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Group/Affiliation

Authors

The SCHEMA project seeks to improve decision-making for health and sustainability in Malaysian cities through the application of systems thinking and place-based methods. The SCHEMA Case Study Series highlights a set of urban challenges and the actions that have been taken to address them, highlighting where systems thinking and a place-based perspective can shed light on underlying complexity and lead to more effective policies and interventions.

Overview

Information about the broad problem. Draw upon global and regional examples and data. Show that this the topic is relevant to many different contexts. What are the common patterns that emerge?

Local Context

Tell us how this issue is specific to the Malaysian context. To the geographical context – river, city, neighbourhood. The scale (or scales) at which the problem appears. What is unique here? How is this problem here different from this problem elsewhere? What specific opportunities does the place the challenge exists in provide?

Addressing the Problem

What did you do (or what intervention did you study)? Why did you (or the implementers) choose to do it that way? Did planning and implementation align? What worked well and what didn't? What else do you want me to know? Oh, and don't forget to show me (with pictures!) what your initiative looked like.







Figure 1: An example of what a figure looks like

Box 1: Training - Language Barriers

MoH/MoE train incoming canteen operators to develop their capacity to provide nutritious food at school. Training is delivered in standard *Bahasa Malaysia* (the national language). However, Malaysia is highly culturally diverse. Many operators are non-Malay, with poor command of *Bahasa*, and thus have difficulties benefiting from the training. This is a further challenge for school nutrition in predominantly non-Malay communities.

Outcomes

What changed? Did the outcome match the intervention vision? Why or why not? Was that a good thing? And show me the outcome – with pictures?

Box 2: Some Common Systems Problems

Drifting goals. Difficulties in achieving set standards causes these standards to be relaxed., Lowering the difficulty of tests to improve scores is easier than improving quality of education.

Escalation. Competition between groups draws both groups into a vicious cycle neither can escape. The nuclear arms race.

Fixes that Fail. A quick and easy solution makes the problem worse in the long term. Building roads to reduce congestion increases sprawl, commuting distance, and congestion.

Limits to Success. A strategy that worked well in the past can't take you to the next level. Customer support is not prepared to meet increased demand from a successful marketing campaign, creating customer dissatisfaction.

Shifting the Burden. *Treating symptoms takes the focus off the underlying problem. Relying on pain-killers rather than visit the doctor to treat a back problem – for months!*

Success to the Successful. A small advantage or head-start creates a winner, because the other party can never catch up. The rich get richer because it is easier to make money when you already have money.

Tragedy of the Commons. It makes sense for each person to behave selfishly – but everyone loses out in the end. Everyone adds cows to a shared pasture, so the pasture degrades and can only support fewer and fewer cows.

Overshooting Goals. Nothing happens in response to efforts. Then, too much happens at once. Trying to get just a shower to just the right temperature.

Accidental Adversaries. Two groups working together take actions to solve internal problems that create new difficulties for their partner. Marketing overpromises to clients, creating delivery problems for Engineering. Engineering compensates by providing Marketing with pessimistic estimates, making Marketing's job more difficult.





Systems Solutions

Give us a good story, and we will work with you to tell it in a systems diagram. And, of course, an explanation of what the diagram means.

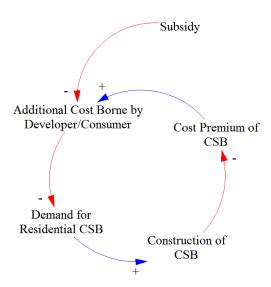


Figure 2: An example of what a systems diagram looks like. Your complexity may vary.

Oh yes, this is shorter than it should be. We are going for about four pages, right? Fill it out!

Further Reading

Keep this short. What might a policy-maker want to read more about?

Reading Influence Diagrams

Relationships between two variables are represented with arrows. Here, positive relationships (change in X results in a change in the same direction for Y) are described with blue arrows and a "+" sign; negative relationships (change in X results in a change in the opposite direction for Y) are described with red arrows and a "-" sign.



When two or more variables form a loop, it can be reinforcing – amplifying the effects of the relationships, or balancing – bringing the effects of the loop to some equilibrium. These loops and their interactions with each other drive systems behaviours, often in surprising ways.

