Doing Agile with Distributed Virtual Teams

Challenges & Opportunities

6th Annual Project Management Symposium
UT Dallas

Rayan Chaudhuri & Kamalesh Donthula
Thomson Reuters
Agenda

- Why distributed teams?
- Can distributed Agile work?
- Challenges of distributed Agile teams
- Resolutions and Outcomes
- Q&A
If this is how your distributed teams work....

This is what you build!
The goal is to work as “One Team”
Agile Teams...

- Agile manifesto states
  “Individuals and interactions over processes and tools”

- Agile practices emphasize that
  “Co-located teams are one of the key characteristics for success in Agile projects”

Why then distributed teams
Why Distributed Teams?

- Cost savings – outsourcing / off-shoring
- Business efficiencies – follow the sun model
- Mergers & Acquisitions
- Lack of resources
- Work from home
Why Distributed Teams?

Most software development is done by distributed teams today

Copyright ©2011 CollabNet Inc.,

Doing Agile with Distributed Virtual Teams
Distributed Teams Bring Added Complexity and Risk

- Widely distributed teams face time zone challenges and lack the ability to read critical, nonverbal cues; building trust is difficult.

- Multicultural teams come with inherent language barriers, varying attitudes, and different approaches to work, all of which increase the risk of misunderstanding.

- Multisourced teams are composed of individuals who work for different companies with multiple agendas, increasing the likelihood of disagreement and lack of trust.

Doing Agile with Distributed Virtual Teams
Can Distributed Agile Work?

- Co-location is preferred, distributed teams are inevitable
- Distributed teams bring added complexity and risk
- But opportunities are many
- Take the risk and resolve the challenges

Distributed Agile teams do work!
What Are The Challenges Of Distributed Teams?

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>11%</td>
</tr>
<tr>
<td>Motivational issues / morale</td>
<td>8%</td>
</tr>
<tr>
<td>Time differences</td>
<td>7%</td>
</tr>
<tr>
<td>Cultural differences</td>
<td>7%</td>
</tr>
<tr>
<td>Have to travel more</td>
<td>5%</td>
</tr>
<tr>
<td>Getting to know each other</td>
<td>5%</td>
</tr>
<tr>
<td>Coordinating work</td>
<td>4%</td>
</tr>
<tr>
<td>Keeping every site on the same page</td>
<td>4%</td>
</tr>
<tr>
<td>More overhead to interactions</td>
<td>4%</td>
</tr>
<tr>
<td>Need for more documentation</td>
<td>3%</td>
</tr>
<tr>
<td>Access to artifacts</td>
<td>3%</td>
</tr>
</tbody>
</table>

Doing Agile with Distributed Virtual Teams
Communication - Challenges

- Communicating in location silos
- Ambiguous, insufficient, delayed information
- Lack of expressing “one-team” culture (us Vs them)
- Not setting the right expectations
- Regional and cultural backgrounds
Communication - Outcomes

- Focus more on communication, less on structure
- Build shared ownership, “all-inclusive” culture
- Do more visual communications
- Overlapping work hours, time-shifting
- Employing the right technology is imperative
Communication Modes

- **Face to Face**
  - Why - high emotional level, body language, character, trust
  - When - release planning, iteration planning, retrospectives
  - Where - physical location, video conference, tele-presence
Communication Modes

- Meet online
  - Why - be in touch daily, constant communication
  - When - Daily team updates, stand-up meetings, iteration demos
  - Where - IM, Email, webcam, phone call, WebEx/GoToMeeting
Agile Communication Tools

Wiki
- Loosely structured data, highly customizable, collaborative
- Good match for documentation in Agile projects
- Helps distributed teams create a common knowledge base

Video Conferencing
- Makes it harder to disengage during meetings
- Body language, emotions
- Good for large projects / high value decisions
Agile Communication Tools

Information radiators at all locations

Doing Agile with Distributed Virtual Teams
Agile Communication Tools

Virtual task boards
Development Standards & Workflow - Challenges

- Heterogeneous development standards, tools, semantics
- Distributed code and artifact repositories
- Build automation & Continuous Integration
- Project governance and service-level commitments
- Adapting to the right Agile technique
According to a study by Forrester research, “firms need to implement a sophisticated workflow and new collaboration tools to govern globally dispersed projects,” including investing in change management systems.
Adopting the right Agile PM tool
- Integrated platform to build cross-team visibility
- Sets a common frame of reference - bridges technical, organizational, functional, or geographic silos
- Offer a common repository for traceability
- Facilitate communication about change, workflow, and function
Development Standards & Workflow - Outcomes

- Doing Continuous Integration and Build Automation
  - Use test scripts to help understand the requirements
  - Use regular builds to get frequent feedback on functionality

- Centralized Version control
  - Standardize on the Source Code Management tool
  - Shared code ownership for distributed teams
  - Access to enterprise’s data retention processes
Popular Agile Tools

- ALM / Agile PM
  - Visual Studio TFS ALM
  - VersionOne
  - ScrumDesk
  - GreenHopper

- Bug trackers
  - BugZilla
  - Jira
  - Mantis
  - HP Quality Center

- Documents and collaboration
  - Microsoft SharePoint
  - Wikis
  - Mind map utilities
  - WebEx, Screen sharing

- Version control systems
  - CSV
  - Subversion
  - Microsoft TFS Source Control

- Continuous Integration
  - Cruise Control
  - Bamboo
The Right Agile Technique

- Trial & error, Adapt & adjust - find the one that works!
- Distributed scrum styles
Isolated Scrum Teams

- BA
- Coding
- QA
Distributed Scrum of Scrums

Doing Agile with Distributed Virtual Teams
Time Zone - Challenges

- Scheduling team meetings
- Time-shifting
- Access to resources, getting answers
- Building collaboration culture
- Causing burn out
Time Zone - Outcomes

- Make time zone differences known
- Be considerate, ‘give & take’, avoid burnouts
- Time-shifting - make time overlap available
- Leaders and representatives at each site
- Develop local SMEs
- Set expectations for email and phone messages
Culture - Challenges

- Understand cultural differences
- Be open & honest
- Impact on business & organization
- Acknowledge local diversities
- Respect local holidays and celebrations
Culture - Outcomes

- Multi-cultural training & awareness
- Discuss local interests and events
- Team culture aimed at open & direct communication
- Plan around local holidays & celebrations, make it known
- Create an equal value system
- Take virtual coffee breaks
Task Estimation & Planning - Challenges

- Scheduling meetings with varied time-zones
- Access to SMEs/Architects for estimation
- Responsibility for shared software components
- Team trust and confidence
- Impact of cultures on work ethics, communication styles
Task Estimation & Planning - Outcomes

- Use shorter iterations
- Whole team Iteration Planning Meetings (IPM)
- Plan for access to SMEs/Architects time
- Pre-planning discussions via emails/wiki before IPM
- Promote and encourage asking questions
Building Team Trust - Challenges

- Right leadership in each location, giving autonomy
- Visibility across teams
- Shared vision and goals
- Bringing teams together, cross-site travel
- Managing matrix teams, organization support
Building Team Trust - Outcomes

- Establish strong leadership in each location
- Create role clarity, decision-making & escalation path
- Give autonomy to local leadership, specify the purpose
- Implement shared goals, builds collective ownership
- Build organization support for matrix teams

There is no silver bullet to do this...
Building Team Trust - Outcomes

- Face to face interaction is critical
- Bring team members together,
  - Plan for cross-site travels
  - Video conference
  - “Treat them as if they are co-located”
- Develop team’s cultural awareness
- Get to know the team members as persons
Building Team Trust - Outcomes

According to Martin Fowler,

“Have each site send ambassadors to the other sites..., the plane fares soon repay for themselves in improved communication”
Conclusion

- Communication & Collaboration is imperative
- Technology is critical, tools are important
- Integrated platform helps breed synergy & transparency
- Cultural awareness build cohesiveness and trust
- Strong leadership is critical in each location
- Time zones can be an advantage

Agile no longer requires co-location for everything!
Q&A

Types of Agile Teams to Avoid

1. The Sinking Ship Team
2. The Merry-Go-Round Team
3. The Roller Coaster Team
4. The Well-Oiled Machine Team

Doing Agile with Distributed Virtual Teams
References

- Distributed Scrum: Agile Project Management with Outsourced Development Teams, By Jeff Sutherland, Anton Viktorov, Jack Blount (Agile 2006 International conference)
- 2010, Forrester Research, Inc., Best Practices: Five Strategies For Leading Diverse, Distributed Teams To Success by Mary Gerush

Please email any questions to:
Rayan Chaudhuri, rayan.chaudhuri@thomsonreuters.com
Kamalesh Donthula, kamalesh.donthula@thomsonreuters.com