

Appropriateness of production systems for the construction industry

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The manufacturing industry has been a constant reference point and a source of innovation for construction over many decades. The lean concept is one of such strategies adopted by the construction from the manufacturing to improve performance. In order to take the benefits of lean techniques developed in the manufacturing industries, it is important to identify which categories of manufacturing systems are best applicable to construction. Many research studies have identified construction as a lean resistant industry because it differs from manufacturing due to site production, temporary multi-organization and one-of-a-kind nature projects. The main objective of this study is to find different characteristics of construction processes and how lean techniques can be adopted to them. The method used for this study is a practice oriented research approach where it compares the characteristics of two construction processes with manufacturing process characteristics. In the attempt of visualizing the existing process, different mapping techniques were used and it can be concluded that certain construction techniques like pre-fabrication soften the construction peculiarities. Furthermore, the construction process can be identified as a combination of fabrication and assembly processes with different characteristics such as layout, material flow, information flow, and work element.