

How detailed should your system map be? | System mapping – Part 4

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Why some causal relationships seem logical but conceal critical system conditions

The right system map isn't always the most detailed one

In the fourth part of this series on system mapping, we look at how the level of detail in a system map determines what dynamics become visible. A system map that is too simple fails to capture key interactions, while a system map that is too detailed often loses its clarity and practicality.

One of the hardest decisions to make in system mapping is therefore how much detail to include in your model. If you oversimplify things, you'll miss out on important dynamics. If you go into too much detail, it becomes difficult to read and less useful. The right choice isn't simply "somewhere in the middle" but depends on exactly what you want to understand or decide.



The level of detail determines what you see

The level of detail on your system map determines:

- Which feedback loops become apparent
- Which interactions you do or don't see
- How useful the model is for discussions and decision-making

A general model is clear and suitable for workshops, but it can obscure important differences. A detailed model is more accurate, but it can quickly become complex and hard to use. The key question, then, is what differences in the system are important enough to serve the purpose of your system map.

When a simple model is enough

If you want to understand how a sector is evolving towards circular value retention, an aggregated variable such as “the extent to which devices are repaired, reused, or refurbished” is often sufficient.

- Keep everything clear and organised
- Make the key feedback loops visible
- Facilitate discussions with various stakeholders

An example in the context of ReX:

- More ReX ? more experience and infrastructure ? greater availability of parts ? more feasible ReX ? more ReX

At this level, you can see the essence of the dynamics without getting bogged down in the details.

When you need to go into more detail

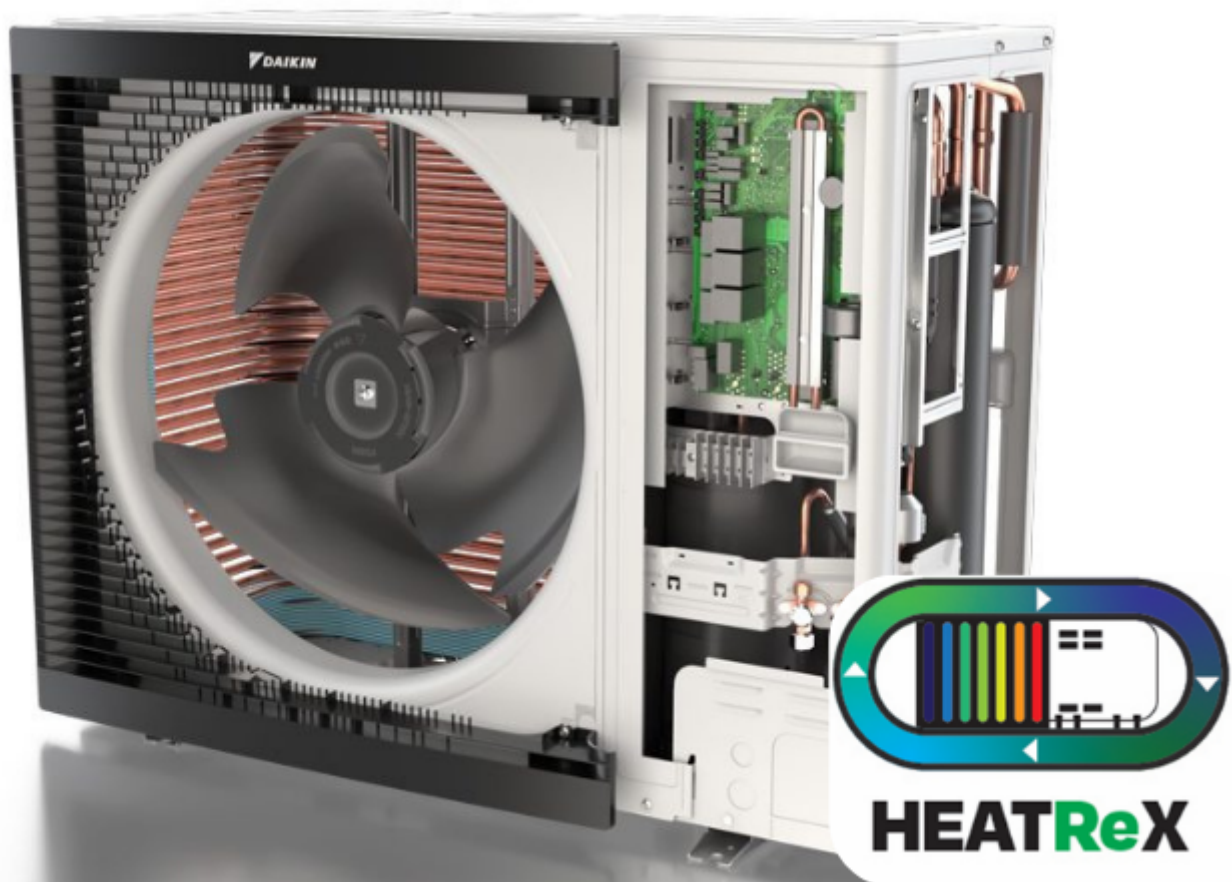
More detail is required when different activities operate differently or affect one another. This is typically the case when:

- They have other effects, such as the difference between selling repaired and refurbished goods
- They compete for the same resources, such as parts or equipment
- They call for different policy choices

An example for heat pumps:

- Repairs affect how long devices continue to operate
- Refurbished devices affect demand for new devices
- Parts harvesting affects the availability of spare parts and the feasibility of repairs

If you lump all of this together under the heading "ReX", you miss out on crucial interactions.



A pragmatic approach

In practice, a simple approach works best:

- Start with the broad strokes and map out the main points and key feedback loops
- Look for where detail is required and where different mechanisms overlap
- Refine your approach and focus only on what really makes a difference

Avoid modelling everything in detail at once, as this will make your system map more complex without providing any additional insight.

Where things often go wrong

A common mistake is to determine the level of detail based on language or intuition. It is therefore best not to simply use “ReX” as a catch-all term without checking whether the underlying dynamics are actually comparable. Do the different forms of ReX behave in the same way within the system or not?

Key insight

A good system map is neither as simple as possible nor as detailed as possible. It is just detailed enough to bring out the right dynamics.

Want to get started yourself?

Would you like to speed up ReX within your company or value chain? Our experts will help you to uncover system dynamics, identify levers for change and develop scalable circular scenarios. Are you interested or do you have any questions? Get in touch.

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Discover the other parts on system mapping

Part 1: [How do you handle conditional causal relationships in a CLD?](#)

Part 2: [Combining stock and flow variables in a CLD](#)

Part 3: [System equilibrium and why systems get stuck](#)

Part 4: How detailed should your system map be??

Part 5: Combining methods and tools in a pragmatic approach (coming soon)

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