

A comparative analysis of PRINCE2 and Agile project management approaches

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Introduction

Project management is a vital competent for successful projects today. The success or failure of a project will depend on the project management approach selected and adopted for the project. There are a number of project management approaches and each is suited for specific projects. The factors that determine the choice of a particular project management approach is guided by a number of factors including the period of project implementation, the cost, the complexity of the project, etc. the different methodologies have different features which are suited for specific project requirements. This essay shall be making a comparative analysis between two project management approaches; Projects IN Controlled Environments (PRINCE2) and Agile. The comparison shall be guided by the standard guide to the Project Management Body of Knowledge (PMBOK) by PMI (2012). Each project management approach will be presented independently but under the analysis framework presented below than a conclusion will be drawn on the major comparative aspects of the two approaches.

Analysis framework

According to PMI (2010), there are 40 project management guidelines for the standard approach. However, these will vary greatly depending mainly on the complexity of the project. As a result, the 40 guidelines can be summarized into four main processes; project initiation, planning phase, execution and control, and close out and evaluation. This process applied for both small scale and large scale projects and each of the different approaches used in project management can be summarized into these four phases.

2.1. Project initiation

The initiation phase for project management is the start point of the project. This process includes various activities and events depending on the nature of the project and the approach. In commercially oriented projects, this phase includes every activity that is undertaken during the pre-sale of the project. The service providers in this phase are tasked with the responsibility of proving eligibility and the ability to compete the project and awarding of the project. Next is the requirements-gathering event where the winning provider gathers the client's requirements. This process is also marked with negotiations to amend the requirements. The final activity in the initiation phase is requirements sign-off (Donald et al., 2008, p. 52).

2.2. Planning phase

The planning phase for any project management is a critical process. If the management team gets this process wrong, the negative effects are not just on the single activity where the planning was done wrongly, but results to a ripple effect that jeopardizes the entire project. To avoid this, the management team needs detailed attention to the planning process. In the typical project planning process, the project plans are derived to address such aspects of the project including project scope, timing, and budget. Once the plan is established, the schedule is also developed, and lastly allocation of resources. Therefore, if any step in the planning process is wrong, the entire project lies in jeopardy.

2.3. Execution and control

These processes can be divided in some of the complex project (David & Roland, 2006). However, for the medium and simple project, execution and control go hand-in-hand. After the planning phase and allocation of project resources, it is a go for the project. The execution process for any project approach is a crowd sourcing event where every member in the team carries out their respective responsibilities as per the allocated timelines. For smooth flow of the execution process, each activity progress needs to be reported to the top management hence daily or weekly reports are submitted. The management team is in most cases among other, tasked with oversight, which is a control activity, hence the combination of execution and control. The simple form of control for any project is adherence to the set protocols including timelines. In case of any violation, the top management should implement the right control measures to limit the negative effects. In addition, some independent control bodies are required for control. The end of the execution and control process is marked by validation.

2.4. Closeout and evaluation

With the project requirements achieved, it is time to hand over the project and closeout. If the deliverables achieved are in line with client requirements, the next step is acceptance and completion of payment by the client. Once closeout takes place, it is the right time for the team to evaluate the project on mistakes that took place and how they can be avoided in future projects. Some of the evaluation aspects included unmet timelines and non-gained project margins. Even though they might not have affects the project deliverable directly, the project remains deficit of the 100% mark and causes of such should be evaluated for future compliance.

PRINCE2 approach

According to Creswell (2009), PRINCE2 project management approach has its roots from the original PRINCE system developed in 1980s by a UK governmental agency. The original purpose for the development of the system was to provide a framework for the management of IT projects (OG, 2009a). In 1996, the system was upgraded to expanded scope and to be more generic in nature hence the development of PRINCE2. The system is used as a methodology standard for management of all types of projects. Since its release, it has gone numerous changes to accommodate business projects and business-oriented environments, and to streamline the approach.

PRINCE2 project management approach is founded on seven principles which can be summarized as:

- i. To continue with business justification
- ii. To learn from experience
- iii. Have defines roles and responsibilities
- iv. Management guided by stages
- v. Exceptional management
- vi. Product focused management
- vii. Tailored approach to suit the project environment

According to Milosevic & Srivannaboon (2006), the adoption of PRINCE2 or for a project management approach to qualify as PRINCE2, it has to be founded on the above principles. The adoption of the PRINCE2 documents and adherence to the processes set out by PRINCE2 alone does not qualify the approach to being PRINCE2.

One of the outstanding features of this management approach is its capability to be wrapped around other management approaches (Schwalbe, 2014). The approach can be integrated with waterfall management approach to provide the necessary project governance needed to steer the project to success. Also, PRINCE2 can be wrapped around agile project management process as long as PRINCE2 is tailored; considering tailoring is one of the seven principles of the approach.

3.1. Project initiation

The initial process of not only PRICE2 but every other project management approach is when the idea is first mooted. The project team is the assembled by the idea developer for the case of individual-oriented projects or by the leadership in team-oriented institutional projects. The team created forms the project management board. The project board then draws the project brief which contains the project objectives, the significance of the project to the business, and determines if the project is worthwhile and viable.

The steering of the project is also described in the initiation stage. This is the role of the project board and its roles are described. In PRICE2 methodology, the role of the project board is to oversee and control the project. As a result, they have to make decisions regarding the project as to achieve accountability targets. According to Creswell (2009), the role of the project board in PRINCE2 approach is to supervise the project and not to manage the project, which is the role of the project manager.

3.2. Project planning

Planning of the project in PRINCE2 is founded on the activities in the initiation process. In this case, the brief prepared in the initiation stage is developed into a business and executable case that covers all the angles of the business. Planning involves such activities like identification of project control measures and strategies, how to establish quality related issues, and the entire project plan is specified (Milosevic & Srivannaboon, 2006). An effective project plan should integrate the various teams working under the board as to achieve the desired common objectives as outlined

by the project. The planning phase of the project is guided by the time schedule and the resources available.

The planning phase of a PRINCE2 project should define three important aspects; the reporting and control arrangement of the project, the time and costs budgets for the project, and risks through review of daily log and reviews their impacts on the project (Flick, 2008). Planning of the project is the work of the project manager and depending on the structure and the complexity of the project, the project manager hands it over to his supervisor for review then it is passed over to project board for approvals.

3.3. Execution and control

After approving and authorization of the plan, the project board gives the nod for initiation of the project process (Donald et al., 2008). This process involves every team member regardless of the function they are playing. The execution process in PRINCE2 requires that the various elements in the project management plan and the control systems work hand in hand towards the archival of the set objectives. Some of the control measures in this approach are adherence to the management plan, the time schedule for the various implementation activities, and effective and efficient use of allocated resources. During this process, the project board should also monitor the project issues, dependencies, and risk and effective management each respective to their occurrence.

Given the various execution and control processes run concurrently, four aspects of the project are critical;

- i. Who is doing what and when – these are the process in the execution project each independently, the resources being used, and the schedule of completion. These lead to a milestone and deliverable known as work product (OGC, 2009a).
- ii. Risks that might affect work – it is the role of the project manager to monitor any project issues and anticipate any risks. And for effect risk monitoring, a contingency plan is required to mitigate the risk, the effects, or simply alleviate the risk or issue.
- iii. Dependencies on deliverable – for effective execution of PRINCE2 project management approach, the project manager needs to establish any dependent process or deliverable for one team to another. This includes management of internal or external dependencies which the team needs to produce or needs to receive for the completion of their work.
- iv. Communication – for effective execution of PRINCE2, communication is core. A communication plan which is part of the project management plan is critical and it should be followed effectively. Effective communication ensures the synergistic-type flow of the process.

The successful delivery of the project deliverable, on time and within the set costs is the objective of every project execution process. However, this might vary depending on the product description guidelines contained in the project plan in PRINCE2 approach, and a product description is required

for every deliverable in PRINCE2 project management (Donald et al., 2008). The execution and control process according to PRINCE2 is divided into four different stages;

3.3.1. Directing a project

The project board activities in the execution and control phase of project management are to oversee the project as described. This role is played through decision making by the various board members for the objective of meeting accountability targets.

3.3.2. Controlling a stage

One of the principles of PRINCE2 project management approach is stage-by-stage model of the execution process. Based on this principle, it is essential for the effective controlling of a stage for the realization of the stage deliverable. The controlling process of stage is basically to determine how the fundamental work packages of the stage are authorized and completed (David & Roland, 2006). It is the responsibility of the project manager to control a stage and manage each sub-process and foresee its progress for the execution and delivery of the stage. In doing so, progress reports and exceptions should be submitted to the project board. The critical processes involved in controlling a stage include authorization of work packages, progress assessment, identification and analyzing of issues, and determination of stage status.

3.3.3. Management of product delivery

In complex projects, under the project manager are team leaders who directly foresee the execution of various work packages. This process determines how the project manager links with the team leaders. It provides formal requirements for the execution, delivery, and acceptance of the tasks in the project. The objectives in this process are;

- i. Authorization and agreement mechanism for work before it is allocated
- ii. To create a common platform for team leaders, team members, and suppliers to ensure that each is aware of the expected deliverables
- iii. Ensure products are delivered within specifications
- iv. To appraise progress to the project manager for effective management

3.3.4. Management of stage boundaries

This determines what should happen at the end of the stage. After stage controlling, management of boundaries specifies what happens next. In addition, this process allows for measurement of the project progress as outlined in the project plan. In case a stage has moved outside the tolerance levels, then this process provides an opportunity to determine what to do next.

3.4. Closeout and evaluation

After the project objectives are achieved, PRINCE2 provides a formal process through which the project should be brought to a close. However, majority project overlook this vital process (Bryman, 2008). The closeout and evaluation process requires reallocation of the personnel and

other resources that were used in the project. Evaluation is all about reviewing the project and audit of every stage. The closeout process should also indentify any next-in-line project that the business should consider.

Agile project management approach

Agile project management approach was established in 1995 through collaborative effort between APMG- International and the Dynamic Systems Development Method (DSDM) Consortium (Schwalbe, 2014). The approach was developed for handling agile projects mainly in the complex corporate niche. Agile approach is built on the principle of human interaction management and founded on a process of human collaboration. The approach is used in software, website, technology, and in the creative and marketing industry. In agile approach, the project is perceived as a series of relatively small activities conceived and undertaken to manage as per the situation in an adaptive manner, contrary to having a pre-planned process (Pichler, 2010).

Agile project management approach has three distinguishing features;

- i. It is consistent since it involves frequent testing of the project under development
- ii. It is the only approach that actively involves the client in the project management process
- iii. The only generally limiting aspect is that it requires the client to be available and have sufficient time to participate

Agile is guided by eight principles which are;

- i. Function on the business objectives
- ii. Timely delivery of the project deliverables
- iii. Collaborative approach
- iv. None quality compromising approach
- v. Continuous and clear communication
- vi. Iterative development
- vii. Founding be incremental



Demonstrative control

4.1. Initiation stage

The most popular and commonly used type of agile methodology is scrum (Pichler, 2010) and it is the form of agile that will be presented in this case.

The initiation state of scrum methodology involves two major activities; determination roles for the various personnel resources and determination of the number of sprints required for the project. The scrum team is made up of the product owner, the scrum master, and the development team (Cho, 2009). A scrum team is self-organizing and cross-functional therefore it does not depend on an external body to deliver. Based on the cross-functional feature, a scrum team has all the competencies required and they don't have to rely on anyone without the team and they are built to optimize flexibility, creativity and productivity.

The principle of delivering products iteratively and incrementally in scrum and having a “done” product determines the possible number of sprints that would be required for the completion of the project (Pichler, 2010). The incremental and iterative model ensures that the deliverable is designed and built as per feedback. The size of the development team is also determined in this process. Scrum developmental team size should remain small yet sizable enough to do a significant work per sprint (Creswell, 2009).

4.2. Planning phase

Planning in scrum project management methodology is done to minimize the number of meetings not defined in scrum. The events in this methodology are time-boxed and they have a maximum period where they have to be executed within a period that cannot be shortened or lengthened. Scrum planning is done at the sprint planning by the entire scrum team. Sprint planning should answer these questions;

- i. What is the increment deliverable to be realized from the upcoming sprint?
- ii. How will the work resulting to the increment be achieved?

4.2.1. Deliverable within a sprint

This process involves forecast of the functionalities to be achieved within a sprint. The forecast is guided by the product owner through decisions of the objectives of the sprint and the product backlog item that if completed will result to realization of the sprint goal. The input into this sprint is the product backlog, the last increment, capability of the team during the sprint, and past performance of the developmental team (Bryman, 2008). With the forecasting done, a sprint goal is established. Sprint goal according to Creswell (2009), the sprint goal is an objective to be achieved through implementation of the product backlog and it is used as a guide by the team on why they are building the increment.

4.2.2. How chosen work will be done?

The development team decides on how the set sprint goal will be executed into build into a “done” increment. The first step in this process is to design a system and the work needed to convert product backlog into a working product increment (Pichler, 2010). The work done varies in size and estimated effort but, it is enough for the sprint. The work planned is decomposed to units for a day or less and then the development team self-organizes to undertake the plan as per the sprint backlog. Adjustments on the sprint backlog can be done with the help of the product owner. In case specialized skills are needed, the team will invite an external expert to get it done.

4.3. Execution and control

According to Schwalbe (2014), the execution process in agile is in terms of daily work starts with the daily scrum. This is the implementation of the set daily work units towards the realization of the sprint goal. The daily scrum is made up of sprint backlogs that are selected for that specific

days work unit. A daily scrum is a 15 minutes time-boxed event whereby the development team has to synchronize activities and create a plan for the 24 hours.

During the daily scrum the team inspects works done in the last scrum and forecasts work that can be done before the next scrum. For enhance efficiency and avoid complexity, the daily scum is held at the same venue daily and it's the responsibility of the scrum master to ensure it, but it's the work of the team members to carry it out (Cho, 2009). Items discussed in the daily scrum include;

- What was done yesterday for meet the sprint goals
- What is to be done to achieve the sprint goal
- Any possible impediments towards the realization of the daily scrum

The objective of the daily scrim is to help team members understand and establish how to contribute towards the realization of the spring goal. After the day's work, the team should also meet to re-plan, resent and sprint backlogs.

4.3.1.Sprint review

After a sprit, a review is held with the purpose of inspecting the increment and adapt the product backlog is need be. During this review meeting, team members and stakeholders collaborate on what was done in the sprint and any changes to the product backlog (Pichler, 2010). In addition, the attendees collaborate on how to optimize the value of the product. As stated by Schwalbe (2014), the sprint review meeting is an informal meeting and the presentations are intended to provide feedback and boost collaboration between the various stakeholders. For the case of month-long sprint, there is a monthly 4-nour meeting held to review the sprint.

4.4. Closeout and evaluation

Closeout in agile project management approach and scrum in particular may mean the end of a sprint or termination of the project. Given the project in scrum methodology is carried out in sprints, closeout is in commonly in the form of sprints. Scrum closeout is done in the form of sprint retrospective (Schwalbe, 2014). Sprint retrospective is an opportunity for the scrum team to inspect its status and plan on how to improve for the next sprint. This process happens after sprint review and before the next sprint planning and its length is normally dependent on the length of the previous sprint.

If the product achieves the desired level of "done," then the sprint review summarizes the project and lays down any improvement aspects for any future agile projects.

Conclusion

Based on the analysis framework outlined in the second section of the essay, PRINCE2 and Agile project management approaches are significantly different. Even though they both have a general standard project cycle of initiation, planning, execution and control, and closeout and evaluation, they are fundamentally different in the methodology. While PRINCE2 methodology has a standard method where the project goal is the ultimate measure of the project having been done, Agile has

a periodic oriented methodology of day or monthly guided by sprint goal. In PRINCE2, the methodology is a single progressive process where the execution and control run concurrently towards achieving the set goals but in Agile methodology, execution is within a set time and control is done both before and after. It is therefore concluded that PRINCE2 project management approach and Agile project management approach are different.

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