Identification and Characterization of Improvement Opportunities in Industrial Processes

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Abstract

Flexibility in responding to demand has become a major challenge for industries today. To achieve customer expectations, organizations must be flexible enough to offer a wide range of products and services that are available at any time and with the quality expected by customers. Digitization and Industry 4.0 have a strong impact on today's production environment. Established lean production methods are part of this flexibilization process and can be improved through new technologies. Any digitization must deal with waste and reduce it more effectively than a classic lean approach could. When compared to conventional automation, lean automation spaces are smaller, system prices are cheaper, inventory and energy use are lower. The system designer and operator, however, must have higher skills and knowledge. The integration of innovative automation technology along with lean production is an up-to-date and promising topic as industry 4.0 will not solve the problems of poorly organized and managed manufacturing systems. Furthermore, its tools must be applied to lean activities that are already successful even before automation.

Keywords: Industry 4.0. · Lean Manufacturing · Continuous Improvement · Industrial Processes.