A Business Culture of Reflection

Part 5

Systemic Management and Organizational Development featuring the KNOW-WHY Method

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About

After the four previous papers of this series emphasized different practical applications of systems thinking and modeling in order to reflect on the complex challenges of an enterprise or a project, this paper now tackles the question of how to establish a culture of reflection within an organization that is eager and able to perform and maintain systems thinking. The paper explains what this means, what the major obstacles are, how to initiate the change and how to maintain a culture beyond our current dominant structure of a single person's sovereignty of interpretation.

The series of papers for "A Business Culture of Reflection" (https://www.consideo.de/papers.html):

1. Systemic Strategy Development including Risk and SWOT Analysis

2. Systemic Product Development featuring Idealized System Design

3. Quantitative Optimization and Risk Analysis of Projects and Processes

4. Systemic Project Management

5. Systemic Management and Organizational Development featuring the KNOW-WHY Method

The series describes the application of the iMODELER software (both the freeware and the full version) and the KNOW-WHY Method using the example of a start-up enterprise (newly founded or a profit center within a company) that plans to become successful by developing, manufacturing and selling a revolutionary electric vehicle.

The 'business culture of reflection' captures the idea that any enterprise can leverage the collective potential of its employees by collaboratively looking at the interconnections of all the existing arguments within the enterprise (and also from the stakeholders outside). Not only the all-too-common phenomenon of endless and repeated meetings with little progress but also that of reluctant or simply unfounded decision-making can be tackled with this change of corporate culture.

The iMODELER (www.imodeler.info), being probably the most important app in the world, allows for the visualization and analysis of interconnections behind any challenge. It works bionically: mimicking yet extending our brain power to capture thousands of arguments with the possibilities of either modeling them qualitatively (comparable to Fuzzy Cognitive Maps) using so-called Insight Matrices to see what would be comparably the most effective measure or risk, or quantitatively (based on System Dynamics and more) to simulate the extent and likelihood of possible developments. The iMODELER comes with a number of unique features like process factors to identify constraints (Goldratt's Theory of Constraints), the iM Optimizer (Operations Research), the iM Data Manager (to integrate data e.g. from Excel), extremely powerful collaborative modeling, sophisticated simulation game functionality, and KNOW-WHY.NET - the platform for building collective intelligence.

The major difference compared to other tools is that it is not merely for visualization (such as mind mapping or concept mapping). However, it is also not overly complicated and yet still avoids following mere simple linear relationships. Rather, the iMODELER allows for direct translation of any kind of argument and the consideration of any linear or non-linear, dynamic phenomenon that we find in the complexity of the real world, where often soft

factors cause major effects e.g. by triggering reinforcing feedback loops of virtuous or vicious cycles.

Arguments are simply translated into the intuitive notation of

"more of one factor leads directly to more/less of another factor"

- using factors and connections that either depict a - or +.

You can use the iMODELER to reflect on business issues such as those described in this series or indeed for any other challenge in which you have to consider the interplay of several factors (hint: nearly all challenges are multifactorial). Whether it is a personal challenge like family topics, vacation or career planning, or societal goals like the transition of our society towards a better world, the iMODELER can help. The long list of possible applications includes horizon scanning, change management, six sigma, asset allocation, corporate foresight, strategy development, product development, project management, process optimization, organizational development, knowledge management, mediation, personal goal planning, and many more…

Note: the models/cases of this series are fictitious. Being far from complete, they lack many details but nevertheless provide instruction through useful examples. For some models, you will find a list of further details in the model's description (Menu … Model properties).

## So you want your people to work smarter, not harder?

Let us think of an enterprise or business unit that hasn't already applied the systemic strategy development from paper 1 of this series or any other modeling. Rather, it is just that one or a few people decide that it would be extremely useful to take some time and reflect on a complex challenge within the enterprise by looking at the interplay of the many factors that make the challenge complex in the first place.

In general we can say:

"Most times we fail because of factors we haven't considered or developments we haven't foreseen"

While even modeling doesn't guarantee that we consider all the decisive factors and foresee dynamics and developments, it certainly increases the likelihood that we have explored the actual development at least as one possible scenario.

Here is a famous model on the idea that some extra time spent on systemic reflection of a complex task could limit the likelihood of unforeseen challenges that delay the target and hence lead to more time pressure. This pressure then often forces teams to work harder, only to make additional mistakes under increasing time pressure because of stress and exhaustion.
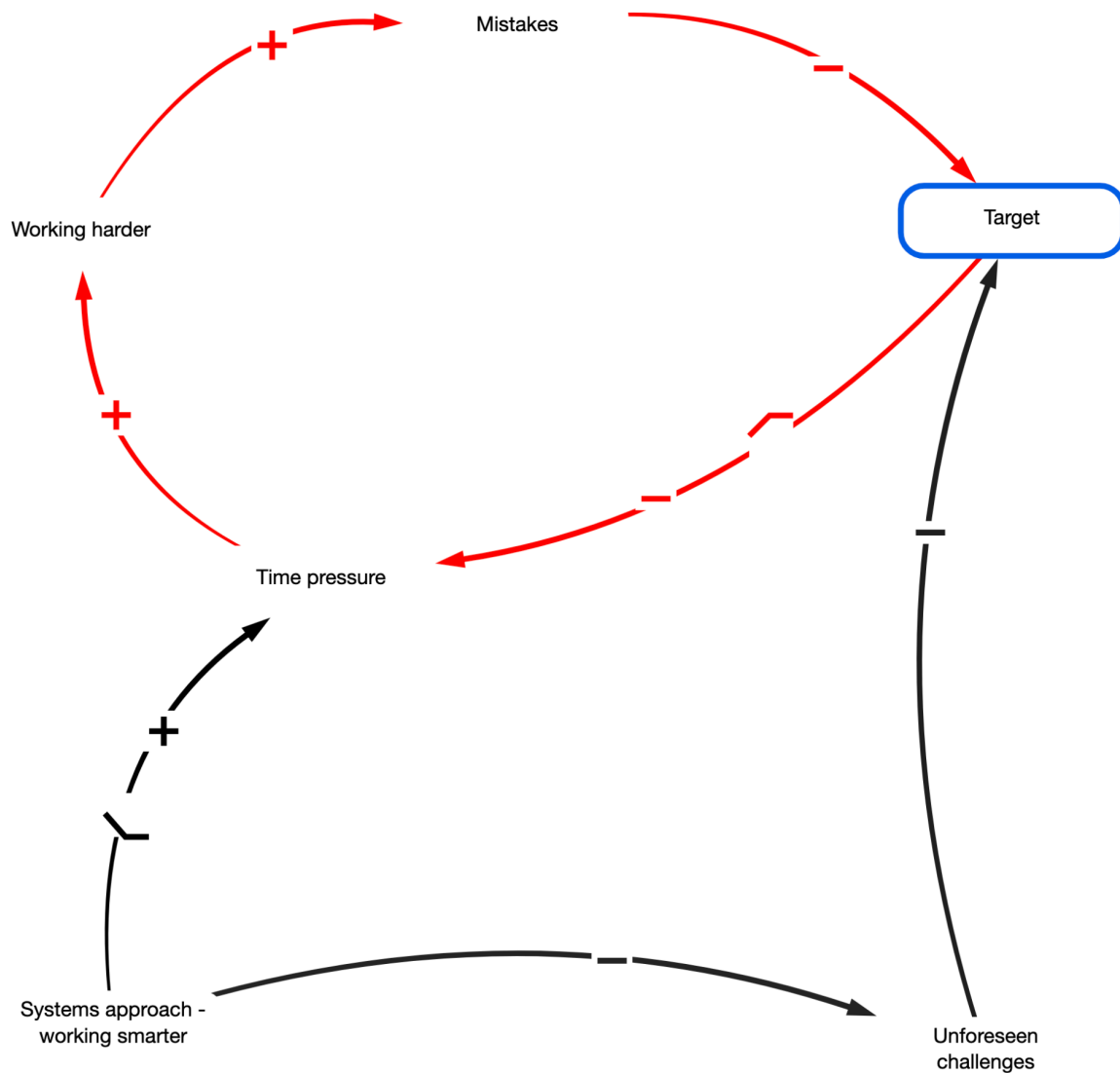
However, the time spent on reflection itself also adds to more time pressure, but only in the short term (indicated by the broken line icon on the connection).

In fact, time is not the only obstacle, as we shall see in the next chapter.

Of course you do not need a tool

Let us see why many people reject the systemic approach or even do not trust the its insights gained by others within an organization. Here's a list:

1. People argue that they **do not have the time for this**. Well, nature provided us with our gut feeling (intuitive intelligence) as well as with the ability to learn from best practice. Both are quicker than systemic reflections and modeling, though both only work if there have already been comparable challenges in the past. Actually, that's seldom the case. And intuitive intelligence, in addition, only works if our emotions do not interfere in the wrong way, clouding our gut feelings e.g. by being in an overly optimistic or overly pessimistic mood.

2. People do not like it if they are not in control of a situation or they do not know what is happening. This very drive to reveal an answer to everything (in our history we even

invented gods and religion to get answers) lets most of us either **rely on our existing knowledge, rejecting that there could be something else, or we argue that whatever there might be is not relevant or can't be foreseen anyway**. Of course, some also get used to avoiding any kind of effort by declaring something as irrelevant (psychological reactance) or by declaring themselves as incapable (self-taught helplessness). These people do not see a need in sitting together and reflecting on the interactions of the many relevant factors. **Within hierarchies, even more people feel obliged to already know everything** without gathering with stakeholders where they would have to admit that they need to learn from them.

3. People find themselves in the **expert's trap**. The marketing people, all the different technicians, the legal department, the accountants from finance, etc. - they are all experts in their fields and come up with the in-depth details of their perspective **with little motivation to acknowledge that others' perspectives might be crucial as well**. Their own fields need to be seen in detail while they argue that the aspects from other fields aren't actually that important. If this sounds unlikely to you, very good, you find yourself in a unique working environment. But from many projects I can tell that when coming up with crucial factors outside of an expert's own field, (s)he tends to question the relevance.

4. **People are overwhelmed** by the many arguments and their interplay. They are used to looking at one argument after another and for each argument, even for logical conclusions **they need proof - a reference or validated data**. Well, of course, each individual argument gains support if it is not just spoken by a stakeholder within a workshop but also backed by references and data. However, if there are no references or data, that has nothing to do with the modeling since the same arguments would somehow play into our decisions anyway. Not only do the arguments need to be correct ("more of something leads directly to more/less of something else"), we also need to consider the crucial factors at play. That's why we should apply stakeholder modeling, integrating the knowledge from key actors. Once the arguments are collected, the conclusions are logically sound. **Usually, abductive logic is used** - if the model is correct, the conclusions are also correct. Some people expect to find data and references for the results even of future scenarios as well. This,of course, is nonsense since the results were unknown and the very reason for the modeling in the first place. The same people typically argue that either they knew the conclusion before or they doubt that the conclusions are correct, stating that there must be too many mere assumptions in the model.

5. The tools and the rules to apply them are **too difficult**. Odd thing: now that iMODELER is easy enough and has gotten rid of many unnecessary rules, quite often people insist on applying more rules instead of just translating otherwise spoken arguments. Also, discussions within workshops around the right number of rules can distract from the actual application.

6. Finally, confronting people with **the term "systemic" activates strange reflexes**. Some have associations with rather esoteric stuff that is irrelevant compared to their existing knowledge. Still others consider it an important approach but yet they need no tool or method for it since they claim to already consider all factors and

their interplay. The first reflex can be avoided simply by phrasing that you would like to look at interconnections without using the term "systemic" or even words like "cybernetic", "holistic", etc.. The second reflex is more valid to some extent: one can easily become distracted by the use of a tool and its interpretation, restricting their free flow of thoughts necessary for coming up with ideas or being able to change perspectives. In this case, a facilitator should recognize the situation and help to reframe arguments and move the attention from the screen to something else, even letting people get up from their chair and using creativity tools. That, by the way, is what also the experienced modelers should consider when they need to come up with additional arguments: take a break from looking at the screen. However, every new argument should then find its way into the model and by looking at its interconnections we have a new starting point for our next creative phase along with a change of perspective.

With the experience and common wisdom that any modeling is better than no modeling, one should assume that they should just give it a try. Once it's started, everybody could become eager to do it on a regular basis. If it only was that easy... In addition to the aforementioned points, here are two more reasons why it is not:

1. While the people who were modeling the complexity of a challenge are convinced to have gained useful insights, **others still reject** both the results and the approach for a couple of psychological reasons that I will elaborate in the next chapter.

2. At the beginning of the team's 'modeling career' they shy away from active collaborative modeling and instead rely on a facilitator who quite often collects loads of arguments in a rushed manner and ends up with a **huge model** that afterwards seems to be **too complicated** to be used. While it is understandable that a facilitator wants to come up with some meaningful factors within a limited time, the time should be well spent and emphasize quality of quantity. After all, the core problem is the lack of available time.

So, there are loads of reasons not to model. The next chapter puts them into perspective and provides some pro arguments for using the tool. The chapter after that features a small example and the final chapter shows how to establish a culture of reflection.

A fool with a tool is still a fool - not using the tools we are all fools

The following model (https://www.know-why.net/model/AA5vOj_aOZDVFZ-aYnCYZyw) shows all the arguments from the prior section, how they impact each other, and what role some decisive features of the iMODELER play in this context:
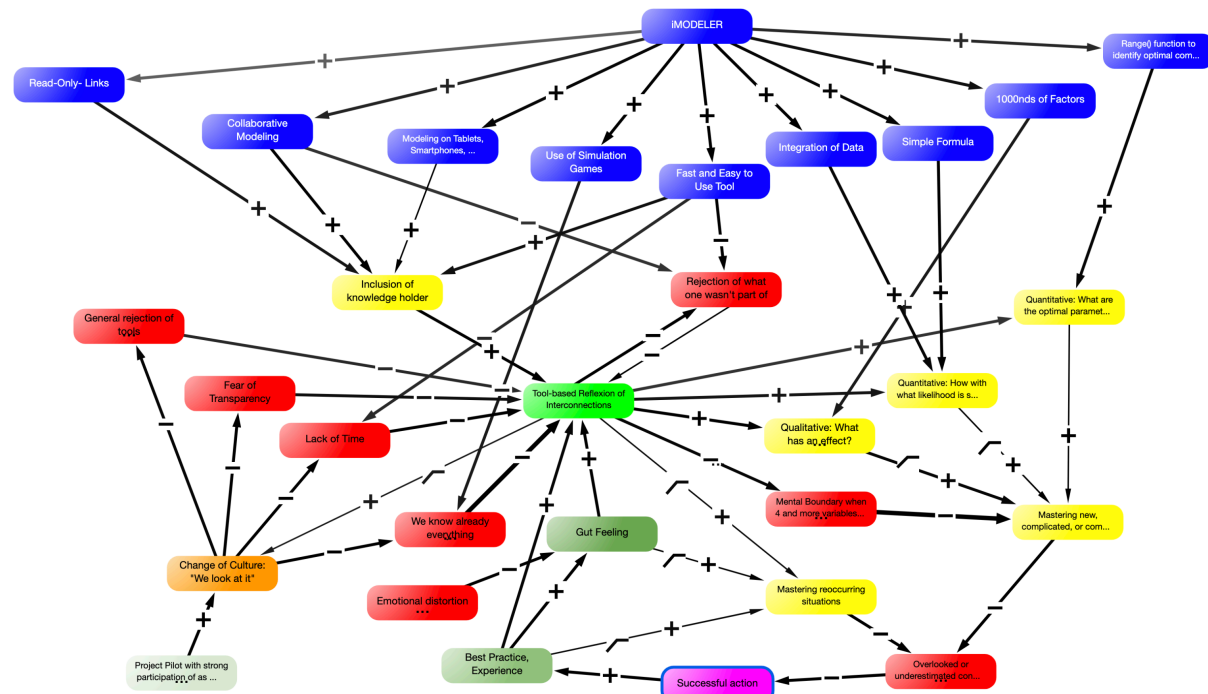
The tool, in order to prevent overlooked or underestimated connections, helps to identify:

- what the most effective factors (risks, targets, measures) are (qualitative modeling),

- how and with what likelihood something is probably going to develop (quantitative modeling with Monte Carlo simulation and data integration), and

- what the optimal parameters for a process are (process modeling applying the Theory of Constraints)

It is useful to remember that, according to studies, we can only grasp the interplay of about four variables at a time. The model that simply visualizes our otherwise spoken or thought arguments serves as a lingua franca that can be universally understood once we just read the connections - "more of …. leads directly to more(+)/less(-) of ….".

By the way, if a connection in your model is apparently not as simple in reality, well then you should probably differentiate your arguments in the model. Here is an example from a fictitious team that is developing an innovative electric vehicle. If one guy comes up with the connection"faster charging" leads to less "need for high battery capacity" then others might argue that it is not that simple. They'd argue that it is harder to increase the charging speed for smaller batteries and the need for cooling increases the price anyway. Well, if this is the argument, then these two aspects need to also be included in the model. The model could then create interconnections to depict that the dilemnas between bigger batteries with more weight and hence more costs, though in principal fit for quick charging, or smaller batteries with less weight and costs but not suited for quick charging (which on the other hand allow for additional cost savings, and so the model grows...).

The sum of otherwise linear arguments - an example

Here is an excerpt of a possible example for our electric vehicle enterprise. The team is discussing the ways of financing the production of the vehicle. First, they simply discussed the pros and cons of waiting for orders, attracting institutional investors and the idea of crowd financing. The cons from that discussion were overwhelming: late production start would hinder order shipments and they are needed to attract investors who, in turn, want influence. The crowd also wants monetary incentives which could jeopardize the attractiveness for larger investors. When they started to discuss the role of unique selling points they decided to use a model (https://www.know-why.net/model/CTKgUwsOH5yVobcjwKhGxpg) for their meeting:
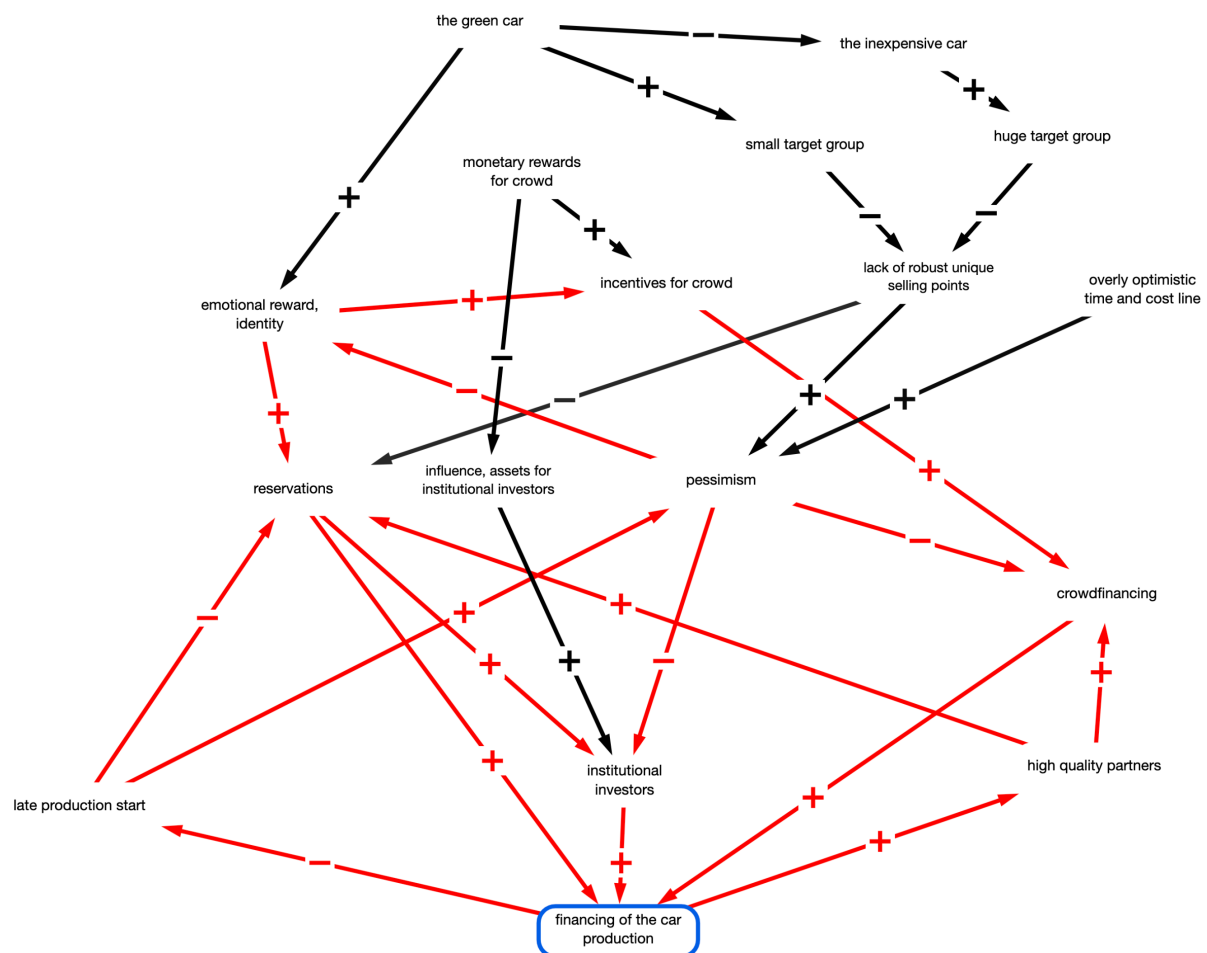
Even far from complete and without proper weighting of the connections and an analysis of the insight matrix, the model shows how the team continued looking for arguments and how soft factors like "pessimism" become pivotal and can trigger numerous reinforcing (red) feedback loops. Quite often, models do not need to be completed to be of great value in meetings since already the proper capturing of relevant arguments is of great benefit.

How to keep the culture of reflection alive - integrated development

We all think of our mindsets and mental models as the most important and correct ones, though many of us rather keep our argumentation to ourselves just to uphold this illusion. The better we feel, the more we are willing to position ourselves with our mindsets and even

to develop them through learning and discussion. However, if we are always proven wrong we feel uncomfortable and shy away from open discussions and learning. Within a team that models, everyone has a very good chance to contribute something to the shared mental model. With that contribution becoming explicit by factors and connections, we get the rewarding feeling of integrated development.

Here are some tips on how to get there:

1. Announce that you want to establish a culture of reflection where everyone can decide something once she or he or the team has reflected on it in a cause and effect model. That means that there should be no decision without a model. If the decision turns out to be wrong, the missing factors and connections should be added to the model and *voila* - you get a learning organization!

2. Dedicate time to 'working smarter, not harder' so the modeling doesn't have to compete with your everyday workload. Most organizations have regular meetings anyway so just double the time for your meetings for some weeks and enjoy spareing a lot of time with more effective meetings in the future.

3. Require from each member of your team a small example model on something, whether from a past, an ongoing, or a future project. Let them present this little (probably just an excerpt of a project/process/organization) model to the others so they learn from each other and get used to the tool. If you can't organize internal coaching, consider remote coaching (buying from Consideo or for free from posting on the pinboard on KNOW-WHY.net). Sometimes these initial team member-led very important models (VIM) are emotionally effective so they feel even more valuable in your agile organization. In this way, they will easily develop ownership in the future, including for collaborative models.

4. Within meetings, try not to have one facilitator that types all the arguments. Use the collaborative modeling feature so everyone can directly insert her or his arguments. Later you may decide to share just the read-only link if you feel the need to prevent any possible tampering with the model. If members of your team are rather quiet and passive, consider for example a 10 plus 5 minutes scheme so rotationally each member facilitates the meeting for 10 minutes, asking the four KNOW-WHY questions (see paper 1 of this series) followed by 5 minutes either to finish an argument or to simply give everyone some time to navigate through the model.

5. As a leader you probably have three scenarios. You can remain passive and enjoy the great performance of your well selected and highly motivated team, with much motivation coming from effective communication and the appreciation of their input. Or, you can be an active part that also contributes a lot without dominating the discussion and suppressing members that are afraid of saying something incorrect or controversial. Or, if in fact you are afraid of saying something wrong, simply let them develop the model with you only asking questions for clarification or even playing the Advocatus Diaboli that raises all kinds of doubts. Do this not to discourage the team but to challenge their argumentation (usually that comes with two of the four KNOW-WHY questions when we ask what leads to less or what might lead to less in the future). You can have a closer look at the model afterwards and in a less open setting raise questions you fear could be embarrassing.

So, it's as easy as that. 'If you succeed in doing so, tell us how' :-) … seriously, since there will be additional factors that will come into play within your organization and we would love to hear about them.

Maybe we can start a discussion below your model on KNOW-WHY.NET:

https://www.know-why.net/model/AA5vOj_aOZDVFZ-aYnCYZyw

For inspiration for this discussion here is a post from Steve Whitla: http://meaning.guide/index.php/2019/11/22/how-many-systems-thinkers-were-bullied-at-school/

"… As a child, I went to a small, private, religious, parent-run school until I was 11. It was closed-off from the outside world, and there were only about a dozen students. It had good points and bad points, but overall I did fine. From 11 though, I was sent to a pretty rough state-run high school with 1200 students, and it soon became apparent that the social skills I needed to fit into this environment were basically non-existent. Not that I would have even known what that meant at the time – I just knew after a few weeks that I had somehow turned into an outcast, and it was OK for everyone to be consistently horrible to me. I didn't stop being very bright and very curious, so I got on very well with teachers, because I genuinely found their subjects interesting. It took me a couple of years to catch on that this was just compounding the problems with my peers.

Over that five years I spent most of my time watching. I wasn't welcome in any social setting in school, so I just observed from a careful distance, and bit by bit started to understand the rules of the game. By the time I was in sixth year most of my worst tormentors had left, I had built friendships with a good number of people, and I was well set to go off and thoroughly enjoy university, which I did 🙂 *.*

But those first five years of high school were absolutely brutal.

Now here's the thing: What difference did it make, at that formative period of my life, to have this experience? Many differences no doubt, but one thing it forced on me was to learn to be OK taking the outsider's perspective. I noticed things that you don't notice so easily when you're an insider: How people will say different things and become different people in order to stay in with different social groups, how much more important group identity is for most people than reality, the depths that people will stoop to when driven by a crowd, how quickly false information gets amplified around the system if the right person sets it off, and how all these kinds of factors inter-relate and compound one another. In other words, I was taking a systemic perspective. …"

"I model - therefore iM"