

How PMI-ACP is Driving Innovation Convergence and the Hottest Project Management Jobs!

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Abstract

At some point every project manager looks at creating career opportunity, wondering, “Where is the future going to be the hottest for project managers?” The answer is at the convergence of **agile** and **innovation**!

In October 2010 PMI announced that agile project management practices and skills had a place in every PM’s tool kit. In May of 2011 PMI announced the new Agile Certified Practitioner (PMI-ACPSM) certification and more than 550 members participated in the pilot exam! What’s driving all this interest? Employment opportunities!

The playing field where human communities compete, from companies to nations, requires innovation and agility to create or maintain any competitive economic advantage. That sustainable advantage comes from systematic innovation. A **strong** correlation of that fact can be seen for industries from consumer electronics and pharmaceuticals to telecommunications. A **mild** correlation can also be seen for industries from healthcare and insurance to retail/wholesale. So whether communities thrive, survive, or fail is directly correlated to their ability to be agile and innovative. That core driver is behind the increasing demand for agile project managers. That is also the agile value proposition ... in a nutshell!

Given the need for agile project management, the next question is, “Why is the PMI-ACP driving innovation convergence and not the better known certifications from other agile organizations?” The new PMI-ACP certification has established itself as the de facto baseline because it addresses a significant weakness in the competing certifications and because it provides the kind of serious validation of knowledge, education, and experience that employers are seeking. It is the next big wave in the project management field.

The presenter, John Stenbeck, PMP, CSM, CSP, PMI-ACP, was the lead author of the best-selling *ACP Exam Prep Plus Desk Reference including the Project Management Agile Body of Knowledge*. This paper will unveil the major components of successful organizational agility; identify how to align your career with this red hot, emerging trend; and offer a compelling invitation to participate with teams focused on developing the expertise of each member. This paper will be a unique and powerful glimpse of the future combined with step-by-step instructions how to engage it. It will be as powerful as it is different from anything else presented at the EMEA Congress. Don’t miss it!

Driving Innovation Convergence and Project Management Success

The Impact of a Very Significant Trend

The Trend

Projects, and therefore project management practices, allow organizations to operationalize their innovative strategic vision. Executing those projects using the correct project management framework ensures those projects maximize the positive impact of the assets and people deployed to deliver them. To accomplish this, professional project managers are increasingly being tasked by their organizations to **synthesize the best practices** of traditional and agile frameworks into an approach that is **tailored to the environmental demands** facing the organization.

The Impact

Without a solid base of agile project management knowledge it is impossible for a project manager to fulfill that responsibility effectively. Being certified in only one framework, whether that framework is Scrum or XP or LSD is

only slightly more beneficial because it means that the project manager can only synthesize from one perspective. The PMI-ACP is the first, and only certification, to require competence in multiple agile frameworks. **That strategic choice strongly aligns with mounting evidence that suggests the future of project management is running hybrid projects.** Tomorrow's professional project manager cannot be effective without the ability to run hybrid projects. So, in a nutshell, the PMI-ACP value proposition is the ability to manage hybrid projects because a PMI-ACP certified practitioner has an understanding of both traditional and a variety of agile frameworks!

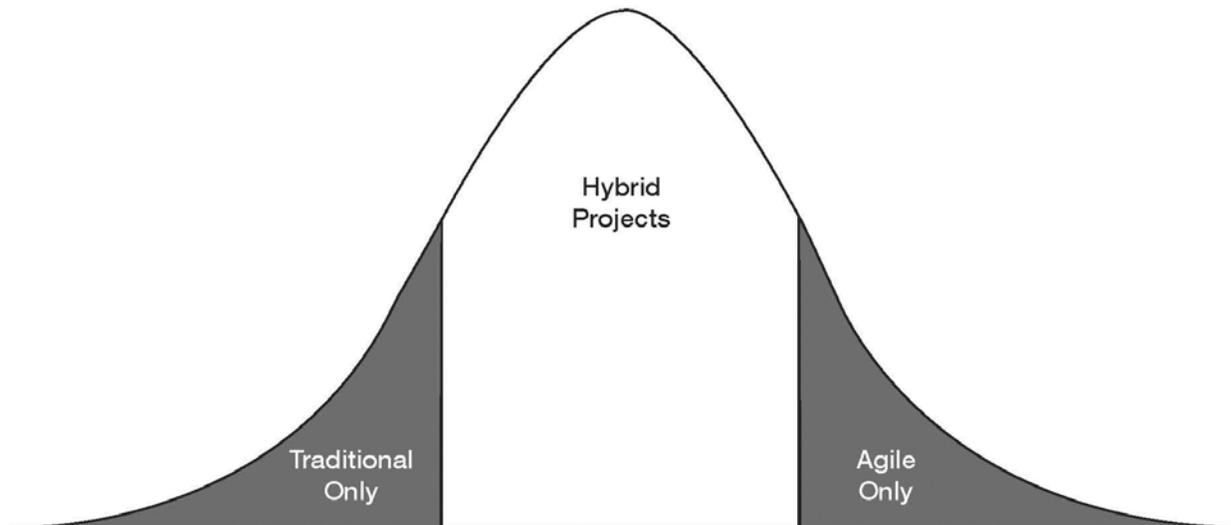


Exhibit 1 – Distribution of Projects Being Managed Using Various Frameworks

The challenge can be summarized in three major variables. First, handling the nearly overwhelming volume of information that comes from all directions—customers, managers, and the project team, to name a few—while effectively planning a path from the problem to the solution that minimizes waste. Second, the steps to creating the enterprise-level, macro-dynamic, business practices needed enable agility are complex and sometimes counterintuitive. And third, the key routines that unlock the team-level, micro-dynamic practices needed to achieve the desired hyper-productive output cannot be implemented piecemeal. Therefore, these three major interlocking variables must be handled as an integrated, self-reinforcing system.

Handling the Overwhelming Volume of Information

Avoiding Waste

In the real world of project management, whether it is being executed within a traditional framework or an agile framework, a non-stop flow of information is being directed at the project manager. A key difference between traditional and agile frameworks in handling that flow of information is that agile explicitly focuses on reducing waste. Because of agile's legacy from lean manufacturing it articulates that the non-stop information flow has to be analyzed and sorted according to importance and urgency in order to define the most direct, and therefore least wasteful, path between the problem and the solution. The least wasteful path can be visualized as a straight or direct line from the problem to the solution. However, in the real world that path is seldom seen or available. The path is usually much more of a series of steps forward exploring and then deciding if the solution is become more visible, more clear, or not, and then adjusting the course being pursued by the resources dedicated to solving the problem. So the key to avoiding waste is to reduce uncertainty.

Reducing Uncertainty

The Cone of Uncertainty

Agile frameworks accept that complex problems cannot be fully defined in advance so they use the scientifically validated empirical process control approach—transparency, inspection, and adaptation—to focus the team on quickly delivering results that move through the cone of uncertainty toward a solution in the midst of emerging requirements.

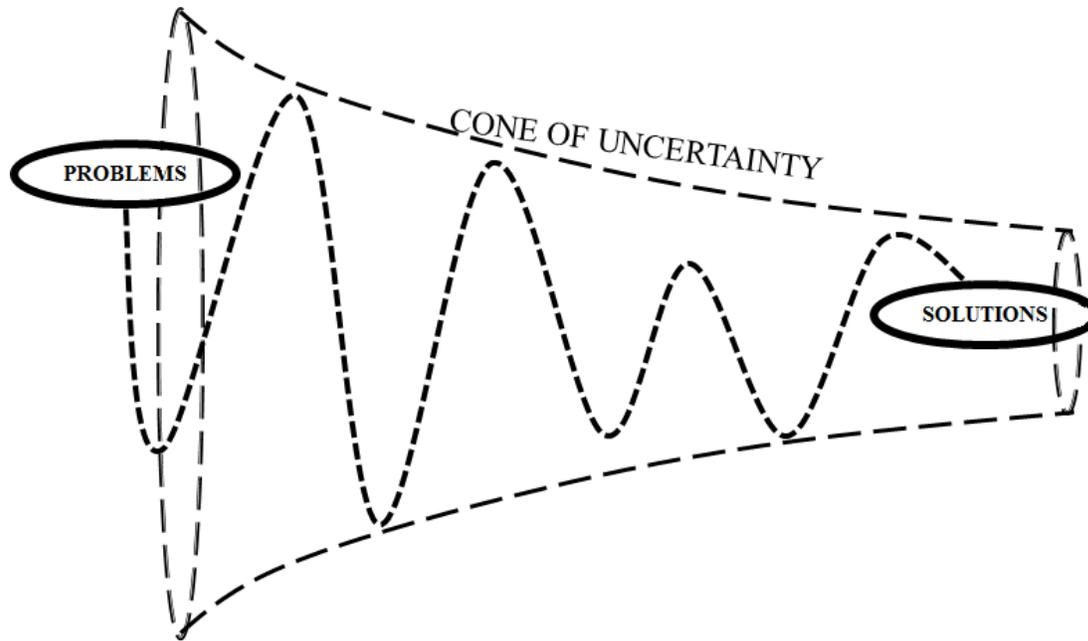


Exhibit 2 – Moving Through Cone of Uncertainty

While customers interact with the team, their focus oscillates back and forth as they find the real boundaries of their problem and clarify the solution to it. The process is dynamic as the understanding of the solution evolves from what they thought at the beginning to what they really need. Although stakeholders need to move through this cone of uncertainty to find the optimal solution, both the stakeholders and the business benefit from doing so as efficiently as possible. Increasing that efficiency comes in the form of reducing cycle-time.

Reducing Cycle-time

One of the reasons so many organizations are pursuing agile frameworks is due to the competitive pressure to reduce how long it takes for an idea to get from vision, business case, and charter to delivered capability that customers value (and will pay for!). At a high level, the time—weeks, months, or years required for delivered capabilities—is the standard definition of cycle time. A properly implemented agile framework should minimize cycle time and increase organizational advantage with responses to market opportunities, competitive threats, or business needs.

The definition of **cycle time in an agile framework** is narrower than in lean. Agile cycle time is the start-to-finish time required to complete a potentially shippable increment of the solution. Cycle time is used to measure the process, not a person. The goal is to understand then improve the process so that reliable, repeatable outcomes minimize variations and the waste that accompanies them. Eliminate process variation and waste and cycle time will come down.

Cycle time in an agile environment does not measure how fast a team member develops or tests a particular story or task because that would be person-centric. Cycle time is how fast the system can produce potentially shippable increments, or iteration goals. A system that produces usable increments in two-week iterations offers twice as much opportunity to adapt to competitive pressures than a system producing results in four-week iterations. That added flexibility also avoids the risk of waste occurring if development is headed down the wrong track.

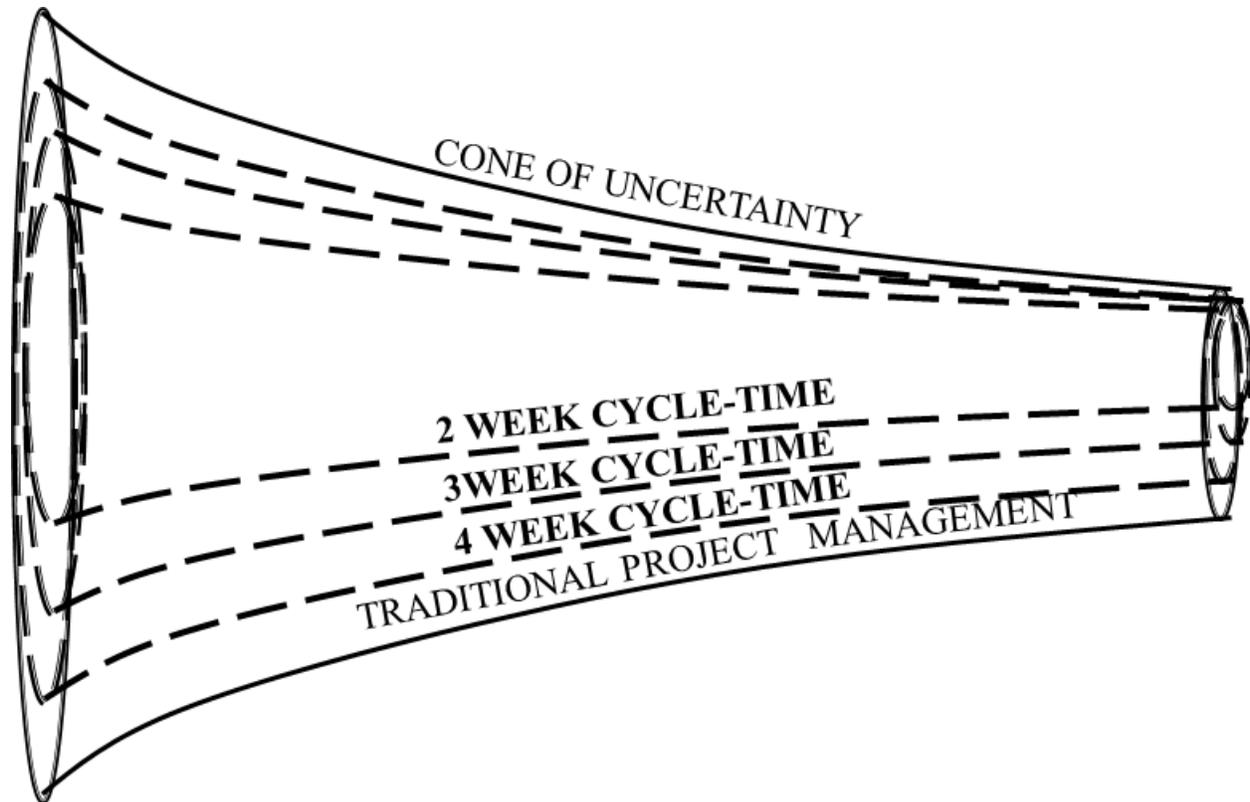


Exhibit 3 – Reducing the Cone of Uncertainty and Cycle-time

Because agile frameworks are rooted in lean thinking, they are a type of continuous improvement method that places significant focus on time. Because the frameworks use stable time increments—two-, three- or four-week iterations—improving cycle time is external to the team dynamic or work process within the iteration. However, the external changes needed to improve cycle time, things like better roadmap planning, release planning, and solution architecting, enable the team dynamic to mature from a four-week focus to a three-week or even two-week focus.

Creating Enterprise-level, Macro-dynamic, Business Practices

The Unique Power of the PMI-ACP

In order to fully realize the potential for agile to unlock sustainable, systematic innovation the organization must develop a strategic competence for clustering or grouping ideas into projects in ways that allow for removing waste, optimizing flow, and decreasing cycle time. Doing so using any of the current agile project management frameworks has been frustrated by a combination of three factors. First, many of the practitioners of Scrum or XP or LSD simply rejected or minimized the requests of the business and customer for reliable long-term planning, choosing to believe it was not really necessary or doable. Second, the agile communities (outside of PMI) did not adopt and adapt any of the traditional program and portfolio management tools that could address the need nor did they systematically prioritize and fund research into developing alternate approaches. And, third, the agile project management

frameworks have only been around for 15 years, with major growth occurring mostly in the last five to seven years, so the time required to create a fully mature set of enterprise best practices simply has not occurred.

Conversely, the PMI-ACP by strategic design embraces multiple agile frameworks as well as the mature tools from the traditional framework in order to facilitate program and portfolio management. For a PMI-ACP integrating business plans, capabilities roadmaps, corporate portfolios, and plans of record in order to guide the grouping and architecting of ideas into projects that remove waste, optimize flow, and decrease cycle time is a natural response to the customers' needs.

Unlocking Team-level, Micro-dynamic Practices

Rationalized Planning Practices

As previously stated, agile frameworks accept that the solutions to complex problems cannot be fully defined in advance. Using transparency, inspection, and adaptation the team delivers working increments of the solution and those results move development through the cone of uncertainty toward a solution in the midst of an emerging understanding of the requirements. Applying that worldview while simultaneously expecting useful, accurate, and detailed estimating would clearly meet the definition of insanity—expecting the impossible as reality!

Instead, drawing again on its heritage from lean manufacturing, agile frameworks do three important things. First, they divide time into meaningful horizons where forecasting, estimating, and working each exercise priority as appropriate. Second, they acknowledge the effect of time horizons on the probability of forecasting and estimating accuracy. And, third, they provide a working environment where teams can produce useful, predictable results by leveraging time horizons and forecasting probabilities.

Meaningful Time Horizons

Estimates are, by definition, inaccurate because they are based on ever-changing assumptions and they cannot accurately factor for the high complexity—bordering on chaos—of most modern projects. Also the further into the future the time horizon is of the activity being estimated, the more the inaccuracy is amplified. Therefore, **defining meaningful time horizons is directly correlated to the cost-benefit ratio of the expected value of the estimate.**

On the nearest-term time horizon, generally considered to be 30 days or less, the expected value of the estimate is zero because there is not enough time left to make any meaningful change based on the estimate. Because that is the case, the rational planning practice is simply to complete the work and measure the actual cost involved. This is the “**working**” time horizon.

On the mid-term time horizon, which must be defined by specific organizational needs for things like cash flow planning, capacity planning, and machine scheduling, the expected value of the estimate is high because meaningful choices will be made based on the estimate. That being the case, the rational planning practice is to prepare useful, detailed estimates of the resource consumption required to complete the work and then use them to plan. This is the “**estimating**” time horizon.

On the long-term time horizon, which again must be specifically defined by the organization, the expected value of the estimate is low because too many variables can change so meaningful choices cannot be based on the estimate. Because that is the case, the rational planning practice is to use forecasting tools—typically called “sizing” in agile estimation methods—so the actual cost of planning is minimized. This is the “**forecasting**” time horizon.

Agile planning spends estimating resources in direct proportion to the accuracy they produce. That means minimizing cost when the probable accuracy is low, and investing more when the probable accuracy is higher. It means planning with user stories as placeholders with minimal, high-level details on the longer-term time horizon and estimates on the nearer-term horizon where greater detail creates value.

Forecasting Probabilities

Another challenge of rationalizing planning is that the variability of any estimate correlates with how far in the future the work occurs. The risk of the activity being under-estimated is always greater than the risk that it has been over-estimated. In fact, chronic under-estimation is frequently revealed as work moves into the current time horizon and is decomposed into smaller tasks that are better understood and can be executed. Compared to the estimate, the amount of work required seems to grow, but seldom shrinks.

These insights about the science of estimation have emerged from the **law of large numbers (LLN)**, which is used by major businesses—as diverse as insurance and casinos—to manage earnings within reliable percentages. The LLN “guarantees” stable long-term results for random events by acknowledging the impact of variability. Based on the LLN, estimating accuracy is now understood to be inextricably linked to time in an inverse proportion. This means that the further ahead you try to estimate, the more the estimate decreases in accuracy.

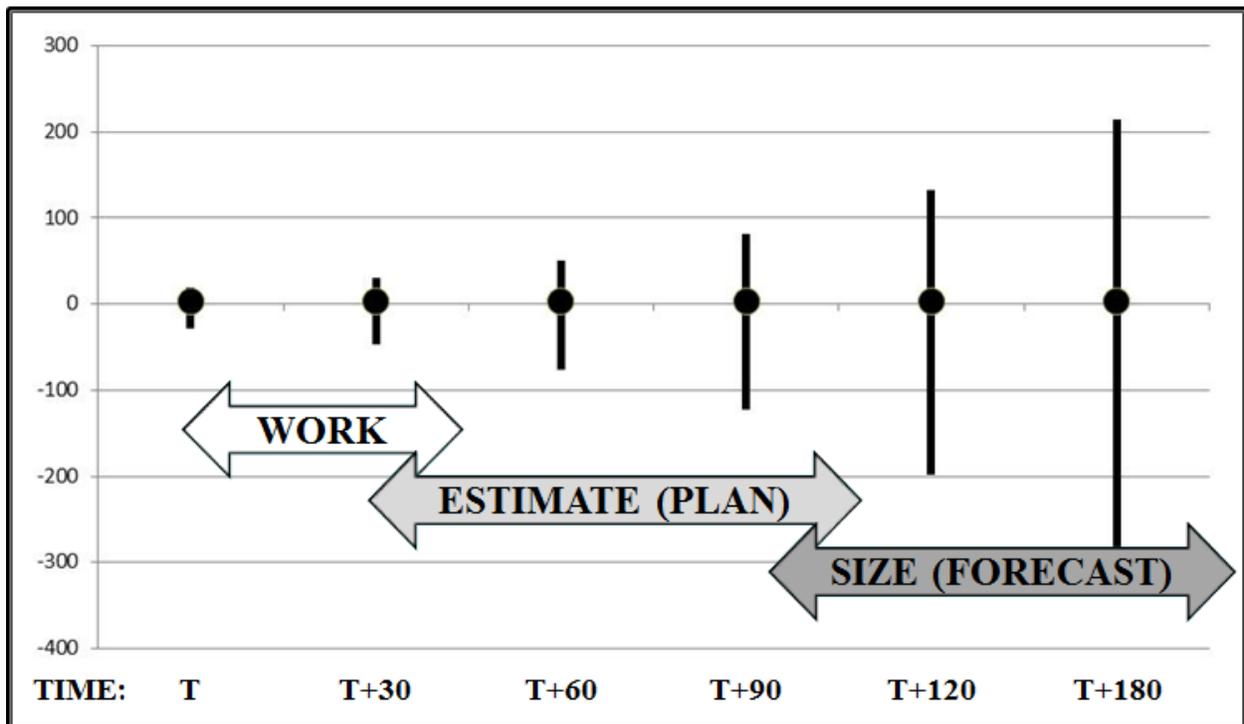


Exhibit 4 – Estimation Variance Over Time and Rational Planning Horizons

Integrating the fact that the probability of estimation accuracy will decrease in a non-linear, asymmetrical way with the concept that meaningful time horizons are directly correlated to the cost—benefit ratio of the expect value of the estimate, enables the creation of a work environment that can unleash the human potential to be hyper-productive.

Working Environment

The agile worldview centers on the team’s work as the point of value creation. So from the team-centric view, the organizational macro-dynamic interfaces through the activities of the customer/proxy, or in Scrum vernacular the product owner (PO), who is receiving, analyzing, and prioritizing the features required for a successful solution. That content is kept in a product backlog, which is equivalent to the product specification or requirements list in traditional project management. It is, however, significantly different because the PO is continuously grooming it based on information being received from internal and external sources. As priorities change, system features can be promoted or demoted. As the project moves forward, features that were on the future horizon enter the current horizon and are analyzed and estimated.

The team interacts with the product backlog at the beginning of each iteration as they negotiate with the customer/proxy and decide which features will be included in the next iteration. Once those features are agreed upon and fully committed to, they cannot be changed. The team commits to doing whatever is necessary to change the current state of those features into the future state as the goal of that iteration. In exchange, the customer/proxy acting as the representative of the organization agrees to not change what is requested or the time period of the iteration in which the goal will be developed.

It is the exchange of those promises—*vows, in effect*—that create the structure within which the team will define a working environment to optimize the probability of their success. It also enables a work environment that can unleash the human potential to be hyper-productive, which is a desirable outcome for the team, the organization, and the customer. It can be visualized as an agile process map.

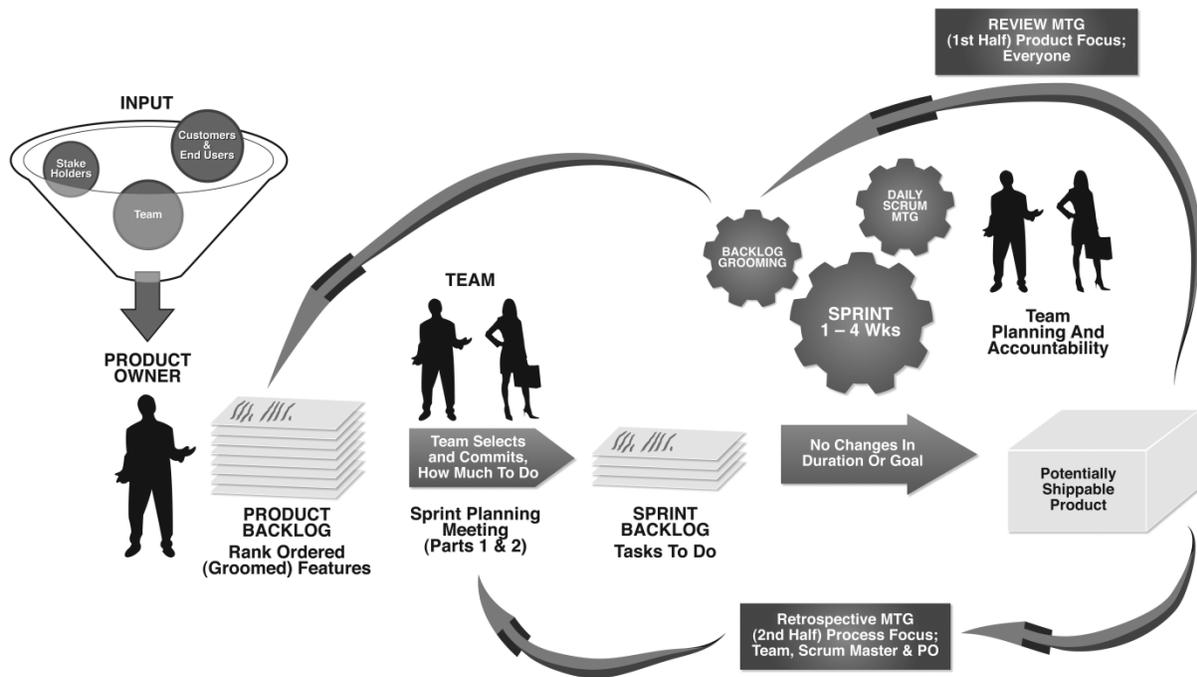


Exhibit 5 – Agile Process Map

Agile frameworks are value-driven in that they emphasize delivering features that have the highest customer value. Agile processes are value-driven in that they emphasize defining the values and working agreements that govern the process of how the team works. Global agile values originate from documents such as the *Agile Manifesto* and the *Twelve Principles*. Team-level values are affirmed in working agreements.

A working agreement is a standard that an agile team applies to its work. The team usually identifies its working agreements at the start of a project and may add to them based on retrospectives and team reflective workshops. Frequently, the team posts its working agreements in an information radiator where everyone can see them.

How PMI-ACPs Are Getting the Hottest Project Management Jobs!

Summary

When the quantitative, engineering environment where most project management takes place is considered, it might seem odd to use a phrase like “agile ethos.” Ethos conjures up other words like philosophy, culture, and attitude, but

there is a good, solid quantitative reason for understanding, accepting, and applying the ethos of agile project management.

That reason is risk management. A project cannot survive, much less thrive, without effective risk management, which for any project, hinges on cross-functional teams communicating effectively. The agile ethos recognizes this fact as being equivalent to gravity. You cannot escape it so why deny it. Instead, leverage it to create potential advantage.

The reason PMI-ACPs are getting the hottest jobs in the project management field is because they are well prepared to implement the best practices the agile ethos suggests so that their teams can be trusted to optimize the chance to identify risks, reduce errors, and produce outstanding results. And unlike their counterparts who have been certified by other organizations, they can also effectively select and deploy mature program, portfolio and enterprise-level tools to lead the organization into the macro-dynamic disciplines needed to create an environment where the team's micro-dynamic processes can flourish.

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