Using systems engineering to study toolbox module of innovation management platform

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ABSTRACT

Due to rapid changes of the global business environment, the Alliance of Innovation in Traditional Industry composed by the research institutions and industries in the central part of Taiwan whose objective is to integrate cross-discipline technology and to promote industrial innovation in order to enhance the value of so-called traditional industry and its competitiveness. Previously, it relied on applicant ’ s experience and knowledge when the alliance member wrote a proposal. As the result, the proposal content are often had mixed quality. Also, they are often short of proper tools to improve the proposal ’ s quality. It also takes a lot of time to process through the complicated evaluation process. Not to mention that the proposal wastes its timely effectiveness during this process. Therefore, present study main objective is to build an innovative toolbox module by using systems engineering method and process. All the tools can be classified based on the development process stages of the innovative product system including the creative ideas proposing, feasibility analysis, system development and system operation stages. Present study also provides example tool cases for the users. Starting from system requirements, this study formulates toolbox module functions. Each tool in this module will then allocate to the corresponding innovative product development phases in accordance to its features. This study also designs the toolbox format and procedure. Finally, ASP.NET tool has been used to construct the innovative tools box database. This study also demonstrates the tool application process by using applicant ’ s scenario analysis results with the introduction of a specific tool from the toolbox database. There are 30 collected tools that can be applied for innovative proposals use, including ten different types of trial version software. Users can download and install the application software from the toolbox database. This study collects the successfully cases from the AITI Database and analyzes the application tool used in these cases in order to assist the future applicants to submit a new and perfect proposal.

Keywords : systems engineering、innovation proposal、innovative toolbox

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