

Enhancement of the efficiency of internal supply chain production system through process-to-process interaction (Article)

Ani, M.N.C., Kamaruddin, S., Azid, I.A.

Abstract:

In this paper, the effectiveness of the internal supply chain consisting of production layout has been investigated based on systematic approach of implementation hybrid production system in automotive manufacturer. Traditionally, production layout was designed based on a single concept of production system such as product-based, process-based or job-shop. But in automotive manufacturer, the hybrid production is more relevant due to the finished-goods/product requiring thousands of the child-parts. Therefore the integrated system between product-based and process-based is more suitable. However, this hybrid production system raises some of the hidden issues such as miscommunication between processes. This research has been conducted by reviewing these issues, and subsequently a systematic approach has been developed to improve the processes' communication. The result shows significant impact where the production wastes were drastically minimised, waiting time was improved from 14% into 11% and line balancing had achieved the optimum rate which is 89%.

ISSN: 17466474

DOI: 10.1504/IJPQM.2022.122294

PUBLISHER: SCOPUS