

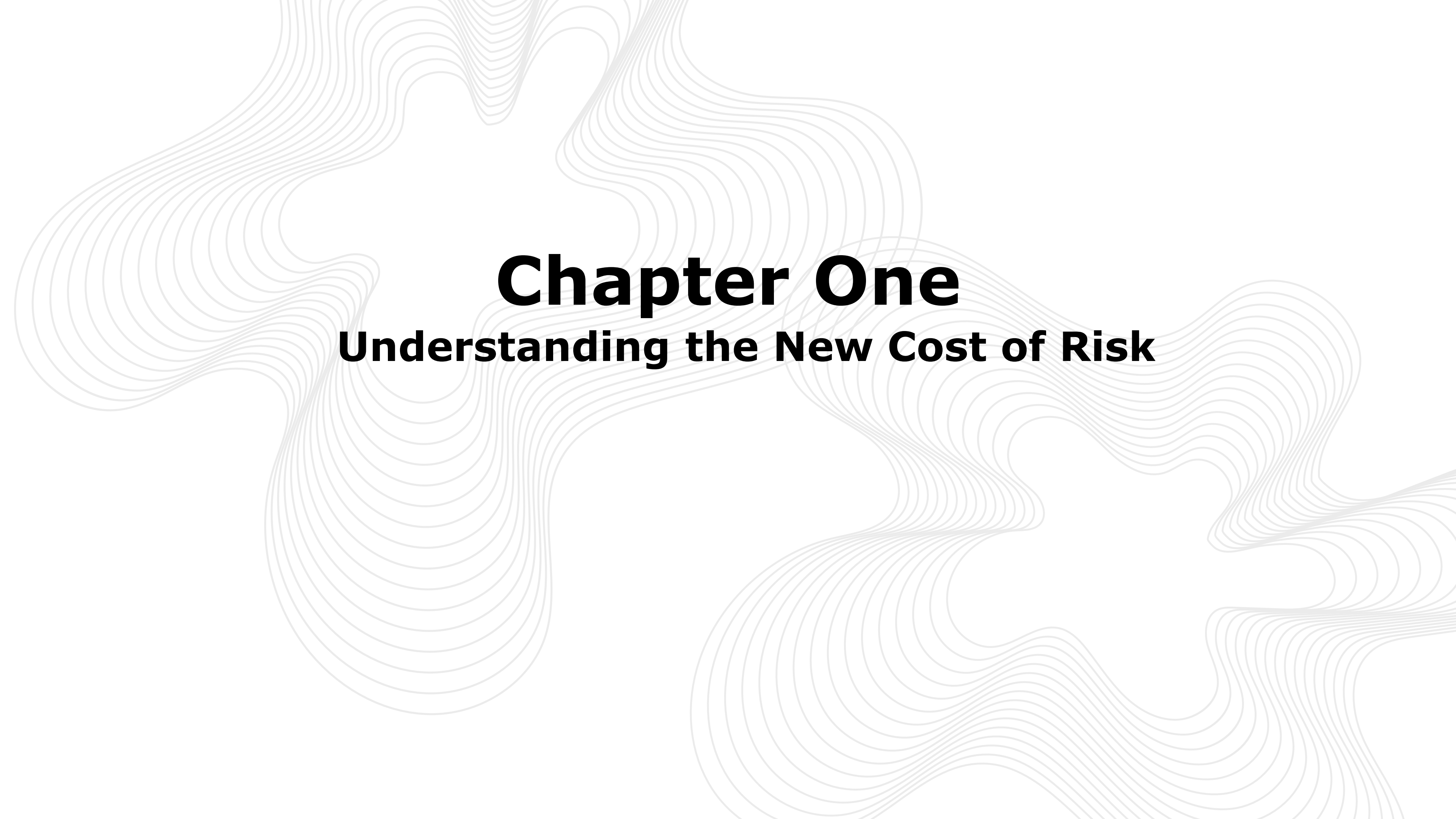
The Cost of Risk

Why Intermodal and Landbridge Solutions are Reshaping ASEAN Shipping Decisions

Reshma Yousuf FCILT

Founder, CLLB Sdn Bhd | Founding President, WISTA Malaysia





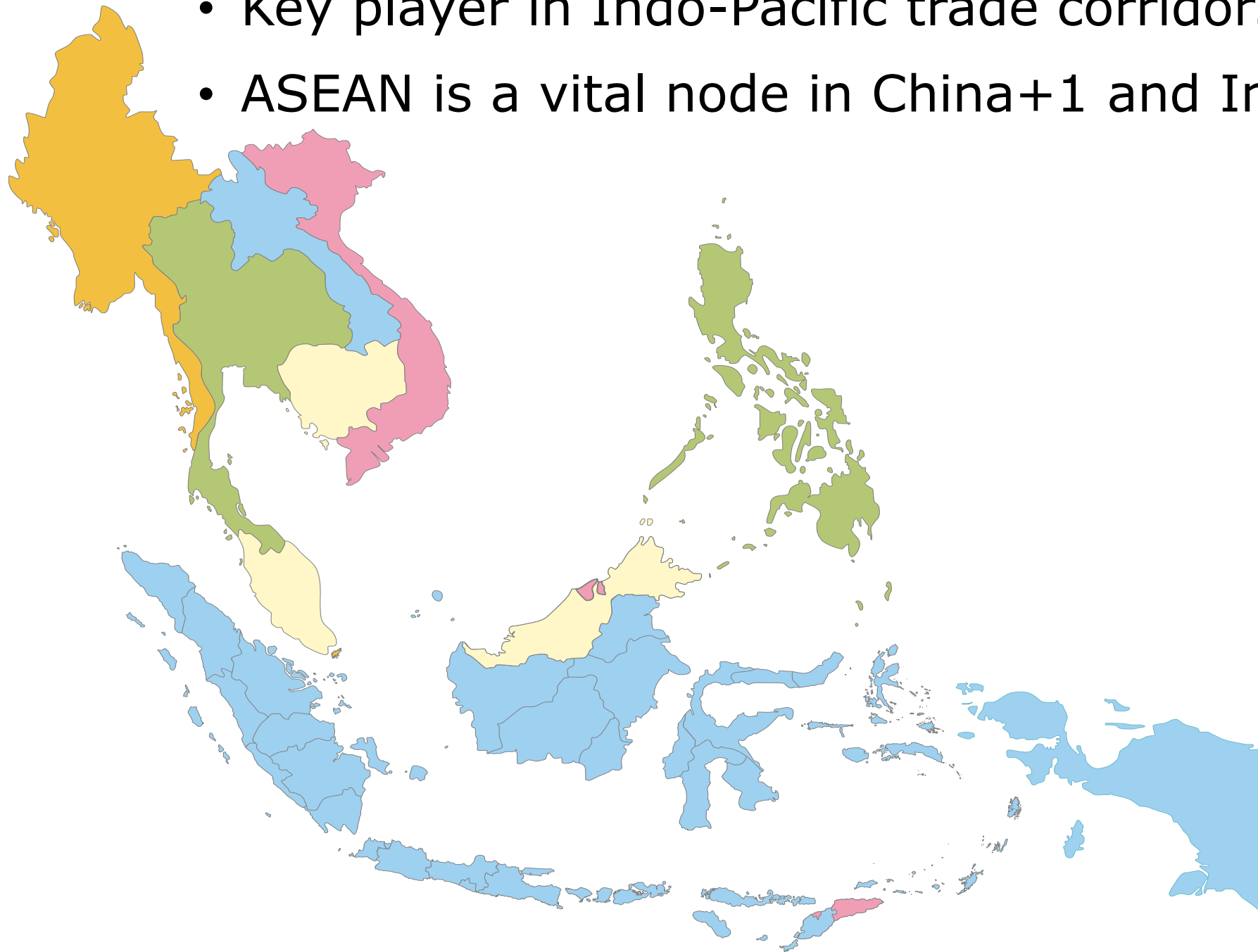
Chapter One

Understanding the New Cost of Risk

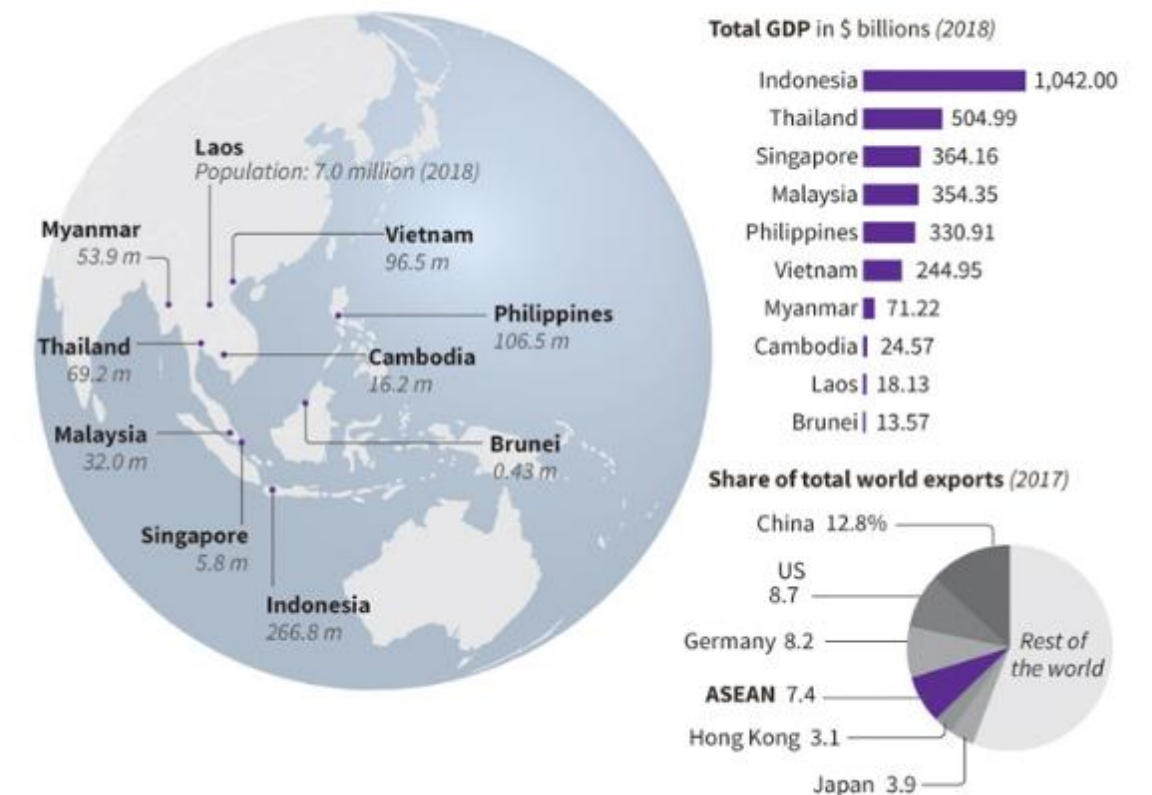
New ASEAN Trade Reality



- 5th largest economy globally with a combined GDP of US\$4.1 trillion in 2024, according to Bernama.
- Over 23% intra-ASEAN trade
- Key player in Indo-Pacific trade corridors
- ASEAN is a vital node in China+1 and Indo-Pacific supply strategies



Association of Southeast Asian Nations



THE HIDDEN COST OF LOGISTICS RISK

Freight cost is only the tip of the iceberg.
Risk cost is what **sinks profitability**.

FREIGHT COST
(Visible Cost)



What you see
on the invoice



Easy to measure



Often only 10–20%
of total cost



THE HIDDEN COST OF RISK

(What really impacts your bottom line)



DELAYS & CONGESTION

Border queues, port congestion,
infrastructure bottlenecks



INVENTORY CARRYING COSTS

Higher working capital,
storage, and obsolescence



PRODUCTION DOWNTIME

Line stoppage, supply
interruptions, inefficiency



MISSED CUSTOMER COMMITMENTS

Late deliveries, penalties,
loss of customer trust



GEOPOLITICAL RISKS

Trade tensions, sanctions, route disruption,
policy volatility



CLIMATE CHANGE RISKS

Extreme weather, flooding, typhoons,
heatwaves impacting routes & assets



ESG PRESSURES

Sustainability expectations from customers,
investors and regulators



EU CBAM & CARBON LIABILITY

Carbon reporting, emissions cost,
future border taxes



COMPLIANCE & REGULATORY COSTS

Customs delays, documentation
errors, fines & penalties



DEMURRAGE & DETENTION

Container, truck waiting,
storage charges



LOSS OF COMPETITIVENESS

Higher landed cost,
slower response to market



LOST SALES OPPORTUNITIES

Revenue impact, market
share erosion



The biggest logistics cost often never appears on the freight invoice.
Managing risk is managing your profitability.

Why Risk Has Become More Expensive

The world is more volatile, regulations are tightening, and supply chains face more uncertainty than ever.



GEOPOLITICAL DISRUPTIONS

Conflicts, trade tensions and sanctions create routing uncertainty and cost volatility.



CLIMATE CHANGE IMPACTS

Extreme weather, floods, typhoons and rising sea levels disrupt infrastructure and operations.



REGULATORY PRESSURE

Tighter customs controls, documentation, and compliance requirements slow movement.



FREIGHT MARKET VOLATILITY

Unstable freight rates and capacity shortages increase landed cost and planning risk.



ESG REPORTING REQUIREMENTS

Investors, customers and regulators demand measurable environmental and social performance.



CARBON LIABILITY RISK

Companies face future carbon pricing, penalties and liability across global value chains.



EU CBAM IMPLEMENTATION

Carbon Border Adjustment Mechanism adds cost to exports and increases compliance burden.



SHIFTING TRADE PATTERNS

Nearshoring, friend-shoring and China+1 strategies increase the need for flexible, resilient routes.



Bottom line:

Greater uncertainty = higher disruption risk = higher total cost of supply chain.



Where Does Risk Enter the Supply Chain?

Risks accumulate at multiple touchpoints across the end-to-end supply chain, driving hidden costs and service uncertainty.



INFRASTRUCTURE RISK

Physical constraints and capacity limitations

- Port congestion and capacity limits
- Road and rail connectivity gaps
- Terminal and equipment constraints
- Reliability of critical infrastructure

Examples



Port congestion, limited berths



Rail bottlenecks, freight schedule delays



Last-mile access constraints



BORDER & PROCESS RISK

Delays and variability at border and handover points

- Customs clearance delays
- Permits, inspections and manual processes
- Policy changes and inconsistent enforcement
- Documentation errors and rejections

Examples



Customs clearance delays



Physical inspections



Permit and documentation requirements



INFORMATION RISK

Lack of visibility and data reliability

- Limited real-time visibility
- Poor data quality and sharing
- System fragmentation
- Inability to anticipate disruptions

Examples



Shipment status unknown



Poor handover of information



Fragmented systems and data silos

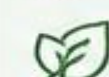


REGULATORY & SUSTAINABILITY RISK

Evolving rules and compliance exposure

- Changing trade regulations
- Climate change and extreme weather events
- ESG reporting and disclosure requirements
- Carbon pricing, CBAM and carbon liability

Examples



EU CBAM compliance costs



Extreme weather disruptions



ESG reporting and assurance requirements



SUPPLIER /
FACTORY



INLAND
TRANSPORT



ORIGIN PORT /
TERMINAL



OCEAN
TRANSPORT



DESTINATION PORT /
TERMINAL



INLAND
TRANSPORT



CUSTOMER /
MARKET



Key message:

Risk is created at every transition point.
Managing these risks is the key to controlling total supply chain cost.



Resilient networks don't just move faster.
They recover faster.

Chapter Two

WHY INTERMODAL MAKES SENSE



The Traditional Shipping Model: Efficient, But Increasingly Exposed

A linear, port-to-port model with multiple dependencies and vulnerabilities that can disrupt your supply chain.



SINGLE POINT DEPENDENCY

- Heavy reliance on specific ports and shipping lanes
- Limited alternatives when disruption occurs



CHOKEPOINT EXPOSURE

- Vulnerable to key maritime chokepoints
- Disruptions ripple across global supply chains



VISIBILITY CHALLENGES

- Multiple handovers and stakeholders
- Limited end-to-end real-time visibility



SUSTAINABILITY PRESSURE

- Longer transit distances increase emissions
- Higher risk of carbon liability and CBAM costs



HIGHER TOTAL COST OF RISK

- Delays, inventory costs, penalties, and lost sales
- Hidden costs far exceed freight rate savings



Traditional maritime networks remain the backbone of global trade, **but increasing congestion, geopolitical uncertainty, climate disruptions, and sustainability pressures are forcing cargo owners to explore alternative routing options.**



The risk is not the ocean itself.
The risk is having no alternative when disruption occurs.

Intermodal Transport: A Smarter Way to Manage Risk

Multiple modes. Multiple routes. Fewer disruptions. Greater confidence.



REDUCES RISK EXPOSURE



Less congestion risk

Bypasses port bottlenecks and single points of failure



More routing options

Landbridge and rail corridors create alternatives when disruption occurs



Fewer delays

Improved schedule reliability and faster recovery



Lower inventory pressure

More predictable lead times reduce safety stock needs



Lower total cost of risk

Reduced downtime, penalties, and expediting costs

ONE SHIPMENT. MANY POSSIBILITIES.

Intermodal connects sea, rail and road networks to deliver flexibility and resilience.



IMPROVES PERFORMANCE



Greater flexibility

Switch modes or routes quickly as conditions change



Improved reliability

Better control over transit time and handovers



Better visibility

Integrated tracking across modes and corridors



Lower carbon intensity

Rail and optimized routes reduce emissions



Stronger customer service

More dependable deliveries build trust and loyalty



The Result:

Stronger, more resilient supply chains



More resilient to disruption



Better control over performance



Lower total cost of risk



More sustainable supply chains



Intermodal is not just about moving cargo by different modes.

It is about building optionality, protecting your supply chain, and delivering certainty in an uncertain world.

The Rise of ASEAN Landbridge Solutions

From Maritime-Centric to Multimodal & Connected

New rail and road corridors are unlocking alternative routes, reducing risk and expanding market access.

WHY LANDBRIDGE CORRIDORS MATTER



Reduce dependency on congested maritime chokepoints
More routing options when disruptions occur



Shorter transit times to key markets
Faster access to China and Indochina markets



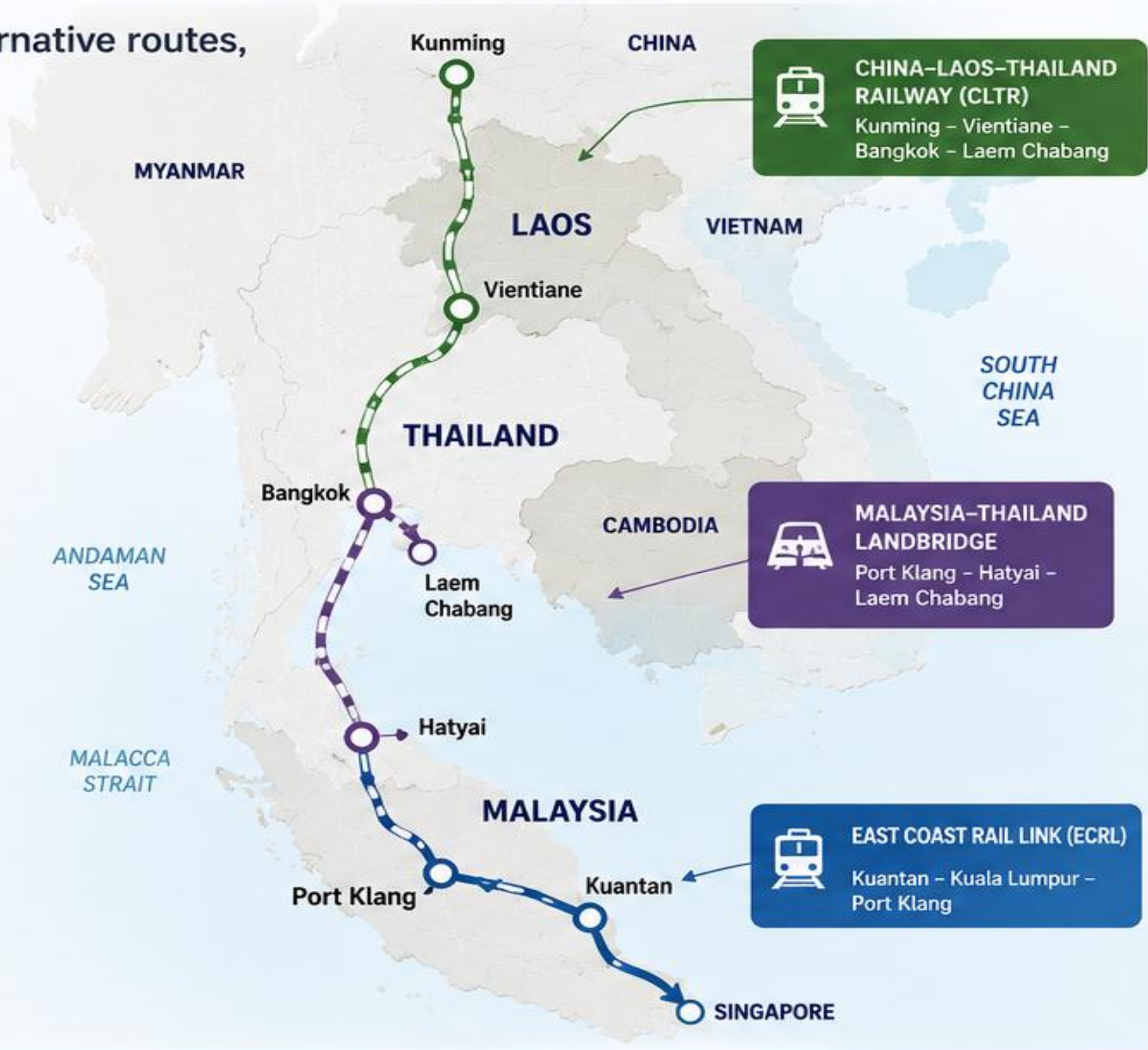
Lower total logistics cost
Less port congestion, lower inventory and risk buffers



Stronger regional connectivity
Improves trade flow, industrial linkages and supply chain resilience



More sustainable supply chains
Rail and land corridors reduce emissions and support ESG goals



KEY CORRIDORS TRANSFORMING ASEAN CONNECTIVITY



CHINA-LAOS-THAILAND RAILWAY (CLTR)
Enhances rail connectivity between Southwest China and Thailand, opening direct access to seaports and ASEAN markets.



MALAYSIA-THAILAND LANDBRIDGE
Creates a seamless road connectivity between the Gulf of Thailand and the Straits of Malacca.



EAST COAST RAIL LINK (ECRL)
Strengthens Malaysia's internal connectivity and provides an alternative gateway to the east coast and beyond.



ONE ASEAN. MANY ROUTES. GREATER RESILIENCE.
More choices today. Stronger supply chains tomorrow.



ASEAN is moving from a maritime-centric network to a multimodal and integrated logistics ecosystem.



More Options



Less Risk



Lower Costs



Stronger Sustainability



Greater Competitiveness

Chapter Three

CASE Examples



Malaysia–Thailand Landbridge: A Smarter Route, Lower Risk

Seamless Road Connectivity Between Two Seas

STRATEGIC ADVANTAGE

A fast, reliable alternative that reduces dependence on congested ports and maritime chokepoints.



**REDUCED
TRANSIT TIME**
3–4 DAYS
vs. traditional
maritime route



SHORTER DISTANCE
~1,200 KM
vs. ~2,400 KM via
Strait of Malacca



**LOWER RISK
EXPOSURE**
Avoids maritime
congestion and
geopolitical disruptions



**LOWER TOTAL
LOGISTICS COST**
Less fuel, less time,
lower inventory
and delay cost



ROUTE COMPARISON		
	LANDBRIDGE ROUTE	MARITIME ROUTE (VIA MALACCA STRAIT)
Transit Time	3 – 4 Days	7 – 10 Days
Distance	~1,200 KM	~2,400 KM
Risk Exposure	Lower	Higher
Total Logistics Cost	Lower	Higher

IDEAL FOR			
Manufacturing Supply Chains	Retail & E-commerce Shipments	Perishable & Temperature Controlled Goods	Time-Sensitive Cargo

China–Laos–Thailand Railway: Connecting Markets, Reducing Risk

A high-capacity rail corridor linking Southwest China to Southeast Asia



FASTER TRANSIT
~2–3 DAYS
vs. 7–10 days via
maritime routes



HIGH CAPACITY
~1.5M TEU+
Annual capacity
and growing



1,000+ KM
Seamless rail connection
from Kunming to
Laem Chabang Port



LOWER RISK EXPOSURE
Avoids maritime chokepoints,
reduces congestion and
geopolitical disruptions

THE CORRIDOR



KEY BENEFITS



Shorter transit time
Faster access to key
markets in Thailand
and beyond



Inland market access
Reach deep into China's
Southwest and Indochina
markets



More reliable
Less exposed to sea
congestion, port strikes
and extreme weather



More sustainable
Lower carbon emissions
vs. long-haul maritime
transport



CONNECTING KEY ECONOMIES



China Southwest
Manufacturing & export hubs



Laos
Gateway and transit hub



Thailand
Industrial & consumption markets
via Laem Chabang Port

ROUTE COMPARISON

	RAIL (CLTR CORRIDOR)	SEA ROUTE (VIA MALACCA)
Transit Time	~2–3 Days	~7–10 Days
Distance	~1,000+ KM	~3,500–5,000 KM
Disruption Risk	Lower	Higher
Total Logistics Cost	Lower	Higher
Carbon Emissions	~30–50% Lower	Higher



The China–Laos–Thailand Railway is more than a rail line. It is a **strategic corridor** that builds **resilience, speed and competitiveness** for ASEAN supply chains.



Diversifies routes
Less dependence on
maritime chokepoints



Improves reliability
Consistent schedules
and fewer disruptions



Reduces total cost
Lower transit time,
inventory and risk cost



Expands connectivity
Stronger links between
China and ASEAN

ECRL: Malaysia's Strategic Risk Diversification Tool

Building Resilience. Creating Options. Strengthening ASEAN Connectivity.



ALTERNATIVE ROUTING

Provides a viable alternative to congested ports and coastal routes



REDUCED DEPENDENCY

Diversifies access across both coasts, reducing single-point failure risk



IMPROVED RELIABILITY

More predictable transit times with fewer disruptions



ECONOMIC IMPACT

Drives regional growth, industrial development and trade competitiveness



SUSTAINABLE FUTURE

Lower emissions rail transport supporting ESG and CBAM readiness

CONNECTING EAST COAST TO THE WEST COAST



A RISK DIVERSIFICATION ENABLER



AVOIDS COASTAL CONGESTION

Provides inland rail alternative during port congestion, storms or capacity constraints



MINIMIZES DISRUPTION RISK

Less exposure to maritime chokepoints such as Malacca Strait and Suez / Red Sea risks



GREATER SUPPLY CHAIN FLEXIBILITY

Enables shippers to choose the best route based on time, cost and risk profile



ENHANCED VISIBILITY

Integrated rail operations improve tracking, monitoring and control



LOWER CARBON FOOTPRINT

Supports modal shift to rail, reducing emissions and supporting sustainability commitments

CONNECTING PEOPLE, PLACES AND POSSIBILITIES



From the East Coast to the West Coast, ECRL is more than a railway – it is a strategic investment in Malaysia's future resilience.

STRATEGIC OUTCOMES



Stronger network resilience



More routing options



Lower total logistics cost



Enhanced regional competitiveness



Stronger ASEAN integration



Resilient Infrastructure. Reliable Corridors. Ready for the Future.

ECRL strengthens Malaysia's position as a regional logistics hub and a key gateway for ASEAN.



FACTORY



ECRL RAIL



PORTS /
TERMINALS



GLOBAL
MARKETS

The Future of Shipping is Not About Moving Cargo... It's About Managing Risk

TRADITIONAL SHIPPING MINDSET



ONE DOMINANT MARITIME ROUTE

Focus on:

- Lowest freight rate
- Largest vessel
- Lowest transport cost

VS.

FUTURE-READY SUPPLY CHAINS



INTERMODAL NETWORKS LAND BRIDGE CORRIDORS REGIONAL CONNECTIVITY

Focus on:

- ✓ Route flexibility
- ✓ Faster recovery
- ✓ Better visibility
- ✓ Lower inventory
- ✓ Multiple routing options
- ✓ Lower carbon intensity
- ✓ Better customer service

INCREASING EXPOSURE TO:



Port
Congestion



Chokepoints
(Malacca, Red Sea,
Suez)



Climate
Disruptions



Geopolitical
Conflicts



Carbon
Costs



Capacity
Shortages



Regulatory
Uncertainty

RESULT:

HIGHER TOTAL COST OF RISK

RESULT:

LOWER TOTAL COST OF RISK

THE NEW DECISION FRAMEWORK

YESTERDAY	 Cheapest Route	 Lowest Freight Cost	 One Shipping Mode		 Cost Optimisation
TOMORROW	Most Resilient Network	Lowest Total Cost of Risk	Multiple Transport Options	End-to-End Supply Chain	Risk Optimisation



The companies that will lead ASEAN trade will not necessarily be those with the lowest freight costs...
They will be those that build the most resilient, flexible and connected supply chains.

JOIN GLOBAL MARITIME LEADERS AT THE
WISTA INTERNATIONAL
AGM & CONFERENCE 2026

Bridging Borders, Driving Change:
Asia Shaping the Future of Maritime & Trade

 InterContinental
Kuala Lumpur

 28–30
October 2026



LEARN

Hear from global leaders on the future of:

- Maritime & Port Development
- Trade Corridors & ASEAN Connectivity
- Intermodal & Landbridge Solutions
- Supply Chain Resilience
- Digitalisation, AI & Innovation
- ESG, Decarbonisation & the Energy Transition



CONNECT

Meet:

- Maritime Executives
- Port Authorities
- Shipping Lines
- Logistics & Supply Chain Leaders
- Policymakers
- Technology Providers
- Women Leaders from over 60 National WISTA Associations



EXPERIENCE

- International Conference
- AGM
- Leadership Forums
- Technical Visits
- Networking Receptions
- Official Gala Dinner

HOSTED BY



Scan to Register



The future of maritime trade will not be shaped by one organisation or one country.
It will be shaped by collaboration, innovation and connected thinking.
Join us in Kuala Lumpur and be part of that conversation.



WWW.WISTA2026.COM



Reshma Yousuf FCILT

Founder of Center for Logistics Leadership in Business- CLLB Sdn Bhd

President of Wista Malaysia (Women's International Shipping & Trading Association)

Deputy Chairperson- Global WiLAT (Women in Logistics & Transport- Women's forum of the Chartered Institute of Logistics & Transport – CILT International)

Thank you

