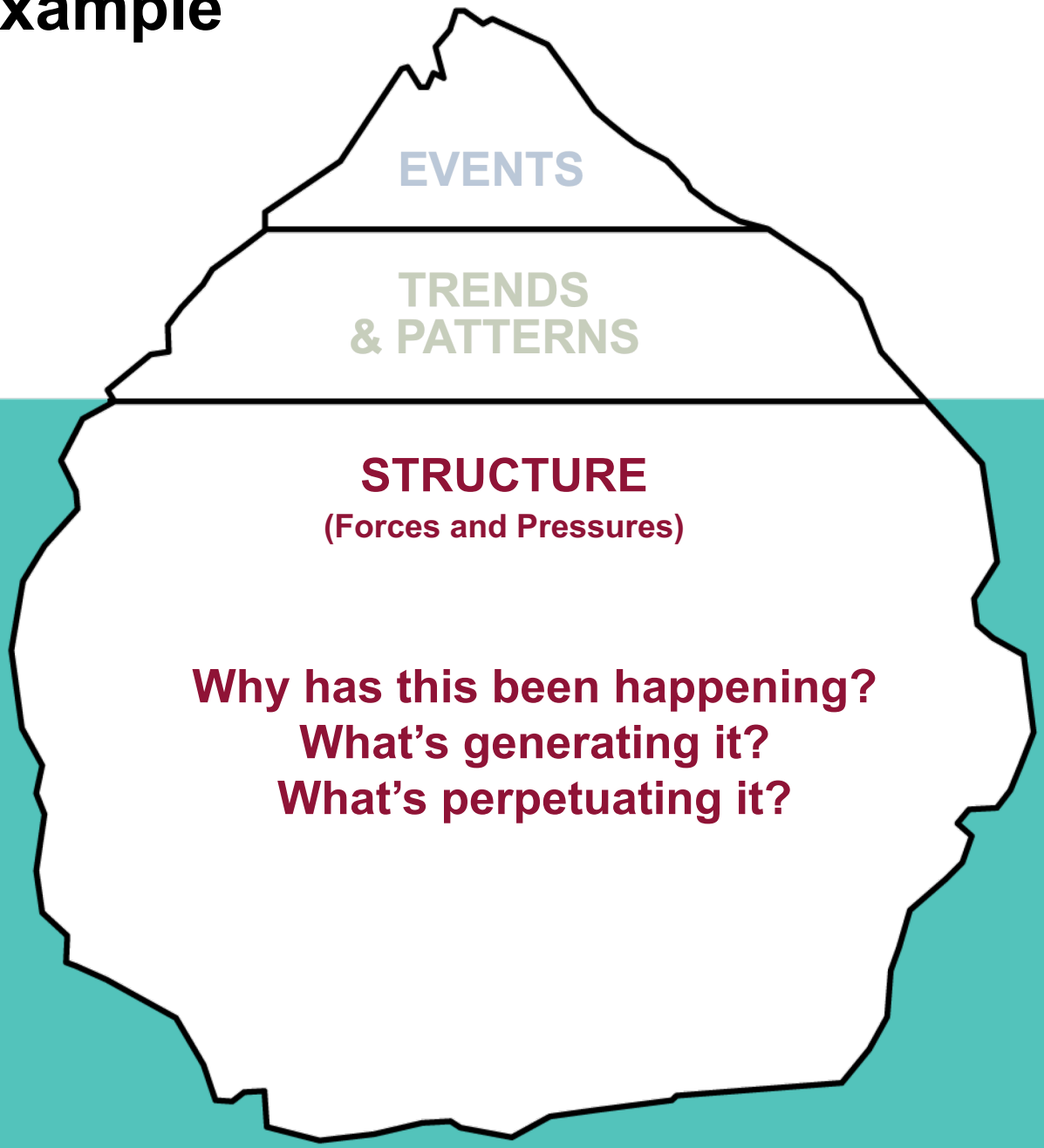
Case Example



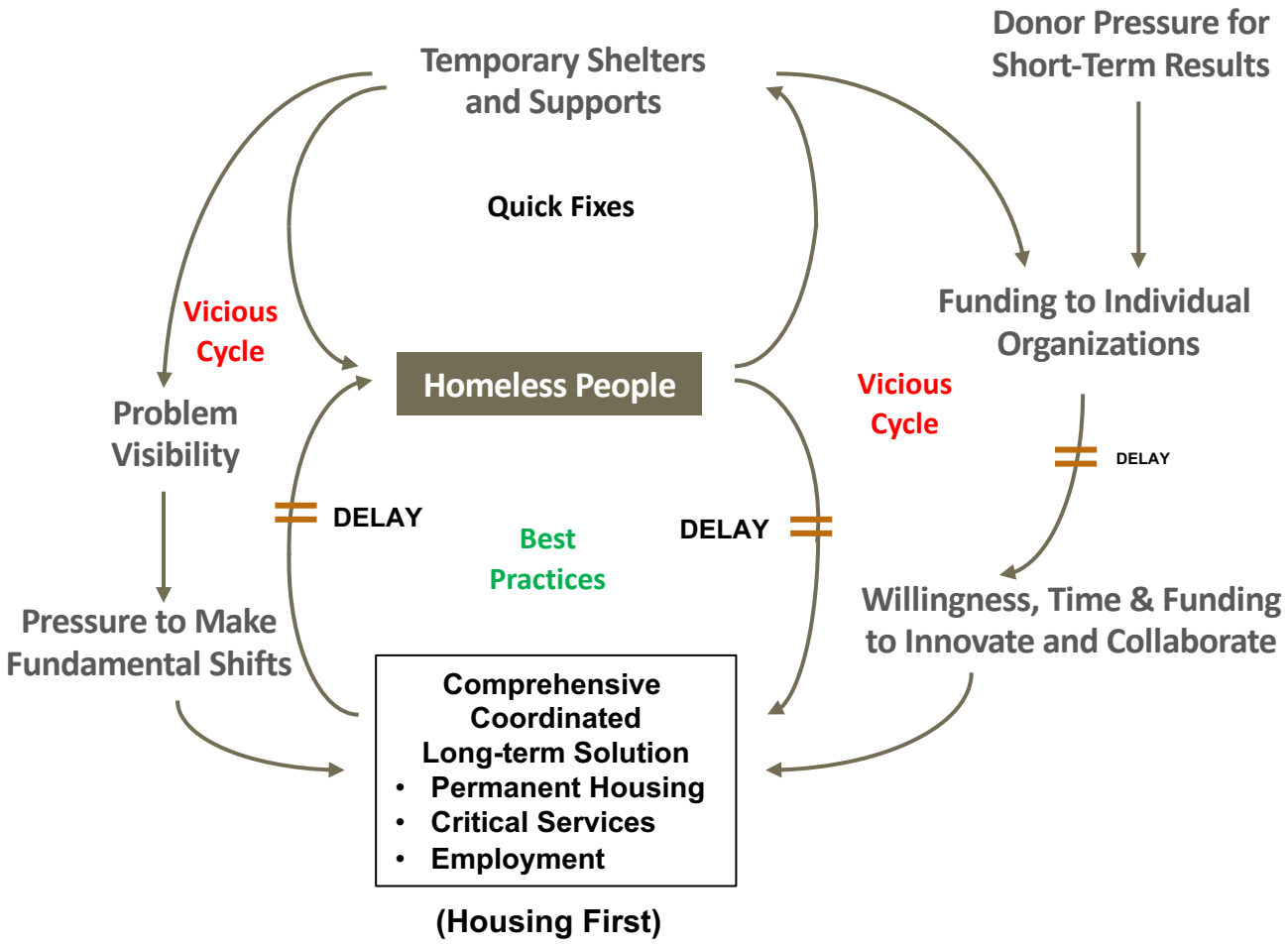
Trend or Pattern Perspective: Calhoun County



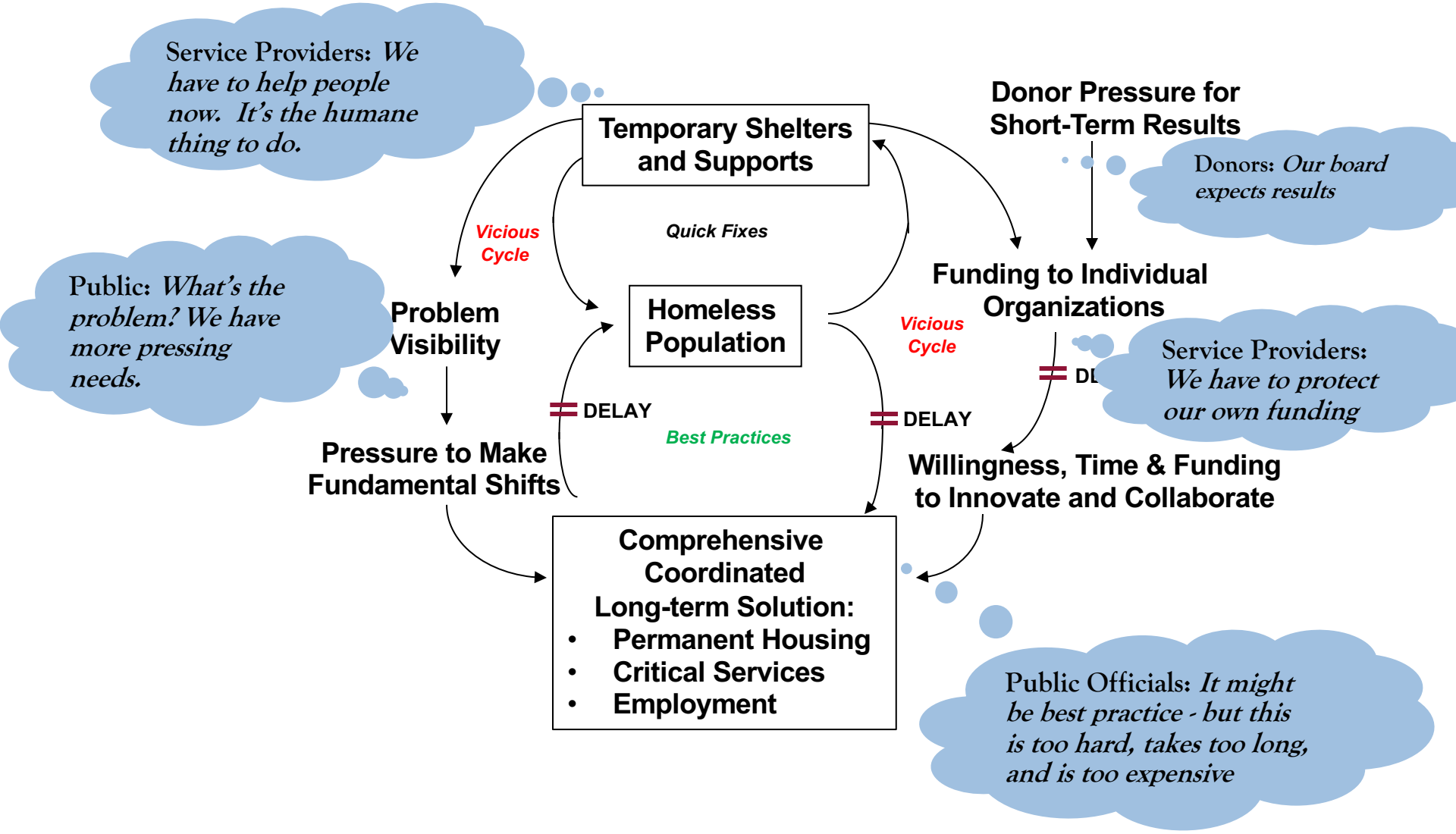
Case Example



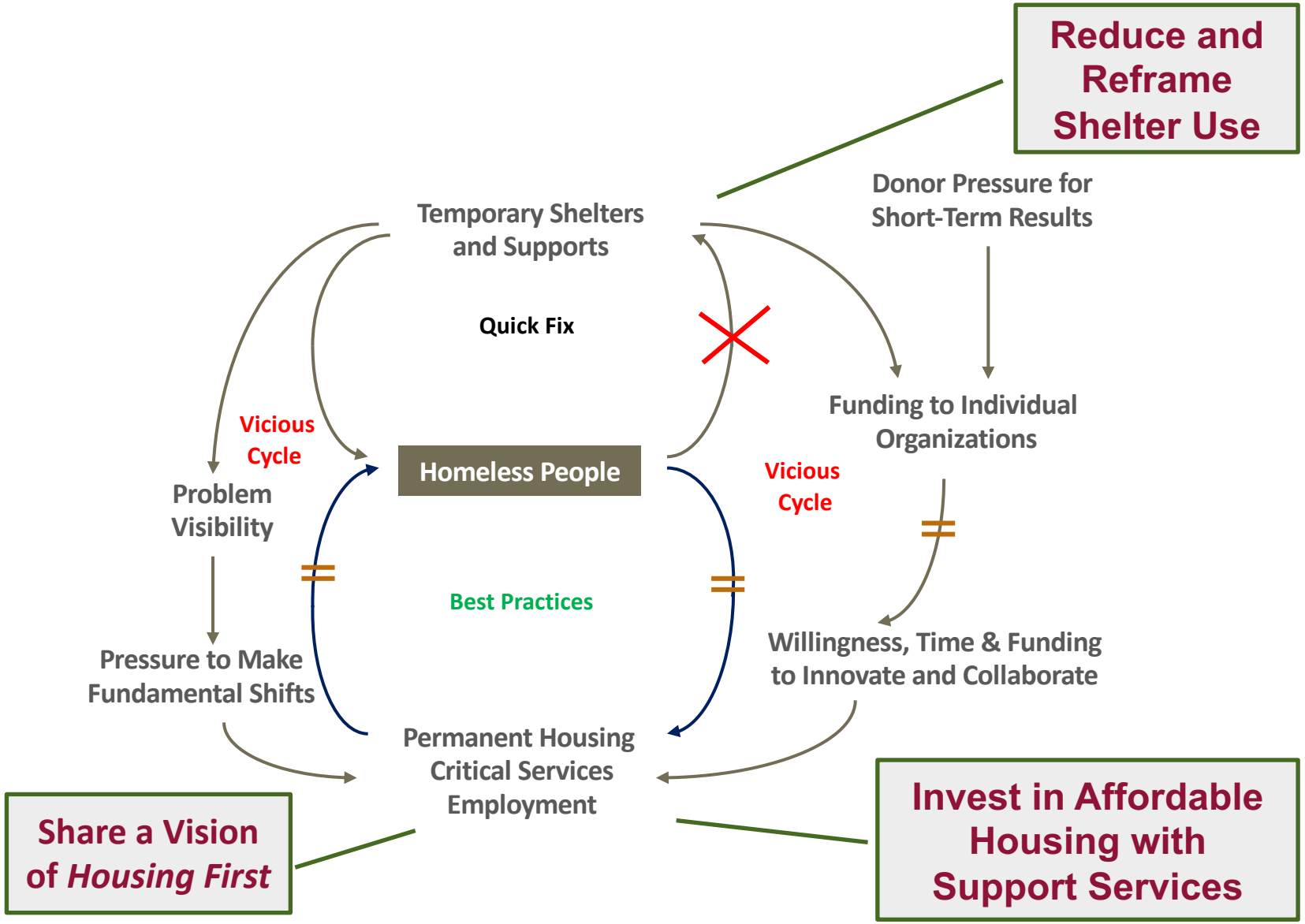
Ending Homelessness: The Irony of Temporary Shelters



Ending Homelessness: Mental Models



Ending Homelessness: Implications



Ending Homelessness: Results

Plan funded

Leverage points identified by a shared understanding of why homelessness persisted became the basis for state approved plan

Collaborative breakthrough

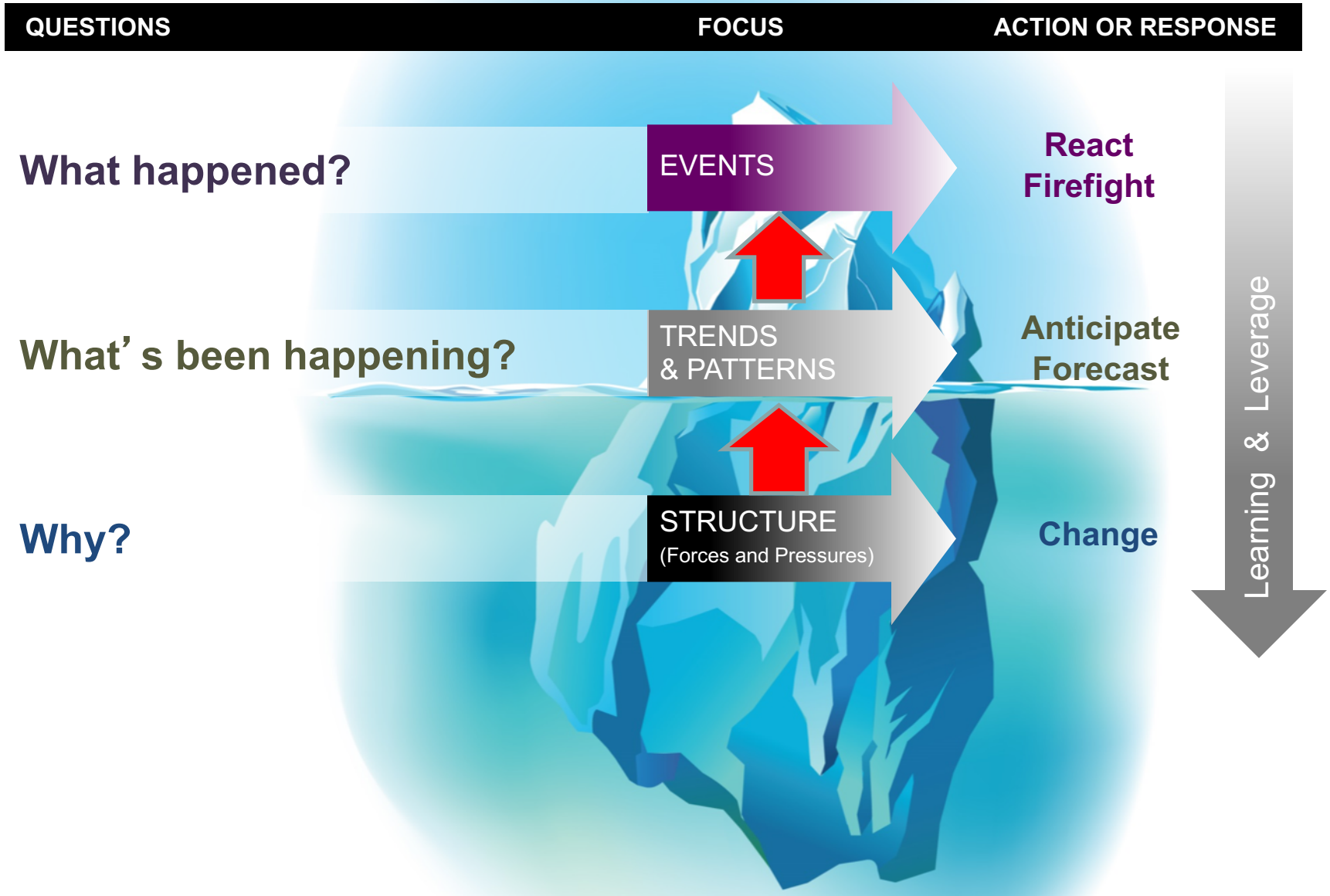
Homeless Coalition voted unanimously to reallocate HUD funding from one service provider's transitional housing program to permanent supportive housing program run by another provider

Quantitative results

In the plan's first six years of operation (2007-2012), which included the economic collapse of 2008, the county reported the following results:

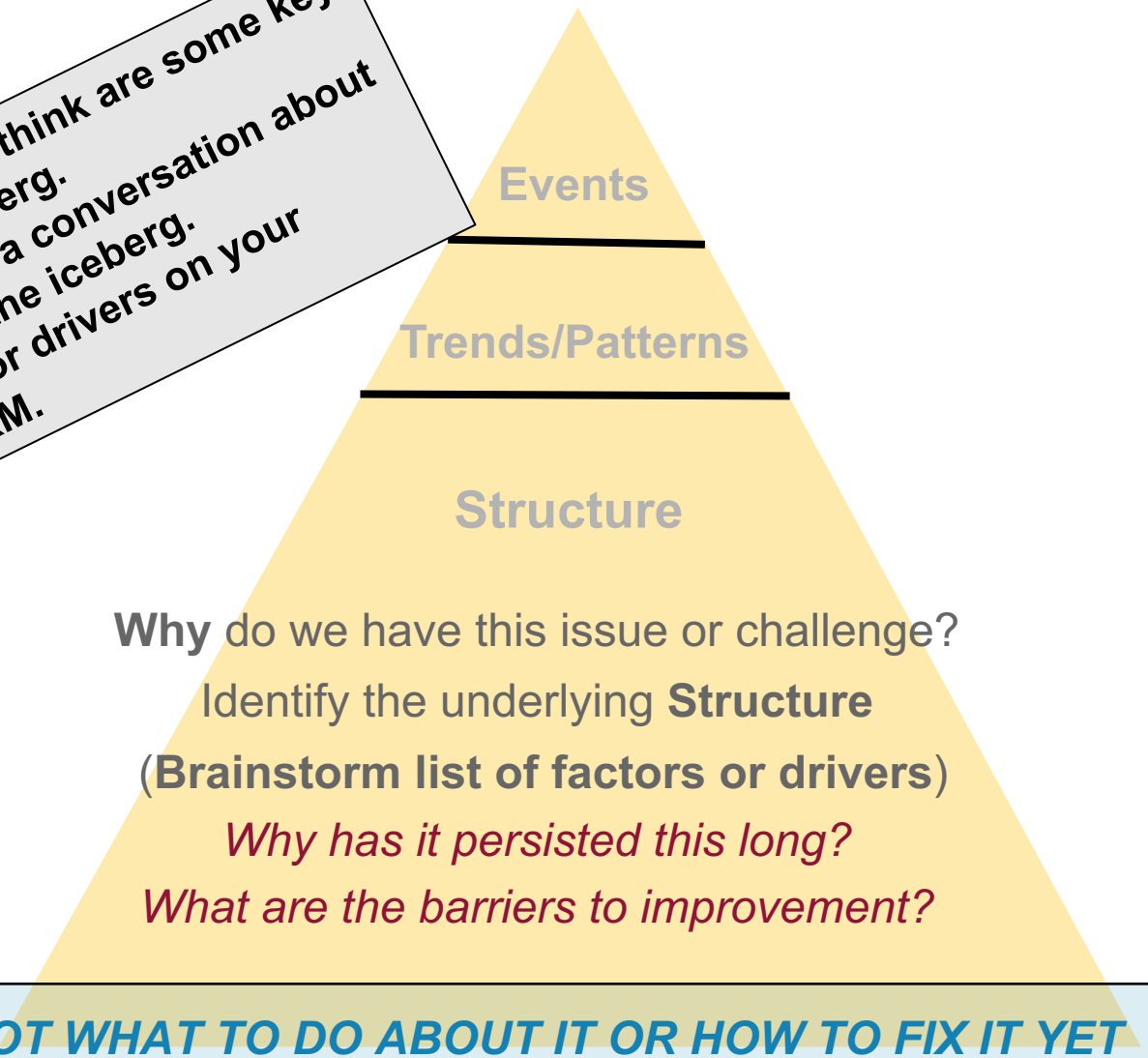
Homelessness decreased by 14% (from 1658 to 1419) DESPITE a 34% increase in unemployment and 7% increase in evictions

Deepening Our Understanding of Problems: The Iceberg



Exercise: Applying the Iceberg Framework to your Issue

- ❑ Make notes about what you think are some key elements at bottom of iceberg.
- ❑ Then, in your group have a conversation about what's at the bottom of the iceberg.
- ❑ Capture key elements or drivers on your flipchart. BRAINSTORM.



NOT WHAT TO DO ABOUT IT OR HOW TO FIX IT YET

Team Exercise #2: Applying the Iceberg Worksheet to your Issue

Structure

Why do we have this issue or challenge?

Identify the underlying **Structure** (Brainstorm list of factors or drivers)

Why has it persisted this long?

What are the barriers to improvement?

Remember: NOT WHAT TO DO ABOUT IT OR HOW TO FIX IT YET

Notes

Mental Models

Mental Models

What are Mental Models?

The beliefs, assumptions, and models we have are about every aspect of ourselves, others, our organizations, and how the world works.

- They are critical to our effectiveness.
- They affect how we think and how we act.
- They may be conscious, or unconscious; they can get us into trouble.
- It's easier to see others' mental models and harder to see our own.
- They are always incomplete and often flawed.
- They are high leverage.

Mental Models Examples
Beliefs We Treat As Facts

- *"The only way anything changes around here is when our senior leaders change it."*
- *"Learning is what we do outside of work."*
- *"Home prices will always rise."*

Mental Models Exercise

As you think about your issue:

What mental models are at play that could be barriers to change or improvement related to your issue? What are the mindsets that have perpetuated the current situation?

Write them as if they were statements of fact:

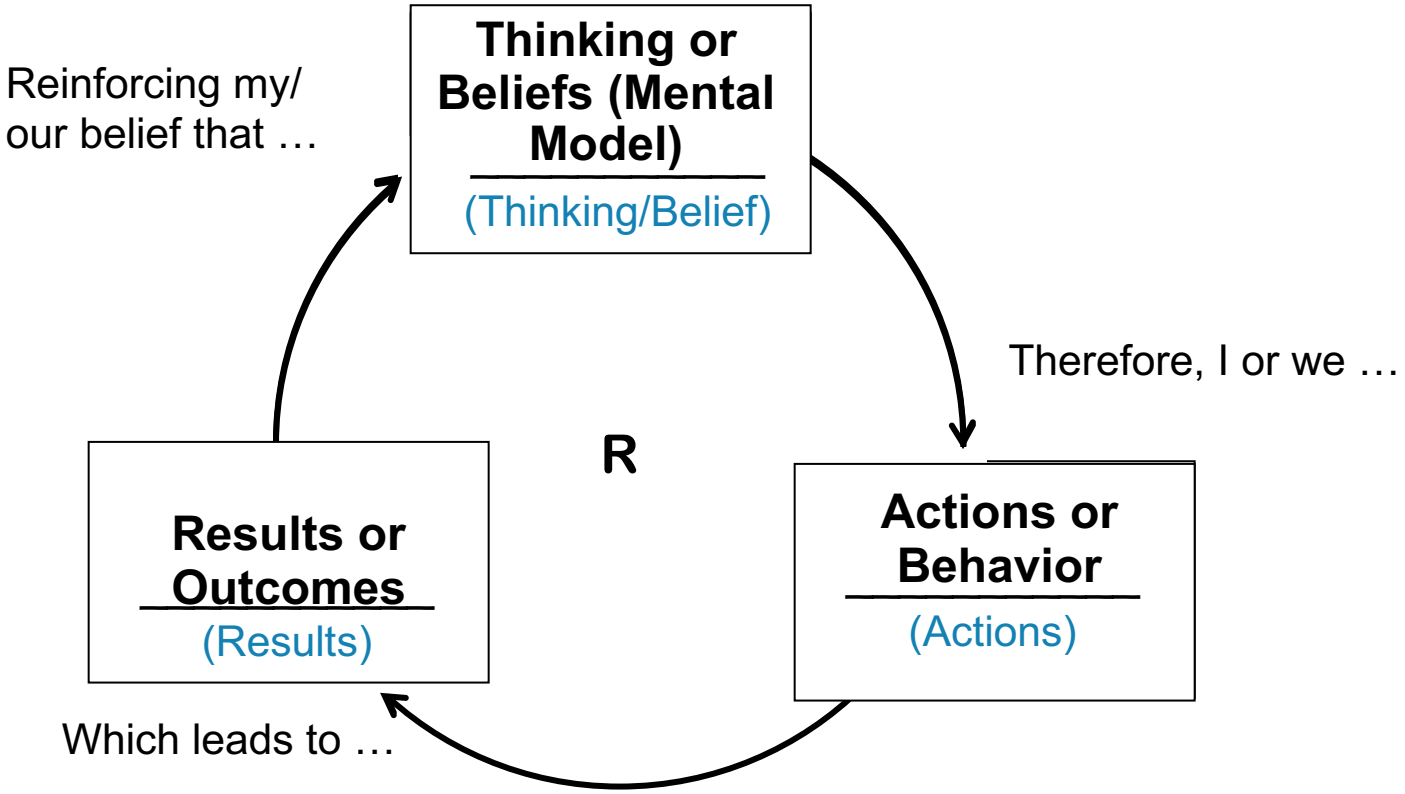
"The only way anything changes around here is when our senior leaders change it."

"Things only get done when we have a major crisis."

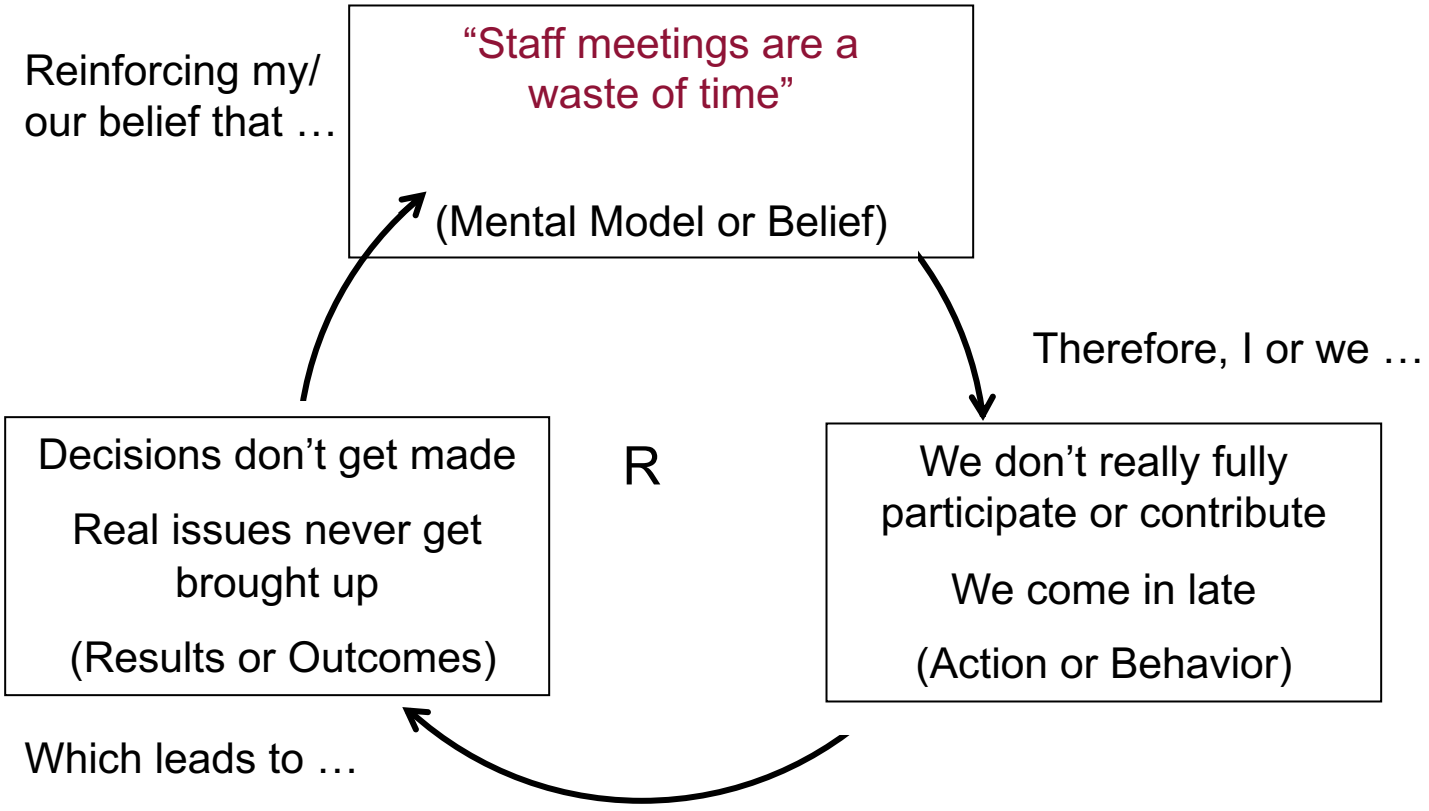
"Meetings are a waste of time."

1. Jot down a few mental models related to your issue or challenge
2. Share with your group

Belief-Action-Results Maps

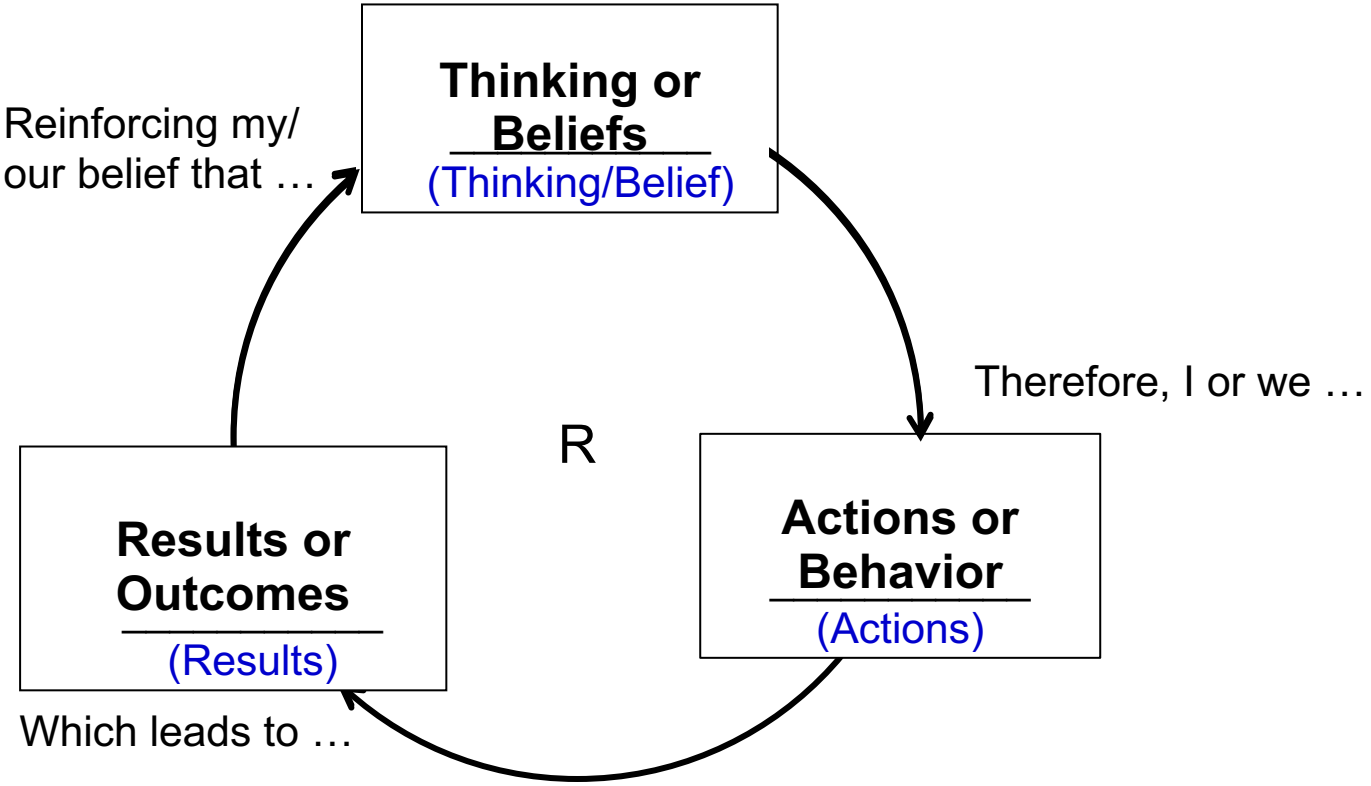


Beliefs–Actions–Results Loop Example



Team Exercise #4: Belief-Action-Results Maps

Develop a BAR map using one of the mental models you just identified



Resource List

Books

- Peter Senge, The Fifth Discipline
- Peter Senge et al, The Fifth Discipline Fieldbook
- Stroh, David, Systems Thinking for Social Change

Websites

- Applied Systems Thinking: www.appliedsystemsthinking.com

Online Systems Thinking Course

- www.iseesystems.com