MAINTAINING SITUATIONAL AWARENESS IN TODAY'S SUPPLY CHAIN

awake.ai

Interview with Karno Tenovuo, CEO and Co-Founder, Awake.AI

Having complete oversight of port operations is crucial for increasing competitiveness, and full situational awareness has become a must-have solution for improving efficiency and safety while reducing operational costs and emissions.

Speaking to Port Technology International, Karno Tenovuo, CEO and Co-Founder, Awake.AI, highlighted the importance of situational awareness and how the company is working with ports to enhance berth planning and optimise port operations.

"There are different levels of situational awareness, and it starts with tracking different assets moving in the logistics chain and getting relevant cargo information about them. For example, we are tracking the vessels, their movement, estimated time of arrival and service activities during the port visit.

"Our situational awareness solution provides the dashboard of what is happening at the port, and planning and optimisation features enhancing the understanding of what will happen at the port or the movement of any particular cargo. As soon as we start combining and utilizing this real-time information and forecasts to make better informed decisions, we reach a new level – situational understanding," Tenovuo explained.

Port call timelines and the estimated time of arrivals (ETAs) for vessels are an important aspect of the situational awareness picture.

"As an artificial intelligence (AI) company we are focused on making those AI-based predictions and optimisations, which are much better than what actors are currently used to," Tenovuo said.

He said most actors currently use some type of Enterprise Resource Planning (ERP) software, or a matrix-type view to work out which row or cell contains the right information.

"It's hard to get an overview of what is going on in the port and how things like the weather will impact loading and unloading. Where is the fleet at the moment and what will be the status a week from now, for instance? For me, that's basic situational awareness."

Awake.AI offers its Smart Port as a Service™ (SPaaS) solution to enhance situational awareness at ports and gives the AI based insights how to optimise port calls.

He said today the question becomes what you do once you have better situational awareness.

"Mostly we get the feedback that actors want to communicate in real-time what is going on. So compared to sending emails and asking numerous times a day 'what's your latest information' now they can have this multimodal chat and real-time overview of any given asset that we have [with SPaaS]."

There are automated bots integrated in this solution, which means these messages can be generated automatically as well as the ability to manually input events and messages, Tenovuo explained.
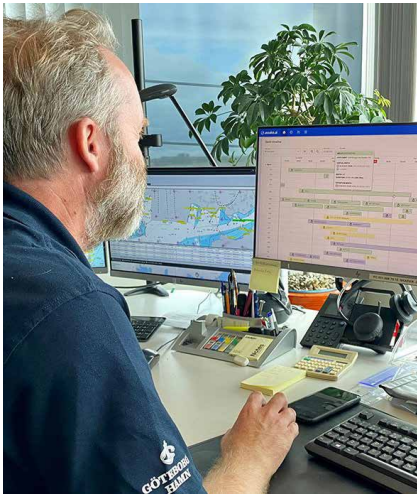
"There is automation in it so people can get the latest predictions if there are changes when tasks are completed. Full situational awareness and smart messaging between actors go really hand-in-hand. But that's not the end game."

THE REAL END-GAME

Tenovuo said what now needs to be considered is 'situational understanding', when you can really do something with the information.

"It helps you with the planning and optimisation of the cargo flow in general, so here comes the berth planning solution that we just launched."

Watch video here

The Smart Berth Planner has AI-empowered predictions integrated into the solution, which provide insights on arriving and departing ships, suggests most efficient berth options and gives warnings when the berth is double-booked or there are security or resource issues, as is fully integrated with other port IT systems.

The Port of Gothenburg, for instance, has already selected the Berth Planner solution to drive its digital journey and help it become more competitive.

Find out more about Awake.AI's work here

For the Berth Planner, Awake.AI links to national single windows, terminal operating systems, AIS and other traditional data sources to collect the information and then uses AI and Machine Learning to get accurate predictions and make planning timelines faster and safer.

"Now you have a modern tool where you can actually share those plans across all relevant actors and get warning if there are unsafe plans or overlapping plans. You know when the conditions are changing and how they impact the plans. Not only do you get warnings, but you also get recommendations on what to do, meaning you can manage tasks and resources better. You can really optimise the port calls."

In today's environment, with ongoing disruptions to the supply chain, this type of visibility and actions are key to ensuring backlogs and bottlenecks either do not occur or are minimalised at the ports.

"The other thing we have learned from industry is that most actors around the world only have about 24h visibility forward, then it starts to be really blurry. This is where AI comes in very handy as AI models can generate accurate and reliable predictions for days and weeks in advance."

DEMAND IS GLOBAL

There is a universal need for these solutions as increasing demand for containerised goods across world adds to existing challenges are being faced by ports.

Tenovuo noted that there is also increased investment in digitalisation generally across the industry. But he pointed out that while container traffic has boomed, other sectors such as bulk have suffered due to a lack of digital investment.

"Digital development outlook for the industry is positive and growing fast."

Ports have a vested interest in maximising their capacity and for authorities with limited land space can benefit from optimised cargo flows, Tenovuo said.

Consequently, Tenovuo suggested it is the terminal operators that can lead the investments and optimising their operations with AI.

"This, ultimately, is something that will drive the benefits to the ports and other actors in the port. And naturally, of course, all ship operators are interested in arriving just-in-time and spending as little time in ports as possible, and we are enabling that with our port call optimisation solution.

"I also see an important role for the cargo owners as the end customers of the logistic chains. They want to manage risks better and get full transparency of their logistics chains and how to avoid disruptions in order to improve their customer service and logistic costs."

There is a constant conversation around how far the maritime industry is collaborating on issues such as situational awareness and port call optimisation.

"We believe that no matter how big the company is in terms of resources, the world is bigger, and these problems are global, so working together will create the needed network and learning effects."

ABOUT THE INTERVIEWEE
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Karno Tenovuo has been in the marine business since 2004. He received his M.Sc. (Tech) from Helsinki University of Technology and his M. Sc. (Econ) from Turku University. After seven years at the Finnish shipyards he started his own company. Rolls-Royce became one of his customers and he was offered a global role heading business development and strategy based in Norway. Two weeks after starting in that role, Karno started the research on future ship operations and then grew that into Ship Intelligence business where was the SVP and P&L owner.

Some highlights include project with Maersk & Svitzer that demonstrated the world's first remotely controlled commercial vessel, Stena and MOL co-operation around intelligent awareness system, Safer Vessel with Autonomous Navigation (SVAN) project with Finnferries that was the first autonomous commercial ship demonstration in the world.

Then he realised that autonomous ships cannot interact with the rest of the logistic chain unless the needed digital handshakes are being developed and linked to an open platform. And so, Awake.AI was born. Mr. Tenovuo is also the chairman of the Board at Digital, Internet, Materials & Engineering Co-Creation (DIMECC). Its breakthrough-oriented co-creation ecosystem digitalises your business and speeds up time to market. DIMECC network consists of 2.000+ R&D&I professionals, 400+ organisations, 69 shareholders and 10+ co-creation facilitators. Contact: karno@awake.ai

ABOUT THE ORGANISATION
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Awake.AI is a software platform company building an ecosystem for smart ports and autonomous shipping. Awake.AI's mission is to lead the transition to sustainable and intelligent maritime logistics and reduce global shipping emissions with our ecosystem partners. The platform is the first of its kind, built from the ground up to accommodate seamless collaboration within the entire maritime logistics chain by sharing situational awareness and providing AIsupported predictions for future planning. The API's and applications built on top of the Awake platform are available for customers and third parties using the subscription business model. For more information visit www.awake.ai