

Optimizing Work Processes: a Comparative Study of Lean and Work Study Principles

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Abstract

This research explores the practical applications of Lean and Work study methodologies across diverse industries in the context of increasing pressures for efficiency and optimization. Lean principles, emphasizing waste reduction and continuous improvement, are examined alongside Work study's systematic analysis and optimization of work processes. Through a comprehensive literature review and realworld case studies, this study highlights Lean's versatility in reducing waste, enhancing productivity, and promoting continuous improvement. Its adaptability across various sectors underscores its potential as a universal improvement methodology. However, the choice between Lean and Work study depends on an organization's specific context, objectives, and industry. While Lean excels in waste reduction and productivity enhancement, Work study's meticulous work procedure optimization suits industries like construction and healthcare. The decision should be made thoughtfully, considering an organization's goals, industry,

processes, and available resources. Both methodologies offer valuable tools for process improvement. Keywords: Lean Methodology, Work Study, Process Improvement, Waste Reduction, Continuous Improvement.

Keywords

Lean, Engineering, Kaizen, Method Study and Optimization.

Biographies

Ngaka Mosia is a lecturer at the University of South Africa. He holds a Master of Philosophy in Engineering Management degree from the University of Johannesburg. Ngaka has presented various national and international conference papers and published several journal papers. He is a member of SAIIE, IEOM, NADEOSA and SASEE and has more than 20 years' industry experience on various levels.

Kemlall Ramdass is a full Professor and associate director of quality in the School of Engineering in the college of science, engineering and technology. He is the first full professor in the department Industrial Engineering in the University of South Africa. He earned a master's in engineering management from the University of Johannesburg and PhD in Engineering Management from University of Johannesburg. He has published journal and conference papers. His research interests include manufacturing, simulation, optimization, reliability, scheduling, manufacturing, and lean. He is a member of IEOM, SAIIE, ECSA and SASEE.

Koketso Masenya is a lecturer in the department of industrial engineering, in the college of science engineering and technology, at the University of South Africa. She has taught courses in production management and entrepreneurship and innovation for engineers. Ms. Koketso Masenya is an emerging researcher and member of woman in engineering. She is a member of IEOM and SAIIE.