

Understanding and leveraging systems



REGIONAL
INNOVATOR'S
NETWORK

What is a 'system'?

Riddle me a system...

You can't touch it, but it definitely exists

- When you try to change things you may get unexpected results

- The whole can behave in ways no one ever intended



If you chop it into little parts, you do not have the whole

- When a part changes, the whole changes

A system has its own logic and rules – it's own identity and behaviours

And...you are the 'system'

*You're not stuck in traffic,
you are traffic**

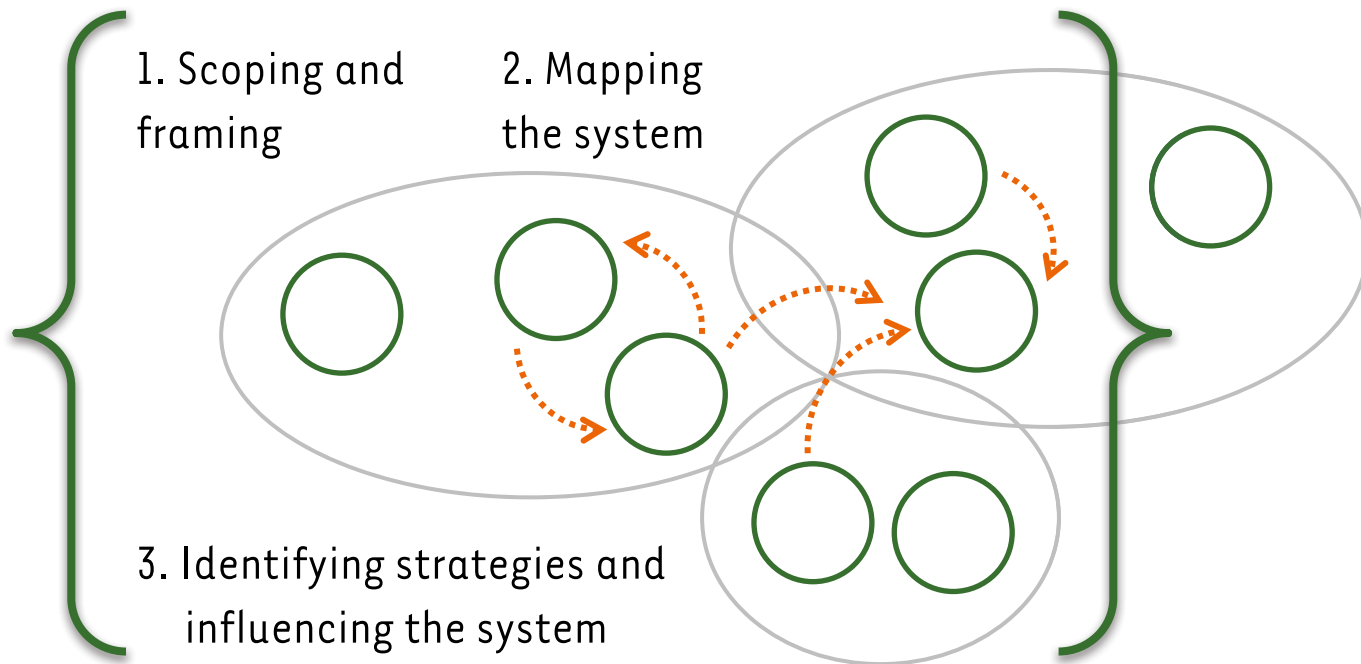
Everything you do every day, every choice you make, either reinforces the system or shifts it.

Systems disciplines

1. Systems thinking
2. Systems theories: complexity theory, organisational theory, complex adaptive systems, evolutionary theory, and more!
3. Systemic design: design-based innovation methods meet strategy and systems thinking

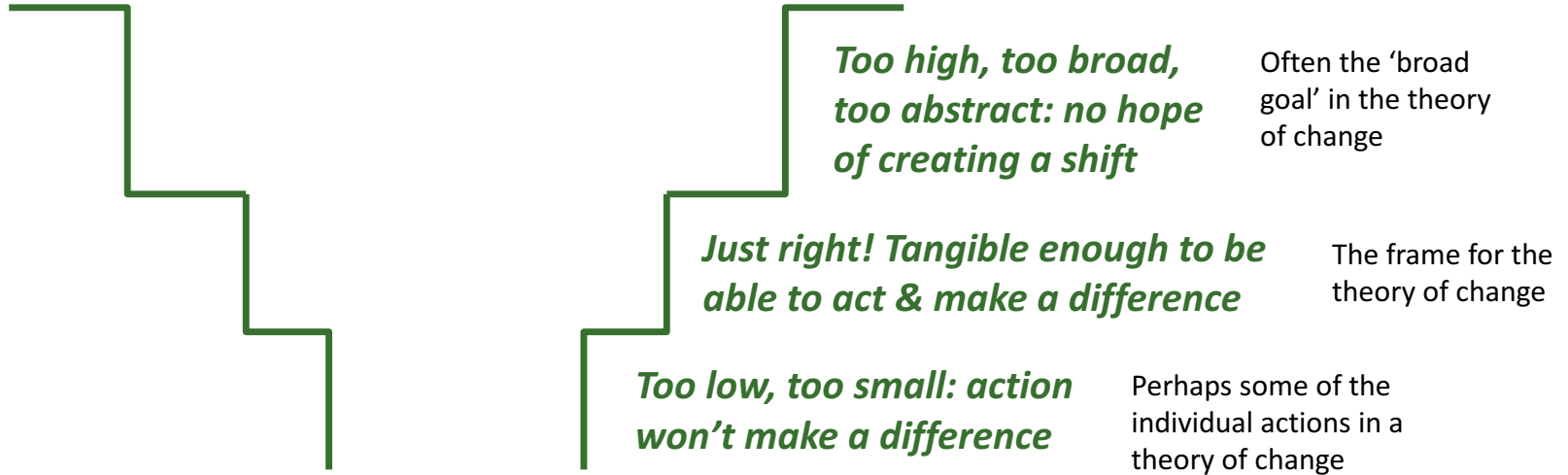
How do we intervene in a
system?

Three steps to intervening



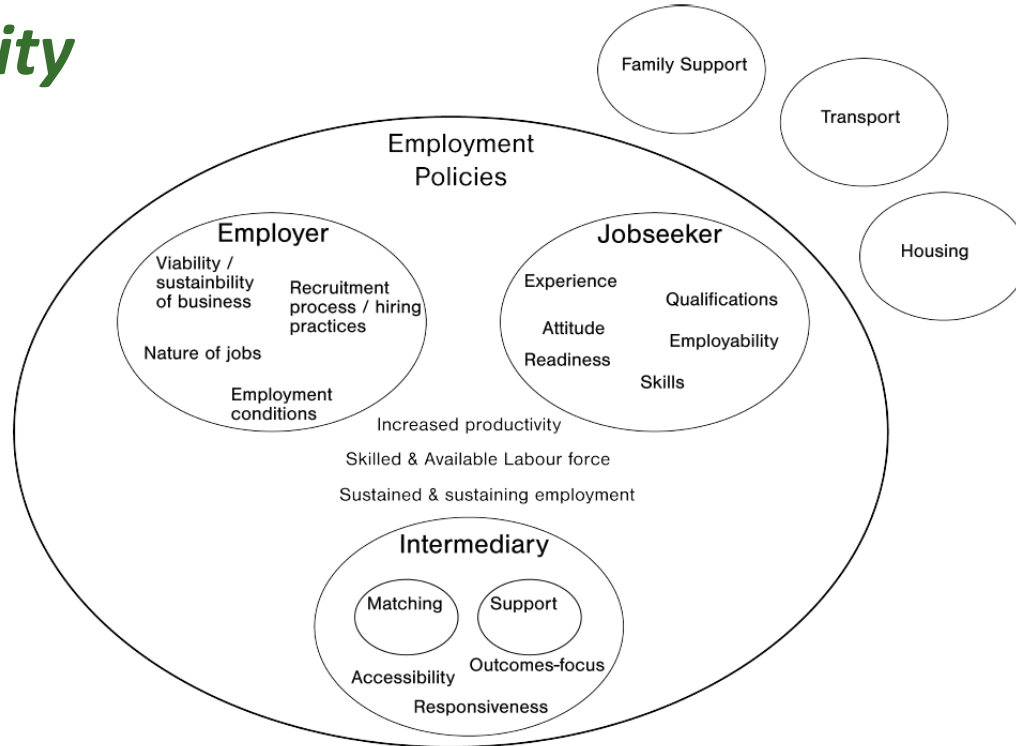
1. Scoping & framing

Funnel of scope



Drawing boundaries

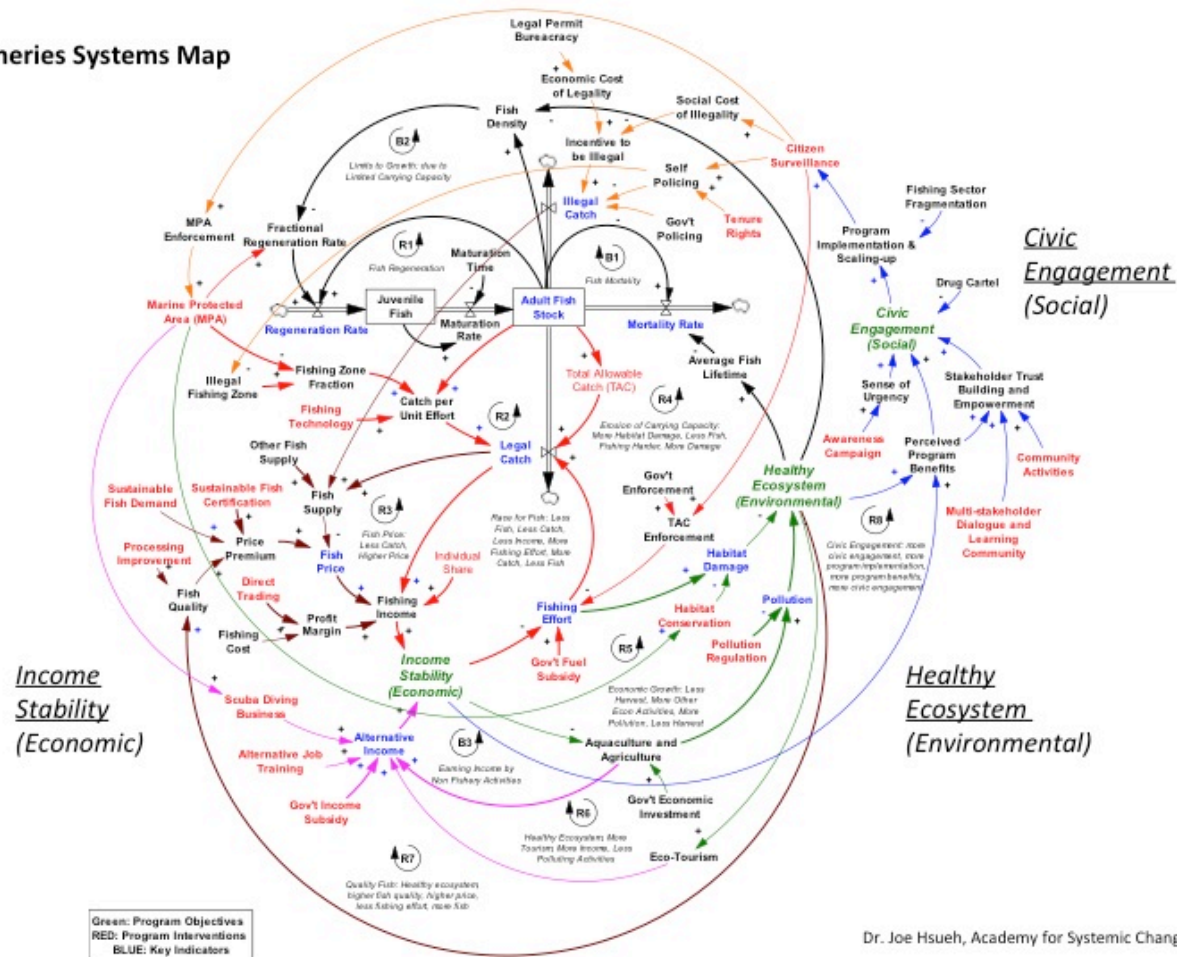
Opportunity Area map



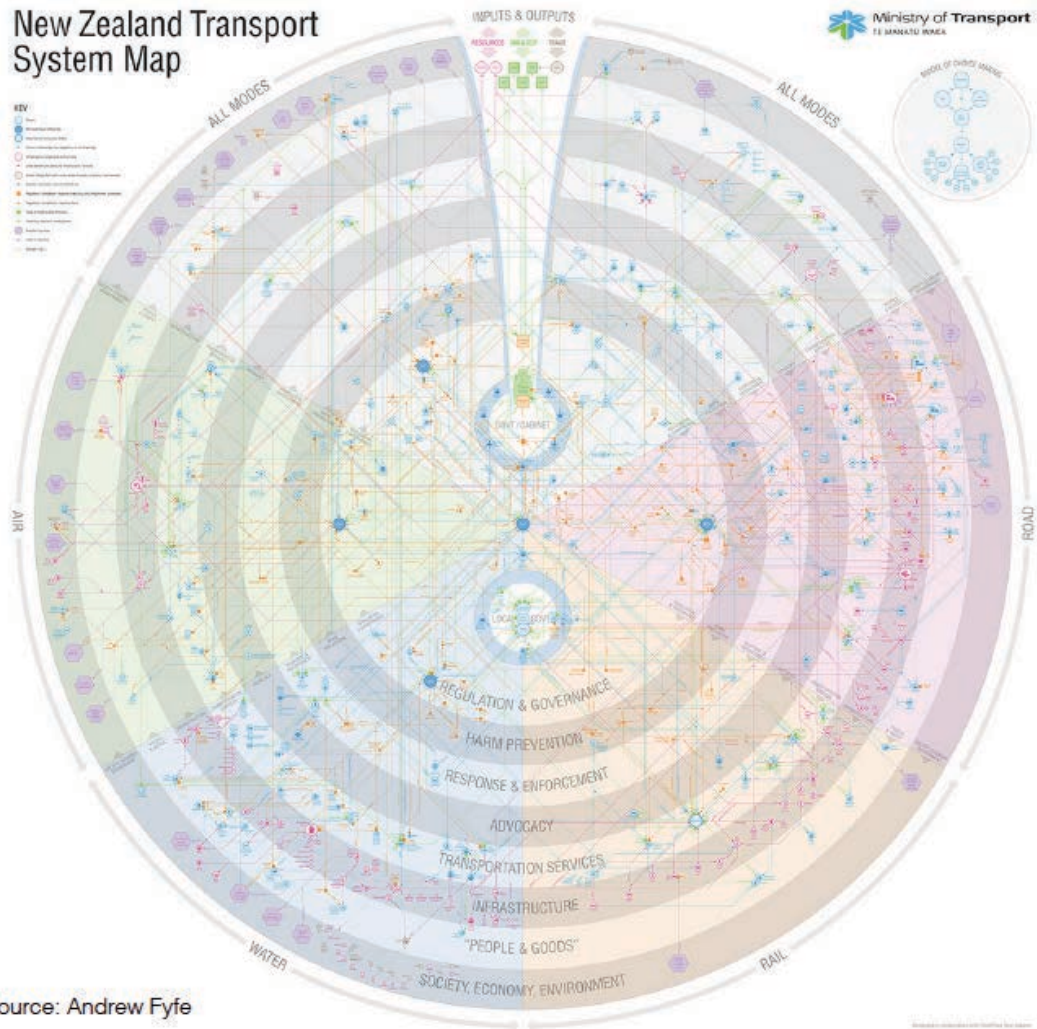
2. Mapping systems

We tend to think systems maps are complicated and hard to read...

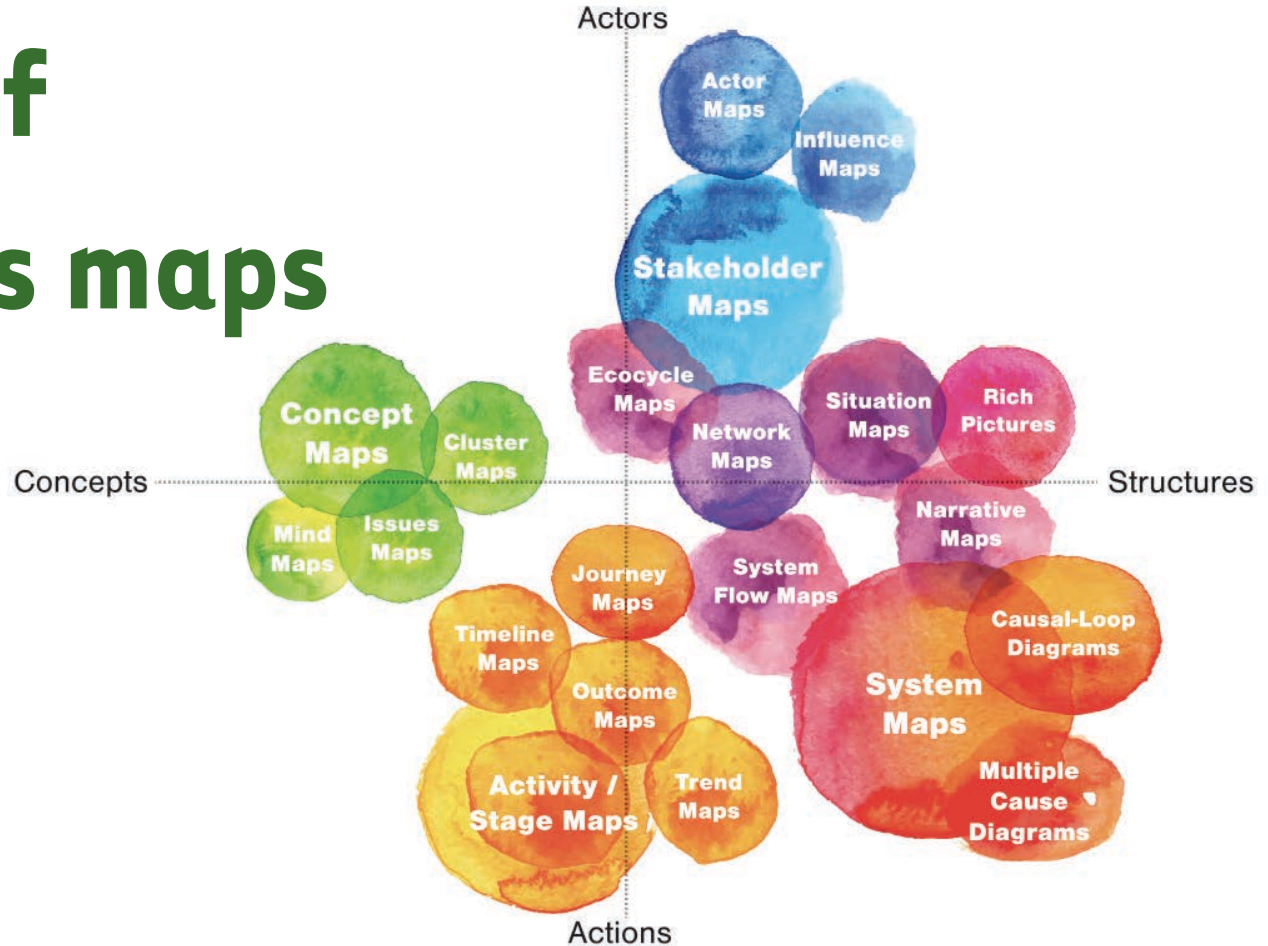
Fisheries Systems Map



New Zealand Transport System Map



Types of systems maps



There are many types of systems maps

Choose the one that fits your need for mapping

Concept maps



Source: <https://galileikids.weebly.com/science/the-solar-system-games>

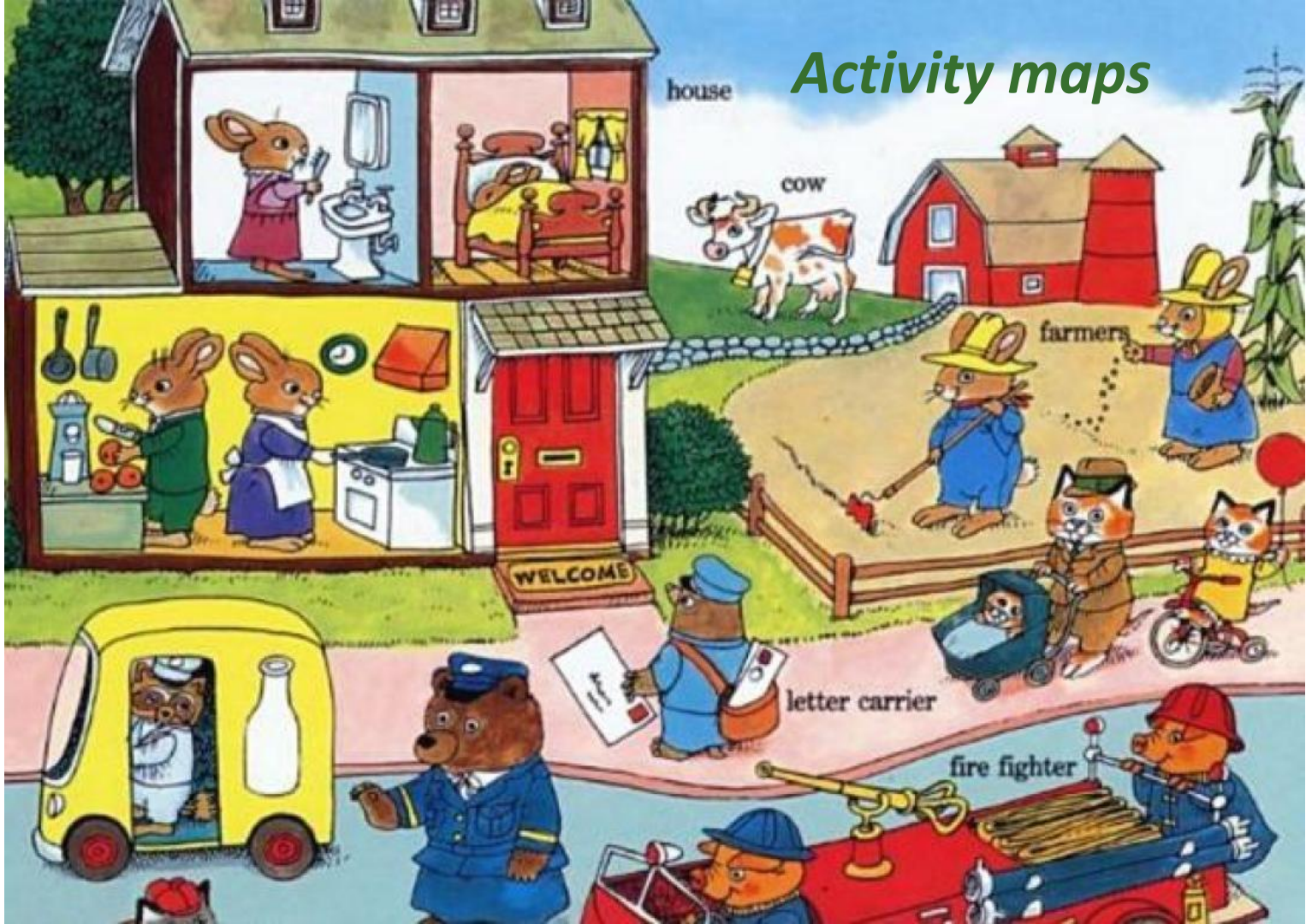
Perspective maps

“An accurate map
of the solar system”

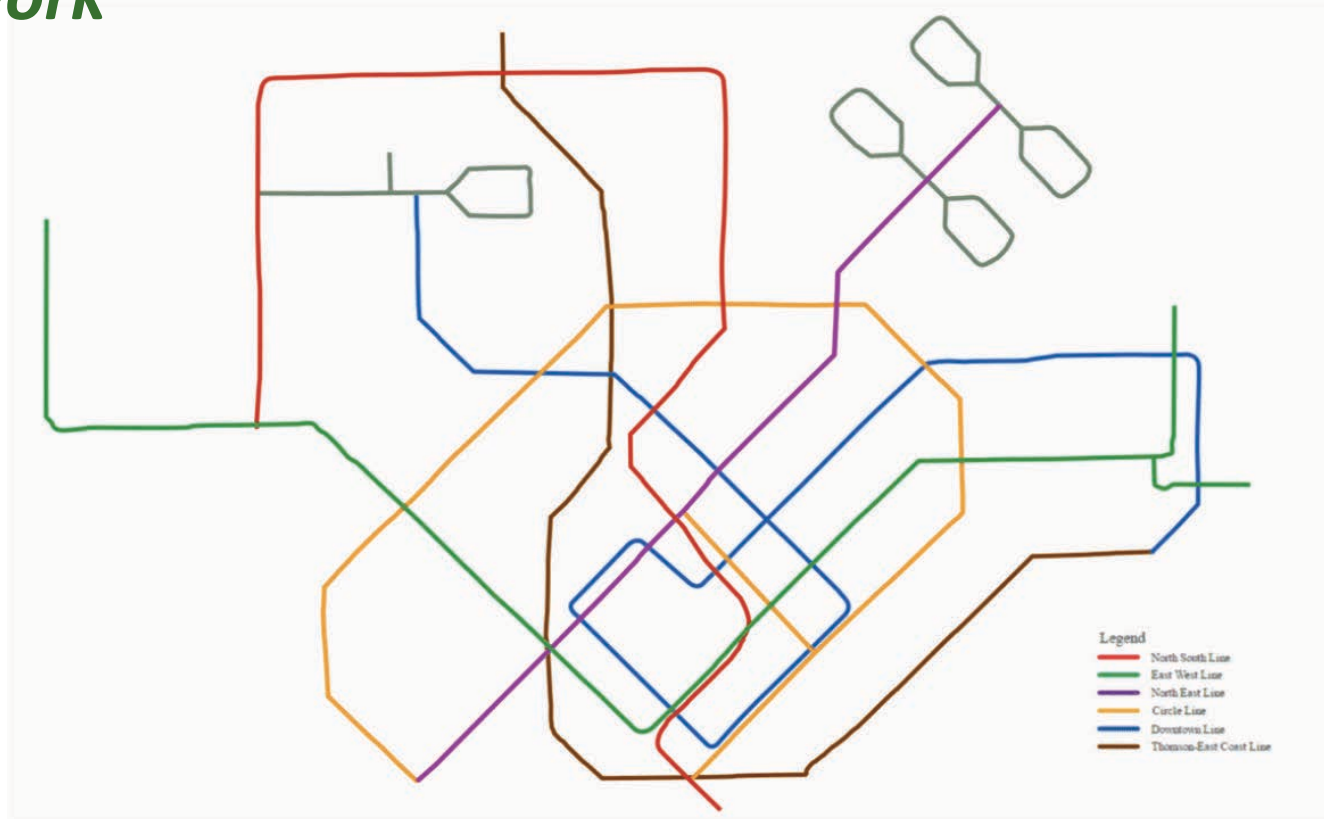
Source:
<https://cheezburger.com/8204769792/an-accurate-map-of-the-solar-system-accurate-edition>



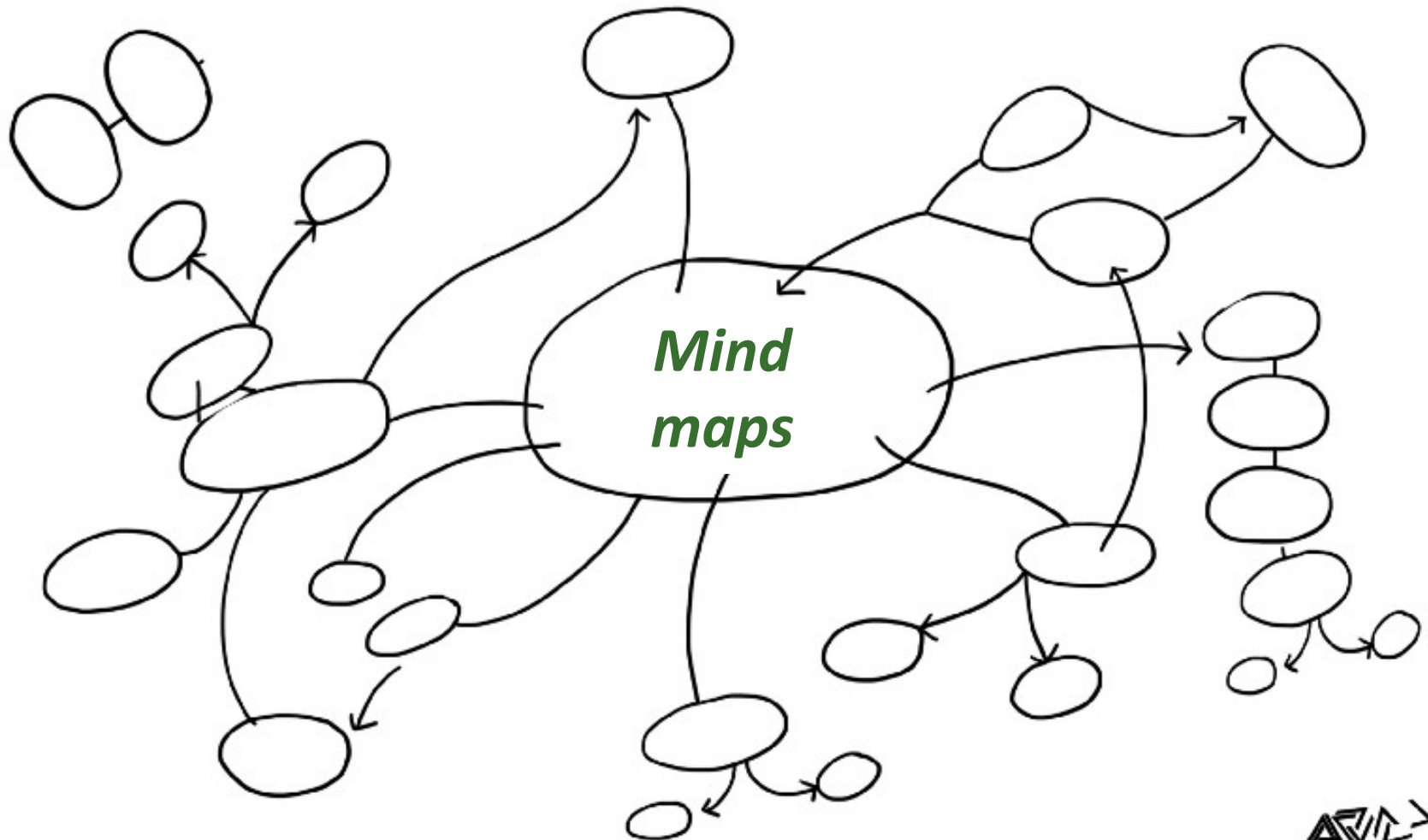
Activity maps



Network map

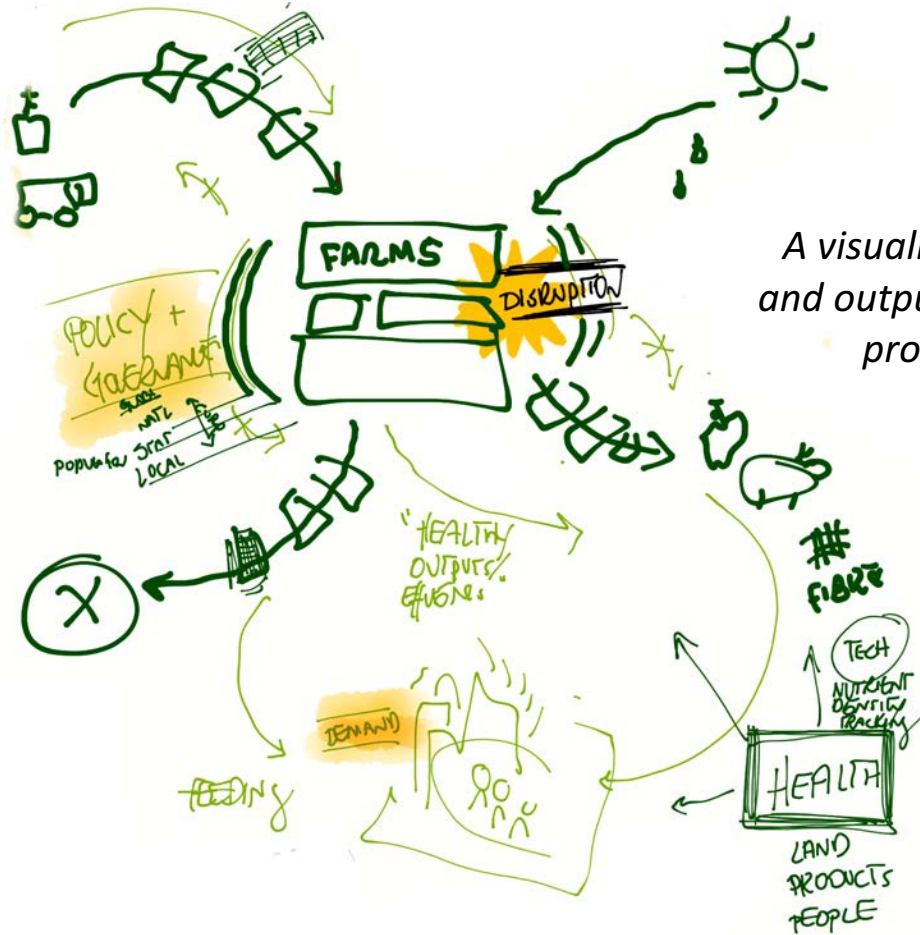


Source: Singapore transit map

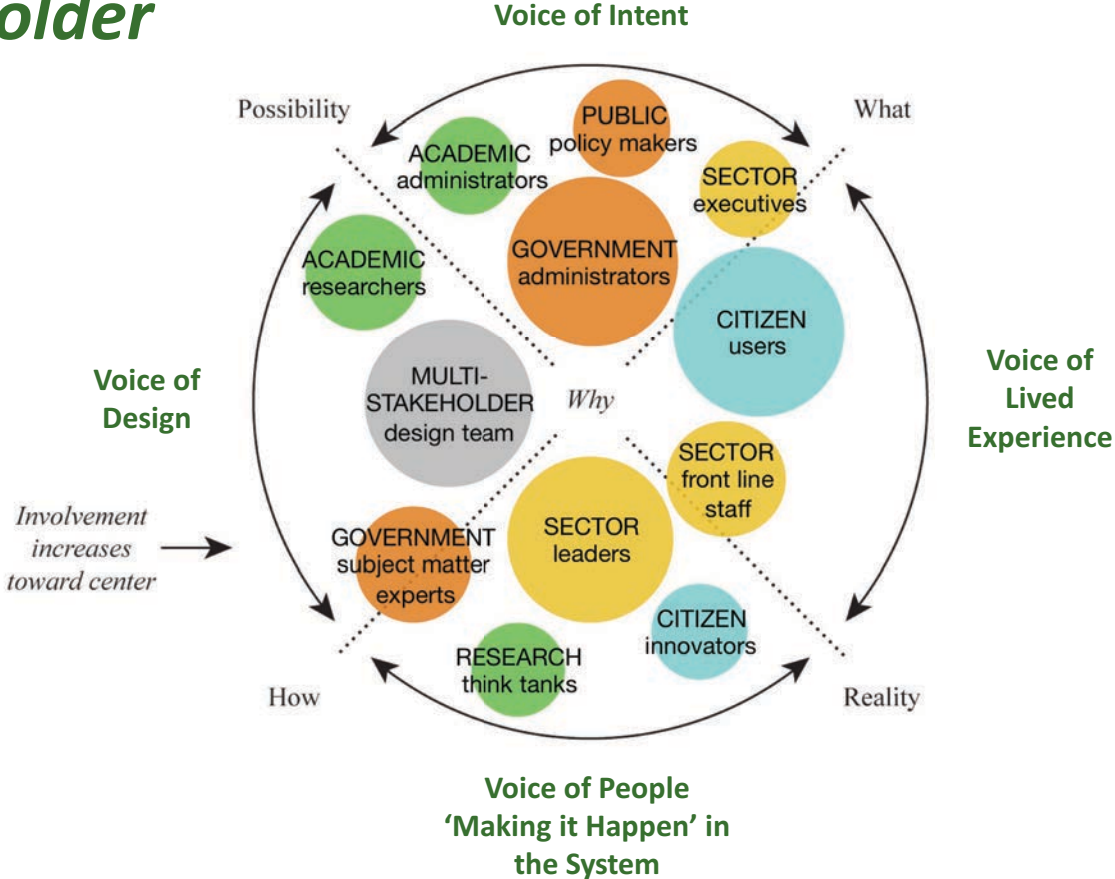


Source: Leyla Acaroglu, <https://medium.com/disruptive-design/tools-for-systems-thinkers-systems-mapping-2db5cf30ab3a>

Rich pictures



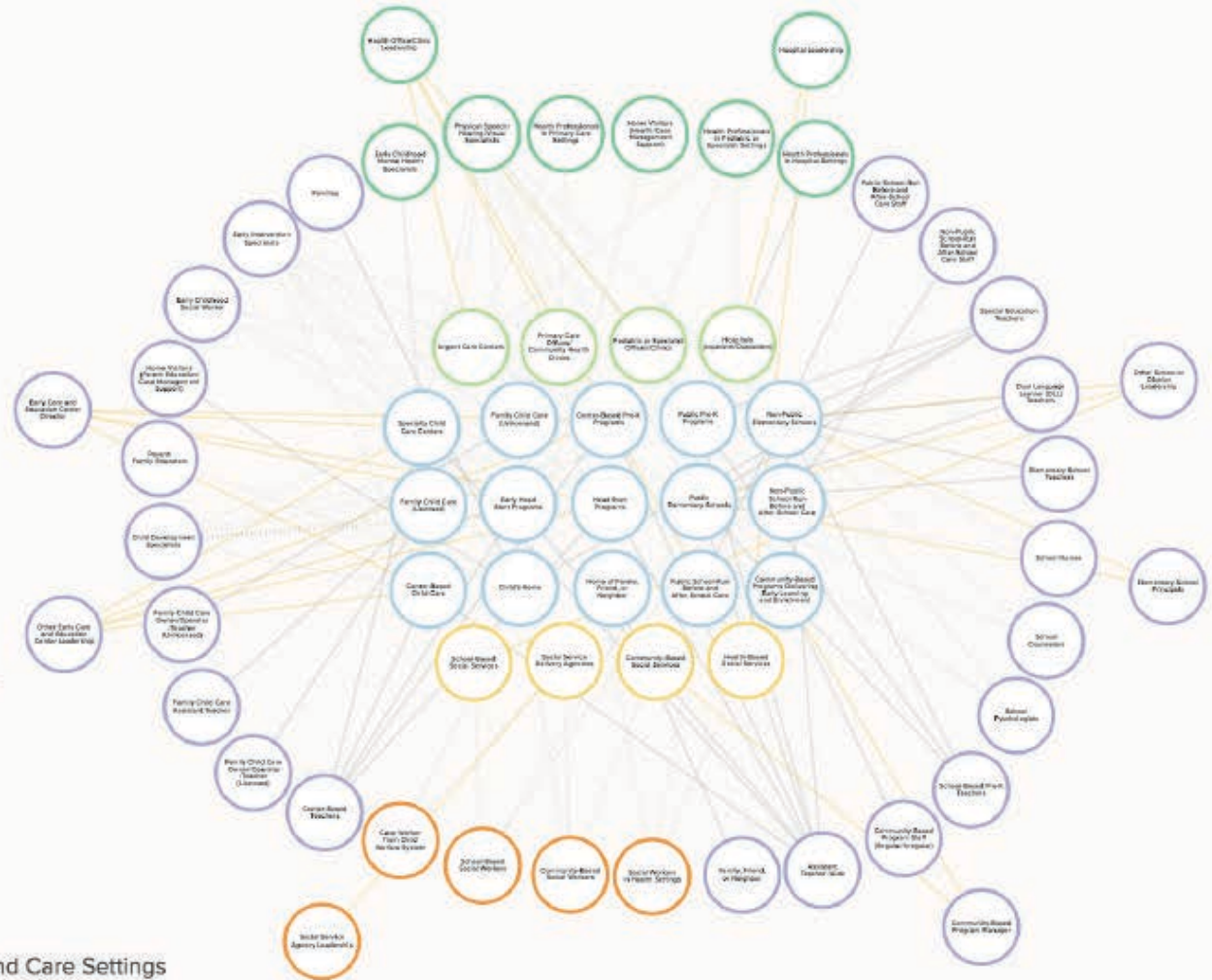
Stakeholder map



Source: Michelle Miller

Search

Actor Map FSG, US

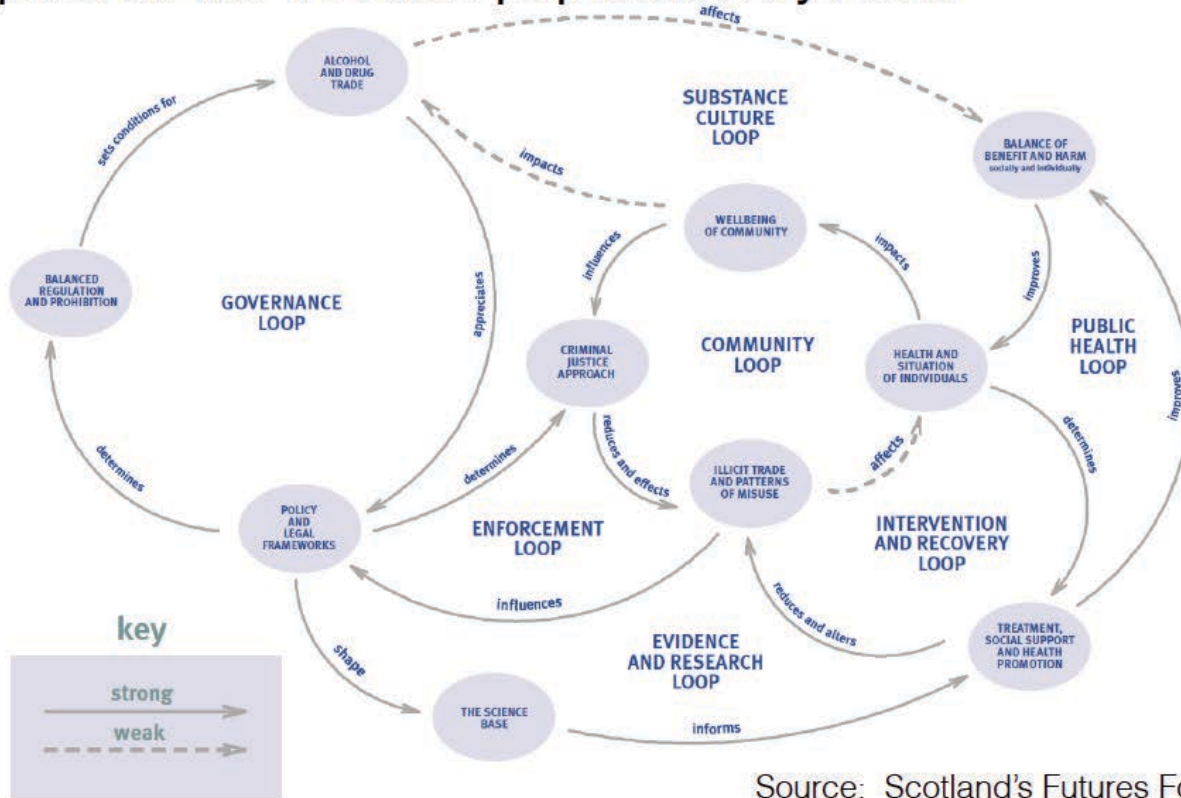


All Sectors

- Setting - Education and Care Sector
- Professional - Education and Care Sector
- Professional - Social Services Sector
- Setting - Health Sector
- Professional - Health Sector
- Setting - Social Services Sector
- Occasional Interaction with Children
- Frequent Interaction with Children
- Organizational Leadership of Education and Care Settings

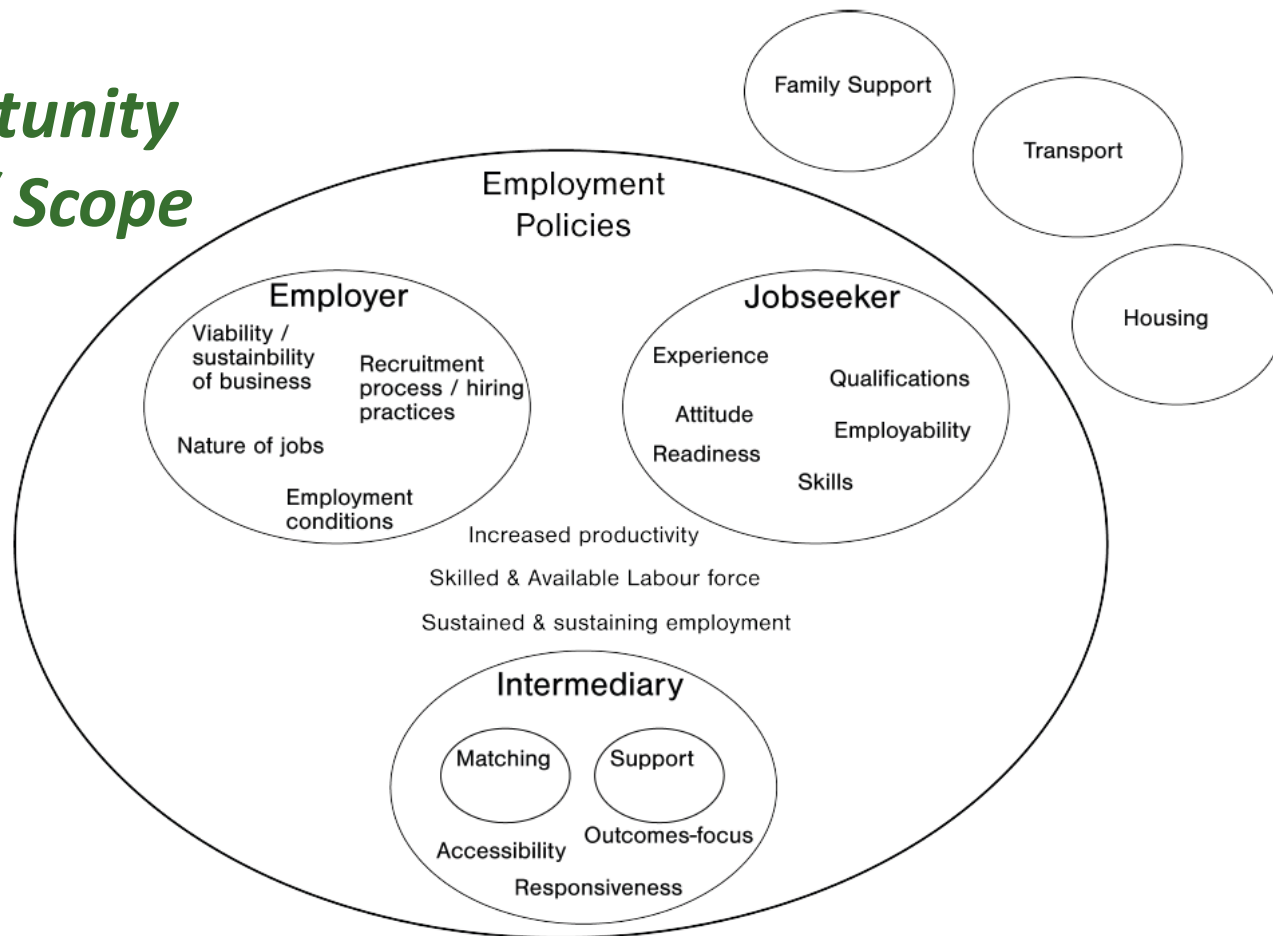
Proposed system AOD in Scotland to halve the negative impact on the Scottish population by 2025

System flow map

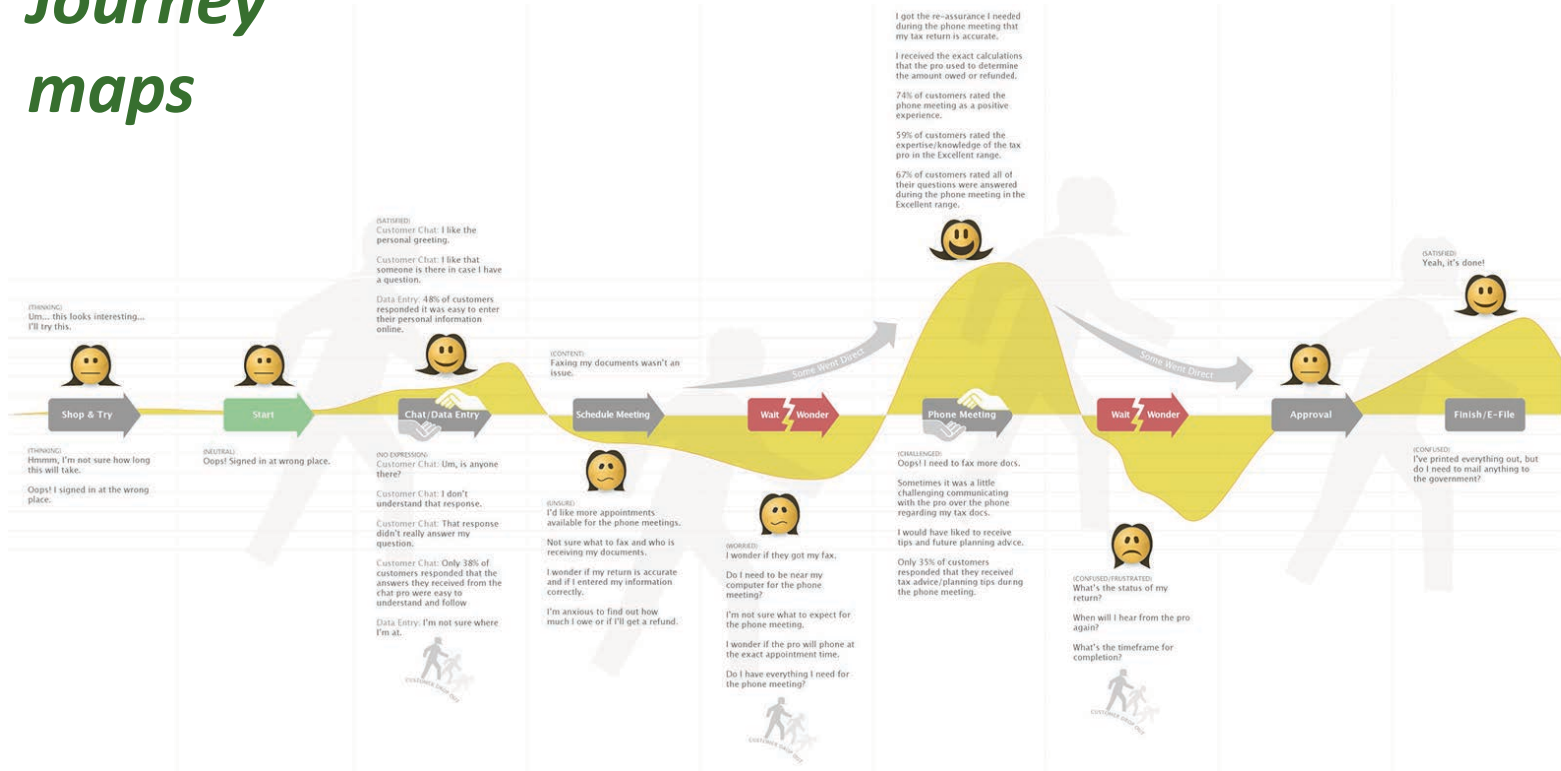


Source: Scotland's Futures Forum, 2008

Opportunity Area / Scope map



Journey maps



Source: <http://cxday.de/wp-content/uploads/2014/05/KerryBodine.com-Intuit-journey-map.png>
 Via <http://blog.uxeria.com/en/10-most-interesting-examples-of-customer-journey-maps/>

Concept maps





How the customer explained it



How the project leader understood it



How the engineer designed it



How the programmer wrote it



How the sales executive described it



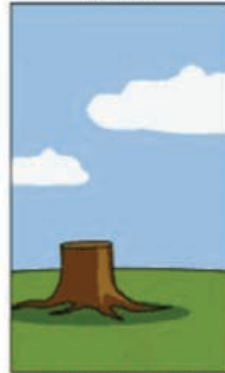
How the project was documented



What operations installed



How the customer was billed



How the helpdesk supported it



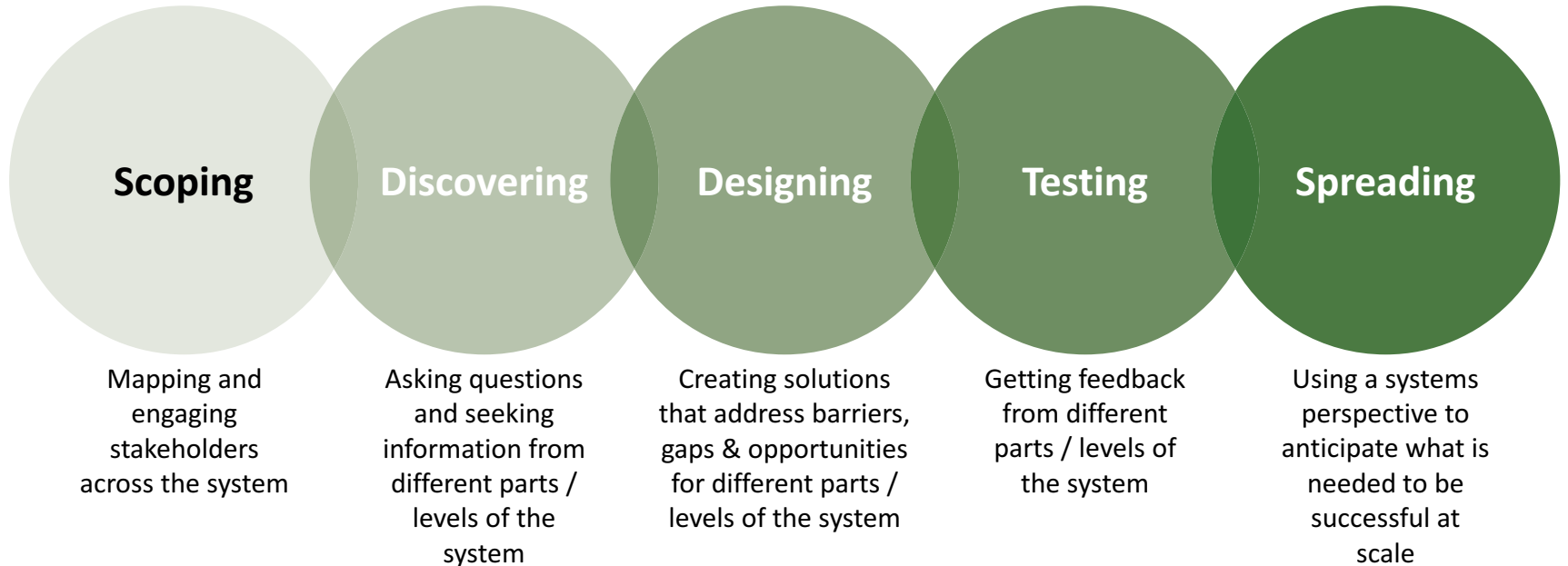
What the customer really needed

“All models are wrong, but some are useful”

George E.P. Box

3. Influencing systems

Throughout the process



There are different systems activities at each step of a project

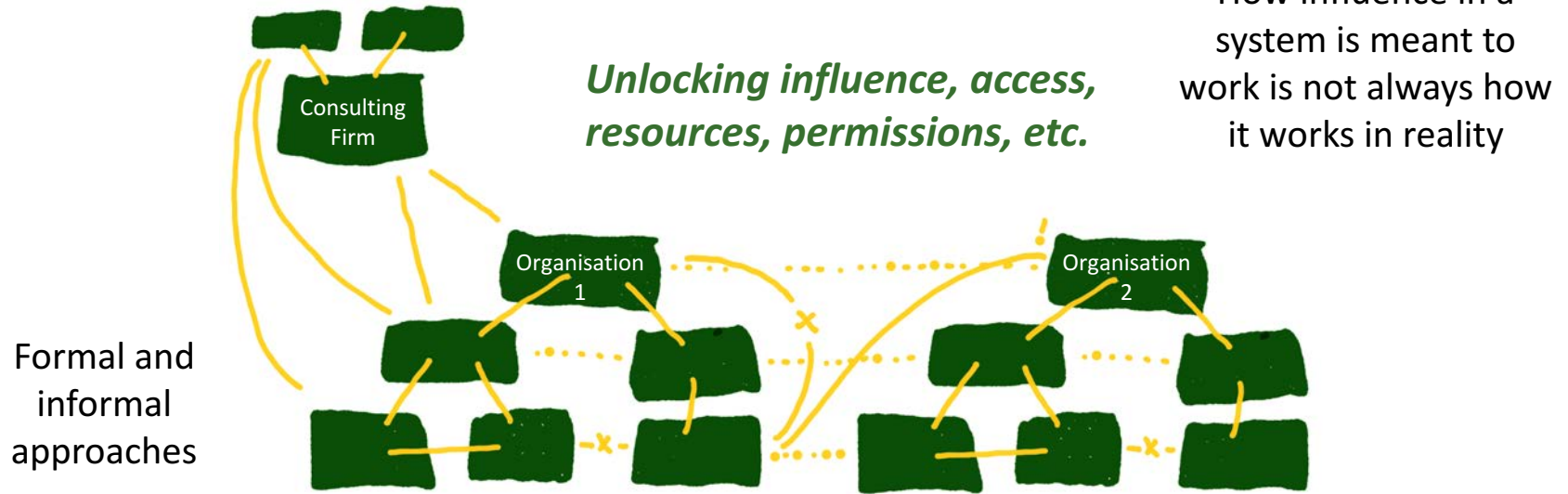
Leverage points

PLACES TO INTERVENE IN A SYSTEM

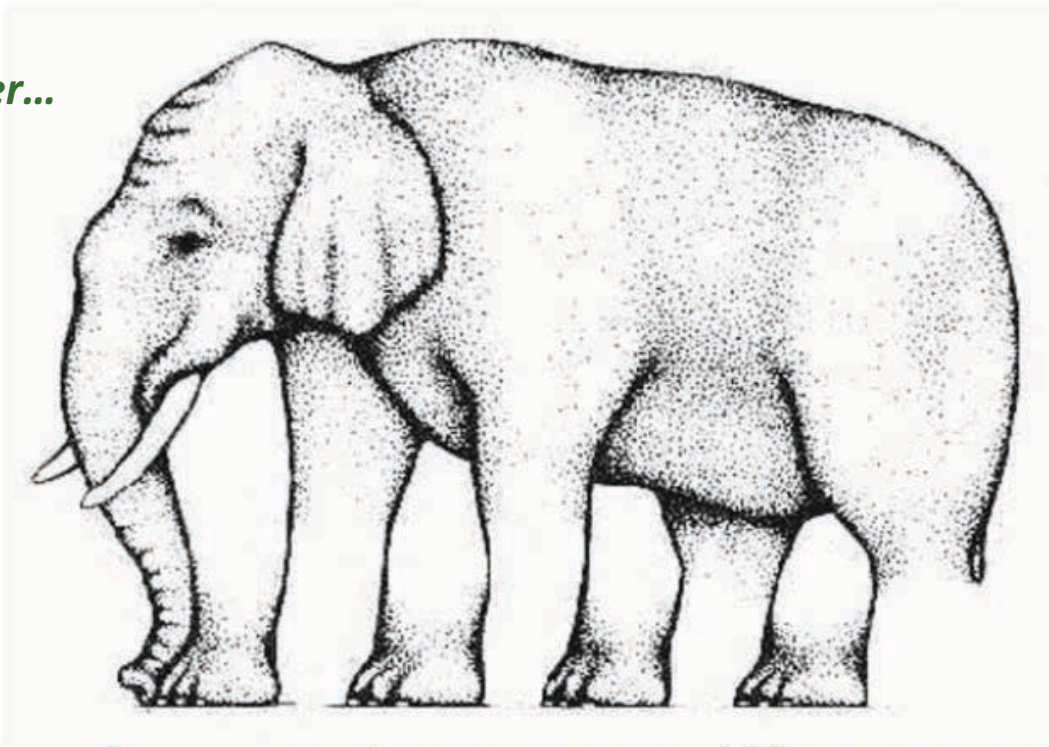
(in increasing order of effectiveness)

9. Constants, parameters, numbers (subsidies, taxes, standards).
8. Regulating negative feedback loops.
7. Driving positive feedback loops.
6. Material flows and nodes of material intersection.
5. Information flows.
4. The rules of the system (incentives, punishments, constraints).
3. The distribution of power over the rules of the system.
2. The goals of the system.
1. The mindset or paradigm out of which the system — its goals, power structure, rules, its culture — arises.

Engaging people for systems change



Just a reminder...



“None of us see the system. We see our own part based on our own background & history. And we all think we see the most crucial part”

Senge, 2014

Thank you!