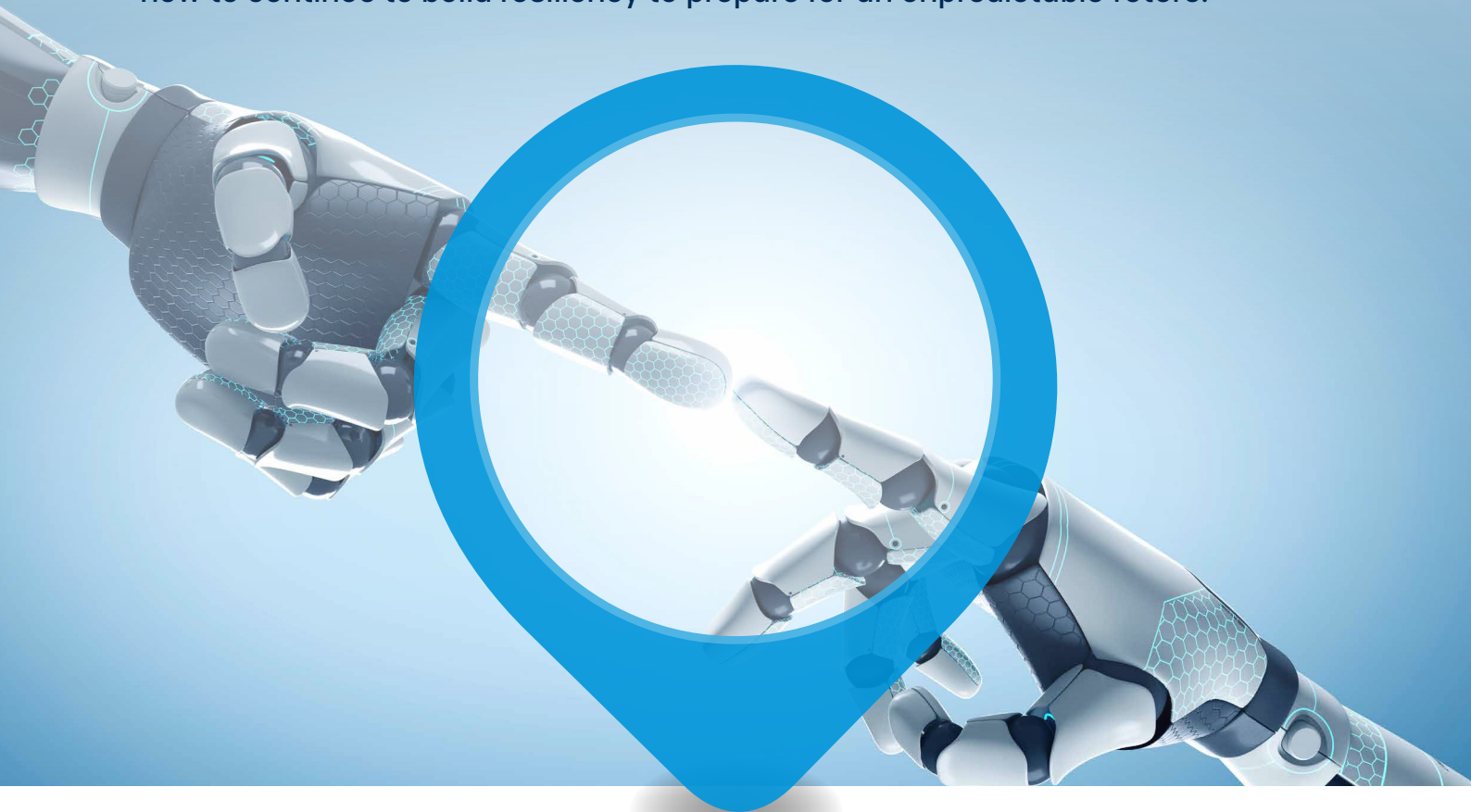


# Container Terminal Automation Conference

## 1 - 4 December, 2020 | VIRTUAL EVENT

"This year's CTAC event will unpack the most important topics and questions for Terminal Operators seeking to innovate and push for automation. The event will provide the best strategies for transitioning out of an unprecedented year and how to continue to build resiliency to prepare for an unpredictable future."



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# Welcome to CTAC 2020

The container terminal industry has not lost its appetite for automation and has continued to innovate. The demand to push forward and achieve greater productivity and efficiency continues to grow, but they are now joined by an equal demand for resiliency in the face of the COVID-19 pandemic.

CTAC 2020 is Port Technology International's flagship container terminal automation event and the first to offer networking and engagement opportunities akin to our live events, providing a platform for knowledge sharing and innovation at a crucial time.

This guide will outline how to navigate the new online platform and includes the agenda, speaker biographies and the articles of interest from the industry. You can also view the agenda via the link at the bottom of this page.

Be sure to make the most of Swapcard, by engaging in the question and answer sessions and by booking meetings and networking with fellow attendees and speakers

The event will provide four afternoons of content dedicated to understanding the key challenges to deploying innovative technologies in the terminal and understanding the best opportunities for terminal operators to yield the greatest value.

Over 20 of the world's largest terminal operators will be offering case studies during the programme, discussing which of their projects have seen the greatest boost to productivity and efficiency.

Each of our sessions will feature case studies and Q&A sessions on some of the industry's hot topics and provide a much-needed update after an unprecedented year.

Some highlights to mention include our **Retrofitting Terminal Automation** session. Most terminals cannot install full automation due to space constraints, so we must understand the process of retrofitting automation, where to invest and how to tailor your automation project to your terminal's requirements.

On our final day, we will host our **Post-COVID** Debate, discussing the effect the pandemic has had on port terminal operations. The container terminal industry has shown resilience relative to other industries, but this does not mean that there will not be changes to daily operations and the deployment of innovation projects we must prepare for.

On a final note, thank you to all our sponsors who make the event possible even during these challenging times.



To view the agenda click [here](#)

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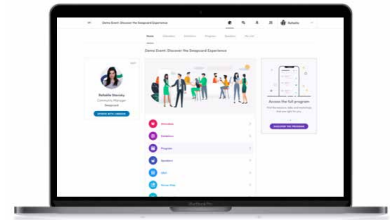
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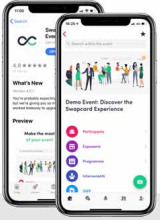
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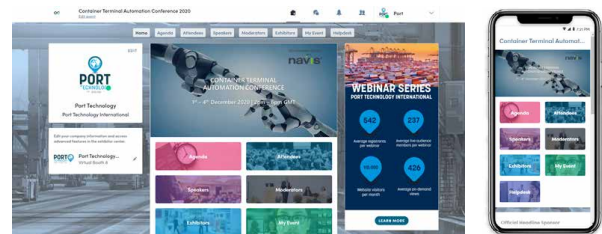
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- Attendees
- Speakers
- Moderators
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# Agenda

## Tuesday 1st December

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### 1.30PM-2.00PM GMT

#### REGISTRATION AND PORT TECHNOLOGY INTRODUCTION

Grab a coffee and join us for a chat during the registration period for CTAC. Network with colleagues and other attendees before we get started.

**SPEAKER:**

– Stephanie M. Morley, Director of Conferences, **Port Technology International**

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### 2.00PM-2.10PM GMT

#### OPENING REMARKS

Focusing on the Navis approach and philosophy behind Automation and how this 'long-view' partner approach is continuing to deliver quantifiable results for Automation customers.

**CHAIRPERSON:**

– Carlos Lopez Barbera, Senior Director Product Management, **Navis**

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### 2.10PM-2.30PM GMT

#### OPENING KEYNOTE: 2030 VISION

How to think differently about the traditional definition of Automation and ways practitioners could evolve their approach to think in bolder, more holistic ways to improve their ROI.

**KEYNOTE SPEAKER:**

– Younus Aftab, CTO, **Navis**

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### 2.30PM-3.30PM GMT

#### AN UPDATE ON THE STATE OF THE SECTOR

This introductory session offers specialist overview of world macroeconomics, the maritime supply chain, and the present state of global terminal automation. The session features world-renowned academics, consultants and representatives of global trade bodies as they flesh out the key themes 2021 will bring, how terminals can best position themselves in the market post-Covid, and how automation and next-gen digital technologies are (or aren't) influencing the sector.

**MODERATOR:**

– Wolfgang Lehmacher, WEF Expert, **World Economic Forum Network**

**PANELLISTS:**

– Eleanor Hadland, Senior Analyst, Ports & Terminals, **Drewry Shipping Consultants**

– Que Tran, Technology Leader and Enterprise Strategist, **DP World**

– Francisco Blanquer, Innovation & Development Senior Manager, **Terminal Link** (Joining Q&A only)

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### 3.30PM-3.45PM GMT

#### NETWORKING BREAK

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### 3.45-4.45PM GMT

#### DEBATING THE FUTURE OF AUTOMATION

The adoption of automation in ports and terminals has accelerated, but operational difficulties and high costs has meant that the industry has been slow to adopt the technology. In this Panel, industry experts will anticipate the complex variables which will affect the adoption of automation in both brownfield and greenfield projects in the next decade.

- Discussing whether full automation is on the horizon for existing terminals.
- Which factors will improve the business case for automation projects in the coming years?
- Will a winning 'playbook' for successful automation emerge?
- How standardisation between terminals would streamline the implementation process and accelerate new automation projects.
- Predicting which innovative advanced technologies will yield the best value.

**MODERATOR:**

- Carlos Lopez Barbera, Senior Director Product Management, **Navis**

**PANELLISTS:**

- Introduction by Gerhard Fischer, Head of Sales, Process Industries and Drives, Large Drives, Cranes, **Siemens**
- Dr. Oscar Pernia, Director of Automation & Process Engineering, **Terminal Investment Limited**
- Christian Blauert, Global Director Port and Terminal Development, **Moffat and Nichol**
- Dr.-Ing. Eva Savelsberg, SVP Logistics Division, Board Member, **INFORM**

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### 4.45PM-5.00PM GMT

#### NETWORKING BREAK

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### 5.00-6.00PM GMT

#### BIG DATA AND ANALYTICS: UTILISING DATA TO MAKE MEANINGFUL AND VALUE-ADDED DECISIONS

Big Data projects are revolutionising information processing in the port by providing terminal operators with the information they need to make results-oriented decisions. Panellists will discuss how Big Data projects will give you full control of your operations and allow you to extract key insights from an otherwise unmanageable and underutilised quantity of data.

- Improve efficiency in the terminal with real-time data analytics.
- How Big data can provide the backbone to automation projects.
- Predictive analytics: How can you anticipate disruption to your operations and use data to perform accurate predictive maintenance?
- Business intelligence: Utilising data to inform and adapt your terminal strategy.
- The importance of optimising data visualisation to ensure you are uncovering the most valuable insights hidden within your data.

**MODERATOR:**

- Lars Jensen, CEO, **SealIntelligence Consulting**

**PANELLISTS:**

- Muneeb Khadeer, Director of Product Management, **Navis**
- Stefano Negrini, Technical Director, Head of IT/OT & Automation Processes at Terminal Bettolo, **Terminal Investment Limited**
- Boris Wenzel, Managing Director, **Terminal Link**

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### 6.00PM

#### CLOSING REMARKS

**CHAIRPERSON:**

- Carlos Lopez Barbera, Senior Director Product Management, **Navis**

# Agenda

## Wednesday 2nd December

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**2.00PM-2.05PM GMT**

### **PORT TECHNOLOGY INTRODUCTION**

**SPEAKER:**

– Stephanie M. Morley, Director of Conferences, **Port Technology International**

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**2.05PM-3.15PM GMT**

### **BEST STRATEGY FOR RETROFITTING TERMINALS WITH AUTOMATION**

Fully automated greenfield projects grab the headlines, yet most automation investment is taking place at existing terminals, with limited space, outdated legacy systems and an existing workforce. This panel discussion will debate how to face the challenges and advantages in retrofitting automation.

- To change current processes to fit new automation or to change the automation to fit the current processes?
- Introducing remote controlled equipment to comply with a possible future Covid XX?
- Selecting the optimal technology for your brownfield terminal.
- Use of proven technology versus innovations on a terminal?
- Training and upskilling staff for your semi-automated terminal.

**MODERATOR:**

– Robin Audenaerdt, Managing Director, **Audenaerdt Project Management**

**PANELLISTS:**

- Floris Vernooij, Senior Product Manager, **Navis**
  - Erik Ward, VP of Systems & Technology, **GCT Global Container Terminals Inc**
  - Abdessalam El Azzouzi, Head Cranes modernization projects and warranty PH projects, **Siemens**
  - Matthias Kraus, General Manager, **DGWorld**
  - Alan Peterson, Industry Segment Leader – Crane Systems, **TMEIC Corp**
- 

**3.15PM - 3.30PM GMT**

### **NETWORKING BREAK**

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**3.30PM-4.00PM GMT**

### **BOXBAY UPDATE**

As transport volumes increase world-wide, container ports are continuously facing numerous challenges with many reaching high levels of utilization, limits to expansion, costly and lengthy environmental processes. BOXBAY is an international joint-venture formed by DP World & SMS group which offers improved operations at container terminals for container storing and handling by means of High Bay Storage (HBS). In this session, you'll hear the most up to date information on the innovative way to place each container in an individual rack, making each one directly accessible. The storage capability of the terminals is enhanced by stacking containers as high as 11 tiers.

**KEYNOTE SPEAKER:**

– Ronald van der Meer, Project Director, HBS, Global Operations & Engineering, **DP World**



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#### 4.00-5.00PM GMT

##### HOW 5G NETWORK DEPLOYMENT CAN PROVIDE THE DRIVING FORCE FOR INNOVATION PROJECTS

This session will discuss how 5G network deployment can improve productivity and efficiency in the terminal, and how the technology can be the driving force behind innovation and automation projects in the future.

**MODERATOR:**

– Egemen Can Senol, Consultant, **Navis**

**PANELLISTS:**

- Ali Yıldız, IT Director, Marport
  - Giacomo Luce, Sales Specialist IoT EMEAR, **Fluidmesh**
  - José Luis Cárcel, Digital Transformation Engineer, **Fundación Valenciaport**
  - Douglas Mafra, Wireless Transformation Manager, **APM Terminals** (Joining Q&A only)
- 

#### 5.00PM – 5.15PM GMT NETWORKING BREAK

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#### 5.15PM-6.30PM GMT

##### EMERGING TECHNOLOGIES AND HOW INNOVATION PROJECTS TRANSLATE TO REAL-WORLD RESULTS

Recent years have seen rapid advancements in technological innovation, which is impacting the way port terminals are run, but it can be difficult to decide which technologies deserve your investment. This update will discuss which technologies will provide instant value to your terminal and suggest which technologies may not be ready for widespread adoption.

- How Artificial Intelligence and machine learning can analyse collected data with ultra-efficiency and help make predictive decisions.
- Will the deployment of 5G revolutionise the flow of information in the port?
- Smart Ports of the future: How terminals can install a wide range of emerging technologies to create a maximally efficient automated terminal.
- Evaluating case studies where emerging technologies have provided measurable value, from IoT, to drones and augmented reality.

**MODERATOR:**

– Matthew Wittemeier, Senior Manager, International Marketing and Customer Relations, **INFORM**

**PANELLISTS:**

- Meena Shah, Sales Engineer, **Navis**
  - Dr. Rafiq Swash, Founder, **AIDrivers**
  - Stephan Trauth, Vice President of Sales, **Yardeye GmbH**
  - Panagiotis Fragkos, Yard and Gate Superintendent, **DP World**
  - Piet Opstaele, Innovation Enablement Manager, **Port of Antwerp**
- 

#### 6.30PM CLOSING REMARKS

**CHAIRPERSON:**

– Carlos Lopez Barbera, Senior Director Product Management, **Navis**

# Agenda

## Thursday 3rd December

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### 2.00PM-2.05PM GMT

#### PORT TECHNOLOGY INTRODUCTION

**SPEAKER:**

– Stephanie M. Morley, Director of Conferences, **Port Technology International**

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### 2.05PM-3.00PM GMT

#### THE PUSH TO DECARBONISE: HOW PORT TERMINALS CAN ACHIEVE THEIR SUSTAINABILITY TARGETS

Social and regulatory pressure to reduce emissions in the shipping industry will require terminals to decarbonise and transition away from diesel. This panel discussion will review the value drivers for electrified port equipment and how automation and electrification can go hand in hand.

- Cooperating with the shipping industry to meet IMO 2030 and 2050 zero emissions targets.
- Understanding the business case for electrification and estimating payback times.
- Battery powered electrification vs fuel cell powered electrification.
- Achieving electrification and automation simultaneously

**MODERATOR:**

– Stephanie M. Morley, Director of Conferences, **Port Technology International**

**PANELLISTS:**

- Thomas Jelenic, Vice President, **Pacific Merchant Shipping Association**
  - Ashley Woods, Global Head of Environmental Improvement and HSSE Performance Insights, **APM Terminals**
- 

### 3.00PM - 3.15PM GMT

#### NETWORKING BREAK

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### 3.15PM-4.30PM GMT

#### STANDARDISATION: HOW DATA SHARING AND COLLABORATION CAN REVOLUTIONISE THE SECTOR

Data sharing and collaboration will allow all terminal operators to be fluent in the same language; optimising operations industry wide and streamlining other technology projects. This discussion will outline the path towards standardisation and consider why the competitive mindset is holding back achievable changes that would benefit all.

- Speaking in the same language: How data sharing and collaboration can optimise operations in every terminal and provide equitable benefits among all terminal operators.
- Learning from aviation: How regulation could provide the answer to data standards in the industry.
- Uncovering how automation projects can be more easily implemented and configured with standardisation, rather than the costly and time-consuming process of building each project from scratch.

**MODERATOR:**

– Matthew Witteimer, Senior Manager, International Marketing and Customer Relations, **INFORM**

**PANELLISTS:**

- Sumitha Sampath, VP Cloud Operations, **Navis**
  - Luis Canto, Chief Technical Officer, **MMC Port**
  - Silja Lorenzen, Manager Operation Optimisation and Technology, **DP World**
  - Marcel van de Pol, Program Director, **Digital Container Shipping Association**
- 

### 4.30PM-4.45PM GMT

#### NETWORKING BREAK



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#### 4.45PM-6.00PM GMT

##### **INTEGRATION: HOW TO INTEGRATE NEW AUTOMATED SOLUTIONS WITH YOUR EXISTING TOS**

- Is there a need to standardise internal processes?
- How to seamlessly install the required equipment, devices, control and supervision systems, transmission and data gathering systems and real-time software applications to your terminal with limited disruption.
- How can add-on software solutions provide additional automated functionality on top of your existing TOS.
- How brownfield automation projects can implement and integrate new technology incrementally.

**MODERATOR:**

– Rich Ceci, VP of Systems and Technology, **Victoria International Terminals**

**PANELLISTS:**

– Stephane Zampelli, Product Manager, **Navis**

– Dr. Rafael Velasquez, Senior Consultant, **INFORM**

– Mar Chao Lopez, Chief Commercial and Business Development Officer, **Valencia Port Authority**

– Simon van Wijlen, Owner, **Paragon Management & Consultancy**

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#### 6.00PM

##### **CLOSING REMARKS**

**CHAIRPERSON:**

– Carlos Lopez Barbera, Senior Director Product Management, **Navis**

# Agenda

## Friday 4th December

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### 2.00PM-2.05PM GMT

#### PORT TECHNOLOGY INTRODUCTION

**SPEAKER:**

- Stephanie M. Morley, Director of Conferences, **Port Technology International**
- 

### 2.05PM-3.05PM GMT

#### POST COVID-19: THE IMPACT OF THE PANDEMIC ON PORT TERMINAL OPERATIONS AND NEW INNOVATION PROJECTS

This session will discuss the effect the global pandemic has had on port terminals and the adjustments that can be made to mitigate the challenges posed by the resultant regulations, social distancing guidelines and a strained economy.

- How will the pandemic affect the implementation of innovation projects?
- Social Distancing rules: How to run an efficient terminal whilst abiding by health and safety guidelines.
- Resiliency: Has the pandemic improved the business case for terminal automation?

**MODERATOR:**

- Beth Maundrill, Editor, Port Technology International

**PANELLISTS:**

- Introduction by Francisco J. Grau Cavanillas, Managing Director, Ports & Terminals, **Orbita Ingenieria**
  - Paul Saraber, Head of IT and Systems, **Rotterdam World Gateway**
  - Rich Ceci, VP of Systems and Technology, **Victoria International Terminals**
  - Sun Fei, Automation Architect, **ZPMC**
- 

### 3.05PM-3.20PM GMT

#### NETWORKING BREAK

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### 3.20PM-4.30PM GMT

#### CHANGE MANAGEMENT: PREPARING YOUR TERMINAL FOR AUTOMATION

The initial move to automation has caused disruption in many sectors, so how can terminal operators prepare their terminal and staff for the cultural change, mitigate disruption, and ensure a smooth transition.

- What skills and training are required and for whom?
- How best to reposition your workforce to fit a semi-automated terminal.
- How to manage a remote workforce without taking a hit to productivity.

**MODERATOR:**

- Lars Jensen, CEO, **Sealintelligence Consulting**

**PANELLISTS:**

- Johannes Leholm, Automation Architect, **Navis**
  - Amir Billones, Data Architect, **Termont**
  - Duncan Glass, Terminal Manager, **Exolgan Container Terminal**
  - Sidney Nederlof, Director of Information Communication Technology, **Red Sea Gateway Terminal**
- 

### 4.30PM-5.30PM GMT

#### FINAL Q&A AND CLOSING REMARKS: REVIEWING THE CONTENT FOR THE WEEK

Grab some refreshments and join us for this informal final session of the week, debriefing all four days of content and addressing any unanswered questions.

**CHAIRPERSON:**

- Carlos Lopez Barbera, Senior Director Product Management, **Navis**

**SPEAKER:**

- Stephanie M. Morley, Director of Conferences, **Port Technology International**



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# Speakers



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**Abdessalam El Azzouzi, Head Cranes modernization projects and warranty PH projects, Siemens**

Abdessalam El Azzouzi with Msc in control systems, joined Siemens in 1998, since 2016 is head of Cranes modernization projects – with 22+ years of experience in cranes business; product and project management as well as services. Current focus is to modernize and automate existing container cranes for life extension and productivity enhancement, where safety and cyber security of automated equipment is key.

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**Alan Peterson, Industry Segment Leader – Crane Systems, TMEIC**

Alan Peterson joined TMEIC in 2006 and has since been working full time in the marine container terminal marketplace. Terminal automation and advanced lifting equipment technologies are his specialties. Currently his responsibilities include managing a global sales force and helping to shape the strategic direction of the business.

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**Ali Yildiz, IT Manager, Marport**

In 1996, Ali Yildiz graduated from ITU, Electronics and Communication Engineering. 1996-1998; Head of Technical Services in Meridian Computer Services 1998-2001; Systems Support Engineer in Alstom Power Systems, 2001-2012; IT Manager in Electrolux Turkey Since 2012; IT Manager in Arkas Holding Port and Terminal Operations Group.

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**Amir Billones, Data Architect, Termont**

Amir is an architect of automated transactional systems with over 15 years of experience in the logistics domain. Applying Digital Transformation strategies, he optimizes business processes and data integration – beyond point-to-point, looking to improve profitability, user experience, systems performance and risk aversion.

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**Ashley Woods, Global Head of Environmental Improvement and HSSE Performance Insights, APM Terminals**

Ashley currently holds the role of Global Head of Environmental Improvement in APM Terminals. Here Ashley is developing and implementing a new Environmental Management program. Embedding sound environmental management practices and standards into APM Terminals' Operating System. The strategy is designed to leverage cross-function and multi-disciplinary expertise within APM Terminals to achieve better environmental outcomes in collaboration and through partnership with customers and stakeholders.

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**Boris Wenzel, Managing Director, Terminal Link**

Boris has twenty years' experience in senior leadership positions in Asia and Europe backed by early experience as a turn-around specialist and proven track record in building successful teams and creating shareholder value. Multi-industry, multi-company and multi-continent experience in diverse cultural environments and solid experience representing interests of financial institutions & PE type investors. He has extensive negotiation and lobbying experience dealing at the top governmental levels in Europe, Asia and South America, as well as EU institutions.

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**Carlos Lopez Barbera, Sr. Director of Product Management, Navis**

Carlos Lopez Barbera is the Sr. Director of Product Management at Navis. He has been with Navis for 7 years and during his journey he had the opportunity to be part of some of the most innovative projects in the industry. His experience on the field is fundamental to understand the real challenges of the maritime industry and leverage the best ideas to build great products.



**Christian Blauert, Innovation and Development Senior Manager, Moffatt and Nichol**

Christian Blauert is the Global Director in Port and Terminal Development for Moffatt & Nichol. Christian has over 25 years of experience within the maritime industry with a strong focus on container terminal developments, terminal management, automation projects and management-strategy as well as business development. Christian joined Moffatt & Nichol having held various C-suite roles, including CEO, for global terminal operators.

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**Douglas Mafra, Wireless Transformation Manager, APM Terminals**

Douglas brings more than 20 years of international experience in the telecommunications and IT area. He is a passionate senior leader with extensive experience heading large and complex projects in difficult and challenging environments in Europe, Africa, Middle East and Asia, working for companies such as Siemens, Nokia, Vodafone, Ferrari Unicredit (Reale Mutua), TIM and KPN. Currently he works for Maersk Industrial Technology as their Wireless Transformation Manager.

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**Dr.-Ing. Eva Savelsberg, SVP Logistics Division, Board Member, INFORM**

Dr.-Ing. Eva Savelsberg is Senior Vice President of INFORM's Logistics Division. She specializes in AI and Optimization Software that renders a wide range of operational processes more productive, agile, and reliable. Eva is also lecturer at the University of Aachen (RWTH), where she received her PhD in mechanical Engineering in 2002. Eva has published 5 books and over 40 papers on innovation in freight transportation.

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**Dr. Rafiq Swash, Founder, Aidrivers**

Aidrivers Founder and Believer Dr. Swash brings extensive experience in technology driven industries, academia and research centres globally. Dr. Swash has contributed greatly to research in AI, visual information search, financial computing, computer vision, 3D sensors, data analytics and automation at an international level.

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**Duncan Glass, Terminal Manager, Exolgan Container Terminal**

Duncan has 30 years' experience in the container shipping and marine terminal industry. For past 12 years he has been responsible in steering the Terminal's operations and developing Process Automation. Prior to joining Exolgan, Duncan had been Commercial Manager of Terminal Pacifico Sur (TPS), Valparaiso, Chile.

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**Egemen Can Senol, Consultant, Navis**

Egemen has been working in the port industry for more than 8 years, having previously worked on Marport Operational Software team as the team leader and contribute to both Navis-related and internal projects. Since 2019, he has been working on the Navis Professional Services team as PS Consultant based on Istanbul and attending various Navis implement/upgrade projects in different regions.

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**Eleanor Hadland, Senior Analyst – Ports & Terminals, Drewry Shipping Consultants**

Eleanor Hadland has over 25-years experience in the port sector, working initially for the UK's largest port operator Associated British Ports. She has subsequently held senior level consultancy roles with Drewry, Moffatt & Nichol, BMT and AECOM. Re-joining Drewry in 2019, she is leading their port sector research team which provides timely analysis of the key trends that are driving change within the sector, and in-depth assessment of the strategies employed by the leading terminal operators.

# Speakers

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**Erik Ward, Vice President, Terminal Systems and Technology, GCT Canada**

Erik Ward is the Chief Information Officer at GCT Global Container Terminals, Inc., joining the executive team in August 2017. His role is to lead the IT strategic vision, day to day operations and projects for Technology & Systems at GCT terminals worldwide. Prior to joining GCT, Erik was a senior leader at Navis LLC, where he was RVP of Customer Operations and responsible for customer care and support for over 100 terminals. He has also held leadership roles for SSA Marine and Tideworks Technology in Seattle and Panama City, Panama.

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**Floris Vernooij, Senior Project Manager, Navis**

Floris Vernooij has been with Navis for over 6 years. Initially starting as a consultant, he is now part of the product management team where he is leading the team that is building the next suite of tools which helps both manned as automated terminals achieve higher levels of productivity and efficiency. Floris holds a Bachelor in Industrial Engineering and a Master of Science in Supply Chain Management.

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**Francisco Blanquer, Innovation & Development Senior Manager, Terminal Link**

Francisco is a Spanish civil engineer but with an industrial professional career resulting in extensive experience in the industry sector that has given him the ability to perform complex multidisciplinary projects. His latest projects have been related to complex systems as: the terminal dynamic lighting system and implementation of IoT and Big Data technology in container terminals. Currently, he is giving and growing all his innovation experience in Terminal Link (CMA-CGM).

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**Francisco Grau Cavanillas, Managing Director – Ports&Terminals, Orbita Ingenieria**

Francisco is an industrial engineer specialised in electronics and industrial automation. Over the years he has held various positions in engineering companies, yet always oriented to process automation and industrial communications. His experience and skills have been developed over more than 18 years of projects and business development in the automotive and maritime sectors. In his current role he is in charge of developing Orbita's global business in ports and terminals.

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**Gerhard Fischer, Head of Sales, Process Industries and Drives, Large Drives, Cranes, Siemens**

Gerhard has been with Siemens AG in the Cranes business segment in Erlangen, Germany as Head of Sales. He is member of IEEE Industry Applications Society, the VDI working group B1 for cranes, the VDE DKE working group for hoisting systems and vice-chairman of the PEMA committee for equipment design and infrastructure.

In 1990 Gerhard joined Siemens AG in Erlangen, Germany to develop high frequency and large-power converters. In 1995 he changed to sales/marketing of variable speed drives followed in 1996 by a posting in Siemens' Centre of Competence in Singapore and Taiwan developing cranes business. From 2005 till 2008 he worked with Siemens in The Hague, Netherlands in a business development function for harbour cranes.

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**Giacomo Luce, Sales Specialist IoT EMEAR, Fluidmesh Networks**



**Johannes Leholm, Automation Architect, Navis**

Johannes Leholm is an automation architect at Navis where he works with logistics providers to identify the most effective strategies to deploy robotic handling equipment at marine terminals. Previously, Johannes worked as a product manager and sales engineer at Navis, where he was responsible for implementing and designing automated solutions that accelerate productivity at some of the largest and most advanced ports in the world.





**José Luis Cárcel, Digital Transformation Engineer, Fundación Valenciaport**

Fundación Valenciaport is the R&D innovation center of the Port of Valencia. At Fundación, José Luis is involved in multiple projects related to the study and development of disruptive technologies like 5G or the Internet of Things and its application to the maritime and logistics ecosystem.

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**Lars Jensen, CEO, Sealntelligence Consulting**

Sealntelligence Consulting is focused on providing expert assistance in strategic decision making, analysis, process improvement and revenue management in the container shipping sector. Lars has 16 years of experience from inside the container shipping industry, including eight years as Director of driving and developing market intelligence & analysis for Maersk Line, Maersk Logistics and The Containership Company.

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**Luis Canto, Chief Technical Officer, MMC Port**

Luis is a professional electronics engineer. For the last 15 years he has been based at Malaysia taking care of Crane Upgrades and Services for different Ports and Terminals. Now he is the Chief Technical Officer of MMC Ports, which owns five Ports in Malaysia, handles 14 million TEU and has 120 quay cranes, 330 RTGs and more than 800 prime movers among other equipment. At MMC Ports he has been leading the internal standardisation and improvement programs as long as the new equipment and port master plans developments.

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**Mar Chao Lopez, Chief Commercial and Business Development Officer, Valencia Port Authority**

Since 1991, Mar Chao López has developed her work in the field of logistics in both public and private sectors. So far, she was the general manager of the Reyser group. In the public sector, she has worked for the Port Authority of A Coruña, as head of service provision unit; and at the Port Authority of Vigo, as head of port operations division and the operating department. Between December of 2006 and March of 2009, Chao was the CEO of transports of the Xunta de Galicia, being adviser in the Port Authority of Ferrol and assuming the presidency of Ports of Galicia.

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**Marcel van de Pol, Program Director, Digital Container Shipping Association**

Marcel is responsible for the development of digital standards for DCSA's IoT and Just in Time Port Call initiatives. In conjunction with carrier subject matter experts, Marcel works to ensure alignment of standards with common industry practices and promote adoption among stakeholders.

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**Matthew Wittemeier, Senior Manager – International Marketing and Customer Relations, INFORM**

Born in America, Matthew Wittemeier moved to Australia in his early twenties. Having received his Bachelor of Management and Professional Studies from Southern Cross University, New South Wales, his career in marketing and sales took flight, including stop-overs in the aviation, creative, finance, and software service industries. Twelve years later, he left the sunny beaches of Australia to take up a new challenge in Germany. Matthew is now responsible for Marketing and Sales at INFORM's Logistics Division. He is a thought-provoking contributor to many industry publications, the INFORM and All Things Supply Chain blog, producer and host of the buzzITtalk podcast, father, and self-proclaimed podcast addict.

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**Matthias Kraus, General Manager, DGWorld**

Matthias holds 15 years of global experience in engineering and product development. He managed international projects in cooperation with leading research and technology companies and utilizes his technical background and experience to help traditional industries in utilizing new technologies in order to make them ready for the challenges of tomorrow.

# Speakers



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**Meena Shah, Sales Engineer, Navis**

Meena Shah is a Sales Engineer at Navis focusing on brownfield retrofit automation and optimization. She has over a decade of experience developing software solutions for both automated and conventional terminals. She holds a BS in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology and a MS in Computer Science from the California State University East Bay.

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**Miguel Ángel Llorente Carmona, Innovation & Terminals Digital Transformation Head, Prodevelop S.L.**

Miguel manages the evolution of product and services focused in the improvement of daily operations of ports and terminals, managing and coordinating a multi-disciplinary team of professionals with a wide experience in port and maritime innovation.

He is Telecommunications Engineer (MSc, 2009), MBA in Global Markets (2014), and Master in Industry 4.0 (2018) with 10+ years of experience in industrial innovation. He has a strong background in sensor networks, tiny/low power communications, industrial IoT and big data analytics and collaborates in several research programmes and standardization initiatives.

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**Muneeb Khadeer, Director of Product Management, Navis**

As product leader at Navis, Muneeb has over 10 years of experience building products and solutions that make people's lives less stressful, more informative, productive and prosperous. His primary focus over the past several months has been to bring better user experience, visibility and insights to terminal and vessel operations.

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**Panagiotis Fragkos, Yard and Gate Superintendent, DP World**

With a background in the Hellenic Navy, Panos has now been working at DP World, London Gateway for six years and is responsible for the strategies and processes deployed at the yard and gate to improve the business's productivity and profitability.

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**Paul Saraber, Head of IT and Systems, Rotterdam World Gateway**

Paul's career started in software development, before Paul became an IT & Enterprise Architect. Currently Paul is Head of IT and Systems at Rotterdam World Gateway (RWG). RWG offers its customers 24/7 safe, reliable, sustainable and efficient container handling in Rotterdam, the main transit port of Europe.

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**Piet Opstaele, Innovation Enablement Manager, Port of Antwerp**

As innovation 'enablement' manager for the Port Authority, Piet is one of the drivers of the digital and innovation transition in the Port of Antwerp. Based on a founded strategy with a pragmatic approach in executing concrete innovation projects, he makes the 'Port of the Future' tangible and leads the development of Port of Antwerp as open innovation platform (e.g. on smart shipping, drones) - on which startups, companies, knowledge institutions and other authorities create new value for the Antwerp port ecosystem.

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**Que Tran, Head of IT, Europe & Russia, DP World**

Que has previously held a number of senior international leadership positions across a range of sectors including media, market research, manufacturing, logistics, inter-governmental and financial services. In addition to technology leadership, he is focused on cyber, digitalization and innovation initiatives to help protect, optimize and transform the organization and industry.



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**Rafael Velásquez, Senior Consultant, Logistics Division, INFORM**

Rafael Velásquez holds a PhD in Mathematical Optimization from the Technical University of Kaiserslautern. He has worked in Optimization Projects over the last 14 years within the Research and IT sector. He joined INFORM in 2008 with focus on promoting optimization solutions in the Container Terminal industry. Since 2012 he is leading the Port Optimization projects at INFORM's Logistic Division.

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**Rich Ceci, VP of Systems and Technology, Victoria International Terminals**

Rich Ceci joined VIT in May 2016 as Senior Vice President of Technology and Projects. He is currently responsible for both IT and major projects in the Port of Virginia. Rich recently completed a pair of projects valued at over \$800M that added nearly 2 million TEU of capacity to the port. The Virginia Projects won recognition by Lloyds List for their innovation and environmentally conscious design.

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**Robin Audenaerdt, IT Project Manager, Rotterdam Terminal & Managing Director, Audenaerdt Project Management**

Robin started as a project engineer at Europe Combined Terminals, Europe's largest container terminal, in Rotterdam in 1995. With first-hand experience from the first fully automated container terminal in the world with AGVs and ARMGs, he has been working as project and implementation manager for container, car, and airfreight terminals and ports ever since. Among other projects, he is currently acting as Project Director at the Container Exchange Route for PortShuttle BV in Rotterdam, a special service and subsidiary of Port of Rotterdam Authority.

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**Ronald van der Meer, Project Director, HBS, Global Operations & Engineering, DP World**



**Sidney Nederlof, Director of Information Communication Technology, Red Sea Gateway Terminal**



**Silja Lorenzen, Manager Operation Optimisation and Technology, DP WORLD**

Silja Lorenzen, Manager Operation Optimization and Technology in the department of Global Operations, DP World Head Office, is passionate about the world trade with its terminals, ports and the supply chain. The international perspective from a global company in a generally growing economy fascinates her, where digitization and digitalization plays a key role. Silja has a strong background in logistics, IT and terminal operation.

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**Simon van Wijlen, Project Manager IT & Integration, PSA Antwerp & Owner, Paragon Management & Consultancy**

Simon van Wijlen is a marine terminal IT Director professional with a passion for ensuring that IT adds value to the terminal operation. He is specialized in terminal automation, building IT teams, and getting the terminal to a high level of performance. Coming from a solid manufacturing and logistics background, Simon is since 2000 in the marine terminal business with main focus on [semi] automated container terminals and with a love for general cargo terminals as well. In 2019 Simon started Paragon Management & Consultancy with a focus on IT [automation] projects in marine terminals.

# Speakers



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**Stefano Negrini, Technical Director, Head of IT/OT & Automation Processes at Terminal Bettolo, Terminal Investment Limited**

Stefano is a professional with over 25 years of experience in within the industrial fields, of which over 20 in the port sector. From 2012 onwards he has been increasing his focus and activities on digitisation and data science, with particular attention to the application and opportunities of terminal processes automation, big data , machine learning and blockchain use in within the port and, more generally, in within the logistic field.

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**Stephan Trauth, VP, Sales Yardeye**

Stephan has over 15 year of experience in sales and project management with focus on complex industrial technology. In the past Stephan has managed various terminal projects around the world and he worked also in the area of business development and product management for hardware and software solutions. Stephan's academic background combines a degree in engineering and a master's degree in business administration.

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**Stephane Zampelli, Product Manager, Navis**

Stephane has 7 years of experience working for Navis and in the maritime industry. He brings this wealth of experience in Operations Research and Automation to the Product Management group in Navis. Before joining Product Management, Stephane has held a position in Professional Services for 5 years in the Optimization team providing services in automated terminals all around the world.

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**Sumitha Sampath, VP Cloud Operations, Navis**

Sumitha has complete oversight of operational processes and decisions concerning all Navis SaaS solutions. She is passionate about the efficiencies that can be brought to business as a result of using Cloud, AIML and other modern technology. She was part of the Navis Strategy team charting out the vision to make 'Global Trade Smarter, Safe and more sustainable for everyone'. Sumitha has an ideal mix of Strategy and Execution, Technology, TOS, Carrier Systems expertise and solid business management experience.

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**Sun Fei, Automation Architect, ZPMC**

2006, software engineer, joined ZPMC and started to work on automated terminals.  
2006 - 2010, software engineer, automation demonstration Terminal on ChangXing Island.  
2011 - 2013, ROCS (Remote Operation Control System) product manager, HIT 24 ARMGs automated retrofit project in Hong Kong.  
2013 - 2015, ROCS (Remote Operation Control System) product manager, fully automated terminal project in Xiamen.  
2016 - 2018, Automation Architect, Hutchison 10 automated RTGs project in Thailand.  
2015 – Now, Automation Architect, APMT 14 automation RMGs project in Italy

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**Thomas Jelenic, Vice President, Pacific Merchant Shipping Association**

As part of PMSA, Jelenic works with policy makers, regulators, industry leaders and other entities to help ensure that sound science and industry issues are part of the discussion as California continues to call for the increased use of zero and near zero emissions equipment at California's ports and throughout the goods movement industry.



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**Wolfgang Lehmacher, WEF Expert, World Economic Forum Network**

Wolfgang is a global thought leader and practitioner in supply chain and logistics. He has held positions as Director, Head of Supply Chain and Transport Industries at the World Economic Forum in Geneva and New York, Partner and Managing Director (China and India) at the global strategy firm CVA in Hong Kong, and President and CEO of GeoPost Intercontinental. He is assisting stakeholders across the global supply chain ecosystem – from startups to asset owners, to Fortune 50 companies – in upscaling and transforming their organizations

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**Younus Aftab, CTO, Navis**

Younus brings deep expertise in cloud operating systems, security and transportation logistics. He is the co-author of several patents resulting in innovative and high growth products. He was most recently the VP of products & solutions responsible for the direction, strategy, development and execution of the product portfolio at Pulse Secure. Previously at Citrix, Younus was responsible for product development for the mobility and cloud platforms.

# News

## COVID-19: Accelerated deglobalisation and the rise of automation

Even before the outbreak of COVID-19, there have been indications over the last decade of reaching the peak in globalisation (see graph).

As the world sees the urgency in splitting its supply chains and retrenching them back to national level to avoid future pandemic disorder, the focus must undoubtedly turn to the position and importance of automation and robotics on the global stage.

Dr Rafiq Swash, Founder, Aidrivers, explores the trend towards deglobalisation and how automation will play its part in the future of industry in this article.

The pandemic has brought the concept of deglobalisation abruptly to the fore as we have seen endless disruption to manufacturing, shipping, storage and distribution.

These interruptions are all on a global scale due to our historic reliance on cheaper overseas production. The questions are: does COVID-19 mean that we are going to accelerate deglobalisation and if so, at what speed?

### Staying at home

Historically, evidence of deglobalisation has already been seen in the stalling of interstate trade and crucially the beginning of the renationalisation of supply chains.

The US-China trade tariff dispute has reinforced this trend. The advancement in automated manufacturing technology means that the location of factories no longer hinges on where the labour is the cheapest.

Put quite simply, factories can stay on home soil, take advantage of efficient automation techniques and increase profitability.

Plus, we now can see that keeping our supplies at home might protect us from future pandemic disturbances.



The metric to watch is the speed of uptake of automation which up until COVID-19, was moderate.

Politically and economically COVID-19 could prove to be the catalyst for renationalisation of many areas of manufacturing as countries seek to protect themselves and reduce supply chain vulnerabilities. The countries which do not make these changes could feasibly pay the price again in any future pandemic.

### Automation steps in

Automated systems are found all along supply chains. They are used from the creation of products on production lines to the delivery via AI enabled autonomous mobility.

All aspects of robotisation are part of the next step in this new wave of onshoring. These processes deliver tangible methods of reducing costs and increasing efficiency and safety. Significantly, automation stops contagion. A lesson that we have learned the hard way in 2020.

The shift towards deglobalisation has been given a springboard via COVID-19. This is the moment where forward-thinking nations with the R&D, innovation and adaptability will allow the acceleration in the use of automation.

Whether the adoption of robotic assembly lines or autonomous vehicles, automation is central to our next chapter in a post COVID-19 world. The first movers in this sphere

will shape much more than their own business. This is just the beginning of an overhaul which will see efficiencies rise and highly sustainable automated practices overtake the current model.

Deglobalisation is an opportunity for automation to move into the limelight and steal the show.

## Terminal operators share responses to COVID-19 crisis in virtual chat

Hamburg Port Consulting (HPC) has provided a virtual chat forum during the COVID-19 crisis to allow the open exchange of experiences for terminal operators during this challenging time.

About 50 select representatives of terminal operators from 18 countries spanning five continents have attended the HPC Online Exchange Forums, conducted during the past month,



actively discussing the measures taken in response to Covid-19.

The main focus was on safety, how to protect the workforce and how to organise terminal operation processes and vessel visits to ensure business continuity, as well as how this could affect market developments and growth moving forward.

HPC said that during these chats it was clear that despite the pandemic impacting different terminals at different times, the established measures to ensure employees' safety and business continuity have been quite similar.

One attendee summarised what was valid to all: "The pandemic was a surprise to all of us, we were not prepared for something like this. But after confusion at the beginning with partly divergent instructions by governments and companies, the terminal management have taken decision with a sense of proportion to safeguard both – health of the workforce and operations."

Alongside more cleaning, wearing of PPE and staying home if present with symptoms of the virus, many terminals also put in place a ban of physical vessel visits.

Managing the continued need for coordination between terminal and vessel the attendees reported an increased use of EDI technology. Thinking ahead, some called for a collaborative stowage tool that eases the exchange of cargo-related information fortifying the digitalization boost that the situation has brought about.

With regards to operations, HPC noted that "automation seems to be the next hot spot" and some of the terminal operators are working on cost-cutting programmes and implementation of these initiatives in the upcoming weeks.

HPC said that attendees also shared a common view on the market outlook. Volumes are assessed as mostly lower. While blank sailings help to cope with reduced efficiency from safety for some terminals in Europe, others from South America report only few blank sailings.

Uncertainties are fed by the tensions between China and the US. Additionally, a fear of bankruptcy of importers and exporters have been expressed.

An increase of importer dwell time was confirmed by the majority. Export volumes down by 20% for some terminals, the impact on Europe's shutdown could not yet be foreseen. The majority expressed their pessimism about the second half of the running year in terms of volume development.

This crisis is recognised as a big one, but also as a chance to create more flexibility for the organisation. Continuous investments in infrastructure and digitalization are common strategies shaping the future of smart ports and creating resilience in port logistics.

A remark by one of the attendees was definitely worth sharing said HPC: "This is not the first crisis the terminal industry has to tackle."

## APMT Aarhus completes first phase of gate automation

APM Terminals (APMT) has said the first phase of the implementation of the new automated gate complex at APM Terminals Aarhus is completed.

In a statement the operator said the terminal has taken an important step towards becoming an even more digitized facility.

Initiated in 2019, the \$3 million project will further improve terminal efficiency using advanced technologies. Construction works have just been completed and trucks entering and leaving the terminal now drive through the gate complex.

Dennis Olesen, Managing Director of APM Terminals Nordics, said: "With the opening of our new gate, we have passed another important milestone towards full gate automation in 2021. With the new gate setup we are significantly improving the flow of cargo into the terminal which will, when fully implemented, increase customer service and efficiency".

The launch of Phase 1 of the project initiates the next stage, where full automation of the gates will be tested by automation engineers using live truck traffic. This includes Optical Camera Recognition (OCR), license plate recognition cameras and CCTV cameras for exception handling of OOG traffic by gate clerks.

The automated gate, along with the upcoming upgrade of the Terminal Operating System, will make it possible to include more digital solutions in the future, such as a digital Truck Appointment System. All systems will be linked to the terminal's new Navis N4 Terminal Operating System (TOS), the leading and most widely used terminal operating system globally, which has become a standard at APM Terminals.



“We will continue to invest in innovation of our business, so we can continue to improve our service level and cater for our customers’ growth”, added Olesen.

The automated Gate Operating System is scheduled to be operational by mid-2021.

## LA powers on with port electrification

One of the biggest challenges for ports is finding ways to meet the growing demand for trade while cutting emissions and building a cleaner, more efficient supply chain.

That means making port operations as environmentally sustainable as possible is critical and the Port of Los Angeles is attempting this with the use of alternative maritime power (AMP), also known as shore-side power or cold ironing.

As part of its efforts the Port has worked very closely alongside the City of Los Angeles and several private sector partners, including Cavotec and Square D Schneider on developing and expanding its AMP capabilities.

AMP is the process of providing shore-side electricity to a vessel at port while its main and auxiliary engines are turned off. The Port currently has 79 AMP vaults, the areas where vessels plug in, across its operations, including container, cruise and bulk terminals.

The Port is working to increase that number and use of AMP even further and has plans to complete its cruise AMP capabilities by 2023.



Speaking to PTI, the Port said its partnership with Cavotec has helped it expand its AMP operations from container to cruise terminals, and that Square D Schneider will provide the technology for its bigger future network.

Los Angeles has been one of the pioneers in the advancement of AMP and has developed its own unique AMP to allow vessels that run on diesel power to ‘plug in’ to an electrical power source.

It initially opened its AMP network at the West Basin Container Terminal in July 2004 after extensive work with China Shipping Container Line.

In August 2004, the NYK Atlas, a container ship built to AMP specifications, became the first to use the AMP network at the Port. The practice is now compulsory for all vessels calling at the Port of LA after regulations passed by the California Air Resources Board (CARB) in 2007.

Combined with other practices, such as the use of scrubbers and alternative fuels including liquified natural gas (LNG), AMP can drastically reduce the emissions of a ship, port and city.

The electricity is provided by the Los Angeles Department of Water and Power. By the Port utilising AMP the City of Los Angeles can also benefit from lower emissions, and this is one of the biggest examples of city and port authorities collaborating to reduce emissions.

*Written by Max Schwerdtfeger*

## Port of Antwerp to develop private 5G network

The Port of Antwerp has signed an agreement with the city government and the Antwerp Fire Department to develop and test a private 5G network.

The network is named ‘Minerva’ and is currently being developed and tested by technology company iSea in collaboration with Ericsson, will allow the three partners to further develop their existing digital applications and to explore new ones.

A private 5G network increases the speed, reliability and security of the port authority, the police and the fire brigade’s digital applications. The network is not dependent on public providers and is thus better protected against potential breakdowns, as well as overload during large events or mass gatherings, for example.

Minerva will also ensure optimum coverage within the three partners’ operational area, on the basis of end-to-end European technology.

The fire brigade, along with the police and the port, have developed a range of digital applications in recent years, such as apps, live streaming, drones and other technologies. Thanks to a faster, safer and more reliable network, this evolution can be strengthened and accelerated. The partners are therefore very satisfied.



Bart De Wever, Mayor of Antwerp said: "It is crucial for the city of Antwerp to have mobile networks at its disposal. They have an important role as a forward-looking platform for the digitalisation of the port's multidisciplinary ecosystem and urban emergency services.

"Minerva can meet the different needs and support applications in their daily operation."

Maarten Torfs, Director of ICT, Antwerp Police, also commented: "Due to the increased digitalisation of the Antwerp Police, we need a safe, reliable and high-performance network for mobile data. This allows us to deploy our various digital applications, such as mobile cameras and the FOCUS app, in the field.

"With this pilot network, we can further develop our existing digital applications and explore new ones."

Eva Van Gerven, Director of Staff Services and Technology of Antwerp Fire Department, added: "Real-time images and information from crucial apps ensure that we, as fire brigades, can deal with an emergency situation more efficiently. And that immediately during the drive towards the situation.

"This pilot network will further strengthen our digitisation and improve our work in the field."

Annick De Ridder, Port Alderman said: "This 5G trial network with Ericsson technology covers the entire port. It will support our future operations in terms of shipping, safety and ecology. But it is also the ideal basis for the development of high speed 5G applications for automation, logistics, safety and security.

"As a Port Authority, we are taking a pioneering role in the digital transformation of the port ecosystem, laying the foundation for new jobs of the future.

Valentijn Vande Keere, CEO of iSea: "iSea is excited to see that, thanks to the excellent collaboration between the various partners and services, this pilot project has become a success. The project opens up some decent prospects for the growth of local expertise and sustainable entrepreneurship.

"New jobs will also be made possible by new technologies such as 5G."

## Rotterdam, Amsterdam and Antwerp to set up single shore-power network

The Port of Rotterdam Authority has announced it will set up a single shore-based power system for inland shipping with the Port of Amsterdam, North Sea Port Netherlands, Drechtsteden, the Port of Antwerp and De Vlaamse Waterweg.

According to a statement, the network will contribute to the user-friendliness of this facility, which is used to provide moored vessels with electric power. On behalf of all these 'Walstroompacties' (Shore-based Power Parties), the Port of Rotterdam Authority has published a European call for bids, which will ultimately lead to the selection of a contractor for these services.

The tender is in line with the partners' policy to pursue a balanced development of the various port areas in the Netherlands and Belgium. Under this policy, the 'Walstroompacties' will not only be investing in economic

development, but also in projects that improve local quality of life and the environment.

The participants' key focus will be sustainability, Rotterdam said. Public authorities and private firms in the different ports are working together to promote transport by inland shipping and rail rather than road haulage.

Another goal will be to reduce the volumes of carbon dioxide, nitrogen oxide and particulates released into the atmosphere. For this reason, the partners have performed extensive research into the utilisation of shore-based power for a range of different vessel types and locations.

Shore-based power allows captains to freely use their on-board facilities without having to resort to polluting sources of power like a diesel generator or the ship's main engine.

"These common objectives have led to a joint approach geared towards supporting the development of shore-based power and making this facility as user-friendly and reliable as possible," a statement read.

"This approach primarily focuses on the provision of services in the context of on-board disruptions, as well as invoicing for power supplied via the shore-based power units.

"Inland shipping takes places in an international context. Ideally, this new standardisation will be adopted by many other countries besides Belgium and the Netherlands."

