



Container Port-Cargo Handling: Rising Utilisation of Port Capacity

INTERCONTINENTAL KUALA LUMPUR, MALAYSIA

2nd March 2022



PANDEMIC IMPACT TO CONTAINER PORT – CARGO HANDLING

Supply Chain Disruption - Cause and Effects

Root Cause

- Lockdown drastically reduced manufacturing output in Asia in first 6 months of pandemic
- Covid cases and new working practices slows working productivity further
- H2' 2020 onwards, Supply chain ill-prepared for unexpected demand surge as China quickly gets on top of virus and ramps up manufacturing capacity
- Accidents (Suez Canal blockage), Covid outbreaks in ports
- Extreme weather events compound problems



Challenges

- Reduced port productivity (long queues of ships waiting outside ports, slower ship turnaround when finally berthed)
- Disrupted sailing schedules, pocked by port omissions (blank sailings/ vessel slides) and blown ETAs
- Overworked ship crew faced huge challenges transferring due to Covid restrictions
- Shortages of warehousing, storage, trucking capacity and labour
- Extended container equipment turnaround times and reduced availability

2 YEARS INTO PANDEMIC – UNCERTAINTIES CONTINUE

Extended Recovery Timeline to end of 2022



Continuation of Possible Global Supply Chain Disruptions

- **China's 'Zero Covid' Policy Creates New Supply Chain Worries**

- China's key priority was to limit spread of Covid during Winter Olympics
- Occasional port closure which caused congestion and subsequent delays
- Shanghai recorded an 86% increase year-over-year in blank sailings

(Source: CNBC, 26th Jan 2022)

- **Russian invasion of Ukraine could hit supply chains**

(Source: CNBC, 23rd Feb 2022)

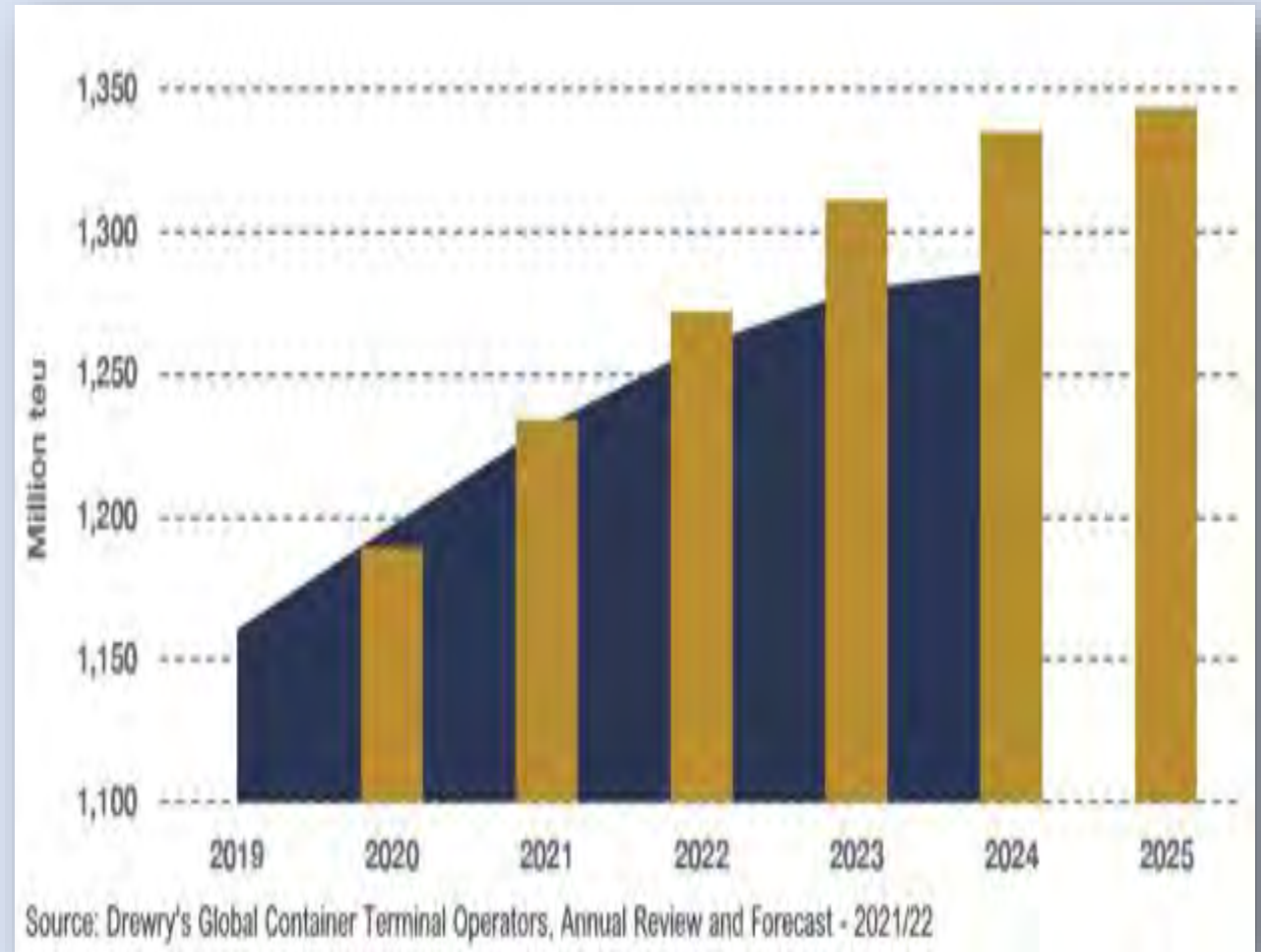
DEMAND & CAPACITY OUTLOOK INDICATES RISING UTILISATION

Anticipated mismatch between supply and demand – Port Capacity Risk

GLOBAL OUTLOOK

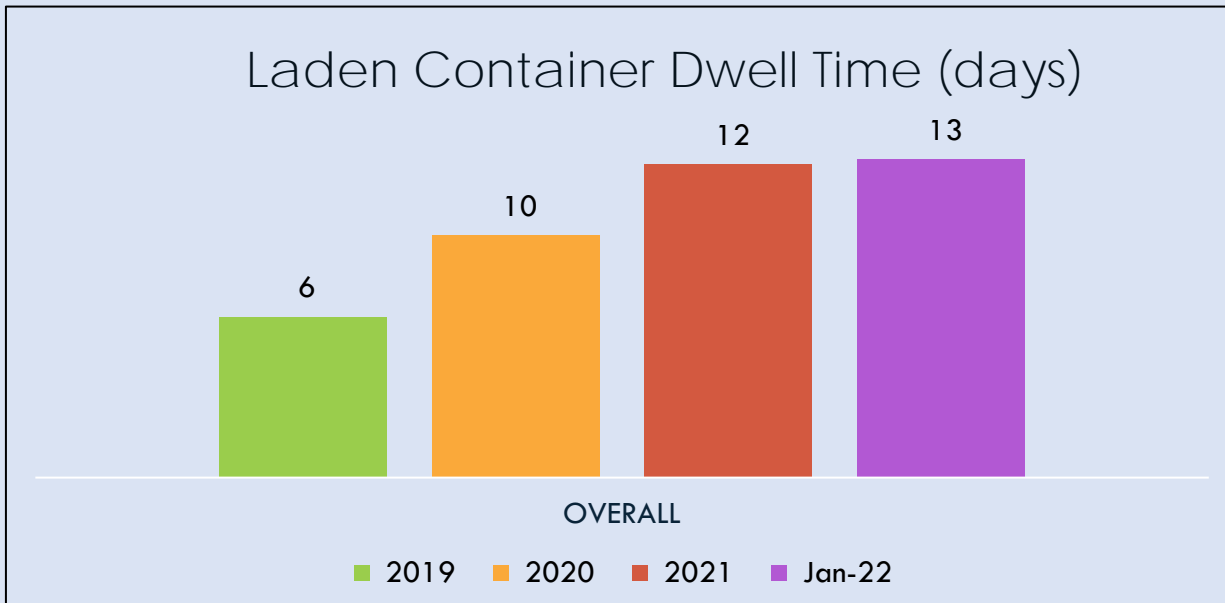
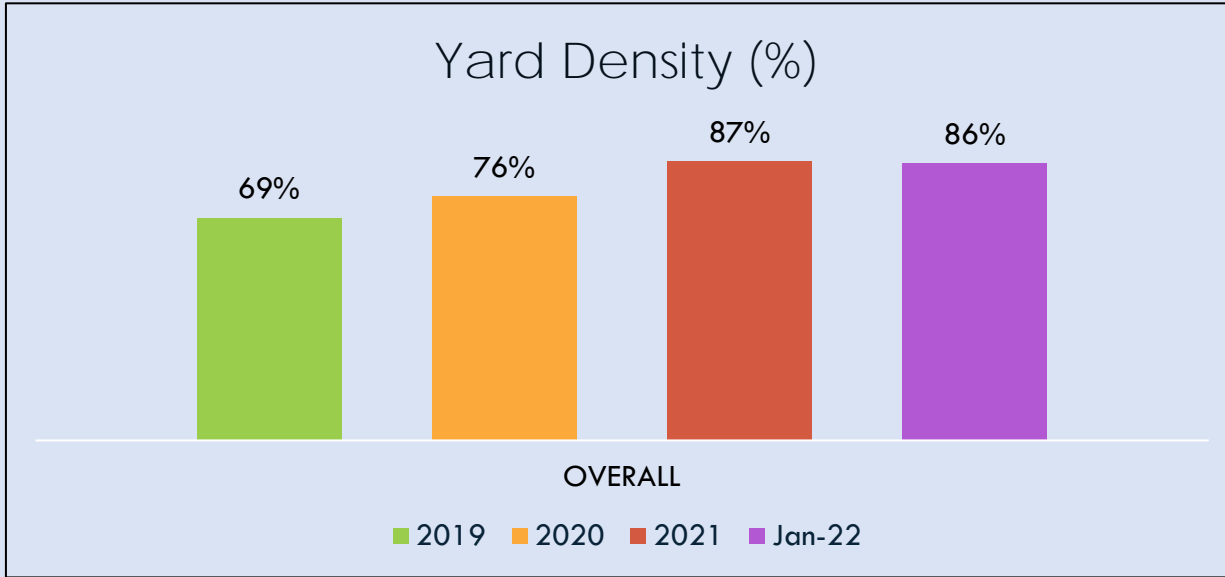
- Global Demand to increase 5% per annum until 2025
- Global Capacity to increase 2.5% per annum until 2025 to 1.34 Billion TEUs
- Global Port Capacity Utilisation will increase from 67% to 75%

(Source: Drewry Report, Q4'2021)



YARD DENSITY PRE AND POST PANDEMIC

How it has affected Handling Capacity



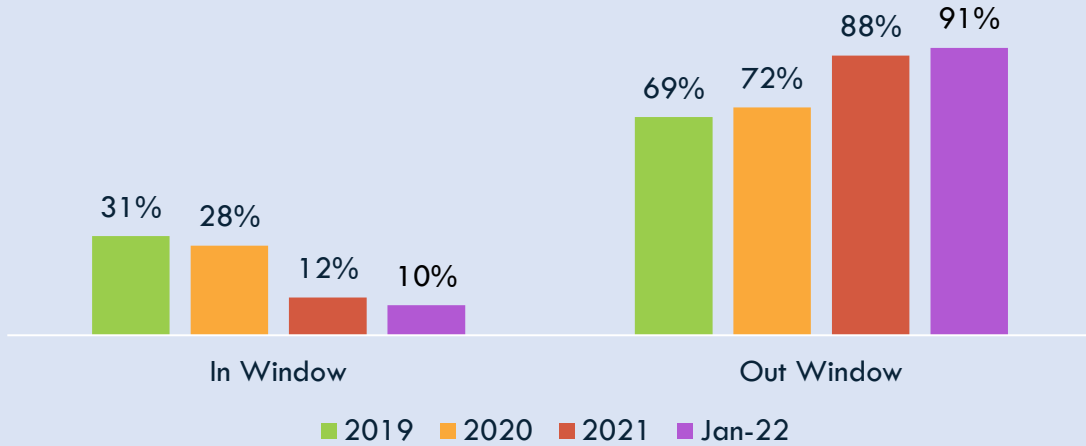
Implications of Global Disruptions To Westports

- Global Port Congestion
 - 85% of vessels arrive out of window
- High Yard Density & Increased Dwell Days
 - Schedule recovery by port omissions which increased TS activities in WP and contributed to higher yard density
 - Increase in dwell days of TS laden containers due to port closure / service disruptions
 - Delay in Import pick up due to lockdown, resulting in long staying containers
- Restow
 - Higher restows as Lines repositioned empties to the Far East

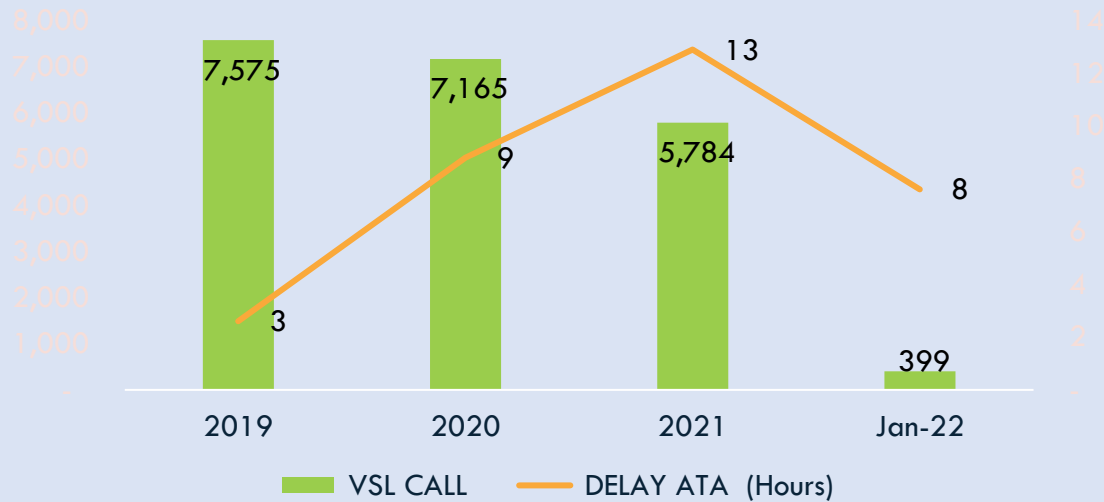
CONTAINER TERMINAL'S CONGESTION

Increasing Berthing Delay Causing Yard Congestion

VESSEL WINDOW



VESSEL CALL & BERTHING DELAY



IMPACT TO WESTPORTS

- Yard Density Reaching 100%
- Terminal Utilisation Levels Rising
- Berthing Delay rising
- **Congestion remain a key risk to Sector's Performance**

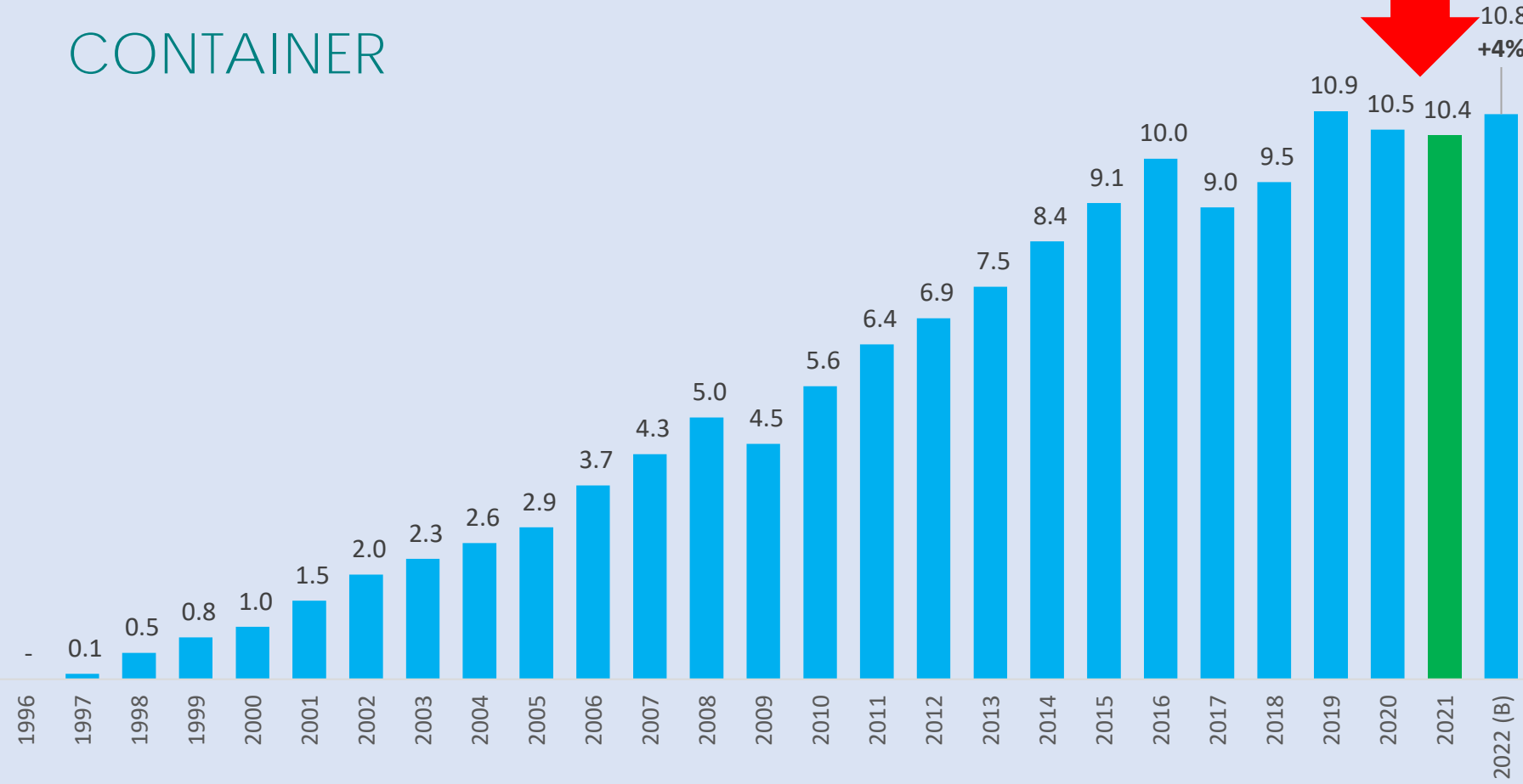


FUTURE OUTLOOK IN WESTPORTS

Volume Impacted in 2020 and 2021 due to Pandemic, expected to recover in 2022

CONTAINER

GLOBAL SUPPLY CHAIN DISRUPTIONS
COVID-19 PANDEMIC



YARD EXPANSION – Additional total ground slots (“TGS”) completed in Q4 2021

EXISTING



TGS

46,922
Pre-Pandemic

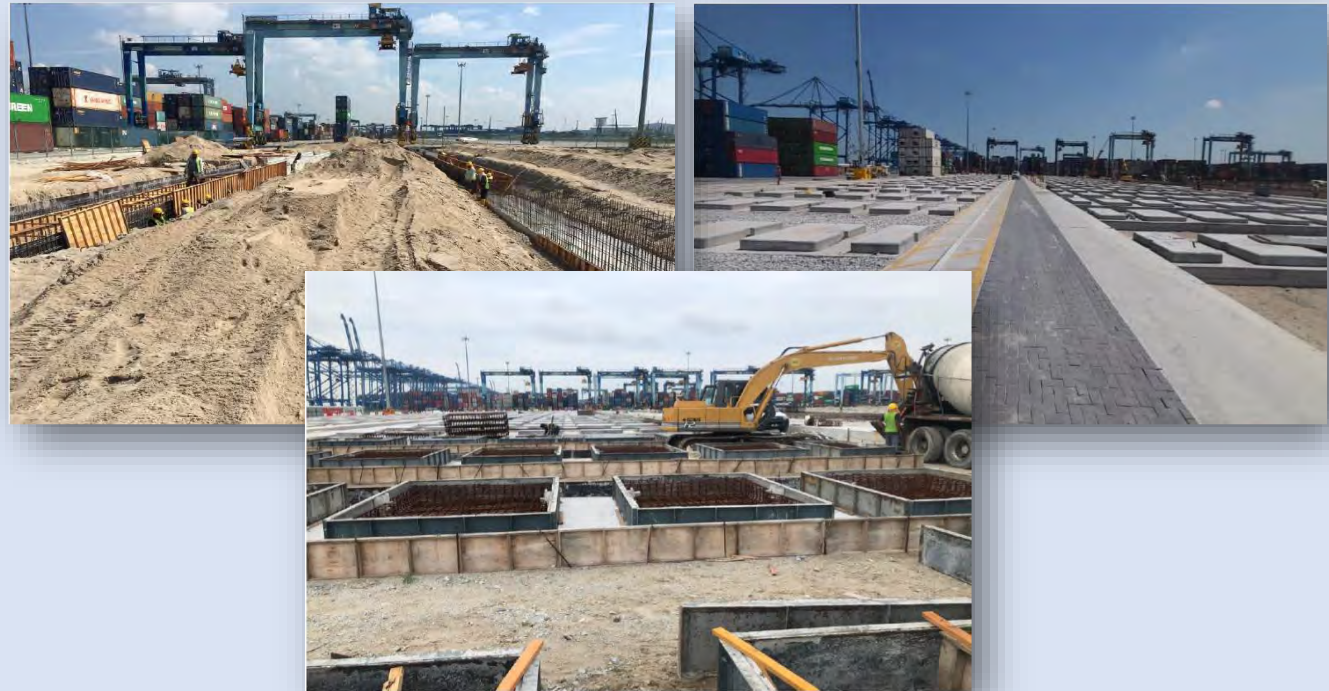
- Pre- pandemic, WP was operating at a 72% utilization rate
- During Covid-19 pandemic, proactively invested to add CAPACITY

NEW DEVELOPMENT



4,201
Completed in
Q4 2020

1,332
Completed in
Q4 2021



TOTAL

52,455

STRENGTH OF WP – Before Covid19 pandemic

DEEPEST DRAFT



17.5 Meters
1996 – 15.0 meters

HANDLING CAPACITY



14 mil TEUs
1996 – 1.0 mil TEUs

SHIP-TO-SHORE CRANES



65 Quay Cranes
1996 – 9 cranes

CONTAINER BERTHS



5.8 Kilometer
1996 – 600 meters

EQUIPMENTS



197 RTGs



601 Terminal Tractors



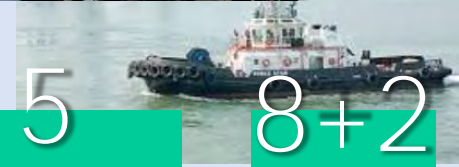
27 Stackers



4,132 Reefer Points



5 Pilot boats



8+2 Tug boats

PURCHASE OF ADDITIONAL EQUIPMENT TO COPE WITH CONGESTION

TOEs	DELIVERY SCHEDULE	NO OF FLEETS AFTER FULL DELIVERY
Quay Cranes	Additional 8 units to be delivered (Incl dismantling 7 units and replace by 6 units): Q1'22 – 2 units Q3'22 – (7 units) dismantling Q4'22 – 6 units	$65 \text{ (Current)} + 2 \text{ (Q1'22)} - 7 \text{ (Q3'22 dismantling)} + 6 \text{ (Q4'22)} =$ $66 \quad \uparrow 2\%$
RTGs	Additional 21 units to be delivered: Q4'21 – 3 units Q1'22 – 9 units Q2'22 – 9 units	$197 \text{ (Current)} + 21 \text{ (New delivery)} =$ $218 \quad \uparrow 16\%$
Terminal Tractors	Additional 100 units to be delivered (Incl 95 units of replacement): Q1'22 – 100 units	$601 \text{ (Current)} - 95 \text{ (Replacement)} + 100 \text{ (New units)} =$ $606 \quad \uparrow 1\%$
Stackers	Additional 10 units to be delivered (Incl 8 units of replacement): Q1'22 – 6 units (4 replacement) Q4'22 – 4 units (4 replacement)	$27 \text{ (Current)} - 8 \text{ (Replacement)} + 10 \text{ (New units)} =$ $29 \quad \uparrow 7\%$

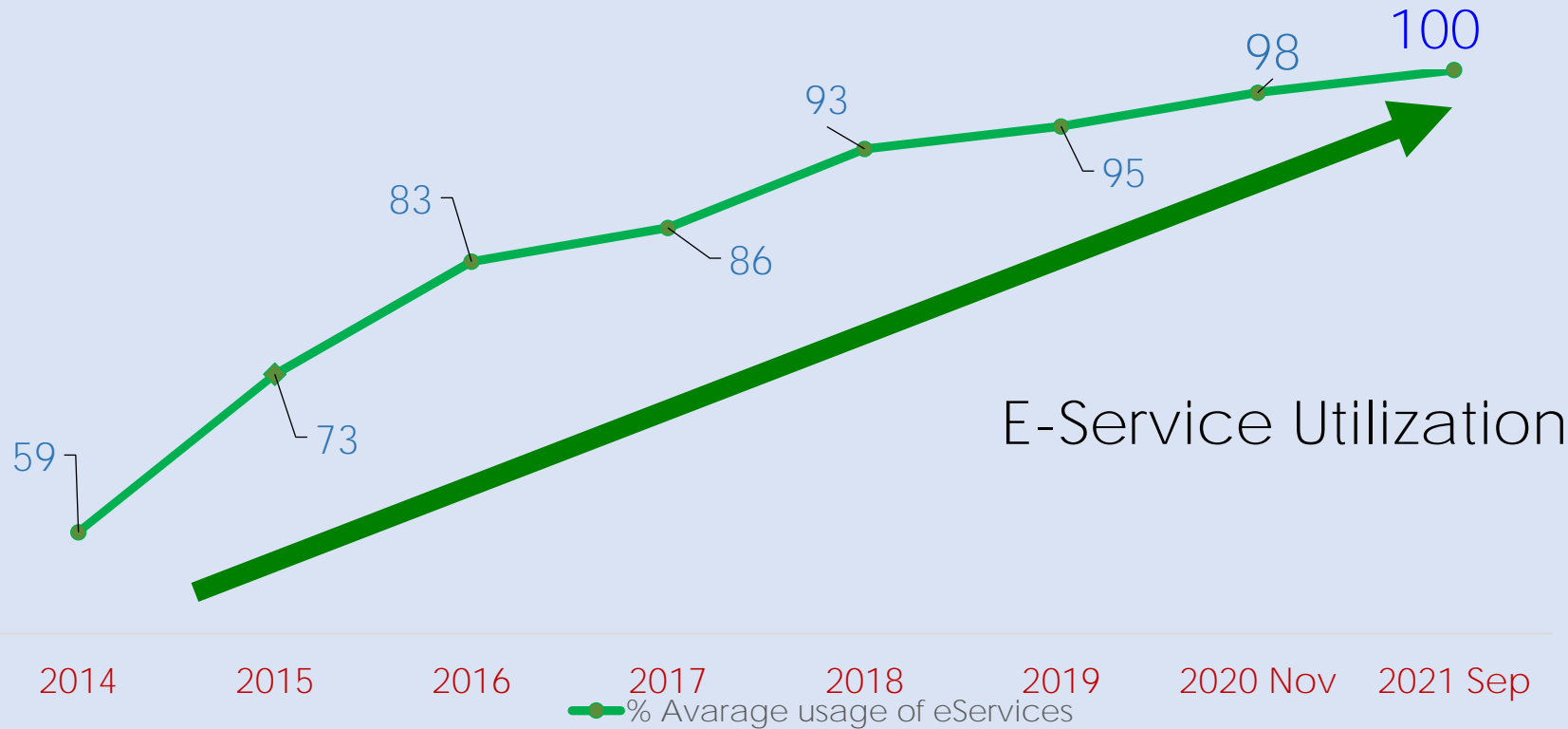
ARRIVAL OF NEW CRANES & RTGs



DIGITALISATION IS KEY TO INCREASE PORT PRODUCTIVITY

Moving Towards Digitalization & Reducing Paper Usage

Through eGate Pass, Export's Auto Clearance & eSSR from 2014



- Improved Data flow can materially reduce the time taken for containers to transit the port
- Neutral platforms will enable information sharing across the wider and global supply chain
- Next in Line – Blockchain platforms

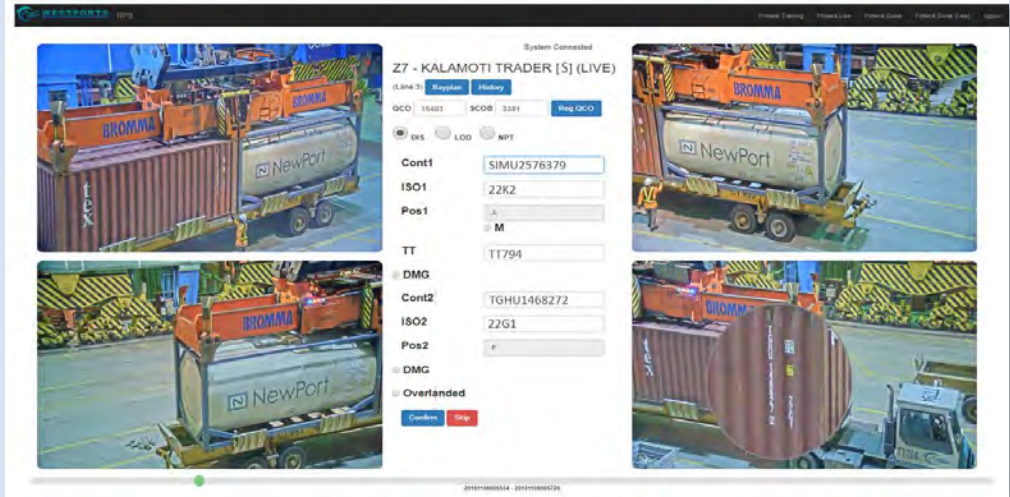
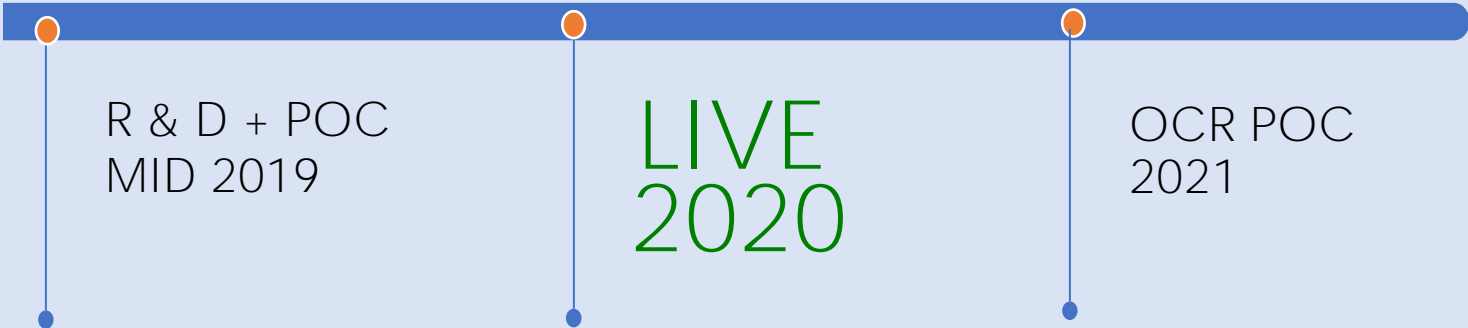
- **100% Online / Electronic Services since 1st Sept 2021**
- **Call Centre Support: 0800 hours to 2359 hours**

WESTPORTS LAUNCHES WORLD'S FIRST WIRELESS REMOTE P-CHECK SYSTEM

- World 1st fully wireless concept Remote Physical Check Operation.
- 100% in-house software development.

BENEFITS

- IMPROVE SAFETY & HEALTH
- 1 STAFF TO 4 CRANES
- HISTORICAL IMAGES
- OPERATOR DIGITALIZATION



REMOTE GATE SYSTEM ("RGS") - LIVE ON 5/4/2021


Booth ID: 123 | Booth Name: AOS Lane 2B7 WESTPORTS // Remote Gate System // v3.85 LOGOUT Gunasilan A/L Muthusamy (3410)


IN	OUT
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14

BUS_ERROR: No Booking for Container


TOUCH TIME: TUE, 05-03-2020 - 14:10
GATE TIME: TUE, 05-03-2020 - 14:24
TRANSACTION TIME: 00:00:28


7





KN701 / BFN80





20	CAIU2381300	20
ISO: 22G1	BKG NO: PKG58190CMA	F/E: F
SEAL - L: CTS56220	SEAL - S:	
WEIGHT (KG): 35800	MGW (KG): 30480	
SHEPPER VGM: 36000	VAR (%): 3.7	
DAMAGE:		

Driver Name: AZMAN BIN DIRAM	
NRIC: 830607-10-8801	
Smart Card No: 12201706208267	
Company: KONTENA NASIONAL SDN BHD	
Plate No: BMD8023	Head No: KN800
Truck Weight: 8400	Trailer Weight: 8400

Please select your transaction decision:

SAVE

Reject

Release Kiosk

Refer Staff

Type reject remarks here.

Release Lane

Refer Supervisor

✓ New Application for gate In and Out

✓ CCTV Integration

✓ Remote Kiosk Health Check Monitoring Application

DIGITALIZE REEFER MONITORING SYSTEM - Ongoing Digitalization Initiatives

- PROVIDE ACCURATE CONNECT & DISCONNECT TIMES.
- INFORMATION IS ELECTRONICALLY STORED
- REAL TIME MONITORING
- AUTO ALERT WHENEVER UNIT DETECTED MALFUNCTION.

- REMOTE TEMPERATURE CHANGE
- INTEGRATION WITH TOS AND ERP
- REDUCE PHYSICAL MOVEMENT & IMPROVE SAFETY IN REEFER BLOCK



PROJECTS UNDER IMPLEMENTATION



DIGITALIZATION

ERP



FUEL MANAGEMENT SYSTEM



INVENTORY MANAGEMENT SYSTEM



E-LOGISTICS SYSTEM



PORT RECEPTION SYSTEM



OPERATIONAL DEVELOPMENT & AUTOMATION



OCR FOR RPS



SEMI AUTOMATED QUAY CRANE



AUTONOMOUS TRUCK



SEMI AUTOMATED RTG

VESSEL PROFILING



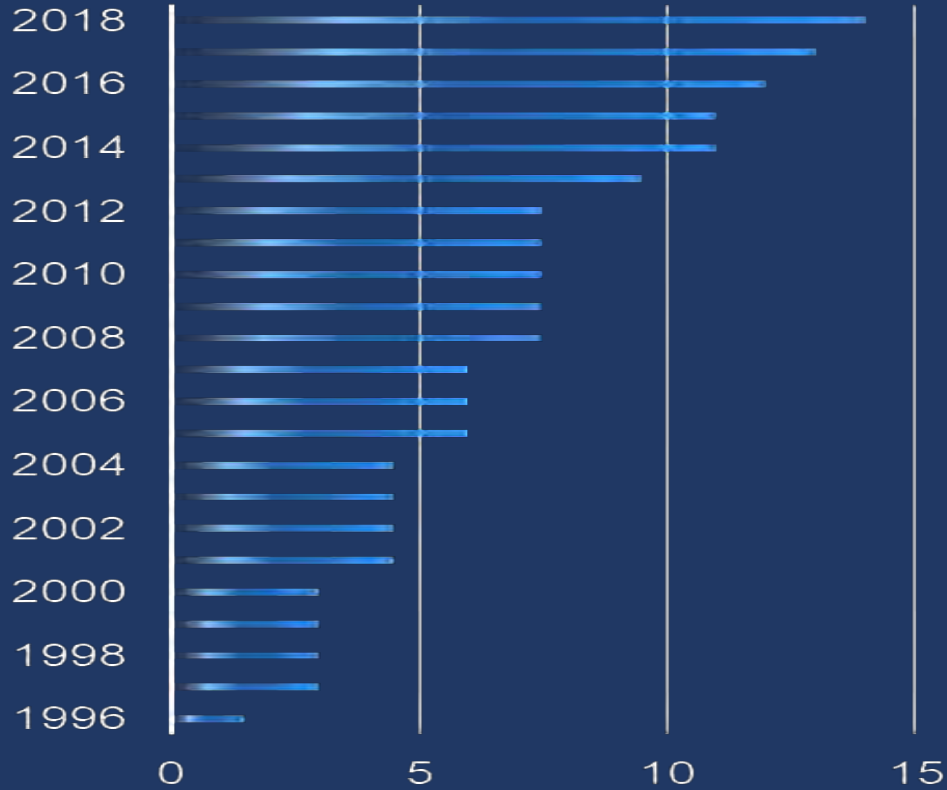
CONVENTIONAL GATE AUTOMATION



5G

PORT EXPANSION – CONTINUE TO GROW CAPACITY

Capacity Expansion m TEUs



- **Track record** of growing capacity from 2m TEUs in 1996 to 14m TEUs by end-2017
- **Last expansion** at CT9 were completed in 2017
- Approval-in-Principle for **CT10 to CT17** expansion in 2017 would raise capacity to 28m TEUs per annum



- Double the Current Capacity
- From 15 Mil TEUs to **28 Mil TEUs**
- **RM12.6 Billion** WP2 Initial Investment

MOVING FORWARD – WE CAN'T DO THIS ALONE...

- No more lockdowns
- Higher window arrivals
- ETA & moves accuracy
- Reduce Container's dwell time
- No rollovers
- Proper industry engagement for policy changes & implementation
- Industry digitalisation
- Simplification of Gov's procedures



THANK YOU!

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