

Gaining Systemic Insight

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Introduction

Our awareness of the complexity in the economy and its relevance for economic development is growing. This can have paralysing effects on our work. We know that traditional approaches have not been effective in terms of achieving substantial and significant change when facing complex problems. Still, most projects use approaches that follow the same basic paradigm. In this paper, we introduce an alternative approach to managing change initiatives. The approach is called Systemic Insight and is based on principles and ideas on intervening in complex systems. It embraces the new paradigm of complexity thinking and human sensemaking.

Systemic Insight proposes five emphases: hypotheses, diagnosis, making sense, strategic intent, and intervention. Additionally, learning and adjusting is integrating elements throughout all emphases. We chose the word “emphases” to highlight that these different points in the model signify a change of emphasis, a change of intensity or perhaps a different mode of working, in contrast to a sequence of distinct steps. The sequence we propose is merely a way to explain our logic, as language in itself is by necessity sequential. In systems, however, many things happen at the same time and, thus, our work needs to adapt and happen in sequential, parallel, or iterative ways. Activities in a complex system cannot follow a predetermined sequence but need to answer to the dynamics of the context. Flexibility is needed to adapt every element to the realities in and around the project.

We are writing this paper from the perspective of a facilitator that engages with actors to change a system.

Hypotheses

The intention of this emphasis is twofold:

- **Capture assumptions formed in the past:** At the outset of our exploration it is necessary to record the past assumptions of influential actors in the system that have lead up to preceding initiatives and that are the reason for our current involvement. This also includes assumptions that informed past and current key strategies of these influential actors in the system. These assumptions made in the past strongly influence the boundaries of our exploration.
- **Re-formulate hypotheses based on expectations and new information:** Throughout our work with the system it is necessary to understand and capture the various expectations of actors, the new information found, and the drivers of behaviour as hypotheses rather than facts.

Hypotheses formulation is an important emphasis as it sensitises the team conducting the diagnosis, the supporting organisations and possibly key influencers to their own bias and perspective. To do so, this needs to include not only the perspective of what drives the behaviour of the system, but also of the team’s own preferences in terms of how data and findings should be interpreted.

The following questions can help a team formulate hypotheses.

Inward facing:

- What is our understanding of the current situation?
- What is our motivation to understand the system and to intervene?
- What are the values that filter how we interpret what we see?
- What is the kind of change we want to see in the system?

Facing the system:

- What could be possible mechanisms to instigate change?
- Where do we expect that change can happen easily, where do we expect resistance?
- Who are the early adopters or pioneers that will respond first, and who is most likely resisting what we find and propose?
- What are the boundaries within which we expect the project to be able to initiate change? What is its sphere of influence?
- How can we measure the change we expect? How will we know if our interventions have been successful?

At first, the team that is leading the change initiative can answer these questions. Later, these questions can be answered from various perspectives of other stakeholders, giving an insight into their motivation and their receptiveness to change. Understanding the different perspectives of predominant stakeholders is crucial in developing appropriate strategies for change.

It is not the aim of this emphasis to define an idealised future state of the system and develop a potential path of change that starts with a project's interventions to reach that stage. There is no need of alignment of perspectives within the team. On the contrary, to find a diversity of views on the situation is beneficial as it potentially leads to a greater variation in the design of interventions. Hence, there is no single hypothesis, no single and neatly packed theory of change that needs to be developed during this step. This needs, however, also the understanding of the team that no perspective is the 'right' perspective and that different interpretations of the situation can be legitimate and valuable. The team needs to find a way to handle divergent perspectives in a constructive way.

Diagnosis

Diagnosis is not a delimited step in a process but on-going sensing of what is going on in a particular system. However, in the beginning of a change initiative, we have to do some up-front analysis. We have to start identifying the main actors, follow leads, and investigate opportunities and constraints, and collecting data that may reveal the dynamics in the system. To do this, several analytical instruments need to be used in sequence or in parallel. Each analytical instrument draws on particular theories and knowledge bases, which all have their own bias or perspective. Therefore, combining different analytical instruments provides a deeper diagnosis that allows teams to consider how factors affect each other. However, it is important for us to recognise that we are working within a complex system and that all the different analytical instruments inform our view of this system from different perspectives, but can never give us a comprehensive understanding of the whole system. There will always be an information deficit that we will have to live with by remaining vigilant and adaptable in our planning and action.

Many analytical instruments that are used in economic development can equally be applied here. Some popular tools include value chain analysis, sub-sector analysis, or cluster analysis. Several standalone tools such as Porter's 5 Forces, Porter's Diamond, interaction analysis, transaction cost analysis or even a simple Strengths Weakness Opportunities and Threat (SWOT) analysis can be used during this emphasis. Also

important are tools that focus on specific issues in market systems like innovation and competitiveness, such as for example the Rapid Appraisal of Local Innovation Systems (RALIS) or the Participatory Appraisal of Competitive Advantage (PACA).

The results of the analysis include a range of data, facts, findings and figures, results from interviews and workshops, qualitative information such as the opinions of key actors, physical evidence and even the subjective assessments and the gained tacit knowledge of the research team.

In our experience it is often difficult to form a complete picture of what exactly is going on through extensive analysis. We are usually confronted with the fact that different stakeholders interpret findings in different ways, which in turn affects their behaviour, appetite for risk or change and their willingness to cooperate in improvement activities. Therefore an additional step is required: making sense of the data.

Making sense

In the preceding emphasis we diagnosed the system and its elements using a variety of different instruments. It can be expected that certain diagnostic instruments already gave us a clearer picture of trends, behaviours and certain drivers of change. However, we found that conventional analysis does not guarantee that the causalities in the system are well understood. Indeed, analytical approaches often focus on individual parts of the system, such as a value chain, a sub-sector or a specific group of people. They ignore the interaction of the parts and the emerging whole. Optimising specific parts of the system can lead to a lower performance of the whole. What is good for the system may not always be good for all the elements and vice versa. It is necessary to make a dedicated effort to make sense of the relations between elements and the system and the interactions of the elements.

The facts, figures and findings gathered through diagnosis do not tell us enough about the hidden truths of the system and the reinforcing and balancing feedback loops that keep the system resilient. Different actors also interpret facts, findings and market signals in different ways, introducing a dynamic into the system that is complex. Actors all make decisions in a decentralised way based on their interpretation of the information at their disposal.

Some of the guiding questions that we have to ask to make sense of the system include:

- What is really going on here?
- What are the dominant patterns that can be seen?
- What seems to be causing or reinforcing particular behaviour?
- Who seems to be resisting change, and who is embracing change?
- Who are the people that are experimenting with new ideas, and who are the influencers that spread ideas in the system?
- Who is profiting from the current situation?
- Where can we see contradicting information and behaviour? How can outliers be interpreted?
- Have the outliers challenged the “accepted” boundaries and obstacles?

In this emphasis, it is necessary to stand back from our favoured target groups, our hypotheses, preferred interventions and our own interpretation of our analysis. In fact, it may even be necessary to question our own findings. If need be, we should invite an external moderator to guide the conversation if we believe that we are identifying with the system too strongly.

The deliberation of the deeper forces working in the system might necessitate additional analysis. For example, we may realise that we drew our conceptual boundaries around our system to narrow or too wide, resulting in some additional interviews or analysis. Or we may realise that it seems like a certain pattern emerged, but we cannot understand what triggered it and what the broader impact of the pattern is.

A deeper appreciation of the system helps to formulate where change may be needed, what will support and resist this change and how it can be measured. It helps us to understand whether the stated purpose of the system or the commonly held values is authentic and whether it really drives the behaviour of the system.

Care must be taken not to get stuck in a never-ending loop between diagnosis and making sense. While we must endeavour to have a deep understanding of the system, complex systems can only really be understood when interacting with them. It may be necessary to prioritise where we need additional analysis before proceeding, and where we are better off doing analysis and sensemaking while we already implement activities.

Strategic intent

In a traditional approach to strategy, an idealised future state is developed. The gap between the current situation and the future state is then believed to be closed by implementing a detailed plan that requires full alignment of all stakeholders. Systemic Insight recognises that we cannot predict the future in a complex adaptive system. Rather than developing a detailed ideal future and plan how to get there, Systemic Insight concentrates on changing the evolutionary path of the system through managing the present.

Consequently, the goal of the strategic intent emphasis is to develop a coherent response to what we found and what we want to achieve. This does not need to be a massive investment in time. The response takes the form of a strategic intent statement that is accepted by key actors. The aim of our strategic intent is to give the team and the organisations that we work with a sense of direction. It is not the intention to get everybody else to implement the same strategy as us, which would make success less likely and make the system less resilient.

Furthermore, we need to differentiate between our own intervention strategy and the strategies of others like the government, institutions, or firms we interact with.

In our economic development initiatives, we are facing different kinds of problems that require different strategies. It is essential to break a situation into problems that are simple, complicated, or complex. There are several frameworks that help us decide what type of problems we are facing. Simple problems can be quickly resolved by using best practice. For the complicated issues, detailed analysis or expert knowledge can propose feasible solutions.

The following heuristic can be helpful when facing complex situations:

- *Know the context*: be aware of the various interrelationships, perspectives, and boundaries that influence your ability to influence the system; understand some of the dynamics allowing you to anticipate where change is probable and where it is not.
- *Act in the context*: do not prescribe solutions from top-down only or from outside the system; the best adapted and most sustainable solutions evolve in the context.

- *Facilitate change*: tread lightly, be the guide of a dynamic process, in which the stakeholders in the system work together to learn and come up with locally adapted solutions.
- *Learn and adapt*: be flexible and continuously adapt your strategy and action to new learning; build a monitoring system that gives you quick feedback on the results of your interventions.

Intervention

In this emphasis, the purposeful interventions are developed, implemented and the effects observed. Complex situations are marked by a high degree of uncertainty about how the situation can evolve over time and what forces are predominantly shaping the system. No single actor in the system has the capacity to solve the problem. Coordinated action is needed. There are different ways to intervene in complex situations. We propose three types of intervention:

- *Incremental* interventions start a process to change behaviour of actors in the system. In order to do that, we use resources we have control over and we implement activities that are visible or easy to communicate. The activities should start soon. These interventions are also called quick wins.
- *Failsafe* interventions change the constraints in the system and, thus, potentially have large-scale impact. These types of interventions need bigger budgets and take longer time. They require a project structure and management.
- *Safe-to-fail* experiments lay the basis for an evolutionary intervention design. Experiments can lead to a better understanding of what works and inform the selection and adaptation of successful interventions. In that way, intervention strategies can evolve over time based on adaptation and selection in the real world. This approach can also help to test various diverging hypotheses within the team or the larger group of stakeholders. Experiments need to be designed in a way so they can fail safely, i.e. without risking the health of the whole project or harm the involved actors. Hence, they need to be small, but still large enough to have a meaningful effect.

In situations where it is not feasible to achieve change, a *graceful exit* is advisable. If we see that we cannot change anything in the strategy of the organisations we work with, we should exit gracefully in order to avoid complete failure of our initiative.

The intervention emphasis looks different in different iterations of the growing path around the spiral. It will most likely start with the implementation of incremental intervention or quick win activities to build trust and a reputation for the project. After that, the small experimental pilot interventions for more complex problems can be implemented. When knowledge and understanding is growing, interventions can become more substantial and more targeted towards achieving large scale change in the wider system. This is when catalytic interventions can be implemented. The advice here is that you should never implement at large scale what you do not fully understand.

Successful interventions in complex systems are often very simple. As facilitators, our need to understand the complexity behind a system should result in simpler interventions. Interventions should be so simple that stakeholders can describe them in a few sentences. A clearly formulated and simple intervention should be prioritised over a complicated intervention that requires the coordination and alignment of a wide range of stakeholders. Furthermore, instead of trying to fix all problems it is advisable to focus on strengthening interaction and clarifying purpose in the system, rather than trying to improve or change the elements or the actors.

Learning & Adjusting

Learning & Adjusting is not an emphasis, but a continuous mode of operation. Learning provides the insights that lead the initiative to change emphasis. Learning and continuous adjustments happens continuously. In the hypotheses emphasis, the different stakeholders can learn about different perspectives in the system and assumptions that are made explicit by their peers. In the diagnosis emphasis, learning can be based on the findings of the different analyses. In the 'making sense' emphasis, learning happens through making sense of all the different data we have gathered and experiences we have gained. In the 'strategic intent' emphasis, learning helps to evolve the planning and intervention strategy. As complex systems cannot be understood by analysing them but only when interacting with them, the intervention emphasis is the most important emphasis to learn about how the system works.

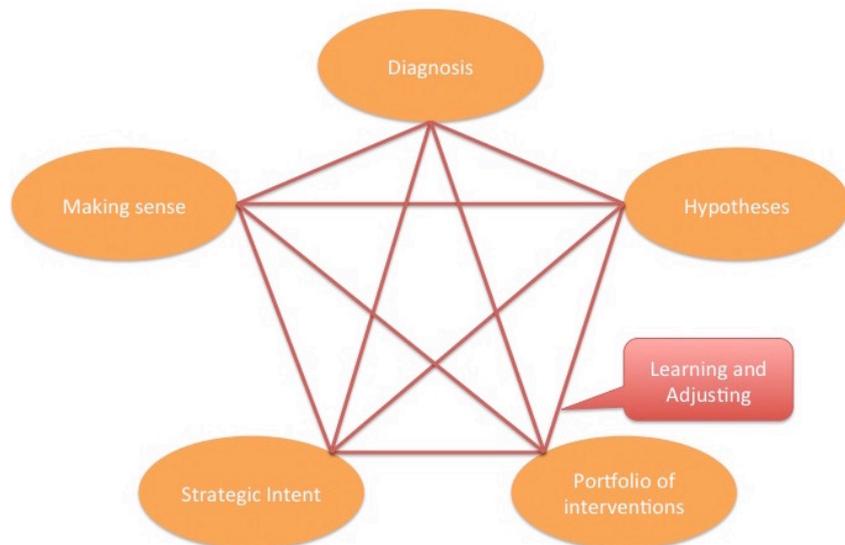


Figure 1: Systemic Insight with its five emphases and learning and adjusting that links them together.

Short learning loops lead to immediate adjustment of emphasis. Learning is the glue that brings all the emphases and generated knowledge together (red lines in Figure 1).

At any point in time, we need to ask the question who is adapting and who is learning. Very often development programmes are focused on their own adaptation and learning and the chosen indicators often measure programmatic activities and not the vitality of the system. Ideally, also the system actors need to be able to learn and adapt and with that increase the resilience of the system.

In order for learning to happen, particularly in the intervention emphasis, an effective monitoring framework needs to be in place.

For interventions targeting complex problems, continuous observation and systematic monitoring by the whole team is crucial to be able to assess the patterns emerging as a reaction to the purposeful interventions. The earlier these patterns can be identified, the earlier the project can react and adjust. This means discard interventions that did not work or led to negative reactions, adapt interventions that show promising results in order to strengthen them, and reinforce interventions that lead to the intended change.

In order to remain agile, the results of monitoring have to lead through quick feedback loops to learning and adjusting. It is imperative that a culture of collaborative learning is established within the involved actors. Observations, experiences, ideas, etc. need to be shared freely.

Additional comments

The intervention team needs to figure out how to value different perspectives. There are at all times our own view as facilitators, the view of counterparts or the organisation that we work with, and the view of key influencers in the system. Even in cases where there is an expressed shared perspective and common values, there will be important differences in priorities, interpretation and actual behaviour of the different actors.

Systemic Insight also requires creativity in responding to the context. The facilitator must be creative in drawing heterogeneous stakeholders into the diagnosis and the strategy. Not all stakeholders will understand or appreciate the necessity to draw in dissenting views and contrary ideas, as stakeholders often value conformity and coordination more than the need for experimentation and alternative approaches.

We understand that our proposed approach might be at odds with standardised project cycle management methodologies applied by donors and development organisations and needs to be adapted accordingly, ideally without losing its agility. We believe that traditional approaches are well suited to working with simple and complicated contexts, but that they are too inflexible in conditions of complexity and uncertainty.

Complexity in development is one of the key research themes of Mesopartner. We are constantly developing new concepts, frameworks and research outputs under this research theme. To stay in touch with us visit <http://www.systemic-insight.com/> or contact Marcus or Shawn.