Agile Management

Is it worth using?

BUS 305 Principles of Management
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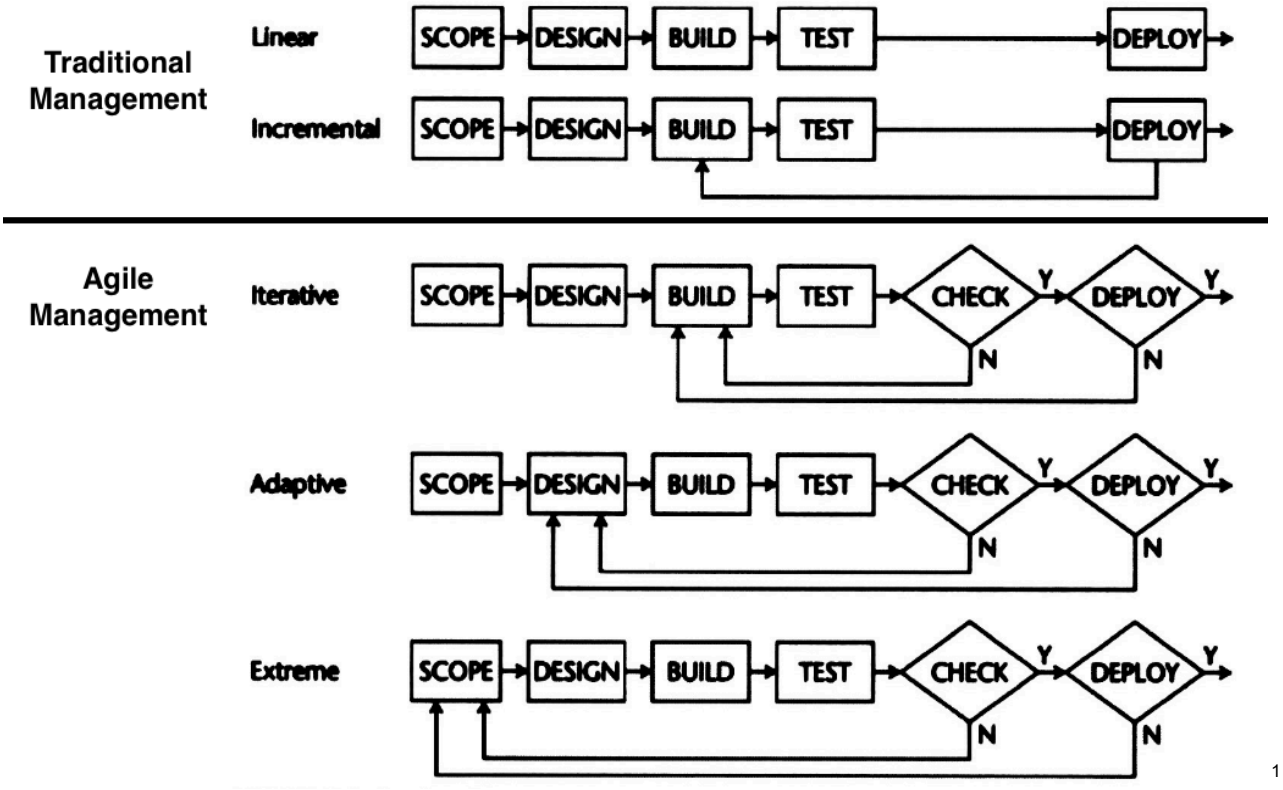
Comparing the world today to the world 30 years ago is a big task. But arguably the biggest change over that time is the advancements in technology. This new, fast-paced industry has quickly become one of the biggest today. By market cap, the three biggest companies in the world right now are Microsoft, Apple, and Nvidia, all tech companies that have mainly risen to the top in the past 30 years. With tech companies like these constantly growing, changing, and adjusting to the current world, new management strategies have emerged to help keep up with everything. One of these strategies is Agile product management, a relatively new management strategy adopted by many tech companies, specifically for areas like software development. Agile project management adds needed flexibility and customer involvement into a given company's work cycle. Although Agile product management has been proven to be difficult to implement and properly maintain in a company, it is very beneficial to companies that manage to do it right.



[1]

A traditional precursor to Agile for project management in software development is the waterfall methodology. This is a linear process that has a solid plan from day one. It covers every step needed to be taken in great detail from the start, to make the goals clear as the project progresses. Agile is in a sense the opposite of this. It is a cyclical model, relying on user feedback and other external factors to produce an end product. This cyclical model is largely the reason providing the big benefit of Agile, which is flexibility. As a result, companies properly using Agile have the potential to keep up and adjust to the constantly changing needs of customers and the world.

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[1] Fernandez, *Agilism Versus Traditional Approaches*

Created in 2001, Agile was introduced as a new project management strategy made to value each employee and improve production by encouraging interaction[2]. It's defined by 12 main principles in "The Agile Manifesto", but the process can be summed up with 5 main stages. These 5 stages are implemented as people progress through the agile work cycle. The first is to evaluate the current state or starting point for the project, looking at the company. The second is suggesting optimizations for the work process given the current state of the project. Third, come up with a plan and include the client to make sure everything is going correctly and if any changes need to be made. The fourth stage is constructing/implementing all that needs to be done based on the last 3 steps. The final step is to evaluate the progress and make sure the process is working as agreed in the previous stages. Then the cycle repeats, allowing changes and improvements to optimize performance and create more timely and potentially better results.[3] The cycle is the big difference between agile methodologies and other traditional management styles such as waterfall.

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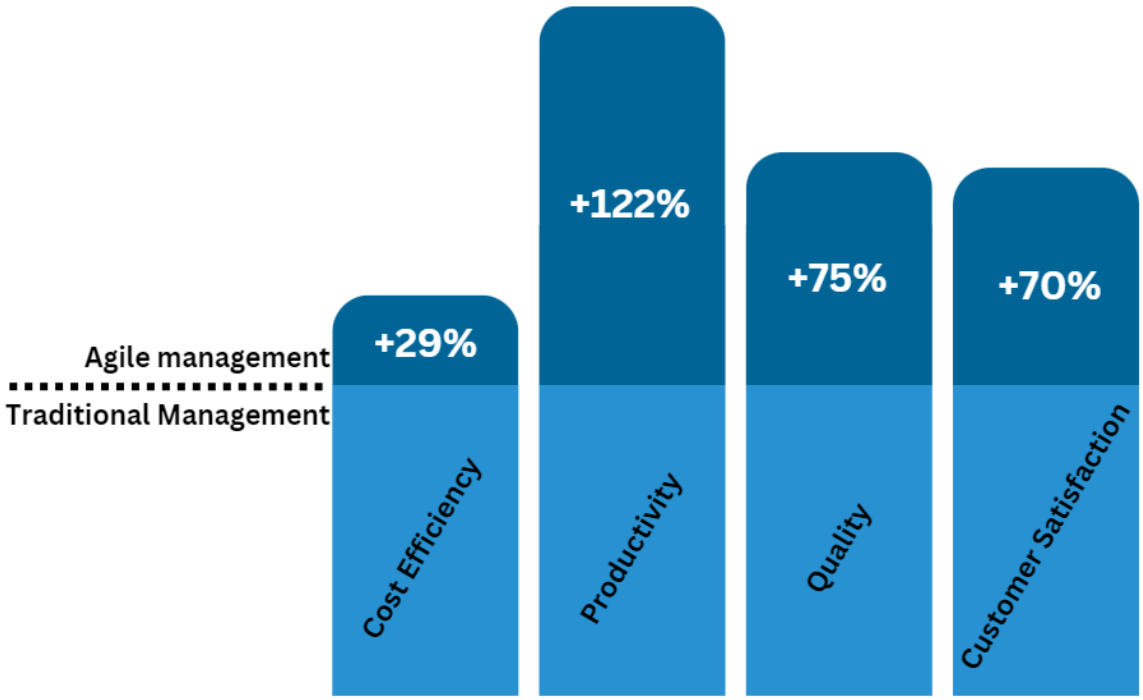
[2] Motiso, *What is an Agile Environment*
[3] Reddy, *Agile Project Management Methodology*

Waterfall also has 5 steps where they look at the requirements, design, implement, verify, and finally maintain the project.[4] Once the maintenance stage is reached people never go to the previous steps. What's been done is set in stone. Overall, there are a lot of potential benefits to agile methodologies, such as the increased incorporation of the client or consumer in the process, faster project delivery times, fast adaptation to changes, distraction reduction, and social/collaboration increases. However, this appears to be a lot of debate about whether or not agile methodologies are worth it. Because of the complexity of the stages and the constant adjustments, many people argue it is very hard to implement agile properly, and that when it isn't implemented properly, it is less effective than the traditional waterfall-like methods.



When Agile is implemented properly, it has the potential to improve a business in many ways at once. According to the article "Calculating Completeness of Agile Scope in Scaled Agile Development" by Sunnia Amjad, "Research benefits of agile over traditional projects can be summarized as an increase in success rate by a huge improvement of 29% in cost, 71% in schedule, 122% improvement in performance, 75% improvement in quality and 70% improvement in customer satisfaction"[5]. Although Amjad doesn't specifically mention any other aspects and if they are better or worse, the improvements mentioned are quite impressive. Companies using agile had over 2 times the performance compared to companies using other traditional methods. This increase is likely because of Agile's flexible nature. Teams meet and communicate often throughout production. So if people find themselves stuck, it is easy to communicate about it and either change course or find help to continue, whereas, in traditional linear methods, an individual could get stuck and potentially not make progress for a while.

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[4] Hoory, *What is Waterfall Methodology*
[5] Amjad, *Calculating Completeness of Agile Scope*

However, these frequent meetings may not be part of every agile process. Philipp Diebold and Marc Dahlem, the authors of the study “Agile Practices in Practice.” explore how agile practices are often not used as a whole. Many times just parts and pieces of agile management are used.[6] In this study, they also list out common individual pieces of agile management, such as customer involvement, time boxing, progress monitoring, and daily discussions. For example, in the situation mentioned above where a team can communicate if individuals are struggling, if a company is not doing daily discussions, they might not realize that people are struggling. Which in the long run could significantly slow down the team's performance. Overall agile can be a difficult management strategy to implement, and if done badly or in the wrong way, it can significantly lower the positive impacts of agile, potentially making it not even beneficial over traditional methods.

One large advantage Agile management has over traditional management is its flexibility. The constant communication between customers, clients, teams, employees, and more makes sure everyone is kept on the same page, which in hand makes it easier to adjust for any last-minute changes to the project, whether they are just changes to the original plans, or adjustments based on current difficulties. The author of “Agile Project Management Challenge in Handling Scope and Change: A Systematic Literature Review.” Primadhika Marnada states that Agile adoption has increased by "33% in response to Covid-19, with 60% of respondents claiming that Agile has assisted their speed to market".[7] Companies using traditional management strategies noticed after the unexpected impact of Covid-19, that they were not prepared for adjustments and change in their current management style. Although teams using Agile Management would have noticed it as well, its focus on flexibility and adjustments allows them to quickly adjust what needs to change allowing them to continue working, keeping productivity as high as possible. Covid was a large part of the recent growth of Agile Management, highlighting its benefits: resilience and flexibility.

While flexibility was a huge benefit recently over Covid-19, it was also largely beneficial when agile practices were first being used in the 1990s and early 2000s. People started noticing the added benefits of individual agile practices in software engineering and how it “retain[s] the rigor of engineering processes and best practices while better helping both stakeholders and software engineers build, deploy, and maintain complex software”.[8] With benefits like that agile is a huge leg up on other competition in the software industry. After the “Agile Manifesto” was created in 2001, marking the true start of Agile Management, the adoption of Agile Practices and Agile Management quickly rose as companies saw the benefits and needed to keep up with each other. According to Rashina Hoda, Norsaremah Salleh, and John Grundy the authors of “The Rise and Evolution of Agile Software Development” in 2007 (6 years after the Agile Manifesto) 84% of software organizations used agile somewhere in their organization. However, more recently in 2018, it has increased to 97% of software organizations using Agile. With the earlier mentioned 33% increase in agile adoption rate over Covid-19, more than 97% of software organizations must be using Agile today.[7] Currently, Agile is generally

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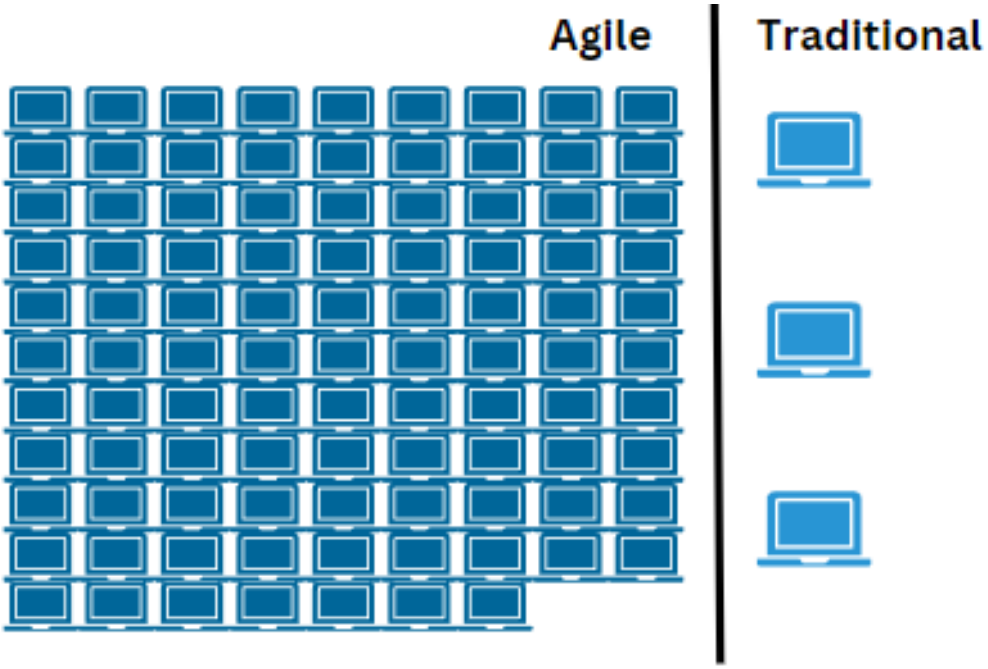
[6] Diebold, *Agile Practices in Practice*
[7] Maranda, *Agile Project Management Challenge in Handling Scope and Change*
[8] Hoda, *The Rise and Evolution of Agile Software Development*

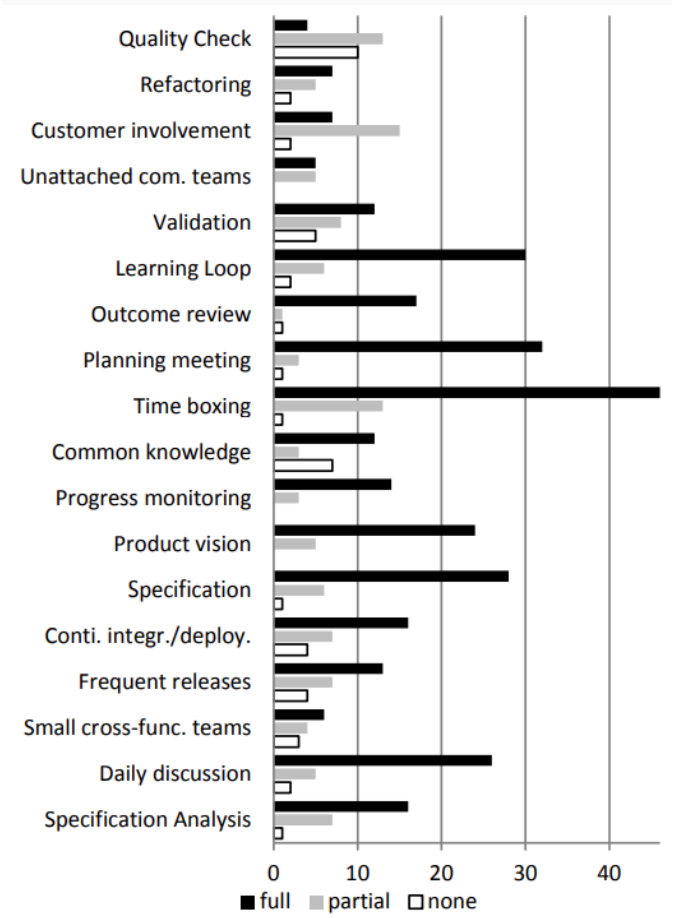


[Prevalence of Agile management in Software Development]

considered the standard for software engineering, and adopting agile practices has almost always proven beneficial in the software industry.

Agile has been used in areas other than software development and high-tech, however, it hasn't been finding the same success it has in software. Daniel Fernandez in "Agile Project Management - Agilism Versus Traditional Approaches" touches on the use of agile management and agile practices in construction. Specifically in the pre-design and design stages of construction. He claims agile management in construction has the potential to lead to more creative solutions, specifically in areas where the requirements are very complex or uncertain. However, he also mentions how the temporary and constantly changing nature of construction could prove difficult to keep agile management consistent.[9] Even though Agile Management is known for its flexibility, the way construction teams constantly change and the goals change by the project has the potential to cause confusion in the agile cycle. The consistent teams and goals in software development are another reason for the dominance of Agile Management in software development, while the inconsistent nature of many other fields can be connected to the lack of Agile Management practices outside of software development.

[9] Fernandez, *Agilism Versus Traditional Approaches*



One potential solution to bring Agile Management to fields outside of software development is to only implement certain agile practices. While using agile practices individually may not be considered agile management, it can still be a largely beneficial way to manage as long as it is implemented properly. The study "Agile Practices in Practice" (mentioned earlier) explores individual agile practices within Agile Management, going over what the practices are and how companies use these practices differently. Practices included in this study include daily discussions, customer involvement, time boxing, and many more. According to this study, most companies successfully using agile management only adopt certain practices to their management strategy.[10] When companies pick and choose the practices they have the chance to fit agile management to their specific needs, and if done correctly, this can be beneficial for the company.

Overall there are a couple of takeaways and varying answers for whether or not using Agile Management is beneficial, but ultimately the answer comes down to the context. If the organization does software development Agile Management is almost certainly the best option for management strategies. Over 97% of software development teams use Agile for a reason, it gives teams the ability to quickly change course or adjust as needed which is a huge benefit for coding. Plus it allows constant communication with the client or customer making sure results are as expected.

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[10] Hoda, *The Rise and Evolution of Agile Software Development*

If the organization is in an industry other than software development, the answer for whether or not it is beneficial to use Agile Management is more up in the air, as well as being more varied team by team. Agile can be beneficial in industries that create or make something such as construction. The cyclic nature allows the creative process to easily change course and adjust over time to come out as expected. However in some cases, Agile can be hard to implement since it is a lot less structured. This is especially tricky in cases where the teams themselves go through a lot of change. Agile relies heavily on team repeated communication which can prove to be tough with changing teams. In this case, it can be a lot more beneficial for teams to implement individual agile practices. If the proper agile practices are used this allows a team to utilize as many benefits of agile as possible, while keeping the actual structure of Agile manageable for the team.

The emergence of agile project management has significantly changed traditional software development, offering a more flexible, customer-focused approach to navigating changing projects. When implemented effectively, agile methodologies have significant benefits such as quicker production, higher quality, and increased customer satisfaction. However, agile isn't universally beneficial. Its emphasis on aspects like continual communication can pose challenges in contexts where the team itself changes frequently. Looking forward, agile methodologies are likely to remain dominant in software development due to their proven effectiveness. Yet, in other industries, companies should be careful when implementing Agile Practices and may have better success implementing them on a practice-by-practice basis if at all. By aligning their requirements with the right blend of agile and traditional processes, almost any company can show improvements over solely traditional methods.

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