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INDUSTRY 4.0 INNOVATION IN SEMICONDUCTOR PLANNING AND OPERATIONS

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ABSTRACT

Industry 4.0 innovations in smart manufacturing and AI have demonstrated impact at scale in manufacturing semiconductor industry. The big data technology concept was started in quality and yield improvement. However, much attention was not given to planning and scheduling of semiconductor industry, which is a key of productivity improvement and customer demand satisfaction. Micron Technology is a world leader of semiconductor memory and data storage and has an initiative to drive Industry 4.0 for planning and scheduling pillar with smart manufacturing and artificial intelligence. This keynote will introduce the evolutionary steps of planning and scheduling systems to support smart manufacturing and digital transformation that leads to streamlined planning and scheduling to drive the productivity improvement and demand satisfaction using digital twin, optimization, artificial intelligence.

AUTHOR BIOGRAPHY

KOEN DE BACKER is the Vice President of smart manufacturing and artificial intelligence at Micron Technology. He is responsible for driving Micron's smart manufacturing initiatives and digital operations including capabilities with IoT, artificial intelligence, advanced analytics, cognitive computing and machine learning to enhance our business, global operations and product development. Prior to joining Micron, Koen led large-scale operations projects for more than a decade to help clients reduce inefficiencies and achieve excellence in manufacturing, procurement, supply chain and support functions. Most recently, Koen was a Partner at McKinsey & Company where he steered the semiconductor consulting practice in Southeast Asia and was one of the firm's leading experts on applying artificial intelligence and automation techniques across operations and support functions such as finance, human resources and procurement. Additionally, Koen consulted with high-tech global clients while working at Deloitte Consulting, Altran Europe and CSC. Koen holds a master's degree in business administration from INSEAD and master's degrees in both industrial management and electromechanical engineering from Katholieke Universiteit Leuven.