



Everyone's Smart
University

Summer 2021

PMG 622

AGILE PROJECT MANAGEMENT

LECTURE 10: ACP

دكتور مهندس استشاري ادارة المشروعات

Eng. Dr. Akram Mustafa Suliman Ali,

PhD. AU, BEng. & MSc. AAST, CEng CMarEng MIMarEST, PE, PMP®,

ASQ CSSBB, ISO Lead Auditor, NDT Level II,

Eng. Dr. Akram Ali

المنتدى المفتوح - THE OPEN FORUM

- This is a Standard Forum displayed in a blog-like format
- Students may start new topics in this format.
- Allow multiple topics listed with the most recent topic at the top of the page and replies behind a link.
- في هذا المنتدى يستطيع اي طالب بدء المناقشة ليرد عليه باقي الطلبة
- و اشكركم على مشاركتكم

Forum Topic:
المنتدى المفتوح
The Open Forum -

ACP



WHAT IS THE PMI-ACP?

- The PMI-ACP® exam is situationally-based, thus also testing the test-taker's command of applying the doctrine
- Passing the exam results in the globally recognized Project Management Institute – Agile Certified Practitioner credential (PMI-ACP)®
- In the mind of hiring managers, the PMI-ACP® 'validates' the Agile knowledge and experience

PMI AGILE CERTIFIED PRACTITIONER

- Scrum
- XP
- Kanban
- Test Driven Development (TDD)
- Feature Driven Development (FDD)
- Crystal
- Dynamic Software Development Method (DSDM)
- Lean

THE PMI-ACP EXAM

- 3-Hours Long
- 120 Questions
- 100 Scored
- 20 Test Questions
- “Pass” or “Fail”
- Most Questions are Situational in Nature

THE PMI-ACP EXAM 7 AGILE DOMAINS



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

Agile Principles & Mindset (16%)
Value-Driven Delivery (20%)
Stakeholder Engagement (17%)
Team Performance (16%)
Adaptive Planning (12%)
Problem Detection & Resolution (10%)
Continuous Improvement (9%)

Written By PMI-ACP Steering Committee Member and
PMI® Agile Community of Practice Co-Founder Mike Griffiths!

PMI-ACP® Exam Prep

A Course in a Book® for
Passing the PMI Agile
Certified Practitioner
(PMI-ACP)® Exam

INSIDE:

- Concepts and Study Material—
What You REALLY Need to Know
- Activities and Exercises
- 140 Review Questions
- Over 200 Visuals and Graphics
- A Focus on Real-World Agile

Updated Second Edition

With New Situational Questions

For all PMI-ACP exams taken on or after March 18, 2018

Mike Griffiths, PMI-ACP, PMP



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

HOW DOES PMI THINK ABOUT AGILE? [1/3]

- The Agile Coach focuses on clarifying project objectives, coordinating with organizational stakeholders, and assisting the self-managing team
- You [the Coach] are supporting an Agile project team
 - Multi-release schedule
 - Numerous Stakeholders
 - Software project for large organization
- Planning is important, but less important than adapting to change!

HOW DOES PMI THINK ABOUT AGILE? [2/3]

- You support the Agile team throughout the project, key Stakeholders are engaged effectively, roles and responsibilities are defined
- Self-organizing teams own implementation of project processes
- Agile Coaches influence stakeholders, enable change, help to resolve problems, and help teams focus on, and communicate outcomes
- We are always looking for small, incremental improvements

HOW DOES PMI THINK ABOUT AGILE? [3/3]

- Agile Coaches spend their time:
 - Helping the team self-organize and self-manage
 - Helping the team resolve problems and impediments
 - Help engage stakeholders
 - Coach team members and members of the organization on Agile principles
- The Agile approach stipulates:
 - Plan at the high level up-front, and execute releases and iterations, help the team manage work, communicate with stakeholders
 - Planning actions are done by Product Owner working with the team; decisions are made by the team
 - Changes to the plan are sought after, and embraced



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

THE SEVEN AGILE DOMAINS

THE SEVEN AGILE DOMAINS

- Domain 1: Agile Principles & Mindset
- Domain 2: Value Driven Delivery
- Domain 3: Stakeholder Engagement
- Domain 4: Team Performance
- Domain 5: Adaptive Planning
- Domain 6: Problem Detection / Resolution
- Domain 7: Continuous Improvement

DOMAIN 1: AGILE PRINCIPLES & MINDSET

[1/3]

- **TASK 1:** Advocate for agile principles by modeling those principles, and discussing agile values. This will help develop a shared mindset across the team, as well as between the customer and the team.
- **TASK 2:** Help ensure that everyone has a common understanding of the values and principles of agile, and a common knowledge around the agile practices and terminology being used.
- **TASK 3:** Support the change related to embracing agile approaches at the system and organization level by educating individuals, and influencing processes and people.

DOMAIN 1: AGILE PRINCIPLES & MINDSET

[2/3]

- **TASK 4:** Maintain highly visible information radiators, accurately showing progress on the project, and team performance. Use these to enhance transparency and trust.
- **TASK 5:** Contribute to a safe and trusting team environment by allowing everyone to experiment and make mistakes. This enhances learning, and continuous improvement of processes.
- **TASK 6:** Enhance creativity by experimenting with new techniques and process ideas. This will allow the discovery of more effective and efficient ways of working.

DOMAIN 1: AGILE PRINCIPLES & MINDSET

[3/3]

- **TASK 7:** Encourage team members to share knowledge by collaborating and working together. This will help to eliminate knowledge silos, and will reduce bottlenecks in workflows.
- **TASK 8:** Encourage emergent leadership within the team by establishing a safe and respectful environment in which new approaches can be tried. This will foster self-organization, and empower emergent leaders.
- **TASK 9:** Practice servant leadership by supporting and encouraging others. This will help them to perform at their highest level, and continue to improve.

DOMAIN 2: VALUE DRIVEN DELIVERY [1/5]

- **TASK 1:** Define deliverables by identifying Features that can be produced incrementally. This will maximize value to the customer, and minimize work that does not add value.
- **TASK 2:** Refine requirements by gaining consensus on acceptance criteria for Features. These should be focused on value to the customer, and determined in the planning for an Iteration, and before development begins.
- **TASK 3:** Select the processes to be used based on characteristics of the project, and the organization. Tailor the processes based on those same considerations, in whatever way optimizes delivery of value.

DOMAIN 2: VALUE DRIVEN DELIVERY [2/5]

- **TASK 4:** Plan for small releasable increments, focusing on minimally marketable features and minimally viable products. This will allow for early delivery [and recognition] of value.
- **TASK 5:** Limit increment size, and conduct frequent product reviews with stakeholders. This will allow for the early identification of, and response to, variances and risks.
- **TASK 6:** Solicit feedback from the customer and end-users frequently, by reviewing the produced features often. This will help to confirm that the product being delivered is providing real value.

DOMAIN 2: VALUE DRIVEN DELIVERY [3/5]

- **TASK 7:** Collaborate with stakeholders to determine their prioritization of features to be developed, based on value to the customer.
- **TASK 8:** Perform frequent quality checks on the product being developed, and take the necessary actions to maintain the quality of the deliverables. This will reduce the overall cost of the development, and ensure delivery of value.
- **TASK 9:** Continuously identify, and respond to, environmental, operational, and infrastructure factors, to effectively and efficiently produce valuable deliverables.

DOMAIN 2: VALUE DRIVEN DELIVERY [4/5]

- **TASK 10:** Conduct frequent reviews and planning sessions with stakeholders to solicit feedback, and use that feedback to adjust the work to be accomplished next.
- **TASK 11:** Balance actual development / production efforts and risk reduction efforts by including risk reduction work in the Product Backlog. This will optimize the value of the product actually delivered, and overall project success.
- **TASK 12:** Continuously collaborate with the customer and stakeholders to re-prioritize requirements, based on changes to the environment and stakeholder needs.

DOMAIN 2: VALUE DRIVEN DELIVERY [5/5]

- **TASK 13:** Elicit and prioritize relevant non-functional requirements [on-going operations, security, etc.], considering the environment in which the final product will be used. This will help ensure long-term value to the customer.
- **TASK 14:** Conduct frequent inspections, reviews, and testing of the work products. This will help to identify opportunities to improve both the product, and the processes used to produce it.

DOMAIN 3: STAKEHOLDER ENGAGEMENT

[1/3]

- **TASK 1:** Continuously identify key business stakeholders throughout the project. Engage the stakeholders to determine and refine their interests, needs, and expectations.
- **TASK 2:** Engage all key stakeholders in knowledge sharing early in the project, and throughout the project. This will ensure the continuous delivery of value to the customer.
- **TASK 3:** Establish relationships with stakeholders by forming working agreements. This will promote effective participation and collaboration.

DOMAIN 3: STAKEHOLDER ENGAGEMENT

[2/3]

- **TASK 4:** Continuously assess changes in the project and organization to ensure that new stakeholders are identified and appropriately engaged.
- **TASK 5:** Establish collaborative behaviors among members of the organization to foster group decision-making and group conflict resolution. This will improve the quality and timeliness of decisions.
- **TASK 6:** Collaboratively develop a high-level vision and supporting objectives. This will establish a shared understanding of the products and deliverables, and the schedule [releases and iterations], to align expectations.

DOMAIN 3: STAKEHOLDER ENGAGEMENT

[3/3]

- **TASK 7:** Establish and maintain a shared understanding of the desired deliverables, success criteria, and acceptable trade-offs with key stakeholders. This will help to align expectations.
- **TASK 8:** Provide transparent and accurate information to stakeholders regarding work progress, product quality, impediments, and risks. This will help stakeholders to make informed decisions about requirements and priorities.
- **TASK 9:** Provide forecasts at a level of detail that balances the need for certainty and the benefits of adaptability. This will support informed prioritization and decision-making by key stakeholders.

DOMAIN 4: TEAM PERFORMANCE [1/3]

- **TASK 1:** Cooperate with other Team Members to establish ground rules and internal Team processes and procedures. This will foster Team cohesion, and strengthen members' commitment to shared outcomes.
- **TASK 2:** Help develop a Team that has the technical and interpersonal skills to achieve all of the project objectives. This will allow for the rapid creation and delivery of business value to the customer.
- **TASK 3:** Encourage Team Members to become generalizing specialists, in order to create a high-performing cross-functional team. This allows for a smaller team, and reduces bottlenecks in the work-flow.

DOMAIN 4: TEAM PERFORMANCE [2/3]

- **TASK 4:** Contribute to self-organizing and self-managing by the Team Members, by empowering them, and encouraging emerging leadership. This enhances agility and speed.
- **TASK 5:** Continuously discover Team and individual motivators and de-motivators, and use them to help maintain Team high morale and productivity.
- **TASK 6:** Facilitate close communication within the Team, and with key stakeholders, through co-location and the use of collaboration tools.

DOMAIN 4: TEAM PERFORMANCE [3/3]

- **TASK 7:** Reduce distractions in order to facilitate effective and efficient work accomplishment.
- **TASK 8:** Participate in the process of aligning the goals and objectives of the Team with the overall goals of the project. Initially and continuously share the project vision.
- **TASK 9:** Assist the Team in measuring their velocity, based on performance in previous iterations and releases. Help them use their velocity to understand their capacity, and create accurate forecasts.

DOMAIN 5: ADAPTIVE PLANNING [1/4]

- **TASK 1:** Plan at multiple levels [project, release, iteration, daily] in the appropriate level of detail. Use rolling wave planning and progressive elaboration to balance predictability with flexibility.
- **TASK 2:** Make planning activities transparent and visible by encouraging participation of key stakeholders, and publishing the results of the planning.
- **TASK 3:** As the project progresses, make increasingly specific commitments, to set and manage stakeholder expectations.

DOMAIN 5: ADAPTIVE PLANNING [2/4]

- TASK 4: Adapt the planning cadence, and planning processes used, based on the results of retrospectives, and the characteristics of the features to be produced.
- **TASK 5:** Throughout the project, inspect and adapt the project planning artifacts to reflect changes in requirements, shifting priorities, scheduling considerations, and budget.
- **TASK 6:** Begin the features / work estimating process with the sizing of features / deliverables based on difficulty and the likely amount of effort required. Do this estimating initially independent of team velocity measures and external variables.

DOMAIN 5: ADAPTIVE PLANNING [3/4]

- **TASK 7:** Adjust Team capacity and velocity measurements to reflect maintenance, administrative, and operational demands. This will allow for more realistic estimating and forecasting related to productivity.
- **TASK 8:** Create initial, rough estimates for the amount of work required for the project, and the time and cost that might be involved. Use these to establish a starting point for project planning.
- **TASK 9:** Refine the initial, rough estimates for the work, time and cost that might be required, based on new information gained over time. Use this progressive elaboration to advance project planning, and refine forecasts shared with stakeholders.

DOMAIN 5: ADAPTIVE PLANNING [4/4]

- **TASK 10:** Using new, updated information regarding project requirements, resource capabilities, and Team velocity, continuously revise the estimates of remaining time [schedule] and remaining cost [budget] needed to complete the project.

DOMAIN 6: PROBLEM DETECTION / RESOLUTION [1/2]

- **TASK 1:** Create an open and safe environment in which problems and impediments can be surfaced. Do this by encouraging conversation and experimentation.
- **TASK 2:** Identify problems and issues, so they can be resolved at the appropriate time, and the processes that caused the issues can be improved. Do this by educating and engaging the Team.
- **TASK 3:** Ensure issues are resolved by the appropriate Team members, when that is possible. When problems arise that cannot be resolved, reset expectations with stakeholders and Team members.

DOMAIN 6: PROBLEM DETECTION / RESOLUTION [2/2]

- **TASK 4:** Maintain a visible, monitored, prioritized list of problems and issues that stakeholders and Team members can easily see. This will help to encourage action, maintain accountability, and track ownership and resolution status.
- **TASK 5:** Communicate the status of problems and issues by posting and maintaining the list of problems in the information radiators. List the problem resolution activities planned in the Product Backlog / Iteration Backlog, along with the product development activities. This will provide transparency, and help to ensure that time and resources are devoted to problem resolution.

DOMAIN 7: CONTINUOUS IMPROVEMENT

[1/2]

- **TASK 1:** Tailor and adapt the processes utilized, by periodically reviewing Team practices, delivery goals, and organizational factors. This will ensure on-going Team effectiveness and efficiency.
- **TASK 2:** Improve Team processes by incorporating inputs from retrospective meetings and improvement experiments. This will help to continuously improve Team effectiveness and performance.
- **TASK 3:** Seek feedback on the quality and suitability of the product by incremental delivery, and frequent product reviews and demonstrations.

DOMAIN 7: CONTINUOUS IMPROVEMENT

[2/2]

- **TASK 4:** Create an environment of continued learning, and provide opportunities for people to develop their skills. This will develop a more productive team of generalizing specialists.
- **TASK 5:** Challenge existing process elements with tools such as value stream analysis, and continuously seek to remove waste. This will increase Team effectiveness and efficiency.
- **TASK 6:** Contribute to systemic improvements by sharing knowledge and practices across projects and organizational boundaries. This will improve effectiveness and efficiency throughout the organization as a whole, and the community in general.



جامعة الجميع الذكية
EVERYONE'S SMART UNIVERSITY

VALUE-DRIVEN DELIVERY

INTRODUCTION

- Delivering Value is a cornerstone of Agile methods.
- Projects are undertaken to provide businesses with additional value.
- Value Driven Delivery is the aim to maximize value throughout the life of the project
 - “Will it make the boat go faster?”
- Negative risk reduces or removes value = “Anti-Value”

ASSESSING VALUE

- There are several mathematical ways to assess value
 - Return on investment (ROI)
 - Net present value (NPV)
 - Internal rate of return (IRR)

CUSTOMER-VALUED PRIORITIZATION

- Determining what holds the greatest value for our customers.
- MUST involve the customer
- Prioritized work packages are arranged in a Product Backlog (SCRUM) or Feature List (FDD).
- This is an ongoing process (and relationship!)