

PMI Netherlands Agile Local Interest Workgroup

White paper Part 2 Agile project management

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Introduction

When answering our first question “What is Agile?” we stated that Agile projects are related to a dynamic project environment where customers are not able to define the project result. In this part of our white paper we try to find an answer to the next question (Q2): Where to apply Agile as a successful project management method?

Definitely in the current situation of economic crisis, increased competition, cost cutting actions, changing preferences of customers, impact of new (social) media, managing change initiatives by projects becomes more and more important. At the other hand increased project complexity makes successful change more and more difficult. Despite this emerging situation a lot of organizations still pay too little attention to select project management methods that are fit for purpose.

In a Dutch research¹ ultimately ten project management methods² were identified and described in detail. The methods were compared using IPMA- Nederlandse Competentie Baseline version 3.0. The research concluded that a number of these methods were not related to a project management process. Only four methods could be linked, from which PRINCE2 and PMBoK were most (also internationally) known. The study ultimately concluded that the best project management method is an integrated (methods, leadership, teamwork and stakeholder management) method. However no link was made to fitness for purpose or effectiveness related to type of project or project complexity. Another interesting finding was that no “specific “Agile project management method was identified. DSDM (one of the methods which is Agile related) was seen as an IT system development method rather than a project management method.

With this information in mind we set up a structure to help us to get an answer to Q 2.

In chapter 1 we focussed on finding an answer to what can be seen as a successful project. An important statement will be that success should not be related to “the golden triangle” of time, costs and quality but it should be related to the perspective of involved stakeholders. Choosing a project management method which matches type of project (complexity) is important to be successful.

In chapter 2 we focussed on finding an answer to define fitness for purpose. We choose to use the degree to which a project management approach fits project complexity. Based on complexity levels four types of projects were identified. Here we also tried to find an answer what type of project suits with Agile projects. This ultimately helps to define where to apply an Agile project management method.

In chapter 3 we focussed on finding an answer on the essentials of a project management method. Project management is defined as a process resulting in (sub rational) decisions on how to manage a project. Based on research on project success factors³ we have identified critical elements of a project management method or system.

In chapter 4 we focussed on finding an answer why it is important to contemplate Agile project management as a distinct method for managing (type 3) complex “open ended projects”. Next we tried to find to define the essentials of an Agile project management (PM) method.

In chapter 5 we focussed on defining practical guidelines for applying the Agile PM method using the principles from Agile manifesto.

¹ E. Baardman, G. Bekker ea. Wegwijzer voor methoden bij projectmanagement, 2006 Van Haren Publishing.

² A4, DSDM, New Product development, PMBoK, PRINCE2, Projectmatig creëren, Projectmatig werken, Systems Management, LAD, Proces management.

³ N. Mulder, thesis report Value- based project management 2012

In chapter 6 we described essential principles from value – based project management which can be used to manage very complex (sometimes also called chaotic or fuzzy front end), level 4 projects. In our opinion this helps to better understand which behavioural elements are important to make an Agile project management method work. These principles are described in a thesis research on value- based project management from Nicole Mulder.

Successful project

From a project manager perspective a project is successful when it delivers results within agreed goals. See diagram 1.

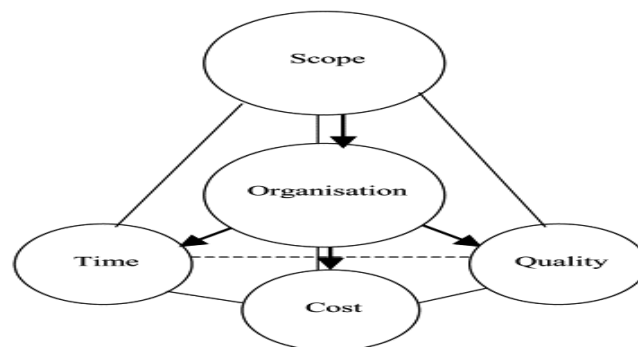


Diagram 1 Turner and Cochrane 1993

This traditional view on project success can be questioned because when starting a (complex) project it is not always feasible to define delivery time, budget, scope and requirements in advance. Moreover it assumes that stakeholders all agree on the importance of these success criteria. Definitely only when using delivered results (after having closed a project) it gradually becomes obvious whether assumed benefits are realized. In a long lasting discussion of project management professionals' ⁴ project success is seen as a kind of concept which only reflects the opinion of individual stakeholders. Each of them has his or her point of view based on interests. For instance from the perspective of the user "fitness for use" (product success) or availability, or flexibility or durability is important. For the maintenance organization "maintainability is important. From the investor's point of view profitable returns on investment is important. The sooner these returns can be realized (for instance time to market) the better. For neighbours who are confronted with new infra-structure for instance quality of life and living comfort will be important.

So when answering the question if a project is successful or not it is important to take in account not only delivering defined results within triple constraints, but by far more to take in account the level to which a project has enabled fitness for purpose seen from the interests and expectations of all involved stakeholders. Project success is an individual and multi-dimensional evaluation of change, depending on expectations and concrete experiences. ⁵ Project success is an indication of the level to which involved stakeholders are satisfied with the project's change effects. Choosing an appropriate project strategy and underlying project management method is important to be successful. The strategy should match project complexity. ⁶

⁴ For instance Thomas & Fernandez 2008 Success in IT projects: a matter of definition. Turner & Cochrane 1993 Goals and methods matrix; coping with projects with ill-defined goals and/or methods of achieving them.

⁵ N. Mulder 2012 Value based project management.

⁶ A. Shenhar 2001 One size does not fit all projects; exploring classical contingency domains. Management Science 47(3) pg.394-414.

Complexity and types of projects

Projects⁷ can be defined as a temporary endeavour undertaken to create a unique product or service. Temporary means that every project has a definite beginning and a definite end. Unique means that the product or service is different in some distinguishing way from all similar products or services.

Turner & Cochrane⁸ have identified a two dimensional complexity model:

- methods (techniques used to create project results or more in general “change”) are or are not well defined
- goals (project deliverables and ultimately outcome) are or are not well defined

The degree to which goals and /or methods are not well defined ultimately determines complexity. Turner & Cochrane have identified four types of projects (see diagram 2):

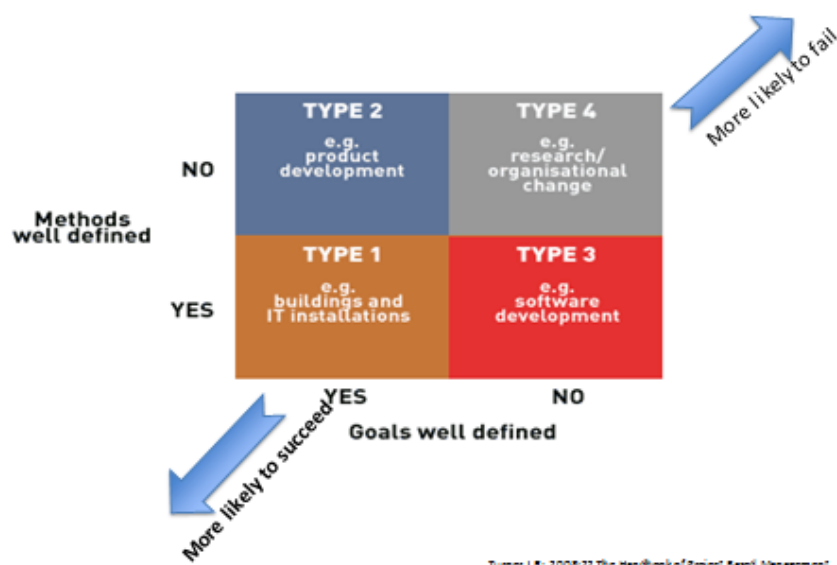


Diagram 2 Goals and methods matrix J.R. Turner

Type -1 projects. In these projects, the goals and methods are well defined. They are typified for instance by large engineering projects, and are the types of projects on which traditional project concepts are based.

Turner calls these projects “earth” projects: they are well defined, with a solid foundation.

Type -2 projects. In these projects the goals are well defined, but the methods of achieving them are not. They are typified by product development projects. Many of these projects, through which modern project management was developed, e.g. Apollo, Atlas, were of this type. Turner calls these projects “water” projects, like a turbulent stream, they flow with a sense of purpose, but in an apparently haphazard way.

Type -3 projects. In these projects the goals are not well defined, but the methods are. These are typified by software- development projects, in which it is notoriously difficult to specify the users’ requirements. The goals are known to exist, but cannot be specified precisely until users begin to see what can be produced often

⁷ PMBoK definition

⁸ R.J. Turner& R. Cochrane Goals and methods matrix; coping with projects with ill-defined goals and /or methods of achieving them, International Journal of Project management 11(2) 93-102, 1993.

during the testing stages. Many people believe (see for instance PRINCE2) that the definition of the goals should be determined at an early stage of the project. Hence they have a dilemma of knowing that the goals should be defined based on active consultation of users and on the other hand not allowing users to determine the goals because they don't know what has to be produced in the project. This is typically the case in the type of projects where an Agile project management approach is suited for. Turner calls these projects "fire" projects, much heat can be generated in the definition of the work, but they can burn with no apparent purpose.

Type - 4 projects. In these projects, neither the goals nor the method of achieving them, are well defined. They are typified by organizational development projects. Sometimes these projects are called "fuzzy" projects because nobody seems to know why what has to be changed and how it should be done. Turner calls these projects "air" projects, they are very difficult to catch hold of, and deliver "blue sky" research objectives.

Besides this two dimensional project complexity model other multi-dimensional models could be used to determine project complexity. For instance when assessing to what extent a project management method is used in the project management practice of various companies and institutions, often a three dimensional complexity model are used:

- Technological complexity: There are several potential technical complexities
The fundamental observation is that the underlying technology of solutions varies and as a result your approach to developing a solution will also need to vary⁹
- Organizational complexity: size, duration, number of disciplines, people and resources availability, geographical distribution, cultural differences, process conditions (e.g. time pressure).
- Governance complexity: multiple goals, transparency goals, conflicting goals, number of stakeholders, mutual conflicts of interest.

Using a set of specific criteria for each complexity dimension a project can be assessed. Ultimately four project types can be identified:

Type 1 simple projects, type 2 complicated projects, type 3 complex projects and type 4 highly complex projects.

As complexity increases, the PM method that is being used in the organization will be extensively applied.

In a recent thesis report on value-based project management¹⁰ another interesting project complexity model is applied. In addition to the project complexity parameters used by J.R. Turner another two project complexity dimensions are introduced: system complexity and pace pressure. In diagram 3, this four dimensional complexity model is displayed.

⁹ Agile and Technical Complexity Scott Ambler | July 6 2010

https://www.ibm.com/developerworks/community/blogs/ambler/entry/agile_and_technical_complexity12?lang=en
There are several potential technical complexities: New technology platforms, Multi technology platforms, Legacy data, Legacy systems, Commercial off-the-shelf (COTS) solutions, System/embedded solutions

¹⁰ N. Mulder Thesis report 2012 Value based project management. This PM approach is focused on type 4 projects; "chaordic" projects. In these projects actors participate in co – creation processes without knowing what outcome can be expected.

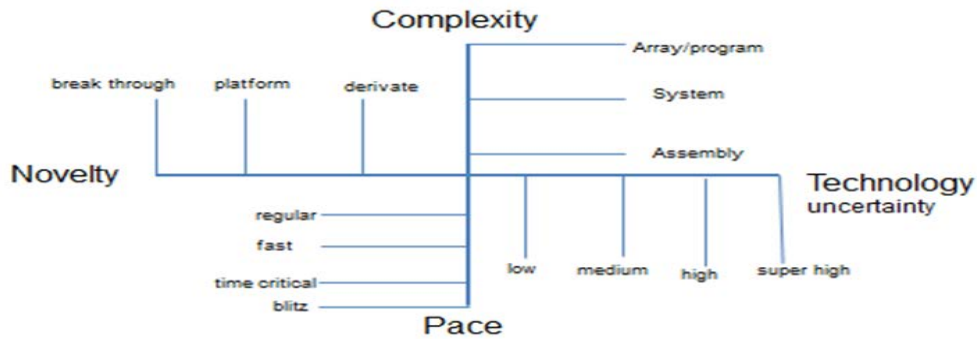


Diagram 3 A.J. Shenhar Project complexity model¹¹

A project which is positioned at the exterior of the complexity axes is called a “chaotic or “fuzzy front end project”. PRINCE2 and PMBoK project types are more positioned at the interior of the complexity axes. Agile projects are more positioned at the exterior of the complexity axes.

This positioning of project types is visualized in a diagram which was introduced by Stacey¹².

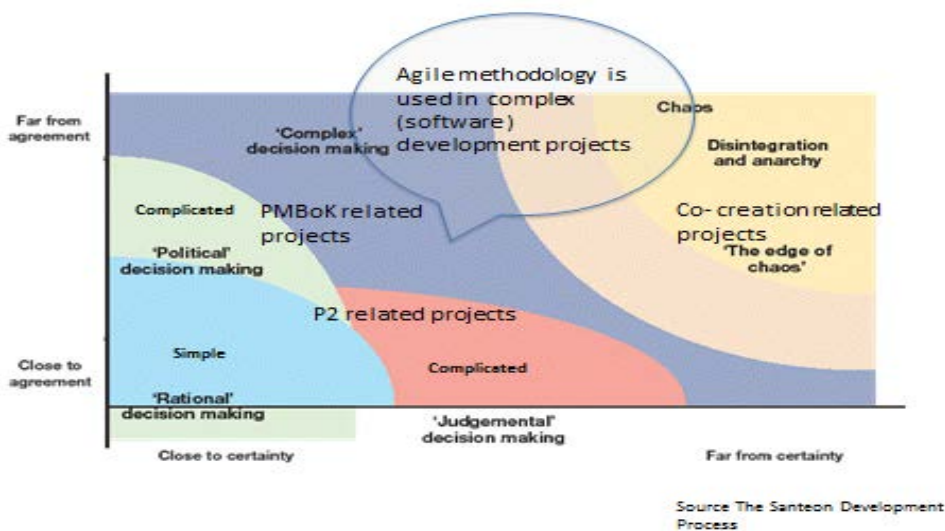


Diagram 4 Positioning of PM methods, adapted model from R.D. Stacey

¹¹ A.J. Shenhar, D. Divir, Reinventing project management; The diamond approach to successful growth and innovation, 2007

¹² Source: Stacey RD. Strategic management and organisational dynamics: the challenge of complexity. 3rd ed. Harlow: Prentice Hall, 2002.
http://www.gptraining.net/training/communication_skills/consultation/equipoise/complexity/stacey.htm

Project management method

Project management¹³ includes all activities that lead to decisions on the operational management and governance of the project. The aim is to transform stakeholder's change expectations into results that lead to satisfaction. A project management method or system helps to define an appropriate project strategy to structure, support and organize this decision making.

When defining decision making processes three levels can be identified: strategic, tactical and operational. The strategic level deals with portfolio decisions on change initiatives, objectives and available resources, investments. There are needs and expectations from internal and external stakeholders to play an important part in this.

The tactical level deals with project governance decisions like validity of a business case, engagement from important stakeholders, (quality of) results, risks, time and resources, communication, change strategy. The results from these decisions can be seen in management documents like the business case, contract of assignment, project (phase) plan, project budget, change management plan, communication plan.

The operational level deals with operational planning & control decisions like work packages, teamwork, specialists, user participation, communication and consultation with stakeholders, quality of the (intermediate) results, reporting, issues, etc.

Although decisions seem to be the result of model/ best practices based rational processes we should be aware in daily practice it is always a matter of reduced or subjective rationality rather than absolute or objective rationality. Factors like availability of information, negotiating and compromising, psychology (e.g. stick to previous decisions, errors of the past are hidden, problems are solved with palliatives, effect of cognitive dissonance in which only information that confirm existing beliefs is accepted, whilst information that is against existing beliefs is neglected), accuracy of estimates play a role in this.

When using a project management method or system, this decision making is often presented by various process diagrams, SOP's, (templates for) management products in which the result of decisions is recorded, instructions on the use of templates. Also, the roles that are involved in decision-making are presented for instance in a RACI diagram have been defined.

¹³ PMBoK: Project management is the application of knowledge, skills, tools, and techniques to project activities in order to meet or exceed stakeholder needs and expectations from a project. Meeting or exceeding stakeholder needs and expectations invariably involves balancing competing demands among:

- Scope, time, cost, and quality.
- Stakeholders with differing needs and expectations.
- Identified requirements (needs) and unidentified requirements (expectations).

In the PMBoK PM method the following (main) project management processes are identified:

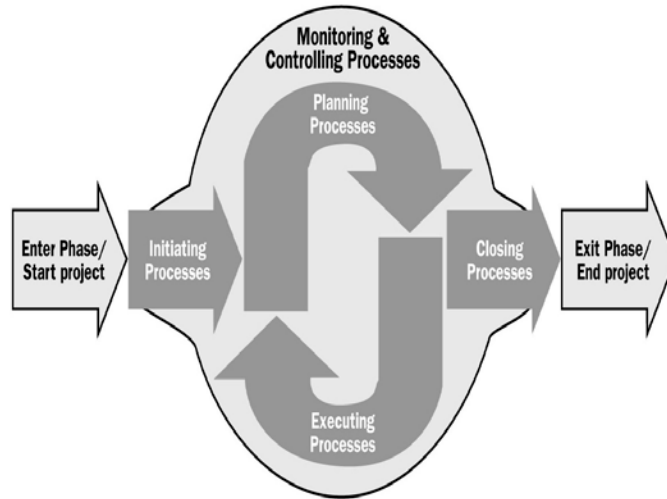


Diagram 5.1 PMBoK management processes

A similar project management process is presented in PRINCE2 PM method:

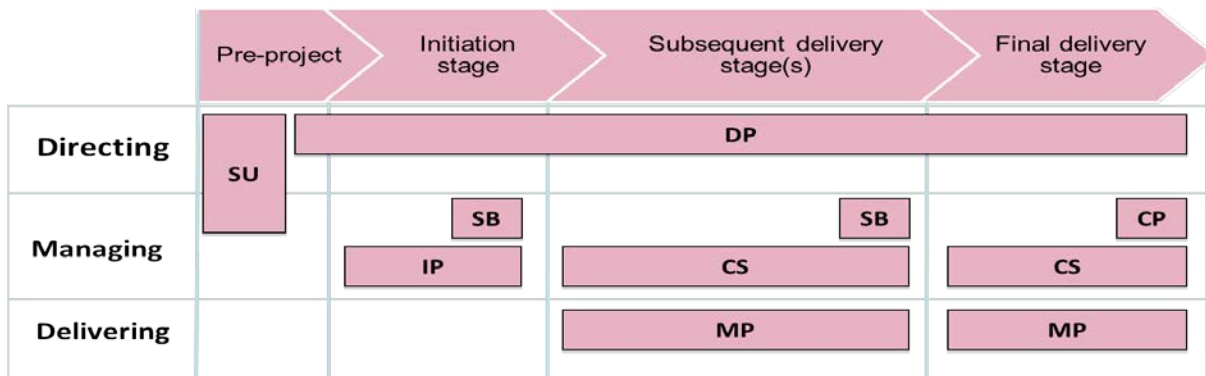


Diagram 5.2 PRINCE2 management processes¹⁴

From various studies¹⁵ on project success factors, six key elements are identified. Somehow these elements should be subject of a project management method in terms of competences, techniques, instructions or templates how to deal with these crucial success factors.

¹⁴ Project management process: SU starting up, IP initiating a project, SB managing Stage Boundaries, CS controlling a stage, CP closing a project. Directing/governance: DP directing a project. Delivering: MP managing product delivery.

¹⁵ See for instance Standish Group Report Chaos 1994/2000; N. Martijnse en P. Noordam 2007 Projectmanagement: lessen uit falende en succesvolle ICT projecten ,Management Control en Accounting 3

1. **Project Vision.** The general project strategy to achieve defined goals. Continuously emphasizing the higher-level goal of a project during each phase of the project is essential. The higher-level goal is rooted in the "business case". The vision is a project executive's tool to generate passion and meaning for the project and hence to realize changes.
2. **Leadership.** Definitely in more complex projects leadership plays an important role. This goes beyond "managing or controlling": not only doing things right but above all doing the right things. Leadership of project managers refers both to internal (team) relations and external relations. Sensitivity to and interaction with (interests, beliefs, wishes, expectations) stakeholders in the project environment is essential for being successful.
Competent leaders are capable to arouse interest of others and convey their vision clearly and convincingly, inspire confidence in others and are skilled in self-management. Key competencies are IQ (rational intelligence): analysis, planning, EQ (emotional intelligence): connect, recognizing emotions and feelings; MQ (moral intelligence): commitment to values and principles of life, integrity, (morally) make right choices.
3. **Teamwork.** The goal of a well-functioning project team is to deliver results with demonstrable value for users and other stakeholders. Success factors are team vision (in line with the project vision and goals), load balancing, social and technical skills, problem solving skills, and cooperation attitude (internal and external).
4. **Stakeholder management.** Stakeholders are "all Individuals or groups who have an interest or some aspects of rights or ownership in the project, can contribute in the form of knowledge, insight or support, or can impact or be impacted by the project". Willingness of the line organization to provide skilled and motivated staff and resources for the realization of the project is an example of engaged stakeholder behaviour.
Managing the relationships with stakeholders should lead to changes with demonstrable added value for stakeholders, useful results and visible "ownership" to make a project successful. Stakeholder management is a dynamic process that is an important core task of the project manager.
5. **Participation of users.** The user is the person who will use the project results. (The customer acquires ownership over such use). To generate the expected project benefits the user must accept the project results, for instance because it poses a demonstrable advantage over the current way of working. Based on this acceptance users are prepared to develop the necessary knowledge, skills and attitude in order to be able to actually use the results. This could mean a (sometimes even considerable) change in behavior and attitude. User participation is important to understand why and what change in the current way of working is desirable. Product success is the extent to which the delivered results comply with the explicit needs and implicit expectations of users and maintenance staff.
6. **Procedures and planning & control mechanisms** to manage time, quality, costs, risks and scope in a feasible way during the project execution.

In the PRINCE2 project management method several success factors can be recognized:

- Business case: project goal, selected change option, benefits, cost and risks.

- Roles and related tasks, responsibilities and competences for the management of a project. PRINCE2 advocates representing interests of most important stakeholders like users, investors and suppliers by the executive, senior user and senior supplier roles in the steering committee.
- Quality procedures and techniques for achieving desired (intermediate) product and process quality. Active participation of users in defining and accepting product quality is strongly promoted.
- Planning and progress monitoring methods for the control of time, cost and quality.
- Procedures and tools for managing risks
- Procedures and tools for managing changes
- A Product Breakdown Structure to identify deliverables, related work packages and disciplines.

At the same time it shows the emphasis on the "hard" project management elements. Teamwork and leadership ("soft" elements) are missing. The PMBoK project management method gives more attention to these soft elements especially in the Human Resource Management knowledge area.

Agile project management method

As stated earlier in Q1, an Agile project approach embodies all kind of techniques and methods like SCRUM, DSDM, XP, Lean & Kanban, Crystal, FDD. In essence these techniques are related to the development process. Agile development promotes adaptive planning, evolutionary development and delivery, a time-boxed iterative approach, and a rapid and flexible response to change. Expected benefits: motivated project team, higher productivity, more satisfied users, shorter deliver lead time and transparency.

From a more general perspective Agile is a conceptual framework that promotes interactions between user/business and specialists throughout the development cycle. It focusses on the management of the delivery process itself and not so much on the project management process. In PRINCE2 language it could be related to Managing Product Delivery process. In this view Agile can be combined well with other project management methods like PRINCE2 or PMBoK.

Despite this pragmatic view on Agile project management, we advocate to consider Agile project management as a separate (PM) project management method. This is based on arguments like:

- Making an Agile project approach successful it should not be based on a "hype" using techniques like SCRUM just because it is "hot". Applying an Agile PM approach should be based on a serious assessment of the type of project complexity (see diagram 4 Tracey model).
- The success of an Agile approach is strongly depending on commitment and active participation from line management. Using known "management" language instead of unknown "IT specialist" language helps in our opinion.
- A "general" Agile PM method helps to apply this method also in not IT related projects.
- A project management approach of Agile fits into an evolutionary thinking process on (project-) management methods. "Open ended" projects are accepted as a "normal" way of realizing change

not only in the public but also in the private sector. Based on our dynamic business environments we could even claim that “closed and well defined” projects are becoming “abnormal”.

What is characteristic for Agile as a project management method?

Agile PM tries to find an answer for managing project situations which are characterized by uncertainty and lack of agreement on what has to change. Flexibility, adaptive capability, is essential in the way the project is run. The project approach enables a “learning process” by means of repeated and short result driven iteration loop. Agile PM is not based on a “waterfall phasing” but on “iterative development phasing”. Agile PM is based on a development-oriented project approach rather than a design-oriented project approach.

To further clarify the distinction between control-oriented PM methods and flexibility-oriented Agile PM method we refer to Ashby's law of requisite variety.¹⁶

*In active (feed forward and/or feedback) regulation, each disturbance (D) in a project will have to be compensated by an appropriate counteraction from a regulator(R), a project manager for instance. If R would react in the same way to two different disturbances, then the result would be two different values for the essential variables, and thus imperfect regulation. This means that if we wish to completely block the effect of D, the regulator must be able to produce at least as many counteractions as there are disturbances. Therefore, the variety of interventions from R must be at least as great as the variety of D. Ashby has called this principle the **law of requisite variety: in active regulation only variety can destroy variety**. It leads to the somewhat counterintuitive observation that the regulator must have a sufficiently large variety of intervention actions in order to ensure a sufficiently small variety of outcomes.*

First of all an Agile project strategy reduces the probability of disturbances by applying Lean principles (e.g. focus on delivering business value for the customer, customer needs are key, short time span of development based on a number of iterations, continuous improvement). Subsequently sufficient intervention actions are organized by decentralizing decision-making powers directly in operating project teams. These self-managing teams are doing their job in continuous interaction with the use. A project manager focuses on facilitating and motivating the team rather than being the regulator him- or herself.

¹⁶ W.R. Ashby 1952 Requisite variety and its implication for the control of complex systems. See S. Beer 1979 The heart of enterprise, 1979.

Agile project management process and elements.

The project management process framework is presented in diagram 6.

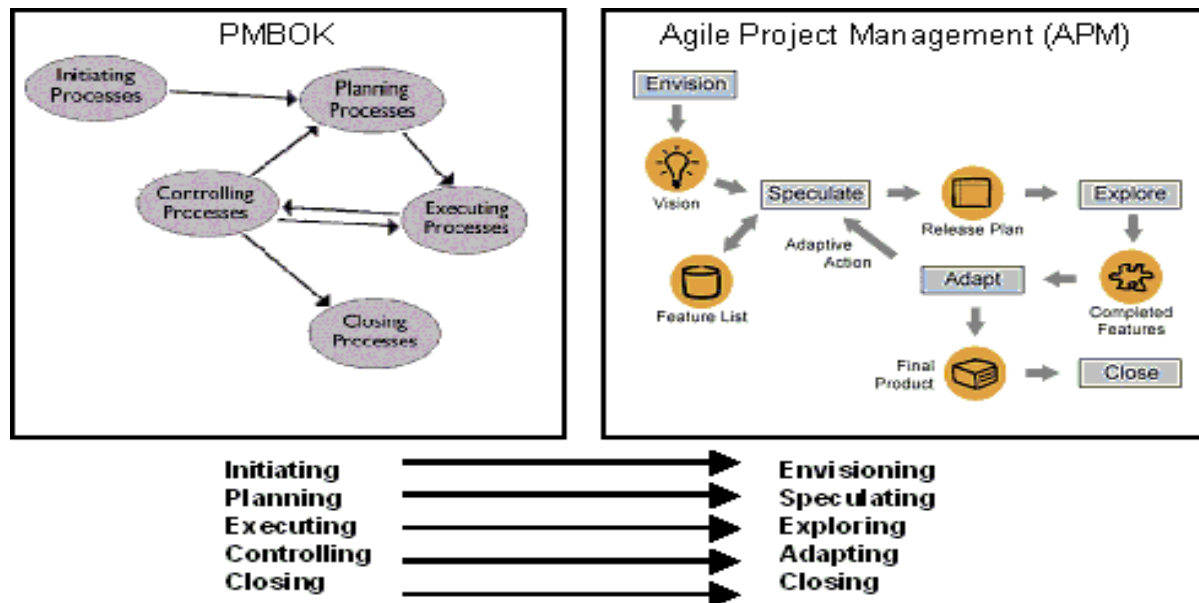


Diagram 6 Comparing PM processes

Envision: determine the product vision and business objective(s).

Speculate: develop a feature based release, milestones and iteration plan to deliver on the vision.

Explore: deliver tested features in a short timeframe in continuous interaction with stakeholders.

Adapt: review the delivered results, the current situation and the team's performance; adapt as necessary.

Close: conclude the project, pass along key learning's and celebrate.

Although quality control (see acceptance of iteration results) and progress monitoring are part of an Agile PM method, characteristic of the Agile PM method is the emphasis on "soft", behaviour related elements like:

- (servant) Leadership (see Q 4 implications of Agile PM for leadership role of a project manager) and important competences like vision, honesty, integrity, challenging, trust, service, empowerment, and appreciation of others.
- Team work (see SCRUM team work) based on self-management, co- location communication and a continuous improvement attitude. Besides the multi-disciplinary (knowledge related) character of the team it is important that team members are equipped to cooperate and participate in problem solving

processes. The theoretical framework of B. C Tuckman ¹⁷ shows it takes a rather complex growth process with several development stages before a multi disciplinarian team becomes “performing” in a self-organizing way.

- Active participation from users and maintenance staff when developing new features. See role of product ownership which goes far beyond the more passive role of senior user in the PRINCE2 board concept.
- Because the open ended character of an Agile project, due to lack of consensus from stakeholders on why and what has to change, getting commitment and engagement from stakeholders is much more complicated than in more traditional “closed” projects. So co-creative stakeholder management is another important element of an Agile PM method.

Practical guide lines for applying Agile project management method

In order to transfer a more abstract project management method into a practical way of working guide lines or application principles are used.

As a representative example of a more on “control” oriented PM method we used the PRINCE2 principles:

1. Use the business case as a basis for decision-making on the project. Monitor the validity of the business case permanently.
2. Evaluate the selected approach based on new insights during the closing of the project (phases).
3. Define what decision making tasks and responsibilities are associated with various management roles in the project.
4. Manage the project (phases) based on plans, risks management and product specifications
5. Manage the project based on agreements in what kind of situations a project manager should escalate to the board.
6. Planning is based on (intermediate) products to be delivered. Users should play an important role in defining specifications.
7. Apply customization when applying various management products.

Although one could argue that applying PRINCE2 principles gives enough “flexibility” when managing a project, in daily practice it is focussed on “being in control”. Management is more important than leadership. Applying PMBoK in daily practice it could be claimed it offers a more flexible way (for instance by rolling wave planning and progressive elaboration) in managing a project.

Anyway both methods are useful for managing project types where the result and technology are more or less well known (PBS, WBS and OBS can be defined). Project success is closely linked to project management success. Executing the plan is essential. Participation of users (who agree on what has to change and are familiar with methods and techniques on how to realize change) focuses on formulating requirements and assessing whether results comply with these requirements.

In daily practice this often means that the senior user appoints “intermediaries” who speak both the “language” of the end users and maintenance staff as well as the “language” of specialist designers and developers. There is a formal way to deal with change requests: the value and feasibility of changes should be

¹⁷ B.C. Tuckman 1965, Development sequence in small groups, Psychological Bulletin 63 (6) 384-399.

determined in advance. Adaptation of the plan happens through the formal approval of the "board".

Agile PM applies the following principles¹⁸:

1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable results (for instance software).
2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
3. Deliver ready to use results (for instance functioning software) frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4. Business people and developers must work together daily throughout the project.
5. Build projects around motivated individuals. Give them the environment and support they need and trust them to get the job done.
6. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation (co- location communication).
7. Ready to use results (for instance software) are the primary measure of progress.
8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
9. Continuous attention to technical excellence and good design enhances agility.
10. Simplicity--the art of maximizing the amount of work not done--is essential.
11. The best architectures, requirements, and designs emerge from self-organizing teams supported by servant leadership.
12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

Conclusion

Agile PM is useful for managing project types for which the results (and scopes) are not really clear beforehand. The technology necessary for realizing the result is fairly well known. For Agile PM the success of the project is very much interlinked with the success of the product. Responding in a flexible way to the customer's 'learning curve' is the central theme. The very short time boxes that produce ready to use (partial) results promote the learning process. By means of multiple iterations, the customer's view on what has to change is gradually increased. Instead of working with intermediaries, a business representative with sufficient authority is appointed who, in close corporation with specialists, directs the developments process. In this type of complex

¹⁸ K. Beck et al 2001 Principles behind the Agile Manifesto.

projects, leadership competences are more in demand than the project manager's hard pm skills. Self-organizing teamwork is essential.

Value-based project management

In order to understand the daily practice of Agile PM even better, we touch upon the really "open fuzzy front-end" projects¹⁹. These projects are located at the outer boundaries of the project complexity model. For these types of projects N. Mulder advocates a value-based project management approach based on ("Project's Eleven") behavior oriented principles. By means of a list of open questions a translation to a practical adaption of the project approach is looked for.

The principles in question are:

1. Base the project's approach on the shared values of the stakeholders. Each change starts with the question: why do we want to change and what do we want to achieve with this. The stakeholders should be in agreement (and have a collective ambition) concerning the added value, the common higher goal, of this change.
2. Focus constantly on the higher project goal. This is used to guide future changes and monitor the success of these changes towards the higher goal. The higher goal contributes to efforts made by actors when there is challenge, when goals are not formulated in too many details and when involved actors are engaged.
3. Develop a project vision and keep it alive. The vision provides direction to achieve the higher goal in such a way that those involved want to commit to it. It is a means to bring about passion and meaning for the project.
4. Work based on trust. Especially in situations where there is ambiguity and obscurity having confidence in each other is important. Trust is an actor's willingness to be vulnerable to other actors without any endeavor to control the other one.
5. The "project manager" is primary process director. Transformational leadership plays an important role. Bass and Avolio²⁰ mention four key elements of transformational leadership:
 - Idealized influence, the extent to which the leader behaves in such a charismatic way, that followers are going to identify themselves with the leader. This is reflected for example in communicating important values and a shared higher purpose.
 - Inspirational motivation, the extent to which the leader's vision conveys to the followers. This characteristic can be found in interventions with respect to the project view and trust.
 - Individual attention, and the extent to which the leader treats followers as individuals and supports (by means of coaching and 'interviewing') them in their personal development. This

¹⁹ Such projects are also known as co-creation processes. In the book 'Management van processen' both a process model and the elements (7 T's) of the management method are discussed. Also various interpretations of the role of process manager (adapted by the project manager) are a topic here. *T. Bekkering en J. Walter Management van processen, 2009.*

²⁰ B.M. Bass en B.J. Avolio 1994 Improving organizational effectiveness through transformational leadership.

characteristic can be found in the intervention with respect to the development approach, in which learning is a central theme.

- Intellectual stimulation and the extent to which the leader encourages followers to think from different perspectives. This can be achieved by challenging assumptions, promoting risk taking and eliciting idea generation. Again, this feature is consistent with the intervention of a development approach, in which learning is central.
6. Keep the dialogue with stakeholders going. This dialogue is wanted for connections between stakeholders, to finally come to a common ground. In this dynamic process, moral principles and common values are balanced with a pragmatic, solution-oriented approach to change issues.
 7. Realize the conditions for self-organization and self-management of the project team. This is possible if there is minimal differentiation of tasks, mature and multi-skilled team members with respect to the tasks to accomplish. Furthermore with result-oriented tasks. By trusting the team to take decisions themselves, setting challenging goals and open communication structures, the leader contributes to the emergence of self-organization.
 8. Employ a process approach that allows vagueness. In "fuzzy front end" projects a developmental approach is needed to transform a vague idea into a feasible solution. The focus here is on learning. Ideas are enriched with stakeholders through a co-creation process. The "front-end" phase covers the period between the generation of an idea and the agreement for its design. A developmental approach precedes a design approach which is the case in those projects based on PRINCE2 or PMBoK. A design approach is a suitable approach to the project realization process from the moment the expectations of the end result are concrete and clear.
 9. Facilitate creativity to find solutions for vague and uncertain changes. Exemplary behavior of (transformational) leaders, learning from experience, encouragement and feedback from other (trustworthy) persons and having success experiences play an important role here.
 10. Let users participate from the outset. Especially in complex project environments, it is increasingly important to use the knowledge and insights from users about what is needed to make for the daily functioning of systems and the best "business solution". Users need not agree to the higher purpose of the project per se, but should be able to contribute to the specification of requirements. User acceptance is achieved when the project's outcome benefits the end user. Participation (more than providing information or consulting) is effective when users are involved throughout the project.
 11. If feasible activities are result driven. The recommended development approach suits chaotic and complex projects where the solutions are not clear at the start. The related, extending iterative process can be result driven based on time boxing techniques.