ALL THE WAY

MAERSK

Transforming to a New Better in Chemical Supply Chains

Executive Summary

In October 2020, we had conducted a successful webinar that focused on the key steps for building supply chain resilience in the chemical industry. A year on, we are now looking at a 'New Better', by exploring solutions that help further consolidate the resilience in your supply chain. In this report, we speak with our panellists Patrick Hore, Global Vertical Head of Chemical; Ian Kaw, Associate Director, Chemical Vertical, Thailand, Malaysia, and Singapore; Samuel Lim, Regional Head of TradeLens, Asia Pacific; Borja Diez, Business Product Owner, Supply Chain Destination Management, and Kevin Loh, Regional TradeLens Product Manager, Asia Pacific, about focusing on the practical approaches in rolling out these measures across your supply chain with the help of two key solutions - Hub in Transit & TradeLens.

Meet our speakers

Patrick Hore
Global Vertical Head of Chemical,
A.P. Moller – Maersk

Ian Kaw
Associate Director, Chemical Vertical, Thailand, Malaysia, and Singapore,
A.P. Moller – Maersk

Samuel Lim
Regional Head of TradeLens, Asia Pacific,
A.P. Moller – Maersk

Borja Diez
Business Product Owner, Supply Chain Destination Management,
A.P. Moller – Maersk

Kevin Loh
TradeLens Regional Product Manager, Asia Pacific,
A.P. Moller – Maersk

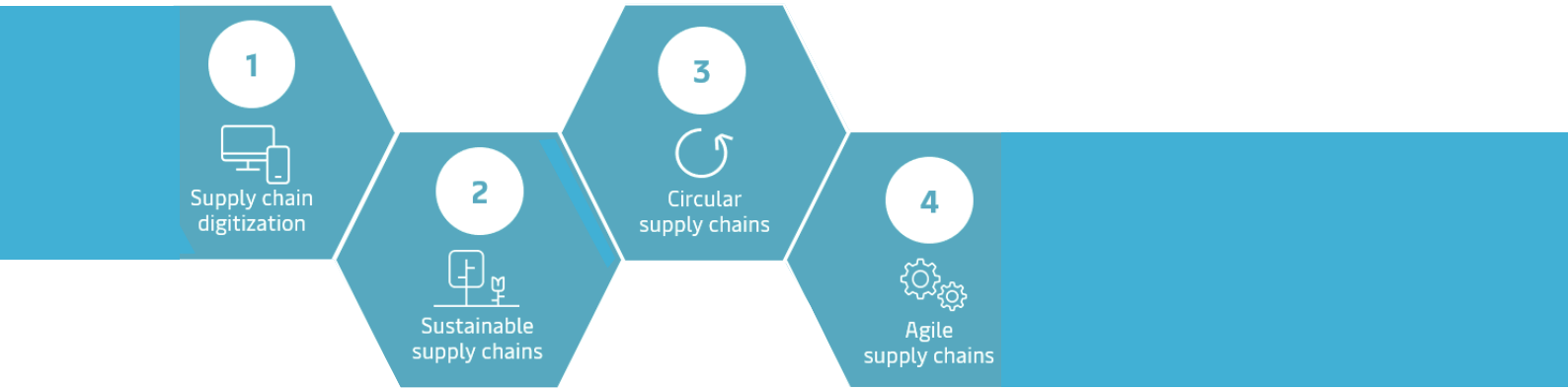
Setting the Scene

Patrick Hore, Global Vertical Head of Chemical, believes that we are all operating in testing times, in which the ability for supply chains to perform is being constantly challenged. And at the same time, the importance of the supply chain to the success of your organisations has increased. In short, resilience, along with the ability to perform despite everything happening around us, is vital. To set the scene, in the previous webinar 'Building Resilience in Chemical Supply Chains', we presented 6 pillars and 4 megatrends that are essential to building supply chain resilience. This report will address solutions for pillars 3, 4 and 5 – inventory management and general buffers in the supply chain, near-shoring and visibility, as well as 2 megatrends under digitisation and agility.

6 pillars in building supply chain resilience

- Review your manufacturing and sourcing networks
- Single sourcing vs multi-sourcing
- Inventory management and general buffers in the supply chain
- Nearshoring for increased control and reduced risks
- Visibility of your end-to-end logistics
- Review your partners in the network from a service level agreement perspective

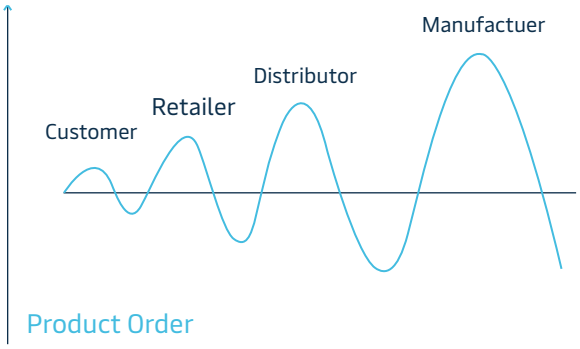
4 trends in chemical logistics



Three key actions were identified to build supply chain resilience.

Selecting a dependable logistics partner

In our previous webinar, we drew from a specific customer case study on Syngenta and another about a Middle-East based petrochemical customer (you can watch the webinar here 24:04 – 38:15). This webinar report uses the practical example of a petrochemical producer (21:40 - 43:42 video above).



Hub In Transit

Here we look at how you can set up a hub closer to your customers, where we provide control tower operations and a visibility platform for last-mile distribution from the virtual container hub while also addressing the infamous Bull-Whip effect.

Become a resilient partner to your customers

The key solution introduced here was TradeLens – a supply chain collaboration platform powered by blockchain.

The benefits of Hub in Transit, and the solution to become a more resilient logistics partner are highlighted in a case study later in this report.

Changes to the supply chain model: Transforming to the 'New Better'

It's been an eventful and unpredictable year. Most of us probably didn't expect to still be facing such disrupted supply chains across all corners of the world, 7 quarters after the pandemic was declared. We see organisations still adapting to the situation, some faster than the rest, and taking steps to build resilience, agility and flexibility in their supply chain. Let's review the 'New Better' and its impact on the chemical supply chain by looking at 2 key solutions:

TradeLens:

A seamless digital supply chain platform jointly developed by IBM and Maersk and underpinned by blockchain technology, which unites stakeholders across the supply chain ecosystem.

Utilising Hub In Transit:

A containerised virtual hub to bring you closer to your markets.

TradeLens:
Global network and ecosystem

TradeLens is a global ecosystem that provides end-to-end container visibility across multiple carriers. Global port operators such as DPWorld, ICTSI and Yilport support and integrate with TradeLens to improve operational efficiency through better visibility of container flows across multiple carriers around the world. This visibility includes confirmation of the transport modal-ity that follows the port stay for each container, which enables better yard planning in heavy transhipment or rail ports. The same benefits can be extended and applied to the supply chain.

TradeLens Global Network Ecosystem

> 60%

Of container trading volume globally is covered by the Ocean carriers on the TradeLens network

178

Terminals live globally today on the TradeLens network with more on the way

Ocean Carriers

CMA CGM, ANL, APL, CNC, BOLUDA, PIL, msc, Safmarine, ZIM, SPIL, Hapag-Lloyd, NAMSUNG, MAERSK, HAMBURG SÜD, SEALAND, ONE, SEABOARD MARINE, ALIANÇA

Rail Operators

CSX, BNSF RAILWAY, CN, CP, EC, ERS Railways, TRANSNET, TFG TRANSFRACHT, METRANS, MODUL

Ports and Terminals

APM TERMINALS, PATRICK, Port of Halifax, Modern Terminals, 交通部航港局, PORTCONNECT, YILPORT HOLDING INC., adani Ports and Logistics, KNet 케이엘넷, PSA, DP WORLD, International Container Terminal Services, Inc.

Government Authorities

Azerbaijan Customs, Australia Home Affairs, Bahrain Customs, Canada Customs, Jordan Customs, Qatar Customs, Russia Customs, Saudi Arabia Customs, Malaysia Customs, Dutch Customs, Indonesia Customs, Thailand Customs

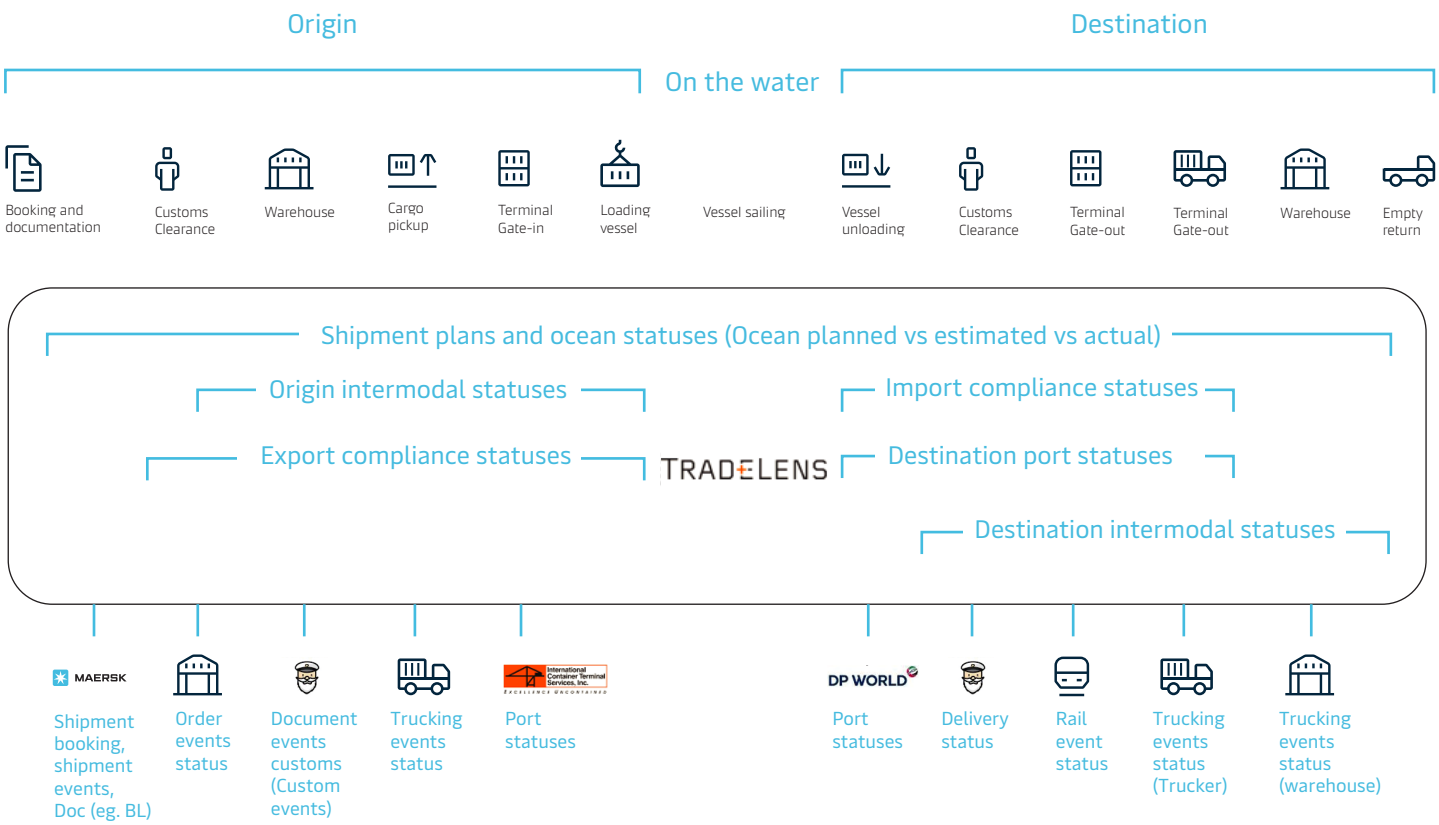
TradeLens: Solution

Samuel Lim, Regional Head of TradeLens, Asia-Pacific states that, as a digital solution, TradeLens can be used to onboard supply chain partners, digitise documents and share them securely with all the stakeholders in a supply chain. It also lets you track different versions of transport plans and files, even across different service providers, all in one place. Another key functionality is the ability to digitise BLs on the platform, allowing you to issue, transfer and surrender eBLs across your supply chain with just a few clicks. The key value is end-to-end visibility across different players in the supply chain network. The chemicals sector has seen one of the largest uptakes with TradeLens. Auto, tech, retail and lifestyle are other verticals showing strong traction with the digital solution for its one-stop-shop visibility solution. Chemical markets are commoditising in a deflationary environment, and cost-effective transparency will become a key differentiator.

TradeLens: End-to-end supply chain visibility

Where the demand for customisation is high for fine and speciality chemical businesses, Tradelens' ability to provide real-time and on-demand visibility, even for complex scenarios, becomes essential for end-customer satisfaction and business competitiveness. TradeLens' powerful search engine and automation allow businesses to save significantly on operational resources. The chemicals market is experiencing consolidation, and our customers have an incentive to grow their supply chains in a scalable manner. TradeLens helps accelerate that journey to digitisation by allowing onboarding via a single source through APIs.

Tradelens - End-to-End visibility from Origin to Destination



TradeLens: Supply chain collaboration

In today's world, partners need to come and work together for the common objectives of the customers. TradeLens allows shippers and their partners to connect on the common platform and share your shipment information, events/milestone statuses and trade documents. Essentially, it is a collaborative environment sharing a real-time single source of truth between you (the shippers) and your partners (suppliers, logistics providers, and consignees). Already available, TradeLens offers a 3-month paid trial for interested customers through which you will get the opportunity to experience real-time visibility and seamless document management throughout your different supply chains.

How TradeLens can benefit our Chemical partners globally

Tradelens provides you the means to digitise your supply chains via a one stop shop by leveraging it's ecosystem

Digitisation of documents with version control
- Reduction of manual efforts in ensuring data accuracy and tracking of multiple document versions across emails with different partners

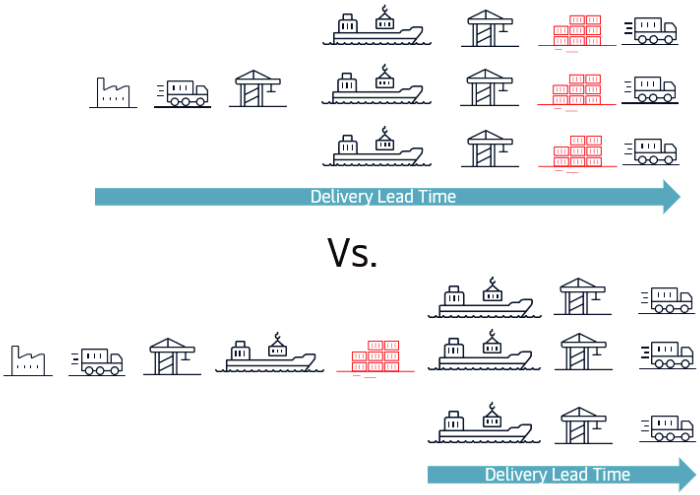
E2E visibility in one place
- Saves time and resources using an online interface that lets you manage visibility and milestone events across multiple supply chains

Accurate real-time information
- Build credibility through multi-source data validation directly from the sources (e.g. truckers or ports) that are reflected when the event happens

Digitally secured and tamper proof
- Have assurance that data is secure, accurate and shared only with authorised partners made possible with blockchain technology

Hub In Transit

Hub in Transit (HIT) is exactly as the name implies: having a hub location to store your cargo along its journey from the point of origin to your final market. Borja Diez, Business Product Owner, Supply Chain Destination Management explains that the aggregate demand in HIT enables reduction of the overall inventory level. This is done by positioning inventory in a strategically located hub that can service multiple destination markets as an order fulfilment site. This ensures that orders can be fulfilled, and shipments routed to final markets only when needed rather than pushing excess inventory into destination markets where rerouting options become limited. By positioning inventory outside of a specific market, the shipper maintains flexibility and can also remove variables leading to shorter and more predictable order lead times compared to shipping from the original

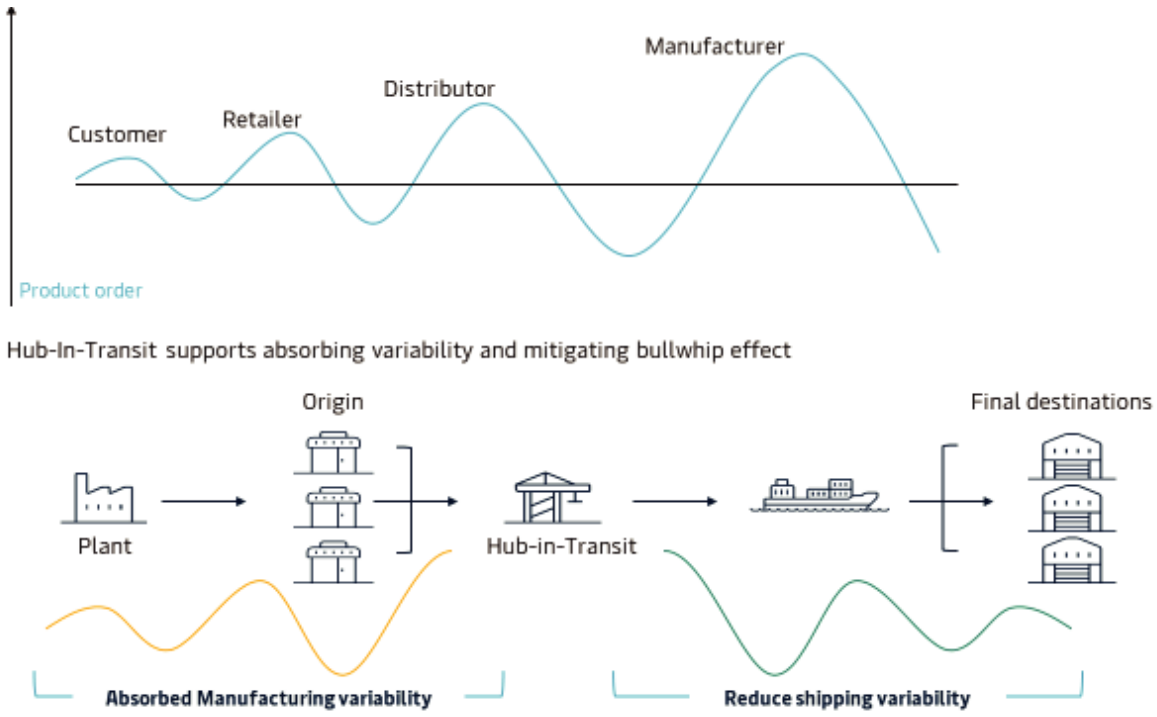


Hub In Transit:

Countering the Bull Whip Effect and ensuring visibility

The Bull Whip Effect is a phenomenon referring to increasing swings in inventory in response to shifts in consumer demand where lead-time variables like manufacturing or shipping influence the effect. Including a mid-way node between the production site and its market helps increase flexibility. It enables a slowdown of inventory at the hub location when the demand is lower, allowing customers to react to a demand peak. This gives you the flexibility to restock from the hub, reducing the overall lead time. In essence, stability is brought to the supply chain by absorbing the variability at the hub. Maersk Hub in Transit includes a visibility solution that is managed by our control tower team. From the moment a shipment is booked, until every container is delivered, traceability is maintained via an easy-to-use dashboard. Our control tower team monitors every shipment from start to finish through the hubs and ensures optimised cost, operations and routing to the requested destination.

How Hub-In-Transit mitigates Bullwhip effect



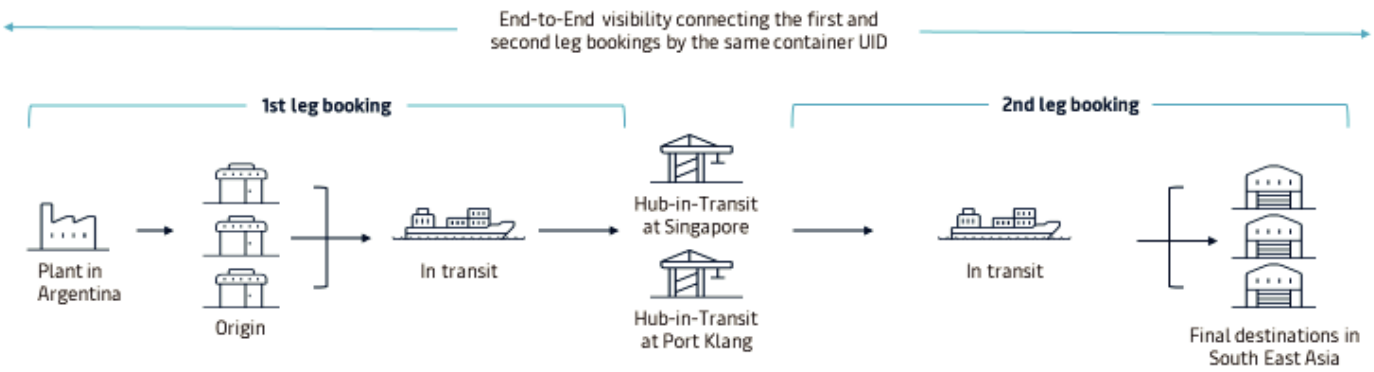
Hub In Transit:
Evaluating your supply chain

Depending on where your demand points are geographically, there is a strong case for evaluating a Hub in Transit solution – particularly if you are dealing with dynamic demand from your destination sites and/or need to address inventory costs by establishing a near- market fulfilment hub.

Even though ocean capacity is limited and port congestion in many trade lanes is causing delays for many shippers, being able to smoothen out the outbound flow and ensure product is available in the hubs to satisfy demand is still appealing. With shorter second-leg transit times, the overall impact to the final customer can be softened.

In case of space shortage on the 2nd leg of the ocean freight journey, alternative cross boarder container trucking services can also be arranged instead of ocean transportation for certain markets such as South East AsiaEven with delays, order-to-shipment timelines will be significantly shorter than shipping directly from origin production sites, improving your OTIF (on-time in full) service level.

Visibility and management solution



Case Study:
Combining HIT and TradeLens

The customer

Maersk partners with multiple large polymer producers in Latin America, Saudi, US and Europe, to help manage their final orders fulfilment through the HIT model. For the purposes of representation and NDA, the example cited is fictitious. 'LatinPolymer Inc' with their cracker plants based across Argentina, produces polymer consumed across various key markets in Asia, mainly China, Japan, Vietnam, Thailand and Indonesia.

LatinPolymer Inc

- Produces about 1.6 million metric tons of polymer per year
- 30% of the volume are consumed across various key markets in Asia Pacific
- 20,000 x 40' containers would flow from Argentina into Asia
- Ave Transit Time is 32days
- More than a month to fulfil every order!

● Asia Market
● Cracker Plant

The challenge

Although the pandemic has brought many disruptions to global supply chains, we also see the rise in consumer products demand, chiefly through masks and gloves for which polypropylene is one of the key components. LatinPolymer was unable to react to their customer requests for shorter lead time, and there was a compelling need to optimise their supply chain network to reduce order lead time. Impact to the business was significant, sales we lost and market share shrunk.

The solution

The company partnered with Maersk, and our team worked on this business case to set up 2 regional hubs to fulfil the APAC market, one in Singapore and another in Malaysia. From our multi-hubs HIT dashboard, the team at LatinPolymer now has complete visibility of shipments inbound on the first leg and the current inventory held at the hub. Additional hubs can be added on as they expand to newer markets. This can be easily made visible in real time using the TradeLens platform, with details on every leg of the transport plan and easy data access to partners.

The result

Operating in an unpredictable environment enables collaborative platforms to continue transforming the supply chain through accurate data and visibility, as it did for LatinPolymer, providing the following benefits:

Average order lead times from the origin to destination ports reduce from 32 days to 7 days via the hub. This not only reduced lost sales, but can also expect increased sales due to higher customer service level.

As a lead logistics partner, we help manage their entire hub network through a single point of contact via a unified platform.

From the dashboard, LatinPolymer can determine which batches are coming to the end of their 'free' storage days at the ports or free D&D days from the carrier. This helps reduce additional port storage and D&D charges.

With TradeLens, the customer can also potentially exchange shipping documents securely and obtain almost real-time visibility of all their transportation milestones, thus enhancing their customer service.

Reduced inventory holding leads to reduced working capital.

With HIT flexibility, they are able to convert inventory storage opportunities to a commercial sales tool to boost revenue.

Insights from our experts

Q:
How relevant are the solutions we heard today in terms of the megatrends you highlighted at the beginning of the webinar?

Patrick Hore:
We spoke about TradeLens, which is one answer to the digitisation megatrend. It is a collaborative and strategic platform that is much broader than digitisation. It focuses on fiscal benefits and compliance in the value chain, with clear relevance to this megatrend. When it comes to agility, the HIT concept helps the shipper in 2 ways. Firstly, you are closer to the market and the end-user, allowing you to serve the market demand as required. And secondly, it helps you focus on the priorities of your business as well as those of your customers. In a push supply chain, you aren't committed to final-mile delivery when business priorities change, and the flexibility of the HIT solution helps you find the right balance to better service your end customers as well as your own supply chain needs.

Q:
What if some of our customer's partners are not already included in the network; will we still be able to have end-to-end visibility with such gaps?

Samuel:
The unique value of TradeLens is that it's not only an online solution but also an ecosystem and an accelerator for digitisation. Even if your supply chain partner is not on the network, you can easily bring them on board very quickly through API integrations, helping them to digitise some of their processes; giving you the end-to-end visibility you need. We know that a supply chain is not a one-man show, and that's why TradeLens places a strong emphasis on its network and its ability to quickly onboard new partners.

Insights from our experts

Q:
What about real-time visibility in the supply chain? I think your product still heavily relies on partners to provide the data needed. What if the partners do not upload information on time? How can we then ensure that the data TradeLens provides is accurate and reliable?

Samuel:
TradeLens' technology doesn't depend on your supply chain partners updating the TradeLens portal or platform deliberately. Everything is automated. When your partners update their local in-house systems, that information is automatically pushed to TradeLens, reflecting data that is equivalent to what you will see on their local systems after validation. We also use multi-source data verification logic that helps us determine, for example, whether the data published by the trucker or the terminal for a gate-in event is up to date. This not only ensures that we provide the latest information and data, but also ensures that data is verified and accurate based on corroboration from various sources.

Q:
Are there any restrictions on hub locations or the number of hubs that can be managed? How many hubs are available?

Borja:
In general, there are no restrictions. Maersk owns physical assets within our network. HIT also works with our partners and yours. In a multi-carrier solution, we work closely with our partners within our network at Maersk to identify and implement the right solution. Currently, we have visibility over all transport plans. We have 13 hubs that are strategically distributed and active. However, this is not a restriction, as we can always review additional hub locations that can support your supply chain.

Insights from our experts

Q:
Can you evaluate the potential gain of implementing a Hub in Transit program?

Borja:
There are a few examples we can showcase, through the Syngenta and LatinPolymer case studies, to highlight the various benefits. To further elaborate, we have a tool that allows us to understand your flows and inventory and highlight the benefits to your supply chain in particular.