



Embedding systems thinking into the project life cycle – a public health case study

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INTRODUCTION

The call to embrace complexity science and systems thinking (ST) has been echoed loud and clear across the fields of public health, one health, planetary health and wider sustainability transitions like those abiding to the UN 2030 Agenda (Green, 2006; Leischow et al., 2008; Leischow & Milstein, 2006). Often, academics advocate for an ongoing practice or competence embedded in organisational processes, rather than a service delivered by external experts requiring a budget (Leischow et al., 2008; Rocheleau et al., 2022). So, the rationale for governments to utilise or practice ST in the process of addressing increasingly complex problems is well articulated (Kaufman et al., 2014), yet there is not much guidance or empirical insight of what this looks like in practice.

While there are myriads of studies that utilise ST tools, such as system dynamics (SD) simulation models and causal loop diagrams (CLDs), the majority of studies are expert-led and only report on the modelling process in relation to the problem at hand. There is little research on how (ST) both can be developed as a competence and practiced in an organisational setting, e.g. integrated in management processes, on an ongoing basis. This gap might be a contributing factor to the current undesirable situation that ST and complexity language is more of a lip service than actual management practice (Savona et al., 2021).

PROBLEM STATEMENT

If we want to increase embeddedness of ST in the way governments operate, including the use of system dynamics models, it is crucial to understand how ST practice, tools and language integrate across the project management cycle and general practice. To gain further insight into the interfaces between ST tools and practice and standard project management processes and tools, this study aims to describe how and to what effect a public health project used a ST approach, incl. CLDs, to address a localised public health issue in Australia through collaboration.

APPROACH

This qualitative case study of a public health program that was delivered in 2021-2023 in Victoria (ICAM), Australia uses observation, document analysis and secondary analysis of evaluation interviews. A third party held process evaluation interviews (N=12) at the end of the program. The interviews explored the stakeholders' experience of taking this novel approach and how it compared to previous project experiences. In addition, the study will include an analysis of the project documentation, such as meeting notes and presentations.

RESULTS

The results are work in progress. They will report on both the process of integration and the effect of the following topics:

- ST tool and methodology integration and adaptation to traditional program structure:
 - o CLD to summarise needs analysis, function as narrative, become boundary object to gain consensus upon leverage points given the budget and timeline

- o CLDs as basis to guide program evaluation, e.g. driver diagrams and theory of change
- Public sector project management process adjustments:
 - o The effect of taking a systems approach on project timelines, implementation approach, and evaluation
 - o The effect of taking a collaboration instead of a competitive approach on:
 - The finance management system
 - The governance of the work and the meeting structures
 - Trust of stakeholders towards the department's intentions
 - o The effect of running integrated projects simultaneously on time and effectiveness
- The learning curve within the project management team (who received foundational ST training), and how small tweaks supported the overall sentiment throughout the project
- The impact of systemic design on the sustainability of the work beyond the program timeline.

DISCUSSION

TBC in detail

Embedding ST into governmental processes provides a different set of challenges than simply hiring expert consultants to develop a ST or SD model and trust that the organisation knows how to implement the indicated policies. We know a lot about how to build good models and how to engage stakeholders in the process. Yet we are lacking the integrational elements that might pre- and proceed such an engagement in order to translate the models' insights into a lived reality.

The embeddedness of a ST specialist into the project team was instrumental to use the tools, design the program around the principles of ST. It was necessary to be available to guard those principles and participate in trouble shooting throughout the process. However, the rigid structures of governmental processes provided great obstacles and just finance alone consumed almost 0.6FTE over a year.

There was a notion of surprise about the achievements of this program, which went beyond expectations. This underscores the novelty of the ST approach. Several stakeholders voiced their desire to take this kind of approach more often. Several asked for further learning opportunities, one formed a ST community of practice, and another committed to professional development. This supports that a foundational level of ST would allow public sector decision-makers to make distinctions between linear and non-linear problems, picking the right tools in the process and understand their implications better.

If we care about using ST in the context of climate and health issues as well as reaching the agenda 2030, fostering this baseline understanding of ST approaches will be paramount.

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KEYWORDS

Public sector projects, systems approach

