Champion Services Sector Scheme: Transport & Logistics Sector

Government of Karnataka

pwc

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List of Abbreviations

AAGR	Average Annual Growth Rate
AAI	Airports Authority of India
APAC	Asia Pacific
APMC	Agricultural Produce Market Committee
B2B	Business-to-Business
B2C	Business-to-Consumer
BIAL	Bengaluru International Airport Limited
BMT	Billion Metric Tons
BT	Billion Ton
CAGR	Compound Annual Growth Rate
CEP	Courier / Express / Parcel
CFS	Container Freight Stations
CO2	Carbon di-oxide
CONCOR	Container Corporation of India
CSSS	Champion Services Sector Scheme
EIC/ EIA	Exporters Inspection Council/ Agency
EoDB	Ease of Doing Business
EU	Europe
EXIM	Exports / Imports
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GoI	Government of India
GoK	Government of Karnataka
GSDP	Gross State Domestic Product
GVA	Gross Value Added
HMRDC	Hassan Mangalore Rail Development Company Limited
IATA	International Air Transport Association
ICD	Inland Container Depots
INR	Indian Rupee
IoT	Internet of Things
IT & ITeS	Information Technology & Information Technology enabled Services
IWT	Inland Water Transport
JICA	Japan International Cooperation Agency
KAPPEC	Karnataka State Agricultural Produce Processing and Export Corporation Limited
K-TECH	Karnataka Innovation and Technology Society
KTL	Knowledge Thinktank on Logistics
LATAM	Latin America
LEADS	Logistics Ease Across Different States
LPI	Logistics Performance Index

LSP	Logistics Service Providers
MoSPI	Ministry of Statistics and Programme Implementation
MRO	Maintenance, Repair and Overhaul
MT	Million Ton
MTPA	Million Tons per Annum
NHAI	National Highway Authority of India
NMPT	New Mangalore Port Trust
OD	Origin Destination
PMU	Project Management Unit
PPP	Public Private Partnership
PQS	Plant Quarantine Station
PWD	Public Works Department
RFID	Radio-frequency identification
RMG	Ready Made Garments
SDEL	Skill Development, Entrepreneurship and Livelihood Department
T&L	Transport and Logistics
TEU	Twenty-foot Equivalent Units
TIES	Trade Infrastructure for Export Scheme
UK	United Kingdom
USD	United States Dollar
VGF	Viability Gap Funding
VTPC	Visvesvaraya Trade Promotion Centre

Preface

With the objective to make India a USD 5 trillion economy, Government of India, in year 2018 announced the Champion Services Sector Scheme (CSSS) with thrust to 12 identified sectors. Aligning with the objective, Government of Karnataka constituted a High-Power Committee for the promotion of Service activities in the State vide Govt. Order No.CI 159 SPI 2018, Bengaluru dated 05.09.2018. The 1st High Power Committee meeting under the Chief Secretary, identified Six (6) Champion Services for the the State and Sectoral expert groups were constituted with respective departments of Karnataka. Department of Commerce & Industries was nominated as the nodal department for coordinating the efforts of individual departments. Visvesvaraya Trade Promotion Centre (VTPC) under the aegis of the Department of Commerce & Industries, was identified to coordinate the formulation of the sector specific reports by engaging consultants. Price WaterHouseCoopers (PwC) was engaged as Knowledge Partners for the study and to draw up the action plan and coordinate with respective line departments for the exercise.

The following Sectoral expert groups, along with the respective nodal departments were formulated vide the G.O pertaining to the subject:

	Sectoral Expert Group	**Chairperson**	**Nodal Department**
1.	Health & Wellness Services	Additional Chief Secretary to Govt., Medical Education Department	Medical Education
2.	Education Services	Principal Secretary to Govt., Higher Education Department	Higher Education
3.	Media & Entertainment Services	Secretary to Govt., Information and Publicity	Information and Publicity Dept.
4.	Remittances & Emigration Services	Secretary to Govt., Skill Development Department	Skill development
5.	Construction & Related Engineering Services	Additional Chief Secretary to Govt., Urban Development Department, Co-chaired by Secretary to Govt., Housing Department	Urban Development Department
6.	Transport & Logistics Services	Principal Secretary to Govt., Commerce & Industries Department	Commerce & Industries Department

This Report is a culmination of the efforts in charting a sector specific Strategy/Scheme for the Transport & Logistics Sector in the State. The report has taken into consideration inputs and feedback from stakeholders in the sector space besides, the views of nodal department.

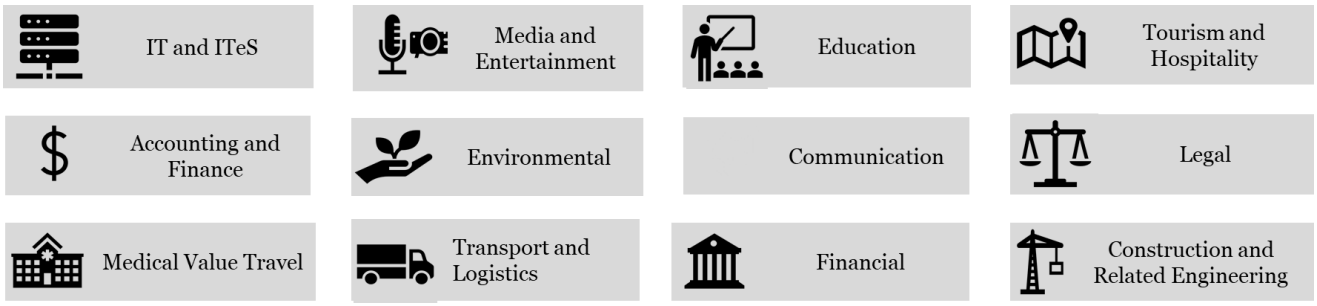
Executive Summary

Executive Summary

The Champion Services Sector Scheme (CSSS) was launched with an objective to give focussed attention to Services Sectors thereby promoting Gross Domestic Product (GDP) growth, creating more jobs and promotion of exports to global markets.

The CSSS was approved by the Government of India (GoI) in February 2018 to give a boost to various services sectors in the Country. Government of India has set a target to increase India's share in global services exports to 4.2% (from 3.3% in 2015) and increase the services sector's share in Gross Value Added (GVA) to 60% by 2022. The Government of India has identified twelve champion sectors under the Champion Services Sector Scheme as represented in **figure 1**:

Figure 1: Twelve Champion Sectors



Source: Department of Commerce, Government of India, 2018

The CSSS will focus on implementing reforms in each of these sectors based on the following 5 pillars:

1. ***New Processes***: to improve Ease of Doing Business (EoDB)
2. ***New Infrastructure***: to strengthen physical and digital connectivity
3. ***New Sector***: to identify untapped sectors for value addition
4. ***New Mindset***: to change the official mindset from issuing/approving authority to partnering in business
5. ***New Standards***: to strengthen export competitiveness of various service sectors

The CSSS program entails the implementation of a focussed action plan for each of the identified sectors to promote growth of the sectors. A dedicated fund of Rs. 5000 Crores has been approved under the CSSS for implementing the recommendations approved under the program.

The Government of Karnataka has identified six champion sectors out of the twelve identified sectors as part of the CSSS with the goal to boost the state's position in these sectors. This document pertains to the sector development strategy for the Transport & Logistics sector.

The global Transport and Logistics sector (T&L) is expected to grow at a Compound Annual Growth Rate (CAGR) of ~7.6% to reach ~USD 16 Trillion in terms of value by 2024[1]

The size of the global T&L sector is expected to reach 92 billion tons by 2024 in terms of volume with a projected CAGR of ~6% during the forecasted period (2015-24). Asia Pacific (APAC) region continues to dominate the global T&L industry with an astonishing ~50% share in total.

Indian T&L sector only accounted for USD 160 billion in 2017-18 and is expected to touch ~USD 245 billion by 2022[2]

The T&L sector in India has great potential to grow exponentially over the next 5 years. The overall freight traffic in India is forecasted to reach 11.4 MT by 2032, growing at a CAGR of~9% during the forecasted period (2018-2032). The Indian warehousing industry is growing at an Average Annual Growth Rate (AAGR) of 10-12% and the market size of INR 1,251 bn in 2018 is expected to reach INR 1,876 bn in 2022.

In India, ~14% of the GDP is spent on T&L sector compared to ~8 to 10% in other developed countries. India's performance as compared to Germany (currently ranked #1 as per World Bank's Logistics Performance Index, 2018) has been analyzed and detailed out in the following sections. Benchmarked globally, the sector shows significant weakness in areas like lead times and Quality & Regulatory processes.

Karnataka continues to be a key player nationally, with a significant contribution from the industrial sector…

Karnataka is also the leading state in terms of software & service exports ranking first in the Country in 2018-19. The share of service exports of Karnataka in the National total is around 40%.

….. resulting in Karnataka becoming the top 4 States in India in terms of merchandise exports, amounting to about INR 1.25 lakh crore in 2018-19. The contribution of industrial sector in Karnataka is nearly 25% of the state's GDP.

However, there are few logistical issues and bottlenecks which are hindering the growth of the T&L sector in Karnataka. The Logistics Ease Across Different States (LEADS) 2019 annual study released by Government of India benchmarks Karnataka's logistics performance across all States in India. The study reveals that Karnataka's ranking has slipped from fourth rank in 2018 to seventh rank in 2019. The study also indicates some of the key issues faced by the private logistics players of the State.

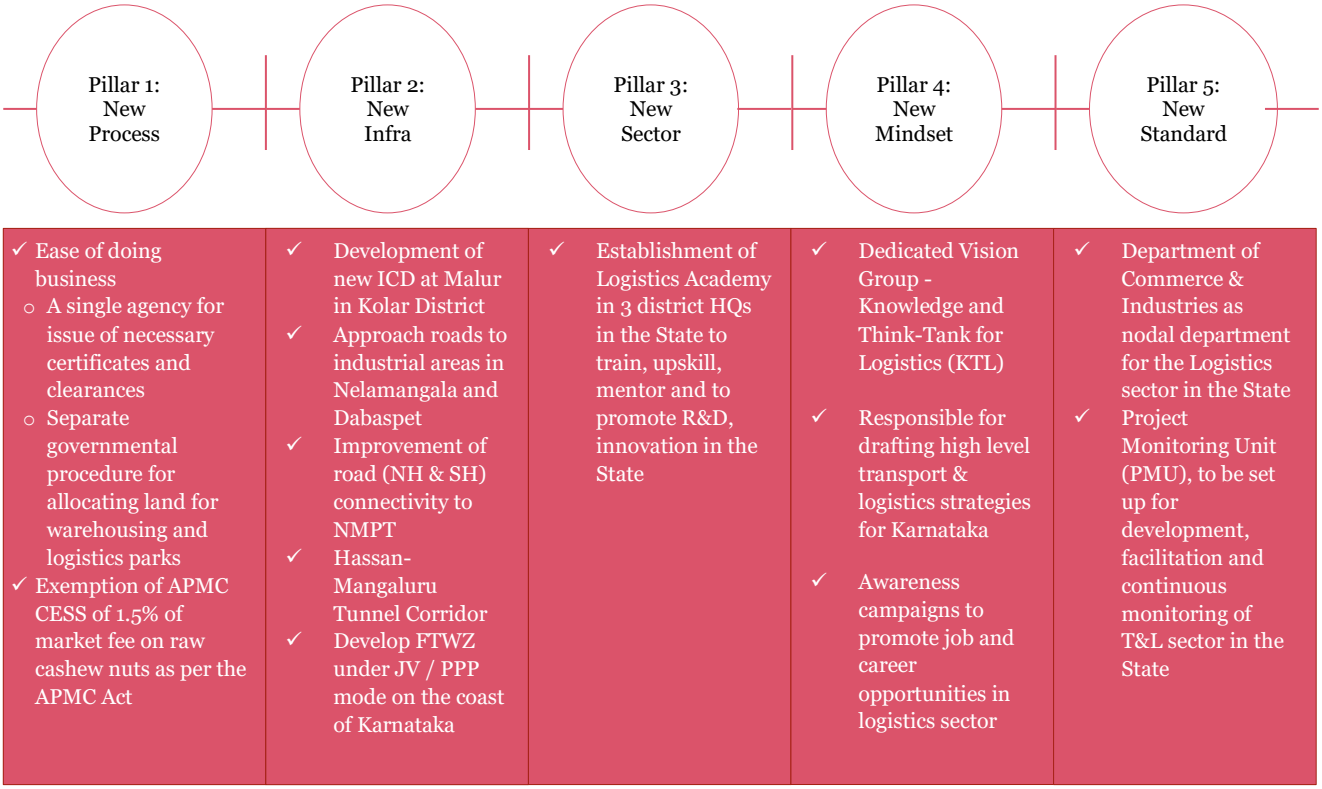
Origin-Destination analysis, high-level logistic cost analysis (hinterland to export gateway) taking typical product examples and Stakeholder consultations conducted by the study team has revealed that poor connectivity infrastructure, skills availability & market access are key impediments for the growth of the T&L sector in Karnataka

The study identifies key interventions needed across the value chain, which have the potential to drive the growth of the T&L sector. To achieve the industry potential, the following interventions have been

[1] India Services, 2019
[2] Study Team Analysis

identified - in line with the five pillars of the Champion Service Sector Scheme – as represented in **figure 2**.

Figure 2: Summary of strategic interventions



Source: Study Team Analysis

It is very important that implementation of the strategic interventions happen in a holistic and focussed manner because there are interventions whose success is dependent on different Departments of the State.

1. Introduction

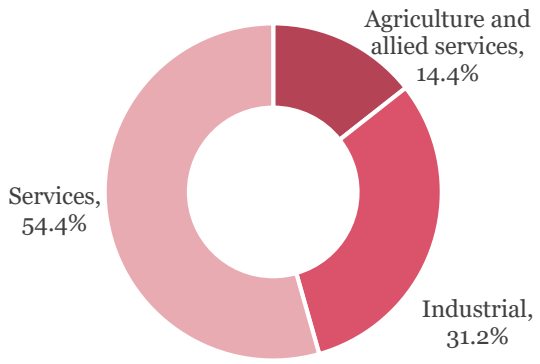
1 Introduction

Services sector is a key driver for India's economic growth

India is one of the fastest growing economies in the world. The Country recorded Gross Domestic Product (GDP) growth of 6.8% in FY 2018-19 against 7.2% in FY 2017-18[3]. A burgeoning service sector is a key driver for India's economic growth.

Unlike other countries where economic growth has led to a shift from agriculture to industries, in India there has been a shift from agriculture to the service sector. The services sector had contributed ~54% of India's Gross Value Added (GVA) in 2018-19 as depicted in **figure 3**. The sector also accounted for more than two-thirds of total Foreign Direct Investment (FDI) inflows into India and 38% of India's total exports in 2018-2019[4].

Figure 3: Sectoral share in GVA (FY 2018-19)

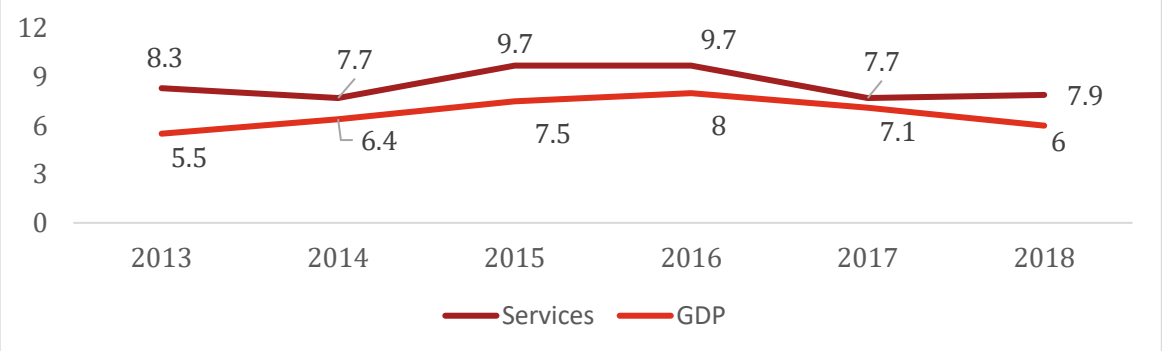


Source: Economic Survey of India, FY 2019

Despite its largest share, India's services sector has not generated jobs in proportion to its share in the economy. The share of services sector in employment was 34 per cent in 2017, which is significantly lesser that its share in GVA.

Importance of the sector can be gauged by the high rate of growth recorded by the sector which has been ramping up the overall rate of growth of the Indian economy over the last decade as represented in **figure 4** below. India has set an ambitious target of becoming a USD 5 trillion economy by 2025. Recognizing the importance of service sector, Government of India has set a sub-target of USD 3 trillion for Services sector.

Figure 4: GDP and Sectoral GVA Growth (%)



Source: Challenges, Issues & Policy Suggestions, Working Paper No. 2 / 2017- Department of Economic Affairs - Ministry of Finance, Government of India

[3] The Central Statistics Office, (CSO), The Ministry of Statistics and Programme Implementation, GoI, 2018-19

[4] https://www.indiabudget.gov.in/economicsurvey/doc/vol2chapter/echap09_vol2.pdf

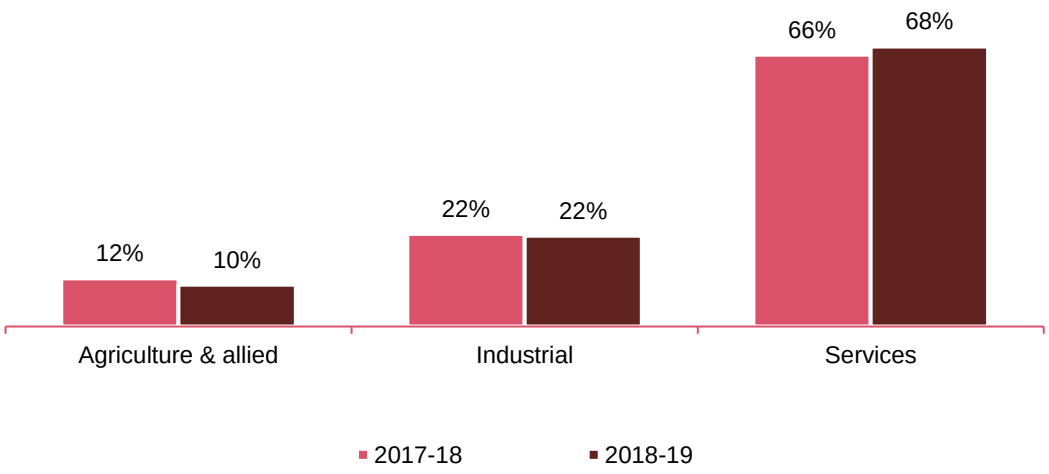
The objective of the CSSS is to increase the competitiveness of the identified service sectors in India thereby promoting GDP growth, employment generation and exports.

The CSSS will focus on implementing reforms in each of these sectors based on the 5 pillars mentioned in the earlier section.

Objective of the Study

The services sector in Karnataka plays an important role in its economy and contributes ~68% of the state's Gross State Domestic Product (GSDP). Its share grew marginally from 65.9% in FY 2017-18 to 67.8% in FY 2018-19, while there was a marginal decline in the share of agriculture and industry sectors as represented in **figure 5**. Services sector in Karnataka registered an annual average growth rate of 10.5% in the last four to five years (2015-2019).

Figure 5: Sectoral share in Karnataka's GSDP (FY 2018-19)



Source: Economic Survey of Karnataka, FY 2019

To further boost the service sector in Karnataka, the Government of Karnataka (GoK) has decided to leverage the Champion Services Sector Scheme launched by the GoI to promote the services sector in Karnataka. The State Government has identified six sectors to be promoted under the CSSS to further strengthen Karnataka's position in Services. These include:

i. Transport and Logistics
ii. Media and Entertainment
iii. Education Services
iv. Health and Wellness
v. Infrastructure and Construction
vi. Remittances and Emigration

The Government of Karnataka (GoK) intends to formulate an Action Plan for each of these sectors to make Karnataka a leader in each of these sectors not only within India but also globally, which would strengthen India's position in the market for services.

GoK intends to develop a strategy for nurturing the Transport & Logistics sector in Karnataka. As part of the GoK's mandate of industrial development in the state, it has appointed PricewaterhouseCoopers Pvt. Ltd. ("Study Team") for formulating strategy and action plan for development of Transport & Logistics sector in Karnataka. The objectives of the study are as follows:

- To prepare a strategy and action plan for development of Transport & Logistics sector in Karnataka
- Recommend strategic interventions that can enhance the competitiveness of Karnataka's T&L Sector.

Coverage of the report

This report discusses the current scenario of Transport & Logistics sector in the state of Karnataka, vis-à-vis the global and national scenario of India. Subsequently, major issues impeding the growth of the sector in the state. The study team has attempted to align the proposed strategy with key objectives mentioned in the previous section. The figure 6 details out the approach for the study.

Figure 6: Approach for the study

1. Market Assessment

- Review historical growth trends- global, national and regional trends (Key Segments - Air, Rail , Sea and Road, Industrial growth, employment etc.
- Review Karnataka's presence on national value chain(Benchmarking in terms of merchandize exports)

2. Competitive Assessment

- Undertake Stakeholder consultations within the Industry (Industry associations, freight forwarders and similar key players)
- Undertake Origin Destination analysis(Identify raw materials , production centres, processing centres and cosumer markets)
- Assess presence of key enablers.
- Assess breakup of transaction costs
- Identify key issues and bottlenecks impeding growth of the industry

3. Sector Development Strategy

- Propose strategic interventions through a four-pronged strategy to address issues and bottlenecks identified in the Transport & Logistics sector in the state

4. Implementation and funding plan

- Propose implementation mechanism and funding requirement for each of the interventions
- Summarize the total funding proposed for all the interventions under the Champion Service Sector Scheme for Transport & Logistics Services in Karnataka.

Source: Study team analysis

Chapter 2 – Market assessment: This chapter will cover local, national and global scenario of Transport & Logistics. Review of historical growth trends – global, national and regional in terms of key segments such as Air, Rail, Sea and Road, review of industrial growth and potential, employment etc., review of Karnataka's presence on national value chain in terms of merchandize exports shall be identified

Chapter 3 – Sector/Product specific analysis: This chapter will assess Karnataka's position on the national value chain. The benchmarking of transport & logistics sector in Karnataka will be done vis-a-vis other states. Additionally, key enablers for success for the industry shall be identified and bottlenecks shall be identified. Benchmarking and cost competitiveness analysis, Origin Destination analysis shall be done here.

Chapter 4 – Sector Development Strategy: This chapter will propose the strategic interventions to resolve the issues and bottlenecks pertaining to the transport & logistics sector in Karnataka.

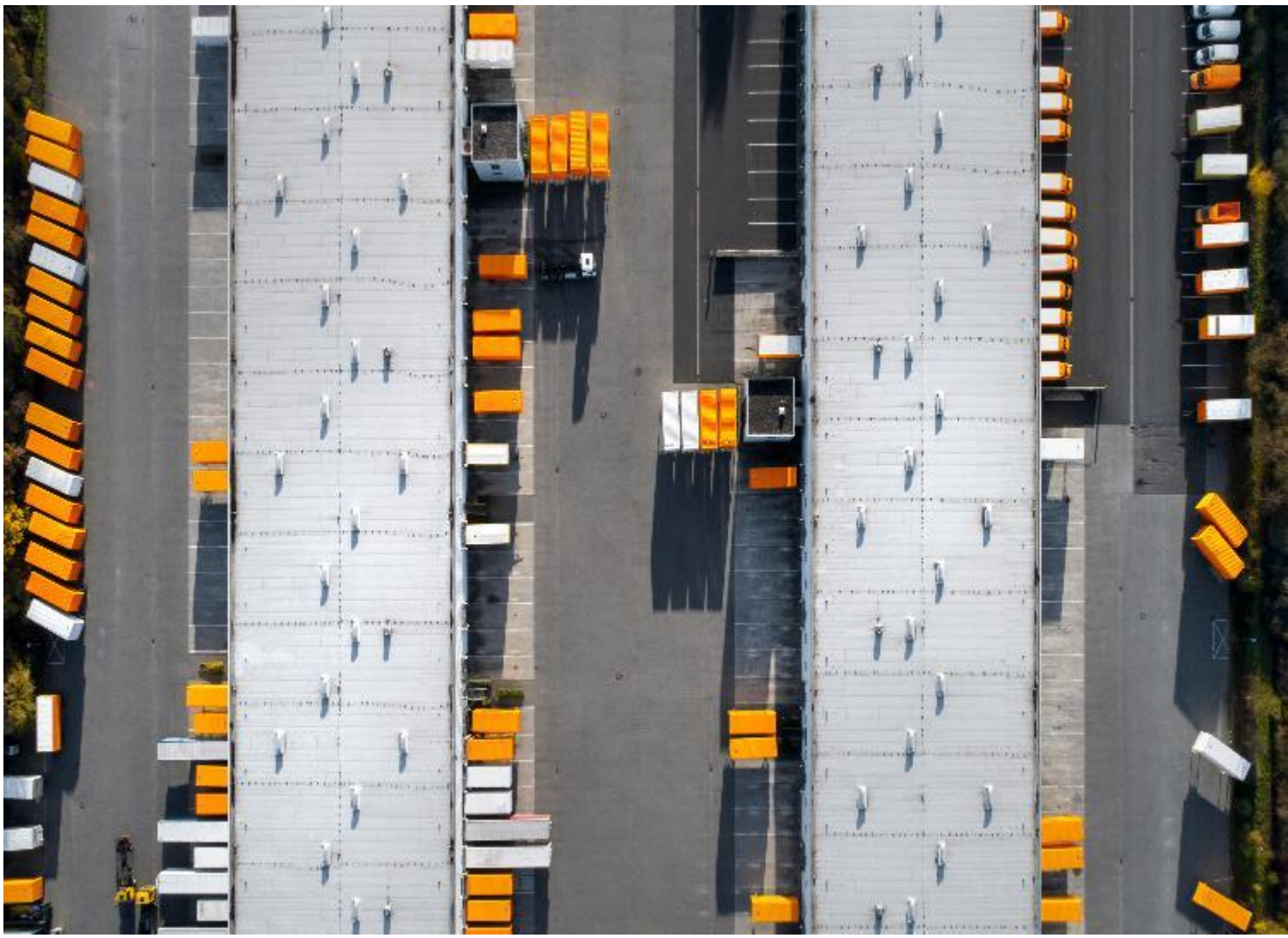
Chapter 5 –Implementation and Funding plan: The chapter will propose implementation mechanism and funding requirement for each of the interventions stated in chapter 4. Summary of the total funding proposed for implementing all the interventions under the Champion Service Sector Scheme for Transport & Logistics Services sector in Karnataka shall be stated here.

Methodology for study

A combination of primary and secondary sources has been used at different stages of the study. Firstly, the global industry and national trends and scenario for the T&L sector have been assessed.

Detailed stakeholder consultations were undertaken across Karnataka. Stakeholders across the value chain were met including export gateways of Karnataka, product manufacturing companies, associations, and government institutions.

Detailed methodology and key findings have been detailed out further in the forthcoming sections.



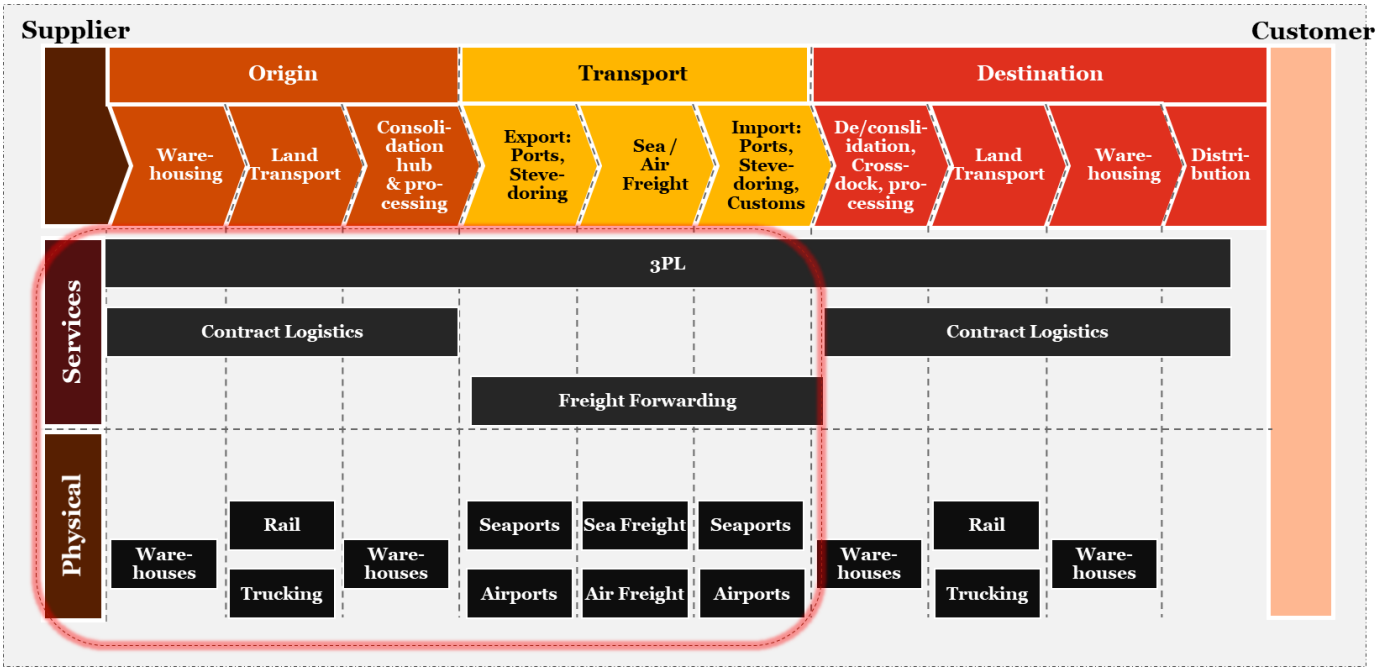
2. Transport & Logistics Sector

2 Transport & Logistics Sector

The traditional approach towards logistics sector has changed entirely from it being perceived as a support function to being strategic today

The Transport & Logistics sector not just enables the competitiveness of an industry but also improves the overall economy of the Country. The sector is evolving rapidly due to demand-side enablers such as growing e-commerce, emerging business models involving specialized players in Third Part Logistics (3PL), technological disruptions (e-marketplace), and policy interventions. Currently, with a lot of disruption and uncertainty, the customers' expectations are changing and therefore each player in the value chain (as represented in **figure** 7) becomes vital. Like individual consumers, industrial customers now expect to get shipments faster, more flexibly, and with more transparency at a lower price. No surprise that across the industry, both operating models and profitability are under strain.

Figure 7: Key players in the T&L value chain



Source: Study team Analysis

Globally, the size of the global T&L sector is estimated to be valued ~ USD 16 Trillion (tn) by 2024 with a projected CAGR of ~7.5%

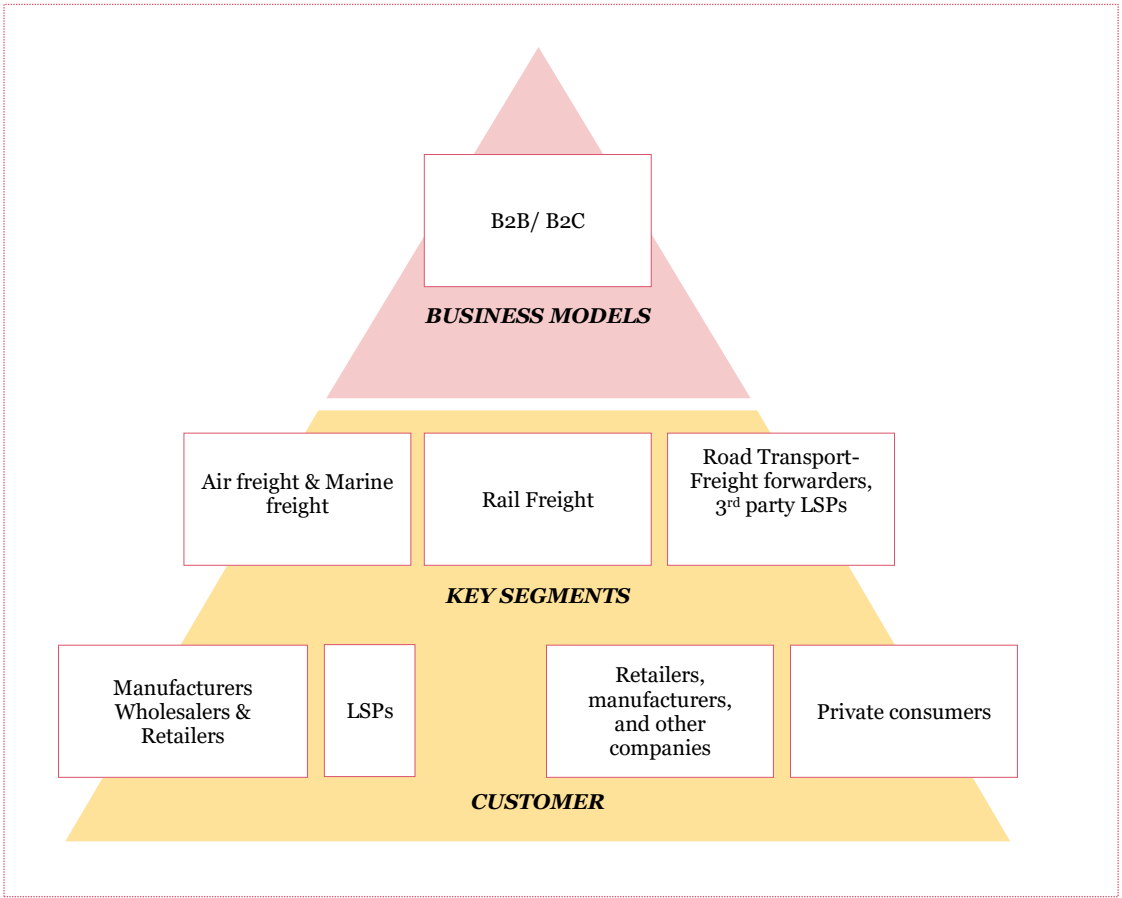
During the forecasted period (2015- 2024), the size of the global T&L sector is estimated to be valued ~ USD 16 Trillion (tn) by 2024 with a projected CAGR of ~7.5%. Asia pacific (APAC) region will continue to dominate the global T&L industry with ~50% share in total. In terms of volume, the sector is expected to witness a steady growth in the next four years and reach ~92 billion tons (BT) by 2024 from ~55 BT in 2015[5]

[5] https://www.indiaservices.in/transport

Transport & Logistics Services is an extremely important contributor in terms of National and State revenues, trade flows, FDI, employment and overall economic development. The T&L sector comprises of both Business to Business (B2B) and Business-to-Consumer (B2C) business models. The major part of the total market can be linked to B2B transactions, with Road Transport and Logistics Service Providers (LSP)[6] accounting for the biggest portion of industry revenue. This is followed by marine freight, rail freight and air freight.

Figure 8 below portrays the various business models, segments and end customers in the Transport & Logistics Sector

Figure 8: Key business models, segments and end customers of the T&L sector



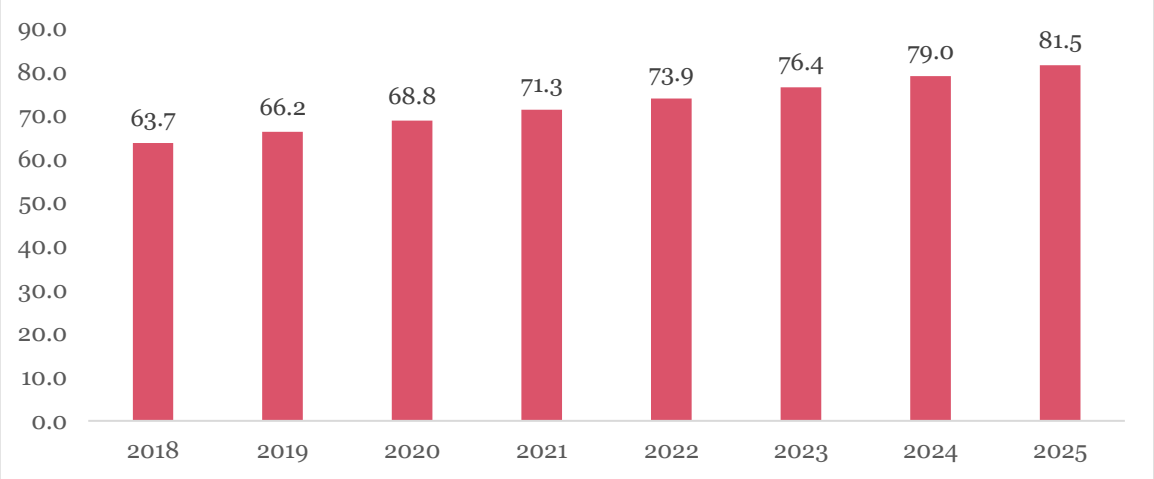
Source: Study team Analysis

[6] Logistics service providers undertake Warehousing, Inventory Management, Cross docking, Transportation and Freight forwarding

While land and ship cargo transportation remain as favorable options, goods transport by air is considered as the quickest

As per the International Air Transport Association (IATA), the volume of cargo transported by air is growing at AAGR of ~4% and is estimated to reach ~82 million tons (MT) during the forecasted period (2018-2025) as represented in **figure 9**.

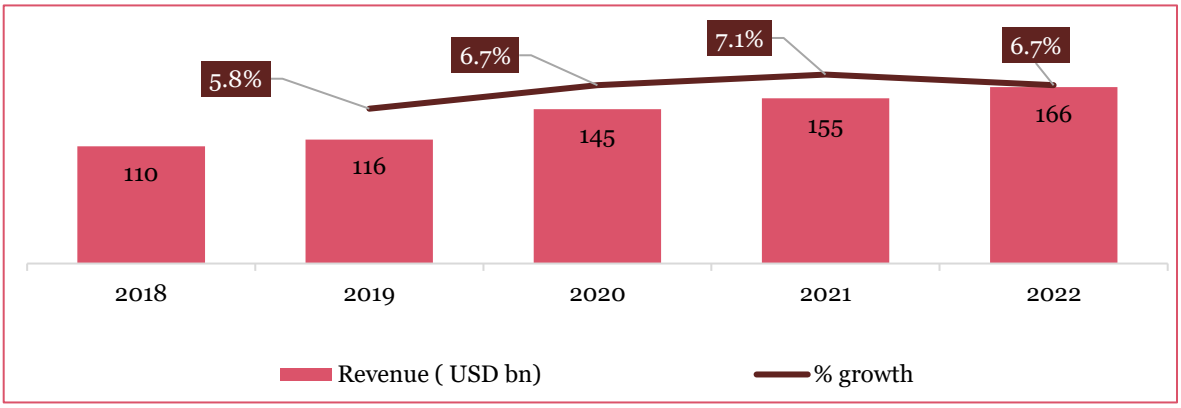
Figure 9: Global air cargo volume (MT), 2018-2025



Source: International Air Transport Association (IATA), 2018

Overall revenue generated from air transport is expected to reach USD 166 bn in 2022 as shown in **figure 10**. Of the total air freight value, a significant 43% comes from the APAC region alone in 2018.

Figure 10: Global air freight sector value (USD bn), 2018-2022



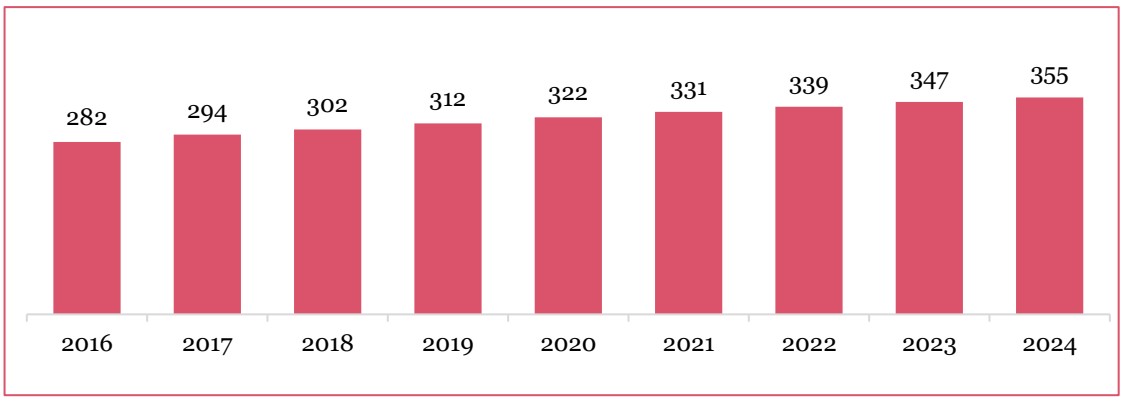
Source: Marketline, 2018

Region wise, all the regions excluding Africa, have shown steady growth in terms of freight volumes. More than 5% annual growth in freight volumes has been reported in North America, Latin America (LATAM) and APAC while a growth of 3.3% has been recorded by the Europe (EU) region. APAC and US sectors are expected to grow with a CAGR of 6.8% and 6% respectively by 2022.

Efficiency of rail transport, less traffic congestion compared with highways, and growth of intermodal transportation are the key factors driving the global trade through rail

The global rail freight transport was valued at USD 312 bn in 2019 and is anticipated to grow at a CAGR of ~4.1% and is estimated to reach ~USD 355 bn in 2024 as represented in **figure 11**, during the forecasted period (2019-2024). Region wise, North American region leads the global rail freight market, but during the forecast period, Asia-Pacific is expected to overtake North America.

Figure 11: Global rail freight transport market revenue (USD bn), 2016-2024

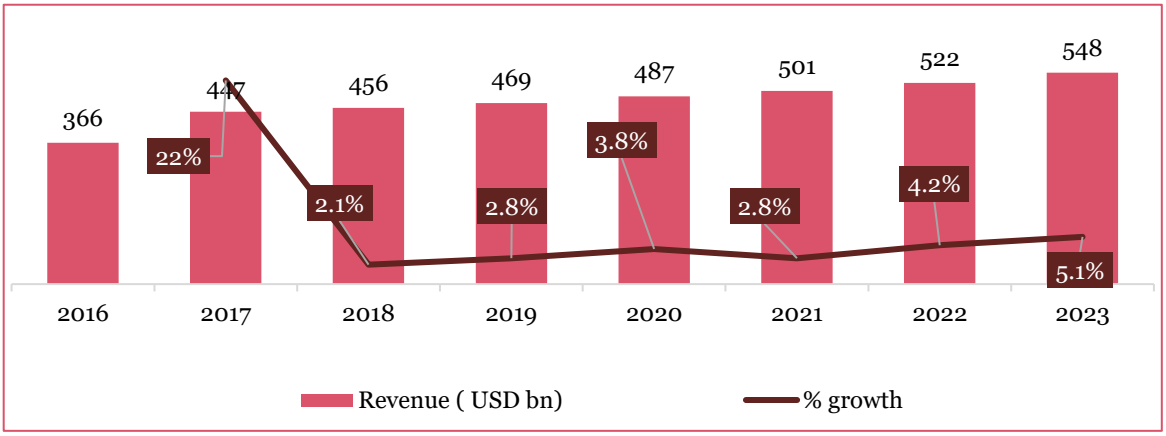


Source: Rail freight transport market 2019 - 2024, Mordor Intelligence

UNCTAD expects international maritime trade to expand at an AAGR of ~ 3.7 % over the 2019–2023 forecast period, driven by growth in containerized, dry bulk and gas cargoes

During the forecast period, the global marine freight industry is expected to reach ~USD 548 bn by 2023 as represented in **figure 12**. In the year 2019 the total revenue in the marine freight industry was ~USD 469 bn, dominated by the containerized segment with total revenues of USD 414.4 bn (90.8%), followed by the dry bulk segment with revenues of USD 42 bn (9.2%)

Figure 12: Global marine freight industry value forecast, (USD bn), 2016–23



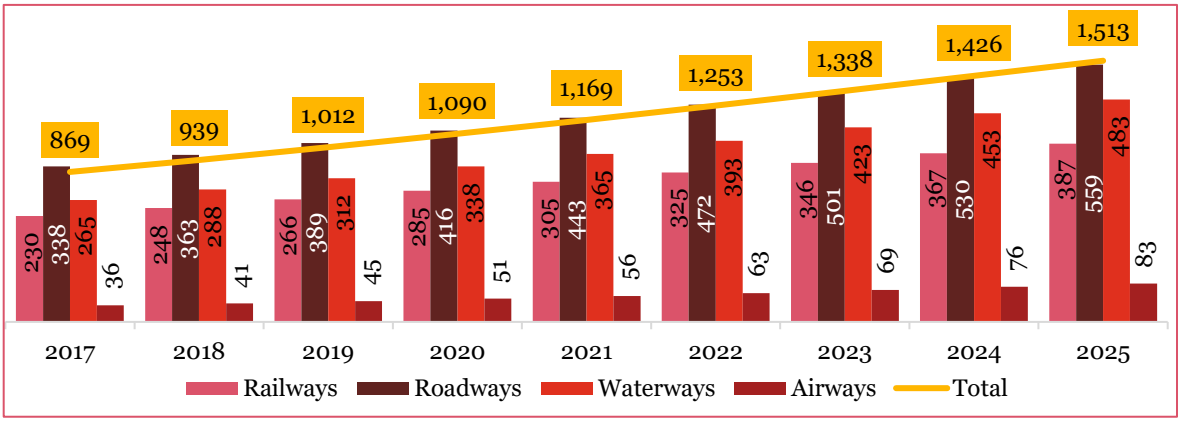
Source: Global - Marine Freight, April 2019, Marketline

Region wise, more than half of the revenues in marine freight industry were generated by EU, ~USD 265 bn (58%), followed by Asia pacific with ~USD 109 bn (24%), United States with ~USD 49 bn (10.7%) and Middle East with ~USD 4.5 bn (1%).

Roadways and Waterways appear to be the most preferred mode of transport & logistics with a collective share of ~69.2% in the overall 3PL market and is anticipated to dominate during the forecasted period as well. This is followed by railways and airways segments with a collective share of ~ 30.8% and is anticipated to reach ~35.8% by 2025

The global 3PL market is categorized into railways, roadways, waterways and airways based on the transportation mode. The global 3PL market was valued ~USD 1,012 bn in 2019 and is expected to cross ~USD 1.5 tn by 2025 growing at a CAGR of 7.1% during the forecasted period (2017-2025) as represented in **figure 13**.

Figure 13: Global 3PL market, 2017-2025



Source: Global 3PL report, Allied Market Research

In the year 2019, roadways segment was the highest contributor to the market with ~USD 389 bn and an overall market share of ~40%. During the forecasted period, the segment is estimated to reach ~USD 560 bn growing at a CAGR of ~6.4%. Similarly, the airways segment is expected to reach USD 83 bn by 2025 at a CAGR of 10.8%.

With an ambitious target of becoming a USD 5 trillion economy by 2025, the Government of India is focussing on easing the regulations in the T&L sector

Transport & Logistics sector which comprises of rail, road, water and air transport is one of the prominent sectors in India. In terms of its contribution to National and state incomes, trade flows, FDIs and employment, the sector has a very important role to play. As per the statistics by The Ministry of Statistics and Programme Implementation (MoSPI), the contribution of Indian logistics sector is around 5% to the total economy. The sector's share in GVA was recorded as road transport (3.14%), railways (0.77%), service incidental to transport (0.75%), air transport (0.15%), water transport (0.05%) and storage (0.05%) in the year 2018-19[7].

[7] MOSPI data (The Ministry of Statistics and Programme Implementation, GoI)

In the year 2018, the sector accounted for only ~ USD 160 billion and is expected to touch ~USD 230 billion by 2022[8]. T&L sector in India has a great potential to grow exponentially in the next 5 years with the overall freight traffic in India forecasted to reach 11.4 MT by 2032 with a projected CAGR of ~9% during the forecasted period (2018-2032). The Indian warehousing industry is growing at an Average Annual Growth Rate (AAGR) of 10-12% and the market size of INR 1,251 bn in 2018 is expected to reach INR ~3,200 bn in 2023[9].

However, in India, approximately 14% of the GDP is spent on Transport and Logistics sector in comparison to 8 to 10% in other developed countries. According to the global ranking of the World Bank's 2018 Logistics Performance Index (LPI), India stood at 44th rank in 2018 from 54th rank in 2014 in terms of overall logistics performance.

The Study team conducted a benchmarking exercise and compared India with Germany (ranked 1st as per the Index). It was found out that the sector shows significant weaknesses in most of the parameters, especially areas like lead times and Quality & Regulatory processes are key impediments to the growth of the sector. **Figure 14** below indicates India's performance as per World Bank's LPI, 2018.

Figure 14: India's Logistics Performance vis-à-vis Germany

As per World Bank's Logistics Performance Index, India ranks 44th while Germany stood 1st

Parameter	India	Germany
Export time/ Port or airport supply chain	3 days	2 days
Export time/ Land supply chain	6 days	2 days
Import time/ Port or airport supply chain	3 days	2 days
Import time/ Land supply chain	8 days	3 days
Shipments meeting quality criteria	77%	95%
Declarations submitted and processed electronically and on-line	100%	100%
Clearance time without physical inspection	1 day	1 day
Clearance time with physical inspection	2 days	1 day
Importers use a licensed Customs Broker	100%	N/A
Able to choose the location of the final clearance	50%	100%

Source: World Bank, 2018

These issues will continue to hinder the growth of the sector and need to be addressed in a holistic manner, as it is estimated that improvement in T&L sector will result in 10% decrease in indirect logistics cost and 5-8% growth in exports in India.

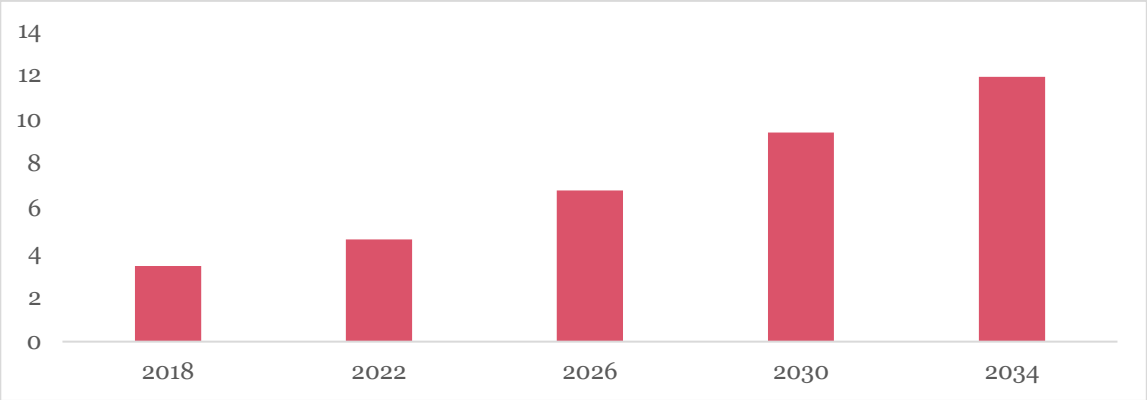
[8] https://economictimes.indiatimes.com/industry/transportation/shipping-/-transport/indias-logistics-sector-to-reach-usd-215-bn-by-2020-survey/articleshow/62693817.cms?from=mdr

[9] Indian Warehouse Market: Industry Trends, Share, Size, Growth, Opportunity and Forecast 2019-2023, 2019

Currently, freight transport in India is road-dominated—accounting for 59% of freight movement, 35% of freight demand is met by rail, 6% by waterways and less than 1% by air[10]

In the year 2018, the overall air freight traffic in India accounted for ~3.4 MT and is expected to touch ~11.9 MT in 2034 with a projected CAGR of ~9% as represented in **figure 15**.

Figure 15: Air Freight traffic in India (MT)



Source: Indiaservices.in/transport & Study Team Analysis

Some of the key drivers and Government initiatives in Air transport are set out below[11]:

- **Growth in Exports & Imports (EXIM):** Growth in import and export in India will be the key driver for growth in air freight traffic. For example, Bengaluru International Airport Limited (BIAL), having processed 1,32,126 MT of air freight in the first year of operations ended FY 2018-19 by processing 3,86,780 MT, effectively tripling in size every 10 years[12].

- **Rising private participation and investments:** By the year 2028, the Indian Aviation industry is expected to witness investments worth ~USD 27 billion. Private sector has a key role to play as the investments brought in by the private sector will propel development of more airports under the Public Private Partnership (PPP) mode. Currently, there are five international airports ((Delhi, Mumbai, Cochin, Hyderabad, Bengaluru) which have been successfully completed under PPP mode and two green field projects are ready to go on PPP basis.

- **FDI:** 100% FDI is allowed under the automatic route for greenfield projects and scheduled air transport service, regional air transport service and domestic scheduled passenger airline. Whereas 74% FDI is allowed under the automatic route for brownfield projects.

- **Focussed investment in Infrastructure:** In the next six to seven years, Airports Authority of India (AAI) and Government of India are planning to invest ~USD 4

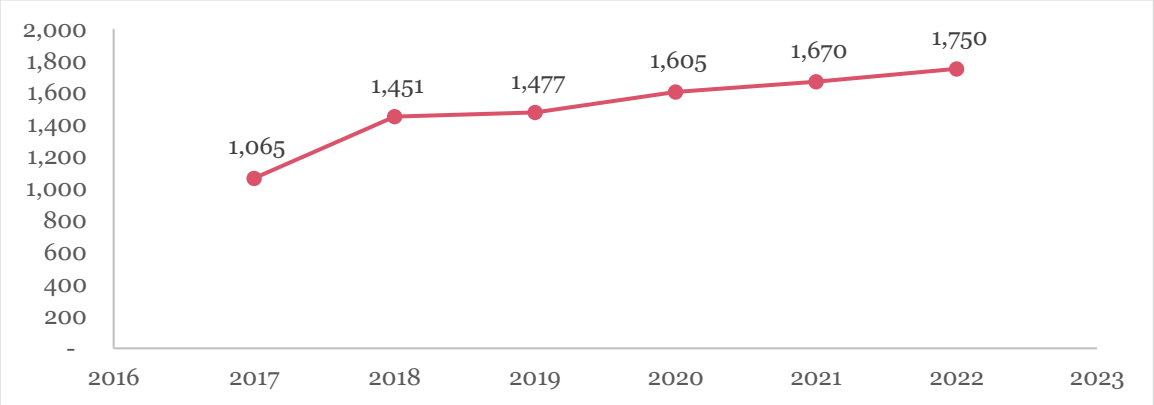
[10] Goods on the move, NITI Aayog, 2018-19
[11] IBEF, Aviation 2019
[12] https://www.bengaluruairport.com/corporate/engage-with-us/cargo.html#achievements

billion for development of new terminals, expansion of existing terminals and development of airport infrastructure along with aviation navigation services.

India being the 16th largest maritime Country in the world boasts an impressive coastline of ~ 7,517 kms

With 12 major ports and 200 minor and intermediate ports, maritime transport is accountable for ~70% of Trade value in India. The overall cargo handling capacity of Indian ports is ~1.5 Billion Metric Tons (BMT) and is expected to reach 1.75 BMT in the next two to three years[13] as represented in **figure 16**.

Figure 16: Cargo handling capacity in India (MT)



Source: National Transport Development Policy Committee (NTDPC) & Study Team Analysis

Some of the key drivers and Government initiatives in Maritime transport are set out below:

- Increasing Demand: The last five years has witnessed a constant growth at an average of 4% in the cargo traffic across 12 major ports in the Country
- Sagarmala Programme[14]: Sagarmala Programme aims to tap the coastal potential of India and promote port led development in the Country. Under the scheme, more than 500 projects with an estimated investment of over INR 800 bn have been identified. The Programme also estimates a significant growth in cargo handling capacity of Indian ports – to an extent of ~ 2.5 BMT by 2025.
- Project Unnati - Operational Efficiency Improvement: To improve the efficiency and productivity KPIs for 12 major ports and to unlock more than 100 million tons per Annum (MTPA) capacity just through efficiency improvement
- FDI and Tax Holiday exemptions[15]: 100% FDI under the automatic route for projects related to the construction and maintenance of ports and harbours. In addition, the enterprises, which are involved in the business of developing, maintaining and operating ports, inland waterways and inland ports, can avail 10-year tax holidays

[13] National Transport Development Policy Committee (NTDPC) data, 2018
[14] http://sagarmala.gov.in/project/port-modernization-new-port-development
[15] Ministry of Shipping, GoI

With a spread of 5.5 Mn kms, the Country has one of the largest road networks across the world

Modes such as rail, water and pipeline, offer the potential to move goods much more cost effectively than trucks and with far lower energy consumption and Carbon di-oxide (CO2) emissions. However, freight transport in India is road-dominated. Of all goods in the Country, nearly 65% are transported by roadways. This is inspite of a higher cost of freight movement, i.e. by road the cost of freight movement is INR 2.8/ton–km as compared to INR 1.68/ton–km for rail and INR 1.06/ton–km for waterways[16].

One of the major reasons attributed to the dominance of road is the greater flexibility which it offers in terms of destination and volume of goods to be transported.

The Government of India, through a series of initiatives, is working on policies to attract significant investor interest. A total of ~200,000 km National highways is expected to be completed by 2022[17].

India holds 3rd position in terms of the railway network with a track length of 1,49,490 km spread over a route of 67,368 km

GoI estimates a significant growth in the rail freight traffic in the next ten years. In the year 2019, the rail freight traffic accounted to 1.2 BT and is expected to reach 3.3 BT in the year 2030.

In order to achieve the same, GoI along with the Indian Railways has launched a National Rail Plan 2030 – a vision document to integrate the rail network with other modes of transport and create synergy for achieving seamless multi modal transportation network across the Country. Apart from these initiatives, GoI, with an outlay of ~USD 13 bn has initiated one of the largest infrastructure projects in India - Dedicated Rail Freight Corridors (DFC) spread across ~3,360 km[18].

A summary of key FDI trends in Indian T&L sector is set out in **table 1** below:

Table 1: Summary of FDI regulations in T&L sector in India

Sector	Equity FDI cap	Entry route
Nonscheduled air transport services, helicopter services, seaplane services, ground handling and other related services	100%	Automatic route
Railway infrastructure	100%	Automatic route
Scheduled air transport services/ domestic scheduled passenger airlines	100%	Government route beyond 49%
Regional air transport services	100%	Government route beyond 49%

[16] National Transport Development Policy Committee. India Transport Report—Moving India to 2032
[17] IBEF, Indian Road Industry Report, November 2019
[18] Ministry of Railways data

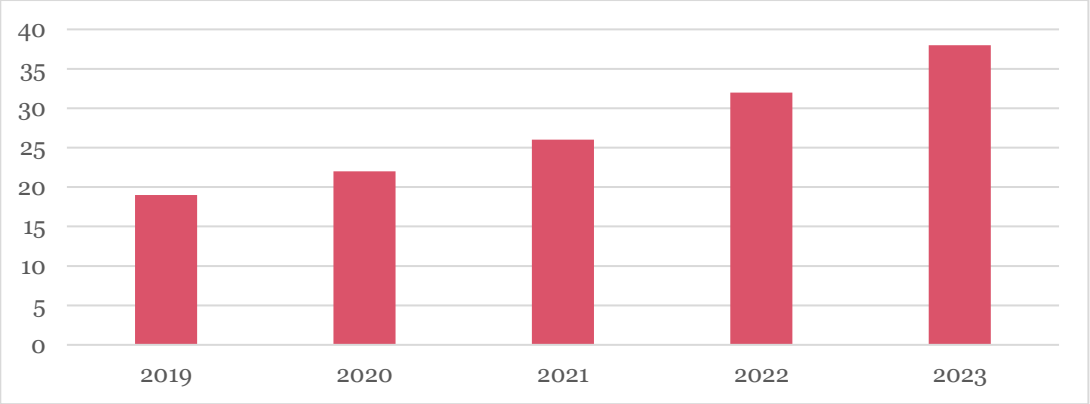
Sector	Equity FDI cap	Entry route
Mass rapid transport services	100%	Automatic route
Greenfield airports	100%	Automatic route
Construction and maintenance of infrastructure projects of ports, roads and highways	100%	Automatic route
Greenfield and existing airport infrastructure	100%	Automatic route
Airport ground handling, maintenance and repair services, flying training institutes, technical training institutes	100%	Automatic route
Road transport services	100%	Automatic route

Source: EMIS Insights - India Transportation Sector Report 2019_2023

With digital innovations, incorporating technology, innovative business models, skillset upliftment set to boost the sector, in turn it can stimulate growth and employment in the country. Historically too, logistics sector has provided employment to vast number of people across the country. Currently, there are ~22 Mn people, who were employed in the Indian logistics sector and Indian Railways alone accounted to employment for around 1.5 Mn people[19].

It is estimated to reach ~38 Mn people in the year 2023 growing at a CAGR of 10% during the forecasted period (2019-2023) as represented in **figure 17.**

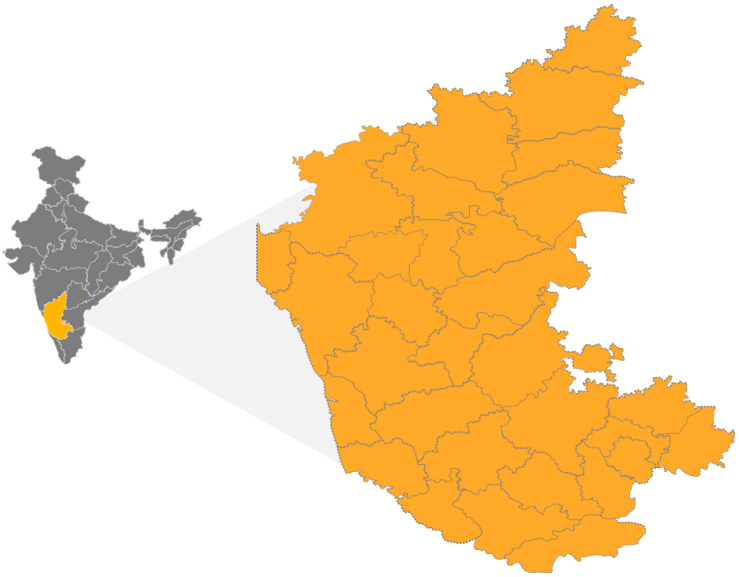
Figure 17: Employment Composition in Indian Logistics Sector (2019-2023)



Source: GES Transport Logistics Report, 2018 & Study Team Analysis

[19] *IBEF- Infrastructure_May 2019, Global Logistics Show, 2020*

The State of Karnataka is home to many large-scale industries across major sectors including automobile, agricultural products, aerospace, biotech, pharmaceuticals and retail.

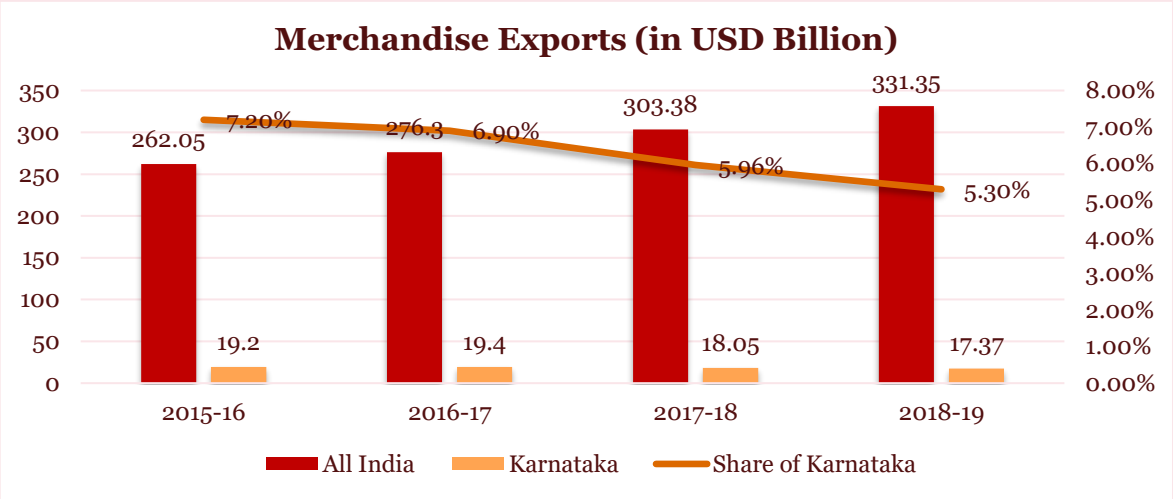


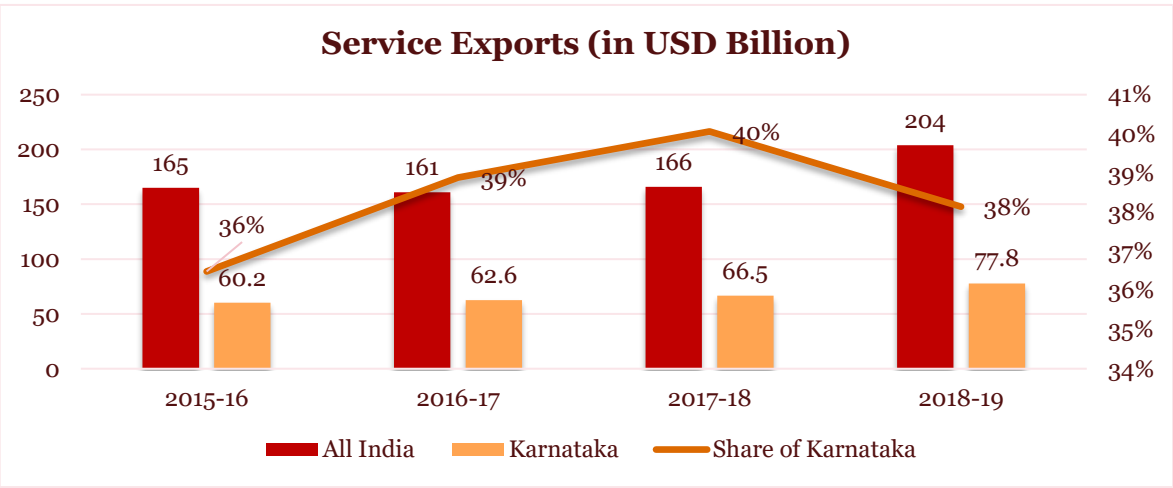
Karnataka has always been a major exporter of commodities like coffee, spices, silk, cashew nuts, handicrafts and agarbathies historically. In the last two decades, the State has witnessed a gradual shift from the above traditional commodities and today, Karnataka is one of the major player in the export of electronic and computer software, engineering goods, readymade garments, petrochemicals, gems and jewellery, agro and food processing products, chemicals, minerals and ores, marine products, etc.

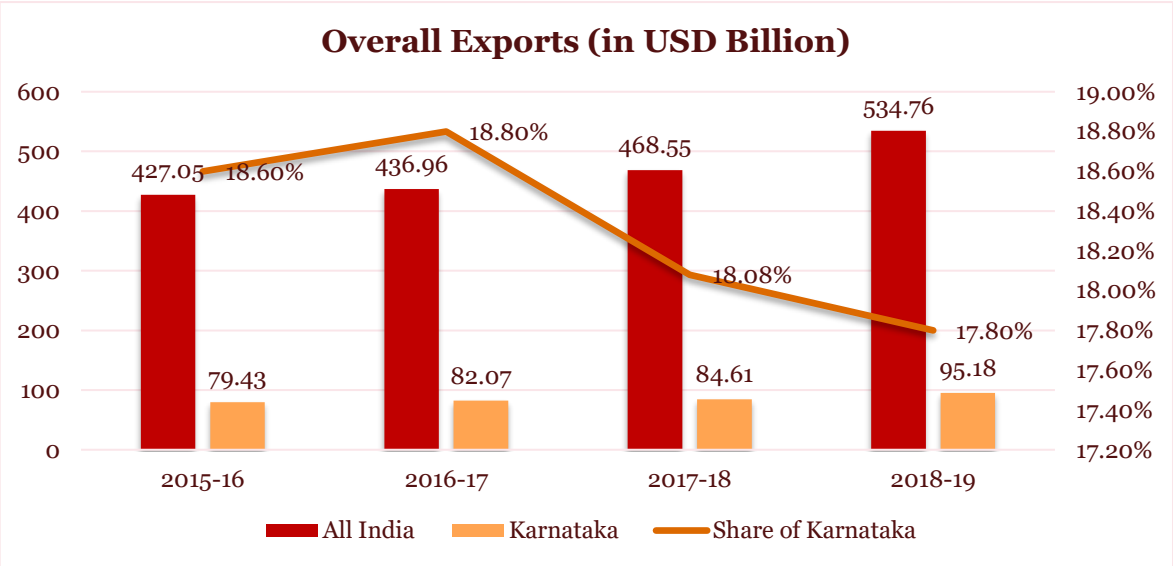
Karnataka has carved out a niche for itself in the global marketplace as the knowledge and technology capital of the country. The State has made rapid and spectacular strides in the new economy. Information technology, biotechnology and research and development institutions have enhanced Karnataka's achievements at national and global levels. Karnataka accounts for more than one third of electronics and computer software exports from the country.

Karnataka's exports amounted to about USD 95.18 Bn in 2018-19 which constituted about 17.80% of the country's exports in that year. The share of merchandise exports in the National exports constitutes around 5.30% and software / service exports around 38% for the year 2018-19. The same has been represented in Figure 18 below.

Figure 18: Export Performance of Karnataka (2015-2019)







Source: Economic Survey of Karnataka (2019-20), DGCIS, Kolkata, RBI, - NASSCOM & ESC

Export is considered an engine of economic growth in the wake of liberalization and structural reforms in the economy. A sustained growth in exports is dependent on adequate and reliable infrastructure.

Robust infrastructure will ensure reduction in the transaction cost of exports, thereby making exports internationally competitive. The transaction costs in India are much higher at 14%[20] as compared to global standards at 8%-10% and a part of the reason is attributed to bottlenecks in infrastructure for exports. In this section, the study team analysed the current status of infrastructure of Karnataka.

Air Transport: Bengaluru prides to house the first private airport of the country namely, Bengaluru International Airport Limited (BIAL). BIAL strives to develop a collaborative and consultative relationship with its cargo partners to enhance current and future facilities and infrastructure. The Airport is among the most mechanised cargo terminals in the country, with the processing of all types of cargo, including pharma and temperature-controlled products, perishable cargo, electronics and animals. Also, Bengaluru airport is one of the major EXIM air cargo handling airports in India, catering to exporters in South India, including Telangana, Andhra Pradesh, Tamil Nadu and Kerala.

In 2019, InterGlobe Aviation Ltd., which operates IndiGo airlines, one of India's largest domestic airline, tied up with BIAL to build its second Maintenance, Repair and Overhaul (MRO) facility in Bengaluru. A 20-year pact was signed between IndiGo and BIAL. The planned facility of 13,000 sq.m. will be built on a five-acre land that will be able to service two narrow body airctafts at a time. The facility is expected to be operational by 2020.

The MRO market is fast growing and is expected to exhibit over 6% CAGR between 2020 and 2026. The MRO market size touched USD 78.88 billion in 2019 and is expected to reach USD 121.5 billion by 2026[21]. The MRO service market exhibits immense potential.

Maritime Transport: The New Mangalore Port Trust (NMPT), which caters to EXIM cargo movement, is the only major port of Karnataka. The state is equipped with a total of 11 ports– 1 Major and 10 Minor ports. In the year 2019, NMPT handled over 1 lakh Twenty-foot Equivalent Units (TEU) per annum. The import and export (EXIM) performance of NMPT for the last 4 years is set out in **table 2** below:

Table 2: EXIM performance – NMPT (2015-2019)

Year	Export Value in USD Mn
2015-16	2590. 43
2016-17	2713. 92
2017-18	3672. 01
2018-19	4837. 20

Year	Import Value in USD Mn
2015-16	7117. 35
2016-17	6846. 03
2017-18	8505. 03
2018-19	10225. 53

Source-DGCIS, Kolkata & NMPT

[20] https://economictimes.indiatimes.com/industry/transportation/shipping-/-transport/index-to-measure-logistics-costs-of-key-export-sectors-on-the-cards/articleshow/71486010.cms?from=mdr

[21] https://www.gminsights.com/industry-analysis/commercial-aircraft-mro-market

The four major commodities shipped from NMPT are refined petroleum products, coffee, fruits and nuts including cashews, marine products and recently ores, slag and ash exports have also started to pick up. The value of four major commodities shipped from NMPT is set out in **table 3** below:

Table 3: Major commodities shipped from NMPT (in USD Mn), (2015-2019)

Year	Petroleum	Coffee	Cashew and other nuts	Marine
2015-16	1,839. 00	365. 01	106. 70	110. 98
2016-17	1,711. 92	407. 90	151. 12	150. 05
2017-18	2,272. 01	499. 22	187. 11	177. 29
2018-19	3,570. 20	417. 84	116. 98	160. 88

Source-DGCIS, Kolkata & NMPT

Logistics, Inland Container Depots / Container Freight Stations (ICD/ CFS): Karnataka currently has an ICD facility in Bengaluru and 7 CFS facilities. Commissioned on April 01, 1993, the Inland Container Depot at Bengaluru is located at the centre of Bangalore's fastest growing industrial area in Whitefield. It is conveniently connected to NH4 and NH7 by Road and is well connected by Road and Rail to all the major gateway ports in South India. Spread over 125.06 acres, the ICD has a CFS and ten warehouses along with three full length rail sidings, catering to EXIM and Domestic traffic, both by Rail and Road.

Warehousing facilities: There are 11 cold storage facilities in the State, which are operated by Karnataka State Agricultural Produce Processing and Export Corporation Limited (KAPPEC) and 194 private cold storage facilities in the State under the central Government schemes[22]. **Table 4** below highlights the total cargo handled by Karnataka ports (sea/air/dry) during the period 2015-2019.

[22]Horticultural Statistics at a glance 2017, NHB

Table 4: Value of Cargo handling by major Karnataka ports (in USD Mn)

Port	2015-16		2016-17		2017-18		2018-19	
	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports
Bangalore Airport	12,341	9,312	12,239	8,896	9,665	5,202	7,648	4,503
Bangalore ICD	2,026	2,876	2,115	2,770	2,445	2,880	2,878	3,070
NMPT	7,117	2,579	6,846	2,693	8,505	3,611	10,226	4,809
Total	**21,484**	**14,767**	**21,200**	**14,359**	**20,615**	**11,693**	**20,752**	**12,382**

Source- DGCIS, Kolkata

To strengthen the overall logistics ecosystem in the State, Government of Karnataka needs to incorporate an all-inclusive, holistic development approach – bringing in all the concerned stakeholders in the sector to a single platform

3. Sector/ Product specific Analysis of Karnataka

3 Sector/ Product specific Analysis of Karnataka

As per the Economic Survey of Karnataka 2019-20, the Gross State Domestic Product (GSDP) of Karnataka for the year 2019- 20 highlights that at constant (2011-12) prices the GSDP is to attain a level of INR 12,01,031 crores at a growth of 6.8%.

The key sectors such as Agriculture, Industry and Services have grown at a sectoral growth rate of 3.9%, 4.8% and 7.9% respectively[23].

The GSVA growth rate of agriculture sector has increased to 3.9% in 2019-20 compared to (-)1.6% in 2018-19. The growth in the industry sector on the other hand has declined at 4.8% in 2019-20 against a growth of 5.6 % during 2018-19. In addition to the above two sectors, Service sector also has declined at 7.9% during 2019-20 compared to growth of 9.8% during 2018-19.

Transport & logistics play a vital role, especially in the agriculture and industry sectors. In order to achieve growth and develop a sector strategy around agriculture and industry sectors, it is critical to review the competitiveness of major sectors and products in Karnataka. The following major product / sector groups have been identified for the analysis, considering the shortlisted sectors constitute ~70% of Karnataka's export share (excluding Software and Service exports)

a) Agriculture & Processed Food Products
    i. Coffee
    ii. Cashew
    iii. Gherkins
    iv. Fresh Vegetables
    v. Fresh Fruits
b) Basic Chemicals, Pharmaceuticals & Cosmetics
c) Readymade garments
d) Engineering
e) AutomobileThe current trend in terms of value of exports of the above commodities for the last 4 years has been analysed and further categorized into 2 broad groups - *Sectors with positive trend and Sectors with negative trend* - based on the value of exports for the last four years. **Table 5 & Table 6** represents the list of products having positive and negative trends in the exports along with percentage share of exports.

[23] Economic Survey of Karnataka 2019-20

Table 5: Sectors with positive trend in the last 4 years (2015-2019)

Products	Value in Million USD	Growth in %
Ores & Minerals	123 to 302	145%
Spices	49 to 103	110%
Petroleum Products	1,825 to 3,576	95%
Plastic	119 to 195	64%
Engineering	3,082 to 4,774	55%
Leather	54 to 80	48%
Chemical & Allied Products	73 to 99	35%
Automobiles	432 to 507	17%

Source-DGCIS, Kolkata

Table 6: Sectors with negative trend in the last 4 years (2015-2019)

Products	Value in Million USD	Decline in %
Gems & Jewellery	5043 to 82	-98%
Aerospace	1,574 to 428	-72%
Silk	73 to 44	-39%
Agriculture	792 to 719	-9%
Coffee	473 to 447	-5.50%

Source-DGCIS, Kolkata

Some of the key reasons for poor growth trend in the above-mentioned products are set out below:

- **Coffee**: Coffee exports declined in 2018-19 primarily due to floods in Kodagu and Chikmagalur Districts during June – August 2018 resulting in a crop loss of nearly 40% and adversely impacting coffee exports
- **Gems & Jewellery**: The sector showed a negative trend due to the ban imposed by Government of India on exports of 22 carat and above Gold Medallions
- **Silk & Silk Products**: Silk exports from India are facing serious competition from China – owing to better quality of Silk and cheaper cost. The Mulberry silk from China are preferred in Textile Industry for its quality and cost wise it is 30% cheaper
- **Cashew**: With the latest state of the art processing facilities, Vietnam is offering Cashew at a much cheaper price in global market resulting in a fall of 45% in Karnataka's Cashew Exports
- **Chemicals**: Exports in this sector declined by about 20% mainly due to fall in exports of one commodity, P-Xylene (An organic petroleum product used in polymer industry) from USD 605 mn in 2017-18 to USD 120 mn in 2018-19.

Benchmarking and Cost competitiveness profile

1. Labour:

Table 7: Comparison of labour costs in other progressive states of India

	UP	Tamil Nadu	Maharashtra	Karnataka	Gujarat	Andhra Pradesh
Labour (avg. cost/day) INR/Day	1,444	1,727	1,166	1,492	841	748
Productivity (GVA/Employee) Rs. Lakh	10.1	13.8	9.6	12.1	6.1	3

Source: Annual Survey of Industries 2016, Ministry of Statistics and Programme Implementation, Study Team Analysis

Note: Average working day is taken for 8 hours.

It can be seen from the **table 7** above that the average unit labour cost of Rs. 1,492 per day in Karnataka is amongst the highest when compared to other competing states. Also, Karnataka boasts a very high productivity when compared to other progressive states along with Tamil Nadu. This indicates that human capital/ labour is not the major impediment for growth in Karnataka.

2. Logistics

As mentioned in the earlier sections of the report, the costs involved in the logistics chain (i.e. inventory holding, transportation, warehousing, packaging, losses and related administration costs) have been estimated at 14% of India's GDP, whereas in developed economies it ranges between 8% and 10%.

Freight transport in India is road-dominated, accounting for 58% of freight movement, 35% of freight demand is met by rail, 6% by waterways and less than 1% by air. Despite largest share in transportation is by road, the cost per MT per km (INR 2.58/MT/Km) is highest among the modes of transport, followed by Rail transportation at INR 1.41/MT/km and water ways at INR 1.06/MT/km. The cost per MT per km when it comes to road transport depends on the distance (hinterland to export gateway), condition of the road, stoppages, checks, tolls etc. Table 8 below represents India's basic but key logistics parameters versus global.

Table 8: India's basic but key logistics parameters versus global

Key parameters	India	Global
Average truck speed (in km/hour)	30 to 40	60 to 80
Average freight rail speed (in km/hour)	24	25 to 35
Airport waiting time - Export/Import (Hours)	50/182	12/24

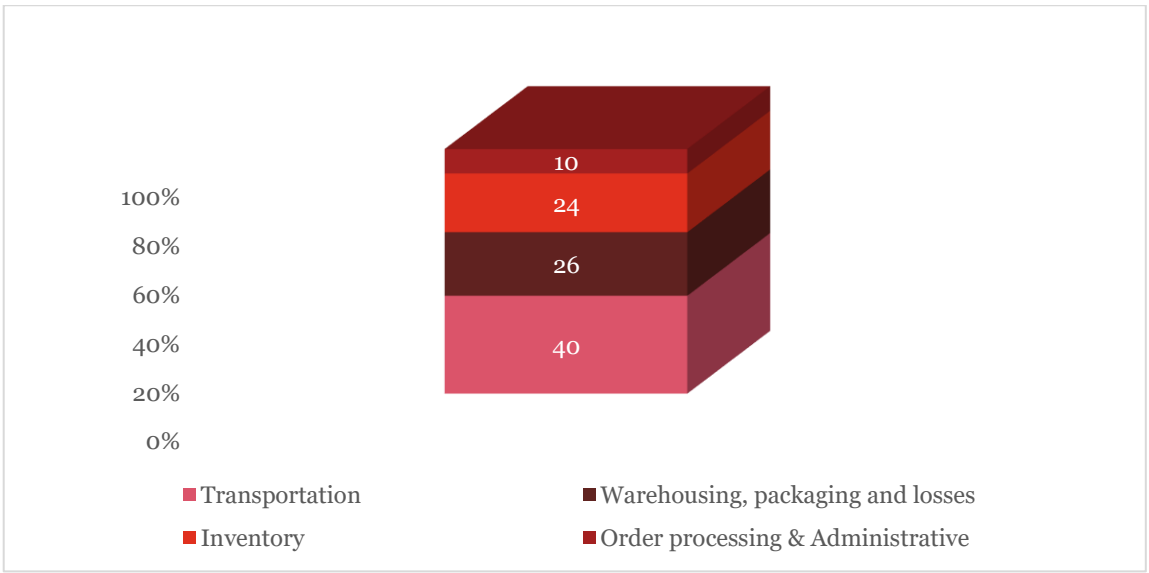
Key parameters	India	Global
Turnaround time at ports (in hours)	84	7 (HongKong and Singapore)
Avg. Distance (Port or Airport Supply chain) in km & Lead time (in days) for exports*	246 (3 days)	337 (2 days) – China 43 (2 days) – Vietnam
Avg. fuel costs (per litre) in USD for Diesel	0.96	0.96 – China 0.68 – Vietnam
Avg. time for clearances	3-4 days	1-2 days

Source: Connecting to Compete 2018, Trade Logistics in the Global Economy-The Logistics Performance Index and its Indicators, World Bank, https://www.globalpetrolprices.com/diesel_prices/Indian Railways, World Bank, Edelweiss research, 2019

The study team conducted an analysis to determine the average logistics cost in India as well as the State of Karnataka based on the elements of logistics costs as depicted in Figure 19.

At the Pan-India level, transportation costs in logistics are high – nearly 40% of the total logistics costs, followed by warehousing charges at 26%, inventory charges at 24% and finally administrative charges at 10%[24]

Figure 19: Elements of Logistics Costs



Source: Goods on the move- NITI AYOG, 2018

Within the State of Karnataka, the average logistics costs for overall trade are incredibly high – with an average ~60% costs associated with transportation, followed by

[24] NITI AYOG – Goods on the move, 2018

administrative costs, warehousing related costs and inventory costs respectively. The details[25] are set out in **Table 9** and **Table 10** respectively.

Table 9: Average Logistics Cost in Karnataka (Export Cycle)

(All costs in INR)

Sl. No.	Elements of Logistics Cost	Twenty Foot Equivalent (TEU)	% of Cost	Forty-foot equivalent unit (FEU)	% of Cost
1	Packing (lashing / choking /securing of cargo in container)	2,000	6.35	4,000	8.16
2	Outbound transportation	20,000	63.49	30,000	61.22
3	Documentation, Customs, agency handling	5,000	15.87	7,500	15.31
4	Warehouse handling in Customs area	4,500	14.29	7,500	15.31
	Total	**31,500**	**100.00**	**49,000**	**100.00**

Table 10: Average Logistics Cost in Karnataka (Import Cycle)

(All costs in INR)

Sl. No.	Elements of Logistics Cost	Twenty Foot Equivalent (TEU)	% of Cost	Forty-foot equivalent unit (FEU)	% of Cost
1	Removal of packing / lashing / choking	2,000	5.48	4,000	7.08
2	Inbound transportation	20,000	54.79	30,000	53.10
3	Documentation, customs, agency handling	10,000	27.40	15, 000	26.55
4	Warehouse handling in customs area	4,500	12.33	7,500	13.27
	Total	**36,500**	**100.00**	**56,500**	**100.00**

Source: Stakeholder Consultations

Note: Average costs per 20' & 40' loads have been considered; Average transportation costs have been considered for movement within Karnataka State; Average weight of cargo moving in 20' & 40' containers are 15 MT and 18 MT respectively

In the State of Karnataka, roads carry ~65% of the freight in the state. The expensive lumpsum costs quoted by the transporters is due to poor condition of approach roads to industrial areas, congestion within the major cities due to urbanization, peak hour traffic

[25] Stakeholder Consultations

restriction in truck movement, construction of major infrastructure projects such as metro projects, flyovers, under-pass etc.

The State of Karnataka is also losing a lot of revenue when it comes to waterway transport as well due to critical issues such as poor last mile connectivity, delay in timeliness of cargo delivery, inefficient regulatory processes which necessitates better state facilitation and co-ordination. The study team assessed the current utilization of NMPT and other seaports in Karnataka and discovered that only 65%-70% of the capacity is utilized due to the aforementioned issues. The remaining 30%-35% happens through other ports in the neighboring States. These issues represent a major loss of revenue to the State as set out in **table 11** below:

Table 11: Estimated loss of revenue to the State of Karnataka (in USD Mn)[26]

Port	2015-16	2016-17	2017-18	2018-19	Major commodities
Chennai (both Sea and Air)	1,330	1,375	1,588	1,488	Ready Made Garments (RMG), textile, tobacco, electrical and Mechanical Appliances.
Cochin	175	166	164	108	Coffee, Textiles, cosmetics, Ready to eat products
Tuticorin	315	297	445	523	RMG, Electrical Machinery
Kattupalli	55	261	329	386	RMG, Iron and Steel, 2 wheelers
Nhava Sheva	664	531	622	813	RMG, Sugar, Pharma, Cosmetics, electrical components
Krishnapattinam	60	87	138	101	Granite, RMG, Tobacco
Ennore	104	98	118	77	Road vehicles
Marmagoa	378	1010	1028	696	Iron and Steel, Granite

Source: DGCIS, Kolkata

Along with Kerala and Goa, Karnataka is one of the largest producers of raw cashew nut in the country. Cashew is primarily grown in Dakshina Kannada, Udupi, Kodagu and Chikkaballapura districts in the State. In the year 2018-19, cashew exports saw an annual decline of ~USD 67 million (from USD 188.4 million in 2017-18 to USD 121.5 million in 2018-19)[27].

The study team conducted a cost analysis for handling charges in NMPT vis-à-vis Cochin Port Trust (CPT). As per the Tariff Authority for Major Ports (TAMP), Ministry of Shipping,

[26] EXIM Analytics

[27] *DGCIS, Kolkata*

Government of India, the handling charges[28] for loaded TEU (foreign) in NMPT is **INR 3,479.68 per container[29].** Similarly, the handling charges for loaded TEU (foreign) in CPT is **INR 3,593.97 per container[30]**

- Even though NMPT offers cheaper price when it comes to handling charges, one of the reasons for the decline, as stated earlier, is because Vietnam is offering raw cashew at a much cheaper price in global market resulting in a fall of 45% in Karnataka's Cashew Exports.
- Secondly, during the study team's stakeholder consultations it was discovered that under the Karnataka Agricultural Produce Marketing Regulation (KAPMR) Act, also known as APMC Act, raw cashew attracts 1.5% market fee. To avoid this, major overseas sellers are not transferring raw cashew stocks to Karnataka resulting in loss of revenue to the state as well as NMPT (as EXIM movement of cashew is predominantly done via. NMPT). Therefore, Kerala (CPT) and Tuticorin (V.C Chidambaranar Port Trust) which do not have APMC Act are getting an undue advantage over Karnataka.

An Origin-Destination (OD) analysis has been undertaken to understand key issues pertaining to the sector in the State

This analysis has been carried out based on assessment of source of raw materials and destination of the final products. This analysis reveals some of the major reasons for higher transport & logistics related transaction costs as compared to some of the progressive states in the country.

The study team conducted the OD Analysis considering the following inputs to develop a framework as represented in **figure 20** below:

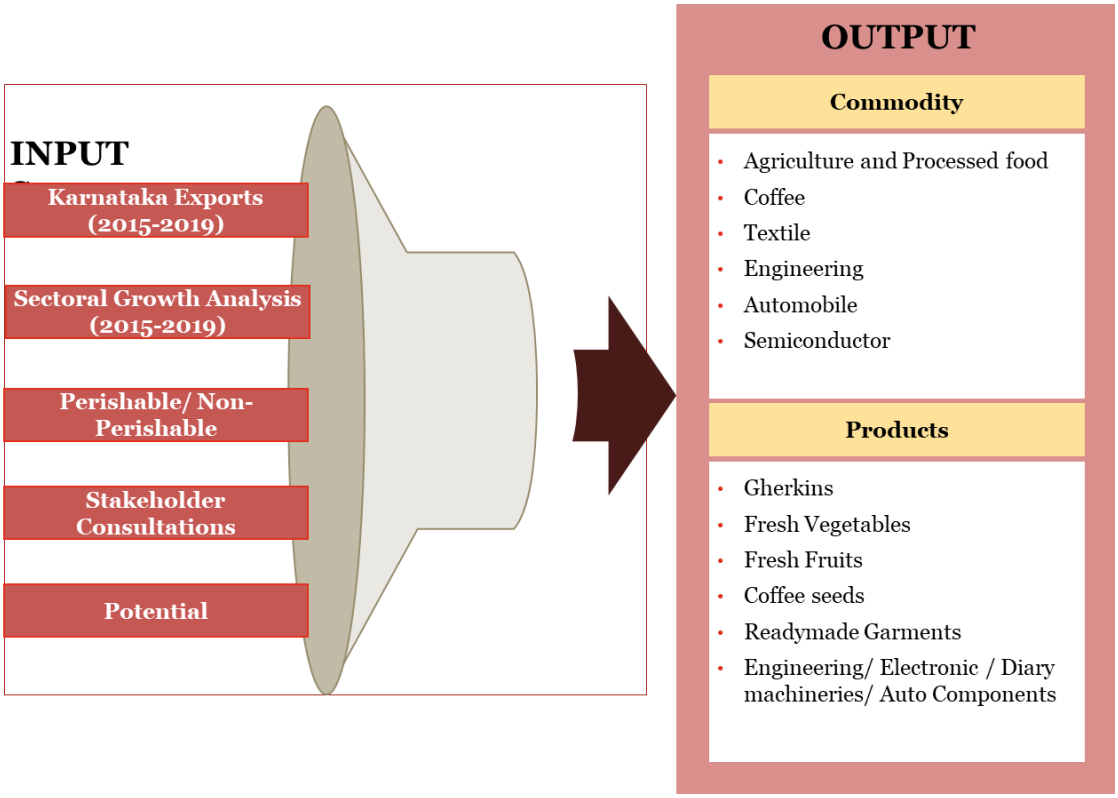
- State exports details during the time period 2015-2019
- Sectoral/ Product wise growth analysis during the time period 2015-2019. As indicated earlier in this section the shortlisted sectors constitute ~70% of Karnataka's export share.
- Perishables/non-perishables
- Stakeholder consultations and
- Potential of Karnataka

The stakeholders consulted represent a vast spectrum across industry associations, exporters, freight forwarders, commission agents, transportation and logistics companies etc.

[28] From Ship to container yard or vice versa+ From Container yard to Truck or vice versa

[29] http://tariffauthority.gov.in/writereaddata/UploadFile/NMPTGNO84ORDRPASDON412017ALL_1175.pdf
[30] https://cochinport.gov.in/sites/default/files/inline-files/SOR%2001052020_1.pdf

Figure 20: Origin Destination Analysis framework



Source: Study Team Analysis

Table 12: Origin Destination Analysis

Sl.No.	Key Product Manufactured	Raw material source	Mode	Production Centre	Mode	Export Gateway	Mode	End Destination
1	Processed Vegetables (Gherkins)	Kolar, Chitradurga, Chikkaballapura	Road NH75, NH48, SH 153, NH44	Bengaluru, Kolar, Hassan, Hubballi	Road Bengaluru City NH 75, SH 153, NH 44	ICD Whitefield NMPT	Rail (Container Freight to Chennai) Sea Freight	Europe & Russia Belgium, Italy & USA
2	Fresh Vegetables (Onion, Capsicum, Tomato, Okra)	Kolar, Chitradurga	Malur Irradiation Unit Road NH 75, NH 48, SH 153, NH 44	Bengaluru	Hyderabad Road NH 44	BIAL ICD Whitefield	Air Freight Rail (Container Freight to Chennai)	Middle East, Indonesia, Malaysia
3	Fresh Fruits (Pomegranate, Papaya)	Hubballi, Dharwad, Koppal, Vijayapura	SH 73, SH 23, SH 13, SH 34	Hubballi, Dharwad, Belagavi, Vijayapura	NH 48, AH47	Mumbai	Air Freight	Middle East, Indonesia, Malaysia, USA

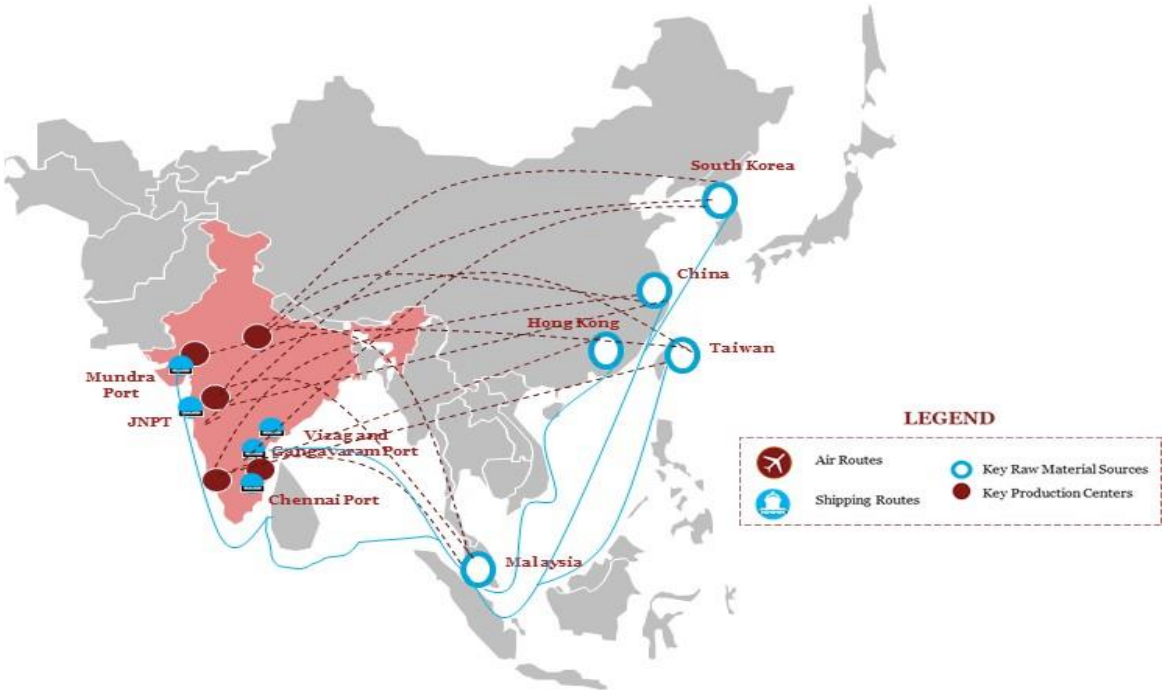
Sl.No.	Key Product Manufactured	Raw material source	Mode	Production Centre	Mode	Export Gateway	Mode	End Destination
4	Coffee	Coorg, Chikkamagaluru	Road NH 275, SH 88B, SH27, SH57	Hassan Chikkamagaluru	Road NH 75 NH73 NH169 SH27	NMPT	Seaport (Colombo)	Italy, Belgium, Russia, USA, UK
5	Readymade Garments (RMG)	Ramanagara, Bengaluru	Road SH3, SH17, SH34, SH85, SH91, SH95, NH275	Bengaluru City	Road Bengaluru City	ICD Whitefield	Rail (Container Freight to Chennai)	Australia, Germany, Norway, France, UK, Sweden
6	Cashew	Dakshina Kannada, Udupi	Road NH75, NH 66	Dakshina Kannada, Udupi	Road NH 75, NH 66	NMPT	Seaport (Colombo)	Europe, USA
7	Engineering	Outskirts of Bengaluru	Road Bengaluru City	Bengaluru City	Road NICE Corridor, Hosur Road, Whitefield, Hyderabad Road NH44	ICD Whitefield BIAL	Rail (Container Freight to Chennai) Air Freight	USA, Japan, France, Netherlands, Singapore, Australia, Germany, UK
8	Automobile	Plastic Componenets from Andhra Pradesh, Engine Componenets from Tamil Nadu	Road NH 48, NH 44, NH75	Bengaluru (Urban & Rural), Ramanagara, Kolar, Mysuru, Dharwad, Tumakuru, Belagavi	NICE Corridor, Hosur Road, Whitefield, Hyderabad Road NH44, NH 48, NH 75	ICD Whitefield Mumbai	Rail (Container Freight to Chennai) Air Freight	Domestic consumption, APAC region

Source: Study Team Analysis

As a case, the study team has undertaken a detailed OD Analysis for the electronic components segment.

The mapping of sources of raw material is illustrated in Figure 21.

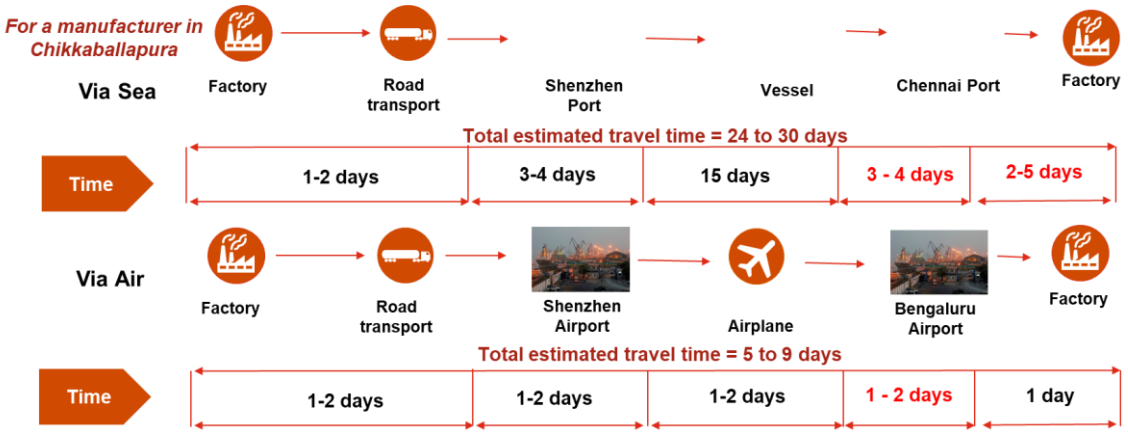
Figure 21: Origin-Destination for electronic components (raw materials)



Source: Directorate General of Foreign Trade data, Stakeholder Consultations and Study team analysis

As can be seen from the figure above, electronic components are both domestically manufactured and imported (primarily from Eastern and South-Eastern Asian countries). For Karnataka, Bengaluru accounts for a majority of domestic production, while international sources include China, Taiwan, South Korea, Hong Kong, Malaysia and Singapore. Bengaluru Airport acts a key gateway for sourcing of components. Domestic sourcing is primarily done from regions around Bengaluru, Tamil Nadu, Andhra Pradesh and from the NCR region and primary mode of transport is by air and road.

Figure 22: Modes of transport and time taken



Source: Stakeholder Consultations and Study team analysis

The preferred modes of transport are both air and sea - choice for which is driven primarily by factors such as customer requirement (time available for the shipment), value and volume of the product, temperature and weather, etc. From the figure 22 above, it can be

seen that time taken by air is significantly lower than that by sea. Interactions with stakeholders has revealed that sea is generally the preferred mode as production schedules for large players is set out almost six months in advance. However, for high value components and in case of contingencies, air is the preferred mode, as high value of the component often offsets the higher costs associated with air transport.

Logistics inefficiency in Karnataka is due to larger lead times, additional time required for cargo movement, and the cost of logistics. The following table shows the cost of logistics for a firm set up in Chikkaballapura. Though Chikkaballapura has relatively larger lead distances to major seaports in the vicinity, thereby resulting in longer travel times and larger costs, its proximity to Kempegowda International Airport, Bengaluru, is major advantage to the region. The comparison of logistics cost for electronics manufacturing regions in India is represented in Table 13 below.

Table 13 : Comparison of logistics cost for electronics manufacturing regions in India

Average Distance (in KM) and transport cost per ton		Karnataka		Andhra Pradesh		Gujarat		Tamil Nadu	
		Chikkaballapur		Chittoor		Sanand		Sriperumbudur	
Mode	**Gateway**	**Distance**	**Cost**	**Distance**	**Cost**	**Distance**	**Cost**	**Distance**	**Cost**
Air	Bangalore Airport	40	3,800	182	12,000				
	Chennai Airport			152	10,000			30	2,600
	Ahmedabad Airport					45	1400		
Port	Mundra					270	21,000		
	Kandla					280	18,000		
	Chennai	337	22,000	164	10,000			43	3,000
	Krishnapatnam	347	23,000	208	14,000				
	NMPT	390	25,000						

Source: Stakeholder consultations and study team analysis

Interactions with stakeholders has revealed that poor quality of infrastructure combined with long clearance times leads to delays, resulting in higher costs. **Table 10 and Table 11** also enables us to identify the key issues and bottlenecks faced by the logistics players in the State of Karnataka. Some of the major findings of the OD Analysis for electronics component segment and other products are summarised below:

1. Customs Process at Bengaluru Airport should be fast tracked to reduce time required for processing
2. Last mile connectivity to be improved and developed based on future requirements; thereby reducing overall travel time

3. Inadequate investments in cold chain infrastructure (temp-controlled warehouses, trucks) to handle agricultural, pharma and other perishable commodities
4. Connectivity issues from different National and State highways to NMPT
5. Critical Infrastructure connectivity/ Widening and maintenance of approach roads to industrial areas in Nelamangala and Dabaspet
6. Transporters demand relatively high lumpsum charges citing congestion in Whitefield region, last-mile connectivity and cargo movements to ICD Whitefield, Bengaluru
7. Peak hour traffic restriction and unauthorized public vehicles parking (Eg: Bangalore Metropolitan Transport Corporation (BMTC) buses) are affecting smooth movement of trucks.
8. Restrictions in truck movement to ICD Whitefield due to the construction of metro projects in Bengaluru

Interactions with stakeholders have further revealed specific issues and bottlenecks curtailing the growth in the State. Some of the key issues as stated by the stakeholders is set out in **table 14** below:

Table 14 : Summary of Stakeholder Consultations

Sl. No	Type of issue	Key issue
1	**Government facilitation**	• Stakeholders were unanimous in their view that the sector needs more attention from the State Government.
2	**Critical Infrastructure related**	Widening and maintenance of roads. Some of the roads that experience congestion include: • Approach roads to industrial areas in Nelamangala and Dabaspet • Traffic congestion and connectivity issues to ICD Whitefield • Last mile connectivity issues from different National and State highways to NMPT namely Shiradi Ghat, Sampaje Ghats • Japan International Cooperation Agency (JICA) funded Hassan-Mangaluru Tunnel Corridor needs to be fast tracked. This could be considered under Bharatamala Programme • Ankola- Hubballi railway link to be made operational • Free Trade Warehousing Zones (FTWZ): Government may develop FTWZ under JV / PPP mode on the coast of Karnataka
3	**Ease of Doing Business**	• Development of separate governmental procedure for allocating land for warehousing and logistics parks near ICDs/ ports /etc. • State facilitation for regular interactions between the industry and transporter unions to jointly address issues to enable logistics ease

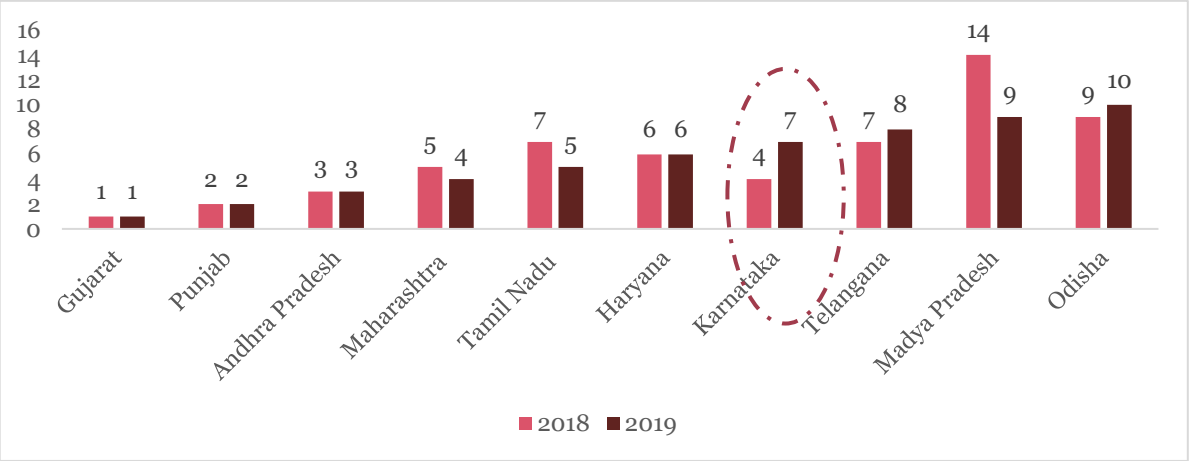
Sl. No	Type of issue	Key issue
		• Exemption of APMC Cess of 1.5% of market fee on raw cashew nuts • Coordination with Indian Railways to examine better rail evacuation from terminals in Whitefield. • Lack of single agency for issue of necessary certificates and clearances of Processed Foods • Restrictions in truck movement to ICD due to the construction of metro projects • Higher number of cases of thefts, especially along the National highways
4	**Skilled Workforce**	• Skilled Labour remains a challenge in the state which is an essential conduit to boost the logistics sector. Skill development & up-skilling programs are very minimal and needs to be upscaled by the State Government/ Departments
5	**Technology promotion and Innovation**	• Stakeholders expressed the limited usage of technology & innovation to improve quality of service in the logistics sector • Asset Management - Government may identify and adopt standards such as Transported Asset Protection Association (TAPA) standards for prevention of theft of logistics asset
6	**Marketing Support**	• Products from the State require branding & marketing support. • Suitable markets need to be identified for the products made in the State

Source: Stakeholder Consultations

The details of Stakeholders interactions are attached as **Annexure** in the later section of the report.

Some of the issues expressed by the stakeholders during the consultations have also been validated in the Logistics Ease Across Different States (LEADS) report released in 2019. While Gujarat, Punjab and Andhra Pradesh have successfully maintained their Top three positions in 2018 and 2019, Karnataka on the other hand has slipped from fourth in 2018 to seventh in 2019 as represented in **figure 23**.

Figure 23: LEADS ranking



Source: LEADS 2019, GoI

Best Practises adopted by Top 5 states in India:

Table 15 below identifies some of the best practices adopted by the Top 5 states in India to ensure a favourable operating environment for logistics and trade in the state.

Table 15 : Transport & Logistics best practices adopted by Top 5 states in India

Sl. No	State	Best practices adopted
1	**Gujarat**[31]	• Ranked #1 in the LEADS index in 2019 • First state to formulate an SEZ policy, which includes flexible labour laws and exit options for investors • Development of the Delhi-Mumbai Dedicated Freight Corridor to increase connectivity to non-major ports • Out of 42 ports located along its coastline, 41 are non-major ports while one port, i.e., Kandla is a major port. Out of 41 non-major ports in the State, 17 are handling cargo. • To promote skill development, the state Government has constituted industrial training institutes in each district to train manpower for the shop floor level
2	**Punjab**[32]	• Ranked #2 in the LEADS index in 2019 • Amritsar-Kolkata Industrial Corridor (AKIC) to facilitate easy movement of freight across states • Development of industrial warehousing hub in Zirakpur-Tepla-Rajpura • Dedicated Logistics Development Cell to facilitate industrial sector in the state
3	**Andhra Pradesh**[33]	• Ranked #3 in the LEADS index in 2019

[31] IBEF 2019, Gujarat Industrial Development Corporation
[32] Invest Punjab, December 2019
[33] https://www.apindustries.gov.in/VCIC/Default.aspx, http://apvision.ap.gov.in/msme.php.

Sl. No	State	Best practices adopted
		• Ranks #1 in India according to the DIPP study on implementation of Business reforms 2016 for Ease of Doing Business • Home to 19 operational SEZs. These SEZs are spread across diversified sectors which include textiles & apparel, food processing, footwear & leather products, multi-product, pharma, IT SEZs, etc. • Vizag Chennai Industrial Corridor (VCIC), part of East Coast Economic Corridor (ECEC), is the first coastal economic corridor in the country. It is aligned with the golden quadrilateral and covers more than 800 kilometers of the state of Andhra Pradesh's coastline.
4	**Maharashtra**[34]	• Ranked #4 in the LEADS index in 2019 • Most industrialised state in India and has maintained the leading position in the industrial sector in the country • Jawaharlal Nehru Port is the largest port in India in terms of container traffic. • Development of the Delhi-Mumbai Industrial Corridor (DMIC) to increase connectivity to non-major ports. As a part of DMIC, Aurangabad Industrial City (AURIC), is being developed on a 10,000 acres land as a Greenfield smart industrial city • Proposed development of Alibaug-Virar multimodal corridor for accessibility to Navi Mumbai International airport, Mumbai Trans Harbour link and Jawaharlal Nehru Port
5	**Tamil Nadu**[35]	• Ranked #5 in the LEADS index in 2019 • Tamil Nadu has 3 major ports: Chennai, Ennore & VO Chidambaranar along with 15 minor ports • Tamil Nadu Skill Development Corporation (TNSDC) has identified central / state government institutions and agencies along with industries for imparting short term skill development training programmes • State has one mega food park, eight industrial parks and four Agri - Export Zones • With a well-developed auto ecosystem, Tamil Nadu is one of the top 10 automobile hubs in the world. Chennai, the state capital, is also known as the Automobile Capital of India • Development of footwear and leather products SEZ (154 acre) is a textile and apparel specific SEZ in Irungattukottai, Kancheepuram district

[34] The Mumbai Metropolitan Region Development Authority (MMRDA) 2020, IBEF 2019
[35] Invest Tamil Nadu, 2019

A conducive environment needs to be set out for the transport & logistics sector in the state of Karnataka in order to address the key challenges/bottlenecks identified.

The following sections lay out the strategy to address these roadblocks impeding the growth of the sector in the state of Karnataka.

4. Sector Development Strategy

4 Sector Development Strategy

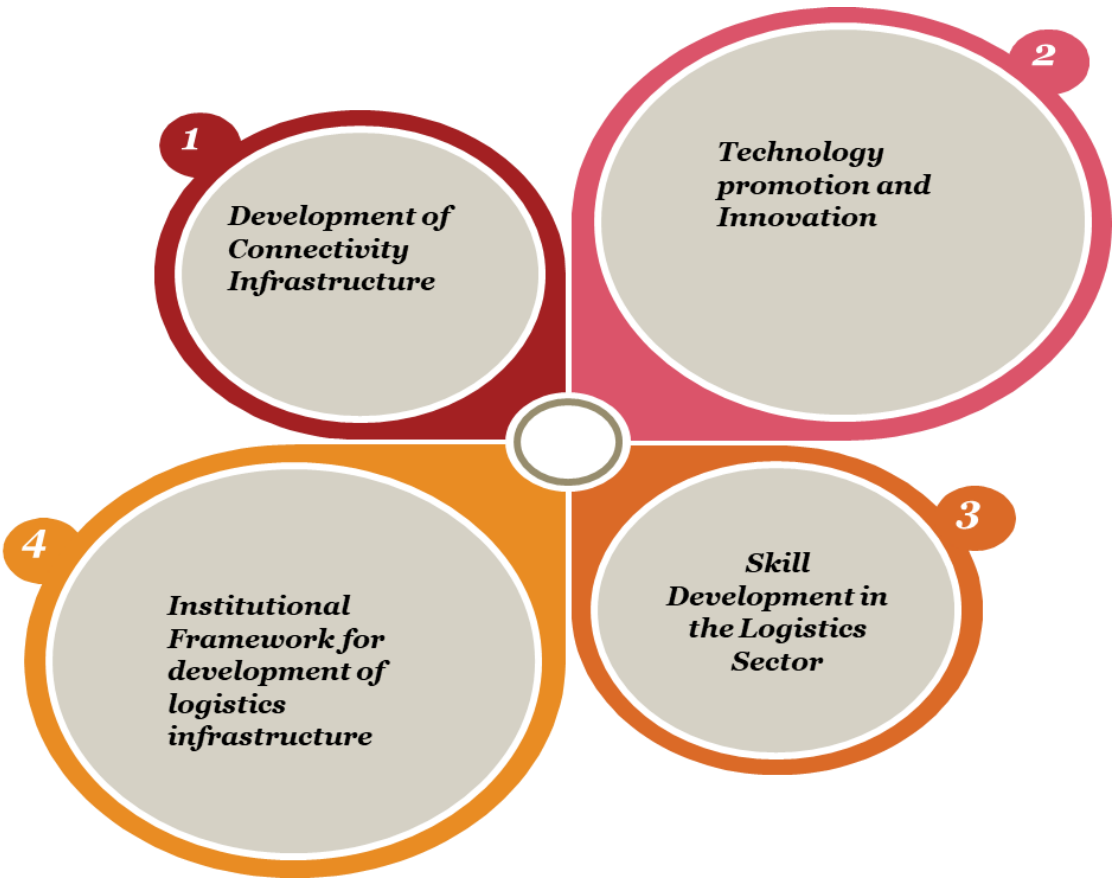
Strategic Interventions:

Based on the research and analysis, stakeholder consultations mentioned in the previous sections, the study team has assessed some of the key impediments faced by the players in the T&L sector in Karnataka. The State is unable to realize its potential to the fullest owing to multiple reasons stated in above sections.

To increase the competitiveness of Karnataka and overall logistics performance vis-à-vis other leading States in the country and globally, the following interventions have been identified through the study - in line with the five pillars of the Champion Service Sector Scheme.

Guided by the strategic interventions as represented in Figure 2 of the report, the study team proposes to implement a four-pronged strategy that will significantly improve the T&L industry as set out in **figure 24** below:

Figure 24: Four-pronged strategy for T&L Sector



Source: Study Team Analysis

Development of Critical Connectivity Infrastructure:

Infrastructure is key to support movement of goods and logistics of shipment. Since infrastructure investments are capital intensive, Governments can play a critical role for infrastructure development. Most infrastructure projects need a longer time horizon and therefore, strategies for development could be categorized as follows:

- Short and Medium-term strategies
- Long term strategies

Such an approach would be useful in setting the right priorities for bridging infrastructure gaps, which are doable in a shorter period horizon of 3 to 5 years,and planning larger projects which require a relatively longer period and are often implemented in multiple phases. This approach will also enable the Government to prioritize and plan its budget and allocate funding in in a judicious manner while meeting the infrastructure requirements of the State.

This study has identified some of the major challenges and bottenecks in the previous sections. To address these issues, the following strategies are recommended:

Short- and Medium-term strategies

- There is an urgent need to decongest the approach road to all existing Dry Ports and major seaports. The approach roads to Nelamanagala and Dabaspet Industrial Areas, ICD Whitefield and all the major National and State highways connecting to NMPT must be upgraded to ensure first and last mile connectivity and timeliness of cargo delivery
- Development of Free Trade Warehousing Zones: Government shall develop FTWZ under JV / PPP mode on the coast of Karnataka as this will create huge employment opportunities and revenue to State and Central Government
- Improving facilities for pre-inspection shipments at the custom bonded godowns.
- Improving facilities for screening of export cargo at air cargo complexes, ICDs and seaports for speeding up the process
- Adequate investments in cold chain infrastructure (temp-controlled warehouses, trucks) to handle agricultural, pharma and other perishable commodities. This would include fast-tracking of the projects approved under Assistance to States for Development of Export Infrastructure and Allied Activities (ASIDE) Scheme.
- Development of warehouses by the State Government as it will help marginal / growing MSME food processing companies to utilize the facility for domestic and international consumption. Viability Gap Funding could be explored for assisting development of logistics parks / large warehouses (>10,000 Sqft) under PPP mode.
- Development of MRO hub in BIAL and surrounding areas will provide a boost to the sector. To enable the same, efforts should be made to attract investors for setting up of MRO facilities.

Long term strategies

- ICD at Whitefield is congested and scope for expansion is limited due to land availability issues. In the circumstances, it would be appropriate to plan for additional capacity of ICD at Malur in Kolar District, which also has railway siding connectivity
- Hubbali-Ankola railway line connecting the hinterland to the coast. This will improve the connectivity to the 10 minor ports of Karnataka and improve feasibility for the planned development of Belekeri, Tadadi and Karwar ports.
- Gauge conversion of the Hassan Mangaluru Railway line to improve rail connectivity to NMPT, taken up by Hassan Mangalore Rail Development Company Limited (HMRDC)
- Tunnel Road/Corridor from Hassan to Mangaluru needs to be fast-tracked. State Government and National Highway Authority of India (NHAI) should explore the option of including the development of Tunnel Corridor under the Bharatmala Programme in order to expedite the development work.
- Expediting development of Chennai-Bangalore Industrial Corridor, Mumbai-Bangalore economic corridor and Kochi-Bangalore Industrial Corridor will facilitate easy movement of freight across states, attract industrial investment and trigger the overall economic growth of the State

In addition to the critical infrastructure interventions identified above, the following measures to promote T&L sector in Karnataka are recommended:

Skill Development in logistics sector:

Stakeholder consultations revealed that there is a dearth of skilled manpower within the sector in Karnataka. Availability of skilled manpower is very critical for the growth of logistics sector, especially due to the latest technological developments in the sector. In this regard it is recommended that the State Department of Commerce and Industries along with the Skill Development, Entrepreneurship and Livelihood Department (SDEL) of Karnataka should look at setting up three Logistics Academies in the State. In order to ensure regional spread, the Logistics Academies shall be set up in three district headquarters namely, Bengaluru, Dakshina Kannada & Belagavi.

Some of the proposed activities of the Logistics Academy are set out below:

- To facilitate skill development programs & up-skilling programs in partnership (as needed) with private training partners. These training partners should also support in placement of the students after successful completion of the course
- Develop a Logistics Career Industry Guide with the support of Logistics Sector Skill Council and enhance the perception of logistics industry as a career choice showcasing the nature of jobs available at various entry and senior levels.
- Owing to the dearth of skilled drivers in the logistics industry, setting up “Driver’s Training Institute” shall be encouraged under PPP mode through Viability Gap Funding (VGF)

The Logistics Academy should also facilitate technology inclusion & innovation which will improve the quality of services in the logistics sector

- Research & Development Wing- To promote Research & Development in the logistics sector, including emerging technologies in the logistics space such as Radio-frequency identification (RFID), Internet of Things (IoT), Block chain, Cloud Computing, Artificial Intelligence, Big Data analytics, Robotics and Automation.

- Promoting Innovation through Start-ups – The Logistics Academy should work hand in glove with the State Government and Karnataka Innovation and Technology Society (K-TECH) to identify and encourage innovative start-ups and technology companies in the logistics sector. This will ensure continuous and sustainable interactions & initiatives with the start-up ecosystem of the State

- Data and Analytics Centre: Creating a Data and Analytics Centre in the Logistics Academy to drive transparency and continuous monitoring of key logistics metrics.

- Asset Management: Government may identify and adopt standards such as Transported Asset Protection Association (TAPA) standards for prevention of theft of logistics asset

Institutional Framework for development of logistics infrastructure

To address the issues identified in the previous sections and boost the T&L sector in Karnataka, it is recommended that measures to enhance the Ease of Doing Business in the sector are undertaken . Guided by the stakeholder consultations, the study team proposes the following:

- Knowledge Thinktank on Logistics (KTL)

- Single window agency

- Project Management Unit (PMU)

Knowledge Thinktank on Logistics (KTL):

To ensure the continuous development and monitoring of the logistics sector in Karnataka, it is recommended that a Vision Group, under the Department of Commerce & Industries, Government of Karnataka should be set up. The Vision Group will drive the Knowledge Think Tank on Logistics for Karnataka. KTL will be responsible for identifying developmental strategies for the sector, policy reviews and attracting investments.

Proposed Members of Knowledge Thinktank of Logistics would constitute:

- ACS/Principal Secretary, Department of Commerce & Industries - Chairman
- Principal Secretary to Government - Revenue Department
- Principal Secretary to Government – Finance Department
- Principal Secretary to Government - Infrastructure Development Department
- Principal Secretary to Government - Department of Transport
- Principal Secretary to Government – Public Works Department (PWD) & Inland Water Transport (IWT) Department
- Chief Commissioner of Customs, Bengaluru zone
- General Manager, South West Railways
- Special Secretary or any other representative from Logistics Division, Department of Commerce, Government of India

- Commissioner for Industrial Development, Government of Karnataka- Member Convenor

Single window agency

1. To issue all the necessary certificates and clearances

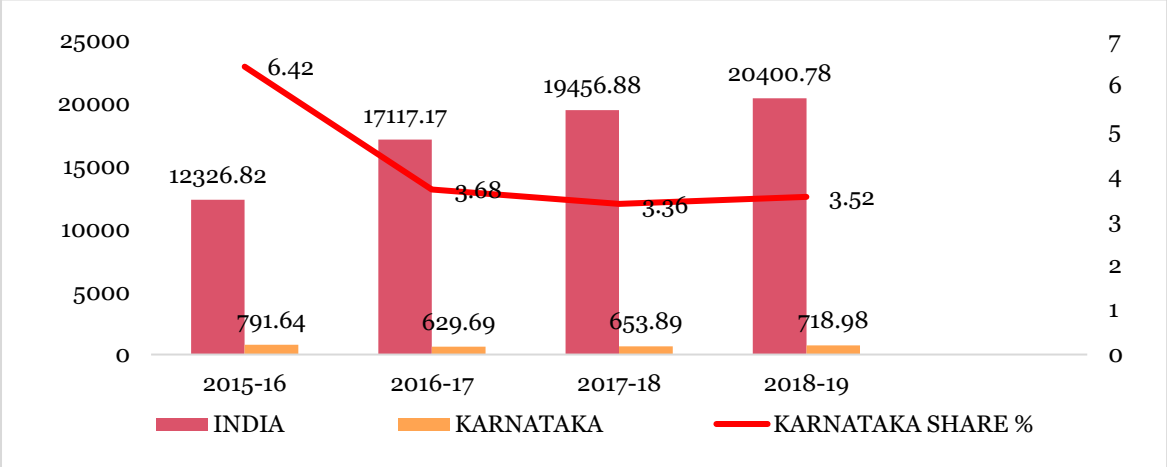
Stakeholder consultations have revealed that one of the major concerns when it comes to merchandize exports is lack of single agency for issue of necessary certificates and clearances.

As an example, the study team analyzed Karnataka's Agriculture and Food Processing sector owning to the fact that processed food products (*cereals, milk, meat, poultry, marine, fruits & vegetables*) require multiple clearances and approvals.

Over the last 4-5 years, while the growth of food processing sector in India is on an upward trajectory growing at a CAGR of 18.2%, the growth of food processing sector in Karnataka on the other hand is almost stagnant. The State's share in the National export over the last 4-5 years is also declining rapidly as represented in **figure 25**.

Figure 25: Share of Karnataka in National exports for Agri & Processed Food

(in USD Mn)



Source: DGCIS, Kolkata

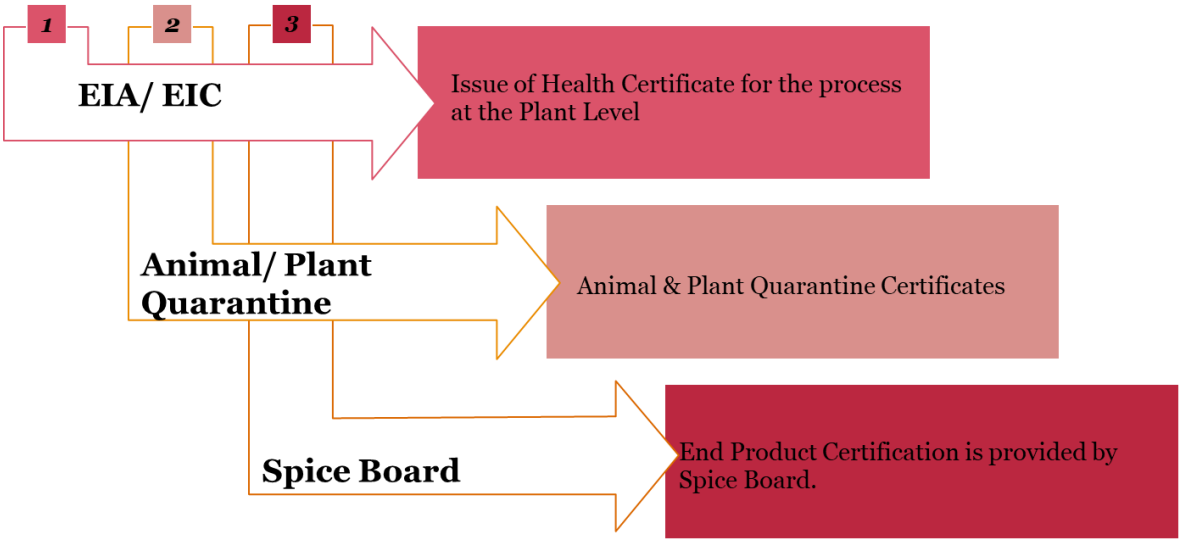
Currently, the typical process undertaken by the Processed Food exporters of Karnataka for procuring approvals/clearances and certifications as set out in **figure 26**:

- Exporters Inspection Council/ Agency (EIC/ EIA): EIC/EIA provides a Certificate of Inspection which is a document certifying that the concerned merchandise (including perishable goods) is in good condition immediately prior to its shipment. This is an annual inspection conducted at the Plant Level.

- Animal/Plant Quarantine: As an example, if it is a Milk/ Cottage Cheese product, then Milk must be certified by Animal Quarantine. Similarly, Plant Quarantine approval is needed for Vegetable/ Fruit products. At present, this clearance is obtained at the Plant Quarantine Station (PQS) in Hebbal, Bengaluru.
- Spice Board: Currently all the processed food products are tested in either Spice Board **Cochin** or **Chennai** due to unavailability of testing labs in Karnataka.

It is estimated that a typical testing laboratory takes anywhere between INR 15-20 crores to set up.

Figure 26: Current procedure to procure clearances & approvals



Source: Study Team Analysis

Karnataka is losing a lot of revenue in terms of less merchandize exports in processed food products. In addition to this, the food processing exporters in Karnataka are also facing unwanted duplication of work, which is high on investment in terms of cost, time & human capital. Therefore, there is a clear need to bring the above clearances and approvals under a single platform.

Similarly, the state should implement single window agencies especially for the clearances of commodities/ products with multiple clearances in order to facilitate ease of doing business.

2. Development of separate governmental procedure for allocating land for warehousing and logistics parks near ICDs/ ports /etc:

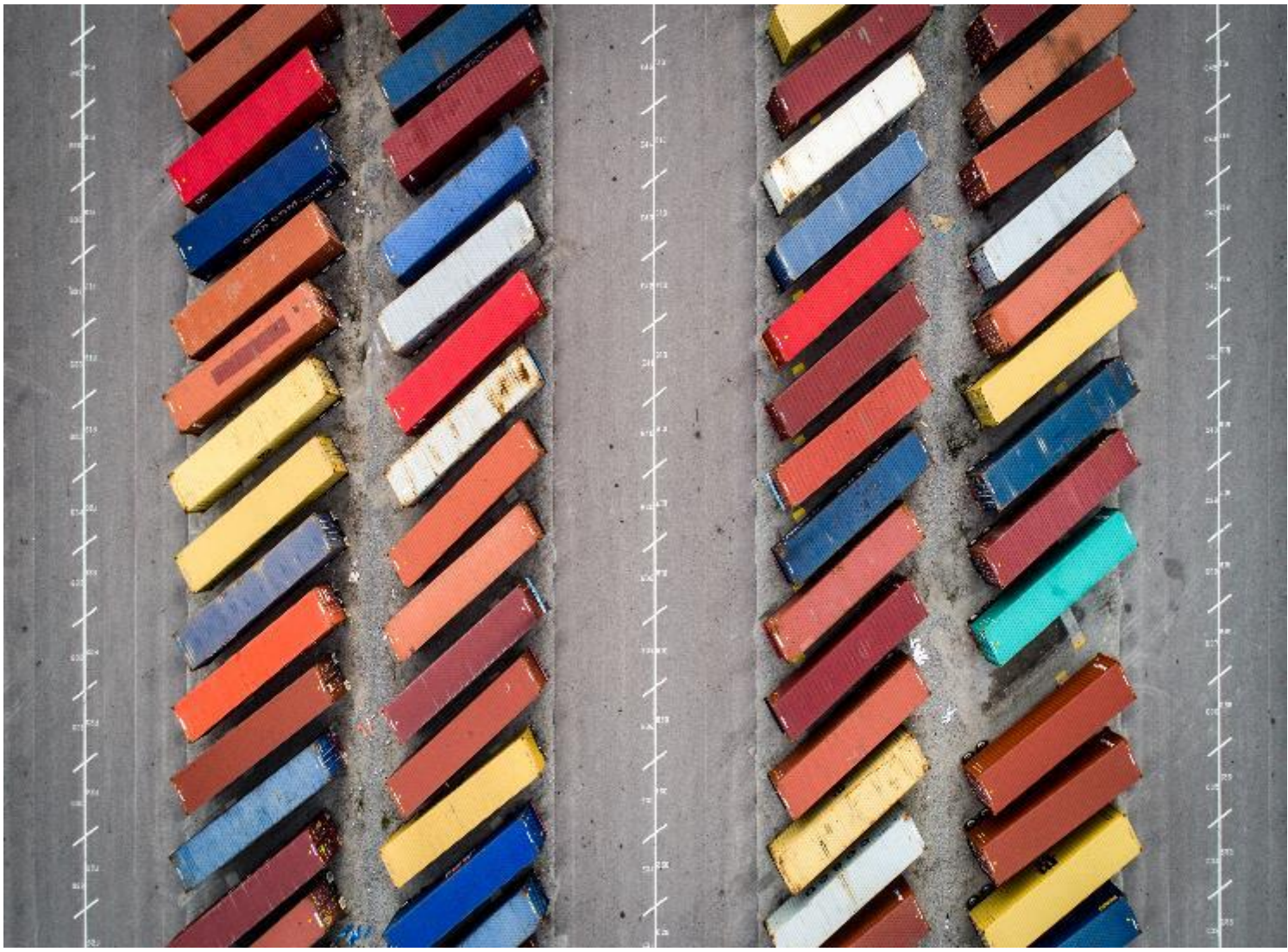
Warehousing and Logistics parks require huge land for facility to be developed. It is imperative for logistics parks and warehouses to be close to ICDs/ ports / etc. Therfore, in order to fasttrack the land aquisition as well as land allocation procedures, a separate governmental procedure may be initiated.

Project Management Unit (PMU):

To ensure effective implementation of the action plan, it is recommended that a PMU is setup for development, facilitation and continuous monitoring of Transport & Logistics Sector in the State.

The indicative functions of PMU will include (but not limited to):

- Investment Facilitation for logistics projects in the State.
- Facilitating and monitoring the activities of Knowledge Thinktank of Logistics.
- Data collection - Collecting industry data such as district export data, exporters data, and other key industry statistics for analysis and dissemination.
- Identifying logistics infrastructure gaps and potential projects.
- Identifying potential infrastructure projects in the state logistics sector.
- Monitoring and review of the logistics related projects.



5. Implementation and Funding Plan

5 Implementation and Funding Plan

The objective of the report was to prepare an Action Plan for Transport & Logistics Services for Karnataka under the Champion Services Sector Scheme. In the previous sections, the study team has analyzed the global, national and regional trends in the T&L sector, the issues pertaining to the sector in the State and the sector development strategy with action points drawn.

In this section we have explored the implementation mechanism and funding requirement for each of the interventions under the proposed action plan. For each of the interventions, **table 16** below summarizes the responsible agency for implementing the suggested intervention and the funding requirement for the same. The table also aligns each of the proposed interventions with the champion service pillars.

Table 16: Implementation and Funding Plan

S. No	Action	Champion Services Pillar	Proposed Funding	Implementing Agency
Development of Infrastructure				
1	• *Improving Critical Infrastructure and Connectivity* • *Develop FTWZ under JV / PPP mode on the coast of Karnataka*	*New Infrastructure*	*~ INR 2,000 crores (lumpsum[36])*	*Infrastructure Development Department, NHAI, Department of Transport*
Skill Development				
2	*Setting up Logistics Academy at 3 district headquarters* *Promoting adoption of digital technologies such as Radio-frequency identification (RFID), Internet of Things (IoT), digital tagging etc.*	*New Mindset*	*~ INR 50 Crores*	*Department of Transport/ Department of Commerce & Industries/ ITBT*

[36] Detailed cost, feasibility analysis needs to be conducted by the State

S. No	Action	Champion Services Pillar	Proposed Funding	Implementing Agency
Institutional Framework for development of logistics infrastructure				
4	• *Comprehensive Vision Group* • *Awareness campaigns to promote job and career opportunities in logistics sector*	*New Mindset*	*~INR 5 Crores*	*Department of Commerce & Industries*
5	*Single window agency to issue all the necessary certificates and clearances*	*New Sector/ New Standard*	*~ INR 15 – 20 Crores*	*Department of Commerce & Industries*
6	*PMU, to be setup in*	*New Standard*	*NA*	*Department of Commerce & Industries*

Source: Study team analysis

The total funding proposed for implementing all the interventions under the Champion Services Action Plan for Transport & Logistics Services in Karnataka is **~ INR 2,070 – 2,075 Crores**.

Going forward, a proposal for the CSSS - T&L Sector needs to be formulated by the State Nodal Department in the prescribed format mentioned in the Champion Service Sector Guidelines issued by the Government of India. It is suggested that the Department of Commerce & Industries, Government of Karnataka engage a Project Monitoring Unit (PMU) to provide support for executing the proposed interventions. This will ensure that the action plan is implemented in a holistic and timely manner.

6. Annexure

6 Annexure

Details of stakeholder consultations[37]:

Some of the key insights revealed during the Stakeholder consultations are set below:

1. Infrastructure facilities at NMPT should be upgraded from semi-mechanized to fully mechanized and connectivity to NMPT must be improved
2. Port charges and charges of CONCOR should be on par with other ports and ICDs across the neighboring States and country
3. Belagavi Airport to be converted as an International Airport to facilitate more investment and promotion of Agri and perishable goods exports from North Karnataka
4. Last mile connectivity to ICD Whitefield: Movement of Containers from the industrial areas in and around Bengaluru to ICD Whitefield is very poor. Connectivity infrastructure needs to be upgraded
5. Few stakeholders in the coffee segment suggested setting up of ICD in either Hassan or Chikkamagaluru to improve connectivity to NMPT
6. Common Facilities like storage, testing facilities/ lab should be developed under the Trade Infrastructure for Export Scheme (TIES)
7. Tunnel Road between Hassan and Mangaluru needs to be fast tracked
8. The port handling charges in NMPT is low, yet exporters prefer Chennai or Krishnapattinam ports because of the poor connectivity to NMPT
9. Connectivity to Colombo port and Jebel Ali needs to be upgraded
10. Providing tax holidays to the vessel operators to enhance NMPT participation
11. Limited usage of technology & innovation to improve quality of service in the logistics sector
12. Skill development programs to improve skilled labour in the sector
13. Separate Green Channel for export of perishable Agri commodities
14. High Import duty on Indian Gherkins in countries like, USA, UK & EU. The same needs to be negotiated through bilateral trade agreements to facilitate the 100% exportable Agri commodities from the state
15. Frequent transporter unions' strike impacts Karnataka's logistics ecosystem

[37] FKCCI, KASSIA, ICD Whitefield, NMPT, KCCI, KSIA, IGEA, Coffee and Cashew Exporters, Freight forwarders