



MEDIA FACTSHEET

PIL, PSA AND IBM CONCLUDE A SUCCESSFUL BLOCKCHAIN TRIAL FROM CHONGQING TO SINGAPORE VIA THE SOUTHERN TRADE CORRIDOR

Singapore, 23 February 2018 - Pacific International Lines (Pte) Ltd ("PIL"), PSA International ("PSA") and IBM Singapore ("IBM") signed a MOU in August 2017 to collaborate on blockchain-based supply chain business network innovations.

Following the signing of the MOU, the companies worked on a Proof Of Concept ("POC") exercise, built on IBM Blockchain Platform, applying and then testing a blockchain-based supply chain platform to track and trace cargo movement from Chongqing to Singapore via the Southern Trade Corridor.

The trial successfully achieved the following objectives:

- Transparent and trustworthy execution of multimodal logistics capacity booking
- Regulatory-compliant execution of multimodal logistics capacity booking process
- Real-time track and trace
- Permissioned access control for ecosystem participants

The POC testing gathered momentum from August to December 2017. The partners believe that there is now sufficient evidence to show that the concept can be taken to the next stage. The scope of the POC will be widened and the partners are eager to engage more participants from the different nodes of the distribution network that form the supply chain logistics ecosystem.

Teo Siong Seng, Managing Director of PIL said, "We are highly committed to this idea because we as a company believe the wider application of blockchain across the global logistics and shipping businesses will lead to much greater operating efficiencies, security and transparency. It is the future for our industry."

Roger Tan, Regional CEO Northeast Asia of PSA said, "PSA's collaboration alongside our partners and relevant stakeholders in this Blockchain trial demonstrates our efforts to enhance physical and digital connectivity, as well as to improve efficiencies along the global supply chain. Ultimately, we hope to create value for our customers along the Southern Trade Corridor – a key route in the Belt and Road initiative."

- ENDS -

About PIL

Pacific International Lines (PIL) is the world's 12th top containership operator and one of the largest shipowners in Southeast Asia. PIL owns and operates with a fleet of more than 160 modern vessels offering services to Far East, Africa, Americas, Europe, Black Sea, Middle East, Indian sub-continent, Oceania and Southeast Asia. The group has several business units including container manufacturing, ship recycling, marine service, real estate, depots and logistics services. One of PIL's subsidiaries, Singamas Container Holdings Ltd, listed on the Hong Kong Stock Exchange, is the world's second largest container manufacturer with 10 container factories and operates 8 depots in China.

About PSA International

As one of the leading global port groups, PSA participates in around 40 terminals in 16 countries across Asia, Europe and the Americas with flagship operations in PSA Singapore Terminals and PSA Antwerp. PSA strives to continue growing its port network alongside its shipping line customers and become the preferred partner to port stakeholders across the world. Employing the finest talents in the industry, PSA delivers reliable and best-in-class service to its customers and develops win-win relationships with its partners. As the port operator of choice in the world's gateway hubs, PSA is "The World's Port of Call". Please visit us at www.globalpsa.com.

***Note to Editors:** PSA dropped the name of "Port of Singapore Authority" in 1997 when it became a corporatised entity. The company should be referred to as "PSA International Pte Ltd" or simply "PSA".

About IBM

IBM is the leader in open-source blockchain solutions built for the enterprise. As an early member of Hyperledger, an open source collaborative effort created to advance cross-industry blockchain technologies, IBM is dedicated to supporting the development of openly-governed blockchains. IBM has worked with more than 400 clients across financial services, supply chains, IoT, risk management, digital rights management and healthcare to implement blockchain applications.

For more information about IBM Blockchain, visit www.ibm.com/blockchain.

For more information about IBM Supply Chain Business Network, visit:
<https://www.ibm.com/bs-en/marketplace/partner-collaboration-network>

For media queries, please contact:

PIL Maurice Mok Corporate Communications Executive Tel: +65 6429 3457 Email: corpcomms@sgp.pilship.com	PSA Stella Jiang AVP Group Corporate Affairs Tel: +65 62794299 / +65 91053178 Email: stellaj@globalpsa.com	IBM Charlene Lee Brand & Communications Lead Tel: +65 97916485 Email: Charlee@sg.ibm.com
--	---	---

BLOCKCHAIN

• IN THE MULTIMODAL TRANSPORT SYSTEM •



MULTIMODAL FREIGHT TRANSPORT INVOLVES THE TRANSPORTATION OF FREIGHT IN AN INTERMODAL CONTAINER OR VEHICLE, USING MULTIPLE MODES OF TRANSPORTATION (EG; RAIL, SHIP, AND TRUCK), WITHOUT ANY HANDLING OF THE FREIGHT ITSELF WHEN CHANGING MODES.

CHEAPER HIGH AVAILABILITY ENVIROMENTALLY FRIENDLY

BUT THERE ARE CURRENT CHALLENGES

TIME CONSUMING
AS THE INEFFICIENT PROCESS TAKES UP UNNECESSARY MAN-HOURS TO CONFIRM THE COMPLETION OF EACH EVENT

OPAQUE PROCESS
AS IT IS NOT POSSIBLE TO TRACK SHIPMENT AND BOOK BLOCK-TRAIN CAPACITY IN REAL TIME

HIGHLY FRAGMENTED
INVOLVING MANY DIFFERENT PARTIES, ACROSS DIFFERENT PLATFORMS WITH COUNTLESS FORMS TO BE FILLED UP

• USING BLOCKCHAIN TECHNOLOGY TO RESOLVE THESE CHALLENGES: •

BLOCKCHAIN IS A CONTINUOUS GROWING LIST OF DECENTRALISED RECORDS WHICH ARE LINKED, ENCRYPTED AND SECURED

SHIPPING LINE

- NEW** CAN CHECK REAL-TIME AVAILABILITY OF CAPACITY AND SUBMIT A RESERVATION & CHANGE REQUEST TO A SPECIFIC BLOCK-TRAIN VOYAGE
- NEW** GET REAL-TIME EVENT NOTIFICATION OF CAPACITY BOOKINGS
- OWNER OF SHIP VOYAGE - ACCEPTS SHIPMENT REQUEST FROM FREIGHT FORWARDER, BOOKS CAPACITY ON BLOCK-TRAIN AND COORDINATE BLOCK-TRAIN AND SHIP VOYAGE

TERMINAL OPERATOR

- NEW** CAN VIEW AND ANALYSE UPCOMING BLOCK-TRAIN VOYAGES
- NEW** CAN GET REAL-TIME NOTIFICATIONS
- OPERATOR OF PORT TERMINAL
- CAN VIEW CONNECTING TRAINS PER OUTBOUND SHIP

BLOCK-TRAIN OPERATOR

- NEW** TRANSPARENT BLOCK-TRAIN CAPACITY ALLOCATION SYSTEM WILL ALLOCATE BLOCK-TRAIN CAPACITY ON A FIRST COME FIRST SERVED BASIS
- NEW** CAN SUBMIT VOYAGE REQUEST AND GET REAL-TIME NOTIFICATIONS
- SCHEDULER AND MAINTAINER OF BLOCK-TRAIN VOYAGE, MANAGE AND MONITOR THE BLOCK-TRAIN BOOKING FROM SHIPPING LINE AND TALK TO RAILWAY BUREAU TO SCHEDULE TRAIN VOYAGE

RAILWAY BUREAU

- NEW** CAN APPROVE OR REJECT THE VOYAGE REQUEST FROM BTO EFFICIENTLY AND PROMPTLY
- NEW** CAN GET REAL-TIME NOTIFICATIONS
- OWNER OF BLOCK-TRAIN
- RECEIVE THE TRAIN SCHEDULE REQUESTS FROM BLOCK-TRAIN OPERATOR

PIL, PSA and IBM WORKED ON A PROOF OF CONCEPT (POC) EXERCISE APPLYING AND THEN TESTING A BLOCKCHAIN-BASED SUPPLY CHAIN PLATFORM TO TRACK AND TRACE CARGO MOVEMENT FROM CHONGQING TO SINGAPORE VIA THE SOUTHERN TRANSPORT CORRIDOR. FOR MORE INFORMATION, PLEASE REFER TO THE ACCOMPANYING RELEASE UNDER THE NEWS SECTION OF WWW.PILSHIP.COM AND WWW.GLOBALPSA.COM.

