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Project ecosystem competency model

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Abstract

This study proposes a conceptual framework of Project Ecosystem Competency Model that could contribute to the creation of sustainable performance in engineering organizations and industries as well as enhancing the value of project stakeholders to contribute to project sustainability.

Within the engineering organizations, working processes are evolving from operational-oriented processes, which are repetitive and sustainable, to project-oriented processes, which can be defined as temporary and unique. In addition, organizational structures are changing from functional structures to project-driven structures. For example, engineering projects are becoming influential to industrial and organizational sustainability because of its performance of special features and requirements of the projects. However, engineering projects are not easily sustainable because they are only evaluated by one criterion whether the project has succeeded or failed.

For many organizations or industries, more than one project is being executed simultaneously, and these multi-project environments can affect the sustainability of the organizations or industries. This study proposes a Project Ecosystem Competency Model to show how ecosystem impacts project lifecycle and understand mutual and reciprocal relationship for successful management of multiple projects. Project Ecosystem Competency Model consists of three aspects: design and maturity of the project ecosystem; project success factors and performance index; and the competency of engineering project management organization that contributes to the maturity of the project ecosystem.

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Keywords: Project Ecosystem; Sustainable Performance; Project Ecosystem Competency Model; Engineering Project Management; Multi Project Management

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1. Introduction

The conceptual framework of the Project Ecosystem Competency Model (PECM) proposed in this study is intended for engineering projects that create sustainable performance by implementing the Engineering Project Management (EPM).

A Project Ecosystem is a group of projects with the same life cycle within the organizations or industry in Fig. 1. This means that their interactions and interrelations impact the sustainability of the projects.

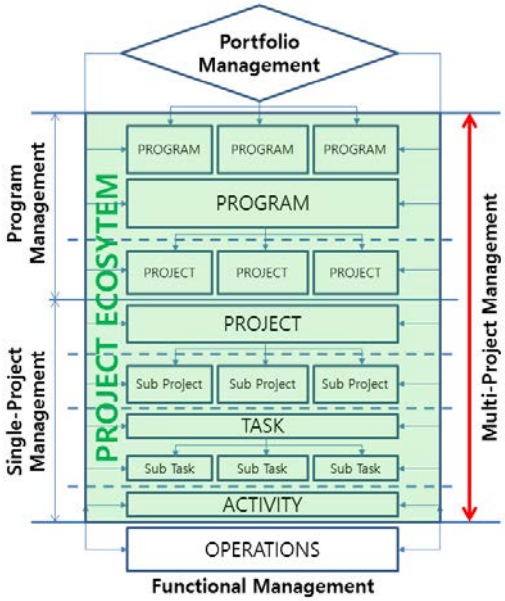

Fig. 1. Project Ecosystem and Project Management

Apollo 11 Project: It has been over forty-seven years since humankind first landed on the moon. Even though this incredible discovery happened, the exploration to this new land has not continued. Why has the Apollo Program not continued? Is it even possible to bring humankind to the moon once again? It is more likely to project the life cycle of how the dinosaur became extinct. With unsustainable Project Ecosystem, it would require restoring and reconstructing the dinosaurs' ecosystem, which is possible only with tremendous effort.

Within the engineering organizations, the work processes are evolving from operational oriented works, which are repetitive and sustainable, to project-oriented works, which can be defined as temporary and unique. In addition, the organization structures are changing from functional structures to project-oriented structures. This is especially true for the engineering projects that are becoming influential to industrial and organizational sustainability through its performances with special features and requirements of the projects. According to analysis, engineering projects are not easily sustainable due to its need for evaluations and its dependency on indications of success and failure.

For any organizations or industries, more than a single project operates under supervision and these multi projects can affect the sustainability of the organizations and industries. From this study, the conceptual model of life cycle of project through how ecosystem can give impact on life cycle of project and its mutual and reciprocal relationship for successful management of projects is proposed.