Introduction to Blockchain Cases and Innovations

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On October 31st 2008, Satoshi Nakamoto introduced Bitcoin to the world. Since then, the technology underlying Nakamoto's proposition has affected multiple sectors and brought disruptive innovation to many areas. Our minitrack on blockchain cases and innovation seeks to speed up the adoption of blockchain technology. It serves as a forum for the presentation and discussion of exemplar blockchain use-cases and innovation. In doing so, it shares insights on how blockchain influences organizations and fosters innovation. In this 4th edition of the minitrack, we received 23 interesting articles. Based on reviewers' comments, we finally accepted 11 papers that contribute to the body of knowledge and spread the adoption of Distributed Ledger Technologies (DLT).

The first paper focuses on the application of Blockchain technology to supply chains. Marco Näf, Thomas Keller, and Roger Seiler review articles in blockchain and supply chain, critically discuss them and conduct a market analysis and survey this topic.

The second article was written by Marek Wester and Boris Otto, and it proposes a methodology for the sustainability assessment of digital currencies. The methodology considers transparency, relevance, comparability, scalability, and fairness and it was applied to ten cryptocurrencies.

In the third paper, Christian Straubert, Eric Sucky, and Jens Mattke aim to address privacy and scalability limitations in public blockchains. Their work proposes a public blockchain freight exchange protocol, and it is tested through a design science approach.

The fourth article is written by Chen Ye and Lin Zhao, and it is entitled "*Public Perceptions of Facebook's Libra Digital Currency Initiative: Text Mining on Twitter*". The article contributes to the normative literature by extracting and analyzing perceptions on Twitter regarding Libra.

The next paper is authored by Youssef El Faqir, Javier Arroyo, and Samer Hassan. It investigates a scalable voting system by focusing on the validation of holographic consensus in DAOstack.

In the sixth paper, Mohammad Saidur Rahman, Ibrahim Khalil, and Abdelaziz Bouras propose a smart contract workflow verification framework for a blockchain-based supply chain management system. The authors use Petri-Nets to model smart contracts workflows.

The next article presents the research of Venkata Marella, Maryam Roshan, Jani Merikivi, and Virpi Tuunainen. The article focuses on rebuilding trust in digital currency exchanges after the cyber-attacks. The authors study seven different cryptocurrency exchanges and investigate their actions after cyber-attacks. The exchanges' practices on rebuilding trust with existing customers and bringing in new customers are presented.

A design research study is presented in the next article, which was written by Daniel Beverungen, Sebastian Overhage, Albert Gorlick', Pascal Moerschel, and Sebastian Schuermann. The study focuses on blockchains for pay per use models, identifies blockchain advantages and disadvantages compared to other technologies, and identifies properties for blockchain business scenarios.

The ninth paper is an exploratory cases study on smart contracts, and it focuses on process automation in blockchains. The paper was written by Julia Eggers, Andreas Hein, Jörg Weking, Markus Böhm, and Helmut Krcmar.

The second to last paper has the title "*Understanding the Challenges of Blockchain Technology Adoption: Evidence from China's Developing Carbon Markets*" and was authored by Xing Chen and Ashley Lloyd. The paper investigates blockchain barriers in Chinese carbon markets. The authors conducted interviews with experts in this area, and they analyze and report their findings.

Lastly, the paper written by Muhammad Saleem Malik, Mehmood Chadhar, and Madhu Chetty, investigates the adoption of blockchain technology. The paper uses the Technology, Organization, and Environment (TOE) framework and the Institutional Theory. It is based on an interpretative qualitative research approach to explore factors influencing blockchain adoption in Australia. The authors identify multiple factors that influence the adoption, such as complexity, cost, perceived novelty, and the disintermediation feature of blockchain technology.