Challenges of Business Analysis and Business Analysts in Agile

bbc 2015
Building Business Capability
November 2015

Shahriar Maghami
Challenge One: Which Methodology?

• IT projects are one of the means to building and enhancing business capability.
• IT projects, however, may be studied and delivered following different methodologies.
• The first challenge for a business analyst is dealing with the question of methodology.
What is the Best Path Forward?
Going Fishing?!
Going to the Moon?!
Agile Suitability Criteria
Agile Suitability Criteria

Adapted from Balancing Agility and Discipline - B. Boehm, R. Turner – 2004
## Agile Suitability Criteria

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>PHASED / PREDICTIVE</th>
<th>AGILE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complexity/Uncertainty</td>
<td>Low to medium</td>
<td>High (but not chaotic)</td>
</tr>
<tr>
<td>Predictable</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Requirements</td>
<td>Known upfront</td>
<td>More known “just in time”</td>
</tr>
<tr>
<td>Large Project Size/Timeline</td>
<td>Suitable if predictive</td>
<td>Suitable</td>
</tr>
<tr>
<td>Modern Language &amp; Technology</td>
<td>Possible</td>
<td>More suitable</td>
</tr>
<tr>
<td>Legacy &amp; Mainframe</td>
<td>More suitable</td>
<td>More challenging due to interdependencies</td>
</tr>
<tr>
<td>Data intensive Interfaces</td>
<td>Less suitable</td>
<td>More suitable</td>
</tr>
<tr>
<td>Continuous Change</td>
<td>Not suitable</td>
<td>Very suitable</td>
</tr>
<tr>
<td>Release Management</td>
<td>Better streamlined</td>
<td>More Adaptive to Business Needs</td>
</tr>
<tr>
<td>Infrastructure Projects</td>
<td>More suitable</td>
<td>More challenging</td>
</tr>
<tr>
<td>Sponsor Buy-in</td>
<td>Important</td>
<td>More important/Critical</td>
</tr>
<tr>
<td>Stakeholder/User Time Commitment and Collaboration</td>
<td>Necessary</td>
<td>Crucial, feedback integral to the process</td>
</tr>
<tr>
<td>Maintenance/Production Support</td>
<td>Suitable for more predictive/defined projects</td>
<td>In multiple cycles until completion</td>
</tr>
</tbody>
</table>

Adapted in part by independent experience and in part from Suitability Scorecard for Agile Development – Corporate Executive Board and other sources.
Determination of Methodology

1. Start
2. High Level Business Analysis Requirements
3. High Level Architecture Analysis
4. Choose Agile
   - Yes: Agile: Best fit?
   - No: Choose Waterfall Phase Driven
5. High Level Solution Selection
6. Assess based on the Best Fit Delivery Method Criteria
7. Review By PM, Agile Expert, BA, SA, or a higher Committee
Challenge Two: No Mention of Business Analyst Role in Agile

**In SCRUM:** While Scrum focuses on value driven development, it does not address business analysis activities in detail and many of these activities occur as implicit steps in the scrum framework.

[Agile Extension to BABOK Guide, Section 2.1.4, Page 12]

**In XP:** While XP does focus on value driven development, it does not explicitly address business analysis activities. XP relies on the fundamental assumption that the customer role is filled by a small number of people who know what the most valuable features will be.

[Agile Extension to BABOK Guide, Section 2.2.4, Page 16]
• Breadth of Knowledge across Disciplines makes a **Generalist**

• Depth of Knowledge in a Discipline, makes a **Specialist**

• Ideal Problem Solving, Requires **T-shaped**
Challenge Three: Agile in Non Agile Environment

- Traditional Work Cultures, work Processes, and Compliance criteria
- Traditional Roles and Responsibilities vs Those in Agile
- Lack of agile experience of technical resources and resistance to adapt
- Unwarranted Myths and Issues with Past Agile Practices
- Agile Practices in “islands” not throughout the organization
- Unfamiliarity or limited knowledge of Agile Best Practices
- Absence of necessary and meaningful multi-level agile planning
- Not doing as-needed documentation
- Excessive impact of end users during execution sprints
- Practicing non-agile, pretending agile
- Diverse non-unified understanding on what agile is and is not
- Not adequately following the core of Agile practices and processes
- Excessive Distributed team work
Contribute in Producing Adaptive Artifacts

- Create a high level Project Roadmap
- Break Roadmap into Annual Roadmaps
- Map Releases at a high level onto the Annual Roadmap
- Map high level Product Backlog Items onto Releases
- Give more clarity to more immediate Release
- Map next few Sprints onto associated Release
Practice Core Agile

- Follow Agile Manifesto and Principles

- Combine Traditional Phases, as much as possible

- Just in Time Analysis, Design, Implementation, Testing, Deployment, need to be included in iterations
Challenge Four: Integration and Convergence to Desired Product

• Iterative analysis, design, and implementation, increases the risks for integration of “pieces, and converging to the desired product.

• Must see the “forest” at all times, while building the “trees”.

• Integration should be done in each iteration or very early on.

• Big Picture needs to be reflected at a high level on scope and Product Backlog and updated frequently.
Iterative Completion of the Product
See the Whole and the Big Picture
Integration of Pieces and Their compatibility within High Level Scope
Integration of Pieces and Their compatibility within High Level Scope
The techniques of business analysis do not change dramatically in the agile environment. But the timing, how they are used, and the extent of documentation, do change.

Agile business analysis is about ensuring the right information is available to the development team in the right level of detail, at the right time, so they can build the right product [“fit for purpose” and “as needed” documentation].

Documentation and artifacts that are more quickly developed such as diagrams, maps, and lists tend to provide more value in agile.

Lower-fidelity artifacts are developed for the sole purpose of building the software for a specific iteration.
Common Business Analysis Techniques

Many of business analysis techniques described in the BABOK Guide continue to be usable in agile.

- **Business Analysis Planning and Monitoring**
  - Plan Business Analysis Approach
  - Conduct Stakeholder Analysis
  - Plan Business Analysis Activities
  - Plan Business Analysis Communication
  - Plan Requirements Management Process
  - Manage Business Analysis Performance

- **Elicitation**
  - Prepare for Elicitation
  - Conduct Elicitation Activity
  - Document Elicitation Results
  - Confirm Elicitation Results

- **Requirements Management and Communication**
  - Manage Solution Scope and Requirements
  - Manage Requirements Traceability
  - Maintain Requirements for Reuse
  - Prepare requirements Package
  - Communicate Requirements

- **Enterprise Analysis**
  - Define Business Need
  - Access Capability Gaps
  - Determine Solution Approach
  - Define Solution Scope
  - Define Business Case

- **Requirements Analysis**
  - Prioritize Requirements
  - Organize requirements
  - Specify and Model Requirements
  - Define Assumptions and Constraints
  - Verify Requirements
  - Validate Requirements

- **Solution Assessment and Validation**
  - Assess Proposed Solution
  - Allocate Requirements
  - Assess organizational Readiness
  - Define Transition requirements
  - Validate Solution
  - Evaluate Solution Performance
Agile Manifesto

- Individuals and Interactions
- Working software
- Customer collaboration
- Responding to change

- Processes and tools
- Comprehensive documentation
- Contract negotiation
- Following a plan
Lean and Agile Space

Lean
- Optimize the whole
- Eliminate/Minimize Waste
- Build Quality
- Learn Constantly
- Deliver Fast
- Engage Everyone
- Keep Getting Better

Agile
- Scrum
- XP
- Kanban
# Agile Extension Techniques Supporting Fundamental Principles

## Principles of Agile Business Analysis

<table>
<thead>
<tr>
<th>DISCOVERY FRAMEWORK</th>
<th>DELIVERY FRAMEWORK</th>
</tr>
</thead>
<tbody>
<tr>
<td>See the Whole</td>
<td>Get Real Using Examples</td>
</tr>
<tr>
<td>Think as a Customer</td>
<td>Understand What is Doable</td>
</tr>
<tr>
<td>Analyze to Determine What is Valuable</td>
<td>Stimulate Collaboration and Continuous Improvement</td>
</tr>
<tr>
<td>Avoid Waste</td>
<td></td>
</tr>
</tbody>
</table>

### DISCOVERY FRAMEWORK

- **Business Capability Analysis**
  - Story Decomposition
  - Story Elaboration
  - Story mapping
  - User Story
  - Storyboarding

- **Personas**

- **Value Streaming**

### DELIVERY FRAMEWORK

- **Backlog Management**
  - Business Value Definition
  - Kano Analysis
  - MoSCoW Prioritization
  - Purpose Alignment Model

- **Behavior Driven Development**

- **Relative Estimation**
  - Planning Workshop
  - Real Options

- **Collaborative Games**

- **Lightweight Documentation**

---

**IIBA Agile Extension to BABOK Guide**
### Agile Techniques Mapped to BABOK

<table>
<thead>
<tr>
<th>BABOK GUIDE AREA</th>
<th>IIBA’s AGILE TECHNIQUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Analysis Planning and Monitoring</td>
<td>Backlog Management, planning Workshop, Real Options, Retrospectives, Personas, Value Stream mapping</td>
</tr>
<tr>
<td>Elicitation</td>
<td>Personas, User Story, Story Mapping, Behavior Driven Development, Collaborative Games, Retrospectives, Lightweight Documentation</td>
</tr>
<tr>
<td>Requirements Management and Communication</td>
<td>Backlog Management, User Story, Story Decomposition, Story Mapping, Planning Workshop</td>
</tr>
<tr>
<td>Enterprise Analysis</td>
<td>Business Capability Analysis, Collaborative Games, Purpose Alignment Model, Story Decomposition, Story Mapping, Kano Analysis, Purpose Alignment Model, Real Options</td>
</tr>
<tr>
<td>Requirements Analysis</td>
<td>Backlog Management, Kano Analysis, Planning Workshop, Personas, user Story, Story Decomposition, Story Mapping, Storyboarding, Behavior Driven Development, Retrospectives, Lightweight Documentation</td>
</tr>
<tr>
<td>Solution Assessment and Validation</td>
<td>Real Options, Story Decomposition, User Story, Business Analysis capability, Value Stream Mapping, Retrospectives.</td>
</tr>
</tbody>
</table>
Business Analysis in Scrum

Adapted from IIBA Agile Extension to BABOK Guide with some changes
Challenge Six: Scope Creep

- PMI Definition: The uncontrolled expansion to product or project scope without adjustments to time, cost, and resources.
- Could we have Scope Creep in Agile?
- Does Scope Creep “Appear” with the same signs and symptoms in Agile as in Waterfall?
- What should a Business Analyst consider “scope creep” in Agile?
- How Business Analysts can avoid Scope Creep in Agile? Or should they?!
Scope Creep and Change

- Documented scope and requirements, as the references of “out of scope” items, in Waterfall.
- Determination of changes easier in Whaterfall, but more difficult to manage.
- Changes are Implicit and Institutionalized in Agile.
- Determination of changes as “excessive” and therefore scope creep, could become more difficult in Agile.
TradiConal(Change Management

- Identify Enhancements
- Submit Change Request
- Review and Assess the Request
- Approved?
  - Yes
  - No
- End
- Update Requirements / Project Plan
- Execute Change
- Test Change
- Validated?
  - Yes
  - No
- Implement Change
Managed Scope Change in Agile:

Development Lifecycle

- Early Frame/Scope
- Mid-work Frame/Scope
- Final Frame/Scope

Feature / Functionality
- Added
- Removed
Continuousy Mapping Scope Change in Product Backlog

- The vision and high level scope of the “Product” needs to be reflected on a “Product Backlog” in Agile.

- Product Backlog Items should reflect the most current views of the end users and stakeholders, through continuous collaboration with them and based on their feedback on what has been delivered already.

- Product Backlog Items need to be prioritized.

- While we don’t want to start with the vision of a car as the “product”, then end up with a “house”, we can, and we should allow for changes in the initial scope, within the context of the initial high level scope.
Continuously Mapping Scope Change in Product Backlog

Product Backlog

Added PBIs

Removed PBIs

Continuous Refinement and Prioritization

Refined & Reprioritized Product Backlog
Product Backlog Refinement

- Stakeholder Input on Product Backlog
- Team Input on Product Backlog
- Unfinished User Stories
- Bugs / Defects

Development & Refinement of Product Backlog

- Epic and High Level User Story Development
- Affinity and Dependency Determination
- MoSCoW
- Prioritization
- High level Sizing and estimation
- Breaking Down Epics and Large User Stories
- Defining User Acceptance Criteria before Sprints
More Value Add with the same Time and Cost

- In traditional approach, scope changes could directly result in changes in delivery time and cost.
- In Agile, working with Fixed Time and Cost is more possible, by focusing on delivering the highest priority add value items within the same time and cost constraints.
Increasing Success for Agile

Increasing Success for Agile

<table>
<thead>
<tr>
<th>SIZE</th>
<th>METHOD</th>
<th>SUCCESSFUL</th>
<th>CHALLENGED</th>
<th>FAILED</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Size Projects</td>
<td>Agile</td>
<td>39%</td>
<td>52%</td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>Waterfall</td>
<td>11%</td>
<td>60%</td>
<td>29%</td>
</tr>
<tr>
<td>Large Size Projects</td>
<td>Agile</td>
<td>18%</td>
<td>59%</td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td>Waterfall</td>
<td>3%</td>
<td>55%</td>
<td>42%</td>
</tr>
<tr>
<td>Medium Size Projects</td>
<td>Agile</td>
<td>27%</td>
<td>62%</td>
<td>11%</td>
</tr>
<tr>
<td></td>
<td>Waterfall</td>
<td>7%</td>
<td>68%</td>
<td>25%</td>
</tr>
<tr>
<td>Small Size Projects</td>
<td>Agile</td>
<td>58%</td>
<td>38%</td>
<td>4%</td>
</tr>
<tr>
<td></td>
<td>Waterfall</td>
<td>44%</td>
<td>45%</td>
<td>11%</td>
</tr>
</tbody>
</table>

Standish Group, Chaos Report 2011 - 2015

**WATERFALL VS. AGILE**

- Successful: 60%
- Challenged: 52%
- Failed: 9%

- Agile: 29%
- Waterfall: 39%
References

• Observations on Balancing Discipline and Agility – Barry Boehm (USC), Richard Turner (GWU)
• Suitability Scorecard for Agile Development - Corporate Executive Board (CEB) – http://www.cebglobal.com
• Strategic Thinking in Complex Problem Solving – Rice University – Arnaud Chevallier – Associate vice provost working on strategic thinking applied to complex problem solving
• Balancing breadth and depth of expertise for innovation: A 3M story – ELSEVIER Wai Fong Boh, Roberto Evaristo, Andrew Ouderkirk
• BABOK Guide v2 and v3 - IIBA
• Agile Extension to BABOK Guide – IIBA
• Standish Group, Chaos Report
• The Scrum Guide – Ken Schwaber and Jeff Sutherland
• SHAHRIAR MAGHAMI:
  • www.agiletoday.org
  • shahriar@agiletoday.org
  • Twitter: @sgmaghami at www.twitter.com/sgmaghami