

LogiSYM

The Magazine for Supply Chain Executives

FEBRUARY 2022

**DEFINING THE
ROADMAP FOR FY2022**

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**COP26: 5ZS THAT
CHANGED THE WORLD
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**The Logistics & Supply Chain
Management Society**
*The Regional Professional Body
for Logistics Practitioners*

The Official Journal of The
Logistics & Supply Chain
Management Society

**Defining the
ROADMAP
for FY 2022**

Dr. Chris Holmes
Managing Director,
IDC Insights Asia Pacific

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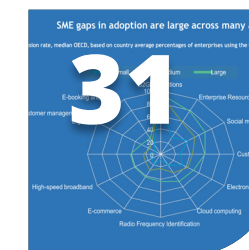


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A WORD FROM THE INTERNATIONAL EDITOR

Are the challenges for 2022 already evident?

Dear Readers,

At the time we go to print we will have already surpassed the new year and into the new lunar year – the year of the Tiger. The tiger embodies courage and bravery and also symbolises resilience and strength — even in times of struggle. This is a most fitting description for the times we live in. Followers of the zodiac, believe this means there will be more disruptions and instabilities in the year to come!

I am in no way advocating that forecasting the year's outcome on a zodiac sign is what we should base our outlook on, but there are strong market signals that indicate 2022 will not be breeze in the park.

The impact of supply chain disruptions have not yet been fully restored. We see escalated costs of transportation hit consumer prices and industry costs. We see the very strong inflationary pressures, now causing governments to consider fiscal actions. Some central banks have already resorted to increasing their base interest rates – which could be the start of a series of actions to contain inflation.

Whilst we see COVID restrictions ease somewhat, there are still many constraints around us. This clearly impacts people mobility that in-turn affects the way we are managing our supply chains.

The theme of this edition is “Defining the Optimal Technology Roadmap” It is clear that technology will dominate our lives even further than we can imagine. We need to embrace the realities, understand the contexts and adopt the right strategies to help us stay on track.

To this end, we have included in this edition some very useful and insightful pieces from industry experts and practioners, who share with us their views

to mapping a technology roadmap. The message by all is clear. There needs to be a “reset”, in the way we think and in the way we do things. Transformation is not just about digitising documents and interconnecting digital systems. It requires a fresh thinking in leadership, to create that clarity on what is the enterprise value proposition, align or re-align the strategic direction within the organisation and embed a clear execution methodology to achieve the intended outcomes.

At the end of the day, technology is an enabler to help accelerate, align and delivery transactional results. But Business performance is not only about transactions, it is also about relationships.

We would like to hear your views and comments on our content and your feedback would be most appreciated – we look forward to receiving your feedback at info@lscms.com

I take this opportunity to wish all our readers a happy and prosperous Lunar New Year.

Meanwhile take care & stay safe!

Joe Lombardo
Editor-in-Chief LogiSYM Magazine



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A WORD FROM THE PRESIDENT

An "Almost Normal"?

January has been a busy month!

A week in Miami followed by an unplanned sojourn in New York/JFK. A physical industry event which we were invited to facilitate, followed by an excellent networking event - and gin tasting and appreciation night- at Singapore's only gin distillery! Shortly thereafter, we jumped on a plane and spent the next 10 days in Sydney.

An antigen or PCR test everyday and a mountain of additional checking and paperwork for travel and controlling the maximum number of people at physical events aside, it feels like things are 'almost normal' and we were in 2019.

If sanity prevails and we avoid an armed conflict and if a stronger wave of COVID does not emerge, many are optimistic that we are slowly but surely emerging to that better normal we have all been looking forward to. However, as we look ahead, we should be mindful not to revert to the 'old' way of doing things or perhaps even worse, adopt new tools and techniques just because someone in our supply chain was enamoured by the sales pitch from one of the plethora of companies touting their solution or product as the magic pill to solve your supply chain woes. More so than pre-COVID, these solutions are in fact placebos that provide a false sense of security and make the supply chain perform worse than it was originally.

It's tough separating the wheat from the chaff and with all the disruptions and rate hikes adding to the chaos, aided sometimes by governments and other stakeholders, Logisticians need to navigate a minefield of opportunities every day.

As always, LogiSYM will be there on your journey with you and kudos to Joe and the team for putting out another excellent issue this month. We hope readers find the insights, news and updates useful and I personally look forward to meeting many of you online and face-to-face in the months ahead.

Be well and be safe!

Raymon Krishnan, FALA, FCILT, CLP
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LogiSYM

Defining the Roadmap for FY2022

Opinion Editorial by Dr Christopher Holmes – Managing Director, IDC Insights Asia Pacific

“By the end of 2022, half of all manufacturing supply chains will see the benefits of supply chain resiliency, resulting in a 10% reduction in disruption impact.”

Goodbye 2021, hello 2022. We say goodbye to a year of turbulence, with the hope that things will be different in 2022. However, a nagging feeling lingers that we will see the challenges of 2021 continue. By this, we mean the continuing external disruptions that affect our businesses. The constant changes of a world affected by a global virus will continue, impacting supply, demand, and operations through health, lifestyle and regulation. So the question we need to answer is how do we plan for this uncertainty? Planning for uncertainty is hard – how can we prepare for things we don't expect? The recommendation is that we plan to operate in uncertainty. The focus needs to be on building processes that can react quickly and are robust enough to cope with change. More

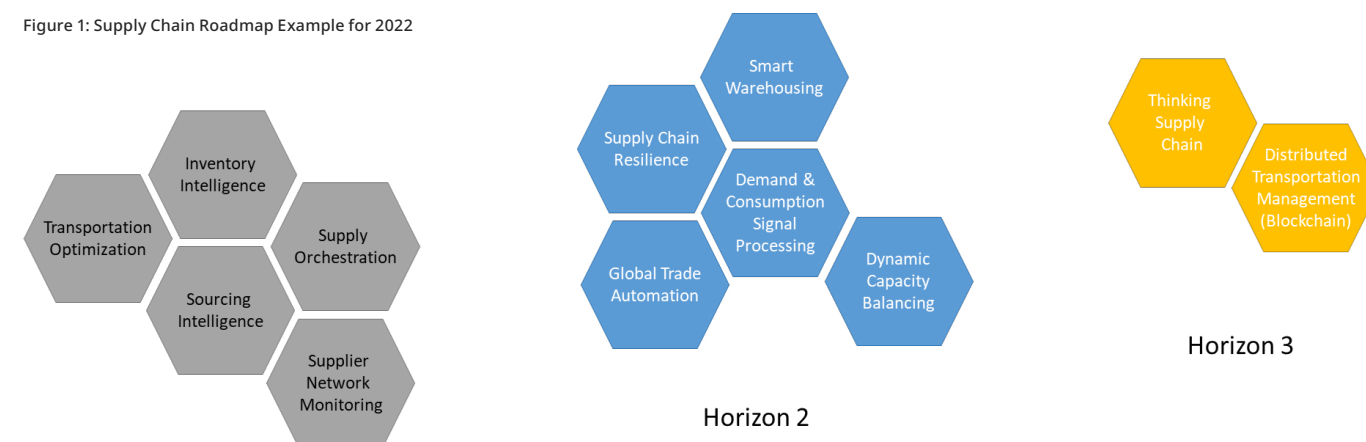
and more organizations are taking this approach and are focused on building out roadmaps that detail the evolution of their internal business process, taking advantage of changes in technology and adding it to their existing environment in a way that allows investments to be scaled across multiple functions or uses.

IDC research has shown that the need for a roadmap is critical to ongoing business and technology alignment success. Without an overarching plan, achieving meaningful results at scale will be due to luck rather than management. In addition, creating a roadmap requires an architecture upon which the different facets of the roadmap can be linked, and a business case can be built that will demonstrate scalability

of technology investments rather than isolated projects.

It is critical to ensure that the process evolution can be achieved when creating the roadmap. We have seen many roadmaps and associated transformation exercises fail. By failure, we mean that the processes are not implemented at scale, and therefore have limited impact on overall business processes or outputs. Key to this is that when deciding on which proof of concepts to initiate, they need to have the required infrastructure to be rolled out across the business. There is little to be gained from initiating a project that shows success when it requires a foundational change in technology that will take years and considerable funding to implement.

Figure 1: Supply Chain Roadmap Example for 2022



Horizon 1

Horizon 2

Horizon 3

Horizons are based on IDC positioning

So what does the supply chain roadmap look like for 2022? We see organizations moving forward with a number of process / technology initiatives. In summary they can be summed up as "data gathering" in horizon 1, "acting on the data" horizon 2, and "integration" for Horizon 3, as indicated in Figure 1.

Creating the roadmap requires senior leadership support, it needs to be driven from the top, with clear roles and responsibilities delegated, and regular reviews to ensure progress is being made. The latest IDC survey had C-Suite leaders 43% of organizations enthusiastic about enterprise intelligence, requiring that the data gathering be in place [IDC FERS Survey December 2021]. However, another survey we conducted showed that 40% of Asia/Pacific manufacturers with more than 250 employees are still using spreadsheets as the prime way of managing supply chains activities [IDC 2021 Asia/Pacific Manufacturing Insights Survey]. The focus on changing the way we run our businesses requires that we enable the ability to know what is going on easily and simply. Access to data to support decision making needs to be at our fingertips, and not require a significant exercise taking days to report. This is fundamental, as only when we have the data in place can we move forward and start to realize the benefits of moving to a digital business. Table 1 shows the key use cases we see as foundational as we seek to build resiliency seeking to enable visibility into all areas of our supply chain which gives us the foundation to innovate.

Table 1: Horizon 1 Use Cases

Use Case	Goals and Objectives
Supply Orchestration	Enhanced visibility, collaboration, and responsiveness mean that supply disruptions will be identified and mitigated where possible and the duration of the impact will be minimized.
Inventory Intelligence	Instrumenting inventory locations to report actual inventory position (smart shelves) and material handling equipment will provide an accurate representation of real-time inventory position in the supply chain digital twin.
Transportation Optimization	Freight costs will be reduced, including expedited freight. On-time delivery of inbound material and outbound finished goods will be improved.
Real Time Digital Dashboards & Metrics	Real-time digital dashboards and metrics that take into account internal and external data feeds allow the business to see all performance KPIs for suppliers, helping the enterprise understand their supply base. It also allows the business to start to project future performance, enabling improved supplier relationships and supplier source selection.
Sourcing Intelligence	Buying based on capacity reservation at suppliers based on a digital twin of the entire supply chain will yield lower inventories and higher perfect order results.
Supplier Network Monitoring	Near-real-time awareness of specific supply positions and aggregate vulnerabilities will mean more reliable performance, lower transportation costs, and better on-time delivery of both ingredients and finished goods.

As we look at Horizon2 (Table2) the move to "action," this is where we bring the data into decision support systems, we equip employees across the organization with the means to access, interrogate and act on the data. This moves into this idea of resilience, in that whilst we cannot predict what will happen, we can respond immediately. Coupled

to this is the move to automated warehousing, which has seen tremendous growth across the region in the last 24 months, as costs of implementation reduce and automating makes sense as we address challenges of workforce management, require worker safety, deal with shortages, and attend to the need for improved accuracy in picking.

Table 2: Horizon 2 Use Cases

Use Case	Goals and Objectives
Smart Warehousing	Automation, freeze-point delay, and network diversification will improve the ability to manage product personalization and delivery efficiency.
Supply Chain Resilience	A resilient supply chain can see what is happening in real time and react to those events quickly enough to minimize the impact on operations and business performance.
Global Trade Automation	The objectives are a reduction in declaration penalties, improved time through customs, accurate/timely settlement, lower freight forwarding costs, and less dispute resolution.
Demand & Consumption Signal Processing	Comprehensive and near-real-time demand and consumption data will allow companies to improve both the forecast and the linkage to inventory and capacity.
Dynamic Capacity Balancing	Daily order/shipment data is captured, allowing logistics providers to either request additional capacity from carriers or notify shippers that excess capacity exists on a given lane. Middle mile between central and regional DCs is an example.

Horizon 3 is where we can start talking about the "digital supply chain" – the idea of integrating all the different processes and players in the supply chain beyond the enterprise. This is where we will see the implementation of

closed loop supply chains, digital supply chain twins, and also start to move to a fully digital process with trust across the supply chain enabled by digital technologies such as blockchain.

Table 3: Horizon 3 Use Cases

Use Case	Goals and Objectives
Thinking Supply Chain	The objectives are better allocation of resources and risk mitigation, better optimal sales and operations plans, and better determination of the next best action.
Distributed Transportation Management	The combination of distributed ledger and transportation management technologies providing access to carriers, customers, and suppliers improves the ability to connect with external trading partners and track and trace the movement of transportation assets and goods through the supply chain ensuring authenticity and product safety.

Every organization is different. Everybody's roadmap is different. Hence, giving guidance is challenging. However, this approach to data, action, and integration is a good starting point to thinking about how you are going to plan for 2022 and beyond.



Dr. Christopher Holmes
Managing Director
IDC Insights Asia Pacific

Chris Holmes is Managing Director for IDC Insights Asia Pacific responsible for leading the Retail, Energy, Manufacturing, Health, Government, and Telecom-municipalities groups. He is responsible for setting the direction of the research and managing the delivery teams. His research focuses on industry transformation, the application of new technologies to enhance business processes, and cross-industry learning.

Defining the Optimal Technology Roadmap

Opinion Editorial by Marco Boos – Supply Chain Thought Leader

Let us reflect over the last 20-months when the world drowned in the reminiscent of Covid pushing Supply Chain and Operations to the brink:

Despite system and process improvements put in place with the express purpose of keeping companies moving forward, Operations / Customer fulfilment struggled to keep Customers happy.

And there is no light in sight that this situation will soon change for good, but why...?

Challenges and disruptions are numerous, diverse and inconsistent, and it seems every week something new is hitting the surface unexpectedly. We just plugged one hole and a new part of the organization would spring a leak. We try to fix and explain the disaster by using poor and insufficient data, a process which never really worked as supposed, along a system/SW which never lived up to its expectations as it was never configured to true value creation making day to day operations simpler.

Now evil is grinning straight into our face as we are ruled and operate in chaos and dysfunction, simply by missing out in aligning the company's core functions and operating models supported by a functional SW-/ERP infrastructure.

Leadership teams are trying to define strategies best suited for their workforces and workspaces.

A Technology Roadmap lays a foundation to prioritize the depth and appetite for a digital transformation. This is intended to provide optimized visibility, enhanced operations, fostering innovation and promoting the corporate purpose and well-being of a company.

Forced Technology Roadmaps and piece meal bolt-on technologies, do not provide desired and long-lasting success – they simply stop some of the current bleeding and create larger or more severe long-lasting issues. A Technology Roadmap when approached with respect and lots of ambition, is a dynamic but fragile environment trying to connect

and corral all existing ecosystems of a company. This does not mean – all these ecosystems have to sit in one IT-Platform or ERP-System, it means they have to interact with each other where required but not mandated!

An Technology Roadmap must support the Business Model and fulfill Customer Needs by centering around 3 critical elements:

TECHNOLOGY ROADMAP ELEMENTS

- MARKET
- PRODUCT
- PEOPLE

are critical and require flexibility in adjusting to changing dynamics as shown in diagram 1

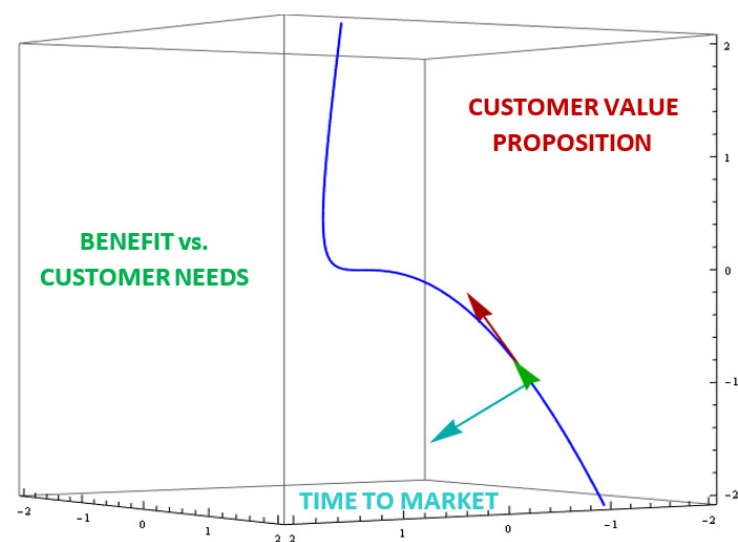


Diagram 1

Optimal Technology can originate out of a single innovation from within a company's core functions

that can revolutionize user experience – like visibility, control, compliance as well as analytic dashboards.

Companies taking the time and effort to question today's operational models and supporting ERP/SW-infrastructure are moving faster out of the lethargic situation is 'what I do' and 'how I do it' still the way to go and how can I quickly but sustainably adjust.

Before embarking on creating an optimal technology or even digital roadmap, there has to be a solid idea of the improvements and positive impacts the technology can/will make. In particular, determining what the business objectives are, what is the potential fiscal impact in cost to establish and additional generated earnings. The optimal technology strategy should fit within your current business ecosystem. It has to support current environment and has to be understood as a transformational project replacing insufficient/dated technology over the course of coming months.

Many of us are spending considerable time struggling to find solutions for the problems of the 'new norm', while still trying to establish a seamless business operation. Still trying to operate today with the processes we used until 2 years ago does not work anymore nor do SW/ERP-solutions. Too many changes and challenges have occurred over the past months and existing systems have become increasingly a burden.

To effectively define and develop

'The Optimal Technology Roadmap' companies, its leaders and board members have to align what is foundational – must have – nice to have – game changing to sustain the well-being of the company, its customers, its employees, its shareholders. An 'Optimal Technology Roadmap' is an enabler managing challenges and opportunities and should not be understood as a piece of Technology being bolt on to an already existing suboptimal process including Software or ERP.

For defining the optimal technology roadmap paired with a successful transformation journey, companies should look at centralizing the core of each company 'critical data and processes' being required to run the business operations. Challenge and question if current data are being used effectively, support business requirements and generate much desired outcome. Look at how your current processes and legacy systems are 'being used' or worse 'not being used' generating significant cost month over month – and how much more efficient your company could generate if technology is aligned to business purpose and output!

Such step is critical and crucial to the future success and requires broad knowledge and expertise of an individual who can juggle and bring together the technical system capability in relation to operational planning, execution, finance and compliance. Is there a golden recipe, playbook or the one fits all solution → unfortunately 'NO'! These are efforts companies have to take and invest to prepare and build a robust business environment supported by

an efficient and dynamic technology for the challenging and volatile times ahead. This does not mean technology has to be expensive, cumbersome and leading into many months of implementations. Key technology today is available in digital APP-Form, can be used in days without costing the world or disrupting the company's heart – the legacy system.

It is an opportunity many of us have waited for a long time, making a change with a significant impact without broiling the ocean with investments with no ROI. But it is on us to do our homework finding the solutions and technology in making a company, our employees and deliverables for our customers better!



Marco Boos

Supply Chain Thought Leader

Accomplished Global Operations, Manufacturing, Supply Chain, Logistics and Transformation Executive with 29 years of experience in Automation, Chemical, Energy, Engineered Products, Oil & Gas and Software Industries.

Marco advises companies and is active part of a Think Tank group for deploying and using Artificial Intelligence-(AI) in Manufacturing, Operations and Supply Chain Digitization. He is a thought leader, speaker and panelist for Supply Chain and Logistics transformation Management and Execution.

Marco has served in global capacity as President, Chief Supply Chain Officer, Head of Manufacturing, Region Operations Head, Head of SCM Shared Services, Region Customs & Logistics Head in global capacity. He lives in Denver, Colorado.

Global Logistics Service Provider Benchmarking Index

Logistics & Supply Chain Management Society (LSCMS), Supply and Distribution Group Launches

Singapore 12th August 2021: Recognising the heightened focus on overall supply chain performance due to increased disruption and challenges, shippers, manufacturers and beneficial cargo owners (BCO's), are increasingly faced with soaring freights rates and what they, correctly or otherwise, perceive to be sub-standard or inferior service.

Additionally, many companies today are placing an increased focus and significance in assessing the wherewithal of a Logistics Service Provider by their sustainability and digitalization initiatives and capabilities – aside from rates and service levels.

According to Mr. Kendrick Ng, of the LSCMS Supply and Distribution group, "It is a crowded and convoluted playing field and there are seldom unbiased or uninfluenced qualitative and quantitative data to manage these perceptions - real or otherwise. As a shipper, participating in this survey will provide valuable data to index

the performance of your LSP's" Developed with Dr. Rajesh Piplani, Director of the MSC in Supply Chain and Nanyang Technological University, the index analyses the responses of up to 100 major shippers who spend at least US\$1 million a year with a particular LSP in airfreight, ocean, warehousing or express services. The first index of its kind to be released globally, it will not be vendor sponsored but rather driven by the real and accurate feedback provided by major shippers. Companies interested to contribute to the index can complete the survey questions at:

Please scan QR code for more details.



About the Logistics and Supply Chain Management Society

The Logistics & Supply Chain Management Society is the regional professional body for Logistics practitioners.

Practically all areas of the Logistics spectrum are represented in the Society. Shippers, Freight Forwarders, Academics, Students, Carriers, Personal Effects Movers and other individuals and organisations form our core. Like most professional bodies, the Logistics & Supply Chain Management Society emphasises a commitment to ongoing education and encourages performance consistent with a generally agreed body of knowledge or standards. Members of our Society are recognised members of a professional body through the work we continue to perform.

The L&SCMS has the proven history, framework, value for money and strategic reach to make it the right choice for you.

Like most professional bodies, the Logistics and Supply Chain Management Society emphasises a commitment to ongoing education and encourages performance consistent with a generally agreed body of knowledge or standards. Members of our Society are recognised members of a professional body through the work we continue to perform. The L&SCMS has the proven history, framework, value for money and strategic reach to make it the right choice for you.

The Society was formed by Logistics professionals with the following objectives :

- To promote professional development of Logistics and Supply Chain Management;
- To serve as a resource centre for its members and parties interested in Logistics and Supply Chain Management;
- To serve as a resource centre and focal point that demonstrably reinforces Singapore as a regional Logistics and trans-shipment hub; and
- To advance, study and disseminate techniques and applications on Logistics and Supply Chain Management.

Logistics & Supply Chain Management Society (LSCMS), Supply and Distribution Group Launches



The Logistics & Supply Chain Management Society

The Regional Professional Body for Logistics Practitioners



SUPPLY AND DISTRIBUTION GROUP

Haulio, the fastest growing digital container haulage platform in Southeast Asia, secures US\$7 million in investment led by Temasek's Heliconia Capital

Haulio has seen significant revenue growth in 2021 and sets sights on further regional expansion across Southeast Asia.

SINGAPORE, 17 January 2022 –

Haulio, Southeast Asia's fastest growing digital container haulage platform, announced that it has raised US\$7 million in a Series A funding round. The company will use the funds to drive stronger haulage capabilities, enhance service quality, elevate product engineering and development, reinforce talent acquisition and scale Haulio's continued regional growth.

The funding round was led by Temasek unit Heliconia Capital with participation from new and existing investors across the globe including Singapore. Among the new investors were Ondine Capital (China), Cornerstone Ventures (Taiwan), FuturePlay (South Korea), Newtown Partners via the Imperial Venture Fund (South Africa), and corporate executives from XA Network. Existing investors including B7 Capital, ComfortDelGro, iSeed SEA, Iterative (United States) and PSA unboxEd, also participated.

Since 2017, Haulio has transacted more than two million containers (2.5M twenty-foot equivalent units or TEUs), with over 50% of the transactions completed in 2021 alone, growing the business further. Haulio expects to triple their revenue numbers by the end of the year as the global supply chain recovers.

Derek Lau, Chief Executive Officer at Heliconia Capital, shared: "Haulio has created a powerful digital platform that bridges the traditional haulage business offline-online thereby transforming

the first-mile logistics operations. The founders' deep understanding of this business should continue to help accelerate growth domestically and overseas. We look forward to working closely with the team and supporting them."

In April 2021, Haulio officially opened its first regional office in Bangkok, Thailand. It has successfully aggregated more than 3,000 hauliers onto its platform and transacted with key industry stakeholders such as PSA's Thailand joint-venture local unit, ESCO and numerous



From left to right: Ivan Ang (Chief of Staff, Haulio); Glen Liu (Head of Strategy, Haulio); Derek Lau (CEO of Heliconia); Alvin Ea (CEO of Haulio); Sebastian Shen (CPO of Haulio)

other global freight forwarders. In under nine months, Haulio's Thailand office has transacted over 500,000 containers and crossed seven figures in revenue. Last June, Haulio also partnered with shipping and logistics global leader CMA CGM to move its containers on the major inland corridor of Laem Chabang and Lat Krabang, thus significantly increasing Haulio's presence in the country.

Haulio is primed for further regional expansion to continue its digital aggregation of haulier network across Southeast Asia and become the leading ASEAN digital haulage platform. This will help bring unparalleled container visibility and milestones to its haulage procurers with reliable pricing and fulfilment within the region anytime. In doing so, Haulio is actively hiring top talent in strategic business functions to support its growth plans into markets such as Indonesia, Malaysia, Philippines, and Vietnam.

Alvin Ea, Chief Executive Officer and Co-Founder, Haulio, said: "We started Haulio with a bold mission to empower the lives of millions of haulier drivers in Southeast Asia and become the key platform of growth for them through our technology and network effect. The complex and fragmented nature of our business continues to be a challenge especially

when container haulage has been a vertical that often gets left behind. This investment will accelerate our regional growth and the transition of haulage standards from offline to online, as we remain steadfast in our vision to haul all containers in and out of Southeast Asia through our platform."

Haulio has also expanded its offerings to include embedded financing and leasing solutions as it strives to be a key technology partner for the traditional haulier market segment. In 2021, Haulio partnered with fintech players such as Funding Societies and Aspire to offer faster pay-out and supply chain financing, as well as with ComfortDelGro and Goldbell to offer leasing of Prime Mover trucks.

Further commenting on the company's plans for the region, **Ea added:** "Container shipping volumes are on the rapid rise, so there needs to be greater optimisation and streamlining of haulage trips given the increasing shortage in equipment and drivers. Our goal towards zero empty haulage trips in Southeast Asia has seen significant progress through our data-first approach for effective job matching and resource pooling. This has helped reduce the carbon emissions from container trucking and unnecessary transportation of empty containers. Haulio has since optimised over 200,000

containers, saving an estimated 2.92×10^6 Truck Kilometres and over 3,000 Metric Tonnes of carbon emission."

"With the rising sustainability pressure on the sector, there is a greater imperative for us to work alongside Southeast Asia's port logistics to ensure greater sustainability in the region for the health of our world."

HAULIO

Haulio is Southeast Asia's leading and fastest growing container haulage platform with the premise of connecting global trade to local first-mile transportation across ASEAN. The company believes in uplifting the industry by empowering its ecosystem of users with its technology. Through the optimisation of resources, Haulio aims to revolutionise international freight logistics towards a collaborative and sustainable future. For more information, visit <https://www.haulio.io>.

HELICONIA

Heliconia Capital Management Pte Ltd is an investment firm and a wholly-owned subsidiary of Singapore investment company, Temasek Holdings (Private) Limited, that provides growth capital for Singapore's leading small and medium sized enterprises, helping them become globally competitive companies.

Hiring a Singapore Agent to Navigate Local Customs Clearance Can Boost Productivity, Efficiency

by GeTS - Global eTrade Services

As a key Southeast Asian hub, Singapore is a small but important market for many overseas sellers.

Navigating cross-border trade processes can still be challenging and time-consuming for international companies. Whether you are venturing into the Singapore market for the first time, or you are already importing goods here but do not want to set up a local distributor or office, using an agent of exportation can considerably ease the process of bringing your goods into Singapore.

But not all third-party agents have the expertise and experience to help you handle the myriad issues of cross-border commerce, ranging from changing regulations to complex cross-border processes and new technologies.

So it is important to hire a reliable, certified Importer of Record (IOR) agent with a proven track record to help you unpack the complexities of cross-border trade.

Let's look at some of the key challenges that a trusted IOR can help you overcome:

1) Navigating complex import procedures

Foreign trading companies may find it daunting or time-consuming

to juggle multiple custom duties, especially if Singapore is an unfamiliar market to them. Common filing mistakes include failing to declare goods, not presenting the right Customs permits for clearance, tampering with Customs seals and locks on containers, and inaccurate product classification. All these errors can cause major delays or even a rejection of your shipment at Customs.

What's more, the cost of not complying with regulations and documentation requirements can be significant – you may face fines and non-monetary penalties that have serious consequences. A minor offence can incur up to S\$5,000 per offence and serious cases involving fraud led to prosecution.

A reliable IOR agent can relieve you of this pressure by acting on your behalf to import the goods, minimising risk of errors by ensuring that your goods are properly documented and declared.

For instance, an overseas e-commerce merchant selling children's toys on Amazon in the United States can appoint an IOR agent so it can be listed on Amazon Singapore via the Fulfilment by Amazon (FBA) program without having to set up a local registered office. This IOR agent will also advise it on import procedures, Customs requirements, and related fees, acting

on its behalf to liaise and coordinate with couriers to ensure all shipments reach the Amazon warehouse in Singapore smoothly.

2) Managing multiple payments and papers to clear Customs

Foreign-based businesses that import into Singapore are required to have an active account with Singapore Customs, a registration with the Accounting and Corporate Regulatory Authority (ACRA) and a Unique Entity Number (UEN). Hiring an IOR agent like [GeTS](#) can help you handle all this electronically on your behalf. This includes:

Import taxes - Singapore has a flat tax of 7 per cent for all imports, except for the dutiable items, such as alcoholic products, tobacco products, vehicles and petroleum products. Additional duties are charged on these items. The IOR agent can help compute the necessary duties for you, ensuring accurate product classification that can help you to save money and only pay what is due.

GeTS also assists in registering for Goods and Services Taxes, as well as managing quarterly Inland Revenue Authority of Singapore (IRAS) tax filing for all business transactions. This eliminates any worry about complicated tax filings and surprise audits.

Commercial Invoice – An IOR agent can help you to ensure an accurate valuation of your goods and to prepare your Cost, insurance, and freight (CIF) documents. The CIF is an international shipping agreement representing the charges paid by a seller to cover the costs, insurance, and freight of a buyer's order while the cargo is in transit.

Air Waybill or Bill of Lading: These are documents given to a shipment company by the carrier, providing details of the shipment and representing a transfer of the title of goods. They allow exporters to receive payment and importers to receive the merchandise they ordered.

Customs Clearance: After ensuring all your documentation are in order, the IOR will proceed to submit import declaration to Singapore Customs. On approval, an import GST permit will be received, which will be sent to the forwarding agent that the customer appointed for physical clearance. There may be occasions where your shipments require secondary processing or inspection before they get clearance from Singapore Customs.

Service	Section 33(1)	Section 32(2)
Cargo ownership rights	Overseas Principal	Overseas Principal
IRAS GST registration		GeTS
IRAS GST e-Filing		
Issuance of tax invoice for GST purposes		
Collection of GST on local supply of goods		
Declaration to IRAS/Customs	Overseas Principal & GeTS	
UEN for import permit declaration	GeTS	
Payment of import GST		

3) Coordinating end-to-end logistics

Many overseas companies underestimate the complexity of managing logistics of delivering their products from port of arrival to last mile delivery. Some IOR agents provide this service and its imperative that you consider your own logistics needs.

At GeTS, we understand that this can be a hassle. This is why we offer a seamless IOR solution from advisory to logistics to Customs clearance, which complements the Fulfilment by Amazon (FBA) program, providing you with additional avenues to capture opportunities in e-commerce.

Hiring the right IOR agent peace of mind that your products will reach your customers in Singapore seamlessly and efficiently, so you can focus on scaling up your business.

You can choose different types of IOR appointments: a direct IOR agent for businesses who do not want to charge GST, or an overseas principal who partners with an IOR agent like GeTS to handle various services as listed in this table below:

Looking for a reliable and efficient IOR agent in Singapore?

[Check out Importer Of Record \(IOR\) | Global eTrade Services](#)

Scan QR Code To Get More Info



Global eTrade Services (GeTS), a global leading trade platform company, is shaping the future of trade and supply chain with its innovative use of technology and deep G2B and B2B domain expertise. GeTS enables the orchestration of physical logistics, compliance and financial requirements of trade and supply chain seamlessly, smartly and securely, thus powering global trade by making it accessible, predictable and easier to fulfill.

SINGAPORE'S LARGEST FULLY AUTOMATED COLD STORAGE AT TEE YIH JIA FOOD HUB

by SSI Schaefer

SSI SCHAEFER On Track to Open Singapore's Largest Fully Automated Cold Storage at Tee Yih Jia Food Hub in Q1 2022

SSI SCHAEFER, the global leader of warehouse and logistics solutions, and Tee Yih Jia Food Manufacturing Pte Ltd ("Tee Yih Jia" or "TYJ"), a leading frozen foods manufacturer, are set to launch Singapore's largest automated rack-clad high bay warehouse storage facility in Q1 2022 at Tee Yih Jia's new \$450 million production facility in Senoko – the "Tee Yih Jia Food Hub".

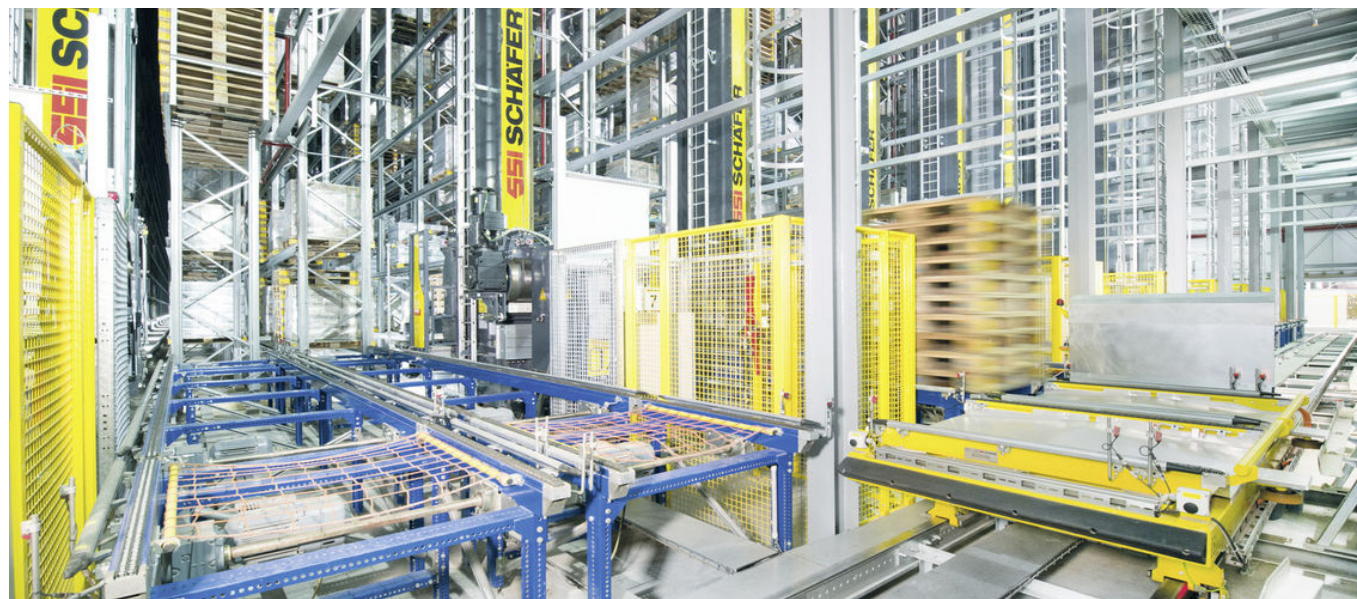
The upcoming Tee Yih Jia facility consists of three warehouses — two cold rooms and one ambient temperature dry store — and features rack clad high bay warehouse with an automated storage and retrieval system (ASRS) which allows the automated placement

and retrieval of high-volume loads from TYJ's storage locations.

Spanning more than 100,000 pallet positions of frozen storage racks, TYJ's food factory and warehouse storage facility sits on a land area of 40,000 m². It is installed with 15 SSI EXYZ cranes which is estimated to be able to move up to 300 pallets per hour with automation technology.

This cooperation comes as warehouse automation booms across the Asia-Pacific region. The APAC automated storage and retrieval systems (ASRS) market is forecast to grow at a CAGR of about 10% between 2021 and 2026. This growth is prominent in the food and beverage (F&B) industry, as companies recognize the advantages provided by ASRS systems and increase focus towards market adoption.

"Logistics automation has been on the uptrend for several years, and COVID-19 has only accelerated this trajectory. With F&B, pharmaceutical and eCommerce booming, cold chain operators and logistics service providers need to evolve their warehouses to support a strong, undisrupted supply chain. As we move towards the next generation of smart logistics, APAC organizations must combine robotics and intelligence software to keep up with shifting market dynamics and meet current and future demands," said Xavier Perello Pairada, – Senior Vice President | Regional head APAC & MEA at SSI SCHAEFER.



Study Period: 2019- 2026

Base Year: 2021

CAGR: 9.95%

DAIFUKU

TOYOTA

SSI
SCHAEFER

muratec
MURATA MACHINERY, LTD.

Hanuha

Solve warehouse challenges with SSI SCHAEFER technology

As a global storage systems leader, SSI SCHAEFER provides a range of warehouse automation solutions to address common challenges faced by cold chain operators and logistics providers. For those with limited vertical or horizontal space, SSI SCHAEFER's rack clad high-bay warehouse technology offers high storage density, direct access to every article, rapid processing speeds, reliability and optimal space utilization.

Within warehouses, the SSI EXYZ Storage and Retrieval Machine is a fully automated storage and retrieval system (ASRS) delivering efficient movements on the X-, Y-, and Z-axis. Suitable for deep-freeze environments down to -30°C, SSI EXYZ enables rapid storage and retrieval in spaces that are too cold for humans to operate.

Meanwhile, Automated Guided Vehicles optimize and automate material flow, from picking source pallets off conveyors and sending them to pickers for order consolidation — all while minimizing the risk of human error. The goods are also tagged for easy item tracking and tracing.

Recognizing that every company's challenges are unique, SSI SCHAEFER builds custom solutions for each organization's requirements.

As more businesses seek warehouse automation solutions, SSI SCHAEFER is well-positioned to help increase supply chain management and efficiency, improve food safety and storage, reduce revenue loss through spoilage, and create a safer environment for workers.



By adding our experience, our partners with construction knowledge and our technology solutions, we can in a very short time, meet our Customers needs.

SSI SCHAEFER

COP26: 5Zs that changed the world

Part 2-Defining the execution

by Wolfgang Lehmacher, Anchor Group & Mikael Lind, Research Institutes of Sweden (RISE)

COP26 marked a special moment. The transport and logistics industry has started to engage differently in the annual United Nations (UN) Climate Change Conference. The sector took a seat at the table and participated in concrete initiatives, like the two zero (2Zs) emission initiatives, namely the Global MOU for ZE-MHDVs for zero emission new vehicle sales and the Clydebank Declaration for specific zero emission maritime shipping corridors. This moment of change was described in Part 1 of our contribution published in the December '21/January '22 LogiSYM edition.

In this subsequent Part 2 of the report, we summarize the efforts required to bring such initiatives to life. Additional three zero (3Zs) emission initiatives were launched at COP26 that will help the transport and logistics industry to contribute its fair share to the decarbonization of economy and society. The three enabling initiatives are the First Movers Coalition, the Just Transition Maritime Task Force and the US-China climate agreement. These efforts complete the set of the five

(5Zs) initiatives that changed the world of transport and logistics during the 14 days of the Glasgow conference. At the end of the article, we also point out that reducing emissions will not be a "home run".

The fourth Z - Zero-emission skills: Just Transition Maritime Task Force

Change can only be brought about by people. It is also people that have to support and work with the new solutions. All job roles in the logistics sector are expected to experience some level of change. As an example of 56 positions analyzed in the Jobs Transformation Map (JTM) for the logistics sector in Singapore, about 54 percent of jobs will undergo at least a "medium degree of change" which will require job redesign, right-skilling or cause displacement.

Under the aegis of the UN Global Compact, the International Chamber of Shipping and International Transport Workers, a Just Transition Maritime Task Force has been set up at COP26 to

prepare policy and business recommendations to develop skills and jobs required for creating a zero emission shipping sector. As per reports, other UN organisations like the International Labour Organization (ILO) and the International Maritime Organization (IMO) are expected to join the task force as partners. The task force aims at aiding the global seafaring community in its green transition through helping the development of green skills and providing equal work opportunities for everyone, leveraging best practices across the global value chain networks and creating policy recommendations of equitable transition with a particular focus on developing nations. A more precise roadmap will be chalked out in a meeting scheduled to take place in December 2021.

The work force, regardless if on operational or executive level, needs to upgrade its capabilities to cope with the new technologies used to power an emission free transport system. A new skill set needs to be established for today's and tomorrow's transport industry professionals as for



Figure 1: Agreements of five zero (5Zs) emission initiatives for decarbonizing logistics and transports at COP26
(Illustration: Sandra Haraldson)

instance for the handling of new fuel types, transforming existing fleets and building new ships being powered by zero emission fuels, but also for utilizing digitalization for data- and information-empowered decision-making and automation. As an example, the gathering force of maritime informatics, uniting practitioners and academics to jointly contribute to making shipping more efficient, sustainable, safe and resilient, is in the process to establish a Maritime Informatics Institute, as recognized by the Nautical Institute (NI), and initiate a globally coordinated upgrade of the human (digital) capabilities founded in a curriculum on needed skills of the future shaped by the

industry. With the outcome of COP26 the need for right-skilling in the field of supply chain, logistics and transport will significantly increase. Skilling is an important building block on the road to social justice and more sustainable supply chain networks.

The fifth Z - Zero emission partnerships: US-China climate agreement

One constant theme in the industry discussion in the logistics and transport industry is thus collaboration. This comes very naturally. The industry is fragmented, conducted in a self-organised ecosystem, and no player can

service the entire spectrum of transport and logistics needs. But although constantly discussed the industry feels it should align and collaborate much better across the globe. This may soon also be needed as decarbonizing supply chains requires a level of collaboration at a scale that has never been seen before- collaboration within and beyond the industry. As of today, all industries are operating as systems within connected systems. That also explains why the transport and logistics sector can't decarbonize alone. But it also means that its contribution is as well needed so that others can reach their carbon reduction goals too.

Generally, the announcements at COP26 included two common themes: collaboration and globality. Holding the increase in global average temperature below 2°C or even 1.5°C above pre-industrial levels requires collaboration across the entire global economy and society. It was made very clear that nobody can solve the climate crisis alone. Mia Mottley, Prime Minister of Barbados summarized this in her speech in one sentence: "The pandemic has taught us, that national solutions to global problems do not work". The two powerhouses and leading emitters of greenhouse gas (GHG) might have heard the message. Unexpectedly, the governments of the United States of America (USA) and the Peoples Republic of China (PRC) struck an agreement to work closely together to cut GHG emissions in the next decade. The two governments vowed to regulate decarbonization,

methane emissions, and fight deforestation together by meeting regularly.

Communication and collaboration between governments, organizations and people across the globe has substantially improved thanks to means of digitalization. Digital platforms ease bilateral and multilateral discussions, innovation and large-scale collaboration. We see a broad range of initiatives of vertical and horizontal collaboration based on digital data sharing in applications, such as data sharing platforms for supply chain management as well as digitally powered service towers monitoring and advising transport and logistics operators providing situational awareness. But we also receive persistent warning signals that there is still significant resistance to data sharing among involved parties. An attitudinal shift of everyone is needed to take responsibility for promoting collaboration with data sharing. Unfortunately, fossil-fuel powered transport and logistics will continue to exist for some time and digitalization helps improving coordination to eliminate congestions, delays and any kind of other waste which all help to reduce costs and carbon emissions. Digital means, like platforms and analytics will be instrumental to implement the clean economy.

Captured in the 5Zs, unprecedented initiatives have been launched to accelerate the journey on the route to a zero emission world. This should be an inspiration but also obligation

for the transport and logistics sector and the players in the supporting industries accelerate their efforts delivering on the commitments announced at COP26. After COP26, we are at about 2.7 degrees of warming. If we look at the commitments for 2030, that number goes to 2.4 and with the long-term goals to 1.8. But not all promises will be implemented. The next and first litmus test will be the outcomes of the discussions on climate action of the various associations, organizations and bodies during the weeks and months to come. So far, the 77th Marine Environment Protection Committee (MEPC) virtual meeting convened by the International Maritime Organization (IMO), only a week after the climate summit in Glasgow, has already failed the test when the talks turned into a stalemate with very poor achievements. The MEPC member states agreed to revisit the emissions targets in 2023. "Governments can't keep kicking the can down the road; every delay moves us further away from reaching pressing climate goals," said Guy Platten, secretary general of the International Chamber of Shipping.

The leaders and decision-makers should keep in mind the following words of Christiana Figueres, former Executive Secretary of the UN Framework Convention on Climate Change (UNFCCC) appointed six months after the failed COP15 summit in Copenhagen and who shaped the process that ultimately led to the historical Paris Agreement at COP21 in 2015 which is the reference point

for all global climate talks till today. "We will move to a low-carbon world because nature will force us, or because policy will guide us. If we wait until nature forces us, the cost will be astronomical."

About the Authors



Wolfgang Lehmacher is operating partner at Anchor Group and advisor at Topan AG. The board member, executive advisor and former head of supply chain and transport industries at the World Economic Forum and President and CEO Emeritus of GeoPost Intercontinental is advisory board member of The Logistics and Supply Chain Management Society, ambassador of The European Freight and Logistics Leaders' Forum, and founding member of the think tanks Logistikweisen and NEXST.



Mikael Lind is the world's first Professor of Maritime Informatics and is engaged at Chalmers, Sweden, and is also Senior Strategic Research Advisor at Research Institutes of Sweden (RISE). He serves as an expert for World Economic Forum, Europe's Digital Transport Logistic Forum (DTLF), and UN/CEFACT. He is the co-editor of the first book of Maritime Informatics recently published by Springer.

The Machine Learning Trap or How to Tell if You've Got the Right Waiter

by Kai Keppner Head of Corporate Marketing INFORM GmbH - Optimization Software | All Things Supply Chain

Almost every progress-oriented company wants it right now: artificial intelligence (AI). No, actually everyone wants machine learning, which is almost synonymous for many people. The feeling on the executive floor is often: that's just the way things are done today, after all, we don't want to be left behind by the competition. Such a drive may initiate necessary transformation, but sometimes it also obscures the view of the things that are actually needed to move forward.

The way is not the goal

A friend recently told me a fitting example of this: A few years ago, he worked for an AI startup that was invited by a large pharmaceutical company to give a board presentation. The strategists in the company wanted to identify early on the important players in the just emerging market, with whom a joint collaboration in the field of AI could make sense in the future. The presentation went well, but my friend and his colleague, an AI programmer, were subsequently in a



moral quandary. The problems pressing the company did not need AI at all, but were much easier to solve by other means.

In the parking lot, the programmer then decided to show the company this error. He opened Excel on his notebook, programmed a solution for one of the problems mentioned and then sent the file to the building in sight, as a gift. A gift of what could have been a €250k AI project. I don't know the details of the outcome of the story, but

let's just say that this honesty didn't hurt either of them.

This example impressively shows that the path to success should generally go via the customer's actual need and not necessarily via his verbalized wish. Whether the sensible path is a database query, a specialized heuristic, fuzzy logic or machine learning: For the customer, the focus should be on solving their task as sensibly as possible. Which method leads to the goal is actually secondary. And another task within

the project may require a different approach. But if the customer's primary focus is on what is currently being discussed on the panels of tech conferences, they will quickly fall into the machine learning trap. And they are literally using a sledgehammer to crack a nut.

The restaurant parable

You can illustrate all of these connections well with a visit to a restaurant. If I go to a restaurant and order a steak, even in an average restaurant I shouldn't care how the chef prepares the steak: Grill, pan, oven, or maybe even a combination? As a diner, I could care less; I trust the chef to make the right decision and in the end, my expectations will be more or less met. Let's assume that I don't go to a restaurant alone and my companion orders filled puff pastry – I wouldn't tell the chef how to prepare it. Different dishes require different preparation methods.

You can also fall into a culinary trap with a restaurant, just like companies do with AI. If you've watched a few episodes of "Chef's Table" on Netflix, you may already be dreaming of new spheres of taste with the help of novel or rediscovered preparation methods. And then you're sorely disappointed when a dish prepared in this way at your favorite restaurant doesn't live up to your expectations or the steak doesn't taste at all the way you like

it. A good restaurant, on the other hand, adapts to its customers: The waiter finds out what the guest actually wants, makes a recommendation, and passes the request on to the chef, who prepares the dish the way the guest would like it.

A good cook is not an AI-only specialist

And this is also how the AI or rather the software business works: A good provider has an appropriately well-equipped "kitchen" with specialized employees who solve problems by means that lead to the best possible solution for the customer, and who are also honest enough to advise against the special request of "spicy jalapeños" on the children's plate under certain circumstances. It may or may not always be machine learning.

Ideally, it happens as it did to a colleague on vacation in Italy: In a restaurant in Naples, there was no menu, and the waiter asked instead how she had spent the day. Afterwards, the waiter briefly thought about the answer and came back an hour later with the food, which ended up being the highlight of the vacation. The details of that multi-course meal would go beyond the scope of this post, so let's just say in brief that the flavor ranged from zucchini flowers filled with ricotta, to lukewarm octopus salad and hake cooked in steam. Obviously exactly the

taste experience my colleague was looking for that day.

Similar to this experience with the Italian waiter, companies should therefore pick solution providers who approach them in a problem-oriented manner and ideally have expertise in various technologies, in order to achieve the optimum result for the customer. There is a good chance that this is precisely when their tastes will be met.



Kai Keppner

Head of Corporate Marketing |
INFORM GmbH - Optimization Software

Kai Keppner has written for the All Things Supply Chain Blog (formerly: ISCO Blog) since it was established in 2012 and assumed the role of editor-in-chief in October 2018. He has a strong interest in the topics of Artificial Intelligence, Supply Chain Planning and Inventory Management.



This blog was originally created in November 2012 as the Inventory and Supply Chain Optimization Blog. We cover the top trends and news surrounding the topic of supply chain management.

The World in 2022: What's on the horizon for supply chains this year?

by Körber Supply Chain Software

Some of supply chains leading tech players share their bold and exciting predictions for 2022 with LogiSYM.

In many ways, 2021 was more challenging than 2020. We had to learn to live with the virus and try to keep industries and people moving and productive while we faced disruption and turmoil like we've never seen before.

As consumers, we've found ourselves getting used to empty supermarket shelves, delivery delays and as professionals we've had to grapple with ongoing shipping container shortage and labour availability challenges.

As a result, supply chain organisations are turning to technology at rapid pace, and as an organisation 2021 was a record year of investment and development for Körber. At the end of 2021, the leading tech provider announced a strategic partnership with KKR, a global investment firm. The partnership will see the two companies build a global supply chain software champion as KKR acquired a significant stake in Körber's supply chain software business. As structural trends and market forces have amplified the need for digital

solutions to handle increased volume and overcome greater supply chain complexity, this investment will assist Körber in its growth plan to build a global champion in supply chain software.

Development, innovation and growth are core values for Körber Supply Chain, as Chief Technology Officer Sean said at Körber's Elevate APAC 2021 conference: "We're constantly looking at all our products and services and asking ourselves: 'what are we doing well and how can we help our customers in the future?'"

What will 2022 look like?

Leaders from across Körber Supply Chain Software's team have shared their predictions for what opportunities and challenges supply chain organisations will face this year. Nishan Wijemanne, Managing Director APAC; Sean Elliot, Chief Technology Officer; Tim Harris, Head of Project Management Office; Anthony Beavis, General Manager; Darren O'Connor, Director of Operations; Tarryn Edelstein, Client Manager and Claudia Ford, Client Manager at Körber Supply Chain summarise the key trends for 2022.

People

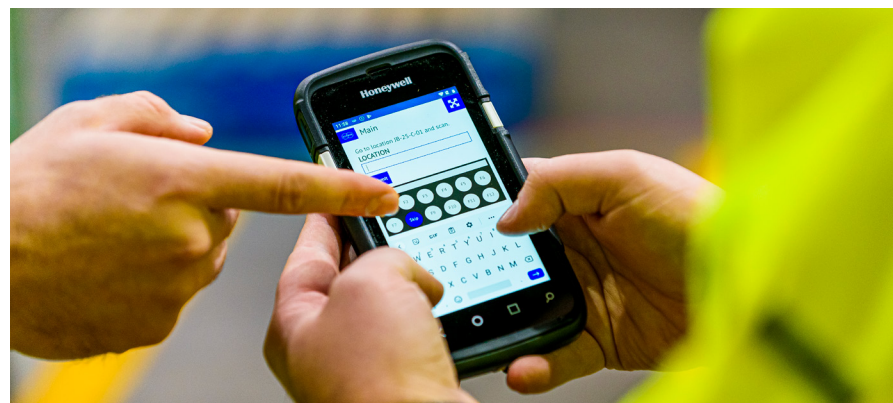
The pandemic has enhanced the squeeze the industry was already feeling around labour availability. As the Omicron variant continues to disrupt the retail and supply chain labour force, consumers are getting used to limited stock availability and delivery delays which is putting increased pressure on supply chains.

All of this is happening alongside what commentators are calling the "great resignation" – where workers are quitting their jobs at historic rates due to a competitive labour market for candidates.

Attracting and retaining great people within retail and supply chain will continue to be a challenge, but having the right team is critical to develop, manage and support these rapidly evolving industries.

Technology can play a huge role in mitigating this challenge. Whether it be to enhance and speed up onboarding processes so the workforce can adapt to address shortages and particular peaks in demand, or to utilise robotic technology to maintain or increase throughputs when labour availability is low. Having access to a global network of talent is also becoming increasingly important in leadership roles and tech such as cloud infrastructure is playing a significant role in ensuring an organisation has a strong culture regardless of whether it's a physical or virtual environment.





AI

One of the standout tech developments for 2022 will be Artificial Intelligence (AI). As capabilities continue to develop in this space, having the ability to utilise machine learning to adapt to trends, peaks and challenges will be critical to success.

As the technology has developed, AI can learn and respond to changes in the environment without any intervention at all. At Körber Supply Chain, we have vast amounts of data we can access in our systems and products. We can use this data to find patterns and make predictions on the future so we can be smarter, we can also use AI to facilitate real-time supply chain decision making.

Another key area for AI is in helping Körber customers simulate and plan future operation – by utilising AI to create different scenarios based on the different technology options. Körber also continues to challenge the status quo with the development of gamification and AI powered support solutions which are set to benefit user advocacy and also address maintenance and triage requirements on a real-time basis.

Robotics and Android voice

Mobile and agile robotics and Android-based voice technology continues to play a critical role in a successful supply chain operation and the Körber team predicts that this will continue in 2022.

As organisations focus on reduc-

ing operational costs and grapple with labour challenges, agile and mobile automation boost efficiency and resilience in an increasingly challenging environment.

Android-based voice technology continues to develop, and we will see more innovation in this produce. More than 10,000 users leverage Körber Voice and Android-based voice technology on a daily basis and it continues to gain popularity. This year will see more users migrate to Android as organisations also recognise, they need multimodal devices to support efficient and adaptable workflows.

As labour availability is scarce, Android voice technology can help attract and retain talent by ensuring that warehouse operators have the tools to carry out their roles effectively and productively. Furthermore, training time-lines for operations using voice technologies are a fraction of the time compared with traditional operational processes, and when a warehouse operator needs to interact with a robot, they can utilise voice to transition that workflow with little disruption to their day or throughput.

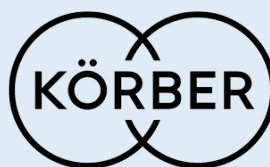
Security and the cloud

As more and more operations leverage cloud technology, Körber is developing its offering in this space – with three principles in mind. Firstly, speed – the team has been developing the solution to ensure that a customer's time to value is immediate. Secondly, resilience and reliability and thirdly, security. Supply chains are an important but fragile element of overall business security, with particular reference to digital security.

With this in mind, Körber has recently appointed a Chief Information Security Officer to support developments in cyber security and continues to enhance security in its cloud offerings.

Universal Control System for Robotics

Demand from the market for more layers of workflow efficiency enablers in a single deployment has been growing at rapid speed. Based on years of in-house experience of warehouse digitisation, from basic Level 1 to fully automated Level 5 facilities, Körber is currently developing a RaaS (Robot as a Service) as well as a next-generation UCS (Unified Control System) strategy to optimise and manage humans, robots, and traditional automated MHE via a single unified software layer to further support our AMR capabilities globally.



Turn complexity into opportunity

Are you ahead of today's supply chain challenges? Today, less than 10% are prepared to handle complexities from more products, suppliers, distribution channels and rising consumer expectations. You need more than a vendor. You need a partner that can deliver software, automation, voice, robotics, materials handling, plus the expertise to tie it all together.

That partner is Körber. Let's conquer your supply chain complexity, together.

SYNOPSIS: Your Supply Chain Roadmap IDC's Predictions for 2022 and Beyond

IDC Supply Chain FutureScape Webinar



Presenters:

Dr Chris Holmes, *Managing Director, IDC Insights Asia Pacific*
Stephanie Krishnan, *Associate Vice President, IDC Manufacturing Insights*
Sampath Kumar Venkataswamy, *Senior Research Manager, IDC Manufacturing Insights*

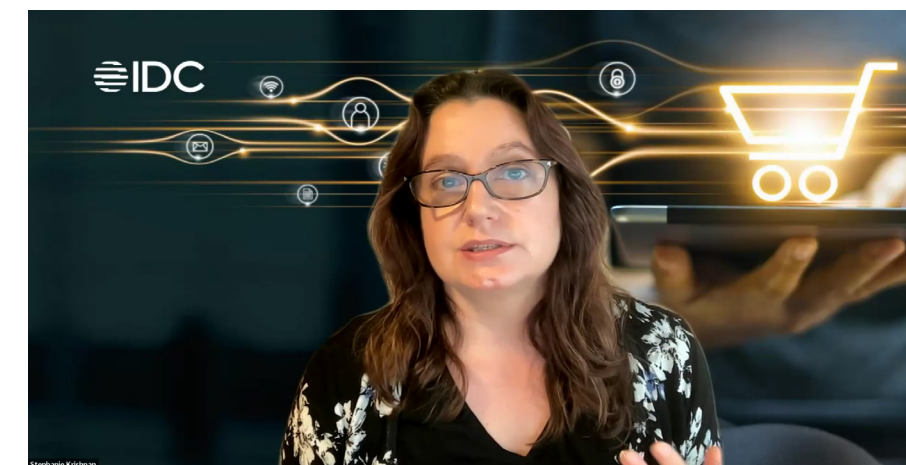
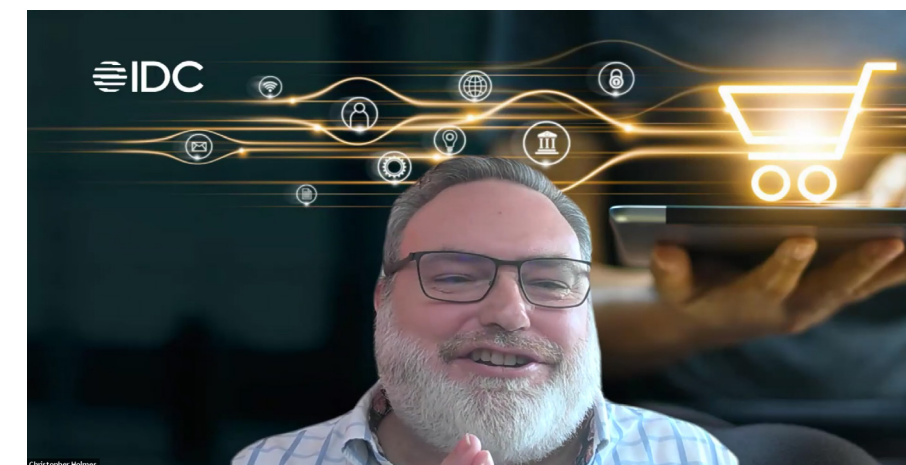
IDC's Predictions for 2022 and Beyond webinar threw a lens on the four key overarching themes that address critical hotspots for today's supply chains: resiliency, worker productivity, forecasting, and last mile. The event highlighted that future supply chains are essential for ensuring business continuity, growth, and future competitiveness. The predictions by IDC Manufacturing Insights focus on three prominent trends. First, the predictions recognize the need for productivity and resilience in the short term. In the mid-term, the predictions trend around sustainability, visibility, and connectivity as organizations build capabilities to achieve long-term competitive advantage and new business models. Finally, the long-term outlook points to collaboration, innovation, supply chain orchestration, and circular economy business models.

For the first prediction, Dr. Chris Holmes noted that as organizations seek the benefits of resiliency, the supply chain has been elevated to board-level discussions as constraints with supply and variability of demand have left companies

without products to sell. Those who have not heeded earlier calls to invest in infrastructure that supports supply chain agility, visibility, and flexibility find that they have struggled to cope with recent disruptions. As a result, companies are now seizing the opportunity to transform their supply chain to make it genuinely resilient, integrating both existing and new

supply chain systems to combine all relevant data and insights for optimal resiliency.

Next, the focus shifts to workers and the need for automation and productivity. In addition to lockdowns and absenteeism caused by COVID-19, employers are dealing with the great resignation - a phenomenon that describes



record numbers of people leaving their jobs during the COVID-19 pandemic. IDC recently found that 28% of organizations worldwide have already identified that talent and talent skills gaps will significantly affect digital transformation efforts over the next 2 years. Stephanie Krishnan noted that through increased automation use, Asia/Pacific supply chains could deal with restricted access to low-cost migrant workforces and gave examples of how turning to robotics for packaging has reduced the impact of labor bottlenecks.

Focusing next on forecasting and its impact on the shop floor, Sampath Kumar Venkataswamy took participants away from reliance on historical forecasts to look at the benefits provided by the use of Internet of Things (IoT) and artificial intelligence (AI), especially when faced with anomalies or disruptions like those experienced in recent years. By implementing capabilities that rely on demand sensing and provide the agility to respond to those signals, organizations can put forecasts together that will better reflect business strategy and needs and increase forecast accuracy.

To wrap up, the final prediction focused on an area that has impacted many of us – the last mile. Stephanie highlighted how organizations in the region are experimenting in the last mile to increase efficiencies, such as



micro-distribution centers, quick commerce, and in-transit rerouting. In the recent IDC Asia/Pacific Future of Operations survey, 49% of Asia/Pacific organizations indicated that first-to-last mile logistics integration across the supply chain is a top priority in the next 12–24 months, ahead of their European and North American counterparts. Speed, accuracy, and flexibility will require the integration of multiple systems seamlessly to increase information and inventory velocity to meet customer demands.

The session ended with twenty minutes of lively questions that delved into many topics, including:

- supply chain integration with manufacturing operations
- the focus for skills development for supply chains and where current areas of shortage are
- the role of big data and small in facilitating information, financial, and product flows

To watch the full webinar, go to: <https://bit.ly/FutureSupplyChainIDC2022>



Stephanie Krishnan
Associate Vice President,
Manufacturing & Energy Insights,
IDC Asia/Pacific

Stephanie Krishnan is the Associate Vice President, IDC Manufacturing & Energy Insights Asia/Pacific, responsible for Industry 4.0 research. In this role, she is responsible for the production, development and growth of the IDC Manufacturing Insights program in the Asia Pacific region. In this role, Stephanie will be delivering a research agenda that will appeal to technology buyers and vendors both in terms of subscription products and custom research in Industry 4.0 looking across ecosystems, value chains and supply chains of industrial industries.

IDC Predictions Featured in the Webinar

By the end of 2022, half of all manufacturing supply chains will see the benefits of supply chain resiliency, resulting in a 10% reduction in disruption impact.

By the end of 2023, chronic worker shortages will prompt 60% of APEJ-based supply chain organizations to prioritize automation investments resulting in productivity improvements of 20%.

By 2024, 40% of APEJ-based supply chain forecasts will be automated through the use of artificial intelligence, improving accuracy by 5 percentage points.

By 2025, 50% of APEJ-based organizations will invest in supply chain systems to increase information and inventory velocity to improve last-mile delivery efficiency and boost customer experience.

Source: IDC FutureScape: Worldwide Supply Chain 2022 Predictions — APEJ Implications



SMEs & Digital Transformation Gap

The transition towards digital technologies is no longer a choice for firms of all sizes and across all sectors. It positioned itself as a top priority for businesses as a matter of survival and growth. According to IDC (2020), it was predicted that 65% of global GDP digitalized by 2022, driving over \$6.8 Trillion of Direct digital transformation Investments from 2020 to 2023.

Digital transformation is an iterative organisational process which incorporates incremental and disruptive changes empowered by digital technology. Digitalisation proved its concept and benefits for businesses through process optimisation and value creation for enhanced performance and enriched customer experience.

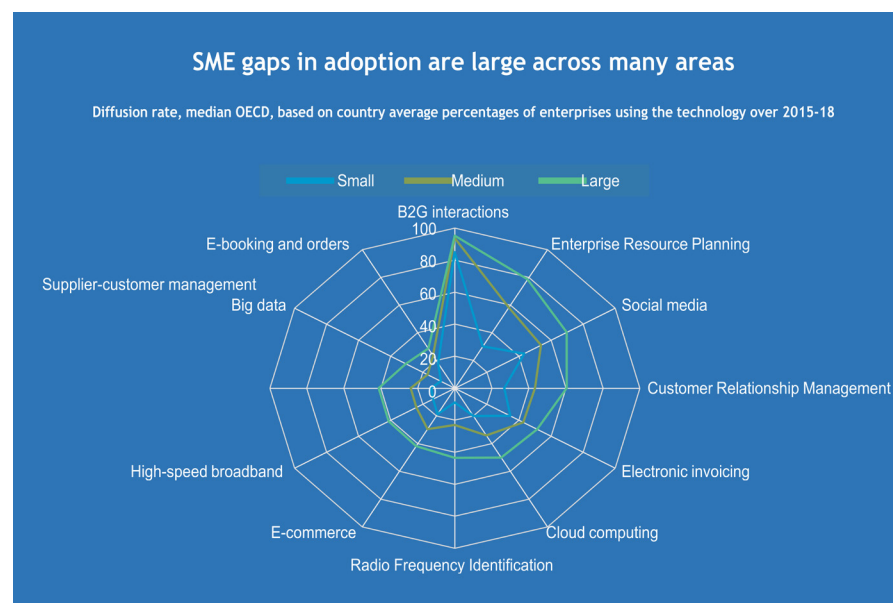
Larger firms are making reasonable progress in overseeing the challenges and taking the opportunities of digital transformation.

By 2023, 75% of organizations are expected to have full digital transformation implementation roadmaps. Small and Medium Size Enterprises (SMEs) could be in a different position compared to larger and global organisations when it comes to digital transition and the associated benefits and opportunities.

Dr. Shereen Nassar, Global Director of Logistics Studies and Director of MSC Logistics and Supply Chain Management Suite at Heriot-Watt University Dubai, notes the key digital transformation challenges which encounter SMEs and the roadmap

A firm can be classified as an SME if it employs fewer than 250 employees with no more than a 50 million EURO annual turnover. SMEs encounter many challenges which hinder them from making good progress towards digital transformation. It was reported by OECD (2020) that many SMEs continue to show slow digital transformation and for smaller SMEs (10 -49) employees digital adoption gap has grown over the last 10 years compared to larger firms. This is happening in many countries where “the median share of employees with connected computers in small firms remains at or below 40%”.

The top four causes that SMEs are lagging behind from digital transformation are lack of financing, right skills, technological know-how, and an implementation plan or strategy. The following figure shows that SME adoption gaps are large across various technology applications.



Source: (OECD, 2020) Note: Values represent the median of diffusion rates in countries for which data are available. Country diffusion rates are average rates calculated over the period 2015-18.

The SMEs might be seen as a less formalised, faster, flexible, or less constrained business model. However, the knowledge and skill gap along with resource constraints often obstruct these firms from appraising and implementing digital transformation opportunities. This justifies why SMEs cannot yet be seen as business model innovators. It is challenging for SMEs to identify the right digital transformation project since it is not sufficient or easy to integrate current technologies. Another factor that adds to these challenges is that the qualifications and information requirements for technological innovation for SMEs are different compared to larger firms. Furthermore, the customised supporting tools for SMEs are rarely available. SMEs need support to consider all innovation activities which are essential to successfully realize innovation.

It was reported by IDC Data (Oct, 2020) that the ongoing Covid-19 pandemic has accelerated digital transformation for more than 70% of SMEs. Although most of the SMEs firms have started their transformation processes, only a few companies have made good progress and reached advanced stages. The rest are not yet clear about how to start or just made very little progress.

This opens the discussion around: how SMEs with limited resources can enforce the digital transformation in their business. This should help drive digital and data-driven innovation effectively and limit the risk of failure.

Government support - large firms often rely on third parties or external consultants. This might not be feasible for most SMEs due to limited financial

resources. Alternatively, SMEs seek support from government initiatives and publicly-funded support units. SMEs can enhance their awareness of digital innovation potentials through these affordable channels. Training on rudiment skills and support in implementing certain innovation projects could also be offered.

Government support should extend to scaling up SMEs internal capacity including technology and finance support, promoting data culture in SMEs, supporting training and upskilling. Furthermore, a supporting regulatory framework is needed along with the adoption of e-services and e-government for SMEs.

Scope of Digital innovation in SMEs

It is important to understand that the scope of digital innovation varies, and firms can target different levels. Digital innovation offers a digital business design that enables the implementation of new strategic options which can happen at three levels. The first level is concerned with digitalising the operating model and optimising processes. The second level focuses on updating and rethinking the current business model through adopting digital technology for the purpose of further improvement and optimisation. The third level can be seen as the

most disruptive type since it is related to the development of a fully new digital business model. Utilisation of a new value creation opportunities often comes under this level.

Unlike larger firms, SMEs, cannot afford to experiment with different innovation projects or even target fully digital disruptive innovation levels while finding their way towards a digital transformation journey. They require a more guided approach with clear directions and procedures to achieve tangible and feasible goals. Such an approach needs to untangle the complexity of the digitalisation process through manageable and evidently understood actions which consider the special characteristics of SMEs.

Digital transformation roadmap in SMEs

Recent research identified a procedure model which comprises two phases to support SMEs in their digital innovation path. The two phases include orientation and iterative transformation i.e. implementation of innovation. Addressing both phases is essential for successful digital transformation in SMEs.

Orientation phase is concerned with procedures or steps that aim to develop understanding of the current

business model and identifying digitalisation potentials. The key outcome of this phase is to position a firm within the digitalisation and create the digitalisation roadmap.

Iterative transformation phase allows the roadmap developed in phase one to be implemented and refined through an iterative transformation process. This process incorporates the preparation of the digitalisation project which in turn requires identification of the related goals, opportunities, and the resources and planning required. This is followed by the implementation of the digital solution. This happens in an iterative manner which allows prioritisation and requires a flexible and agile approach. This should be enabled by a supportive business environment that nurtures digitalisation culture and involves employees.

Finally, SMEs have a key role to play in countries' economies and it is extremely important that SMEs move towards digitalisation since they cannot afford to be lagging behind. SMEs need to understand their constraints and how to position their businesses in their path towards digitalisation. They need to develop an awareness of the available sources of support. Here governments' role is indispensable and key to boosting SMEs

digital transformation that requires setting long-term strategic objectives and action plans, and coordinating investments across the board.

Furthermore, SMEs should think of digital transformation plans as living documents that can be adjusted based on priorities. A Successful digitalisation path for SMEs should be supported by the right mindset, commitment and transparency. That should ensure not only long-term survival but also sustainable development and growth.



Dr. Shereen Nassar

Global Director of Logistics Studies |
Heriot-Watt University

Dr Shereen Nassar is the Global Director of Logistics Studies and the Director of the MSc Logistics and Supply Chain Management programs at Heriot-Watt University Dubai.

Dr Shereen's main research interest is sustainability and supply chain resilience. She has published numerous research papers and book chapters in areas such as automotive recall risk and social sustainable supply chain performance, sustainable maritime logistics, supply chain information security, contemporary disruptive business applications of blockchain technology, smart cities and implementation challenges.

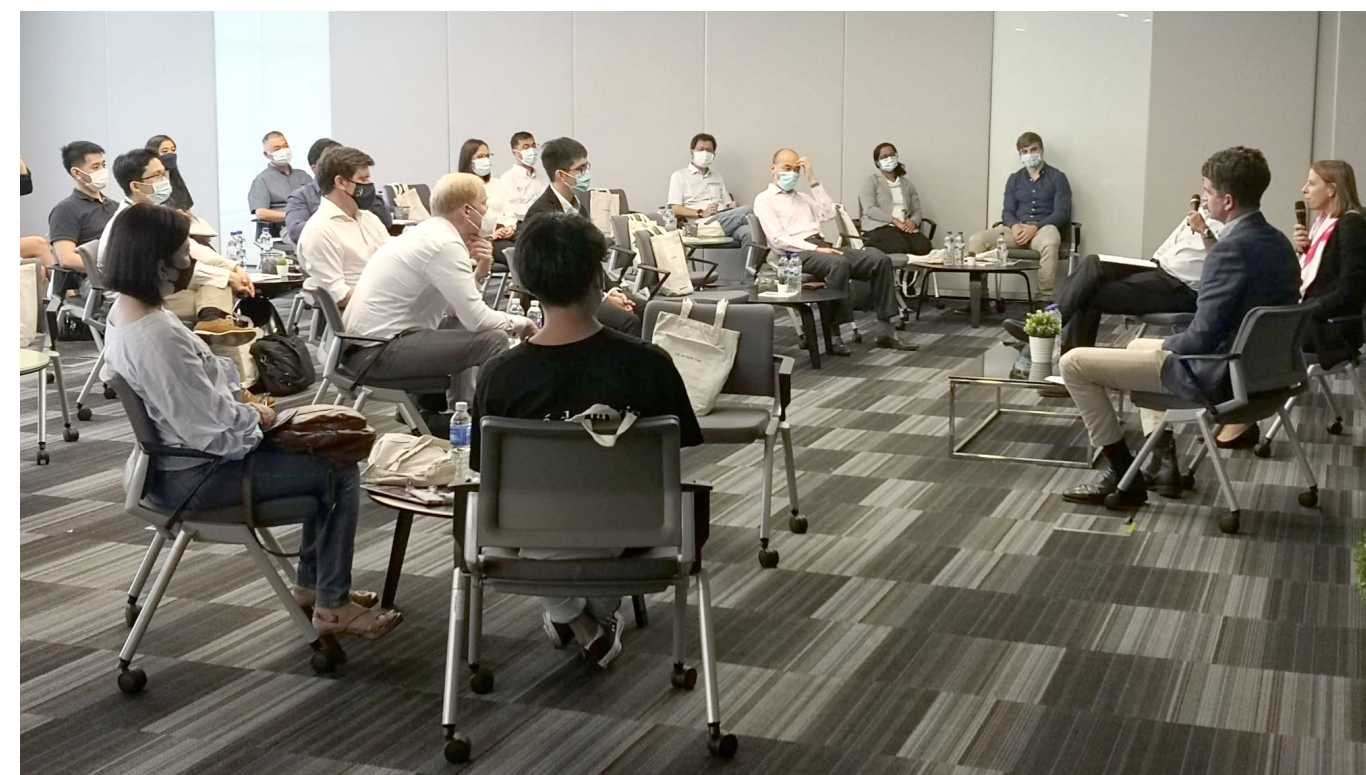
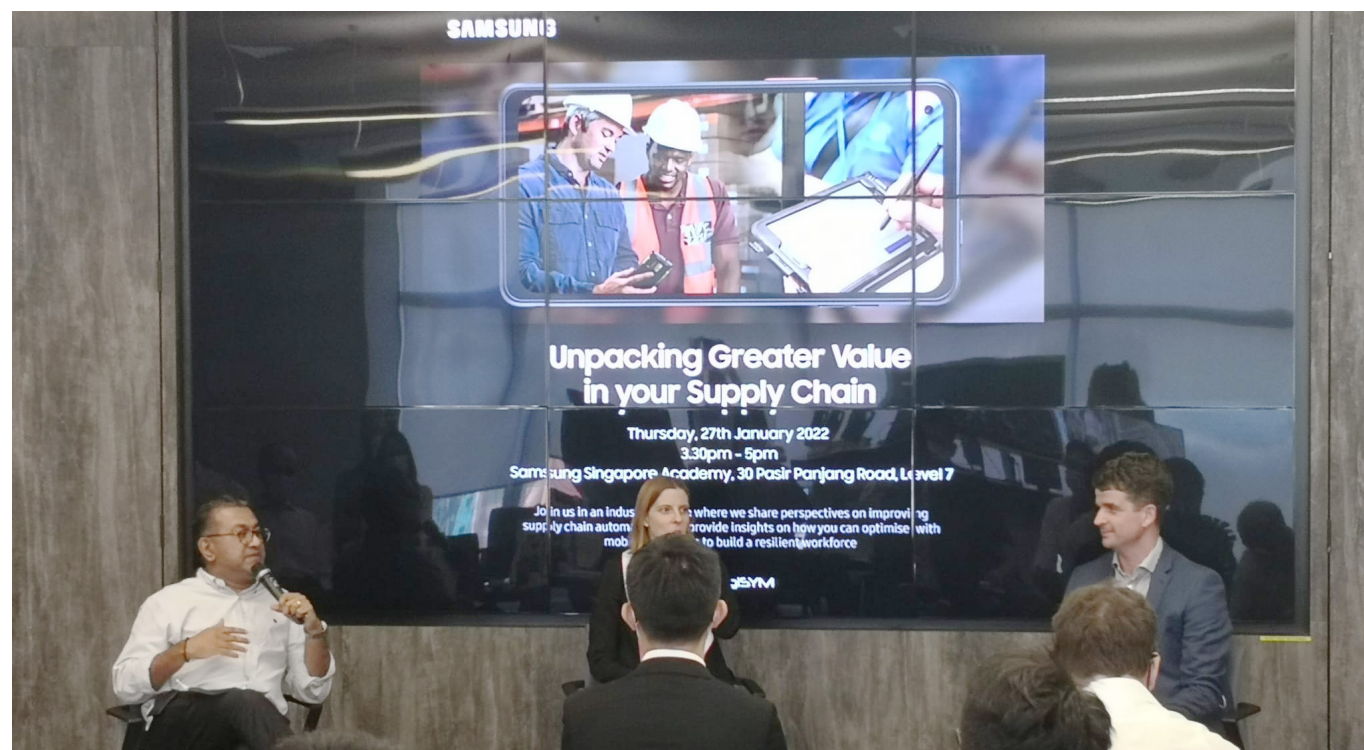
Dr Shereen has extensive international teaching experience across UK and MENA region. She teaches both postgraduate and undergraduate levels. Her teaching proves the diverse expertise she has developed over a decade.



On the ground and in person with supply chain industry professionals networking and learning in a safe environment. Great start to our first on-ground event of the year and thanks to our partner Samsung Electronics for hosting it.

Moderated by LSCMS President, **Dr. Raymon Krishnan** with an expert panel including **Nathalie Duchemin** from Samsung Electronics and **James Christopher** from TMX, the expert panel reinforced that digitalisation of the supply chains will remain to be a key priority among businesses as we move towards a 'better normal'.

In line with this, we can expect to see more businesses considering the implementation of automation solutions throughout their supply chain operations - but what should be considered before getting started on this automation journey?



Nathalie pointed out during the panel discussion, that it is beneficial to consider how automation or mobile solutions implemented can future-proof businesses, particularly in today's uncertain business climate. Looking into solutions that can improve the resilience of the supply chain will be helpful should more disruptions happen. James emphasised the all-important factor of ensuring that your people are part of the journey after you have worked with experts to identify your business needs. With excellent input and a lively dialogue with almost 100% attendance, the event was a resounding success.



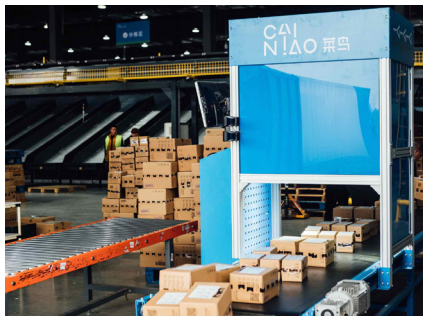
Cainiao Commits US\$47 Million to Safeguard Global Logistics Services Ahead of China's Spring Festival Holiday

- 150,000 logistics personnel in 300 cities to support warehousing and last mile logistics services
- Overseas customers in 200 countries and regions will enjoy the same logistics efficiency
- 200 million cross-border parcels are stocked in Cainiao's warehouses for delivery

[20 January 2022] - Cainiao Network, ("Cainiao"), the logistics arm of Alibaba Group, today announced it is committing RMB 300 million (US\$47 million) in subsidies to incentivize over 150,000 logistics employees and courier personnel in 300 Chinese cities. These personnel play an essential role in safeguarding logistics services ahead of the upcoming Spring Festival holiday in China.

For consumers, this means that eCommerce purchases made on Alibaba platforms such as Taobao and Tmall will be dispatched as per normal, both in China and around the world. In 2021, Chinese consumers alone spent approximately US\$127 billion on shopping and dining, a 28.7 percent increase from 2020[1]. Other countries also saw growth in retail consumption during the Spring Festival last year. For example, Singapore recorded a 5.2 percent year-on-year increase in retail sales[2] and Malaysia saw a spike in online shopping figures last year[3]. These figures are expected to increase this year as a result of growing consumers' desire to send new year gifts to their loved ones who are physically separated due to the pandemic.

In anticipation of a surge in consumer demand, Cainiao's warehouses spanning tens of millions square meters have pre-stocked over 200 million festive-related goods, with export warehouses seeing five times increase in pre-stock volume compared to last year. The pre-stocked goods include food, beauty products, furniture, household items and electronic appliances to support cross-border deliveries for over 10,000 Chinese merchants.



For overseas consumers in over 200 countries and regions, Cainiao's export and overseas warehouses will maintain normal operations to ensure logistics timeliness of cross-border parcels. This extends to cross-border logistics services for Lazada's customers in Southeast Asia, where there are Cainiao's distribution centers and warehouses in various cities. Cainiao will also subsidize selected cross-border logistics routes and services so that export merchants can enjoy the most cost-effective logistics services.

In addition, Cainiao's warehouses in over 30 industrial manufacturing belts will support the logistics needs of manufacturers to facilitate direct dispatch from factories to consumers in 300 Chinese cities, of which consumers in 209 cities will experience the same logistics efficiency as before.



Cainiao's bonded warehouses situated near 20 ports in China will upkeep regular operations to further safeguard delivery timeliness of imported goods from thousands of overseas merchants to consumers in 200 Chinese cities, while doubling the delivery radius from last year.

In the last mile, over 50,000 Cainiao Post stations across 198 Chinese cities will remain serviceable, ensuring that Chinese consumers continue to enjoy the convenience of doorstep deliveries for their Taobao and Tmall eCommerce orders. During the week of the Spring Festival celebration between 30th January and 5th February, eCommerce orders made before 3 p.m. will be delivered by Cainiao Post to consumers' doorsteps before 9 p.m. on the same day. This service standard and delivery timeliness are made possible due to the contributions and dedication of over 100,000 Cainiao Post employees.

CAI NIAO 菜鸟

Founded in 2013, Cainiao Network ("Cainiao") is a smart logistics company and the logistics arm of Alibaba Group. As part of its commitment to create customer value, it adopts a collaborative approach to logistics that aims to improve efficiency and customer experience for all players along the supply chain. It carries forward Alibaba's mission of making it easy to do business anywhere by aiming to deliver anywhere in China within 24 hours, and across the globe within 72 hours.

THE GREEN CORRIDOR Optimal Tech for Green Logistics - Making Emissions Visible

by Tim Foote, Founder of Susymbio

When I was advised that this month's LogiSYM Magazine would have some focus on digitization, I immediately thought about the absence of greenhouse gas (GHG) emissions data in our everyday life. Accounting systems and other operational management systems simply don't bother to measure waste and in particular, GHG emissions. Because tech investment in most large companies is made over years and years, the ability to accommodate for emissions data is usually something that has to be done outside of the usual management system data.

Raw materials, parts and services are currently all running through supply chains and manufacturing processes and emitting GHGs. Digitization of processes should include this emissions data going forward. The old adage "If you can measure it, you can manage it" has definitely proven itself time and time again. That said, information needs to be timely and it needs to be accurate. IT solutions for supply chains need to bring that micro level information on waste (including GHG emissions) into the hands of managers.

EFFICIENCY IS NO SMALL MATTER - DNV, an international society that conducts research on decarbonization, recently released its energy transition [outlook](#) for 2021. The outlook predicts that in the next 30 years, the global economy will likely grow by 111%, but energy demand will likely peak in 2035. In other words, the growth of making products does not increase in direct relation to the energy needed to make them. That

is because it is expected that industries will be constantly improving on how to make more products using less energy. Indeed, human ingenuity has been able to do this time and time again.

The efficiency gains predicted though are not necessarily a given. It takes committed upper management to invest in the tools that can measure what is happening so that this greater efficiency can be realized. When it takes less energy to produce more, it creates proportionately less emissions. The ability to do any of this generally means having the tools - and that takes data. If you can provide a manager with data, then they can work on solutions.

Digitizing logistics technology is innovating fast. Companies that are investing in technology now have some avenues to get the GHG emissions data. One can have technology for the macro level (plotting our forecasting for sales) as well as the micro level (monitoring fuel economy in a truck).

I recently toured the [Advanced Remanufacturing and Technology Centre](#) (ARTC) in Singapore. This center was funded by both private and public sectors to advance R&D in manufacturing technologies - especially those involved with "remanufacturing" or essentially repairing something instead of scrapping it (itself a very green thing to do). Vivien Cheong, Regional Business Development Manager of Arcstone, ([arcstone.co](#)) led me past the neat gadgetry on display and under development in the lab

testing areas to where her company sits on the 4th floor.

Arcstone sells digital systems to optimize manufacturing. The different stages of manufacturing are broken down into the steps taken in the factory in what they call their "workflow builder" module. For the factory itself, there is some neat calculating going on which takes the raw materials, the water, and the energy used. Using this information, carbon emissions is calculated for each step. In addition, processing times are recorded at each station so that overall production is monitored and managed.

In many factories the "raw materials" will be parts or subcomponents provided by suppliers. These suppliers do not have to provide carbon emissions data. Instead, the supplier simply provides workflow module type data to Arcstone, which crunches the numbers to offer a view of emissions throughout the entire supply chain and production chain.

In this way, operation and production data from various dashboards (tier 3 and 4 suppliers included) are connected to a main "control center" that monitors the entire supply chain. Important here is the inclusion of carbon emissions data. The dashboards from suppliers as well as what energy and materials are used in the factory are tabulating the amount of emissions in each location.

Arcstone provides several ways for the data of suppliers to be passed. It can be done via EDI, API or via

a web portal. Such real-time data and visibility functions allow for supplier comparisons as well as overall emission source contributor identifications, which can be focused on for improvement. As the carbon emissions are directly calculated from the system, there is no need to badger suppliers for that specific data especially if they don't know or have the information themselves. What the supplier does need to provide is production and utilization data, which they should be monitoring already for themselves.

DISTRIBUTION AND BEYOND

- I also met with Anders Nordahl, COO of [Mixmove/Orkestra](#), recently to share a cold beverage. After spending years at large MNC 3PLs, he wanted to get behind some tech that would innovate the industry. Mixmove provided that for him.

Anders is someone who thrives on data, so it makes sense that he would have been attracted to Mixmove's solutions. He's an avid cyclist who bikes at least 200 kilometers a week and he relies on a lot of data to help him maximize his routine: he measures his peddle

power, which leg is working harder, his heart rate (the most important), and much more so he can improve his performance day by day. Believe me, it's impressive!

Mixmove currently brings benefits to businesses dealing with warehousing fulfillment and transportation and includes 3M and DHL Supply Chain as customers, who primarily want to gain efficiencies in loading and moving shipments so that truck utilization is maximized and overall truck miles are reduced.

The technology incorporates AI features that optimize loading for shippers and 3PLs alike. Mixmove is cloud-based and provides visibility on the parcel level. Crucially, the system will calculate the carbon emissions spewed out with every transportation move. The mileage (using real-time optimal routing logic) is combined with the shipment's physical details and the delivery truck type to calculate the CO2 emitted.

Data silos put up by different companies, systems, and even departments are often a main reason for overall inefficiency. That

inefficiency means needless tons of CO2 are emitted. Anders has shown from his work with large accounts that by using the AI technology of Mixmove and collecting data from these different silos in an agnostic cloud-based system, great fuel savings and therefore CO2 emission cuts can be achieved. In one case the fuel and emissions per kilogram shipped was actually halved for a customer!

Siemens and other digital system vendors are also adding emission visibility features to their products. Businesses of all sizes have more and more options to report and capture their GHG emissions and more importantly have the tools to drill down and reduce those emissions. So when you are moving forward with new digital solutions to increase efficiency, do consider incorporating solutions that provide GHG emissions data. Our planet and our future generations would thank you for it!



Timothy Foote
Founder of Susymbio

Tim Foote runs Susymbio, a boutique consulting firm advising on e-commerce logistics solutions and sustainability program management services. Tim has held various positions with MNCs, gaining a wide knowledge and expertise in logistics operations. He crafted delivery solutions for e-commerce clients and managed supply chains for several chemical and freight forwarding companies. At DHL eCommerce's first Asia Pacific Head of Go Green, he put in place carbon footprint management, sustainability training, illegal wildlife smuggling monitoring training, and employee engagement. Tim volunteers his free-time with the Singapore Wildcat Action Group, a not-for-profit organization that raises awareness and funds for wildlife conservation.