

Quality System Functionality Evaluation in Production Logistics

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Abstract

Purpose: This paper addresses a comprehensive modeling and functionality evaluation of a module-based quality system in production logistics at the highest domain abstract level of business processes.

Design/methodology/approach: All domain quality business processes and quality data transactions are modeled using BPMN and UML tools and standards at the business process and data modeling. A modular web-based prototype is developed to evaluate the models addressing the quality information system functionality requirements and modularity in production logistics through data scenarios and data queries.

Findings: Using the object-oriented technique in design at the highest domain level, the proposed models are subject further development in the lower levels for the implementing case. The models are specifically able to manipulate all quality operations including remedy and control in a lot-based make-to-order production logistics system as an individual module.

Practical implications: Due to the specification of system as domain design structure, all proposed BPMs, data models, and the actual database prototype are seen referential if not a solution as a practical "to-be" quality business process re-engineering template.

Originality/value: This paper sets out to provide an explanatory approach using different practical technique at modeling steps as well as the prototype implementation.

Keywords: Business process, Data modelling, Production logistics, QIS, UML, BPMN, Data query

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