



cutting through complexity

*Anjan Brahma*

**10<sup>th</sup> Southern Asia Ports, Logistics  
and Shipping 2015, India**

15<sup>th</sup> September 2015

# **Evolving business environments in the logistics sector for domestic and international trade**

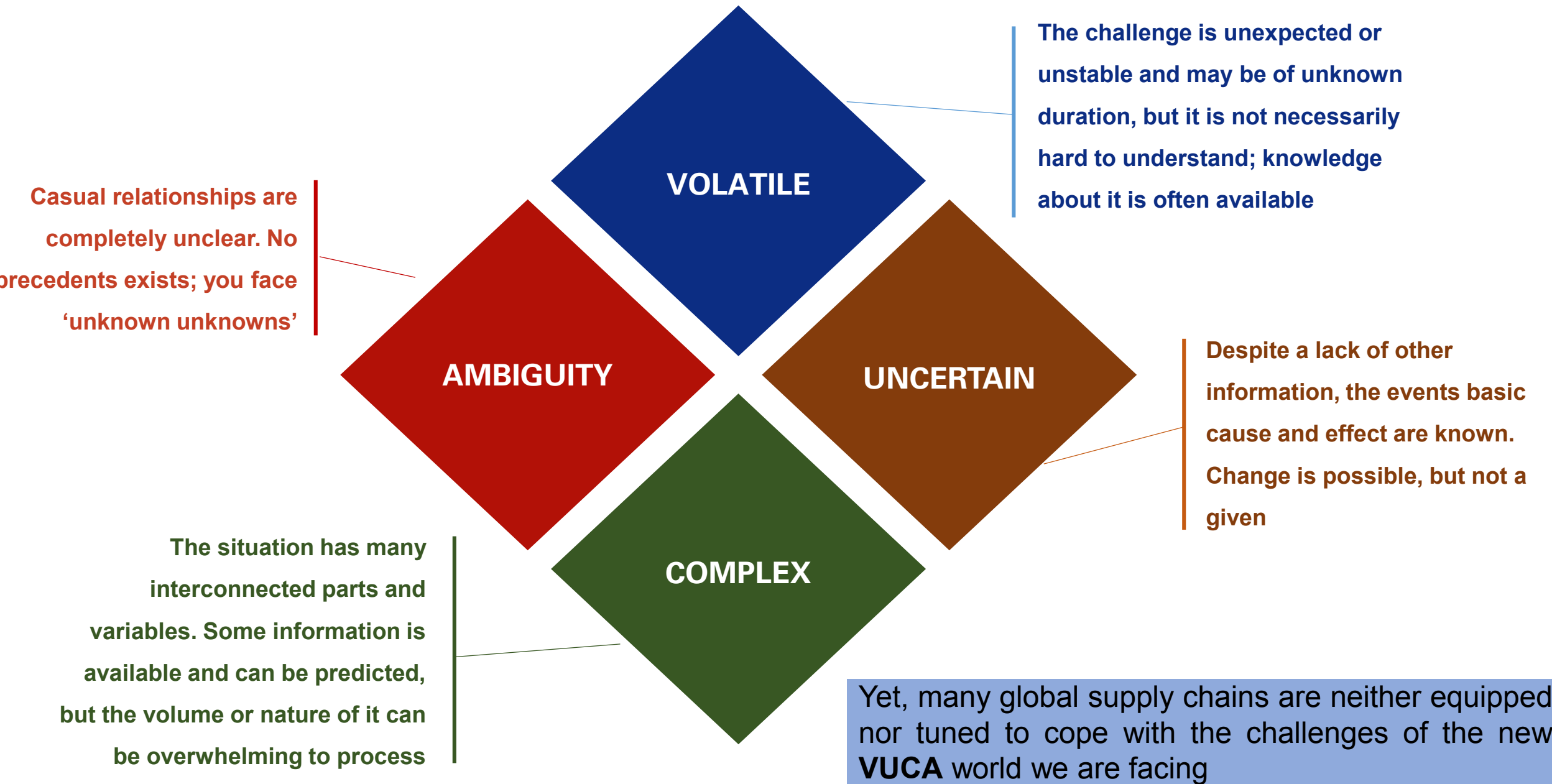
**In times of change ...**

**Learners inherit the earth;**

**While the Learned find themselves beautifully equipped to  
deal with a world that no longer exists.**

**- *Eric Hoffer***

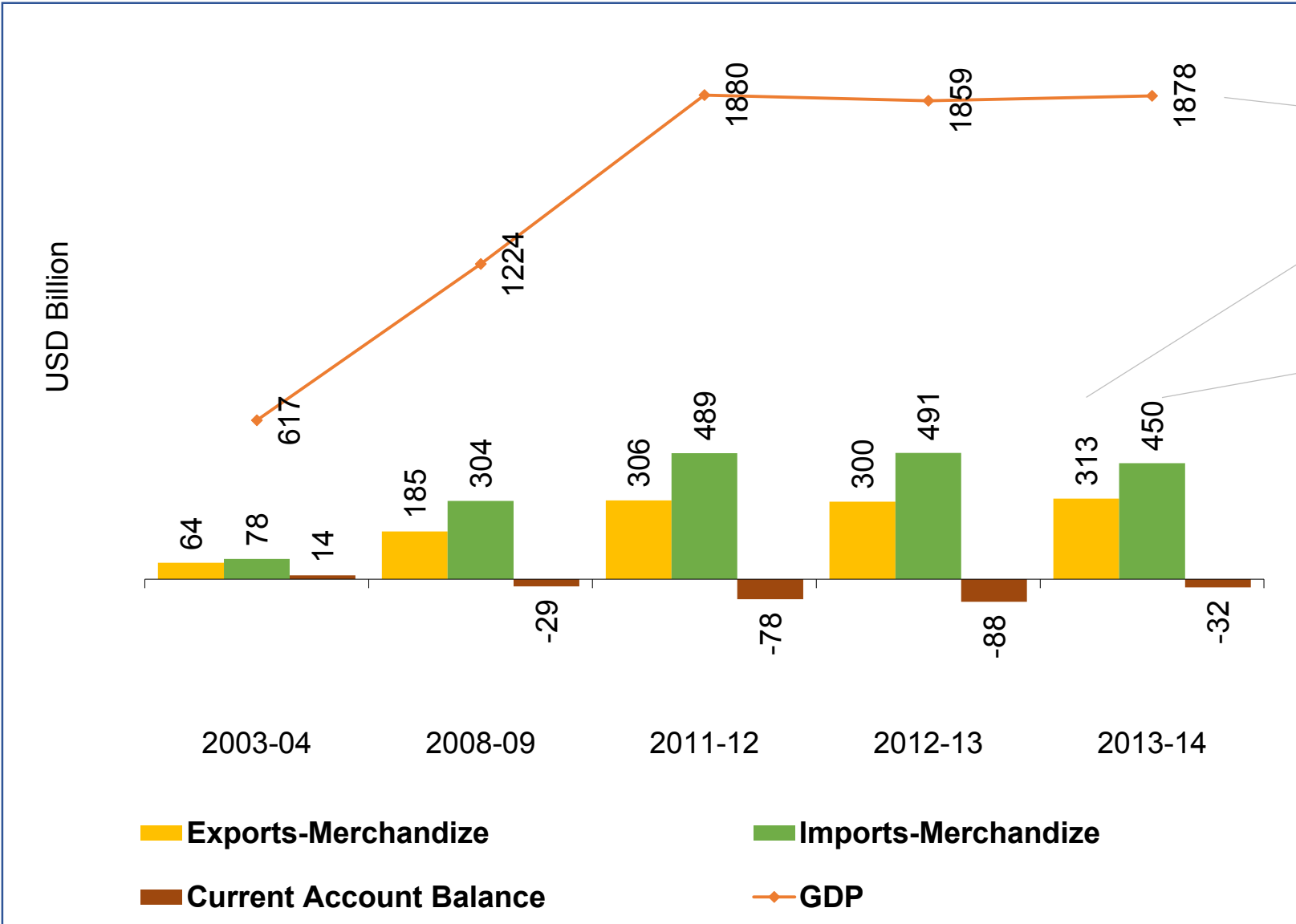
The VUCA world describes the conditions of increasing variability and demand uncertainty, and the complexity and ambiguity of supply chain networks...



The explanations are sourced from the HBR article – 'What VUCA really means for you'

The contribution of international trade to the country's GDP has significantly increased over the past decade from 23% to 40%; Imports having outpaced the growth of Exports

A snapshot of the Indian economy over the last decade

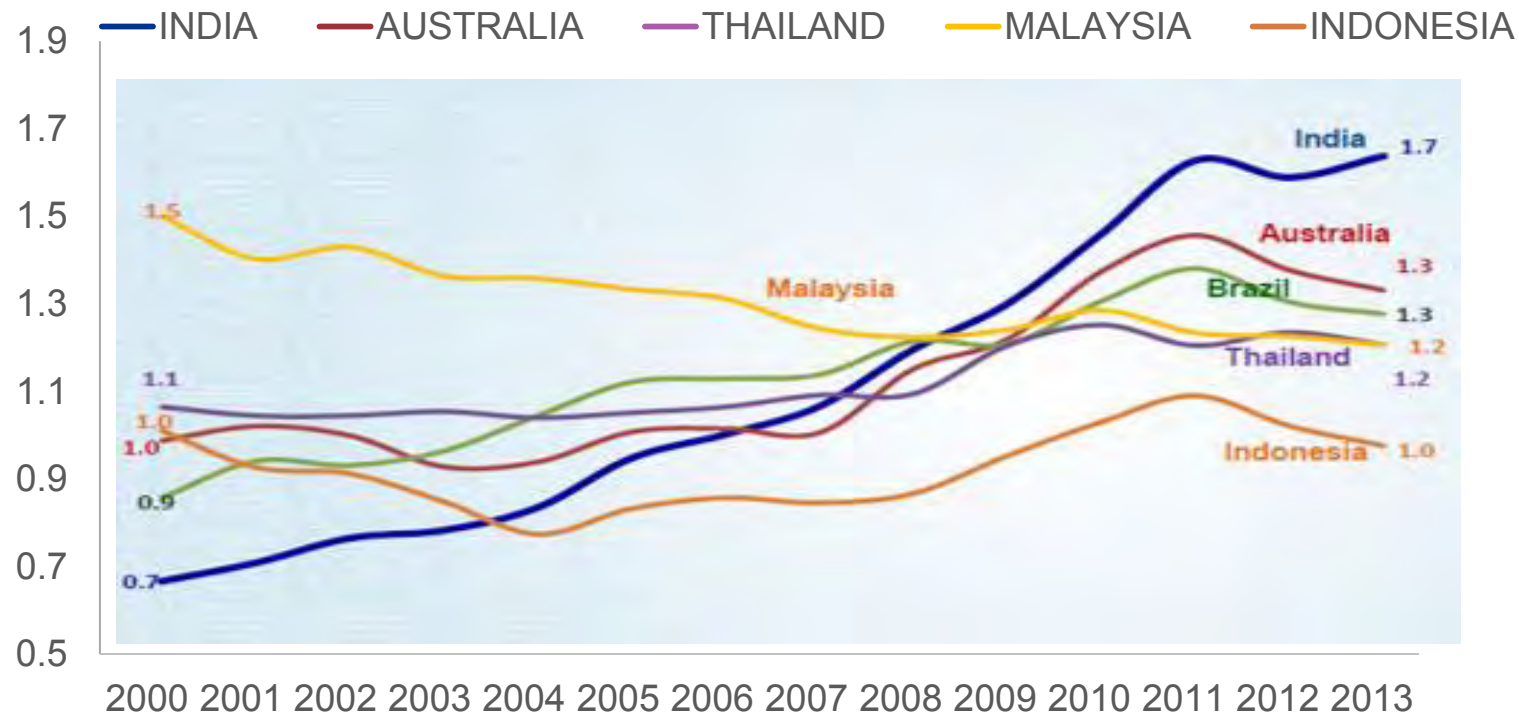


- 3x** Growth in GDP over last 10 years
- 5x** Growth in Exports over last 10 years
- 6x** Growth in Imports over last 10 years

Overall merchandise trade at 40% of GDP in the last 5 years; up from 23% in FY04

Source: Ministry of Commerce & Industry, Gov. of India

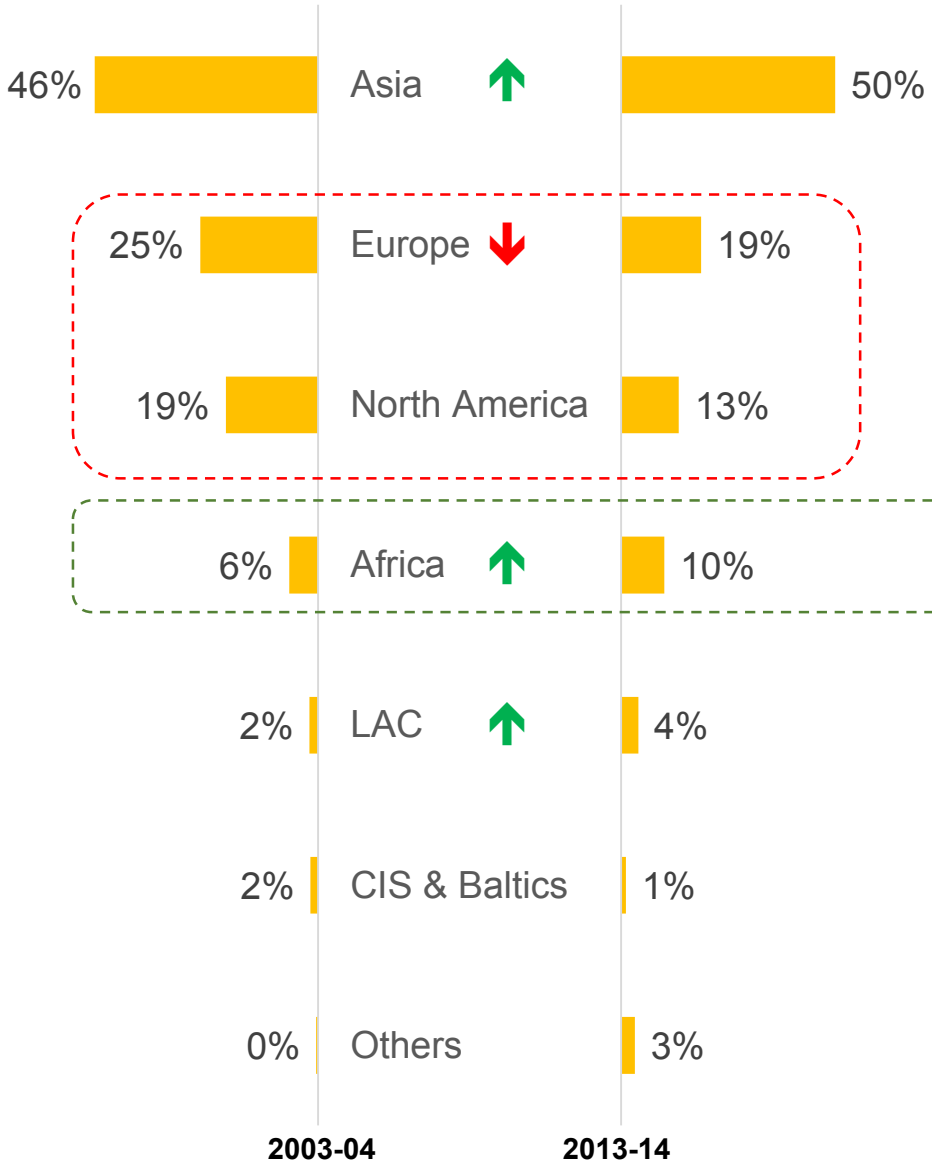
# India has emerged as a leading player amongst developing countries and is expected to have the fastest growth in the coming years



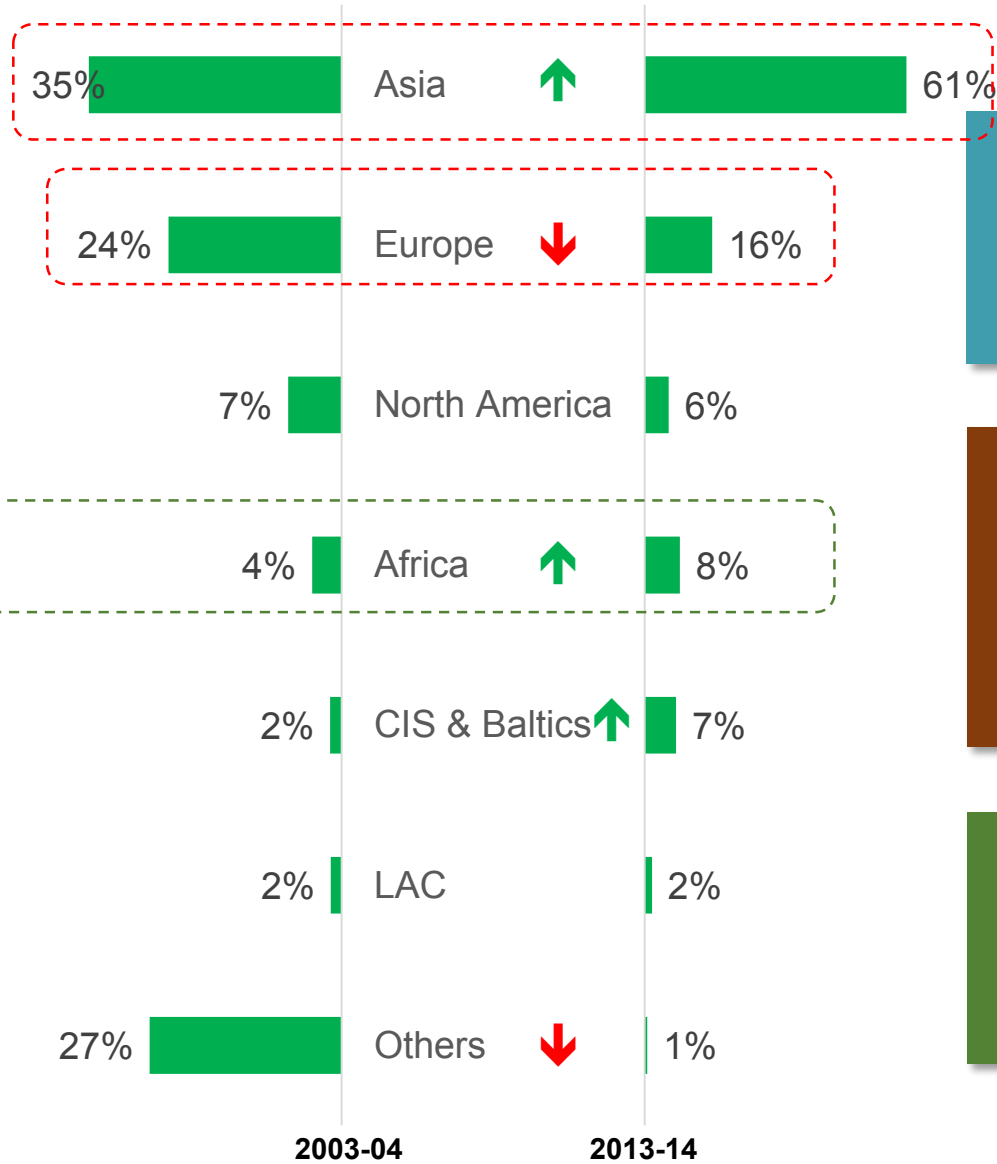
- A shift in Government's policy in recent years from protecting 'producers' to benefiting 'consumers' is seen in its push for a more liberal global trade regime
- It has signed several regional and bilateral trade agreements:
  - India – Sri Lanka FTA
  - Trade agreements with Bangladesh, Bhutan, Nepal, Maldives, China and S. Korea
  - Comprehensive Economic Cooperation Agreement with Singapore
  - Framework agreements with ASEAN, Thailand and Chile
- India now ranks 6<sup>th</sup> largest global exporter, up from 25<sup>th</sup> position in 2000

# The direction of trade is moving towards southern countries like LAC, Africa and particularly intra-Asia

## India's Export destinations



## India's Import destinations



## Key trends

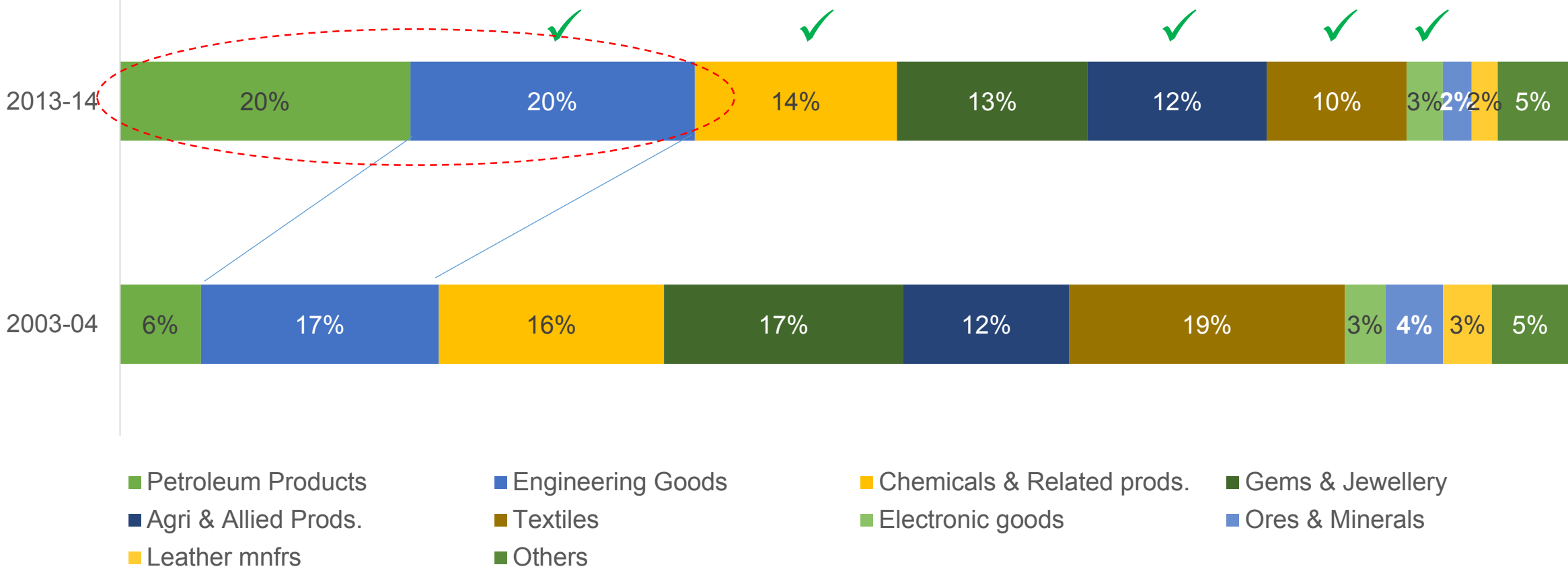
1 > Direction of trade moving towards Southern countries – LAC, Africa and particularly Asia

2 > Asia is at the center of world's fastest growing trade lanes; Asia – MENA, Asia – LAC and Asia – Africa

3 > Need for developing resilient supply chains to cater to this emerging trend (FTZ, storage, etc)

**Thrust on manufacturing will continue to increase containerized exports; finished petroleum products being the other significant export commodity**

**India's Export composition**



- Exports shows a marked shift to finished petroleum and engineering products
- Engineering, textiles, agri & allied products and other manufactured products will lead to an increase in containerized traffic
- These sectors are also likely to get a strong impetus from the current Government's 'Make in India' initiative and the port led development initiative

Source: Ministry of Commerce & Industry, Gov. of India

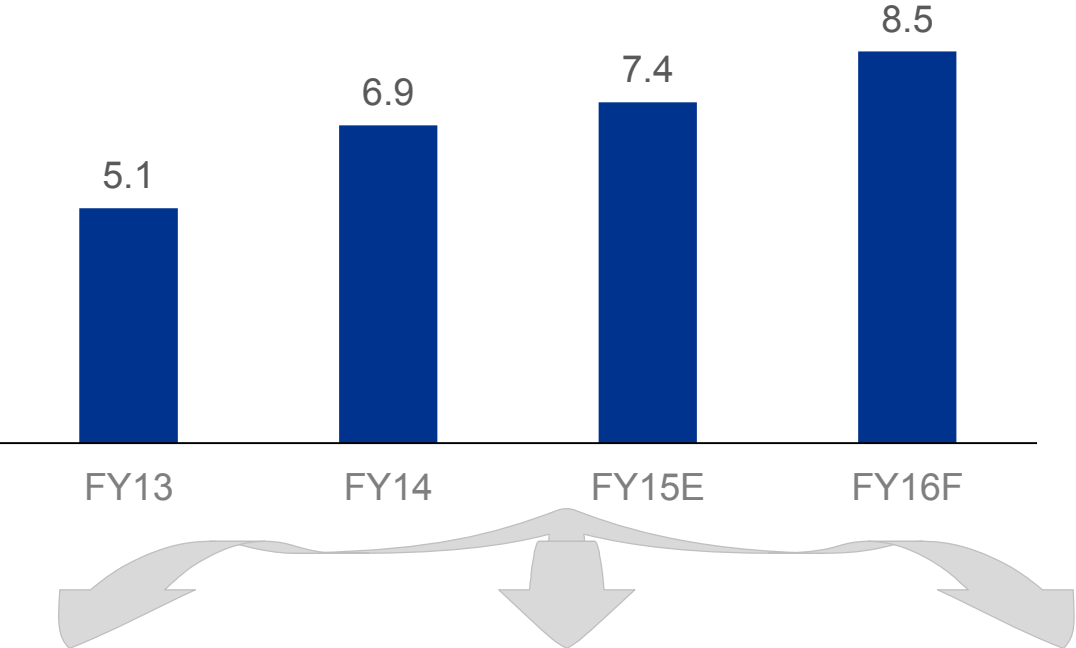
**With the Indian economy poised for growth over the next decade, the logistics sector is likely to be an interesting space as one of the key enablers**

**2007** GDP crossed USD 1 trillion

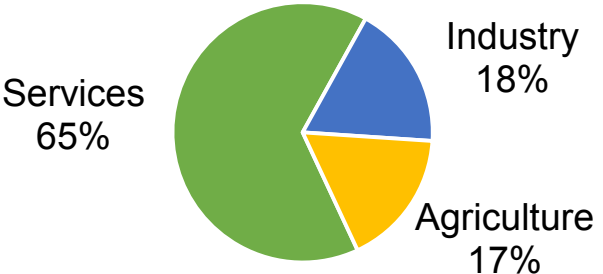
**2014** GDP crosses USD 2 trillion

**2025** GDP expected to cross USD 4 trillion within next 10 years

GDP growth (%) (2011-12 prices)



GDP composition by sector (FY14)



Inflation (CPI) – 2014	<b>6.37%</b>
Population – 2014	<b>1.28 billion</b>

**Past**

Indian economic growth slowed in FY13 and FY14 due to the global economic slowdown and the Euro Zone crisis

**Present**

The new government, led by Prime Minister Narendra Modi, has made efforts to reinvigorate sustained and robust economic growth at 7.4 per cent in FY15

**Future**

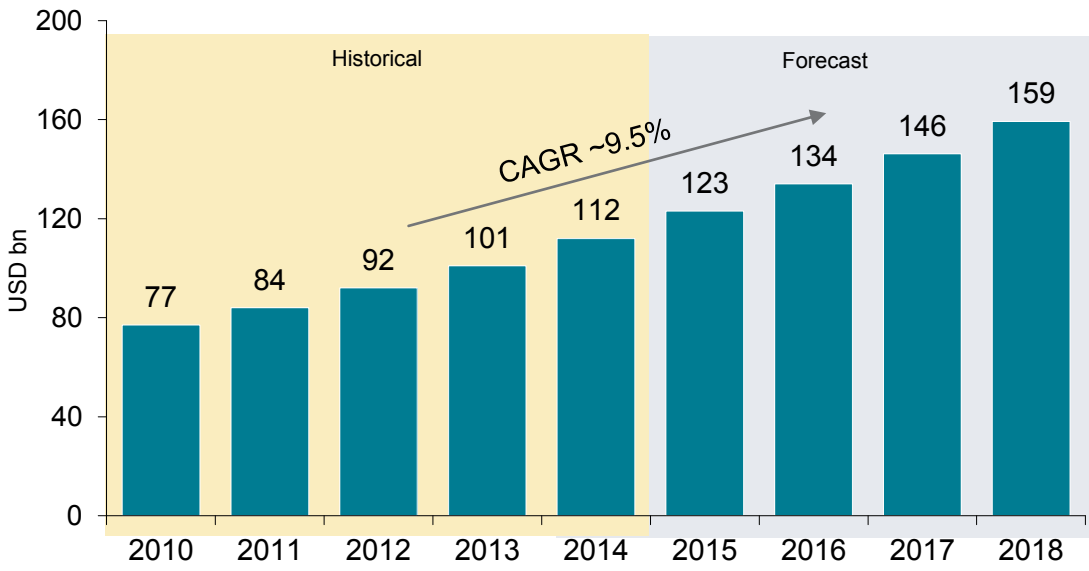
With an expected growth of 8.5 per cent in FY16, India is likely to be one of the largest and fastest growing economies in the world

Source: : Economic Survey of India 2015, "India set to become \$2 trillion economy this year," The Times of India, 19 October 2014, "India becomes trillion dollar economy," The Times of India, 26 April 2007, "India to be \$4 trillion economy in next 10 years: Jayant Sinha," Business Standard, 6 February 2015



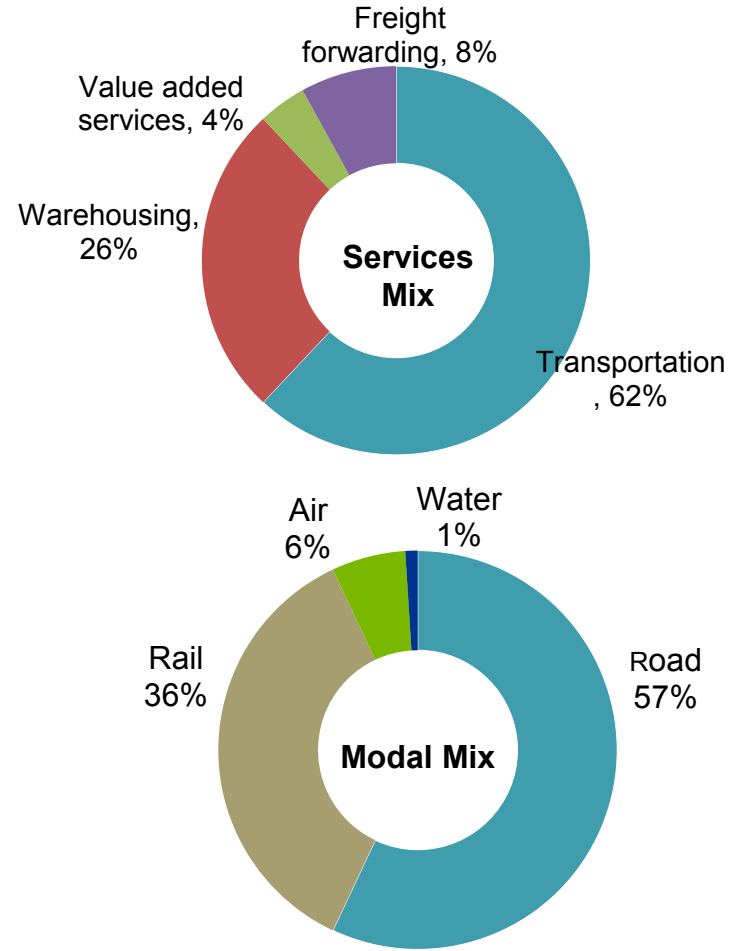
# India's logistics industry is expected to grow at a CAGR of ~9.5% p.a. to reach ~\$160 billion by FY18

## Logistics Market: Revenue Growth and Forecasts

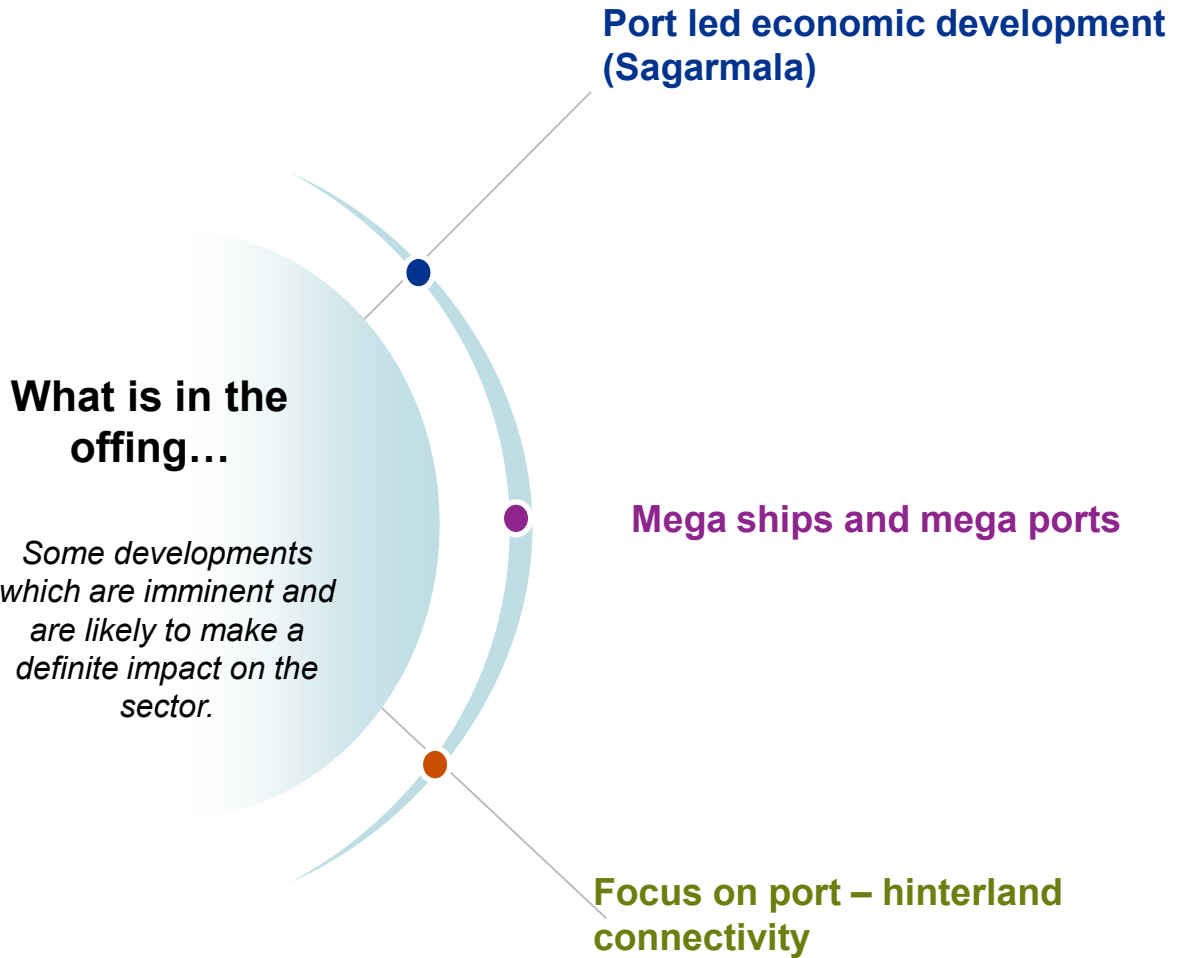


Source: KPMG in India analysis, Frost and Sullivan

## Logistics Revenue and its Components



Source: : KPMG Analysis



# Theme 1 – Port led economic development

Trend	Why will this happen?	How will this impact logistics?	What are the business opportunities?
<b>Port based industrial development</b>	<ul style="list-style-type: none"> <li>• Focus on ‘Make in India’</li> <li>• Focus on EXIM based industries</li> </ul>	<ul style="list-style-type: none"> <li>• Increased volumes of EXIM trade; largely containerized traffic</li> <li>• Higher service levels through evolved port ecosystem and infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Development of Multiple maritime economic, trade and urban centers/ clusters</li> <li>• Infrastructure development for <b><i>FTWZs, SEZ, industrial parks, logistics parks, CFS, ICDs, PFTs, etc.</i></b></li> </ul>
<b>Ports of global scale and standards</b>	<ul style="list-style-type: none"> <li>• Improved port utilization</li> <li>• Reduced congestion</li> <li>• Improved mechanization and material handling</li> </ul>	<ul style="list-style-type: none"> <li>• ~20% reduction in operational efficiencies of gateway ports</li> <li>• Significant TAT improvement</li> <li>• Improved storage facilities minimizing losses</li> </ul>	<ul style="list-style-type: none"> <li>• Building World Class ports with all encompassing modern, mechanized facilities with deep drafts</li> <li>• <i>Building dedicated vessels, channels and facilities for coastal/inland shipping</i></li> </ul>
<b>Technology adoption to logistics</b>	<ul style="list-style-type: none"> <li>• Improved mechanization</li> <li>• Real-time tracking and trend assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement in efficiency and reduction in turn around time</li> <li>• Green initiative</li> <li>• Effective data management and sharing</li> </ul>	<ul style="list-style-type: none"> <li>• <b><i>Collaborate to adopt technology solutions</i></b> like RFID, electrification of equipment, improve TAT</li> <li>• <b><i>Solutions development for port community</i></b></li> </ul>

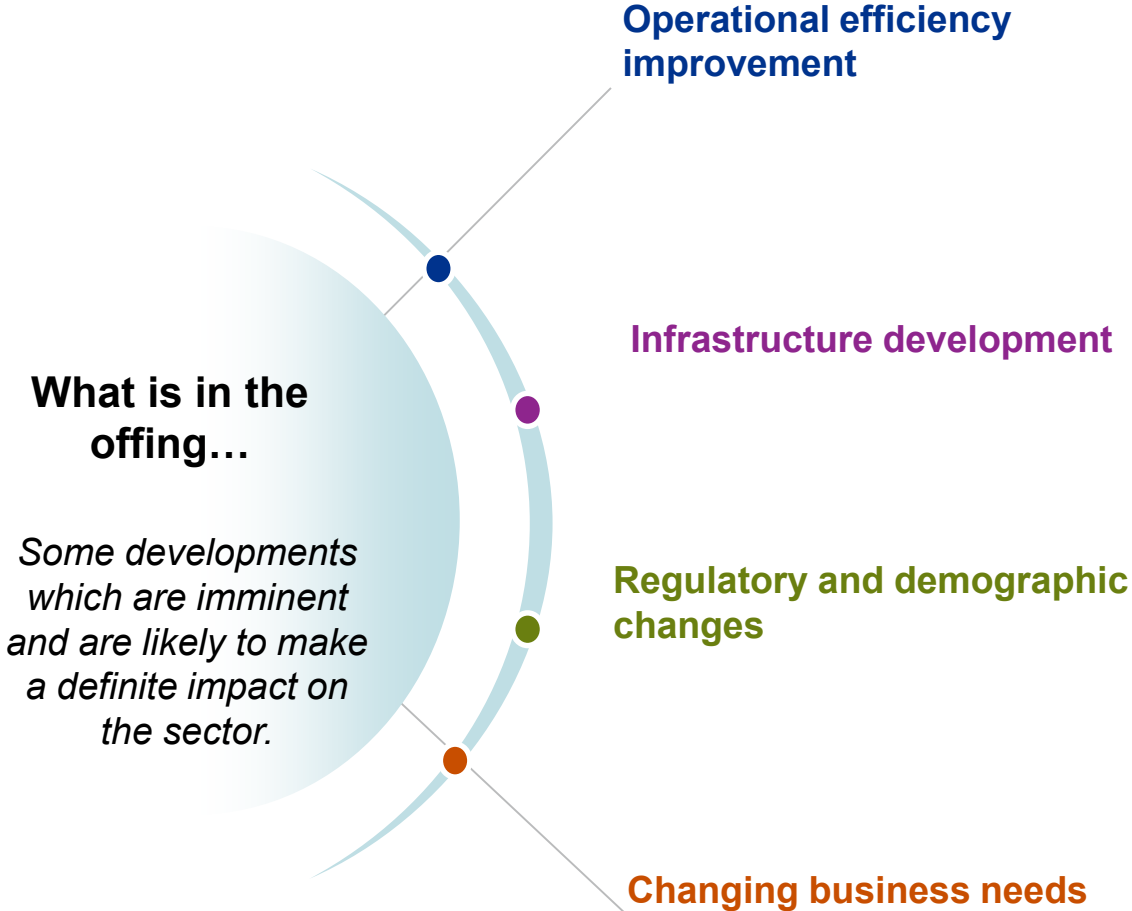
## Theme 2 – Mega ships and mega ports

Trend	Why will this happen?	How will this impact logistics?	What are the business opportunities?
<b>Modernization of existing ports</b>	<ul style="list-style-type: none"><li>• Hub and feeder port concept</li><li>• Increasing vessel sizes especially for containers, LNG, and bulk (coal)</li></ul>	<ul style="list-style-type: none"><li>• Increased efficiencies due to scale</li><li>• Better frequency of mainline vessels</li><li>• Reduction of feeding cost for containers</li></ul>	<ul style="list-style-type: none"><li>• Development of 3-4 modern world scale Mega ports of 200 Mtpa capacity</li><li>• Develop Trans-shipment terminal to handle Asia-Pacific Regional traffic to emerge as Regional Container Hub</li></ul>
<b>Development of riverine and coastal ports</b>	<ul style="list-style-type: none"><li>• Smaller ports with deeper access to hinterland</li><li>• Distributed capex</li><li>• Water being a cheaper mode of transport</li></ul>	<ul style="list-style-type: none"><li>• Reduce congestion on road network</li><li>• Efficient multi-modal connectivity to reduce transportation cost</li></ul>	<ul style="list-style-type: none"><li>• Dedicated backward linkages with existing and planned Transport / Infra projects</li><li>• <i>Structured urbanization of coast/rivers and development of riverine/ coastal communities</i></li><li>• <i>Shipbuilding and repair industry</i></li></ul>

## Theme 3 – Focus on hinterland connectivity

Trend	Why will this happen?	How will this impact logistics?	What are the business opportunities?
<b>Last mile connectivity</b>	<ul style="list-style-type: none"><li>• Need for effective and large scale evacuation</li><li>• Congestion on road and rail network</li></ul>	<ul style="list-style-type: none"><li>• Improved infrastructure thereby increased efficiency</li><li>• Reduced logistics cost</li><li>• Logistics to act as an enabler for traffic growth</li></ul>	<ul style="list-style-type: none"><li>• Direct Port to plant transfers e.g. conveyors and pipelines</li><li>• Provide dedicated roads/ lanes for domestic cargo movement from port to nearby clusters</li><li>• Dedicated freight corridors</li></ul>
<b>Development of large scale storage and processing infrastructure</b>	<ul style="list-style-type: none"><li>• Focused industrialization and economic activities requiring land parcels with good connectivity</li></ul>	<ul style="list-style-type: none"><li>• Large scale warehousing with high technology adoption</li><li>• Minimise losses and increase efficiency</li><li>• Reduce congestion on road network</li></ul>	<ul style="list-style-type: none"><li>• Infrastructure development for <b><i>FTWZs, SEZ, industrial parks, logistics parks, and warehousing clusters</i></b></li></ul>

# We see certain themes that have a potential to transform the domestic logistics space



# Theme 1 - Operational efficiency improvement

Trend	Why will this happen?	How will this impact logistics?	What are the business opportunities?
<b>Fleet Consolidation</b>	<ul style="list-style-type: none"><li>• Focus on cost efficiency</li><li>• Development of freight corridors and logistics parks</li><li>• Vehicles meeting global standards</li></ul>	<ul style="list-style-type: none"><li>• Lower total transportation cost</li><li>• Higher service levels</li></ul>	<ul style="list-style-type: none"><li>• <b>Consolidate operations</b> to capture scale and efficiency advantages</li></ul>
<b>Cargo standardization &amp; warehouse mechanization</b>	<ul style="list-style-type: none"><li>• Improve service levels and minimizing losses</li><li>• Unavailability of labor</li><li>• Risk from customized assets</li></ul>	<ul style="list-style-type: none"><li>• ~20% reduction in operating cost of modern warehouses</li><li>• TAT improvement</li><li>• Reduction in in-transit damages</li></ul>	<ul style="list-style-type: none"><li>• Increasing <b>use of advanced technologies</b> like FIBC, for bulk transport, <i>especially in B2B setups</i></li><li>• Increased outsourcing to 3PL and <b>specialized w/h service providers</b> (hub &amp; spoke)</li></ul>
<b>Technology adoption to logistics</b>	<ul style="list-style-type: none"><li>• Manage customer expectations</li><li>• Reducing cost of mobile technology</li><li>• Real-time tracking and trend assessment</li></ul>	<ul style="list-style-type: none"><li>• Use of 'big data' to optimize logistics movements</li><li>• Improvement in efficiency and reduction in transit time / losses</li></ul>	<ul style="list-style-type: none"><li>• <b>Collaborate to adopt technology solutions</b> like RFID, GPS tracking to reduce losses, improve TAT</li><li>• <b>Solutions development for logistics industry</b></li></ul>

## Theme 2 – Infrastructure development

Trend	Why will this happen?	How will this impact logistics?	What are the business opportunities?
<b>Development of National Highways</b>	<ul style="list-style-type: none"><li>• Congested road network (top 7 highways carry 50% freight)</li><li>• Poor infrastructure impeding growth</li></ul>	<ul style="list-style-type: none"><li>• Efficiency improvement (reliability, speed, larger truck sizes)</li><li>• Consolidation hubs and development of hub-spoke models along major highways</li></ul>	<ul style="list-style-type: none"><li>• <b>Re-evaluate network</b> to benefit from lower cost &amp; efficient options</li><li>• <b>Development of warehousing</b> infrastructure along highways</li><li>• <b>Shift towards logistics outsourcing</b> and <b>emergence of 3PL/4PL</b> players</li></ul>
<b>Development of dedicated freight corridors</b>	<ul style="list-style-type: none"><li>• Under investment in rail infrastructure</li><li>• Lesser capital investment required than road capacity</li><li>• Congested road network</li></ul>	<ul style="list-style-type: none"><li>• Shift towards rail in modal mix</li><li>• Efficiency improvement (load factor, decongestion at ports/rail/road, faster turnaround)</li></ul>	<ul style="list-style-type: none"><li>• Re-evaluate modal mix and network to benefit from improve efficiency</li><li>• <b>Shift towards logistics outsourcing</b> and <b>emergence of 3PL/4PL</b> players</li></ul>
<b>Development of Warehousing Zones</b>	<ul style="list-style-type: none"><li>• Increase in EXIM trade</li><li>• Increased demand for modern warehouses</li><li>• High wastage in perishables</li></ul>	<ul style="list-style-type: none"><li>• Enhanced quality of warehousing and service levels</li><li>• Adoption of technology leading to better inventory tracking</li><li>• Faster Turnaround with EXIM focus</li></ul>	<ul style="list-style-type: none"><li>• Increased outsourcing to 3PL</li><li>• Increased opportunity for value addition activities</li><li>• Increase in shared warehousing</li></ul>



## Theme 3 – Regulatory and demographic changes

Trend	Why will this happen?	How will this impact logistics?	What are the business opportunities?
<b>GST roll-out and implementation</b>	<ul style="list-style-type: none"><li>• Complex tax system leading to revenue leakage</li><li>• Inefficient distribution systems</li></ul>	<ul style="list-style-type: none"><li>• 15-20% logistics cost reduction</li><li>• Networks optimized</li><li>• Consolidation of warehousing locations</li><li>• Lower system inventory</li><li>• Improved service levels</li></ul>	<ul style="list-style-type: none"><li>• <b>Re-design outbound distribution network</b> &amp; identify strategic locations</li><li>• <b>Shift towards logistics outsourcing</b> and <b>emergence of 3PL/4PL</b> players</li></ul>
<b>Increasing urbanization and creation of megacities</b>	<ul style="list-style-type: none"><li>• Manufacturing and services-led economy</li><li>• Migration toward urban areas with &gt;60 % urban population concentrated in ~25-30 urban clusters by 2030</li></ul>	<ul style="list-style-type: none"><li>• Development of logistics parks consolidation centres, 'dedicated freight corridors (DFCs)' etc.</li><li>• Innovation for last mile connectivity</li><li>• Wastage/loss reduction</li></ul>	<ul style="list-style-type: none"><li>• <b>Focused industrial development</b></li><li>• <b>Development of logistics hubs</b> with modern facilities and multi-modal connectivity</li><li>• <b>Growth of 3PL / 4PL business</b></li></ul>

## Theme 4 – Innovative logistics models to cater to evolving business models

Trend	Why will this happen?	How will this impact logistics?	What are the business opportunities?
<b>Postponement of manufacturing operations</b>	<ul style="list-style-type: none"> <li>• Need for flexibility in operations</li> <li>• Minimize non-optimal product movements</li> </ul>	<ul style="list-style-type: none"> <li>• Ability to manage demand-supply imbalances</li> <li>• Reduction in logistics cost</li> <li>• Lower system inventory</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Re-evaluate manufacturing strategy</b> and footprint,</li> <li>• Focus on <b>last mile connectivity services</b> for finished products</li> </ul>
<b>Penetration of organized retail</b>	<ul style="list-style-type: none"> <li>• Urbanization and changing demographics</li> <li>• FDI in Multi Brand Retail</li> <li>• Innovation in retail (including e-commerce)</li> </ul>	<ul style="list-style-type: none"> <li>• 8-10% reduction in logistics cost</li> <li>• Direct procurement</li> <li>• Central &amp; modern warehousing</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Emergence of warehousing hubs &amp; 3<sup>rd</sup> party specialized w/h service providers</b></li> <li>• Focus on <b>last mile connectivity services</b></li> <li>• Growth in <b>cold chain supply chain</b></li> </ul>
<b>Focus on reverse logistics</b>	<ul style="list-style-type: none"> <li>• Focus on managing returns &amp; after sales</li> </ul>	<ul style="list-style-type: none"> <li>• Development of supply chains to maximize value from returns (recycling of waste, re-sell)</li> <li>• Reduction in economic loss from minor damages / obsolescence</li> </ul>	<ul style="list-style-type: none"> <li>• Emergence of companies operating reverse logistics supply chains – managing returns, waste management</li> </ul>
<b>Industry verticalization</b>	<ul style="list-style-type: none"> <li>• Focus on quality control and minimizing losses in FMCG, foods, retail, dairy etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Specialization in freight service providers</li> <li>• Reduction in costs and improves efficiencies</li> </ul>	<ul style="list-style-type: none"> <li>• Development of <b>third party logistic service providers specializing</b> (capabilities and assets) <b>in industry verticals</b> (e.g. cold chain, project logistics)</li> </ul>

**Thank You!!**

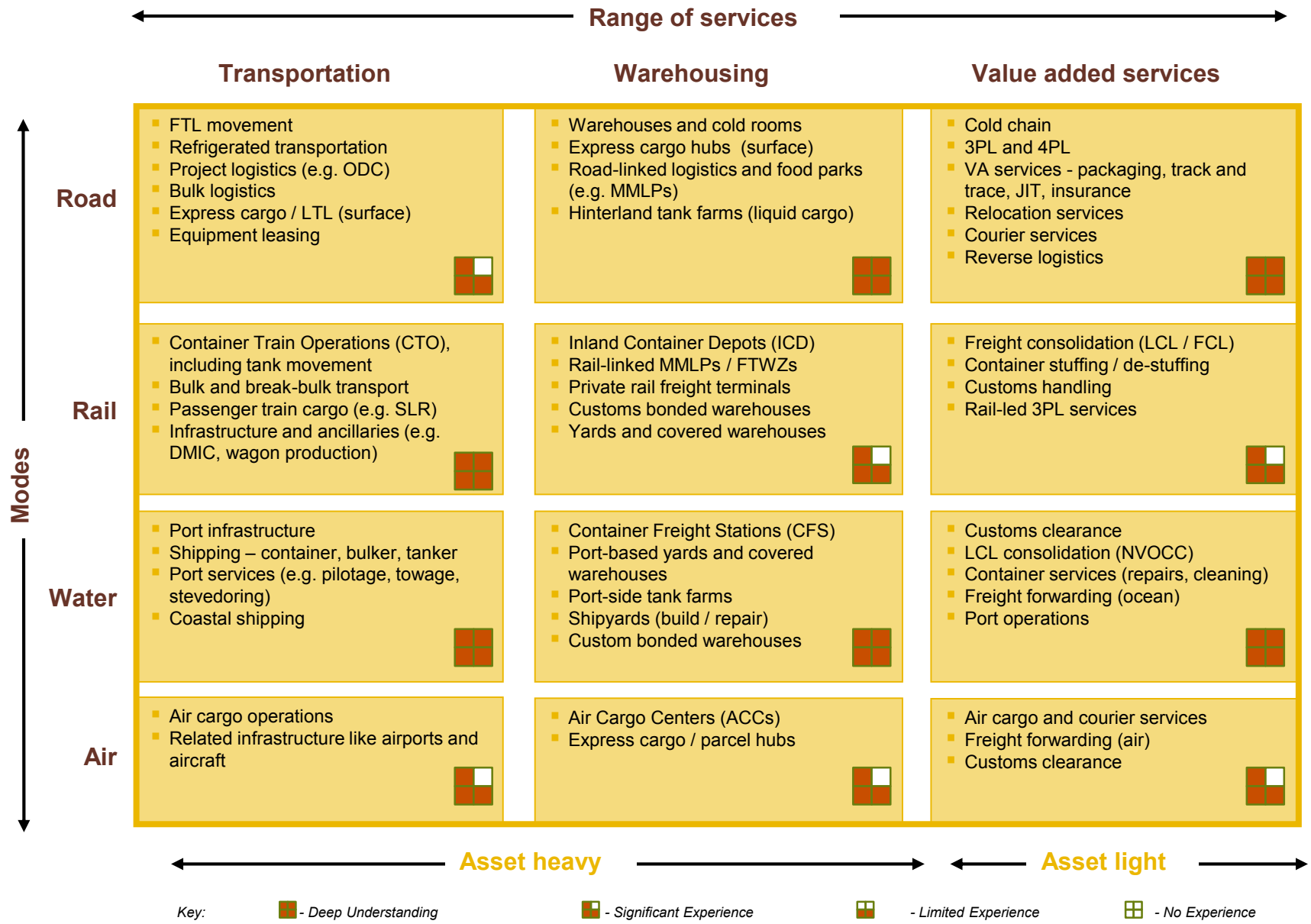
The image is a composite background. The left side shows an aerial view of a dense city with many skyscrapers under a clear blue sky. The right side shows the interior of a modern office building, featuring large glass windows and a balcony. Two people are silhouetted against the bright light coming from the windows, looking out at the city. The overall color palette is dominated by blues and greys.

# About KPMG

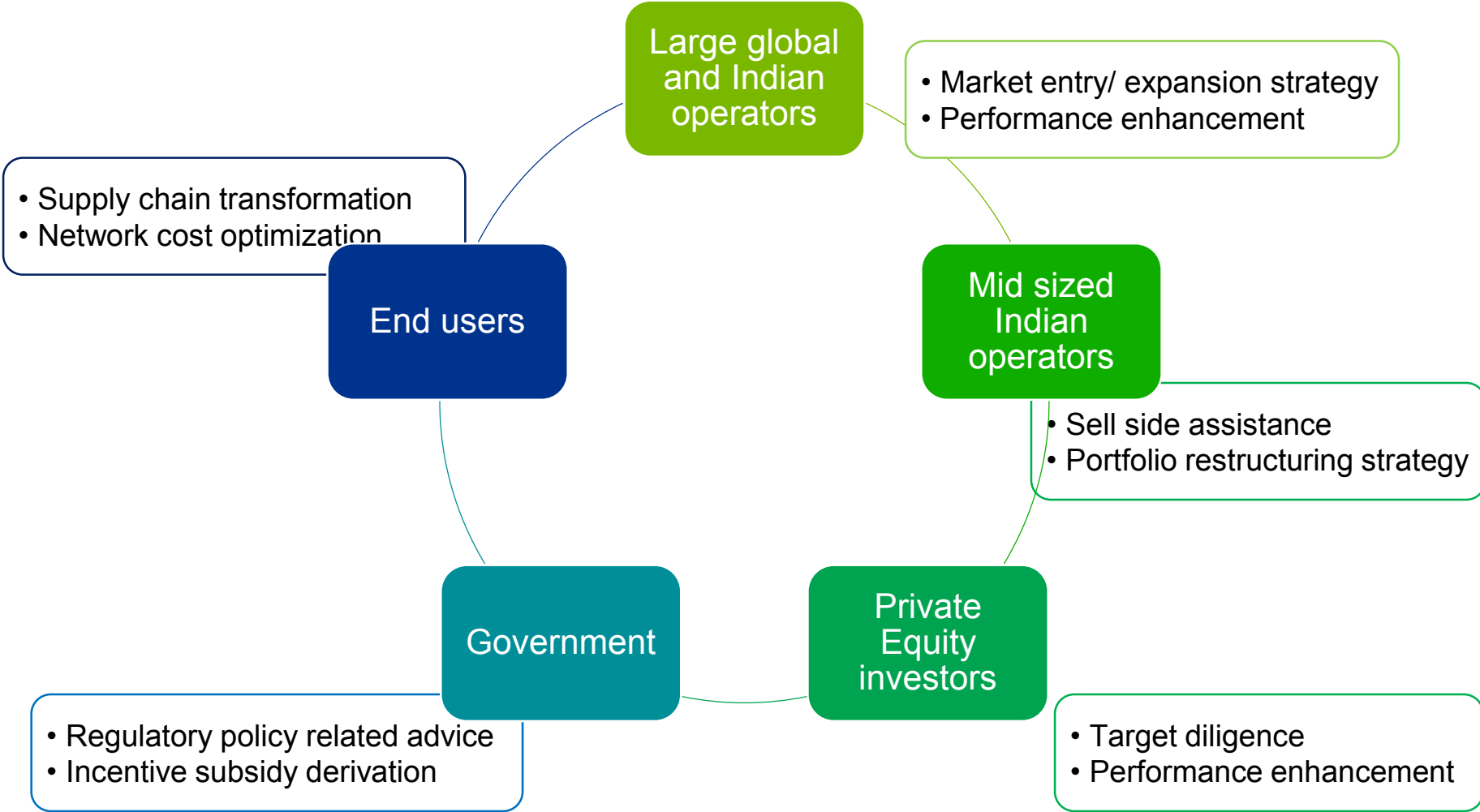
# We believe KPMG offers a unique proposition in the Transport & Logistics domain



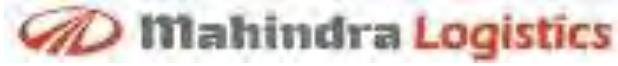
# KPMG has strong credentials and experience - 100+ assignments across logistics sub-segments in India



We have a 360 degree perspective of the Indian logistics sector and serve five distinct client communities



# KPMG has helped variety of clients to develop their growth and entry strategy in logistics and transport





# Our Experience Summary in Logistics and Transport

## Policy Advocacy

- Multiple projects with Govt. of India to advise them on policy matters such as ports, chemical and fertilizers, public sector, cybercrime, fiscal sustainability
- KPMG has partnered with leading industry bodies such as CII and FICCI to publish white papers on the logistics industry (e.g. Skill Gaps in the Indian Logistics Sector, Competitiveness Through Efficient Logistics, Adding Wheels, Logistics in India)



Goods and Services Tax  
Read, Steady, Go ?



Adding Wheels  
Investing in the  
Indian Transport and  
Logistics Industry



Logistics Game  
Changers  
Transforming India's  
Logistics Industry

## COE – Supply Chain BrainNet

- Eight to nine subject matter experts present globally
- Over 400 dedicated value chain consultants globally
- KPMG has track record of more than 3,000 successful supply chain projects



Conference on  
**Ports & Logistics**



15<sup>th</sup> - 17<sup>th</sup> February 2013, New Delhi



INDIA SUPPLY CHAIN  
COST OPTIMISATION  
Mumbai, April 21, 2011



CII – FICCI Awards for  
Excellence in  
Transport & Logistics

## Benchmarking Database

- Databases on road transports and cost benchmarks for Indian scenario
- Database on port related costs and efficiency parameters for port equipments



INDIA  
MARITIME  
WEEK  
2012



India  
after  
GST

## Transportation and Logistics as focused industry

- Worked on various areas such infrastructure advisory services, vendor selection and transition, planning for sourcing of imported material, end to end coal strategy, development of transportation cost benchmarking model



23 - 25 February 2012  
Bombay Exhibition Centre, Mumbai



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