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Title: How Effective are Agile Methods for Distributed Software Development?

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Abstract

Today organisations trade in an environment where change is constantly forcing software developers to be nimble, responsive and incorporate design changes on a daily basis. These methods encourage development teams to embrace change by focusing on adaptability over planning. Distributed Software Development (DSD) is also becoming more common in order to reduce labour costs and reduce the time to market. However, research shows that time zones and geographical distance in DSD can affect communication and collaboration, which adversely affects the project. This research discusses the challenges faced by organisations using agile methods with DSD teams. It takes an interpretive approach to explore the interactions between people, process, geographical/temporal distance and cultural influences. The method of data collection used for this research is semi-structured interviews and is qualitative in nature. The Constant Comparative Method is used to analyse the data. The study reveals that the values of agile software development such as an emphasis on face-to-face communication, contact with customers and informal communications are challenged when DSD teams are used. Finally, the research presents a framework, entitled the 'Hybrid DSD Lifecycle', to address the challenges of DSD, which uses a combination of agile, and waterfall methods to best suit the DSD environment.