



PMINJ 2011 Annual Symposium

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Agile or PMBOK®? You Can Have Both!

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building talent, driving results

Jim Highsmith, one of the originators of the Agile Manifesto, defined agility in project management as the following:

“Agility is the ability to both create and respond to change in order to profit in a turbulent business environment.”

“Agility is the ability to balance flexibility and stability.”

What do we mean when we refer to agile project management?



Emphasis on highly skilled developers with the ability to motivate themselves



Iterative, incremental delivery of work products or prototypes (iteration or sprint)



Customer involvement and participation as an integral part of the project effort, continuously available for review and consultation



Change-readiness—the ability to create and respond to change

What is the Manifesto?

What is Agile?

The Manifesto for Agile Software Development—

- Is known as the **Agile Manifesto**
- Was created in 2001 by a group of advocates of **iterative** and incremental development methods
- Is the foundation document of the agile movement, which sets forth the underlying philosophical concepts of agile project management and includes a set of 12 principles

Source: www.agilealliance.org and www.agilemanifesto.org

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The Manifesto for Agile [Product*] Development

"We are uncovering better ways of developing products by doing it and helping others do it. Through this work we have come to value:

Individuals and interactions over process and tools
Working products over comprehensive documentation
Customer collaboration over contract negotiation
Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more."

- Manifesto for Agile Software Development

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Principles Behind the Agile Manifesto

What is Agile?

Customer/Success Measures

- "Our highest priority is to satisfy the customer through early continuous delivery of valuable [products]."
- "Working [products] is the primary measure of progress."
- Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.

Highly Skilled/Motivated Teams

- Business people and developers must work together daily throughout the project.
- Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
- The most efficient and effective method of conveying information to and within a development team is face-to-face conversation."
- Continuous attention to technical excellence and good design enhances agility.
- The best architectures, requirements, and designs emerge from self-organizing teams.

Incremental Delivery/Change Acceptance

- Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
- Deliver working [products] frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
- "At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly."
- Simplicity—the art of maximizing the amount of work not done—is essential.

Source: www.agilemanifesto.org

- Scrum
- Crystal Methods
- Unified Process (UP)
- Lean Development (LD)
- Extreme Programming (XP)
- Dynamic Systems Development Method (DSDM)

5 Common Agile Myths

What is Agile?

MYTH 1

Agile methods are just thinly disguised hacking.

TRUTH

There is no hacking involved...they are merely distributed across the interactions.

MYTH 2

Agile practitioners see requirements definition and design as “not adding customer value” and as “ceremony” to be avoided.

TRUTH

Requirements definition and management are extremely important as they define the success of each iteration.

MYTH 3

Agile practitioners do not plan or document their work.

TRUTH

Planning and estimating are needed in “rolling waves” with just enough documentation to meet customer expectations.

MYTH 4

Agile methods conflict with the PMBOK® Guide project management.

TRUTH

The PMBOK areas are still applicable to each iteration and need to be planned and managed to stay on-spec, on-time, and on-budget.

MYTH 5

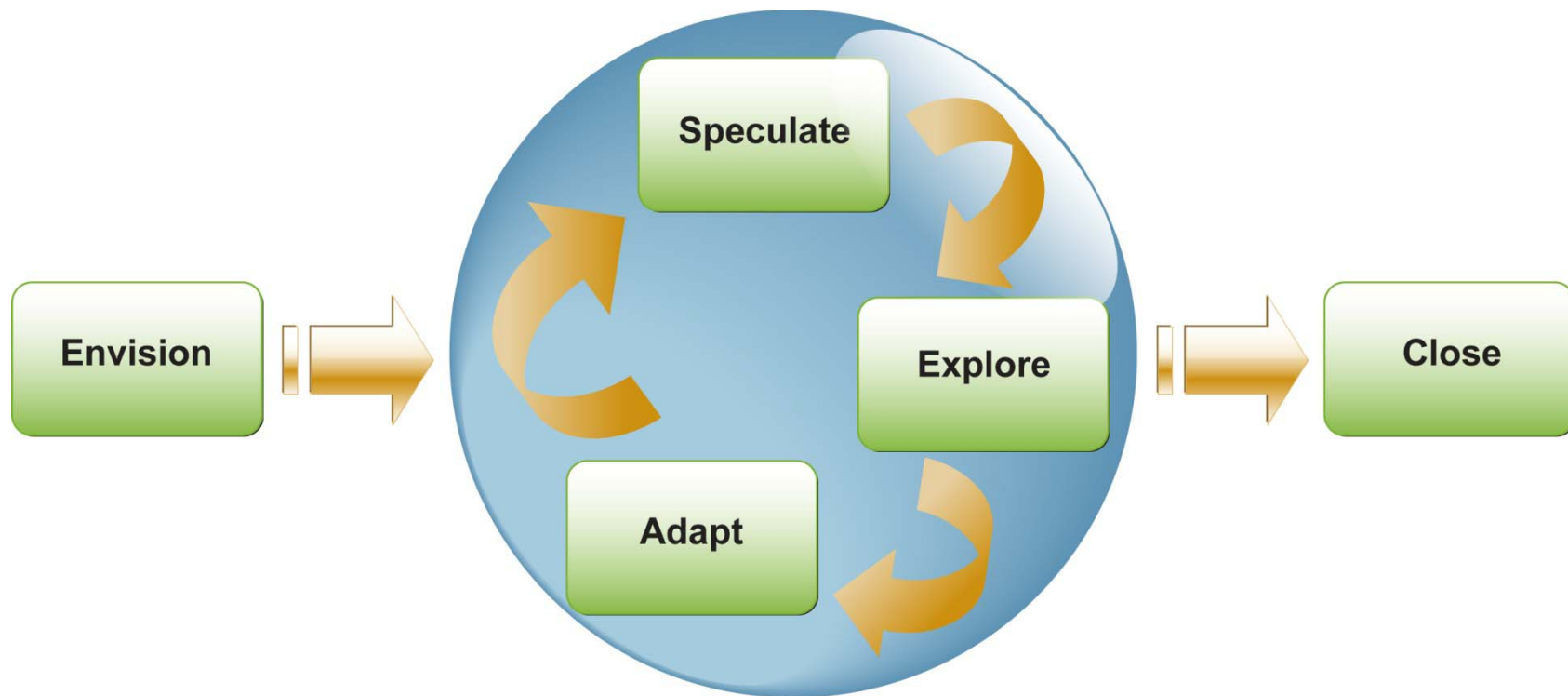
Agile projects can be done quicker, with fewer resources and without a project manager.

TRUTH

The PM needs to be a facilitator, relying less on managing and more on leading.

Process of an Agile Project

What is Agile?



Source: Highsmith, 2004, p. 18

Phases of the Agile Project

What is Agile?

The team performs the following activities—

Envision

Collaborates to outline the overall vision for the product

Speculate

Conjectures on possible methods of creating the product that was envisioned

Explore

Builds the first iteration of the product

Adapt

Walks through the outcome of the iteration to determine if any changes are made, incorporates any lessons learned, and reviews progress metrics

Close

Delivers the final product and reviews the overall effort

PMBOK® Guide Knowledge Areas

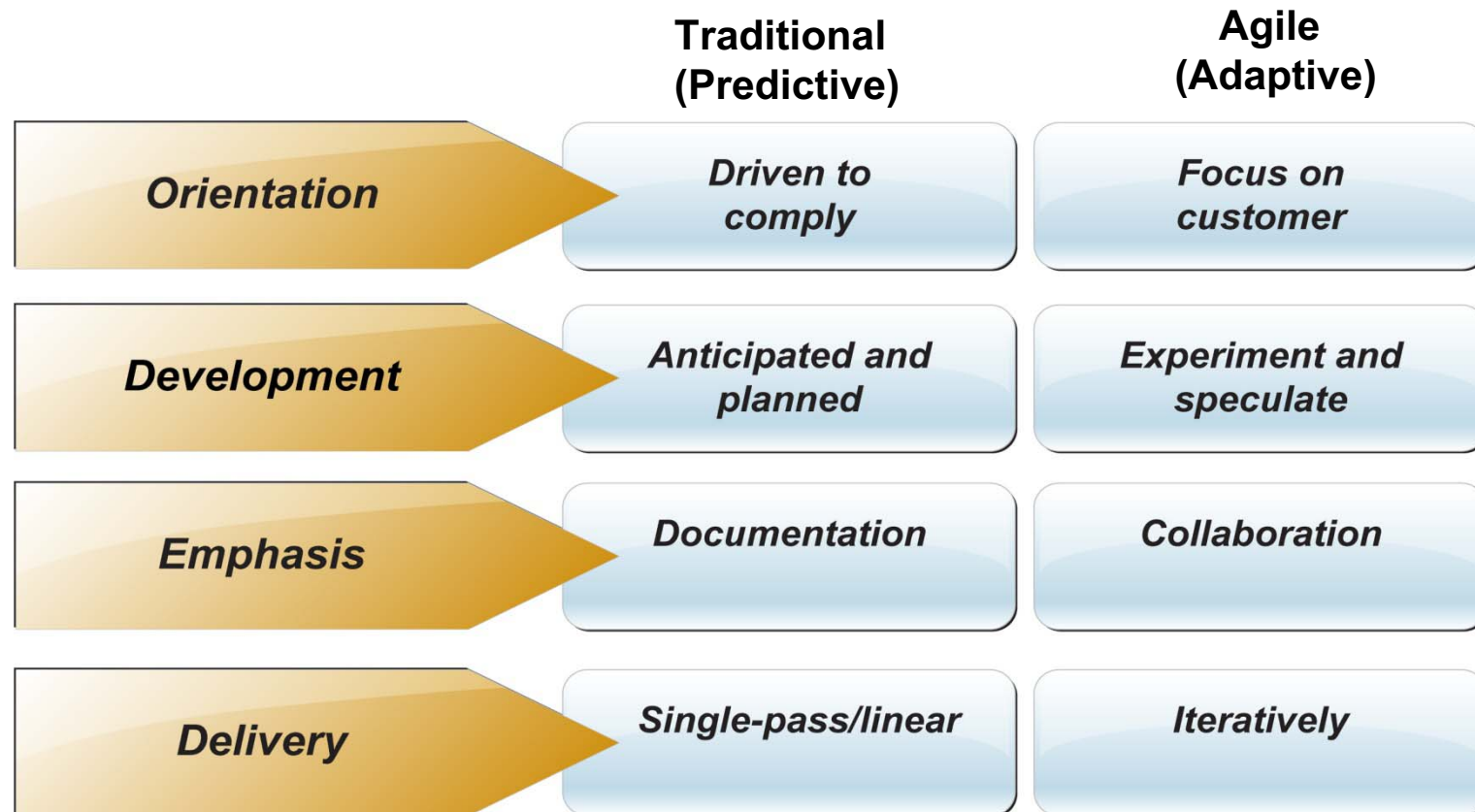
How does
PMBOK® Exist
in Agile?

- The PMBOK® Guide's knowledge areas apply to agile methods as well as traditional methods.
- Agile or not, every project must—
 - Develop a scope of work
 - Estimate the time and cost of the project
 - Allocate resources
 - Conduct a risk assessment
- The key question is: What techniques will be used?



Traditional Versus Agile Methods

How does
PMBOK® Exist
in Agile?



Product-Project Deliverables Comparison

How does
PMBOK® Exist
in Agile?

Product Development

- Business Case
- Business Requirements
 - Use Cases
 - User Stories
- Technical Specifications
- Systems Requirements
- Test Cases
- Product Builds
- Final Product

Project Management

- Integration – Change Requests
- Scope – Work Breakdown Structure (WBS)
- Time – Schedule
- Cost – Budget
- Resources – Organization Chart
- Quality – Standards
- Risk – Log with Mitigation Plans
- Communications – Reports, Dashboards
- Procurement – Vendor Contracts

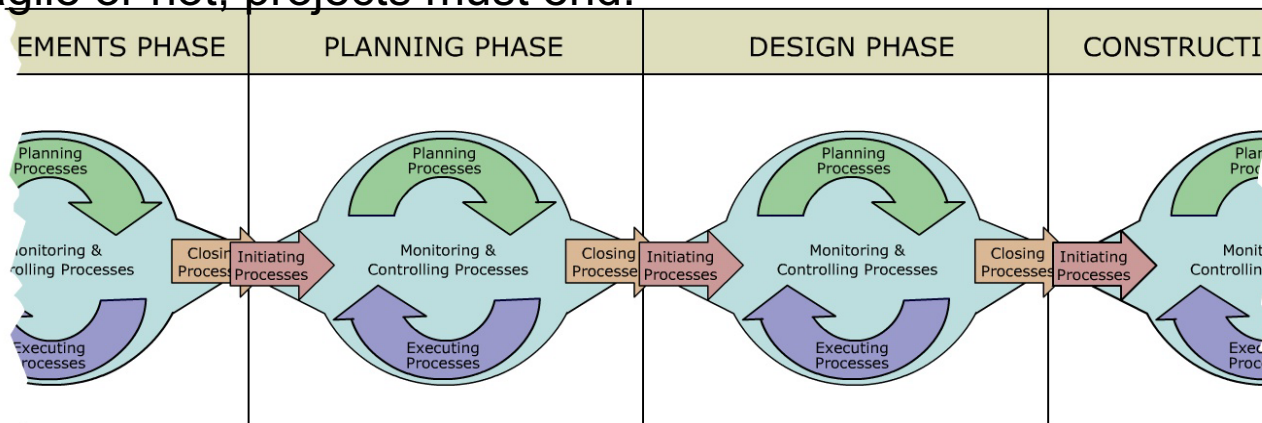
**Both sets of deliverables are needed whether you use
a Traditional or Agile Framework**

PMBOK® Guide Process Groups

How does
PMBOK® Exist
in Agile?

The PMBOK® Guide's five project process groups also apply to agile methods as well as traditional methods:

- **Initiating** – for example, an envisioning workshop)
- **Planning** – distribution across the entire effort, with incremental additions and extensions
- **Executing** – incremental execution through multiple iterations or releases
- **Monitoring and Controlling** – reporting status and managing changes
- **Closing** – agile or not, projects must end!



Source: PMBOK® Guide, p. 40

Project Management Knowledge Areas Comparison

How does
PMBOK® Exist
in Agile?

Knowledge Areas	Traditional	Agile
Integration	Perform change control	Adapt to changes
Scope	Define scope and create WBS	Determine iteration requirements
Time	Estimate, develop project schedule	Map and define releases and iterations
Cost	Estimate, develop project budget	Estimate, develop project budget
Quality	Plan for quality, manage to standards	Plan for quality, manage to standards
Human Resources	Acquire, develop, manage project team	Acquire project team
Communications	Report project performance: <ul style="list-style-type: none"> • Progress, Status, Forecast • Earned Value 	Report project performance: <ul style="list-style-type: none"> • Achieved Value • Earned Value
Risk	Identify, plan, mitigate	Identify, plan, mitigate
Procurement	Acquire and manage procurements	Acquire and manage procurements

Agile Adoption in Hybrid Environments

How does
PMBOK® Exist
in Agile?

- Agile adoption does not have to be an all-or-nothing, either-or scenario:
 - Many organizations will not migrate entirely to agile methods for all projects.
 - Many projects are not well suited for agile approaches.
- Agile PMs must be prepared to work with other PMs and teams that employ traditional methods.



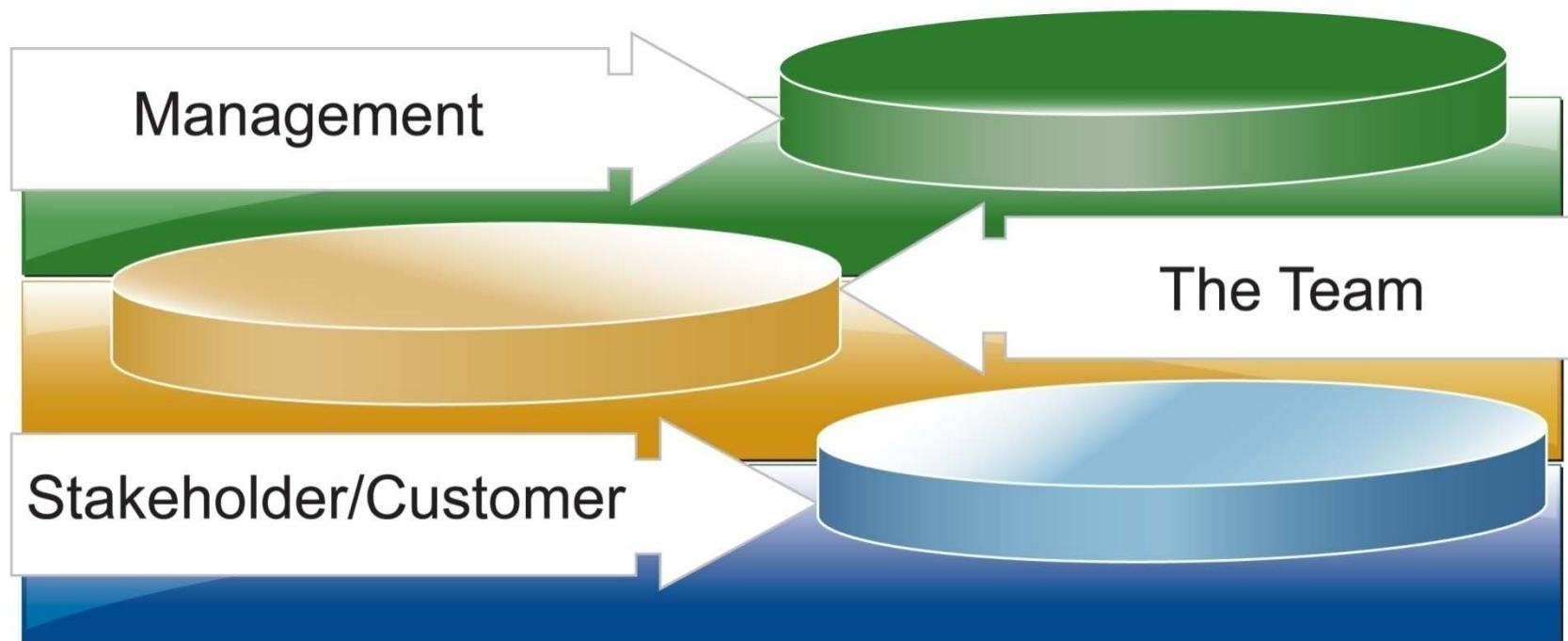
Traditional



Agile

Challenges to Agile Adoption

How does
PMBOK® Exist
in Agile?



Is Your Company Ready for Agile?

How does
PMBOK® Exist
in Agile?

ESI's Agile Project Management Readiness Tools Help Determine if the...

Organization is ready to:

- Move ahead in the agile environment
- Accept and promote agile project management

Project Manager is ready to:

- Manage an agile project vs. traditional project
- Lead and facilitate vs. manage

Team is ready to be:

- Involved daily
- Collective vs. individualistic in work styles
- Self-managed and self-directed
- Creative and innovative in the delivery of the product

Project is appropriate:

- Requirements & Planning
- Execution & Delivery
- Industry & Regulations

Strengths of Agile Development

What is Agile's Value

Agile development—

Fosters innovation and creativity

Immerses the customer and vendor into the ownership of the solution

Engages self-motivated and creative team members

Helps customers who cannot articulate requirements

1

Facilitates leadership among team members

Provides time for evolving expectations and requirements

2

Centers the quality of the product around the customer's demands

Produces products to market faster

3

When to Use Agile?

What is Agile's Value

When your project...

Agile = YES

- Is innovative, experimental or has “never-been-done” by the organization
- Has an actively engaged and available customer
- Has a project team of highly skilled, motivated, and driven professionals
- Will have close collaboration and communication within the team and with the customer on a daily basis

When Not to Use Agile?

What is Agile's
Value

Agile = NO

- Industries in which formal change management processes and extensive documentation are required
- Projects that have high regulatory compliance requirements
- Project teams with novice team members in key roles
- Customers/users have limited involvement

Traditional Status Reporting

What is Agile's
Value

Scope – We are on-spec.

Time – We are on-schedule.

Cost – We are within budget.

$CPI > 1$

$SPI > 1$

Earned Value = +

So, the project status is **Green!**

But, have we learned anything about how much of the **Product of our Project** is completed?

Earned Value Management (EVM) in Agile Projects

What is Agile's Value

- Uses story points as the basic unit of measurement
- Measures iterations planned against iterations completed
- Requires initial baselines and a set of parameters to provide cost estimates, cost at completion or cost metrics

The release budget is \$100,000 for a completion of 100 story points.
At this time, you have completed 25 of the story points at a cost of \$20,000.

Actual percent complete = 25 completed story points/100 story points = 25% complete

Earned Value = actual percent complete (25%) X total budget (\$100,000) = \$25,000

This means you are ahead of budget by \$5,000.00.

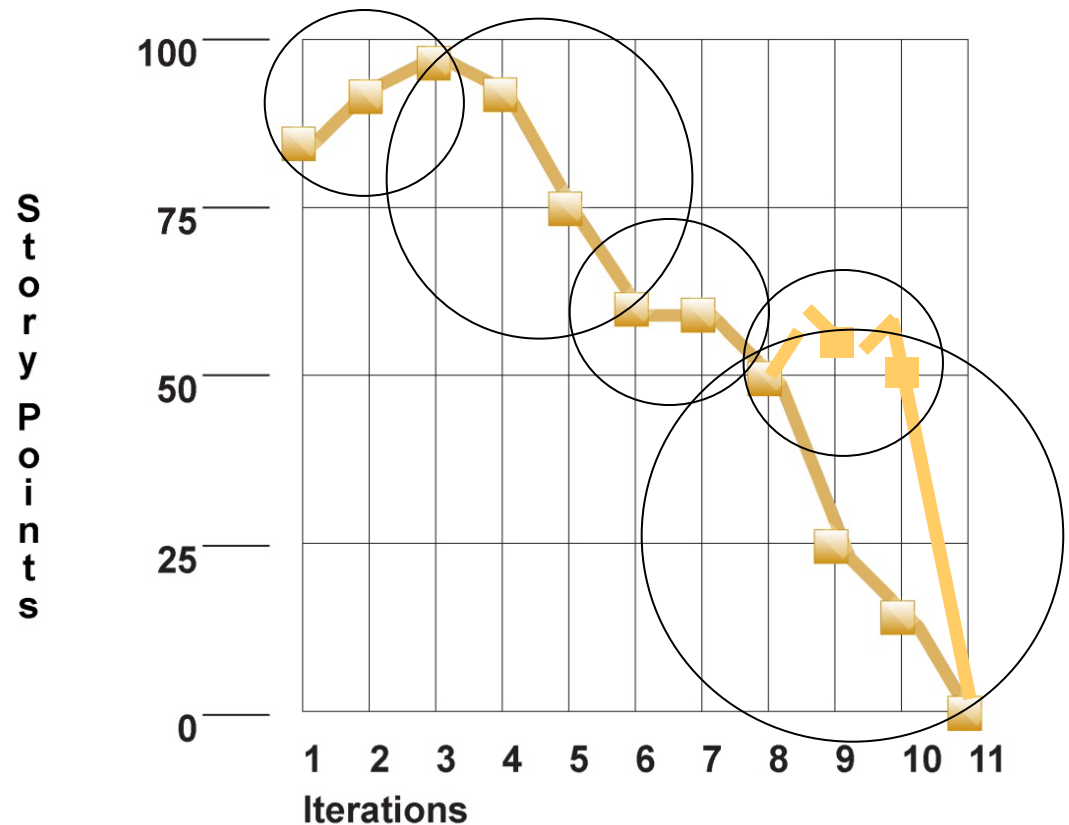
Source: Sulaiman, Barton, and Blackburn, www.solutionsiq.com/PDF/Sulaiman-AgileEVM.pdf

Burn-Down Charts Show

What is Agile's Value

AV is the amount of the Product completed.

- A simple line chart is used to track progress
- Shows how many Story Points have been “burned through” (velocity)
- Indicates progress and the team’s internal productivity (for example, the team’s estimating accuracy)



Story Points – User Stories prioritized according to user needs.

Project Closeout Retrospective

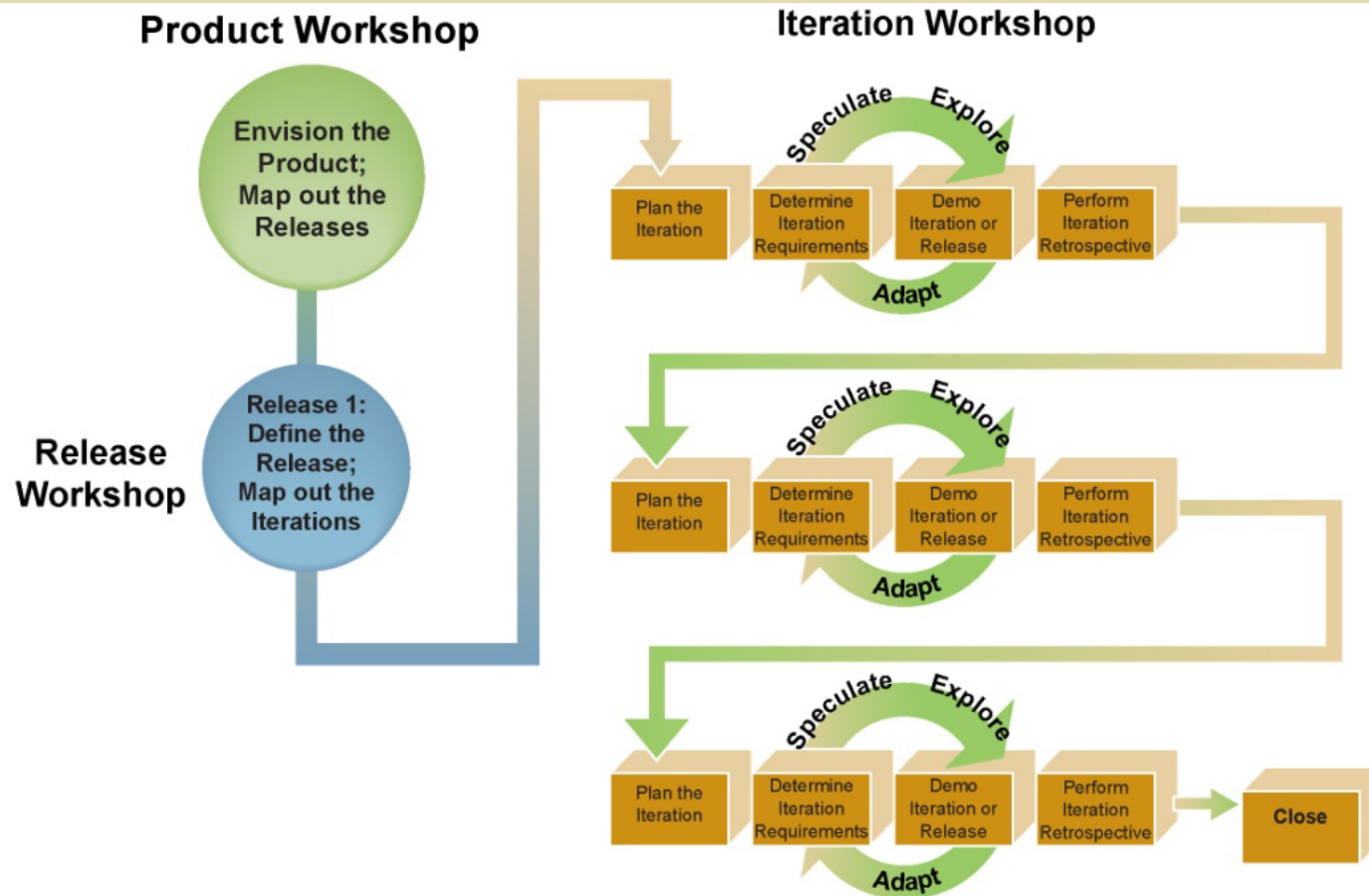
What is Agile's Value

Agile

- The retrospective—
 - Assesses the product and the process
 - Captures practice improvements for the entire enterprise (document and retain practices that worked well for future application and retire or revamp those that were not efficient)

Traditional

- Lessons learned assesses the project:
 - Schedule lessons learned meeting.
 - Document best practices.
 - Provide relevant, timely information.
 - Preserve and disseminate information.



Agile methods ensure adaptation to the real progress of the project, not its conformance to a plan or prediction.



Questions?

Thank you for listening.

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