

RESILIENCE OF SUPPLY CHAINS AND THE ROLE OF SIMULATION

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ABSTRACT

Supply chain resilience refers to the capacity of a supply chain to proactively prepare for unforeseen events, effectively address disruptions, and bounce back from them while ensuring the sustained smooth operation of the supply chain at the preferred level of connectivity and management of its structure and functions. Recent disruptive events including the Covid-19 pandemic and the Russian invasion of Ukraine have caused an increased emphasis on supply chain resilience. In this presentation, we discuss strategies to prepare for, address, and bounce back from (potential) disruptions and the role that simulation can play in enhancing supply chain resilience.

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JOHN FOWLER is the Motorola Professor of Supply Chain Management in the W.P. Carey School of Business at Arizona State University. He served as the department chair of supply chain management from 2011-2016. Prior to that he was the Avnet Professor of Industrial Engineering at ASU. His research interests include discrete event simulation, deterministic scheduling, and multi-criteria decision making. He has published more than 120 journal articles and more than 100 conference papers. Professor Fowler recently served as editor-in-chief for IIE Transactions on Healthcare Systems Engineering and continues to be the department editor for Healthcare Operations Management at the journal. He is an editor of the Journal of Simulation and associate editor of IEEE Transactions on Semiconductor Manufacturing. He is a fellow of the Institute of Industrial and Systems Engineers and recently served as the vice president for continuing education. He is a former INFORMS vice president, and served on the Winter Simulation Conference board of directors from 2005-2017. He was also the program chair for the 2002 and 2008 Industrial Engineering Research Conferences and the 2008 Winter Simulation Conference.