

Applying systems thinking to explore the impacts and outcomes of SiREN.

Supervisors: Dr Roanna Lobo, Dr Jonathan Hallett and Professor Bruce Maycock.

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Background

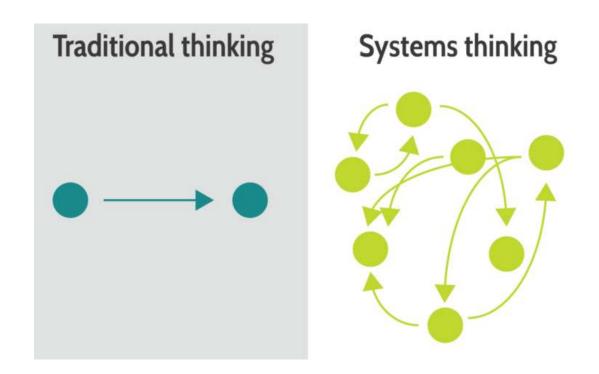
Research and evaluation capacity supports:

- more successful programs and policies
- efficient use of resources
- development and use of relevant evidence
- improved population health outcomes

Despite the potential to enhance public health practice, it is unclear how and in what ways partnership models, like SiREN, influence practice.

Systems thinking

Systems thinking is a discipline for seeing wholes. It is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static snapshots." Peter Senge.

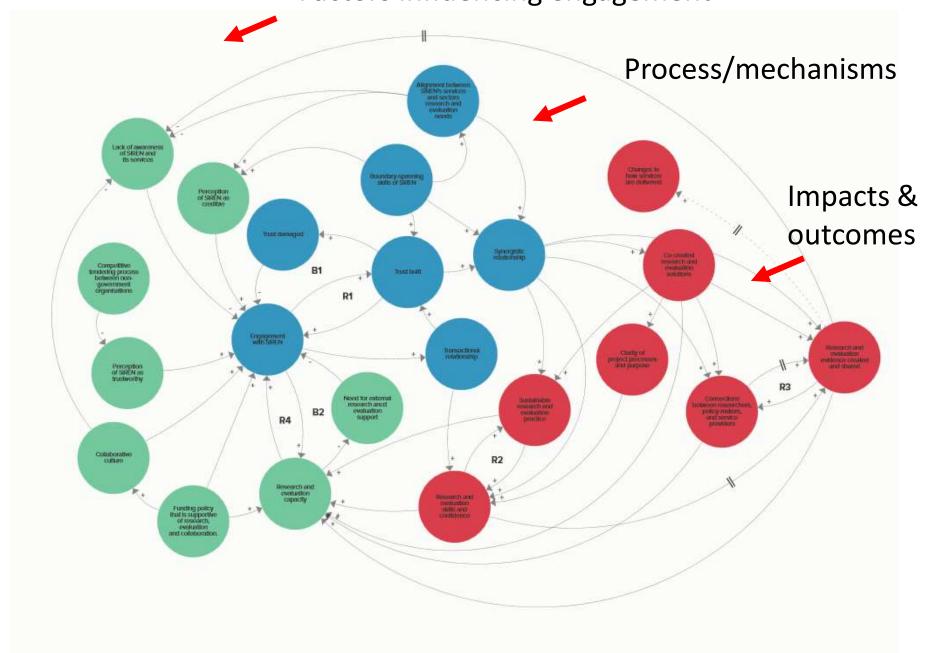


Methods

Data was collected from: SiREN organisational documents; online surveys (n=104); and in-depth semi-structured qualitative interviews with people who had engaged with SiREN (n=16).

- 1. Data was entered into NVivo and coded using a complex adaptive systems lens.
- 2. A draft causal loop diagram (systems map) was developed.
- A workshop with interview participants and the SiREN management team was held to refine the diagram.

Factors influencing engagement



Feedback

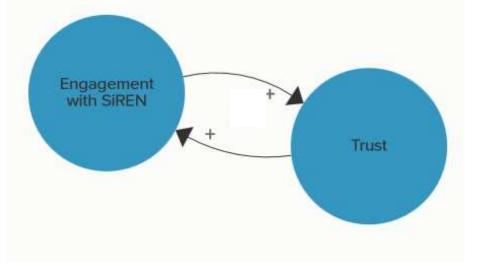
Feedback: A change within the system that feeds back in leading to further change.



Feedback

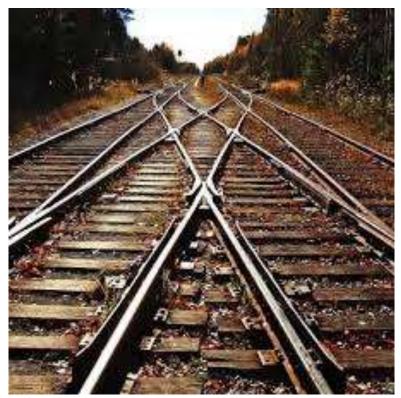
Engagement builds trust which leads to increased engagement.

"I think it's about showing credibility, following through with promises. So saying they'll do something and actually doing it. I think recognising... I think that stuff around not coming in and being, "We know everything," and listening to what the sector has to say, and trying to work with the sector..." Manger, NGO



Path dependence

Path dependence: Processes can have similar starting points and lead to different outcomes due to different decisions made along the way.



Adaptation

Adaptation: System changes in response to an intervention.

"It's (evaluation) not something you just tag on the end of something. It actually drives the whole (program)... I've learned a lot about the importance of evaluation" Project Officer, NGO

"(SiREN) had been encouraging me to find these sort of research projects, you know, and so I'm starting to kind of now see (research) opportunities which is great." Project Manager, NGO

Emergence

Emergence: Elements within the system interact to bring about changes.

"...we've broadened our scope (referring to new services) and part of that has been because we've increased the evaluation methods that we use and the way that we evaluate." Manager, NGO.



So what?

Using systems thinking supported

- the identification of the real drivers of change
- the understanding how elements interact and contribute to outcomes
- the understanding of how broader system factors influence SiREN's ability to achieve its aims
- a participatory approach to creating a shared understanding of SiREN

References

- Best, A., & Holmes, B. (2010). Systems thinking, knowledge and action: towards better models and methods. *Evidence & Policy: A Journal of Research, Debate and Practice, 6*(2), 145-159. doi:10.1332/174426410X502284
- Fredericks, K. A., Deegan, M., & Carman, J. G. (2008). Using System Dynamics as an Evaluation Tool: Experience From a Demonstration Program. *American Journal of Evaluation*, 29(3), 251-267. doi:10.1177/1098214008319446
- King, G., Servais, M., Kertoy, M., Specht, J., Currie, M., Rosenbaum, P., . . . Willoughby, T. (2009). A measure of community members' perceptions of the impacts of research partnerships in health and social services. *Evaluation and Program Planning, 32*(3), 289-299. doi:10.1016/j.evalprogplan.2009.02.002
- Paina, L., & Peters, D. H. (2011). Understanding pathways for scaling up health services through the lens of complex adaptive systems. *Health Policy and Planning*, *27*(5), 365-373. doi:10.1093/heapol/czr054
- Prashanth, N. S., Marchal, B., Devadasan, N., Kegels, G., & Criel, B. (2014). Advancing the application of systems thinking in health: a realist evaluation of a capacity building programme for district managers in Tumkur, India. *Health Research Policy and Systems*, 12(1), 42.
- Senge, P. (2006). The *Fifth* Discipline: the Art and Practice of the Learning Organization. New York: Doubleday/Currency
- Renmans, D.; Holvoet, N.; Criel, B. Combining Theory-Driven Evaluation and Causal Loop Diagramming for Opening the 'Black Box' of an Intervention in the Health Sector: A Case of Performance-Based Financing in Western Uganda. *Int. J. Environ. Res. Public Health* 2017, 14, 1007.
- Rutter, H., Savona, N., Glonti, K., Bibby, J., Cummins, S., Finegood, D. T., ... & Petticrew, M. (2017). The need for a complex systems model of evidence for public health. *The Lancet*, *390*(10112), 2602-2604.

