

Using systems practice to refocus evaluation

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What we'll cover

- Some of the basics of 'systems practice'
- Examples across planning, implementation / monitoring and evaluation
- Pros, cons, requirements and considerations
- Q&A





What is a 'system'?

A system is any set of components that are have a relationship and dependence on each other. Those interactions produce outcomes or changes that are greater than the sum of their parts.









Systems practice is...?

- Systems practice = applied systems thinking
- Systems thinking is the mindset and way of understanding a context through the relationships and interactions of parts, not the parts by themselves
- So, systems practice is the use of specific methods or tools to apply this mindset





Different methods

There are many! Some of the more common ones include:

- Causal Loop Diagrams
- Fuzzy Cognitive Mapping / Participatory Systems Mapping
- Social Network Analysis
- Soft Systems Methodologies (e.g. Rich Pictures, like mind mapping)

The main thing is that they all take a systems view (relationships between parts) and work to understand the drivers of emergent outcomes.



Core components









Interconnection webs of relationships between individual elements

Boundaries

applied to help make sense of things, but they are permeable

Function

each relationship does or produces something

Emergence outcomes that are greater than the sum of individual parts



Practical steps

- 1. To start, **name the system** it helps to build clarity
- 2. Define **boundaries** vertically and horizontally
- 3. Identify the **individual components** of the system
- 4. Identify the **existence and nature of relationships** between them
- 5. Analyse, explore, interpret and **'make sense'** of the system depending on your **purpose**
- 6. Other steps?

it depends...



Examples from our work

Typically in three 'areas':

- Planning using a systems lens to take a different approach to understanding a problem / context
- Monitoring using a systems lens to monitor change over time
- Evaluation using a systems lens as one part of an evaluative effort





Planning – Safe at Home

- Domestic and Family Violence is a leading contributor to homelessness amongst women and children in Victoria. A Victorian NFP working in this space advocates for Safe at Home
- Safe at Home refers to the processes that enable women and children to remain safe at home should they choose, and the perpetrator removed. It's accepted as an approach, but is not occurring as it should.
- They wanted to use a systems approach to understand the barriers and enablers to Safe at Home working as it should
- We took a **cross-sectoral view** and spoke to representatives from a range of organisations. These include service delivery, policy, and peak bodies for different communities. Using semistructured interviews and qualitative analysis we produced the **Safe at Home Systems Map.**





Structure:

- 72 barriers and 28 enablers
- 7 pre-cursor outcomes ('sub-systems') in addition to the 'vision'
- Intersectional elements identified

Sub-systems include 'individual experience', 'financial security', 'justice system', 'service coordination', 'safety', 'support' and 'homelessness prevention'.

Value:

- Coalition builder everyone can find a piece
- New areas financial insecurity
- 'the old' awareness raising a perennial need



Monitoring – Community Group Connectedness

 Resilience is often framed as a role of emergency management. Knox City Council (VIC) is working on a whole-of-council approach to community resilience that can span all council functions. To that end, Council commissioned a pilot to understand community group connectedness in the municipality.

- We developed a **quantitative survey** that was distributed via Council staff to their networks (e.g. sporting clubs, environmental groups, etc).
- Respondents could nominate up to five groups they 'worked with'. They were also asked to rate their connection to council.
- We devised a two-form approach to connectedness relationship strength and relationship importance.





- 64 started the survey, with 55 identifying an additional 142 groups and organisations
- In total 198 unique elements, and 250 different relationships
- 30% of connections reported the max relationship strength' score, with another third below 19/24
- 80% were 'extremely' or 'vey important'. Only 8 relationships were 'not' or 'slightly' important.
- SNA metrics tell us that there are five organisations that are 'leaders' in the community. Council can now adopt this as a recurrent activity as part of regular operations.





Systems influence tracking



Systems influence tracking

- Evaluating a place-based health promotion intervention across a regional area.
- Key program activity is 'brokerage', with program staff working to influence and impact the system at various levels, including collaborations and networks within their local areas and across the region.
- Developed a baseline systems map to track the way they influence the system over time. Currently the map contains basic information relating to strength of connection and type of partnership. Drawing from monitoring data collected regularly over the next few years we will see how this map changes over time, and we'll also build a much richer contextual understanding of the system as we add more detailed information to the map.
- This tool will also be used to inform ongoing program improvements. Program staff will be able to identify gaps or key links within the system and where there are opportunities to increase their influence.



Evaluation – Promoting physical activity

 A pilot project wanted to apply a systems change approach to promote physical activity within the school environment

- We applied the novel **System Effects** methodology to develop pre- and post- systems maps
- System effects involves the use of soft systems, fuzzy cognitive mapping and graph theory
- The map incorporates student, teacher and parent perspectives, with both maps incorporating 241 responses (time 1) and 305 responses (time 2)







A coding framework was developed from a random sample of responses. This was applied to the preintervention data set, with outlier codes added in as required. The same framework was used 'post', with new themes identified and incorporated.





31 unique barriers identified with **226 relationships** between them

Prominent causes (connections going out) include lack of diversity of opportunities, fear of judgement by peers, and poor quality / accessibility of spaces and infrastructure

Eigenvector scores indicate that student motivation / laziness, poor accessibility of spaces and student interest are likely to be the most influential across the network.



37 unique barriers identified with 291 relationships between them.

Prominent causes include students lack of energy, preference to spend time on social media, lack of teachers to supervise.

Eigenvector scores indicate four of the top five influential barriers are still present except for the infrastructure barrier.

Legend Barriers





Pros and Cons

Pros	Cons
Using systems methodologies can help	A certain amount of (quality) data is required to make
reframe and contextualise findings from other	sure that the version of the system presented is
methods	accurate 'enough' for the purposes of use
They can incorporate a myriad of data forms /	In many instances they do not have the
types, meaning they can be used to help tie a	answer – but rather identify more questions /
narrative together	directions
Systems methodologies produce unique	The visuals often require appropriate levels of
visuals which can be a powerful output for	contextualising or understanding in order to make
sensemaking, discussion and conflict	the most of them. Their complexity can be difficult to
resolution (in some instances)	communicate if not well understood

It is another method – which also means there are resourcing, timing and capability considerations.



Requirements / considerations

Requirements	Considerations
Complexity – the scope needs to be sufficiently complex to warrant the effort. If you can do it 'by eye' – probably not worth it!	There are a variety of platforms that can be used to develop the specific systems map. Many (but not all) are cloud-based which has implications for some organisations in terms of data storage.
Clarity – there are many different specific methodologies within the suite of systems tools. Each have their own nuances – it is important to be clear on the question .	Utilisation of the outputs is another factor – they require resources – and while the visuals are impressive, it needs to be worth the cost. Is it the right technique to answer the question?
Capability – it is a technique that can be learned through practice. You need the time and – importantly – the opportunities to develop.	These techniques are best used in dynamic environments as a means of thinking about change. There are 'good', 'better' and 'best' ways in which they can be used – but they depend on your organisational context.



