"LARG (Lean, Agile, Resilient, Green) Supply Chains and Manufacturing Systems"

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Abstract
Supply chains and manufacturing systems are increasingly facing various internal and external challenges. Besides the typical phenomena that have been characterising the markets of the last decades (e.g., globalization, price volatility, competitiveness, network complexity, or demand customization), the recent natural, sanitary, and geopolitical disasters largely disrupted industrial systems worldwide. The real challenge that the industrial systems face today is achieving sustainable performance while responding to the competitive market with rapid and unexpected changes. This also implies that the systems need to consider contrasting factors and satisfy multiple constraints simultaneously. In the attempt of combining the various features of the industrial systems, as associated with the necessity of being increasingly efficient, the concept of LARG was coined, which grounds on four paradigms, i.e., lean, agile, resilient, and green. "Lean" refers to a possible strategy focused on cost minimisation and waste elimination, 'zero inventory' and 'just in time' (JIT) approach. The concept of "Agility" describes the capability that allow for flexibility and responsiveness to (volatile) market requests. "Resilience" refers to the capacity of adaptation, ability to manage uncertainty and recover from disruptions. Finally, the concept of "Green" is used instead of sustainable when dealing with environmental-related themes, motivated by climate change, excessive waste production and scarcity of natural resources. The current literature usually addresses the topics separately; however, the recent coronavirus (COVID-19) epidemic demonstrates the necessity to extend and integrate these principles for designing efficient systems, able to prevent and face unexpected events. Thus, in modern era, Lean, Agile, Resilience and Green paradigms needs to be adopted and used together for increasing the competitiveness of industrial systems and guaranteeing their sustainability. In recent research, the lean, agile, resilience and green paradigms are starting to be integrated with other perspectives, e.g., sustainability, which is a further interesting area of research.

Session topics
This Invited Session aims to collect the recent research, which study and combine Lean, Agile, Resilience, and Green paradigms in operations and supply chain management, and consider the impact of the effect of their combination on system performance. Quantitative, theoretical, empirical studies and applied research papers are welcome. The session aims at attracting papers including but not limited to the following topics: present and new trends in the association of LARG paradigms; combined effects, benefits, conflicts or trade-off treating one or more paradigms at a time; integration of lean, green, resilience and agile practices with the technologies of I4.0; key performance indicators for lean, agile, resilience and green evaluation; drivers, barriers, factors for LARG integrated models.

Submission
Papers must be submitted electronically using the IFAC PaperPlaza conference manuscript management system: www.ifac.papercept.net. All submissions must be in PDF format, written in English, and prepared according to IFAC format, see: https://ifac.papercept.net/conferences/support/support.php for details. The corresponding author submits the paper online (pdf format) as an invited session paper. **Submission as an invited session paper requires the invited session code: xxxx**. Several international journals are associated with MIM 2025 for publication of special issues.

Important dates:
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