LogiSYM

The Magazine for Supply Chain Executives

NOVEMBER 2021

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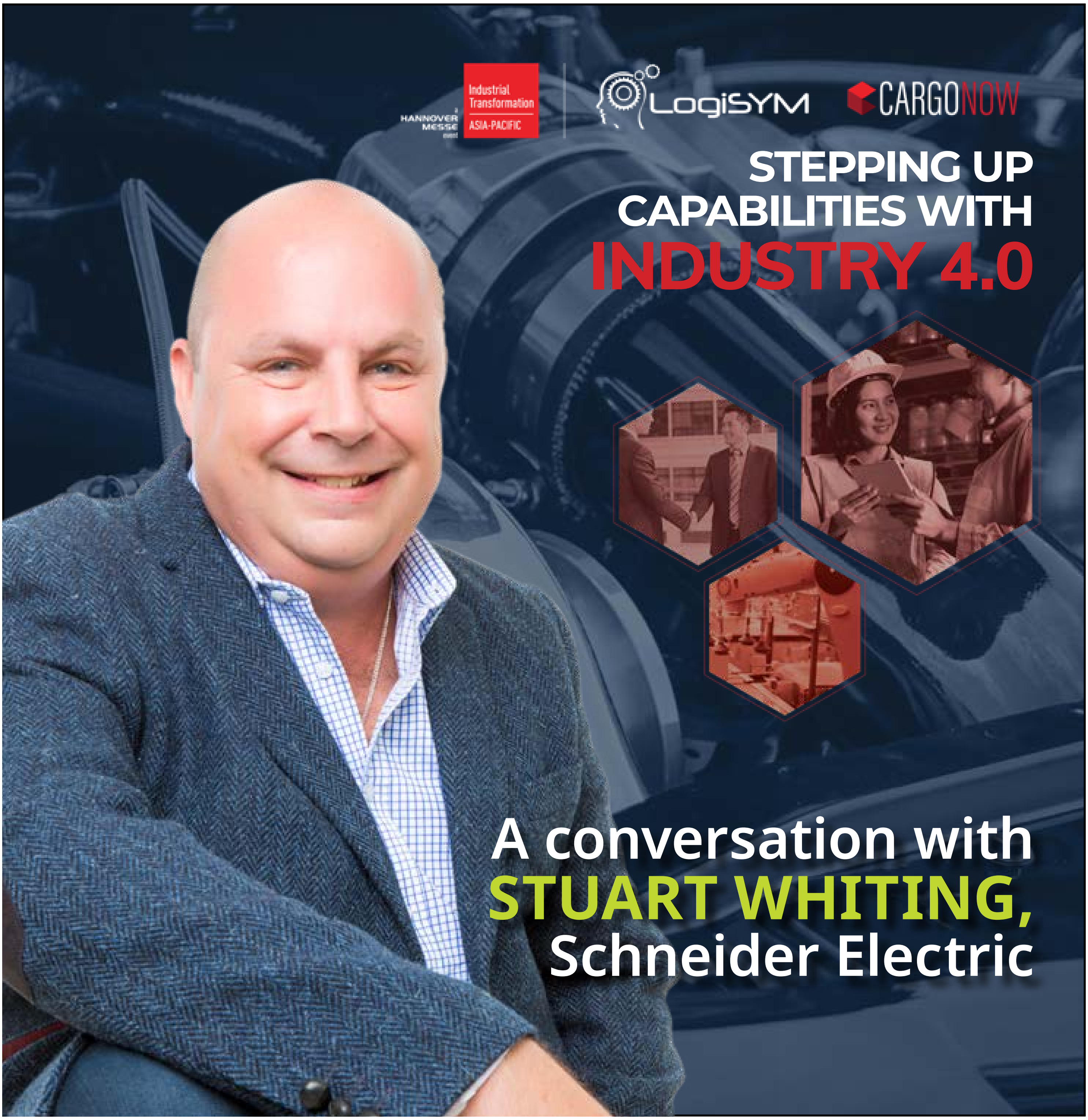
RETHINKING THE NEXT NORMAL: TRANSFORMING LOGISTICS AND SUPPLY CHAIN WORKFLOWS WITH SAMSUNG
PG 18 BY SAMSUNG ELECTRONICS

DB SCHENKER - SINGAPORE A VITAL NODE IN SINGAPORE'S LOGISTICS ECOSYSTEM
PG 25 BY DB SCHENKER SINGAPORE (PTE) LTD

HOW TO DEAL WITH BLOCKCHAIN AS A SMALL LOGISTICS COMPANY
PG 40 BY THOMAS TWENHOVEN AND SVEN REIMERS

The Logistics & Supply Chain Management Society
The Regional Professional Body for Logistics Practitioners

The Official Journal of The Logistics & Supply Chain Management Society



NOVEMBER 2021

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A WORD FROM THE INTERNATIONAL EDITOR

......Where are new Technologies leading us to ? ......

Dear Readers,

Welcome to the November LogiSYM digital edition. You can download past editions at **logisym.org**

This edition is a special November issue, which coincides with the LogiSYM 2 day Symposium in partnership with Industrial Transportation Asia Pacific (ITAP), together with a Hanover Messe Exhibition at Singapore Expo from – 22nd to 24th November 2021.

The theme for the event is ***Stepping Up Capabilities with Industry 4.0***, a very fitting topic for the times we live in. It is also comes at an opportune timing. As we approach the tail end of 2021 and are busy preparing for a post pandemic landscape in 2022 & beyond, it is really fortuitous to have such an event on our door-step here in Singapore.

In line with the theme, this edition addresses several aspects of the realities around us. Not least Smart Solutions and Technology, that features highly in the ranking of our contributors thoughts. The experiences expressed in our Opinion Editorials highlight some tough challenges and how we are dealing with them. Feature articles are varied in content but offer insights into various areas of the industry and how we should address the solutions we seek.

I am especially pleased to showcase our cover story. In conversation with Stuart Whiting – Senior Vice President at Schneider - a refreshing insight into how big Corporations are addressing the transformational challenges around technology and people, whilst keeping grip on the “green values” which must be at the forefront of all our agendas going forward.

It is also fitting that the LogiSYM conference runs in the same month as COP26 in Glasgow UK. As mentioned, earlier green logistics is by far a greater challenge than we yet realise. Attaining a neutral carbon footprint will not be easy, but it will be mandatory that we achieve the critical goals set-out in the Paris Agreement. But we will all agree that implementing these goals will take some serious effort and they can only be achieved if we all work together.

Our regular columnist on the Green Corridor, Tim Foote, keeps constantly remining us on our obligations in the space of green logistics – we can no longer see this as a parallel track to operations, but a key element that has to be embedded in the DNA of the organisational Purpose, Mission & Core Values.

Finally I would like to echo the messages of our content contributors. The challenges are many and the momentum to address is gaining ground. But the common thread amongst them all, is that we need to continue to learn new things. Whether they be technology, new methods and even managing human resources, the transformation train is gathering great momentum and change will exponentially accelerate.

So, we all need to seriously think about Transformation in more ways than one. Changing our fixed mindset positioning will be the start of our transformation journey, of which technology is a key enabler.

I wish all who are participating at the LogiSYM / ITAP event a very productive and fruitful conference. The Hanover Messe exhibition will also be a special show case and hope many get the chance to visit.

As editor of the LogiSYM magazine, I would like to thank all those who have put pen to paper to share with us their insights and experiences.

I look forward to receiving your feedback at info@lscms.com and even publishing an article of yours.

Meanwhile take care & stay safe!

Joe Lombardo
Editor-in-Chief LogiSYM Magazine

A WORD FROM THE PRESIDENT

Continuing to push the envelope

By the time many of our 70,000+ subscribers read this message, we would be well into ITAP | LogiSYM | CargoNOW - which is being run as a physical and hybrid event with up to **5,000 attendees** on site, over three content filled days.

Barring any last minute complications, this would make it the largest in-person supply chain event of the year in Singapore and my thanks and gratitude goes out to all our participants, sponsors, partners and committee members who have helped make this a reality. Running a physical event is always taxing and with COVID-19 and the need to stay safe and operate within regulatory guidelines, this challenge increases ten-fold.

2022 is fast approaching and we hope to soon emerge into the better normal. From a Supply Chain perspective we expect the first half of the year to be as challenging as the last year has been, with things only starting to ease up in the latter half of the year. If we have learnt anything these last 24 months, it is that for a supply chain to continue operating as efficiently and effectively as possible, calculated risks need to be taken - with the right partners.

In running this event, we had many discussions and meetings about whether to proceed with a live event but at the end of the day the committee unanimously decided that "we should continue to establish and lead aggressively, <u>but with caution</u> and continue to be the leading voice and platform for supply chain collaboration and knowledge sharing in the region".

We take this part of our remit seriously and one of the reasons we decided to make this move was to demonstrate that calculated risks can be successfully undertaken through proper planning, communication and with the right partnerships. Collaboration is key to the success of any successful supply chain and this could be taken as a case in point.

As always, we hope you found the event and this issue of LogiSYM relevant and we look forward to your feedback, input and comments. Be safe, and let's keep those supply chains moving!

Raymon Krishnan, FALA, FCILT, CLP
President
The Logistics & Supply Chain Management Society

CONTRIBUTORS

Sven Reimers,
Hamburg University
of Technology

Thomas Twenhöven
Kühne Logistics University

Dweep Chanana
Managing Partner
at Anchor Group

Wolfgang Lehmacher
Operating Partner
at Anchor Group

Dr Shereen Nassar
Global Director of Logistic Studies
– Heriot-Watt University Dubai

Scott Phillips
Supply Chain Director - Global Shoes
Production & Sourcing at ECCO
Shoes

PUBLISHER Peter Raven
EDITOR-IN-CHIEF Joe Lombardo
EDITOR-AT-LARGE Raymon Krishnan
DIGITAL EDITORS Spencer Sy
SALES – ASIA PACIFIC Harjeet Chekhire
DIGITAL MEDIA James Chan

ADVERTISING Harjeet Chekhire
Email: harjeet@logisym.org
Tel: +65 9238 5848

Dave Chan
Email: dave@logisym.org
Tel: +65 9878 8343

LogiSYM Magazine
50 Kallang Pudding Road,
06-06 AMA Building,
Singapore 349326
Tel: +65 6746 2250
Email: info@lscms.org

LogiSYM

Why Smart Logistics Strategies are now so crucial?

by Scott Phillips, Supply Chain Director, Global Shoe Production & Sourcing – ECCO Shoe

"I am in the midst of yet another factory down in China for us last week and the chaos of supply chain management/mitigation ensues...if for nothing else, it seems this pandemic has come full-circle!"

My short Op-Ed serves to highlight the inherent supply chain risks and to discuss how the employment of 'smart logistics' is now so crucial. This also illustrate the inadequacy of these type of investments when disruptions occur! For clarity, disruption, covering all aspects of the supply chain, sourcing, manufacturing/retail footprints, logistics services (or lack thereof) as well as FTA's and geopolitical tensions being exaggerated by the pandemic.

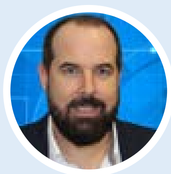
Moreover, the Supply Chain Manager needs to seriously conducting risk studies (more than just resetting insurance premiums) and the absolute execution/dedication towards living the results of mitigating "risk". Sure most companies with good supply chain risk plans can cover off 'an event' that disrupts supply. But in the past 18 months even with a diversified (backend) sourcing and supply portfolio, 'an event' has turned to 'event after event' where there are no longer goal posts to aim at – and for the risk 'plans'...they are in an inch of their existence of being useful – I am sure many companies out there are already toast!

So then how does the investment in smart technologies meant to serve ? – taking automated warehouses in China to combat rising labour costs have, moving sourcing to lower cost countries like Vietnam, who are (at least in the south) in heavy lockdowns, across to using AI/Big Data to construct lean inventory management to support cash flows, now being stripped bare, like the retail shelves ?

It has been proven, at least to me, that the supply chain professional in the past 18 months, have had to be like a "Chameleon" to survive the most disrupted commercial landscape ever – be it inside and outside the 4 walls of their own responsibilities. If supply chain leaders "bluffed' their way into getting funds for an isolated supply chain investments, these are likely to be exposed right now!

In this period, I have experienced using our data analytics, that we heavily invested in. This to make decisions on 'an event' that has shown us to be brilliant in resolution and then 2 weeks later, look foolish and torn as another 'event' of disruption takes place! To strategically integrate an improved network of distribution with investment in automated warehouses, cloud based fulfilment, consolidated logistics service providers, only to be exposed as amateurish by the lack of support in a 'hacked' 3rd party logistics network, and associated shipping industry. We have waited and held back decisions 'to see what happens' and look like geniuses as the 'event after event' takes care of the positive resolution, only to employ this approach the next time 'an event' happens, thus being made to look completely incompetent – the same applies with making 'gut-fell- decisions on what to move on and when!I can site other examples of insane realities, of just how much things have changed – moving people talent around the world has almost frozen (or been extremely hindered by extra requirements), to creating 3-4 week additional lead-times for extraordinary inspections due to geological issues (India to China) that are covered with propaganda statements of COVID inspections. Still searching for the key to avoid 'bullwhip' impacts, not just in sourcing (in our case of raw materials), but further down the supply chain between when retail/e-com in up/down in EU/USA whilst key manufacturing hubs in Asia are down/up, and vice-versa! And I can hardly justify any near-term investment activity into the supply chain whilst distribution (Air/Ocean) costs (globally) are out-of-control and impacting bottom lines of all businesses – even those companies with high contribution margins.

"All this while, I believe the supply chain profession is still in 'training' for more difficult times to come and the commercial reality, well...those who have resilient supply chains with investments in technologies, strategies and talents that can combine together in harmony, will be the competitive advantage. So nothing new, we are just getting fitter to cope with the unimaginable that is the future, by training in the now that 24 months ago was unimaginable!"



Scott Phillips
Supply Chain Director - Global Shoes Production & Sourcing at ECCO Shoes

How can Learning make the difference ?

by Joe Lombardo – Transformational Management Consultant

Overview

Whilst we all see a positive change in momentum around us, we need to plan and navigate well. But that is the very point – what do you we need to know, to plan and navigate well? For some it may be obvious – get back to what we know best. And that is what is most peculiar! How quickly some forget the pain of disruption and the hard lessons learnt –are we back to normal ?

If we are realistic, we are still trying to figure out the aftermath of the disruption. The added complexities, the speed of change and the new stakeholder expectations, are enough to overwhelm us for a while longer yet. But whilst we genuinely try to find that reset button to get ourselves and our business back on track, the challenges we face and the surrounding noise, may be distracting our focus on what is important!

Where should our focus be?

Talking points continue to be around resilience, agility and speed of execution,which are still relevant and crucial focal points. But the challenge is how to acquire these characteristics and harness them into a workable "navigable plan"? It does not matter what industry you are in or what special sector you think differentiates you from others – we all have the same exact issues.

Focusing on resilience, agility and speed of execution are not tools, processes nor solutions in an organisation that will make them happen. Tools, processes and solutions will enable such a realisation, but it will take a "mindset change" to achieve a lasting and meaningful impact.

Indeed, "mindset" is another fashionable term banded about with a generic connotation. But without understanding what drives mindset behaviours, it will not have that purposeful impact. As such I will try to illustrate how understanding mindset in a meaningful and purposeful manner can make the difference.

Learning, Unlearning and Relearning

You will have heard many talk & quote "learn, unlearn & re-learn" as being the way forward, and that is certainly true. But understanding what it means to use the right process and the right methodology, is equally important. If you have not heard this expression or have, but not really taken much notice, it was coined by Alvin Toffler in his book "Future Shock", 1st released in 1970. His visionary views of business models & organisational structures, were precursors of what we are seeing today – the need to reflect on knowledge and competencies.

Toffler talked about "Learn, Unlearn & Re-Learn" – which sounds simple and logical, when quoting the theory. However it's adoption is more engaging and requires a deep honest self-appraisal to understand it and make it truly work.

But many simply dismiss this notion as not necessary and a waste of their time. The reaction you get is "have been there, done that, got years of experience", what more do I need to learn?" - accept all that as more than adequate to carry them through the future.

And there is the biggest folly of all ! Your behaviour reflects your mindset, which reveals all.

When things around you start looking different - something is changing. When you hear new ideas and suggestions from staff, peers, customers that sound strange - then something is happening. When trying to solve problems and your way seems more difficult than before - then it looks like your approach has become less effective. When your ideas, suggestions, proposals do not seem interesting to those around you anymore - then maybe you are becoming out of touch with the new realities. Indeed many other similar questions will become more evident, as your attention to such signals call you to a new reality – maybe you are not as relevant as you think you are!

Un-Learning is the path to Re-Learning

It is no shame nor failure to accept that we all have to refresh our portfolio of competencies. Not to recognise this and doing something about it, is actually the failure. It requires personal discipline, humility & the ability to let go of "old baggage" to enable new competencies to flourish.

This journey has no age limit nor entry requirements, except to be willing and committed to it. Whilst predicating the "learn and unlearn and re-learn" process, we have to be aware of the conditions to make it work, appreciating the anxieties such a process creates and the need to managed it well such to ensure the best outcomes are achieved.

By pro-actively challenging what we know or think we know, we can truly start such a journey.

We must listen more to different views, add more information to our knowledge base and seek new sources of information from outside our usual circle of influence. It is in no way undermining our ways and our methodologies, or even our character but it will help to recalibrate our views and the help us realise to let go of things that have become obsolete. Most of all open the path to re-learning, which truly builds Mindset Resilience.

We are all conscious of change around us, keen and anxious to learn new things. And many are very successful in attaining this goal. But when we look at how much of the new learning content has been absorbed or even deployed, it is very little! And it is due to this imbalance between the & old that is in conflict with applying new learnings.

Re-Learning to make a difference

In an age where alternative facts, half-truths and flood of media information, one could be excused for feeling over-anxious with letting go of what we feel safe with. But this is not reason enough, not to un-learn & re-learn. It is for these reasons that we must ensure we transition our personal tool kits, competencies and mindset into more relevance to make the difference!

Creating our own learning strategy and executing it with purpose, is a very interesting and gratifying journey. We just need to delve into finding out what is really out there and not dismiss what does not fit into our perception as wholly wrong. This truly builds a Learning Mindset.

The scope of this paper is to help explain some of the fundamentals around learning, un-learning and re-learning thinking and how a Growth Mindset is crucial in enabling this process.

But more importantly, it is to encourage an open view into this area, that will make a difference. Even with the anxieties in learning and even more anxieties in the unlearning process, it is a worthwhile investment that will make that difference. This truly builds an Innovative Mindset.

When learning is extended across an organisation, the difference is magnified through the collective body of its people. It is about attaining that balance and alignment of common purpose and that keeps expanding with the phenomenon of un-learning and re-learning together.

This will shape the corporate Culture, Improve Performance and achieve great Outcomes.

Joe Lombardo
Transformational Management Advisory

Founder of ESP Consult, Joe Lombardo, advises on transformational management through a supply chain focus. The need-for-change is a very likely and necessary step for business transformation and sustainability. Starting a journey of transformation can be hugely daunting. ESP advises on structuring the model to facilitate and successfully implement transformational programs. A transformational journey, is a truly enlightening and lasting motivating experience. "Business culture is fundamental and pivotal to success. It is not just talking about culture, but it is about the attitudes and behaviours of an organisation. A Growth Mindset Culture is at the core of our programs strategy".

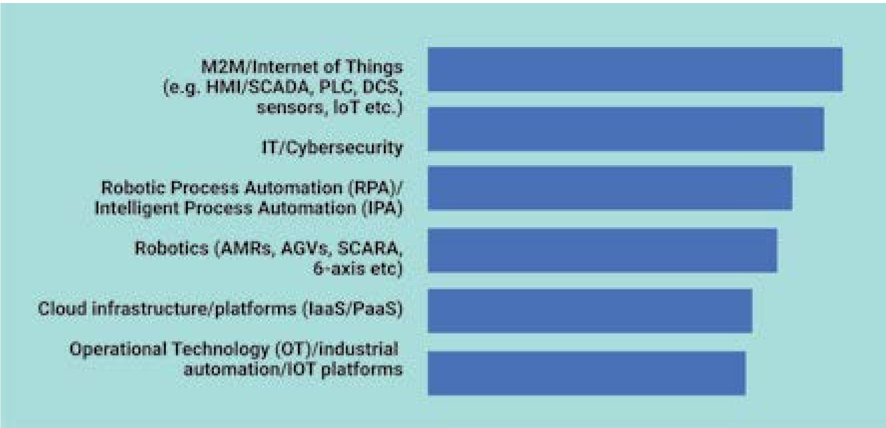
Automation is augmenting the future of supply chains

By Sampath Kumar Venkataswamy
Senior Research Manager, IDC Asia/Pacific Manufacturing Insights

Market volatility, supply chain disruptions, resource availability issues, extreme supply and demand pressures, have all put pressure on organizations, resulting in supply chain performance being a top concern for Asia/Pacific manufacturers (1). This has motivated search for solutions to address the complexities, where technology investments could add speed and agility to decision-making and actions. From this, a significant trend that has surfaced in the last 18 months, has been the need for increased automation to address productivity and throughput challenges.

Supply chains have three primary flows that need to be coordinated - Goods Movements, Product, information and financial flows. Optimizing and expediting information flows, speeds up expedite physical and monetary activities. Organizations in the region are currently focused on quality, supply chain risk management and response times. These are drivers to improve supply chain outcomes (1), which also help to deal with resource shortages. As such automation of information and physical flows are key areas of focus. This gives a clear investment priorities over the next two years (refer Figure 1).

Figure 1: Asia/Pacific Manufacturing Investments Priorities in the next 2 years



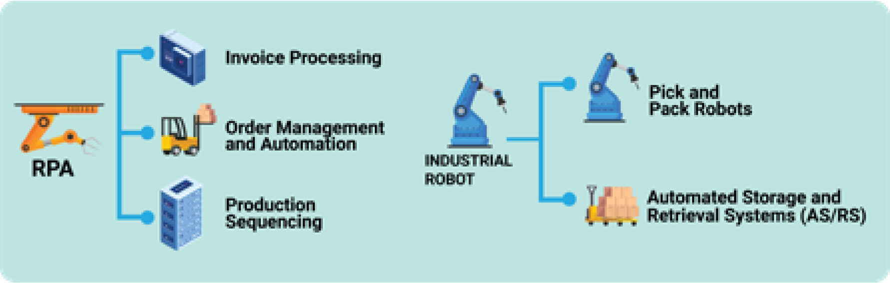
Automating information exchange through robotic or intelligent process automation (RPA/IPA), can help reduce repetitive tasks while maintaining transactional accuracy. Similarly, physical automation like traditional robots, conveyors, AMRs/AGVs can reduce the productivity and quality gaps across the value chain. The growing importance of business resilience and real-time data visibility will further fuel the adoption of automation technologies, to make organizations more agile, flexible and better prepared for supply chain or market disruptions.

Key use cases for automation

Workforce shortages, has led to conversations and developments of robotic or intelligent process automation (RPA/IPA) capabilities, focused around reducing repetitive and manual tasks. Invoice processing, order management and S&OP planning to increase quality, accuracy and reduce processing times are typical targeted applications. These are quick wins cases, with an accelerating uptake. IDC projects growth for RPA and related technologies in APAC Manufacturing, retail and transportation at almost 28% CAGR from 2021 to 2025. This indicates improved traction towards information integration and platform connectivity. This provides a foundation for scaling investments to more sophisticated use cases such as intelligent operations and decision enablement.

The industrial and service robotics spend in Asia/Pacific is expected to reach US$169 billion by 2025 with significant focus on articulated, collaborative, and autonomous machines. Some of the key use cases are around the pick and place robots that aid in packaging and collaborative operations along with AS/RS systems that aid in significantly reducing the warehouse space requirements.

The impact of automation has been quite significant in the recent past - the F&B industry has produced 200% more with 55% less manual workers as compared to that of the 1970's. Majority of interventions are around packaging operations, fueled by increased ecommerce activity during the lockdown. Business acquisitions, like Yamaha acquiring Tokyo robotics, Jenoptik acquiring INTEROB, reinforce growing importance of robots in supply chain operations. As for implementations, last year saw a fair bit of activity -DHL acquiring over 1000 robots to manage its warehouse operations, Kantsu and Invia collaboration to implement 200 AMRs to automate their warehouse.



Addressing the implementation challenges

The decision to invest in automation is not simple, it takes a lot of effort and planning to start. It is important to talk about the factors that govern or influence automation related investments:

• The cost of deploying communication infrastructure to support information provision for software automation, such as RPA, or communications for robotics

• The ease of use and skill-set requirements to enable automation

• The speed of deployment to ensure projects are providing returns as soon as possible to accelerate a return on investment

Recommendations for organizations pursuing automations

For many organizations the business case for automation is centered around the 'when', rather than 'why'. Organizations should focus on comprehensively support their digitalization drive. This will get them a faster buy-in and ensure a sound business case – recommendations:

1. Create Roadmaps of Process Workflows - Organizations should evaluating their warehouse space, assets and inventory types, to map out optimal process workflows based on key factors like identify fast-moving SKUs, bottlenecks and possible opportunities for automation.

2. Invest in Ecosystem Partners - Evaluate suppliers, seek guidance based on company size, business, budget, product, inventory pace, plans for scaling, SKU complexity, in-house value adds and other relevant factors.

3. Supporting Technology Infrastructure - WMS, WES, cloud, IoT, AI and RFID Technologies, are all relevant for visibility and control throughout the warehouse. The power of automation and robotics is most amplified, when all systems are integrated and work together. Run automation visualizations, to measure viability and impact before making investments – which would also mean investing on virtual layouts and simulations.

4.Manage Risk through Continuous Innovation - consumers and supply chain will continue to change and evolve, with the separations between nodes dissolving. Consider how stores and smaller-footprint fulfillment locations can also benefit from automation.

The end objective is achieve a balance between operational costs and quality with focus on providing superior products or services to their end customers, whilst ensuring internal safe working. An Automated solutions has been proven to be the aids in creating a transparent and error-free environment, that delivers improved customer satisfaction, along with creating new revenue streams.

Sampath Kumar Venkataswamy
Senior Research Manager

“Sampath Kumar Venkataswamy, with over 14 years of manufacturing and consulting experience in core engineering design and supply chain management, is a senior research manager at IDC Manufacturing Insights. He is responsible for the Asia/Pacific manufacturing and supply chain trends and practices. Sampath’s core research includes role of technologies such as IoT, cloud, analytics and blockchains in addressing challenges across the manufacturing value chain. Sampath’s background in structural design, engineering and manufacturing, Sampath's research, emphasizes on operational technologies - supported development of next generation of hydraulic excavators at Caterpillar following developments of Tier 4 locomotive prototypes and pilot builds at GE Transportation for the US market”.

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:

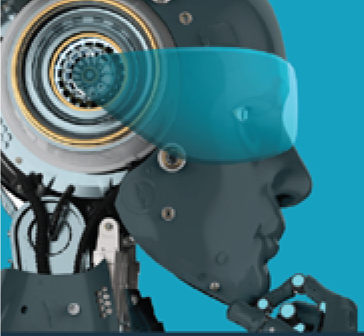
Please scan QR code for more details.

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.



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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.


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Rethinking the next normal: Transforming Logistics and Supply Chain Workflows with Samsung

Samsung's Enterprise Mobility Solutions support digital transformation efforts for process simplification, efficiency and transparency

There is no doubt that the pandemic has radically transformed the logistics and supply chain industry, especially with increased demand and reliance on deliveries. Today, there is expectation for organisations to deliver top-notch customer experience with efficiency and transparency.

The sector, however, has been moving steadily towards a more flexible and mobile work style as workers in the sector are largely required to be working from different locations. Along with technology advancements – including improved hardware and a move towards cloud-based solutions – companies are rethinking how they can succeed in this new, digital-first market.

Adopting mobility solutions for growth

For many, the first step is embracing secure, collaborative and seamless mobility solutions. Not only do they unlock work-from-anywhere models for greater productivity, they also enable companies to gain a competitive edge with faster turnarounds and improved customer service.

From a hardware perspective, docked smartphones and tablets are an augmentation of mobile-PC convergence. According to IDC, 60 per cent of global enterprises are looking at smartphones as their company's singular IT-supported 3-in-1 device, especially since they can complete tasks that were traditionally performed on a PC or a laptop. This also leads to a 25 per cent lower total cost of as compared to standard consumer devices .

Samsung Enterprise mobility solutions meet the needs of today's fast-paced logistics and supply chain industry. They enable professionals to anticipate and take on future demands as well:

1. Mobility solutions in the logistics sector can increase service accuracy with timely proof of delivery and warehouse receiving to facilitate greater transparency and ultimately increase efficiency.

2. Workers can scan items and obtain customers' signatures upon delivery or collection, and this process creates an irrefutable paper trail. When paired with automated alerts for package pickups and shipment for digitised proof of delivery, organisations can improve customer service experience, along with timely order fulfilment.

3. Samsung Enterprise-grade barcode scanning capabilities allow workers to attach images to digital record. Users can also mark up any issues using Samsung's S-Pen stylus.

4. Instant, on-ground communications can also be improved. Mobile-based press-to-talk applications enable on-ground personnel to communicate with teams and manage workflows more effectively.

Importance of a trusted partner in logistics and supply chain transformation

Finding the right mobility technology partner for transformation is critical to success. While logistics and supply chain organisations may face different business challenges, a reliable solutions provider with a breadth of solutions will enhance operations and improve productivity in a seamless, secure manner. In recent years, Samsung has supported organisations in their digital transformation journeys.

Linfox and Samsung create efficiencies and enhance logistics security

Linfox, an Australian logistics and supply chain organisation, partnered with Samsung to streamline fleet management and strengthen operational control with Samsung's enterprise mobility solutions.

It implemented an easy-to-use, paperless interface, allowing drivers to easily access digital logbooks and safety check lists to boost efficiency and safety for drivers. Linfox also provided real-time updates on driver progress and job completion to reduce information gaps among their staff.

Having the Samsung tablets in our trucks means that we remove all of the miscommunication between our field staff and our office staff, which just means we can provide better service and better information to our customers.

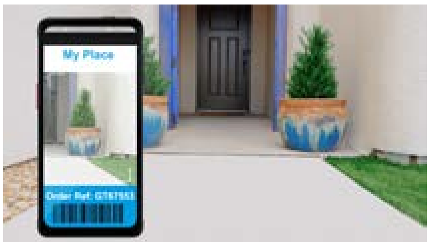
– Nik West, Linfox

Harnessing economic value with Hermes UK, UK's 2nd largest parcel company

As part of its efforts to transform and reduce cost, Hermes UK replaced costly legacy hardware with smartphones for last-mile delivery fulfilment.

Instead of barcode scanners and dedicated devices that were cumbersome and costly to maintain, Hermes UK was able to streamline operations by using a single, multi-functional device with the Samsung XCover4 smartphone.

Working with Samsung, Hermes UK is currently deploying smartphones equipped with Knox Capture, an enterprise-grade barcode scanning app which can record an electronic signature, verify ID and take a picture of where a package has been left off. The goal is to provide more than 15,000 dedicated devices with a Samsung ruggedised device with Scandit solution. By replacing these dedicated devices with smartphones, Hermes could significantly lower the total cost of ownership while providing couriers with a much more flexible and intuitive solution.

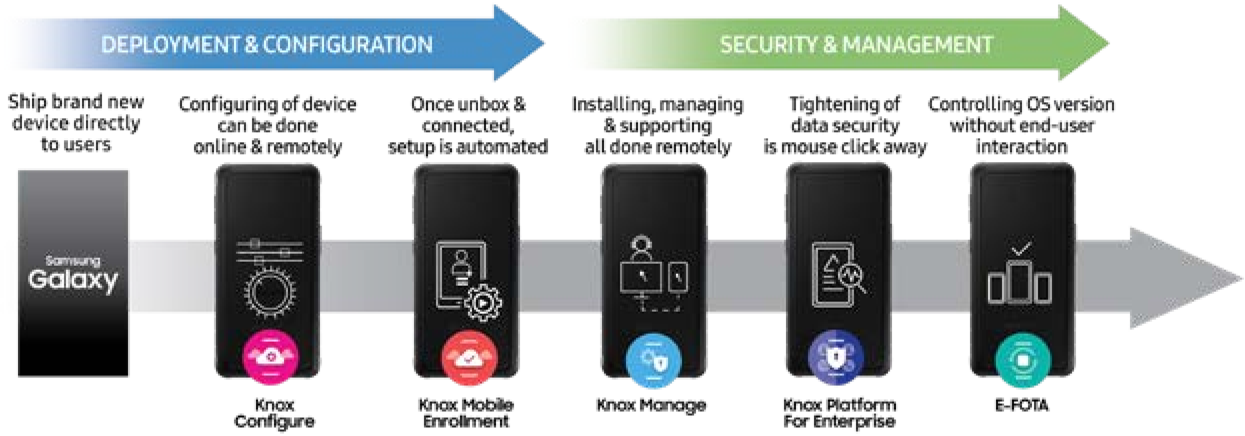


Enabling Remote Device Management and Deployment for Cervecería Nacional

Panama's largest beverage company, Cervecería Nacional, partnered with Samsung to embark on its digital transformation efforts. Effective and easy mobility management was critical for successful implementation.

The company was able to deliver a new mobile workstyle by eliminating the reliance on unprotected, uncontrolled devices and data, which came with too much liability. It also deployed a new mobile app to support onsite sales and manage inventory at vending machines and warehouses.

To have a better grasp of the devices in operation within the company, the IT department converted to using Samsung Knox Manage. It could remotely



Samsung Knox helps organisations streamline deployment, configuration as well as security and management processes.

set limits for mobile data and restrict which apps workers can install and which domains they have access to. This has saved the team more than 50 hours a month, allowing the team to improve their efficiencies in business management, minimise risk and capitalise on opportunities for profitable growth.

Support tickets and calls are also down, saving money and time for the IT team to innovate and redirect efforts to business-critical projects. By controlling worker data and application use, the company has also eliminated data overage fees, decreasing costs by 10 per cent.

Readying for a digital-led future with Samsung Knox

The Linfox, Hermes UK and Cervecería Nacional case studies highlighted how it is critical to find the right partner with proven solutions and capabilities that deliver real-world results.

Samsung Knox offers organisations access to a complete suite of enterprise mobility solutions designed to streamline processes, improve efficiency, and introduce greater transparency. Ultimately, this allows business leaders to succeed in streamlining and optimising processes with transformative impact.

Knox Configure enables remote configuration to transform a fleet of mobile devices for specific business needs. It addresses enterprise demand for singular, tailored IT-supported devices that cater to multiple functions. For the logistics industry, this could mean creating a purpose-built device for kiosk mode and transforming the phone into a walkie-talkie to enable barcode scanning and delivery signing all from a single device.

Knox Capture enables barcode scanning for real-time accuracy and thorough documentation, while **Knox Manage** optimises employee device management and monitoring.

And for an all-up enterprise mobility management option, **Knox Manage** gives more visibility and delivers real-time insights to allow full control for IT Teams to manage employee devices on the go, minimising risks and significantly lowering operational costs for damage and loss.

By embracing mobility through secure device management, enterprise-level mobile functionalities and centralised device management, organisations in the logistics and supply chain sector will be better equipped to address and adapt to rapid challenges arising from digitisation and the pandemic. Designed with security, manageability and productivity in mind, Samsung enables logistics and supply chain professionals to be agile and seamlessly transform operations and workflows to stay ahead of the curve in a digital future.

SAMSUNG

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI, foundry and LED solutions. For the latest news, please visit the Samsung Newsroom at http://news.samsung.com.

Is your freight invoice accurate?
A new study claims it might not be.

Andreas Wramsmyr, International Business Executive and CEO

Shipping freight across the world is a complex matter. But what is even more complicated is freight billing and handling freight payments: what a cargo owner is initially quoted is often different from what he later is asked to pay. A recent study claims that as much as 20% of invoices are incorrect, making billing accuracy a significant industry problem. But there is a solution on the horizon: to go digital and automate the freight billing process to save costs and ensure accurate freight payments

Billions of dollars are thrown overboard every year

Billing inaccuracy and payment challenges are massive problems in the logistics industry. It's not uncommon that the final freight invoice differs significantly from the number initially quoted. A 2021 Cargo Owners and freight forwarders survey, confirms this. It claims that as much as 20% freight invoices may be inaccurate - 1 in 5 is significant !

This means that cargo owners need to spend considerable time, money and resources reviewing and double-checking freight invoices to ensure they are billed correctly. Another study from the Dreary Report from 2018, states that inefficiencies, pain points and lack of automation in the maritime industry result in costs adding up to a staggering $34.4 billion.

Too much paperwork, too many manual audits

But what is the reason behind these costly inefficiencies and billing inaccuracies?

While some cargo owners may claim that suppliers overbill on purpose, such considerable numbers, suggests that there is more to it than a few suppliers padding invoices. First of all, for cargo owners, international transport and shipping can be complicated operations involving

multiple stakeholders and several suppliers and contacts for a single shipment. Numerous suppliers means intricate **freight billing** and leads to extended **freight invoice processing.** The manual administration of reviewing freight invoices is both time-consuming and prone to error. Even when **freight invoices** are from a single freight forwarder, the individual line items, ranging from customs clearance to the actual shipping, may not be described in detail. It can also be unclear which supplier charged what. Furthermore when invoices often arrive in various formats adds more . If you're lucky enough to avoid paper and get invoices using EDI, the freight billing process could still have problems when different interfaces don't integrate seamlessly with the internal payment system.

Lack of trust

It is clear that complex, manual payment processes are critical sources of costly mistakes and overbilling. But there's more to it: the lack of trust and close working relationships between supply chain stakeholders means all sides spend a massive amount of time manually verifying and checking paper invoices and shipping documents.

A global pandemic adds new fees and complications.

As if this wasn't enough, 2021 has added its own set of complexities. Container shortages, port closures, and changed routes have created new freight billing problems. Soaring container shipping rates that change weekly as well as new, out-of-the-ordinary surcharges and costs for detention and demurrage mean that cargo owners are often in the dark about the final price. Furthermore, many cargo owners need to divert part of their supply chain to the spot market, with non-contractual rates and pre-payment.

Invoices from new suppliers risk being held up in audit resulting in late payment, which could strain client-supplier relationships and missed delivery penalties.

Save time, money and resources by going digital

Luckily there's a solution to these supply chain challenges: information technology and automation. Modern technology can quickly eliminate mundane, manual processes, and streamline quotations, booking requests, and confirmations and integrate them with the freight billing process.

Automation speeds up activities, increases efficiency and makes sure everyone is doing the right thing at the right time. Working on a digital platform enables cargo owners and transport suppliers to communicate and collaborate directly, without intermediaries. Stakeholders can build trust by establishing close, long-term working relationships.

Digital tools and applications also mean more freight transparency and visibility and a sense of control. The added real-time visibility on a digital platform helps cargo owners avoid redundant charges and prevents costly and time-consuming disputes.

Furthermore, when booking an international shipment through a digital platform, there are no extra or hidden costs to be added; in terms of invoicing and billing, what you see is what you get. Exact fees are available at a cargo owner's fingertips, and only mouse clicks away, as prices are fixed and agreed upon before shipment pick-up.

But the most important benefit we get from automated may be the wealth of information and data you get from working in a digital system. Cargo owners and transport suppliers can extract data that can help mitigate problems and assist in decision-making. Critical supply chain information enables analysis and insight to help forecasting, pricing, procurement, sourcing, and supply chain optimisation. It assists an organisation in understanding not only what the costs are but also what they may be in the future.

Limited supply chain visibility and insight are, more than ever, massive pain points, but with an automated system, many of these issues are solvable - or can be avoided altogether.

Many options available

The traditionally conservative logistics industry is quickly evolving. Log tech companies are now driving advancements in the transport field, offering multiple functionalities, services, and applications to digitalize the supply chain. Facilitating freight payments and ensuring billing accuracy may be one of the most significant enhancements.

Today there's no reason to spend unnecessary time and resources using a manual process when digital systems and applications are readily available. Shifting to an automated process not only facilitates and improves **freight billing processes**; it also offers increased freight visibility and control and the possibility of unbundling. Digitalisation is the future of shipping: direct collaboration, easy freight payments, and accurate billing - and what we recently considered to be the future, is already here.

Adnavem is a log tech scale up helping customers to gain control of their global supply chain. The Adnavem digital transport platform offers cargo owners and logistics providers the opportunity to connect and collaborate directly, without intermediaries. In addition to increasing visibility and control and cutting unnecessary paperwork, the automated platform also makes it possible to specify line-item costs, and such specifics ensure that what you're quoted is what you pay.

Andreas Wramsmyr

Andreas Wramsmyr is an international business executive and CEO. He has more than 15 years of experience in driving business development and change management at international companies. Today he is the co-founder and CEO of the successful log tech scale-up Adnavem. The company is transforming the logistics industry by connecting cargo owners and transport suppliers through the company's proprietary tech platform.

ADNAVEM

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Save time and costs by using BPO for your Customs and trade compliance

by GeTS (Global e-Trade Services)

Business Process Outsourcing (BPO can help you raise productivity in your exports-imports business

In a small, open economy like Singapore, expanding into overseas markets is often a critical way for local companies to scale up their product sales and business.

With hundreds of countries that you can export to and import from, it is important to not only strategically choose the right locations to conduct cross-border trade, but to also thoroughly understand the Customs and logistics requirements for each product and each market. This ensures that you can keep cross-border commerce costs down and protect your bottom-line.

That's where Business Process Outsourcing (BPO) comes in. In the case of wholesale trade and logistics, BPO has taken on increasing importance among many trading and freight companies, who are often bogged down by the gamut of small details involved in cross-border commerce.

Trade document process outsourcing is an increasingly popular BPO service that many logistics companies are using to raise productivity on three key fronts: Customs clearance, management of demand patterns and saving costs.

Hassle-free Customs Clearance

BPO for Customs declaration and clearance can provide you with a speedy and efficient way to manage your cross-border business.

For instance, an importer in Singapore who wants to import items from an overseas supplier will need an agent to handle the import filing to clear the cargo when it is shipped to the Singapore port. A reliable BPO provider like GeTS can advise on Customs requirements, act as the Customs broker and file the permit declaration.

Conversely, an exporter in Singapore who wants to sell items overseas can enlist the help of a BPO provider to settle the export documentation (export permit declaration) and Certificate of Origin to get the export shipment cleared. The overseas buyer will then use this Certificate of Origin to get Customs relief for taxes.

A third group of companies who benefit from BPO services are freight forwarders who want to outsource their customers' permit declarations.

In all these cases, it is critical to use the right Harmonized System (HS) codes for your products and file the correct Customs paperwork. But these complex tasks can be daunting for most firms, especially with language barriers in many foreign

countries and the need to constantly stay up-to-date with the latest changes in Customs and licensing regulations.

A BPO provider like GeTS offers the compliance expertise as well as a range of smart tools such as automated data computing to handle all these tasks – and much more – accurately and seamlessly. This way, you can focus on what matters most to your business.

Managing the supply chain

Many Singaporean companies exporting overseas will experience lull and peak periods in sales. Some will even encounter sporadic, unpredictable spikes in trade declaration volumes.

This poses a dilemma for many firms: hiring a full in-house trade compliance team may not be cost-effective but hiring too few professionals to handle the job can cause significant delays and heighten the risk of errors and non-compliance during demand spikes.

The cost of wrong filings and non-compliance can be onerous – fines and non-financial penalties with serious consequences could have a major impact on your overseas business.

That's why trading companies may choose to outsource permit declarations to a BPO service provider to cope with the high volume of data entry. If the trader meets the prerequisite capabilities, GeTS can do their permit declaration on their behalf.

It can also offer advisory and consulting help on how to optimize your cross-border trade processes.

Save costs

Perhaps the simplest reason why it may make sense to rely on BPO in trade and logistics is simply the amount of costs that can be saved.

Outsourcing trade compliance to a trusted service provider like GeTS can save you money in the long run by reducing your risk of costly fines and penalties, as well as minimizing your overhead costs.

Apart from boosting efficiency and raising productivity of staff, there is much flexibility when it comes to pricing.

GeTS offers a different range of pricing modes ranging from pay per use to subscription fees. This will help cater to companies of different sizes. Smaller companies may decide to use the pay per use model to ensure maximum flexibility, while larger companies may tap the subscription model to realize economies of scale.

At GeTS, we have over 30 years of experience in global trade compliance, with a proven track record, a team of certified trade compliance experts and cutting-edge technology to ensure your Customs clearance and trade logistics are handled seamlessly and efficiently.

Find out more about BPO ***here.***

GeTS

Global eTrade Services (GeTS)

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.

DB Schenker - Singapore

A Vital Node in Singapore's Logistics Ecosystem

By DB Schenker Singapore (Pte) Ltd

Singapore's Status a Global Hub

From its peak, 97% flight capacity was reduced from Singapore Airlines. Typically, 45% to 50% of cargo is carried in belly holds of aircraft. With such dramatic reductions in flights, Singapore's status of a logistics hub was put severely at risk.

However Singapore has managed to preserve it position as a global trade hub. With broad-based support packages, targeting hardest-hit industries like aviation, coupled with support of a strong logistics ecosystem, reinforced by global players such as DB Schenker.

DB Schenker in Singapore

2021 marked DB Schenker's 51st year in Singapore. The organization has come a long way since its formative years. It is currently operating in 12 facilities across the island, with possibly the largest contract logistics footprint in Singapore. DB Schenker Singapore has also cemented the position as a key pillar in Singapore's logistics ecosystem, being the number one air exporter (for freight forwarding) and attaining market leadership in ocean freight as well.

The contributions of DB Schenker Singapore toward Singapore's status as a global trade hub have not gone unnoticed. In October 2020, DB Schenker hosted a high-profile delegation comprising key government agencies amongst whom, Ministry of Trade and Industry, Ministry of Manpower, Economic Development Board and Workforce Singapore at the Red Lion facility – Schenker Singapore's premier integrated freight and logistics facility.

On October 29th, the company has also been featured in Channel News Asia's docuseries "Becoming a Global Hub", underscoring the key role that Schenker plays in Singapore's standing as a vital node in the global supply chain.

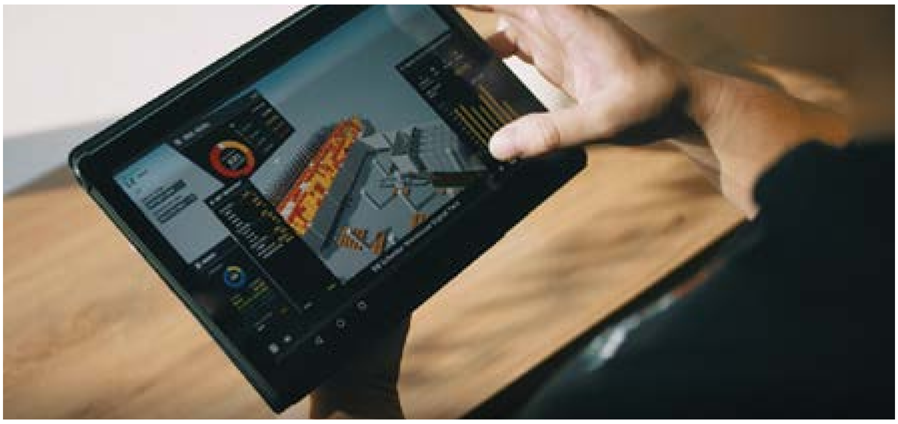
Schenker Singapore, Turning Adversity into Opportunity

Keeping Supply Chains Moving

"Keep supply chains" moving has been one of Schenker's guiding principles while navigating through the choppy waters of the pandemic. Even at the height of the pandemic, business continuity plans were quickly activated to ensure minimal impact to operations. With ensuing lockdowns in the various countries, the company was able to free up large amounts of space to act as buffer storage as connectivity to markets diminished overnight.

The incessant flight cancellations caused major constrains to capacity. To overcome this, Schenker Singapore embarked on flight charter solutions. To date, they have completed close to 100 air charter flights for their customers, keeping their supply chains moving in-spite of the circumstances. These charters included flights that carried life saving medical equipment to remote places like Kathmandu.

DB Schenker's strong network of multimodal solutions also helped mitigate the impacts of black swan events like the incident at the Suez Canal. With longstanding strategic partnerships with the carriers, they were able to switch freight modes with ease, even amidst the tight market. Overland transport solutions from Singapore all the way to China & even Europe were also executed to executed to keep supply chains moving.



Through this trial by fire, DB Schenker Singapore has managed to turn adversity into opportunity, forging even stronger partnership and building greater trust with their customers and partners.

Continued Innovation even Amidst the Pandemic

Even pre-pandemic, DB Schenker has been a firm advocate of digitalization. This investment in equipping employees with future ready skillsets has put the organization in good stride to tackle the challenges brought on by COVID-19; allowing Schenker to accelerate investments and efforts in innovation even as many other organizations are struggling to stay afloat.

One of the key achievements in 2020 was the automation systems commissioning and go-live of the integrated Red Lion facility in May – at the height of the pandemic. With multiple automation systems in place and various sub-systems requiring seamless integration. 2020 has also seen an accelerated push for more digitalization projects in the organization; with Robotic Process Automation (RPA), PowerApps and Python based projects widely implemented in the various operations.

Another notable project launch is the DB Schenker's digital twin. The digital twin allows for internal operations as well as customers to view the various processes, along with detailed metrices throughout the facility. With customers and some staff unable to have full access to operational sites, the digital twin has proven to be a useful tool to provide internal and external stakeholders with actionable intelligence to take proactive measures to achieve maximum efficiency.

Customers have reaped tangible benefits from these projects and have recognized DB Schenker as a front-runner in innovation and digitalization.

A Continued Focus on People

DB Schenker Singapore's philosophy of having "Putting People at the heart of everything we do" remains unyielding even in adversity. Where many companies have exercised cost cutting measures, Schenker has conversely stepped-up investments in our people. For example, in 2020, over $SGD 1 million was spent in developing our employees through training. In 2021, DB Schenker has also launched a comprehensive e-learning platform, comprising of over 1,000 courses; empowering employees to take learning into their own hands as face-to-face trainings are put on hold.

Aside from work-relevant skills development, DB Schenker Singapore has also put in place

numerous well-being programs during these trying times. The company has engaged with healthcare partners for mental well-being workshop as well as launching an employee assistance program where staff can connect anonymously to a professional counsellor.

The company has also been no stranger to grooming budding logistics talent. Every year, Schenker partners with institutes of higher learning to undertake capstone projects. These projects give students a platform for practical application of their field on study on real-world industry problems; with Schenker reaping the benefits of gaining access and fresh perspectives to the latest advances in the field of academia.

Planning for a Greener Future

Climate change is one of the biggest challenges of our generation. DB Group has set ambitious targets to reduce specific CO2 emission by 50% by 2030 compared to 2006. DB Schenker in Singapore are focusing our efforts on being a cleaner and greener organization. Starting from within, the organization has apportioned “green space” for its Green Finger project. These green spaces are essentially vegetable gardens where employees plant vegetables and herbs which can be subsequently harvested for personal consumption. The compost for these gardens is from food waste generated from the staff canteen. Such projects help cultivate a green mindset among the employees and help foster a sustainable culture from the ground up.

DB Schenker can offer Eco-solutions for every mode of transportation. This allows customers to reduce or compensate for CO2 emissions along the entire supply chain. In partnership with Lufthansa Cargo, DB Schenker launched the first regular carbon neutral cargo flight connection in history, saving around 174 metric tons of conventional kerosene each week. In Singapore, the company also utilizes a fleet of electric vans to carry out zero-emissions deliveries island-wide.

The latest Red Lion facility has a plethora of green features - solar panels to energy-efficient fittings; it is the first facility in Singapore to attain the LEED v4 gold certification, also the largest such facility in South East Asia. This year also saw the launch of the upcycling hub – a collaboration with Airlab and SUTD, where logistics by-products like pallets, plastic wrap and other waste material are transformed into useful furniture and fittings for staff’s dining and recreation area.

Endnote

Singapore’s push to reopen its borders progressive help preserve her status as a global trade hub. With the top 25 global logistics players operating through our island nation, many of which have successfully managed to navigate push through the headwinds brought about by the pandemic, coupled with sound government policies and a robust social compact; will solidify Singapore position as a vital node in the global supply chain.

DB SCHENKER

DB SCHENKER
Schenker Singapore (Pte) Ltd

Brief Company Bio
Schenker Singapore (est. 1970) is a pioneer in providing integrated logistics solutions through their global Air, Ocean and Land transportation network. These freight solutions are integrated seamlessly with their Contract Logistics, providing customers with a holistic end-to-end solution. Today, DB Schenker is the #1 air exporter in Singapore and has one of the largest warehousing footprint in the country. They have evolved from being a traditional freight forwarder to providing differentiated services like supply chain consulting, network design, scenario simulation, solution design and implementation.

Fusionova Technologies Pte Ltd

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SOFTWARE DEVELOPMENT

E – COMMERCE / DIGITAL MARKETING

TRUCKING PORTAL

MULTI – STORE RETAIL MANAGEMENT SYSTEM

DATA ANALYTICS

FACIAL & TEMP RECOGNITION

Our Promise

- Digitally transform businesses.
- Integrated and Real-time visibility of Processes in Purchase & Supplies, Inventory Management, Billing, Logistics & Sales
- Better Manpower utilisation due to the ability to complete work faster (30% and more), accurately without mistakes. Less human data entry.
- Time to Track and Trace items / parts /orders as well as manpower /machine resources is reduced as information is available real-time
- Save paper work, cost and time.
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+65 9457 9332

www.fusionovatech.com

enquiry@fusionovatech.com

A conversation with STUART WHITING, Schneider Electric

Senior Vice President – Global Supply Chain, Logistics & Planning at Schneider Electric
by Joe Lombardo, Editor-in-Chief – LogiSYM Magazine

"Stuart welcome to another of LogiSYM's fire-side chats & thank you for taking the time to speak to us during this very busy period for you, as we approach the end of 2021. It is especially a pleasure to talk to you, as your career has traversed several Business Sectors, Regions and has spanned many stages of developments in the supply chain industry".

We are pleased to continue our 2021 fire-side chat series with key people in the supply chain industry, and it is with particular pleasure to catch up with Stuart Whiting, Senior Vice President, Global Supply Chain, Logistics & Planning at Schneider Electric, based in Singapore but with a global functional responsibility.

Stuart is a British national, married with three children. Holds a Fellow of the Chartered Institute of Logistics and Transport and holds a Global MSc. in Logistics and Supply Chain Management from Cranfield University's School of Management. He is very passionate about developments in the Supply Chain arena and is always seeking excellence in his drive for efficiency & innovation in Supply Chain operations" - a quality that is very relevant to face up to the many Supply Chain challenges in our path!

• Would you tell our readers a little about your background and experience?

"I joined Schneider Electric Schneider Electric in Singapore with Global responsibility for Logistics and Network Design in 2013. Throughout my time in Schneider the scope and responsibilities undertaken in both day-to-day operations and transformation has grown. In 2017 I also assumed responsibility for Field Services and in 2019 Data Excellence & Analytics embracing digital transformation driving our Tailored, Sustainable and Connected 4.0 Supply Chain Strategy through greater visibility, traceability & automation of standardized, (re-engineered), end-2-end processes.

From 2020 I also took responsibility for Planning, end to end across the Supply Chain, further optimizing the adoption of SIOP, SO&E and Executive Alignment with our Chief Financial Officer and ExCom, Upstream Planning and collaboration with Procurement and Suppliers – all with the focus on achieving the utopia of the "Perfect Order" by extending the Functionality of our Logistics Control Towers to end to end Order Orchestration and "ACT" capabilities across all functions and steps in the supply chain – ensuring proactive real time visibility, efficiency and planning to all activities to ensuring fulfillment in full of demand and driving greater customer centricity and satisfaction in delivery".

"Before joining Schneider Electric, I was at DPDHL holding multiple positions over a 14-year career. Spanning Global, Regional, Country Operational/Commercial Roles and General Management in Asia Pacific and Europe. Prior to that, I was with TNT for 6 years. Based in the USA and later North Asia, I specialized in "Supply Chain Solutions" for North American / European Corporations with Asia Pacific manufacturing/sourcing operations".

"My passion for Logistics and Supply Chain is founded from my very structured upbringing. It was heavily influenced by my Father's career, which saw him traveling all over the world and the opportunity of an excellent education afforded to me by the British Public-School System – Boarding school was disciplined, indeed regimented in many ways. It really gave me an excellent grounding in self-discipline, confidence, resilience, and focus - embodying the principles of Agile and embracing Change".

"Those schooling experiences, coupled with a Rugby culture, really taught me the importance of teamwork, respect, and an appreciation for your opposition/competition. The foundations again centered on discipline, training, and information relative to the games and seasons This culture allowed us to mentally and physically prepare for what was before us, one game at a time - without losing focus on our end objective".

"Boarding school culture helps you to build relationships, self-confidence, and self-reliance, it teaches you how to focus and to be ambitious, to have faith and belief – preparing one well for the trials and tribulations of our business life...importantly it teaches you that by paying attention and carefully managing the inputs, (being mindful of contingency), the outputs will invariably take care of themselves!"

• What are some of your greatest achievements in your career to date?

"One can speak of many material successes, be it transformation, business turnarounds, and approaches to change management. One's greatest achievement must be People, through the influence on adapting and forming winning cultures, to delivering competitive advantage and the winning edge".

"Today after over 30 years in Supply Chain, it is so rewarding to see the success of those that you have coached and supported - but critically the relationships that have stayed the test of time... these can only be built on trust, mutual respect, and benefit".

"Working with Dr. John Gattorna to deploy the Dynamic Alignment model in Japan, Taiwan and to DHL's Strategic Account/Global Account Management Front and Back Office Operations, was a great experience."

"More recently this learning and application has evolved into the Tailored, Sustainable, Connected Transformation initiatives at Schneider Electric. In conjunction with other Global Supply Chain domains we seek to deliver the Perfect Order and End-to-End Delivery Experience for Schneider Electric's Customers. Our focus is to create a robust End-2-End Control Tower and Orchestration for Schneider Electric Supply Chain".

• How has Business and Supply Chain changed over the course of your career?

"Over the last 30 years, I have seen Supply Chains evolve from being a back-office "Cost Center Function" to the 'spearhead' of many Corporate Strategies. Orchestrated and positioned appropriately, Supply Chains can be the winning edge - the true differentiator that delights Customers and delivers absolute efficiency and leverage to the P&L/Balance Sheet". "As everything begins with the Customer - from the need to understand their buying behaviors, to the attributes that drive these behaviors, it is essential for an organization to understand these before re-engineering any Supply Chain".

"Done properly, it will significantly change the Culture of an organization for the better too - one that thinks horizontally and vertically but learns to collaborate cross-functionally with agility and purpose to manage all kinds of challenges and opportunities".

"With the power of DATA, real-time Visibility to Monitor Sense, Detect and Predict - we have evolved from a Just-in-Time to Just-in-Case Supply Chain with resiliency embedded in its Operating Processes to deliver the "Perfect Order" with sustainability top of mind most of the time".

"Hindsight is not the new Foresight, but for those who share the most information, wins !"

• What are some of the key learnings & formative experiences of your career, that you could share for others to learn from?

"The silo mentality of traditional organizations must be broken. Given that Customers buy horizontally through the Supply Chain, our focus must now be on how best to collaborate and integrate an organization and culture horizontally to respond to these Buying Behaviors".

"In understanding the customer interdependencies, re-engineering / creating / standardizing your end to end supply chain processes and the systematization of tools and applications can truly build a competitive advantage, improve operating results and unite teams to common causes. Causes where every member of the team understands their role to ensuring the "Perfect Order" whilst delivering optimal efficiency in planning and execution".

"The role that data, automation, and analytics play, is just accelerating these benefits and further demonstrating that Logisticians are by nature the true Supply Chain collaborators. Supply Chain Logistics requires strong coordination between upstream and downstream flows and the Supply Chain domains driving transparency and openness in terms of sharing information and data, to enable and execute a perfect delivery experience - the synchronization of Outside-in Demand with Inside-out Capabilities is a new dynamic in managing supply chains.

• What challenges facing the world today are important to you?

"Sustainability is at the core of our purpose: to empower all to make the most of our energy and resources bridging progress and sustainability for all". Sustainability in Supply Chain Logistics is at the heart of our company's operations and values".

"For Schneider Electric to be more sustainable, developing a sustainability strategy for Supply chain Logistics is critical. It's how we help our customers and partners every day in buildings, data centres, infrastructure, industry, and homes. 128,000+ employees serve customers in more than 100 countries, enabling them to manage their energy and processes in ways that are safe, secure, reliable, efficient, and sustainable".

"Climate Change is the biggest existential crisis of our generation. The technologies to face this huge challenge rely on two disruptions (Smart and Green):

• **Digital –** the foundation of a more desirable future, key to more efficiency in our energy

• **Electrification –** energy transition, renewable, microgrids, solar, wind. The world will invest more in electricity in the coming 20 years than in the creation of electricity.

Businesses have an important part to play. Schneider believes we must lead by this example, thus ensuring our own operations and those of our critical partners are clean and sustainable".

"This year, we were recognized by Corporate Knights as the world's most sustainable company. Last year was ranked 4th in The Gartner Supply Chain Top 25, even this year #1 in Europe's Top 15 Supply Chains for 2021".

"These recognitions add to our brand value, for our investors and customers, which we must strive to improve upon this performance every year to fulfill our commitment to them also".

"For me personally, my values are absolutely aligned with Schneider Electrics mission. I find a meaningful purpose in my role every day. Sustainability is incredibly important to me. Continually working towards a more sustainable future, is incredibly rewarding".

"The sustainability journey is one of strong collaboration with our Customers, Supplier, Busines Partners, and Employees – an eco-system of our Stakeholders, I believe will create that resilience, sustainability, and responsible behaviour, required for the next generation of sustainable industrial development".

• What is the role of Business and Change Leadership in addressing the ever complex & growing challenges in supply chain management?

"The change leadership role is more important today than ever before, changing the status quo of the way we do things today - to the way we need to do our jobs tomorrow".

"Leadership has first to embrace the Strategic Transformation, change management and impact that lies ahead and work with our employees to adopt and sustain. Leaders today must grow, from managing multi-cultural teams to multi-generational teams - each has its value. It is imperative that all feel safe and have a sense of belonging whilst continually learning from each other within a culture of inclusivity and respect".

"Similarly, teams need to adapt to new ways of working. Becoming more autonomous / virtual and more digital / data-focused are increasing the demands and needs for our supply chain employees to change. Developing core competencies and skills, whilst embracing the fast pace of change, without compromising Quality is fundamental".

• What are the priorities you are working on right now?

"Whilst I have outlined the ambitions and goals in the Schneider Electric roadmap, the last 18 months have indeed been very difficult. To ensure continued success, we need to look after our employees – their safety, mental and physical wellbeing and support for the eventual transition back to the office environments is crucial."

"We are faced with continued supply chain constraints, i.e. electronics and plastics - in the upstream supply chain. Whilst we must manage the operational challenges of today, we must embrace bi-modal management ability to continue to transform - we must stay on track as we Strive for the Perfect Order. To achieve superior and sustainable performances, we must continue our program of connecting and digitizing our upstream supply chain linkages to compliment that which has already been achieved downstream".

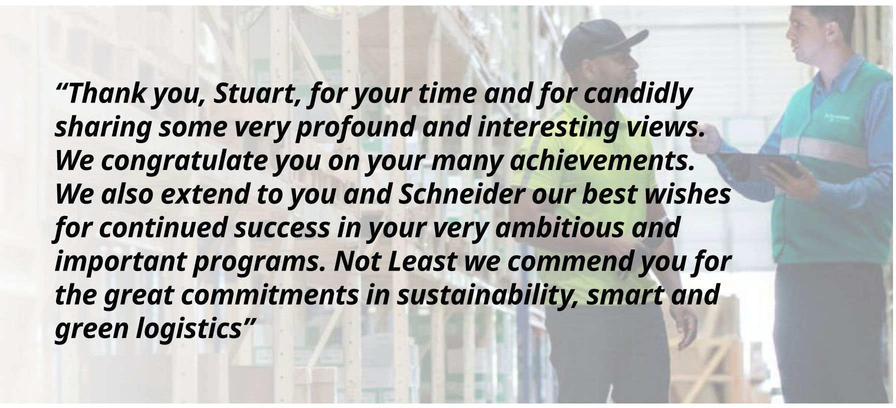
Our Team and Peer groups, with the support of our management, are focused on "Sustainability at Core". This involves improving data excellence and analytical capabilities at all levels, as we strive towards Autonomous Supply Chains. These clear priorities are fundamental, but Developing our People, our competencies for the Future is one of the most important priorities to me in this journey,

• What advice would you give people who have a career in, or who are considering joining, Business and/or Supply Chain management?

"A career in Supply Chain Management goes way beyond the movement and storage of goods. Supply chain management is the heartbeat of any organization - it is the differentiator in the eyes of the customer; hence it can delight or significantly disappoint - quality with excellence in execution is pivotal to a continually evolving and changing supply chain as it responds to ever-changing markets and customer dynamics". "It has also become a very technical function to work in, with data-driven processes, that enable predictive decision making, as we progress to becoming more digital with our ultimate destination in the transformation journey of being autonomous and self-healing. However human networks and relationships are and will continue to be very relevant in ensuring the success of these Supply Chains".

"Supply Chain Management demands strong people skills but is not inflexible in mindset. Demands global collaboration and networking, with agility and speed in execution. It requires a sensitivity to environmental issues, with sustainability at the heart of all decisions. It is about growing and staying relevant as a business enabler that is deeply interconnected in local, regional, and global networks of interdependencies".

"It really is a dynamic industry that attracts strategic thinkers. "Always thinking Ahead' and that is why I respect and promote the profession of Supply Chain Management – I am really enjoying this journey, tough as it may be it is very exhilarating and one which I highly recommend to new generations"



"Thank you, Stuart, for your time and for candidly sharing some very profound and interesting views. We congratulate you on your many achievements. We also extend to you and Schneider our best wishes for continued success in your very ambitious and important programs. Not Least we commend you for the great commitments in sustainability, smart and green logistics"

Joe Lombardo
Transformational Management Advisory

Founder of ESP Consult, Joe Lombardo, advises on transformational management through a supply chain focus. The need-for-change is a very likely and necessary step for business transformation and sustainability. Starting a journey of transformation can be hugely daunting. ESP advises on structuring the model to facilitate and successfully implement transformational programs. A transformational journey, is a truly enlightening and lasting motivating experience. "Business culture is fundamental and pivotal to success. It is not just talking about culture, but it is about the attitudes and behaviours of an organisation. A Growth Mindset Culture is at the core of our programs strategy".

Addressing the Talent Gap in Logistics and Supply Chain

Dr Shereen Nassar, Global Director of Logistics Studies – at Heriot-Watt University – Dubai Campus

Overview

"There is no doubt that the global supply chain market is growing exponentially. The mismatch between the high demands by employers and the supply of logistics skills and knowledge is resulting in a growing gap in the logistics & supply chain market".

Talent gaps in logistics and supply chain, continues to be a top challenge and a source of high risk for many companies. The Covid-19 pandemic and its continued disruptive effect along with uncertainties shaping the business ecosystem, coupled with the accelerated trend towards digitization, have contributed further to this gap. This careful examination and actions to mitigate the risks and to support sustainable business growth.

Advanced digital technologies, like artificial intelligence, machine learning, blockchain and IoT, are playing a big role in making the industry more agile and resilient. This understandably requires a workforce prepared to integrate into the new disruption-based advancements, and successfully navigate industry demands.

What is a talent gap?

It is critical that access to skilled workers is a key factor that sets successful companies apart from others. A skilled worker , soft and job specific ones. Have sound skills and able to deploy them effectively, differentiates talent from just skilled workers.

The talent gap in the job market refers to the demand of skills and competencies required by employers versus the available workforce skills and competencies in the market. Understanding the talent gap is crucial for businesses and job seekers.

- **At a business level** - understanding the gap helps businesses identify training, retaining and hiring requirements. It is also important in responding to business strategies and plans. An effective analysis of talent gaps aids in sustainable, strategic talent mapping for short-term and long-term needs.

- **At an individual level** - the analysis of the talent gap helps job seekers to enhance their employability through identifying the requirements of skilling, reskilling and upskilling.

Talent gap in logistics – how big is it?

Gartner (2020) - challenges to hire, train and retain logistics talent, is a critical priority for logistics leaders.

A global survey led by the World Bank's Logistics Performance Index, has identified logistics workforce shortages at four levels - operative workforce, administrative workforce, logistics supervisors and logistics managers. The result showed nearly 35-40% of participants agreed that the availability of skilled workers in operative and administrative work, was low. 50% of respondents agreed that major skills shortage was found to be at managerial level, facing difficulties finding adequately trained staff. The survey concluded that these skill gaps were prevalent in both developed and developing countries. However, the gap is much more acute in developing countries.

Talent gap in logistics – root causes and challenges

1. Stakeholders - Disconnections intensify talent gap

The key stakeholders in this challenge are employers, educators, and job seekers. The skills gap is a result of disconnects between employer's expectations for a role and availability of suitable candidates for the role.

The source of such disconnects, is related to the information gap among the three parties. Employers are lacking know how to communicate the skills and capabilities needed for a role or how to test for suitable candidates with the required skills and capabilities. Educators are not aligned on which skills to focus on. Job candidates are not sure how best to showcase that their skills and knowledge.

This skill gap is more evident for logistics managerial levels where the demand exceeds the available workers. In contrast unemployed numbers of operative and administrative levels exceeds job openings.

2. Logistics career - Lack of awareness and misperception

There is a lack of awareness among next generations regarding logistics as a profession. According to Gartner Gartner 2020 report, logistics is not seen as a long-term career and seems like a less attractive career option. The perception of the logistics profession as an operative work e.g. warehouse picker or truck driver resulted in completely overlooking logistics and supply chain by next generations and new graduates. In addition, the career path and compensation in logistics and supply chain might not be recognized by many of the next generations. Also, the immense talent gap in this field might not be well communicated in the job market.

3. Talent gap - Experience vs. qualification

Most of current logistics and supply chain leaders do not have qualifications in logistics and supply chain. They lead and manage their supply chains mainly based on their professional experience - skills they developed over time. Experience could be limited to skills and knowledge developed in a certain job or activity.

This is no longer sufficient. The current supply chains leaders are mainly, Baby Boomers (born between 1946 & 1964). They are expected to retire between now and 2029 creating a big gap of skilled logistics professionals.

The new business models supported by intelligent systems call for new knowledge and for up-skilling or re-skilling. The pace of change and transformation towards new business models is relatively fast. Timing is critical for a smooth transition and full assimilation of the complex issues – from baby Boomers who lack the digital and analytics skills, to the new talent, who lack the end-to-end understanding of supply chains.

4. Disruption and Talent Gap

Talent gap in logistics is not new. It existed long before the recent COVID-19 disruption. The pandemic only aggravated it significantly, which moved it to red zone as a High Risk source for many companies.

The highly volatile supply and demand workforce, caused by the ripple of the pandemic, created uncertainties to a changing work ecosystem and shortage of manpower, has forced a revisit current business models.

5. Digitalisation amplifies the gap

Technology is a key driver of change and is shaping the features of all industrial revolutions. That in turn forms the managerial practices and the future workforce skills needed to support digitalized businesses.

Industry 4.0 - the 4th industrial revolution has created digital systems, solutions and new work methodologies. Digital systems capture data from both physical and digital sources. Industry 4.0 and its digital solutions, disrupt workforces, widening talent gaps in many industries, also heavily impacting logistics and supply chains.

Logistics 4.0 requires new skills and knowledge. This in turn creates a new skills gap, most evident since current logistics talent is lacking in-house skill sets required to successfully deploy Ind 4.0 new technologies.

Addressing the talent gap in logistics

Three main dimensions which to consider in responding to the logistics talent gap:-

Logistics Stakeholders: A collaborative response

A need for robust communication channels among the key logistics stakeholders. Employers and Logistics leaders need to improve their job specifications and applicants' selection processes. Educators need to re-assess skills they teach and ensure alignment to industry needs. Job seekers need to improve their personal branding - showcasing their skills, knowledge and make themselves visible to employers.

Employers should work in partnership with other stakeholders including government and education institutions to upgrade learning in logistics and supply chain that allow individuals to develop the skills needed for current and future job demand. Such collaborative response is the key for the success in close skills gaps.

Logistics Career: deliver the right message to the right audience

Logistics leaders need to enhance awareness of a career in logistics, especially to the next generation employees, by delivering the right message and understanding their expectations.

Logistics leaders need to understand what drives next generation workforces' decisions about their career. This should not be limited to compensation and career path. A recent report by Gartner showed that next generations value companies with high corporate social responsibility profile. Diversity, equalities, well-being and work life balance. Gig jobs is a popular and a favoured model to achieve these expectations.

Next generation workforces value innovation, flexibility and short track progression plans. They can move from one job to another in short time to harness opportunitiesa and they are "tech savvy" .

It is challenging for them to cope with outdated systems and logistics leaders need to show by example how these new generation can be achieved as part of enhancing the awareness of the profession.

Mitigate the risk: nurture an internal talent pool

Logistics skills gap is a chief source of risk for business readiness, for change and digital transformation. Leaders need to mitigate this "talent gap risk" by conducting structured skills gap analysis for logistics and supply chain activities. This requires a collaborative response by all internal stakeholders including Human Resource department. The outcome of the analysis specifies the upskilling needs for the current workforces for training and development requirements.

This should be supported with a change management plan for the relevant logistics activities roles. To maintain the current talent pool, leaders need to foster a learning culture, promoting continuous development, internal knowledge transfer, mentoring programs and guided e-learning.

Developing in-demand skills, enhancing capabilities, and embracing technology will create a futuristic workforce that can adapt to disruption and be agile. With the industry's projected growth, it is indeed a fast-growing labour market that needs equipped, motivated, and focused individuals, the sector is set to take on challenges and emerge as winners.

Dr Shereen Nassar
Global Director
Logistics Studies

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.

Digital Frontrunners: Injecting smartness in supply chain networks

by Wolfgang Lehmacher and Dweep Chanana

Supply chains are called out for being inefficient, disjointed and full of delays. Trade tensions, Covid-19 induced supply/demand shocks and incidents like the Suez Canal blockage have pushed many logistics chains close to the point of breaking. Supply chain infrastructure seems to be at its limits, especially in the United States, and certain operational practices appear outdated. The emergence of consumers as key actors in the value chain, empowered through apps and Uberization, only exposes these fault lines further.

With so much of the discussion on the future of supply chains tied to these recent challenges, we can easily forget that supply chains have always been evolving. Today, however, the "smart" supply chain has become a necessity. Companies that can build, operate, and leverage such supply chains will define the future of logistics.

Introduction – why and what is smart?

Based on Anchor Group research there are three vectors along which supply chains can be smartened.

1. Data-driven

The first and most obvious vector is to improve operations. A smart supply chain is efficient, automated, and eventually autonomous, delivering a combination of the following outcomes.

a) Better utilization of resources: About 25% of trucks run empty in Europe. Asset utilization in such areas can be improved by moving from a static to a dynamic allocation model.

b) Increasing speed and reliability of execution: Automation of operations reduces avoidable delays and costs arising from manual effort. Time can be saved for freight forwarders, by automatically issuing a pickup notification by a carrier once a plane has landed, rather than calling the airline to check on the plane's arrival status. To implement this change will require the airline, to automatically update records through sensor-based signals or integration with flight data systems, rather than relying on manual updates.

c) Improving forecasting and decision making in uncertainty: Logistics operations works today on "judgement calls" by thousands of experienced professionals. Successful operators will be able to scale this through data and analytics – able to monitor behavior along the chain, predict issues and their impact, and use such predictions for dynamic configuration and orchestration (e.g. how a shipment should be (re-) routed to avoid bad customer experience).

Real smartness requires building all three capabilities. But smartness does not end there.

2. Digitally connected

A regularly undervalued opportunity is making supply chains "flatter". Actions in flat supply chains are more transparent and participants more connected to each other, such that organizational boundaries start to blur. Companies can unlock additional sources of revenue or go further and change or create business models.

Essentially, companies should be looking for expansion opportunities. Adding to their value chain, but also in all adjacent segments. An example is Maersk's move into e-commerce fulfillment and delivery. Digitization enables an ecosystem player to expand the scope of business and leverage resources in the entire system.

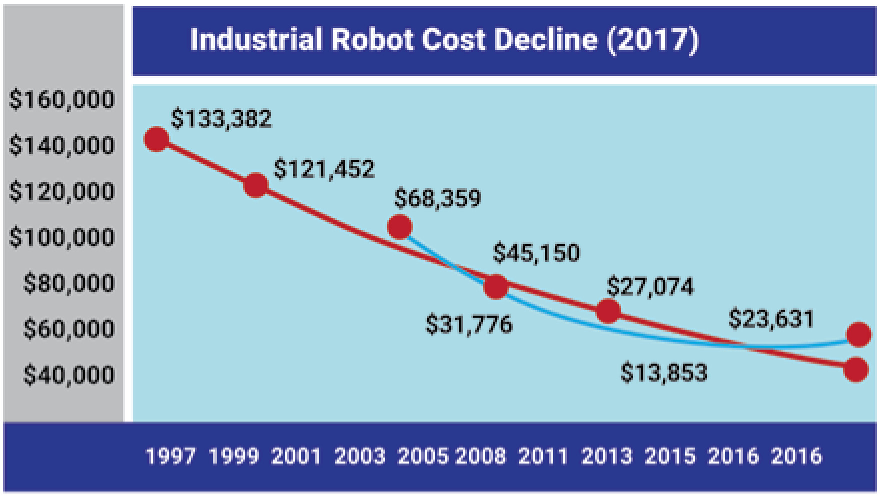


Figure 1: Industrial robot cost decline and forecast. Source. ARK Invest

3. Distributed

The growth of e-commerce has made consumer power a driving factor in today's supply chain networks. To respond to this ever-changing and ever-growing customer demand, supply chains need to be flexible and distributed. In parallel, e-commerce companies and Brands with direct-to-consumer strategies, need to leverage downstream partners to improve customer experiences. The trend manifests itself in solutions such as distributed manufacturing, distributed ledger technology, micro-fulfillment centers and edge intelligence.

Achieving Utopia - building digital players

A supply system has reached its ideal state when it can be characterized as self-aware, self-managed and autonomous. Increasing affordability of digitization and automation capabilities resulting from the exponential decline in the cost of core technologies, helps companies to reach this end-state (see Figure 1). The cost decline has improved return on investment (ROI) across a variety of logistics and supply chain activities.

Enabled by technology, Digital Frontrunners are rebuilding the industry, from two opposite angles: digital-first and incumbent-first.

Digital-first players, like Tradeshift, Flexport, or Ezyhaul, are new entrants that build their business on a digital-only view. Their digitized operations make them more efficient, agile and responsive to demand shifts, also helping their customers become more agile.

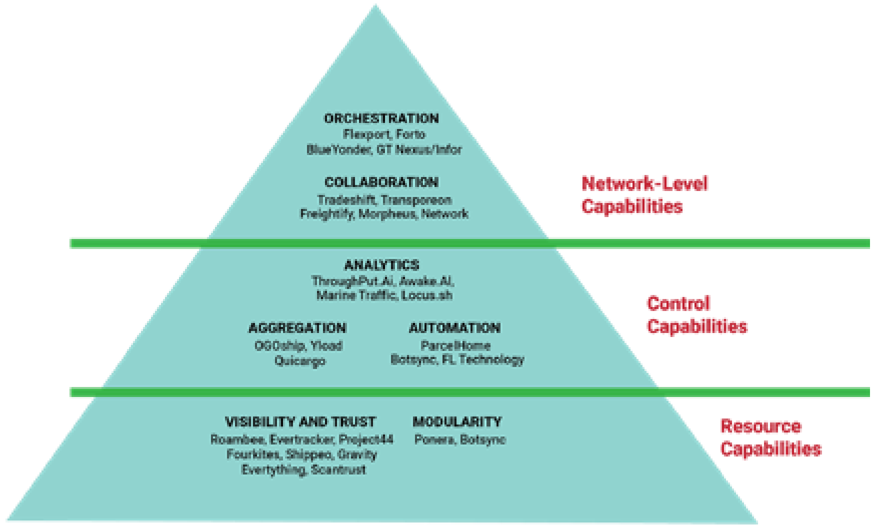
But digital-first players may reach their limits of digitization. In parallel other platforms may focus on matching demand for less complex processes, leaving more complex operations to incumbents. Others may start to resemble the traditional players they sought to replace. Thus, the digital forwarder Flexport has started to operate their own warehouses and experimented with airplane operation.

Some incumbent-first firms aim to transform into digital frontrunners. For them, it is often about improving operations – but the most successful go beyond implementing digitization initiatives in narrowly defined areas. They create new businesses that resemble digital-first players, while leveraging the extensive industry knowledge and market access of the parent – like DHL's digital freight platform Saloodo or Maersk's digital supply chain management platform Flow.

But such incumbent-first opportunities, tend to limited by operational resistance or insufficient organizational change management capabilities than by technology.

The incremental path to injecting smartness

Change usually occurs incrementally, with more and more parts of the value chain getting smarter and digital solutions co-existing with each other and humans. Injecting smartness is as much about individual technologies, as about building an eventually orchestrated digital whole. Achieving this state requires that companies know which inter-dependent digital capabilities are needed – and how they enable smartness.



The opportunities are seen in three sets of capabilities to logistics Service Providers (LSPs) Carriers and Supply Chain-driven businesses (see Figure 2).

1. Resource capabilities

Resource capabilities are requirements placed of underlying resources deployed by a digital frontrunner.

a) Visibility & trust: Knowledge of what happens at the most granular level is critical because we cannot improve what we don't see. Such situational awareness can be established in different ways, - through telematics, 3rd party data streams, or sensors. But such transparency is only as good as its quality and the trust in it. Sensor-based data offers accurate and near-real time information. Visibility data must be authenticated –product authenticity, can be ensured through immutable QR codes. Today's reality is "good enough" visibility, often derived from automated but delayed data feeds. While this improves the status quo, the risk is to automate or aggregate existing inefficiencies or take decisions on incorrect information.

b) Modularity: Companies benefit from resources that can be plugged-in / out and that can work independently or in combination. This imparts flexibility to the organization. Warehouse automation solutions can thus address several use cases, can be re-configured, and operate in a hybrid world; similarly, re-usable and modular packaging systems can replace expensive and environmentally burdensome one-time-use solutions.

2. Control capabilities

Control capabilities allow frontrunners to achieve higher-levels of autonomy and intelligence.

a) Aggregation: Aggregation within or across organizations increases logistics efficiencies (warehouses, trucks, other assets etc.)raising flexibility to respond to volatile demand. Digital 3rd Party Logistics providers aggregate storage and fulfillment capacity on national and international scale. Trucking platforms aggregate trucks. In the gig economy, we see labor aggregated through platforms.

b) Analytics: Visibility into the network allows companies to predict outcomes (with probabilities) and in turn take decisions on what should be done to minimize / maximize chosen business metrics.

c) Automation: Automated execution of (repetitive) operative or administrative tasks allows for high throughput, less errors and a better utilization of human capital for more valuable work- like autonomous mobile robots (AMRs) or sorting systems like the FL Technology electromagnetic floor. Thanks to optical character recognition (OCR) and robotic process automation (RPA) invoices are checked and payments executed without human intervention.

3. Network-level capabilities

Network-level capabilities operate across an entire organization or even across organizational boundaries.

a) Collaboration: Historically, companies have sought to remove fragmentation through vertical integration. Technologies such as document exchange, digital payments and immutable records offer an alternative path where players can co-operate more flexibly and compete more effectively with larger players at arms-length.

b) Orchestration: The effective execution of collaborative activities, whether internally or externally is the key to smartness. It enables to manage activities along end-to-end supply chains providing consumers with increased access and information and companies with more agility and resilience.

Solutions can deliver multiple capabilities. Visibility data and modularity are foundational allowing analytics, aggregation and automation to prepare the ground for collaboration and orchestration.

Conclusion

In summary, smart supply chain and logistics network solutions are data-driven, digitally-connected and distributed. They promise to improve operations and render assets more productive. They are also enablers to transform businesses. Smartness is about collaboration across ecosystems and the fruitful orchestration thereof to better respond to customer demands.

This sounds simple, but its realization requires fundamental change that starts with a grand vision and clear understanding about the required capabilities.

While digital-first players get more than their fair share of attention and investment, the industry misses two realities :- 1. we operate in a complex world – as such digital and human/manual will coexist for the foreseeable future, 2. the larger opportunity - is not in replacing the industry, but in helping the economy achieve utopia.

While a few companies, such as Amazon and JD.com, can build the “lights out warehouse”, most cannot. Thus, strategies should focus on enabling the remainder of companies to realize the promise of technology.

Wolfgang Lehmacher

Wolfgang Lehmacher is operating partner at Anchor Group. The Director Emeritus, Head of supply chain and transport industries at the World Economic Forum and former President and CEO at 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.

Dweep Chanana

Dweep Chanana is Managing Partner at Anchor Group. He was Head of Venture Investments at Momenta Partners and Managing Director at Touchstone Ventures. He also served as Director, Strategy and Business Development for Family Services at UBS Wealth Management, and led a UN financed market entry and financing program in Kenya. A telecommunications engineer by training, he worked with Lucent and Hughes.

Buzz or Benefit?

How to Deal with Blockchain as a Small Logistics Company

By Thomas Twenhöven, Kühne Logistics University and Sven Reimers, Hamburg University of Technology

Blockchain has become a much-talked-about technology in the logistics industry. After an excessive hype cycle in 2017 and a subsequent return to normal in 2018, more sober approaches to the technology are now visible. For example, retail giant Walmart is tracing produce along the supply chain from farms to stores. Shipping company Maersk uses Blockchain to exchange information about container flows with its partners. These are initiatives led by very large organizations, and both Walmart and Maersk rely on the technical expertise of IBM to build the systems, introducing another very large organization.

However, Blockchains' origins in cryptocurrency promise decentralization instead of large organizations. Furthermore, the logistics industry contains hundreds of thousands of small companies, particularly the road freight sector. This is quite a contrast to Walmart, Maersk, and IBM, which raises some questions:

Can Blockchain support small organizations in logistics? And how should they deal with this technology?

At a macro level, Blockchain seems promising for small companies in logistics. By improving digital integration, multiple small companies can connect more easily. Together as a network, they can compete with their larger peers directly. The industry and especially its smaller members have struggled with digitization so far. Not least because digitization in small organizations with many outside partners usually requires joint efforts by many actors. In a world of intense competition, such cooperation is difficult. The decentralized model of Blockchain systems could be helpful here because it enables the creation of systems without one specific operator in control of the system. While such systems are new and complex to develop, the agility of small and medium-sized enterprises (SMEs) may help in this regard.

On the other hand, successfully marketing such innovations can be quite difficult also for larger organizations. Again, we can take Walmart and Maersk as examples. While they have developed systems based on Blockchain technology, they have forced many smaller partners to join through their substantial market power, which is rather antithetical to the traditional Blockchain approach. This further emphasizes the question of how SMEs can benefit from Blockchain and how they should deal with it. Managers of SMEs face the difficult decision of either trying to implement the lofty ideals of Blockchain or ignoring the technology, potentially at their peril.

Understanding this area is the goal of the research project "ChainLog." It began in 2020 as a cooperation between the Hamburg University of Technology and Kühne Logistics University. ChainLog consists of a qualitative and a quantitative empirical study and aims to understand the applications and opportunities of Blockchain in logistics for SMEs. We aim to explore the specifics of implementing Blockchain in logistics, rather than potential use cases

and other more theoretical considerations. In a first step, through expert interviews, we have identified three typical roles SMEs can assume. They describe the attitude of a company towards a particular Blockchain implementation project. An overall company strategy around Blockchain consists of multiple such decisions. In particular, we have identified the roles of Observers, Cooperators and Service Providers. They are described in the following and the implications of assuming a specific role are summarized in the table.

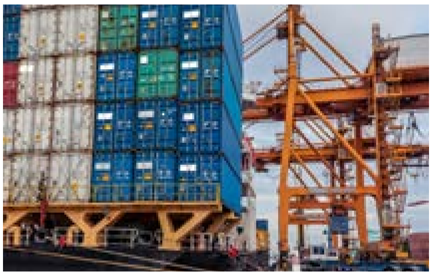
The Observer is not an active participant in a Blockchain project. Instead, they observe the development process from a distance and adopt a finished solution. In doing so, they can capture the upside of Blockchain technology without incurring the costs and risks of creating such a system themselves. Furthermore, observers do not influence the development of the respective systems, thus forcing themselves to adopt the standards set by others. The SMEs involved in the projects of Walmart and Maersk (among others) are in a similar situation. They were mostly uninvolved with development and adopted the finished systems developed by IBM. Most notably, Blockchain adoption may not be voluntary when it occurs in the context of pressure from a very large partner. Observers also differ in the intensity of their observation. Some observers essentially ignore the technology, while others actively seek for information and discussions with existing projects.

Cooperators take this active role further. They actively participate in setting up and advancing a Blockchain project. They contribute financially with their domain knowledge and IT capabilities, depending on what is available in their company and needed in the project. They actively shape the Blockchain system according to their needs and further their understanding of Blockchain technology. Cooperators differ in the extent and type of their contributions since not every participant needs to contribute everything. Still, the project ultimately requires sufficient contributions in all these areas. Often, the logistics companies involved in the project draw on cooperators from the IT industry, who work alongside the logistics companies as partners. Both start-ups and established IT providers in the logistics field looking to add Blockchain capabilities to their

	Observer	CooperatorS	ervice Provider
Project Learnings	Learned few techniques, just how to connect to a blockchain	Many insights into governance, technology and organizational structure	Many insights into governance, technology and organizational structure
Risk of Project Failure	Low risk, since the observer is only integrated	Moderate level of risk, only the deployed resources are affected	Moderate level of risk, only the deployed resources are affected
Design Options	Little influence, cannot influence the existing system	High impact on the design of the blockchain solution and the participants of a project	High impact on the design of the blockchain solution and the participants of a project

portfolio may take on this role.

Service Providers take this IT focus further. Instead of working on a project as an equal partner, they are hired (and paid) to support a project. They depend on third parties



to engage them and often act as Blockchain evangelists as part of their business development activities. They are usually involved when other partners lack IT capabilities or Blockchain-specific knowledge and have decided to acquire it externally. Their sponsors cannot often internalize the technical knowledge developed in the project and continue to depend on the Service Provider. While this is understandable from a traditional business perspective, it introduces a difficult dynamic into a Blockchain system. When the Service Provider controls a system through a technical role or a knowledge monopoly, the system is centralized. However, such an exclusive position is an attractive position for the Service Provider.

The different role descriptions highlight the difficulty inherent in building a decentralized system. Service Providers can easily become a new intermediary, which Blockchain promises to replace, and powerful companies may force many SME partners into an Observer role. Thus, Cooperators may seem like a superior option. However, powerful partners can also force Cooperators into a different project. Further, cooperation requires substantial resources (in money and time), and the project may well fail. Successful technical developments can still fail to gain market traction. Meanwhile, Observers only face projects that finished successfully and have presumably received some attention in the market (thus attracting the observer), and Service Providers are paid regardless of the outcome. However, Service Providers are still exposed to the success of Blockchain in general – if the technology is not deployed anywhere, customers will be difficult to find.

At the company level, a well-informed strategy can balance these issues. Service Provision is not a realistic possibility for most Logistics companies because they lack the knowledge and organizational structure to provide IT services. Observers and Cooperators are not mutually exclusive options – a company may choose to cooperate in one or more particularly promising projects in a core area and observe other initiatives from a distance. Discussions with supply chain partners can prevent the unexpected appearance of Blockchain projects where participation is essentially mandatory and may yield new opportunities for cooperation instead.

All in all, managers face a difficult issue with Blockchain technology. We have identified different roles for individual projects and proposed an overall company strategy for SMEs in logistics. Building on these roles, SMEs can evaluate whether a specific Blockchain project they want to start or are asked to join is only a buzz or provides tangible benefits to their business model.

The ChainLog IGF Project (20951 N) has been funded via the German Federation of Industrial Research Associations (AiF) by the Federal Ministry for Economic Affairs and Energy on the basis of a decision of the German Bundestag and on behalf of Bundesvereinigung Logistik (BVL) e.V. (German Logistics Association).

Thomas Twenhöven
Kühne Logistics University

Thomas Twenhöven studied industrial engineering at the Berlin University of Technology and is currently a PhD candidate at Kühne Logistics University. His research concerns applications of Blockchain technology in Supply Chain and Logistics. Beyond ChainLog, he has participated in the HANSEBLOC research project, prototyping a Blockchain platform for logistics operations.

Sven Reimers
Founder & Chief Executive Officer
LBB International

Sven Reimers studied logistics at the Hamburg University of Technology and is currently working there as a research associate at the Institute for Business Logistics and General Management. His research interests focus on the adoption of Blockchains by SMEs. Beyond ChainLog, he has participated in the Release Order based on Blockchain (ROboB) research project, building a prototype for the Port of Hamburg.

THE GREEN CORRIDOR

Packing for the Future

by Timothy Foote - Founder of SUSYMBIO

Have you seen the video of an innovative way to pack a suit in a rolled-up cardboard tube (https://rollor.com/) that's been circling among the logistics crowd on LinkedIn? I must admit, new ideas on how to package anything more efficiently (and better yet, sustainably) is like catnip to me, a self-proclaimed tree-hugging logistics nerd. In this particular video, the company offers a seemingly simple but sturdy method to ship a suit jacket wrinkle-free! Unfortunately, while I am impressed with the rolled-up cardboard tube and it is more environmentally friendly than plastic and Styrofoam packages, it likely will still end up in a landfill or incinerator somewhere.

The pandemic expanded the e-commerce and food delivery markets in unprecedented ways. Many consumers will likely continue to be loyal e-commerce shoppers even after the pandemic. This may be good news to e-marketplaces and logistics companies that support e-commerce, but mountains of packaging materials that go with every shipment are wreaking havoc on our planet.

The Singapore National Environment Agency calculated that in 2020, 1.14 million tons of paper and cardboard waste was generated (Singapore population of 5.45 million). This represented a 13% increase over 2019, as a result of home deliveries. Unfortunately, only 38% of this paper and cardboard waste is recycled. For plastic waste, the level of recycling is even worse at only 4%!

In a fully functioning circular economy, all packaging wastes should be recycled or re-used. To achieve this, more investments in recycling processing systems are needed, a fact the Singapore government is aware of and has made plans for this. But in the meantime, there is a pressing need to make and use packaging that can be recycled to begin with.

I recently watched a panel discussion on "Circular Economy" featuring speakers representing the private and public sectors in Singapore, as well as experts from high-recycling countries. A concept really hit home for me: the mandate that companies have "extended producer responsibility" for the products they manufacture and the packaging they use. By making manufacturers responsible for the full life cycle of their products, they might be motivated to consider more sustainable material options in their manufacturing.

Another big takeaway from the discussion was that, the most successful way to increase the recovery of packaging and products is by incentivizing consumers to do some of the work - example, a deposit return principle. This encourages consumers to return packaging to designated collection points, in return of their deposits. It been proven as the best means for companies to retrieve their packaging in one place so they can more systematically collect and process them for reuse.

This will make for opportunities in our sector. Not only will there be the initial delivery, but services to retrieve the products and the packaging will be a value-added offer. I see two ways logistics service providers (LSP) could capitalize on a circular economy:

1. LSPs can partner with packaging vendors that use sustainable materials and offer both packaging and logistics services to their clients.

2. LSPs can design and propose a "package recovery" product for their clients. This could be done by the LSP itself or outsourced to a trusted vendor whose service can then be folded into the package recovery program.

Beyond trucks, ships and all other hardware, logistics can be seen as a solutions services industry. As cities and communities move toward the circular economic model – it is critical for our industry to consider how we can be part of it to contribute and to benefit from 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.

COP26 and the Real Economy: Climate Change Solutions at and beyond Glasgow

By Aron Cramer, President and CEO, BSR

As many of us prepare to descend on Glasgow for the once-delayed, badly needed COP26, the world is facing serious questions. While it may be hyperbolic to say that these next two weeks represent the "last chance" to avert climate disaster, the urgency of action is blindingly clear, as the UN's declaration of a Code Red for humanity makes clear.

At the core of this COP, and indeed all our collective efforts to maintain a stable climate that sustains humanity, is this dilemma: actions and commitments continue to increase, but the trajectory of the planet's warming is headed in the wrong direction. Breaking this dynamic is objective number one in Glasgow and is very much worth navigating the welter of COVID-19 precautions adding a layer of complication on top of what is a highly complex event to begin with.

Here are four things we want to see emerge by the time this COP ends on November 14.

Raise Ambition

First and foremost, it is essential that we continue to expand ambition: An explosion of net-zero commitments has been made since Paris, an idea that remained at the fringes in 2015. More than 3000 companies have now committed to net zero before mid-century, including one-fifth of the world's largest companies. More than 130 governments—representing 61 percent of global emissions, 68 percent of global GDP, and 52 percent of the global population—have made comparable commitments. The Race to Zero is one of the centerpieces of voluntary action in Glasgow, which is assembling commitments in several hard-to-abate sectors. What's more, there are nearly 2,000 companies that have expressed support for science-based targets. Many governments are coming to COP with strengthened nationally determined contributions (NDCs). Investors are making commitments through Climate Action 100+, adoption and use of the TCFD framework, and other means. The ambition loop must continue—and expand.

Translate Ambition to Action

All this is crucial, to be sure. But it is far from sufficient. The science tells us that we are not yet turning the corner. It is well past time to translate ambition into action. Doing this means setting not only 2050 targets, but also 2025 objectives, which are measured and reported transparently. As one article put it, a 2050 pledge is "six CEOs from now," meaning that long-term commitments may not lead to necessary changes. Ensuring that commitments deliver tangible, meaningful results requires not only changing business models, products and services, and incentives, but also an urgent call for strong policy solutions. This continues to lag, not least on the part of many companies and trade associations in the US recently, with insufficient support (albeit with some exceptions) for the climate provisions of President Biden's Build Back Better legislation.

Finance the Transition

It is also essential that governments keep their Paris promises on climate finance. Some governments—Germany, for example—have done exactly that. But far too many have failed to do so. This is a matter not only of justice, but also of generating the widespread support required for transformative global action. The need could not be clearer. We have learned the painful lessons of the financial costs—let alone the devastating human costs—of the global pandemic. In the wake of COVID's destruction, it is therefore sobering to see The Lancet, one of the world's foremost medical journals, call climate change "the defining narrative for human health." The fact is that the human costs of climate change come along with financial costs, which also makes clear that climate finance is an investment that will pay off. Business has unique credibility in making the economic case for such investments; it should use its voice to make sure governments make good on their pledges—at long last.

Bring Climate Justice to the Fore

My strongest hope for COP26, however, is that it will be a turning point towards a more just and inclusive world as we go through the energy transition. Climate justice has too often been relegated to the sidelines at COPs—and beyond. We have seen such changes before. At Paris in 2015, very few companies or political entities had committed to net zero; today, it is rapidly becoming commonplace. Can the same dynamic be embraced on climate justice? Of the 3000+ companies setting net zero aspirations, how many have included commitments to climate justice? BSR's estimation is that the numbers are closer to 1 percent than even 10 percent, let alone 100 percent. As the treatment of climate finance shows, there is insufficient public investment in investing in inclusive climate solutions. In a world that is brutalized by extreme weather with increasing frequency, it is indefensible not to make climate justice a priority.

The Challenge Ahead

The world is facing a serious test at a time when international cooperation and democratic institutions are under significant pressure. There is also great cynicism about whether the many commitments made by business and government are more than empty words. It has never been the case that any COP could turn the world in the right direction. Many of the exciting partnerships, investments, and innovations that we need happen far from the COP "Blue Zone" where the negotiators trade text.

The world outside COP relies on commitments inside COP, but the work to make good on those commitments happens in "the real economy" the rest of the year. With ongoing ambition, resolute pursuit of that ambition, the right level of investment, and a focus on climate justice, we can turn this into a catalyst that shifts the economy in the right direction.

Aron Cramer
President and CEO, BSR

Aron is recognized globally as a preeminent authority on sustainable business. In addition to leading BSR, which has grown substantially throughout his tenure as President and CEO, Aron advises senior executives at BSR's 300 member companies and other global businesses and partners on the full spectrum of social and environmental issues.

Making Last-Mile Delivery Sustainable

by Parcel Monitor

The logistics and transport industry is one of the largest contributors to global carbon emission, which last-mile delivery falls into. In a time when consumers are becoming more environmentally conscious, ensuring sustainable last-mile delivery is now more critical than ever for retailers and logistics companies.

In our latest panel discussion, we sat down with sustainability logistics experts to hear how they are making last-mile deliveries more sustainable. The discussion was moderated by Zsofia Agnes Nagy, Freelance Supply Chain Adviser, and was joined by:

• Bernard Wiley, Head of Logistics, Who Gives a Crap

• James Atkinson, Sustain ability Programme Manager, DPD Ireland

Putting a price on carbon

Carbon dioxide is a key greenhouse gas that drives global climate change. From product manufacturing to delivering it to customers, each process leaves behind a carbon footprint. Almost every delivery vehicle that you find on the roads today is diesel-powered.

A great initiative that many companies have adopted, including both DPD Group and Who Gives a Crap, is to put a price on carbon. Since carbon is now registered as a cost to the business, companies would find ways to reduce emissions to reduce operating expenses. Evaluating the cost of carbon incurred in deliveries can help to build accountability and incentivize.

Going electric

Many logistics carriers today have started replacing diesel-powered delivery vehicles with electric vehicles. DPD Group, for one, has set aside 200 million euros to decarbonize, improve their entire operation, and reduce emissions.

James from DPD Ireland shared that there is still a challenge with proving the cost-effectiveness of electric vehicles, however, even with the total cost of ownership model. With electric vehicles (EV) still being at a relatively nascent stage of development, the company still finds it difficult to derive the cost savings of electric vehicles, especially so for the larger delivery vans. Nevertheless, this will change over time as the EV market and technology matures.

From a retailer's standpoint, Bernie from Who Gives a Crap shared his struggles in achieving carbon-negative last-mile delivery in a country where logistics partners have not rolled out electric vehicles. Even if retailers purchase these vehicles by themselves, there is also an infrastructure challenge where there are no charging spots within the country.

Sustainability in reverse logistics

With online purchases, there is a higher chance of customers returning the products since they have not seen or tested them in person. Although the returns process is in itself not sustainable since there will be more packaging waste, logistics carriers can still put in place a more sustainable process to alleviate the impact on the environment.

One great example that DPD has already done is to ensure that the returns process is efficient. Since returns tend to be less urgent, James shared that they would fully utilize delivery trucks that are already heading towards the same destination to fulfill return orders; this reduces and

Looking ahead

More logistics carriers today have realized the importance of having sustainable practices and they are striving towards becoming carbon negative in the next five years. With so many innovations happening, will carbon-free be the future of logistics?

This is the second part of a three-part series summarizing the key takeaways from our panel discussion. If you didn't manage to catch the first part of the series, you can read it on our LinkedIn Page here. Follow us on LinkedIn or join our community if you don't want to miss out on the next article.

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Parcel Monitor is the leading platform for e-commerce logistics insights. By leveraging on our data capabilities, Parcel Monitor creates an open space for the ecosystem to discover, collaborate, and innovate.

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