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The Future's Smartest Supply Chains Will Leverage Blockchain

“I envision blockchains as the orchestrator of the supply chain process, where supply chain events – or transactions – can originate from applications as well as ‘things’. A smart contract will determine the next action to be conducted along the supply chain, based on blockchain transactions linked to the contract.”

This is the contention of Amsterdam-based global blockchain expert Arjeh van Oijen, who will be sharing his expertise and vision with African supply chain professionals at the upcoming SAPICS Conference.

Most widely understood in relation to Bitcoin, blockchain technology has expanded beyond its cryptocurrency application, and the supply chain is one area in which it is expected to deliver big benefits. Today's complex, multitiered and increasingly global supply chains encompass more participants, suppliers and service providers than ever before, spread across different geographies. There is a burgeoning demand for supply chain visibility, traceability, reliability and integrity. Van Oijen believes blockchain is the solution.

He cites the example of the technology's application in fighting the blood diamond trade as evidence of the unrivalled traceability that blockchain can deliver in supply chains. *“Blockchain offers a tracing system for durable goods, and one example of this is where it is being used to prevent blood diamonds from entering normal circulation.”* Information on diamonds is securely housed on the tamper-proof blockchain network, and distributors can easily establish a stone's true origin.

“Blockchain technology makes it possible for parties to exchange data and enter into transactions in a standardised, secure manner,” he expands. *“Because all data is stored in the distributed universal ledger of the blockchain network, each party has an*

unambiguous picture of the most current situation. It is precisely this convenient way to exchange confidential information between multiple parties in a business network that is the major asset of blockchain technology. This makes it possible to use the technology for anything from sharing financial data to monitoring a physical supply chain and communicating with government agencies. Within the blockchain, existing digital data can be exchanged easily and quickly in a reliable way."

Because blockchain technology prevents any parties from tampering with an entry in the distributed ledger, it means that, in the supply chain context, processes, events, payments, clauses, conditions and even raw materials and assets cannot be falsified.

Van Oijen explains that in commercial applications of blockchain technology, where business logic has been added to blockchain's communication technology, this logic is laid down in so-called smart contracts. *"These are essentially agreements that have been reached between two or more parties and that are managed as a transaction in the blockchain network.*

"The smart contract can then ensure that these agreements are checked and executed automatically, without human intervention. In that sense, blockchain has an automated notary function. Simply put, all parties have access to the same irrefutable information, and can therefore trust that all obligations have been fulfilled and at the end all conditions of the contract have been met."

In his SAPICS presentation, Van Oijen will address the key aspects of blockchain technology, including the value of blockchain for supply chains and considerations for supply chain professionals implementing and applying blockchain technology. He will cover topics like topologies of blockchain networks, security and confidentiality, smart contracts and integration with existing applications.

In addition to the presentation, he is hosting a workshop on blockchain technology at the 2018 SAPICS Conference. *"This is a deep dive into the value and application areas*

for supply chains and considerations for a successful implementation of blockchain technology,” he explains. “Different cases of actual implementations and pilots will be covered to make this somewhat abstract subject as concrete as possible. Instead of a one-way monologue, the audience in this workshop will be invited for a lively dialogue and sharing of point-of-views as well as experiences.” Van Oijen notes that the workshop is aimed at blockchain novices as well as those already more familiar with the technology.

“As the CEO of Amsterdam-based startup unchain.io, which has just launched its blockchain gateway platform, Arjeh is exceptionally well qualified to deliver a valuable and accessible understanding of this cutting-edge technology to this year’s conference delegates,” comments Mungo Park, president of leading supply chain association SAPICS. *“Arjeh is passionate about making people understand the value that blockchain will bring to organisations and in this context, specifically to supply chains. Before founding unchain.io he worked for consulting and IT firms, including IBM. He has been involved with many blockchain initiatives and PoCs (Proof of Concepts).*

“SAPICS is delighted to have a global blockchain authority of Arjeh’s calibre on the speaker line-up for this year’s 40th anniversary conference,” he concludes.

The annual SAPICS Conference is the leading event in Africa for supply chain professionals. This year, it takes place in Cape Town, from 10 to 13 June. For further information, or to register for the 2018 SAPICS Conference, call 011 023 6701 or email info@sapics.org.za. Up-to the-minute information is also posted on the SAPICS conference website: <https://conference.sapics.org>

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SAPICS builds operations management excellence in individuals and enterprises through superior education and training, internationally recognised certifications, comprehensive resources and a country-wide network of accomplished industry professionals. This network is ever expanding and now includes associates in other African countries. SAPICS is proud to represent APICS (the global end-to-end supply chain association) as its exclusive premier channel partner in Sub-Saharan Africa.

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