Fast Tracking the Indian Automotive Logistics
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With an anticipated combined size of about USD 140 bn, the automotive and logistics sectors in India provide extremely attractive business opportunities to organisations. Considering the current size of the industry and its growth opportunities, the efficiency and profitability of these sectors would play an important role in increasing the share of manufacturing in the GDP of the country. However, at 13% of the GDP, the logistics industry in India has a long way to go in achieving the desired levels of efficiency. With the rapid evolution and maturing of the automotive sector, the journey is not an easy one. It is therefore the right time to look at the trends and challenges facing the sector.

In this white paper that would be released at the Auto SCM 2008, we as the Knowledge Partner to CII – IL, have tracked the current state of the logistics industry and identified the strategic, evolutionary and performance gaps for the outbound logistics providers. We have articulated the issues that would require focus, debate and action.

Kumar Kandaswami
Senior Director and Country Manufacturing Industry Leader
Deloitte Touche Tohmatsu India

“With an anticipated combined size of about USD 140 bn, the automotive and logistics sectors in India provide extremely attractive business opportunities to organisations”.

Foreword
I am happy to be a part of Auto SCM 2008, the third edition of the Automotive Supply Chain Summit organized by the Institute of Logistics A Centre of Excellence, established by Confederation of Indian Industry (CII), focusing on Logistics and Supply Chain Management.

Auto SCM 2008 deals primarily with outbound from India given the current spotlight on the country as a manufacturing hub for small cars and auto parts. This two-day event expects to draw participants from leading domestic and international auto manufacturers, and logistics & supply chain management experts to discuss the industry’s challenges and opportunities. The event will also dwell on case studies and concepts in export and domestic outbound logistics.

Institute of Logistics is proud to associate with Deloitte as a knowledge partner to publish, this important study titled ‘Fast Tracking the Indian Automotive Logistics’. It brings to fore the issues in outbound logistics (vehicles, parts and reverse logistics) for OEMs catering to Tier I manufacturers and in-bound challenges for OEMs and parts distribution to OEM service counters.

It gives an insight to the current status of auto logistics including 3PL/ 4PL practices, gaps in the existing structure, process and service delivery and ‘hidden’ issues, with a way forward for fast tracking.

I am confident that this research work will be of immense value to the industry.

R Dinesh
Events Chairman-Auto SCM India 2008
JMD, TVS Sons

“Auto SCM 2008 deals primarily with outbound from India given the current spotlight on the country as a manufacturing hub for small cars and auto parts”.

Fast Tracking the Indian Automotive Logistics
Globally, organizations are increasingly realizing that there are a number of factors that differentiate, long term sustainable partnerships, from the one-off transactional outsourcing benefits. Some of these include; full menu of specific logistics services and solutions, seamless integration of systems applications, robust ability to support initiatives that help avoid major investments in capital and other resources, reduction in total landed cost and not just operating cost, total quality assurance programs, wide geographic coverage and risk & security management capabilities.

The automotive logistics industry has evolved much faster in India compared to logistics in other sectors. Almost all the players in the automotive industry use 2PL for a part of their logistics operations. A trend towards creating a perfect blend of in-house and outsourced service components to effectively manage supply chains is leading to the emergence of 4PL services.

However, there are significant challenges driven by supply chain complexities resulting in inefficiencies which in turn lead to cost increases. The challenges of managing complexity and costs for the automotive logistics industry are likely to increase given the positive movement of the drivers.

Our analysis suggests that there are gaps at the strategic and operational levels that organizations need to address in their pursuit of growth and profitability specifically in the following areas:

1. Selection criteria for LSPs
2. Collaboration between manufacturers and LSPs
3. Customer service
4. Technology
5. Impact of logistics on manufacturing

Organizations can make strategic and operational investments in processes and technologies to drive continuous improvement across their logistics activities to address the above gaps.

- First, manufacturers need to focus on a collaborative approach to logistics strategy and planning involving the LSPs.
- Second, while manufacturers have historically looked at transportation costs as merely the price paid to LSPs, organizations now need to move towards “value delivered”.
- Third, players need to focus and prioritize their technological investments.
- Finally, as LSPs collaborate, they need to align with the business requirements of OEMs/component manufacturers and take advantage of the growth opportunities in areas such as service parts business where the manufacturers are planning to improve the level of collaboration with LSPs.

The automotive logistics industry has evolved much faster in India compared to other sectors.
A October 2007 World Bank study titled “Connecting to Compete” ranked India 39th among 150 nations on a Logistics Performance Index (LPI) behind competing Asian economies like China (30th), Thailand (31st) and Malaysia (27th). India was ranked behind its peers across different areas ranging from customs procedures, and infrastructure quality to the ability to track and trace shipments, timeliness in reaching destination, and the competence of the domestic logistics industry. Improving the performance of the industry is critical to economic growth, specially at a time when India is focusing on attracting investments and global customers.

One of the key reasons is that the Global logistics industry has evolved rapidly over the past decade while the Indian logistics industry, has evolved much slower.

As globalization, technology advancements and increasing levels of outsourcing continue to drive the logistics services market globally, historically functional and fragmented activities of transportation and warehousing have evolved into integrated logistics management.
**Initial Technology**
- Microcomputers emerge, allowing the first optimization models to be created
- Point solutions are created
- Companies begin to manage data

**Functional Organization**
- Transportation department separate from warehouse management and inventory management departments
- Back-office functions operated as transactional cost centres
- Shipper-carrier relationship same as buyer-supplier to obtain least cost for service

**Production-driven logistics**
- Supply chains organized into pre-production materials management and post-production distribution
- Required to invest in excessive inventory in response to poor and unreliable transportation
- Focus on maintaining production flow at all costs

**Asset-based networks**
- Companies optimize locations and match assets to business needs largely based on deregulation of transportation industry
- Many own private fleets and distribution centers depending on manufacturing location and distance from demand
- Logistics industry organized by freight volume and mode

**Productivity enhancement**
- Deregulation of transportation industry is catalyst for improving productivity - total logistics costs decline by 37%
- Warehouse and manufacturing plants move from tracking labor productivity to asset productivity

*Source: Deloitte Consulting LLP*
Emergence of intermediaries (3PLs)
- Rather than being asset focused, 3PLs leverage people, process and IT
- Flexibility to manage freight movement by sharing transportation and distribution assets across shippers and carriers
- 3PLs are able to customize, enable and execute for improved service at reduced costs

Integrated systems
- Enterprise-wide technology platforms bring together companywide data and begin to remove functional silos
- Beginning of cross-functional supply chain organizations

Continued evolution of logistics services
- Next generation of logistics service provider emerges as an asset-light, expertise-rich entity that leverages a network of asset-based service providers, information and cross-industry/geography volumes to add value to clients

1990 - 2000

Integrated systems
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2010

Continued evolution of logistics services
- Next generation of logistics service provider emerges as an asset-light, expertise-rich entity that leverages a network of asset-based service providers, information and cross-industry/geography volumes to add value to clients
Given the rapid evolution of the industry, there is a significant shift in customer needs and expectations. There is a shift from traditional relationships to long-term sustainable partnerships.

Traditional relationships between logistics service providers and buyers are often characterized by:
- Outsourcing of individual operations or functions
- Adversarial engagements
- Lowest cost approach without considering value & total cost
- Regular changing of providers regardless of experience and investment required
- Non-aligned perspectives on operational objectives
- Shorter term view of relationship

Globally, organizations are increasingly realizing that there are a number of factors that differentiate, long term sustainable partnerships, from the one-off transactional outsourcing benefits. These include:
- Full menu of specific logistics services and solutions
- Seamless integration of systems applications
- Logistics consultation services
- Ability to support initiatives that help avoid major investments in capital and other resources
- Reduction in total landed cost and not just operating cost
- Total quality assurance programs
- Wide geographic coverage
- Risk & security management capabilities

The Indian logistics industry has evolved much slower
The evolution of the logistics industry in India has been slow. While India spends around 13%-14% of the GDP on logistics which is significantly higher than several developed economies like the US (9.5%) and Japan (10.5%), the sector is today nearly a decade behind when compared with global logistics industry.

Globally, productivity enhancement driven by the emergence of intermediaries (3PLs) started in the early 90s. However, in India, penetration of 3PL services which began in the early 2000s is still in a nascent stage at less than 3%, although over 90% of the organizations use 3PL services in specific sectors like automotive.
Deregulation
• Removal of cap on FDI
• Entry of several international players
• Excise duty, tax reduction
• Huge investments in service networks
• Auto Financing drives demand

Outsourcing
• More value added services like customs clearance, freight forwarding, customer service, rate negotiation, order processing etc.
• Freight consolidation and fleet management practiced
• Entry of global players

Global Manufacturing Hub
• 90% of components for automobiles are sourced locally
• Global hub for transmission systems and small cars
• Formation of component manufacturing clusters

Realignment of Logistics Services
• Increasingly new innovations are expected in supply chains and logistics with the coming of new distribution models
• Shift towards multimodal means of transport
• Outsourcing non traditional functions like reverse logistics
• 3PL services go main line.
Emergence of 4PL

1990 - 2000

2010

Given this scenario, our research suggests that the following interdependent factors will shape the industry over the next 5-10 years.

<table>
<thead>
<tr>
<th>Globalization and Consolidation</th>
<th>Increased Outsourcing</th>
<th>Security and Risk Management</th>
<th>Technological Advancements</th>
<th>Increased Customer Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mergers and acquisitions are creating firms that may have capability to provide a “single point of contact” that can manage global supply chains for their clients.</td>
<td>Companies are utilizing logistics outsourcing more and more to increase flexibility and responsiveness in their supply chain.</td>
<td>Supply Chain Security and Risk Management will be a key area to prevent disruptions due to factors like weather, labor issues, strikes, diseases like SARS, or terrorist attacks.</td>
<td>Rapid advancements in supply chain technology enablers will lead to increased functionality and greater potential to improve performance of supply chains.</td>
<td>Customers will be moving away from tactical transactional based service outsourcing to solutions that are more strategic in nature and supported by leading edge technology and systems.</td>
</tr>
<tr>
<td>Globalization of traditional businesses is driving the logistics industry to address considerations like market expansion, new sources of supply, international trade, etc.</td>
<td>Global supply chains are getting increasingly complex to manage and companies are focusing more on core competencies.</td>
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While the automotive logistics industry has evolved much faster in India compared to logistics in other sectors...

The automotive industry contributes to about 1% of India’s total logistics spend. Logistics cost in automotive industry accounts for 2%-3% of sales and around 3%-4% in the auto component industry. Reverse logistics cost in Indian auto and auto components industry is estimated to be around 0.5%-1% of auto and auto components industry. (Source: Cygnus).

Almost all the players in the auto sector use 2PL for some of their logistics operations. About 80% of the auto component industry use 3PL services. A trend towards creating a perfect blend of in-house and outsourced service components to effectively manage their supply chains is leading to the emergence of 4PL services.

...there are significant challenges driven by complexity in the supply chain

Increasing complexity driven by both scale and scope is having a significant impact on the financial performance of companies. The complexity in the industry is best understood when viewed in the following context:

- **Growth of vehicle and subsequent expansion of the auto component industry**: From USD 4.47 bn in 2001-02, the auto component industry has grown more than three-fold to USD 18 bn in 2007-08. This has been driven by the growth of vehicle production from over 5.3 mn units in 2001-02 to nearly 11 mn units in 2007-08. (source: ACMA)

- **From a handful of manufacturers in the early 90s, India now has over 40 manufacturers, over 4000 dealerships, about 600 component manufacturers in the organized sector and over 10,000 parts manufacturing firms in the unorganized sector that operate in a tier-format spread across India.** (source: Deloitte India Analysis, NMCC, ACMA)

- **For a vehicle manufacturer, about 50,000 parts are required at any point of time, of which about 5000 are fast moving. The assembly lines require well coordinated Just-in-Time (JIT) scheduling of auto parts supplies to maintain the desired flow.**

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**Growth in the Auto Component Industry**

<table>
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<tr>
<th>Production (USD Mn)</th>
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<tbody>
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<td>3000</td>
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<td>4500</td>
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<tr>
<td>6000</td>
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<th>Production (Nos)</th>
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<td>5,000,000</td>
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<td>9,000,000</td>
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<td>10,000,000</td>
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</tbody>
</table>

Source: ACMA
The complexity is resulting in increasing inefficiencies and therefore impacting costs

The complexity has impacted the financial performance of companies. An analysis of the combined financial performance of some of the leading vehicle manufacturers indicate that while there has been an increase in PAT over the period 2004-07, inventory turns of these firms, have fallen significantly between 2004 and 2007. One of the reasons for this could be the shortening product life-cycles of automobiles and the presence of several market players which has resulted in the launch of over 100 models and variants in the past two years. This decreases the efficiency of the chain with companies being forced to increase inventory to make their product portfolio available to the customers. This therefore requires higher levels of operating efficiencies by logistics service providers.

The challenges of managing complexity and costs for the automotive logistics industry are going to increase given the positive movement of the drivers. In the subsequent section, we have analyzed the performance gaps at the strategic and operational levels.

<table>
<thead>
<tr>
<th>Globalization</th>
<th>Auto Industry Growth</th>
<th>Outsourcing</th>
<th>Technological Advancements</th>
<th>Policy</th>
<th>Government Initiatives</th>
</tr>
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<tbody>
<tr>
<td>• Increasing presence of MNCs driving competition</td>
<td>• Growth in vehicle sales from 11 mn to 32 mn by 2016 driven by product innovations like ultra low cost cars</td>
<td>• Increased dependence on logistic service providers for end-to-end services</td>
<td>• Widespread usage of IT for optimization of resources</td>
<td>• Introduction of Goods and Services Tax (GST) along the lines of VAT</td>
<td>• Government focus on infrastructure development</td>
</tr>
<tr>
<td>• Emergence of India as a hub for global manufacturing and sourcing activities driven by advantages of low costs and an established automotive base</td>
<td>• Regional development of the auto components industry necessitates the logistics of components between these regions.</td>
<td>• Increased realization of benefits from outsourcing logistic operations to 3PL service providers</td>
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<td>• Opening up of railways for automotive logistics</td>
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</table>

Source: Deloitte India Analysis
The need to optimize logistics cost would increase with vehicle manufacturers planning innovative models for business like multimodal transport and dealer assembly. Deloitte conducted a survey across key players in the industry covering vehicle manufacturers, component manufacturers and logistics service providers (LSPs) to understand the current trends and initiatives in the auto supply chain, to identify the key areas for consideration and the areas of focus.

For the purpose of benchmarking, the following dimensions of comparisons were used:
- Selection criteria for LSPs
- Collaboration between manufacturers and LSPs
- Customer service
- Technology
- Impact of logistics on manufacturing

Selecting the LSP: Creating the efficiency base
Manufacturers often view logistics as a cost center rather than as a differentiator in the market place. At the heart of the problem is a lack of insight into the real opportunity. For example, a large percentage (50%) of the manufacturers surveyed ranked operating geographies/coverage of service providers and fleet size/infrastructure as “very high” in their considerations for selecting an LSP (Figure 1). Only 22% of the manufacturers considered the nature of service as “very high” in their selection. The results would have been different in mature markets which have undergone an evolution.

Even from an operational perspective, there is a mismatch between the requirements and availability. While fleet size/infrastructure is one of the key considerations for selecting an LSP, the logistics industry is highly fragmented with around 80% of the members having one or two trucks and less than 10% of the members having more than five trucks.
Functional Collaboration with LSPs: (Mis) Alignment with Growth Areas

While 33% of the manufacturers indicated very high levels of collaboration with LSPs in the traditional areas of outbound and inbound logistics, only 12% of the manufacturers indicated “very high” levels of collaboration in the emerging area of service parts (Figure 2). We expect the Indian automotive industry in the near future, to focus significantly on service parts business following the global trend (Refer: Service Revolution in Manufacturing).

Figure 2: Level of Collaboration with LSPs across functions

Service revolution in manufacturing

An ongoing Deloitte Global Service and Parts Benchmark Survey (SPM) of the service business of more than 120 companies and business units across Europe, North America, and Asia-Pacific (The automotive and commercial vehicles industry account for more than a quarter of the companies studied) whose combined revenues reach more than US$1.5 trillion provides some interesting comparisons and conclusions for the Indian automotive industry. These are:

• The SPM analysis suggests that service and parts sales account for an average of 36% of total sales across the automotive and commercial vehicle businesses benchmarked. Furthermore, the average profitability of service and parts operations (SPOs) among those companies is more than 53% higher than overall business unit profitability, with service and parts profits accounting for an average of 47% of total profits of the business units.

• The total impact of the service business, however, varies dramatically across the companies benchmarked. A majority are struggling to join the service revolution. Despite the many opportunities for improvement, about half the service businesses benchmarked have profit levels and revenue growth rates lower than or on par with their business units (Figure 3). For about a quarter of the companies, both growth and profitability of their service
business lag the main business. The missed opportunities for improvement are significant. Companies often fail to capture even the market for servicing their own installed base of products—the “captive” service market.

*The median captive market share of the automotive companies benchmarked is just 45% of “pure” services, such as field service repairs, and about 75% in spare parts.*

*For numerous companies these captive market shares are much lower. In addition, the total market potential—which also includes the potential of selling services, parts, and accessories to customers who did not buy the original product (the “non-captive” market)—is typically two to 10 times larger than the captive market. The SPM analysis shows that the service businesses of most companies today reach only a small share of this market.*

While at this stage outbound logistics (nearly 60% of the respondents) and inbound logistics (about 42% of the respondents) are still recognized as areas for improved collaboration with LSPs, 42% of the respondents recognize the need to improve collaboration in service parts logistics (Figure 4). This provides significant opportunities for both the LSP and the manufacturer in their journey of growth and profitability.
Operational Collaboration with LSPs: Gaps in prioritization

About 45% of the manufacturers rate logistics cost as “very high” in the selection of LSPs and around 90% indicated that LSPs need to focus on cost reduction (also see Figure 9) perhaps reflecting the cost pressure on the manufacturers. However, only 11% of the manufacturers have indicated “very high” levels of collaboration with their LSPs for the purpose (Figure 5). Those organizations that have collaborated with LSPs have gained “high” levels of benefits (Figure 6). This strongly indicates a need for manufacturers to collaborate with LSPs across the three areas of cost reduction, inventory management and replenishment and, forecasting and demand planning.

Figure 5: Level of Collaboration with LSPs across Operations (%)

Figure 6: Benefits achieved through collaboration (%)

Cost Reduction Inventory management & replenishment Forecasting & demand planning

Cost Reduction Inventory management & replenishment Forecasting & demand planning

Nil Minimal Moderate High Very high

Nil Minimal Moderate High Very high
**Barriers to Customer Service: Thinking beyond the ordinary**

Delays in transit and difficulties in scheduling rank “very high” among manufacturers as barriers to customer service (Figure 7). About 97-98% of automotive freight in India is transported over the road networks that cut across several states passing through multiple check posts which compound the delay. This coupled with the fact that around 40% of the traffic load is taken by 4% of the national highways contribute to the delays.

It is therefore no surprise that manufacturers rank reliability and on-time deliveries as the biggest area for focus by the LSPs (Figure 9). However, only 10% of the respondents plan...
to use multiple modes of transportation (Figure 8). Organizations are therefore not planning to deviate from their current system of freight movement by road. One of the key strategies for logistics planning with “very high” focus is full truck loads.

Almost 40% of the respondents plan to have a high reliance on LSPs for value added services (VAS). Companies are looking to outsource non-traditional logistics requirements such as reverse logistics, inventory management, order processing, distribution, and labeling and packaging. This is in line with the global trend discussed earlier, although at this point of time organizations are focusing on areas like cost, fleet size/other infrastructure and operating geographies (Figure 1).

Increased range of services offered by the logistics service providers is one of the significant requirements of the automotive supply chain.

However, some OEMs and LSPs are choosing to be different. There is an emerging trend of multi modal transportation involving OEMs and LSPs. Gujarat is being used as a hub to transport cars from Northern India to Kerala in the South through shipping lines. Adani Logistics Ltd. transports Maruti Suzuki India Ltd’s (MSIL) cars from their plants in North India to Mundra, Gujarat, from where it is shipped to Kochi in Kerala along the coast in smaller container ships owned by Shreyas Shipping and Logistics Ltd. In the financial year 2007-08, about 4,500 Maruti cars hit the port of Kochi. Boxtrans Logistics (India) Services Pvt. Ltd also moves MSIL cars by containers from northern India to Visakhapatnam, Andhra Pradesh. MSIL expects to increase delivery through the railways and the coastal route as it would help them move cars swiftly and allow them to flush out additional truck capacity from their system which can be allocated elsewhere (Source: The Hindu Business Line, Economic Times).

It is expected that as the volumes increase the cost of multimodal transport would be lower compared to road transportation in future. The Indian Railways have opened up rail transport for the automotive industry. Investments are also being made in rail-based multimodal facilities by private players in a number of locations such as Ahmedabad, Bangalore, Nagpur, Pithampur, Chennai, Delhi, Mumbai and Hyderabad. The multimodal efforts would further be aided by the tax reforms. It would enable organizations to have consolidated regional warehouses in few strategic locations in the country and operate on a hub and spoke model. These to be established along the dedicated freight corridors could be a viable option.
Adoption of Technology – In line with the strategy?

Extensive implementations of the ERP and online order processing followed by CRM characterize OEMs/component manufacturers (Figure 10). However, the benefits achieved from the implementations have not been “very high” especially for ERP and online order processing (Figure 11). Emerging technologies like RFID are at a nascent stage. The lack of benefits achieved forces organizations into re-implementing the same in the next three years. Around 70% of the manufacturers have planned for an extensive implementation of ERP (Figure 12) while 40% of them have already indicated to have done so. A well implemented transaction processing system at the manufacturers’ end would increase the visibility and enhance the performance of processes in areas like inventory management, demand planning and scheduling. This could potentially drive increasing collaboration between manufacturers and LSPs.

While value added services by LSPs were indicated as one of the key drivers of logistics strategy, 50% of the respondents have planned “extensive” implementation of the WMS in the next three years. Over 33% have planned “extensive” implementation of the TMS (Figure 12). It would be expected that

Figure 10: Technology: Degree of Implementation by OEMs / Component Manufacturers

<table>
<thead>
<tr>
<th>Technology</th>
<th>Nil</th>
<th>Minimal</th>
<th>Some</th>
<th>High</th>
<th>Extensive</th>
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<tbody>
<tr>
<td>RFID</td>
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<td>Online order processing</td>
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<td>Customer Relationship Management (CRM)</td>
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<td>Transportation Management System (TMS)</td>
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<td>Warehouse Management System (WMS)</td>
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<td>Advanced Planning &amp; Scheduling (APS)</td>
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<td>Forecasting/Demand Planning Software</td>
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<td>Enterprise Resource Planning (ERP)</td>
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<td>E-sourcing/E-procurement</td>
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<tr>
<td>Electronic Data Interchange (EDI)</td>
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Fast Tracking the Indian Automotive Logistics
LSPs rather than manufacturers would be investing in technologies like TMS and WMS. To that extent, there appears to be a contradiction between the need for outsourcing value added services to LSPs and implementing such technologies. Peers in the Asia Pacific region have their priorities set.

Figure 11: Technology: Benefit Achieved
Figure 12: Technology: Plan to Implement in the Next Three Years

[Diagram showing the percentage of companies implementing various technologies, including RFID, Online order processing, Customer Relationship Management (CRM), Transportation Management System (TMS), Warehouse Management System (WMS), Advanced Planning & Scheduling (APS), Forecasting/Demand Planning Software, Enterprise Resource Planning (ERP), E-sourcing/E-procurement, and Electronic Data Interchange (EDI).]

Legend:
- Nil
- Minimal
- Partial
- High
- Extensive
Results from a Deloitte Global Manufacturing Industry Benchmarking Survey (GBS) in the Asia-Pacific region indicate that only 30% of the organizations have “some to extensive” implementations of WMS and TMS. Quality Management Systems (QMS) followed by ERP and EDI are the top priorities. Only about 5% of the organizations plan to implement WMS and just over 10% plan to implement TMS in the future. The trend towards increasing level of outsourcing to LSPs and focus on core processes is evident (Figure 13).
Impact of logistics issues on business

Outside the uncontrollable factors like poor infrastructure, rising fuel and real estate prices, technology penetration in the logistics industry is seen as a significant issue affecting business (Figure 14). Though fuel prices have increased significantly in the past few years, organizations do not seem to offset fuel prices with higher inventory carrying costs (figure 8). This could be due to the increasing costs for warehousing. This may also be due to the fact that logistics costs are around 4% of sales for most companies and transportation costs account for about 40% of the total logistics costs.

The size and fragmentation in the logistics industry could be reasons behind some of the key issues faced by manufacturers. High real estate costs, human resource challenges and investments in technology are factors that would potentially drive consolidation in the industry in India in line with global trends.

Figure 14: logistics Issues and their Impact on Business
While the challenges and gaps are numerous, our study suggests that companies can make strategic and operational investments in processes and technologies that would enable them to drive continuous improvement across their logistics activities.

**In the near future**, demand for infrastructure coupled with the need to optimize costs on a continuous basis together with elimination of risks would drive consolidation of the industry. This would also force organizations to come up with innovative models of infrastructure planning.

**First, manufacturers need to focus on a collaborative approach to logistics strategy and planning involving the LSPs.** Indeed, our analysis indicates a strong relationship between the level of implementation of processes—such as cost reduction and inventory planning & replenishment—with the benefits achieved from the implementation. Since the automotive industry is well known for its collaboration across the supply chain, we do not anticipate major challenges in this area.

**Second**, while manufacturers have historically looked at transportation costs as merely the price paid to LSPs, organizations need to move towards “value delivered”. Organizations need to look at all components of cost, including cost of acquisition, transportation and logistics costs, duties and taxes, inventory carrying costs, overhead and administration, and risk and compliance costs.

**Third**, as India moves towards a USD 120 bn automotive industry by 2016 (IBEF), players need to focus and prioritize their technological investments. From a LSP perspective, technology implementation has become essential and players should look at better management of resources through information systems.

**Finally, as LSPs collaborate**, they need to align with the business requirements of OEMs/component manufacturers and take advantage of the growth opportunities in areas like service parts business where the manufacturers are planning to improve the level of collaboration with LSPs. For example, one of the world’s leading manufacturers of construction and mining equipment, diesel and natural gas engines and industrial gas turbines has extended its internal excellence in service parts management and logistics to external customers through the creation of a logistics subsidiary, thereby building a global growth business and capturing a much larger share of the available market for those types of business services. Since its inception, the organization has achieved remarkable success. Today, it operates in over 100 locations across 25 countries managing more than 18 million stock-keeping units (SKUs). The organization believes that massive opportunities remain for creative third-party logistics providers in the $170- billion industry.
In the near future, demand for infrastructure coupled with the need to optimize costs on a continuous basis together with elimination of risks would drive consolidation of the industry. This would also force organizations to come up with innovative models of infrastructure planning.
About CII - Institute of Logistics (CII-IL)

The confederation of Indian Industry (CII) works to create and sustain an environment conducive to the growth of industry in India, partnering industry and government alike through advisory and consultative processes.

To address the need of sharpening India Inc’s competitive edge through better Logistics and Supply Chain practices, the CII Institute of Logistics (CIL) was established in 2004 by the Confederation of Indian Industry as a Center of Excellence in Logistics and Supply Chain.

At CII Institute of Logistics we create a platform for the Industry to gain more insights into the emerging trends, industry specific problems of national importance and global best practices in logistics & supply chain management. We enable the industry to cut down the transaction cost, increase efficiency, enhance profitability, sensitize and enable to bring solutions to macro level issues.

The Vision of CII Institute of Logistics is to become an International Centre of Excellence in Logistics and SCM and to facilitate Indian industry to be referred in Global Business for its Best Practices in SCM and Logistics.

The Mission of CII Institute of Logistics is to be a platform to create and share intellectual capital for reducing transaction cost and improving competitiveness, in the process nurture the skills of Logisticians and ensure adoption of Best Practices in Logistics and SCM through online and offline activities.

For over four years now, CII Institute of Logistics, the country’s premier Centre of Excellence in logistics and SCM, has enabled a number of exemplary success stories in logistics.

Our services include Training, Consultancy, Education, Events, Research and information services.
Deloitte member firms provide professional services to more than 85 percent of the manufacturing companies in the Fortune Global 500®.

Global Manufacturing Industry Group
The Deloitte Global Manufacturing Industry Group, which is made up of Deloitte Touche Tohmatsu (DTT) member firm manufacturing industry practices, comprises more than 750 Deloitte member firm partners and 12,000 industry professionals in over 45 countries. The group’s deep industry knowledge, service line expertise and thought leadership allows them to solve complex business issues with member firm clients in every corner of the globe. Deloitte member firms attract, develop and retain the very best professionals and instill a set of shared values centered on integrity, value to clients, and commitment to each other and strength from diversity. Deloitte member firms provide professional services to more than 85 percent of the manufacturing companies in the Fortune Global 500®.

For more information about the Global Manufacturing Industry Group, please visit www.deloitte.com/manufacturing.

Deloitte in India
In India, we offer a range of audit & enterprise risk, tax, consulting and financial advisory services across thirteen cities.

Our existence for over a century in the Indian professional arena supplements the technical proficiency of the client service teams to create powerful business solution tailored to the client’s need.
Global Service and Parts Management
Benchmark Respondent Profile
In the automotive sector, 68 percent have corporate revenues of more than US$1 billion; and 16 percent have revenues ranging from US$600 million to US$1 billion. Of the automotive service businesses benchmarked to date, 56 percent have global coverage, 25 percent have regional (multinational) coverage, and the remaining 19 percent have national coverage.

Global Manufacturing Industry
Benchmark Survey (GBS)Respondent Profile
The GBS includes over 900 business units from 35 countries. 13% of the respondents were from the automotive sector.
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>APS</td>
<td>Advanced Planning and Scheduling</td>
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<tr>
<td>ACMA</td>
<td>Automotive Components Manufacturers' Association</td>
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<tr>
<td>CV</td>
<td>Commercial Vehicle</td>
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<td>CII-IL</td>
<td>Confederation of Indian Industry - Institute of Logistics</td>
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<td>CRM</td>
<td>Customer Relationship Management</td>
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<td>EDI</td>
<td>Electronic Data Interchange</td>
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<td>ERP</td>
<td>Enterprise Resource Planning</td>
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<tr>
<td>FDI</td>
<td>Foreign Direct Investment</td>
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<tr>
<td>4PL</td>
<td>Fourth Party Logistics</td>
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<tr>
<td>GBS</td>
<td>Deloitte Global Manufacturing Industry Benchmarking Survey</td>
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<tr>
<td>GST</td>
<td>Goods and Sales Tax</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>IBEF</td>
<td>India Brand Equity Foundation</td>
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<tr>
<td>IT</td>
<td>Information Technology</td>
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<tr>
<td>JIT</td>
<td>Just in Time</td>
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<tr>
<td>LPI</td>
<td>Logistics Performance Index</td>
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<td>LSP</td>
<td>Logistics Service Provider</td>
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<td>MSIL</td>
<td>Maruti Suzuki India Ltd</td>
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<tr>
<td>Mn/mn</td>
<td>Million</td>
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<td>MUV</td>
<td>Multi-Utility Vehicle</td>
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<td>NMCC</td>
<td>National Manufacturing Competitiveness Council</td>
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<td>Nos</td>
<td>Numbers</td>
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<tr>
<td>OEM</td>
<td>Original Equipment Manufacturer</td>
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<tr>
<td>PAT</td>
<td>Profit After Tax</td>
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<tr>
<td>QMS</td>
<td>Quality Management System</td>
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<tr>
<td>RFID</td>
<td>Radio Frequency Identification Device</td>
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<tr>
<td>2PL</td>
<td>Second Party Logistics</td>
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<td>SPO</td>
<td>Service and Parts Operations</td>
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<td>SARS</td>
<td>Severe Acute Respiratory Syndrome</td>
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<tr>
<td>SKU</td>
<td>Stock Keeping Unit</td>
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<tr>
<td>SCM</td>
<td>Supply Chain Management</td>
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<td>3PL</td>
<td>Third Party Logistics</td>
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<tr>
<td>TMS</td>
<td>Transportation Management System</td>
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<tr>
<td>US</td>
<td>United States</td>
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<tr>
<td>USD</td>
<td>United States Dollar</td>
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<tr>
<td>VAT</td>
<td>Value Added Tax</td>
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<tr>
<td>WMS</td>
<td>Warehouse Management System</td>
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