Hallmarks of Effective Implementation of Agile Practices and Agile Transformation Chronicles

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Abstract: *Agile methods aim at fast, light and efficient than any other vigorous method to develop and support customers business without being chaotic. Several hallmarks are presented here so that the agile software development practices will become more effective when they are accomplished. Different success stories of organizations shows the rising movement of agility in the software field. Agile transformation chronicles are the live examples of how the agile software development practices are prevailing round the globe.*

Keywords: Agile, Deliverables, Hallmarks, Chronicles, Version One.

1. Introduction

Agility is increasingly becoming the driving force in many organizations. Agile development - once a predominantly team-based practice, is grabbing the attention of the business. Software professionals are getting more knowledgeable about agile development and are now scaling it more broadly within their organizations. It's not just knowledgeable; the agile community is applying what they know about the methodologies more broadly in the workplace based on the success they have seen within single teams. Agile momentum has taken off and its successes are being embraced at the enterprise level. Agile helps organizations complete projects faster and more people are recognizing that agile development is beneficial to business. It is proved that implementing agile on the whole delivers what organizations hope for.

My hypothesis is that the advantages of adopting an agile software development approach lies in the considerable raise in software quality. Amazingly there are two kinds of benefits for the customers who try agile. The first one is Quality and the second benefit is lower defect rates. Agile methods are a rising movement in the software field. This realistic, people oriented method to software development demands software practitioners. Several adopters experienced enrichments in competence, superiority, work inspiration, and consumer satisfaction. User involvement is given high priority in the working style of agile, drawing user„s right in to the heart the development process. While transferring to agile methodology from the traditional pattern it produced the benefits above expectations which replicated in the decrease in fault rate as well as producing high quality software.

This research paper is the result of an immense research work on the effective implementation of agile software development. This research work which is a part of Doctor of Philosophy is organized as follows: Section II explains the hallmarks of effective implementation of agile software development practices; Section III presents the agile transformation chronicles as given by Version One which enterprise agility and provides end-to-end solutions for organizations that follow agile practices and Section IV concludes the research paper.

2. Hallmarks of Agile Success

Agile software development facilitates industry to fabricate a successful product. The products that exhibit agile development success follow several characteristics which are summarized as follows:
1) Iterative agile
2) Working deliverables
3) Adaptive planning
4) Continuous testing
5) Changing requirements
6) Continuous improvement
7) Relative Estimation

Iterative Agile: Agile software development methods are known for their iterative releases. A release with several iterations produces a working and accepted product. Each iteration starts with a typical plan by the agile team on the work that they will do in that iteration. The team should understand the requirements accurately and model the system so that the outcome will be as expected by the stakeholders. The goal is to accurately plan the iteration by evaluating and prioritizing the work items, understanding requirements, modeling the requirements and performing continuous testing.

Figure 1: Iterative Agile Development Methodology

Working Deliverables: The agile development team's primary measure of progress is the delivery of working feature. This is possible only with the team communication and collaboration throughout the agile development process. At every step during development the team should continuously work to improve the business value by considering the changing requirements from the customers, users and other stakeholders.
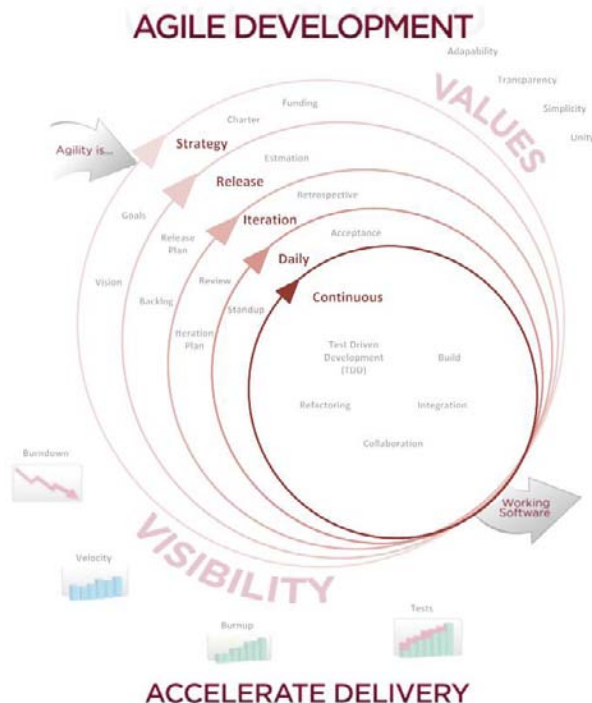

Figure 2: Agile Delivery

A deliverable is that the organization can both measure and quantify and includes tangibles such as a finished product and intangibles such as increasing sales for the quarter by more than 10 percent.

Adaptive Planning: Continuous planning is one of the key success factors of agile software development. Planning at the iteration level is essential that picks and plans for the next batch of features to implement in priority order. If the features are too large to be estimated and delivered within a single iteration, then we break them down further.
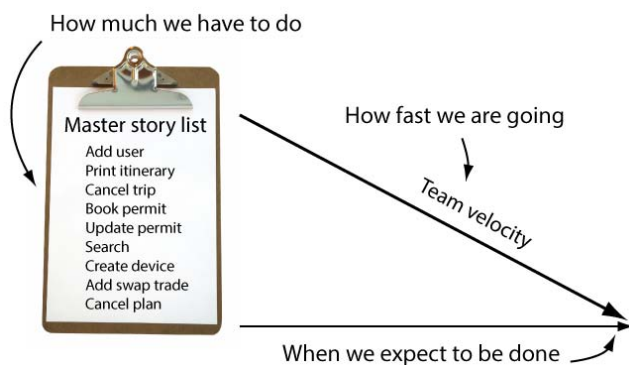

Figure 3: Agile Planning

Agile planning is nothing more than measuring the speed of a team can turn user stories into working, production-ready software and then using that to figure out when they'll be done.

Continuous Testing: By practicing continuous testing in agile development we can easily avoid the risk that will occur and the constant dread of it. We write the tests beforehand as the code itself is written at both the unit and acceptance feature level.
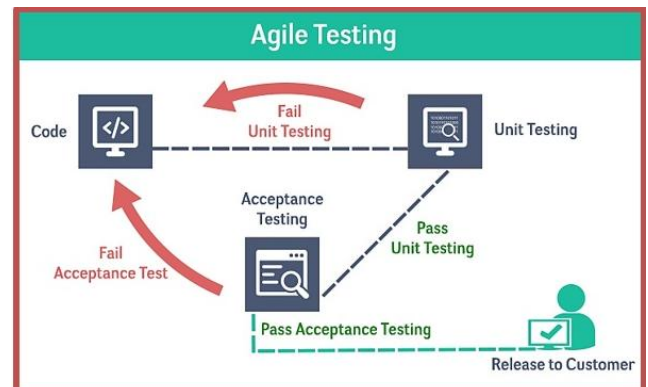

Figure 4: Agile Testing

The most agile of agile development projects strive to automate as many tests as possible, relying on manual tests only when absolutely necessary. This speeds testing and delivers software that behaves predictably, which in turn gives us more continuous and more reliable feedback. There is an emerging wealth of new tools, techniques, and best practices for rigorous continuous testing; much of the innovation is originating in the Test-Driven Development (TDD) community. Agile Testing integrates testing as part of development process, rather than considering it as a different phase. Since testing is part of the development process, it is actively gets done throughout the programming phase.

Changing Requirements: Agile software development teams embrace change, accepting the idea that requirements will evolve throughout the project. Agile development teams are facilitated with the platform, culture and tools to manage changing requirements effectively so that they can deliver the product that meet customer's expectations.
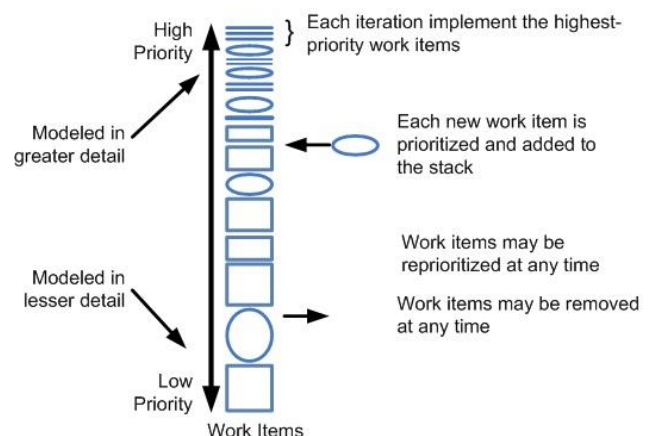

Figure 5: Disciplined Agile Requirements Change Management Process

As the agile team work in small increments and deliver frequently in short iterations and when the customer desires to make changes, the team will do that in the next iteration.

Continuous Improvement: To reduce operating overhead the organization should thrive for constant improvement. Continuous improvement helps to streamline workflows. Efficient workflows lead to reduce waste time and effort. Companies that practice agile methods enjoy the flexibility of continuous improvement where the teams are provided the time necessary for improving creativity and innovation skills. To maintain quality standards companies should turn to continuous improvement.
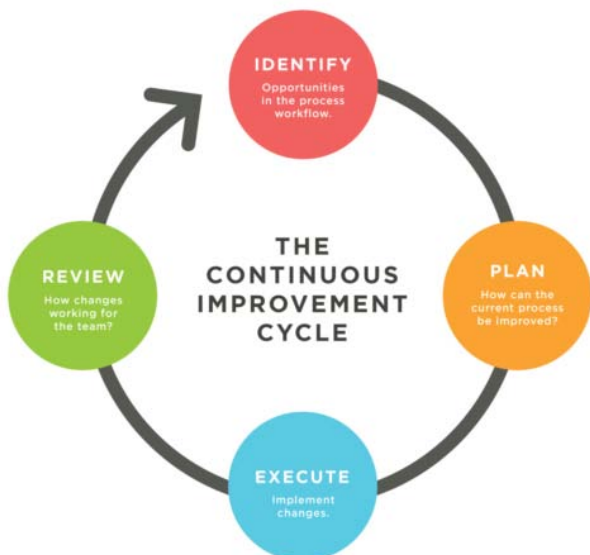

Figure 6: Agile Continuous Improvement Cycle

Relative Estimation: To accelerate planning and to remove unnecessary complexity, many agile development teams practice relative estimation of features. Relative estimation is applied at a product backlog level rather than at the sprint backlog level. Sprint backlog items can be estimated in time units and can be estimated easily because the requirements will be defined with enough details. Whereas, the product backlog items (PBI) are more loosely defined making the time based estimation very difficult. Teams compare the relative effort of completing a new requirement to the relative effort of a previously estimated requirement. The three factors that are required to determine the effort required to complete a PBI are complexity, repetition and risk.
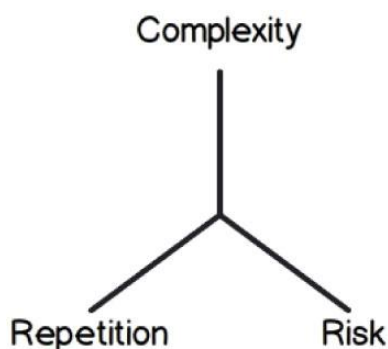

Figure 7: Factors required to complete PBI

3. Agile Transformation Chronicles

When it comes to selecting agile lifecycle management software and services, enterprises around the world are partnering with Version One to ensure their agile transformation success. The agile transformation chronicles as shared by Version One are as follows:

Cerner Corporation is a global supplier of health information technology solutions, services, devices and hardware. The company‟s proven health information technologies connect systems, people, and information to increase quality of care while reducing costs at approximately 14,000 health care facilities around the world. Cerner knew it had to accelerate its products‟ time to market to help clients navigate health care reform and to stay competitive in the rapidly changing industry.

CareerBuilder has the largest online job site in the U.S. and the global leader in human capital solutions and has agile teams around the world. Initially CareerBuilder‟s agile teams were using whiteboards and post-it notes to manage projects. The CIO saw the success of these teams and decided to scale agile across the entire IT organization. This created a lot of remote teams and the whiteboards and post-it notes just weren‟t working anymore.

Autotrader, a leading online resource for car shoppers and sellers, is part of Cox Automotive. The entire organization was committed to the idea of agile at scale from the start, so instead of just focusing on agile as a technology team transformation, they looked at the positive impact that agile could have across all the disciplines within the company.

PayU is the leading online payment service provider for merchants and buyers. They had been practicing agile for several years across the majority of the enterprise and used JIRA as their agile project management tool. JIRA‟s lack of portfolio management and enterprise reporting made visibility into the progress of the entire enterprise portfolio extremely difficult.

Dean Health Plan, one of the largest integrated health care systems in the U.S., needed to improve the efficiency of IT and decrease the amount of time they were spending

designing upfront requirements. The company selected the Scaled Agile Framework® (SAFe) and VersionOne to help them achieve their business goals.

FERGUSON

Ferguson Enterprises Inc., the largest wholesaler of commercial and residential plumbing supplies in North America, has been a VersionOne customer since 2012. Ferguson started with a few agile teams in the U.S. and offshore, and was planning to scale agile across the entire organization.

OPENLANE

OPENLANE, the industry leader in providing online wholesale auction platforms for automotive OEMs, captive finance companies, banks, and dealers, has been a Version One customer since 2005. The company takes pride in moving very quickly to respond to our customer's dynamic needs. They needed an agile platform that could help them embrace agile and keep up with the pace of change as their business continued to grow and expand.

SIEMENS

Siemens Health Services (HS), the health IT business unit of Siemens Healthcare, is a global provider of enterprise healthcare information technology solutions to hospitals and large physician group practices. HS decided to comprehensively redesign their agile methodology, shifting from a time-boxed agile approach to a continuous flow approach. HS faced the challenge of fully deploying Kanban across 40-50 teams around the world and through all management practices without interrupting workflow and productivity.

FHLBank ATLANTA
A FEDERAL HOME LOAN BANK

The Federal Home Loan Bank of Atlanta (FHLBank Atlanta) is a cooperative bank that offers competitively priced financing, community development grants, and other banking services to member financial institutions. Before starting down the path to agile in late 2010, FHLBank Atlanta was struggling with software quality issues and delayed releases. Since then the organization has reduced the number of open product tickets by 92% and is consistently delivering projects on time and within budget.

KELLEY BLUE BOOK
OFFICIAL GUIDE

Kelley Blue Book, the leading provider of new- and used-car information, is the only vehicle valuation and information source trusted and relied upon by both consumers and the industry. Nearly three years ago, the project managers and Scrum Masters at Kelley Blue Book were growing increasingly disillusioned with the homegrown tools in place to support the company's software development teams. To improve the company's software development processes and workflow systems, the consensus was to select a tool purpose-built to support agile methodologies.

axway
business. in motion.

Axway is a Business Interaction Networks company which provides the tools to manage, run, secure and monitor all business interactions for today's organizations. With a complex team and development structure, Axway needed to maintain a high level of communication across functions and locations to ensure success. After testing several open-source tools, Jorge was unimpressed by the lack of functionality and visibility they provided. Next, they evaluated VersionOne and quickly realized that only VersionOne could meet all of their needs, so they made the decision to move to VersionOne.

TIDEWORKS
TECHNOLOGY
A Carrix Solution

Tideworks is a leading provider of cost-effective, reliable software solutions for growing terminal operations and shipping lines worldwide. With 170+ people involved in software development across the world, and without a standard method for planning and tracking projects, executing on priorities was a complicated endeavor. Tideworks realized they needed a more robust project management tool to get the job done.

bwin.party digital entertainment

The world's largest publicly-traded online gaming company,

bwin supports more than one million users in 22 languages and over 70,000 financial transactions per day. They understand what it takes to build scalable software. As bwin scaled agile methods across 25 development teams in four countries, they knew they needed a tool that could reinforce process consistency, synchronize work efforts, and provide real-time visibility and reporting. Additionally, stakeholders outside the development organization needed to collaborate on projects, driving the need for project visibility and transparency into the development process.

4. Conclusion

Agile momentum continues strongly and widely across different organizations and the most widely used agile methodology is scrum undoubtedly. Keeping aside the misconceptions related to agile, organizations can succeed at the enterprise level by putting into practice the proposed hallmarks of agile software development practices. The presented agile transformation chronicles by Version One are the live examples of how agile software development is prevailing round the globe.

5. Acknowledgement

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