**Inter-team Coordination in Large-scale Agile**

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ABSTRACT

Agile development is a new type of software development method that has attracted widespread attention since the 1990s. It is a software development capability that can respond to rapidly changing requirements. Because of its efficient nature, more and more small teams are turning to agile development as their first choice. But agile development can be challenging when it comes to large software projects where multiple small teams work together.

This paper mainly describes the difficulties encountered in coordination in large-scale agile development. How to avoid these problems is the focus in our future work. It also discusses the importance of Design/Architecture in large-scale agile.

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CCS CONCEPTS

• Software and its engineering

~Software creation and management

~Software development process management

~Software development methods

~Agile software development

KEYWORDS

Inter-team coordination, Large-scale agile, Design/Architecture

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1 Review Agile Concepts

With the rapid development of the new generation of information technology and the upgrading of consumer demand, product functional demand is increasingly diversified and uncertain. The traditional software development methods represented by the waterfall model can no longer adapt to the pace of product updates. As technology updates and user needs continue to diversify, agile development gradually replaces traditional development. As a new method of software development that can quickly respond to the functional requirements of users, agile development is not only widely used in the software industry, but also gradually spread to other industries.

The main feature of agile development is that the software development process attaches great importance to human initiative. Agile software development method mainly has the following five advantages:

•Precise requirements and accurate results. Agile development has a very short development cycle. This allows agile development to more accurately accomplish the task of each phase. At the same time, the shorter development cycle also allows the program to better adapt to changing requirements.

• Guaranteed quality. Agile methods have strict requirements for the quality of each iteration. Agile development teams have a high level of development methodology, and some test code will be finished before the formally development.

•Customer cooperation is better than contract negotiation. Good teams care more about working with customers.

•Highly return on investment. In an agile development, the most valuable features are always prioritized to development, so that the customer will always get the maximize return on investment.

•High speed is one of the most significant benefits of agile development. Agile teams focus on developing only the parts of the project that are most needed and most valuable today. Because that the software can be quickly put into development.

Agile development, of course, has its own disadvantages. Agile development focuses on human communication and ignores the importance of documentation. If the turnover of project personnel is too large, it will increase the difficulty of software development and maintenance. Nevertheless, the advantages of agile development have made it increasingly the most popular method of software development.

It contains said information for all three versions of MS Word (Windows and 2 versions of Mac). There are also separate links to the user guide, which can be referred to by the user. This URL also contains some useful video links, which describe how to add the template, structure the paper, and generate the layout, in different clips. **Display Formula with Number**

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2 Impediments and Solutions

2.1 Organize

Agile development team is a new form of self-organization and cross-functional team cooperation, which advocates the form of self-organization and self-management of the team. Therefore, the quality of teamwork is an important factor related to the performance of agile development teams. However, it has not been fully studied which contents in the daily work of the team will affect the team performance.

Through the study of some actual projects, I found that most of the good large agile development teams have the following characteristics:

1. Unified phase goal

It is means to determine what functions need to be done and what goals need to be achieved in one cycle. During the development process, the team moves toward a unified goal, without interrupting progress by inserting new features. Once the phase goals are set, the team begins work. Once the goal is complete, the team is ready to move on to the next functional iteration.

2. Decoupling

The main purpose of decoupling is to maintain independence. It is divided into three aspects:

a. Technical decoupling

This means the underlying core architecture, applications, and UI are clearly layered, which makes it easier to develop functional extensions.

b. Business decoupling

That is, the independence of the business function module. large functions need to be divided into independent feature modules to facilitate the division of development tasks.

c. Team decoupling

Divide large teams into separate teams (5-8 people are preferred). Each team is responsible for independent feature module development. Each team includes product requirements analysts, project managers, developers, and UI designers. Although the size of each team is small, its staffing is comprehensive.

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2.2 People

2.3 Tools

ACKNOWLEDGMENTS

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REFERENCES

[1] Working Together in Agile Teams: https://www.benlinders.com/2019/working-together-in-agile-teams/

[2] How to Make Sure Agile Teams Can Work Together: https://hbr.org/2018/05/how-to-make-sure-agile-teams-can-work-together

[3] Why is Sprint Zero a Critical Activity? Dick Carlson, Mr. Soukup

[4]. Agile Teams: https://www.scaledagileframework.com/agile-teams/

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