

Product-Service System (PSS) for inventory control: Analysis using Delmia QUEST simulation modelling based on the production line.

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Abstract. Product service system (PSS) rises surprising opportunities and purposes for companies and customers, it is in demand a set of products and services capable of fulfilling a customer's need. Companies and customers play an important role in development from traditional product-based business model to PSS, focusing specifically on the manufacturing sector industry. Based on a traditional marketing perspective, the notion of PSS originates from the shift of marketing focus from products to a more complex combination of products and services supporting production and consumption. The primary aim of positivity can be attained if the production line system is designed, based on system use, to avoid waste and if services are developed with products. This research describes how process flow in the production line and how inventory control related to PSS based on the generated result by simulation software. PSS and inventory control have not come together. From manufacturing industry perspectives, there is not a standard approach to implement PSS inventory control. Inventory control in PSS creates a more extensive set of uncertainties that the factory needs to manage due to the enhanced scope and complexity of the product and service offering. The research is carried out by using the Delmia QUEST model simulation to develop visual documentation based on the production line process. Results generated by QUEST conclude that the difference in the result obtained shows that the condition of failure and without failure in the production line affected the data regarding PSS for inventory control.

Keywords: Product service system (pss); process flow; inventory control;
Delmia QUEST

1 Introduction

Product Service Systems (PSS) is a marketable system of products and services capable of satisfying customer needs, lower environmental impact in a competitive and sustainable manner [1]. PSS is often adopted from the functionality of a product offered by an additional service offer. Simulation by the computer in the manufacturing system is the utilise of software to make simulation models of

simulation software, not only one variable can be tested but the software also allows combined changes that affected the production line processes. With the ability to generate a result, a capacity to foresee the effect of the changes can be made. Delmia QUEST is helpful software to enable the decision-making process and improve the system efficiently without the possibility of wipe eliminate the actual events.

Acknowledgements

This paper would not be possible without the financial support given by the Universiti Malaysia Pahang via RDU180385. Neither would it be possible without the support, time and knowledge provided by the collaborating industrial company

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