DISTRIBUTED AGILE DEVELOPMENT: A SURVEY OF CHALLENGES AND SOLUTIONS

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OUTLINE

- Introduction
- Agile Characteristics
- Distributed Agile Development
- Challenges and Proposed Solutions
- Conclusion
What is Agile?
- Time Boxed Software delivery approach.
- Incremental Development
- Break project into user stories
- Prioritizing them
- Continuous delivery in short iterations
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HOW IS AGILE DIFFERENT?

- Analysis, design, coding, and testing are continuous activities
- Planning is adaptive
- Roles Blur
Scope can vary

- Requirements can change

- Working software is the primary measure of success
How successful are transitions to agile ways of working?

- Great success, 11%
- Success, 33%
- Neither, 40%
- Failure, 5%
- Too early to tell, 11%
- Great failure, 2%

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CHALLENGES AND SOLUTIONS

**DOCUMENTATION:**
Use Document Management Tools:
- Issue tracker (Jira)
- Project management tool (Scrum Works).

**PAIR PROGRAMMING:**
Use of video conferencing tools or replace this with equivalent practices like:
- Show-and-Tell hour
- Daily Developer Scrum.

**DIFFERENT WORKING HOURS:**
Use of:
- Developer to developer handshakes
- end of the day status notes.

**COMMUNICATION:**
Use of Tools:
- Live Meetings,
- E-mail,
- Video Conferencing,
- Instant Messaging,
- Visual Studio Team System,
- Scrum for Team System,
- Share Point,
- Dry Erase Board, etc.

**KNOWLEDGE MANAGEMENT:**
Use of Knowledge Management Techniques:
- Knowledge Generation,
- Knowledge Codification,
- Knowledge Transfer,
- Knowledge Application.

**CULTURAL DIFFERENCES:**
- Engendering Cultural Awareness,
- Understanding Cultural Differences,
- Rotating Team Ambassadors,
- Sharing Work Practices,
- Managing Language Barriers.
CHALLENGES AND SOLUTIONS

**LANGUAGE BARRIER:**
- Speak slowly and clearly,
- Don’t assume understanding,
- Praise others for asking questions,
- Sign up for English as a foreign language course

**TEAM COHESION:**
- Maintain team involvement And cohesion.

**PEOPLE vs. PROCESS ORIENTED:**
- Addressed by two groups of practices:
  - Continuously adjust the process
  - Verify the trust.

**ROLE OF SPECIALIST:**
- Need for a specialist,
- Formal Documentation

**KNOWLEDGE TRANSITION:**
- Set up overlap time for different time zones to get 24 X 7 yield.
- Apply knowledge transfer mechanism.

**RECRUITMENT CHALLENGES:**
- Developing recruiting practices,
- Assigning agile projects for experience

**DEVELOPER’S FEAR:**
- Allow Feedback,
- Making Stand-Ups Voluntary,
- Assigning mentors and Pairing
CONCLUSION

- This survey uncover the challenges faced by geographically dispersed agile teams and the ways to conquer them

- Also discuss the context. So that the organizations can find the whole picture of different challenges in this paper and can apply the suitable approach in distributed teams