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Beyond Agile – Highly Adaptive Project Organizations (H.A.P.)

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Abstract:
Some people say that "agility" is the answer to the question on how to manage projects in a complex environment. The high degree of uncertainty, the lack of transparency and the dynamic are just some aspects of our projects these days. This brings up the search for the "right" methodology and an approach to stay successful. But agility is not a methodology at all and it does not provide all the needed details that project managers need to complete their work. This paper introduces a model that helps project managers set the necessary screws, so the project itself can master complexity, stay flexible and agile and even survive relevant crises: the model of Highly Adaptive Projects (H.A.P.).

1. Introduction

Which is the best methodology when it comes to managing complex projects? Which one is modern? Which one fits best for what kind of goal / theme? When discussing these questions, people quickly come up with one answer: „Agile Project Management". Agility is modern, but not new.

The greatest attention was generated by one model, which comes from the area of software development: SCRUM. Known and tested for a long time in IT only, the method has expanded into other industries. Today there are many discussions happening in all kinds of organizations about the agile approach, agile methods or agile management. An example: "Oh, you are working agile? So you are performing SCRUM." The model is put on the same level with the approach. As a matter of fact, SCRUM is only one model and by no means is it the only one. This error is only the beginning of a chain of misunderstandings on the subject of "agility".

2. Agility is not a method at all, but a mindset

Many projects that are managed with traditional process models are not customer-oriented and not sufficiently effective. This finding developed SCRUM, this new approach that would revolutionize the software development industry. By now has been established even outside of IT projects, in order to make organizations more agile and leaner. Whether it is SCRUM or a form that is mixed with the traditional approach, the mistake is to mix up the mindset and the method.

It starts with the promises of agile coaches and consultants. They sometimes promise that implementing agile methods increases productivity, elevates motivation in the team and raises employee satisfaction. It sounds as if there is a linear relationship: Method in, productivity out. This clearly is not the case, because we operate in complex systems that aren't predictable. Furthermore, agility itself is not a method, even if the most prominent representative SCRUM comes with clear roles, activities and artifacts. However, in order to deploy those in a target-oriented way, you will need a mindset that allows self-organization, transparency and discourse. With only daily stand-up meetings or naming a product owner, the promise of higher

productivity or motivation is empty. The reverse becomes true. Only introducing a new method makes agile projects more likely to fail. People then turn back to "We have always done it this way".

3. Agile principles are too vague

Four principles form the Manifesto for Agility and building the basic values for working the agile way:

- Individuals and interactions over processes and tools
- Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

SCRUM brings in additional role definitions, artifacts and lots of terms, such as self-organization, freedom in planning or democracy. All these principles, values and rules are important and fine, but need to be seen in the correct context of the organization or the specific project. If this does not happen (and this can be observed quite often), the terms remain too general and the number of misunderstandings and misinterpretation increases. Agile teams, for example, are referred to as self-organized, and at the same time self-organization is praised as one of the success factors of agile methods. Yes, agile teams are self-organized; this is true for every complex social system. What is truly meant when talking about agile methods, is self-monitoring or self-management. Teams themselves decide on tasks and responsibilities, there is no project manager who assigns the work packages. This is self-monitoring, not self-organization. When the common language is unclear and phrases and concepts make "no sense", it will lead to many misunderstandings. Additionally, concrete ideas about how to implement "responding to change" in an organization are also needed. What characteristics and skills does a (project)-organization need to have in order to successfully work agile?

4. Resilience and Highly Adaptive Projects

We´ve all heard about the so-called "stand-up-men", people who have overcome severe tragedies and crises and stood up stronger in the best-case scenario. Athletes who had an accident, which forced them to start anew.....and then start at the Paralympics, years later. Celebrities, after fighting a serious cancer, who find their way back into the limelight. People who went through many personal crises in their lifetime, but were not broken by them. They managed the crises. We consider those people to be robust, crises-proofed, "tough", and resilient. In the context of project management resilience means recognizing errors and turbulences early on and identifying solutions quickly.

How many reports about complex projects, which are characterized by resilience and stand-up mentality are you familiar with? None? Exactly, we read and hear about major projects in public only when they are in real trouble. When Stuttgart 21 increases by several ten million euros, the health card has severe security problems or the opening of the new Berlin-Brandenburg Airport is postponed once again. What happens then often follows a certain pattern: We are looking for the causal relationship, find the culprit, name the source of the mistakes and fix it anew. We analyze cause and effect and find out how to make those projects more robust. It is the way we try to avoid mistakes, crises and turbulences.

Cause-effect versus Interrelation
So we install a more widespread risk management, get to the bottom of the mistakes (as much as possible) and again, confuse causation and correlation. We have learned to think in a cause-effect relationship and to approach problems by analyzing them, so the issue for us is switching over to look at the interrelations. Approaches that only focus on robustness and error prevention do not fit in complex contexts, because a degree of uncertainty and unpredictability always exists. So we need to take a look at what makes project organizations more resilient.

Resilience means the ability to detect errors and turbulence early on, to identify possible solutions quickly and to get out of a critical situation promptly. A resilient project organization adapts itself easily to changing circumstances and conditions.
Because we don't read publications about success stories of resilient projects, does not automatically mean they don´t exist. They do, and we should learn about the factors that make a project more adaptive from them. These factors can be named and located in every project, more or less distinct.

5. The model of Highly-Adaptive-Projects (H.A.P.)
If the following model of Highly-Adaptive-Projects (H.A.P.) is presented, it is to be understood quite clearly on the basis of complex systems and not as a cause-effect-structure. The behavior of every individual in a complex project system affects the system, and vice versa.

The H.A.P.-Model
The model describes the characteristics and skills of an adaptive project, which then can be used as set screws for its resilience.

The main dimensions, which can influence the adaption of a project, are:
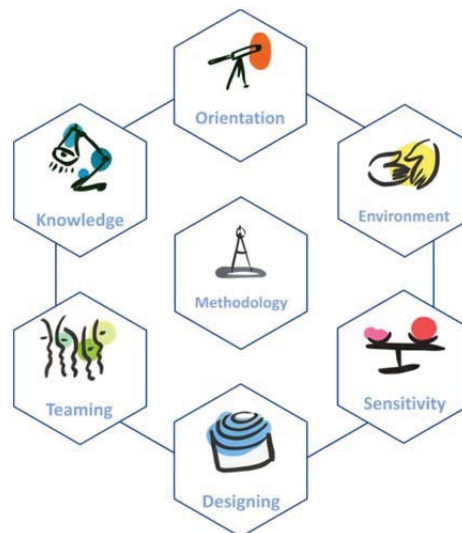

Figure 1: Highly Adaptive Project model

Each dimension consists of various facets, some of which are exemplarily presented here. Each project provides a quality in each dimension and facet; the question is only to what extent. Non-resilient or non-adaptive projects do not exist, there are only more or less resilient. Resilience is a process.

- **Orientation**

Each project, as well as each individual, has his or her own representation of time. Some are living more in the past, some very much in the present; others are already in the future. Is your project rather transfixed on problems of the past or does it actively create the future? Aspects of personal responsibility and target-orientation play a part here as well. In nearly every project the answer to the question of target-orientation is: "Of course we are target-oriented." Ok, but how and in which way are you discussing this in project meetings? Are people discussing the current situation and it's problems or are they discussing how to achieve the target. This is only a supposedly subtle difference, which has a significant influence on the orientation of people's thinking in everyday discussions.

What is the tenor in the team's discussion? Is the glass half full or half empty? Of course, every High Performance Team needs its pessimists. At last they provide a certain degree of awareness regarding problems and imminent crises. The prevailing mood, however, should be optimistic. A project team that is able to recognize its own failures and successes and realizes what this has to do with their own competences and actions will be able to get out of a crisis much faster.

- **Environment**

One for all - All for one. In a complex system every individual is responsible for the quality of cooperation. Therefore, confidence is the necessary basis for this system and can be established through communication and transparency. In highly adaptive projects cooperation, not competition comes first.

In a dynamic complex environment, cooperation is the mechanism that supports the interconnection of people. It makes sure that information flows, people interact and cooperate with each other. Thus, the "social capital" within the project will be built. If it's getting turbulent, people as well as projects need stable relationships to overcome the crisis quickly and without harm.

- **Sensitivity**

How intensely are you paying attention to the weak signals of your project? How long are they overheard or ignored? Until the crisis becomes immense?

Unfortunately, that's exactly what happens very often. In fact, there is no project turbulence that happens unannounced. It starts with rumors, through the grapevine, a gut feeling- these are often the first indicators of "something is about to happen". But is it noticed?

The team should pay attention for a moment and make the determination, whether or not this signal should be followed. And if we are already stuck in a crisis, acceptance is the key for a fast escape. In adaptive projects the stages of denial, anger and possible negotiations are short once the crisis is accepted. At this point, the project manager has significant influence; he should be the first one to accept "what happened". This defines the capacity to act for the entire project team.

- **Designing**

Question: "How do you handle failure and errors in your project organization?"
Answer: "Well, mistakes are actually permitted...."
In most project organizations, you will see that mistakes are sanctioned. It's obvious that no error management culture in terms of resilience exists. It is essential however.

Good examples are given by so called high-reliability-organizations (HRO), such as fire departments, aircraft carriers or emergency rooms. In these organizations, errors and mistakes can easily have fatal consequences, which is why the staff pays very special attention to them. "Almost-errors" are not seen as an affirmation of success, but as a hint that something in the system may not be running smoothly. Errors are used to learn about the systems behavior.

Talking about the error management culture brings us right back to the point of confidence. Only in a trustful atmosphere it is possible to report errors and almost-errors without being punished. Otherwise the staff quickly learns that mistakes are not allowed and they will sweep them under the rug. A good strategy of error prevention is paying attention to weak signals and a mindset that is accepting of "Something always happens".

- **Teaming up**

"Same attracts same" is the motto that is reflected in many project teams. We feel most comfortable in a circle of like-minded people. They're a good match, there is little to discuss. We don't have to argue about our opinions and points of view. That's convenient, but not promoting resilience.

The magic word here is diversity. An adaptive project consists of people with different opinions, ideas, experiences, backgrounds and skills. Variety increases adaptiveness. Generalists normally complement a project team with transfers of overlapping subjects and good conceptual thinking. The diversity first appears in discussions and here it will depend on the language used in discussions.

The scientist Marcial Losada discovered that "High-Performance-Teams" communicate in a proportion of 6:1 of positive to negative language. The proper proportion provides the balance between 'taking off' and 'remaining on the ground' and therefore also resilience. The successful implementation of diversity in project management is only achieved if the basis of cooperation is confidence and mindfulness. Diversity is then mirrored in the language used by the team members.

- **Knowledge**

One attribute of complex systems is the lack of transparency. In an interconnected project environment with many interactions even an experienced project manager is no longer able to understand the whole system by cognition alone. He needs a skill that everyone possesses, but which is rarely taught. It is called intuition. This does not mean he should use his own intuition, but rather the collective one. To rely on the intuition of one individual alone can lead to wrong decisions quickly. The collective intuition, however, is a powerful instrument, which helps to make decisions in complex contexts and thus, manage the project.

When talking about complexity, we have to discuss "time to play" and innovation. If decisions cannot be made by analysis through experts only, a new approach is necessary - innovation. What does that have to do with "time to play"? If you are in need of new ideas, concepts and solutions, the staff should have free time to think things through. On one hand, this means that the team can insert even unusual items and thoughts outside the box. On the other hand, the members need a temporal (if necessary regional) frame, in which "thinking out of the ordinary" is welcome. The more often this is allowed and taught, the faster scenarios for solutions can be generated in case of possible project crises.

6. There is no benchmark for resilience

It would probably be very nice and practical, if there were standard values for each dimension, "resilient" or "not resilient". They do not exist. Each project is moving on an axis inside every individual dimension. A statement about the quality of the positioning and the possibilities to increase the resilience can only be made in the particular context of the individual project. But one can start by discussing the facets of the H.A.P. model with the project team. So they may find a common language, make sense of what they are talking about and get on a discourse. That is the first step on the ladder of resilience.

7. References

[1] Stephanie Borgert: Resilienz im Projektmanagement. Bitte anschnallen, Turbulenzen, Springer Verlag, (2013)

[2] Carl Weick, Kathleen Sutcliffe: Managing the Unexpected: Resilient Performance in an Age of Uncertainty, John Wiley & Sons, (2007)

[3] Dave Snowden: A Leader's Framework for Decision Making, https://hbr.org/2007/11/a-leaders-framework-for-decision-making (2007)