



CILT *Buzz*

THE CHARTERED INSTITUTE OF LOGISTICS AND TRANSPORT SINGAPORE



GLOBAL SUPPLY CHAIN DISRUPTIONS

CILTS Webinar

Red Sea Crisis

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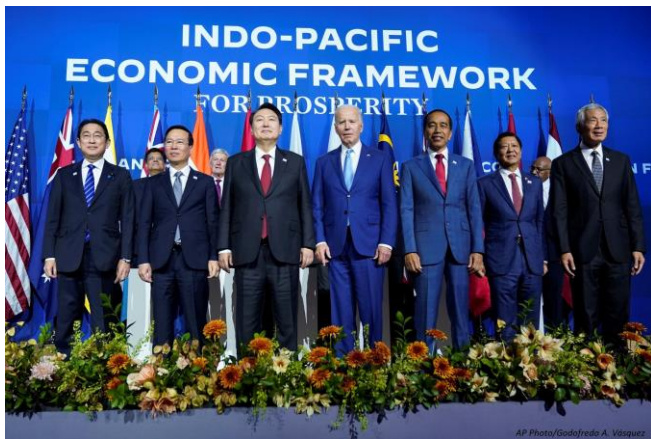
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CHAIRMAN'S MESSAGE

Dear Colleagues,

Several significant Supply Chain developments reflect the strengthening of Singapore's Supply Chain Resilience: 1) Fedex Express Regional (Asia Pacific, Middle East and Africa) HQ's shift to Singapore; 2) Increase in E-Commerce business with growing concerns on e-marketplace related scams; 3) Popstar Taylor Swift's stimulus to the Live Entertainment industry and attendant boost to Mega-Event Logistics sector; 4) Singapore-Australia MOU for Green and Digital Shipping corridor.

Meanwhile, 14 Countries including Singapore and 6 other ASEAN member states will benefit from the progressive implementation of the Indo-Pacific Economic Framework for Prosperity (IPEF) with investments in Supply Chain and Clean Energy projects.



With continued strong FDI investment flows, especially in Advanced Manufacturing and High Tech and High Value Add Industries, the continued collaboration between MNCs and SMEs in Singapore will help catalyse the pace of Digitalisation and Sustainability Capability building. SMEs will need to continue to transform themselves and ensure End-to-End

Supply Chain Resilience to be worthy partners of MNCs.

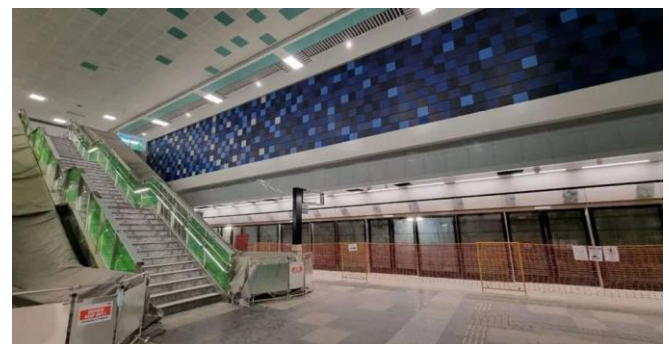
AIR

Passenger traffic at Changi Airport soared above pre-pandemic levels for the first time in February, hitting 104.3% of the numbers recorded in February 2019. There were 5.35 million passenger movements in February 2024. In a move that will further spur traffic growth, since Feb 9, citizens of Singapore and China can enter each other's country without a visa, for a stay of up to 30 days.



LAND

LTA-MRT — LTA has announced that 7 Thomson-East Coast Line (TEL) stations, from Tanjong Rhu to Bayshore, will be operational on 23rd June, benefitting 235,000 households within 10-minute walk of a TEL Station.



The Total MRT Rail Network will thus increase to 210km—slightly under 60% of the targeted 360km by the 2030s. The East Coast

Integrated Depot for Buses and Trains, with connecting tunnels to TEL and DTL Lines, and viaduct links to the East West Line, will be ready by 2026.

SBS TRANSIT (SBST) and GETGO have announced a pioneering collaboration which will offer commuters a BETTER First and Last mile connection. About 400 GetGo Cars will be parked within 5-10 minute walk from 50 MRT stations along SBS Transit (SBST) two MRT Lines viz. NORTHEAST and DOWNTOWN lines, and SBST-run BUS INTERCHANGES. This represents a major step toward the much publicised “CAR LITE” Vision.

SEA/SHIPPING



Singapore and Australia recently signed an MOU to establish a Green and Digital Shipping Corridor with the view to CUT emissions from Shipping and Facilitate Efficient Maritime Trade and Efficient Port Operations.

In April 2023, Singapore’s Maritime Port Authority (MPA) had signed similar MOU partnerships with Los Angeles Port and Long Beach Port – part of the Green and Digital Shipping Corridor across the Pacific.

In Dec 2023 Singapore and Tianjin (North China) also concluded a similar Shipping Corridor. In 2022, Singapore and Rotterdam Port (Netherlands) had also established a Green and Digital Shipping Corridor.

Baltimore's Francis Scott Key Bridge collapsed on Mar 26 after Singapore-flagged container ship Dali smashed into a pylon. Singapore’s MPA is working closely and helping the US Transportation authorities. MOT’s Transport Safety Investigation Bureau is also investigating to learn lessons to prevent such maritime accidents in future. See [page 12 for a special report on the impact on supply chain](#).

LOGISTICS

MILITARY — With the RSAF’s acquisition of 8 F35A and 12 F35B next-generation, advanced Fighter Jets, and the eventual retirement of the ageing F16 fighter jets in service since 1998, the RSAF’s combined Fighter fleet up to 2040 will comprise the F35 and F15SGs. Lockheed Martin, the manufacturer of the advanced jets, has delivered about 1,000 fighter jets.

The transition to the more Advanced Technology Jets will invariably oblige the RSAF to manage a Major Change Management and Complex Transformation of its Local and Overseas supporting Logistics and Supply Chain Services and Operations.

E-WASTE SUPPLY CHAIN — Singapore produces about [60,000 tonnes of e-waste](#) a year. To handle this, it has an extended producer responsibility (EPR) scheme since 2021. Across the island, there are now more than 800 collection points for e-waste. Items are collected by an NEA-approved company and sent to local e-waste recyclers.

On behalf of the CILT Board and EXCO, we wish our Muslims friends and colleagues a Happy and Healthy Ramadan.

Karmjit Singh
Chairman



CILTS AT ENTERPRISE SINGAPORE LOGISTICS SECTOR ENGAGEMENT SESSION 11 MARCH 2024

Chairman and other Board Directors of CILT Singapore were invited by EnterpriseSG to its engagement session held on 11 March 2024.

The session was a platform for key stakeholders of Singapore's logistics ecosystem to connect, exchange views on issues pertinent to Singapore's logistics sector and to explore opportunities with like-minded partners for industry level transformation projects.



The session included presentations by EnterpriseSG, followed by breakout sessions on discussions to co-create the path forward for the logistics sector to elevate Singapore's

CILTS INVITED TO FORUM PANEL OF BNP-MOORE STEPHENS SHIPPING CONFERENCE 18 APRIL 2024

This year's conference is focused on the 3Ds of shipping: **Disruption, Digitalization, Decarbonization**. Chairman CILTS Karmjit Singh has been invited by the conference organisers to be the moderator for the forum on Disruption.

The conference, organised by Moore Stephens in collaboration with co-sponsor BNP Paribas, Singapore is in its 14th year.

The event is supported by **The Chartered Institute of Logistics and Transport**, the Institute of Chartered Shipbrokers, the Singapore Shipping Association and Maritime and Port Authority.

Participation is by invitation only. A link to the past 2 years' conferences can be found at:

<https://www.mooresingapore.com/shippingforum2023>

<https://www.mooresingapore.com/shippingforum2022>

CILT INTERNATIONAL PRESIDENT VISITS CHINA



CILT International President **Chief Teete Owusu-Nortey** visited China in March 2024 to discuss collaboration opportunities between CILT and the Chinese Government. The partnership will see the formation of global events for members and corporate organisations of CILT to provide opportunities in China within the transport, logistics and supply chain sectors. In China, Chief Teete met up with the President of CILT China, Wang Ensen, Global Chairperson of WILAT Global, Vicky Koo and senior government officials.

CILT AFRICA FORUM 2024 22-24 APRIL 2024



The 2024 edition of the 17th CILT Africa Forum will be hosted at Elephant Hills Resort, Victoria Falls, Zimbabwe from 22nd to 24th April 2024 under the Theme: **Unlocking Africa's Wealth Through Logistics and Transport.**

[FIND OUT MORE / REGISTER >](#)

CILT INTERNATIONAL CONVENTION 2024 LANGFANG, CHINA 16-18 JUNE 2024

| DATE | TIME | SESSIONS |
|----------------|---------------------|--|
| JUNE 16 | 8:00 AM - 20:30 PM | Guest Arrivals • Opening Ceremony of the Lang Fang Fair for invited Guests • CILT International AGM • Dinner followed by: • WILAT Global Workshop • Next Gen Forum |
| JUNE 17 | 08:30 AM - 21:30 PM | Opening Ceremony • Opening Address Chief Teete OWUSU-NORTEY, FCILT • Address by President of China Communications and Transportation Association Mr Hu Yadong • Welcome address Vice-Governor of Hebei Provincial Government • Opening Address Mayor Langfang Municipal Government • Session Commences |
| JUNE 18 | 08:30 AM - 17:30 PM | WSC Meeting • Daxing International Airport Economic Zone • Xiongan New Area • Logistics and Supply Chain Companies in Langfang • Exhibition: • International smart logistics scene • National Modern Trade Logistics important Base scene |

With the theme of “**Cross-border Logistics and International Transport**”, the Convention will focus on the development of global trade logistics and provide a platform for exchange and cooperation among industry insiders and enterprises from all countries.

[FIND OUT MORE / REGISTER >](#)

CILT INTERNATIONAL WEBINAR 17 APRIL 2024

A Bright Future for Passenger Rail in the USA?

We are pleased to present the first instalment in our latest webinar series, exploring the latest insights and developments within the transport, logistics and supply chain industries.

This first webinar explores the complexities of passenger rail within the USA.

[FIND OUT MORE / REGISTER >](#)

**SEE THE BUZZ:
CILTS, Members & Friends**

INTERNATIONAL WOMEN’S DAY

We join our members and friends in the military forces in celebration of the following female trailblazers who paved the way and inspired others to rise to the challenge and make their mark in the military.

1979: First female Commanding Officers in the SAF



Pioneers in the force: (from left) MAJ (Ret) Fong, CPT (Ret) Tan and CPT (Ret) Koh were the first women to step up and become female officers in the SAF.

MAJ (Ret) Fong took command of 1st Air Supply Base as its Commanding Officer (CO) on 1 Jul 1979.

1979: First woman to qualify as an RSAF Pilot LTC (Ret) Koh Chai Hong



A young LTC (Ret) Koh (left) walking with fellow cadet Tan Bee Har – they were two of five outstanding female trainees selected for the pilot course.

LTC (Ret) Koh raised the bar sky-high when she became the first woman in the SAF to earn her pilot wings, graduating top of her class in the process.

2000: First female naval diver MAJ (Ret) Esther Tan Cheng Yin



MAJ (Ret) Tan's career has the makings of a movie plot, from becoming the first woman to qualify and join the elite NDU, to taking part in counter-piracy operations in the Gulf of Aden.

MAJ (Ret) Tan had enrolled in the Republic of Singapore Navy (RSN) in 1995, studying for a degree in Electrical and Electronic Engineering at NTU through the Navy scholarship programme.

2003: First female fighter pilot in the RSAF MAJ (Ret) Khoo Teh Lynn



Making dreams her reality: MAJ (Ret) Khoo's love of military jets landed her a seat in both the F-16 cockpit and in the history books as the RSAF's first female fighter pilot when she earned her Fighter Wings in France.

MAJ (Ret) Khoo Teh Lynn's love for flying started before she signed up with the RSAF in 2000 – the aviation enthusiast joined the Singapore Youth Flying Club during her first year in Raffles Junior College. Her desire to fly the best "high-performance aircraft" in the RSAF then meant her sights were set on piloting the F-16 jet.

2005: First female Colonel in the SAF COL (Ret) Karen Tan Puay Kiow



Progressing through the ranks in the SAF, COL (Ret) Tan assumed the role of Commander of Central Manpower Base (CMPB) in 2005, along with receiving her promotion to the rank of Colonel.

2013: First female CO of a frigate COL Jerica Goh



COL Jerica Goh took command of RSS Supreme in 2013, becoming the first female CO of a frigate in the SAF. In 2016, COL Goh became the first female Colonel in the Navy.

Three years after assuming command of RSS Supreme in 2013, she became the Head of Naval Training Department in the RSN, and

was promoted to the rank of Colonel. In 2016, she became the first female Colonel in the RSN.

2014: First female Red Lion 2WO Shirley Ng



In 1999, she made her first freefall jump using the first parachute she packed as a certified rigger. This marked the start of her journey in becoming part of the SAF's elite parachutist team, better known as the Red Lions.

She made her debut jump with the Red Lions in the National Day Parade (NDP) 2014.

2018: First female Chief Warrant Officer CWO (Ret) Jennifer Tan



In 2011, then-Master Warrant Officer (MWO) Tan achieved the milestone of becoming the first female Regimental Sergeant Major (RSM) of the 2011 National Day Parade.

Rising through the ranks, she became the first female Chief Warrant Officer in 2018, holding the appointment of CO of the Armour Combat Training Centre.

2022: First female fighter squadron commander SLTC Lee Mei Yi



Drawn to the RSAF because of her love for flying, she successfully earned her wings as an F-16 fighter pilot.

SLTC Lee became the first female fighter squadron commander when she took command of 140 Squadron (SQN) in 2022. In that same year, she went on to lead the aerial display squadron at NDP.

2023: First female Ranger CPT Yap Hui Jun



Nothing is impossible: CPT Yap Hui Jun completed what many consider the toughest course in the SAF. She is now among the elite who have earned the right to wear the coveted Ranger tab.

Weeks of back-to-back missions while battling food and sleep deprivation. Carrying combat loads of over 30kg, including equipment like the Man-portable Anti-Tank, Anti-DOoR (more commonly known as the MATADOR) and General-Purpose Machine Gun (GPMG).

To prove herself worthy of being a Ranger, CPT Yap Hui Jun went through the same operations as the men while carrying the same load.

Read more about these amazing trailblazers in: [PIONEER](#)



CILTS SHIPPING/MARITIME

Webinar Series

The series was launched on 17 Aug 2023 with the first webinar, [Container Shipping](#), followed by [Supply Chain & Logistics](#) on 29 Sep 2023. We extend our warmest appreciation and thanks to all our distinguished speakers and participants.

NEXT SHIPPING/MARITIME WEBINAR!
11 Apr 2024



The Chartered
Institute of Logistics
and Transport



Women in Logistics
and Transport

SHIPPING/MARITIME WEBINAR SERIES

brought to you by:

THE CHARTERED INSTITUTE OF LOGISTICS
AND TRANSPORT SINGAPORE

RED SEA CRISIS

Impact on Shipping & Ports

11 APRIL (THU), 2024
11.00 am - 12.00 pm (SGT)



REGISTER NOW
Find Out More

Supply Chain

INSIGHTS
by 

Houthi Attacks Disrupt Global Supply Chains

Last Updated March 13, 2024

Summary:

- Volume through the canal is at record lows. Vessel traffic in the month of the Evergiven incident, March 2021, was 278% higher than in February 2024.
- Ports in Africa are experiencing an influx in volume, leading to congestion. However, this influx also brings more money into local economies and paves the way for increased investment in infrastructure.
- Transit times have leveled out, with a median of 1-2 weeks of additional time on major lanes.
- 606 vessels have been rerouted around the Cape of Good Hope to avoid the Red Sea.



Yemen Group Houthi Continues to Target Commercial Vessels

The Houthi rebel group continues to have a significant impact on supply chains. While attacks on vessels continue, the terrorist group promises to increase intensity as Ramadan begins. Though military groups are continuing attacks to mitigate the damage the Houthis are inflicting, they have attacked and sunk British-owned vessel Rubymar causing an “environmental catastrophe” due to the 41,000 tons of fertilizer that was onboard. This sunk vessel is also likely the cause of damaged cables, which are telecommunication cables responsible for data moving from Asia to Europe. While Houthis deny actively targeting cables, these are not the first cables that have been damaged since attacks began back in December.

Volume through the Suez Canal

Since the attacks began in December, 606 vessels have rerouted to avoid the Red Sea. This has caused the lowest volume levels in recent history through the Suez Canal. In March of 2021, the Evergiven got stuck in the canal and halted passage for 6 days. Despite vessels not being able to pass through the canal, that month saw 278% more vessel traffic than February of 2024, which only saw the passage of 129 container vessels.

MORE UPDATES AT:

[Project 44](#)

SPECIAL REPORT

Baltimore Bridge Collapse

IMPACT ON SUPPLY CHAIN

The collapse of the Baltimore Bridge in the US, a critical infrastructure component, has sent shockwaves through the global supply chain, highlighting the fragility of our interconnected systems. The bridge, which served as a key conduit for goods and materials, now lies in ruins, leaving a gaping hole in the logistics networks that businesses and consumers alike depend on. The shipping industry was already struggling with rebel attacks in the Red Sea and drought in Panama Canal before the Francis Scott Key Bridge fell on 26 March.

Immediate Impact on Shipping and Transportation

The immediate aftermath of the collapse saw a halt in port traffic, with dozens of ships left in limbo, unable to proceed to the Port of Baltimore, one of the three ports on the US east coast that are at least 50 feet deep and able to handle large ships. This sudden disruption has caused a bottleneck, with significant delays in the delivery of goods. The Port of Baltimore, now shut down indefinitely, faces daily losses estimated at US\$15 million. The ripple effects of these delays will be felt across various sectors, particularly those reliant on just-in-time delivery systems.

Economic Ramifications

The economic impact is profound. The bridge's destruction disrupts the shipping of cars, parts, and risks the loss of Baltimore's cargo trade to other ports. With the port handling a substantial volume of car shipments, the automotive industry is bracing for a hit. General Motors and Ford, for instance, have announced rerouting measures for affected shipments. However, the long-term consequences could include increased costs and scarcity of automotive parts.

Supply Chain Resilience and Adaptation

The incident underscores the need for robust supply chain resilience strategies. Businesses must now adapt, seeking alternative routes and methods to transport goods. The American Trucking Association estimates that approximately 4,900 trucks per day will need to be rerouted, adding to the cost for shippers and ultimately consumers. This adaptation phase will test the agility of supply chains and the ability of companies to respond to unforeseen challenges.

Long-Term Effects and Recovery

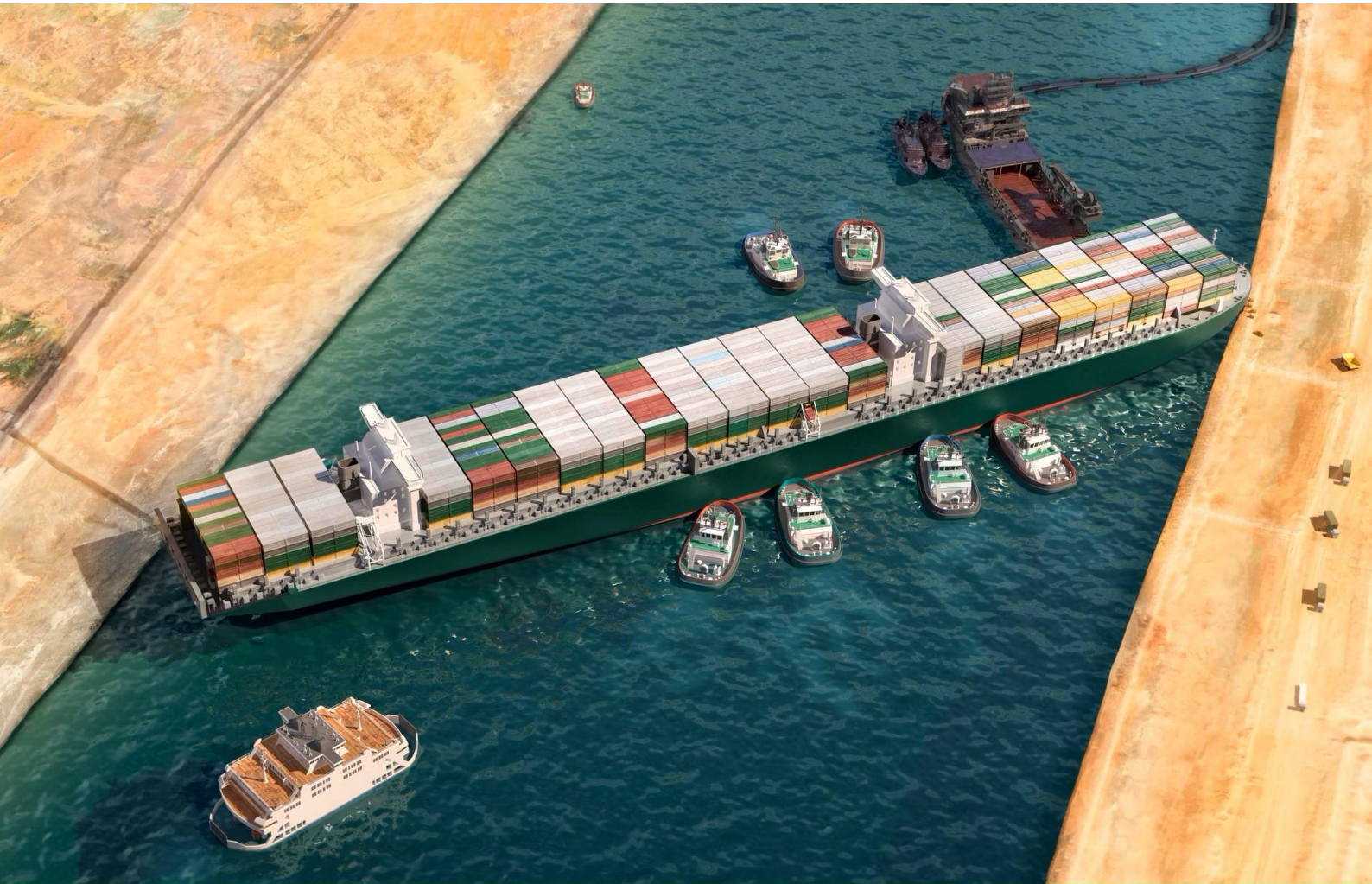
The long-term effects on the supply chain are yet to be fully realized. The bridge's reconstruction will be a monumental task, with the potential to take months, if not years. During this period, the supply chain will have to operate without one of its main arteries, forcing a reevaluation of transportation networks. The recovery process will likely see an increase in transportation costs, changes in shipping routes, and a push for infrastructure modernisation to prevent similar incidents in the future.

Conclusion

The Baltimore Bridge collapse is a stark reminder of the vulnerability of our supply chain infrastructure. It highlights the need for investment in resilient structures and the importance of contingency planning. As the dust settles, the focus must shift to rebuilding not just the physical bridge, but also the trust in a system that supports the flow of goods worldwide. The path to recovery will be a testament to the resilience and adaptability of our global supply chain networks.

Suez Canal incident reveals:

Global trade relies on shipping with few alternatives



In March 2021, the Suez Canal was blocked for 6 days by the *Ever Given*, a container ship that had run aground in the canal. The 400m 20,000 TEU vessel was buffeted by strong winds on the morning of 23 March, and ended up wedged across the waterway with its bow and stern stuck on opposite canal banks, blocking all traffic until it could be freed. Egyptian authorities said that "technical or human errors" may have also been involved. The blockage of one of the world's busiest trade routes significantly slowed down trade between Europe, Asia and the Middle East. On 28 March, at least 369 ships were queuing to pass through the canal, stranding an estimated US\$9.6 billion worth of trade.

IMPLICATIONS FOR GLOBAL SUPPLY CHAINS

For one, the repercussions on shipments, oil and commodity prices, and availability of goods have been huge. Those in Europe have heard the news that they may face a shortage in instant coffee, as the ingredients could not be shipped over. Container shipping costs have soared by four times year-on-year, continuing a years-long trend accelerated by COVID-19.

While the ship has been freed and the jam alleviated, what are the potential ramifications for global supply chains?

At stake are liabilities for missed deliveries, lost sales, manufacturing down time, expired products, and insurance claims. This is not only for the Ever Given vessel, but for the delayed deliveries of other affected vessels. Who absorbs these costs will be a lengthy affair of multi-party negotiation among shippers, consignees, shipping lines, freight forwarders, and insurance companies.

WHY ALTERNATIVE MODES OF TRANSPORTING GOODS ARE NOT PERFECT

In the short term, shipping routes were re-routed, primarily through the Cape of Good Hope in Africa. This is a longer distance of over 10 days, leading to delays and higher costs. Although the immediate delay is on the Europe-Asia routes, the delays will also affect all other shipping as ship capacity is tied up.

So the question to ask is – will this mean an increase in the use of other transportation modes?

Air freight could be used, although this is more expensive and likely to be activated for urgent shipments, such as out-of-stock raw materials for production, or spare parts for maintenance and repair. Much depends on where you're shipping from, the distance, the volume and weight of goods. A piece of furniture from Shenzhen to the US can cost US\$1,200 by ocean but a whopping US\$4,000 by air, according to freight management company Freightos.

Air cargo can be used for smaller volume and low weight items, such as e-commerce purchases of consumer items like cosmetics, fashion and electronics, where buyers may be impatient while air freight costs remain low.

But air freight is unlikely to be a large substitute for large shipping by corporations, when such routine replenishment orders planned ahead of time are usually more efficiently transported through seaborne trade.

When businesses don't use ships, they use overland transport such as rail and trucking. This had already seen a surge during the pandemic-induced port delays last year, which has fuelled the growth of tech integration to ensure seamless connectivity between airports, seaports and last-mile trucking as e-commerce boomed all around the world, allowing businesses to pick and choose routes with the greatest efficiencies. In part, this explosion of infrastructure has been underway pre-pandemic to serve burgeoning trade between China and the rest of the world.

One example of a rail connection that has seen robust trade is the one that goes from China to Europe, passing through Russia and Central Asia, were introduced in the earlier part of 2010s, and have become part of the Belt and Road Initiative. Rail and truck shipments from China to Europe have also increased during this period – by almost double according to forwarding group Geodis.

But these modes of transportation will not be able to substitute sea freight, especially because land-based modes - limited by vehicular size, with time, fuel and manpower costs making it less efficient compared to maritime shipping - have also been traditionally more expensive than sea freight.

The pandemic has also made long-distance, multi-country cross-border trucking less efficient as stepped-up checks, screening and customs slowed waiting times at the China-Vietnam border crossing and more.

Perhaps vaccinating drivers, which is what Malaysia and Singapore have pledged to undertake, could alleviate pain points. While they are an important part of the alternative shipment modes for companies, whether they become more widely adopted in the long term, would depend on price, and how seamless border clearance processes get.

SUPPLY CHAIN RESILIENCE IS EXPENSIVE

In the longer term, the Suez Canal incident is likely to be part of the larger trend in recent years that sees companies focusing more on supply chain and business continuity. Ensuring supply chain continuity is more expensive though. It involves keeping more inventory, rather than focusing on Just-in-Time (JIT) deliveries.

It requires securing multiple sources to ensure supply continuity, which can also increase the cost of logistics and the price of products. Countries and companies are also exploring near-shoring alternatives, especially in critical supplies such as food, medicine and energy, where possible. For example, Singapore's focus on food resilience may see vegetables sourced from local producers that could be more expensive since these are produced in land-scarce Singapore, using advanced vertical farming technology.

Companies will have to weigh trade-offs between the costs of contingency planning versus the costs of disruption. If disruptions are rare like black swan events, then it does not make sense to pay for the extra costs of risk mitigation. If, however, we expect to see some form of disruption regularly, then it would make commercial sense to pay for the extra costs of back-up plans.

CHANGING GLOBAL SUPPLY CHAIN STRUCTURES

Overall, an incident like what happened at the Suez Canal would likely not cause major changes to supply chains. However, the global supply chain landscape has been changing and adapting, reshaped by new emerging markets, trade tariffs, impact of technologies such as automation and e-commerce, and most recently, COVID-19 disruptions.

We are more likely to see a portfolio approach rather than a one-size-fits-all approach, with a business mix that is spread across different customers and different countries. Companies may feel that with certain markets, products and trade routes, diversifying is key, whereas in less risky markets or more stable businesses, going with tried and trusted options is adequate and may be more cost-effective.

Companies need to understand the overall trend lines and invest based on a medium-and-long-term perspective, while preparing for the inevitable short-term operational fluctuations. Global supply chains will continue to become more varied, with regional supply chains interlinked globally as well.

The Suez Canal incident is one more reminder of the need for supply chain resilience in Singapore's long-term planning.

SOURCE

[Channel News Asia](#)

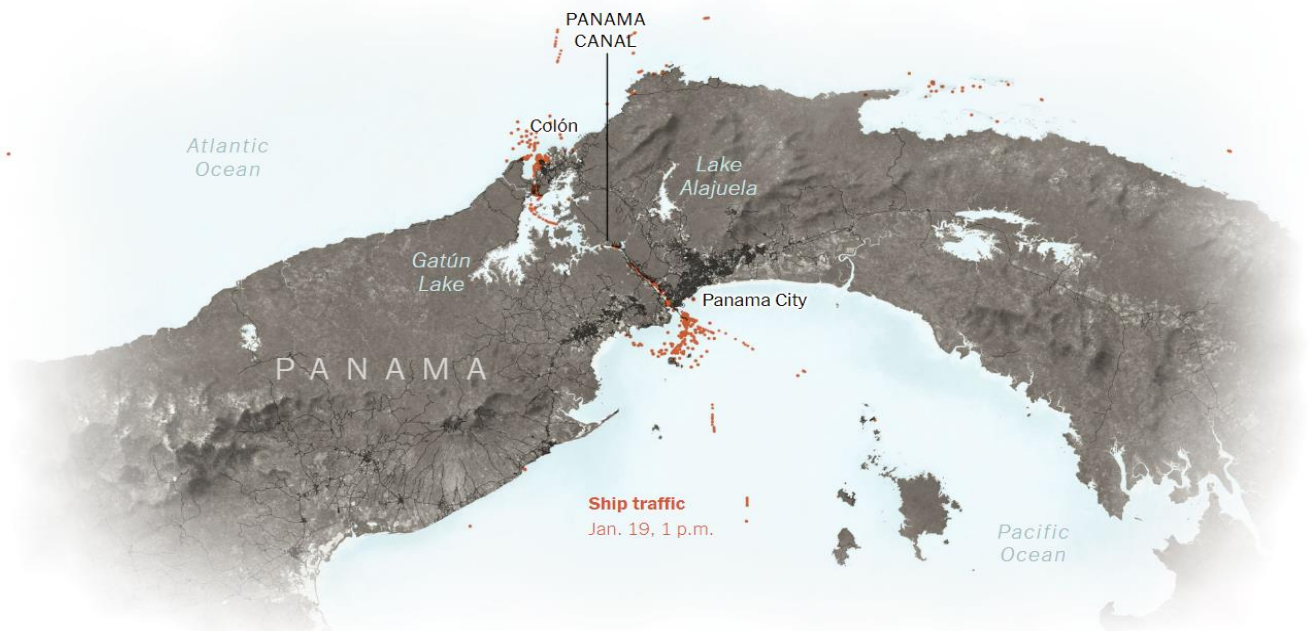
FURTHER READING



[The Suez Canal Blockage – Lessons to be Learnt:](#)

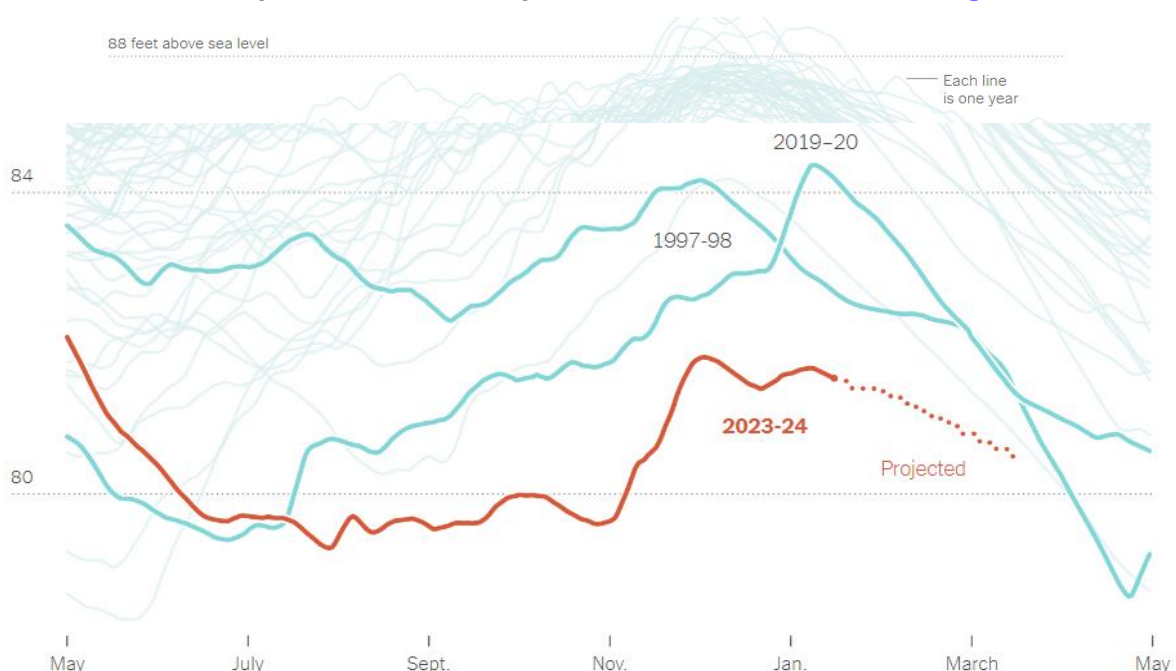
CLIMATE CHANGE

Panama Canal Drought Slows Cargo Traffic



The lake that allows the Panama Canal to function recorded the lowest water level ever for the start of a dry season this year, which means that vastly fewer ships can pass through the canal. The extreme drought, exacerbated by an ongoing [El Niño](#) that is affecting Gatún Lake and the whole region appears likely to last into May.

The Panama Canal Authority has reduced daily traffic through the narrow corridor by nearly 40 percent compared with last year. Many ships have already diverted to longer ocean routes, which increases both costs and carbon emissions, while the global shipping company Maersk recently announced they will shift [some of their cargo to rail](#).



Source: Panama Canal Authority - Note: Water levels reflect a seven-day rolling average.

Panama typically sees a dry season from January to May, but climate change has made rainfall patterns much less predictable. The result is that the increasingly severe droughts and extreme deluges can push canal infrastructure past its operational limits. Rising temperatures also evaporate a significant amount of moisture from the reservoir and its watershed.

In previous droughts, weight restrictions were imposed because heavier boats risk running aground in the shallower water. The canal typically handles an estimated [5 percent of seaborne trade](#), including 46 percent of the container traffic between the East Coast of the United States and Northeast Asia. But last summer, the Panama Canal Authority began taking the drastic measure of reducing traffic. Toll revenues have [dropped by \\$100 million per month](#) since October.

Each maneuver takes around 50 million gallons from its reservoirs to raise and lower vessels through the locks before spilling into the sea. “The fact that the Panama Canal operates on freshwater is a major disadvantage compared to other water routes,” said Ricaurte Vásquez Morales, the administrator of the Panama Canal Authority, in a [video address](#) last month.

“This is certainly a low input year — one of the lowest, one of the driest on record,” said Joshua Tewksbury, the director of the Smithsonian Tropical Research Institute based in Panama.

Demand for global shipping has risen steadily since the canal first opened in 1914. Cutting through the narrow isthmus saves thousands of miles on trips that might otherwise need to route around the tip of South America or through the Red Sea, where [Houthi attacks have thwarted traffic](#) in recent months.

Decades of deforestation have degraded the landscape’s potential for absorbing flood waters. The Smithsonian Tropical Research Institute has been working with the Panama Canal Authority on forest restoration projects and research into which planting strategies best support the forest’s “sponge effect” to mitigate wet and dry spells, as well as to deliver other climate and ecological benefits.

But it may not be enough to meet the pressing demand for cargo traffic through the Panama Canal. What’s happened this year has emphasized the urgency of obtaining more water sources, said Ms. Arrocha Paz. “Whatever can be done inside the watershed is not going to be enough for the next 50 years.”

SOURCE [The New York Times](#)



PANDEMIC DISRUPTIONS

The Lessons of Covid-19

How Covid-19 shook the Global Supply Chain and what we can learn from it

The Covid-19 pandemic has been a global crisis that has affected not only the health and lives of millions of people, but also the economy and trade of many countries. One of the most visible and impactful effects of the pandemic has been the disruption of the global supply chain, which is the network of processes and activities that move goods and services from the producers to the consumers. The pandemic has exposed the vulnerabilities and interdependencies of the global supply chain, and has also highlighted the need for resilience and adaptation in the face of uncertainty and change.

Causes and Consequences of the Disruptions

The global supply chain disruption caused by the Covid-19 pandemic can be attributed to several factors:

- The lockdowns and travel restrictions imposed by many governments to contain the spread of the virus, which reduced the availability and mobility of labour, transport and logistics.
- The surge in demand for certain products, such as medical equipment, personal protective equipment, and online goods, which created bottlenecks and shortages in some sectors and regions.
- The decline in demand for other products, such as oil, tourism, and entertainment, which led to oversupply and waste in some sectors and regions.
- The uncertainty and volatility of the market and consumer behavior, which made it difficult for businesses to plan and forecast their production and inventory levels.
- The lack of coordination and communication among different actors and stakeholders in the supply chain, such as suppliers, manufacturers, distributors, retailers, and customers, which resulted in inefficiencies and mismatches in supply and demand.

The disruption of the global supply chain had significant consequences for the economy and society, such as:

- The loss of revenue and profit for many businesses, especially small and medium enterprises, which faced reduced sales, increased costs, and delayed payments.
- The increase in unemployment and poverty for many workers, especially in the informal and low-skilled sectors, which depended on the supply chain for their livelihoods.

- The rise in inflation and inequality for many consumers, especially in the developing and emerging countries, which faced higher prices, lower quality, and limited access to essential goods and services.
- The deterioration of the environment and sustainability for the planet, which suffered from more pollution, waste, and greenhouse gas emissions due to the disruption of the supply chain.

Lessons for the Future

The pandemic has been a wake-up call for the global supply chain, which needs to rethink and reform its structure and operations to cope with the challenges and opportunities of the 21st century. Some of the lessons and recommendations for the future are:

- The need for **diversification and flexibility** in the supply chain, which means having multiple sources, modes, and routes of supply, as well as the ability to switch and adjust them according to the changing conditions and needs.
- The need for **digitalization and innovation** in the supply chain, which means using technology, data, and automation to enhance the efficiency, transparency, and resilience of the supply chain, as well as to create new products, services, and business models.
- The need for **collaboration and integration** in the supply chain, which means fostering trust, communication, and coordination among the different actors and stakeholders in the supply chain, as well as aligning their goals, incentives, and standards.
- The need for **sustainability and responsibility** in the supply chain, which means balancing the economic, social, and environmental impacts of the supply chain, as well as ensuring the health, safety, and well-being of the people and communities involved in the supply chain.

The Covid-19 pandemic has been a test and a lesson for the global supply chain, which has shown its strengths and weaknesses, as well as its potential and limitations. The global supply chain has a vital role to play in the recovery and development of the world after the pandemic, but it also needs to adapt and improve to meet the demands and expectations of the new normal. The global supply chain can be a source of risk or resilience, depending on how we manage and shape it.



The importance of strategic stockpiling comes to the forefront when global supply chains and production lines are disrupted during times of crisis.

Stockpiling is not only about storing supplies and equipment but a broader consideration of what are the more pressing dangers or threats that may disrupt national economies and livelihoods. To ensure that food and essential supplies remain available, many countries have built and maintained national stockpiles over the years.

Strategic stockpiling and crisis production planning are an ongoing effort as it is not enough to rely on stockpiling or diversification. As the **COVID-19 pandemic** has shown, food production has to continue despite social distancing while increasing demands for medical equipment and drugs must be met. This provides an impetus for industries to innovate and revolutionise production and manufacturing at an accelerated pace, where some of these crisis production models may eventually be converted to new modes of operation.

Explore the resources below to find out more about strategic stockpiling and crisis production planning.

Videos and Podcasts

1. [Coronavirus: Where did all the food go?](#)
2. [The market for emergency vaccines is like no other](#)
3. [Is our food supply under threat?](#)

Websites

1. [COVID-19 and its lessons for innovation](#)
2. [Public stockpiling and food security](#)
3. [Off our trolleys: what stockpiling in the coronavirus crisis reveals about us.](#)
4. [Why are people stockpiling toilet paper? Four experts give their opinions.](#)
5. [Why we're running out of masks.](#)
6. [Your brain evolved to hoard supplies and shame others for doing the same.](#)

SOURCE

[National Library Board](#)



Port congestion is a situation where ships have to wait for a long time to enter or leave a port, due to limited capacity, infrastructure, or labour availability. Port congestion can cause delays, higher costs, and lower quality of goods for both exporters and importers, as well as consumers and businesses. Port congestion can also have negative impacts on the environment, such as increased emissions, noise and waste.

Port congestion has been a persistent problem for the global supply chain, especially since the onset of the COVID-19 pandemic. The pandemic disrupted the normal flow of trade, as lockdowns, travel restrictions and health protocols affected the production, transportation, and consumption of goods.

Some of the major incidents of port congestion in the last three years are:

- In March 2021, the [Suez Canal](#), one of the most important waterways for global trade, was blocked for six days by a giant container ship called Ever Given. The incident caused a massive traffic jam of hundreds of ships and delayed the delivery of an estimated \$9.6 billion worth of goods per day.

- In October 2021, the [ports of Los Angeles and Long Beach](#), the busiest in the US, faced a record backlog of more than 100 ships waiting to unload their cargo. The ports, which handle about 40% of the US container imports, were overwhelmed by the surge in demand for consumer goods, as well as the shortage of truck drivers, warehouse workers, and equipment.
- In January 2022, the [ports of Shanghai and Ningbo](#), the largest and third-largest in the world, respectively, experienced severe congestion due to a combination of factors, such as cold weather, COVID-19 outbreaks, quarantine measures, and Lunar New Year holidays. The ports, which handle about a quarter of China's container trade, saw their average waiting times increase by more than 50%.

These incidents illustrate the vulnerability and interdependence of the global supply chain, and the need for more resilience and coordination among the various stakeholders.

Lessons to be learned from the port congestion problem are:

- **Investing in port infrastructure and technology to increase capacity, efficiency, and safety.** For example, upgrading the equipment, systems and processes for loading and unloading containers, as well as improving the connectivity and visibility of the port operations.
- **Enhancing the port labor force and working conditions to ensure adequate supply, skill, and motivation.** For example, providing training, incentives and protection for the port workers, as well as facilitating their mobility and flexibility.
- **Diversifying the supply chain sources and routes to reduce the reliance on a few major ports or regions.** For example, exploring alternative modes of transportation, such as rail or air, or using smaller or regional ports that may have less congestion or lower costs.
- **Collaborating and communicating among the supply chain partners to optimize the planning, scheduling and execution of the port operations.** For example, sharing information, data and forecasts, as well as aligning the incentives, expectations and standards among the shippers, carriers, port authorities, terminal operators and customs agencies.







EXERCISE SG READY

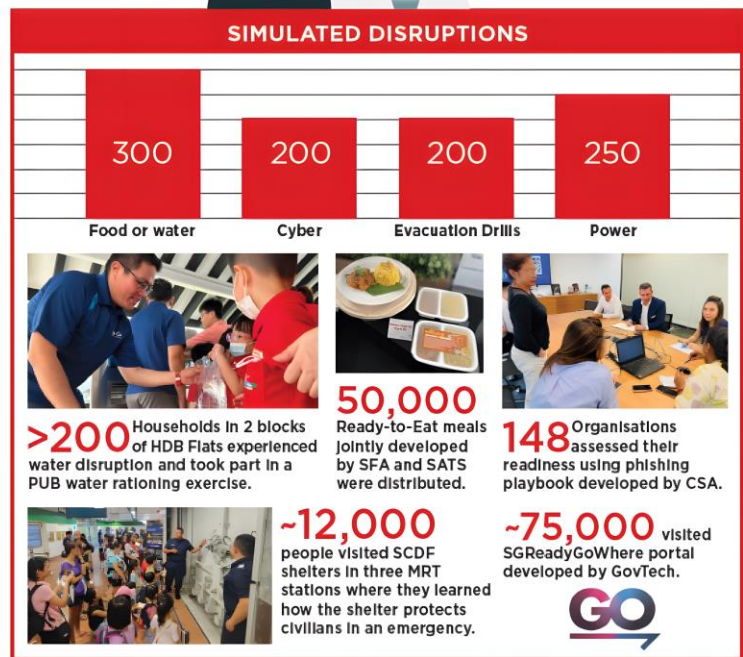
Singapore gets ready for disruptions

Exercise SG Ready

More than **800** organisations took part



| | | |
|---|--|--|
|  Over 250 Public Agencies |  Over 160 Businesses |  21 NEA Markets and Hawker Centres |
|  2 blocks of HDB Flats |  17 Community Organisations and 4 PA Integrated Hubs |  4 MRT Train Stations |
|  Over 330 MOE Schools |  10 Institutes of Higher Learning |  9 Public Attractions |



For the first time, an **islandwide Total Defence Exercise, [Exercise SG Ready](#)**, was launched on Feb 15 to commemorate **40 years of Total Defence Day**.

The exercise, which ran till Feb 29, involved more than 500 educational, community, commercial and government organisations. They will take part in exercises that simulate attacks on Singapore carried out by an anonymous aggressor using various means.

These include **disruptions to power, water and food supplies, disinformation campaigns, phishing and drone attacks.**

Exercise SG Ready was launched at an event at South Beach Tower in Beach Road by Deputy Prime Minister and Minister for Finance Lawrence Wong.

DPM Wong said in a video message that Total Defence has kept Singapore safe and guided its people through many challenges, including terrorism, financial crises and a pandemic.

“We overcame these challenges and emerged stronger, because we worked together, stayed united, and each one of us played our part. That is the essence of Total Defence,” he said.

Total Defence remains crucial in Singapore’s next phase of nation-building as our external environment becomes more complex and volatile, added DPM Wong.

Noting that existing security threats like terrorism show no signs of abating, he said: “We also have to contend with new threats, such as more sophisticated cyber attacks and [hostile information campaigns](#), as well as the growing impact of climate change.”

He urged everyone to use the exercise to learn about the threats facing Singapore, reflect on society’s readiness to deal with them, and to practise what to do when they happen.

Total Defence is commemorated on Feb 15, when British forces in Singapore surrendered to the Japanese in 1942 during World War II at 6.20pm. The Japanese occupied the country till Sept 12, 1945.

SOURCE [The Straits Times](#)

VIDEO (1:41 min)

EXERCISE SG READY

More details of Exercise SG Ready:

[MINDEF PRESS RELEASE](#)

HUMANITARIAN LOGISTICS

Singapore delivers third tranche of humanitarian aid for Gaza

RSAF C-130 transport aircraft stays on to conduct humanitarian airdrop operations staged out of Jordan



In March, Singapore delivered its third tranche of humanitarian assistance for Gaza via Jordan. **Minister for Foreign Affairs Vivian Balakrishnan** made a working visit to Amman, Jordan to hand over the aid in cooperation with the Jordanian government.

The Republic of Singapore Air Force (RSAF) deployed an A330 Multi-Role Tanker Transport (MRTT) and a C-130 transport aircraft for the mission.

"At the invitation of the Jordanian government, the C-130 will stay on and conduct humanitarian airdrop operations staged out of Jordan with support from the Jordanian Armed Forces", MFA said.

The Singapore Armed Forces' (SAF) Changi Regional Humanitarian Assistance and Disaster Relief Coordination Centre (RHCC) led efforts to coordinate and consolidate contributions of humanitarian aid supplies from agencies including the SAF, Ministry of Health and non-governmental organisation Relief Singapore.

SOURCE

[CNA](#)

On March 20, the Republic of Singapore Air Force successfully executed its first humanitarian airdrop to the Palestinians in Gaza.



SAF Participates in International Maritime Security Operation in the Red Sea

SAF Participates in International Maritime Security Operation in the Red Sea



The **Red Sea** is the shortest sea route linking **Asia and Europe**. It is a major Sea Line of Communication (SLOC) carrying approximately **12% of global trade** and **30% of global container traffic**. Disruptions to this SLOC will have an impact on global supply chains.

As of 9 Jan 2024, Yemen-based Houthi forces have unlawfully attacked about 20 merchant ships in the Red Sea with missiles and drones - including Singapore-flagged vessel **MAERSK HANGZHOU**.

These attacks have increased business costs, as ships have been rerouted around southern Africa to avoid the Red Sea. The number of ships passing through the Bab el-Mandeb Strait in the Red Sea has dropped by about a third in recent weeks.

“ It is to our interest for Singapore to join cause with the international community to protect and ensure that key SLOCs around the world remain open, especially if threatened by unlawful acts by non-state actors or terrorist groups. ”

- Minister for Defence Dr Ng Eng Hen

As part of ongoing international efforts to keep the Red Sea open and safe, **Singapore will contribute to Operation Prosperity Guardian under the Combined Task Force 153**, one of the five task forces under the 39-nation Combined Maritime Forces (CMF).

The Singapore Armed Forces will deploy:

- i** a Senior National Representative to the CMF in Bahrain,
- ii** a team from the Republic of Singapore Navy (RSN) Information Fusion Centre to support info-sharing and engagement outreach with the commercial shipping community, and
- iii** a team of planners to work with international partners to formulate operational plans.



The US launched the multinational Operation *Prosperity Guardian* to ensure maritime security in the Red Sea. The international community of user states also has a role to play. In particular, there is the 39-nation **Combined Maritime Forces (CMF)**, of which Singapore has been a member since 2009. The CMF's Combined Task Force (CTF) 153: Red Sea Maritime Security has been tasked to keep the Red Sea Sea Line of Communication (SLOC) open and safe. The launch of Operation *Prosperity Guardian* aims to restore international confidence and the free flow of maritime shipping through the area.

Singapore participates in Operation *Prosperity Guardian* and contributes to CTF 153's efforts. The Singapore Armed Forces (SAF) had similarly participated in the Combined Task Force 151; that was a counter piracy effort in the Gulf of Aden, where we deployed assets for quite a long time from 2009 to 2023. For CTF 153 and the current operation: Operation *Prosperity Guardian*, the SAF deployed: (a) a team of

planners, to work with international partners at their HQ to formulate operational plans; (b) a team from the RSN's Information Fusion Centre (IFC), to support information-sharing and engagement outreach with the commercial shipping community; and (c) a Senior National Representative to the Combined Maritime Forces in Bahrain.

Separately, Singapore and the SAF, together with international partners have continued to monitor developments in the region, including the ongoing need for humanitarian assistance. **SAF has been supporting Singapore's humanitarian aid contributions to Gaza, and that was through the Changi Regional Humanitarian Assistance and Disaster Relief Coordination Centre (RHCC)'s information networks and resources.**

Further to this effort, the French Armed Forces invited the SAF to provide two medical personnel to serve on FS *Dixmude*, docked at the El Arish Port in Egypt. This is a reconfigured hospital ship, and has been treating casualties from Gaza. The SAF has deploy a medical team to aid civilian casualties there.



SAF's Lieutenant Colonel Nazirul Hannan Abdul Aziz (first from left) and Military Expert 3 Jimmy Woo Ying Ming (second from right) with the French Armed Forces medical team on board the FS Dixmude

[SOURCE](#)[MINDEF](#)

THE SUPPLY CHAIN SHIFT TO ASEAN



In an era marked by increasing globalization, geopolitical tensions, and shifting economic landscapes, businesses worldwide are constantly evaluating their strategies to ensure resilience and sustainability. A relatively new concept that has gained attention in recent years is “**friendshoring**” – a strategic approach to offshoring or outsourcing that prioritizes countries with which a company’s home nation shares amicable diplomatic, economic, or trade relations.

Amid increasing trade and political tensions and China’s rising labor costs and long-term demographic shift, a growing number of companies are diversifying their China business by moving operations to other countries, in particular for “sensitive” sectors. However, China still offers myriad strategic advantages, such as comprehensive supply chains, highly developed infrastructure, and a wealth of talent, expertise, and know-how. Moreover, China remains one of the world’s biggest consumer markets, which will continue to attract companies from around the world.

For these reasons, companies with an existing presence in China are unlikely to abandon the market entirely. Rather, many investors are choosing to supplement Chinese operations with low-cost inputs sourced from production facilities in markets such as Vietnam and Indonesia, in an effort to diversify operations and minimize risks of trade and supply chain disruption. While the structures of these operations differ greatly depending on the country in question, this production model has become widely known as “[China+1](#)”.

The countries that are set to benefit are typically places that offer low-cost operations and labor, but that also have relatively developed infrastructure and supply chains

that are integrated with the wider region and the end market. For companies that are looking to keep operations in Asia, the list of candidates includes Malaysia, Vietnam, Indonesia, and India, among others.

While these countries offer low-cost alternatives to China, markets such as South Korea and Japan may also be ideal destinations for high-value production and technological innovation, with Western countries, in particular, being able to benefit from close trade and political ties with their home countries.

Reshoring to countries in ASEAN

Some of the countries that stand to benefit the most from friendshoring or a China+1 strategy are the 10 ASEAN countries, as they have the advantage of providing a lower-cost environment and being part of multiple multilateral trade treaties, which facilitate trade in goods.

These treaties include the China-ASEAN FTA, which eliminates tariffs on the majority of goods traded between China and ASEAN countries. Meanwhile, the Regional Comprehensive Economic Partnership (RCEP) aims to remove tariffs on 90 percent of goods traded between member countries over the next 20 years. The treaty currently has 14 active member countries—the 10 ASEAN countries except Myanmar, plus China, South Korea, Japan, Australia, and New Zealand.

The RCEP will motivate more investment through the China+1 strategy to lower-cost members of the FTA, such as Malaysia, Indonesia, and Vietnam, for more labor-intensive processes, such as in garment manufacturing.

Through these treaties, companies seeking to reshore operations to countries in Southeast Asia can continue to enjoy the benefits of integrated supply chains. The regional trade deals can enable them to continue sourcing materials and components from China cheaply and with fewer delays. In addition, the treaties also allow companies easier access to more markets. This includes higher-cost markets like Japan and South Korea, as well as the large consumer bases in fast-growing economies like Malaysia and Indonesia.

Looking at the possible destinations in more detail, Indonesia, Malaysia, and Vietnam stand out as ideal candidates among the ASEAN 10 member countries—due to their large populations, developed industries and supply chains, and high growth potential, as well as friendly relations with the US and Europe.

SOURCE

[ASEAN Briefing](#)

ASIA-EUROPE FREIGHT ROUTES: OTHER WAYS IN THE MAKING?

The Red Sea attacks crisis has underscored the vulnerability of global trade routes, particularly for nations reliant on transporting goods through the Suez Canal.

BELT AND ROAD INITIATIVE (BRI)

China's Belt and Road Initiative (BRI) presents a potential alternative, offering a land-based route for cargo transport.

The BRI, launched in 2013, envisions a vast network of infrastructure projects linking China with Europe, Africa, and Southeast Asia. It includes a land route – the Silk Road Economic Belt – that could significantly reduce dependence on the Suez Canal. This route would traverse Central Asia and Russia, eventually reaching Europe.



While the BRI is still under development, it has the potential to offer several advantages over traditional shipping routes. Here's a closer look:

- **Diversification:** The BRI provides a diversification option for cargo transportation, reducing reliance on chokepoints like the Suez Canal.

- **Reduced Costs:** BRI could potentially lower transportation costs in the long term, as it avoids canal fees and could offer economies of scale.
- **Faster Delivery Times:** Land routes can be faster for certain stretches compared to traditional sea routes, especially for time-sensitive goods.
- **Geopolitical Security:** BRI could lessen vulnerability to disruptions in piracy-prone regions like the Red Sea.

However, the BRI also faces challenges:

- **Infrastructure Development:** Large-scale infrastructure development is needed in some regions along the BRI route.
- **Geopolitical Considerations:** The BRI traverses various political landscapes, and navigating these complexities can be challenging.
- **Debt Sustainability:** Concerns have been raised about the potential for debt burdens on countries participating in the BRI.

Overall, the BRI's potential as an alternative trade route is significant. It offers diversification, potentially lower costs, and faster delivery times. However, substantial infrastructure development and careful navigation of geopolitical complexities are necessary for the BRI to reach its full potential.

INDIA-MIDDLE EAST-EUROPE CORRIDOR (IMEC)

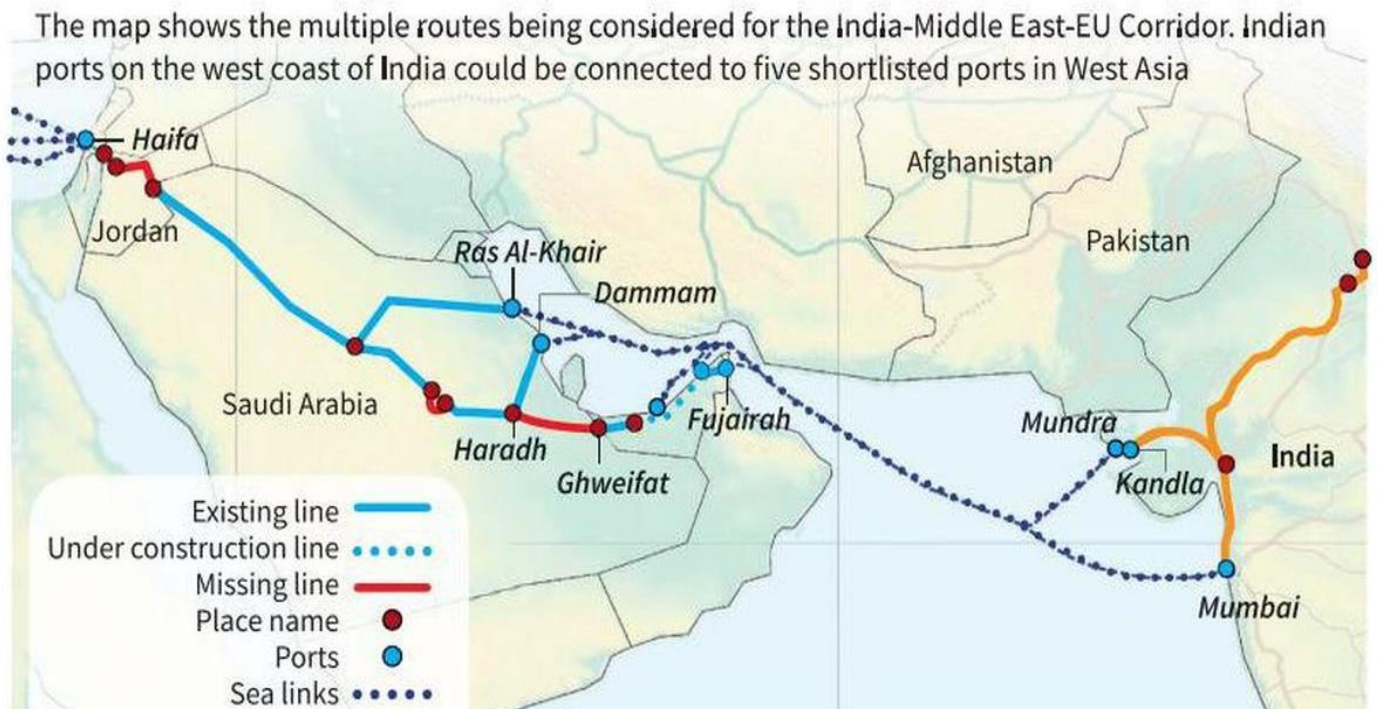
Background and Ambitions

The IMEC, announced in September 2023, was envisioned as a **transformative trade route connecting South Asia to Europe**.

IMEC was cemented at last year's **Group of 20 Summit**, in a three-way handshake between an unlikely triumvirate: US President Joe Biden, Indian Prime Minister Narendra Modi and Saudi Crown Prince Mohammed bin Salman.

In this pioneering concept, it is envisioned that goods would traverse from western **Indian ports through the United Arab Emirates, Saudi Arabia, and Israel**, reaching markets in Italy, France, and Germany. The leaders of the Group of 20 Summit hope that this trade corridor would enhance inter-regional connectivity and economic development.

Less than a month later, on October 7, Hamas attacked Israel and the Middle East erupted in a new wave of geopolitical turmoil. As the war in Gaza drags on, talk of the transcontinental trade lane has all but gone silent.



Challenges and Geopolitical Realities

The ongoing geopolitical turmoil in the Middle East, which erupted from the Hamas attacks on Israel has brought the IMEC project to a standstill.

The United States’ efforts to counter China’s Belt and Road infrastructure programme has faced a setback, emphasising that strategic plans often stumble in the face of harsh geopolitical realities.

Hopefully, stability in the region is eventually restored and another freight route option opens up for the supply chain connecting Asia and Europe.



Modernising Military Logistics and Supply Chain Security



For the US to remain in stride with warfighting demands across vast distances, now is the time to rethink US military logistics and integrate commercial supply chain practices and capabilities.

Defense operations can catch up with two decades of rapid advances in technology that have enabled commercial supply chains globally. These Industry 4.0 technologies, including artificial intelligence and machine learning used in predictive analytics, supply chain intelligence and more autonomous functionality, can quickly bridge gaps and increase speed in contested defense scenarios. The result can be greater cargo visibility, smarter warehousing and better transportation utilization.

Challenges during the COVID-19 pandemic highlight the need for greater resiliency, responsiveness and military supply chain visibility. The U.S. Navy can get ahead of economic, cyber and other contested scenarios that could disrupt logistics. The Department of Defense (DoD) can make the investment to re-architect a defense supply chain and logistics infrastructure that fosters resilience, velocity and agility at enterprise scale before the next major challenge.

History can inform new military supply chain partners

Throughout 20th century conflicts, the cornerstones of US military dominance were an agile warfighting force; a defense industrial base that excelled at research-driven manufacturing; and a global logistics capability that set the bar for planning, stockpiling and large-scale transportation. That logistics dominance, however, is eroding as readily available technological tools enable potential adversary abilities to deny access and impede sustainment operations. In addition, new disruptive and asymmetric capabilities in the cyber and space domains have global reach. At the same time, hypersonic weapons put logistics at risk from a great distance. Recent enemy cyber threats to a US low-orbit satellite and to US energy pipeline infrastructure show that attacks can be extremely focused and result in acute domestic risk.

The US military can work more closely with commercial partners and allies to identify vulnerabilities and build agility into critical supply chains. In this military supply chain transformation, private partnerships can foster greater diligence by tapping commercial supply chain lessons and big data to ferret out solutions to major issues, such as a lack of supply availability, limited to no end-to-end visibility and a lack of resiliency.

There are four actions that military leaders can take to overcome today's challenges and create a more predictive and secure supply chain that functions in all phases and conditions in a contested logistics scenario.

1. Design a more modern and agile IT infrastructure

Design a more modern and agile IT infrastructure to operate logistics when communications are compromised. Systems can have multiple nodes and support deep, predictive analytics that function afloat, ashore or at enterprise scale without connectivity.

Many companies and federal agencies have created such networks, which can be phased and adaptive when an IT system is degraded.

2. Embrace better end-to-end (E2E) visibility tools

Gaining better E2E visibility can start with a supply chain risk management assessment that can expose risks at critical supply points, including energy infrastructure, as well as deep relationships at resupply locations, at ports, and with allied and commercial partners. A vulnerability assessment can expose and remediate

weaknesses among DoD partners, especially commercial and foreign partners, and build agility across all supply classes.

Another E2E tool is the creation of a supply chain digital twin, a model to generate predictive analysis and visualizations on potential supply chain disruptions across the world. Built on real-time data, simulation, machine learning and reasoning, a digital twin can improve the decision-making process.

3. Predict real-time supply needs and create surge capacity

By knowing what is needed when and where, AI can advance predictive logistics and execute preplanned push logistics.

Commercial industrial supply chain resiliency was lacking at the height of the COVID-19 pandemic, which resulted in lessons in U.S. Navy supply chain readiness. During supply surges in conflict, when cybersecurity breaches could disrupt the supply chain, the Navy of the future needs the ability to mobilize supply production at any location, especially in the context of great power competition.

The use of Industry 4.0 technology enablers at scale can deliver data-driven insights to commanders and wrench turners alike. In addition to forecasting with AI and machine learning, this can include predictive maintenance and other applications:

- Predictive logistics: Using machine learning, internet of things data, natural language processing and advanced analytics to help drive and operate the system in a more autonomous mode
- Process optimization: Business process reengineering and modernization, which can drive fundamental change, rather than applying incremental improvement with new systems

There are also lessons to learn from the US government and private industry coordination of medical supply chains and logistics at the height of the COVID-19 pandemic. The problem: critical medical supplies were largely produced outside the United States. After initial medical supply inventories were exhausted, there was no ability to quickly expand production to meet the need. The critical lesson was that you can't immediately surge what you don't have, even with the Defense Production Act (DPA).

The nation had limited visibility on medical supply production, lacked surge contracts and lacked data infrastructure to augment visibility on everything from raw materials

to alternative sources. However, with private commercial supply data combined with government COVID infection statistics, shipments eventually could be distributed quickly and equitably. The lessons showcase that military supply chain leaders can get ahead of the next challenge and collaborate with the private sector, and illustrate the need for greater DoD agility. A contested logistics situation would be even more difficult than the COVID-19 pressures on labor, materials sourcing, production and delivery.

4. Be prepared to maintain, command and control in a contested environment

Be prepared to maintain, command and control a resilient, multinode supply chain in a contested environment, which will allow you to view the Common Operational Picture (COP) and see where everything is and how it moves.

This may require enterprise-to-edge, operationalized data from the cloud to a laptop. This can lead to a competitive advantage in conflict by providing commanders with a comprehensive logistics picture that can predict problems and prescribe supply chain solutions across the enterprise.

Planning may need to go into construction of decision support tools and commercial connectivity between the DoD, commercial partners and allies. This should address adversaries' sophisticated cyber and other strike capabilities, including kinetic bombardment and focused energy attacks. In other words, operations data and information are part of the broader logistics picture and are used to create solution sets during disruptions across the network.

Summary

As the military transforms for the next conflict with a hybrid force of manned and unmanned systems, now is the time to transform supply chains and logistics capabilities to keep pace with the speed of conflict and sustain maritime advantage.

SOURCE

[EY](#)



Nearshoring, Friendshoring and Reshoring

Key findings

- **Nearshoring, friendshoring and reshoring have become key corporate strategies as companies prioritize risk management over cost-effectiveness in their supply chains.**
- **Trade deglobalization has potential consequences for asset allocation and portfolio construction that could include changes to country and sector allocations as well as to thematic- and real-estate-investing strategies.**
- **The shift in supply-chain strategies may elevate ESG considerations and geopolitical risks in investment decision making.**

As global-supply-chain strategies evolve and geopolitical dynamics shift, nearshoring, friendshoring and reshoring have emerged as key corporate strategies that prioritize supply-chain resilience over immediate cost-cutting concerns. Mentions of these supply-chain strategies in multinational corporations' earnings calls have risen sharply since 2020. Climbing costs associated with port bottlenecks, parts shortages and shipping costs have contributed to the growing reassessment of supply chains.

The global nearshoring trend may not displace China as the world's largest manufacturing base. Many companies, however, may shift to a “**China plus one**” or “**China plus many**” strategy, maintaining some operations in China, for example, to serve the local market, while adding facilities elsewhere. Moreover, diversifying supply chains away from China could be challenging for some companies, especially in certain industries, and may take considerable time to unfold.

Supply-chain changes link to seven key portfolio areas

Either China-plus strategy could offer both opportunities and challenges to institutional investors, potentially influencing some of the most important decision areas in portfolio construction.

Country beneficiaries. As manufacturers seek to diversify their supply chains, some emerging- and frontier-market countries with untapped manufacturing capacity, particularly in Asia (Malaysia, Thailand, Vietnam and India) and Latin America, stand to be the potential front-runners of a China-plus strategy. For example, at the beginning of 2023, Mexico replaced China as the U.S.'s top trading partner, benefiting from geographic proximity, a strong manufacturing-based economy, skilled workers and free-trade pacts. The primary candidates to be China-plus beneficiaries offer competitive labor costs, geopolitical friendliness to key developed-market nations and a strategic geographical location.

In a twist on the nearshoring trend, some Chinese manufacturers are themselves moving their late production stages to neighboring nations, as geopolitical tensions and tariffs rise.

Global investment themes. Many of the likely China-plus beneficiary countries are grappling with labor and skill shortages. Robotics and industrial automation may help bridge the gap, presenting investment opportunities in companies with these thematic exposures. Year to date through Sept. 12, 2023, robotics and artificial intelligence has been one of the [best-performing thematic segments](#) based on the MSCI ACWI Investable Market Index (IMI), posting a return of 42.4%. The nearshoring trend may fuel ongoing interest in the theme.

Commercial real estate. The nearshoring trend entails a shift from “just in time” logistics and lean inventory to a “just in case” model, in which firms scale up the amount of warehoused goods. This may lead to greater demand for warehousing and manufacturing facilities in the China-plus beneficiary countries, possibly leading to a commercial-real-estate boom in some markets.

The higher demand surfaced, for example, in central and eastern Europe as the logistics segment of the real estate market expanded sharply from 2018 to 2022 with multinational companies strengthening their supply chains by nearshoring. And beginning in 2020, demand for logistics infrastructure in southeast Asia's emerging markets climbed swiftly, due in part to domestic economic growth and relocation of production facilities from China.

ESG and climate. While nearshoring reduces the carbon footprint associated with long-distance transportation, constructing new facilities has an impact on the environment. As companies relocate supply chains to withstand disruptions, they may choose to maximize their investment in climate-related innovation, scale sustainable finance and attempt to turn the risks of the net-zero transition into opportunities. Investors attuned to this possibility may identify related investment opportunities.

Industry implications. The industries with complex, global supply chains, such as semiconductors and pharmaceuticals, may be most affected by the nearshoring trend. On the one hand, some developed-market companies in these sectors could face significant costs associated with reconfiguring their supply chains, thus reducing their profitability. On the other hand, emerging-market companies in candidate China-plus countries that supply these industries may benefit.

Another way to assess the industry implications of nearshoring is to examine which industries in China have the highest economic exposures to developed-market countries. High exposure may be a harbinger of upcoming change in these industries.

Geopolitical risk. As the nearshoring trend has gained traction, geopolitical risk has become a more explicit input in investment strategy. Even companies engaging in friendshoring, which encourages sourcing from geopolitically allied countries, may be vulnerable to shifting geopolitical tensions. Alliances can be fluid and unpredictable, and companies may choose to hedge their associated risks by spreading production facilities across several friendly countries or bringing them onshore. Monitoring the stability of a company's geopolitical ecosystem may become more important for investors.

Macroeconomic trends. Nearshoring could stimulate economic growth in the beneficiary countries through job creation and infrastructure development, leading to increased capital expenditures in the global economy. At the same time, global inflationary pressures could build from increased demand for resources and labor. Greater trade fragmentation could also entail costs to economic growth. The IMF estimates that the move toward economic blocks with higher foreign-direct-investment barriers could cause a 2% drop in long-term global economic output.

[SOURCE](#)[MSCI](#)



How Retailers Can Navigate Choppy Supply Chains

The recent surge in Houthi rebel attacks in the Red Sea have disrupted one of the world's most important maritime trade routes and forced shipping and oil companies to suspend transit through the area. With this vital trade artery disrupted, retailers face the prospect of longer shipping routes, increased costs from transit through alternate means, and potential product shortages.

In fact, recent data has shown that these disruptions are already more significant than pandemic-era ones; a January report by Sea-Intelligence analyzed and compared vessel delays, finding that the current drop in vessel capacity is the second-largest in recent years, second only to the disruptions caused when the "Ever Given" cargo ship was stuck in the Suez Canal in March 2021. However, amidst the turbulence, technology and pandemic-honed strategies can help retailers stay afloat and navigate these choppy waters.

If one good thing came out of the 2020 pandemic for retailers, it was that it served as a crash course in supply chain resilience. Many retailers have built diverse networks, spanning different regions and partners, which provide much-needed flexibility when disruptions arise. Similarly, optimizing inventory based on data-driven forecasts is no longer optional. Holding the right amount of stock, calculated algorithmically, can reduce the occurrence of empty shelves.

Technology now offers even more opportunities to improve logistics. Retailers and shippers should ensure they have the following tools:

Real-time visibility and tracking. Advanced logistics platforms provide granular, real-time data on shipment location and status. This granular visibility empowers retailers to proactively anticipate delays, optimize inventory allocation, and adjust sourcing strategies to minimize potential stockouts.

AI-powered scenario planning. Disruptions are inevitable, but their impact can be mitigated through intelligent preparation. AI-powered tools can simulate various disruption scenarios, including rerouting options and their associated cost implications. These simulations allow retailers to identify the most efficient and cost-effective pathways to minimize delivery delays and maintain product availability before making significant changes like choosing air vs. maritime transit.

Capacity optimization. AI and predictive tools can also assist in bringing additional container capacity online efficiently and in the correct areas. This is a luxury not afforded to retailers during COVID, when there was no excess capacity available. A recent CNBC report indicated that, currently, about 10% of the world's fleet is not in service. This could be intelligently deployed to correct imbalances in availability and make schedules more consistent.

Proactive mitigation through data analytics. Machine learning algorithms can sift through vast volumes of data, from historical shipping patterns to weather forecasts and geopolitical events. By identifying previously unseen patterns, and by predicting potential disruptions, these algorithms equip retailers with the foresight to implement proactive mitigation strategies.

While technology provides critical tools that can help navigate disruption, success also hinges on open communication and strategic adaptation. Keeping customers informed about potential delays, and leveraging recommendation engines that are capable of offering alternative options like similar items, all builds trust, and fosters better relationships. Additionally, promoting flexible fulfilment options — such as the ability to buy items online and pick them up in store — potentially reduces reliance on long-distance shipping, mitigating the impact of future disruptions.

Retailers should also do what they can to amplify their voice. A stable Red Sea benefits everyone, so working with officials and with retail lobbying groups that are advocating for de-escalation and peaceful resolutions is an approach that aligns not only with ethical principles, but also with long-term business interests. By embracing technology, implementing pandemic-learned strategies, and fostering collaboration, retailers can navigate these choppy waters and ensure their shelves remain stocked, their customers are satisfied, and their businesses remain resilient in the face of an ever-changing global landscape.

SOURCE

[Supply Chain Brain](#)



Disaster Response and Recovery in Supply Chain Disruptions

In today's world, supply chain disruptions caused by natural disasters, political instability, and pandemics are becoming more frequent, emphasising the need for a robust disaster response and recovery plan in supply chain management.

Why is disaster preparedness important in supply chain management?

Risk Mitigation

Disaster preparedness aims to reduce the risk of supply chain disruptions caused by natural disasters, accidents, or other unexpected events. This includes identifying potential risks and developing strategies to mitigate them, such as:

- Conducting risk assessments and mapping out potential supply chain disruptions
- Identifying critical suppliers and developing backup plans for alternative sourcing
- Creating redundant systems to ensure continuity of operations in case of a disruption

Cost Savings

Preparing for disasters can save supply chain managers high costs in the long run. This includes:

- Avoiding stockouts and lost sales due to disruptions
- Minimising costs associated with rush shipping or expediting production to catch up on lost time
- Reducing the need for emergency response services or additional labour to handle disruptions.

Reputation Management

Supply chain disruptions can also damage a company's reputation, particularly if it cannot meet customer demands during or after a disaster. By being prepared, companies can:

- Maintain a positive image by ensuring business continuity and customer satisfaction
- Demonstrate their commitment to sustainability and corporate social responsibility by minimising the environmental impact of disruptions.

Key Elements of an Effective Disaster Response Plan for Supply Chains

An effective disaster response plan is essential for minimising supply chain disruptions caused by natural disasters, accidents, or other unexpected events. Here are some key elements that businesses should include in a comprehensive disaster response plan for supply chains:

- **Risk Assessment:** A risk assessment should identify potential risks and vulnerabilities in the supply chain network. This includes mapping out potential supply chain disruptions, identifying critical suppliers, and assessing the impact of disruptions on business operations.
- **Business Continuity Plan:** A business continuity plan should ensure critical business functions can continue during a supply chain disruption. It includes identifying alternative sourcing strategies, developing redundancy plans, and establishing communication protocols and emergency response procedures for all stakeholders in the supply chain.
- **Technology:** Technology can be critical in disaster response efforts, including real-time supply chain operations monitoring and data analytics to identify potential disruptions.

By including these key elements in a comprehensive disaster response plan, supply chain managers can be well-prepared to navigate unexpected events and minimise the impact of disruptions on business operations.

Role of Technology in Supply Chain Disaster Recovery

Technology is critical in supply chain disaster efforts by enabling real-time monitoring, data analytics, and supplier communication. Here are some specific ways technology can support disaster recovery in the supply chain:

Real-time Monitoring: Technology enables real-time monitoring of supply chain operations, helping managers quickly identify disruptions such as weather conditions and traffic patterns. This allows for prompt action to minimise the impact on the supply chain.

Data Analytics: Data analytics can identify potential disruptions in the supply chain, allowing managers to adjust their operations proactively and avoid potential issues, such as changes in demand or disruptions in logistics.

Communication: Cloud-based supply chain management systems use technology to communicate with suppliers, track shipments, and manage inventory levels. Real-time visibility into operations allows managers to make informed decisions and respond promptly to potential disruptions.

Automation: Automation is a valuable tool for streamlining supply chain operations and minimising disruptions caused by human error. Businesses can achieve it through automated warehousing systems, autonomous vehicles, and other technologies that enhance speed and efficiency.

By leveraging technology in these ways, supply chain managers can improve their disaster recovery efforts and ensure that their operations are resilient to potential disruptions.

Best Practices for Managing Supply Chain Disruptions During a Disaster

Disasters such as natural calamities, cyber-attacks, and geopolitical issues can cause significant disruptions to global supply chain networks. Here are some best practices for managing supply chain disruptions during a disaster:

Collaboration

Collaboration is key to managing supply chain disruptions during a disaster. Supply chain managers should work closely with suppliers and customers to identify alternative sourcing strategies and develop contingency plans.

Redundancy

Redundancy is critical to ensuring business continuity during a disaster. Supply chain managers should identify critical suppliers and establish redundancy plans to ensure that essential products and services can continue to be delivered.

Flexibility

Flexibility is essential during a disaster, as disruptions occur quickly and unexpectedly. Supply chain managers should adjust their plans and operations to respond to the changing situation.

Risk Assessment

A risk assessment should identify potential risks and vulnerabilities in the supply chain network. It includes mapping out potential supply chain disruptions, identifying critical suppliers, and assessing the impact of disruptions on business operations.

Contingency Planning

Companies should develop a contingency plan to ensure critical business functions can continue during a supply chain disruption.

Contingency planning includes identifying alternative sourcing strategies, developing redundancy plans, and establishing communication protocols and emergency response procedures for all stakeholders in the supply chain.

Testing and Training

Regular testing and training ensure that the disaster response plan is effective and that all stakeholders respond to potential disruptions.

Testing and training include conducting tabletop exercises, reviewing emergency response procedures, and providing training to supply chain employees.

SOURCE

[Imarticus](#)

EDUCATION

EVENTS ON CILTS WEBSITE

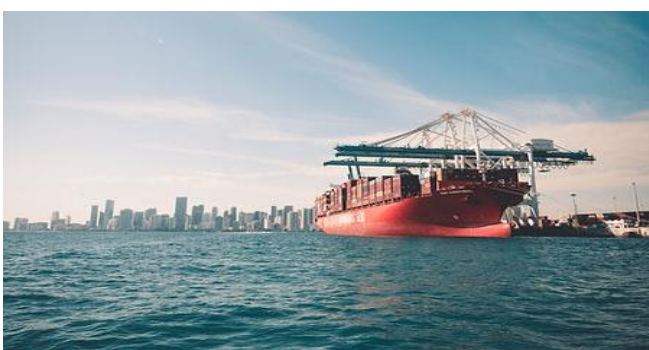
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Country of origin of products determines duty, admissibility and certain government agency requirements at import.

Determining origin is not always straightforward. Rules for determining origin vary under various laws and free trade agreements. And the inquiry doesn't end there! Understanding how to label goods with that origin is also important.

- [TOP FORCES IMPACTING YOUR STRATEGIC PLANNING IN 2025](#)
18 APR 2024

Looking at trends is no longer enough to thrive in this age of disruption. The disruptive pace of technological advancement has ushered in a new era for businesses, characterized by the critical need to adapt through digital transformation.



This adaptation is not just about survival but also about building a legacy that reflects an organization's impact and intentions. Executive leaders must consider the factors that will actively influence their organization's short-term and long-term responses to future opportunities and risks for transformation in the digital age.

KNOWLEDGE CENTRE

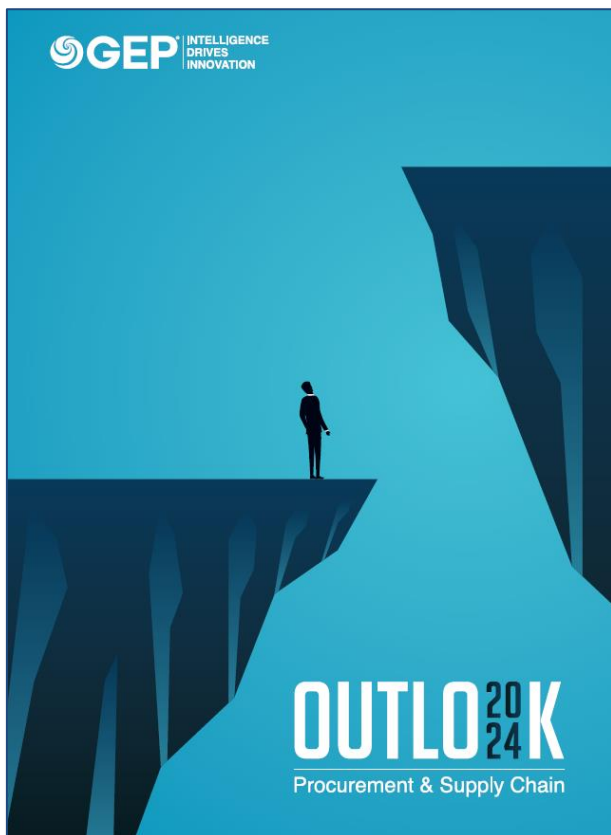
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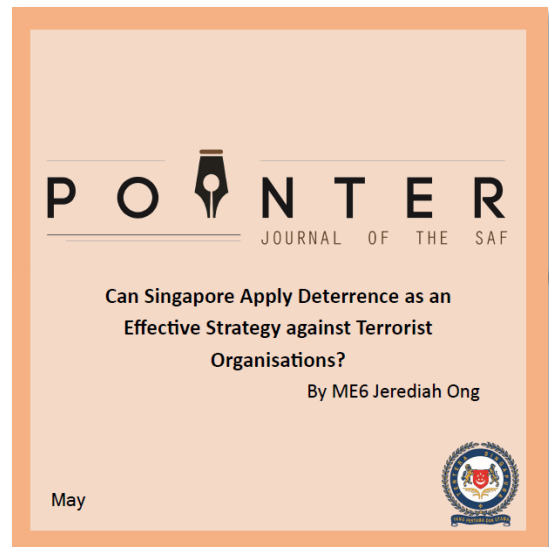
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PUBLICATIONS

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The GEP Outlook 2024: Procurement & Supply Chain report covers the leading topics and priorities that will dominate the corporate agenda in 2024.



Can Singapore Apply Deterrence as an Effective Strategy against Terrorist Organisations?

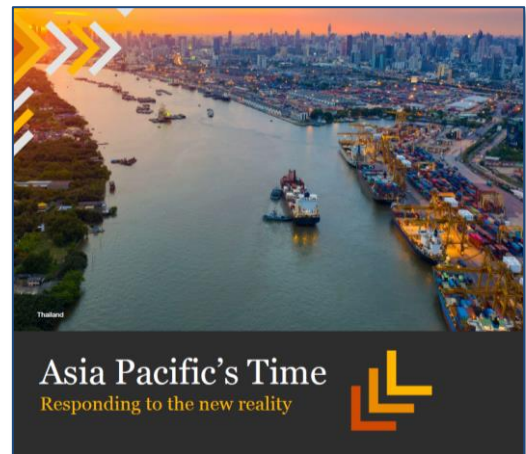
While the theory of deterrence continues to be an effective strategy against conventional threats, the author explores whether this theory is still relevant amidst the on-going threat of terrorism. This is especially so in Singapore's situation, taking into consideration her position as a multi-cultural nation with strong economic links to global trade.



Learn how to employ a high-velocity approach to supply chain operations that reduces friction and empowers your teams to act with speed and confidence.



As companies grapple with growing complexities and the urgent need for adaptation and resilience, the evolving scenario demands a new level of agility and foresight. In the face of these growing pressures, what would this new environment look like if you could build it today?



Asia Pacific is evolving rapidly, balance and stability is no longer a given, and the guiding principles to growth are no longer obvious. Businesses must act quickly to build trust, create value and deliver sustained outcomes. Our new world is anything but simple. While the global economy has rebounded from the lows of 2020, we continue to see environmental, financial and social pressures converge to create new and more complex challenges across Asia Pacific.



Modal shift from the car to public transport must therefore be at the heart of decarbonisation strategies, particularly for journeys linking cities and peri-urban areas. Achieving this shift requires fresh strategies aiming for substantial increases in efficient and user-facing public transport offers, deployed in parallel with constraints on car use, either through journey times or costs. The challenge facing this mission is one of funding and financing, particularly at the pace required.



With everything that's at stake in today's challenging times, it's no wonder that employers prize accurate minute-taking skills more than ever before. Minutes serve as a permanent record of what was decided, what actions must be taken, who must take them and when. Every day, key meetings are probably taking place in your office. And the decisions made as a result of those meetings can involve millions of dollars, and even change people's careers. That's why the role of the minute-taker is so important.

Who We Are

The Chartered Institute of Logistics and Transport Singapore is part of the leading, global professional body for those engaged in supply chain, logistics and transport – covering all sectors of the industry, namely air, land and sea, for both passenger and freight transportation.

Our primary objectives are to support our members in continuous professional development to future-proof their careers, as well as to work in close collaboration with the public and private sectors, Government agencies and the academia to develop opportunities and synergy for industry transformation and growth, underpinned by strategic thrusts in digitalisation and sustainability.

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