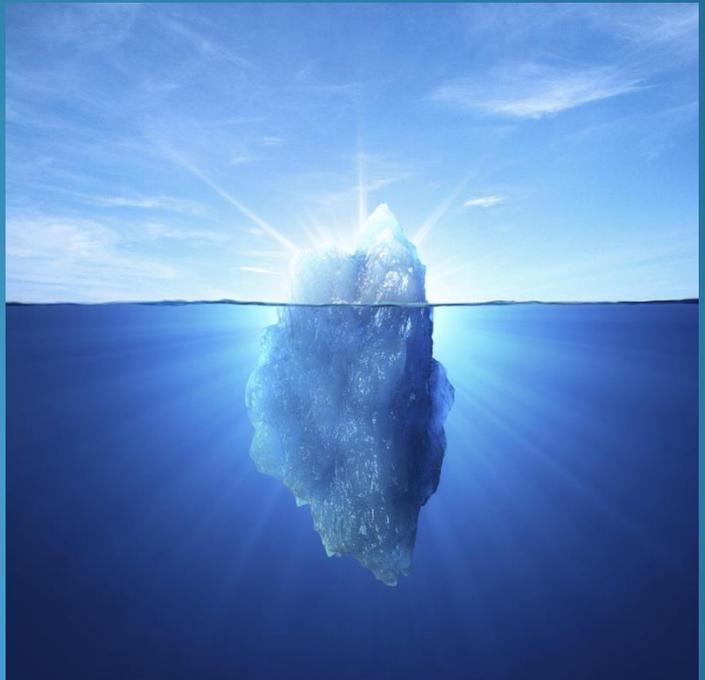


Intervening Systemically & Levels of a System



Systems Thinking – What is it?

Systems thinking is the process of understanding how things, regarded as systems (i.e. in their wholeness), influence one another in various ways.

In nature, systems thinking examples include ecosystems in which various elements such as air, water, movement, plants, and animals work together to survive or perish.

In organizations, systems consist of people, structures, and processes that work together to make an organization "healthy" or "unhealthy". Systems thinking has roots in the General System Theory that was advanced by Ludwig von Bertalanffy in the 1940s and furthered by Ross Ashby in the 1950s.

The field was further developed by Jay Forrester and members of the Society for Organizational Learning at MIT which culminated in the popular book *The Fifth Discipline* by Peter Senge which defined Systems thinking as the capstone for true Organizational learning and therefore progressive innovation.

“The defining characteristic of a system is that it cannot be understood as a function of its isolated components...the behaviour of the system doesn't depend on what each part is doing but on how each part is interacting with the rest ... “ Peter Senge

Systems Thinking - Why does intervening systemically matter?

Unacknowledged or unexamined Mental Models (i.e. Structures of Thought) are the leading cause of failure in ANY change effort. Inclusive leadership practices benefit from the discipline of seeing systems at the various levels so as to intervene impactfully.

Scientists have always known the importance of the structures of our thinking to influence what is perceived or understood

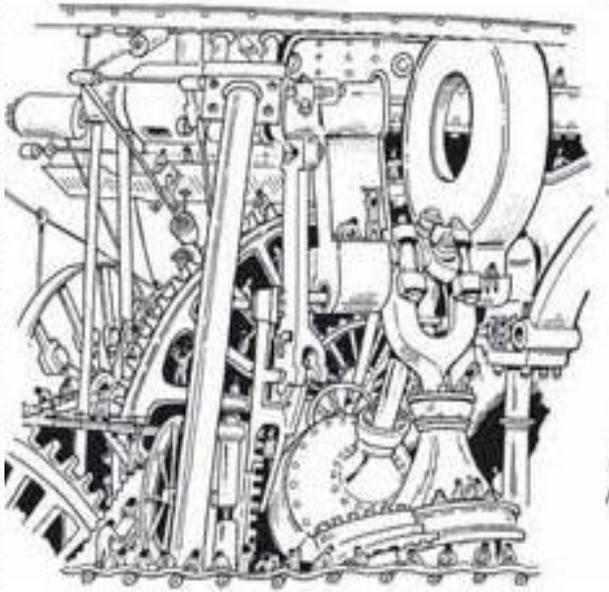
Einstein to Heisenberg in 1926 wrote: *“It is theory that determines what we can observe.”*

David Bohm, UK Physicist, in the 1970s wrote: *“Thought produces a result, and then it says, I didn't do it; it's there by itself, and I must correct it. But if thought is constantly making this result and then saying, 'I've got to stop it', this is absurd.”*

A systems thinking approach to change and to leading change can give each of us the power to harness our best openness to learning and innovation, to leverage our collective thoughtfulness and ability to inquire deeply, and so to achieve our intended outcomes in a more lasting (or sustainable) fashion.

Seeing Organizations as Systems

– Two different paradigms for organisations...



Mechanistic paradigm = linear cause and effect; complicated but predictable; one part can be replaced without significantly impacting the whole



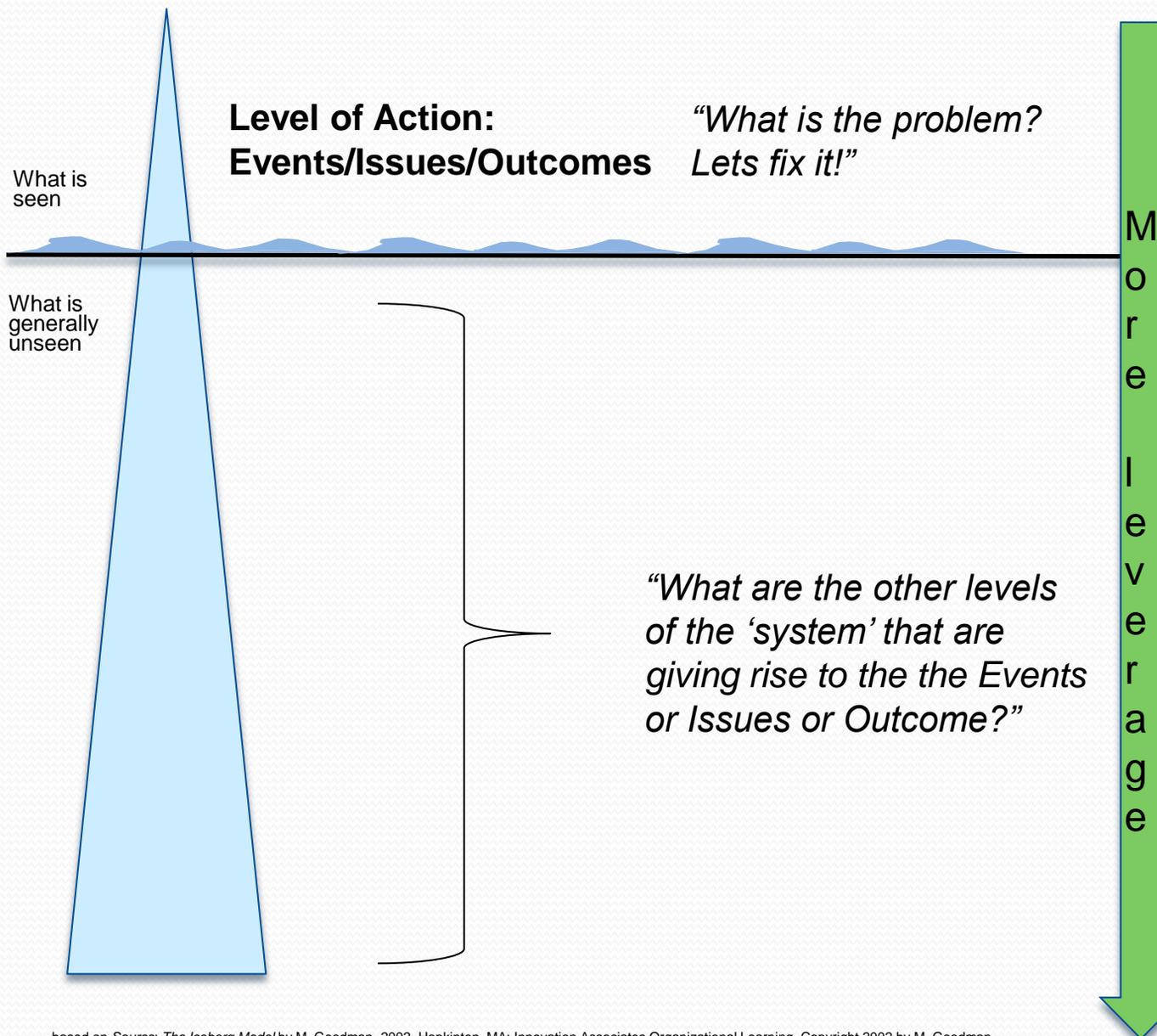
Organic paradigm = complicated and complex; changing over time; learning to adapt and innovate; co-involved parts

The Systems Iceberg – How to more effectively diagnose existing systems and design for a new system

The Iceberg model is a systems thinking tool designed to help an individual or a group discover the patterns of behavior, supporting visible structures, and mental models that underlie a particular event or outcome. What we are usually aware of is only the Level of Action (events/issues/outcomes) of a system.

A deeper strategic awareness allows us to leverage questions such as:

- What are the root causes of the events or issues we notice?
- How do we intervene systemically to maximize impact and success?



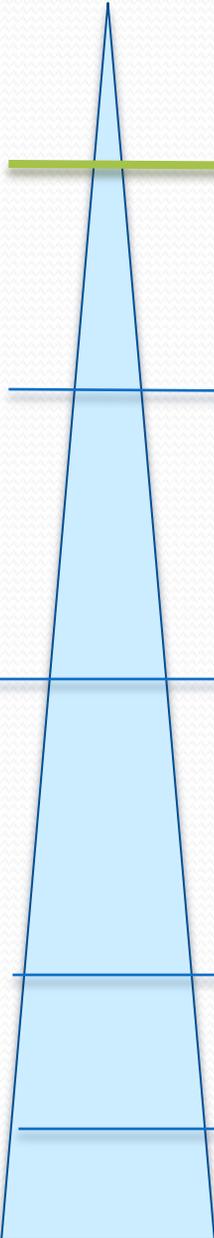
The Iceberg Model of sustainable change: A systemic way of intervening – **DIAGNOSIS**

(diagnosis from the top down)

		DIAGNOSTIC QUESTIONS
	Events/Issues/ Outcomes	What is/has been happening? What are we seeing? Outcomes? Behaviors? Data?
	Patterns & Trends	What has been happening over time? What are the shared dynamics or patterns across the system?
	Visible Structures	What processes, policies and ways of organizing or structuring create or sustain the events/issues/outcomes?
	Invisible Structures/ Mental Models	How does our habitual thinking allow this to persist? What are the Rules-in-use / Habits / Unconscious bias / Opinions / Belief systems?
	Cultural Factors	What cultural or societal factors sustain the dynamics?
	Individual readiness	Am I / Are we ready to change?

The Iceberg Model of sustainable change: A systemic way of intervening – DESIGN

(design from the bottom up)



The diagram shows an iceberg with the visible tip above the water and the much larger submerged part below. The submerged part is divided into six horizontal layers, each corresponding to a row in the table. A vertical arrow on the right side of the table points upwards, indicating the direction of design intervention from bottom to top.

		DESIGN QUESTIONS
	Events/Issues/ Outcomes	What actions will we take?
	Patterns & Trends	What patterns will be visible and commonplace?
	Visible Structures	What policies, processes, organizational practices will need to be changed? What will need to be reinforced?
	Invisible Structures/ Mental Models	What mental models will need to be transformed? What mental models need to be in place to ensure our vision is realized?
	Cultural Factors	What cultural or societal factors will be needed for the change?
	Individual readiness	How do we want to change? Who will we be when we change?