

Towards Industry 5.0: Implications for Supply Chains

**27th International Symposium in Logistics, Twente
Sunday 9th July 2023 (14.30hrs – 18.00hrs)**

Workshop leaders: Dr Christos Braziotis¹, Dr Maria Pia Ciano¹, Dr Engin Topan²

Background

The ISL community has been meeting annually in a pre-conference workshop to discuss, debate and develop understanding about current, pervasive, and future Supply Chain (SC) issues. These workshops have traditionally involved both academics and practitioners, with the aim to develop pragmatic results that align theory and practice. The most recent workshops in Bali (2018), Würzburg (2019), online due to the pandemic (2021), and Cork (2022), have effectively addressed a wide range of issues like industrial SC digitalization, COVID-19 impact on logistics, and more recently circular SC systems.

This year, the debate will focus on the impact of current and future societal and economic developments on SCs. In the last decade 'Industry 4.0' (I4.0), represented by the cyber-physical production system, drove global companies towards responsive systems based on flexible production and a transparent SC. Since late 2016, scholars have been calling for a more precise declination of the intents of I4.0 into the so-called 'Industry 5.0' (I5.0), an extension from digital manufacturing to digital society. In 2021 the European Commission suggested that I5.0 "complements the existing "Industry 4.0" approach by specifically putting research and innovation at the service of the transition to a sustainable, human-centric, and resilient industry". Covid-19 amplified SC vulnerability, highlighted the need to strengthen their resilience, and to rethink working models. The international conflicts reinforce the need for industries and economies to be resilient to external shocks. The European Commission recognises this paradigm and its dimensions (sustainability, humans-centric approach, and resilience) as the answer. However, the topic of I5.0 remains in its early development phase and accepted standards for its implementation are lacking. A significant gap concerns understanding the transition from I4.0 to I5.0 for individual operations and across the SC.

Purpose of the workshop

This workshop seeks to explore the transformation from I4.0 to I5.0 for SCs, debate the necessary changes, and the research and practical implications. This can take the form of the following areas of discussion:

1. What is the motivation for the transition from I4.0 to I5.0?
2. What are the transition-related challenges/risks?
3. How should the transition take place?

Outline Structure of the Workshop

The workshop will follow the approximate timetable below:

- 14:15 - 14:30 Tea/coffee & Networking
- 14:30 - 14:45 Welcome and brief introduction to the workshop topic
- 14:45 - 17:45 Workshop group work and individual comments
- 17:45 - 18:00 Concluding discussion

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