

Systems Thinking - Tools for Making Sense in an Organization

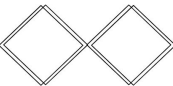
A very short practical introduction



Jakub Perlak



Jak Kuba



How am I?

Agile and Design Thinking Coach

trying to humanise the workspace and having systemic perspective. Supporting people in creating a learning environment where value is based on empathy.

Certified Trainer, (Team) Coach and Facilitator.

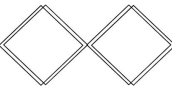
Actively participate in Agile communities.

Conference tourist.



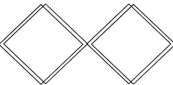
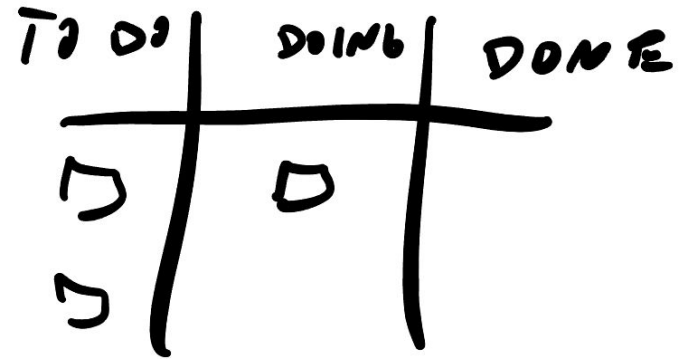
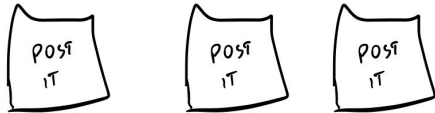
Lifelong learner, **hobbyist scientific researcher (PhD almost done).**

Occasional lecturer.

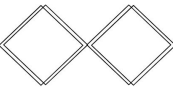
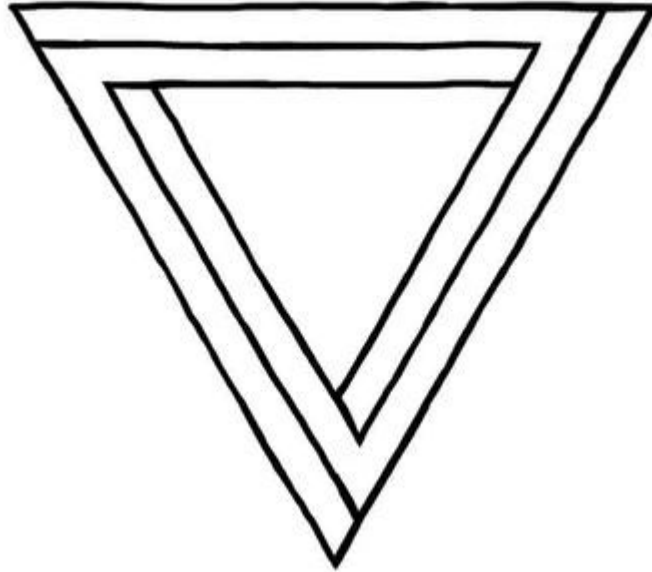


Planning

- What I have? (45 min)
- What you need? (45 min)



Triangle - System of Systems - exercise



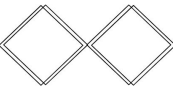
So what is a System and System Thinking?

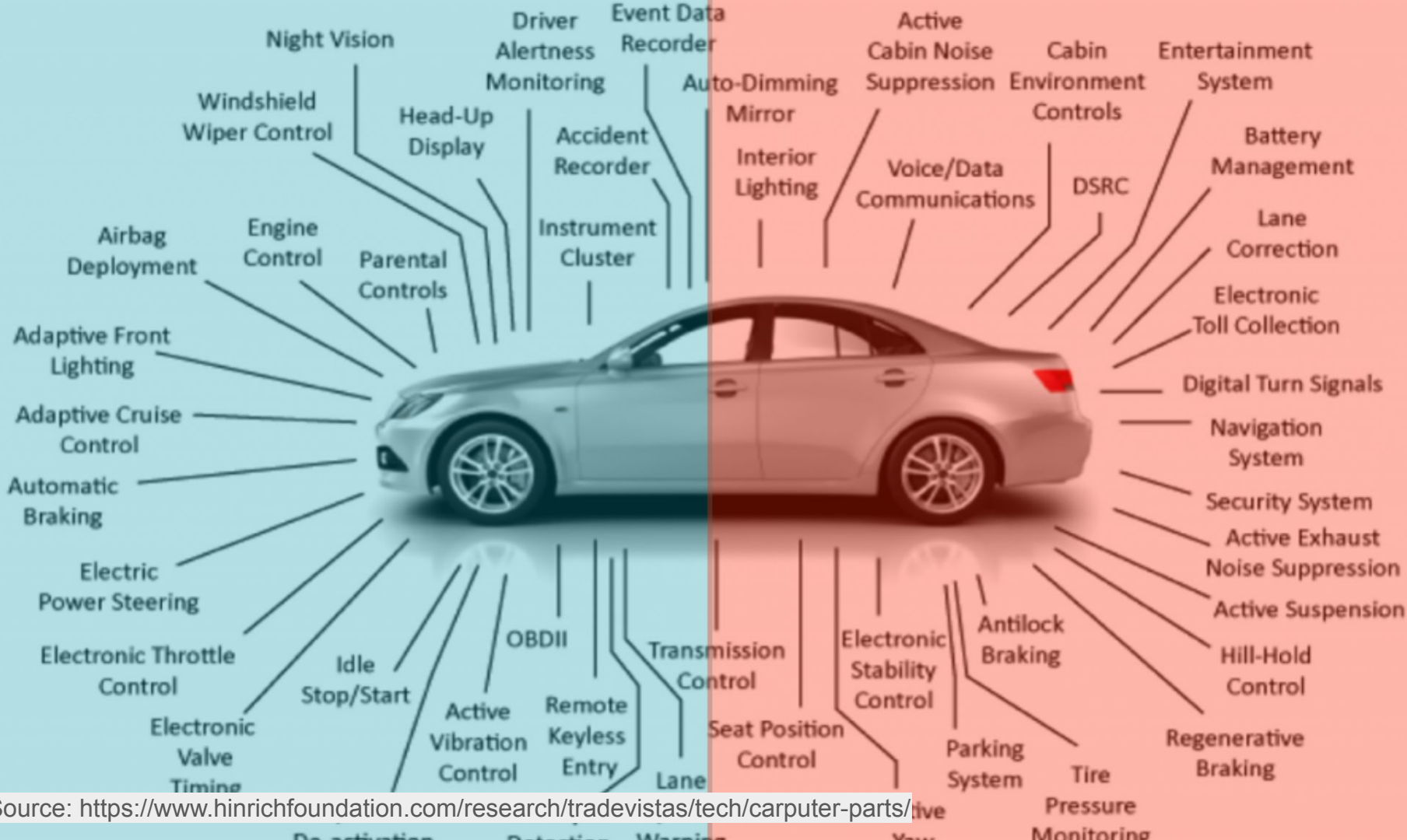
- System is more the sum of the parts (Ackoff)
- An interconnected set of elements that is coherently organised in a way that achieves something (function or purpose) (Meadows)

Why this is important?

Today's managers are sold simple solutions to complex problems. But, as many soon discover, **simplicity is rarely effective in the face of complexity**, change and diversity. Despite apparent promise, **quick-fix panaceas fail because they are not holistic or creative enough**. They **focus on parts of the organization rather than the whole**, take **little account of interaction**, and pander to the notion that there is **one best solution in all circumstances** (Jackson)

Everything we see, do and experience in this world is made of systems (Meadows)





Source: <https://www.hinrichfoundation.com/research/tradevistas/tech/carputer-parts/>



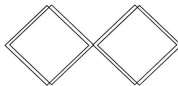
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Iceberg... Seeing What's Below the Surface

Iceberg Model

Events: Delay in delivering value to the market on January 14, with 23 bugs identified in the production environment after release.

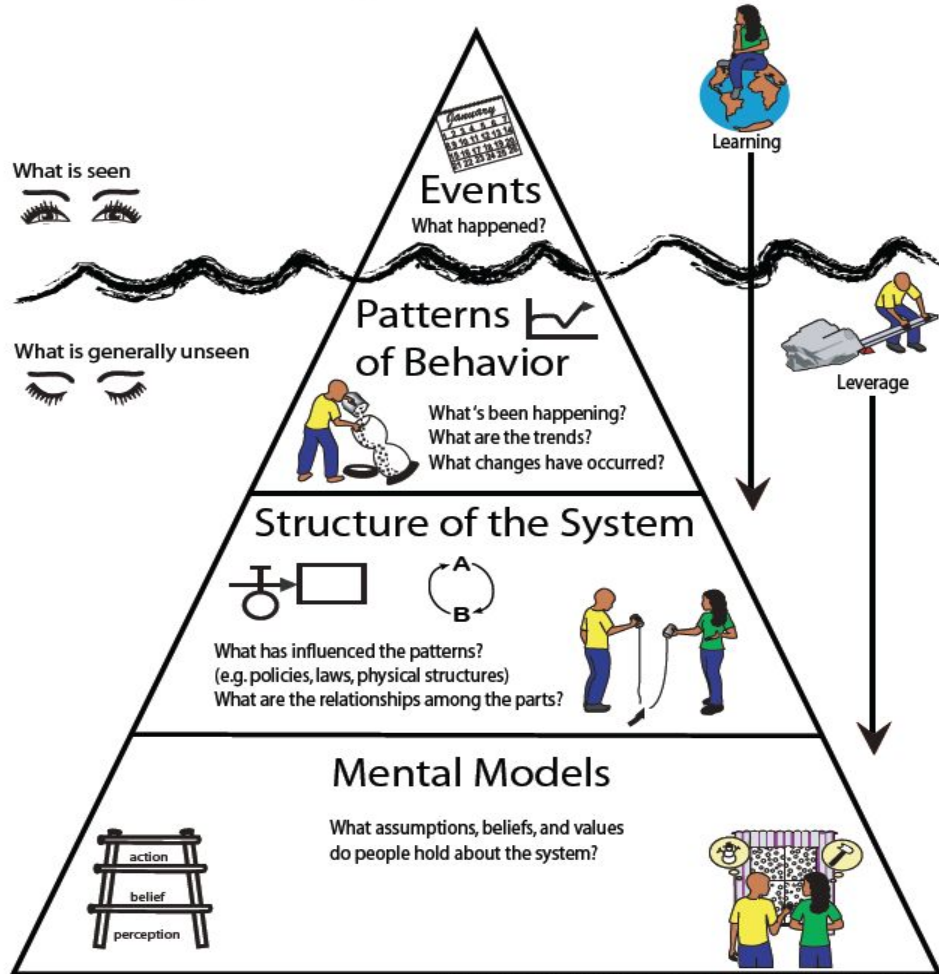
Patterns: Multiple buggy and delayed releases over time, dependencies between teams, people blaming each other, developers not willing to learn new skills. The problems got worse over time.

Structures: Functional and component teams created local identities and made people focus on improving the performance of the separate parts. The human resources (HR) policies encouraged individual efficiency and limited people in their multi-skill development.

Mental models: It is "productive" and "efficient" to have narrow specialists in the organization; everyone should be busy to maximize success.

Source: Cesario & Pavlichenko (2022)

Source:
<https://agsystemstinking.net/2016/10/24/systemstinking/>

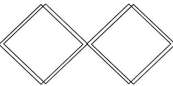
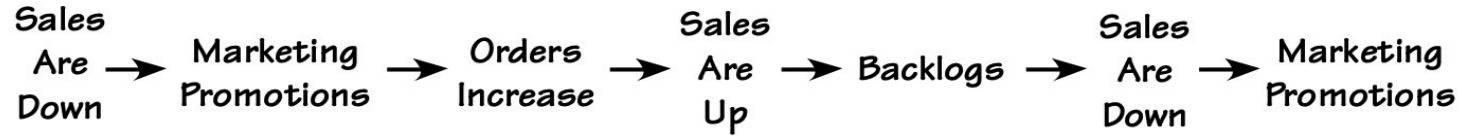




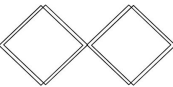
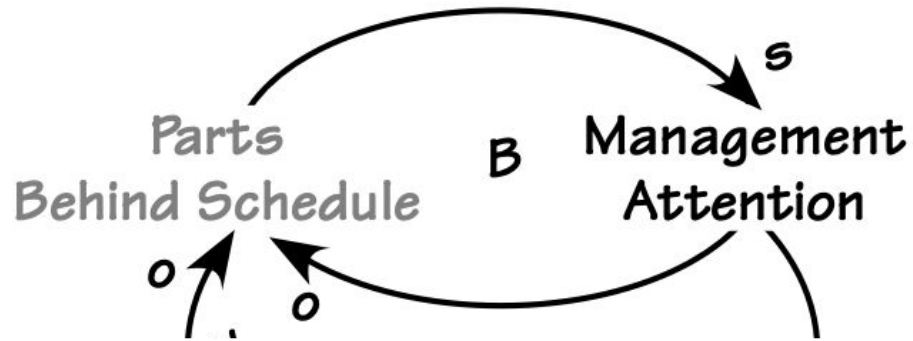
**A bad system will beat a
good person every time.**

-- W. Edwards Deming

Thinking in Loops



Maybe more “realistic” example



POSIWID

The Purpose of a
System Is What It Does

"There is, after all, no point in claiming that the purpose of a system is to do what it constantly fails to do."

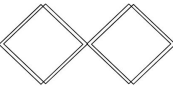
– Stafford Beer, systems theorist

Source: <https://unfix.com/blog/purpose-of-a-system>



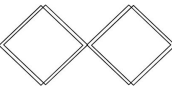
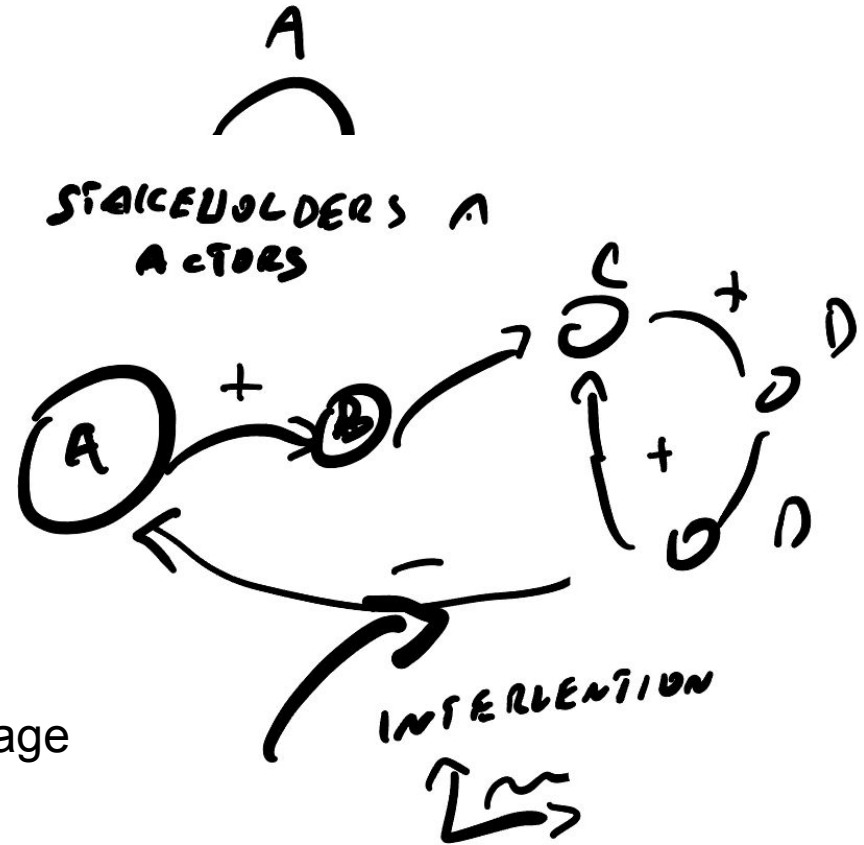
Tools

Iceberg, loops, elephants... More?

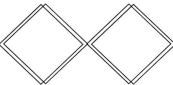
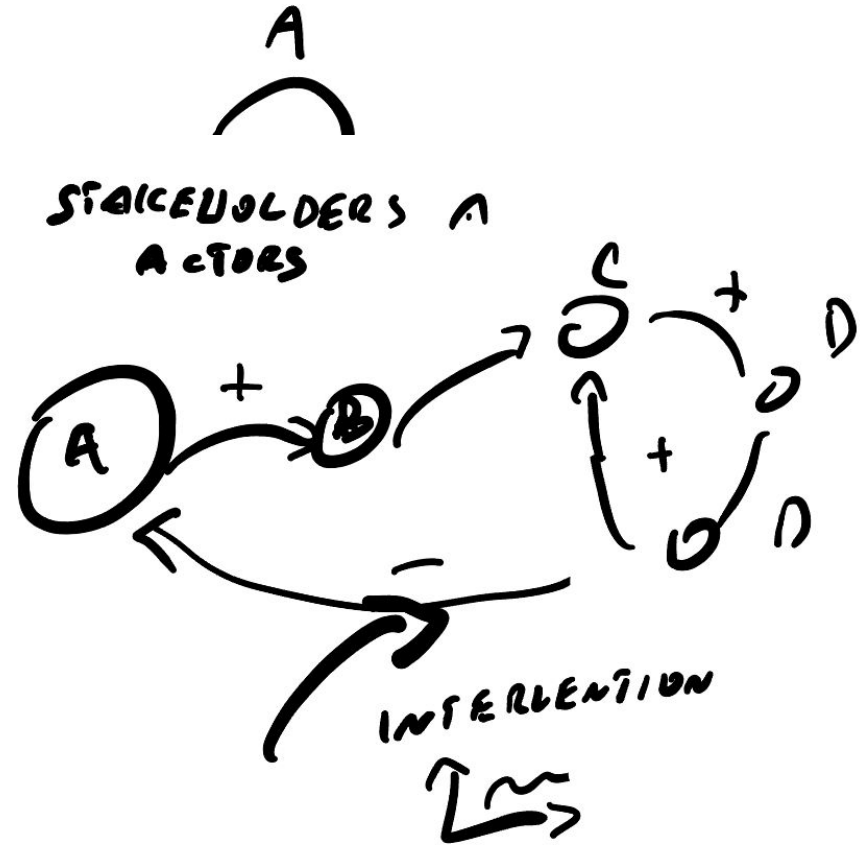


System Mapping

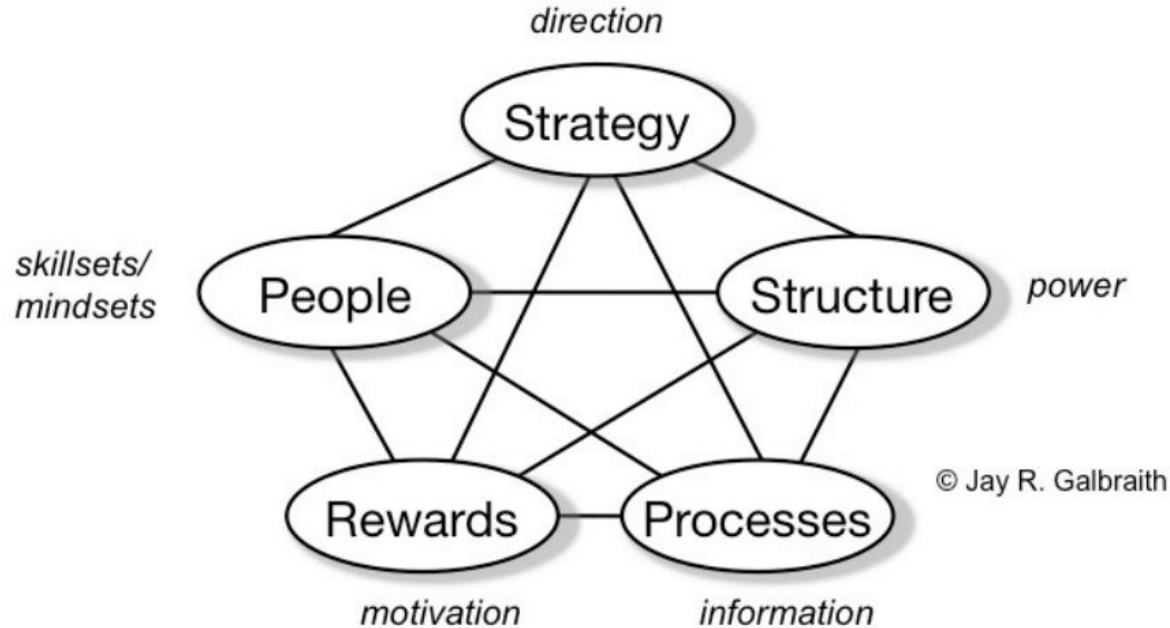
1. Set boundary
2. Identify (all) actors in the system
3. Draw arrows to show relations
 - a. Information / Feedback
 - b. Influence etc.
4. Plus positive / minus negative impact (OPTIONAL)
5. **Reflect**
5. Pick a place to intervene / Find leverage
6. Strategy (what and look at metrics)
7. Learn and Adapt



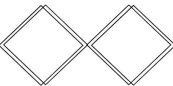
Example



Organization Parts of the System

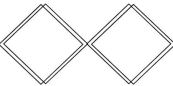


Source: "Star Model" (Galbraith, 2002)



How to start?

Wherever you are...





"To manage a system effectively, you might focus on the interactions of the parts rather than their behaviour taken separately."

Russell L. Ackoff

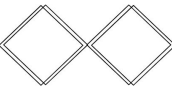
Ideas

Any way, not bad way

- Systems Thinking as communication tool, draw together
- Try to map current problem with bigger picture of your organization (eg. Star Model)

Maybe more promising way

- Engage owners, senior leadership (help them achieve their goals) rather ask to just use the tools
- Try to identify patterns and structure, communicate and visualize
- Find leverage points -> experiment





We can't control systems or figure them out. But we can dance with them!

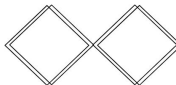
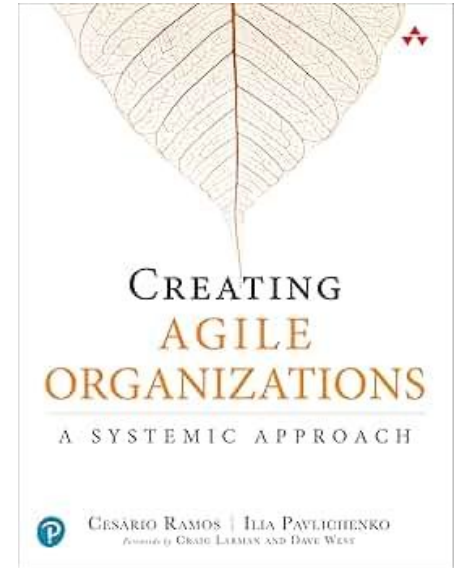
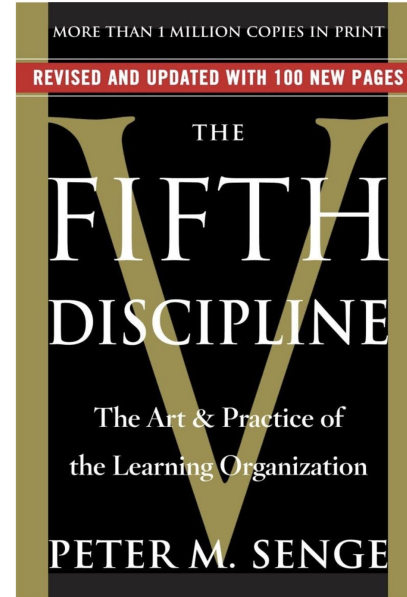
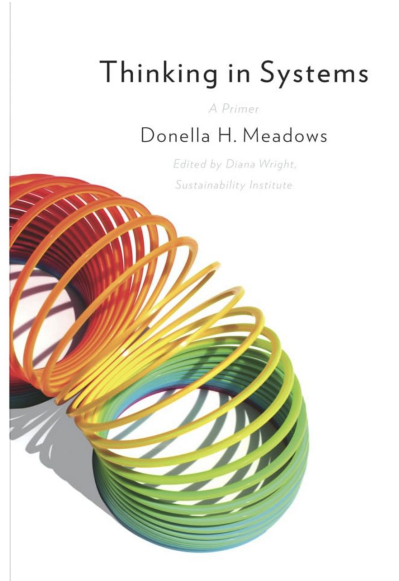
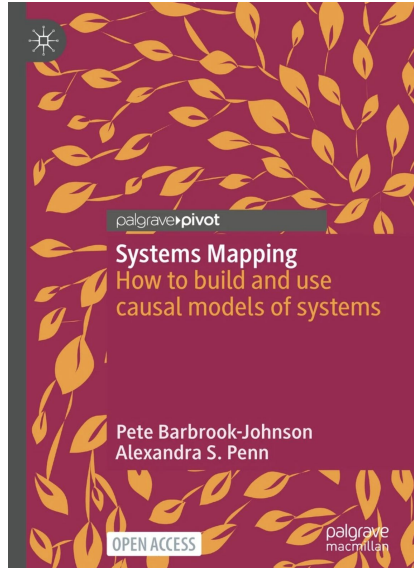
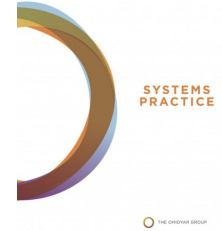
— *Donella Meadows* —



AZ QUOTES

Inspirations

THE SYSTEMS THINKER™



Thanks!



MOTOROLA
SOLUTIONS

Think More in Systems!

