

## CONFERENCE PAPER

**Title** : Analytical framework of potential tensions in case of industrial SMEs facing Industry 4.0 implementation

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### Abstract :

The concept of Industry 4.0 still triggers multiple challenges that SMEs should overcome before, during and after its implementation. While existing studies offer an overview of potential enablers and barriers and strategic roadmaps to follow, their representation is far global and do not consider the uniqueness of SMEs. Moreover, there is a research gap about how these elements can enter in tension and create additional challenges for SMEs facing Industry 4.0 implementation. Therefore, this paper conducts a narrative literature review to draw an interpretive framework about potential tensions that can occur between existing enablers and barriers that SMEs can experience and strategic choices that they make during Industry 4.0 implementation. The 50 identified tensions are analysed by means of a contextualist approach to stress the importance of considering Industry 4.0 implementation as change management project. By following such logic, SME may become aware of tensions among its pre-existing inner or outer features (context) as well as by undertaken actions towards this transformation (process). Together, these tensions can influence the way a SME makes its strategic choices about Industry 4.0 implementation (content). The results of this study show that tensions can be also detected between ideal types of strategic choices that can be influenced by contextual tensions or reflect processual tensions. By going further than a classification of existing findings, the study stands for a new implication for SMEs facing Industry 4.0: without considering their particularities on a case-by-case basis, they can endure extra challenges in the form of tensions.

### Keywords:

Industry 4.0 implementation; Small and medium enterprises; Tensions; Drivers; Barriers; Strategy

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