

Unpredictability is a central feature of complex systems. The last few weeks have shown us one thing: Nobody can really answer the question: "What's next?" and the picture of what will happen in the coming months is extremely vague. So perhaps we should dig out our old management books and concentrate on the essentials. In this case, "thinking in scenarios".

### What are complex systems, what are they characterized by and how do we deal with them?

A complex system is characterized by consisting of many variables that are interdependent. It is more than the sum of its parts - the system itself develops new properties caused by the interconnections of the elements. The functioning and behaviour of a complex system cannot be predicted precisely. Keyword COVID-19: we find ourselves in a situation of unpredictability, uncertainty, and the difficulty of setting the right goals and measures.

### What are typical mistakes when dealing with complex situations?

It is a natural reflex to solve new, less tangible situations with old approaches, approaches we are familiar with such as:

- 1. **detail focus and tunnel vision**: A lot of times we think the problem is clear. However, we often only look at one aspect of detail. But we do this with great care and accuracy. Without knowing and understanding the overall system, it is not possible to set the right steps.
- using mean values / average values: Under certain circumstances, averages can provide good information. In dealing with complex systems and situations, however, they are of little help. The average temperature in Austria in April is 10.5 degrees - but what does that tell us about the weather?

- 3. making linear predictions: We have seen how poorly linear predictions work in complex situations with the exponential growth of COVID-19 cases. Some international politicians and experts have completely misjudged the situation based on using the right data in the wrong way.
- 4. **Oversteering the system:** Complex systems act with a time delay. In the case of COVID-19, we see delays between the measures taken by the Federal Government and its effect on the growth of COVID-19 cases. If time delays are not known and not taken into consideration, it leads to oversteering and mismanagement.

# So what helps in setting the right objectives and measures in complex situations?

First of all, you need the big picture of the situation and system. A stakeholder map can serve this purpose: Who is involved in my system? How do the individual actors or components relate to each other?

Involve your employees to look at the challenge together and define the real problem. Bringing in different perspectives makes it easier to grasp the overall system and identify the right objectives and solutions.



The graphic shows quite well why it makes sense to integrate different perspectives.

So, if you have a rough picture of the different players and variables in the system and

their interdependencies, you can consider what impact different future scenarios will have on your company.

For our current COVID-19 situation you can roughly orientate yourself on 3 scenarios

**Scenario 1**: "Normality" returns in 3-6 months. There are few changes in the supply chains and the customer behaviours hardly change.

**Scenario 2**: A slow ramp-up over the next few quarters, returning to more or less "business as usual". A selective adjustment of the business models is necessary.

**Scenario 3**: A very slow ramp-up, characterized by social rethinking, massive changes in customer behaviour. A fundamental change in business models will be necessary.

Maybe your scenarios of the COVID-19 crisis look different.

# It is important that you ask yourself the right questions:

- 1. What are the possible or expected developments? With which probability and which time horizon will they occur?
- What influence do they have on the internal drivers of my business? What changes in external drivers do I need to consider?
- 3. What do the possible developments mean for my business in general? What do they mean for my customers? What do they mean for my supply chains?
- **4.** What do I need to do now to be prepared for the possible scenarions in 6/12/18 months!
- 5. What are the biggest opportunities and biggest risks arising from the scenarios?

You have thought about your system, developed scenarios and asked the right questions? But you are still unsure where the journey will take you? Maybe the sentence of my physics professor will help: "I prefer 80% probability to 100% spurious accuracy!"

### Written by the PURE Management Team:



#### **Florentine Fellner**

Consultant, trainer and large group facilitator for over 8 years with a focus on complexity management, change management and leadership development.

Contact: florentine.fellner@puremanagementgroup.com



#### Georg Oppitz

Consultant for over 15 years with focus on strategy development, change management and numerical process analysis and optimization.

Contact: <a href="mailto:georg.oppitz@puremanagementgroup.com">georg.oppitz@puremanagementgroup.com</a>

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