Séminaire conjoint / Joint Seminar
CRI²GS, École des sciences de la gestion (ESG) - UQÀM

Guido Perboli

Politecnico di Torino, Italie/Italy

DESIGNING REAL-WORLD USE CASES BY A LEAN BUSINESS APPROACH FOR INTRODUCING BLOCKCHAIN IN LOGISTICS AND SUPPLY CHAIN

Abstract: The Blockchain technology can be defined as a distributed ledger database for recording transactions between parties verifiably and permanently. Blockchain emerged as a leading technology layer for financial applications. Nevertheless, in the past years, the attention of researchers and practitioners moved to the application of the Blockchain technologies to other domains. Recently, it represents the backbone of a new digital supply chain. Thanks to its capability of ensuring data immutability and public accessibility of data streams, Blockchain can increase the efficiency, reliability, and transparency of the overall supply chain, and optimize the inbound processes (Crainic et al., 2018; Gatteschi et al., 2018).

The literature concerning Blockchain in non-financial applications mainly focused on the technological part and the Business Process Modeling, lacking in terms of standard methodology for designing a strategy to develop and validate the overall Blockchain solution and integrate it in the Business Strategy (Perboli et al., 2018).

In this seminar, we show a first attempt to overcome this lack. First, we integrate the current literature filling the lack concerning the digital strategy, creating a standard methodology to design Blockchain technology use cases, which are not related to finance applications. Second, we present the results of a use case in the fresh food delivery, showing the critical aspects of implementing a Blockchain solution. Finally, we discuss how the Blockchain will help in reducing the logistics costs and in optimizing the operations and the research challenges.

➤ Crainic, T.G., Perboli, G., Rosano, M. (2018). Simulation of intermodal freight transportation systems: A taxonomy European Journal of Operational Research, 270(2), pp. 401-418. DOI: 10.1016/j.ejor.2017.11.061.

➤ Gatteschi, V., Lamberti, F., Demartini, C., Pranteda, C., Santamaría, V. (2018). "Blockchain and Smart Contracts for Insurance: Is the Technology Mature Enough?" Future Internet 10, 20.

➤ G. Perboli, S. Musso, and M. Rosano, (2018). Blockchain in Logistics and Supply Chain: A Lean Approach for Designing Real-World Use Cases, IEEE Access, vol. 6, no. 1, pp. 62018–62028.

Note : Guido Perboli is Associate Professor of Strategic Management and Operations at the Department of Control and Computer Engineering. He is also co-director of the ICE center - ICT for City Logistics and Enterprises (ICE) center, a research center focused on two of the main activities supporting the Urban growth: logistics and enterprises. He is a CIRRELT collaborating member.

MARDI / TUESDAY
21 mai 2019 /
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11h00

Salle / Room 5441
Pavillon André-Aisenstadt
Université de Montréal

Ouvert à tous / Open to all

Organisateur / Organizer

Teodor Gabriel Crainic

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