Invited session

Digital Transformation in SMEs: industrial practices, state of the art, challenges and issues

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Abstract: Digital Transformation (DT) in industry becomes well-admitted today. Companies are currently undergoing this phenomenon for a variety of reasons: to meet customer demand, to improve technical performance and propose innovative products, to face market competition, etc. Besides, DT affects several dimensions of the industrial company such as: business processes, technologies, structure, competencies and work culture and has also to cope with sustainable considerations. In this sense, companies are more or less advanced in their DT, depending on their size, sector and culture. Having limited resources, Small and Medium Enterprises (SMEs) are particularly facing difficulties in grasping DT.

Subscribing with the SMEs DT management, the aim of this session is twofold: to explore existing approaches and case studies from DT and to draw up perspectives to support SMEs in their DT. How far have SMEs come in implementing DT? What are the difficulties they face? Which frameworks, methods and tools have been developed in literature to support SMEs in their DT? What are the scientific challenges and issues?

Contributions are expected either from companies and academics. They may relate to various phases of DT, respectively before, during and after implementation. Some of the considered topics are described hereafter throughout the following questions (but are not limited to):

- How can the "readiness" of an SME be assessed before embarking on DT? How far is this readiness considered during implementation?
- What are the success factors for DT? These may concern the digital past (success & failure stories, digital usage and bypass), the software and hardware infrastructures, the reliability of current digital systems, the eco-system (collaboration with IT service providers, constraints imposed by contractors, government…), the digital culture, the social capital (cognitive, relational), etc.
- How do companies consider environmental, social and ethical dimensions during DT? Do SMEs have the means to take these dimensions into account? How can these dimensions be assessed once DT has been carried?
- How to support companies in the choice of digital technologies and their implementation? How to support staff during DT?
- How to measure and improve digital "maturity", respectively before, during or after the DT?
- How to assess DT success as well as its impact on SME's performance? What is the link between DT success and performance improvement? (bearing in mind that the performance is not limited to the triptych cost/quality/time)
- How to assess the Impact of DT on the company's business model?

Keywords: Digital Transformation (DT), Industry 5.0, SMEs, Readiness, Maturity, Success factors, Performance, Sustainability.

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If the theme of the paper is not suited to the session scope, the paper will be evaluated and considered for a regular session.

Key dates

January 31, 2024 – Full paper submission

March 15, 2024 – Notification to authors

April 15, 2024 – Final paper submission

For any further information, please contact the organizers of the invited session: lamia.berrah@univ-smb.fr and lilia.gzara@insa-lyon.fr