EXPLORING THE INTEGRATION OF AI IN AGILE PROJECT MANAGEMENT: CHALLENGES AND OPPORTUNITIES WITHIN THE SRI LANKAN IT SECTOR

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Abstract

The introduction of artificial intelligence (AI) in Agile Project Management is reshaping the way software development teams manage project planning, tracking, and completion of complex projects. Yet, while advanced tools are becoming widespread, empirical evidence relating to the use of these technologies by project managers in emerging technology hubs like Sri Lanka remains limited. This qualitative study focuses on project problems encountered in using AI for project success rate and team efficiency, and the strategy options for project leaders, grounded in the Technology-Organization-Environment (TOE) framework, for integrating its capabilities into their Agile software workflow. The study employed semi-structured interviews with 45 Agile project managers, scrum masters, and senior technical leads who actively use or evaluate AI-supported project management technologies. A purposive sampling technique was used in 15 software organizations in Sri Lanka, which yielded 3 important participants from each organization. Thematic analysis was based on three dimensions: technology, organization, and human, which revealed three major obstacles to implementation. First, teams are encountering cultural opposition toward algorithmic supervision, since the algorithm seems to be a possibility to break down trust and hinder cooperation in Agile. Secondly, the lack of data quality and low levels of digital infrastructure make the predictions less reliable. Thirdly, there is a critical competency on the part of the project leaders to apply and understand AI-driven insights practically and effectively in decision-making. However, the results provide good opportunities for project leaders. With proper governance, focused training, and team synergy, AI tools can handle sprint planning, backlog prioritization, dynamic resource allocation, and risk management, freeing up the project manager's time to lead on strategic tasks. Though qualitative in design and focused on a single developing economy, this study is useful for project management professionals, academics, and educators training the project management workforce for an automation-driven future.

Keywords: Artificial intelligence (AI), AI integration in PM, Agile Project Management, Sri Lankan IT industries, Project Management.