



Agile Practices Benchmarking Case Study

by
MindTree Limited

About Organization - ABC

General Organizational Information

Captive / Non Captive	Captive
About Business	Software Services
Major Verticals	T&T, Manufacturing, BFS, Insurance
Number of Employees	9000+
Quality/Process Models embraced	Ex: ISO 20000 / 27001, CMMI V 1.2 Level 3
Others 1	
Others 2	
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Agile Related Information

Type of Project (please elaborate)	New Development Project.
Domains	Travel and Transportation (Airline – Baggage)
Technologies	Java
Number of Projects & % of Projects	2 Projects (50%)
Agile Institutionalized since	March 2011
Key success factor 1	Schedule
Key success factor 2	Quality
Key success factor 3	Scope (these are Fixed Price projects)

Agile Execution @ Project A

Project Name	ABC
Project Size	<i>13 members, 71 story points (1 story point ~ 7 person days)</i>
Project Structure	<i>1 onsite member. Daily SCRUM offshore. 1 SCRUM of SCRUMs with customer and onsite team</i>
Agile Approach	<i>SCRUM with MindTree Engineering Processes</i>
Agile Practices	<i>Continuous integration, Test Automation, Stand-Up meeting</i>
Agile Metrics	<i>Burn-down chart, Product Velocity, Defects per Function Point</i>
Agile Tools	<i>Xplanner</i>
Agile Skills	<i>CSM, Configuration Manager</i>
Why Agile in this project	<i>Customer required early visibility and predictability</i>

Agile Execution @ Project B

Project Name	XYZ
Project Size	<i>21 members, 325 story points</i>
Project Structure	<i>1 onsite member. Daily 2 offshore SCRUMs. 1 SCRUM of SCRUMs with customer , another Vendor and onsite team</i>
Agile Approach	<i>SCRUM with MindTree Engineering Processes</i>
Agile Practices	<i>Continuous integration, Test Automation, Stand-Up meeting</i>
Agile Metrics	<i>Burndown chart, Product Velocity, Defects per Function Point</i>
Agile Tools	<i>Xplanner, Jira, Sonar</i>
Agile Skills	<i>CSM, Configuration Manager</i>
Why Agile in this project	<i>Customer required early visibility and predictability</i>

Measurement and Analysis

Metrics	Criteria	Analysis	Results
Scope burn down	Team Velocity in the previous Sprints	Based on the number of user stories completed and total story points accomplished	Burndown chart – Depicts the team’s productivity from Sprint on Sprint
Defect density	Number of defects per Function Points		
Code complexity	This is based on the one time effort spent on development of any of the user stories. Later user stories which will make use of the base user story or frame work, they will be considered as simple user story (like including add, delete, update or select functionality)	This would be based on the number of operation/s involved in developing the user stories. This exercise would be done at the beginning of the Sprint-1.	This will help to relook into the story points assigned to each of the user story and complexity assigned to it. It will help to re estimate the effort required to complete such less complex code or user story.

Challenges & Solutions

Focus Areas	Challenges	Solutions
Scope and estimation	Sizing for Fixed price Resource Loading for a Fixed price project	Function Point sizing
People	Agile skills; especially on Engineering side	Training
Product / Process Quality	New skills for both Development team and client team	Customer handled the session on the Agile and explained the tools used in the project (through Demo)
Tools / Technology	Automation of test cases for web services (Regression Testing) using Assertion, Parameterization and JDBC connection.	Developed Request XMLs for regression testing as well as for test automation for all web services
Customer	New to Agile Methodology	Customer team handled a session on Agile and provided an insight to the process followed during the development cycle

Focus Areas	Challenges	Solutions
Culture / Collaboration	Distributed	Tools such as Webcam
Sustenance	NA	NA
Sponsors	No internal sponsor	
Practices	Perception of micro management	Communication with team
Metrics	Challenge with traditional metrics	Identified metrics which have an impact on the effort, schedule, cost and Quality

Limitations & Recommendations

Focus Areas	Current Limitation	Future Recommendation
Scope and estimation	Estimating for NFR	Base estimations on prior projects
People	Experience	Highlight need for experienced profiles
Product / Process Quality	Bandwidth	
Tools / Technology	Jira, Greenhopper or Redmine	To make decision during Sprint-0 on the tool selection
Customer	Taking decision on the CRs (if there are any during development)	To define the process during the start of the project on handling CRs during development cycle
Culture / Collaboration	Customer collaboration/commitment to resolve impediments from their end.	Need to push project start till impediments are resolved

Significant Benefits

Focus Areas	Benefits
Scope and estimation	Team's commitment to complete task as per their estimate
People	Team dynamics, workload reduction...
Product / Process Quality	Effort optimization, Cost control, On schedule, reduced defect level, reliability, usability,
Tools / Technology	Visibility, Report,
Customer	Satisfaction, Value for money ...
Culture / Collaboration	Flat organization, mutual respect, team's success
Sustenance	
Sponsors	Working software demo
Practices	Continuous improvement
Metrics	Burn down chart (focus on remaining work), effort variance