

## **Supply-chain Management & Logistics Forum 1**

### **Digital Transformation and Smart Logistics: Industrial Revolution ‘Virtually in the Clouds’**

#### **Moderator:**

**Marin Ivezić** - Partner, PwC Hong Kong

#### **Panel Speakers:**

**Dr Hans Lombardo** - Co-Founder and COO, Chain of Things

**Henry Ko** - Managing Director Asia, Flexport

**Jeff Steilen** - Vice-President, Information Technology, Asia Pacific, UPS

**Dr Ren Changrui** - Chief Scientist and Head of Cognitive Logistics Research, IBM Research, China

Marin Ivezić, Partner, PwC Hong Kong, opened the forum by noting that many industry players are already exploring smart logistics and digital transformation.

Dr Hans Lombardo, Co-Founder and COO of the Chain of Things, spoke about the burgeoning use of blockchain technology in the supply chain management and logistics industry. The industry is the biggest area for blockchain growth in terms of applications being developed and adopted, he said, adding that there is even a Belt and Road blockchain project in the works. “The strengths of blockchain lie in it being wall-less, censorship-resistant, secure, anonymous and transparent.”

Using blockchain technology, Lombardo’s Hong Kong-based start-up Chain of Things has developed a concept called “smart buckets” to resolve common supply-chain problems, among them difficulty in tracking goods as well as a lack of trust and transparency. Lombardo described a smart bucket as a physical storage point for objects in transit. Each smart bucket has sensors that report its detailed environmental status, and each object’s blockchain-based identity adopts that status, forming a paired identity. Through the system, this information is made available to all parties involved along the supply chain, allowing them to track the object’s journey and quickly rectify any errors.

The smart buckets concept provides transparency and ownership as well as clean, fast and secure reporting of product data, thus improving efficiency and preventing loss. Further steps to be taken include setting up a potential shipping identity network and developing a scalable blockpass (a blockchain identity protocol) solution with industry partners.

Henry Ko, Managing Director Asia of Flexport, told the story of his seven-year-old daughter buying a T-shirt online. Her e-commerce (business-to-consumer) experience was seamless and simple and the T-shirt arrived in a few days. In contrast, traditional business-to-business processes are mostly conducted offline, manually and inefficiently. Digitising the supply-chain model would alleviate problems.

He gave an example of his company, Flexport, a Silicon Valley tech-driven freight forwarder that uses its own integrated platform to process everything from orders and payments to real-time information and data analytics. The platform caters simultaneously to the needs of the firm, its customers and their partners, granting all parties extensive control, and hence certainty, over their products, as well as access to real-time data that allows them to respond quickly to market changes. The system improves user experience and lowered transaction costs.

Ko also explained Flexport's plan to create "a social network for trade" by bringing online the entire supply chain and allowing buyers and sellers to connect directly with each other through its platform. "Moving cargo can be as simple as a few clicks that even a seven-year-old can do," he said.

Jeff Steilen, Vice-President, Information Technology, Asia Pacific, UPS, outlined UPS' direction in adopting new technology. The global logistics company invests more than US\$1 billion in technology every year, focused on four key areas. Firstly, UPS constantly modernises its operations to improve efficiency. Next, it strives to meet its customers' needs by adopting enabling technologies that give them full visibility of the supply chain, allowing customers' customers the flexibility to choose when and where to receive their packages. Third, the firm seeks to cut emissions while improving its delivery capability through new technology. Finally, it helps communities by providing humanitarian relief in hard-to-reach places, such as bringing blood and medical supplies to Rwanda.

According to Steilen, UPS' strategy – through the use of two systems, Telemetrics and Orion, which respectively collect and process data – have resulted in environmental savings equivalent to taking 21,000 vehicles off the road for an entire year. He also presented a video showing how UPS use drones for delivery to save time and driving effort.

Dr Ren Changrui, Chief Scientist and Head of Cognitive Logistics Research, IBM Research, China, noted there is considerable scepticism surrounding innovative concepts in the logistics industry, but stressed that many new technologies are not only already in use but also generating great value by resolving long-standing supply chain problems.

Blockchain is disruptive not just due to its potential to resolve the industry's deep-rooted issues but also because it enables a new way of collaboration among multiple parties along the supply chain, Ren said. He urged the industry to embrace technology and innovation in logistics as it can "make the hard things easy" by improving businesses and "make the impossible possible" through business transformation.

During the question-and-answer session, when asked if blockchain were merely a marketing buzzword, Lombardo said the technology has tremendous transformative potential, but has yet to mature. He pointed to the success of the bitcoin

cryptocurrency as well as projects in moving pharmaceuticals, and added that the Monetary Authority of Singapore is also using blockchain to decentralise its functions.

Blockchain technology represents a new way of doing things, Ren said. It also provides a basic foundation in cybersecurity, ensuring data is secure by requiring authorisation for access. Answering a similar question on artificial intelligence, he said AI is not necessarily meant to replace or dramatically change things. “We utilise new technology to help people do things better... just like the smartphone acting as a new assistant for us.”

Asked how UPS came to embrace new technology, given the logistics industry’s inertia, Steilen credited his company’s customer-centred approach. As customer experience now drives brand loyalty, it is imperative for UPS to keep pace. He said UPS now has a daily average of 40 drone flights in Rwanda. “Once you have a demonstrated platform where a technology is successful, that helps you sell the concept.”

Discussing how smart logistics could drive improvement across organisations or even impact the future of the region, Ko suggested that digitisation will help small and medium-sized enterprises overcome traditional challenges in expanding globally with limited resources and low volume. “It can enable SMEs to move their products with greater efficiency and lower transaction costs, allowing them to focus on research and development as well as marketing.”