

## Global Optimisation of the principal Global Supply chains of NZ

To restructure and realign the Global Supply Chain Assets and operations of the Key shippers, Gateway Ports , Dry Ports, Freight & Inland Hubs of New Zealand



To be read in conjunction  
with Part 1, 2A & 2B

### PART 4C of 4

**MANAGING GLOBAL STRATEGIC ALLIANCES**  
**MANAGING THE TYRANNY OF TIME & DISTANCE**  
**THE ALLIANCE ADVANTAGE IN OPERATING GLOBAL**  
**AND REGIONAL THEATRES OF OPERATIONS**  
**THE MILITARY SECURITY OVERLAY**

A topline presentation for C-SUITE Managers  
By  
Allan Rodrigues  
Managing Director & Senior Management Consultant

[www.thebusinessbinnacle.co.nz](http://www.thebusinessbinnacle.co.nz)



Allan Rodrigues retired honourably from the Indian Navy in 1994 after serving 21 years. He is the Sword of Honour of his course and winner of the Lentaigne Medal at the Defence Services Staff College in Wellington India. During his Naval Career he has commanded IN Ships Nipat, Himgiri, and Subhadra. He has also been the 'Commander Work-up and Sea Training' of the Western Fleet and the Second in Command (XO) and Chief Instructor of the Naval Academy INS Mandovi. He was cleared for promotion to Captain but chose to join industry. He migrated to New Zealand in 1995.

In New Zealand, Allan has been a senior manager and C-SUITE 'board level' senior Management Consultant. He specialises in aligning strategy, finance, operations, decision engineering and performance management. Over the last 30 years Allan has been the lead management consultant for several major multi-million dollar projects over a range of industry sectors including the development and analytics for the reform of the sea and inland port & freight hub sector, the alignment of key supply chain hubs and assets across New Zealand to increase supply velocity, value based projects for the TV satellite and broadcasting sector, major electricity utilities, kiwifruit and agronomy, a review of the captive insurance sector, a benchmarking project for a major Australian Bank and technology start-ups under risk. He has designed a 4<sup>th</sup> generation Balanced Scorecard and an IT Portfolio Management Financial Model. Amongst the major projects he has undertaken is a 'Real Options' valuation of a major section of the national electricity grid in New Zealand, a valuation of the worldwide marketplace for the satellite 'occasional-use' time sensitive carriage of news and sports, strategic alliances and several strategic planning and valuation projects under risk and uncertainty.

Allan's qualifications include an MSc (Defence Studies) University of Madras (Lentaigne Medal) and an MBA (Elective Finance) from Henley Management College and Business School, Oxford on Thames, Oxfordshire U.K. He is a noted industry based adjunct professor who has been invited to both lecture (and guest lecture) at the master's degree level at universities in New Zealand and Australia over a period of twenty years from 2001 to 2021. He has conducted advanced logistics and supply chain governance advisories for senior operations/supply chain managers of the major NZ companies and defence services on behalf of the Centre for Supply Chain Excellence (CSCE) at the University of Auckland. He is currently the MD of The Business Binnacle Ltd ([www.thebusinessbinnacle.co.nz](http://www.thebusinessbinnacle.co.nz)) a management consulting practice. He is currently semi-retired from full-on consulting work.

The project was current during the timeline it was compiled and remains so for the most part. Whilst the data in some cases may be outdated, the underlying analytical methodology is current in many cases. Nevertheless, these methodologies need to be periodically peer-reviewed.

Many of the tools used have been obtained and adapted from peer-reviewed sources. The work of Professor(s) Simchi-Levi, (Wharton) on the 'global optimisation' of the GSCs, Theo Notteboom (Maritime Institute, Univ of Antwerp) and Jean Paul Rodrigue (Texas A & M) on port reform and the port eco-systems, Michael Porter (Harvard) on Value Chains and competitive advantage, Kaplan & Norton on strategy mapping and the balanced score card, G. Bennett Stewart, on Economic Value Added (EVA) , Ashwath Damodaran on valuations under risk and uncertainty, Dixit and Pindyck on 'Investments under uncertainty', Kulatilaka & Abrams on 'Real Options' feature across all four presentations.

The work of Yves Doz & Gary Hamel on Strategic Alliances, Kenichi Ohmae, Simon Benninga (Wharton) on Finance and Strategy, all master strategists in their own right, feature in the detail in presentations 2 to 4.

The author has also used his own work on the nexus of the value chain and supply chains, the de-aggregation of value chains and the 4G Balanced Score Card to inform this project. All models that have been used or adapted have been referenced. They feature at various places in the presentations.

The Author thanks the many senior managers past and present on the C-suite of many of New Zealand's large Sea Ports, Inland Ports, Dry ports and Freight hubs and the principal shippers of the main New Zealand export companies for sharing their practical and hands-on experience in operating and managing some of the most complex global supply chains in the world. Many of the models developed by the doyens of the Global Supply Chains in academia were adapted for this project using the hands-on knowledge gleaned from these practitioners in the marketplace.

Since this is a work targeted at busy C-SUITE senior managers it was essential to make the logic of the approach visible at first glance. Rather than use APA referencing the author has identified the authors by name and date with specific reference to their work to avoid clouding the issues in short wordage available.

# THE C-SUITE PRESENTATION

## PART 4

### The Global Supply Chain (GSC) The overarching methodology for GLOBAL OPTIMISATION

#### PART 4A –

- ❑ DETERMINING THE RHYTHM AND CADENCE OF THE GSCs -SVCs
- ❑ MANAGING THE TYRANNY OF TIME AND DISTANCE. MAPPING THE GSC END TO END

#### PART 4B

- ❑ POST PANDEMIC GSC & TECHNOLOGY AND BIG DATA ON THE GSC
- ❑ TRANSPORTING RESOURCES ON TIME, IN FULL, WHEN NEEDED
- ❑ MANAGING CONGESTION AND CAPACITY INVESTMENT UPGRADES

#### PART 4C

- ❑ MANAGING STRATEGIC ALLIANCES AND SCORECARDING FOR PERFORMANCE
- ❑ THE SECURITY OVERLAY. THEATERISATION FOR GLOBAL & REGIONAL OPERATIONS FOR MARKET COMPANIES AND THE MILITARY

- ❑ PART 1 The PORT ECO SYSTEM & Global Transportation Corridors
- ❑ PART 2A & PART 2B: The Lean Agile Global Supply Chain Eco System
- ❑ PART 3 THE GLOBAL SUPPLY CHAIN & STRATEGIC VALUE CHAIN CONFLICT
- ❑ PART 4 In this section as indicated above

# The Lean- Agile Global (or Local) Supply Chains (GSCs & LSCs) & their impact on the Global Transportation Corridors

These FOUR presentations capture the Architecture and Construct of the **LEAN AGILE GSCs** in tandem with the efficient management of Sea Ports or Inland Ports or Freight Hubs on the **GLOBAL TRANSPORTATION CORRIDORS**. Whilst they do delve into the asset management and operations processes of Sea and Inland Ports, the focus in this section is on the GSCs and their sea-land transportation rhythm and cadence

All four knowledge packs are densely packed as presentation cum data documents laid out in ways that combine the knowledge, data and findings from several investigative reports and presentations written and delivered over a long arc of several years by the author, with inputs from the port and supply chain analysts on the team. The nexus between the GSCs of the world and the Sea/Inland ports on the transportation corridors that interlink the global supply chains going outward or inward to and from New Zealand, and the conflict with the Strategic Value Chains of the individual GSC members have been drawn out by the author in some detail for the first time.

All four presentations cum data- documents answer the question

“ What do Lean-agile **Global (or Local) Supply and Strategic Value Chains** need from the various nodes and hubs on the world’s transportation corridors, so that they can manage the conflict between cost efficiency on the one hand and high agility (or High Fulfilment) on the other?”

## Opening Comment.

**Note. The presentations may seem a bit crowded and dense. The colours used are loud to draw attention. They are designed to be so**

A NUMBER OF SLIDES FROM THE EARLIER PRESENTATIONS IN THIS SERIES ARE REPEATED FOR EASE OF REFERENCE.

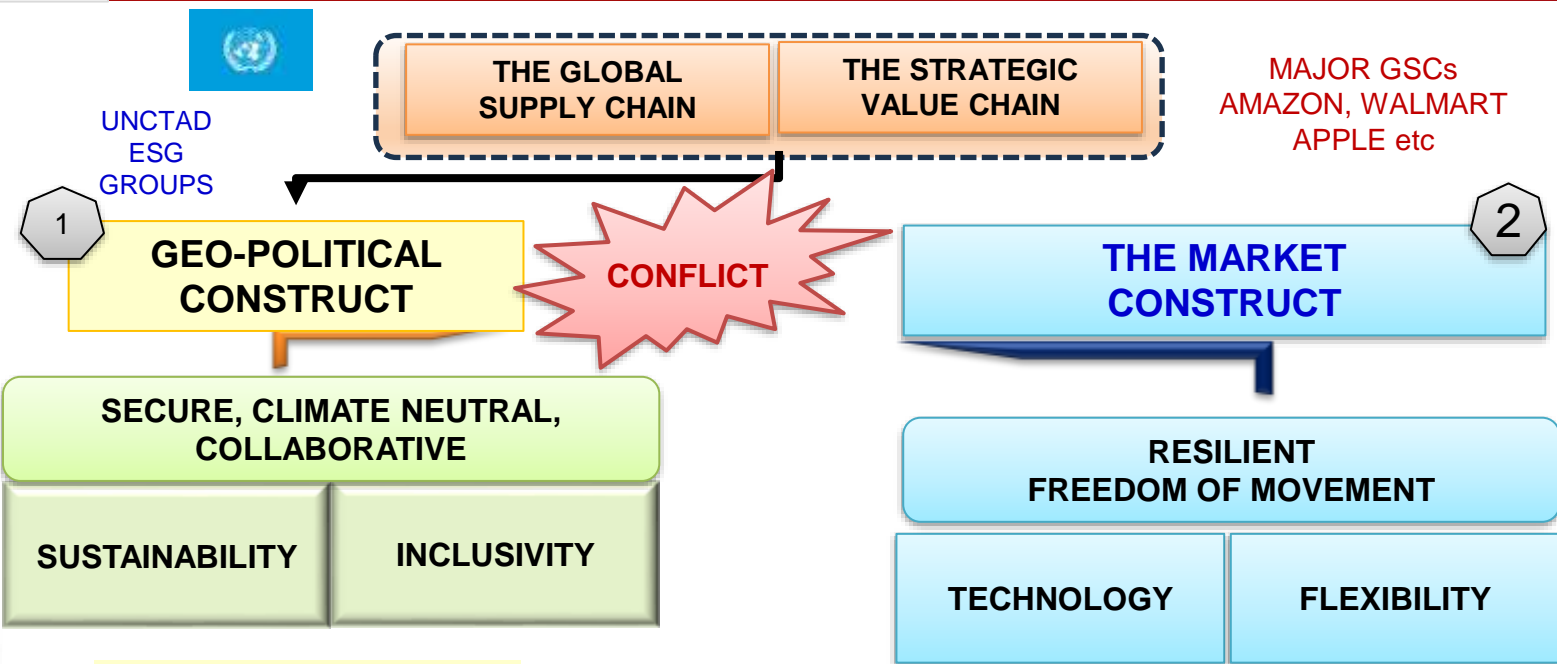
The original project papers including the reports and presentations continue to be commercially sensitive and have been redacted. Rather than rewrite a formal report compiling the various methodologies and findings and for the sake of convenience in dissemination, **the original reports and slides created for various forums have been repurposed, but with explanatory notes included** for the benefit of lay readers and non-supply chain specialists. **The author has designed each of the presentations to be a full document and to be readable 'as-is' in pdf without added notes.**

This series of four presentation packs have been compiled pro-bono to demonstrate the broad ideation funnel used by some of the global supply/value chains of the world, as a way of educating/training senior managers on the current work being done at the coal face of many of the modern supply and value chains of the world.

The author advises caution with their use. There is a need for peer review and constant updating. Many globalisation strategies have come under fire post 2016 and the pandemic. **Nevertheless, the 'Global Optimisation' innovation developed by the many doyens in the field, are just as easily used locally in a single country, or geography, as well as internationally.**

# The architecture of the GSC and SVC post pandemic Moves to future proof the Global Supply Chains

- COVID 2019  
Pandemic  
Worldwide  
impact
- BIG SHIP > 20K  
TEU  
CREATED  
EXCESS  
CAPACITY
- BREXIT  
EU -UK SCM  
2020 - to date
- UKRAINE WAR  
Feb 2022  
to date
- SUEZ CANAL  
Closure MAR  
2023 grounding  
of MV  
EVERGIVEN  
**HOUTH CRISIS  
2024**
- PANAMA CANAL  
DROUGHT  
2022 to 2024

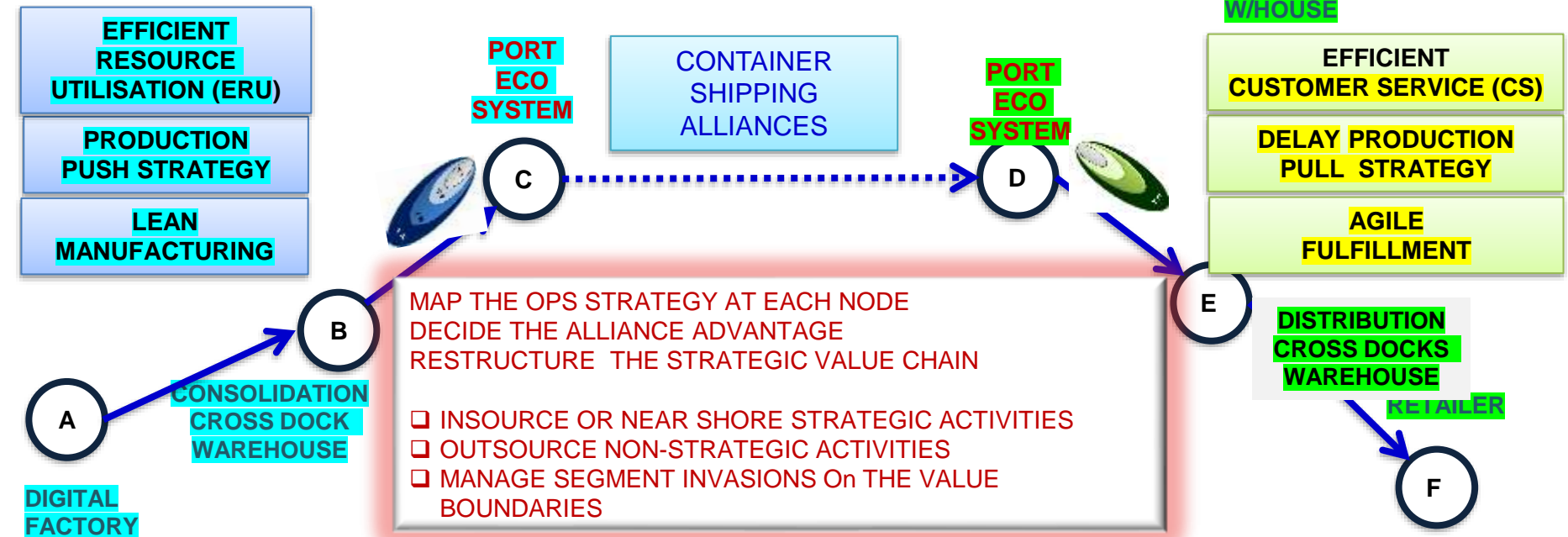
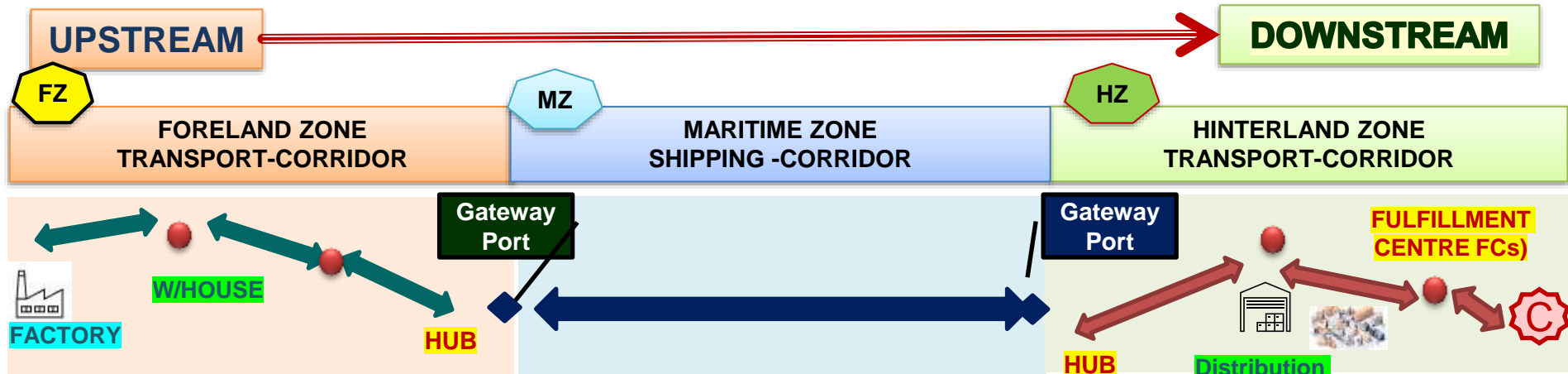


MAJOR GSCs  
AMAZON, WALMART  
APPLE etc

- Goods on the GSC should not become collateral damage in war or conflict
- GSCs should be long globally and deep locally. SMES and small business should benefit as well
- The power of the Alpha Males on the SVC needs to be mitigated
- The GSCs need to be sustainable and climate neutral

- The GSC must make time irrelevant
- Be Lean upstream with digital high-tech production
- Agile downstream. Ramp up fulfillment
- Dominant on the Strategic Value Chain
- BE Dual sourcing- using separate clusters of expertise
- Use Global Optimisation for all profits
- COOPETITION Cooperate and Compete
- Use the ALLIANCE ADVANTAGE

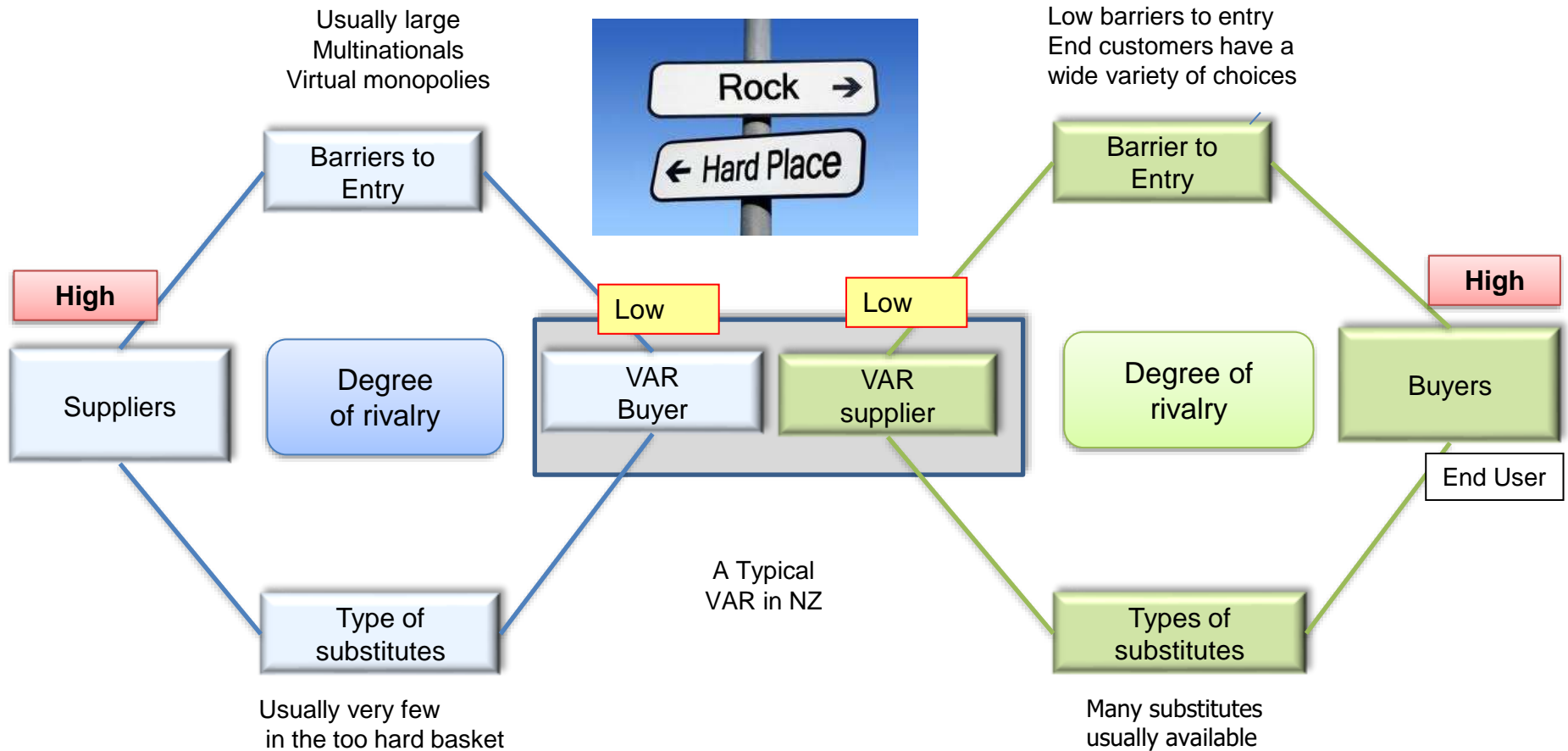
GSCs are driven by Alliances ON EACH LEG  
They trade off : PUSH-PULL- LEAN AGILE  
Balance Customer Service Versus Efficient Resource Utilisation





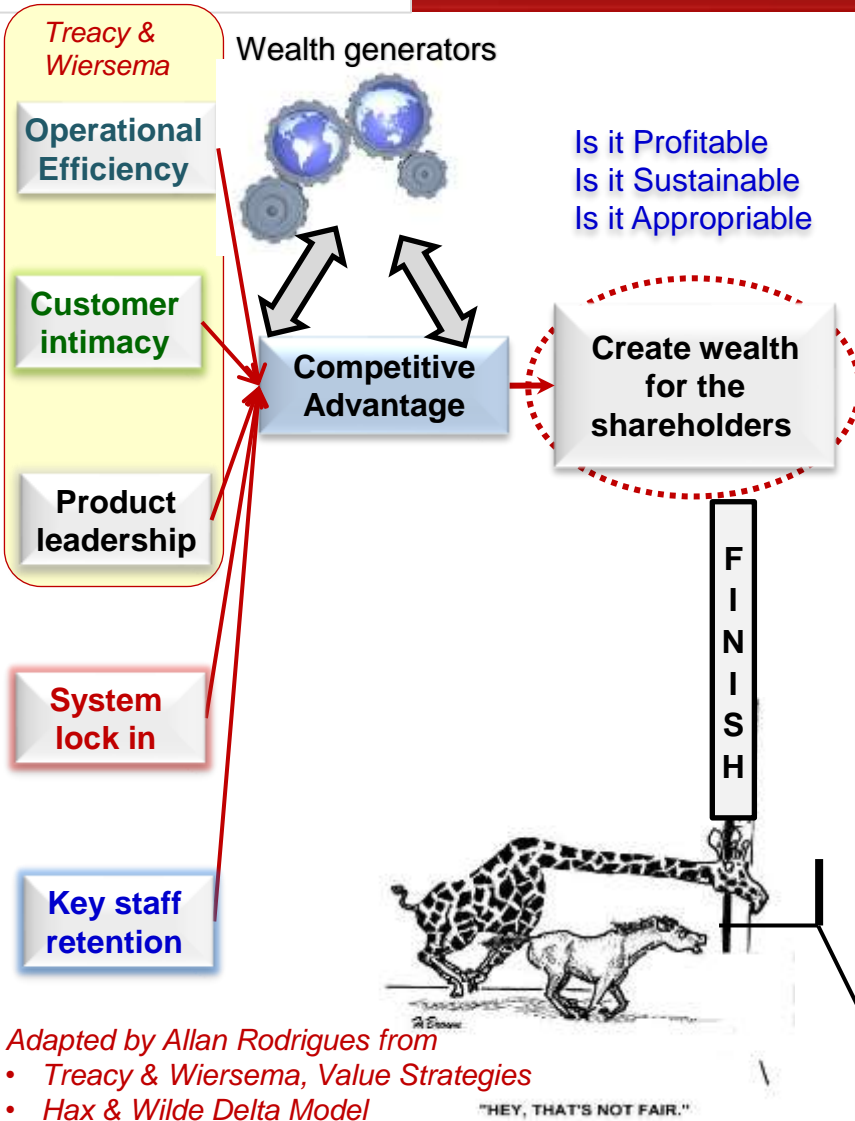
# Porter's Double Diamond

## Who has the power – How do you get it back



Most service industries are value added resellers (VARs)  
 How do they notionally share power with a saltwater croc ?  
 How do they fight on their value chains?

# The traditional route to competitive advantage (CA) by market competing entities at the coalface of business



*Adapted by Allan Rodrigues from*

- *Treacy & Wiersema, Value Strategies*
- *Hax & Wilde Delta Model*
- *Steve Jobs (various fora)*

- ❑ There are more recent avatars of competitive advantage used extensively in the market. Local descriptions prevail, but since CA is always linked to creation of wealth, there is tendency to subsume them into five recognizable interactive silos.
- ❑ **OPS EFFICIENCY.** Rather than lowest cost, Treacy and Wiersema identified a 'horses for courses' customer driven approach of **cost based on customer need. Lean-Agile GSCs take this further to provide the 'DIFOT' highest quality of service, efficiency (agility) at the lowest cost.**
- ❑ **CUSTOMER INTIMACY.** To drive value from intimately understanding the needs of the customer.
- ❑ **PRODUCT LEADERSHIP.** Broad ideation funnels to develop RADICAL & INCREMENTAL INNOVATION. **Product leaders change the marketplace.** The GSC-SVC interface takes this further towards dominance of a macro environment.
- ❑ **SYSTEM LOCK IN (SLI) .** To lock in customers in ways that ensure that they stay with the firm by increasing the barriers to exit. **SLI** works best when the customer voluntarily stays put with the firm. Typical SLI examples include Gillette low-cost razors but a high cost of blades, or Adobe, Microsoft 365 Netflix using subscriptions rather than one-off sales.
- ❑ **KEY STAFF RETENTION. CA** does not work if they are not supported by a talented work force able to manage continuous change at the coalface of business





# Some Typical Strategic Value Chain (SVC) Key activities by Hinterland Logistics-Shippers

*adapted by Allan Rodrigues from Porters original Value chain*

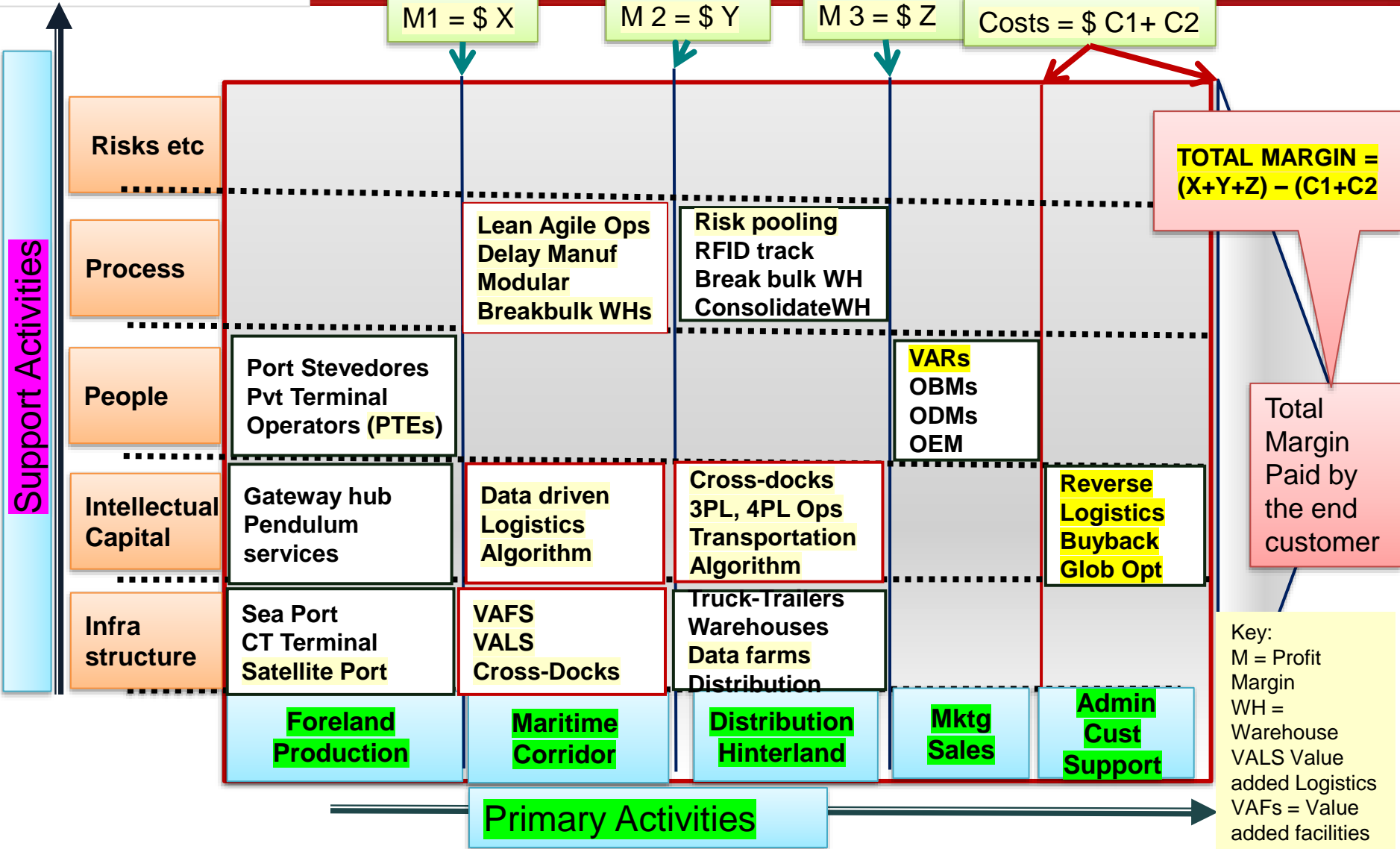
**Value Boundaries**  
M1, M2, M3, C1 C2

M1 = \$ X

M2 = \$ Y

M3 = \$ Z

Costs = \$ C1+ C2



# Companies operate as networks

## The alliances work through COOPETITION (cooperate & compete simultaneously)

Skill focus has changed from 'operations management' to >>>>

>>>Relationship management

>>>Time management

>>>Customer management

>>>Knowledge exchange

**CO-OPETITION**



# The 'Five C' analysis for assessing strategic alliances

## The model makes a good take off point



*adapted by Allan Rodrigues from Hennart J.F.(2022) & the original 4Cs by Brouters, Brouters & Wilkinson (1995)*

- ❑ **COMPARATIVE SIZE**. Does not mean both partners must be of equal size. Size is in context of the specialist services they offer. A small player fits well into an alliance if it has a sizeable presence in its market, or area of expertise
- ❑ **COMPATIBLE GOALS**. The goals of the partners must be compatible with the strategic direction of their own organisations and with each other. **This is one of the main reasons why alliances fail.**
- ❑ **COMPLEMENTARY SKILLS**. Alliances based on the size of the contribution by each partner (monetary, assets or other value adds) are not enough. Alliances work best when each partner makes a real contribution of its experience, core competencies, access to markets, customers, capabilities and key assets. **TRUST DRIVES THE ALLIANCE**
- ❑ **COMMENSURATE LEVELS OF RISKS** must be borne by each partner based on the size of the reward. Risks must be shared for the alliance to work. If not, one partner might hold back or delay or hold back actions to preserve its assets and let the other take the risk.
- ❑ **COOPERATIVE CULTURE**.. Poor chemistry, abrasive interactions between partners based on relative size can be avoided and even managed. Incompatibility however cannot be overcome. Partner firms should concentrate on why they make compatible bed fellows instead. This is the challenge that each party must address.

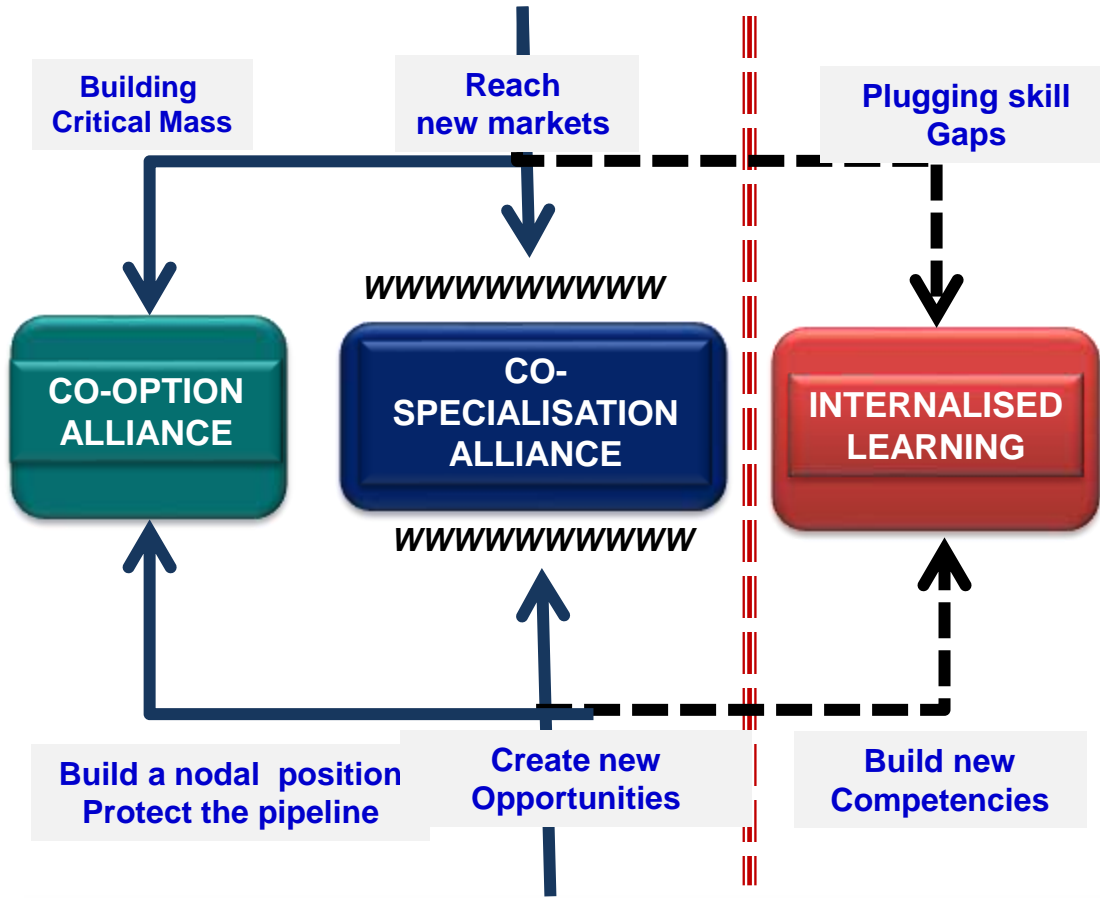
<https://www.thebusinessbinnacle.co.nz/services/strategic-alliances/>

# The Alliance Advantage 'Co-opetition' Versus 'Competition'

adapted by Allan Rodrigues 2020 from the original model by from the Doz & Hamel 1998

## GLOBALISATION & MARKET SHARE

Entities "Racing for the World"



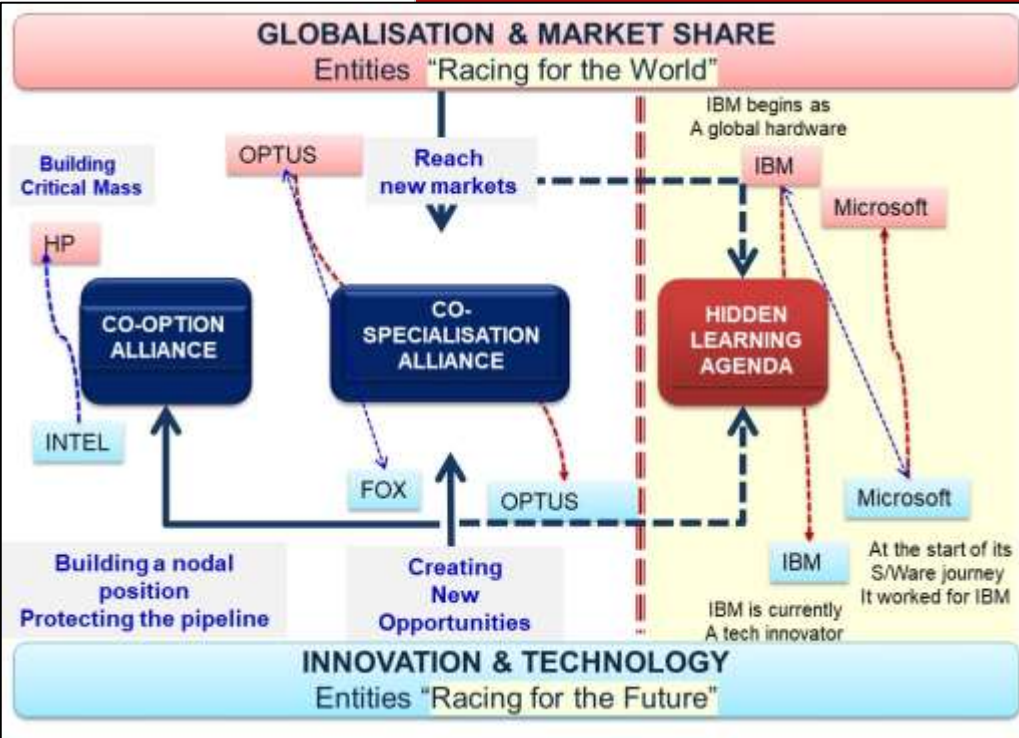
Doz & Hamel's 1998 in their seminal work built the alliance advantage model that has morphed into several adaptations since. The logic of the model is that an alliance consists of :

- ❑ **ENTITIES RACING FOR THE WORLD** or market share and dominance, and:
- ❑ **ENTITIES RACING FOR THE FUTURE** driven by innovation and invention.

They meet at three interfaces each with their own motivations to build or gain something

- ❑ **CO-OPTION** alliances where one entity develops a standalone product but needs market or global access
- ❑ **CO-SPECIALISATION** alliances where both entities need to join their respective core-competencies to jointly produce a product/service that they could not do alone
- ❑ **INTERNALISED LEARNING** where one party seeks to build new innovative competencies and the other tries to plug a skill gap. This creates a 'hidden learning agenda'





COOPTION ALLIANCE are easier to manage. The global player acquires a product for a price e.g. HP or Dell buys an Intel chip and uses it on its a PC/Laptop. The Global entity has the market reach that the innovator needs.

The Intel has to protect itself, or it will be replaced by a competitor. It uses investment in research and development to build upgrades making it difficult to be replaced easily.

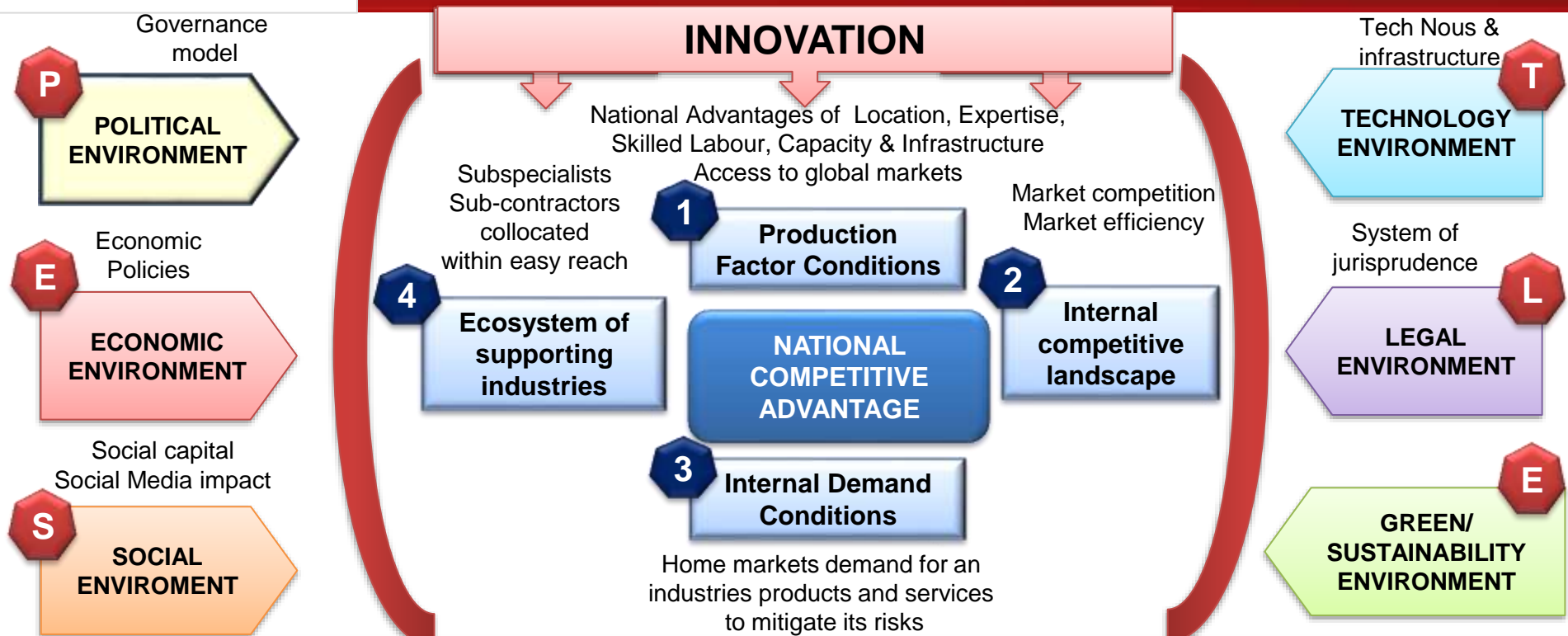
CO\_SPECIALISATION ALLIANCES are difficult. Each partner has a skill that must be combined with the skills of the other partner. The difficulty is that the staff at the coalface are loyal to their own organisation and chain of command. The key is to make them loyal to the alliance.

Examples are Optus provides satellite carriage for News and Sports and Fox (SKY) DTH provides the last mile to the home.

- ❑ There is a HIDDEN LEARNING AGENDA as learning is internalised especially with CO-SPEC alliances. Each party learns the others business over time and seeks to replace the other.
- ❑ In CO-OPT alliances the Global entity looks for another player that is better/cheaper. To protect itself the innovator must invest in R & D and knowledge to be ahead of the knowledge curve or die or be replaced.
- ❑ In CO-SPEC alliances segment invasions are common. OPTUS SATCOM .a long-haul telco provider entered the last mile of the DTH business in direct competition with FOX(SKY). . Likewise, Microsoft which was an innovative software provider to IBM with a global reach but became a Global Behemoth itself. IBM then became an innovative hardware provider racing for the future to support the needs of the software industry. A reversal of roles.

# Porter's original competitive advantage of nations adapted to Competitive Positioning in the 21<sup>st</sup> century

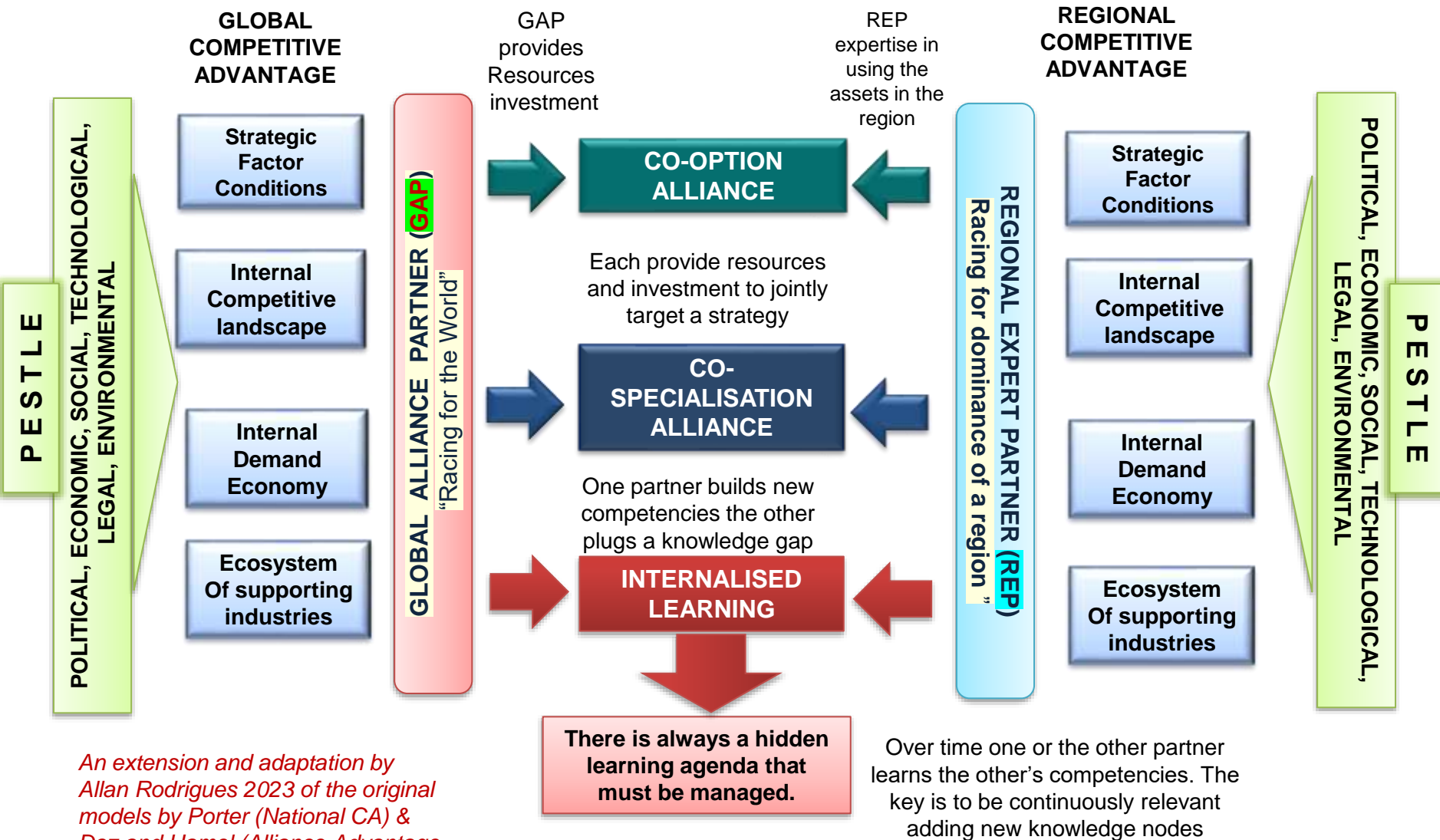
*adapted by Allan Rodrigues 2022*



- ❑ Countries do not have competitive advantage. It is innovation that drives competitiveness. Incremental innovation makes industry efficient. But it is **Radical Innovation that shapes industries and rewrites the rules that make a nation great.**
- ❑ Porter's mantra must accordingly be read in conjunction with the PESTLE analysis of the macro-environment of the nation and its sources of competitive advantage that might range from Location, Expertise, Culture, Morale and Governance. But in the end, it is the competitiveness of its businesses that drive the economic lever that creates dominance.
- ❑ The PESTLE directly impacts on the RADICAL and INCREMENTAL innovations that drive 'Production Factor Conditions', the eco-system of its supporting industries, its internal competitive landscape and the need for a large home market that mitigates the risk of building capacity to export to the world

# National Level Competitive Advantage & Alliance Advantage Model

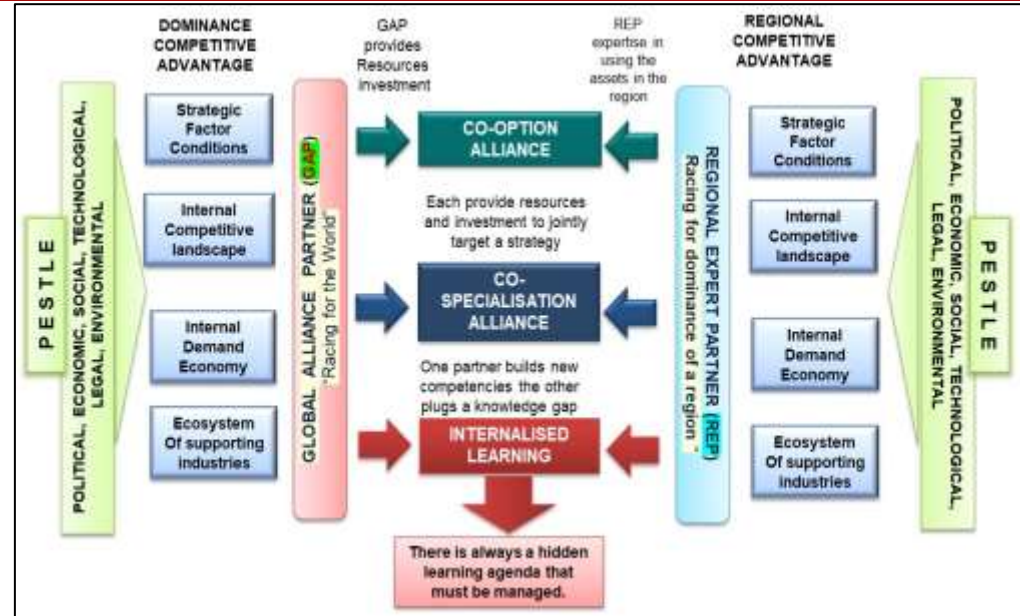
## The resource driven view towards the theaterisation of commerce



*An extension and adaptation by Allan Rodrigues 2023 of the original models by Porter (National CA) & Doz and Hamel (Alliance Advantage)*

# National Competitive Advantages impact on the Strategic Alliances that drive Coopetition on the GSC-SVC interface

- ❑ A partner with a global reach usually comes to the alliance with global competitive advantages. Strategic Factor Conditions include a global economy, major investments in infrastructure, access to skilled labour and global markets.
- ❑ Conversely a global player would partner with a local or regional partner with knowledge, expertise and comparative size in its specialised theatre of operations, at least enough for each partner to add value to each other's strategic interests.
- ❑ Both partners seek to plug gaps in each of their areas of influence. The Dominant global partner brings in global markets to create scale economies.
- ❑ The PESTLE environ in which each player operates in, impacts differently. E.g. One partner may well be in a recession the other might be in a growth cycle. Likewise, there are other pluses and minuses that exert pressures on each player.
- ❑ Both partners need to decide to operate in Co-option or Co-specialisation alliances or both. In any case there will be leakage at the interface.
- ❑ **TRUST AND CHEMISTRY ARE THE KEY TO SUCCESS.**

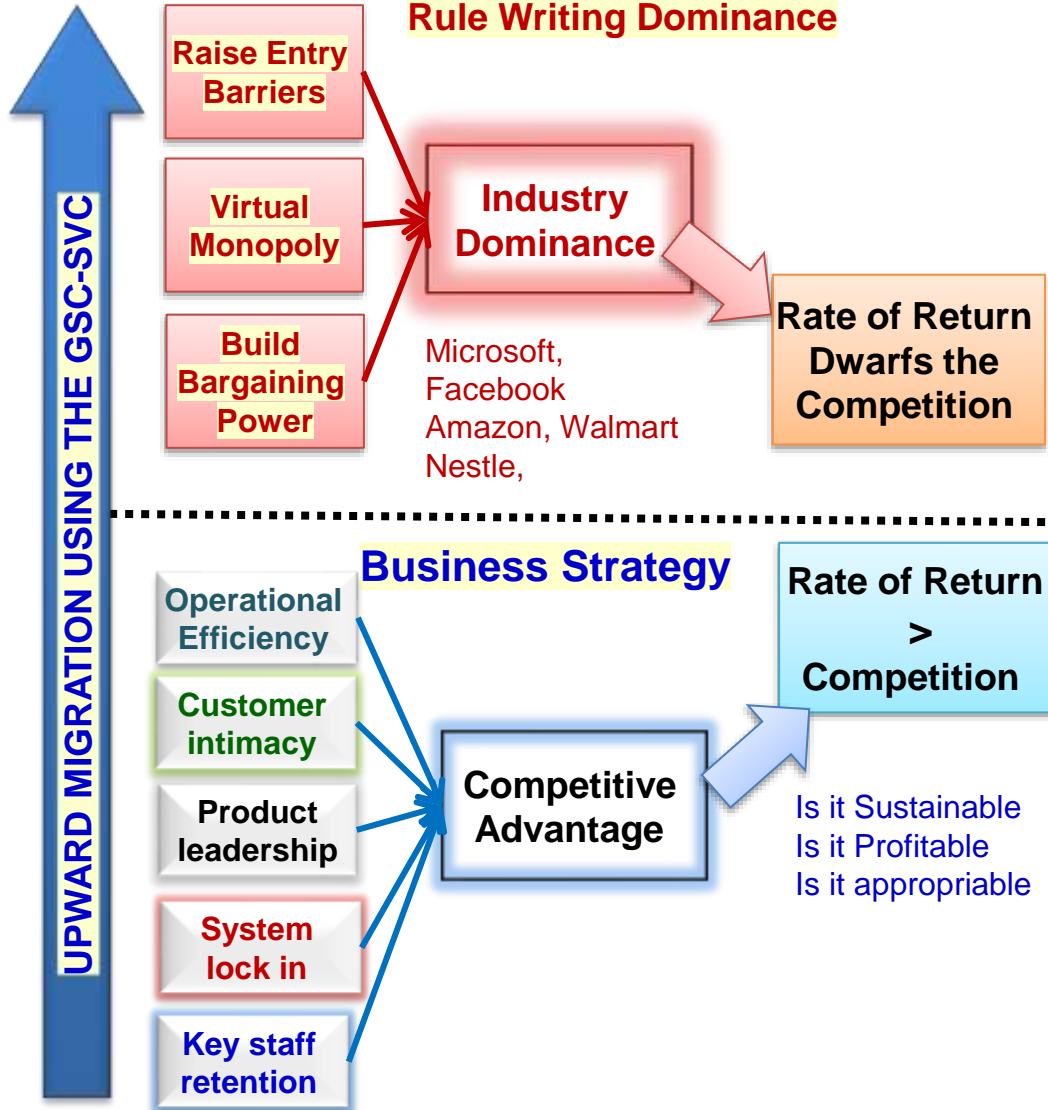


- ❑ CO-SPEC alliances usually have jagged interfaces as the loyalty of the staff are to their parent orgs and often not to the alliance at all. Invariably one party or the other learns the other's business and the alliance falls apart, usually in 3 - 5 years or it needs to be recrafted.
- ❑ CO-OPTION alliances work if the smaller player has a deep bench of expertise. An alliance with a regional expert with intimate knowledge of the region and its nuances, or a deep investment in expertise that is not easily copied. CO-SPEC alliances usually become CO-OPTION alliances, or they split up.

*An aggregation of Porter's National Competitive Advantage Model and Doz and Hamel's Alliance Advantage model adapted by Allan Rodrigues 2022)*

# From competitive advantage to dominance Rewriting the rules of competition in the 21<sup>st</sup> century

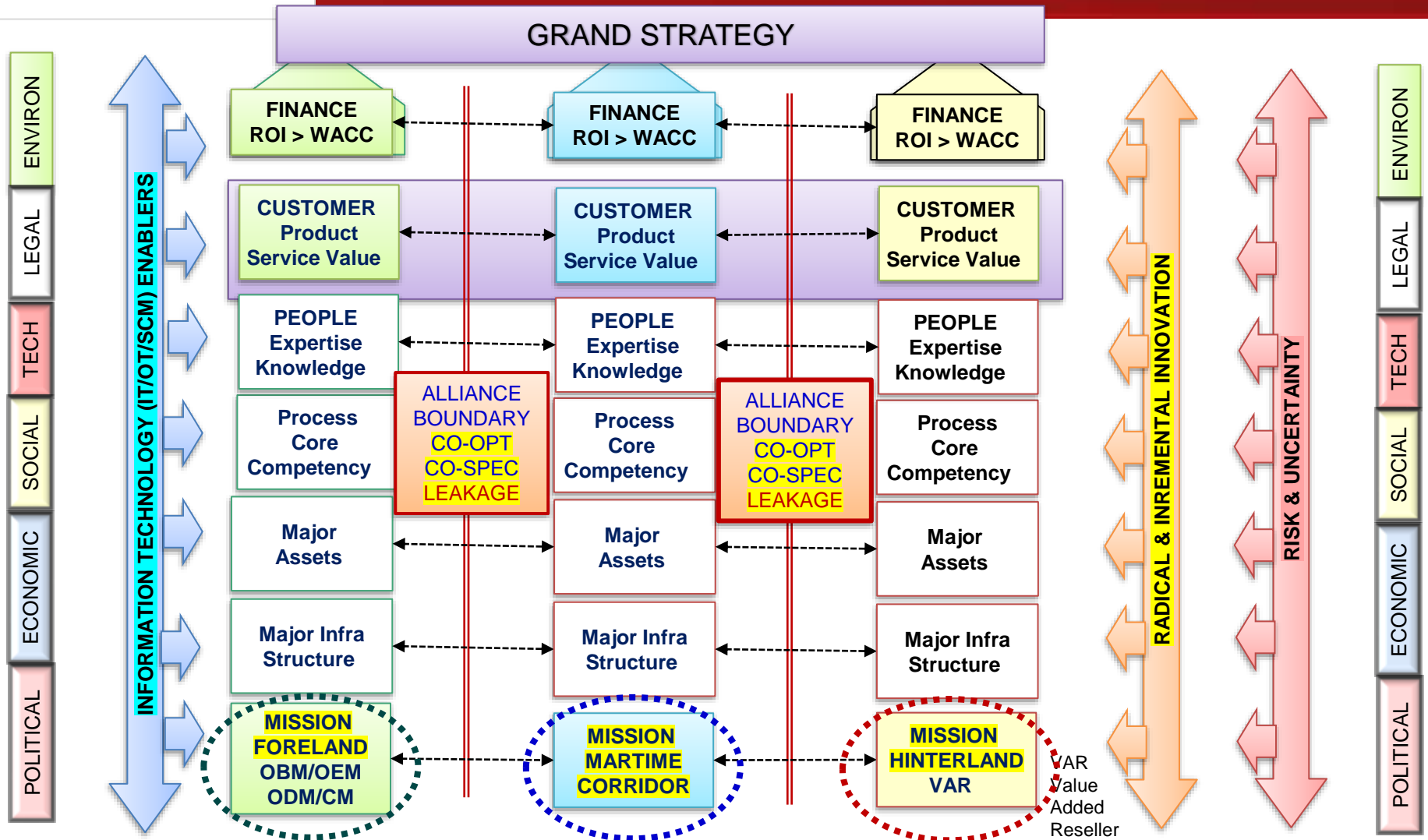
*Adapted by Allan Rodrigues from the original by Robert M Grant (2020)*



- ❑ The convergence marketplace of technology and AI driven business converts information into knowledge instantaneously, making it possible for market entities to avoid competition altogether.
- ❑ **The current model strives for dominance.** Rather than using the traditional route to competitive advantage market behemoths use knowledge at the GSC-SVC interface to invade the value boundaries of their own and other industry SVCs where synergies can be obtained.
- ❑ **The current grand strategy of the dominant Alpha is to raise the barriers to entry to any new entrant, force legacy competitors to exit the business or become value added resellers (VARs).**
- ❑ **The ability to bring to bear unlimited resources through the LEAN AGILE GSC allows these Alpha Males to overwhelm the competition.**
- ❑ **They create virtual monopolies, build gigantic bargaining power to rewrite the rules for competition in their favour**

# “Roddy’s Resource Driven View (RDV) “Supply-Value Network”

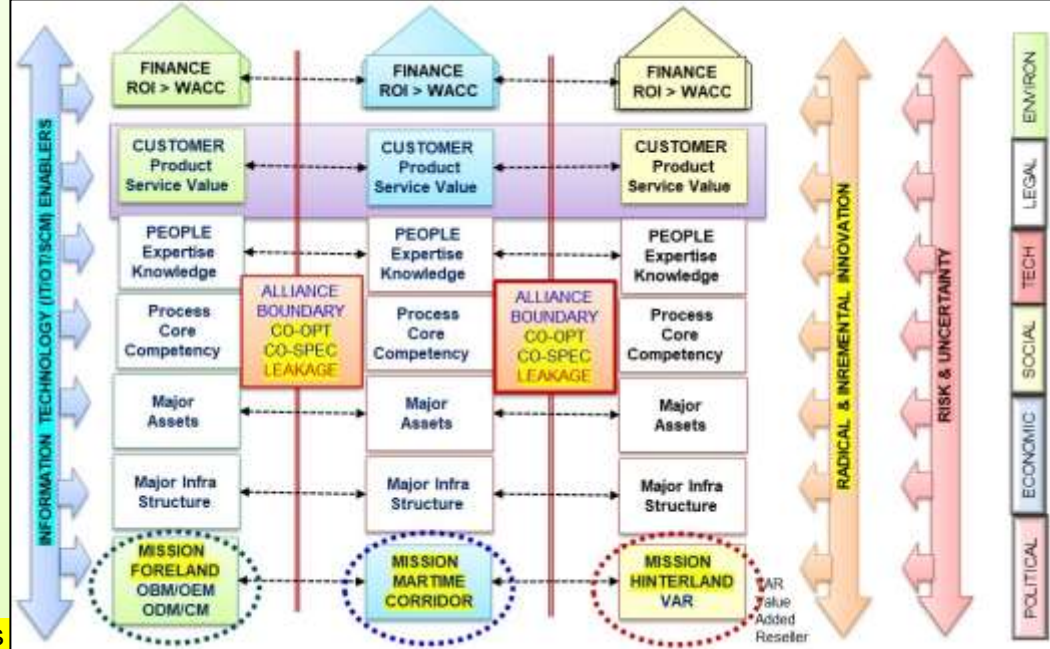
## An aggregate model for Global Resource Management



An extended adaptation by Allan Rodrigues of the original PESTLE Model, Porters National Competitive Advantage, Doz & Hamels Alliance Advantage and Kaplan & Norton’s Balanced Score Card superimposed on Simchi-Levi’s Lean Agile Supply Chain.

# National Competitive Advantages impact on the Strategic Alliances that drive Coopetition on the GSC-SVC interface

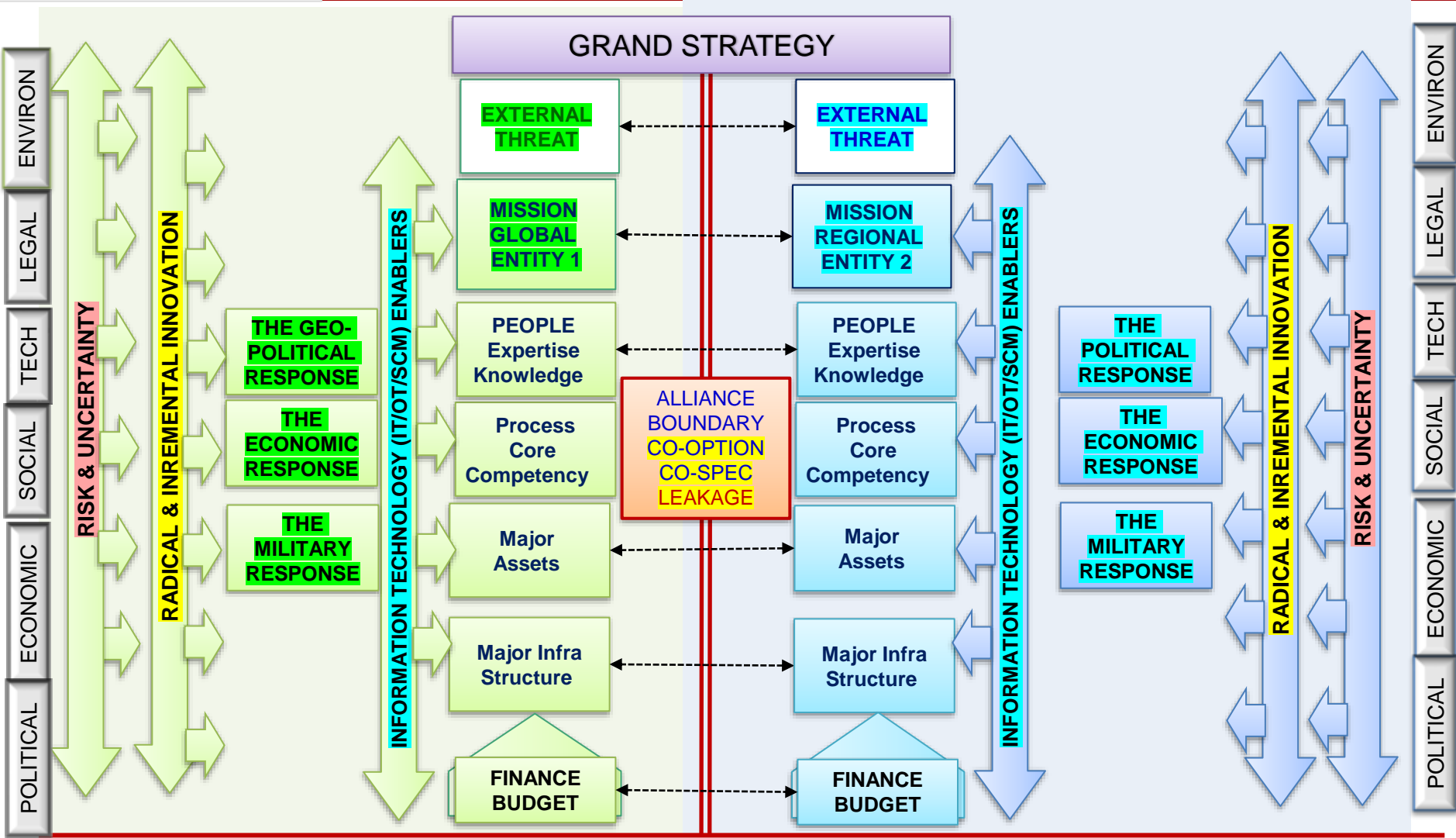
- Each partner operates in a PESTLE environment that may or may not be the same. Each partner brings infrastructure, assets, processes and people with their expertise and knowledge to firstly, design a product/service offering for its customers and create value for its itself. It must now share that value with others.
- Finance is the overarching measure. The aim is to provide a Return that is well above the ability of each partner to go it alone. The partner with a global reach usually comes to the alliance with factor conditions that include economic power, major investments in infrastructure, access to skilled labour and resources.
- A Global player would partner with a local or regional partner with knowledge, expertise and with enough size in its specialised theatre of operations so that each would add value to the alliance. **Both partners seek to plug gaps in each of their areas of influence.** The Dominant global partner has global markets creating scale economies.
- The PESTLE environ each player operates in impacts differently. E.g. One partner may well be in a recession the other might be in a growth cycle. Likewise, there are other pluses and minuses. **Both partners need to decide on whether to operate in Co-option or Co-specialisation alliances or both. In any case there will be leakage at the interface.**
- TRUST AND CHEMISTRY ARE THE KEY TO SUCCESS.**



- CO-SPEC alliances usually have jagged interfaces as the loyalty of the staff are to their parent orgs and often not to the alliance at all. Invariably one party or the other learn the other's business and the alliance falls apart, usually in 3 - 5 years or it needs to be recrafted.
- CO-OPTION alliances work if the smaller player has a deep bench of expertise. An alliance with a regional expert with intimate knowledge of the region and its nuances, or a deep investment in expertise that is not easily copied. CO-SPEC alliances usually become CO-OPTION alliances, or they split up.

*An aggregation of Porter's National Competitive Advantage Model and Doz and Hamel's Alliance Advantage model adapted by Allan Rodrigues 2022)*

**RODDY'S AGGREGATE ALLIANCE MODEL**



*An extended adaptation by Allan Rodrigues of the original PESTLE Model, Porters National Competitive Advantage, Doz & Hamels Alliance Advantage and Kaplan & Norton's Balanced Score Card superimposed on Simchi-Levi's Lean Agile Supply Chain.*



## RODDY’S AGGREGATE ALLIANCE MODEL

- ❑ The road to theaterisation in national alliances dealing with common threats is fairly similar in design to those in marketplace alliances. **The difference is in the end game.** In business it is financial value. In a national alliance the currency is power & might.
- ❑ Instead of creating competitive advantage with customers, the alliance focuses on and defines the threat faced both individually and by the alliance (often these threat perceptions might differ). What drives the alliance is the combined mission that is fragmented into individual missions that contribute to a grand strategy
- ❑ Each alliance partner is impacted by different macro environmental risks (PESTLE) based on which each individual player **wields three levers of power in response to the threats.** These are a **Geo-political, economic and military response levers.** These response levers must be used in tandem and aligned between partners as well.
- ❑ The alliance could then use a shared architecture of their core infrastructure, assets, processes (tactics) and the expertise and knowledge of their people to work together to achieve the mission of the alliance.
- ❑ **Finance is now the means to an end not the reason for one’s existence.** It is investment that enables each individual alliance partner to achieve the mission.
- ❑ **TRUST AND CHEMISTRY ARE THE KEY TO SUCCESS. THE MISSION MUST BE TRANSPARENT**

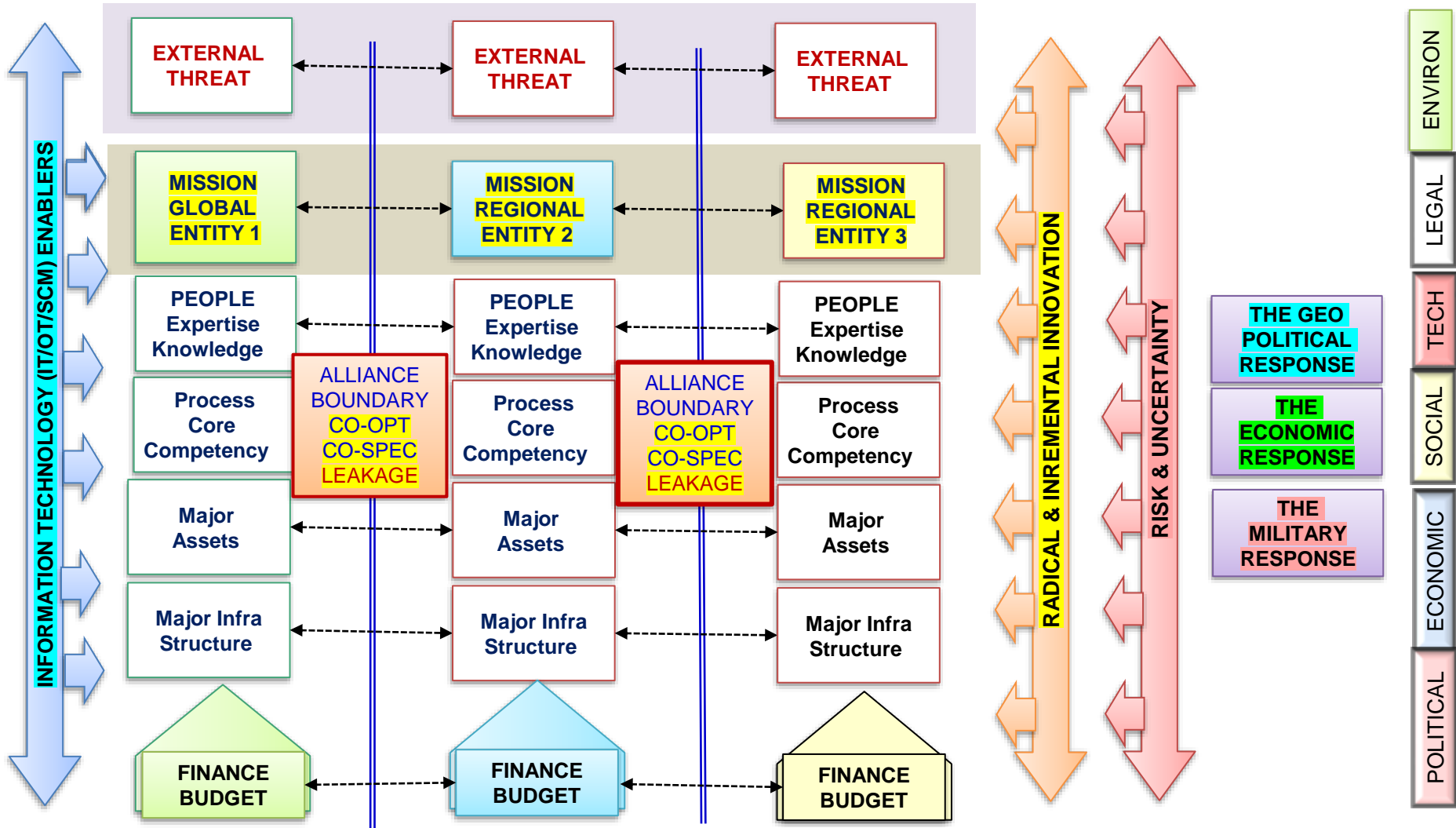


- ❑ CO-SPEC alliances usually have jagged interfaces. It requires military or civilian assets to work together in teams. **Again, the loyalty of the staff are often anchored to their parent orgs and often not to the alliance at all. Invariably one party or the other learn the other’s business and the alliance falls apart, usually in 3 - 5 years or it needs to be recrafted.**
- ❑ CO-OPTION alliances work if the smaller player has a deep bench of expertise. An alliance with a regional expert with intimate knowledge of the region and its nuances, or a deep investment in expertise that is not easily copied. CO-SPEC alliances usually become CO-OPTION alliances, or they split up. The best case is for the global player to outsource the mission to the regional player. The US and the UK are a case in point.

*Originally aggregated and adapted by Allan Rodrigues from Porters National Competitive Advantage, Doz & Hamels Alliance Advantage and Kaplan & Norton’s Balanced Score Card superimposed on Simchi-Levi’s Lean Agile Supply Chain.*

# “The Alliance Advantage & Road Map to Theaterisation”

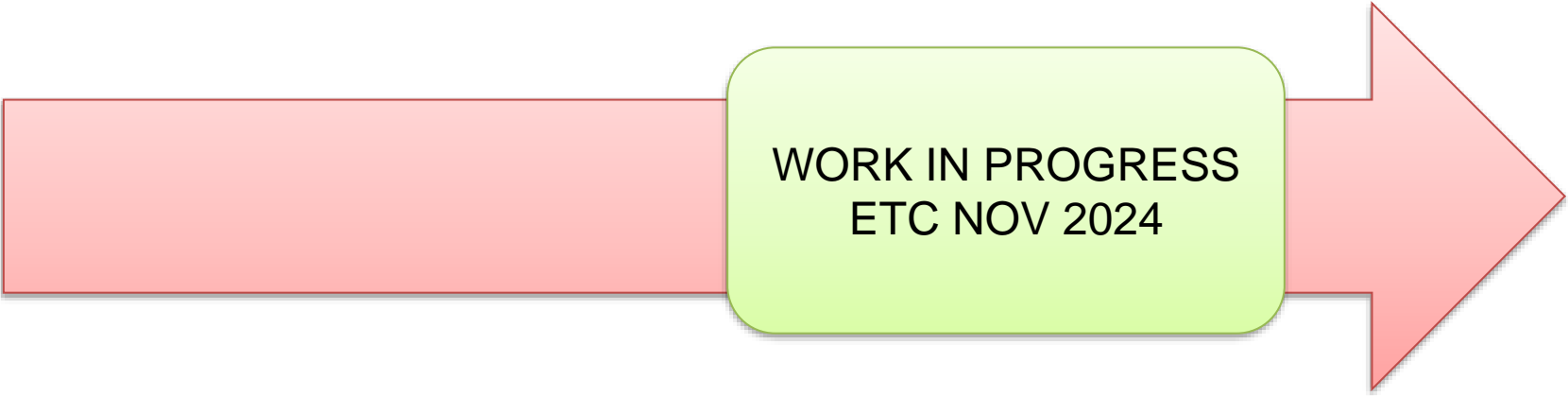
## “The pathway to dominance with 3 or more players”



An extended adaptation by Allan Rodrigues of the original PESTLE Model, Porters National Competitive Advantage, Doz & Hamels Alliance Advantage and Kaplan & Norton's Balanced Score Card superimposed on Simchi-Levi's Lean Agile Supply Chain.

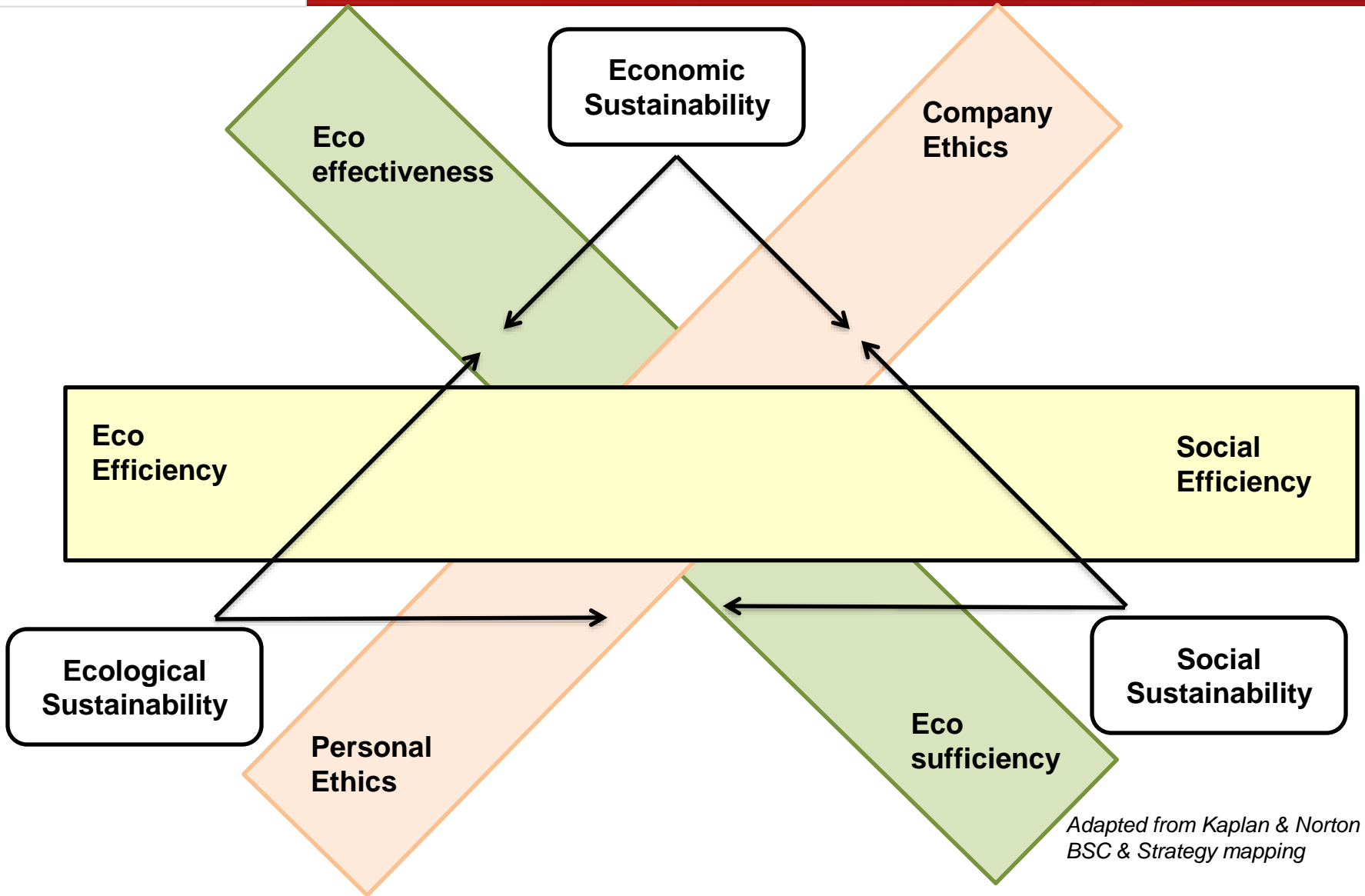
# PART 5

## Sustainability & Performance Management



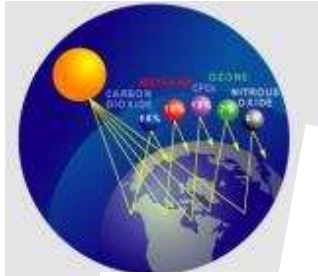
WORK IN PROGRESS  
ETC NOV 2024

# Part 5 Sustainability On the GSC



*Adapted from Kaplan & Norton BSC & Strategy mapping*

# We have to first be sustainable in our operations policy



Reduce COX's

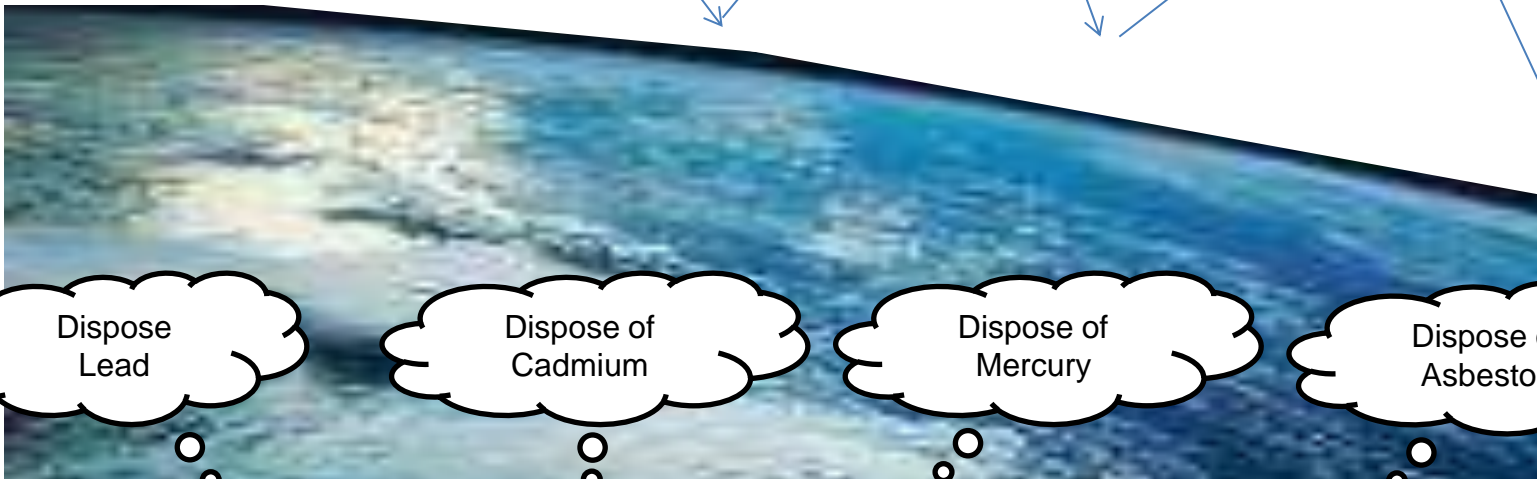
CO2 levels > photosynthesis by plants /trees

Reduce SOX's

SO2/SO4 cause acid rain damage plants trees

Reduce NOX's

Combustion processes in power plants



Dispose Lead

Lead in water  
Damage to nerves and brain cells

Dispose of Cadmium

Cadmium – batteries  
Pollute fish stocks

Dispose of Mercury

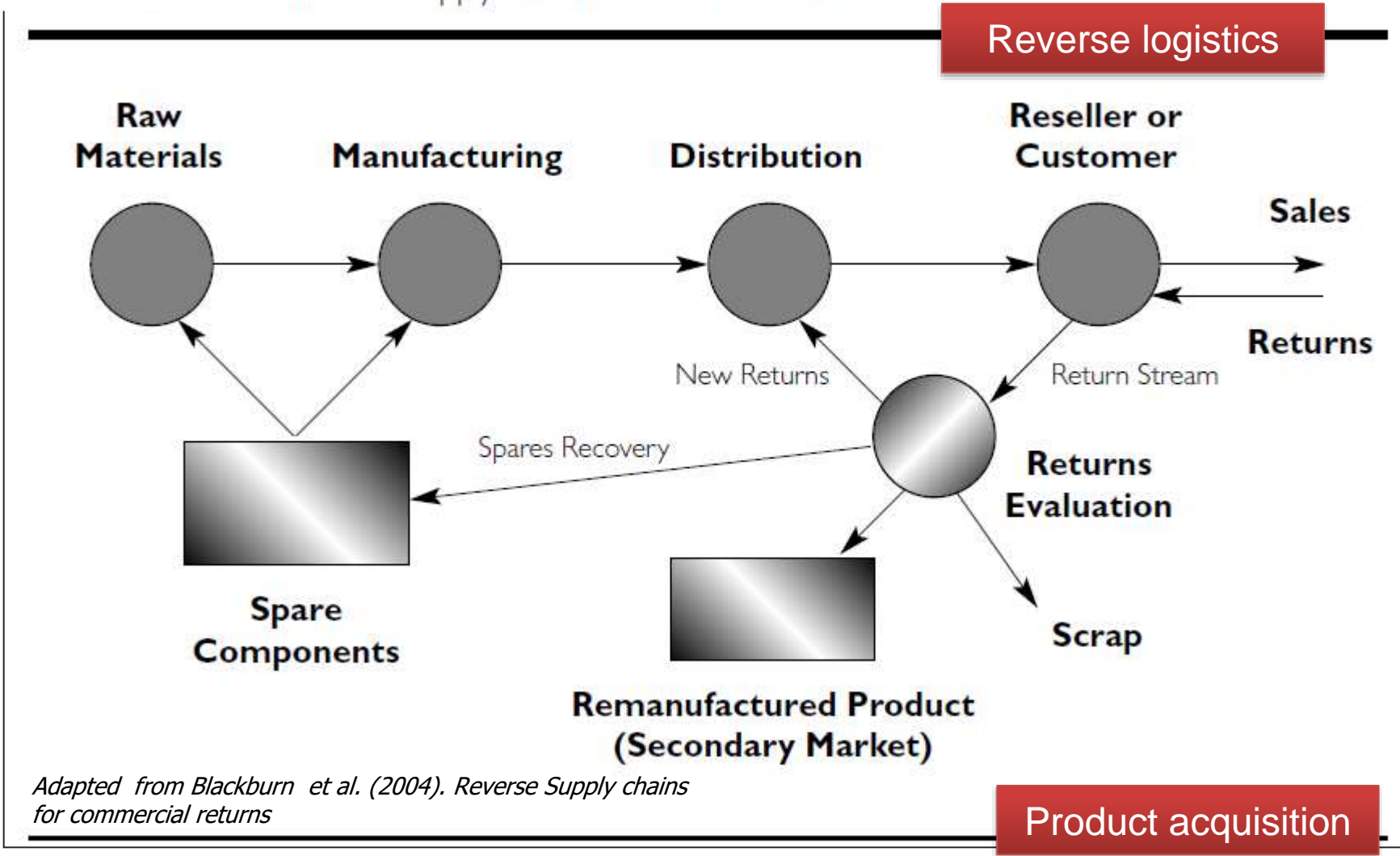
Mercury  
Fish – causes deformity & death

Dispose of Asbestos

Asbestos legionnaires disease

# The reverse supply chain for product returns

A Reverse Supply Chain for Product Returns



*Adapted from Blackburn et al. (2004). Reverse Supply chains for commercial returns*

# Future Global Supply Chains what do we want .. Do we really.. really want

## RESILIENT

- Strong
- Flexible
- Adaptable

When

- a drought hits a canal
- New conflict begins
- New Pandemics
- Accidents/ calamities occur
- Promote regional trade
- Develop infrastructure in country
- Resilient maritime corridors
- Hinterland development
- Rural Urban transport connectivity

Goods should not become collateral damage

## INCLUSIVE

We need

- A more inclusive story of globalisation
- SMEs have a fair chance of benefitting from the GSCs

GSCs should be defined not by how long they are globally but how deep they are locally

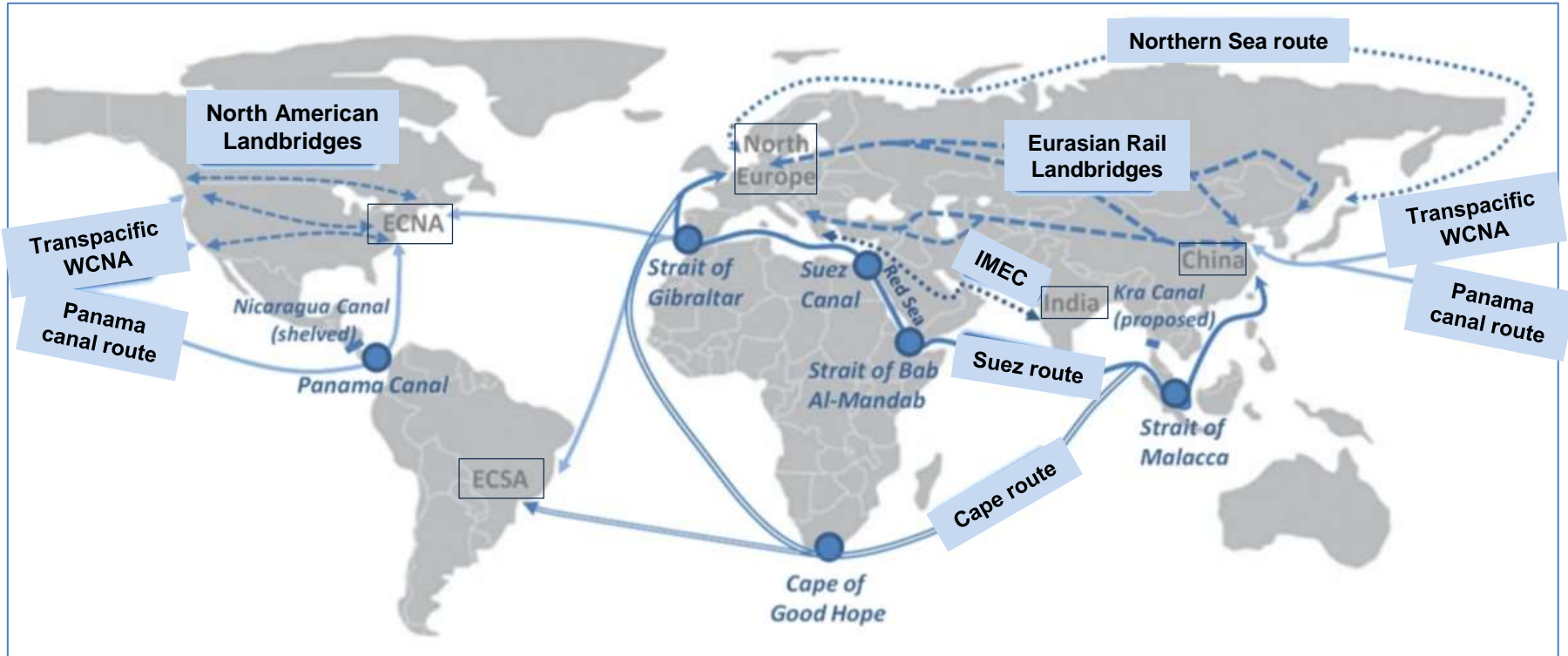
*Rebecca Grynspan  
Secy Gen UN T& D  
21 Mar 2024)*

## SUSTAINABLE

Climate Smart with change response 2050

- Ships use sustainable fuel based on IMO standards
- Address pollution at source
- IMO standards for COXs, SOXs NOXs 0.50% m/m (mass by mass to reach 0.10% by 2050
- Higher quality fuel (LS fuel)
- 77% drop in SOXs
- Net Zero

# The Red Sea & Strait of Bab al-Mandab routing alternatives on the Asia Europe, United States trade



IMEC India–Middle East–Europe Corridor,  
 ECNA East Coast North America,  
 ECSA East Coast South America,  
 WCNA West Coast North America.

*Notteboom, T, Haralambides, K, Cullinane, K. (2024). The Red Sea Crisis: ramifications for vessel operations, shipping networks, and maritime supply chains. Maritime Economics & Logistics, 2024, <https://doi.org/10.1057/s41278-024-00287-z>*



# Panama Canal Change in routes from Upstream China to the US Eastern Seaboard

**Regular shipping routes could be altered as a result of a slowdown at the Panama Canal.**

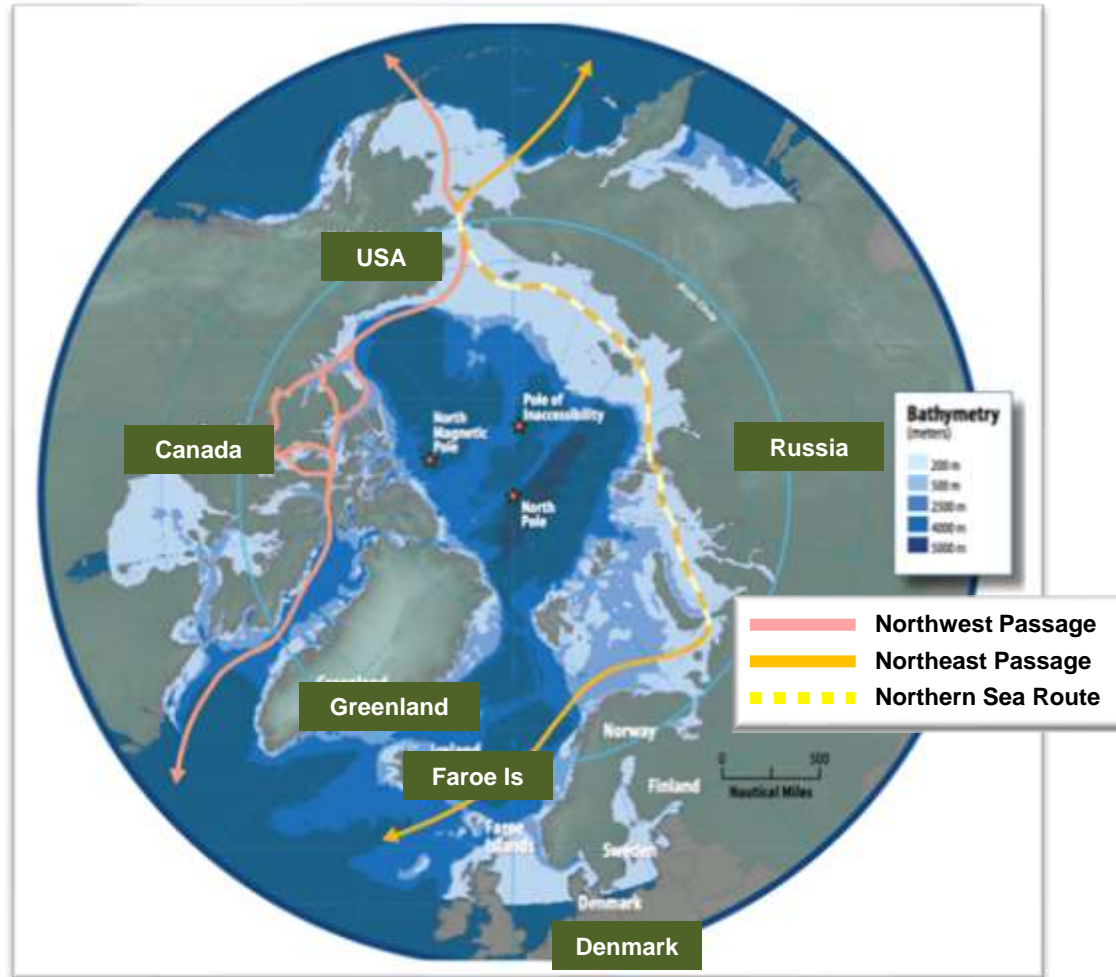
**Expected diversions of typical routes**



McKinsey & Company

<https://www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/how-could-panama-canal-restrictions-affect-supply-chains>

# Map of the Arctic region showing shipping routes NE Passage, Northern Sea Route, and NW Passage



Harder.S

[http://www.arctic.noaa.gov/detect/documents/AMSA\\_2009\\_Report\\_2nd\\_print.pdf](http://www.arctic.noaa.gov/detect/documents/AMSA_2009_Report_2nd_print.pdf)