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Procedia Computer Science 83 (2016) 576 – 583

Procedia Computer Science

The 7th International Conference on Ambient Systems, Networks and Technologies (ANT 2016)

Agile project management approach and its use in big data management

Patrícia Franková[a], Martina Drahošová[b], Peter Balco[a,b]*

[a]*Comenius University, Faculty of Management, Odbojárov 10, P. O. Box 95, Bratislava, 82005, Slovakia*
[b]*Comenius University, Faculty of Management, Odbojárov 10, P. O. Box 95, Bratislava, 82005, Slovakia*

Abstract

The use of project management methodology for each project generates a lot of questions as well as recommendations. One group argues that the standard methodology are applicable to all projects. Another group prefers the view that reflects the project management methodology tailored to the project. In our contribution we summarize the practical views of project managers on project management issues in the area of big data management.

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Peer-review under responsibility of the Conference Program Chairs

Keywords: Agile big data management; project management; big data projects; practical recommendations.

1. Introduction

The aim of this work is to document agile approach to project management and suggests ways of using it in projects related to Big Data management. For this purpose we conducted interviews with experts in the field of big data management and project management, which was held in order to clarify the issue of Big Data management and the possibility of applying agile approach to big data projects in different companies. Based on the evaluation and processing of data from the interview, we identify which of the principles of Agile Manifesto, can be used in the management of Big Data projects. Subsequently we determined the recommended practices in the management of Big Data and Big Data projects management. We based our analysis of the opinions of practitioners and the analysis

* Corresponding author. Tel.: +421 915 995 755
E-mail address: peter.balco@fm.uniba.sk

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Peer-review under responsibility of the Conference Program Chairs
doi:10.1016/j.procs.2016.04.272

of the questionnaire. The questionnaire survey was designed to generate practical knowledge and experience in the field, which was subsequently distributed to companies undertaking the big data projects.

By analyzing the data obtained from interviews and questionnaire survey, we try to answer the following questions:

- What approach is suitable for the management of Big Data projects?
- Is it possible to use an agile approach to managing Big Data projects?
- What are the practical recommendations for the implementation of Big Data projects?

Project management can be understood as "the planning, delegation, monitoring and control of all aspects of the project and motivate the participants to achieve the project objectives within the expected performance parameters set for time, cost, quality, scope, benefits and risks". [1,2] Similarly, standard ISO 1006 [3,4], defines project management as "the planning, organizing, monitoring, managing and reporting of all aspects of the project and the motivation of all project participants to achieve the project objectives." In principle, it is the implementation and control of the actions that are necessary during project implementation in order to achieve the project objectives within pre-defined limits [28, 31].

2. Agile approach to software development

In addition to the plan managed approach of software development is gradually focus on an agile approach. Word agile has become one of the modern concepts of the 21st century. When we were interested in the popularity of agile approach and agile framework Scrum, we searched for these terms in the English language between trends in the search engine of company Google [5].

What does the term "agile" mean? This term is not in the context of software development clearly defined. The origin of the term of agility in manufacturing is defined as " the ability to successfully sell low-cost, high-quality products with short delivery times and in different capacities that by the adaptation to the needs of the user provide increased value for customers ".[6] In the article [7] it is stated that "a key precondition for agility in software development is the freedom to adapt procedures and methods to the needs of a particular project."

Success of practicing agile development is confirmed by the latest research State of Agile™ of [8] sponsored by Version One, which a supplier of business software in the field of agile is handling. Of the more than 3,500 respondents surveyed, mainly in the field of software development, up to 88% using agile development. An annual increase of 2 percent compared to the previous two years also reflects the growing popularity of agile approaches.

2.1. Agile Methods

Agile methods are "methods that are trying to focus on the primary objective of effective software development, ie. the creation of working software (without defects)".[9]

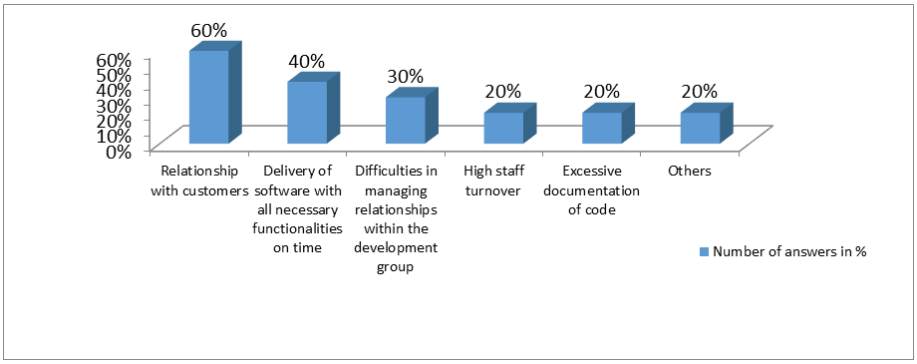

Fig. 1. The transition to agile methods during the software development mitigated these problems.

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