

# Agile Practices for Waterfall Teams



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**NK Shrivastava**, PMP, RMP, ACP, CSP, SPC4  
CEO/Consultant/Agile Coach - RefineM

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## Agenda

1. What is Virtual Lunch & Learn
2. Your Expectations from this Webinar
3. Agile Practices For Waterfall Teams
4. Upcoming Learning Opportunities from RefineM
5. How to get 1 PDU for this Webinar?
6. Rewarding Our Star Attendees
7. Q & A

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## RefineM's Virtual Lunch & Learn

**This is a monthly webinar delivered during the lunch hour in the first week (Wednesdays) of every month.**

**It's designed to help you learn while you eat lunch, providing a relaxed environment to enhance your experience.**

**The monthly webinars will cover a variety of Project Management / Agile topics.**



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## Your Expectations

**What are your expectations from this webinar?**

**Why are you here today?**



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# RefineM

Helping organizations turn their project management capability into a *competitive advantage*



CEO/Consultant since Dec 2011

- \* Agile Transformation/Coaching/Adoption
  - ✓ Agile Coach @ IBM
- \* Project Management/ Process Improvement Consulting and Training
- \* Products for Project Professionals
  - ✓ Essential Gear for Project Managers
  - ✓ PMP Exam Simulator
  - ✓ PMP Videos at Vimeo

### My professional journey b/f RefineM

20+ years of Successful Project Leadership

- \* Led 100s of projects of all sizes, successfully
- \* Recovered many projects, saved millions of \$
- \* Implemented numerous process improvements
- \* Coached/mentored 100s of PMs, and executives
- \* Board Member – SWMO PMI Chapter (2008-2014)

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## What's New at RefineM



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## What's New at RefineM

### \* Upcoming Free Webinars

Webinar Title	Date
Maintaining a Backlog	Apr 5
Progressive Elaboration	May 3

### \* New Projects

- ✓ Agile coaching for a large technology corporation
- ✓ New class – Agile Practices for Waterfall Teams
- ✓ New workshop – Lean/Agile Process Improvement Workshop

### \* PMP Exam Prep Test Simulator

- ✓ <https://Examprep.RefineM.com>

### \* PMP Videos at <https://vimeo.com/ondemand/refinempmpexamprep>

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## Manifesto for Agile Software Development

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.

*Developed in 2001 by 17 agile advocates at Snowbird resort in Utah*

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## Agile Twelve Principles

1. **Satisfy the customer** thru early and continuous delivery
2. **Welcome changing requirements** even late in development
3. **Deliver working software frequently** a couple of weeks to a couple of months
4. **Work together daily** (business people and developers)
5. **Motivated individuals**, build projects around them, and give them freedom
6. **Face-to-face conversations** is the most efficient and effective method
7. **Working software** is the primary measure of progress
8. **Sustainable development** i.e. maintain a constant pace indefinitely
9. **Continuous Attention** to technical excellence & good design enhance agility
10. **Simplicity** – the art of maximizing the amount of work not done – is essential
11. **Self-organizing teams** deliver the best architectures, requirements, and designs
12. **At regular Intervals** the team reflects on how to become more effective

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## Agile Practices

- |   |                                  |
|---|----------------------------------|
| 1. Maintaining a Backlog / Prioritized List | 1. Continuous integration (CI)   |
| 2. Progressive elaboration                  | 2. Iteration planning meeting    |
| 3. Smaller iterations                       | 3. Planning poker                |
| 4. Daily standups                           | 4. Refactoring                   |
| 5. Retrospectives                           | 5. Test-driven development (TDD) |
| 6. Frequent reviews / demos                 | 6. User Stories                  |
| 7. Use of Wireframes for UI design          |                                  |
| 8. Visualizing work through Kanban Board(s) |                                  |
| 9. Limiting Work In Process (WIP)           |                                  |
| 10. Customer involvement throughout project |                                  |

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Source: PMI-ACP Exam Prep, Second Edition by Mike Griffiths, p. 62.

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## Top 10 Agile Practices for Waterfall Teams

1. **Maintaining a Backlog / Prioritized Requirements**
2. **Progressive Elaboration**
3. **Smaller Iterations**
4. **Daily Standups**
5. **Retrospectives**
6. **Frequent Review/Demos**
7. **Using Wireframes for UI Design**
8. **Visualizing Work through Kanban Board(s)**
9. **Limiting Work in Progress (WIP)**
10. **Customer Involvement Throughout the Project**

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## Mapping to Agile Principles

Agile Practice	Matching Agile Principle
Maintaining Backlog	Welcome changing requirements
Progressive Elaboration	Satisfy the customer through early and continuous delivery of valuable software
Smaller Iterations	Deliver working software frequently
Daily Standups	Work together daily
Retrospectives	At regular intervals, the team reflects on how to become more effective
Frequent Review/Demos	Working software is the primary measure of progress
Using Wireframes for UI Design	Continuous attention to technical excellence and good design enhance agility
Visualizing Work through Kanban Board(s) & limiting WIP	Sustainable development
Customer Involvement Throughout the Project	Business people and developers must work together daily throughout the project."

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## Exercise

**What are your top 3 practices you think you will be able to apply on your waterfall projects, and why?**  
**(5 minutes)**

## Agile Practices for Waterfall Teams Overview



1. Maintaining a Backlog / Prioritized Requirements
2. Progressive Elaboration
3. Smaller Iterations
4. Daily Standups
5. Retrospectives
6. Frequent Review/Demos
7. Using Wireframes for UI Design
8. Visualizing Work through Kanban Board(s)
9. Limiting Work in Progress (WIP)
10. Customer Involvement Throughout the Project

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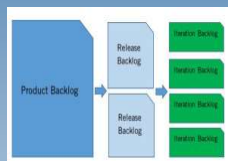
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## Practice #1: Adapting to Waterfall

- \* In Waterfall, entire functionality delivered in big bang
  - ✓ Or in phases for larger projects
- \* Staying focused on importance is still valuable
- \* Keep focus on the highest priorities

## 2. Progressive Elaboration



- What is it?
- How to adapt to a Waterfall Team?

## Practice #2: What It Is

- \* Further refining details as the project progresses
- \* Helps to enable early and continuous delivery
- \* Saves time and overhead of planning upfront

**May not work well for all projects**

## Practice #2: Adapting to Waterfall

- \* In Waterfall, entire functionality delivered in big bang
  - ✓ Or in phases for larger projects
  - ✓ Hampers ability to progressively elaborate in an Agile way
- \* However, team can use rolling wave planning
- \* Provide requirements detail just in time

## Smaller Iterations



- What is it?
- How to adapt to a Waterfall Team?

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## Practice #3: What It Is

- \* Limiting iterations to no more than 2-4 weeks
- \* Teams benefit from more constant customer feedback
- \* Teams also have more chances to hold retrospectives

**Less than 2 weeks is too quick**  
**More than 4 weeks is way too slow**

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## Practice #3: Adapting to Waterfall

- \* Find ways to have more frequent customer touchpoints
  - ✓ Identify key customer stakeholders
  - ✓ Build a communication plan to secure frequent on-site meetings
- \* Regular review can lead to same benefits

## Daily Standups

- What is it?
- How to adapt to a Waterfall Team?



## Practice #4: What It Is

- \* 15-minute daily meeting of the team
- \* Answers following questions:
  1. What did I achieve since yesterday?
  2. What do I plan to achieve today?
  3. What help do I need to achieve my goal of the day?
- \* Each team member should be prepared to contribute

**Keeps team focused on moving forward, resolving issues**

## Practice #4: Adapting to Waterfall

- \* Find ways to have the team meet frequently
  - ✓ Discuss their progress
  - ✓ Discuss roadblocks to future progress
  - ✓ Brainstorm solutions
- \* Regular team review keeps everyone on the same page

# Retrospectives



- What is it?
- How to adapt to a Waterfall Team?

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## Practice #5: What It Is

- \* Meeting of the team to reflect after each sprint
- \* Purpose of the retrospective is to answer:
  1. What went well during the sprint?
  2. What could have gone better?
  3. What actions can we take to improve in the next sprint?
- \* Team records their thoughts and generates insights

**Vital part of continuous improvement**

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## Practice #5: Adapting to Waterfall

- \* Hold lessons learned during the project
  - ✓ Lessons learned at the end are no longer actionable
  - ✓ Team may be frustrated at no longer being able to use lessons
  - ✓ Lessons learned during the project can be immediately applied
- \* Collect regular feedback from team and stakeholders
- \* Implement knowledge management to track feedback

## Frequent Reviews / Demos

- What is it?
- How to adapt to a Waterfall Team?



## Practice #6: What It Is

- \* Meeting with customer to review working software
- \* Purpose of frequent reviews / demos:
  1. Allow constant customer feedback
  2. Allow customer to suggest changes for the next sprint
  3. Increase customer satisfaction

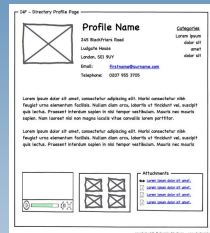
**Vital part of customer involvement**

## Practice #6: Adapting to Waterfall

- \* Find ways to get frequent reviews / demos
  - ✓ Waterfall teams won't have sprints to mark frequency
  - ✓ However, they can communicate with stakeholders and find time
- \* Collect regular feedback from stakeholders
- \* Track feedback and make changes as needed



# Using Wireframes for UI Design



- What is it?
- How to adapt to a Waterfall Team?

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## Practice #7: What It Is

- \* Outline of user interface structure and layout
- \* Usually sketched out with lines or boxes
- \* Goal is to help customer, team communicate about UI

**Wireframes help the team get development right**

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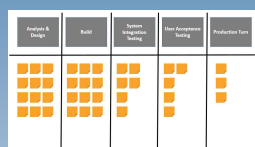
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## Practice #7: Adapting to Waterfall

- \* Any team, Agile or Waterfall, can use wireframes
- \* Sketch out a simple representation of layout
- \* Validate it with the customer before development

## Visualizing Work Through Kanban Board(s)



- What is it?
- How to adapt to a Waterfall Team?

## Practice #8 – What It Is

- \* **Kanban – from Japanese word for “visual board”**
  - ✓ Developed in a manufacturing context
  - ✓ Taiichi Ohno developed Kanban process for Toyota Production System
  - ✓ “Kanban” refers to a card that signals the need for a component
  - ✓ Kanban process is a pull system, rather than push system
    - Components are created just-in-time as they are needed, reducing waste

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Source: Smith, Steve. Kanban Fundamentals course on PluralSight.

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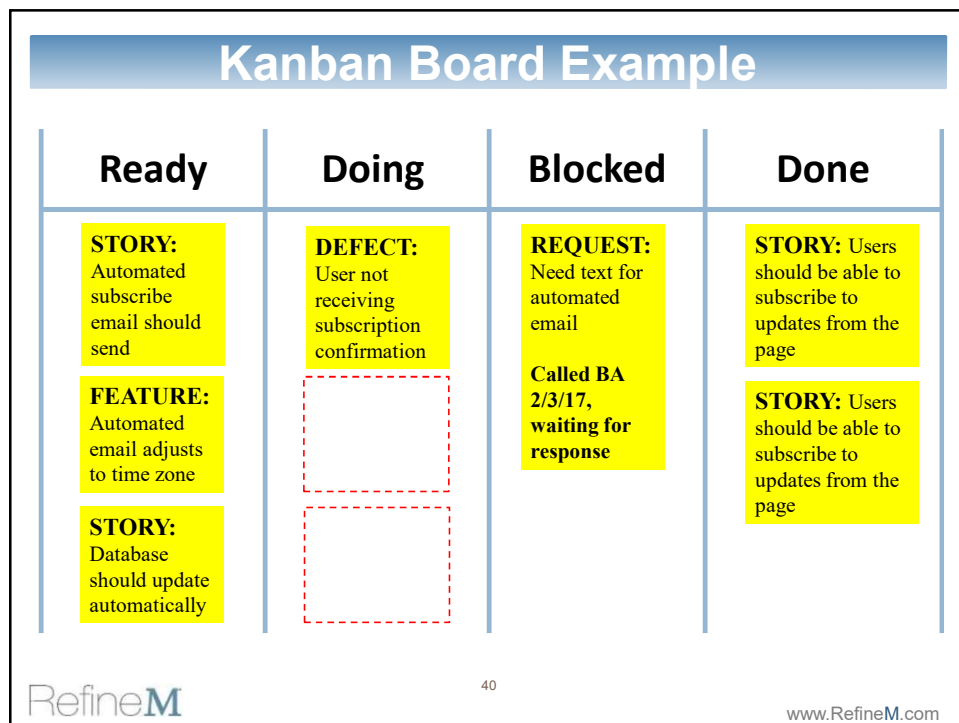
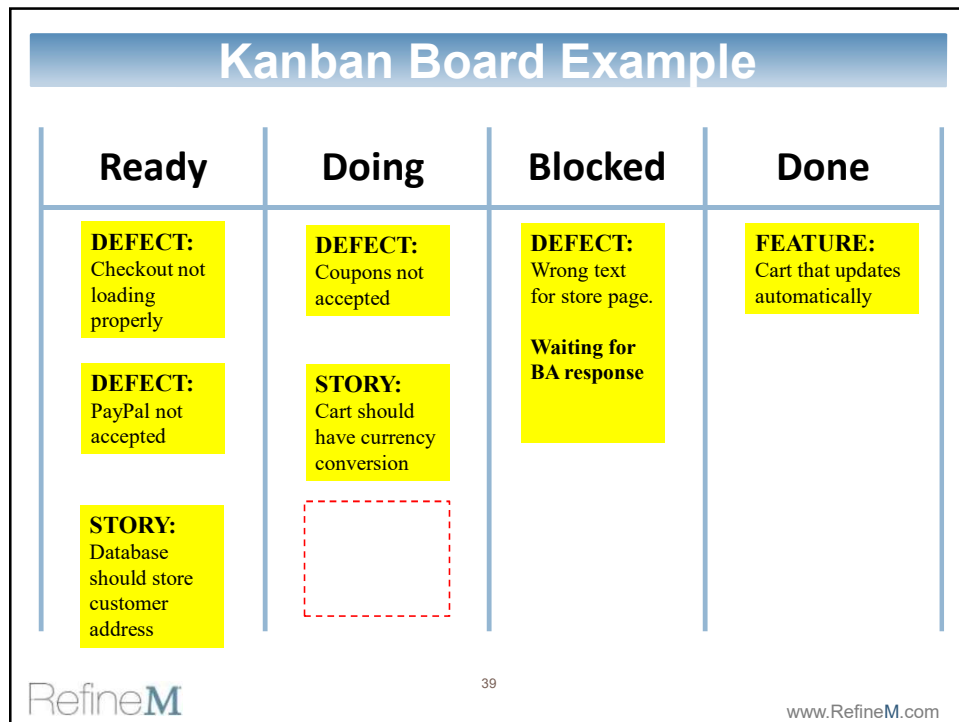
## Benefits of Kanban

- \* **Improved Quality**
  - ✓ Kanban process doesn't allow shipping with known defects
- \* **Faster turnaround of work requests**
  - ✓ Kanban process improves lead time and process flow
- \* **Exposure and elimination of process bottlenecks**
  - ✓ Visualizing work exposes process bottlenecks
- \* **Reduced waste**
  - ✓ Work is pulled only when it is needed and the team has capability
- \* **Improved teamwork**
  - ✓ Visualizing the workflow improves team communication

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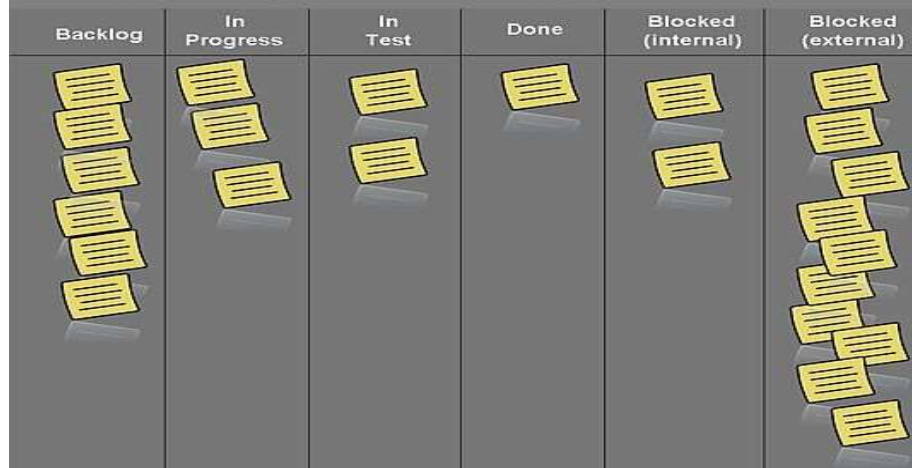
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## Kanban Board Example

Example of a Kanban Board separating internally and externally blocked work



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## Practice #8: Adapting to Waterfall

- \* Adopt the two basic principles:
  - ✓ Visualize work
  - ✓ Limit WIP
- \* Can implement as a physical solution or use software
  - ✓ VersionOne, Smartsheet, Leankit
- \* Look for process bottlenecks

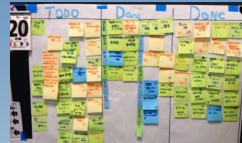
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## Limiting Work in Progress (WIP)



- What is it?
- How to adapt to a Waterfall Team?

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## Practice #9: What It Is

- \* **Placing a boundary on work that can be in process**
  - ✓ 100% capacity utilization doesn't make sense
  - ✓ If a road has 100% capacity of cars on it, everyone stops
  - ✓ Measuring flow rather than capacity utilization makes sense
  - ✓ Limiting WIP helps flow remain constant

**Kanban provides framework for managing queues and capacity**

**Limiting WIP is key to managing both**

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## Why Limit WIP?

- \* **Reduces waste**

- ✓ Less WIP means less lead time
- ✓ Little's Law: Length of queue = arrival rate \* average wait time
  - So average wait time = length of queue / arrival rate

- \* **Improves quality**

- ✓ WIP limit allows team to single-task each work item
- ✓ Improved quality leads to more trust between team and customer

- \* **Improves Flow**

- ✓ Lower capacity utilization means that flow is efficient

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## How to Limit WIP

- \* **Visualize work**

- \* **Set a limit 1 item/person/state in the queue at a time**

- \* **Adjust based on work**

- \* **Smaller limit means there could be more idle time**

- \* **Larger limit means team might get overwhelmed**

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## Practice #9: Adapting to Waterfall

- \* Kanban board exposes bottlenecks
  - ✓ WIP limits alleviate the bottlenecks
- \* Make sure limits can be enforced
- \* May lose short-term efficiency
  - ✓ But worth it in the long term

## Customer Involvement Throughout the Project



- What is it?
- How to adapt to a Waterfall Team?



## Practice #10: What It Is

- \* Involving the customer on a consistent basis
- \* Getting their feedback and incorporating it
- \* Goal is to ensure deliverables meet customer needs

**Vital part of increasing customer satisfaction**

## Practice #10: Adapting to Waterfall

- \* Use stakeholder register and communication plan
  - ✓ Get key stakeholders frequently involved
  - ✓ Keep them involved throughout the project
  - ✓ Manage their expectations
- \* Get as many face-to-face meetings as possible

## Exercise

**Are there any agile practice that you will not be able to implement in your projects, right away? Why?**  
**(5 minutes)**

## Conclusion

1. Adopting practices won't make a Waterfall team "Agile", but will improve their "agility" significantly.
2. Waterfall teams can utilize some practices for success
3. Think about what practices are a best fit for you right away. Start from there, add others as you go.

**Enhance project delivery with Agile practices**

## Next Online Training Course

**Agile Practices for Waterfall Teams**  
**April 11, 9:00 AM-5:00 PM Central US time**  
**\$345 early bird ends March 21**

***Learn key agile practices for your teams.***  
More info at <https://refinem.com/agile-practices-for-waterfall-teams-public/>  
Contact us at [Contact@RefineM.com](mailto:Contact@RefineM.com)

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## Featured Upcoming In-Person Training

### Project Management Professional (PMP)® Exam Prep

#### Project Management Professional (PMP®) Exam Prep Course

<b>Course Details:</b>	<b>Register:</b>	
<b>When:</b> Multiple Dates	May 08-11, Kansas City, MO	<a href="#">REGISTER</a>
<b>Where:</b> Multiple Cities	Jul 31-Aug 3, Kansas City, MO	<a href="#">REGISTER</a>
<b>Format:</b> 4-day, in-person training	Sept 18-21, Springfield, MO	<a href="#">REGISTER</a>
<b>Standard Fee:</b> \$1,595 until 3 weeks before start date, \$1,800 afterwards	Oct 30-Nov 2, Kansas City, MO	<a href="#">REGISTER</a>
<i>Food and course materials included with fee. <a href="#">Other discounts available.</a></i>	<i><a href="#">Contact us about future dates or to arrange for this training to be delivered in your organization or city.</a></i>	
<b>Earn:</b> 35 PDUs / Contact Hours		

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## Next Lunch and Learn

### \* ***Maintaining a Backlog***

- ✓ What is the benefit of this key agile practice?
- ✓ How can Waterfall teams adapt this practice for success?
- ✓ What are some best practices when adapting?

\* ***Wednesday, April 5, 12:00-1:00 PM Central***

**Register Today - Don't wait for the last Minute**

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## How to Claim 1 PDU for this Webinar?

1. Visit [ccrs.pmi.org](https://ccrs.pmi.org) and log in.
2. Click on "Report PDUs" link.
3. Click "Courses and Training" in upper left.
4. **Activity Name:** "Agile Practices for Waterfall Teams: Overview"  
*(complete this first, before you go to #5)*
5. **Provider:** "RefineM LLC" *(don't select dropdowns)*
6. **Date started:** March 1, 2017
7. **Date completed:** March 1, 2017
8. **Contact person:** NK Shrivastava
9. **Contact phone:** (417) 763-6762
10. **Contact email:** [Trainings@RefineM.com](mailto:Trainings@RefineM.com)
11. **PDUs:** 1.00 Technical.
12. Click on the "I agree this claim is accurate" box and then Submit.

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## Rewarding Our Star Attendees

- \* Anyone who attends 3 Lunch and Learn Webinars in a row is a Star Attendee and is eligible for a prize drawing for a \$10 Amazon gift card.

This month's winner is:

Carla N.



**Congratulations to the winner!**  
**Stay tuned for our next drawing in April.**

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## Questions from Attendees

1. *What are the three best practices from this that can apply to a manufacturing environment?*

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## Questions?



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**NK Shrivastava, MBA, PMP, RMP, ACP, CSP, SPC4**

**CEO/Consultant, RefineM**

Nixa, MO 65714, USA

[nks@refinem.com](mailto:nks@refinem.com), [www.refinem.com](http://www.refinem.com)

<http://www.linkedin.com/in/nkshrivastava>

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## More Training Opportunities From RefineM

Training Title	Springfield	Kansas City	Joplin	Online
Agile Practices for Waterfall Teams	Apr 04 Oct 19	Mar 24 Sept 22		Jul 20
PMP® Exam Prep	Sept 18-21	May 08-11 Jul 31-Aug 3 Oct 30-Nov 2		
Agile Fundamentals / Agile 101		May 17-18 Aug 16-17 Nov 15-16		
PMI-ACP® Exam Prep		May 17-19 Aug 16-18 Nov 15-17		
Leadership Skills for Managers	Mar 22 Sept 28	Apr 27	Jun 08	May 23-24 Nov 08-09
Process Improvement Workshop	Sept 27	Jun 15	Apr 20	
Advanced Techniques in MS Project		Oct 11		May 03-04 Sept 06-07

Please visit <https://refinem.com/training/public> for more details.

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