KALE
Industry Solutions, Customised Approach

Technology Survey For The Indian Logistics Industry-2008

Foreword

"Forget Logistics and you lose" goes the famous wartime maxim. This could not have been more appropriate for the contemporary corporate world. Logistics as an industry is gaining a lot of importance globally and is one of the fastest growing industries in the world.

India's emergence in the global business landscape has given a boost to the domestic logistics industry like never before. Exports have grown at 26% CAGR and imports at 33% for the period 2003 – 2007. The rapidly growing economy is producing an explosive market for logistics services. Taking cognisance of this fact, the government is also taking various steps to boost the industry's potential by announcing plans to spend $17 billion on transportation infrastructure by 2010. Plans are also afoot to set-up a council to build efficiencies in the sector.

The potential has resulted in a steady increase of the number of players in the industry. Smaller players are setting up shop, existing players are consolidating and larger players are setting up centres of excellence. There is a lot of activity happening in this highly fragmented market and the trends are quite revealing. 3PL players are growing at over 25%. Small and medium family owned enterprises are growing in stature in the integrated logistics space. Global majors have committed to huge investments for their Indian operations. PE funds are increasingly eyeing the sector. The sector has already attracted investments of over Rs. 20,000 Crs in the first half of 2008.

Overall there is one realisation - what will eventually differentiate the also-rans from the successful players is the effective use of technology. Moving from "nice to have" to being "the necessary devil" the Indian Logistics industry is seeing a transition in the way technology is being perceived. Technology is expected to remove gross inefficiencies in the operations and will soon become the business driver for the Logistics companies in India.

Recognizing this dire need, "The Technology Survey for Indian Logistics Industry – 2008" was commissioned by Kale Consultants to Feedback Business Consulting Services Pvt Ltd. Feedback is a premier business-to-business research based consulting firm, operating in India since 1985. Feedback has enormous experience in research engagements across diverse industry verticals and sectors. This report presents the key findings of the survey and provides valuable insights into the future of technology in the Indian Logistics Industry.

We are sure that this report will be an eye-opener for many, and a guide to all the stakeholders of the industry. We thank all those who have participated in the survey this year and look forward to your views in coming years.

Sumeet Nadkar

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Head – Logistics SBU
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Executive Summary

The furious pace of economic growth in India has necessitated unparalleled focus and significant investments in expanding infrastructure. Logistics constitute an important 'cog in the wheel' in the overall infrastructure development. The current logistics industry is highly fragmented with presence of unorganised enterprises including transporters, express cargo movers, courier companies, freight forwarders, container companies and shipping agents, spread across the country. Competitive pressures on firms to focus on core operations and lower costs is producing a growing demand for logistics services. India spends around 13 per cent of its GDP on logistics, higher than US (10 per cent), Europe (11 per cent) and Japan (10 per cent). This translates to around INR 150,000 Crores in operating costs for the economy and therefore loss in capital formation. India risks missing out on 1 to 2 per cent GDP unless significant strides are made to bridge this gap and improve supply chain efficiencies.

↗ Logistics Market

Logistics service providers are looking forward to the growth of organised retail industry in addition to the continued growth of other sectors such as automotive, electronics, metals, textiles, chemicals and pharmaceuticals. The Indian logistics industry is set to grow as a CAGR of 11 percent to reach levels of INR 4100 Bn by 2013. Not surprisingly, several international majors and progressive Indian logistics service providers are committing huge investments in building infrastructure, expanding market presence and broad basing their offerings to the market. Complementing the growth of such large players, is the fast emerging SME segments of the market. Our research suggests that this segment is rapidly expanding scale and approaching a phase of accelerated growth. As the market evolves and grows, competition intensifies and business dynamics undergo transformation, companies are scaling new barriers and forging partnerships even as they commit major investments to tap the potential in this sector.

↗ IT Logistics Solutions

The fast expanding logistics sector is increasingly adopting a mix of 'plug and play' and 'integrated' IT solutions to streamline operations, build efficiencies and enable accelerated growth. The IT solutions market in this sector, though nascent is rapidly evolving to meet the growing needs of a cross section of firms in this domain. A gamut of applications driven by need for streamlining operations and business processes is driving the adoption of IT among the logistics service providers. In addition, increased customer expectations of 'just in time' deliveries and tracking systems has fueled need for e-Commerce/ web based and RFID solutions. IT is expected to be the harbinger of growth in the next phase of evolution of the Indian logistics sector. Our study shows the current market for IT solutions in this sector is estimated at INR 400 Crores and set to grow to a level of INR 1,000 Crores by 2012-13. Though this market lacked the presence of large players historically, leading Indian software firms are gearing up to make a foray into this market segment with globally accepted and adopted solutions. This is expected to provide fresh impetus to the growth of the Logistics IT solutions market in India.

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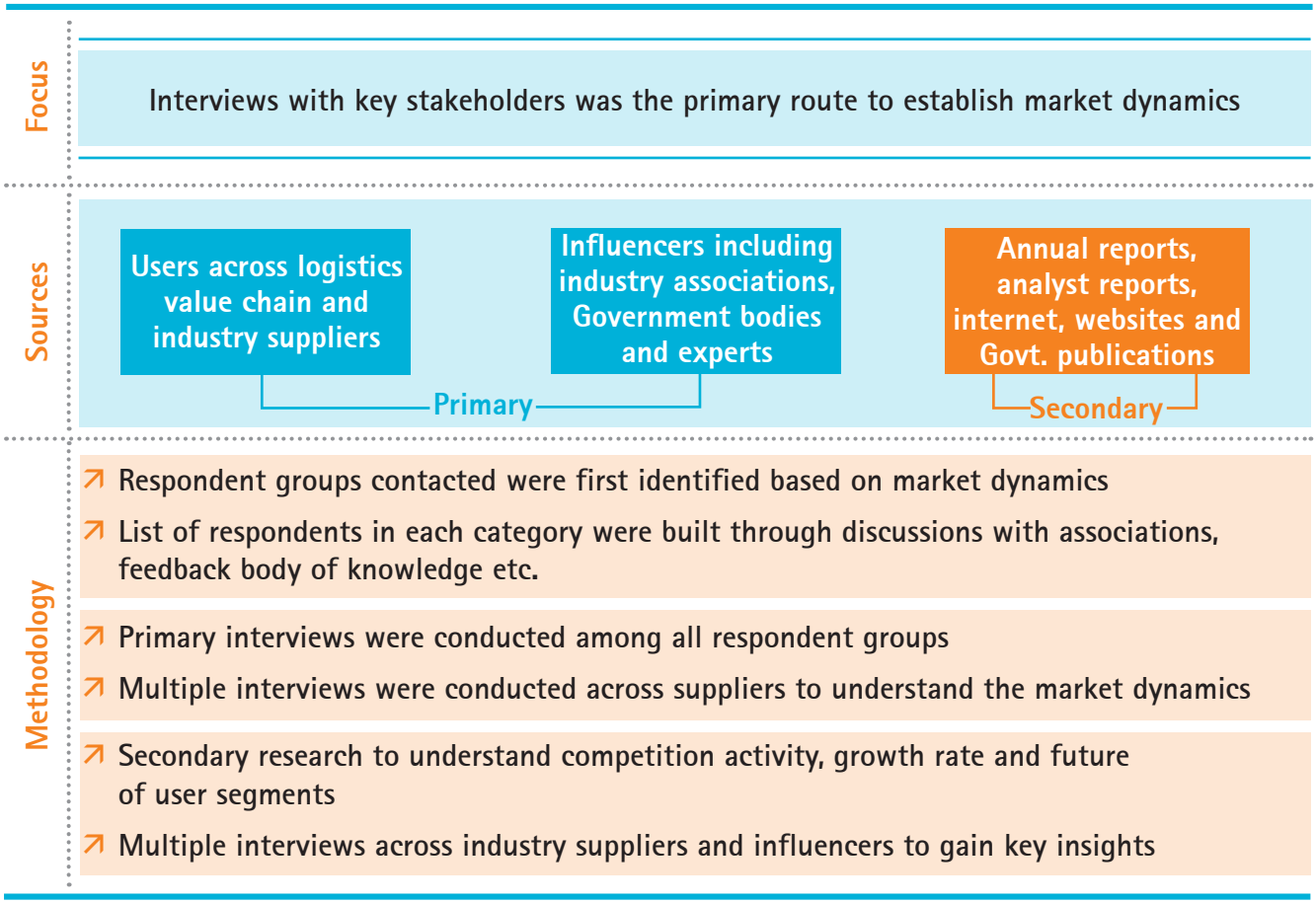
Objectives and Scope

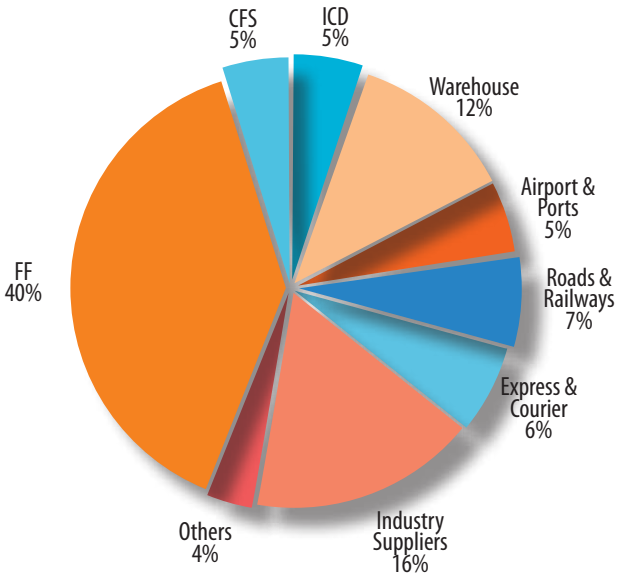
The key objective of the study was to assess the market dynamics and the technology adoption in the Indian Logistics market



The study relied on a supply side primary survey route – interviews with end users, suppliers, and industry influencers IT solutions to arrive at current and future spend levels in their respective businesses. In addition, telephonic interviews with the end users were carried out across other B class cities.

Methodology

The survey relied on primary interviews with industry experts and secondary research



N = 500

* Others include - Influencers, industry experts, government agencies and associations

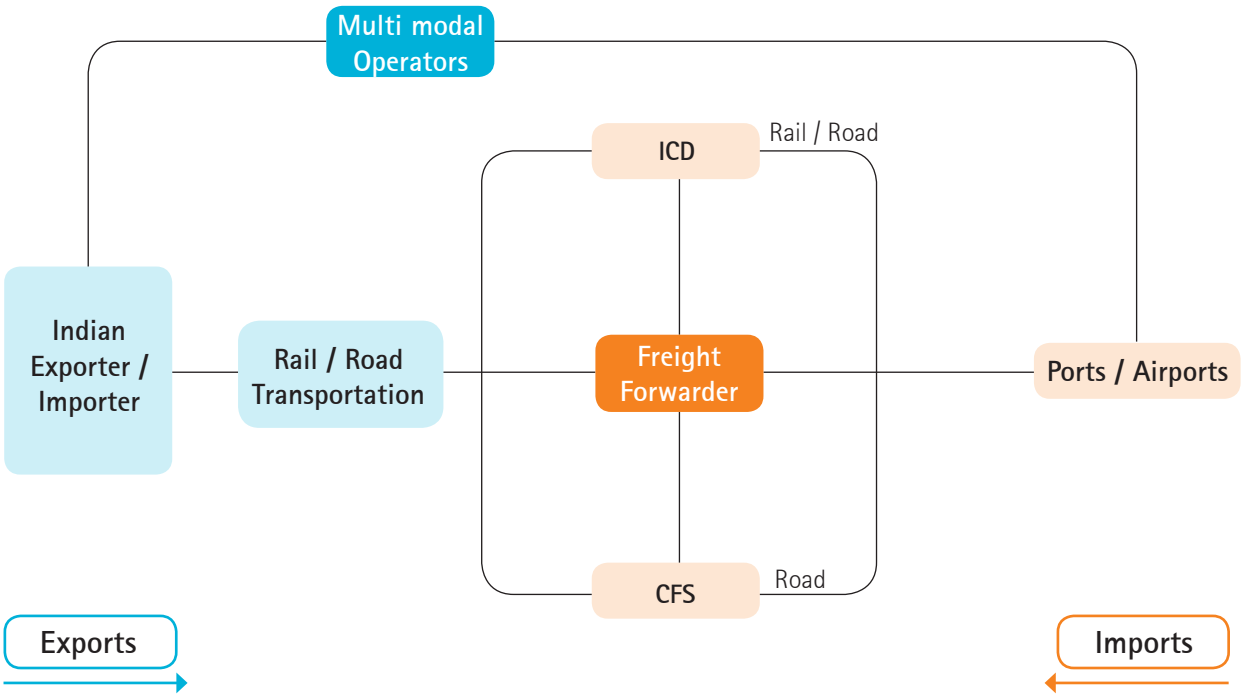
The key objective of the study was to understand the dynamics of the technology adoption in the Indian Logistics Industry. This study particularly focused on the following areas:

- Assessing the market size and market segments
- Current state of technology adoption in the Indian Logistics industry
- Demand drivers for IT Logistics Solutions
- Future growth in the use of technology by the Logistics industry

Over 500 respondents across 140 organisations in 10 cities (Delhi, Mumbai, Hyderabad, Pune, Bangalore, Chennai, Vizag, Kochi, Kolkata and Paradip) participated in the survey.

Market Overview

Transportation and storage are the key links of the Logistics value chain



* Warehouses are maintained or hired by different stakeholders at their centres

The logistics value chain consists of key links or segments – Transportation (road, rail, ports and airports), Storage (Inland Container Depots / Container Freight Stations, Warehouses) service providers like Freight forwarding, custom house agents and specialised service providers like 3PL and Multimodal operators.

Road transportation provides key services like cargo management, trucking related services like fleet management, network optimization, and route planning. The road transportation segment is very fragmented and is dominated by the single truck owners.

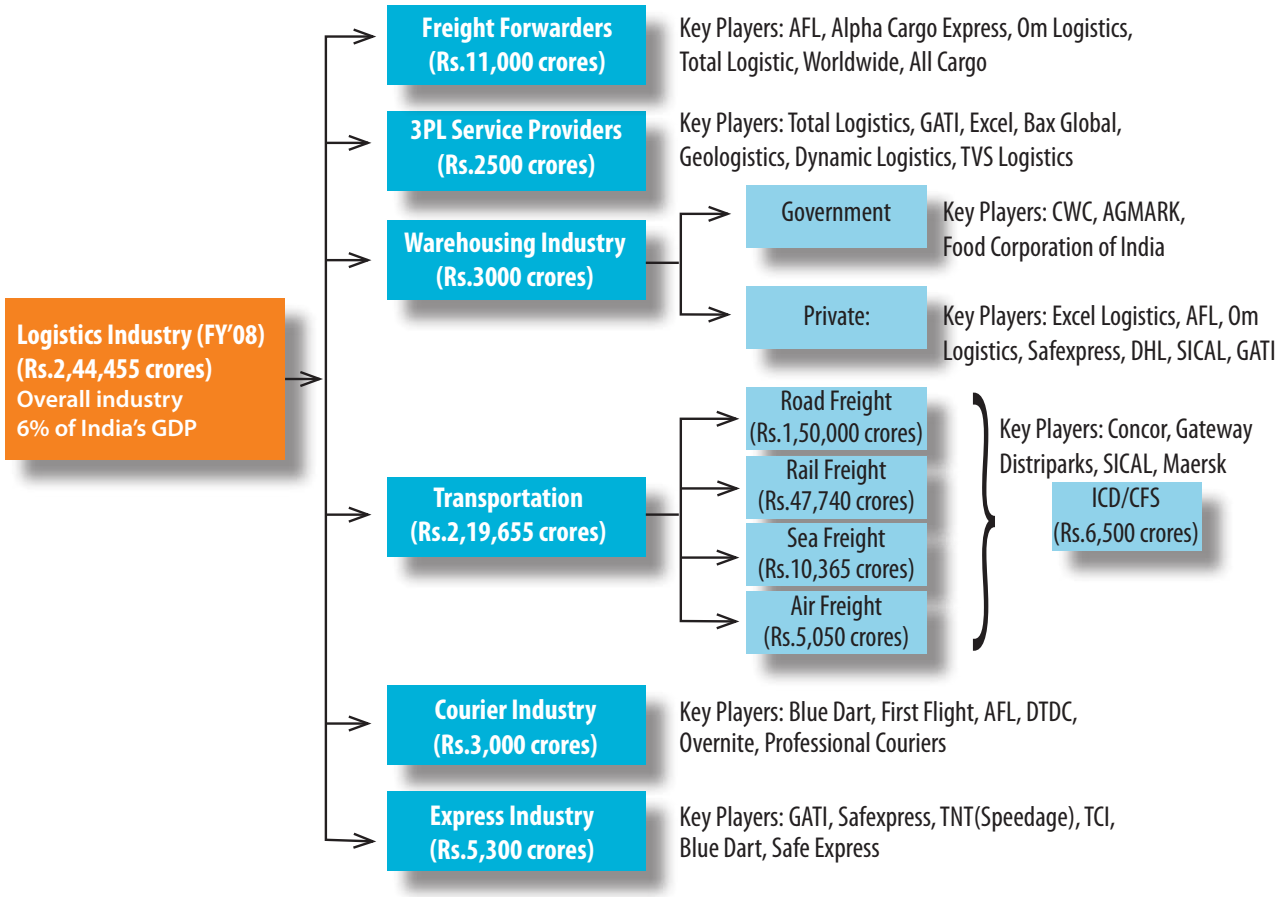
Major ports and airports also facilitate the container / EXIM movement in the country.

Inland Container Depots and Container Freight Stations act as hubs in the complete logistics chain. The Government of India has set up Inland Container Depots (ICDs) which are also called dry ports. Shipping formalities can be completed in ICDs for containerized cargo instead of at the exit gateway port. CFSs have been established to speed up export cargo and to specially help small exporters whose consignments are less than container (LCL) loads.

Freight forwarders can be either integrated logistics service providers, or national and regional freight forwarding agents. Freight forwarding is also one of the services provided by the integrated service providers. The key services offered by freight forwarders include customs clearance, vessel arrangement, goods location tracing, etc. for export or import consignments.

Specialized service providers like multimodal and 3PL operators offer complete end-to-end solutions for all the key end user segments, and there are limited numbers of players operating in India.

The size of the Indian Logistics Industry is expected to grow to Rs. 4100 Bn by 2013



Source: Feedback estimates, Secondary research GDP at current price

The Indian logistics industry is made up of freight forwarders, 3PL service providers, the transportation sector that includes road, rail, sea and air freight, the courier industry, express industry, and the warehousing industry.

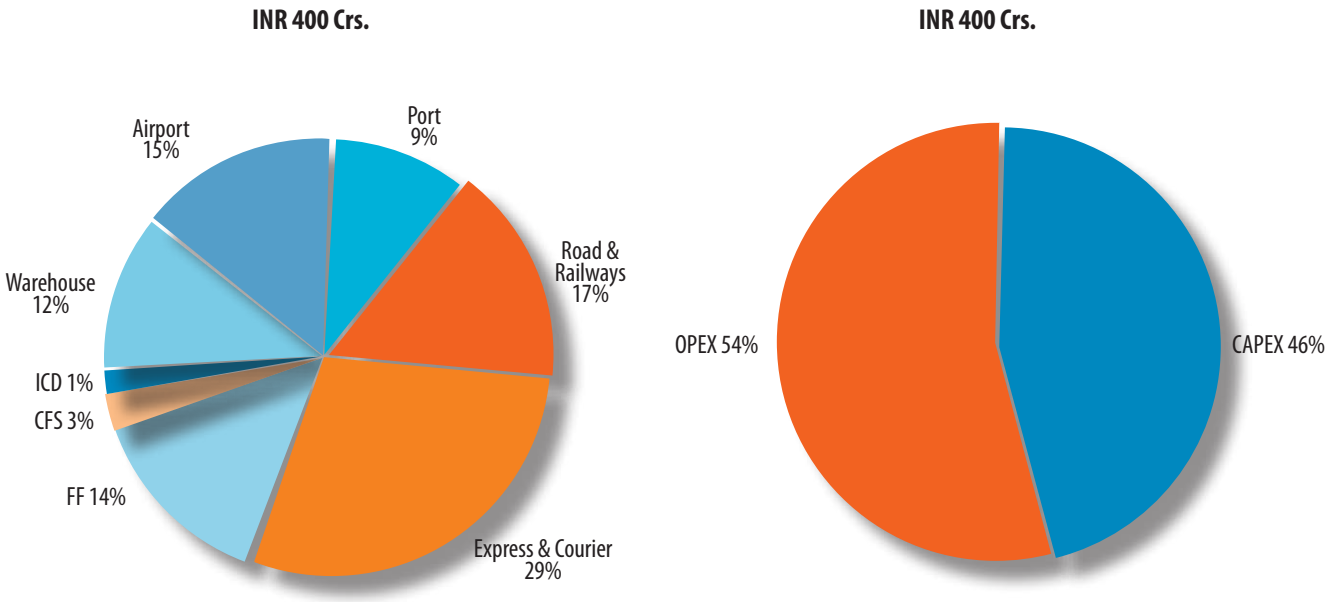
The size of the logistics industry in India is estimated at Rs. 2,44,455 crore for FY 08. Despite the fact that road freight constitutes 60% of the overall industry, it is a highly unorganised sector and is entirely vested in the hands of small private players.

Rail freight comprises 20% of the total logistics industry. However, this is set to grow with the investment in developing new routes and liberalization of this industry.

A characteristic feature of the local express and logistics service providing companies is that many players offer homogeneous services; with the result there is near-commoditisation of services where the demand is price sensitive. The top-end of the market is controlled by a handful of multinationals and large domestic players.

Technology Adoption in the Indian Logistics Industry

The current IT solutions market in Logistics industry is estimated at around INR 400 Crores



Source : Survey estimates

As part of the strategy to streamline business operations Logistics companies are increasingly investing in IT infrastructure and applications across numerous operations to achieve economies of scale. The market size for IT solutions in this sector has been estimated primarily based on end user level interviews. Spend norms on IT have been derived based on the primary interviews across a cross section of firms and extrapolated to the universe levels based on appropriate segmentation of players. Inputs from other market stakeholders and experts have been additionally reckoned to arrive at the overall estimates as well as break up by product components, end use segments and regions.

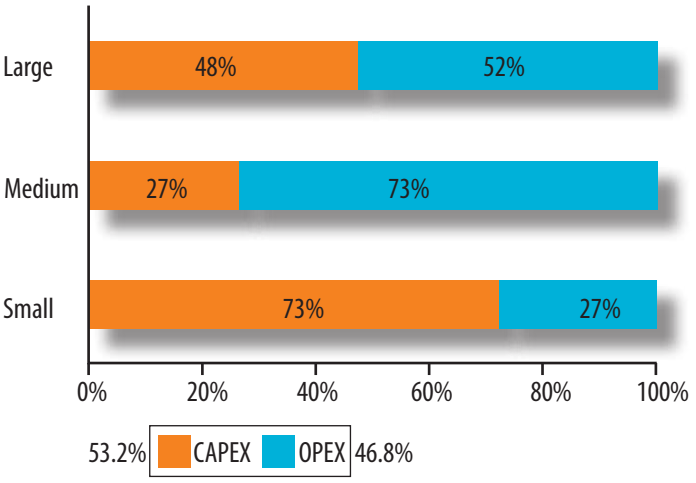
The current market size (FY 2007-2008) of the IT solutions market in Logistics industry is estimated at around INR 400 Crs. This however does not include the apportioned value of spend on in-house solutions.

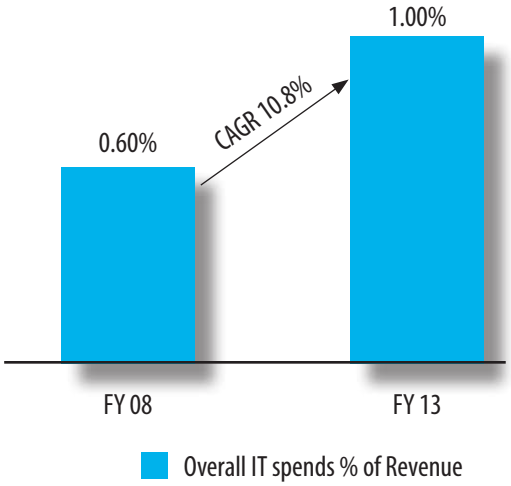
West India is the largest market for such solutions followed by North and South India. These are estimates based on the presence of end users across regions and inputs obtained from IT solution providers.

CAPEX (Capital expenditure) includes expenditure on new IT hardware and software. OPEX (Operating expenditure) includes expenditure on IT hardware, maintenance, software maintenance, upgrades and connectivity solutions.

Freight Forwarders, ICD, CFS have higher CAPEX spends as most of the players are expanding and have procured the basic IT hardware over the years.

The technology spend is expected to grow by 160% in the Freight Forwarding Industry over the next 5 years





Source : Survey estimates

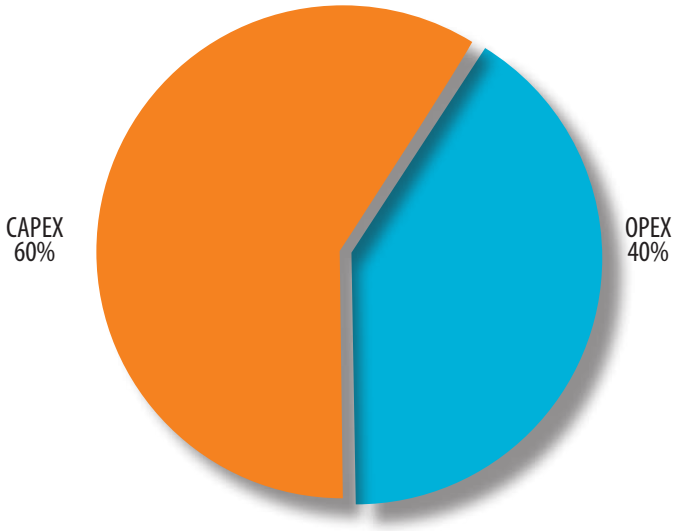
The overall freight forwarding industry in India is estimated at INR 11,000 crores, with an expected 14% CAGR over the next 5 years. While large players currently use integrated software developed in-house mainly, medium players mainly use mid range 'plug and play' software. In the case of small players, usage of software is very low as most players are currently in the process of developing their basic IT hardware systems.

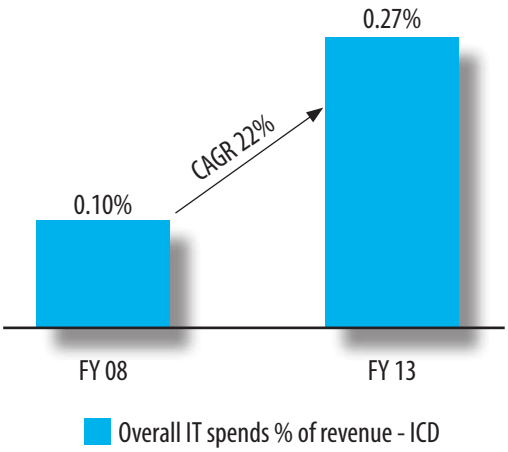
Current IT spends by the freight forwarders segment at an overall level is estimated at 0.6% of the overall revenue and is expected to increase to around 1% by FY 13. Large players with an extensive and distributed infrastructure are also increasingly investing in a reliable network infrastructure to ensure seamless, on-time delivery of services to their customers.

In the future, growth is mainly seen in the mid sized players across regions. Large players have over the years made major investments on IT to scale up operations on a pan India basis while midsized players are increasingly relying on IT to scale up. Going forward, IT is expected to be a major enabler of efficient operations for such players.

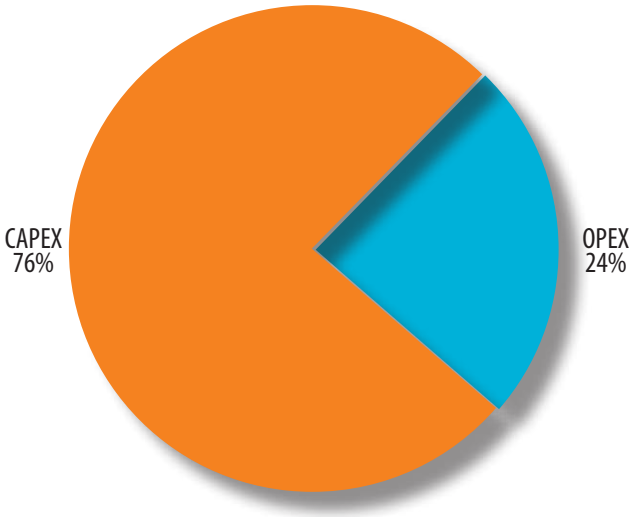
ICD & CFS largely spend on integrated software solutions

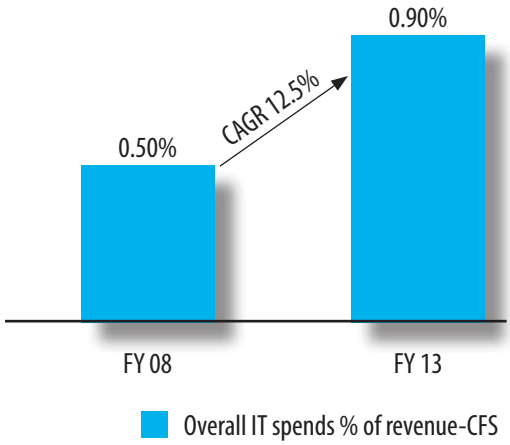
ICDs - CAPEX Vs OPEX





CFS - CAPEX Vs OPEX



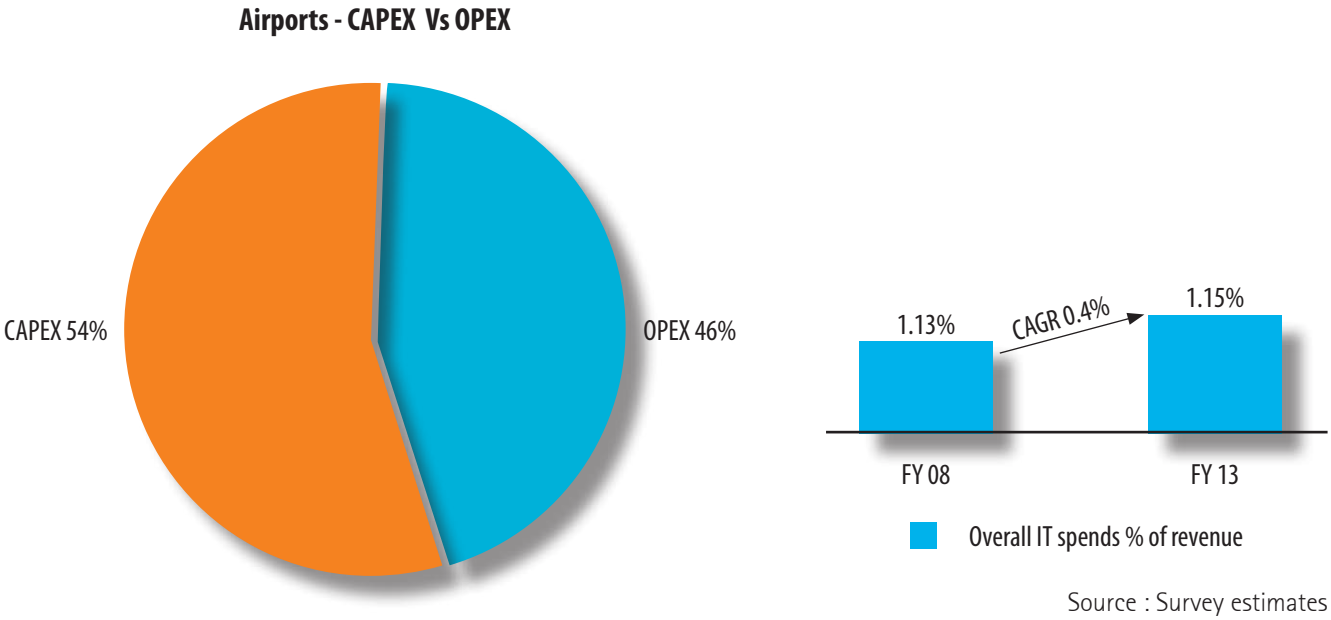


Source : Survey estimates

The overall market for ICD and CFS is estimated at INR 6,500 crores, with an expected CAGR of 14% over the next 5 years. All players in this segment use integrated software in their day-to-day operations, with software that is customized as required. Current IT spends by ICD is estimated at ~ 0.1% and CFS ~ 0.5% of the overall revenue levels.

Privatization of ICDs and the entry of new players is expected to throw open significant opportunities for players. The growth in EXIM and domestic traffic is expected to fuel demand for better IT systems to sustain operations for such ICDs/ CFS.

The maximum utilization of technology is seen in the Airports

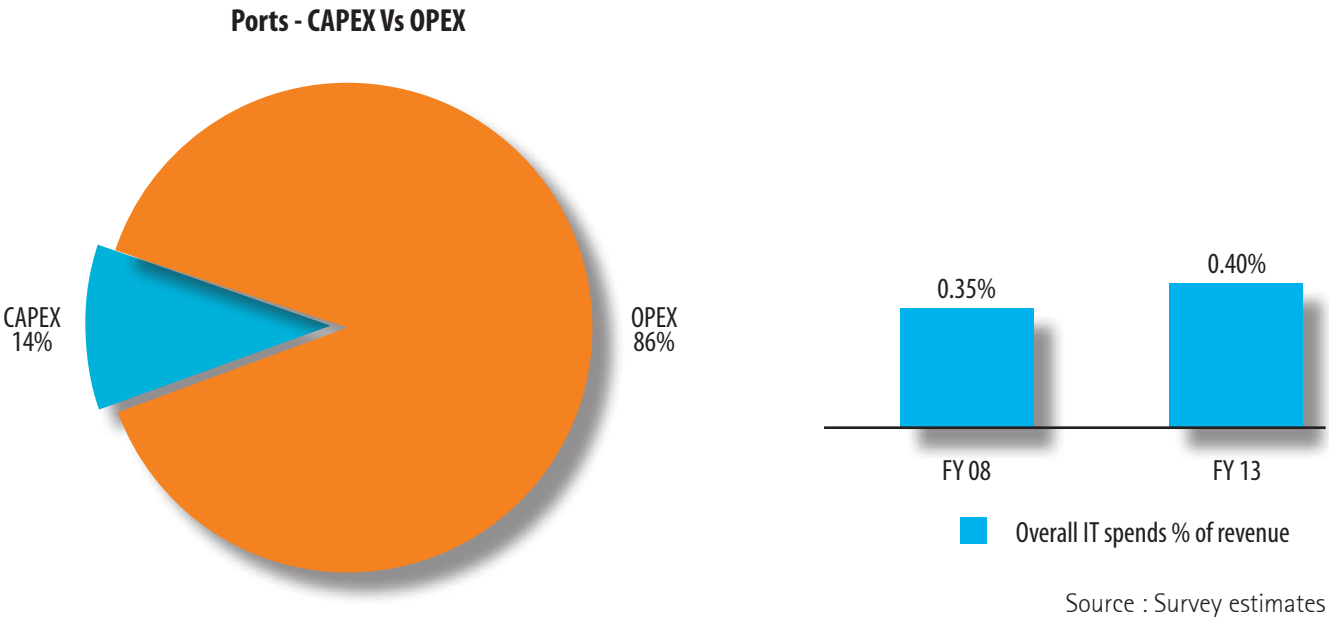


Source : Survey estimates

The overall air freight market is estimated at INR 5,050 crores at present and is expected to grow at a CAGR of 11% over the next five years. This segment uses integrated software – cargo management software.

Airports is one of the segments where IT utilization is maximum compared to other segments in the Logistics space. Current IT spends by Airports is estimated at approximately 1.1% of the overall revenues. New Investments of INR 28,525 crores are expected in the next 4 years to boost the IT requirement.

All major ports in India use an integrated and customised ERP solution

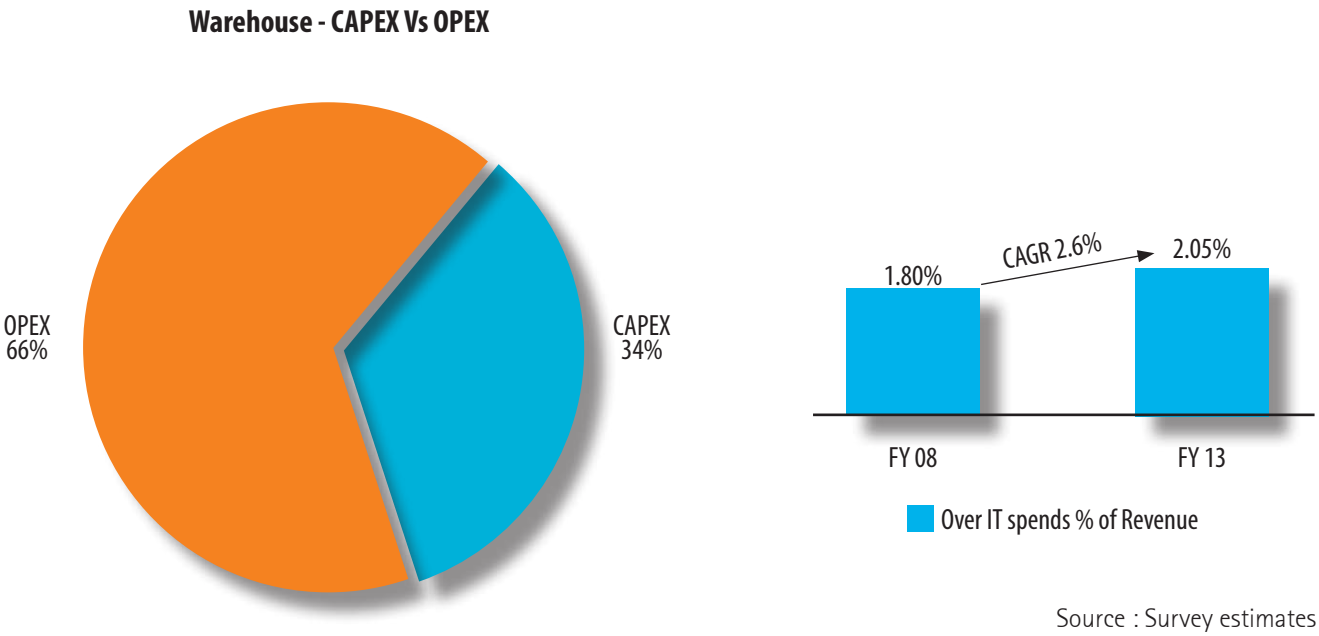


Source : Survey estimates

There are 12 major ports and 200 non major ports in the country. The overall ports market is estimated at INR 10,365 crores, which is expected to grow at a CAGR of 12% in the next 5 years. The major ports in India use integrated ERP solution customised to the needs. Current IT spends by Ports is estimated at 0.35% of the overall revenue and is expected to increase to around 0.4% by FY 13.

Growth would be driven mainly by increasing trade volumes and new ports coming up / planned (25 public private participation (PPP) projects, 33 others have also been identified)

Warehouses will need tracking solutions for efficient handling of inventory

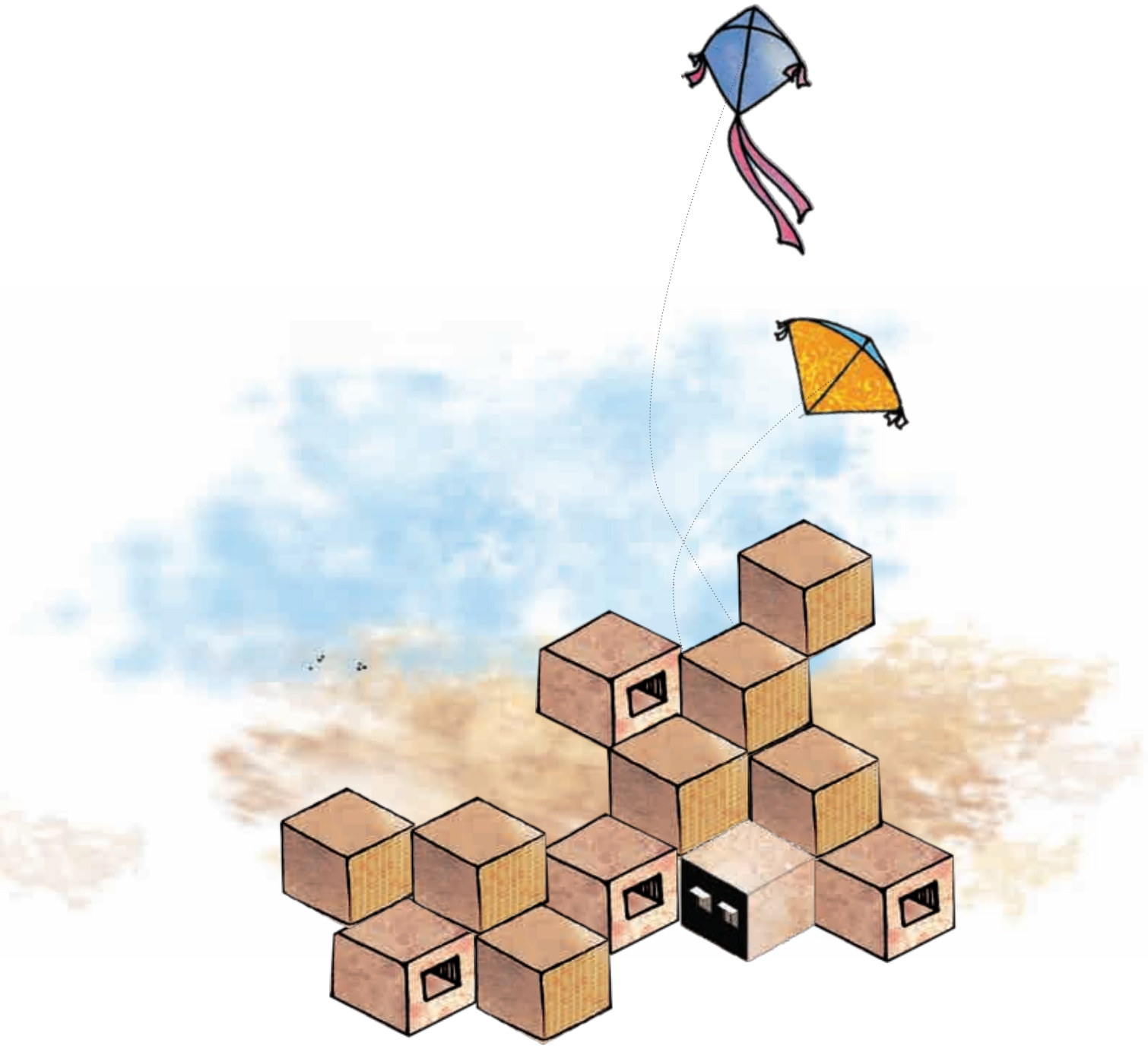


Source : Survey estimates

The size of the overall warehouse industry is estimated at INR 3,000 crores. While state and central owned government warehouses do not use any application software, 70-80% of the company owned warehouses are integrated with ERP systems, which are centrally installed. Current IT spends by this segment is estimated at 1.8 – 2 % of the overall revenue and is expected to increase to 2 – 2.05 % by FY 13.

The warehousing space in the Logistic segment is estimated to double in the next 4 – 5 years with an addition of 45- 50 mn sqft of space. Changing practices and need for better methods of tracking and handling of products stocked in the warehouses will trigger the need for IT.

The Future of Logistics Industry and Technology Trends

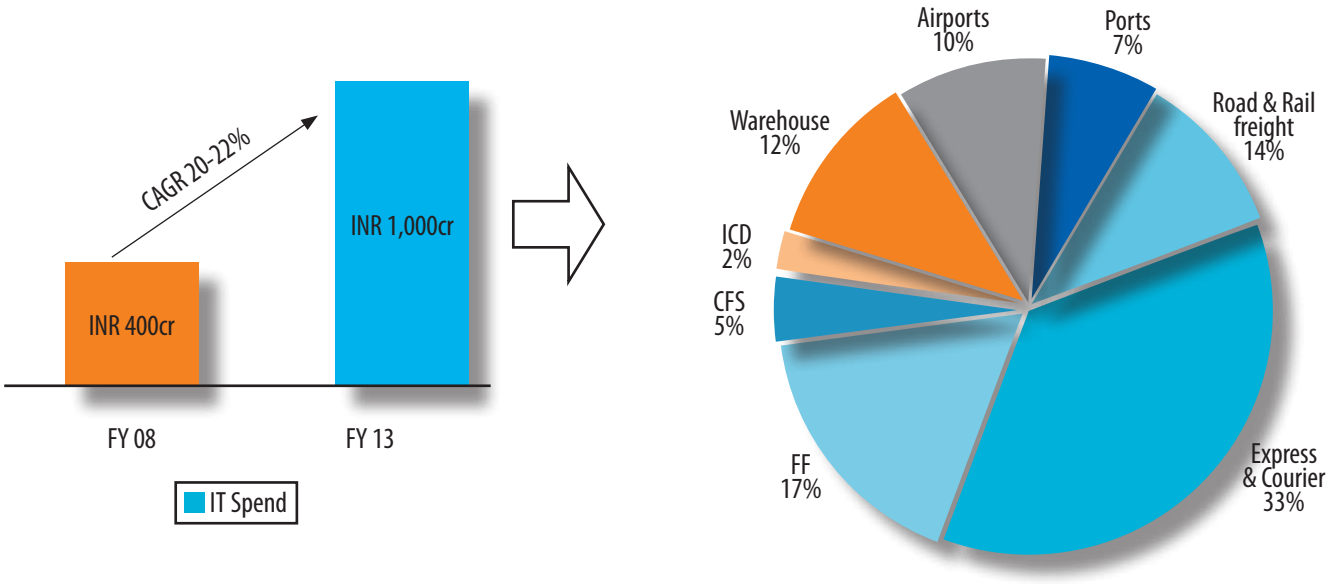


The overall Logistics industry is expected to grow at a CAGR of 11% and reach INR 4100 Bn by FY 13

(in Indian Rs.)

Segment	Estimated Future market (INR Crores FY '13)	Growth drivers
Freight Forwarders	21,180	↗ Medium players graduating to become total logistics solution providers ↗ Increased EXIM traffic in the country
ICD	7,700	↗ Indian Railways has opened up the container operations for private players in 2006 – dominated earlier by CONCOR ↗ 42 ICDs to be opened by private players
CFS	4,815	↗ Growth potential for CFS is directly linked to containerized EXIM traffic growth ↗ Large players – have plans to have a pan India presence
Airports	8,510	↗ Privatization of airports ↗ Development of non – metro airports ↗ Overall investments – INR 28,525 crores investments expected over 4 years (2007 -08 to 2011 -12)
Ports	18,270	↗ 25 public private participation (PPP) projects for berth development worth INR 15,000 crores in the pipeline ↗ Govt. initiating investments in the sector
Warehouse	7,380	↗ Private companies plan to increase their reach across key regions; ↗ Growing organized retail market; ↗ 30 mn sq ft warehouses planned by key logistics players like Safe Express, Gati, TCI, etc.
Rail Freight	73,400	↗ 2 dedicated rail freight corridors exclusive for freight to be built over five years • Eastern corridor connecting Ludhiana and Kolkata. Western corridor connecting Mumbai and Delhi ↗ New initiatives by Indian Railways - High-capacity parcel vans ('Green Parcel Vans') have been used in special-purpose rakes intended to carry fruits and vegetables, availability of refrigerated parcel van service ↗ RDSO has been exploring possibilities of using double-stacked container trains
Road Freight	241,500	↗ Improving road network in India - 'Golden Quadrilateral' plans to connect the four metropolitan centers and the three major ports of the country ↗ Increasing rural road connectivity ↗ Historically, the road freight sector has been in the hands of the unorganized sector – is moving towards organized operations ↗ Increased EXIM traffic in India
Express Cargo	14,300	↗ Key growth driver - opening of banking, insurance, retail, aviation and telecom sectors and their penetration in smaller cities ↗ Increase in global and domestic trade ↗ India emerging as a global outsourcing hub for IT, ITeS, pharma, textiles etc. and is set to become one of the largest trading partners in Asia
Courier	10,300	↗ Increased usage of express and courier services by all key segments in the industry

Technology adoption will grow at a CAGR Of 20-22%. Visibility, time to market and real time information will be the key



Source : Survey estimates

The overall IT spends is expected to grow to approximately INR 1,000 crores from the existing level of INR 400 crores, in the next 5 years (growing at CAGR of 20 – 22 %).

Some of the key issues faced by the shipper community of the Logistics Market segments are gaining total supply chain visibility, reducing time to market, responding to changes in demand through mass customization and creating a supply chain of chains with enough flexibility to enable an agile enterprise capable of responding to change with agility.

To address the challenges faced by the shipper community, the service provider community needs global networks to meet demands of shippers, needs to provide 'real-time' accurate information, integrated into shipper systems, needs to manage more than transportation – mass customization has extended the manufacturing environment and requires additional services to meet customer needs and finally has to achieve the balance between managing client expectations, maximizing asset utilization and human resources. Thus the key players in the logistics arena are inter-related and are impacted by the same business drivers:

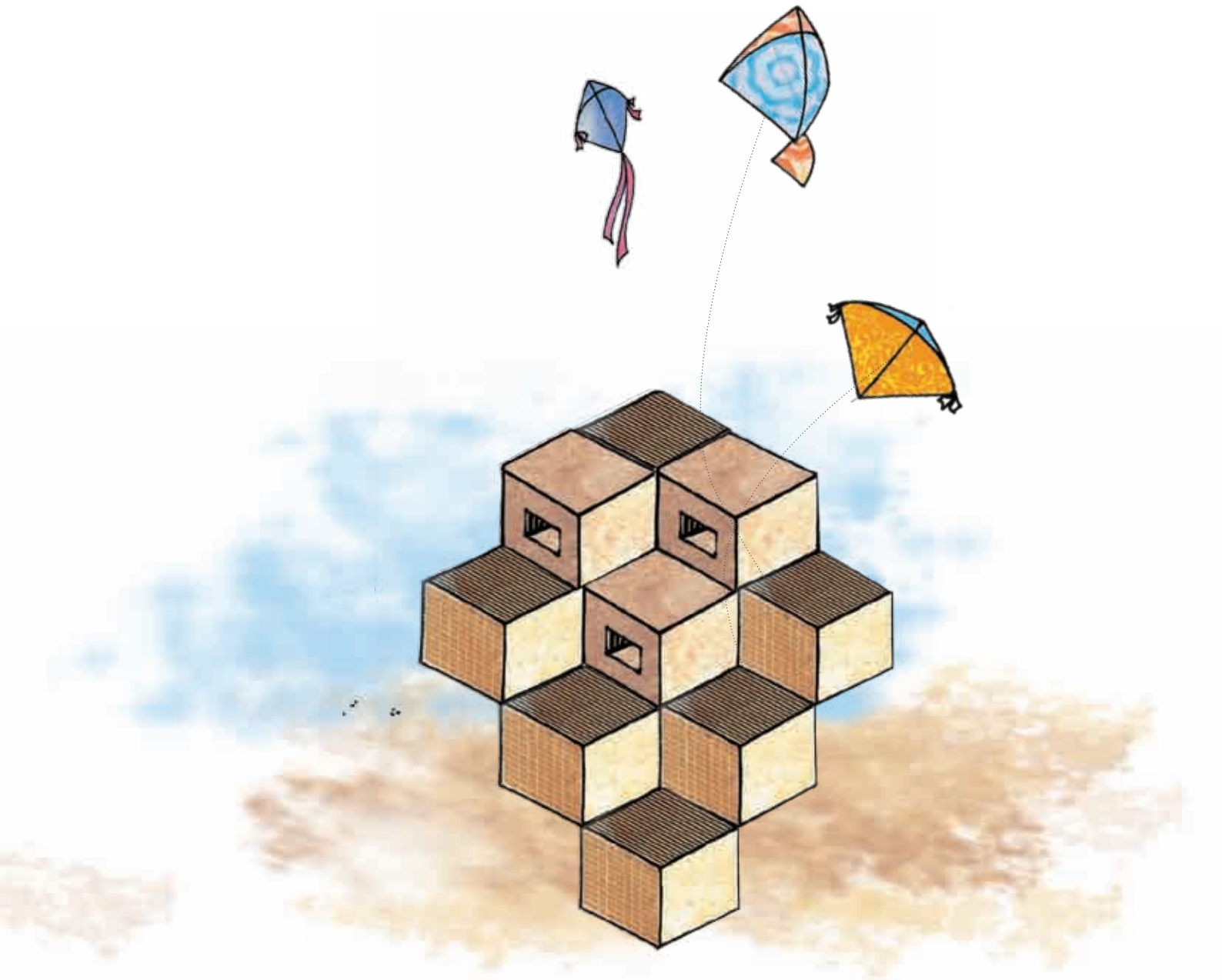
- Need to provide enhanced customer service capabilities, to include web-based order entry as well as real time order and shipment visibility
- Increased competition through Internet access, with associated price pressure.
- Need to provide business to business e-commerce with key supply chain partners
- Need to integrate all supply chain partners – no matter how small
- Integration of supply chain data into ERP systems to drive business process

Emerging Technology of the Future

Emerging technology adopters will stay ahead of their competition

Technology	Likely trend in adoptability
RFID	↗ Nearly 80% opined that they were interested in RFID technology and would like to use in future. ↗ Software using RFID technology which can help tracing the shipments in a warehouse ↗ RFID costs still remains a concern ↗ RFID in metallic environment like containers yet not proven ↗ Warehousing, CFS, ICD are the most likely segments to adopt usage of RFID mostly driven by their overseas customers
Web Based software and SaaS models	↗ Trend will be towards using new generation web-based solutions mostly driven by the customer demands ↗ On-demand software is the likely trend software ↗ Compliance to trade regulations will influence the usage of IT ↗ Multi-national customers will demand more visibility and transparency that can be achieved through the web based integrated solutions
Mobile Technology Adoption	↗ Most usage of mobile technology will be done in Fleet Management i.e. Tracking of the fleet, via GPS ↗ Transport companies and Railways keen on adopting any low cost technology which can track the fleet at any instance ↗ Mobile technology integrating with business applications will be a key trend ↗ RF devices to become more prominent in the Indian warehousing and CFS industries
Enterprise wide Solutions	↗ Software addressing the end to end business needs of logistics companies will gain prominence ↗ Integrated solutions will find usage in Airports, CFS, Forwarding and ports ↗ Multi-locational systems will be a necessity ↗ Industry will need one stop shop solutions inclusive of Hardware, Software, Network, RF services etc.

Insights from Kale on Technology Adoption



Technology will enable the Logistics ecosystem to grow exponentially

Logistics industry is undergoing a sea change. The world is looking at India not only as a sourcing destination for skilled work force and raw material but also as a large consumer market. This is reflected in the surge in investment in the auto, retail, pharmaceuticals, textiles, metal, and chemicals industries in India. Shippers are increasingly outsourcing their logistics activities to specialist logistics service providers to concentrate on their core activities and control logistics costs. The shippers are demanding that their LSPs provide them with the visibility, flexibility, agility, transport cost optimisation, and lower risks.

The traditional LSP is offering wider range of services to meet the demands of the shipper. Large multinational LSPs are now setting service standards for the entire logistics entry.

Technology is expected to be a key enabler to support the Logistics sector in its growth. Influx of capital in the logistics value chain will also depend on the ability of the stakeholders to deploy technology in improving their processes and functions. Investment in technology, is expected to result in higher utilization of assets like truck fleet, warehouse, coordination of movement of cargo, etc. Improved customer satisfaction using new generation technology will shape the growth of the Logistics industry. Thus, technology will not only improve efficiencies but is likely to result in higher outsourcing by end user segments.

New business models will drive technology adoption by incorporating an inclusive growth

The logistics industry is undergoing metamorphosis. The 3PL companies are adding a wide array of services to their offerings. The success stories of small time freight forwarders growing into a full fledged integrated service provider are becoming commonplace. The freight forwarders are getting into businesses such as Warehousing, Trucking, Packaging, CFS and vice versa.

This change in business models will mean rationalizing and optimizing processes across the enterprise which in turn will necessitate the usage of new generation technology. There will be a clear movement towards providing end-to-end integrated logistics applications which can be deployed in a modular fashion.

This business trend also indicates the necessity of pervasive technologies such as Internet which means using web based applications. The growth in technology adoption will be inclusive which means all segments of logistics industries from small to medium to large will have to adopt technology to meet benchmark market service standards.

Emerging technologies will help the market grow efficiently

Technology till date in logistics has been perceived as nice to have rather than a business driver (which is the true potential).

Emerging automated data capture technologies such as RFID will enable logistics firms to offer real-time cargo/container tracking to their customers. Tracking solutions, therefore provide significant value addition to clients, giving both the users and logistics service providers a competitive edge in their respective businesses.

Airports and ports need to have a common platform where all its stakeholders can exchange information and interact seamlessly. Such an e-commerce platform will reduce the paperwork, help plan workflow, and reduce transaction and processing times. This in turn will also help them increase their profitability as these entities will be able to accept more customers and do more business.

Nearly all large and medium scale companies are expected to utilize technology for scalability and improving operational efficiencies.

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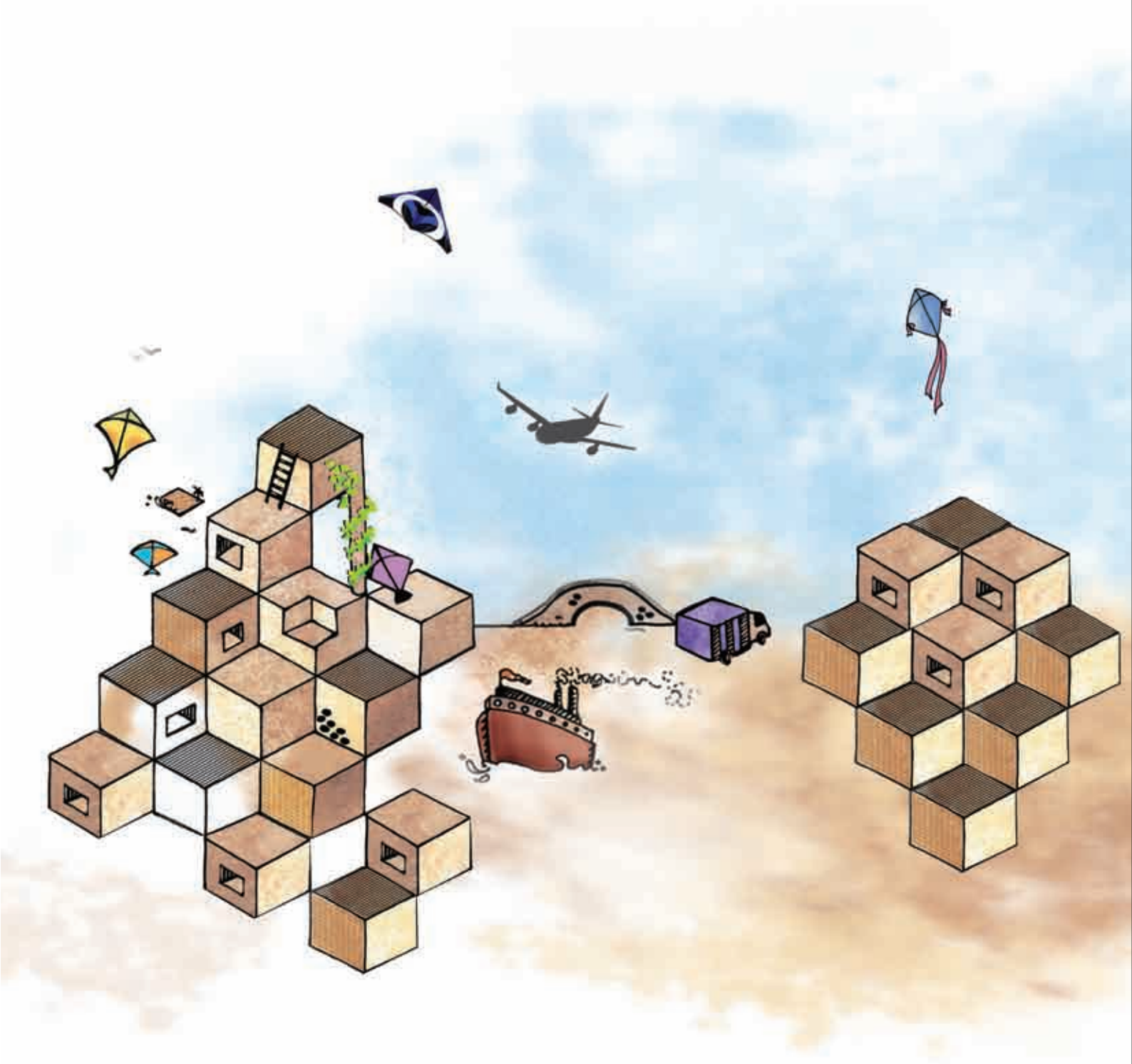
IT Solutions for Airlines, Logistics & Travel Industry



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