

# Impact of Artificial Intelligence on the Evolution of Performance Measurement in Supply Chain 4.0

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**Abstract.** The evolution of Industry 4.0 technologies is currently transforming the manufacturing sector influencing directly performance measurement systems (PMS) and ended requiring new organizational processes. Traditional systems, based on static indicators and past data, are no longer sufficient to manage the real-time and interconnected systems of modern supply networks. In this context, Artificial Intelligence (AI) with its capabilities presents ultimate opportunities to improve PMS.

This study examines for the first time the evolution of industry 4.0 technologies then introduces the importance of those technologies for supply chain and especially for performance measurement impact, and at last, a conceptual model is proposed to demonstrate how AI can affect PMS through a matching between PMS's requirements and IA capabilities using WSM method.

**Keywords:** Industry 4.0, intelligent supply chain, performance measurement indicator, KPI, supply chain management, WSM