

Embedding safety into the lean philosophy

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Lean manufacturing involves minimizing expenses by attempting to eradicate waste, waste of materials, energy, and human resources. But, if lean efforts are at the cost of safety then that is a bad thing for any company, research in the *International Journal of Lean Enterprise Research* emphasizes.

"To remain profitable, organizations must continue to lower costs while maintaining quality and productivity," explains Elizabeth Cudney of the Missouri University of Science and Technology, in Rolla, Missouri, USA, and colleagues. However, she points out, "During the focus on lean implementation there is a potential of introducing hazards and changing a process in ways that can result in non-compliance of health and safety regulations." The lean philosophy, taken to its logical conclusion, should see money and time spent on accidents and employee compensation as just as wasteful as ordering too much raw material for a product, and as such it too should be minimized.

The team explains that the lean philosophy was invented by leaders at Toyota, Taiichi Ohno, Shigeo Shingo, and Eiji Toyoda during the company's formative years in the car industry. The company practiced and perfected an approach to manufacturing the right product at the right time and in the right quantity, also known as just-in-time (JIT). The team further explains that the main tenet of lean is to identify waste, or non-value adding (NVA) activities, and to then eliminate or minimize them as far as possible; waste being anything consumes time, energy, money, or resources and does not add value to the final product or service.

Now, on the basis of a survey of companies using lean today, Cudney and colleagues suggest that lean and safety issues must be addressed at the same time in order to produce a more productive and safer working environment. They point out that, "When there is a passionate effort to lean processes, there is a danger that lean facilitators might overlook health and safety issues or even introduce new hazards." They emphasize that waste related to safety issues should be considered by lean practitioners from the outset. Ergonomics, health and safety, and continuous improvement activities in lean can be integrated to boost efficiency and improve working conditions.

More information: Cudney, E.A., Murray, S.L. and Pai, P. (2015) 'Relationship between lean and safety', *Int. J. Lean Enterprise Research*, Vol. 1, No. 3, pp.217-231.

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