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# Complexity informed theory of change



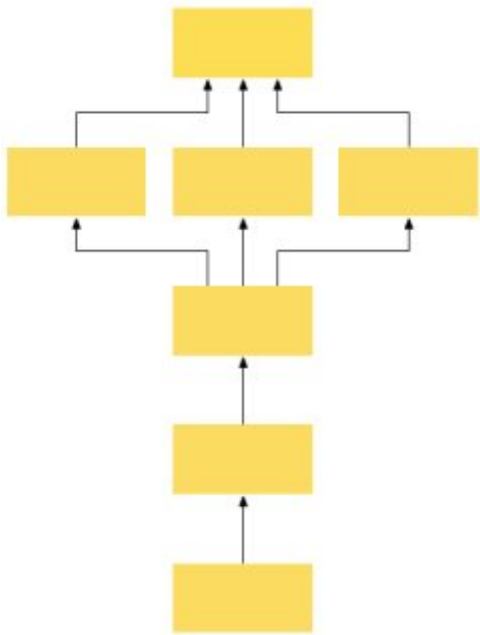
Marcus Jenal

All blogs

**The "complexity aware" theory of change approach can help managers develop appropriate strategies for interventions and focus their attention.**

We know that current development challenges are complex. But not all elements of a development programme are necessarily complex ([see Mesopartner Working Paper 16](#)). Can a theory of change show which aspects of a programme are complex and which aren't? How does this help managers develop appropriate strategies for interventions and focus their attention?

I have been thinking quite a bit about monitoring and how to find a monitoring framework that works in programmes that are facing the complexities of the real world (I [blogged about a new conceptual framework for monitoring and results measurement](#) and also about [moving from spotlight indicators to sensor networks in monitoring in complex systems](#)). More monitoring guides speak about the complexities programme managers and staff face "out there" and some guides even venture as far as to say that change in the real world is not linear or predictable. The new BEAM Monitoring guidance, which I co-authored, for example, states that "a market systems programme is unlikely to achieve its goals in a simple, linear way. It may be difficult to fully understand (at least in advance) how causes and effects will work at a system-wide level. There may therefore be significant uncertainties about how the overall market system may be re-oriented to serve poor people better."



But what these guides recommend is usually still “traditional” results chains – which are inherently linear – and a fairly detailed prediction of what will happen and what is needed to make this happen.

This does not mean that because complex situations are unpredictable we cannot develop a theory of change. On the contrary, we need to capture our hypotheses of how we think we can get to the change we want. Being aware of complexity does not mean that the only thing we can do is to venture “out there” and try all kinds of random things. Trial and error needs to be systematised.

So what should a “complexity aware” theory of change look like? Others have written about this (for example Vogel and Fischer\*), and we have tried to condense current thinking and practice in the [BEAM Monitoring Guidance](#):

- The theory of change needs to be presented as an overarching framework that explains how the programme intends to work, but without detailing the specific mechanisms of change (i.e. interventions). This will help ensure the theory of change remains valid even if individual interventions are adapted, closed down, or scaled up.
- In conditions of significant uncertainty, an adaptive, learn-as-you-go approach is essential. It makes sense for programmes to include a range of exploratory interventions that can be scaled up, or brought to an end. These projects may run independently of each other, and each should be thought through with its own mini theory of change.
- Due to the adaptive nature of market systems programmes, the theory of change should be reviewed and modified regularly to reflect emerging findings, changing hypotheses, and adjustments to programme strategy.

- In a complex system, different stakeholders will have different perspectives and interpretations about what makes things work, which may not be amenable to analysis with a single model. It is therefore important to record different viewpoints and assumptions, and review these critically through ongoing monitoring efforts.
- It is perfectly feasible for a programme team to develop a theory of change in-house. However, in the likelihood of diverse views emerging, it may be helpful to commission an external facilitator to help develop a theory of change.

What many people who write about complexity and theory of change stress is that the need to become better at focusing on the links between the boxes in the results chain, i.e. our assumptions of why some activity or change leads to a subsequent change. But how can we do that? To come up with a theory of change for a programme, or results chain for an individual intervention, people usually sit together in a workshop and try to develop incremental causal steps that lead an intervention to the end results of systemic change and poverty reduction.

The first version of our theory of change should still be fairly general since we cannot know too much about the intricacies of how change happens; it essentially is the representation of our knowledge and hypotheses we start off with. Once we have completed this first version of the theory of change, we can take all the assumptions that underpin our hypotheses, i.e. all the links between the boxes and write them on cards or post-it notes. We then collect them on a board or wall and start a **Cynefin** exercise. Through this exercise two things happen. On the one hand, we become clearer which of the causal links in our theory of change are obvious, complicated, complex, or even chaotic. This will help us manage the intervention design. But secondly, within the team we develop a common understanding on complexity and the difference between the ordered and the unordered space. The team will have a common vocabulary to speak about these things and a collection of examples to point to. So when a new situation comes up or a new causal relation needs to be discussed, the team can relate them to the examples used in the exercise and ask whether the new assumption is like the complex domain or more like the complicated domain.

Causal links that are on the ordered side, i.e. either obvious or complicated, can be left as direct arrows in the theory of change or results chain. We either have the knowledge and evidence that the causality is linear and predictable, or we think that with more analysis or the involvement of an expert we can determine what we need to do.

In the complex domain, there are multiple competing hypotheses of how the intended change could be achieved or what it could look like, and the available evidence supports different and even competing perspectives. So rather than add a straight arrow between two boxes, we should add an “exploration box” that contains

both boxes. This means that the causality between the two boxes is unclear and we need to run a set of experiments to determine how we can achieve the intended change. We also need to be aware that the relationship might be non-linear and that the intended change has to emerge due to the interaction between different changes; or, to put simply, there are different things that need to change in order for us to see the change we want to see. In some cases we might not even know what a good outcome looks like before we see it.

What we end up with is a theory of change with different types of assumptions or arrows. Some are linear and fixed – we know that if we do A, B will happen. These are the areas where we need less involvement of the management other than in an oversight function. Then we have the “exploration boxes”. This is where we need to develop a portfolio of experiments and be exploratory and adaptive. This is what management needs to focus on and be most involved in.

This type of “complexity aware” theory of change helps us figure out what we are sure we know and we can predict, and what is complex. We know that different strategies are needed for the different domains (also described in the Cynefin framework). Furthermore, the “complexity aware” theory of change approach also helps managers to know where they should focus their attention and use tools like adaptive management or agile approaches.

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*Marcus Jenal leads BEAM's focus on Monitoring and Evaluation. This blog was originally posted on Marcus's blog, Systemic approaches for development. check it out on [www.jenal.org](http://www.jenal.org)*

*\*"Complexity-informed theory of change for Private Sector Development in Democratic Republic of Congo", Vogel, I. and Fisher, G. (2013).*