Competency model with a focus on Industry 4.0 aligned to industrial SMEs, as a triggering instrument for their digital transformation

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Abstract

Digital transformation involves radical changes in business models, techniques and technologies, materials, and software currently used by companies, especially in manufacturing. Industry 4.0 brings opportunities for industry through digital technologies and intelligent information by forming fully integrated, automated, and optimized production flows that improve efficiency and productive capacity. From the perspective of the systemic approach that encompasses all the elements, interactions, and interdependencies of the system under study, this research proposes the definition of a competency model focused on Industry 4.0, which includes different dimensions of digital transformation, strategy, technologies, talent or profiles, organizational culture, and communications. A general and adaptable framework for industrial SMEs in Mexico, which considers their technological maturity as a starting point and the lines of action concerning enabling technologies, indicators, and knowledge and competencies needed to prepare them and turn them into smart factories.

Keywords

Industry 4.0, Digital transformation, Profiles and Competencies, Framework, SMEs.