Fundamentals of Agile PM

Agile PM 101
Seminar Overview

Module 1
METHODOLOGIES & FRAMEWORKS:
Agile vs. Traditional

Module 2
PLAN & ESTIMATE:
Why, When, and How To Do It

Module 3
EXECUTE & CONTROL:
Tools, Techniques and Case Study Exercise

Module 4
ENTERPRISE ADOPTION:
How To “On-Board” Agile Pilot Projects

Module 5
TIPS & TRICKS:
The Rest of the Story

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Introduction:
John Stenbeck, PMP, PMI-ACP, CSM, CSP

- Sr. PM Consultant for client-side ERP implementations
- Experience in Accounting, IT, Aerospace, Construction, and Manufacturing
- Train technical professionals in Aerospace, Defense, High Technology, Financial Services, Bio-medical and Life-science fields
- Adjunct instructor at the University of California San Diego (UCSD)

Introduction:
John Stenbeck, PMP, PMI-ACP, CSM, CSP

- Featured speaker at HP’s National Conference (2002), Oracle’s Annual Conference (2003), and PeopleSoft’s International Conference (2004).
- One project reached the Federal Supreme Court.
- Front page feature in the San Diego Union and LA Times; Guest on Oprah and the Today Show.
- Past President and VP of Prof. Dev. for PMI-SD
GR8PM Introduction:

- PMP® and PMI-ACP® Exam Prep classes
- Scrum Master Certification classes

Corporate On-site seminars:
- Command Course in Agile Project Management
- Project Management Boot Camp
- Crash Course in Leadership
- Masters Course in Estimating and Risk Management

Organizational Support Services:
- Agile Enterprise Roll-out Consulting
- Contract Project Managers

Partial List of Past Clients

- Booz Allen Hamilton, Inc., McLean, VA
- Guinness Bass Import Company, Greenwich, CT
- Lucent Technologies – Bell Labs, Allentown, PA
- Nike Corp., Beaverton, OR
- Oracle Corp., Redwood Shores, CA
- Orange County Public Works, Orange, CA
- Qualcomm Inc., San Diego, CA
- U.S. Army – Space & Terrestrial Comms., Fort Monmouth, NJ
- U.S.D.A. – National Finance Center, New Orleans, LA
- Visa – Smart Cards, Foster City, CA
Fundamentals of Agile PM:

**Module 1:**
METHODOLOGIES & FRAMEWORKS

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Agile PM 101 – Best Practices:
Module 1: METHODOLOGIES & FRAMEWORKS

**Introduction:** Simple Example

**Scenario:** You + 3 Friends hold a dinner party.

**Project Objective:** Successful party, and still be friends!

**Cross-functional Team:** Each a specialist in either Cocktails, or Appetizers, or Entrees, or Desserts.

**Deadline & Constraints:** Friday night; Budget (so no hired Labor), Mutual Accountability, and Integration.

**Sprint 1:** Planning and Shopping.

**Sprint 2:** Preparation and Greeting.

**Sprint 3:** Dinner and Conversation.

**Sprint 4:** Dessert and Good-byes.
Are You Ready For Some Key Questions?

Key Questions:

Is Agile Really Needed?

The last major tool recognized in the PMBOK (Second Edition) was Critical Chain in 1997.

What has changed since then?

- Google launched in September, 1998
- The iPod was unveiled in October, 2001
- The BlackBerry “smartphone” was released in January, 2002
- NASA’s Phoenix lander extracted Martian ice in June, 2007
- The iPad was released in April, 2010
Has Complexity Increased?

Iron Triangle transformed into Hell-of-a-Hexagon
From Three to Fifteen Interrelationships.

Is Agile Being Used?

Organizations Using Agile
Source: PMI.org (2011)

- 50%
- 33%
- 17%

Select Projects  Extensively  Not At All
How Has Requirements Complexity Increased?

**FEATURE USAGE**

Feature Usage reported by Jim Johnson, Chairman, Standish Group International, Inc., XP2002 Conference, Sardinia, Italy

Organizations

- TRADITIONAL PROJECT MANAGEMENT
  - PROJECT MANAGEMENT INSTITUTE
  - PRINCE²®, APM, IPMA, and Various Universities

- AGILE PROJECT MANAGEMENT
  - SCRUM ALLIANCE
  - Agile Alliance, Scrum.org, PMI, and Various Universities
Certifications

PMI

- PgMP
- PMP
- ACP
- CAPM
- PMI-SP
- PMI-RMP

SCRUM ALLIANCE

Methodology = Philosophical Foundation
(PMBOK or Agile)

Framework = Logical Foundation
(Scrum, Extreme, FDD, Lean or Spiral)

Processes = Practical, How To Protocols
(Sponsoring, Organizing, Funding, Controlling)

“I estimate that 75% of those organizations using Scrum will not succeed in getting the benefits they hope for from it.”

Ken Schwaber, Scrum Co-Creator
**We 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

We Would Add… not a …

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**Similar Taxonomy for Each Methodology**

**Traditional:**
Graphical WBS

- Objective
  - Phase 1
    - Work Package 1
      - Activity 1
        - Task 1
      - Activity 2
    - Work Package 2
      - Activity 3
        - Task 2
      - Activity 2
  - Phase 2
    - Work Package 1
      - Activity 2
    - Work Package 2
      - Activity 3

**DETAILS**
- Few & Broad

**Agile / Scrum:**
Feature Structure

- Product
  - Theme 1
    - Epic 1
      - Story 1
        - Task 1
      - Story 2
        - Task 2
    - Epic 2
      - Story 3
        - Task 3
  - Theme 2
    - Epic 3
      - Story 4
        - Task 1
    - Epic 4
      - Story 3
        - Task 2
Similar Taxonomy for Each Methodology

Definitions are completely arbitrary logical devices.

<table>
<thead>
<tr>
<th>PMBOK:</th>
<th>AGILE:</th>
<th>DEFINITION:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Phase</td>
<td>2. Theme</td>
<td>2. What a User Class wants to see or experience (Sub-function; End-to-end workflow)</td>
</tr>
<tr>
<td>3. Work Pkg.</td>
<td>3. Epic</td>
<td>3. What a User will do and the result(s) they will see</td>
</tr>
<tr>
<td>5. Task</td>
<td>5. Task</td>
<td>5. Technical job plus acceptance criteria</td>
</tr>
</tbody>
</table>

Similar Roles

Traditional vs. Agile/Scrum

**Traditional:**
- Stakeholders & Sponsor
- Program or Sr. Project Manager
- Jr. PM or Team Lead
- Team and SME’s
- Everybody else

**Agile / Scrum:**
- Stakeholders & Sponsor
- Product Owner
- Scrum Master
- Team and SME’s
- Everybody else
Agile’s Best Known Framework

INPUT

PRODUCT OWNER

PRODUCT BACKLOG
Rank Ordered (Groomed) Features

TEAM

Sprint Planning Meeting (Parts 1 & 2)

SPRINT BACKLOG
Tasks To Do

SPRINT 1 – 4 Wks

TEAM Planning And Accountability

REVIEW MTG
(1st mtg Product Focus Every 30 Days)

No Changes In Duration Of Sprints

Potentially Shipable Product

RETROSPECTIVE MTG
(2nd mtg Process Focus: Team, Scrum Master & PO)

Agile PM 101 – Best Practices:

Fundamentals of Agile PM:

Module 2:
PLAN & ESTIMATE

Agile PM 101 – Best Practices:
Module 2: PLAN & ESTIMATE

Enterprise-level planning
Enterprise-level Development Planning

Market Development

Product Development

Operational Planning

Production Planning

Granularity unlocks the Agile-Enterprise!

Product Functionality (Themes)

Roadmaps (Feature Stories)

Releases (User Stories)

Iterations (Stories & Tasks)
Project Initiation: Product Overview

Vision Statement Example:

For music lovers who want a simple way to listen to and manage songs, the iPod is a portable digital music player that provides a user friendly experience with intuitive, easy to use controls. Unlike other MP3 players, our product provides seamless integration with a world class music store (iTunes).

Best Practice: Ideally, a vision statement gives the team the ability to explain the project to someone “in an elevator”.

Project Initiation: Help Sponsor Format the Vision

• FOR (target customer)
• WHO WANTS (statement of the need)
• THE (product name)
• IS A (product category)
• THAT (product key benefit, compelling reason to buy)
• UNLIKE (primary competitive alternative)
• OUR PRODUCT (final statement of primary differentiation)

Best Practice: Using this Vision Statement format helps Stakeholders clearly articulate previously vague thoughts.
Agile PM 101 – Best Practices:
Module 2: PLAN & ESTIMATE

Project Initiation:

Product Vision Questions:

• Do you know what you want developed?
• Who is it for? Why are we developing this for you?
• How does this align with your strategic objectives?
• What benefits are expected from a successful deployment?
• What are the consequences of failure?
• What are your competitors doing in this area?

EXERCISE SCENARIO:

You have been hired by a small technology company to create a new iPhone App to complement their marketing strategy – funny, interactive novelties. The App must be something that clients find clever and valuable because it is entertaining and quirky!

The last iPhone App – the “Practical Joker” - was a huge success because it played on people’s enjoyment of practical jokes. Using the iPhone’s ability to “hear and identify” songs, it “listened” to whomever the iPhone was pointed at and then announced whether they were “honest and beautiful” or “misled and homely” or “sinister and hot” among a host of other entertaining descriptions.

Your customer needs another “first” to keep their competitive advantage…and that is your mission!
When is it best to do detailed estimating, (a) when you know very little or (b) when you know a lot?

The amount of estimating done in Traditional versus Agile is similar. It just happens at different times, with different assumptions.

**Fundamental Premise of Planning**

<table>
<thead>
<tr>
<th>Estimate Types</th>
<th>% Design</th>
<th>Estimate Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROM</td>
<td>0 – 10%</td>
<td>+100% to – 50%</td>
</tr>
<tr>
<td>Budget</td>
<td>15 – 25%</td>
<td>+30% to – 15%</td>
</tr>
<tr>
<td>Definitive</td>
<td>45 – 100%</td>
<td>+15% to – 5%</td>
</tr>
</tbody>
</table>

**Estimate Descriptions**

- **ROM**: Made without detailed engineering data using tools like capacity curves, scaling factors, and feature/cost ratios.
- **Budget**: Made for owner’s planning not project control using tools like flow sheets, layouts, and equipment details.
- **Definitive**: Based on detailed engineering data, approved drawings and specifications. Used for project planning and control.
Cost-effective Planning Despite Uncertainty

Level 1 - Product: iPad, v1.0, Web Access & Communication

Level 2 - Themes:
- Video Watching
- Game Playing
- Music Listening
- Traveling
- E-Mailing

Level 3 – Epics (for E-Mailing):
- Manage Contacts
- Create Messages
- Store & Retrieve Messages
- Attach & Link Content
- Filter Viruses & Spam
Agile PM 101 – Best Practices:
Module 2: PLAN & ESTIMATE

Level 3 – Epics (for E-Mailing):
- Create Messages
- Manage Contacts
- Store & Retrieve Messages
- Attach & Link Content
- Filter Viruses & Spam

Level 4 – Stories:
- Create Contact
- Update Contact
- Delete Contact
- Sort Contacts

Level 5 – Tasks:
- Define Fields
- Define DB
- Define GUI
- Check Duplicates
- Validate Format
- Import Function
Agile PM 101 – Best Practices:
Module 2: PLAN & ESTIMATE

User Story Description

As a: Email User
I want to: Sort my emails
So that: I can find emails from specific people

Acceptance Criteria

Given: I am logged into my email account
When: I want to sort my emails
Then: I can sort them by sender
Properly defining “Done” is critical to success.
  • Detailed Lessons Learned are a great resource.

**Definition of “Done” – Example:**
  • Cleanly coded into an executable
  • Refactored for usability
  • Unit and Regression tests are error free
  • **Includes** User Documentation

**Definition of “Done” – More Examples:**

Install the Radio Broadcast System (RBS) equipment:
  • Cabinet anchors properly drilled and set in concrete slab
  • Electrical supply and grounding tested without fault
  • Equipment rack, UPS, and signal equipment installed and tested error free
  • RF jumpers connected and swept
  • RBF integrated to core and test calls 100% error free
  • As installed documentation, and photos, loaded to facilities repository
Facilitate Emergency Response Tabletop Exercise:
- Identify, recruit, and confirm participants
- Validate time blocked in participants’ calendars
- Preparation information delivered and expectations communicated to participants
- Attendance confirmed 24 hours beforehand
- Welcome participants and execute exercise
- Conduct Lessons Learned and collect evaluations

Aircraft hardware installation and certification:
- All materials received and certified per Bill of Materials (BOM)
- All processes have been certified against FAA protocols
- All technicians have proper certification on record
- Each component replaced by certified technician and reviewed/approved by Supervisor
- Each component is unit tested and no errors are detected
- Each system is regression tested and no errors are detected
- Entire aircraft is run through complete ground safety test protocol and no errors are detected
- All documentation is properly filed
Fibonacci Sizing:

1. The Fibonacci series = 1, 2, 3, 5, 8, 13, 21, 34, 55…
   • Defined by the non-linear recurrence equation: \( F_n = F_{n-1} + F_{n-2} \)

2. Process first establishes a “midpoint” and then the relative size of other items in the group

3. Leverages our physiological “wiring” because it uses Size instead of Time!

4. First we will learn HOW to do it, then we will APPLY it.

Exercise Instructions – Round 1:
1. As a Team pick the “medium” dog and assign it a size of 8.
2. Individually, put a relative size to the other dogs (2, 3, 5, 8, etc.)
3. You can use any number more than once, or not at all.
4. After everyone has finished, as a Team review and size each dog.

Use the following process:
(a) Start at top of list.
(b) Share each one’s number.
(c) Highest number, then lowest, explain why.
(d) Use the explanations to re-vote.
(e) Negotiate the final team number.

<table>
<thead>
<tr>
<th>Breed</th>
<th>Individual</th>
<th>Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Lab</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dachshund</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Great Dane</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terrier</td>
<td></td>
<td></td>
</tr>
<tr>
<td>German Shepherd</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poodle (std.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Bernard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulldog</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Exercise Instructions – Round 2 (Planning Poker) :
1. Write the Numbers below on each of 9 Index Cards.

2. Create an index card with a ? and an ∞ symbol.

   How to use the ? and ∞ cards.

3. Size the Cars on the next slide.

Planning Poker Exercise:
1. As a Team pick the “medium” car and assign it a size of 8.
2. The start at top and individually choose a card for the size.
3. Use only the number cards for now.
4. On the count of 3, everyone shows their card at once!
5. Highest, then lowest, explain why.
6. Use the explanations to re-vote.
7. Negotiate final number.
Implications for Project leaders:
- Understand multiple Agile frameworks and tools
- Tailor Agile to the organizational context
- Integrate Traditional tools when appropriate
- Embrace change and create hybrid approaches

Sixth Annual "State of Agile Development"

Key Changes (since last year):
- Companies using Scrum: down 10%
- Companies using Hybrids: up 25%