

May 13, 2015

Agile – Bringing Testing to the Forefront

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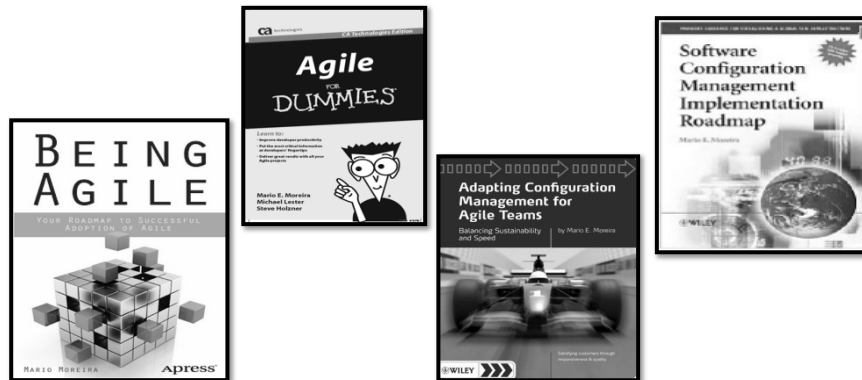


Welcome!

- VP of Client Engagement and Enterprise Consultant with Emergn
 - Helping companies transform to Agile.
- Past roles, CM Engineer, SQA Manager, Architect, Programmer, VP of Engineering, Head of Agile Transformation, and more.
- CSM and CSP having implemented Scrum, XP, & Kanban at the product and organizational levels.
- Writer of the *Agile Adoption Roadmap Blog* (at <http://cmforagile.blogspot.com/>)



Books I've authored



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Agile - Bringing Testing to the Forefront

What We'll Cover Today

- What is Agile and Benefits
- Challenges of Agile
- Agile process
- Changes in QA
- QA Role in Agile
- Wrap-up



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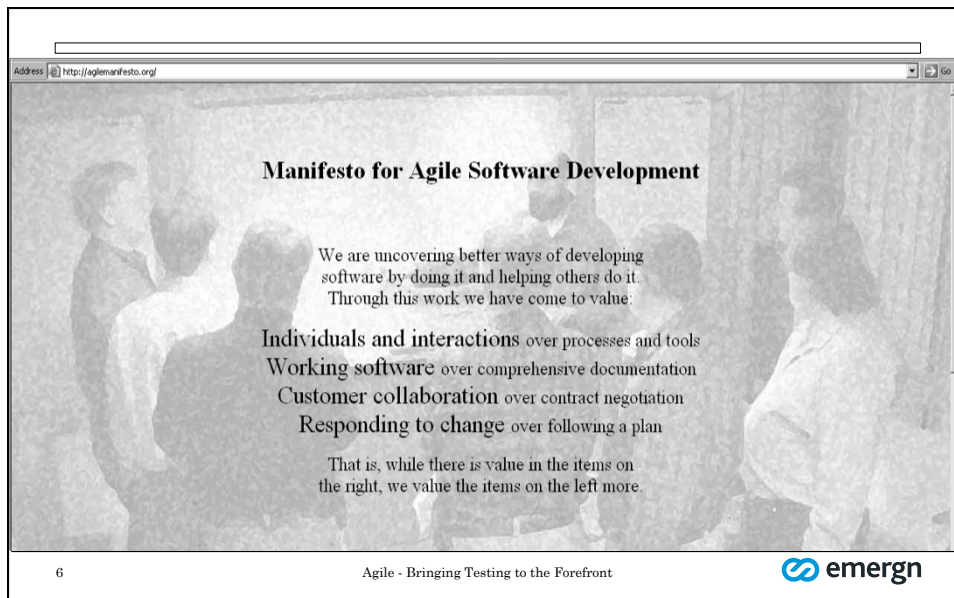
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What is Agile?

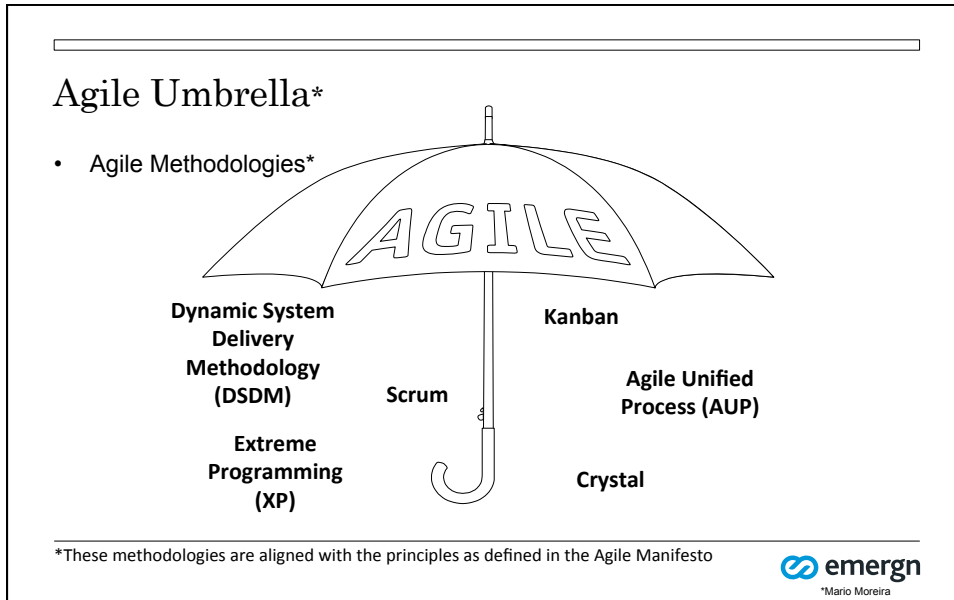
- Its nothing more and nothing less than a set of...


Values and Principles

...focused on the delivery of value to the customer



The screenshot shows a web browser window with the address bar containing <http://agilemanifesto.org/>. The main content area features a background image of a group of people in a meeting. Overlaid on this image is the text of the Agile Manifesto. The title is "Manifesto for Agile Software Development". The introductory text reads: "We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:". This is followed by four lines of text, each with a bolded phrase followed by "over" and a less bolded phrase: "Individuals and interactions over processes and tools", "Working software over comprehensive documentation", "Customer collaboration over contract negotiation", and "Responding to change over following a plan". A concluding sentence states: "That is, while there is value in the items on the right, we value the items on the left more." At the bottom of the browser window, there is a small number "6" on the left, the text "Agile - Bringing Testing to the Forefront" in the center, and the "emergn" logo on the right.



- ### Why Agile?
- Strong focus on customer**
 - The goal is to deliver customer value
 - Continuous Risk Mitigation and Requirements Validation**
 - Reduces uncertainty and reduces risk of delivering something the customer does not really want
 - It is another tool in an organization's toolkit**
 - A value-driven approach instead of a plan-driven approach
 - Increases company Revenue by focusing on...**
 - Delivering customer value (functionality, cycle time, and quality)
 - Eliminating waste in the organization and process
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- Agile - Bringing Testing to the Forefront
-  emergn

How is Progress Realized in Agile?

- A good Plan?
- Requirements Document?
- Design Specification?
- Written Code?
- Executed Test Cases?

... Working Software



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What is not Agile

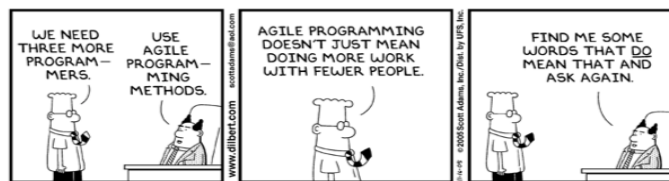
- Wild west coding
 - Actually more disciplined
 - Expect to see people drop out after a while
- No documentation or heavy documentation
 - Right-size the documentation at the right time
- Agile is not governance
 - PRIME is a governance process where various development methods (including Agile) may be applied
- No customer or representative available
 - Customer provides continuous feedback
- Requirements fixed up front
 - Requirements evolve over time

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Drawbacks to Agile

- Harder than people think
- High-level of Discipline
- Stakeholders need to be involved
- Exposes more than a product team is ready to admit
- Does require trained people
- Traditional incentives are poorly compatible
- Typically not well understood by Management
- Challenges convention thinking
- More than just a set of processes, it's a cultural shift



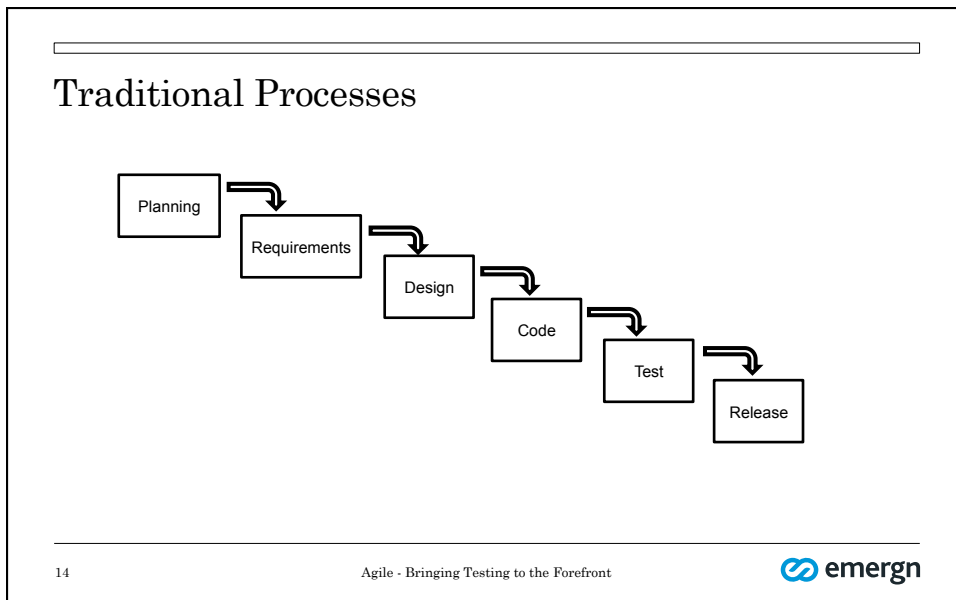
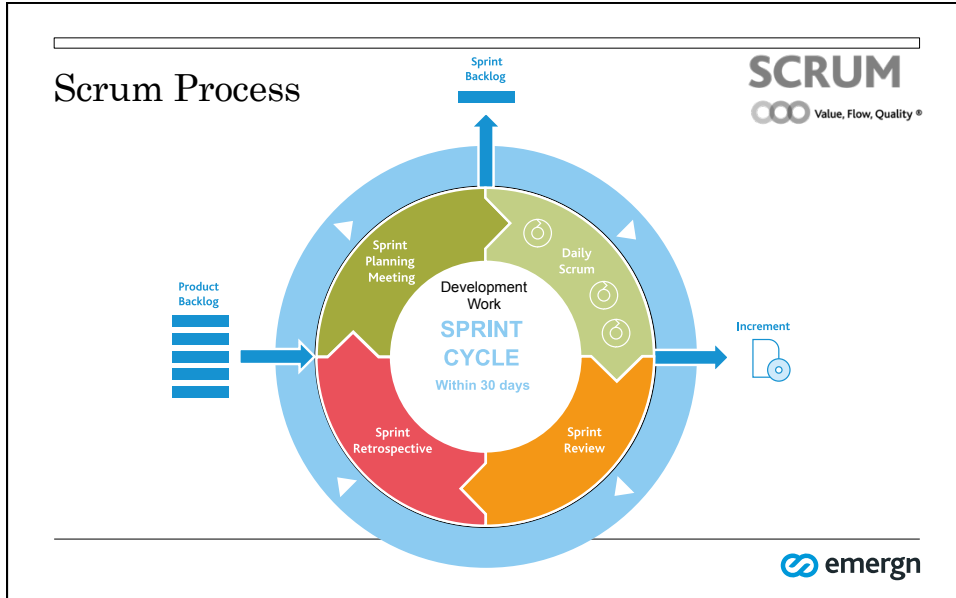
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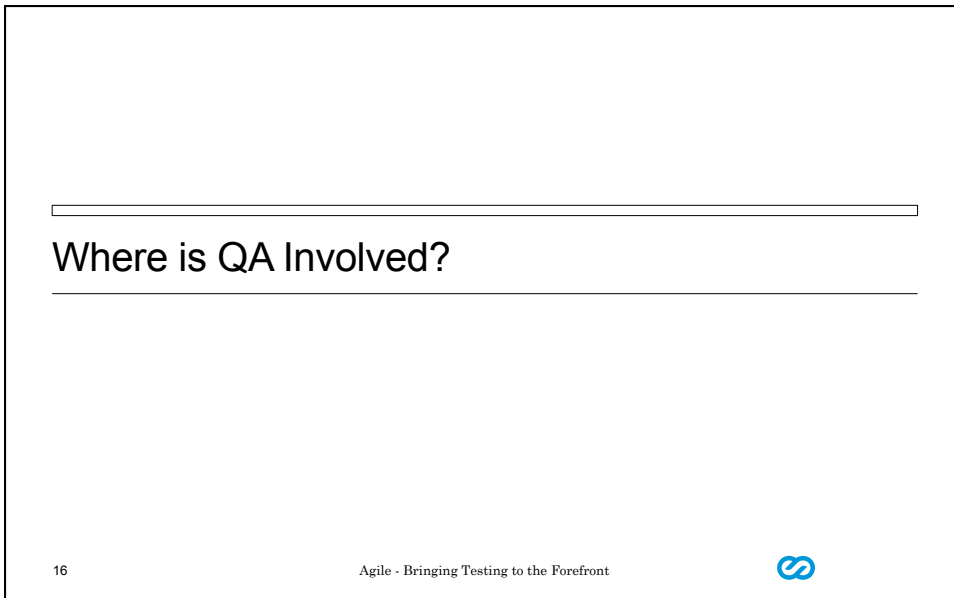
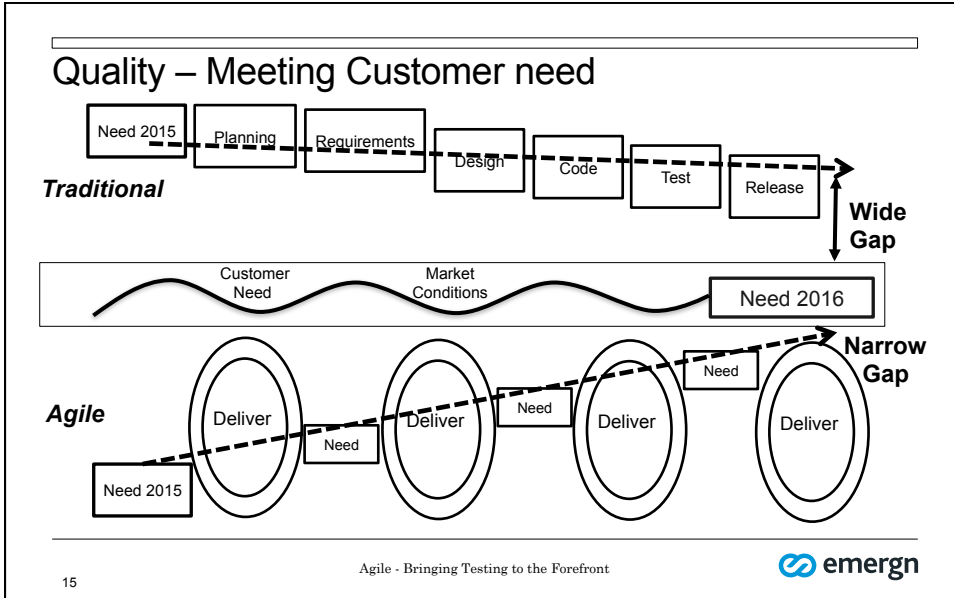
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Agile Process - Scrum

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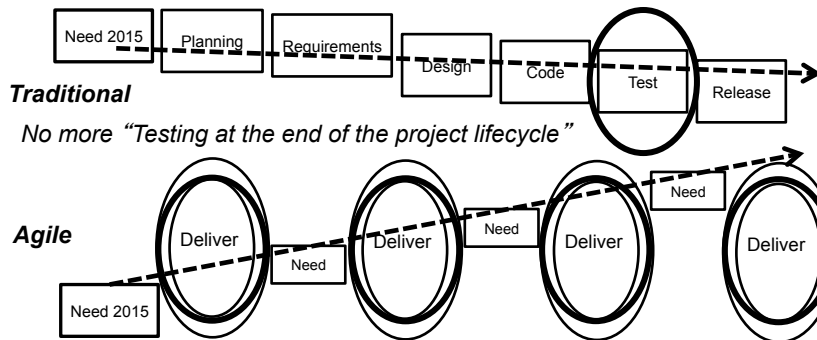
Everywhere!

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Early and Often

- Agile expects QA to be involved every Sprint



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Early and Often

- QA people need to be scheduled throughout the project, not just toward the end

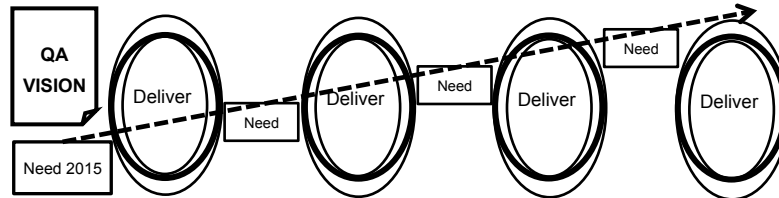


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Early and Often

- QA Vision replaces a QA Plan
- More iterative focused QA
- Test Case readiness
- Test Tools and Infrastructure readiness
- Automation is key

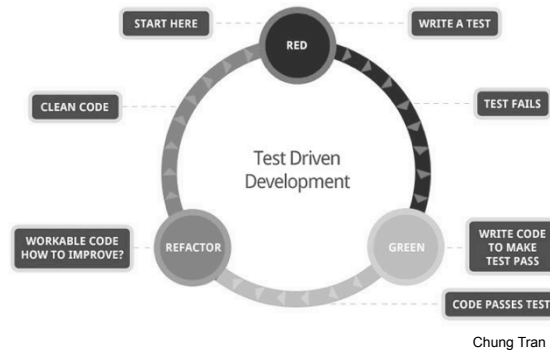


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Early and Often

- **Test Driven Development (TDD) has us build Test cases before coding**
- **Not only early but First!**



Chung Tran

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Quality is embraced at the Beginning

- **Quality includes verification all along the way**
- **But Quality is much more than just “defects”**
- **Much more focus on building the right thing (aka, validation)**

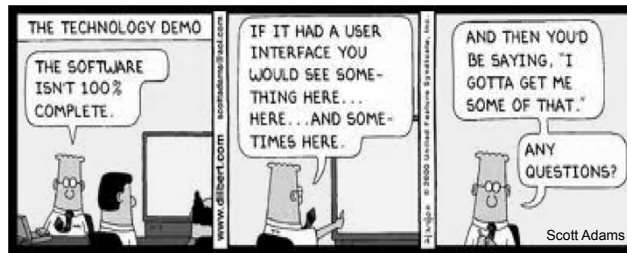
*Build it Right
Build the Right Thing*

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Quality is defined by Customer

- **Quality includes identifying what customer really wants**

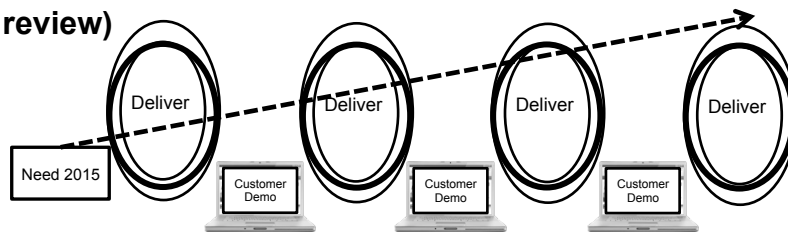


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Quality is defined by Customer

- **Quality is delivering working software regularly to gain customer feedback.**
- **QA is part of the conversation with customer (sprint review)**

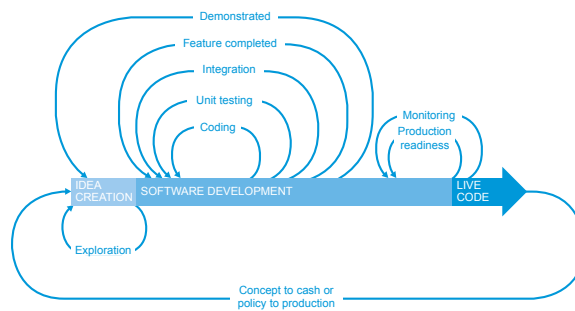


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Quality is defined by Feedback loops

- In Agile, we embrace Feedback of all types
- Quality is improved by quality feedback loops

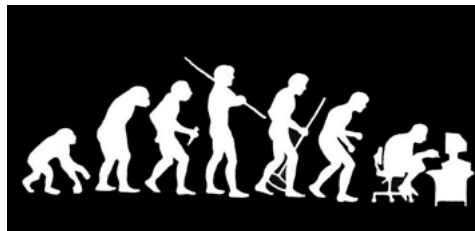


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Quality is Welcoming Change

- Agile principle - We welcome change to requirements
- Quality includes being responsive to change
- Processes must be receptive to change



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QA is part of the Agile Team

- **QA is a committed Agile Team member**
 - Cross functional
 - Scrum Master, Product Owner, Development Team
 - QA is part of the Development team
 - Best QA to Dev ratio is 3-to-5 or 4-to-5
- **100% dedicated**



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QA is part of the Agile Team

- **A Developer and QA person is assigned to each user story**
- **Collaborate with each other**
 - No more “over the wall” mentality
 - No more “I can’t test until the whole spec is ready”



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QA is part of the Agile Team



- **QA role expands to help others (dev, tech writing, CM, etc)**
- **QA can help the Product Owner/ Manager define the Acceptance Criteria**

QA – Part of the Everyday process

Sprint 0 and Agile Release Planning

- **QA Visioning should occur during Sprint 0**
- **QA must be involved in Agile Release Planning**
 - Intense session to get a big view of the work ahead
- **QA involved in scrubbing stories**
 - Agile Team scrubs the Product backlog to gain an understanding of the work and provide a level of confidence and feasibility

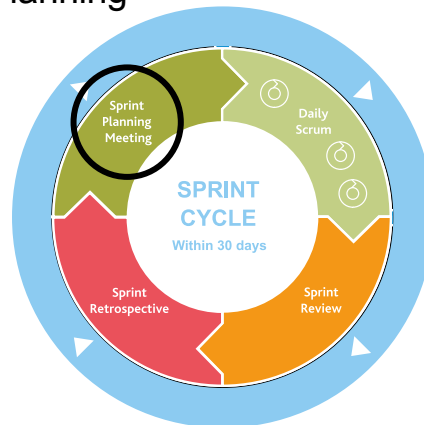


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Sprint Planning

- **A collaborative team meeting at the beginning of each sprint**
- **Establish sprint goal(s) and understand, prioritize, and size stories**
- **Outcome is Sprint Backlog of work**
- **Team self-organizes around work**
 - QA volunteers for testing user stories (pairs with developer)

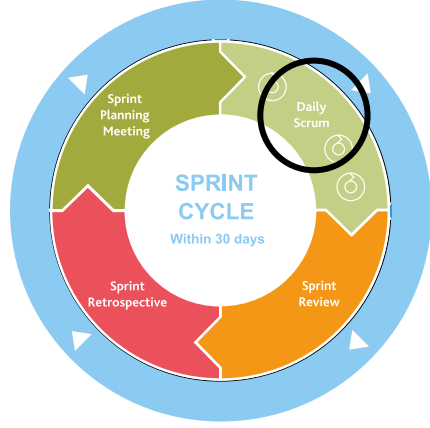



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Daily Stand-up (aka, Scrum)

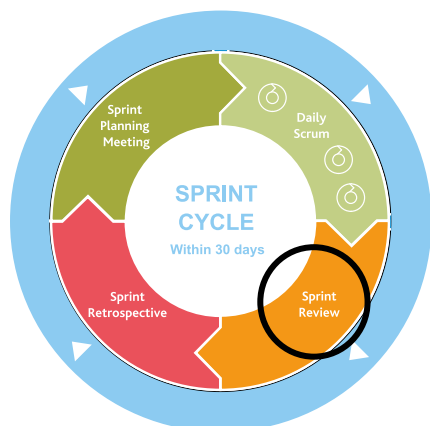
- **Short session (10-15 minutes) held every day**
- **Participants include: ScrumMaster and Team**
 - QA participates
- **Every team member should answer 3 questions**
 - What did you do yesterday?
 - What will you do today?
 - Do you have any impediments?




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Sprint Review

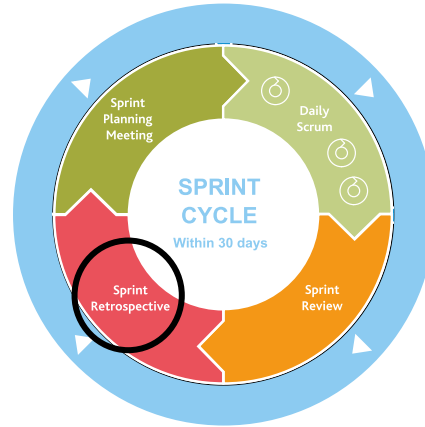
- **Demo of new features or underlying architecture**
- **Team “demos” what it accomplished during the sprint**
 - Target audience is Product Owner and customers (as available)
 - No software should be shown to the Product Owner that is not “done”
- **Provide feedback on demonstrated features**
- **Validate readiness for release**



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Retrospective

- **A private session with team to determine:**
 - What went well
 - What can be improved
- **A continuous process improvement loop**
- **Select one or two high value priority items from “improvement” list**



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Wrap-up

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Summarizing

- What is Agile and Benefits
- Challenges of Agile
- Agile process
- Changes in QA
 - Early and often
 - Quality focuses on validation
- QA Role in Agile
- Wrap-up



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- Remaining Questions, Thoughts, and Idea

Thank You!



Agile Relative Sizing Framework

