Assessing Readiness for Agile Adoption using a Practical and Innovative Approach

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Important Questions

• “Why should we adopt agile practices?”

• “How do we proceed with adopting agile practices?”
Exercise A

Agile Adoption Simulation

More Important Questions

• What does it mean to be agile?
• When is an organization considered agile?
• Which practices should the organization adopt?
• How to successfully aid an organization to adopt agile practices?
• Are there any guidelines to help with the agile adoption efforts?
• Was anything overlooked during the adoption effort?
Process Improvement Lifecycle

Learning
- Propose Future Actions
- Analyze and Select
- Develop Solution
- Implement Solution
- Refine Solution
- Pilot/Prototype Solutions
- Create Validation

Acting
- Stimulate for Change
- Build Sponsorship
- Charter Interactions
- Document Current & Desired States
- Design Recommendations
- Set Priorities
- Develop Approach
- Plan Actions
- Implement Actions
- Establish Performance
- Monitor
- Evaluate
- Adjust

Diagnosing
- Stimulate
- Initiating

Establishing
The Agile Adoption Framework

- To guide and assist organizations in adopting agile practices in their projects

- Sidky Agile Measurement Index
  - Organize the Practices based on value

- 4 Stage Process
  - Steps to guide the process with a focus on potential and readiness

Sidky Agile Measurement Index (SAMI)
Sidky Agile Measurement Index (SAMI)

- Agile Levels
- Agile Principles
- Agile Practices and Concepts
- Indicators

Agile Levels

Level 5: **Encompassing**
Establishing a vibrant environment to sustain agility

Level 4: **Adaptive**
Responding to change through multiple levels of feedback

Level 3: **Effective**
Developing quality, working software in an efficient an effective manner

Level 2: **Evolutionary**
Delivering software early and continuously

Level 1: **Collaborative**
Enhancing communication and collaboration
Agile Principles

A. Embrace change to deliver customer value
B. Plan and deliver software frequently
C. Human centric
D. Technical excellence
E. Customer collaboration

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<tr>
<th>Agile Levels</th>
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Embrace Change to Deliver Customer Value

Plan and Deliver Software Frequently

Human Centric

Technical Excellence

Customer Collaboration

Level 5: Encompassing
- Low Process Ceremony
- Agile Project Estimation
- Ideal Agile Physical Setup
- Test Driven Development
- Paired Programming
- No/minimal number of Cockburn Level -1 or 1b people on team
- Frequent Face-to-face interaction between developers & Users (Collocated)

Level 4: Adaptive
- Client Driven Iterations
- Smaller and More Frequent Releases (6-8 Weekly)
- Adaptive Planning
- Daily Progress Tracking Meetings
- Agile Documentation (from Agile Modeling)
- User Stories
- Collaborative, Representative, Authorized, Committed and Knowledgeable (CRACK) Customer Immediately Accessible
- Customer contract revolves around commitment of collaboration, not features

Level 3: Effective
- Risk Driven Iterations
- Maintain a list of all remaining features (Backlog)
- Self Organizing Teams
- Continuous Integration
- Continuous Improvement (e.g. Refactoring)
- Have around 30% of Cockburn Level 2 and Level 3 people on team
- Unit Tests

Level 2: Evolutionary
- Continuous Delivery (Incremental-Iterative development)
- Planning at different levels
- Software Configuration Management
- Tracking Iteration through Working Software
- No Big Design Up Front (BDUF)
- Customer Contract reflective of Evolutionary Development

Level 1: Collaborative
- Reflect and tune Process
- Collaborative Planning
- Collaborative teams
- Empowered and Motivated Teams
- Coding Standards
- Knowledge Sharing Tools (Wikis, Blogs)
- Task Volunteering not Task Assignment
- Customer Commitment to work with Developing Team

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### Indicators

- Each agile practice
- Over 300 Indicators

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### Organizational Characteristic Assessment Table for Collaborative Planning

<table>
<thead>
<tr>
<th>Characteristic to be assessed</th>
<th>To determine</th>
<th>Assessment Method</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Style</td>
<td>Whether or not a collaborative or a command-control relation exists between managers and subordinates. The management style is an indication of whether or not management trusts the developers and vice-versa.</td>
<td>Interviewing</td>
<td>D1, D2, D3,</td>
</tr>
<tr>
<td>Manager Buy-In</td>
<td>Whether or not management is supportive of or relative to having a collaborative environment</td>
<td>Interviewing</td>
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### Indicator Sheet

<table>
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<tr>
<th>ID</th>
<th>Statements</th>
<th>Nominal Values</th>
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</thead>
<tbody>
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<tr>
<td>D1</td>
<td>Your manager does not micro-manage you or your work.</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>D2</td>
<td>Your manager encourages you to be creative and does not dictate to you what to do exactly.</td>
<td>Strongly Disagree</td>
</tr>
<tr>
<td>D3</td>
<td>Your manager gives you the authority to make decisions without referring back to him/her.</td>
<td>Strongly Disagree</td>
</tr>
</tbody>
</table>
Objective 1: Make Go/No-Go Decision
  - Stage 1: Discontinuing Factors

Objective 2: Identify Agile Practices to Adopt
  - Stage 2: Project Level Assessment
  - Stage 3: Organizational Readiness
  - Stage 4: Reconciliation
Stage 1: Discontinuing Factors

- Are we ready to undergo agile adoption efforts?
  - Showstoppers
  - Irrelevant of the agile practices adopted

- Some Discontinuing Factors:
  - Inappropriate Need for Agility
  - Lack of Sufficient Funds
  - Absence of Executive Support

Stage 1: Discontinuing Factors

- Assessing the Existence of Discontinuing Factors
  - Organizational Characteristics
  - Indicators

- Lack of Sufficient Funds
  - the dollar amount allocated to the process improvement effort and
  - the ability to actually spend the funds for agile adoption.
    - Can the funds be spent towards any process improvement activity?
    - Are there any restrictions on the type of activities for which these funds can be used?
Stage 2: Project Level Assessment

- **Objective:** Identify the maximum level of agility for a project (target agile level or Agile Potential).

- **Why:** Factors exist that are outside the project and/or organization’s control that adversely affect the ability to adopt an agile practice
  - Customer related factors
  - Team proximity
  - Team competence

Stage 2: Project Level Assessment

- **Limiting Agile Practices**
  - Their successful adoption depend on circumstances that are usually outside of the organization’s control.

- Identify the Limiting Agile Practices in each level

- Using the Indicators, assess the factors associated with the Limiting Agile Practices
<table>
<thead>
<tr>
<th>Level 5: Encompassing</th>
<th>Level 4: Adaptive</th>
<th>Level 3: Effective</th>
<th>Level 2: Evolutionary</th>
<th>Level 1: Collaborative</th>
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<tr>
<td>Low Process Ceremony</td>
<td>Client Driven Iterations</td>
<td>Risk Driven Iterations</td>
<td>Evolutionary Requirements</td>
<td>Reflect and tune Process</td>
</tr>
<tr>
<td>Agile Project Estimation</td>
<td>Smaller and More Frequent Releases (4-8 Weeks)</td>
<td>Maintain a list of all remaining features (Backlog)</td>
<td>Continuous Delivery (Incremental-Iterative development)</td>
<td>Collaborative Planning</td>
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<tr>
<td>Ideal Agile Physical Setup</td>
<td>Adaptive Planning</td>
<td>Frequent face-to-face communication between the team</td>
<td>Planning at different levels</td>
<td>Collaborative Planning</td>
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<tr>
<td>Test Driven Development</td>
<td>Daily Progress Tracking Meetings</td>
<td>Continuous Integration</td>
<td>Software Configuration Management</td>
<td>Collaborative teams</td>
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<tr>
<td>Paired Programming</td>
<td>Agile Documentation (from Agile Modeling)</td>
<td>Continuous Improvement (i.e. Refactoring)</td>
<td>Tracking Iteration through Working Software</td>
<td>Empowered and Motivated Teams</td>
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<td>No/minimal number of Cockburn Level -1 or 1b people on team</td>
<td>User Stories</td>
<td>Have around 30% of Cockburn Level 2 and Level 3 people on team</td>
<td>No Big Design Up Front (BDUF)</td>
<td>Coding Standards</td>
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<tr>
<td>Frequent Face-to-face interaction between developers &amp; Users (Collocated)</td>
<td>Collaborative, Representative, Authorized, Committed and Knowledgeable (CRACK) Customer Immediately Accessible</td>
<td>Customer contract revolves around commitment of collaboration, not features</td>
<td>Customer Contract reflective of Evolutionary Development</td>
<td>Knowledge Sharing Tools (Wikis, Blogs)</td>
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<td>Task Volunteering not Task Assignment</td>
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Stage 3: Organizational Assessment

- Which practices is the organization ready to adopt
- Assess the practices of target agile level and below using Indicators.
  - Numerous Organizational Characteristics
- Pre-adoption readiness assessment for each practice
<table>
<thead>
<tr>
<th>Level 5 Encompassing</th>
<th>Embrace Change to Deliver Customer Value</th>
<th>Plan and Deliver Software Frequently</th>
<th>Human Centric</th>
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<td>Test Driven Development (6/12)</td>
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<td>Ideal Agile Physical Setup (3)</td>
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<td>Paired Programming (4/9)</td>
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<td>Level 4 Adaptive</td>
<td>Client Driven Iterations (1/3)</td>
<td>Smaller and More Frequent Releases (4-8 Weeks) (4/4)</td>
<td>Adaptive Planning (1/2)</td>
<td>Daily Progress Tracking Meetings (3/4)</td>
<td>Collaborative, Representative, Authorized, Committed and Knowledgeable (CRACK) Customer Immediately Accessible (5)</td>
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<td>User Stories (3-4)</td>
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<td>Level 3: Effective</td>
<td>Continuous Improvement (3/7)</td>
<td>Risk Driven Iterations (4-8)</td>
<td>Self Organizing Teams (3/9)</td>
<td>Continuous Integration (2/5)</td>
<td>Customer Contract reflective of Evolutionary Development (4)</td>
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<td>Level 2: Evolutionary</td>
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### Stage 3: Organizational Assessment

**Example for the Collaborative Planning Practice**

**Organizational Characteristics (Indicators)**

- **People**
  - Management
    - Management style (Indicators: 7 Management – 4 Developers)
    - Transparency (Indicators: 2 Management)
    - Buy-In (Indicators: 4 Management)
  - Developers
    - Power Distance (Indicators: 1 Management – 4 Developers)
    - Buy-In (Indicators: 1 Developers)
  - Project Management
    - Planning
      - Existence (Indicators: 1 Assessor – 2 Management)
Stage 3: Organizational Assessment

The highest level of agility for organization = position of practice org not ready to adopt

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<th>Agile Practices for Agile Level 1</th>
<th>Category of Assessment</th>
<th>Area to be assessed</th>
<th>Characteristic(s) to be assessed</th>
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Stage 4: Reconciliation

- Resolve the differences between the target level and the organization’s readiness
  - to determine the final set of agile practices that will be adopted/employed.

- No reconciliation necessary when:
  - Org. Readiness Level > Project Target Level
    - Try to change limiting circumstances
  - Org. Readiness Level = Project Target Level
    - 100% Potential Achieved
Stage 4: Reconciliation

- Reconciliation needed when:
  - Org. Readiness Level < Project Target Level

- Option 1
  - Improve weak/hindering Org. characteristics

- Option 2
  - Adopt only practices the org is ready for

The Agile Adoption Framework
Conclusion

- Agile Adoption Framework:
  - Adds structure and discipline to the adoption process
  - Provides guidance and assistance to organizations adopting agile practices

- Benefits
  - Agile Levels (sets of practices based on values)
  - Well-defined 4-Stage Process
    - Project and Organizational level
    - Pre-adoption Assessment (Readiness)
  - Independent of any one particular agile method

Thank you
Any Questions?

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