PLUG AND PLAY
SUPPLY CHAIN

Pan Pacific Green Corridor: Steering Maritime Innovation

June 12, 2025
11:30AM - 1:30PM



Emcee



John Ang

Director, Strategic Partnerships & Special Projects
Plug and Play APAC

PLUG AND PLAY

Pan Pacific Green Corridor

AGENDA



11:30 AM - 11:35 AM	Welcome
11:35 AM - 12:00 PM	Keynote: Smart Port Challenge
12:00 PM - 12:35 PM	Panel: Pan Pacific Corridor
12:35 PM - 12:45 PM	Startup Spotlight: CONROO
12:45 PM - 01:05 PM	Fireside Chat: Startup Sharing
01:05 PM - 01:10 PM	Closing
01:10 PM - 01:30 PM	Networking

Keynote: Smart Port Challenge



Desmond Tay

Regional Director, Americas
Maritime and Port Authority of Singapore (MPA)

MPA
SINGAPORE

Maritime Singapore: Your Next Port of Call

Desmond Tay

Regional Director (Americas)

Maritime and Port Authority of Singapore



















MPA
SINGAPORE

Why Maritime?

80% of global trade is carried by sea on over 100,000 registered merchant vessels*

The global maritime transport & ship port infrastructure market size exceeds **USD500 Billion** annually

Vessels (container, bulk, tanker, offshore)

Freight Transportation

Port terminals and supporting infrastructure



Asia Pacific is the **fastest growing** region in the maritime and port sector

Singapore is the world's busiest transshipment port, handling a record 41.12 million Twenty-foot Equivalent Units (TEUs) in 2024

*Vessels over 100 tons

Maritime and Port Authority of Singapore

Premier Global Hub Port

Port Planner

Port Authority and Regulator



International Maritime Centre

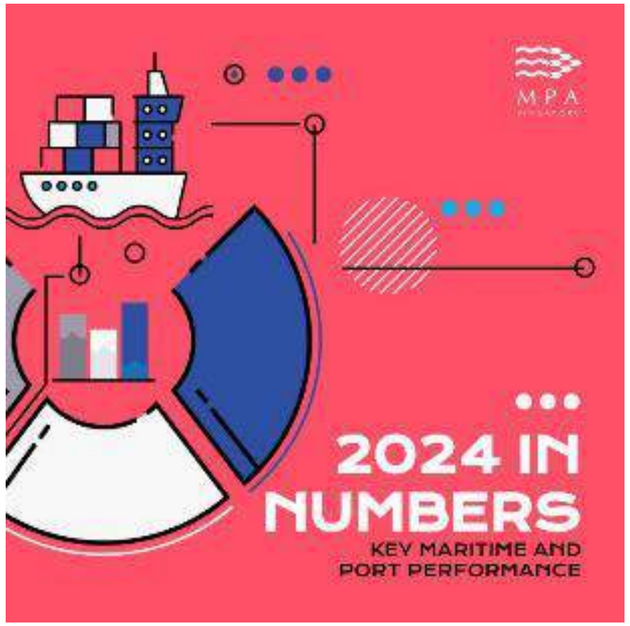
Promoter and Developer of the Singapore Maritime Cluster

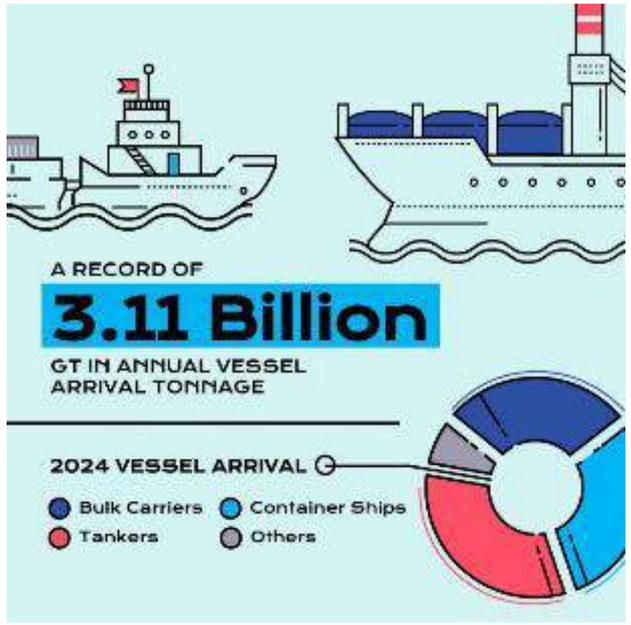


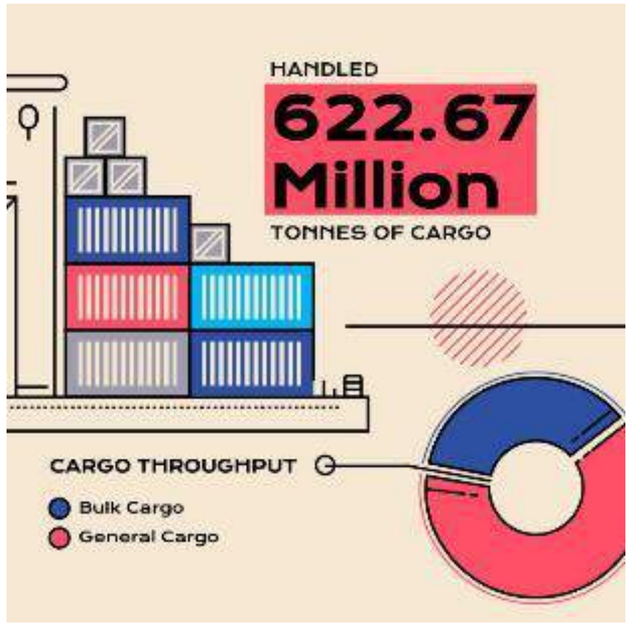
Advance & Safeguard Singapore's Maritime Interests

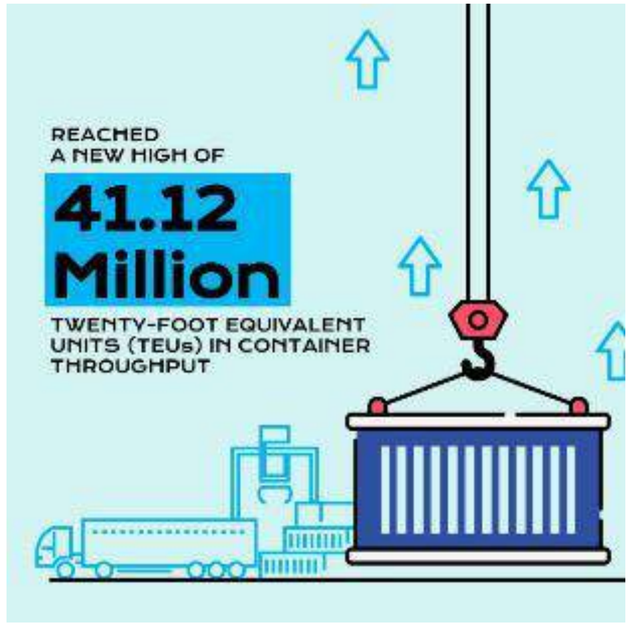
National Maritime Representative

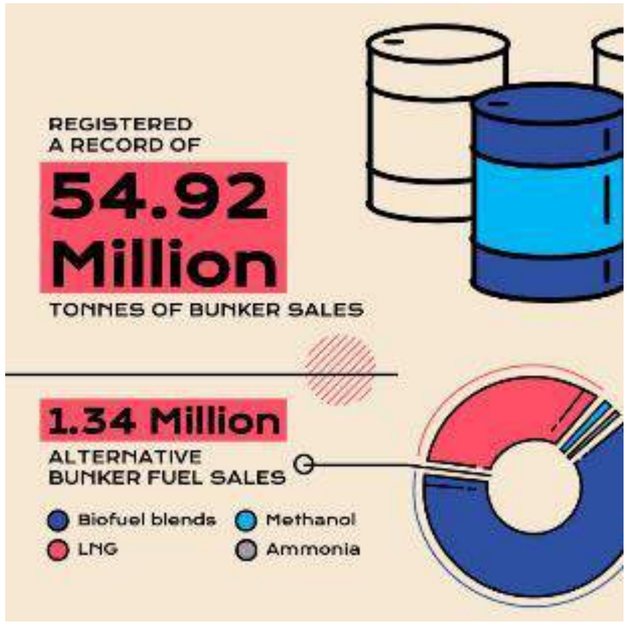



2024 IN NUMBERS
KEY MARITIME AND PORT PERFORMANCE

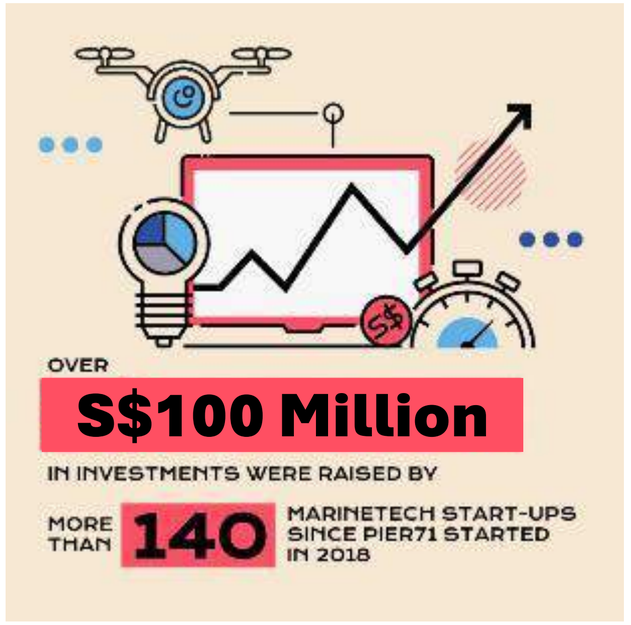

A RECORD OF
3.11 Billion
GT IN ANNUAL VESSEL ARRIVAL TONNAGE
2024 VESSEL ARRIVAL
Bulk Carriers
Container Ships
Tankers
Others

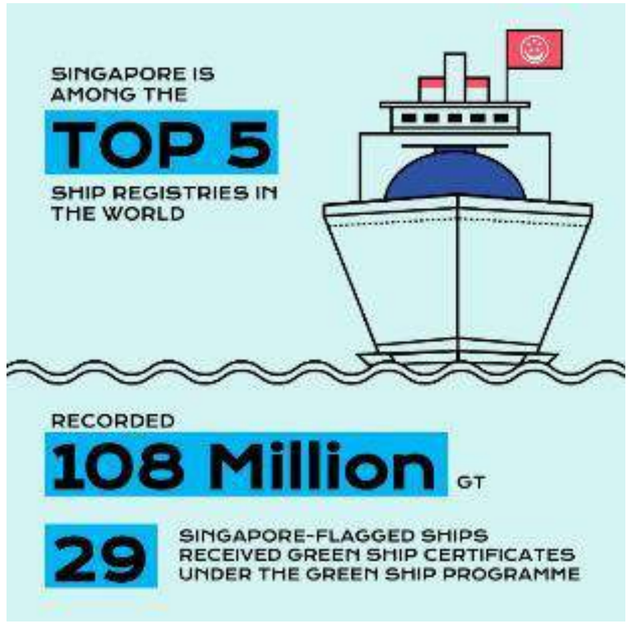

HANDLED
622.67 Million
TONNES OF CARGO
CARGO THROUGHPUT
Bulk Cargo
General Cargo


REACHED A NEW HIGH OF
41.12 Million
TWENTY-FOOT EQUIVALENT UNITS (TEUs) IN CONTAINER THROUGHPUT


REGISTERED A RECORD OF
54.92 Million
TONNES OF BUNKER SALES
1.34 Million
ALTERNATIVE BUNKER FUEL SALES
Biofuel blends
Methanol
LNG
Ammonia


S$5.2 Billion
IN TOTAL BUSINESS SPENDING BY KEY MARITIME COMPANIES OVERSEEN BY MPA
MORE THAN 30 MARITIME COMPANIES SET-UP OR EXPANDED THEIR OPERATIONS IN SINGAPORE


OVER
S$100 Million
IN INVESTMENTS WERE RAISED BY
MORE THAN 140 MARINETECH START-UPS SINCE PIER71 STARTED IN 2018


SINGAPORE IS AMONG THE
TOP 5
SHIP REGISTRIES IN THE WORLD
RECORDED
108 Million GT
29
SINGAPORE-FLAGGED SHIPS RECEIVED GREEN SHIP CERTIFICATES UNDER THE GREEN SHIP PROGRAMME

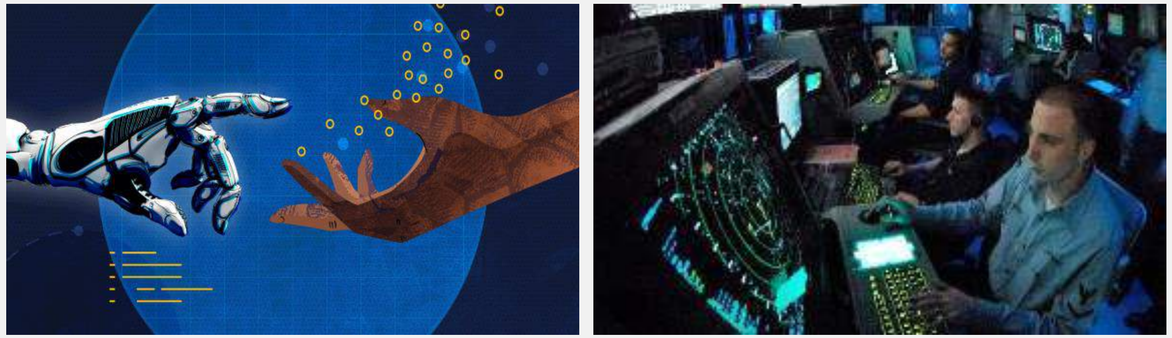
Key Drivers and Trends for the Future of Shipping

DISRUPTION



Geopolitical conflict, supply chain disruption, port congestions, changing market structures

DIGITALISATION & AUTOMATION



Increasing pace of digitalisation & automation. Opportunities to improve efficiency of port services, navigation, and maritime safety & security

DECARBONISATION



Increasing global regulatory pressure on businesses to decarbonise through new fuels, fleet performance management

GLOBAL TALENT





Reskilling and upskilling the maritime workforce for new technologies

Next Generation Port - A Living Lab for testing in live environment



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Innovation and Testbed Opportunities - Port of Singapore as a Living Lab for Innovation

MPA SINGAPORE



PSA The World's Port of Call

Tuas Mega Port



Jurong Port

Test-bed Energy Solutions for Next Gen Multipurpose Port



NANYANG TECHNOLOGICAL UNIVERSITY jtc

ENERGY MARKET AUTHORITY NATIONAL RESEARCH FOUNDATION

Drone Estate



Designated Sea Spaces & Drone Estate



Digital Test-Bed



- **Maritime Innovation Lab 3.0** focuses testing and developing capabilities in the six domain areas of space, air, sea, sub-sea, cyber, and sustainability.

Data Repository

- Singapore Maritime Data Hub (MDH) as a one-stop data repository and centralised API gateway for maritime community data



Scan here for the link

Regulatory Sandbox

- Facilitate full scale trials in a safe and controlled environment

Maritime Autonomous Surface Ships (MASS) Pilot Projects





World's First Use of Ammonia as a Marine Fuel in a Dual-Fuelled Ammonia-Powered Vessel in the Port of Singapore

5G-Enabled Communication

- 5G-enabled port technologies (AGVs, Automated cranes, cargo handling operations)
- Singapore aims to have full 5G mobile network coverage of its major anchorages, fairways, terminals and boarding grounds

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PIER71
Port Innovation Ecosystem Reimagined at BLOCK71

Port **I**nnovation **E**cosystem **R**eimagined @ BLOCK**71**

Founded in 2018, the **FIRST** maritime ecosystem innovation builder in the region

Opportunity to tap on Singapore's vibrant maritime ecosystem to scale-up your technologies

2018 ESTABLISHED

>130M SGD INVESTMENTS SECURED

>1200 PROPOSALS

12 INVESTMENT PARTNERS

10+ FOREIGN START-UPS SET UP SG OFFICE

CLOSE TO **150** START-UPS GLOBALLY

>65 PROJECTS SUPPORTED (MPA FUND)

Founding Partners

MPA SINGAPORE

NUS National University of Singapore Enterprise

Part of

MARITIME SINGAPORE

Supporting Partner

PLUG AND PLAY

PIER71

Port Innovation Ecosystem Reimagined at BLOCK71

Flagship Programme

Smart Port Challenge 2025 Applications now Open!



Annual innovation competition to find the best solutions from technology start-ups to address innovation opportunities by maritime corporates in Singapore.
Applications close 11 July.



PIER71 Accelerate Programme

Sep - Nov

Market Validation and Customer Discovery
Mentorship from industry veterans, workshops, and networking opportunities

PIER71 Grand Finals

5 Nov

Demo Day and Investor Networking
Pitch to maritime corporates and VCs in one of the most vibrant maritime hubs in the world

Be eligible for

- **Sponsored Residency**
- **Testbed opportunities**
- **Grant Funding**

Founding Partners

MPA SINGAPORE

NUS Enterprise

Supporting Partner

PLUG AND PLAY

Part of

MARITIME SINGAPORE

Smart Port Challenge (SPC2025) Innovation Opportunities

15 innovation opportunities supported by over 25 Innovation Partners

Green Technologies

Develop and promote use of green and clean technologies

- Low or zero emissions marine fuel
- Emissions reduction and management
- Electric habour craft
- Energy efficiency

2025 Innovation Opportunities

Next Generation Ports

Enhance productivity and safety of port operations

- Port operations and services
- Preventive maintenance
- Oil spill response and management
- Automation of terminals
- Digital Twin
- Enhance connectivity for digital port services
- Electronic workflow and documentations

Smart Shipping

Improve efficiency and safety of ship operations

- Autonomous operation
- Fleet operations
  - Safe boarding of personnel between ship and habour craft
- Conditions monitoring and preventive maintenance
- Training and upskilling

Digitalisation

Enable greater applications of AI, Cybersecurity, cloud,

- Artificial intelligence
- Maritime Cybersecurity readiness and resilience
- Robotics, Autonomous guided vehicle

Founding Partners

MPA SINGAPORE

NUS Enterprise

Part of

MARITIME SINGAPORE

Supporting Partner

PLUG AND PLAY

Smart Port Challenge (SPC2025) Innovation Opportunities

15 innovation opportunities supported by over 25 Innovation Partners

PIER71
Port Innovation Ecosystem Reimagined at BLOCK71

ABS
AL
BW Epic Kosan
Delivered with CARE
CMA CGM
COLUMBIA GROUP
DNV
EQUATORIAL
focal
GOLDEN OCEAN
INCHCAPE
Jurong Port
OneOcean
MARINA
MOL
Mitsui O.S.K. Lines
NCS
ORIENT
MARITIME AGENCIES
PIL
PSA
PSA VENTURES
RIGHTSHIP
RINA
SEATECH
Trusted Solutions
TEEKAY
TCOMS
Wilhelmsen
ZEBOX

2025 Innovation Opportunities

MARITIME SINGAPORE STARTUP ECOSYSTEM MAP 2024

SMART SHIP

acoumulus · AiDA · Aleph · ALICIABOTS · alpha ori TECHNOLOGIES · AQUATOR · ASSENTIRI · Blue C mobile · CYBEROWL · ELSA · eyeGauge · GLEEMATIC A.I. · GROUNDUP.AI · kpler · MARI APPS · NautilusLog · nextvoyage · Nexus Ocean · REPERION · ShipIn · SMARTSEAS.AI · Smart Ship · SOL · SYMPHONY · TAMS · VASCO · VOLTEO Maritime · ONE Technology · voyager · VOYAGER WORLDWIDE · ZERONORTH

CREW MANAGEMENT, SAFETY & TRAINING

bigyellowfish · CAPTAIN'S EYE · cerekon · FlexoSense · frontM · GREYWING · MAGES STUDIO · MARIFIED · MARTIDE · MASCON · OCEAN Technologies Group · riverr · VULCAN AI

REMOTE OR DIGITAL INSPECTIONS

Avetics · BEEX · F-DRONES · NAUTISENSE · PERFORMANCE OROTORS · VEBITS

SMART PORT

aidrivers · aruvii · conbo.ai · GETT Technologies The right connections · HERON · innovez-one · Logipeace · MICROSEC · mVIZN · NAVOZYME · Oceans · portcast · Sea-Cabbie · SEALON TECH · TAGVANCE · VILOTA

DIGITAL BUNKERING

ADP · ANGSANA TECHNOLOGY · ascenz marorka · brightree · BUNKER CHAIN · moorio · SGLAB · Tradeco · Vector InfoTech

SHIP SUPPLIES

ENT-VISION · GotSurge · MagicPort · MARINEONLINE · MOSCORD · PELAGUS·3D · Shipskart · SUPPLY LOGIC

GREENTECH & DECARBONISATION

3Y Energy Solutions · AMOGY · boundy4blue · C2 · CRecTech Carbon Recycle Technologies · DAPHNE TECHNOLOGY · EcoWorth · Everimpact · GREENCOP · MarinaChain · NANOMATICS · OM88 · PYXIS · REGENERATION · signol · sungreen · Value Maritime · FLOW TECH · ZERO44

SMART SUPPLY CHAINS

BorderDollar · CARGOBASE · freightify · HAKOVO · LogChain · Moaah · MyKaki · Orbital wave · Quincus · stemly · TRAMÉS DIGITAL FREIGHT ECOSYSTEMS · Xceler · Tathya Earth

*This map showcases active maritime technology startups in Singapore, as of 2024. It is not intended to be an exhaustive list.

Supported By

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Developed By

MOTION VENTURES · PIER71

HOW CAN YOU PARTICIPATE

For Startups

- Mentorship & Masterclasses
- Workshops by industry veterans & domain experts
- New markets, product market fit

- **Pilot projects and scaling opportunities!**

For Corporates

- Shape and adopt innovations
- Sponsor challenge statements, Co-develop solutions

- **Early adopter!**

For VCs

- Greenfield opportunities
- Evaluation Panel
- Exclusive speaking engagements

- **Fuel the next wave of innovation!**

Join us in making waves!

Connect with us on LinkedIn at PIER71

Join Smart Port Challenge 2025

Any questions? Message enquiries@pier71.sg

Thank you!

Desmond Tay

Regional Director (Americas)

Maritime and Port Authority of Singapore











Panel: Pan Pacific Green Corridor

Steering Maritime Innovation



Desmond Tay

Regional Director, Americas

MPA SINGAPORE



Dr. Noel Hacegaba

COO

Port of LONG BEACH THE GREEN PORT



Kenji Togasaki

Senior Vice President

IINO LINES



Leyland Seto

Director

PLUGANDPLAY

Startup Spotlight: CONROO



Felix Paul Czerny

Co-Founder and CEO
CONROO

CONROO


English
Connect
Welcome to CONROO
Sign-in or create a new account and access the whole CONROO experience
I have an Account
I don't have an Account
CONROO GmbH - Version 4.0.1
CONROO

How can (bootstrapped) startups & multinationals build powerful business partnerships?



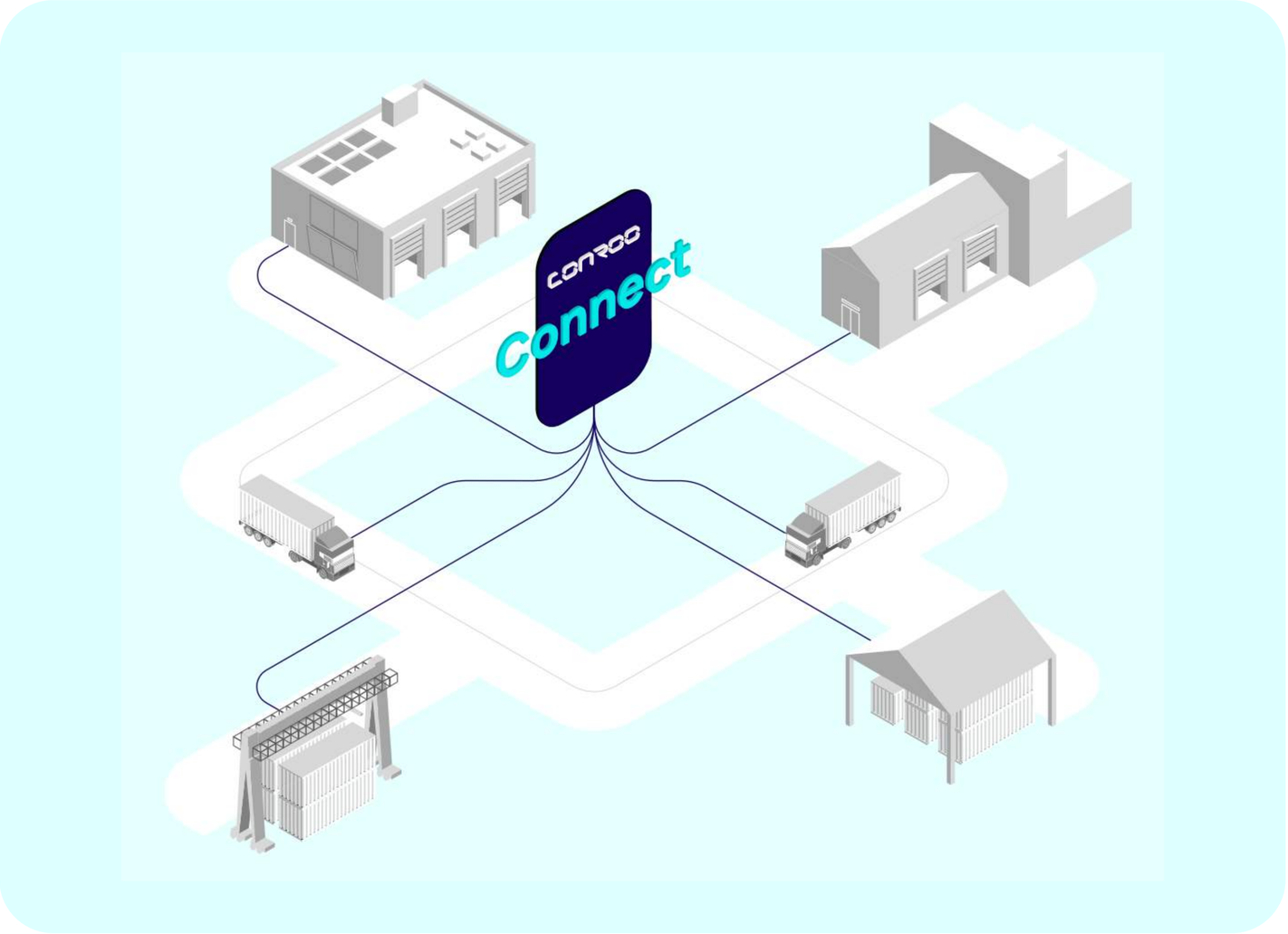
It all started with a queue...



App-Powered Truck Processing

CONROO Connect

A truck visit system that uses the truck driver's smartphone as a secure and intelligent sensor to connect terminals and depots with the trucking community.



CONROO Connect solutions revolutionise truck handling

Pre Connect

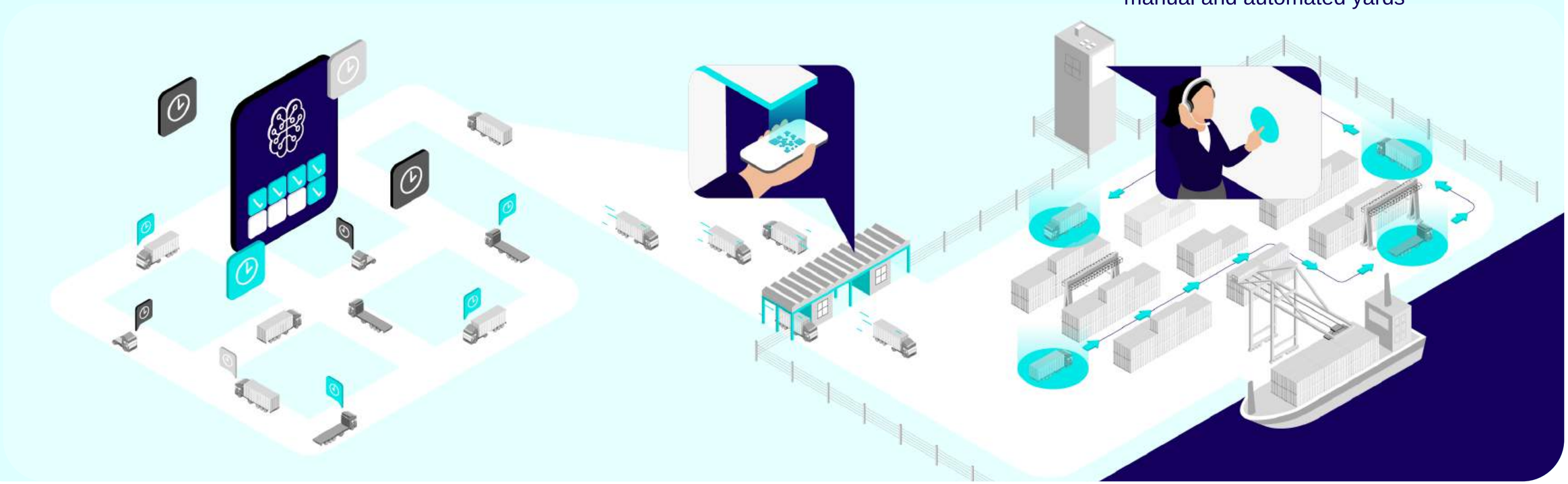
Real time pre- announcement and AI-based slot management

Gate Connect

Efficient, smart and secure digital truck gate processing

Yard Connect

Intelligent and safe digital truck processing within manual, semi-manual and automated yards



Pre Connect consists of two independent solutions

CONROO

Pre Connect

Real time pre- announcement and AI-based slot management



Real time pre announcement

Synchronize real-time information flow between truck drivers / trucking companies and terminal operators based on live location data of truck drivers.

AI-based slot management

Synchronize truck arrivals based on real-time ETA prediction and terminal capacity.

Gate Connect enables efficient truck dispatching while ensuring secure and safe terminal access

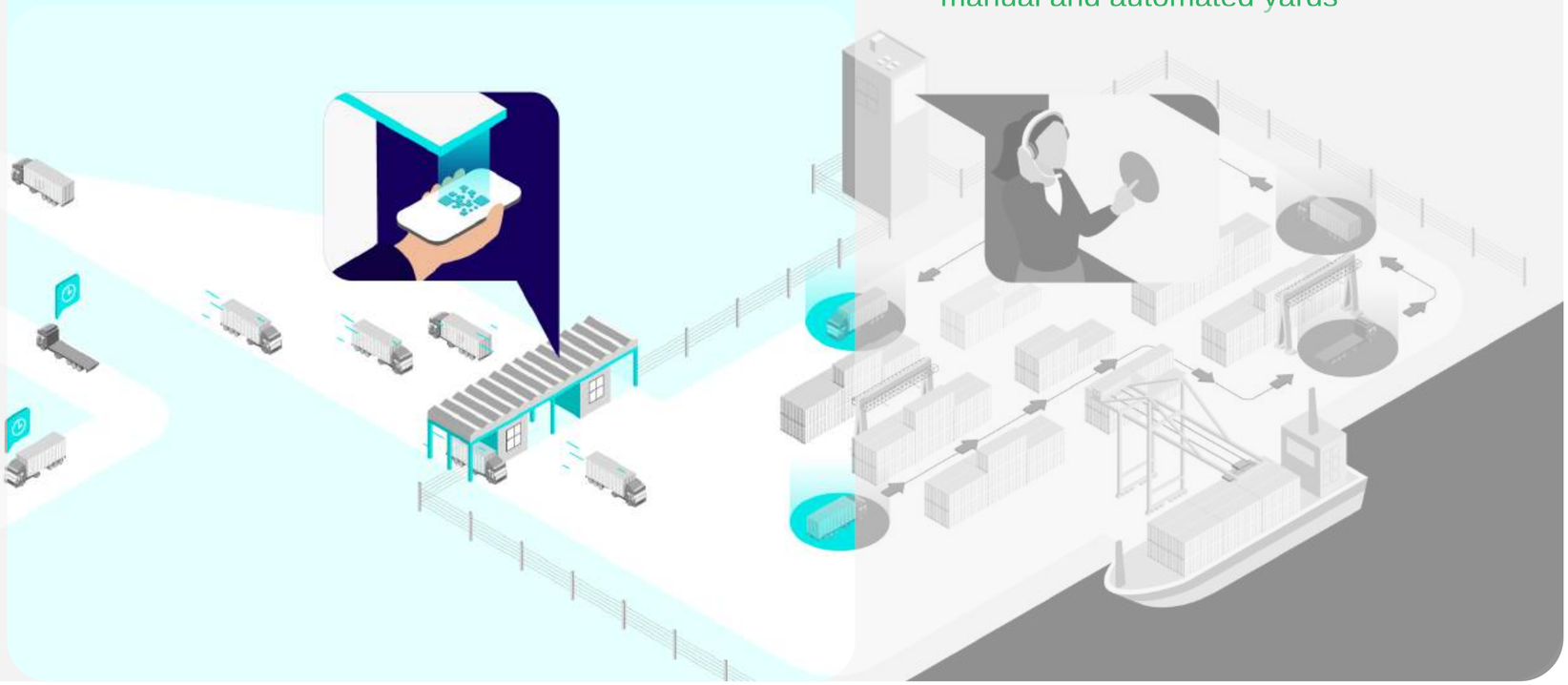
Pre Connect

Real time pre- announcement and ai based slot management



Gate Connect

Efficient, smart and secure digital truck gate processing



Yard Connect

Intelligent and safe digital truck processing within manual, semi-manual and automated yards

Yard Connect enables precise location and communication especially within automated yards

Pre Connect

Real time pre- announcement and ai based slot management



Gate Connect

Efficient, smart and secure digital truck gate processing



Yard Connect

Intelligent and safe digital truck processing within manual, semi-manual and automated yards



CONROO Connect is going to be live in more than 30 terminals & depots in 2025 and we are just getting started…

>30

sites are under contract. We started in 2021



116.958

hours of terminal staff could be optimized in 2024



295

tonnes of CO_2 could already be saved in 2024



43%

Reduction of truck turnaround time



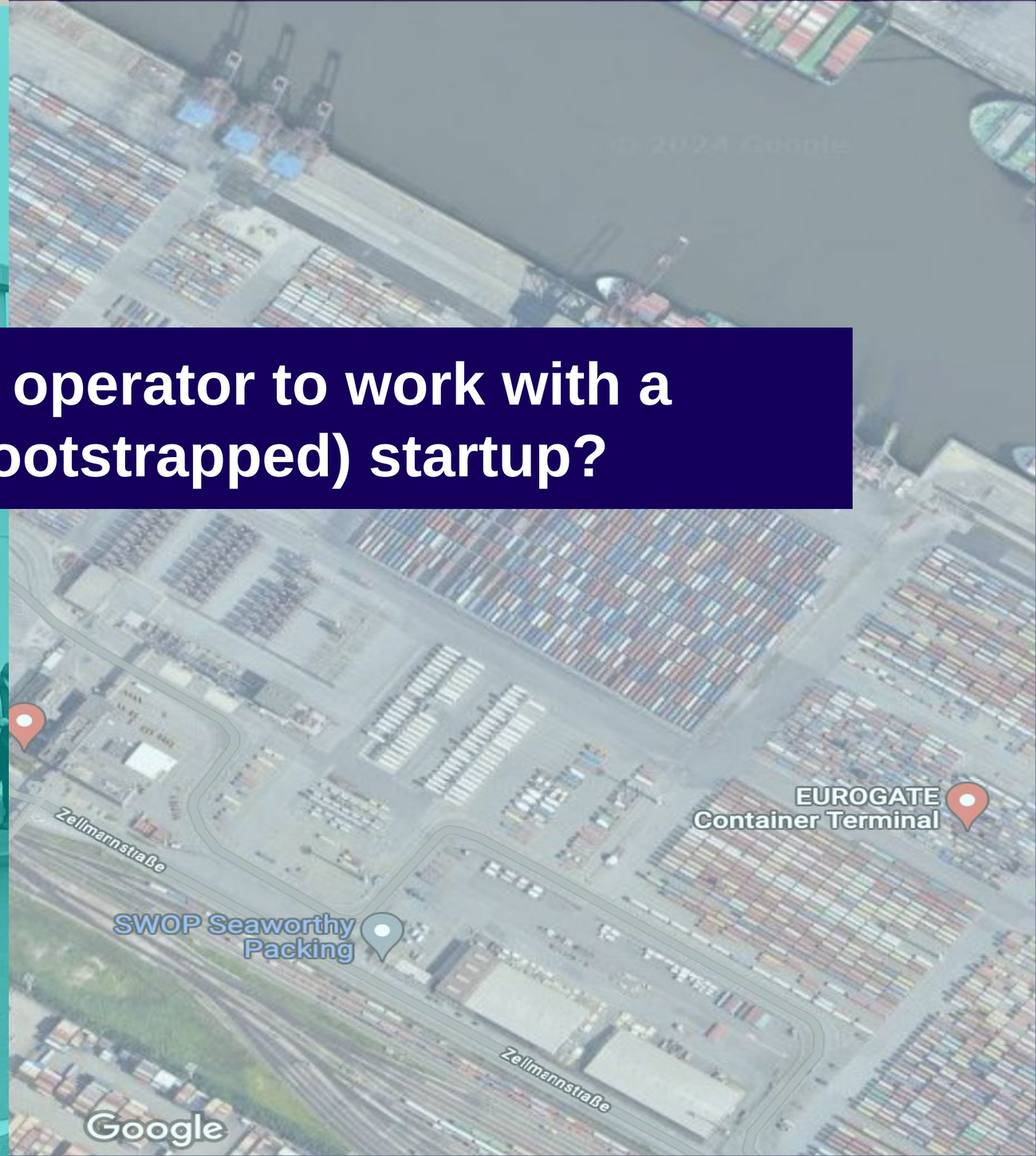
and many more…

How can (bootstrapped) startups & multinationals build powerful business partnerships?

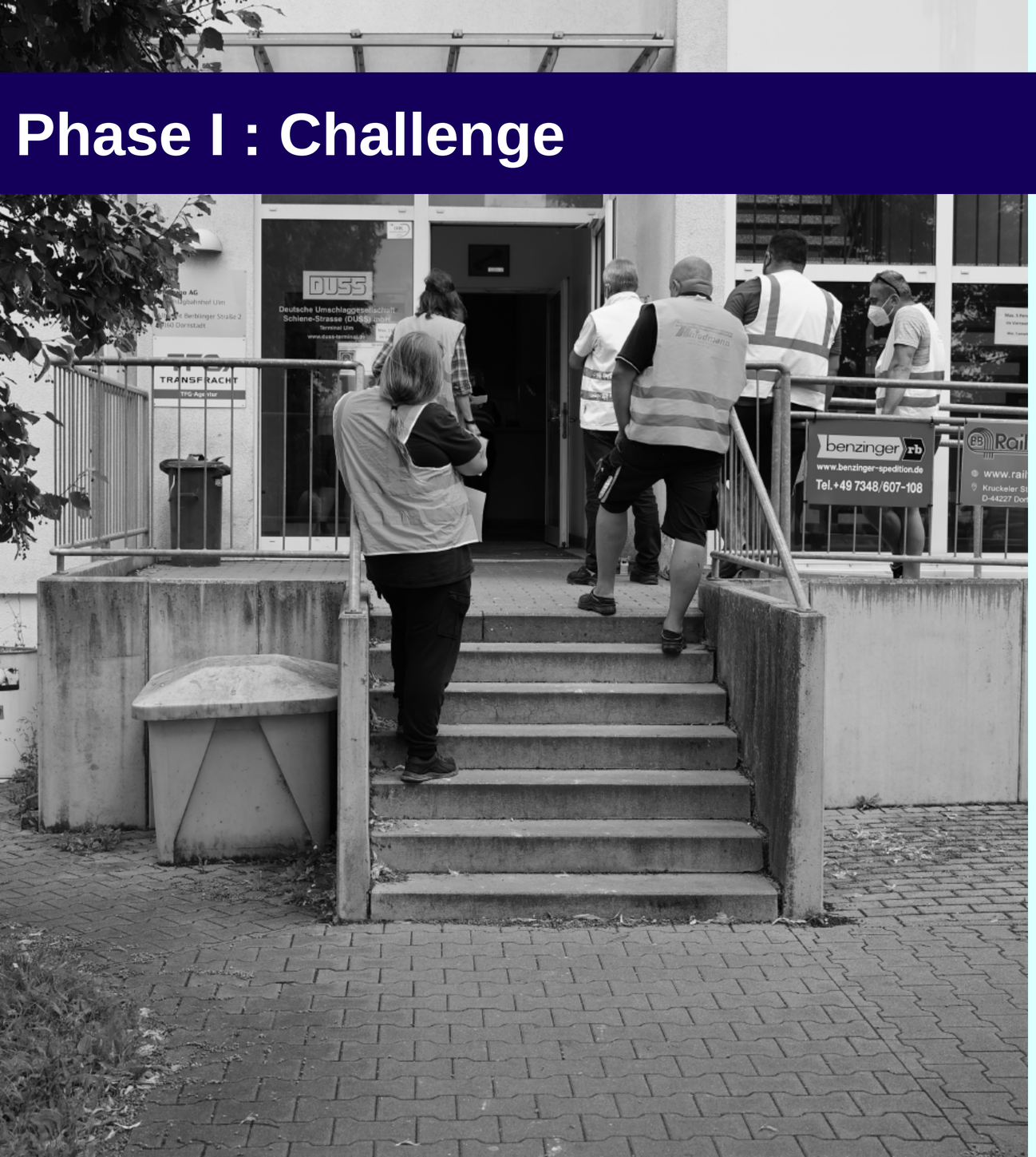
…or how to get from a small inland operator to work with a multinational port operator as a (bootstrapped) startup?







Phase I : Challenge



Inland terminal (train to truck) – Business unit of multinational railway company that needed efficiently handle truck drivers at the gate / check-in

Corporate challenge

Phase I : Solution

App for efficient truck handling the truck dispatching process - Preannouncement, Gate and Yard processes



Startup solution

Phase I : Success factors

Fully understand the key problem and process. Inspire your potential customer with the scale and impact of your solution.

Empower an independent unit to co-create a solution with the startup that benefits the whole corporation.

Startup insights

Corporate insights

Phase II : Challenge

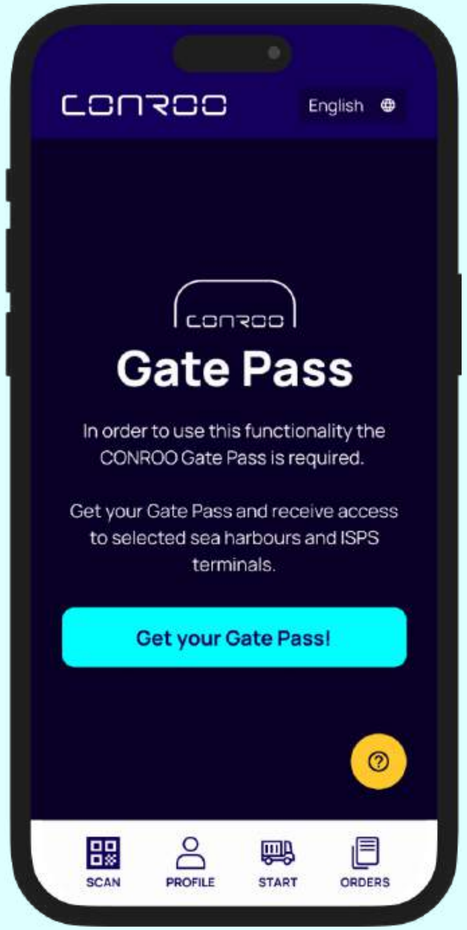


A port terminal operator experiencing security, efficiency, and safety concerns stemming from its current truck dispatching process.

Corporate challenge

Phase II : Solution

"Onboarded over 20,000 truckers within six weeks, digitally identified each driver, and ensured full compliance with all IT security and regulatory standards."



Startup solution

Phase II : Success factors

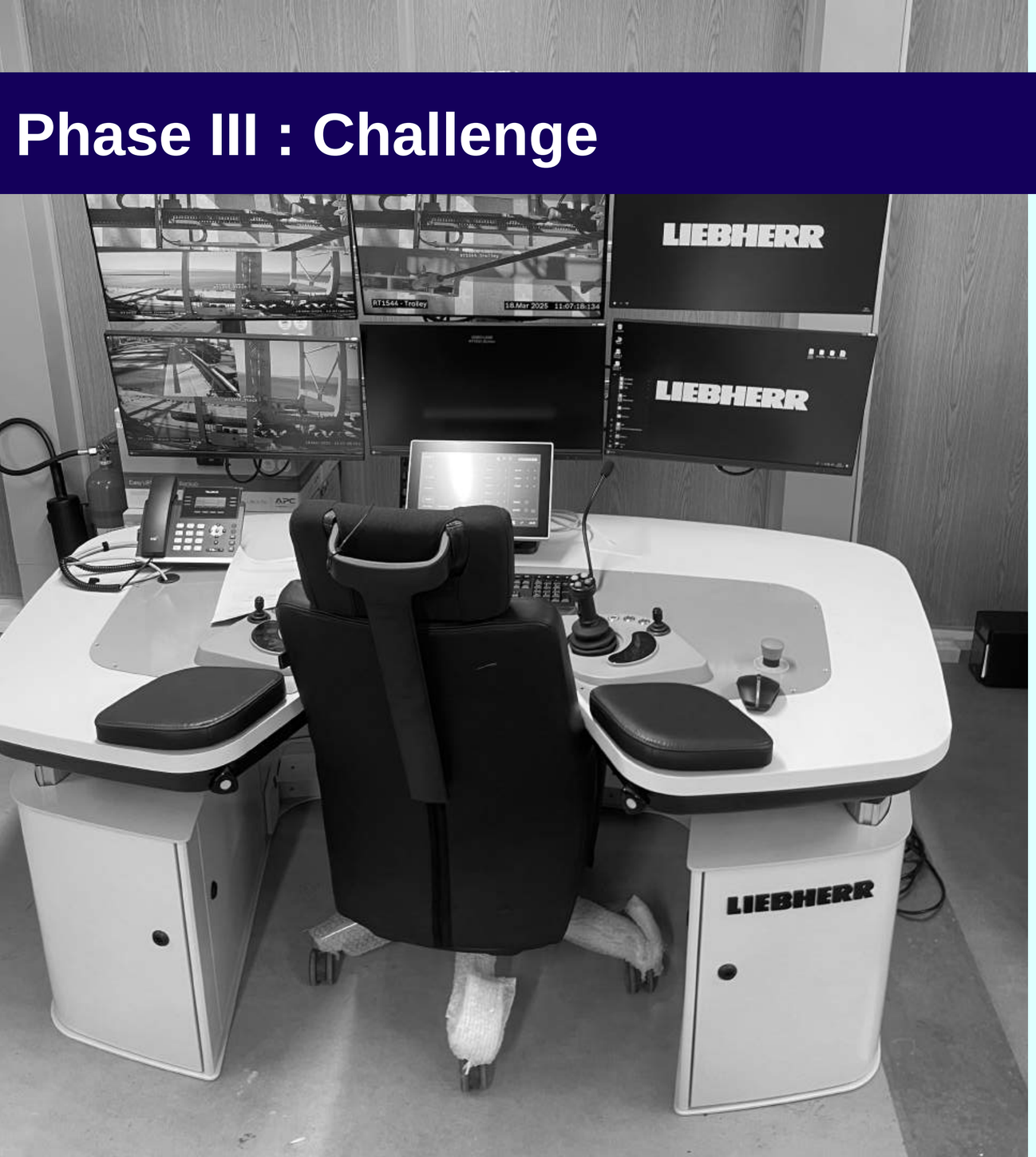
Adapt your solution to fit other clients’ needs while keeping your product vision intact.

Startup insights

Even when you have a clear solution in mind, stay open to new ideas and trust the fresh perspective newcomers bring.

Corporate insights

Phase III : Challenge



MAERSK

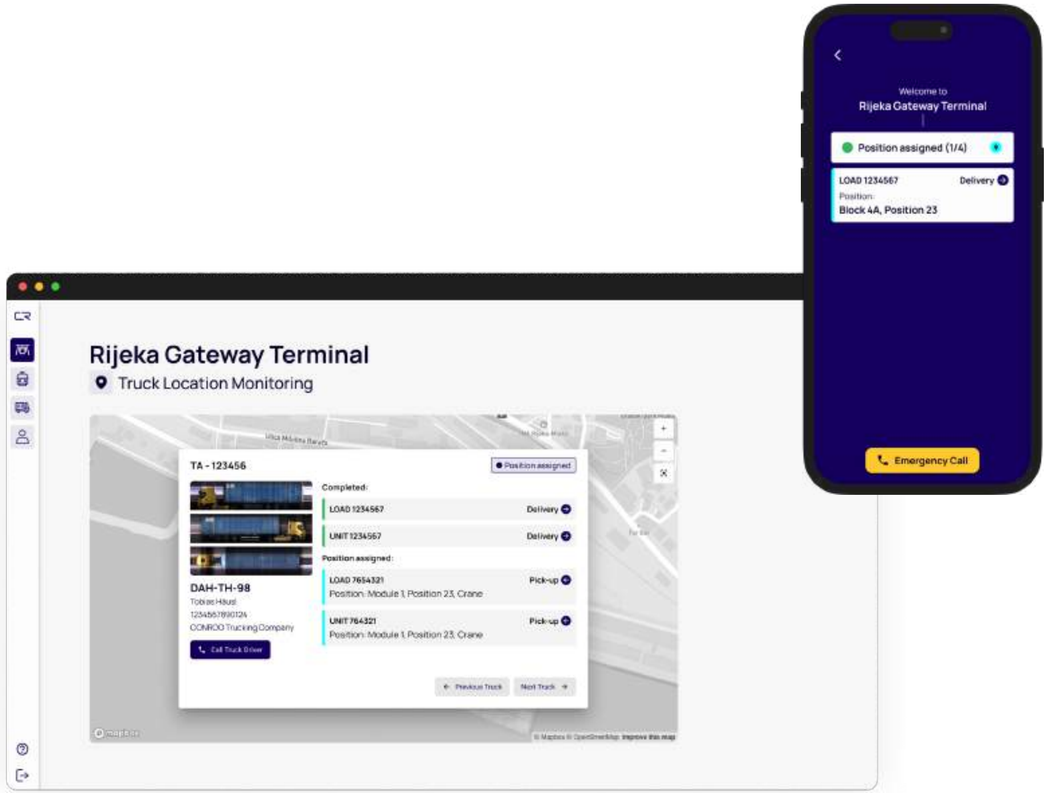
Lifting Global Trade.
APM TERMINALS

A port terminal operator aiming to build a state-of-the-art terminal featuring the most innovative, secure, and efficient processes.

Corporate insights

Phase III : Solution

Integrate external truck drivers into terminal operations by delivering a fully digital end-to-end remote truck dispatching process.



Startup solution

Phase III : Success factors

Align your product vision to the long-term strategy of innovative multinationals within your industry.

Keep an eye on emerging startups and factor them into your long-term innovation pipeline, given the extended innovation cycles in this industry.

Startup insights

Corporate insights

THANK YOU

CONTACT

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Fireside Chat: Startup Sharing



Dr Jehan Kanga

Founder and CEO



Sidhant Gupta

Co-Founder



Johnny Gambell

Technical Manager



John Ang

Director

PLUG AND PLAY
SUPPLY CHAIN

Thank You for Attending!

Please join us at the Outdoor Patio for networking.

