

Chapter 7

Managing Information Technology Projects Using Agile Methodology: The Case of Books for Africa Project

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ABSTRACT

The management of information technology (IT) projects has experienced a shift from predictive and traditional project management methodology to more adaptive practices like Agile. Agile method and its developmental stages are a response to current business-changing trends and computing needs of society. The process assists in accelerating product delivery with rapid feedback and cost-conscious, consecutive iteration, distinguishing it from other traditional practices like the waterfall method. This chapter contributes to the existing literature by discussing agile project management for IT projects, with a specific case of the Africa IT project – the Books for Africa Project (hereafter called, Book Project). The first part of the chapter is used to review the literature on Agile IT projects. The Book Project as a case is an IT project, and it is discussed in detail in the chapter. The chapter concludes with transferable lessons for projects in developing countries, specifically those located in Sub-Saharan Africa.

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INTRODUCTION

Project Management, to an extent, has been present since the beginning of human civilization. The construction of such complicated architectural masterpieces like the Great Pyramid of Giza in 2570 BC, or The Great Wall of China in 208 BC, could hardly have been accomplished without at least a rudimentary standardization of project management principles; some could even argue that it would have been impossible without highly advanced technical project planning and management expertise (Haughey, 2010).

Through the evolutionary stages of project management, the field has been exposed to a shift from more traditional project methods like waterfall to the less conventional and current methods like agile. Two important reasons for the changes have been technological advancements and the on-demand IT products and services. The shift has revolutionized project management and contemporary agile method of managing projects have significantly affected the financial (cost) and schedule (time) variables of project operations. Unlike the predictive methods which suggest concrete planning before execution, the development of agile, lean, and related method have allowed for project activities to be done iteratively without completing any specific phase, such as the planning phase (12th Annual State of Agile Report, VisionOne, 2018).

The Book Project utilized the agile method of project management to collect books for the Main Library at the University of Jos, Nigeria, West Africa. Included in the chapter are some of the challenges and benefits encountered during the process of the book collection. The case is discussed to illustrate how the project was successfully initiated and implemented using the agile project methodology. The team involved in the Book Project discovered that when implementing projects using agile methodology, there were common variables that were relevant and the chapter discusses these variables and concludes with best practices to implement related projects in developing countries.

LITERATURE

Software Project History

The history of modern software project management can be traced back to the late 1950s. Software companies adopted the already well-known waterfall model, which was primarily used for hardware production as a model for its software projects. However, with developing systems, companies realized that this linear approach of product development was less than optimal for software (Mens, 2008).

The two major limitations of this linear model were the lack of flexibility for the separation of phases and a lack of requirements' clarity especially at the start of a project. The main causes for software project failures were expanded to incomplete or unclear requirements, inadequate user involvement, inadequate resources, unrealistic time demands, unclear or unrealistic project goals, poor estimates, inadequate executive support, changing requirement, and inadequate planning (Wells & Kloppenborg, 2019)

Project Success Definition

The identification of causes or obstacles that led to software project failures led to engineering of other methodologies like agile method. The preference for agile practices was mainly to achieve project success. There are several ways to determine the success of projects and many definitions of project suc-

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