

LogiSYM

The Magazine for Supply Chain Executives

MAY 2023

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EXPORTS FROM RWANDA**
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.... How are the complexities & diversities of our supply chains helping us to innovate.... ??

Dear Readers,

Creativity and innovation are generally at their peak when there is a need to find urgent solutions to issues. Innovating existing processes and the way we do things, often requires leadership courage to engage in new and untested methods. And herein is where lies the problem. Trying new and uncertain ways of doing things, usually has connotations of failure. And failure is something we all try to steer well clear of. But without some degree of failure, will never be able to successfully innovate nor leverage the organisation's creative potential.

However, the many complexities in our supply chains have forced us to look at things differently and take a fresh path to apply new methods and processes. It may be hard to persuade our colleagues and superiors to do so, but when the change has been met with success, everyone enjoys the credit. So why are we so fearful of failure and how can we ensure that we can minimise the possibility of failure to reach our ambitions?

The answer lies in how resilient we really are as individuals and in how we behave within the organisation. Whilst everyone aspires to achieve great things, often this means trying to do things the way we know and accepting little input from others. This in fact is the 1st step to failure – thinking that we know it all!

Complex issues cannot be solved with singular dimensions alone. We do not have all the answers and solutions, no matter how experienced or well-qualified we are. But accepting opinions, inputs and diverse views from those around us, is the 1st step towards achieving success and which moves us closer to fulfilling our aspirations. Such a mindset will strengthen our resilience to confronting failure, strengthen our approach to accepting views from sources and thinking likely different to ours and

opens new opportunities to collaborate and engage better.

The outcome of being cognisant and embracing the diversity of ideas, feedback and methods will make us less likely to fail as well as make us more agile, more collaborative and appreciate better those around us. This is how we can overcome complexities and risk, enabling us to innovate our supply chains of the future - Growth Mindset.

Our theme for May is Agricultural and Food Logistics – Humanitarian & Agri-food supply chain. This topic in itself presents many challenges and complexities. To address these challenges, we truly need new thinking and a new mindset in designing and supporting our food supply chains. As we can all see, food prices are rising monthly at unsustainable rates, even for rich nations. Whilst many of us focus on industrial and commodity supply chains, the biggest impacts in the food supply chain are even more critical for us all – a call to action.

I hope that you find our feature articles in this edition both interesting and helpful and spare a thought for what we can do in the humanitarian & agri-food supply chains

We are always happy to hear your views and welcome comments on our content and your feedback would be most appreciated – we look forward to receiving your feedback at info@lscms.org and to seeing you at LogiSYM Singapore 2023.

Joe Lombardo
Editor-in-Chief
LogiSYM Magazine



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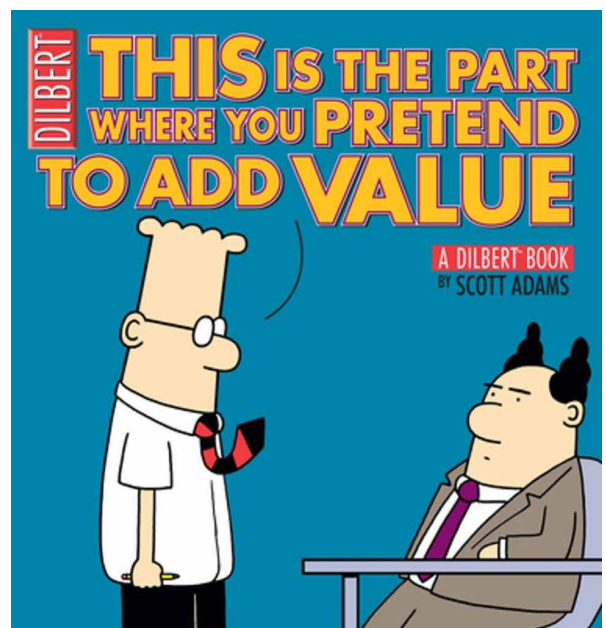


Are you part of the solution or part of the problem?

I wrote in my message last month about supply chain professionals and business leaders having a 'case of the wobbles'. I have been on the road quite a fair bit this month and meeting with logisticians and business leaders and as we emerge into that better normal we are hopeful of, as COVID is something most are learning to (cautiously) live with, I am also starting to see many of us reverting to our pre 2020 thinking and behaviours. We as human beings have short memories so it should not come as a surprise and of course it is always easier to revert to the tried and tested habits of the past - as opposed to breaking away and trying something different.

Unfortunately though much of what we do or do not do as Logisticians really needs to change. This we can all agree with but one of the debilitating challenges to any supply chain transformation process is having stakeholders who do not add value and perhaps even worse, sabotage the efforts we are trying to make to improve a process. I was reminded of this when someone gave me this book by Dilbert. Originally released in 2008, I can so relate to many of the stories in the book. It served as a good reminder to me and I hope I help drive home the same message in this month's editorial.

We can do better. Let's be part of the solution and not be part of the problem.



Raymon Krishnan, FALA, FCILT, CLP
President
The Logistics & Supply Chain
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Going The Extra Mile: How DP World's DUBUY.com is Boosting Coffee Exports from Rwanda

Feature Article by Mike Bhaskaran, Group Chief Operating Officer, Digital Technology for DP World

DP World's e-commerce platform DUBUY.com played an instrumental role in enabling local coffee farmers in Rwanda to export their coffee beans around the world, by providing them with simple, yet effective solutions to their packaging issues.

SUPPORTING LOCAL COMMUNITIES

Since starting the operation back in 2000, with 300 coffee farmers, Dukundekawa coffee, part of Africa's Fine Coffee Association, has now grown to a 1,900-strong farming community. Starting from scratch with a minimal amount of land, the community now grows its beans across 400 hectares, as the farmers take

care of the crop to ensure the finest beans of the highest quality are produced.

As a staple of the community, Dukundekawa now owns a dry mill and three wet mills (Ruli, Mbilma and Nkara) and the local farmers take immense pride in creating the perfect cup of coffee, from farm to table.

Grown at altitudes of 1,800 – 2,200 metres above sea level, the coffee beans themselves are unique and distinct. Extremely flavoursome with bold undertones, the coffee is described as exceptionally lively, with subtle, floral tones that lead into fruit notes of grapefruit and stewed apples. As an after-taste, the coffee

even has a hint of vanilla and cinnamon. Indeed, it is these innovative pairings that have seen the company recognised for several awards.

Whilst the coffee beans have become well-known in Rwanda and have been enjoyed by many, the coffee farmers, wanted to take their coffee beans to the next level. Fuelled by their previous successes, the farmers wanted to export the beans outside of Rwanda, so that coffee-lovers around the world could enjoy a delicious cup.

FACING CHALLENGES

From a supply chain perspective, there existed a seemingly unsolvable problem. The farmers of Dukundekawa coffee, were struggling to export their coffee beans out of Rwanda. What they faced was that by the time the coffee beans had reached their destination, their quality had deteriorated and this meant they could not be used or sold on.

There was nothing wrong with the coffee beans themselves or the way they were being shipped. The issue lay in the packaging being used. Because



it was not air-tight, the coffee beans were disintegrating during the journey, which meant they were ending up at their final destination in poor condition.

The local farmers needed to find a way to transport their coffee beans in packaging that ensured their quality – keeping the beans fresh, air-tight, and at the optimal temperature to ensure the coffee would arrive in the best condition for consumption.

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IT'S ALL IN THE PACKAGING

The solution to their problems was perhaps closer than the farmers had first thought. Dunkundekawa Coffee was featured on DP World's global wholesale e-commerce platform, DUBUY.com. After hearing of the issues the farmers were facing, DP World recognised they could support in helping to find a solution to the local farmers' packaging issues.

After discussing the problem with several different companies to source sustainable packaging that would be fit for the task, they identified Swiss Pac, a leading manufacturer of sustainable packaging based in the United Arab Emirates. DP World wanted to show the local coffee community in Rwanda that they can go the extra mile - supporting their growth journey through technology and innovative ways of working.

When DUBUY.com approached Swiss Pac with the idea of creating customised packaging to support the coffee farmers, they were very receptive to the idea. This initiative was a first for all involved, with the UAE packaging firm never having worked with buyers in Rwanda before. Through the connection made by DP World, both parties were able to communicate, cooperate and create a customised product to help solve a specific issue.

SUPPORTING TRADE FLOW

After going through a number of different options in packaging and trialling many different types, the local farmers placed an order of the customised coffee bags with Swiss Pac via DUBUY.com. Once they went through rigorous testing, they decided on a design. After discussions over the look and feel of the branding they landed on the name Dukundekawa Cooperative and then coffee were born; they were ready to go to market.

Once this had taken place, the same SKU was then put back on DUBUY.com; so the process went full circle, with the local farmers starting as buyers on the platform, now also becoming sellers of the finished product. This was a major milestone moment for the local coffee farmers to celebrate; now the opportunities for their coffee, which until this point were restricted to only being consumed in Rwanda, were infinite. This meant that they could trade their coffee beans around the world with ease, thanks to the support of



DP World and its e-commerce platform DUBUY.com.

ACCELERATING TRADE VIA TECHNOLOGY

One of the reasons for its success, was that the team at DUBUY.com were able to quickly and simply provide visibility of the coffee, via its 'online shop' and via its market accessibility. The rebrand also helped just as much as the packaging itself – it meant that the refreshed brand was appealing to an international market, which ultimately helped the coffee beans to stand out on the global stage.

Through DP World's DUBUY.com platform, the *Dukundekawa Cooperative*, has been able to expand its operation and sell its coffee internationally, supporting the livelihoods of over a thousand farmers who work on the land.

FROM FARM TO CUP

The whole process took a few months to complete; from building the trust with the local farmers to finding and helping deliver a solution that supported the local community to grow the business overseas. Whilst this was a fairly short process, the impact and the level of difference it has made to the *Dukundekawa* coffee community has been phenomenal. It has helped to transform the lives of this community and those who depend on it to grow and thrive.

We have helped take an excellent business operation, and enable them to realise their

ambitions on a global level. It is humbling to help create a business practice that is both flourishing and sustainable for years to come – now the *Dukundekawa Cooperative* is trading, and they have a solid solution in place for their packaging – the sky really is the limit when it comes to their expansion.

A FINAL THOUGHT

This DP World partnership with Swiss Pac and the Rwandan coffee farmers exemplifies the significance of technology, innovation, and collaboration in supporting local communities across the globe. More importantly, it addresses how we can help build sustainable communities, providing support and growth for local businesses to scale through our own network and offerings as a global logistics provider.

DP World's DUBUY.com enabled Rwandan farmers to connect with Swiss Pac and acquire packaging that would keep their coffee beans fresh during transportation. In addition, the rebranding opened up further doors, and importantly ensured the coffee was appealing, attractive and visible on the platform. The success of this partnership displays how businesses big and small can create a positive impact beyond profits by addressing social and environmental issues while generating economic value.

Companies like DP World have the ability and responsibility to support sustainable and ethical practices that go beyond their

core business objectives. We hope that this initiative inspires business executives to think past the commercials and to seek new and innovative ways to make a positive impact on the world.



Mike Bhaskaran

Group Chief Operating Officer, Digital Technology at DP World

Mike Bhaskaran is the Group Chief Operating Officer, Digital Technology for DP World. He is responsible for driving the digital transformation of all parts of our value chain globally and operates all aspects of our technology presence, driving global business process improvement and systems implementation.

Mike has valuable experience in Blockchain, e-commerce technology, and driving innovative digital capabilities in complex supply chains at scale. Mike started his career within Engineering before moving into Distribution Operations and Supply Chain at Dell Computer Corporation. Prior to joining DP World, Mike was the Chief Supply Chain Officer at Staples Inc.

Before that he worked various other global organizations including Amazon, The Gap Inc, Starbucks Corporation and Beyond the Rack Inc, where he was responsible for all technology infrastructure and software development efforts.

Mike has a Masters in Industrial Technology & Engineering from Utah State University in the US and an MBA from Krannert Graduate School of Management at Purdue University in the USA.

Smart Glasses and Beyond: Harnessing the Full Potential of Augmented and Mixed Reality

Feature Article by Sojung Lee, President, TeamViewer, APAC

Imagine a world where virtual and physical realities merge, bringing unparalleled efficiency and innovation to businesses and industries across the globe. This is made possible in the -Industrial Metaverse, where information and data are digitalised and are presented using augmented reality (AR) and mixed reality (MR) tools to target the needs of businesses and blue-collar workers on the shop floor and enable efficiency and productivity in industrial environments.

A report by Deloitte¹ makes clear the opportunities ahead, especially for Asia. "Asia's favorable demographics, supply chain market share,

and growing influence on socio-cultural trends underline its potential role in shaping the metaverse," it says. "The potential impact of the metaverse to GDP in Asia is US\$0.8T-US\$1.4T per year by 2035, roughly 1.3 - 2.4% of overall GDP."

However, a considerable gap in adoption still exists among businesses that have yet to devise a solid strategy for harnessing the full potential of these disruptive technologies.

While data from Asia is still relatively sparse, according to a survey commissioned by TeamViewer in collaboration with Handelsblatt Research Institute, out of 3,575 corporate decision-makers in 10 European countries, only 15% have made significant progress in implementing a plan for the future of logistics—a sector that could greatly benefit from digitalisation.

The survey reveals that 43% of respondents have no strategy to digitalise their logistics, while 18% have only just begun the process. Larger firms are more likely to have a strategy or have moved on to execution, but overall, digitalisation has yet to take off.

AUGMENTING YOUR BUSINESS: IMPLEMENTING INDUSTRIAL METAVERSE SOLUTIONS THAT MATCH BUSINESS NEEDS

To ride the AR wave, companies need to be smart in their implementation. Through the Industrial Metaverse, companies are able to digitalise information and data, and display them to industry workers in the immediate field of view using AR and MR smart glasses. This enables workers to see workflows and holograms as if they were part of reality.

It is remarkable to note that AR has clear advantages over virtual reality (VR) in industrial settings. While VR offers immersive virtual experiences, AR layers information over real-world scenes, allowing users to remain aware of their physical surroundings. This is crucial for certain industrial environments, where AR maintains situational awareness in terms of worker safety and efficiency.

Several factors can make or break the success of implementing Industrial Metaverse solutions—from platform versatility to hardware compatibility. After all, in today's fast-paced digital world, seamless integration





UNTAPPED POTENTIAL: THE GROWING RELEVANCE OF AR AND MR TECHNOLOGIES IN BUSINESS OPERATIONS

The Deloitte survey indicates a correlation between the current or planned use of AR and MR technologies and their estimated relevance among responding companies, which suggests that as companies begin implementing these solutions, their relevance becomes more apparent, and further implementation may follow.

Approximately one-sixth of the European companies surveyed currently use smart glasses in their logistics operations, while almost one-quarter plan to use them soon. This demonstrates a significant untapped market for AR and MR technologies in the logistics sector alone. As companies begin to recognise how the technology can benefit their business in terms of improved efficiency, reduced errors, and enhanced worker productivity, adoption rates are expected to increase.

Companies who are AR-curious can easily connect with technology providers and partners who can offer guidance, resources, and eventually solutions tailored to specific business needs. A small-scale pilot project can demonstrate the feasibility and benefits of the Industrial Metaverse. Most importantly, a clear vision from leadership is needed to explore and implement emerging technologies.

With more industries and businesses comprehending how AR, MR, and AI solutions

with existing IT systems and ease of management are key for the success of digital transformation.

As the Deloitte report further states, "To unlock the full economic potential of the metaverse, metaverse technologies must be integrated into business practices." Businesses can thrive in this exciting and rapidly evolving space by choosing a platform that ticks all the boxes.

Integrating AR solutions with existing systems such as warehouse management, enterprise resource planning, and production management will extend the company's digital business workflow to the worker on the floor.

For example, Airbus Helicopters successfully integrated their SAP system with TeamViewer's AR solution Frontline xInspect running on smart glasses. The result is a hands-free solution that makes their assembly and inspection processes for helicopter gearboxes more intuitive and efficient. This allowed Airbus to achieve a paperless inspection process with 100% data reliability, eliminating manual input errors, resulting in a 40% reduction in gearbox inspection time.

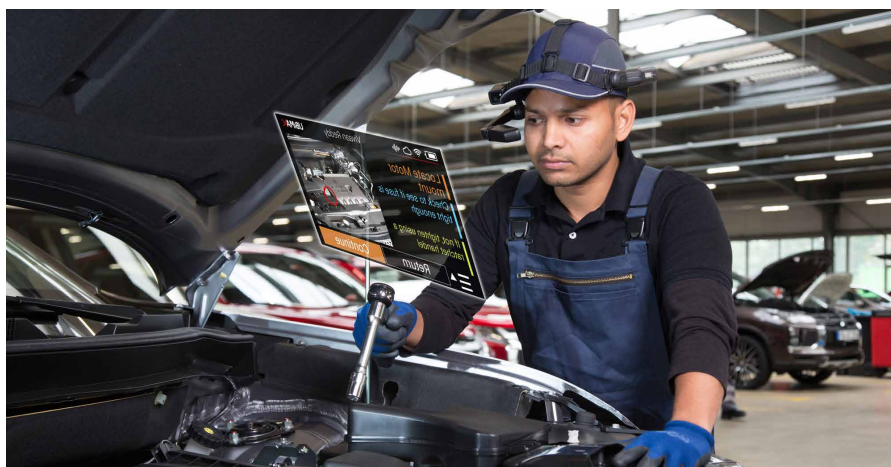
Successful implementation of AR software solutions also often relies on the hardware selection. AR software not only runs on smart glasses but also on smartphones and tablets, and the solution needs to be flexible enough to fit the processes they envisage to meet their intended end goal. It's important to include the employees who will work with the solution in the decision-making process.

Another example is when DHL Supply Chain involved their logistics staff from the very beginning when implementing the TeamViewer Frontline vision picking solution xPick in warehouses around the globe since 2017. Integrated smart glasses now display order-picking instructions and location information, permitting order-picking to be conducted hands-free and intuitively. Employees have been enthusiastic about being able to use state-of-the-art technology and are pleased with how light the smart glasses are, and how much more comfortable the process is now with hands-free picking. As a result, the company has seen an impressive improvement in staff retention rate, productivity level by 15%, higher accuracy rates, and a 50% reduction in onboarding and training times.

can impact their potential, significant growth in adopting these technologies is expected in the near future. There is a growing understanding of the benefits the Industrial Metaverse offers as by implementing platforms like TeamViewer Frontline, companies can optimise their operations, boost efficiency, and cut costs.

DRIVING DIGITAL TRANSFORMATION WITH PARTNERSHIPS AND EMERGING TECHNOLOGIES IN THE INDUSTRIAL METAVERSE

Aside from technological advancements, partnerships between tech companies will play a crucial role in driving digital transformation and expanding the reach of the industrial metaverse in 2023. Bundled solutions and strategic collaborations can help enterprises connect devices, information, and people more effectively, eliminating the need to work with multiple vendors. Such partnerships will be particularly beneficial for emerging technologies within the industrial metaverse,



enabling greater adoption and collaboration across the industry.

In terms of next steps in the Industrial Metaverse, we already see self-learning algorithms enriching complex manual processes, adding even more value. AI can perform verification assessments through image recognition, which reduces the likelihood of human errors and increases worker agility and productivity. By combining AI and AR, safety checks can be automated to provide an intelligent means of protecting against common occupational hazards.

Many industries are facing a shortage of skilled labor, which has prompted businesses to seek ways to improve worker productivity and efficiency. The increasing digitalization of the workforce has also created a need for new tools and technologies that can help workers perform their jobs more effectively. Industrial Metaverse is already here and we are ready to explore with everyone to harness the full potential of AR and MR in an ever-changing market.



Sojung Lee

President,
TeamViewer APAC

Sojung Lee is the President of TeamViewer for the Asia-Pacific region. Her responsibilities encompass all go-to-market activities in APAC, including direct sales as well as developing an ecosystem of strong alliances such as channel partners, distributors, and resellers.

She is an experienced senior executive with a proven capability in building and leading high-impact teams. Her background includes 14+ years of experience in the Enterprise IT and the services industry across the Asia Pacific region. Before Sojung joined TeamViewer, she held several senior positions at IBM Asia Pacific and SolarWinds.

¹ Deloitte Report, *The Metaverse in Asia*, November 2022

Looking to transform your business and uplift workers' productivity?



The new NTUC CTC Grant is here to bring win-win outcomes for both companies and workers!



What is the NTUC CTC Grant?

The new NTUC Company Training Committee (CTC) Grant supports entities that have formed CTCs to implement transformation plans with the aim of improving worker and business outcomes. Managed by NTUC's e2i (Employment and Employability Institute), the CTC Grant provides funding support of up to 70 per cent of the qualifying cost for each project.



Who can apply for the CTC Grant?

Entities legally registered or incorporated in Singapore i.e. companies, societies, non-profit organisations such as charities and social service agencies are welcome to apply.



How to apply for the CTC Grant?

- Form a Company Training Committee (CTC).
- Develop and validate the transformation plan through the CTC, showing how the plan leads to better worker and business outcomes.
- Engage e2i to review the project application before submission.
- Submit the grant application(s) to e2i from 1 Aug 2022 to 31 Jul 2026 via the NTUC CTC Grant Application Kit.



What are the objectives that the transformation project needs to achieve?

- **Enterprise transformation:** Enhanced business capabilities, innovation and/or productivity; and
- **Workforce transformation:** Better career prospects and better wages for Singapore Citizens / PRs through efforts such as job redesign and training. The applicant needs to commit at least one of the following worker outcomes:
 - wage increase; and/or
 - implemented Career Development Plan (CDP)

To find out more about forming CTCs,
visit trainandtransform.ntuc.org.sg

To apply for the NTUC CTC Grant,
visit e2i.com.sg/ctc

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Canadian Pacific and Kansas City Southern combine to create CPKC

CPKC becomes the first and only single-line railway connecting Canada, the U.S. and Mexico

Canadian Pacific ("CP") and Kansas City Southern ("KCS") today combined to create Canadian Pacific Kansas City (TSX: CP) (NYSE: CP) ("CPKC"), as authorized by the U.S. Surface Transportation Board's ("STB") March 15, 2023 final decision, creating the first single-line railway connecting Canada, the U.S., and Mexico.

"Today, we celebrate this historic combination creating a truly unique single-line rail network that begins a new chapter of railroad history in North America," said CPKC President and Chief Executive Officer Keith Creel. "As we mark this once-in-a-lifetime occasion by driving the Final Spike in Kansas City, Missouri, where CP and KCS come together, we stand ready to bring new competition into the North American rail industry at a time when our supply chains have never needed it more.

"This unmatched CPKC network will give our customers new options and expanded reach to more markets as we provide reliable rail service, take trucks off public roads and raise the bar on rail safety by expanding CP's industry-leading safety practices,"

Creel added. "The public, environmental, competitive and safety benefits of this historic combination are extraordinary for our railroaders, communities, rail customers and the North American economy."

CP completed its US\$31 billion acquisition of KCS on Dec. 14, 2021. Immediately upon the closing of that acquisition, shares of KCS were placed into a voting trust, which ensured that KCS operated independently of CP during the regulatory review process. Today, pursuant to the STB's March 15, 2023 final decision approving the transaction, the voting trustee transferred the KCS shares to an affiliate of CP, formally bringing KCS into the CPKC family.

In Kansas City today, the company will mark the creation of CPKC by hosting a celebration featuring the driving of the ceremonial Final Spike at the only place where the CP and KCS railroads meet. CPKC will also break ground today on a new yard office, the future location of its state-of-the-art U.S. operations center.

"We stand ready to move the commerce of today and ready to compete hard to grow tomorrow," Creel continued. "With the most relevant railroad network on the continent, we'll create value for all stakeholders, bringing new jobs, economic growth and environmental benefits to workers, customers and communities."



With its global headquarters in Calgary, Alta., Canada, CPKC is the only railway connecting North America and has unrivaled port access on coasts around the continent, from Vancouver to Atlantic Canada to the Gulf of Mexico to Lázaro Cárdenas on Mexico's Pacific coast. While remaining the smallest of six U.S. Class 1 railroads by revenue, the new combined company has a much larger and more competitive network, operating approximately 20,000 miles of rail, and employing close to 20,000 people. Full integration of CP and KCS is expected to take place over the next three years, unlocking the benefits of the combination.

CPKC will bring a new safety standard to the North American rail landscape. CP has been the safest railroad in North America for 17 straight years, as measured by the Federal Railroad Administration-reportable train accident frequency ratio. In 2022, CP had an all-time best frequency of 0.93, a rate nearly half what the company produced a decade

ago and 69 percent lower than the Class 1 average.

CP's culture of safety, supported by its history of sustained investments in core infrastructure and technology, aligns with KCS's like-minded culture, allowing the combined system to operate at the apex of rail safety. CPKC will place safety at the forefront of everything it does.

CPKC plans capital investments in new infrastructure of more than US\$275 million over the next three years to improve rail safety and the capacity of the core north-south CPKC main line between the U.S. Upper Midwest and Louisiana.

Anticipated environmental benefits of CPKC include the avoidance of more than 1.6 million tons of greenhouse gas (GHG) emissions due to the anticipated improved operational efficiency of CPKC versus current operations and another 300,000 tons of GHG

emissions with the diversion of 64,000 trucks to rail for a total reduction of 1.9 million tons of GHG emissions over the next five years. Diverting 64,000 long-haul truck shipments to rail annually with new CPKC intermodal services will reduce total truck vehicle miles traveled by almost 2 billion miles over the next two decades, saving US\$750 million in highway maintenance costs.

CPKC will also support the expansion of Amtrak and other passenger services on the CPKC network.

CPKC filed articles of amendment changing the company's name to "Canadian Pacific Kansas City Limited", which became effective today. CPKC's common shares will remain listed on the Toronto Stock Exchange (TSX) and New York Stock Exchange (NYSE) under the ticker symbol "CP" and are expected to begin trading under the new name and new CUSIP (13646K108) on April 18. Each existing share certificate reflecting



the former name of the company will continue to represent a valid certificate until such certificate is transferred, re-registered or otherwise exchanged.

Forward looking information

This news release contains certain forward looking statements and forward looking information (collectively, "FLI") to provide CPKC shareholders and potential investors with information about CPKC and its subsidiaries and affiliates, which FLI may not be appropriate for other purposes. FLI is typically identified by words such as "anticipate", "expect", "project", "estimate", "forecast", "plan", "intend", "will", "target", "believe", "likely" and similar words suggesting future outcomes or statements regarding an outlook. All statements other than statements of historical fact may be FLI.

Although we believe that the FLI is reasonable based on the information available today and processes used to prepare it, such statements are not guarantees of future performance and you are cautioned against placing undue reliance on FLI. By its nature, FLI involves a variety of assumptions, which are based upon factors that may be difficult to predict and that may involve known and unknown risks and



uncertainties and other factors which may cause actual results, levels of activity and achievements to differ materially from those expressed or implied by these FLI, including, but not limited to, the following: the realization of anticipated benefits and synergies of the CP-KCS transaction and the timing thereof; the satisfaction of the conditions imposed by the U.S. Surface Transportation Board in its March 15, 2023 decision; the success of integration plans; the focus of management time and attention on the CP-KCS transaction and other disruptions arising from the CP-KCS integration; changes in business strategy and strategic opportunities; estimated future dividends; financial strength and flexibility; debt and equity market conditions, including the ability to access capital markets on favourable terms or at all; cost of debt and equity capital; the

ability of management of CPKC, its subsidiaries and affiliates to execute key priorities, including those in connection with the CP-KCS transaction; general Canadian, U.S., Mexican and global social, economic, political, credit and business conditions; risks associated with agricultural production such as weather conditions and insect populations; the availability and price of energy commodities; the effects of competition and pricing pressures, including competition from other rail carriers, trucking companies and maritime shippers in Canada, the U.S. and Mexico; North American and global economic growth; industry capacity; shifts in market demand; changes in commodity prices and commodity demand; uncertainty surrounding timing and volumes of commodities being shipped; inflation; geopolitical instability;

changes in laws, regulations and government policies, including regulation of rates; changes in taxes and tax rates; potential increases in maintenance and operating costs; changes in fuel prices; disruption in fuel supplies; uncertainties of investigations, proceedings or other types of claims and litigation; compliance with environmental regulations; labour disputes; changes in labour costs and labour difficulties; risks and liabilities arising from derailments; transportation of dangerous goods; timing of completion of capital and maintenance projects; sufficiency of budgeted capital expenditures in carrying out business plans; services and infrastructure; the satisfaction by third parties of their obligations; currency and interest rate fluctuations; exchange rates; effects of changes in market conditions and discount rates on the financial position of pension plans and investments; trade restrictions or other changes to international trade arrangements; the effects of current and future multinational trade agreements on the level of trade among Canada, the U.S. and Mexico; climate change and the market and regulatory responses to climate change; ability to achieve commitments and aspirations relating to reducing greenhouse gas emissions and other

climate-related objectives; anticipated in-service dates; success of hedging activities; operational performance and reliability; customer and other stakeholder approvals and support; regulatory and legislative decisions and actions; the adverse impact of any termination or revocation by the Mexican government of Kansas City Southern de Mexico, S.A. de C.V.'s Concession; public opinion; various events that could disrupt operations, including severe weather events, such as droughts, floods, avalanches and earthquakes, and cybersecurity attacks, as well as security threats and governmental response to them, and technological changes; acts of terrorism, war or other acts of violence or crime or risk of such activities; insurance coverage limitations; material adverse changes in economic and industry



conditions, including the availability of short and long-term financing; and the pandemic created by the outbreak of COVID-19 and its variants, and resulting effects on economic conditions, the demand environment for logistics requirements and energy prices, restrictions imposed by public health authorities or governments, fiscal and monetary policy responses by governments and financial institutions, and disruptions to global supply chains.

CPKC

About CPKC

With its global headquarters in Calgary, Alta., Canada, CPKC is the first and only single-line transnational railway linking Canada, the United States and Mexico, with unrivaled access to major ports from Vancouver to Atlantic Canada to the Gulf of Mexico to Lázaro Cárdenas, Mexico. Stretching approximately 20,000 route miles and employing 20,000 railroaders, CPKC provides North American customers unparalleled rail service and network reach to key markets across the continent. CPKC is growing with its customers, offering a suite of freight transportation services, logistics solutions and supply chain expertise. Visit cpkcr.com to learn more about the rail advantages of CPKC. CP-IR

Leveraging Your Bargaining Power in Logistics Service Provider Negotiations

Feature Article by LSCMS Shippers Council

How do you know you have good rates?

Do you feel like you're always at the losing end of the deal?

Do you know what the current air market saturation means to you and your business?

2022 peak season failed to materialize, so why am I still seeing needless 'peak' surcharges related to Covid?

Belly capacity is almost at the pre-covid levels, but why are my rates still elevated?

The logistics industry is a complex and constantly evolving ecosystem that plays a vital role in the global economy. Shippers, who are responsible for moving goods from one location to another, have traditionally relied on logistics service providers (LSPs) to manage their transportation needs. Over the last 3 years, the balance of power has shifted

considerably, with LSPs gaining more control over pricing and service negotiations.

Shippers have until quite recently been faced with a daunting challenge when it comes to negotiating with LSPs. One reason for this is that many LSPs in recent years have undergone considerable consolidation initiatives and as a result have become larger and more powerful. In some sectors, this means they can now dictate terms to shippers. To compound matters, some LSPs have developed sophisticated and convoluted

pricing models, making it difficult for shippers to understand the true cost of transportation.

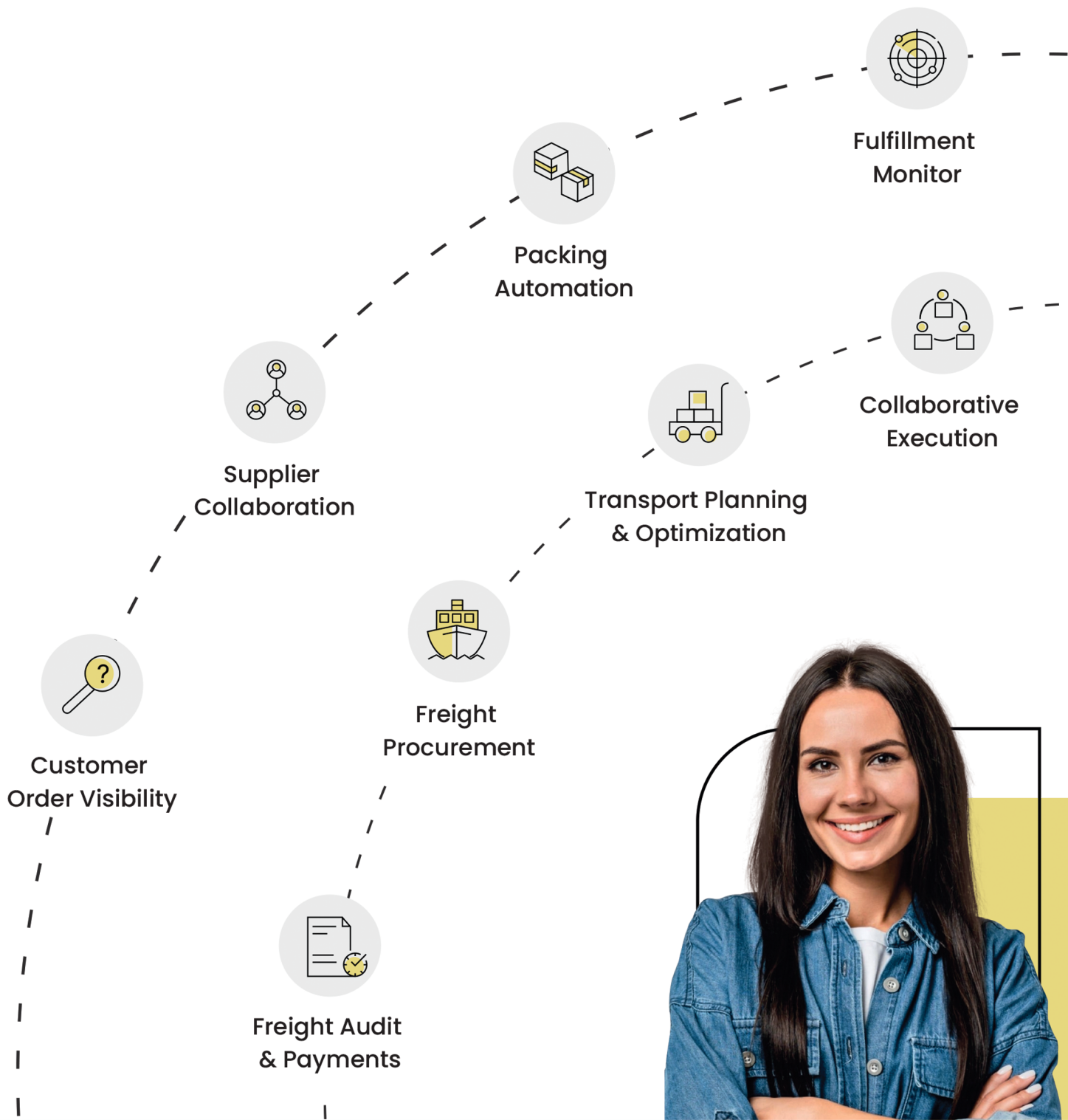
As the dust settles after the pandemic, many shippers find themselves under pressure to reduce costs yet again. Coupled with softening customer demand and the return of air-cargo belly capacity, the current airfreight market condition presents a perfect opportunity for shippers to regain, maintain and balance influence and control. Logistics is a derived demand. Over the extended and complex supply





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chains we manage or support, collaboration and a long-term view are necessary to weather and overcome the challenging business environments in which we operate. Yes, COVID was (hopefully) a black-swan event of a scale and magnitude none of us has ever imagined or had to overcome but as a Logistician, dealing with challenges, big and small is simply what we do on a daily basis.

In this article, we will share a few tips shippers can leverage to increase their influence and gain better insights and bargaining power during negotiations with logistics service providers:

DO YOUR RESEARCH

The more you know about the logistics industry and the specific services you need, the more leverage you will have during negotiations. Before entering into any negotiation, do your research



on the market trends, industry standards, and pricing models. This knowledge will help you better understand what you are paying for and what you should expect in return.

BE CLEAR ON REQUIREMENTS

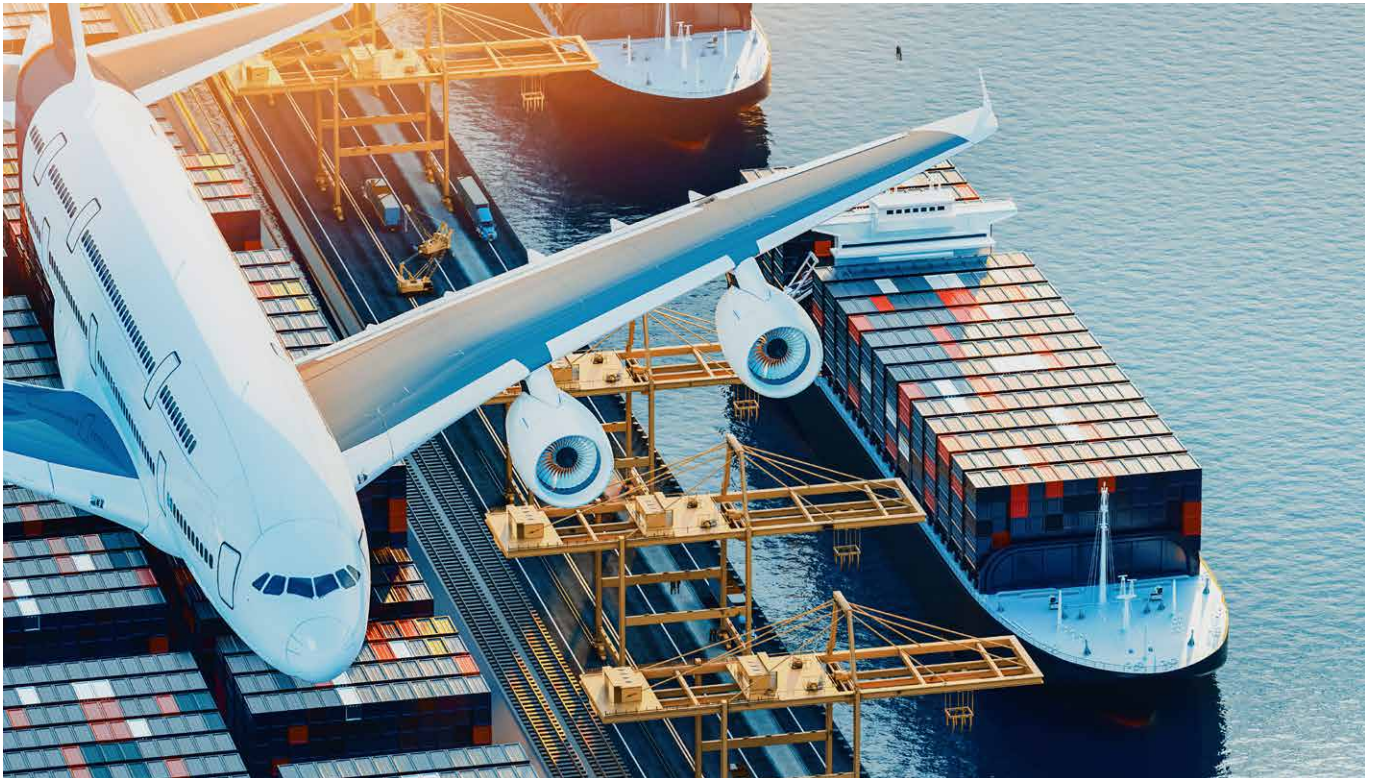
Shippers need to be clear about their transportation needs and requirements. Many shippers are not specific enough in their requests, and this can result

in LSPs offering solutions that may not be ideal. The more detailed data and information you can provide, the more accurate a quote you can get from your LSPs. Shipment size, weight, location, frequency, peaks and troughs and seasonality, temperature control or hazardous material handling requirements (if applicable) are just some of the relevant information to include in an RFI, RFP or RFQ. By being specific about their requirements, shippers can avoid the risk of LSPs overcharging for services that are not necessary and allow them to provide a comprehensive and accurate quote.

CONSOLIDATE YOUR VOLUME

Explore ways to consolidate your volume with a few LSPs. By doing this, you will be able to demonstrate a higher volume commitment, which can help you negotiate better rates and service levels.





ALWAYS GO TO BID

Shippers should consider implementing a bidding process. By inviting multiple LSPs to bid on a shipment, shippers can create a competitive environment, encouraging LSPs to offer higher-quality services. This process also allows shippers to compare pricing and services offered by different LSPs, enabling them to make more informed decisions.

KNOW YOURSELF AND YOUR PROVIDER

Network alignment is key. Do they have what you need? And do you have what they need? If you align on lanes where the primary strength or needs are, you have more negotiating capital. Additionally, there needs to be a fit between your organisation and the LSP. Are they or are you simply too big or too small to engage

in a commercial relationship effectively? This is not a one size fits all situation.

BUILD RELATIONSHIPS

Logistics is still very much a people business. Establishing strong relationships with LSPs can give you an edge during negotiations. By building trust and demonstrating a commitment to the relationship, you will be able to create a collaborative environment that brings forth more productive negotiations.

BE WILLING TO WALK AWAY

Shippers should be prepared to walk away from negotiations if they are not getting the deal they want. This requires a willingness to be patient and persistent, as well as a clear understanding of the alternatives available. Taking some risks may open up new opportunities.

CONCLUDING THOUGHTS

Shippers have the opportunity to leverage opportunities and buying power, to achieve better logistics and supply chain deliverables. Improving on their marketing and procurement skills would help them achieve such aspirations. The Shippers Council has a broad collective group of expertise in its membership. The group advocates a proactive and enhanced approach to Logistics procurement. Price will still be of primary importance but will not be the only criterion. Building on shared and collaborative values of strategy, alignment on network, technologies/tools and sustainable elements to strengthen and leverage the relationship to keep it on track is fundamental. Business relationships, whether simple or complex, cannot be created and sustained in short time frames. They need time to

develop and be nurtured, to achieve mutual aspirations.

The LSCMS Shippers Council is open to partnering and sharing their work, tool kits and papers, to help Shippers achieve better results. Collectively Shippers can positively shape the logistics landscape. Shippers are not alone in the challenges they face. They just need to reach out and find new avenues & sources of support.



SHIPPERS' COUNCIL

About the LSCMS Shippers' Council

The LSCMS Shippers Council is a very active group of major Shippers. The group members share their logistics expertise, and industry common challenges and discuss opportunities and solutions. This engagement advances knowledge and expertise for logistics practitioners across the spectrum of supply chain topics.

The group meets on a regular cadence, both virtually and in person, to raise and discuss topics of interest with attention to current and pressing relevant subjects. This group is not just a "talk shop session" but one where the focus is on achieving outcomes.

If you are a Shipper and interested to hear more on this topic or would like to join the Council, please feel free to contact us at elee@lscms.org.

This article and the views contained therein was prepared or accomplished by the LSCMS Shippers Council. The opinions expressed in this article are strictly those of the LSCMS Shippers' Council and not attributable to a specific individual or enterprise.

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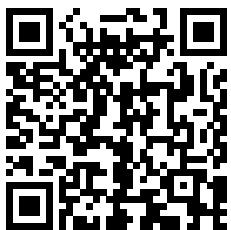
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High-End Track and Trace Solution With New Line Scan Camera Variant

The ICR890-4 Pro Color is setting new standards in logistics applications for CEP and retail

SICK is launching a new variant of its line scan camera. The ICR890-4 Pro Color is the first camera of its kind for track and trace systems that can both dynamically adjust its focus and also output additional color images. This enables the ICR890-4 Pro Color to deliver crystal-clear color and grayscale images even at very high speeds, and thereby reduce manual rework in automated logistics applications in CEP and retail.

With its ICR890-4 Pro Color, SICK is bringing to the market the world's first dynamically focusing line scan camera with color images for track and trace systems. Its applications include 1D and 2D code reading tasks in transport and logistics processes. With its enhanced modular camera design, LED illumination unit, focus control unit, and high performance decoder, the ICR890-4 Pro Color line scan camera is setting new and never-before-seen standards for track and trace systems.

It enables incoming objects both at goods receipt and when handling returns in retail or in the CEP sector to be automatically digitized, directly integrated into automated logistics processes, and seamlessly documented, for example by distinguishing boxes from bags, identifying hazard symbols, or classifying objects by their colored labels. In total, this can be used to create comprehensive master data for each respective object.



Crystal-clear images even at speeds of up to 4.5 meters per second



EFFICIENT SORTING AT VERY HIGH CONVEYOR SPEEDS

At a throughput of >18,000 objects per second and conveying speeds up to 4.5 m/s, the ICR890-4 Pro Color continues to deliver an outstanding image quality for OCR, video coding and vision applications thanks to the parallel output of a color

and grayscale image. The images and data produced in the system can then be further interpreted using SICK software applications. This not only reduces the amount of manual rework, but also enables the goods to arrive at their destination even faster thanks to automated verification.

SICK
Sensor Intelligence.

About SICK Sensor Intelligence

SICK is one of the world's leading solutions providers for sensor-based applications in the industrial sector. Founded in 1946 by Dr.-Ing. e. h. Erwin Sick, the company with headquarters in Waldkirch im Breisgau near Freiburg ranks among the technological market leaders. With more than 50 subsidiaries and equity investments as well as numerous agencies, SICK maintains a presence around the globe. In the 2021 fiscal year, SICK had more than 11,000 employees worldwide and a group revenue of around EUR 1.9 billion.



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Roundtable Synopsis:

AUGMENTED REALITY A GAME CHANGER FOR THE LOGISTICS OF THE FUTURE



On 13th April 2023, LogiSYM hosted a roundtable and live demo on "Augmented Reality:", featuring industry experts and professionals from TeamViewer, GlobalFoundries and the Logistics and Supply Chain Management Society. The event aimed to explore the transformative potential of augmented reality (AR) in revolutionizing the logistics and supply chain industry.



Mr. Paul Leow, the Director of Sales for ASEAN at TeamViewer, commenced the event by welcoming the participants and introducing TeamViewer as a leading provider of remote access and control solutions. He set the stage for the discussions and expressed the company's enthusiasm for implementing more widespread applications of AR in logistics.



Dr. Raymon Krishnan, President of The Logistics and Supply Chain Management Society, kicked off the event by providing insights on the logistics and supply chain industry in the coming year. He discussed the current trends and challenges faced by the industry, emphasizing the need for innovative technologies like AR to drive efficiency, enhance productivity, and improve overall operations.



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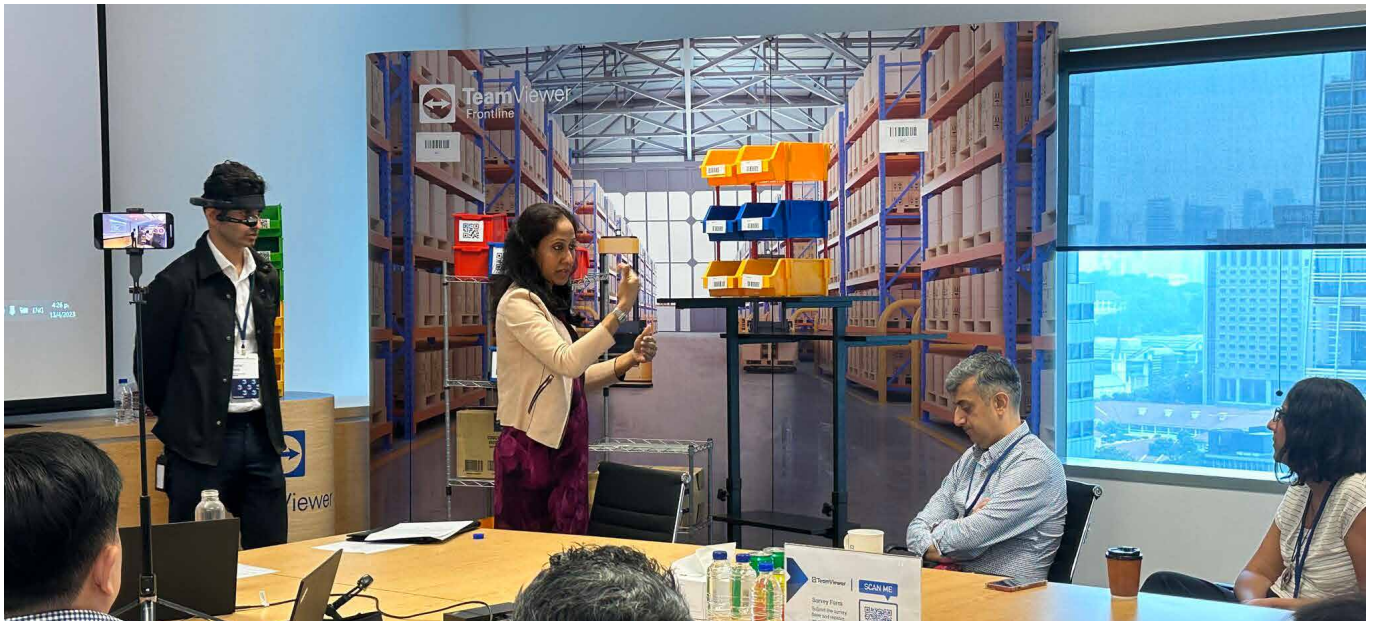
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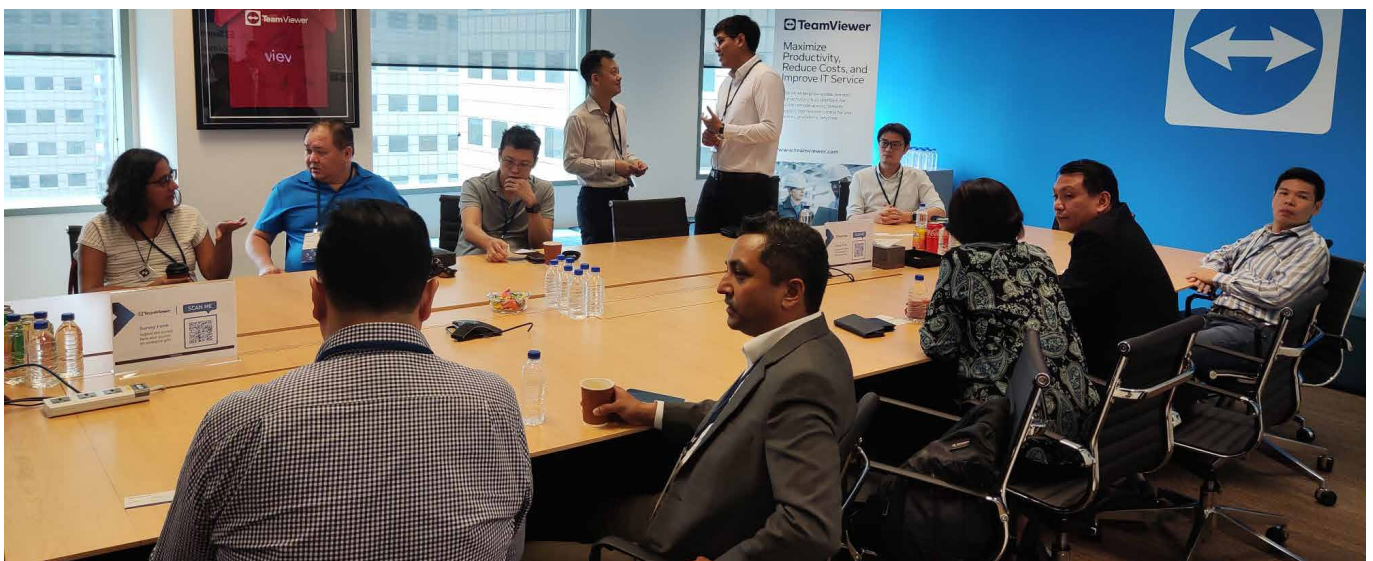
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Mr. Tushar Joshi, Enterprise Sales Manager at TeamViewer, presented TeamViewer's frontline solutions specifically tailored for the logistics sector. He highlighted the capabilities of TeamViewer's AR-powered tools in assisting remote collaboration, troubleshooting, and maintenance tasks in real-time. Tushar also conducted a live technology demonstration to showcase practical applications of AR in the logistics industry. He exhibited how AR can facilitate remote assistance, augmented training, and real-time visualizations, enabling logistics professionals to perform tasks with greater accuracy and efficiency.



Mr. Vijindra Pandhari, Senior Innovation Leader at GlobalFoundries, shared the success story of their organization that have already adopted AR solutions in their logistics operations. He highlighted the positive impact of AR on cost reduction, improved safety, faster decision-making, and enhanced customer experiences.

The roundtable and live demo successfully provided attendees with valuable insights into the potential of augmented reality as a game changer for the logistics industry. Participants gained a comprehensive understanding of TeamViewer's frontline solutions and witnessed firsthand the practical applications of AR in optimizing logistics processes. The event concluded with a sense of excitement and anticipation for the future of logistics, driven by the transformative power of augmented reality.



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- ✓ Up to 100% satisfied workers



Contact our AR experts now to find out how xPick can improve your processes.



Smart energy storage system provider Cactus signs deal worth over €1 million with leading Finnish logistics company Logitri to optimise its carbon-neutral logistics operations

20 Cactus One smart energy storage units will be installed in Logitri's logistics centre in Finland, helping them maximise their onsite solar installation, reduce consumption peaks and protect from electricity price fluctuations and power outages.

Cactus, a producer of smart energy storage systems, has signed a deal worth over 1 million euros with Finnish third-party logistics giant Logitri to install 20 Cactus One smart energy storage units at their logistics centre in Tuusula, Finland. The storage system will provide 2.5 MWh of energy storage capacity, securing the electricity supply of Logitri's logistics centre. The units will also help to level out consumption peaks caused by charging its fleet of electric vehicles, which includes Finland's first-ever

electric semi-truck, ordered for Logitri's transportation company Storemen Logistics. Cactus' scope of work includes the fabrication, installation, commissioning, operation, maintenance and financing of the smart energy storage system.

With a global logistics chain powered by electric vehicles and temperature-controlled warehousing, Logitri searched for new ways to secure its electricity supply and optimise its own consumption amid the ongoing energy crisis. With

an objective to future-proof its infrastructure as it moves towards a fully electrified fleet, the ability to maximise the use of clean energy, manage cost exposure as well as levelling of consumption peaks were each of particular importance to Logitri in finding the optimal solution.

Cactus's smart energy storage systems enable cost saving and flexibility by utilising intraday electricity price fluctuations and releasing stored solar energy generated from Logitri's 958kWp solar array, one of the largest of its kind in Finland, when electricity prices and consumption are at their highest.

"Logitri is always searching for ways to improve our operations with regards to the environment, with 50% of our vehicles already running on natural gas or electricity. In the evenings, when our vehicles are put on charge, it causes a large spike in our energy consumption. With the complementary nature of our solar production and the Cactus system, we can ensure sufficient electricity supply and charge up to 100 warehouse Li-ion machines, including forklift



Grow Your Brand Through Platform Partnership

Consumers trust recommendations from third parties more than they trust a brand itself. 70% of people will trust a review from a complete stranger as opinions and recommendations are by and large more influential when they do not come from the source itself. Additionally, most marketers include company logos and testimonials as proof on materials pages to strengthen trust and influence visitor behaviour.

LogiSYM offers marketers a range of promotional options to reach your target audience, generate quality leads and increase conversion rates.

The combined magazine platforms of LogiSYM and CargoNOW offer one of the largest circulations globally and are the biggest in the Asia Pacific region. Coupled with this, LogiSYM and CargoNOW hold world-class symposiums in various parts of Asia and the Middle East and have been doing so for more than 8 years.

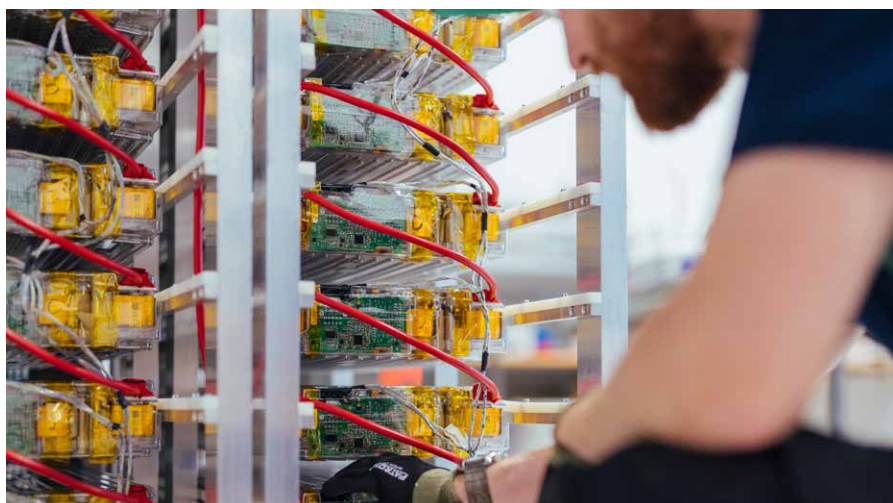
The online presence of the brands is second to none and this is further strengthened by our high visibility on social media such as Facebook and LinkedIn.

In this Influencer or Platform Partnership, LogiSYM will provide significant influencer reach across the supply chain industry which include the following platforms:

- ✓ Articles in two of the largest circulation supply chain publications globally
- ✓ Press-releases
- ✓ Webinar sponsorships
- ✓ Online advertising
- ✓ Industry led symposiums across the region
- ✓ Surveys & survey analysis
- ✓ Advertisements in two of the largest circulation supply chain publications
- ✓ Online articles
- ✓ Content syndication
- ✓ White label reports and thought leadership articles
- ✓ eDMs
- ✓ Social media – LinkedIn, Facebook, YouTube



When working on the Influencer / Platform Partnership, partners have the opportunity to choose which options they feel will give them maximum reach and success and planning and pricing will be structured along the desired activities. Contact Harjeet@logisym.org for more information.



trucks, at once without incurring high additional costs," says **Jarno Hanhinen**, co-founder and CEO of Logitri.

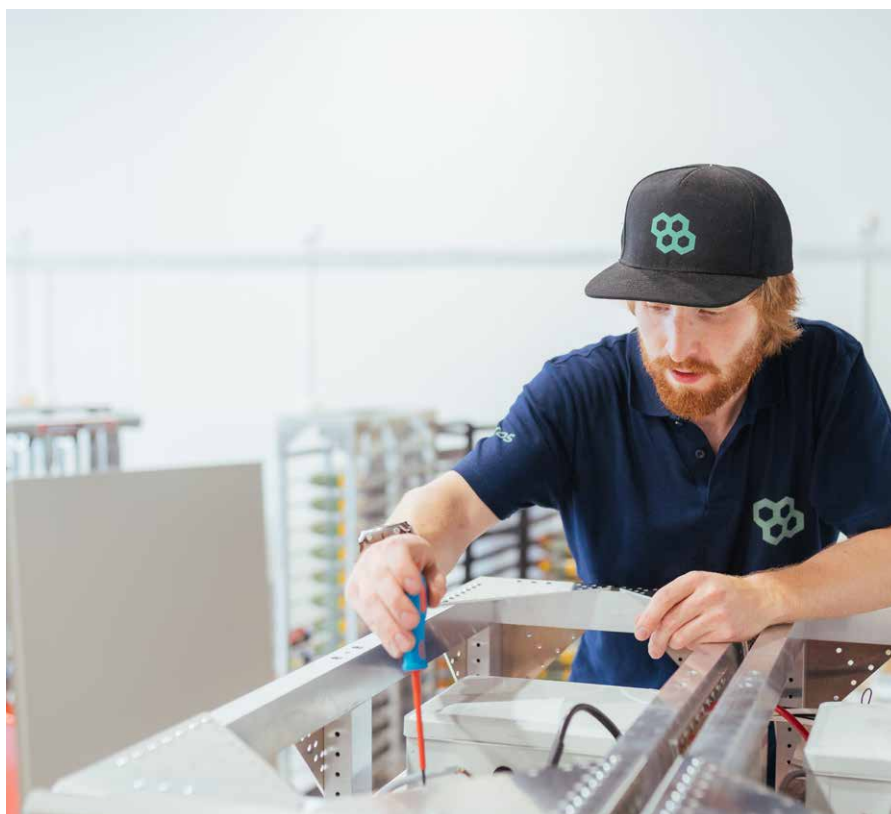
Cactus will deliver two types of its electricity storage systems to Logitri – the 100 kWh Cactus One Classic unit made from recycled Tesla EV batteries and the brand new 130 kWh Cactus One Cardo unit. Cactus One Cardo units use first-life lithium iron phosphate battery modules that Cactus manufactures at its factory in Muhos, Finland. This new technology enables Cactus to increase its production output in line with clients' demands and needs, whilst continuing to offer the optimal second-life application for EV batteries with their Cactus One Classic.

Once installed, each of the units is controlled and optimised by the cloud computing service, Cactus Spine, allowing for a fully autonomous operation of the units. Cactus Spine continually seeks efficiencies and savings opportunities, automatically optimising the operation of each energy storage unit in the background on a 24/7 basis.

For example, Spine will automatically charge the storage units when there's excess solar production or cheap electricity available from the grid, and will discharge when it is most economically advantageous. In addition, Spine manages the system's participation in the grid's services market, regulating the frequency of the national electricity grid whilst generating additional income.

"The contract we signed with Logitri is one of the largest of its kind for behind-the-meter energy storage. The system consists entirely of Cactus One energy storage units and is connected to Logitri's existing electrical network. This enabled a very fast delivery schedule, with the first units of the system installed almost immediately after the contract was signed, and the overall system expected to be delivered in its entirety by autumn. Thanks to the modularity and scalability of our design, the system has been in operation right from the installation of the first unit," says Cactus founder and CEO Oskari Jaakkola.

Fuelled by its strong customer-led growth and €2.5M funding round in late 2022, Cactus doubled its factory size in early 2023, allowing for nearly a 10-fold increase in unit production.





CACTOS

About Cactus:

Cactus's smart energy storage system secures critical power supply locally and allows for efficient utilisation of renewable energy globally. The units are made out of upcycled Tesla batteries. The energy storage units offer high-capacity backup power and perform local energy optimisation operations, bringing economic benefits and resilience to our clients and grid operators.

Building on strong success in their home market of Finland and due to increased demand for their products internationally, Cactus has recently opened its first international office in Amsterdam, The Netherlands, led by Head of International Sales John Graham. The company sees the Netherlands as a key component of its growth strategy and is in active discussions with numerous companies regarding the

provision of their Cactus One solution, with the first shipments expected in the near future.

"Cooperation with Logitri has contributed to our decision to expand our operations to the hub of European freight traffic, the Netherlands. As a result, we are now better able to respond to the great international demand that our product has received," concludes Jaakkola.

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THE GREEN CORRIDOR

Eating Into Our Future

Agricultural Emissions - What is Happening? What More Can be Done?

by **Timothy Foote**, Founder of Susymbio

As the global population hits 8 billion people and growing, the age old question continues to be asked - how long can the Earth support humanity? We all need food to survive and for most that takes talking about the emissions associated with food production "off the table". Doing that would be a mistake though. Some in the agriculture industry are making changes to be more sustainable and what they are doing helps show a way forward for our future. Additionally, we logistics professionals can also make an impact.

Looking at the agriculture sector on the whole, combined with forestry and land clearing, this sector emits **nearly a quarter of all greenhouse**

gasses. There are many studies that can raise this amount or slightly lower it depending on what is put into the sector and what is not, but we can see that it is significant. It is even larger than the emissions from our own transportation sector.

I am fortunate that I myself work with agriculture sector companies through my work with South Pole (a leading sustainability company). As the logistics expert on the team, I work on different projects with South Pole as and when needed. South Pole helps major MNCs ascertain greenhouse gas emissions as well as provides them with solutions to help reduce or mitigate them.

There are two areas of concern when it comes to the agriculture sector. One is what is happening on the farm, and another area is how our need for food and timber changes wilderness into pasture or farmland. The driver of both is our demand for particular foods. 8 billion people are now pressing for something to eat and agriculture is working to deliver that, but at a cost to our planet's future.

Let's start with the farm; this is where our current food is produced and the agricultural yields here impacts how much land is grabbed from our wild spaces.

DOWN ON THE FARM

I spoke to a contact of South Pole, who works a lot with the agriculture side of things. She provided me with some main emission sources in that sector as well as what some companies are concentrating their reductions work on.

Main sources are:

- Enteric fermentation of ruminant livestock during digestion. It is belched out or passed out via the large



intestive.

- Manure management (in dairies and piggeries)
- Rice cultivation
- Fertiliser use

Below is a breakdown of these from the FAO (Food and Agricultural Organization of the United Nations 2018)

WHAT'S A FARMER TO DO?

When you look at the top emissions countries for crops and livestock it is unsurprisingly countries that produce most of the world's food. They are the most populated countries as well. Progress therefore on these emissions reduction actions are vital.

Four common initiatives to reduce greenhouse gasses happening now are:

1. soil carbon sequestration schemes
2. tree planting
3. animal effluent management (e.g. covering a waste pond from a dairy or piggery and flaring captured methane or turning it into biogas)
4. controlled burning of

Savannas in the early dry season to prevent greater emissions from late season wildfires (Savanna Burning method)

More solutions are coming out which is encouraging, but there is really a whole lot more to be done on the farm which scientists are working on. Furthermore, until the yields and logistics behind agriculture can keep up with consumer demands, the second largest category of this sector's emissions continues to grow unabated.

SAVING OUR FORESTS

Emissions from tearing down forests (our carbon bank and CO₂ hungry plant life) is amazingly high (43% of the sector's total emissions in 2018).

The driver behind deforestation is largely due to farm and pasture lands growth. When this is done, all of the stored carbon in the forests are released. These emissions are classified by FAO as "agricultural land use" emissions. In 2018 Indonesia

was the top emitter of agricultural land use emissions in the world because of the destruction (by draining or fire) of peat lands associated with oil palm cultivation.

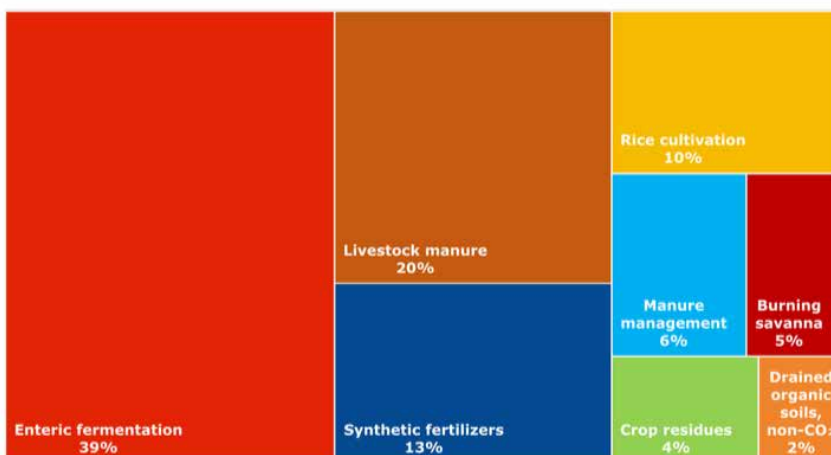
With global populations continuing to grow and the yields on existing farms not keeping pace, emissions from robbing our planet's lush forests is a major concern for all of us. Who can do what with land is largely the responsibility of governments who are the overall managers. Industry and civil society have a large impact on whether land is protected from deforestation or not because policy and enforcement are driven by these blocks. That said, there are tangible initiatives that can be done which can make small impacts on the overall agriculture sector emission numbers.

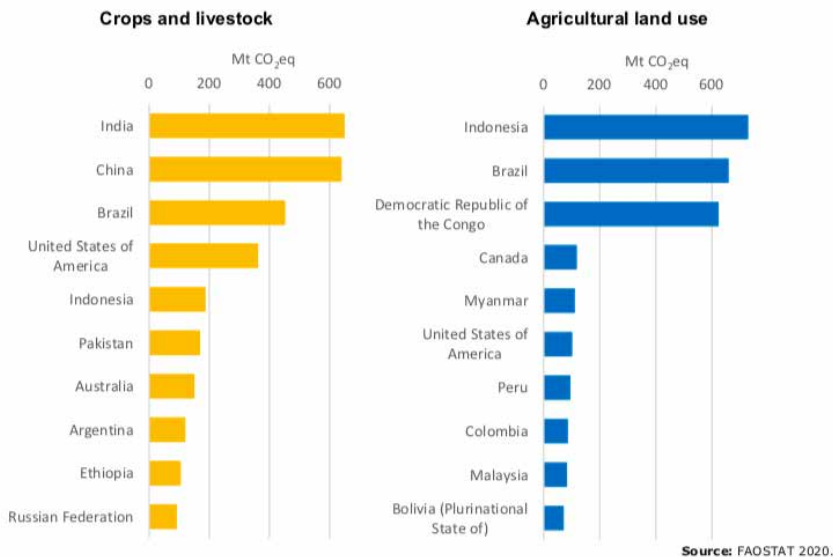
HOW TO REDUCE EMISSIONS OUTSIDE THE FARM

Most of us may be off the farm, but we are not out of the system for the sheer fact that we all consume food. So what emission reduction initiatives can be done when you are a sustainable logistics leader?

1. Support efforts to reduce food waste. Logisticians already do this, but in many parts of the world it is not uncommon to have over 20% of food spoiled before it ever reaches the table. Our industry has to support transport innovation and business development for our rural communities here in Southeast Asia

Figure 2. Contribution of crops and livestock activities to total non-CO₂ emissions from agriculture in 2018 (5.3 Gt CO₂eq)





(especially small holder communities). This will further reduce waste prior to market and further increase rural incomes.

- For your company sponsored food events, have a plan for left overs and try to select low emission food offerings. All food is not equal (look at the top farm emissions source above), through reducing employee consumption of high emission foods, you can set an example for your company's culture.
- Get your workforce educated on the need for healthy biodiversity (Sustainability Goal #15)

in your area. Most people today are separated from nature from the time they are born. We live only in people adapted environs, so there is no understanding of just how dependent we are on nature. At DHL I created a "ranger program" to do that, where my team provided community members an understanding about local plants, animals and their importance through nature walks. Programs like these indirectly influence that greater discussion regarding wilderness protection.

These are just three initiatives. Please let me know how your company is "greening" up our connection with food. I'm always looking for more solutions, so please continue to engage with our LogiSYM community when you can make time. Together we can stop eating away our future. As you can see, it will take innovative work and some food choice management.



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 organisation that raises awareness and funds for wildlife conservation.





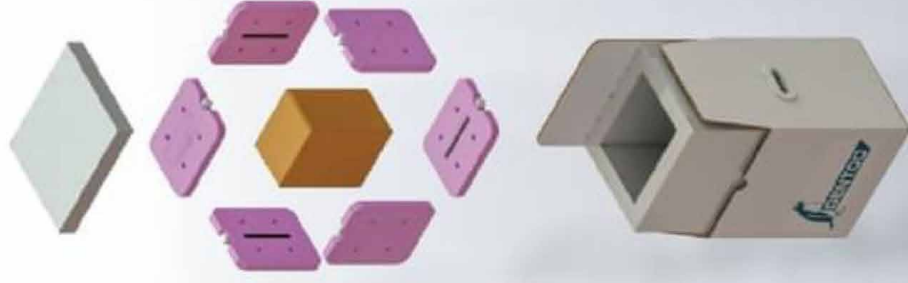
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