A Study on Web-based Innovative Service Platform Using Systems Engineering - A Case of Taiwan Vehicle Industry

張書瑋、金憲

E-mail: 9606920@mail.dyu.edu.tw

ABSTRACT

In order to maintain the enterprise profit and the competitive advantage, many enterprises are turning to systems engineering practices to improve their responsiveness to the needs and expectations of various stakeholders. Systems engineering provides a systemic approaches with the process and tools for technology and business innovation. In this study, it surveys seven Domestic and Foreign innovative service platforms as follows: InnovationNet, NineSigma, InnoCentive, YourEncore, ITRI, AITI and IDC. Systems engineering approach and information technology was used to develop a web-based systems engineering service platform to cooperation the resources of local university, research institutes and industries in the area of auto-vehicle. The platform can provide innovative activities as follows: human resources function module, innovative issue tracking function module, results database function module, latest information function module, forum function module, accompanied Link function module, electronic newspaper function module, user management function module and system management function module. A web-based consulting service module was developed following the systems engineering procedures as a demo case to verify the function of this Advanced Vehicle Innovation Service Platform (AVISP).

Keywords : Systems Engineering ; Innovative Service Platform ; Systems Engineering Service Platform（SESP） ; Systems Engineering Process ; Vehicle Industry

Table of Contents

REFERENCES

一、英文部分 [1].Abdel-Malel, L. L., Wolf, C., and P. D., Guyot,“ Telema-nufacturing:a flexible manufacturing solution, ” Inter-national Journal of Production Economics, 56, 1998, 1-12.

[2].Blanchard, B. S. and W. J. Fabryky, Systems Engineering and Analysis, Prentice Hall, Inc., 1990.

[3].Camarinha-Mators, L. M., Afsarmanesh, H., and C. Garita,“ Towards an architecture for virtual enterprises, ” Intelligent Manufacturing, 9,

1998, 189-199.
[4].Foo, S., Hui, S. C., and C. Leong, “ An integrated help desk support for customer services over the World Wide Web-a case study, ” Computers in Industry, 41, 2000, 129-145.
[5].Lan, H., Ding, Y., Hong, J., Huang, H., and B., Lu, “ A web-based manufacturing service system for rapid product development, ” Computers in Industry, 54, 2003, 51-67.
[6].Hall, A. D., “ Systems Engineering from an Engineering Viewpoint, ” IEEE. Trans., SSC-1, 1965, 4-8.
[7].INCOSE, Systems Engineering Handbook, 2000.
[8].Lee, W. B., and H. C. W., Lau, “ Multi-agent modeling of dispersed manufacturing networks, ” Expert Systems with Application, 16, 1999, 297 – 306.
[9].Montreuil, B., Frayret, J. M., and S. D., Amours, “ A strategy framework for networked manufacturing, ” Computers in Industry, 42, 2000, 299-317.
[10].Offodile, O. F., and L. L., Abdel-Malek, “ The virtual manufacturing paradigm:the impact of IT/IS outsourcing on manufacturing strategy, ” International Journal of Production Economics, 75, 2002, 147-159.
[11].O ’ Sullivan, D., “ Framework for managing business development in the networked organization, ” Computers in Industry, 47, 2002, 77-88.
[12].Rochford, L., Generating & screening new product ideas, Industrial Marketing Management, no. 4, 1991, 287-297.
[13].Rahman, S. M., Sarker, R., and B. Bignall, “ Application of multi-media technology: a review, ” Computers in Industry, 38, 1999, 43-52.
[14].Sampson, P., “ Can consumer create new products, ” Market Research Society, 12(1), 1970, 40-52.
[15].Thomas R. J., New Product Development: Management and Forcasting for Strategic Success, John Wiley & Sons, Inc., 1993.
[16].Waterman N. A. and P. Dickens, “ Rapid product development in the USA, ” World Class Design To Manufacture, 1, 1994, 27-36. 二、中文部份 [17].Robert, J. Thomas，新產品研發，鄭三俠譯，智勝文化，台北，1995。
[18].小島敏彥，新產品開發管理，初版，蔣永明譯，財團法人中衛發展中心，台北，2002。
[19].司徒達賢，策略管理，遠流，台北，1995。
[20].黃啟三，新產品設計，全華圖書，台北，2005。
[21].陳銘欽，新產品開發對產業競爭力影響之研究-以汽車業為例，大葉大學管理學院碩士論文，2005。
[22].楊必立、劉水深，行銷管理辭典，初版，華泰書局，台北，1988。
[23].產業技術白皮書，經濟部技術處，台北，2005。