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### **Research Exposé**

Agile Teams as the model of the future?  
A comparison between the job  
satisfaction of agile teams and plan-  
based teams in software engineering

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## **Agile Teams as the model of the future? A comparison between the job satisfaction of agile teams and plan-based teams in software engineering**

This master thesis should deal with agile teams as a facet of Work life 4.0. Together with other changes in daily work life, such as home office, job sharing and many more, agile, flexible and autonomous teams are one of the main components of future based functioning. Nowadays biographies are not as predetermined as a few years ago. People work part-time more often, they make sabbatical years or change their profession per se during their work life (Eilers & Rump, 2017, p. 23). As the world of work is in a constant change, it is important that science keeps up with the speed of the change. Nowadays terms like Work life 4.0, employability support and work-life-balance are omnipresent when talking about economy and work life (Eilers & Rump, 2017; Cameron & Green, 2009). This change is partially traced on the demographic change going on in work life. Currently Generation X provides the most people in work life (Statistik Austria, 2019). But in some years Generation Y or Millennials will take their place. As studies show Millennials attach importance to a job, which is fun and flexible (Pinzaru, et al., 2016, p. 177). Because agile methods try to satisfy these aspects the importance of agile methods become clear. Therefore it is important to give attention to the demographic changes which lead to changes in the work life. As mentioned before, agile teams are part of the change going on now. Especially in IT related fields agile teams are at the present time (Stray, Moe, & Hoda, 2018; Tripp, Riemenschneider, & Thatcher, 2014). In order to contribute something to the state of the art this master thesis will deal with agile teams and the comparison with traditional teams when it comes to job satisfaction. The goal is that the derived information helps teamleaders and managers to plan their teams as efficient as possible.

Hofert (2018, p. 3) describes agility as the ability to react fast on changes. When talking about agile concepts Hofert (2018, p. 4) talks about adjusting the work process according to the talents and strengths of the employees. Closely linked to that is flow. Mihaly Csikszentmihalyi describes flow as the complete involvement "in something to the point of forgetting time, fatigue, and everything else but the activity itself" (Csikszentmihalyi, 2014, p. 230). The goal of agile concepts is that people's motivation for work comes from within because they work for something they are interested in (Hofert, 2018, p. 4). Another definition is from Bauer (2004, p. 13 f.): "the high performance teams are characterized by flat hierarchy structures, job rotation, self-responsible teams, multi-tasking, a greater involvement of lower-level employees in decision-making, the replacement of vertical by horizontal communication channels, and complementary human resource management practices that give employees the appropriate incentives to participate in decision-making through the use of alternative payment schemes and increased employer provided training". Stray, Moe and Hoda (2018, p. 2) describe three conditions for agile teams namely autonomy, cross-fertilization and self-transcendence. Hofert (2018, p. 11) describes eight values for agile working: commitment, feedback, focus, communication, courage, respect, simplicity and openness. The two main agile process methods which are developed from these values are namely scrum and kanaban (Hofert, 2018, p. 11). Based on this

values there are furthermore principles that lead to methods. A view examples for agile teams would be: self organization which leads to an authorized team, team potential analysis which leads to reflection, flow and diversity or meta communication which leads to saying instead of asking (Hofert, 2018, p. 16). These methods should achieve the agile team working. Barriers which could lead to problems could be “not having clear and common goals”, “lack of trust” or “lack of organizational support” (Stray, Moe, & Hoda, 2018, p. 3). The necessity of agile teams and adjustment in general develops from constant change in the work environment. The more complex a system gets the more focus on process orientation should take place. Especially software companies face a growing environmental complexity that demands agile teams. When designing such teams there are many points to have an eye on: the number of team members, the diversity within the team, a possible conflict between the individual autonomy and the need for team, higher peer pressure and many more (Stray, Moe, & Hoda, 2018, p. 4; Bauer, 2004, p. 4). Depending on the agile method used, there are answers for these problems. Scrum for example suggests five to nine team members. A big difference between traditional teams and agile teams are furthermore the team members per se. In agile teams everyone who is needed to get the project done participates in the team whereas in traditional teams normally people with the same function form a team (Tripp, Riemenschneider, & Thatcher, 2014, p. 269). But not only for team members but also for managers things change when agile methods are applied. Hofer (2018, p. 51) describes that leadership in agile contexts differ much from leadership in traditional contexts. As Bauer (2004, p. 13f.) mentioned agile teams have flat hierarchy structures. This fact lead to another position for a leader. Whereas leaders in traditional settings are persons with power, who could sanction, praise or punish their employees, leaders in agile settings are more like a serving leader (Hofert, 2018, p. 51). In Scrum for example you have more leadership tasks splitted on different people. There is the product-owner, who is responsible for the improvement of the product and there is the Scrum Master, who is responsible for getting problems and tasks out of the way (Hofert, 2018, p. 52).

The connection between agile teams and job satisfaction are shown in the following studies. Job satisfaction is described as a positive feeling about a job which results from the evaluation of its characteristics. That means that people with a high job satisfaction have positive feelings of their job and people with a low job satisfaction have negative feelings about the job. Because researches has often shown that there is a connection between job satisfaction and organizational performance, it is important to make a connection between the agile teams, their job satisfaction and the performance. As Stray, Moe and Hoda as well as Tripp, Riemenschneider and Thatcher showed in their studies, agile teams have a higher job satisfaction in comparison with traditional teams. Another study shows, that people working in agile or mostly agile teams have a higher job satisfaction in comparison to the team members of plan-driven or mostly plan-driven teams (Kropp, Meier, Anslow, & Biddle, 2018). Bauer (2004, p. 4) describes, that studies have shown that agile and high performance teams have the tendency for higher wages. Although this is according to Herzberg just a Hygiene Factor which lead to no dissatisfaction the higher it gets it is an important point to mention. Another aspect which can lead to higher job satisfaction

from agile team members is the flexible time table. This allows them to coordinate their leisure time better with their family members which in turn leads to a better work-life balance, which is especially important for members of Generation Y and Z (Bauer, 2004, p. 5; Stojanova, Tomsik, & Tesarova, 2015, p. 85)

Therefore it is possible, that this high job satisfaction leads to a higher performance. To understand the effect of certain aspects of a job it is important to mention some job satisfaction- and motivation models. One of these theories is the Hygiene-Factor Theory by Herzberg. There are factors that lead to satisfaction and different factors that lead to dissatisfaction. The Hygiene factors lead either to dissatisfaction or to no dissatisfaction but they can not lead to satisfaction. Examples for hygiene factors would be salary, work conditions or security. Then Herzberg describes Motivators. These lead either to satisfaction or no satisfaction but never to dissatisfaction. Examples would be responsibility or the work itself (Miner, 2005, p. 61 ff). With this theory it could be explained, why agile teams have a higher job satisfaction because responsibility is also part of the agile team methods. Another model that should be mentioned is the Job Characteristic Model by Hackman and Oldham. They describe five core characteristics for motivation: skill variety, task significance, task identity, autonomy and feedback from the job. These characteristics lead to specific psychological states which lead to outcomes – for example: job satisfaction and motivation. With the Job Characteristic Model the higher job satisfaction of agile team members can be explained as well, because as mentioned above, agile teams have a high autonomy and contain feedback and demand high commitment (Miner, 2005, p. 75 ff). Another related concept is Model X and Y. Whereas X humans need command and control, Y humans go along with high degree of imagination, ingenuity and creativity (Hofert, 2018, p. 97). With all of these models some parts of the agile team methodology can be explained.

There are questionnaires for each of these theories. To examine the job satisfaction in this specific case it could be an advantage to combine and complement existing questionnaires. As the sample consists of people in IT related jobs, the addition of questions which deal with specific IT topics and factors specifically related to this part of the job could be a valuable addition to the existing questions. Because of the sample an online questionnaire is the most useful way to collect the data. Furthermore the questionnaire will be an online one because it is easier to reach more people in a short amount of time (Döring & Bortz, 2016, p. 398). First of all these people deal with computers everyday so to make them feel as comfortable as possible, an online survey is a good option. Furthermore the quantitative access makes a comparison with other studies easier. A disadvantage of the questionnaire would normally be that the participants must have a specific reading and language competence but because the participants in this thesis are team members in the IT sector a questionnaire should be possible for them to fill out (Döring & Bortz, 2016, p. 398).

The content of the theoretical part will be as follows. First a general overview about the topic should be given. Then an explanation and definitions about agile teams should follow. In this chapter should be explained what agile teams are, where they can be found and the history of this kind of team. In the following chapter the application of agile teams should be described. Afterwards a chapter about the relation between

performance and job satisfaction is planned. In this chapter, important theories and models must be mentioned as well. As the last part there should be a combination between the findings of studies about agile teams and the findings about job satisfaction.

### Timetable

Period	Working Phase	Task
May 2020 – October 2020	Phase 1: Preparatory Work	<ul style="list-style-type: none"> <li>• Finding a Supervisor</li> <li>• Restriction of Topic</li> <li>• Literature Research</li> </ul>
August 2020 – October 2020	Phase 1a	<ul style="list-style-type: none"> <li>• Finding existing questionnaires</li> <li>• Extension of existing questionnaires</li> <li>• Preparation for sending out</li> </ul>
October 2020 – December 2020	Phase 2	<ul style="list-style-type: none"> <li>• Collecting data via online questionnaire</li> <li>• Writing theoretical part</li> <li>• Consultation with supervisor</li> </ul>
January 2021 – April 2021	Phase 3	<ul style="list-style-type: none"> <li>• Completion of theoretical part</li> <li>• Analysis of questionnaire</li> <li>• Writing empirical part</li> <li>• Writing discussion</li> </ul>
April 2021 – May 2021	Phase 4: Adjustment Phase	<ul style="list-style-type: none"> <li>• After Correction of Supervisor adjusting thesis</li> </ul>
May 2021	Phase 5: Final Phase	<ul style="list-style-type: none"> <li>• Submission of Thesis</li> </ul>

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