KEY BARRIERS OF PERFORMANCE OF AGILE TEAMS IN NON-IT AREA

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Abstract

At the core of the agile organization are self-organized teams that should have specific characteristics. There were identified key attributes of self-organized team that positively influence team performance. However the team itself may face challenges on different levels that block its performance. Several studies focused on the identification of key performance barriers in the agile IT teams (Hoda et al., 2016, Stray et al., 2018) - not having clear and common goals, lack of trust, too many dependencies to others, lack of coaching and organizational support, and diversity in norms.

Agile management is intensively implemented outside the field of IT; the author of this paper focuses on the analysis and understanding of the barriers of performance in other areas of business, specifically in the Czech Republic. Organizations in the Czech Republic are still on their ways of agile transformation and face many challenges. Based on the qualitative research, the author defined key barriers of performance of agile teams in non-IT area. Barriers are divided into three levels – Team level, Organizational-operational level, Organizational–culture level. The outcomes can be applied to business practice to support performance, especially in organizations that are undergoing transformation or preparing for the transition to Agile.

Key words: Agile, Performance, Management, Self-organized Teams

JEL Code: M12, M14, M54

Introduction

Agile is a way of thinking and understanding the new, complex and unstable reality and acting in it. This complex reality is characterized by a very fast pace, stronger competition and intense digitization. Digital technologies (rapid Internet development, interconnected systems, artificial intelligence, robotics, big data, and cloud) are changing all elements of the value chain,

including product design, supply chain, manufacturing and customer experience, and new business models are emerging under their influence. Many organizations in the Czech Republic decided to change their operational model from the traditional hierarchical structure towards more flexible and customer oriented Agile. As it is mentioned in the KPMG Global Agile Survey 2019, the reasons behind this transition differ from delivering business value across the whole value chain to integration of both business and IT. This new model of operation brings many advantages as speed, continuous delivery of value to the customer, increased customer satisfaction and more flexibility.

Empirical studies have identified a number of positive impacts on the organization's results. Sidky (2007) identified several benefits of implementing agile methods, namely early return on investment, short time to market, better quality, better relationships with clients, and better relationships in the team. This is confirmed and further elaborated by Gustavsson (2016), who in the analysis of 21 case studies from agile projects outside of IT lists a total of 17 benefits that agile projects bring to organizations and summarizes that the most frequently mentioned benefits relate to teamwork, customer interaction, productivity and flexibility.

As confirmed by many experts, agile shift is more than anything else a change of an organizational culture and individual mindset reset. The challenges discussed by Gustavsson (2016) were problems with changing thinking towards flexibility, lack of process visibility, and buy-in from managers. Scaling Agile among the entire organization brings amount of challenges, sometimes unexpected, that might stay hidden until they suddenly rise and negatively influence the fragile stability of the new culture. The question arises, can the organization avoid or mitigate the challenges connected with the agile transition?

One of the key elements bringing the message about the shift to employees is performance management. Performance management, including communication and subsequent rewards and recognition, play a key role in managerial practice to increase not only individual performance but also a powerful tool to help organizations implement their strategy and strengthen their desired work culture (McMullen, T. 2018). Organizations can become agile in various ways - they can be created as agile - most often IT organizations or organizations with a focus on SW development are created in this way; they can transform themselves as a whole into agile in several waves of transformation; they can transform themselves in gradual steps - which is a more systematic approach; or they can be changed bottom-up (Brosseau et al. 2019). Some organizations build their new operating model on a hybrid principle - in the part of the organization where the flexibility and end-to-end process flow is applicable an agile

approach is used, in the rest of the organization the organization remains in the traditional hierarchical model: in some functional areas (maintenance, purchasing, sales call centers or accounting) traditional structures and processes are likely to bring lower costs and more repeatable results to the organization (Garton and Noble, 2017). The tension between the two parts (agile and non-agile) of the organization brings another kind of challenge, more on the organizational level, but influencing the team and individual performance too, as teams in Agile have a different mind-set and information demands than traditional organizational units as well the coordination between those two is difficult. By describing the above situations and tensions we should understand that transition to Agile brings a wide portfolio of challenges that in fact may work as ultimate barriers to performance of individuals, teams, and organizations.

This paper aims to contribute to the empirical understanding of the area of performance in the agile organization, with the focus on the barriers that agile teams have to face and overcome. The results from the qualitative research of two cohorts of respondents are presented. The results show that barriers of performance can be met on three levels that influence each other: Team level, Organizational-operational level, Organizational–culture level. The paper is organized into four main sections. In the section 1, the research design is presented followed by the results of the research in the section 2. Than the discussion is presented in the section 3, and finally the conclusion in the section 4.

1   Research design

In this section, the research design is described. The research procedure was realized following these steps: (1) I started with a brief research on the state of the art in the literature. (2) I performed an unstructured discussion with experienced specialists in Agile and agile transition (3) I realized an online research through questionnaires (due to pandemic lock-down the most relevant way of data collection). (4) Second cohort of respondents was interviewed online (Zoom). I was able to collect enough data to identify concrete barriers. (5) I analyzed the notes of the interviews qualitatively. Afterwards, an initial classification was developed. (6) Finally, this classification was used to categorize the identified barriers and prepare the model.

The term Agile/agile, that is used in this paper in the context of the studied teams and organizations, means that the company TOP management decided to transform the organization as a whole, or partially to a hybrid model mentioned above. I do not refer to any specific agile methodology (SCRUM, SAFe, others) but use the term Agile/agile in general.

1.1 Literature review

Organizations face a dual need in a volatile, uncertain, complex, and ambiguous environment (VUCA). Organization must be a reliable partner for customers and at the same time be able to adapt to their needs. The ability to balance these two needs is crucial for sustainability. Too much standardization to be a reliable partner can lead the organization to be unable to respond flexibly to change. Conversely, too much flexibility and adaptability to customer needs can lead to fragmentation and a loss of focus on the organization's overall mission, vision, and goals.

Nerur et al. (2005) outline the four groups of challenges that traditional organizations face in implementing Agile. Although this study is focused on software development, its outputs can be generalized for further use in other parts of the organization. Parker et al (2015) discussed the area of team values and performance. In their study, Kusters et al. (2017) describe barriers and risks in the existence of an agile team in a traditional environment (in a hybrid model). There were identified 22 issues, which were grouped into 6 groups. Theobald et al. (2018) deal with the classification of issues of the relationship between agile and traditional teams in a hybrid organization. The problem areas were divided into several categories, of which the largest volume of problems were identified in the area of Coordination and Integration. Lugnet et al. (2021) identified more general challenges which are associated with implementing agile methods. In the Table 1, there is summarized a set of identified challenges relevant to the agile transition.

Tab. 1: Overview of identified challenges in agile

Source	Challenge
Nerur et al. (2005)	- Management and organization: culture, org. structure / form, knowledge management, remuneration system - People: teamwork, competencies, customer relationships - Processes: Change from a process-oriented approach to a focus on functions and people, short, iterative and tested development - Technology and tools: Suitability of existing technologies and tools, new sets of skills in given areas.
Parker et al. (2015)	- No beliefs and values - Many performance measures and key performance indices - Prevailing of team of competition above a shared learning
Kusters et al. (2017)	- Organization and structure - Processes and control - Culture and management styles

	- Development and testing
	- Stakeholder involvement
	- Documentation and communication
Theobald et al. (2018)	- Project Planning
	- Controlling, Reporting & Approval
	- Contracting & Budgeting
	- Process Requirements
	- Tooling & Infrastructure
	- Coordination & Integration
	- Staffing
Lugnet et al. (2021)	- A lack of approval not only from top managers but also from critical peers
	- An unprepared organization that did not allow teamwork
	- A lack of specific company success factors to support new methods

Source: Prepared by author

The most often mentioned areas are related to the management style and company culture, people and teamwork, processes, and technology, infrastructure and tools. This is also supported by the 14. State of Agile report realized in 2019, where there were identified barriers of agile as follows: general resistance of the organization to change, insufficient participation of leadership, inconsistent processes and practices in individual teams, corporate culture contrary to the values of Agile, inadequate support and sponsorship from TOP management, lack of skills and knowledge of agile techniques.

1.2   Methodology

The data for this paper were gathered in a range of different organizations and business areas with the exception of IT sector. The research sample was compiled on the basis of opportunistic approach and the snowball sample technique. The respondents represented a mix of national and international organizations of different sizes, however always with a certain level of experience with agile management. The overview of respondents and their experience is summarized in the Table 2 and 3.

Tab. 2: Overview of respondents

Role	Questionnaire	Interview
Agile Consultant, Coach	13	4
Specialist	12	1
Manager	7	1
Trainer	3	

Product owner	1	
Project Manager	1	

Source: Own research

Tab. 3: Length of experience

Length of experience with Agile	No. of resp.
Up to 6 months	6
6-12 months	1
1-3 years	24
More than 3 years	12

Source: Own research

The explorative and inductive approaches were used. The explorative approach provides a rich basis for understanding the real situations and their context. Empirical data from 37 qualitative questionnaires and 6 semi-structured interviews serve as the basis for the paper. The questionnaire consists from open questions, focused on the overall experience with agile and specifically on the barriers of performance that respondents perceive crucial in the agile organization. To obtain different views on the analyzed phenomena, there were included as well questions related to proposed changes for more successful implementation of Agile. The interviews have taken about 1 hour, were realized online and in-person, and recorded. Open coding was used for the analysis, in order to capture important ideas for the researched problem, concepts and categories are defined.

2   Results

2.1   Barriers

In the first stage, the data related to the barriers of performance both from questionnaires and from interviews were analyzed. The outputs from the analysis were first confronted to the model of Karhatsu et al. (2010) that describes the six building blocks of well-performing self-organized team: Autonomy, Communication and collaboration, Shared leadership, Continuous learning, Redundancy, and Team orientation. The intention was to use this model as a basis for creating a model of related performance barriers. The model however proved insufficient as it describes the internal setting of the team itself without the more complex view on the organization. Based on the collected data there were identified barriers that are staying outside the team and are considered important for respondents.

High team performance is influenced negatively with the barriers that were divided into three groups. The first group of barriers describes the Team set-up, nominally low competences

of team members accompanied by a low number of candidates with needed skills-set, misalignment or misunderstandings on common goals, missing feedback and willingness to learn from it, unreachable know-how that is kept out of the team for some reason, reluctance to share, ego of team members, bad relationship or "chemistry" in the team, too high bureaucracy, and lack of time for appropriate documentation.

The second group of barriers refers to the environment where the team has to operate. It is represented by low readiness of technology, infrastructure, and software, as well as by inappropriate or outdated processes, poor knowledge and application of the methodology, too high dependence or too low connection with other teams, tools are not available, disproportionate pressure or parallel work on multiple intentions; budgeting and non-autonomy to invest to projects.

The third group of barriers was identified in respect to the organizational culture: The way of leadership and management, when the original management team does not understand the purpose of the agile transition, has bad expectations from the new way of working and/or gives low support; overall negative mood connected to the change; when the problems are not solved immediately. As well the unsuitable physical environment (offices) may affect performance of the team badly.

2.2   Improvements

In the second stage, there were analyzed proposed changes that participants consider possibly helping the organization to implement or apply Agile more successfully. These recommendation are considered a reference to possible future or hidden barriers that the organization should address to maintain the new culture. The five main areas for improvement are identified based on the data as follows: Support of a team autonomy (less control, trust, transfer of responsibility), Alignment across organization (alignment of all levels of management, release of cooperation across silos), Methodology application (understanding the selected methodology and consistency in use), Leadership (leaders as owners of the transformation, listening to people, "people over processes"), and Role modelling (personal engagement of managers, permanent support of Agile on a daily basis).

3   Discussion

As with any significant change, when implementing Agile in an organization, the organization must face problems or challenges that slow down or make it difficult to achieve the desired

result. Most researches show that the biggest barriers are organizational culture, structure and leadership style. This is not a surprising finding, organizations were created in a different context, where it was possible to analyze the situation, plan, cascade goals through the organization and deliver performance without major changes, in a relatively stable environment. However, in a changing world, this approach is no longer possible. If an organization decides to use Agile, it is likely to address challenges and barriers in the context of the organization as a whole, as well as barriers at the team and individual level.

The research confirmed that there exist performance barriers that are perceived by employees and experts involved into the agile transition or agile style of working. It confirmed the discussed findings that were articulated by several studies and summarized in the theoretical part of this paper. Performance barriers may be structured into three levels model that from organization point of view provide a clear overview of their relationship and dependencies (presented on Figure 1). Referring to the three levels model of performance barriers, as well the proposed improvements can be aligned to it, can be translated into the barriers (hidden or future). Team autonomy relates to the first level, alignment and methodology to the second level and leadership and role modelling to the third level.

Fig. 1: Model of performance barriers in Agile
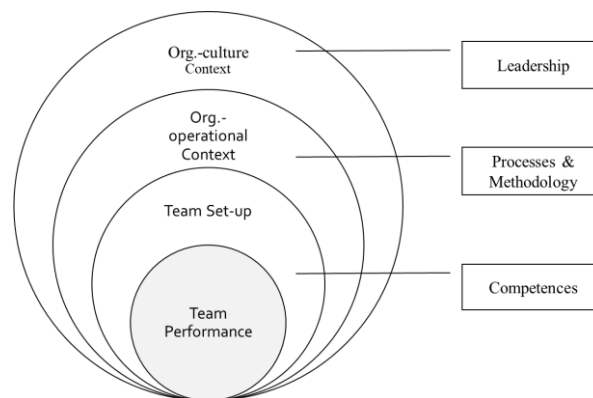
Source: Own research

From the outputs, it became clear that for the team itself there are the most blocking barriers connected to low level of competencies (knowledge, skills, experience, and attitude) related both to expertise of the team and to Agile. This corresponds with the perceived lower maturity of agile teams in non-IT area, where the transition is more in its early stages.

Conclusion

The present paper aimed to present the barriers of performance that teams in the agile organization have to face. Qualitative data were analyzed obtained from the questionnaires and interviews with experienced specialists from different organizations. Agile and its application to practice is on the rise in the Czech Republic, yet many organizations are on the very beginning of their transition. It is believed, that the presented model of identified barriers contribute to better understanding of focus areas while shifting to Agile.

Research limitation

This research was carried out on a sample of 43 respondents in total that represented mix of industries and size of companies. The research can be extended on a larger population or focused to selected industries to further elaborate on the barriers model. Limiting for the research was the situation associated with the pandemic, when a number of originally contracted interviews or questionnaire survey on larger samples could not be carried out.

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