# THE 'A-WORD'. AND OTHER TRENDS SHAPING MARITIME

Dr. Eva Savelsberg, Senior Vice President, INFORM, and **Matthew Wittemeier**, Director of Marketing and Sales, INFORM

In 2020, INFORM's Dr. Eva Savelsberg sat down for an interview with Matthew Wittemeier to share her perspective on global trends, technology, society, and environmental issues that were pushing and pulling the global supply chain. At the forefront of the COVID-19 pandemic, many of the trends discussed were accurate. In INFORM's latest article, Eva and Matthew have once again sat down for an in-depth discussion of the state of the industry. This 'teaser' paper covers a small handful of the most pertinent topics discussed. The full interview will be released during PTI's Container Terminal Automation Conference (CTAC) in North America, on 14-15 November.

WHERE IS THE INDUSTRY AT TODAY

When we last spoke, it was at the peak of Covid, or perhaps a bit before the peak of Covid, so a lot happened in the meantime. I think it's always easier to see patterns in the rear-view mirror, but enough time hasn't passed to say definitively where we are from a macroeconomic perspective. If we look back over the past few decades, we had a significant push towards globalization in the '90s. Then, as we all know, in 2008, everything came to a halt. We saw a similar slowdown in the
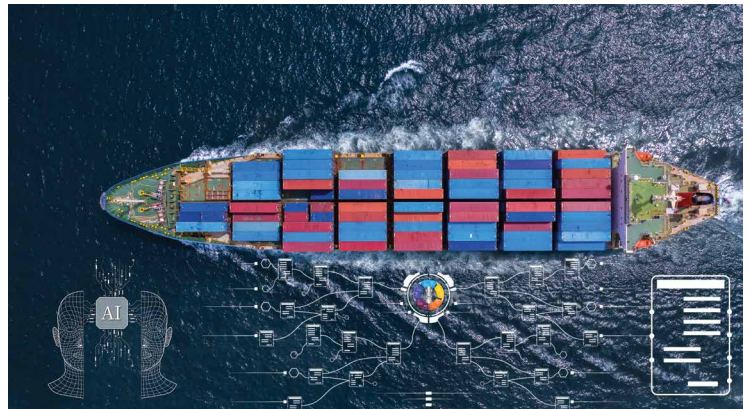
global economy in 2015, albeit, not as strong but still significant for maritime.

Before Covid, the world was progressing forward, nothing to write home about. When Covid came, as all well know, the world came screeching to a halt. We also saw extreme volatility in the market up and down throughout the pandemic. The industry saw a huge push in volumes throughout 2021 in terms of volume, but as well in terms of reputation. Shipping and the supply chain were being discussed at dining room tables around the world as parents tried to explain why there wasn't toilet paper or pasta at the shops and why the price of timber had tripled in some cases.

Suddenly containers were sexy and neighbors who didn't care about logistics suddenly understood how a container terminal worked and why, as an industry, we were facing so many challenges.

I think today, we don't really know where it will go, because we are not only dependent on having a safe world, having a safe workplace, having safe shipping routes, but also we are dependent on consumer behavior, and I think for the time being, nobody knows if national, much less the global economy will pick up again or slow down as most federal reserves are trying to instigate to combat inflation. In short, we don't know whether the significant rise in eCommerce fueled by Covid and

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Covid lockdowns was a sustained peak that will subside or a steady rise in demand.

That said, there were a lot of lessons hard learned during Covid, and we will never be better positioned to learn from and enact change from those lessons than now. While the industry has slowed down from the Covid peak (which is actually a good thing), it should be seen as the space we need to make changes to processes, procedures, technology, etc. to ensure that we are better positioned for the next peak which is so far proving to be difficult to predict.

AUTOMATION IS THE 'A-WORD'

What we see at INFORM is that there are a lot of infrastructure projects in the works that were delayed due to Covid. We see a sharp increase in automation conversations again. Covid showed us that the supply chain is an essential element of the global economy. In fact, it showed everyone that it's essential. Your grocery store is never more than 48 hours away from having empty shelves. We need to take steps to ensure that this volatile supply chain can function as efficiently as possible both with and without humans.

Covid has, in a way, made the 'a-word', 'automation,' acceptable again. Before the pandemic, automation was considered a way to reduce costs by removing 'costly labor'. Today, I think we've seen that automation has upsides beyond just cost reduction, and that it helps us, and the supply chain in general, to be more resilient.

WE REQUIRE RESILIENCY

And that's what we need in the whole supply chain, to be more resilient. We require a higher transparency across the supply chain to be prepared for an unpredictable future. Coming back to the global view, we can't be prepared for every disruption that is likely to hit the industry over the next two decades. Over the past three years, we've seen the industry swing up and down in response to the pandemic, trade wars, actual war, climate disasters, climate change-fueled disruptions, cybersecurity incidences, and geo-political shifts towards the right (which has coincided with stronger national priority vs. globalization).

We will of course need to learn to cope with all these major disruptions we are experiencing, which experts mostly agree will only continue to increase in frequency and duration. While it's currently a matter of speculation how these factors will specifically impact the maritime industry, if we look at historical patterns, we can expect a slowdown followed by a sharp rise in traffic that peaks beyond what the nodes in the maritime supply chain can handle at once.

There are a few tools in the industry as strongly positioned to help terminal operators manage disruption as Artificial Intelligence (AI) and algorithmic-based decision support software. By automating decision-making in complex environments, tools like those INFORM has been supplying to the industry for more than 27 years, help terminal operators to shift their focus from routine decision-making to exception handling and managing the complex challenges that lie ahead of us. AI and operations research (OR) based software tools are the fastest way to build resiliency into your terminal operations.

THE SECOND 'A-WORD'

Technology is evolving around us at a pace unseen before and it will only get faster. I want to look at the new 'A-word', AI. With the rise of Chat-GPT, AI is now front and center in the eyes of people the world over for better or for worse. INFORM presented in 2022 its first update on whether AI is a tool or threat (and will give an update
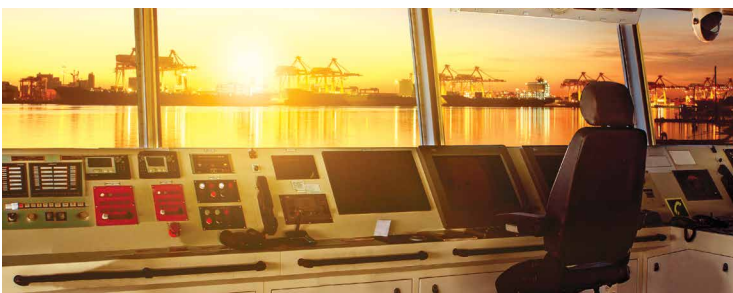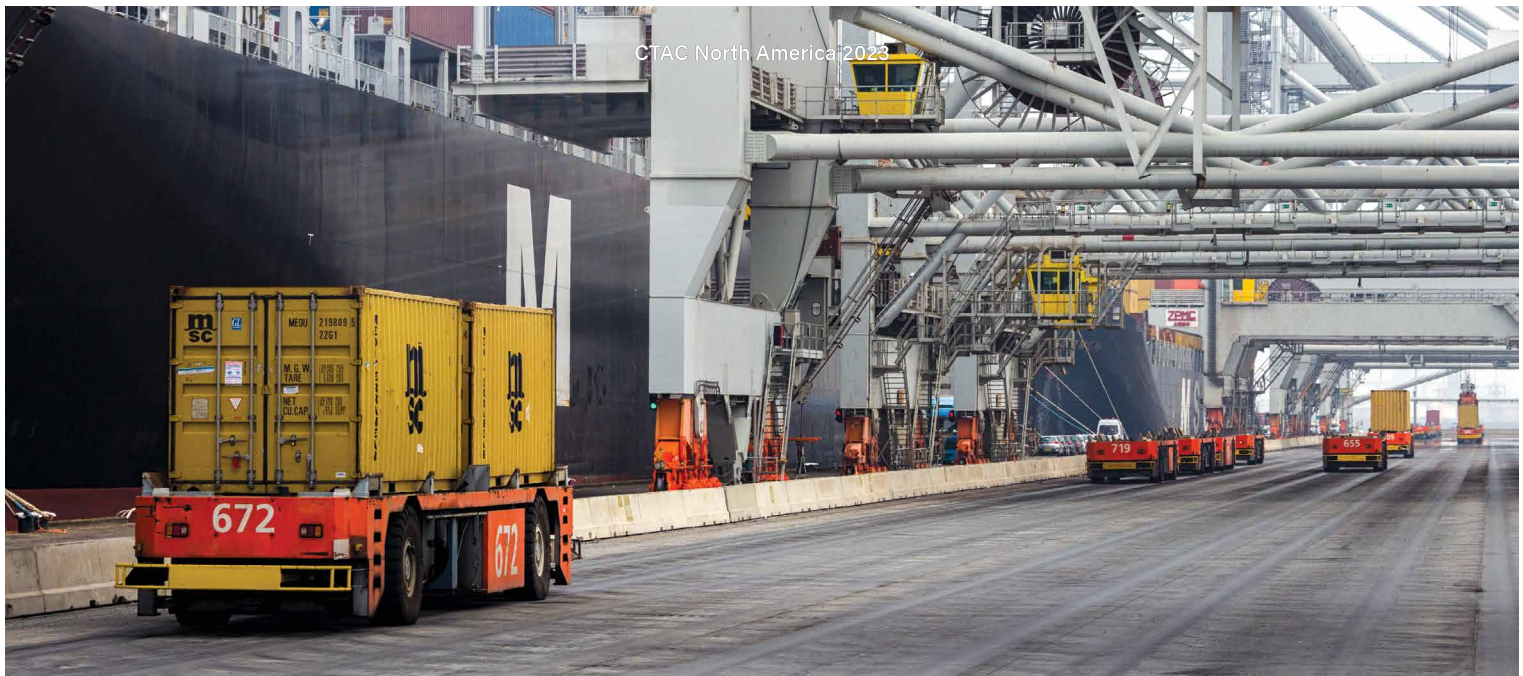
to that presentation at the CTAC North America conference in its AI keynote). I'm a firm believer that AI is a tool, and as a tool, we decide how it is used. At INFORM, we've seen conclusively that it can help the logistics industry from top to bottom and from side to side.

Let us take machine learning as an example, to get better insights into patterns that happen. But it also helps us to improve how we make future decisions (where we use OR algorithms to make decisions in the now). The decisions that our algorithms make help decisively with terminal operations whether manual or automated. For automated terminals, software-aided decision-making improves automation outcomes full stop. There is no doubt here. We've been proving this for nearly three decades.

Further, AI helps us to reduce the infrastructure footprint, which is very important. It helps operators to be more flexible with the assets they have . When we look at the disruptions discussed earlier, when you have a smaller infrastructure footprint, you are better positioned to not only survive but continue to thrive when the industry slows down. And on the other side, when demands go up and we push towards peak handling, or if irregularities occur, AI can handle those easily.

Customers running our yard optimization solution are routinely operating their yards at 75-85 per cent capacity with much fewer

rehandlers than their peers in the industry allowing them to handle peaks with a high degree of efficiency and flexibility. Think back to the 2021 peaks and ask your operations teams how hard it was to operate the terminals at over 75 per cent capacity. I'm positive the answers won't be good ones.

THE FULL INTERVIEW

INFORM will be releasing the full interview in video format at CTAC North America in November. The complete interview tackles a broad range of topics from climate change and sustainability to the impact of the global North on the current geo-political state of affairs and how these will impact shipping decisively, and a lot more in between. It is worth a watch. Attendees at CTAC in Norfolk will have first access. Don't forget to book your tickets with PTI.

ABOUT THE AUTHORS:
Dr. Eva Savelsberg is Senior Vice President of INFORM's Terminal & Distribution Center Logistics Division and is a member of INFORM's Executive Board. She specializes in AI & Optimization software that renders a wide range of operational processes more productive, agile, and reliable. Eva received her PhD in Mechanical Engineering in 2002 from the University of Aachen (RWTH). She has published five books and over 50 papers on innovation in freight transportation

and is a regular contributor to industry publications and events.

Matthew Wittemeier is Director Marketing and Sales at INFORM's Terminal & Distribution Center Logistics Division where he's become a thought-provoking contributor to many industry publications and conferences. He's co-author of the multi-award winning "2038: A Smart Port Story – a novella about the future of technology and the social challenges it may bring". In addition, he is a member and judge at The Academy of Interactive and Visual Arts (AIVA), as well as having been the senior producer and host of the buzzITtalk podcast and served on the board of YoungShip Rotterdam. He holds a Bachelor of Management and Professional Studies.

ABOUT THE COMPANY:
INFORM specializes in AI and optimization software to improve operational decision-making. Based in Aachen, Germany, the company has been in the optimization business for 50+ years and serves a wide span of logistics industries including ports, maritime, and intermodal terminals. With a broad range of standalone and add-on software modules, INFORM's unique blend of algorithmic-based software expertise, rich industry experience, and big-world thinking delivers huge value for its customers.

More Info: https://infrm.co/terminal