

A Systems Engineering Mechanism Applied to Knowledge-Intensive Service Industries

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ABSTRACT

A Knowledge-Intensive Service Industry Program was initiated by applying core technologies from systems engineering to new business models. This program uses a knowledge-management platform to integrate domain technologies, the work-flow process, collaborative design, cooperative service and business intelligence analysis, thereby introducing an innovative tool for phasing an outcome and entry/exit mechanism approach. Via this study, academic and research organizations with their accumulated technologies and intellectual properties in various industrial fields can collaborate with industrial alliance partners to develop knowledge-intensive service industries. Through the aid of new business models, systems engineering provides integrated solutions to all segments combining technology and marketing. This program applies systems engineering approaches to evaluate market needs, prospective business models and developmental processes for reducing the uncertainties associated with developing industries. A fresh-food logistics service system is used as an example to evaluate the effectiveness of the proposed mechanism and service. In the To-Be model, the system can provide accurate warehouse management information and conserve up to 50% of the floor area, 30% of the human resources and 30% to 50% of the energy efficiency.

Key Words: service industries, knowledge-management platform, innovative mechanism, business models

系統工程於知識驅動之服務業創新機制的應用

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摘要

系統工程之核心技術，可用於建立知識驅動之服務業計畫商業運轉模式。此服務業計畫係