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Benefits of IT Enterprises Using Scrum Framework

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Author Note

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BENEFITS OF IT ENTERPRISES USING SCRUM FRAMEWORK

Abstract: Scrum is one of the most widely used Agile methods today. Team members retain their own views on the entire process of product development and achieve autonomy. How to effectively implement Scrum in an information technology enterprise is essential. The shift from a linear approach to an integrated approach to product development stimulates cross-learning, communication, and divergent thinking across all levels within the company.

Key Words: Scrum, Agile, IT Project Management

Chapter 1: Introduction:

1a. General Introduction

Agile project management has taken the business world by storm for the better part of two decades. Recently, Scrum has been taking hold. Scrum sounds mysterious, but it is actually a set of simple processes and practices that help you change quickly. The goal of the project team is to complete the project.

In the past, when using traditional methods, this meant planning and designing the entire project from the outset and sticking to that plan without budging. But project work is completely unpredictable. It is simply impossible to know at the outset how the project will progress and how best to meet the unique challenges. Agile project management was born out of a desire to adapt in real time, allowing teams to adapt to changing circumstances.

1b. Research Problem

IT enterprises no longer use milestones and project phases to measure success. It is an important change. IT companies want to use software that works, tell people how we are doing, and we want to get constant feedback. Perhaps the most transformative change is allowing teams to organize themselves. The team designed and tested it from scratch, which was much better than any up-front planning. Front-end planning is theoretical, and continuous improvement design is both practical and tactical, allowing you to achieve your goals better and faster.

Chapter 2: Hypothesis

2.a Brief Overview of Theoretical Foundations Utilized in the Research Study

The word “Scrum” is borrowed from the experience of the football team. The founders of agility discovered that in football, the goal is to bring the ball a little closer each time. Why can't the project do this? Why not shift the focus from winning the entire game to winning every milestone and deliverable? These innovators chose the term Scrum to represent this new approach, where deliverables and milestones are broken down into smaller goals, and the entire team focuses on accomplishing one goal at a time. As with football, winning a game or delivering a project is not a problem if you score a certain number of points each round. And just like that, the sporting term Scrum has been transformed over the past few years to take on a new meaning. It means starting a project like a football game, pursuing small goals and deliverables that lead to the completion of the project.

2.b Brief Overview of Literature Reviewed, Discussed and Applied

But when the waterfall approach is applied to highly empirical work such as software development, problems arise. Empirical work is more like a scientific experiment. You try and verify the results, and if it does not work, try something else. You certainly cannot do that when you are building a house, but it is very common with software or some other product. This is the key reason why waterfall methods are not suitable for software development. Waterfall works best when you can plan and execute specific deliverables. You simply cannot plan the exploration process in advance. The frustration of highly skilled software developers when executing waterfall projects became the tipping point of the Agile revolution. A key change was asking business partners to work with us throughout the project, rather than just telling us at the beginning what we needed and then telling us at the end how far we were off target. We need continuous direct interaction to really meet our customers' needs.

Chapter 3: Methods

I used secondary research. I consulted books, read papers, and watched videos. I did not do primary research, because of the limitation of time and resources. I utilized the library resources to become knowledgeable about Scrum. I took several helpful courses on Scrum from LinkedIn.

Chapter 4: Findings:

4.a Brief Overview of Research Project

Scrum adopts the Agile Manifesto and key principles (Eby, 2017), which boil down to a very simple framework that promotes a focus on small scale and rapid learning. Learning fast is what failing fast really means. With this in mind, the fundamental point of this framework is to encourage rapid feedback loops. Scrum framework is not mandatory. We usually think of it as a guardrail, like a highway guardrail. Guard rails do not tell you which lane to drive in, but they keep you within the boundaries, so the journey goes smoothly. The same goes for Scrum. With Agile principles as roadmaps and regular execution of short-cycle activities within a loose framework, your project is poised for success. To summarize, this is the simplest form of the Scrum framework. First, the Product Owner develops a prioritized work backlog for the team. Every two weeks or so, the team looks at the backlog and decides what to do in the next two weeks. Based on the backlog, the team develops and tests the solution until it is complete and ready for use. At the end of the two weeks, the team presents results to the product owner and stakeholders. Finally, they reflect on how the project went during the two-week period and decide how to improve working methods. It is that simple. Short-term frames and a focus on the product drive teams to fail fast. More aptly called rapid learning.

4.b Results of the Method of Study and Any Unplanned or Unexpected Situations that Occurred.

BENEFITS OF IT ENTERPRISES USING SCRUM FRAMEWORK

Agile project management is a large synthesis that includes many methods that follow the same principles. Scrum is one such approach, creating a framework that helps teams stay focused and free from distractions. At the heart of Scrum are two roles: the product owner and the Scrum master. The authors of the Agile Manifesto found that in the past they could not have the right business experts to guide their day-to-day decisions when needed. Scrum solves this problem by creating a product owner. This person is fully at the service of the team, and it is their full-time job. The Agile Manifesto authors also recognize the need for someone to help the team solve day-to-day problems and adapt to constant changes in requirements. So, an Scrum master was created to help protect the team from distractions and get the job done (McKenna, 2016). This dedicated role also helps improve internal team processes. In addition to establishing roles and providing assistance to the team, Scrum also requires rapid delivery so that you always know whether expectations are being met. To fail fast and learn fast, you need fast feedback loops. Scrum sets boundaries for teams to deliver value: two to four weeks. This is the frequency with which you want to complete a product that is commercially approved and ready for use by users. Scrum also believed that to successfully deliver so quickly, the team needed to meet daily, so a daily standup was mandated. Finally, the final key element of the framework is the recognition that for a team to function properly, it needs time to reflect and think about how to improve. So, Scrum mandates a retrospective meeting where the team can evaluate itself and decide how to improve. This framework does just that. The focus of Scrum is to make the team as efficient as possible. Agile projects can be flexible in scope, so the focus of Scrum is how to deliver maximum value within a limited time and budget (Wood, 2022).

4.c Brief Descriptive Analysis

BENEFITS OF IT ENTERPRISES USING SCRUM FRAMEWORK

Scrum is a lightweight framework, very flexible, efficient, and powerful, but just like a car, the best models and frameworks are useless without a powerful engine. Every Scrum team has two key roles: the product owner and the Scrum master. The Product Owner is the business representative of the team. They are not part-time members, as they contribute to the final product every day. They review all work done by the team and either accept or require changes to ensure maximum value is delivered. In the past, business representatives participated through requirements documents, which were rarely updated. On a Scrum team, the Product Owner always issues work orders, making sure that the details of the requirements are clearly understood by the team members, which is only part of their job. They are also responsible for communicating with stakeholders on a daily basis. It is not enough to just communicate with the team, they must also stay abreast of all changes in the business environment in real time. As a result, the Product Owner is the guardian of the product vision. They are responsible for defining and managing to-do lists and prioritizing work items.

4.d Reliability and Validity of the Analysis

Unlike Waterfall which has fixed scope, Scrum allows flexibility in scope. Due to time and cost constraints, the Product Owner knows that work must be continuously prioritized according to the principle of greatest value first. They also push the team to get as much work done in each short delivery period. If you're wondering how exactly a team can meet these requirements, that is fine. The founders of Scrum realized the need to check and balance the product owner, so they set up Agile coaches. Agile coaches are responsible for protecting teams and processes. They are the facilitators who keep the team inside the Scrum guardrails (McKenna, 2016). They are responsible for balancing the requirements of the Product Owner with the needs of the team. This role is the first line of defense, ensuring that the team is working at a sustainable development

pace. We do not want the team to burn out before completing the task. It is important to keep this mind when using Scrum.

The Scrum framework values not the heroics of the team or individual members, but sustainability and an open and honest dialogue about what can and cannot reasonably be done. The Scrum master is the most visible spokesperson for the team. They value transparency. They design charts and boards to share the team's progress with interested parties. They are also the first point of escalation when the team hits a snag. The Scrum master is responsible for removing any obstacles to keep the team working smoothly. The Product Owner focuses on what needs to be done, the Scrum master focuses on how the team does it. In addition, the team commits to the Product Owner, and the Scrum master is responsible for holding the team accountable. They show how a team is performing over time and help teams improve processes and practices. As you can see, each role is critical to the proper functioning of the framework. Without any one of them, Scrum cannot be as effective as it should be.

4. e Explanation of the Hypothesis and Precise and Exact Data

The essence of Scrum is day-to-day collaboration and communication. All the hard work you put into helping the team is sure to pay off handsomely. Therefore, try to arrange team members in the same room, aisle, or space to ensure more effective collaboration. For many companies, this is not practical due to architectural or distance barriers. It doesn't matter, you can still use Scrum successfully. You just need to work a little harder to ensure full collaboration. You can try video conferencing, private chat rooms, and teleconferencing from all locations. These all help the team stay connected. About team composition, start by making sure you have a dedicated team. If team members are shouldering your project and another project, they are significantly less effective, slowing down delivery. A dedicated core team is more focused, more efficient,

and delivers faster. The ideal team size is seven, but two can be added or subtracted. I know this is too specific, but research shows that this is the size that creates the most intimacy and the most effective collaboration. Of course, the more people are fine, but the bigger the scale, the harder it is to maintain the communication channels that keep everyone connected. Ideally, teams consist of five to nine people who happen to have every skill needed to get the job done. This is the so-called T-shaped talent. They have both extensive knowledge and profound professional knowledge, like the T-shaped structure. This type of talent is hard to come by, so you'll need to deploy some consulting talent to help your team when they need specialized skills (Haas, 2016). Some common professional skills include architects, database analysts, and security analysts.

Your team needs these talents occasionally, but the workload is not high enough for them to work full-time. This is normal. It can also be successful if you are upfront committed and in constant communication (Haas, 2016). Small teams that have been working closely together will inevitably encounter internal conflicts. Set some ground rules ahead of time to prevent problems before they happen. These are called team norms. You need to help the team establish norms before work begins. These norms allow team members to make commitments to each other about how to collaborate, how to resolve disagreements, and how to reach consensus on the design. As an example, the most common norm for Scrum teams is: Agree to disagree but continue to implement the team's decisions. Other common norms are when laptops can be used during meetings to ensure everyone is focused on the conversation. You can even create norms about how you are accountable to each other. You can be creative when developing team norms, but norms must be agreed upon by all team members to be effective. You must also apply the norm fairly, and team members must trust each other enough to be accountable to each other for enforcing the norm. If you take the time to address these things and help the team lay the

groundwork, they will succeed more quickly. You'll be amazed at how quickly they can work effectively once you help set them up for success.

Chapter 5: Discussion

5.a Brief Overview of Material

As the team prepares for the sprint, it requires more fine-grained collaboration, which is what the sprint planning meeting is for. Development team members, agile coaches, product owners, etc. must be fully involved. These responsibilities cannot be delegated.

5. b Full Discussion of Findings (Results) and Implications

Product owners use a prioritized backlog to present the highest-value stories to the team in order. The team needs to feel confident and secure in order to ask questions. The goal at this point is that everyone on the team fully understands the intent of the story, and the specific acceptance criteria. Also, it is useful to post the team's definition of "done" for all stories at the meeting. Remember that the team's definition of "done" is common, so having this information handy helps clarify all tasks. Questions and answers about sprint planning are very important. At the end of the sprint planning, the team commits that they will complete all the work.

Misinterpretations must be avoided, and this session is all about dispelling misunderstandings about the story. Once everyone understands the story details, the team writes down the tasks to be performed to complete each story. The next step is to identify tasks for the story. Each task must be specified and estimated when it will take time. At the sprint level, story points are used to determine whether a story is included in a sprint. At the task level, capacity is populated based on the number of hours each person can take on. Knowing the duration of all the planned work in the sprint, you need to verify that the team has the capacity to complete the work. Keep in mind

that, generally speaking, for an eight-hour day, employees tend to only work about six hours. The other two hours are usually spent on phone calls, emails, interruptions, etc. We want to avoid overcommitting, so comparing necessary and available time is a reasonable confirmation step. Finally, once you have clearly explained the stories and identified the tasks for each story, now it is time to commit to work. Scrum is heavy on the commitment step. You ask everyone if they can commit to completing the story in the sprint, and everyone should say yes or no, and if the latter, explain why. If someone cannot commit, the Product Owner and team need to work together to adjust the sprint until everyone can commit. In Scrum, sprint planning is a collaborative effort. You repeat this meeting at the beginning of each sprint, and each time you improve.

5.c Full Discussion of Research Analysis of Findings

Scrum teams take Sprint commitments very seriously. They work hard every day to work together to complete the story. Remember, "Done" in Scrum means that the working product meets the acceptance criteria. That is the goal, so the team is constantly developing and testing to make sure all the acceptance criteria are met. However, it is the Product Owner's responsibility to approve acceptance. Because they are the business representatives of the team, it is up to them to finally decide whether to accept or reject. That is, throughout the sprint, team members check in with the product owner. On the task board, each story that passes acceptance can be moved to the Done column. Some teams have more formal short meetings called "sprint reviews." During the meeting, the team and product owner meet to review the sprint. This is a checkpoint where people review each story in the sprint and see which ones are completed. All work that fails acceptance is reviewed, prioritized, and moved to another sprint (Hass, 2016).

Sometimes, if the team discovers new information about a story, it needs to be broken into smaller pieces. After splitting, these parts are still prioritized by the product owner and moved to the appropriate sprints. Finally, the team collectively understands and agrees on what has been done and can demonstrate it to a wider range of stakeholders. This meeting should be short and cover: what has been done, what needs to be done in future sprints, and what can be demonstrated. Another step in this meeting Scrum collaboration. The team confirms work progress and looks to future work. This collaboration helps give the team an understanding of the overall project, allowing the team to focus on the big picture while delivering a usable product each sprint.

5.d Full Discussion of Hypothesis and of Findings

Scrum teams strive to deliver a working product at the end of each sprint. But it is pointless if no one knows. Scrum's solution is to demonstrate. We know that the product owner is responsible for accepting or rejecting what is delivered. The content they accept can be demonstrated to a wider audience. Remember, the Product Owner is accountable to the other stakeholders behind the scenes to make sure they get what they want. Through demos, the product owner and team can ensure that stakeholders are satisfied with what has been delivered.

Demonstrations are a powerful tool for Scrum teams to build trust between the team and stakeholders. There are several approaches that can be taken. This is an opportunity to engage in direct dialogue with stakeholders. Stakeholders care about the success of the team and the product. This is a great opportunity for the team to get direct feedback. Stakeholders get to see firsthand the work being done for them. They provide feedback to the team, they give credit for the work that has been done, and they suggest changes, which are new stories. The Product Owner takes note of this information, starts adding details after the presentation, and considers

adding new stories to the backlog. Sometimes, after viewing the presentation, stakeholders decide to leave something out. It is good to bring it up now, and something can be done right away. Teams can move toward outcomes that stakeholders really want. Another benefit of presentations is to let stakeholders know who is executing the project. They get to see first-hand the skills and contributions each team member uses during each sprint. This is an opportunity to build relationships between the team and stakeholders. Such insights give stakeholders a broader, more balanced view of what it takes to build their product. Plus, they'll see that the team is open to feedback to adapt to their changing needs. Finally, a demo can show overall progress towards the end goal. After each sprint, the product owner updates the product roadmap and release plan, which should be presented to stakeholders. The team leads the stakeholders through it all, and stakeholders can provide feedback on the timing and content of all planned releases. This again builds trust and relationships. Maybe, a demo is not a must after every sprint. But you need to demo as often as possible. This will help you build trust with your stakeholders and demonstrate the progress you've made. If feedback is received frequently and the product is continuously improved, the product will be more reliable and accepted by more people (Wood, 2022). The advantages of Scrum are many, including transparency, keeping everyone informed. So be sure to demonstrate often to make sure your product is exactly what your stakeholders want.

Chapter 6: Conclusion

6.a Summary of Academic Study

The advantages of Scrum include three aspects: corporate philosophy foundation, management culture and technical tools. Its philosophy is based on empowering project development teams and meeting customer needs. IT project management is a kind of mental

investment. If the voluntary input of developers cannot be guaranteed, the product will be discounted. Studies have shown that the efficiency difference between a developer who is willing to invest and a developer who is not willing to invest is more than three times. The contribution is more than ten times. Scrum can only work effectively when the team deeply understands collective responsibility and self-organization from the inside out. Team members can only be considered to have truly mastered Scrum when they realize collective responsibility and promise to deliver the actual product within a fixed time. Its management culture is rooted in the philosophy of helping others achieve their goals. Agile methods respect people and emphasize efficiency. Agile methods emphasize face-to-face communication, and ensure effective communication through on-site customers, standing meetings, and pair programming. Its main technical tool is to make timely-based decisions through a learning process. Communication and feedback are the foundation of everything, and instant feedback is the prerequisite for embracing change.

6.b Implications of Academic Study

Scrum applies the principles of self-organization and self-management, empowers the project development team, and accelerates the creation of more valuable software by frequently using the "check-adjustment" cycle, which brings lower management costs and high-quality output.

Scrum recognizes the complexity of Information Technology and implements empirical methods. When implementing an empirical process control approach, there are 3 pillars: Visibility, Inspection and Adaptation. For the process controller, the aspects of the process that have an impact on the result must be clearly visible and must be authentic. Scrum ensures the benefit of all stakeholders in the project. Due to the fast speed of transmission, enterprises can respond to the market faster and thus have higher income. Scrum is highly interactive and can

quickly adjust the problems encountered in the development process without major mistakes in the direction.

6.c Limitations of the Theory or Method of Research

Scrum can be applied in various industries, such as aerospace, medical, human resources, education, etc. There may be newer versions of Scrum which tend more to be a framework that can create results rather than a methodology.

6.d Recommendations or Suggestions of Future Academic Study

Improving team processes is an ongoing effort that never ends.

Can your team guarantee a "Done" Increment at the end of each Sprint? In what ways are teams demonstrating ownership of their processes? What aspects of the team's process are less transparent and perhaps overlooked? What steps would you like to take to improve your team's process?

Chapter 7: Bibliography

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BENEFITS OF IT ENTERPRISES USING SCRUM FRAMEWORK

Appendix 1: Certificate for “Transitioning from Waterfall to Agile Project Management”



Appendix 2: Certificate for “The Basics of Scrum”



BENEFITS OF IT ENTERPRISES USING SCRUM FRAMEWORK

Appendix 3: Certificate for “Characteristics of a Great Scrum Master”



Appendix 4: Certificate for “Strategies for Effective Leadership Teams”

