

LogiSYM

The Magazine for Supply Chain Executives

APRIL 2024

**NAVIGATING THE
FRONTIERS OF LOGISTICS
AND SUPPLY CHAIN
MANAGEMENT WITH
GENERATIVE AI**

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**TECHNOLOGY EMPOWERS
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IS AI GREEN?**

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Navigating the Future: Harnessing Technology and Sustainability in Supply Chain Management

In the realm of logistics and supply chain management, technology serves as a catalyst for progress. From advanced analytics to Internet of Things (IoT) devices, every innovation holds the potential to improve if not revolutionise the way goods are sourced, manufactured, and delivered. At LogiSYM, we identify and share the myriad ways in which technology empowers supply chain professionals to streamline operations, enhance visibility, and respond swiftly to market demands. In this issue, every article has AI in the title and this just goes to show how much interest there is in this nascent area.

As we traverse the frontiers of logistics and supply chain management, the emergence of Generative AI presents an unparalleled opportunity for optimisation. By leveraging the power of machine learning and predictive analytics, Generative AI equips organisations with the foresight to anticipate disruptions, optimize routes, and minimize risks.

In our journey toward sustainability, the intersection of artificial intelligence (AI) and environmental consciousness takes centre stage. While AI holds the promise of enhancing operational efficiency and reducing waste, questions arise regarding its ecological footprint.

As we embark on this journey together, let us embrace technology as a force for positive change, harnessing its potential to create a more resilient, efficient, and sustainable supply chain ecosystem. At LogiSYM, we are committed to guiding you through the evolving landscape of logistics and supply chain management, empowering you to navigate the future with confidence and clarity and I hope to see many of you at LogiSYM Asia Pacific and LogiSYM ColdChain in May.

Raymon Krishnan, FALA, FCILT, CLP

President

The Logistics & Supply Chain Management Society

P.S. A good part of this month's message was generated using Chat GPT. Can you tell the difference? 😊





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LogiSYM

Navigating the Frontiers of Logistics and Supply Chain Management with Generative AI

Feature Article by **Dr Shereen Nassar** Global Director of Logistics Studies and Director of MSc Logistics and Supply Chain Management Suite **Heriot-Watt University Dubai**

Logistics and Supply chain management is a fast-paced industry that demands constant innovation. It plays an integral part in the success of any business. In the rise of digital transformation, Generative Artificial Intelligence (AI) is emerging as a game-changer for optimizing operations and enhancing efficiency. According to a recent survey conducted by McKinsey in 2023, about one-third of companies are now using Generative AI across at least one of their business functions. The study shows the sectors in which Generative AI has the potential to readily make a positive impact including customer service, operations process optimisation, production planning and scheduling, quality control and inspection, and inventory

management. A report on the statistics of ChatGPT and Generative AI in business (2024) showed that in the near future, approximately 72 per cent of companies plan to increase their investments in the integration of Generative AI into their existing business processes. This innovative technology can be deployed in a variety of ways by businesses and can have a wide range of benefits.

Cutting-edge technology streamlines processes and transforms how businesses predict, plan, and respond to rapid market changes. The development of Generative AI, a subset of AI that creates new content, including images, text, and algorithmic content, has found its niche in the supply chain management sector. A Generative AI system generates forecasts, optimises

routes, and even designs optimal warehouse layouts based on sophisticated algorithms and a large data set. Businesses can thrive in an increasingly competitive landscape by using this transformative technology to reframe traditional supply chain practices. The Generative AI market in supply chain management is experiencing rapid growth. It is estimated that between 2023 and 2032, the market will grow at a compound annual growth rate of about 45.62 %, reaching around USD 12,941.14 million in 2032 as opposed to USD 301.83 million in 2022. It is clear from this growth that there is confidence in Generative AI's capability to enhance supply chain operations as a whole. It is evident from these statistics that Generative AI can be a principal factor in supply chain transformation. Business operations are rapidly adopting these technologies and over the next decade, the market is expected to grow at a significant rate.

The use of Generative AI brings several benefits to logistics and supply chain management.





Improving forecasting accuracy & optimising inventory - By analysing historical data, market trends, and previous forecasts, Generative AI can improve the accuracy of market forecasts and generate more accurate predictions of demand. A business is able to optimise inventory levels and reduce stockouts by being able to forecast consumer behaviour with greater accuracy and predict market fluctuations more accurately. By doing this, businesses can cut down on excess holdings, prevent overstocking, and improve the flexibility of their supply chains by limiting their excess holdings. As a result of this technology, it is possible to determine which distribution and warehousing methods are most cost-effective while considering lead times, transportation costs, and changes in demand.

Enhanced decision making - Through the use of Generative AI, businesses will be able to make business decisions

based on data in real-time. Having access to real-time insights allows organisations to be more resilient and react quickly to changing conditions and address potential supply chain bottlenecks proactively, allowing them to adapt to changing conditions swiftly as well.

Optimised Resource allocation - Using Generative AI, businesses are able to reduce costs and maximise their efficiency by dynamically generating optimal routes for transportation and distribution. By using this technology, supply chain networks can be redesigned in such a way as to achieve optimal performance and reduce waste. In a recent study by Forbes (2023), it was reported that, by 2026, more than half of the world's largest manufacturers would leverage artificial intelligence to redesign their service supply chains. This will guarantee the availability of the right spare parts in the right places at the right time, preventing three-

quarters of problems from causing failures.

Personalised customer experience - Generative AI can be used to analyse customers' preferences and behaviours so that products and services can be tailored to meet their preferences. As a result of offering customized recommendations and promotions, businesses can increase their customer satisfaction and retention by enhancing their customer experience.

Although Generative AI can add significant value in managing logistics and supply chain management activities, its implementation encounters several challenges.

Data quality and availability - Accurate predictions are based on the quality and quantity of data. In order for Generative AI to achieve accuracy, it needs to have vast amounts of high-quality information. Organizations with dispersed systems and

siloes data can face significant challenges when it comes to ensuring data integrity and availability.

Transparency and Interpretability - The complex algorithms that make up Generative AI can lack transparency at times, causing stakeholders to doubt how decisions are made, and making it hard to understand their effects. To build trust and acceptability within the organisation, it is crucial to ensure that AI-generated insights are interpretable and can be used in various ways.

Integration with existing systems - It can be very complicated and disruptive to integrate Generative AI into existing supply chain systems and processes. To maximise the benefits of this technology, it is imperative that seamless integration and compatibility with legacy systems are ensured so that the technology can be used effectively.

Legal and ethical considerations - The development of AI that uses Generative algorithms has raised ethical concerns regarding data privacy, bias, and accountability. As a result, businesses must navigate these ethical dilemmas carefully in order to ensure that AI is used responsibly and ethically in the management of their supply chains.

To conclude, there is a wide range of benefits and challenges associated with the use of Generative AI in supply chain management, which presents a multitude of



opportunities and challenges for organisations that want to optimise their operations and remain competitive even in today's dynamic marketplace. Utilizing Generative AI as a platform for growth, innovation, and efficiency in their supply chain processes will enable businesses to unlock new opportunities for growth, innovation, and efficiency in their operations.



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Dr Nassar's main research interest is sustainability and supply chain resilience. She has published a number of 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.



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DP World Accelerates Growth in South Korea with US\$ 50 Million Investment in Busan New Port

DP World Busan Logistics Centre will bolster the Busan-Jinhae Free Economic Zone's ambitions of becoming a hub for international business and logistics

Busan, South Korea, 15

March 2024: DP World has announced a US\$50 million (approximately ₩66 billion) investment to develop a new logistics centre in Busan New Port, strengthening the port's position as a logistics hub for Northeast Asia and reinforcing the global standing of the wider Busan-Jinhae Free Economic Zone (BJFEZ) in business and logistics.

Construction of the facility in the 75,000-sqm land is set to commence at the end of 2024, with operations expected to start by the second quarter of 2026. The DP World Busan Logistics Centre (BLC) will have capacity to process nearly 80,000 TEUs of cargo per year by 2028 and offer comprehensive value-added logistics services such as

assembly, processing, and packaging to local and regional customers.

Glen Hilton, CEO & Managing Director, Asia Pacific, DP World, said: "With this major investment, DP World will be able to combine our strong freight handling and multimodal transportation capabilities with new warehousing and logistics solutions to provide customers in South Korea a more seamless end-to-end supply chain offering. The DP World Busan Logistics Centre will cement Busan New Port's position as a key supply chain hub for Asia Pacific, and thus empower local and international businesses to seize the expanding opportunity in intra-Asia trade."

Leveraging South Korea's manufacturing prowess and the BJFEZ's central position in the country's advanced manufacturing sector, the BLC plans to specialise in exports of completed automobiles, automotive parts and materials, fishery equipment, machinery and other key Korean industry outputs.

BJFEZ is the third-largest free economic zone in South Korea, with 700 million people living within a 1,200km radius. A gateway to Eurasia and the Pacific, the economic zone is developing a mega 'Logistics Tri-Port', which will span sea, air and land ports including Busan New Port, the forthcoming Jinhae New Port, the forthcoming Gadeok International Airport and the Busan New Port Freight Station with rail connections to parts of Eurasia.

Integrating new logistics centre into DP World's South Korean operations

DP World already has significant presence in South Korea. Through its subsidiary, Pusan Newport Company (PNC), it operates the largest terminal in the Port of Busan,





the world's second busiest transshipment port and one of the highest performing ports in Asia. In 2020, DP World also acquired a majority stake in UNICO Logistics, a Korean multimodal transport and rail specialist with a large footprint in East Asia, Central Asia and Russia.

As part of the US\$50 million investment, DP World will integrate operations of the new BLC with freight handling solutions from PNC and UNICO Logistics' transcontinental rail freight services.

Beyond its commercial activities, DP World also engages local communities by hosting groundbreaking sport events. Later this year, DP World Tour will make a stop in South Korea as part of efforts to help cultivate love of golf for the growing fanbase in the country.



About DP World

Trade is the lifeblood of the global economy, creating opportunities and improving the quality of life for people around the world. DP World exists to make the world's trade flow better, changing what's possible for the customers and communities we serve globally.

With a dedicated, diverse and professional team of more than 106,500 employees from 158 nationalities, spanning 73 countries on six continents, DP World is pushing trade further and faster towards a seamless supply chain that's fit for the future. In Asia

Pacific, DP World employs more than 7,000 people, and has ports and terminals in 17 locations.

We're rapidly transforming and integrating our businesses -- Ports and Terminals, Marine Services, Logistics and Technology -- and uniting our global infrastructure with local expertise to create stronger, more efficient end-to-end supply chain solutions that can change the way the world trades.

What's more, we're reshaping the future by investing in innovation. From intelligent delivery systems to automated warehouse stacking, we're at the cutting edge of disruptive technology, pushing the sector towards better ways to trade, minimising disruptions from the factory floor to the customer's door.

Technology empowers the Supply Chain

Feature Article by **Mark Millar** International Keynote Speaker, Commissioned Author, Trusted Advisor and Supply Chain Thought Leader

Technology underpins and empowers our supply chains, but needs to be nurtured for maximum effect.

The accelerating adoption of digital technologies across the supply chain is resulting in a data explosion, which needs specialist expertise to fully exploit its potential for competitive advantage.

As today's supply chain ecosystems become ever more connected, strategic and complex, they embrace a myriad of business partners, frequently spanning many countries, languages, cultures and time zones.

These ecosystems comprise profound interdependencies amongst and between the network of stakeholders, with an inherent need for information gathering and sharing across different information technology systems.

The expanding adoption of multiple technologies throughout today's complex supply chains is resulting in a massive explosion of data across the ecosystem. The ability to harness the raw power of this deluge of data – and transform it into useful actionable business intelligence – requires capabilities and expertise which may be beyond the

scope and reach of all but the largest corporations.

However, to capitalise on the opportunities for technology to underpin and empower our supply chains, it must be nurtured with application and diligence.

DIGITAL DISRUPTION

The rapid evolution of new and emerging technologies is resulting in more widespread manifestations of Digital Disruption - which is the change that occurs when new digital technologies and business models impact the value proposition of existing goods and services.

It is interesting that for the most part, digital disruption is not led by the incumbents. It emerges from outside of the established business models - everyday examples of the modern era are Uber, AirBnB and NetFlix.

Many emerging technologies have now reached the threshold of becoming commercially viable solutions, meaning that supply chains are at the forefront of experiencing digital disruption.



Companies will need to refine their supply chains, to capitalise on the data surge created to create competitive advantage.

SUPPLY CHAIN COMPLEXITY

One of the challenges of harnessing the power of technology is the complexity of twenty-first-century supply chains. The extensive portfolio of business partners in any single supply chain will undoubtedly include a wide range of information system capabilities.

Many companies will be encumbered by their legacy systems, others will be using leading-edge software tools. Datasets will be captured and collected from numerous sources throughout the supply chain and stored in a variety of different formats, ranging from the most sophisticated of IT systems to the most basic.

However, every supply chain principal needs to collect, collate and correlate these disparate data flows into a single exchange, and enable the efficient and seamless flow of electronic information throughout the ecosystem.

Microsoft Excel is by far the most widely used planning solution for supply chain professionals in manufacturing and retail, with 61.5 percent of respondents saying they use spreadsheets as their planning solution.

Meanwhile, Forbes reports that 88 percent of all spreadsheets have "significant" errors in them and even the most carefully



crafted spreadsheets contain errors in one percent or more of all formula cells—the majority of errors being caused by human error.

ENABLING TECHNOLOGIES

Key technologies that enable the proliferation of data throughout the supply chain include Cloud Computing, the Internet of Things, Autonomous Vehicle Technology, and of course Artificial Intelligence.

Cloud Computing permits cost-effective access to computing applications and storage via the internet, providing a range of services including specific software application tools, secure data storage and pure processing power.

Coupled with Software as a Service (SaaS) business models, this allows small and medium-sized organisations to use much more sophisticated IT solutions than would be available from their own modest budgets and

limited in-house expertise. Companies can substantially reduce the cost and complexity of owning and maintaining their own information technology infrastructure, both hardware and software - and the related supporting resources and technical expertise.

By utilising cloud infrastructure and software services on a pay-per-use basis, they save on both capital expenditures and ongoing maintenance costs, entrusting specialist IT services to the experts in that particular field.

The **Internet of Things (IoT)** takes advantage of the prevalent deployment of sensors and automatic identification devices throughout the supply chain, to capture and accumulate a greater range of data on a more timely basis.

Much more than just location tracking, such applications can now measure and monitor – in real-time – the temperature,



humidity, pressure, movement and vibration of products, even as they are transiting the globe, whether by truck, train, ship or plane.

Converting these vast amounts of data into useful information (which is easier said than done) empowers much better informed – and more responsive – supply chain decision-making, thus optimising the allocation of resources and enhancing overall performance.

In turn, this results in Big Data, which then enables the Predictive Analytics that can turbo-charge the effectiveness and responsiveness of your supply chain. The iterative process leverages the network effect – in this scenario also known as the Data Flywheel.

The principle of the Data Flywheel is that the more participants there are in the ecosystem (users, sensors, etc) then the more data you collect. The more data you have, the better you can enhance the learnings therefrom – for example, build better algorithms. With better algorithms you can develop better solutions or products, which in turn attracts more users into the system, thus further fuelling the rotational momentum of the flywheel.

Autonomous Vehicle Technology has many developments under trial in pilot projects; but there are already many high-profile examples in action, especially drones which have seen enormous take-up in the consumer sector.

We can expect to see more and more adoption of autonomous vehicle technologies across multiple dimensions of the supply chain, impacting the various modes of transport:

- **In the Air** – drones travelling through controlled airspace; also flying and spying within the warehouse and around the container yard;
- **On the Road** – self-driving long-haul trucks and the platooning of truck convoys
- **Across the Water** – a fleet of autonomous container ships managed centrally from a land-based control centre
- **Last Mile Delivery** – small autonomous ground vehicles, patrolling inner city roads and pavements to deliver parcels to consumers – the digital postman of the 21st century?

Commercial deployment of autonomous vehicles is no longer held back by technological developments. The remaining barriers to adoption are the regulatory frameworks governing licensing, safety and security aspects, as well as the legal responsibilities and liabilities when accidents do occur.

Artificial Intelligence (AI) is poised to have a profound impact on all aspects of business. In the supply chain sector, we can expect AI-enabled productivity enhancements across a whole range of activities, including:

- **Supply Chain Optimisation:** by analysing factors such as transportation costs, lead times, and supplier performance, AI can help identify the most cost-effective routes and sourcing strategies.
- **Supply Chain Visibility:** AI can aggregate and analyse data from multiple sources to provide real-time visibility into supply chain operations.
- **Inventory Management:** AI algorithms can optimise inventory levels by continuously analysing data on factors like lead times, supplier performance, and demand variability.
- **Demand Forecasting:** AI can analyse the huge amounts of data being generated by other related technologies to provide more accurate demand forecasts, which will help optimise inventory levels and reduce stockouts.
- **Warehouse Automation:** AI will help streamline warehouse operations, by powering robotics and automation systems to automate picking, packing and sorting activities.
- **Last-Mile Delivery:** AI algorithms can optimise last-mile delivery routes based on numerous factors including traffic patterns, delivery windows and customer preferences.
- **Customer Service:** AI-empowered chatbots can take on the first-line support, providing real-time customer service on a 24-hour basis.



AI has the potential to transform supply chain management, helping companies to lower transportation costs, reduce lead times, improve inventory availability and increase customer satisfaction.

However, a YouGov January 2024 multi-country survey of transportation and logistics companies in Germany, the UK and the USA found a significant gap in the adoption of basic data analytics and AI. Only 50 percent of transportation and logistics professionals across the three countries reported their organizations utilising basic data analytics in their operations - and just 25 percent of all respondents are making any use of Artificial Intelligence. Cost barriers, disruption to existing services and lack of know-how were quoted as the top barriers to further technology implementation.

CONCLUSION

Capitalising on the potential for technology to empower supply chains will require specialist expertise with determination and diligence,

underpinned by commitment, investment and perseverance from senior management. The digitalization journey is one of a thousand steps, the most important of which is the first. There will be challenges along the way, so perseverance and commitment are critical for success.



Mark Millar

International Keynote Speaker,
Commissioned Author, Trusted
Advisor and Supply Chain Thought
Leader

Mark Millar is an internationally renowned keynote speaker; a respected authority on supply chain and logistics; and author of the widely-acclaimed book *Global Supply Chain Ecosystems*.

A LogiSYM Thought leadership Champion, Mark leverages 30+ years' global business experience to provide knowledgeable and independent perspectives that empower executives to make better-informed decisions.

A Visiting Lecturer at Hong Kong Polytechnic University, Mark is on Advisory Boards at the Logistics and Supply Chain Management Society and the Foundation for Future Supply Chain, and serves as an Advisor to companies large and small, helping clients with their strategic growth objectives and supply chain strategies.

Hyster-Yale Group Enhances Aftermarket Capabilities in Asia-Pacific with Strategic Relocation of Parts Distribution Centre

Hyster-Yale Group, a leading integrated full-line lift truck manufacturer, is strengthening its aftermarket fulfilment capabilities in Asia-Pacific by relocating its parts distribution centre (PDC) to Johor Bahru, Malaysia. This new distribution centre will further anchor Hyster-Yale's activities in the region, as it will serve as a logistics hub for all regional distribution of genuine parts manufactured by Hyster-Yale.

Supported by global 3PL provider, Geodis, the PDC offers customers excellent first-fill rates and next-day deliveries to dealers within the region. As part of the relocation, Hyster-Yale will also introduce new streamlined approaches for parts and dealers' identification, enabling dealers and customers to have quick access to information such as pricing, availability, and technical specifications.

Tony Unsworth, Vice President of Aftermarket, Service and Fleet, Asia Pacific, India & China, Hyster-Yale Group, shared, "As Hyster-Yale becomes the choice material handling equipment provider regionally, the new location of our parts distribution centre enables our dealers

and customers to have direct and more efficient access to the parts they need. Our continued investment in logistics and services underscores our commitment to provide better service and support at reduced costs. This relocation and increase in inventory capacity is essential to our strategic growth, and we're very excited about the opportunities that lie ahead."

Hyster-Yale will maintain an extensive inventory of readily available parts at the newly relocated PDC, allowing dealers to reduce inventory costs and decrease time between ordering and receiving parts for all regional dealers. Additionally, Hyster-Yale will use a single part number for each of its genuine part regardless of where it's manufactured or shipped from. This makes it easy for all dealers to order and track parts.

The company has also introduced a new Parts Selector portal, a convenient source for competitively priced parts. All Hyster-Yale dealers will have 24/7 access to the web-based tool for parts availability checks and order status information.



HYSTER-YALE
GROUP

About Hyster-Yale Group

Hyster-Yale Group, Inc., designs, engineers, manufactures, sells and services a comprehensive line of lift trucks, attachments and aftermarket parts marketed globally primarily under the Hyster® and Yale® brand names. Subsidiaries of Hyster-Yale Group include Bolzoni S.p.A., a leading worldwide producer of attachments, forks and lift tables marketed under the Bolzoni®, Auramo® and Meyer® brand names, and Nuvera Fuel Cells, LLC, an alternative-power technology company focused on fuel cell stacks and engines. Hyster-Yale Group also has an unconsolidated joint venture in Japan (Sumitomo NACCO). Hyster-Yale Group, Inc. is a wholly owned subsidiary of Hyster-Yale Materials Handling, Inc. (NYSE:HY). Hyster-Yale Materials Handling, Inc. and its subsidiaries, headquartered in Cleveland, Ohio, employ approximately 8,300 people worldwide.



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THE GREEN CORRIDOR

Is AI Green?

by **Timothy Foote**, Director Transportation & Network APAC at **Asendia**
and Founder of **Susymbio**

Artificial Intelligence for me can sometimes seem like just a buzzword. We see this term used perhaps too often. So much so that there are now several companies using the term “artificial intelligence” or “AI” to promote the sophistication of their rice cookers. But unlike many technologies that often get eclipsed by better solutions or machines, artificial intelligence is so general that it will most certainly not disappear.

The big picture is clear. Technology is pressing forward to advance the abilities of machines to take in information and independently make decisions autonomously. That can mean potentially amazing gains for efficiency in the future.

EMPOWERING MACHINES PAST THE HUMAN MIND

For centuries now, inventors and scientists have been working to build machines that could mimic what our minds do. True autonomy though of a machine to make decisions on its own could arguably only be shown to begin with a chess playing computer game invented in 1952. Arthur Samuel invented this first computer game that would see what

move a person made and independently decide on a counter move on its own. In the 90's, headlines about the game competitions between IBM's Deep Blue computer and the chess grand masters continued to show the advances of AI technology.

Invention has since the 1950s gone way beyond checkers. The sophistication of computers that are able to learn from human experience or the environment has moved to see computers creating on their own. They are no longer simply reacting but extrapolating their own rules. This “on their own” part, is even pressing society to start defining what is human intelligence? We need to know this to be able to try and define when computers have surpassed us in working intelligence. This is not a question anymore of if it will happen, leaders in AI want to know when they can prove it has happened.



AI & SUSTAINABILITY

There are pros and cons to the current use of AI tools. This is for the most part a result of the newness of the technology. Current AI services are learning about our world, but that requires a lot of data and processing power to answer even the simplest of questions.

The use of AI tools like ChatGPT has been clearly shown to use much more data center power than a simple online search done using search systems like Google. This increased data center use means not only more electricity but also water (which is used in cooling systems). AI is, at this stage in its development, a very thirsty technology. A study in University of California, Riverside calculated that a typical conversation done with ChatGPT requires 50cl of water (the amount of a small bottle of water). If you multiplied the that one conversation times the millions happening online, then it quickly becomes apparent that tools like ChatGPT should not be simply used as a search tool.

AI use in society is not just about people chatting with

a computer though. In the logistics field, customer service tasks are more and more being done using conversational AI in combination with standard chatbots. By reducing the manpower needed to perform all of these tasks, it reduces the human made emissions associated with overall operations.

GETTING BEYOND CONVERSATIONS

Beyond languages and conversation – AI computers have always outpaced humans when it comes to calculation speed and accuracy. The ability to take in millions of points of data and predicting patterns and interactions is where AI can go way beyond our mortal capabilities. It is for this reason that a critical research area for AI tech is centering on predicting our whether.

Humanity has never been able to predict the weather very accurately past the immediate area around them for a short period of time. More accurate forecasting is probably the biggest benefit that businesses and governments can see for AI's use. Knowing the weather and having an idea on the climate in specific areas over the coming years essentially can provide societies with the ability to efficiently manage resources for optimal benefit. It can apply to all industrial sectors including the transportation and logistics sector. For example, if it can be known that an area will be short of water in the coming Summer,



then alternative water systems can be staged and setup in order to meet the coming demand.

On an enterprise level, if supply chain managers were able to see into the future, then efficiencies for warehousing, transport and commodity costing would allow for better planning and execution. There would be in theory higher utilization of existing resources and therefore less emissions generated from inefficiencies.

AI IS EVOLVING FASTER THAN WE ARE

In the last 70 years, the computer technology has gone from the ability to play checkers to replacing humans in dealing with customers. The speed of adapting AI and of AI decision making itself is getting more efficient every year. Our human brains in comparison have stayed in the same basic design for at least 35,000 years. Humans live by the rules of biology, where computer science and technology have the benefit to continue to evolve. For this reason, I'm guardedly optimistic about the possibilities that AI can have.

Currently, AI machines are constrained by the limits

of human ingenuity of programming and human centered observation and knowledge sets. In the near future though, will the computer's ability to learn and build create a completely different and unique brain of its own? If so, may be it will be able to come up with solutions that we desperately need to save and maintain our planet from irreparable damage. We must all keep an eye on how and where it is developing.



Timothy Foote

Director Transportation & Network APAC at Asendia and Founder of Susymbio

Tim has worked in management positions at multiple MNCs for more than 25 years, gaining expansive expertise in logistical operations. Tim continues to craft delivery solutions for many e-commerce clients at Asendia. Once a regional Head of Go Green at DHL eCommerce, Tim now works for customers to decarbonise their logistics by managing Asendia's 100% carbon-neutral network.

To further promote a net zero future for the logistics industry, Tim created MOVE GREEN. This is a movement committed to greening the logistics industry during this time of transformation. Please join the companies making a pledge to become net zero by going to [Susymbio.com](https://susymbio.com) for more details.



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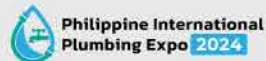
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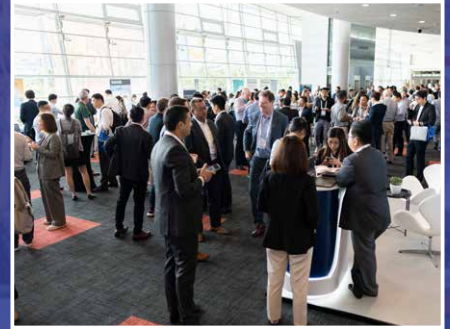
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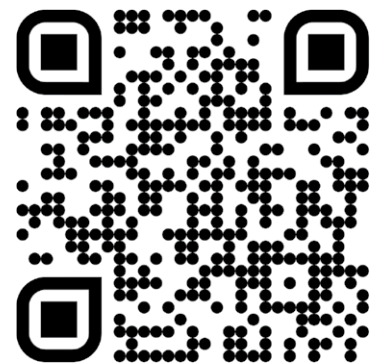


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