Improving Industry 4.0 | A Service Science Perspective

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Abstract

Traditionally, customers were considered to be destructive value stakeholders, independent of products, and distant from production sites. Industry 4.0 is a hot and relevant topic, driven by digital technologies, which has made it possible to incorporate a new economic dimension: the consumer collaborates with the producer in the co-creation of products. Service Science is a multidisciplinary scientific discipline, which studies the interactions between abstract entities called service systems. Considering that value is the result of collaborative interactions between service systems, Service Science appears to be one of the most important emerging scientific fields suitable in the approach and development of Industry 4.0. Given this apparent alignment between the mindset of Industry 4.0 and the philosophical base of the Service Science, the following question arises: How to address Industry 4.0 through the Service Science? As a methodology to find a possible answer to this question, we started from a literature review, in which divergences and gaps between the Service Science Body of Knowledge and its philosophical basis Service-Dominant Logic were explored and identified. The main goal is to understand the potential tension of these two approaches in the context of Industry 4.0. Once the divergences gaps identified, a conceptual framework is conceptualized, through which, the creative interactions of Industry 4.0 can be enhanced and scaled use of Service Science's Theory.

Keywords: Service Science; Service Systems; Industry 4.0; Service-Dominant Logic; Cyber-Physical Systems.

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