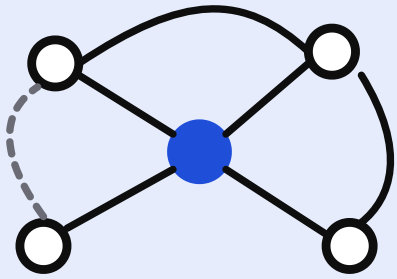
Discipline

Systemic design

Combines systems thinking with human-centered design to understand complex systems with many actors, such as health care or transportation, and intervene in them.



In Spanish
Diseño sistémico

Origin
Banathy (1996); Jones (2014)

What it deals with

Many problems have no single cause or owner: fixing one part of the system can make another worse.

Principles

See the system
Map actors, relationships and loops.

Widen the boundaries
Include those affected by the problem, even if they are not customers.

Leverage points
Look for where a small change moves a lot.

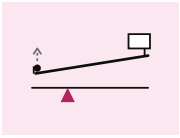
Applications in design

✓ Use it like this
Draw the whole system before proposing a solution.

✗ Avoid
Treating a complex problem as solved with a single product or service.

Don't fall for it
In a system, every solution has side effects: look for them.

Models

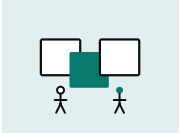


Model

Leverage points

The places in a system where a small change can produce a big effect, from shallowest to deepest.

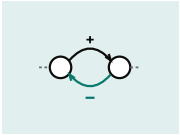
Methods and tools



Approach

Co-design

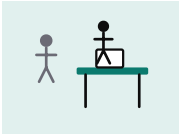
Designing together with the people who will live with the result, with tools so they can create too.



Method

Causal loop diagram

A map of arrows that shows how some things push others until they form circles.



Method

Contextual inquiry

Observing and asking people questions while they do their work, in their own setting.



Method

Stakeholder map

Drawing who can influence a project or be affected by it, and how they relate to each other.

Connections

Builds on

- Design studies
- Wicked problems
- Four orders of design

Related to

- Design for policy
- Service design
- Transition design
- Organizational design
- Regenerative design
- Sustainable design

Authors and works

1996	**Béla H. Banathy**	Proposed designing social systems, not just objects.
2014	**Peter H. Jones**	Set out principles of systemic design for complex social systems.

Sources

Original sources

- Banathy, B. H. (1996). Designing social systems in a changing world. Plenum Press.
- Jones, P. H. (2014). Systemic design principles for complex social systems. In G. S. Metcalf (Ed.), Social systems and design (pp. 91–128). Springer. View source (https://doi.org/10.1007/978-4-431-54478-4_4)
- Vandenbroeck, P., Van Ael, K., Thoelen, A., & Bertels, P. (2016). Codifying systemic design: A toolkit. In Relating Systems Thinking and Design Symposium (RSD5), Toronto. View source (https://openresearch.ocadu.ca/id/eprint/1918/)
- Jones, P., & Van Ael, K. (2022). Design journeys through complex systems: Practice tools for systemic design. BIS Publishers. View source (https://download.boekhuis.nl/9789063696344_fragm-docb.pdf)

Last reviewed: October 29, 2026

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