

Agile QA's Revolutionary  
Impact on Project  
Management





# Introduction & Agenda

- Rachele Maurer, PMP, Certified Scrum Master
- A **quick** overview of agile
- Current QA practices
- QA with agile

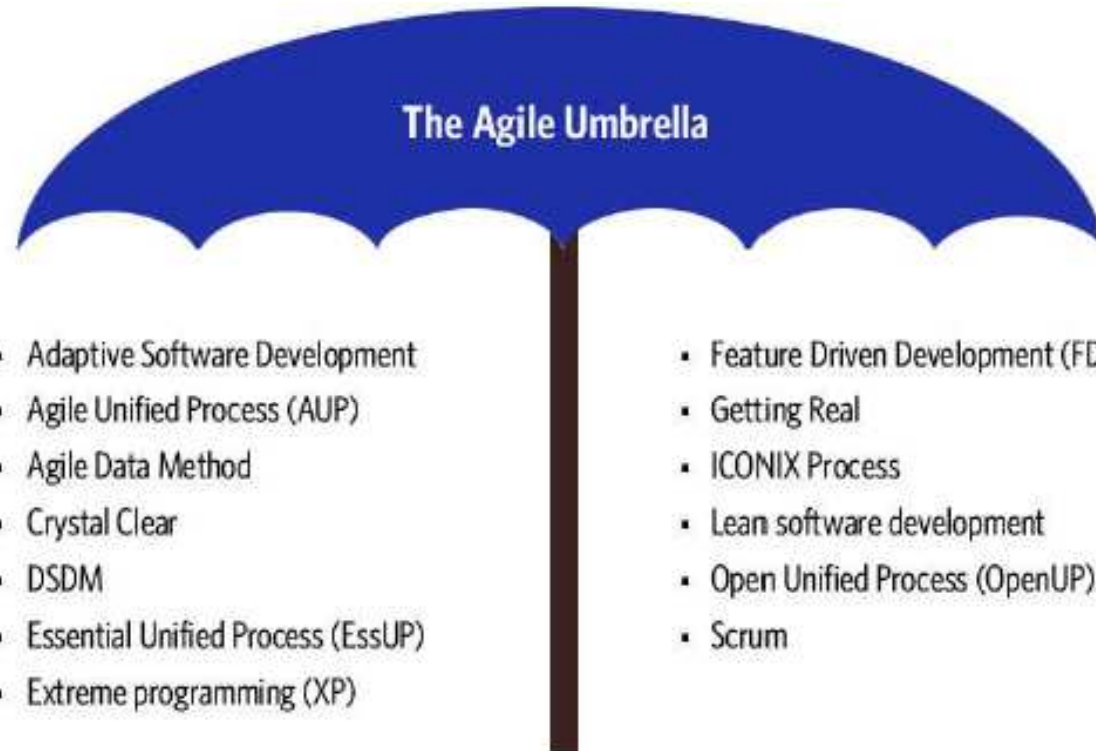




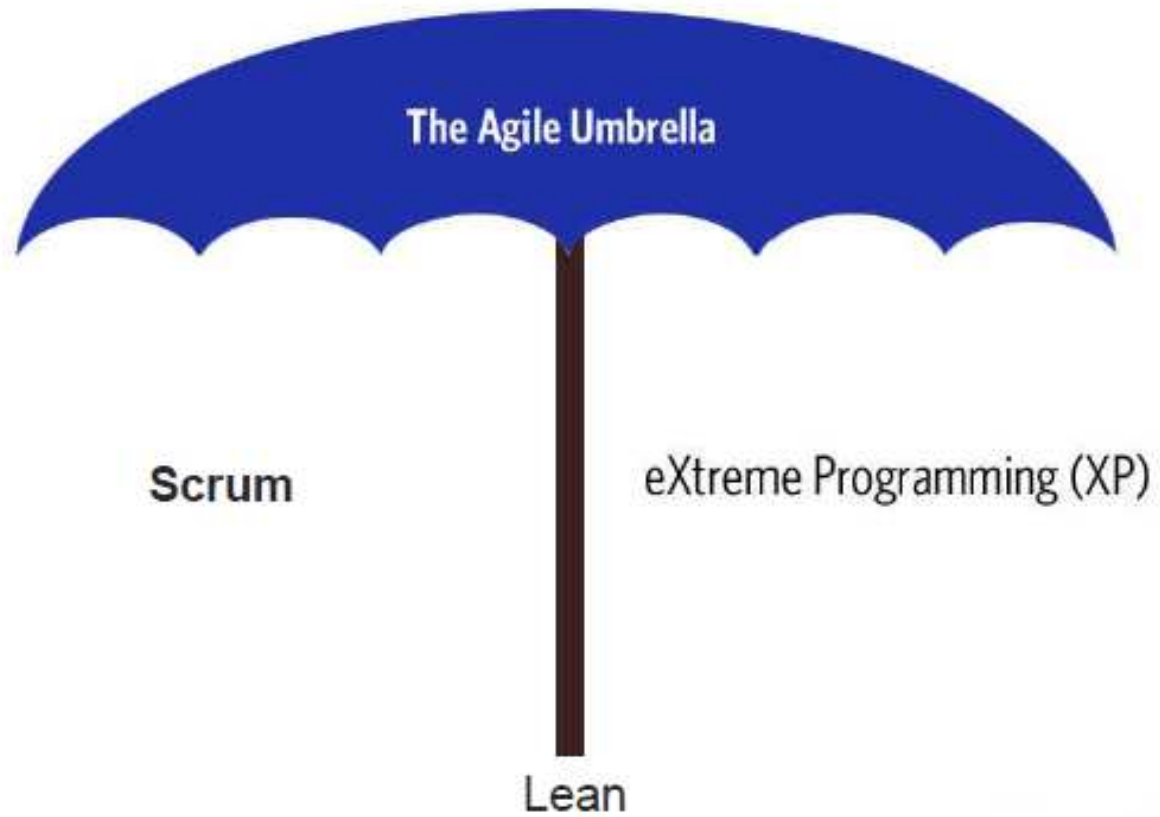
## What is agile?

- A very quick overview

# Agile Methodologies



# Agile Methodologies



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# The Agile Manifesto

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

- **Individuals and interactions** over processes and tools
- **Working software** 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.”

Kent Beck Mike Beedle Arie van Bennekum Alistair Cockburn Ward Cunningham Martin Fowler James Grenning Jim Highsmith Andrew Hunt Ron Jeffries Jon Kern Brian Marick Robert C. Martin Steve Mellor Ken Schwaber Jeff Sutherland Dave Thomas

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# Agile in Practice: the Tip of the Iceberg

- Teams work in iterations, generally 1-4 weeks long
  - Each iteration includes design, development and testing
- Deliver small groups of usable functionality on a regular basis
- Self-organizing, cross-functional teams
- Close collaboration with the business
- Inspect & adapt



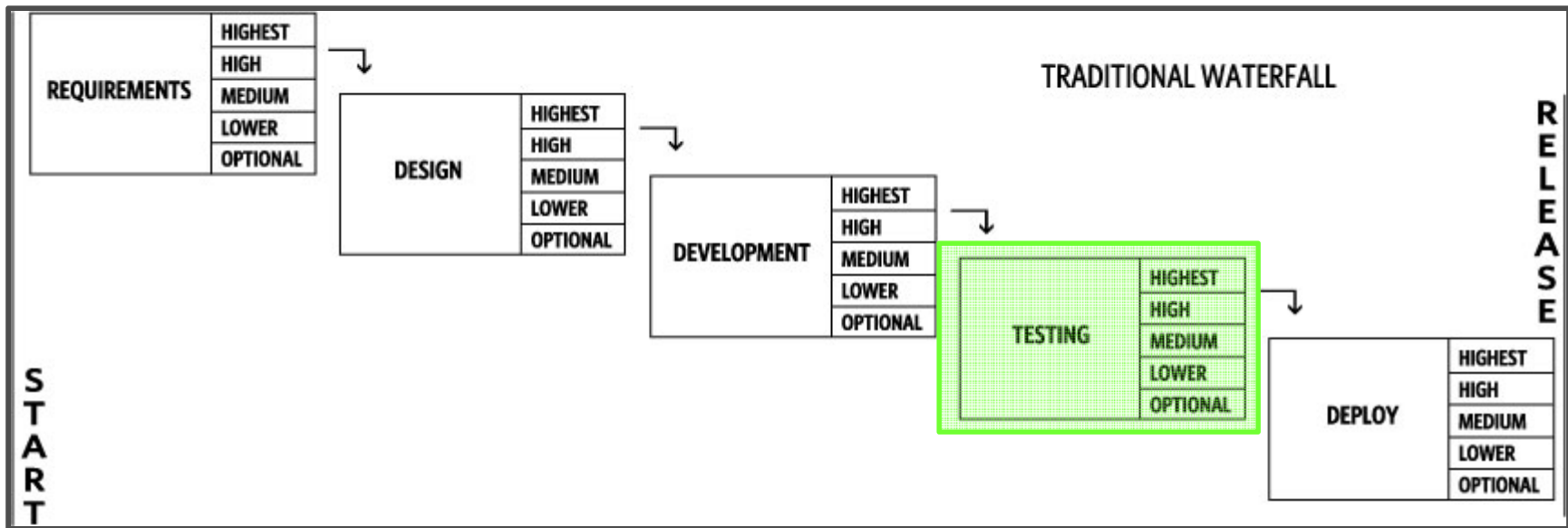


**QA's Role in Traditional Project Management**



# Waterfall Methodologies

- QA generally the last phase in a project before deployment





# Risk Factors

- Sunk costs high
- Bugs found long after development complete
- Fixes costly
  - **Bugs hard to find and solve**
- Problems jeopardize release date



A person's leg in a dark suit and shoe is shown in the upper left, kicking a large, rusty metal ball with a chain. The ball is the central focus, with a chain of heavy metal links attached to it. The background is a dark, semi-transparent rectangle containing text.

## The Agile QA Revolution

- What's different?



# The Agile QA Revolution

- Agile is fundamentally changing the definition of progress and the definition of done.
- What does project progress mean?  
What % complete?
- The agile principles inherently promote quality
- Working in iterations reduce risk
- Automated tools change the nature of QA





## From a PM Standpoint, This Means...

- Ability to do better estimation
- Ability to reduce downstream risk in schedule and cost
- Ability to increase quality

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# The 12 Principles of Agile

1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
3. Deliver working 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 a face-to-face conversation.
7. Working software is the primary measure of success.
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 design emerge from self-organizing teams.
12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.





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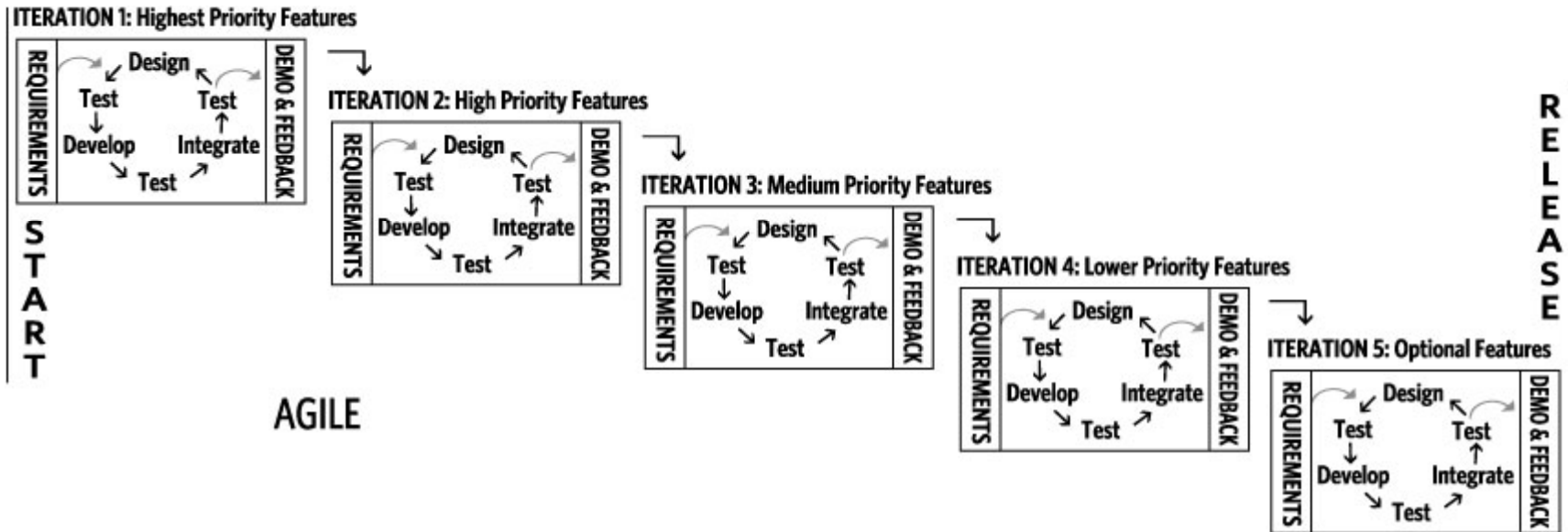
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# Agile Iterations

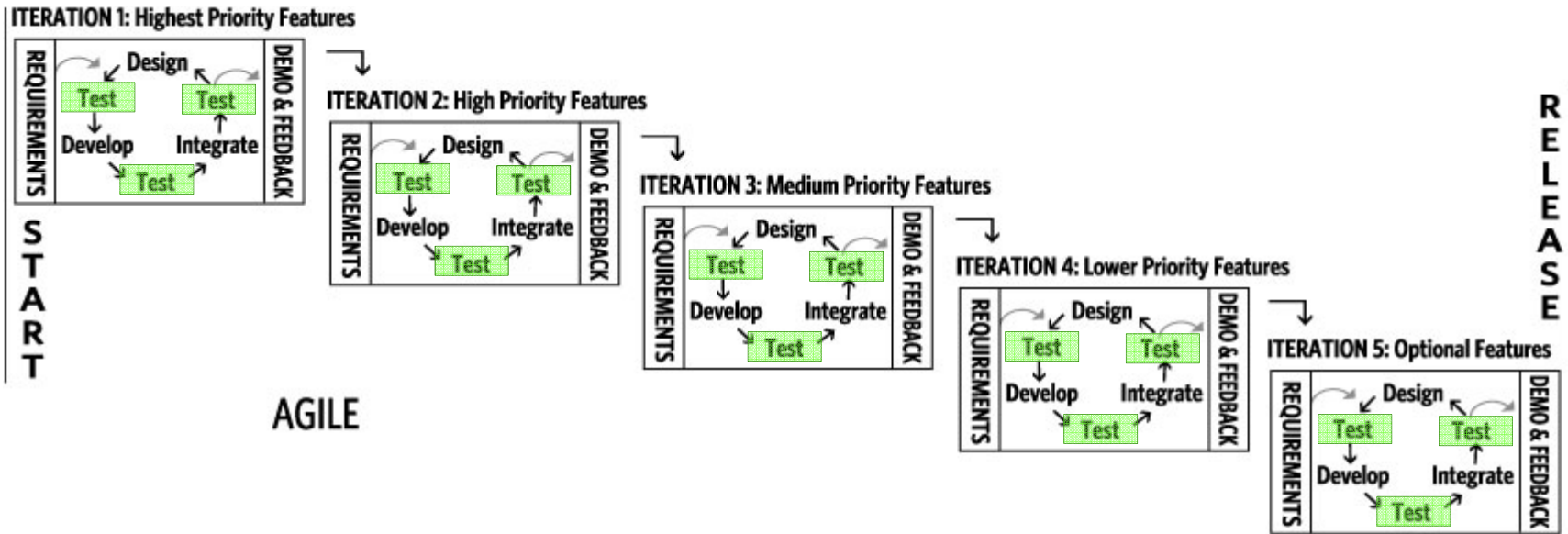


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# Agile Iterations





# Agile Iterations

- Short: 1-4weeks
- Throughout each iteration:
  - **Refine requirements**
  - **Design**
  - **Develop**
  - **Test**
  - **Integrate**
- At the end of each iteration:
  - **Demo + Feedback**
  - **Potentially release shippable functionality**
- Shippable functionality – **definition of done:**
  - **Developed**
  - **Tested**
  - **Integrated**
  - **Documented**





# Automated Testing

- Critical to agile projects
- Allows for quick turnaround:
  - **Develop during the day**
  - **Run automated tests overnight**
  - **Fix bugs immediately in the morning**
- Daily, robust testing
- Can use for unit testing, system testing, integration testing, regression testing, user acceptance testing, static testing





# Agile QA Considerations

- Test-driven development
- Continuous integration
- Peer reviews





# Agile QA & Risk Reduction

- Agile enables more frequent & robust testing
- Sunk costs low
- Bugs easier to find
- Bugs easier to fix
- QA is an integral part of the team and the process
- Acceptance criteria is part of requirements
- “Done” is truly done



# For More Information...



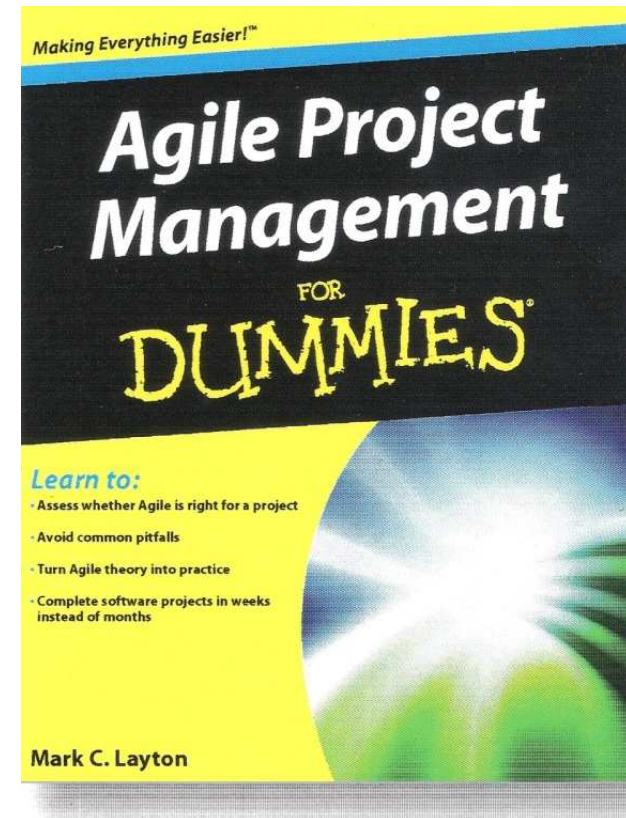
## Agile Scrum Master Certification Training + PMI Agile Certification Preparation

Speaker: Mark Layton

Date: December 5-6

Location: Seattle

[www.platinumedge.com/training](http://www.platinumedge.com/training)



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