



Dear readers,

The third edition 2016 reflects the growing importance of research in production engineering area, both in terms of the contribution for solving industrial problems and for generating scientific knowledge. The first paper proposes a procedure for the implementation of the sales and operations planning process (S&OP). The article includes the mapping process and activities, as well as an application on an automotive company. The second paper explores the concepts and discusses the decision factors for the allocation of projects for initiatives of Design for Six Sigma and Design Thinking. Thus, a case study in a financial company is used. The study indicates that the Design Thinking tends to be more effective, promoting innovative results. The third paper aimed to identify gaps in the implementation of risk management. The research was based on an action research in an engineering company. The results show the importance of top-down engagement in the implementation of risk management. The fourth paper discusses the use of combustion with energy recovery for co-processing, aiming to reduce the municipal solid waste volume (MSW) sent to landfills. Therefore the authors designed a mathematical model to support the structuring of reverse logistics system of MSW for co-processing. The last article of the first block employees multiple case studies, analysing the impact of MES (Manufacturing Execution System) implementation to manufacturing companies. Confirming the current literature, the results show improvements in competitive priorities, especially in the production cost, delivery time and quality.

The sixth article discusses standards and concepts used in civil-military coordination in the context of humanitarian logistics, presenting the types of employment of military assets in various humanitarian responses. The article also discusses the performance of the Brazilian armed forces in disaster management, its challenges and limitations. The seventh paper discusses the factors that promote resilience in supply chains. Thus, a systematic review of the literature is performed. As a result, twelve facilitators for resilience in the supply chain have been characterized. The eighth article, by means of a single case study, exploratory and descriptive, aimed to analyse the use of earned value management technique in a construction project from the perspective of Lean Construction. The following article evaluates an alternative to existing energy trading models currently in Brazil. More specifically, it is examined the feasibility of the use of a cooperative model. The focus of the evaluation was the potential to mitigate risks and reduce restrictions for small and medium consumers. For this real data on price of electric energy, its consumption and future demand are explored. The tenth article presents an analysis of the implementation of Urban Logistics Spaces as intermediate distribution centres in freight transport in urban areas using vehicles and tricycles to reduce the negative impacts of urban freight distribution. The results of the analysis of a practical example indicate that the operating costs, mileage, number of vehicles and emissions are reduced with the implementation,

benefiting for urban mobility.

The eleventh article presents the proposal of a method for the implementation of Lean in administrative areas, incorporating the use of Business Process Management techniques. The next article deals with the application of production capacity concepts and demand forecasting, in order to propose solutions that optimize capacity utilization. The thirteenth article makes use of metamodeling technique to create a mathematical model that represents a particular output of a discrete event simulation model of, and proceeds with its optimization. To illustrate the method simulation models related to the medical field were used. The use of metamodeling for optimizing simulation models reached statistically equal solutions found by a commercial optimizer with the advantage of reducing the computational time of the process. The next article also uses simulation, specifically System Dynamics, to assess the reduction of environmental impact with the implementation of Green IT practices such as server virtualization and the shutdown of the equipment when not in use. The final article aims to evaluate the performance of the fuel flow processes through the application of data envelopment analysis technique (DEA).

In this edition we have 41 authors from 6 states in Brazil. The authors represent 20 different educational institutions. We hope this collection of papers can contribute to enrich your learning.

We wish you all a good read!

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