



SYSTEMIC
DESIGN
TOOLKIT

Systemic Design Toolkit Guide

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shift^D





Design tools to tackle complexity

The entity of challenges we are facing is becoming more complex, and conventional ways of problem solving do not work anymore. In this fundamental shift, systemic design seems to provide an answer to tackle such complexity.

The systemic design toolkit is conceived by designers and change-makers willing to trigger a process of systemic transformation. The tools are meant to be used during collaborative co-creation sessions.

This booklet will guide you through a selection of eight techniques from the toolkit. These are categorised according to different phases of the design process, but that does not mean that you cannot use them in different ways. We invite you to be creative, to use and adapt them to your project. We hope this kit will be the trigger to start a creative conversation and catalyse a process of change.

The toolkit
methodology
7 steps

Systems thinking

Design thinking



1. Framing the system



2. Listening to the system



3. Understanding the system



4. Defining the desired future



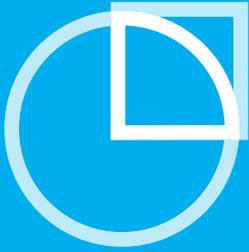
5. Exploring the possibility space



6. Designing the intervention model



7. Fostering the transition



Step 1

Framing the system

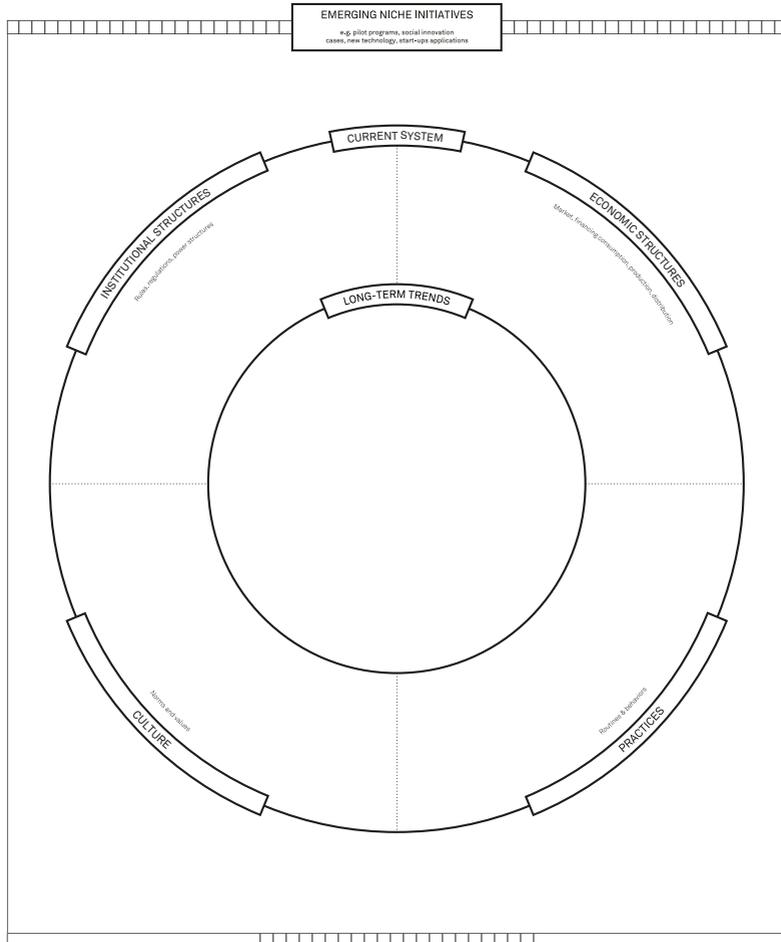


Setting the boundaries
of your system in space
and time, identifying the
hypothetical parts and
relationships.



RICH CONTEXT

Framing the system



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Recommended size: A0



Rich context

Materials

- Rich context template
- sticky notes
- markers

What

A technique that helps you understand the “big picture” by mapping the current practices, trends and innovative initiatives in the system.

Use it to generate shared understanding about the current situation and identify the profiles you should interview in your field studies.

Instructions

Get a grip on the current situation by using the template. Map:

1. Long-term trends. Write the trends affecting the issue on sticky notes (e.g. climate change, population growth, ageing, resources depletion...). Cluster them in the center of the poster.
2. Current system: map the established ways of doing (how is society currently dealing with the issue? e.g. cultural and social norms, practices, rules, infrastructure, existing networks, power relations, ...).
3. Emerging niche initiatives: map the alternative ways of doing (what are the new, innovative ways of dealing with the issue?).



Step 2

**Listening to
the system**



Listening to the experiences of people and discovering how the interactions lead to the system's behaviour. Verifying the initial hypotheses.



ACTANTS

Listening to the system



<p>ACTANT 1</p>	<p>ACTANT 2</p>	<p>EXPERIENCE OVER TIME Draw the curves for both actants</p>
<p>"PERSPECTIVE" on the issue</p>	<p>"PERSPECTIVE" on the issue</p>	<p>What makes the experience change?</p> <p>What explains the differences between the curves?</p>

Download more tools at appliedcognition.net/act



Recommended size: A2



Actants

Materials

- interview notes
- Actants template
- markers
- pictures

What

A way to model, summarize and communicate your systemic field research. The Actants describe an archetypal relationship.

Use the tool as a base to understand and map the system: it is useful to extract influencing variables from the field studies.

Instructions

1. Go through your interview notes/transcripts from the field studies. Study a relationship between two roles (e.g. child, teacher). For each of them, choose a picture and summarise their perspective on the issue with a strong quote.
2. For each actant, draw the archetypal experience over time with a curved line. Annotate the key moments and positive/negative emotions.
3. Analyse the curves separately and try to define, from the interviews, the qualitative and quantitative factors/variables that influence the changes in the experience.
4. Observe the curves together: focus on the differences. Try to understand why the experiences differ.



Step 3

Under- standing the system

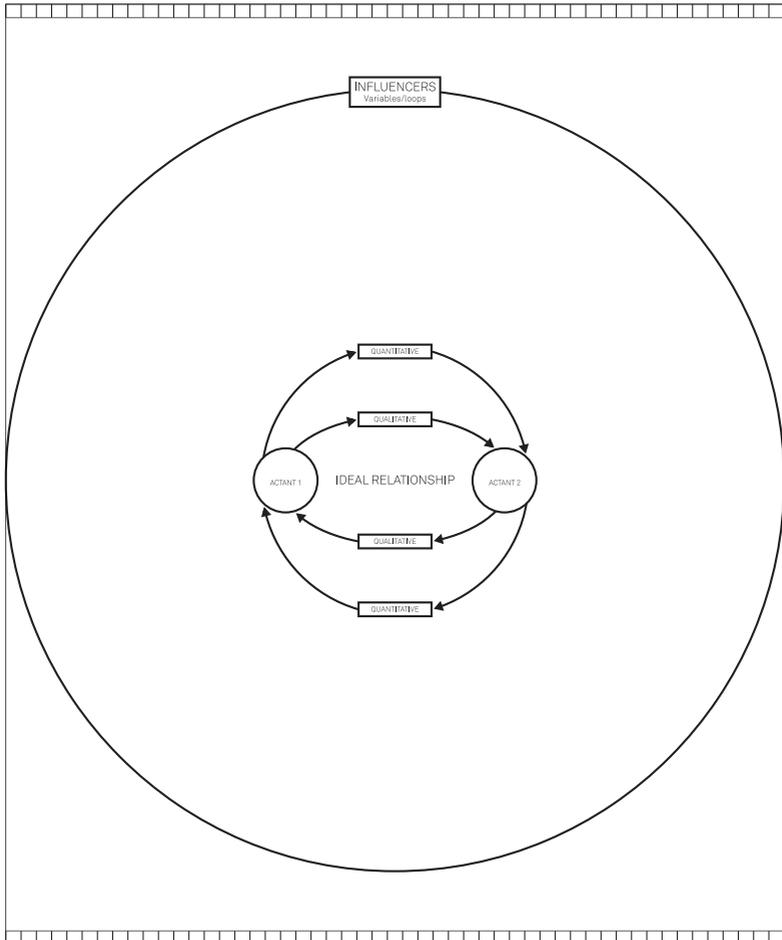


Seeing how the variables
and interactions
influence the dynamics
and emergent behaviour.
Identifying the leverage
points to work with.



SYSTEM MAP

Understanding the system



Download more tools at systemicdesigntoolkit.org



Recommended size: A0



System map

Materials

- System map template
- interview notes
- actants
- sticky notes
- markers

What

A technique for visualising the system, its structure and the interrelations between its elements.

Map the system to develop shared understanding between the stakeholders about its complexity and interdependencies. Also, use the map to discover the leverage points in the system.

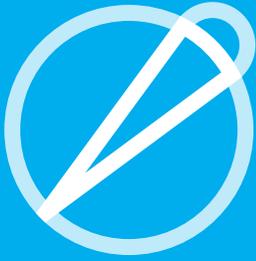
Instructions

1. Ideal relationship: make the ideal relationship between the actants explicit, by identifying the qualitative/quantitative variables exchanged between them. Write them on post-its and stick them in the center of the poster.

2. Influencers: look back at the stories that emerged from your interviews. Identify causal loops and draw them around the “ideal future”.

3. Leverage points: connect the variables in the loops to the core exchanges. Follow the logic of growth and balance of the feedback loop diagrams.

Now look at the connections. Which variables are the most influencing for the core relationship? Note them down, as they are the leverage points.



Step 4
**Defining
the desired
future**

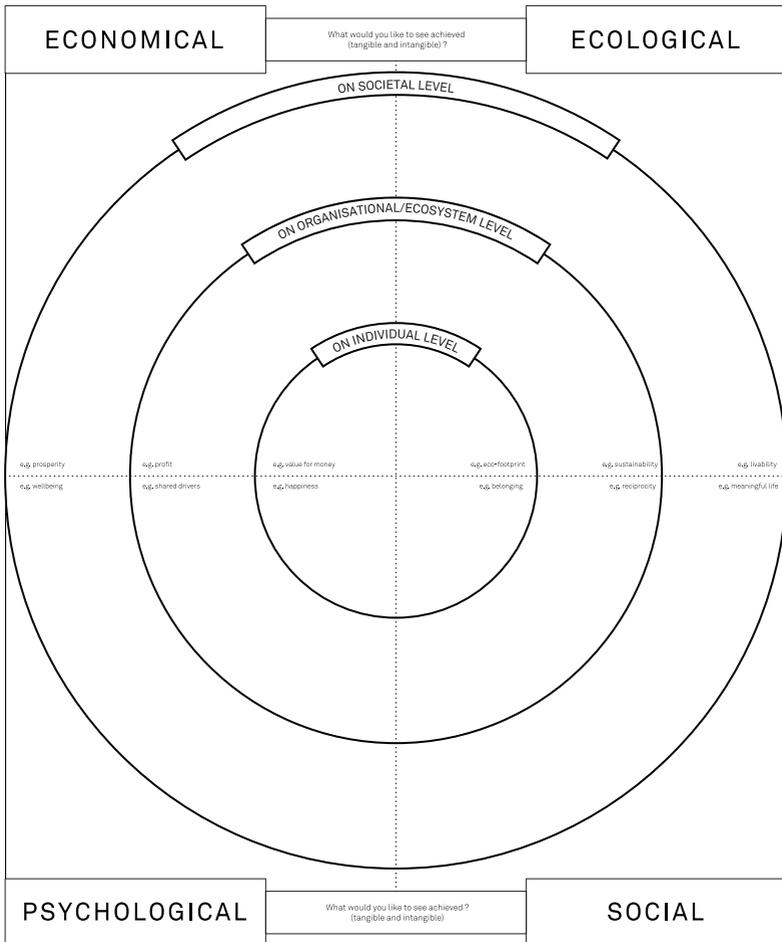


Helping the stakeholders articulate the common desired future and the intended value creation.



VALUE PROPOSITION

Defining the desired future



Download more tools at systemicdesigntools.org



Recommended size: A1



Value proposition

Materials

- Value proposition template
- sticky notes
- markers

What

A tool to make the ideal future explicit, by listing the benefits that the interventions will bring to the future individuals, organisations and society.

Use the tool to stretch the ambition of the group and align the stakeholders on the intended outcomes.

Instructions

Look at the leverage points you need to tackle, and think about the future situation you want to achieve by intervening in the system. Focus on different aspects (ecological/economic benefits, social values, ...).

1. Brainstorm on the benefits you want to provide for the single individuals: write them on sticky notes and place them in the center of the poster.
2. Write down the benefits that organisations/the ecosystem will get. Place them around the first circle.
3. Write down the benefits that your interventions will provide on a societal level. Place them around the second circle.



Step 5

**Exploring the
possibility
space**

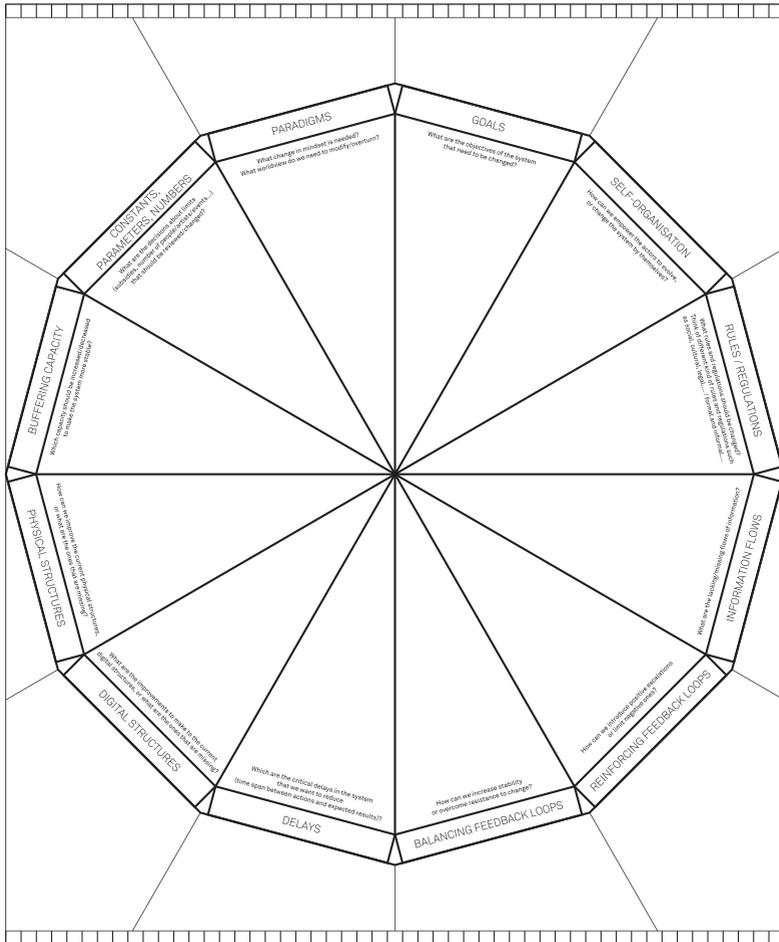


Exploring possible
ideas for intervening
on the leverage points.
Empowering the ideas
by working with the
paradoxes in the system.



INTERVENTION STRATEGY

Exploring the space of possibilities



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Recommended size: A0



Intervention strategy

Materials

- Intervention strategy template
- sticky notes
- markers

What

A brainstorming tool to understand and explore on which levels (how) you can intervene in the system.

By exploring different possible typologies of intervention, you make sure the future combination of interventions will cover the big picture.

Instructions

Look at your leverage points identified in the system map: these are the challenges you are going to tackle in order to achieve your desired future.

Using the intervention strategy canvas:

- On which levels do you need to intervene to tackle your challenges?
- What interventions are needed (e.g. improving face-to-face communication, hiring more qualified staff, taking more focused policy measures, raising collective awareness on the topic, ...)?

Think about possible interventions, write them on sticky notes. Stick your idea in the related area of the canvas.



Step 6

**Designing the
intervention
model**



Defining the engine for
change and its variations.
Iterating by envisioning
its implementation in
different contexts.



Recommended size: A4



Intervention model

Materials

- connectors
- round sticky notes
- markers

What

The intervention model describes the DNA of change within a system; it contains the principles/activities that will enable change in the system.

By looking at how interventions connect and reinforce each other, you can envision an effective strategy for change.

Instructions

1. Review your ideas included in the intervention strategy canvas: which of those can reinforce or enable each other?
2. Transcribe the ideas on sticky notes.
3. Stick the post-its on the provided props. Use them to connect your ideas. Build your model of interconnected interventions.

Compete

Striving to gain or win something that is scarce

Working together to achieve a common goal

Teamwork

COLLABORATION

Intangible

Existing only in the mind

Real, discernible by touch

Tangible

PRESENCE

Intuitive

Understood without giving it much thought

Transferred knowledge, skill or behaviour

Taught

UNDERSTANDING

Free

Given or available without charge or obligation

Exchanged for money, goods or services

Paid

BUSINESS MODEL



Paradox cards

Materials

- paradox cards
- sticky notes
- markers

What

The paradox cards stimulate paradoxical thinking: bringing together the opposite sides of a problematic situation to achieve solutions for the whole. The cards are useful to elaborate ideas into more concrete concepts, and ensure such concepts create positive reinforcing loops.

Instructions

Go through the paradox cards set:

1. Assign a paradox card to each intervention idea. Choose a card that best describes the idea. Which end of the paradox does the idea cover?
2. Evolve your intervention model, by refining the existing ideas or adding new ones. Make sure that:
 - the "open" side of your paradoxes is covered as well;
 - the interventions representing the sides of each paradox reinforce each other.



Step 7

**Fostering the
transition**

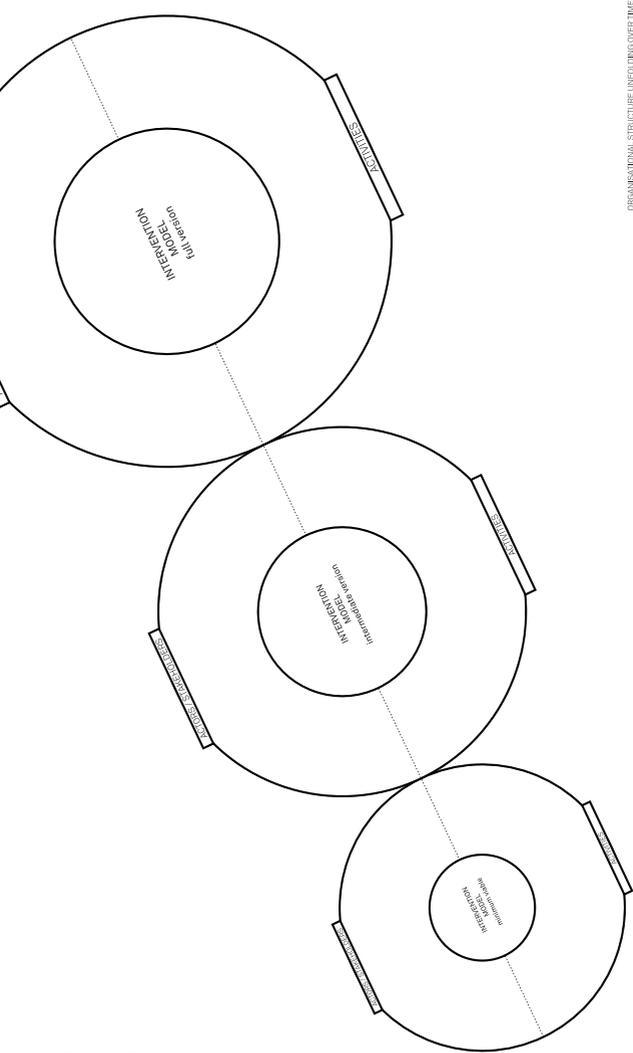


Defining how the interventions will mature, grow and finally be adopted in the system.



ROADMAP FOR TRANSITION BY DESIGN

Fostering the transition



NETWORK UNFOLDING OVER TIME

SOCIETY
Culture, Ideology

ECONOMY
Innovation, Competition, Entrepreneurship

TECHNOLOGY
Innovation, Diffusion

POLITICS
Institutional Change

LEAP
Breakdown

ORGANISATIONAL STRUCTURE UNFOLDING OVER TIME

INSPIRING

CONNECTING

SCALING UP

Download more tools at systemdesignproakt.org



Roadmap for transition

Materials

- Roadmap for transition template
- sticky notes
- intervention model

What

The roadmap for transition is a tool to plan the implementation of the interventions in a way that change occurs by design.

You use it to map the transition towards the desired goal by planning and growing the intervention model in time and space.

Instructions

Look at your intervention model:

1. First circle: what is the minimal version of the intervention model that you can implement in a first stage? On sticky notes, describe the minimal version of the activities you plan to implement, along with the actors involved.

2. Second circle: once the first activities are accomplished, how can you connect them to like-minded people/organisations? Write down the names of such actors, and the activities you need to create learning networks.

3. Third circle: how can you make sure your interventions become an established practice in the current system and reach the large public?

About **the toolkit**



“Remember, always, that everything you know, and everything everyone knows, is only a model. Get your model out there where it can be viewed. Invite others to challenge your assumptions and add their own”.

Donella Meadows
Thinking in Systems: A Primer



The creators

A few years ago, the need of tackling increasingly complex projects pushed Namahn and shiftN to collaborate on a Systemic Design toolkit. At the RSD5 symposium in Toronto (2016), the two partners presented the first version of the toolkit and assessed its fit for purpose during the conference workshop.

Since then, the original authors collaborated with Peter Jones (Systemic Design Association) and Alex Ryan (MaRS Discovery District) for continued development of the toolkit towards a mature version, ready for use.



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