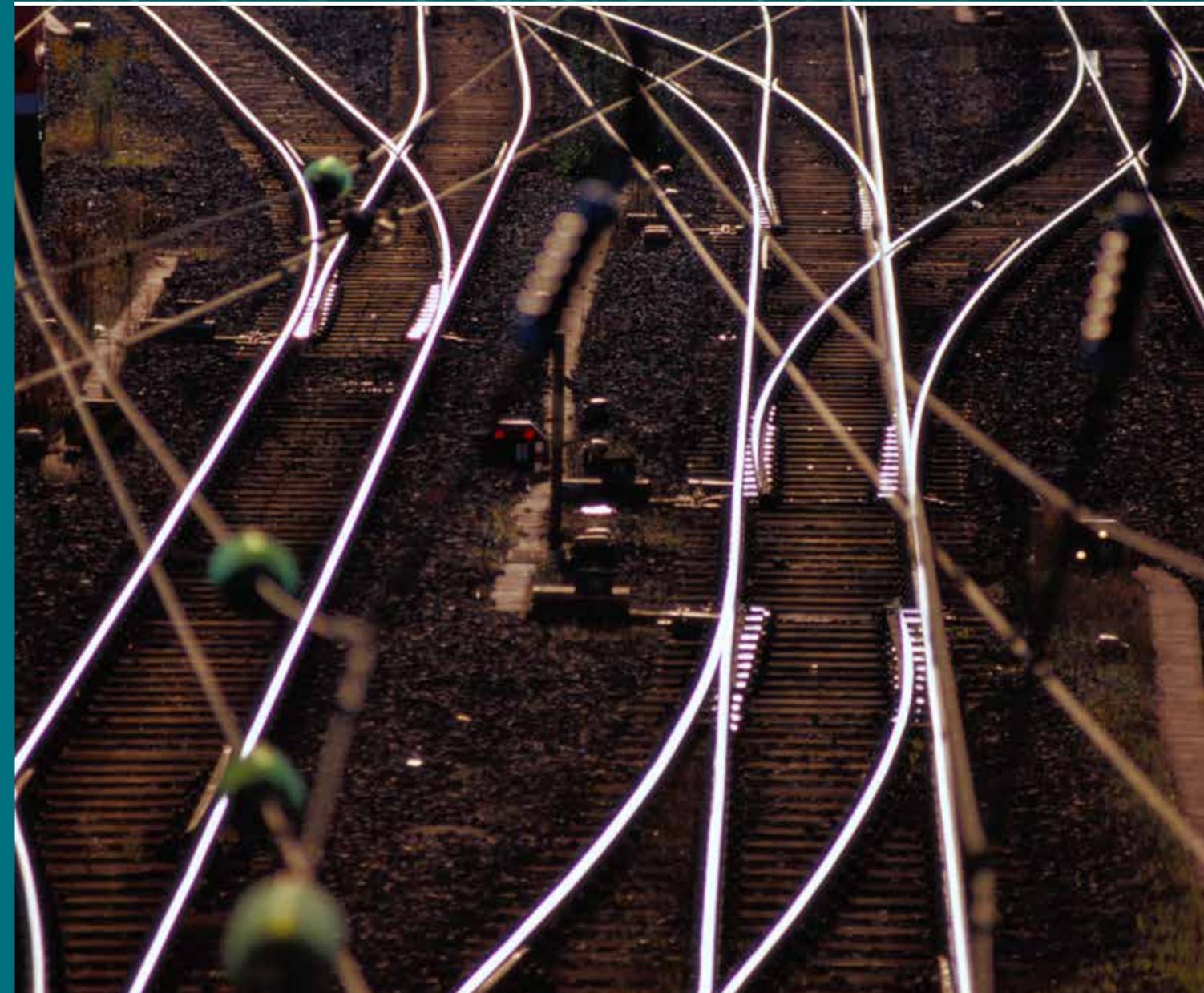




Confederation of Indian Industry
Institute of Logistics

Recommendations: Cargo Summit- Integrating the Country's Transport Networks

12-13 March 2014, Mumbai



Attended by:

AMTOI | ACCAI | CAI | EICI

Foreword

The Indian transportation and logistics industry is poised at a crossroads along its growth trajectory. This is particularly important at this juncture in light of the ongoing global economic uncertainty that has been impacting the Indian market to an extent. However, driven by strong fundamentals and consistent demand, the resilient Indian economy in general and the logistics sector in particular are seemingly well-positioned to sail through turbulent global waters. Rising investment, rapidly evolving regulatory policies, mega infrastructure projects and several other developments in recent times

have driven the Indian logistics market, simultaneously gradually overcoming infrastructure-related constraints and logistics-centric inefficiency. While traversing this road to development, multiple projects and services have been either at the planning or implementation stage. Such developments have spanned across all modes of transportation and logistics services and have involved active participation of all stakeholders, ranging from logistics service providers and policy makers to end users and industry think tanks. To analyze such path breaking ideas is the objective of this recommendation report.



Recommendations

At a time when awareness on specific initiatives is widely recognized, the objective has been to capture distinct aspects that could potentially revolutionize each segment. That said, the collective evolution of India's logistics industry can only be realized through uniform progress across segments. For India's logistics sector to fulfill its role in supporting the country's rise as a complex, multi-layer and mature economy in future decades, the following recommendations should be considered to develop a universal roadmap for the industry:

- Improve physical infrastructure and transportation capacity-related constraints by enhancing terminal and route infrastructure for various modes of transport.

Some of the initiatives include:

- Developing dedicated freight corridors and improving rolling stock quality and quantity to enhance rail transportation usage
- Establishing multi-modal logistics parks and free-trade warehousing zones through private sector participation
- Developing new air cargo hubs near major airports for proper handling of perishable and fragile commodities
- Faster implementation of marquee road projects similar to Golden Quadrilateral and enhance usage of high tonnage trailers (more than 20 feet size trucks) on roads

- Policy-related measures taken by the government that could incentivize private participation in segments. Some of the initiatives include:
 - Provision of tax incentives and sops to enhance the usage of coastal shipping and inland waterways transportation
 - Governance of IWT under a single body (e.g., IWAI must be centralized. Governance is currently under multiple authorities such as the CIWTC, port authorities and state governments)
 - Implementation of GST

- Channel the movement of commodities to suitable modes of transportation. Divert the transportation of bulk commodities from road to increasingly appropriate modes such as rail and waterways, thereby releasing capacity for consumer goods and also reducing the risk of accidents.
- Designing the mesh of cargo networks in such a manner that the intersections of various modes of transport are near the production centers of bulk, industrial, consumer goods and farm produce.
- Harmonize and streamline processes across government bodies that have a role to play in the logistics sector, thereby reducing stoppages and touch points of cargo movements as well as increasing the speed with which goods are transported within, into and out of the country.

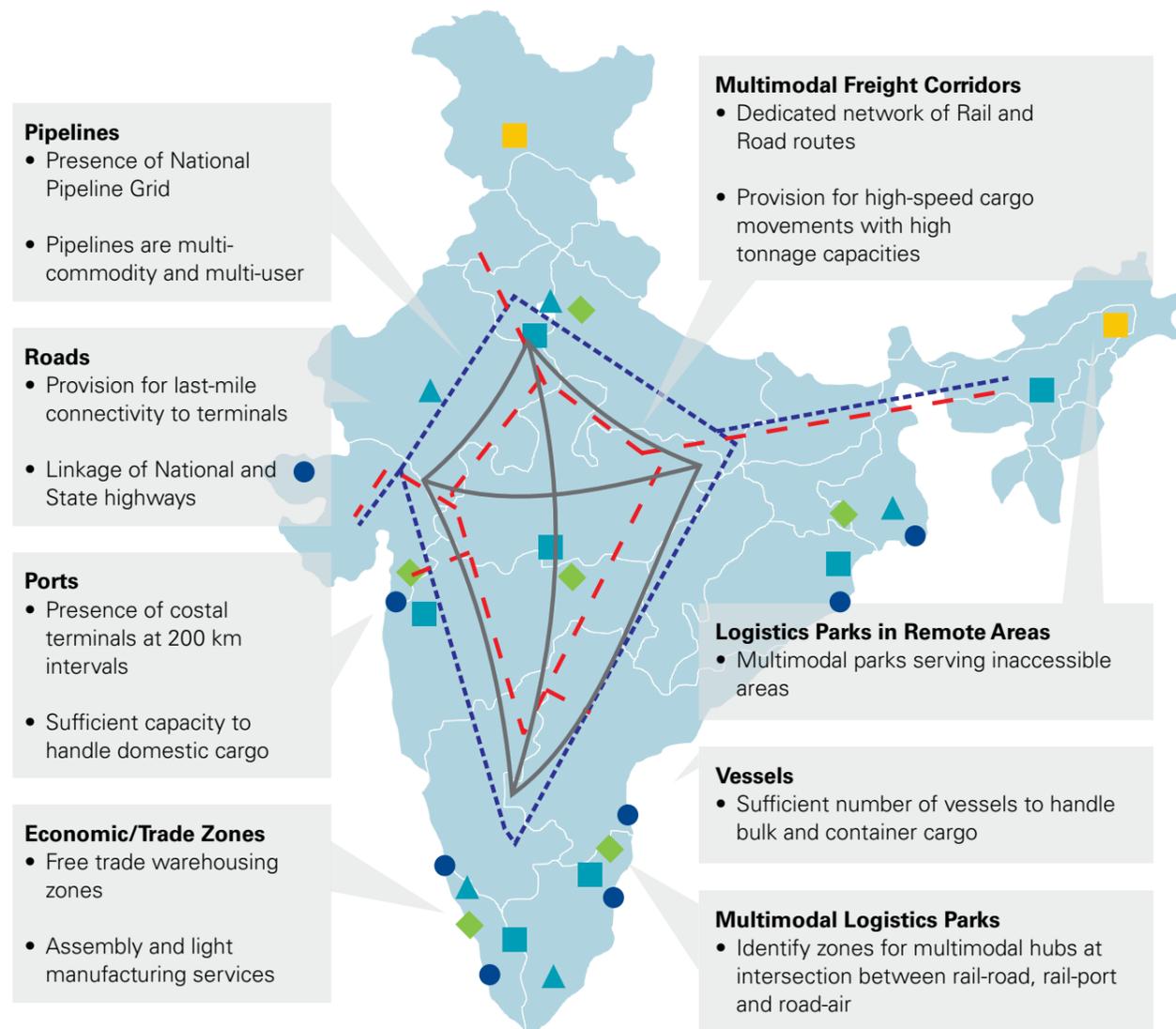
- Set benchmarks and standards for the industry, thereby driving the uniformity of warehouses, storage and transportation equipment.
- Decongest airports and seaports, shifting cargo-clearance activities away from expensive real estate to inland or port or airport locations.
- Establish safety, health and environment (SHE)-related standards centrally to facilitate uniformity across industry sub sectors and companies while increasing safety and limiting the adverse environmental effects of the sector on society.

- Address skill development
 - Creation of a robust institutional framework for creating logistics manpower
 - Creation of incentives for development of skills for logistics employees
 - Undertaking of initiatives to uplift the image of the industry
 - Acceleration of the drivers of consolidation, integration and organization in the industry
- Setting up of an inter-ministerial committee to facilitate constructive and synergistic dialogue between key industry stakeholders to set the foundation for a clear, long term and sustainable vision that is all-encompassing and can serve potential future requirements to ensure enhanced integration among various modes of transportation.



Action required #1: Desired "to be" state of logistics infrastructure in India

The desired state would be an overlay of transportation networks, allowing efficient transportation of each commodity type as well as a natural handover point — where networks intersect and large quantities are broken down into smaller volumes for last-mile transportation into urban centers.

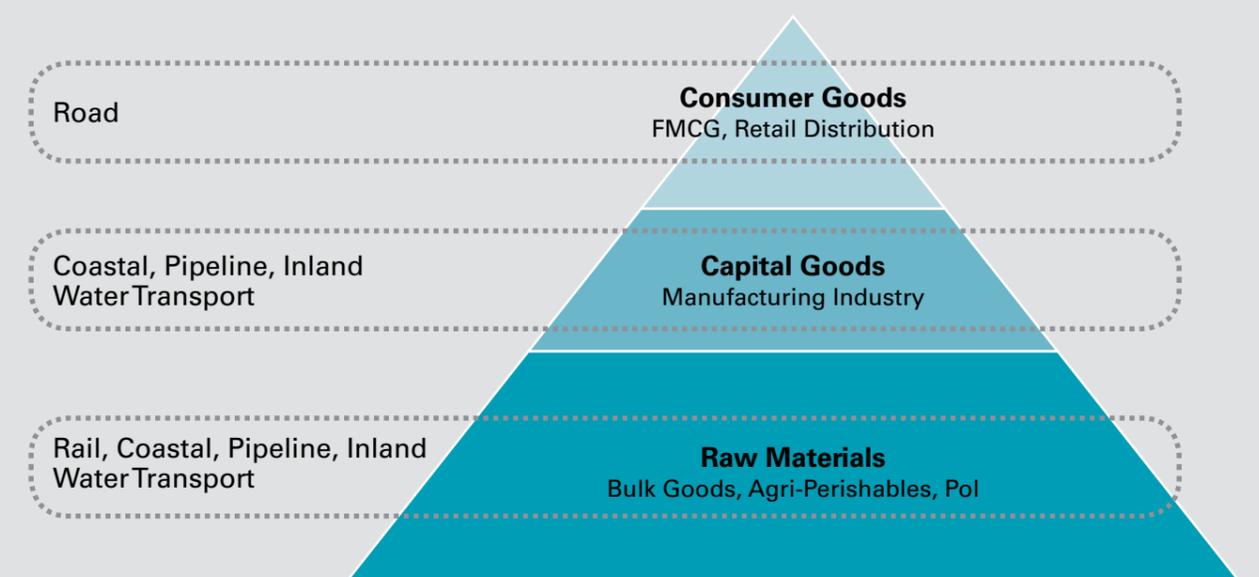


Source: KPMG in India analysis

Map is only for representation purpose only.

Action required #2: Shift to optimal modes of transport by cargo class/volume

In terms of volumes involved, cargo in India can be classified in a pyramid-like fashion with each category entailing distinct logistical considerations:



Source: KPMG in India analysis

The need of the hour is to select best possible modes to reduce congestion and facilitate smooth cargo movement through multi-modal transport. It is important to achieve optimal movement of freight by matching cargo categories with transportation modes for expanding volumes across categories. Following are some benefits of an improved multi-modal transportation system with planned overlaps among networks:¹

- Optimal utilization of logistics infrastructure has the potential of reducing India's transport fuel requirement by 15–20 percent and decreasing logistics expenditure by 0.5–2 percent of GDP.
- The current utilization of the railways for cargo movement is about 30 percent. However, there is scope to increase it to 60 percent and reduce congestion in road networks.
- The share of pipelines toward POL transportation is 55 percent – less than the international benchmarks of 80 percent.
- Despite a long coastline and inland waterways, the combined share of coastal shipping and inland water transportation in India is only 8 percent of the total cargo transported in the country. This can be increased to 15 percent by 2016, which may decongest other modes of transport and reduce the cost of goods movement.

¹Integrated Logistics Strategy, National Transport Development Policy

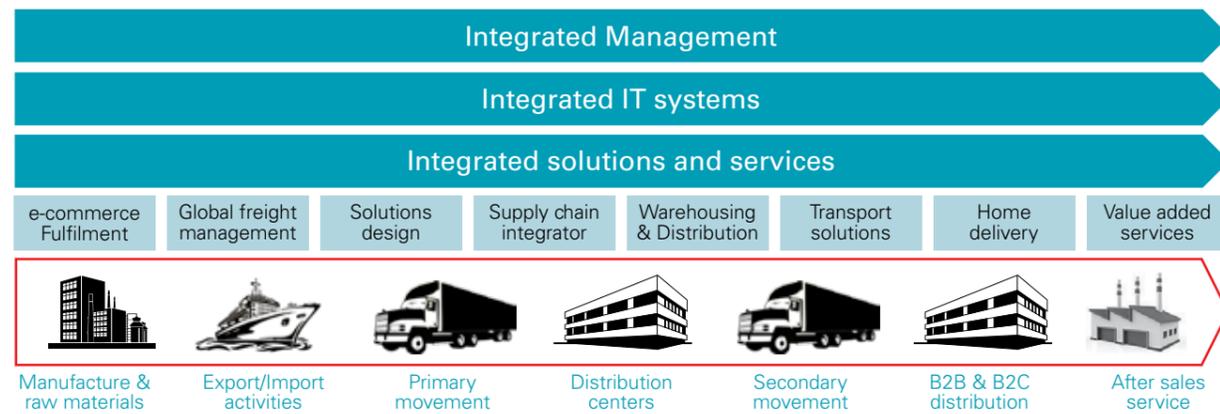
Action required #3: End-to-end logistics integration

The Indian transport and logistics industry is undergoing a transformation, which is in line with the developments in the rest of the world. Increasing

thrust on containerization, regularly upgrading technologies in production and distribution processes and globalization are boosting demand from logistics

and transportation services users for 'integrated transport solutions' in preference to stand-alone 'transportation' and 'distribution' services.

Figure: 3PL logistics integration model



Source: Report of Working Group on Logistics, Planning Commission

This is evident from the supply side where the focus is rapidly shifting toward providing '3PL Solutions' as a strategic initiative.

Currently, as demonstrated by the three bands in the above figure — integrated management, integrated IT systems and integrated solutions

and services — a single service provider has the potential of integrating the management of the end-to-end movement.



Action required #4: Development of integrated logistics hubs

A logistics hub is envisaged as a mega logistics park where all activities pertaining to this field — for national as well as international transit — can be conducted commercially by independent operators. These operators may be either owners or tenants of buildings or facilities (warehouses, distribution centres, storage areas, offices, truck services and railway container operators) located in the hub. This hub should be freely accessible to all companies and equipped with the public facilities

important for these operations. To facilitate intermodal transport for goods handling, a variety of modes of transport – roads, rail, sea, air or inland waterways – should serve a logistics hub. It should also offer a single-window facility to all customers, irrespective of whether they are related to export-import or domestic trading. Moreover, the design of these hubs should be guided by international best practices.

The Working Group recommends that while CFSs, ICDs, warehouses and logistics parks are being developed at various places in the country by private and public sector undertakings, it is important to take initiatives to establish 15–20 mega logistics parks as logistics hubs in a planned manner. These hubs should be located at major transportation hubs, including the origin and destination points of the proposed DFCs, or near consumption centres or industrial complexes.

The following map provides a list of potential locations where such hubs can be established:



Sector-wise recommendations

Air

- Development of air freight stations (AFS): Permitting the transfer of cargo to designate/customs-notified freight stations — AFS or ICDs — could help reduce congestion at airport premises. AFS, although notified by the Ministry of Finance, have yet to become operational. The barriers preventing the establishment of AFS should be removed, and the Customs should be directed to issue concerned regulatory clearances.
- Development of air cargo villages: Co-location of shippers, forwarders, agents, express operators, carriers and customs in integrated air cargo villages that have specialized facilities is required to facilitate effective handling of cargo such as agro-perishables and pharmaceuticals. Delhi in north; Navi Mumbai, Nagpur and Pune in west and Bangalore and Hyderabad in south are ideal locations for air cargo hubs due to strong inter-modal linkages.
- Establishment of an Air Cargo Promotion Board (ACPB): The establishment of an ACPB, comprising members from the finance, commerce, industry and civil aviation industries, can facilitate organized growth in this sector by driving policies and the planned development of air cargo hubs in the country. Some of the initiatives it can lead are the introduction of a cargo village concept at all hub airports, the development of an air cargo vision 2020 and a time-bound roadmap, the development of air cargo hub airports in India, and the formulation of quality of service (QoS) parameters for all stakeholders.
- Expansion of freighter fleet: There is an urgent need for policy support and robust infrastructure to drive efficiency in freighter operations in the country. In this context, a consistent policy for the allotment of dedicated facilities at any of the airports for dedicated freighter aircraft should be developed. Further, dedicated terminal space and facilities for express airlines should be provided to streamline operations. Restrictions on night operations and high lease rentals also need to be relaxed from a profitability standpoint.

- Information sharing via a cargo community system: Inter-linkages and circular flow between airlines, airport operations and air freight stations, customs, banks, custom house agents (CHAs), and other allied agencies should be established to reduce unproductive delays.
- Execution of 24X7 customs operations in phases: Customs authorities should consider the immediate introduction of round-the-clock operations that will expedite clearances, which include the processing of documents, assessments, and the examination and release of cargo. This model can be implemented initially at airports in the metros and gradually introduced in other cities.
- Professional training programs for air cargo: The GoI may consider establishing a superior cargo training institute in collaboration with the industry. The institute could offer courses encompassing policy, regulations, finance, operations, technology and human resource development, to name a few.

| Airport | Cargo handled (MMT), in 2010 | Custom operating hours |
|-----------------------|------------------------------|------------------------|
| Delhi | 0.6 | 1 shift |
| Mumbai | 0.7 | 1 shift |
| Hong Kong | 4.6 | 24x7 |
| Dubai | 3.0 | 24x7 |
| Incheon | 2.7 | 24x7 |
| Shanghai Pudong | 2.6 | 24x7 |
| CDG, Paris | 2.0 | 2 shifts |
| Changi, Singapore | 1.7 | 24x7 |
| Schiphol, Amsterdam | 1.6 | 2 shifts |
| Suvarnabhumi, Bangkok | 1.3 | 24x7 |

Source: Airport's websites, Airports Authority of India, KPMG in India analysis



Ports

- Inter-sector coordination: An integrated transport approach that promotes inter-sector coordination of road, railways and shipping departments should be developed. This will facilitate rapid and efficient evacuation of cargo at ports due to seamless hinterland connectivity via road and rail.
- Development of mega ports: Ports with supportive, high-potential surroundings should be developed into mega ports that can derive the benefits of economies of scale. The GoI needs to facilitate such projects through appropriate policies, incentives and fast track measures.
- Improve capacity utilization: For ports that are potentially limited by the hinterland, the focus needs to be on operational efficiency, which can help such ports remain competitive vis-à-vis large ports and have a compelling proposition for customers. This would also enable them to remain profitable at low traffic volumes.
- Reduce focus on suboptimal ports: While multiple ports can provide customers with variety and create competition in terms of pricing and customer service, the proliferation of ports of suboptimal scale must be avoided. Projects that are unviable ultimately erode investor confidence, customer experience and the economy. Thus, coordinated coastline planning and diligent approval of projects, not only from an environmental but also a commercial/business standpoint, is the need of the hour.
- Enhancing port infrastructure: Increased emphasis on upgrading seaside and landside infrastructure to enhance draft and evacuation procedures would enable universal smoother cargo flows from larger vessels. Improved level of mechanization via upgrading material-handling equipments and enhanced proper IT infrastructure should be build to ensure electronic flow of information among various stakeholders.
- Improving efficiency at Indian ports: Significant investments for modernization and efficiency improvement are required to bring Indian ports at par with their global counterparts across key operational parameters. The following table provides a brief comparison of Indian and international ports, highlighting significant scope for improvement.
- Manpower skill enhancement: Investing in more institutes through the Indian Maritime University (IMU) that provide focused training to key personnel would help improve talent pool shortages and develop skills required in the shipping sector. Collaboration with foreign universities should be established to facilitate knowledge sharing of best practices followed globally.

| Parameters | Indian ports | International ports |
|--|----------------------------|---|
| Average number of containers handled per ship per hour | 15–23 | <ul style="list-style-type: none"> • Colombo: 25 • Singapore: 30 |
| Annual container throughput capacity | JNPT: 4.3 million TEUs | <ul style="list-style-type: none"> • Singapore: 35million TEUs • Hong Kong: 24million TEUs |
| Maximum crane productivity – per quay crane per annum | NSICT: 188,000 TEUs | <ul style="list-style-type: none"> • Hong Kong terminal: 272,700 TEUs • Hamburg: 252,200 TEUs |
| Maximum quay productivity | JNPT: 2,000 TEUs per meter | Hong Kong terminal: 3,050 TEUs per meter |

Source: KPMG in India analysis

Rail

- **Capacity creation:** In addition to the Western and Eastern DFCs, there is a need to create adequate freight-carrying capacity within the Indian rail network. The proposed creation of four additional DFCs — North-South (Delhi to Chennai) East-West (Howrah to Mumbai), Southern (Chennai to Goa), and East-Coast (Kharagpur to Vijaywada) — would meet increased freight demand and also elevate the quality of service to global standards. The Indian Railways also needs to establish and improve connectivity with ports and road networks to form an inclusive intermodal strategy for first- and last-mile connectivity.
- **Rail-side warehousing:** The need of the hour is to create warehousing facilities alongside railway lines so that direct unloading can be facilitated from wagons to warehouses. This would allow traders to avoid multiple handling costs, which are generally expensive. Our analysis indicates that rai-side terminals such as those being created by the Central Rai-side Warehouse Corporation (CRWC) — a subsidiary of Central Warehousing Corporation (CWC) — could offer a win-win proposition for all relevant stakeholders. Rai-side terminals can be expected to reduce logistics costs, which also include inventory carrying costs, transit time and holding time for the warehouses.
- **Private investments:** The PPP model should be encouraged for the development of the route network, as well as for the modernization of coaches through the transfer of technology. This will likely drive India toward the status of an export hub for modern passenger coaches and stations to provide multifarious facilities such as offices, retail, entertainment, restaurants, theaters, hotels, and health and education services. Private freight terminals should also be established for bulk and container handling.

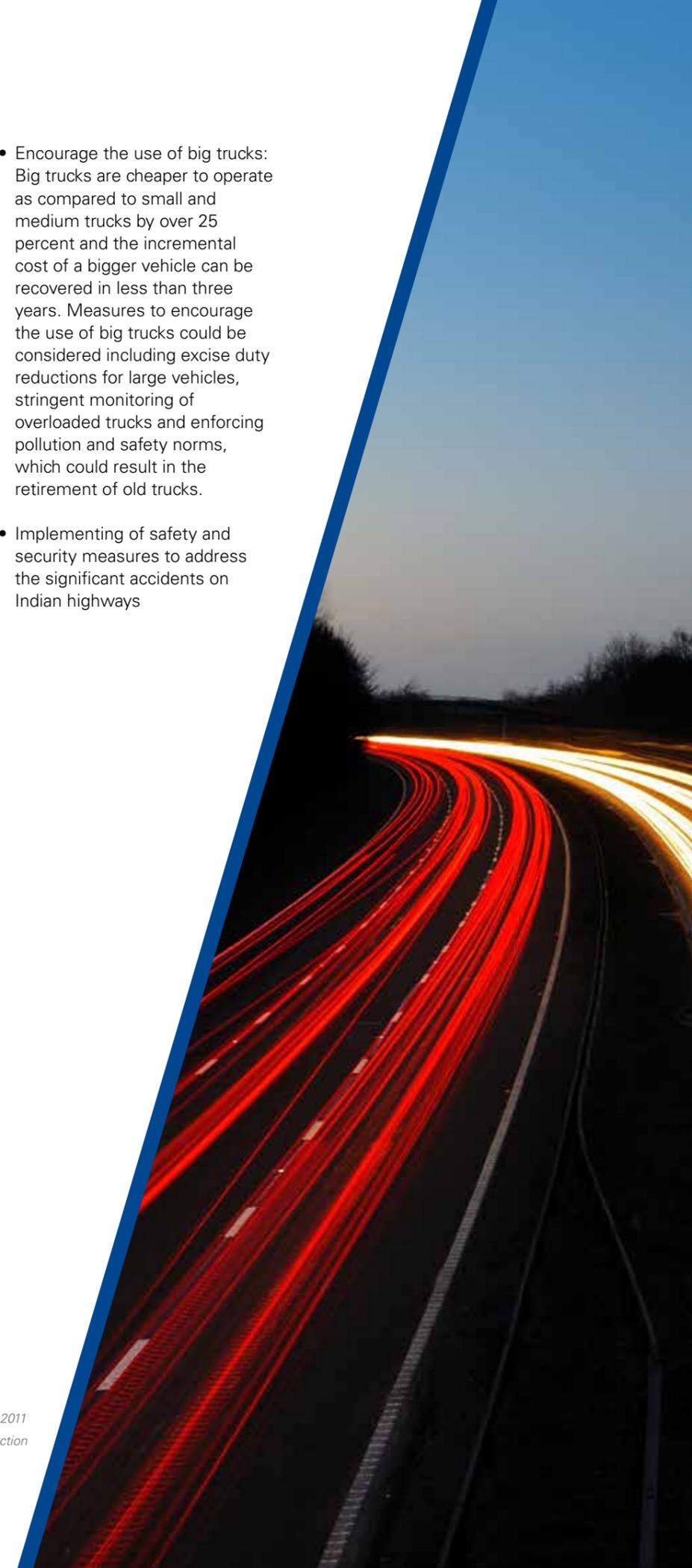


Road

- **Promotion of Fleet Exchanges:** Creation of an efficient marketplace similar to Stock Exchange or Commodity Exchange to bring together transport customers and transport vendors for the largely unorganized transport sector could revolutionize the trucking landscape. Collaboration of Fleet Exchanges with the existing Road Traffic Offices (RTO) could be a win-win with Fleet Exchanges providing an Online Real Time Technology platform while RTOs providing the on field support. Such exchanges will not only reduce the element of cost that a middleman makes but will also give visibility of loads to the vehicle owner on pan India basis. This shall help in spreading the vehicle type mix which is currently concentrated in a few pockets in India to a broader area.
- **Electronic Toll Collection (ETC):** Given that there are about 525² toll plazas across India, the smooth application of ETC would amount to estimated fuel savings worth INR10 billion³ annually. Although this may command significant investment from road developers/operators against a small contribution of about INR100 from vehicle operators, the benefits are expected to result in a win-win scenario for all stakeholders. While developers/operators shall benefit from plugging revenue leakages — which are currently estimated at INR12 billion — guaranteed savings in fuel would outweigh the initial cost of INR100. Above all, this would save significant avoidable logistics costs for the wider industry and the Indian economy.
- **Encourage the use of big trucks:** Big trucks are cheaper to operate as compared to small and medium trucks by over 25 percent and the incremental cost of a bigger vehicle can be recovered in less than three years. Measures to encourage the use of big trucks could be considered including excise duty reductions for large vehicles, stringent monitoring of overloaded trucks and enforcing pollution and safety norms, which could result in the retirement of old trucks.
- **Implementing of safety and security measures to address the significant accidents on Indian highways**

²CRISIL research press release titled 'Electronic toll collection to save Rs10 billion annually', November 23, 2011

³Cril research press release titled 'Electronic toll collection to save Rs10 billion annually', November 23, 2011



Warehousing

- Implementation of GST: The existing landscape of fragmented, unorganized small godowns will likely undergo significant reorganization with the introduction of the much-overdue uniform GST. The development of large hubs in key locations, coupled with small spoke warehouses closer to production and consumption centers, is expected to emerge following the rollout. This change in legacy tax structure is expected to be the largest driver of modern warehousing infrastructure in the nation. While several companies have initiated consolidation and rationalization of existing warehouse networks, confirmed rollout dates have yet to be declared.
- Skill development: The availability of skilled manpower — both management and operational — will likely be a constraint as the sector continues to evolve rapidly amid changing regulation and the entry of global retailers and service providers. By 2015, it is estimated that India will need approximately 30,000–35,000 warehouse managers alone. Government, policy makers and private sectors players must take cognizance of this and develop a collaborative approach to establish training infrastructure and incentives in the form of job opportunities for qualified personnel.
- Development of new storage models and networks: The emergence of advanced storage models such as multi-modal logistics parks (MMLPs), mega food parks (MFPs) and FTWZs must be aligned with the development of key infrastructure projects related

to port, highway, and rail projects — such as the GQ project, the NSEW project and the DFC project — to facilitate cohesive network development.

- IT adoption: The rapid transformation of physical infrastructure for storage would be incomplete without the adoption of supporting IT. Technology is expected to constitute the backbone of a strong and efficient modern warehouse that encourages accuracy, inventory tracking and lowered operational costs. Today, market offers multiple forms of warehouse-management systems, and service providers can select off-the-shelf solutions that best suit their level of complexity.



Water

- Infrastructure and capacity
 - Incentivize ports to develop additional small berths for domestic cargo — domestic ships currently waste 55 percent of the total voyage time due to port delays.
 - Increase vessel capacity to facilitate fewer vessel voyages and, thus, help reduce port congestion. Capital investment in coastal ships should be encouraged.
 - Maintain draft along important inland waterways.
 - The development of domestic cargo corridors for last- and first-mile connectivity with ports.
- Policy initiatives
 - Allow co-loading of domestic and EXIM cargo on coastal vessels; currently excess capacity moves on international vessels between Indian ports. While already allowed for Indian flag vessels, the decision on foreign flag vessels is awaited.
 - Policies around subsidies for capital investments in coastal shipping may be revisited, as has been done for the road, rail and airline sectors.

