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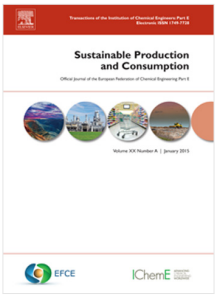

Flexible sustainable manufacturing via decision support simulation: A case study approach

K.T. Shibin, Angappa Gunasekaran, Rameshwar Dubey

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*Research Highlights

Flexible Sustainable Manufacturing via Decision Support Simulation: A Case Study Approach

Research Highlights

The main purpose of this article is to illustrate a decision support system for the redesign of an existing assembly facility in an automotive factory for new product introduction in a flexible and sustainable way with the help of a simulation-based optimization approach.

In our study, we have assigned equal weightage to each performance parameter of the facility, including economic, environmental, social, and manufacturing flexibility.

Our analyses further helped validate the changes required before implementation. Implementation of the proposal based on our findings helped the organization achieve economic benefits and environmental benefits. Along with these benefits, our studies have also helped improve safety measures and working conditions.

Finally, we have outlined the limitations of our study and noted future research directions.