Using Systems Thinking

To Transform Organizational Structures (LeSS & More)

Natalia Curusi, Lead Consultant, Technical Program Manager
Cprime Elabor8
9 October 2026

Natalia Curusi

Technical Program Manager,

Enterprise Agile Coach

nmotoc@gmail.com

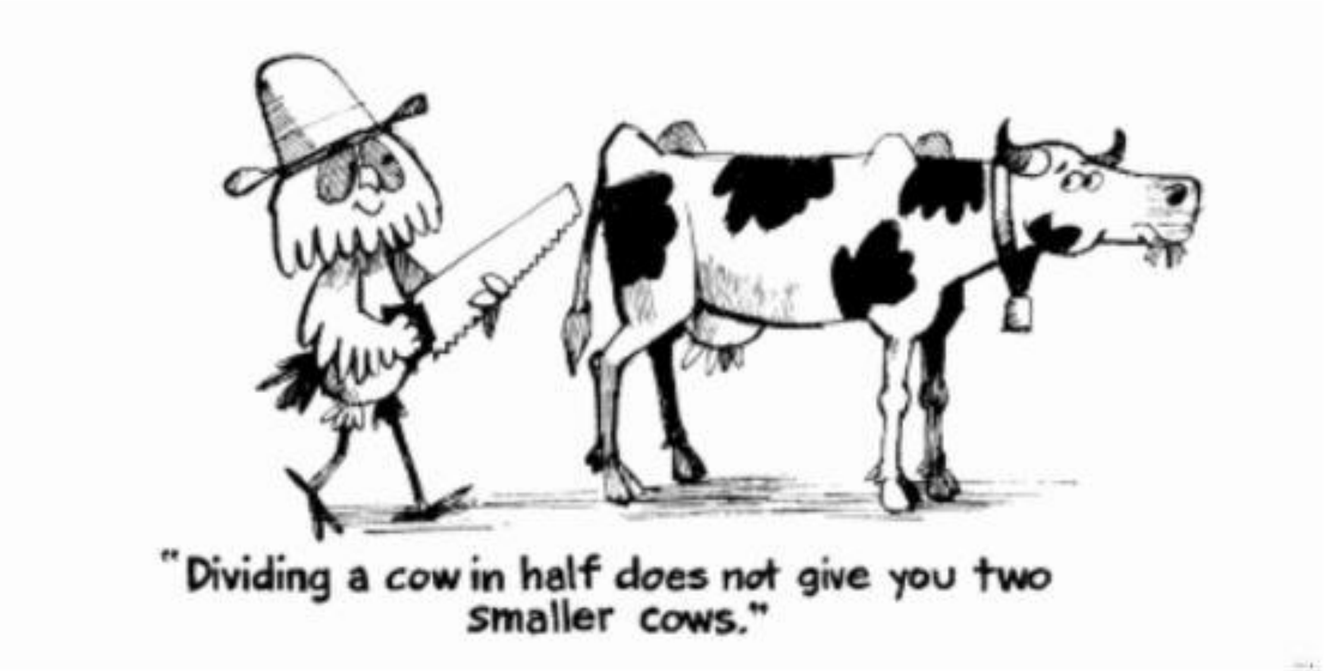
I am an Agile transformation leader, enterprise coach, and systems thinker with over 20 years of experience in complex software delivery environments. My background spans software engineering, project and program management, service management, and enterprise Agile coaching across industries including financial services, mining, logistics, automotive, and digital platforms. I focus on enabling sustainable transformation by aligning leadership, removing systemic impediments, and creating psychologically safe, high-performing environments through Agile, Lean, Systems Thinking, and practical experimentation.

Transformation is rarely resisted because people hate improvement.

It is resisted because people fear losing safety, control, identity, or trust.

What Is A System?

A system can not be divided into two and still perform the function.



A system is a collection of parts that interact with each other to function as a whole.

Draper L. Kaufmann

What Is
A System?

A System is part of Another System or Parent System

System Emergence

Emergent properties are key in Systems Thinking.

There is emergence from the interactions within a system that can't be seen in the isolated parts.

Guess What

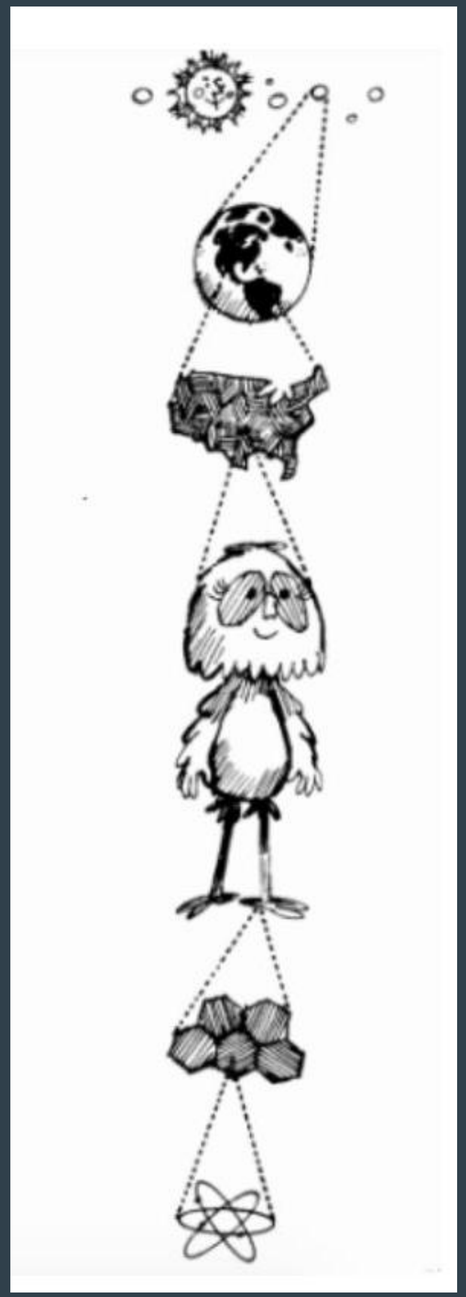
Are the following systems or just collections of items?

- *Bowl of fruit*
- *Football team*
- *Toaster*
- *Kitchen*
- *Database of customer names*
- *Tools in toolbox*
- *A marriage*

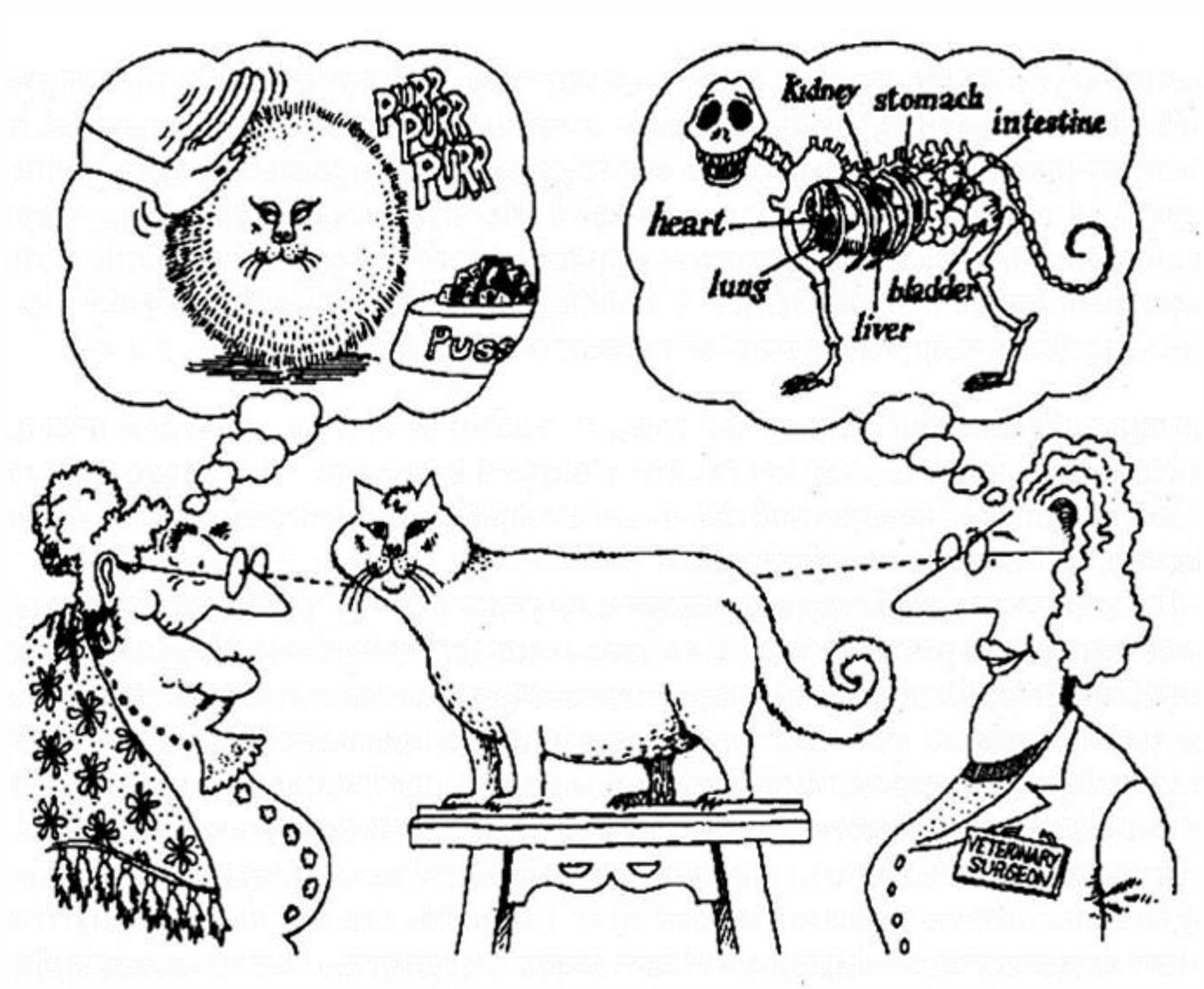
System Granularity

Increasing Size

Universe
Galaxy
Solar System
Planet Earth
World Ecosystem
World Civilization
Nation
State
Organisation
Individual (YOU!)
Nervous System
Brain
Brain Cell
Cell Nucleus
Molecule
Atom
Particle



Different Visions & Models



Systems Thinking For Organisations

See, understand, and optimize the **whole system** (not parts), and explore system dynamics.

Avoid the local and sub-optimizations of focusing on the ‘efficiency’ or ‘productivity’ of individuals and individual teams.

The system is not the sum of its parts!

Beware of bottom-up

The *“Common sense” is not so reliable when trying to understanding non-linear systems—such as large-scale product development*

Taiichi Ohno, the father of the Toyota Production System

System Thinking Laws

- ✓ Today's **problems** come from **yesterday 'solutions'**
- ✓ The **harder you push**, the harder the **system pushes back**
- ✓ Behavior **will grow worse before it grows better**
- ✓ The **easy way out usually leads back in**
- ✓ The **cure can be worse** than the **disease**
- ✓ **Faster is slower**

- ✓ **Cause and effect** are **not closely related** in time and space
- ✓ **Small changes** can produce **big results** You can have your cake and eat it too—but not all at once
- ✓ **Dividing an elephant in half** does not produce two small elephants
- ✓ There is **no blame**

Source: The Fifth Discipline

See **system dynamics**

See **mental models**

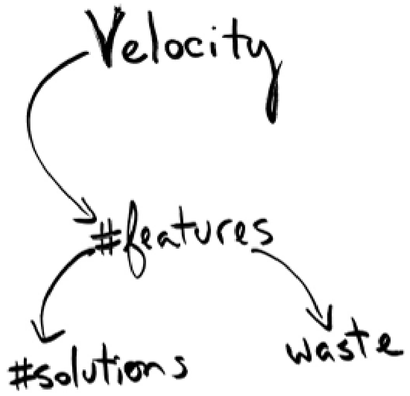
See **root causes**

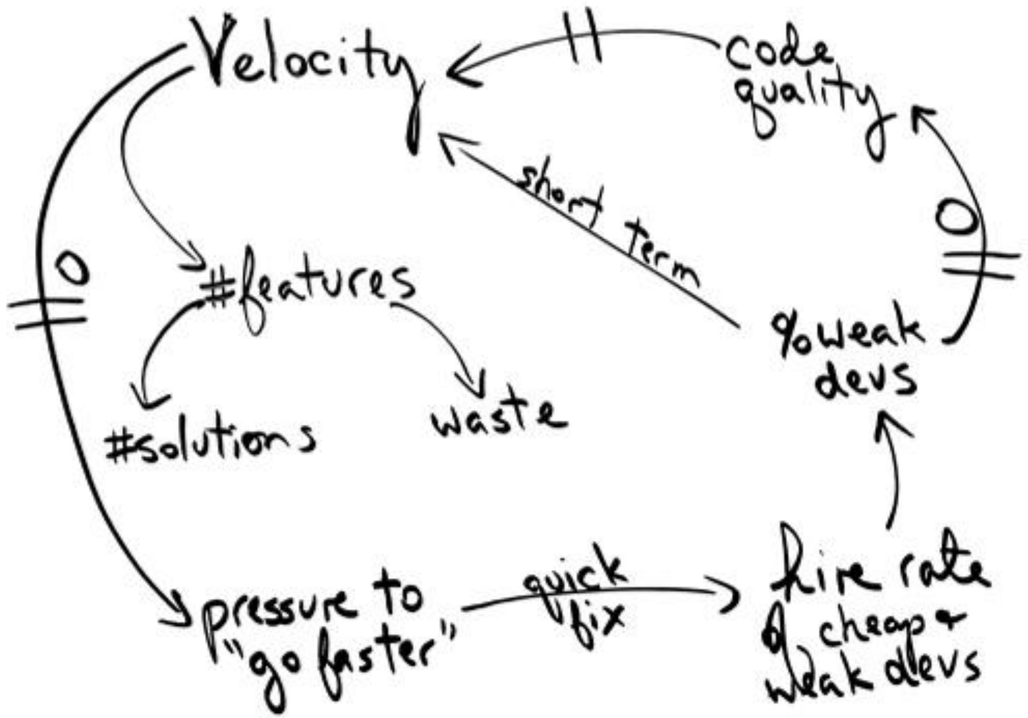
See **local optimization**

And... **Go and See**

Seeing Systems Dynamic

Casual Loops Diagrams





Source: The Fifth Discipline

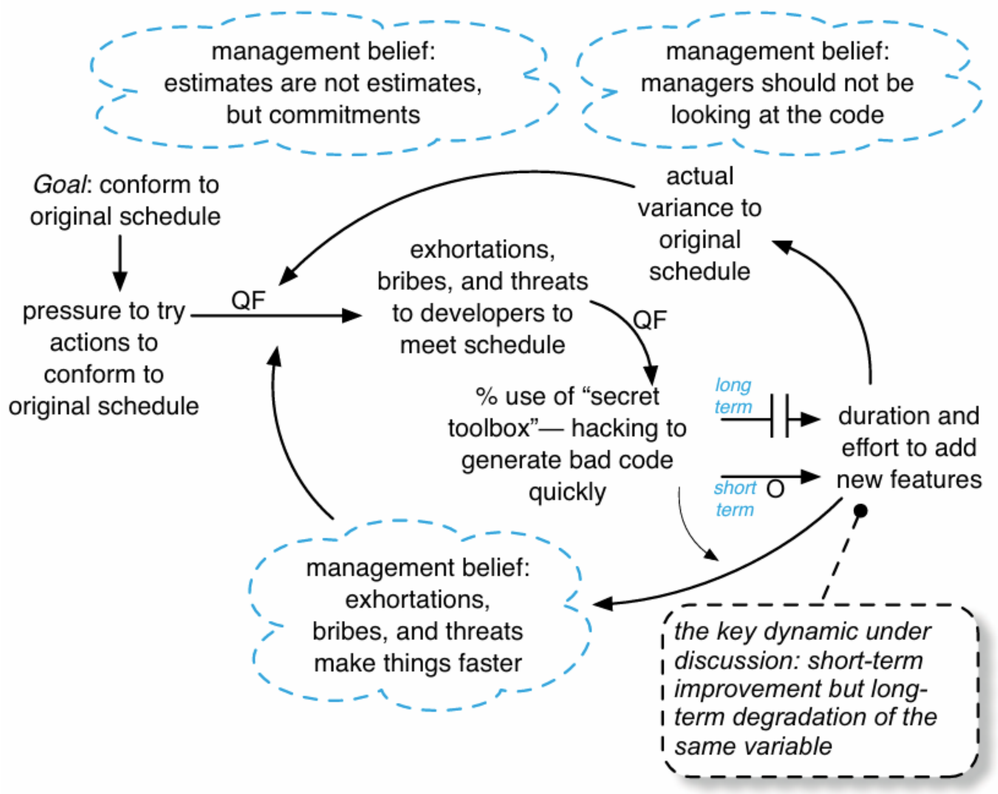
Casual Loops Diagrams Elements

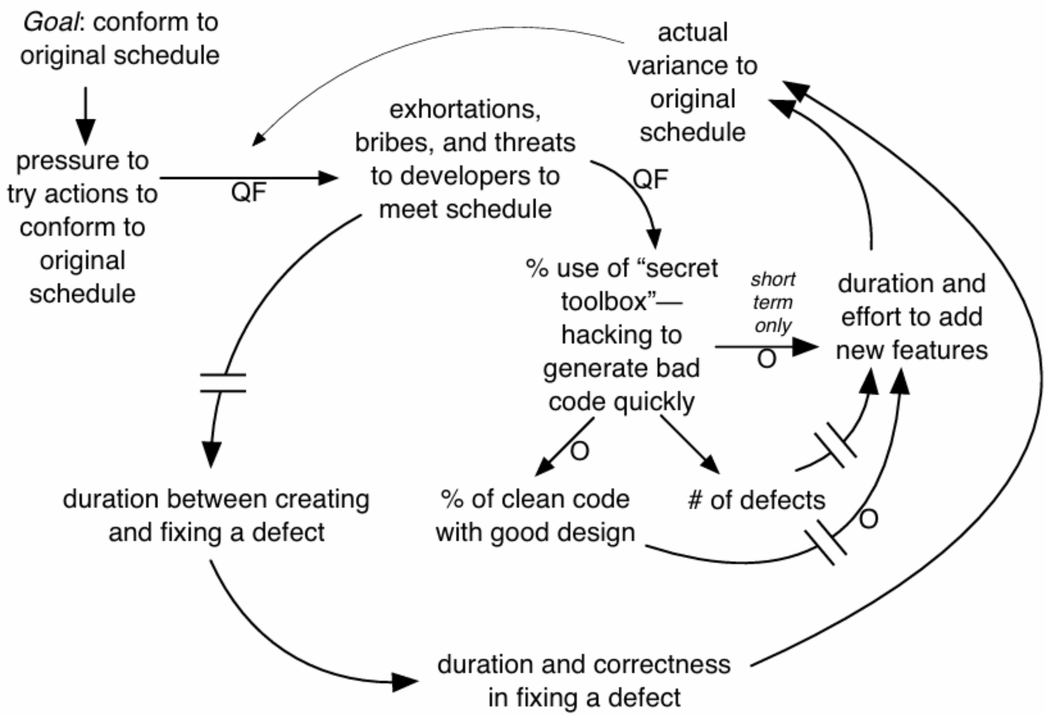
- ✓ variables
- ✓ causal links
- ✓ opposite effects
- ✓ constraints

- ✓ delays
- ✓ reinforcing feedback loops
- ✓ Balancing feedback loops

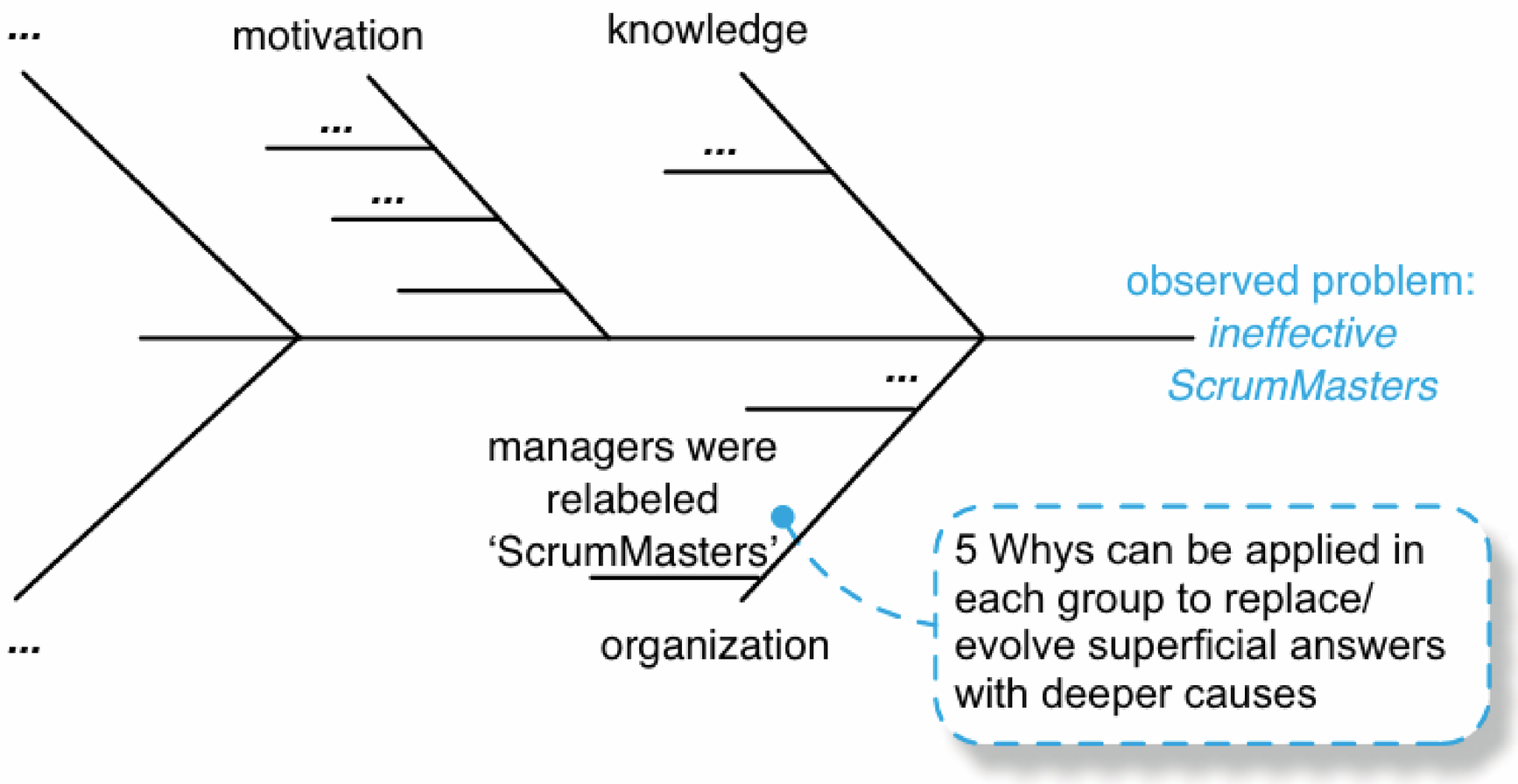
Source: The Fifth Discipline

Seeing Mental Models





Seeing Root Causes



Seeing Local Optimisation

The *"best" is a local optimization.*
In fact, it sub-optimizes overall system throughput

Global Optimisation

Global Optimisation: Deliver value fast with high quality and morale.

Does this decision or policy focus on delivering value to the external customer fast, or does it focus on the interests of a department, person, internal policy/practice, or rare case?

Systems Thinking for Organisational Restructuring

Optimise the Whole

Traditional hierarchies optimise departments, functions and individual performance.

Systems Thinking challenges us to organise around end-to-end customer value, not functional silos.

Does our structure optimise the whole organisation or just its individual parts?

Redesign Boundaries

Reporting lines, team boundaries and management layers shape how work flows.

Every additional handoff, approval or dependency may create delays and reinforce local optimisation.

What happens when we restructure around value streams and cross-functional teams?

Scaling Means Structural Change

Scaling Agile is not about adding frameworks on top of existing hierarchies.

LeSS challenges traditional structures by reducing coordination complexity, encouraging feature teams and shifting management towards improving the system.

Are we transforming the organisation or preserving the old hierarchy under new names?

Nine Principles for Structural Transformation

.

1. See the Whole System

Map reporting lines, dependencies, decision flows and informal power structures before redesigning the hierarchy.

2. Challenge Existing Hierarchies

Question which management layers and functional boundaries create value, and which create delays and handoffs.

3. Organise Around Customer Value

Move from functional silos towards long-lived, cross-functional teams with end-to-end responsibility.

4. Anticipate System Dynamics

Understand how structural changes affect incentives, power, behaviour, coordination and feedback loops

5. Challenge Mental Models

Expose assumptions about control, managerial authority, resource utilisation and the need for specialists.

6. Treat Resistance as Information

Explore what people fear losing: authority, identity, expertise, stability or trust. Look for systemic causes.

7. Increase or Reduce Dependencies

In mature environments, encourage collaboration through dependencies; in less mature ones, minimise handoffs and coordination until teams develop greater maturity.

8. Experiment and Learn

Test structural changes, inspect their unintended consequences and adjust through feedback rather than rigid plans.

9. Optimise for the Whole

Measure success through end-to-end flow, customer value, quality and adaptability, not departmental efficiency.

Remember

All models are wrong, but some are useful

Model for understanding, not truth

Model to have a conversation

Key takeaways

Only three things to carry back into work tomorrow:

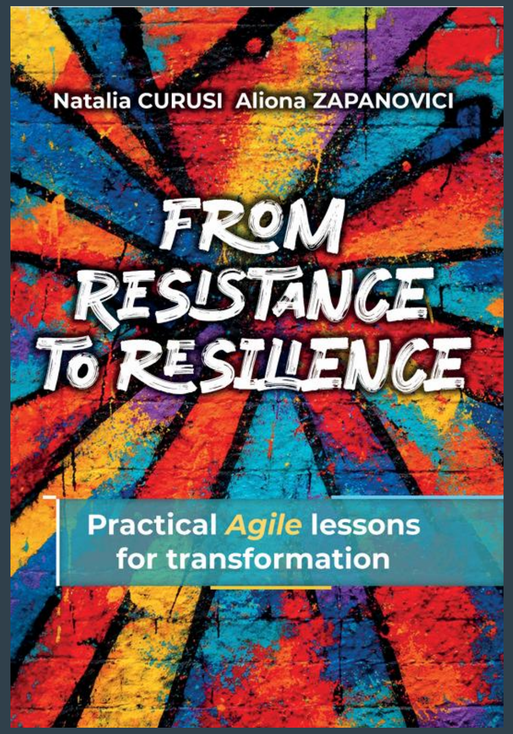
1. **Resistance is information, not failure**
2. **Trust enables transformation**
3. **Small experiments create sustainable change**

Final reflection

People rarely resist being respected, heard, and involved.

They resist being controlled, ignored, and transformed without them.

Thank you



From Resistance to Resilience

Practical Agile Lessons for Transformation

Natalia Curusi

linkedin.com/in/natalia-curusi

Resistance is information. Trust before process. Small wins create momentum.

Learn More

- ✓ **Scaling Lean & Agile Development: Thinking & Organizational.** Systems Thinking chapter, *Craig Larman, Bas Vodde*
- ✓ **Tools for Large-Scale Scrum**, by Larman & Vodde. (*This chapter is also online at less.works*)
- ✓ **The Fifth Discipline** by Senge
- ✓ **Thinking in Systems**, by Meadows & Wright
- ✓ **Systematics**, by Gall
- ✓ **Deming's Out of the Crisis** by W. Edwards
- ✓ **Industrial Dynamics** by Jay Forrester
- ✓ **Quality Software Management: Systems Thinking and An Introduction to General Systems Thinking** by Weinberg
- ✓ **The organizational-learning writings** by Argyris, Putnam, McLain, and Schön
- ✓ The publications and resources available through the **Society for Organizational Learning** (www.solonline.org)