

Auto SCM 2010

“ Logistics as a Key Enabler to make India a Global Hub”

July 2010

A Report

INAUGURAL SESSION

Chair: Mr R Dinesh, Member, Event Chairman, Auto SCM 2010 & JMD, TVS sons Ltd

Special Address: Dr. Tarun Khanna, Jorge Paulo Lemann Professor, Harvard Business School.

Release of McKinsey report” Transforming the Nation’s Logistics Infrastructure”

Launching of Warehouse Certification by CII Institutes of Logistics

Panel: Dr. Rakesh Mohan,
Chairman
National Transport Development Policy committee
K V Mahidhar
Head
CII Institute of Logistics

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Mr. Dinesh Kumar in his opening speech remarks said that India is now emerging as a global hub for production , Supply chain management plays a pivotal role as not just a enabler, but more so as a differentiator by making India more stronger as a hub for production by citing International car manufacturers moving to India.

Mr. Dinesh Kumar stated that the first point was with regards to actual vehicle production itself, as India has become the small car hub, the second one being on the component production which is also known as a tier one companies.

As most of the global manufacturing companies have set up their base in India ,tier 1 companies have also moved into India to exploit the domestic market , many of them have made India a hub for production of Auto components.

Mr.Dinesh also asserts on the third point, as to how India can become an aftermarket warehousing hub for the Southeast Asian companies, as he believes strongly at least for some cars for some vehicle manufacturers, which can later be exploited to support other South Asian countries around us.

Dinesh Kumar further continued on saying Supply chain cost what is visibly seen is on the final end product, and what is not observed is the supply chain cost incurred by the

tier 1 manufacturer, by the tier 2 manufacturer and last but not the least at the raw material stage itself. One of the factors, that could come up, is the supply chain rate as much as costing 20% of a car when it is produced as against the normal assumption of between 5- 10%.

Dinesh Kumar quoted the recent survey on the Indian manufacturing quality, which will obviously determine whether India is going to be the base for manufacturing or not, but also reinforced, that supply chain could become a potential point of rejection, for tapping or rather the manufacturing expertise, which again depends on three elements the first one being cost, infrastructure, taxes and inter-movement of goods in India to ensure production to become least cost. The second element is efficiency which is the supply chain transparency, the ability to share information across, to ensure planning accuracy takes place, so that we have least wastage across the supply chain.

And finally the last element by which he concluded to discuss and come out with an Indian way to manage supply chain better, referring to the Indian mindset of looking at efficiency of cost and value as being the pure drivers going forward.

Tarun Khanna started his special address by saying that he would like to layout a conceptual way to think about what kind of challenges are in the way of making India a global hub.

There are real and serious costs due to compromise on information flow, compromise of physical infrastructure. Tarun Khanna elaborated on this by comparing the economies of developed market such as the United States and the developing market like India, in terms of availability of information and physical infrastructure. He further explained through his experience of sourcing an ice pack, required to refrigerate a medication, which would cost Rs.20, and due to lack of adequate information and the physical infrastructure, and with the amount of time and effort spent on procuring led to a cost of Rs. 720, which he said, back in the United States he would go online to CVS pharmacy or the Wall Green pharmacy, which are the nation-wide 24hours pharmacy and assured that on a click of a button it tells him the exact location, where the ice pack is available and at with an extra fee of \$5.00 he could get it delivered to him in less than 45 minutes at a total cost of 4.99 cents. This clearly explains the lack of information flow, which goes a long way in preventing the Indian market to emerge as a global hub.

Tarun Khanna shared his thoughts on what it takes to build successful markets in developed and developing countries, he reinforces that in India private sectors have an important role to play in facilitating the infrastructural problems and improving the economical development of the country and in this context, he also shared the piece of information, where he has penned a book called, "Winning and emerging markets.....",

which lays out the conceptual map, that essentially elaborates the "ice-pack" problem in general.

Coming back to the point, Dr. Tarun points out India emerging as the hub of auto businesses, and quotes dinesh's mention of tapping the mindset of india through frugal engineering and value consciousness. Also talking about low cost talent tapped, like the engineering talent, the design talent, the workforce etc, where Tarun Khanna put across the question to Dr. Rakesh Mohan to address as what does it cost us to access this talent, what is the complimentary investments that needs to made as a society or as a set of companies to begin to access this talent, starting from the elementary education, which he says is a challenge in India, where considerable time and effort is spent in bringing in people with a minimum graduate degree , technically qualified, to bring them up to the point to do useful work in corporate companies and enormous undertakings.

He concluded by saying that a bunch of complimentary investments are needed to be made in the country for accessing these talents which he says that he is happy that this forum seems to encouraging the very fact of the audience, a combination from private sector individuals and public sector individuals have gathered to share their thoughts to resolve this problem.

Low cost talent is one of the input side of any company and the output side it is to understand and respond to the unique demand patterns, which has resulted in the production of various small cars, as many multinational companies are now creating a bandwagon of affordable cars with low energy foot prints, low fuel consumption

But even on the logistics side, supply chain should not be considered as mere enablers and as also now, as companies deliver logistics services, it is very encouraging to see some of the skills that they are developing in the decade in resolving some of the "ice-pack" problem that are unique to auto logistics.

Release of McKinsey report on "Transforming the Nation's Logistics Infrastructure" by Dr. Rakesh Mohan and the first copy was handed over to Rajat Gupta.

Rajat Gupta on briefly explaining the findings of the McKinsey report, said that India loses 40 billion dollars of its GDP due to its poor logistics infrastructure, which is roughly 4% of the GDP. He said that this problem 10 years from now will only get bigger, which could be more than a \$100 billion dollar problem that is more than 5% of our GDP, this

is despite the very large investment that India makes in logistics infrastructure in the country.

Rajat Gupta cited the exact problem as the investments that are not wisely made. Precisely, they are made in an uncoordinated manner.

By making investments in infrastructure wisely and purposefully would result in reduced waste and fuel consumption, that will improve the outcomes and will improve the opportunities for industries which will pave way for making India a global leader.

He put forth few more points from the report saying that infrastructure in logistics has to be constructed in a planned manner.

He first mentioned, logistics is a network, and added that there are 7 corridors, road corridor, rail corridors and water ways corridors like the east coast and west coast. There are 150 major connectors in the country, some of them are expressways, some of them railways, there are 700 last mile connectors. Rajat further added that the network needs to be a mesh, comprising these three components.

Secondly, optimum utilization of the existing infrastructure. Mr Rajat supported his statement by pointing out that India has roads, but does not invest enough in maintenance, has tolling stations, but do not have electronic tolling and keeps trucks waiting, India has capacity in Rail lines, which is not fully utilized, because India does not have automatic block signaling everywhere.

Hence, infrastructure does exist in India, but only 10% to 20% of this infrastructure is utilized.

Thirdly, India needs to shift the way it is spending money. India spends 50% on roads, 40% on railways, 10% on airport and shipping, which needs to shift, Rail needs to take a bigger share. Again between road and rail, it needs to shift to Rail, by focusing on the network, money to spent on the maintenance of these infrastructure to increase the operational capability of infrastructure. He quipped by saying finally if we can we should also increase the infrastructure.

Rajat concluded by saying that the need of the hour is an integrated approach, which is in the current point of discussion is an integrated logistics policy that should be led by the prime minister's office or a group of ministers, that would drive the implementation of such a policy. The outcome of the accomplishment of the integrated logistics policy will result in India saving at least 20% of transport fuel, lower amount of carbon footprints, and a decade from now, India will become a global leader.

Dr. Rakesh Mohan launched Warex, Warehouse Certification Program, this is a new initiative by CII institute of Logistics which assesses and certifies the overall functionality of the warehouse. The certification process will enable the service provider to understand the current level and upgrade to the next level, and helps end users have some basic benchmark which they can rely on in going forward when they choose their warehouse infrastructure or partner to suit their supply chain design.

Dr. Rakesh Mohan started his special address on recalling the awareness or importance of logistics 10 years ago among people, as even the term logistics was not familiar rather popular as compared to the current scenario of conducting seminars and conferences on Logistics for a large number of crucially concerned people.

Dr. Rakesh also cited out the McKinsey report reiterating the need for an integrated logistics policy to transform India's logistics infrastructure. He also admitted that having been a part of the committee, he understands the difficulty to integrate rather even to think of transforming the logistics infrastructure.

He said that this can be achieved only if India achieves 8 to 10% growth hoping for over the 10 to 30 years. It is of course with the concern of the future transport and the logistics of the country, the prime minister has appointed the National Transport Committee headed by Dr. Rakesh Mohan.

He said India's economy is being closely watched and being noticed by people from outside, particularly over the past 7-10 years. India has achieved around 6% growth in the 30 years, you can't achieve a sustained growth of 6% without efficient infrastructure and logistics etc.

Relatively speaking Dr. Rakesh Mohan pointed how little effect did the global crisis affect India, if India and China were not that effective it couldn't be a global crisis.

While working on the report of Indian infrastructure 15 years ago, the kind of growth projected for the next ten years, the investment infrastructure should be taken on 8% on GDP, but we did achieve the growth rate and agrees that there is much better utilization of the infrastructure.

We in India, always do the investment in infrastructure at the last hour and do not plan in advance, which is a major setback. We flog the existing capacity until we go for the new capacity, he says the good news is that we use the existing capacity or assets very well. Explaining this further by citing examples, that despite railway stations and bus stations in poor shape without proper care and maintenance life still goes on, which he

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The session begun with Dr. Tarun Khanna, who recently released his book, “Winning and emerging markets” where he makes his point on “institutional voids”, infrastructure being one such can be seen as an business opportunity rather than a setback ,

By stating that the challenge is to bring the buyer and seller together and to resolve this problem it is imminent to have credible information as to where the buyers and sellers are.

All developments occur when the buyers and sellers are brought together, in some sense, but bringing them together was the fundamental problem for development. To fill these voids it is essential to have the following credible information. In some sense he points the launch of warex as a classic example to as the sunnier side of the institutional voids, the idea is the entities that resolve the information problem or the contract sanctity problem between potential buyers and sellers, when they are not functioning, is a void, filling the void is a huge entrepreneurial opportunity.

CII fills the void to assure through developing the Warex program, where the provider of warehouse services undergoes the program to be accredited, so that the buyers of the warehouse is reassured that the provider is not a fly by night operator which increases the credibility of the provider or it is the credibility enhancer.

Broadly speaking all logistics companies are attempts to fill institutional voids, trying to make a business by allowing buyers and sellers to move their goods and services.

He concluded by quoting that the answer to the entire supply chain problem like getting spare parts, auto components have a variety of entrepreneurs who have to make their existence felt to resolve this problem.

Mr. Rajat Gupta citing the example of growing demand of small cars in India, said the domestic market is very large, it is going to be 3-4mn cars by 2020. He hinted India to be in top 5 market in the world. Referring to frugal engineering, he said that india can make car platforms at 20-40 million dollars and innovative car platforms, we have ability to set our plants at 20- 50% lesser cost than what can set up by mature markets, whether it is component plants, assembly plants or steel plants. Our manufacture cost, because of factor cost advantages and because of the operational efficiencies which the companies have dwelled over the 20 years is well positioned. In the context, we have created global size hubs in India. All these above factors enable or position us well both in domestic purposes and the international purposes in the market for small cars.

However, there are also challenges. Setting up manufacturing facilities is becoming more difficult, the nature of automotive industry is multi-tiered eco-system and the industry spends two times more on logistics which is hidden. Thirdly there is a complexity in information sharing and data transfer, in efficiency in knowledge flow and information flow.

Mr. Marc Nassif talking about the factors that made an international player to come to India, he said that they chose India from the perspective of an international investment, has huge potential to become a global hub. He says that mindset of the people and also Chennai being a coastal area, made it more attractive to set up the Renault plant here, which he says is the important factor for any country to become a global hub. Also he said that the connectivity is the most important factor, we need roads, ship, and rail.

Talking about the road he says carbon footprint is also a point of concern to be addressed efficiently. He further suggests that connectivity within India should given more significance, as the cost of vehicle manufactured will largely depend on this and minimum inventories to be maintained.

He concluded that India can definitely be a global hub if the above said issues are resolved, as good infrastructure and good connectivity within India will result in sustainable and profitable business.

Mr. Christoph Remund, explaining, on how can supply chain follow the pace of growing automotive industry in India. Indian logistics has grown tremendously as it has about 46% share in the global market in Asia. Because of the geographical location, manufacturing, knowledge, cheap labour, India has a definite advantage to become the distribution hub to many countries. He further said undoubtedly India will become a global hub, but the challenges are with the supply chain quality coping up with the rapid pace.

Looking at the United Nations report, the ease of import and export to and from India is still at the lower end compared to developing countries. Issues like delay in shipment clearing, complex documentation, inefficient supply chain, lack of facilities in moving goods within India makes it expensive, more complex and complicated.

There is a need of a holistic approach to logistics rather than individual pockets. He also advocates the Government to play a vital role in assisting and creating the right environment for private sectors or business fraternity to invest. Quoting the example of how Singapore and Hong Kong has developed over the years due to the government creating an environment for business to flourish.

Mr. Remund stressed the need for giving equal importance to cargo and cargo handling in airports, which are currently not even been considered as a priority. In his conclusion,

he said the need of the hour and the most crucial thing is the speed at framing a integrated policy for logistics.

Talking about the Port of Zeebrughe, which is situated in the north east coast of Belgium , which is one of the busiest sea routes, Mr. Sven De Wachter stated that the port may not be the largest Port but definitely a very niche port. It is when the globalization started the port became busier.

Though Belgium is a small country with only over 1 crore population but do not have their brand of cars. As an automotive industry and infrastructure, Zeebrughe is extremely good and is very well connected to the rest of EU by road, rail and water ways which is essential to drive the economy of any country.

In India, economy is growing all over the country, just like in Europe in the past, so infrastructure will follow. The country is developing on its own and industry is developing on its own, which is why India is driven by economic and domestic growth which is the important factor over the global economic crisis, that India was least affected because of domestic growth.

Finally, Mr. De Wachter advises many Indian entrepreneurs who are trying get business overseas, to be the best player in the domestic market, by following best practices and then try overseas, which is exactly what the overseas to come to India do. Only best domestic market player come to india and sustain.

SESSION II: Panel Discussion- Key requirements for developing world-class infrastructure

Session Chairman Dr. Rakesh Mohan, Chairman, National Transport Development Policy committee

Panelists: Mr. Thomas Netzer, Principal, Mckinsey & Company,

Dr. J.N. Singh, IAS; Member(Finance), NHAI

Mr. P.Sripathy, CEO, GMR

Mr. R.Venkatesh, Director, Temasek,

Mr. K. Venkatesh, Sr. Vice President- Developmental Projects,

L & T Ltd.

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Thomas Netzer, started his presentation by sharing as to what initiated the McKinsey report, which he said is by taking stock of the existing infrastructure in India are not state of the art atleast as compared to that of the international standards, and also aware that government was keen to invest in a lot infrastructure. it is imperative to invest money in the right way , to invest efficiently, and implementing infrastructure as big as possible. The main question is are we doing the right design, are we doing the right planning, in terms of airports, railways and roads etc. and it is observed that this needs to address from the freight point of view, hence, he declared that he would talk about the logistics infrastructure from the freight point of view and not from the passenger point of view.

Transport or Logistics infrastructure is the key enabler for economic growth of a nation, and also it is the high, long-term interdependent investment, for example to build an airport, important points like the connectivity to airport from roads, cities should also be considered all which drive to the point that Logistics infrastructure involves complex design and management. Hence there is strong need to understand status quo and root causes of weaknesses of infrastructure in India, to analyse future needs of India's logistics infrastructure and also to develop a strategy and comprehensive set of recommendations to implement strategy.

High logistics cost is partially driven by the fact that freight transport in India is dominated by roads, where India spend 30- 70% on roads, when compared countries like China and USA spend who spend on more on rail and less in road, despite the fact the two –thirds of India' freight travel over long distance is structurally suitable for rail and waterways. In India at least 65% of the freight is bulk that travels long distance , most of these goods should be transported by rail or water ways than roadways, this is major concern and is the key driver for the cost of logistics being so high in India.

Lot of freight flow in India is concentrated, there are only 7 corridors connect 15 high growth clusters and carry 50% of freight, while there are 150 major connectors and 700 last mile connectors.

The poor state of logistics infrastructure resulted in losses of USD 45 billion or around 4.5% of GDP in 2008, which will only worsen the situation with increased waster and emissions due to imbalanced mode mix, high concentration, higher transport cost, higher theft and waste and facilitation payments with higher share of roads and lower speed.

Mr. Thomas Netzer, concludes by saying India's logistic infrastructure is in poor shape and has a poor outlook and recommends to adopt a fundamentally different approach to build its logistics infrastructure through shift on four dimensions, which is focusing on key network connectors, proactive development of enablers, sweating existing assets, and reallocation of investments across and within modes. He also stressed the need of an National integrated logistics policy, which should outline tangible objectives to build infrastructure capable of keeping pace with India's growth.

The proposed approach to transform the nation's logistics infrastructure would provide multiple opportunities to the private sector, the infrastructure users, logistics providers as well as infrastructure developers.

Dr. J. N. Singh responding to the query raised by Dr. Mohan on shift to the rail sector, but he said the in roadways it has taken an accelerated path, with last year covering 3300 kms and for the current 9000km is already awarded. This would be the focus for the next 3-4 years, with a target of 25kms/day. There has been a major shift from EPC mode to the PPP mode.

Dr.J.N.Singh also expect the cost over runs not to take place, as this charges the developers with penalty and does not give them a positive incentive. He also added on the road maintainence which is covered for the next 25 years under the concession agreement by the BOT operators. There are also concerns with regards to land acquisition, development vs environment concerns and long term finance.

Mr. K Venkatesh responding to the query raised by Dr. Mohan of whether he endorses the view of Dr. Singh, of the acceleration and changes in the next 10 years. The momentum in the last 6-8 months has increased compared to last years, however, has slowed due to combination of factors including economic downturn. Since the road policy is biased towards the PPP format, the sentiments of the banking sector and the investment philosophies played a role in slowing down the process.

The developmental policies in roadways that are encouraging right from categorizing the road building process into mega project interconnecting the corridors. He also admitted that the road building in India is maturing, as there tremendous acceleration from the clearance till completion, from 3 years to 18 months. The second category being the expressways and the traditional national roadways. He also appreciated the prime minister's Gram SadakYojna under the Ministry of Rural development, which has achieved phenomenal success.

Mr. P. Sripathy responding to the query on key success factors of building Hyderabad in 30 months, Delhi airport in 37 months, said that firstly it is the mindset, what is impossible today will be possible tomorrow. Secondly is the integrated holistic

approach, includes the views, opinions of all stake holders, one such approach is the elevated expressway to connect the airport (Hyderabad)with the city, which is situated at a distance of 30 kms away. Thirdly, there should be holistic approach right from design, construction, operate and maintain. Fourthly, it is important to put the extra effort to break it down into smaller components and monitor it at micro level.

Mr. P. Sripathy, while answering another query on succeeding in coordinating various government agencies while handling projects both at Hyderabad and Delhi. He advocates and follows the policy of “never complain”, in any given situation, there will be a mix of people who are supportive, and also the otherwise, however, the challenge is to exist among them and believing that we are doing a meaningful and purposeful job.

Mr. R Venkatesh talking on the financing for projects in India by the international funding agencies said that India infrastructure story so far is very positive. The reason is very clear is there is no investment happened and so there is a huge opportunity to invest. What makes this attractive, the infrastructure spend in India was at 2% of the GDP in 2003 which grew to 5% in 2009, and 5 years from now it is expected to grow upto 8%. He also illustrated this with the Bangalore airport expansion, initially Bangalore airport was planned for the next 10 years considering the air traffic, but within a span of two years, there are already talks on expansion, which is a great perspective from the side of an investor, because it indicates huge demand and it is secular.

While quoting the example of ports,In FY09 and FY10, when most of the global ports declined on growths, India still had a positive growth and is expected a 10% growth in the future. The key factors that an investor looks for is growth, assurity of growth from the infrastructure perspective, volatility in risk is minimal.

SESSION III: Challenges and Innovations in Automotive Supply Chain

Opening Remarks Mr. A.M. Viswanathan, Vice President, Godrej & Boyce Mfg. Co.Ltd

Presentation by Mr. S. Ravichandran, President, TVS Logistics Ltd.

Mr. Sanjay Upendram, CEO Amarthi Consulting

Mr. Pranil Vadgama, President, CHEP India Pvt. Ltd

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Mr. S. Ravichandran speaking on the challenges and innovations inAutomotive supply chain presentation by with citing out the opportunities for developing countries like India,

saying that the logistics cost are estimated at 11-15% while for developed nations it is only 7-8% of the total GDP, while India has \$1200 Billion GDP, however the opportunity available for us to save is only between \$ 50-85 billion GDP which 25,000 to 40,000 Crores. How to achieve this as the developed countries.

Mr. Ravichandran while explaining the challenges, he said Supply chain is divided based on various perspectives like kind of role, geographical location and types of services being provided. How does the supply chain gets constructed based on that the innovations and challenges should be worked upon.

Ravichandran explains the challenges and also suggests innovations. Firstly the challenges in strategy used in supply chain is whether is the supplier, consumer or the service provider look at supply chain vertically, where each of the above individual looks at the challenges from their point of view, while it should be looked at horizontally, supply chain not to be looked at as JIT at the gate, or till tier1 or tier 2 rather should be JIT in the entire chain, also aim at optimization is the tangible or intangible cost as a indicator as to whether we are doing the job in the right way. Secondly the challenges in Engineering component of the supply chain, the facilities at the port, roads, storage structures, vehicles, material handling equipments, which are performing at 40% to 50%, do we have enough ports, the capacity to handle, roads to increase average speed 40 – 50kms, the storage structures now thankfully warehouses where 25 m to 30 m high are being constructed unlike 12-15 m, Information movement has not bothered the system, is not a challenge though, but still managed manually, the innovation should result in seamless transfer of data.

Mr. Ravichandran concludes saying that there are many challenges, and we are capable of finding solutions provided we have the manpower who can understand the entire supply chain and who can think horizontally across the supply chain.

Mr. Sanjay Upendram said that India is fast becoming the epicenter of global growth. India is the second fastest growing automotive market in the world, from 2005 to 2010, as there is immense increase in production, whether it is passenger vehicles, commercial vehicles, tractors or two wheelers.

Talking on the several key trends in the automotive industry that are impacting the supply chain, such as growing consumer choices, rapid model introduction and design changes, extensive distribution and service networks, increasing customer expectations. In the current scenario, the supply chain is complex and inefficient. Further on the challenges that still need to be addressed across the supply chain are Design stage, sourcing, manufacturing, distribution, selling and servicing.

Mr. Upendram further explains that over the last 15 years, OEMs and suppliers have implemented several key initiatives to improve competitiveness which needs to continue.

Mr. Upendram has identified 5 innovative supply chain solutions for competitive advantage, which would continue to impact automotive supply chains globally and in India.

1. Product de-proliferation capabilities :

There is a need to bring out new product development process to enable optimal cost and time to market. Product portfolio has a huge impact on the supply chain efficiency and effectiveness. Simultaneously, de-proliferation strategy initiatives have to be implemented considering the various analysis.

2. Optimized supply chain:

Majority of the existing supply chains have evolved due to past policies (supplier availability, taxation, monopoly restriction) and not necessarily due to holistic business considerations (evolving supply chain optimization, like raw material demand/supply, product and customer mix, total cost of operation, service levels, taxation and incentives, infrastructure and national supply chain). Developing world –class operations involves evolving a robust manufacturing strategy.

Existing infrastructure in India is being upgraded as new tax laws are emerging, domestic and global demand is growing, and emerging hubs of manufacturing and distribution are emerging.

He asserts the future is in the large national logistics parks (mfg & distribution hubs) that provide economies of scale and scope. Outlining the key features of these parks, with over 100 acres in size, integrated systems accessible by multiple modes, container terminals, bulk cargo terminals, warehouses, third party logistics players, ICD/ICFSs, banking and insurance, office space, facilities for manufacturing, packaging parking, mechanized handling, inter-modal transfers, cold chain center, aggregation/ disaggregation to handle domestic and EXIM freight.

Similarly, strategically locate and seamlessly integrated multi modal logistics park.

3. Order- to- delivery capability:

Globally OEM's are ramping-up their order-to- delivery(OTD) capabilities... this will impact the entire supply chain with a significant impact on Tier I suppliers. OTD is driving new operational and supply chain capabilities across the automotive ecosystem, and impacting the areas of product development, material supply, manufacturing, distribution, Management information system. He also quoted few examples of few global giant who implemented OTD capability with a target , for example, BMW 10 days, General Motors 20 days, Toyota 14 days, Volvo 14 days.

4. Responsive service network:

Superior service performance can be achieved by institutionalizing the following key processes across the product supply chain. Implementing a robust service strategy could result in an increase in sales of 10-15% as well as improve repeat business for products. A CDC like approach can decrease the cycle time of problem detection and addressing of Warranty management problems.

5. Agile and visible supply chains:

Companies are yet to completely leverage IT for decision making and workflow. He reiterates the need for supply chain visibility Enhancement systems and automotive executive information system.

Mr. Pranil Vadgama spoke on unlocking efficiencies in the supply chain, where he explained the evolution in packaging in automotive and the transition from expendable packaging(when component supply was outsourced) to owned returnable packaging(which emerged to allow the implementation of supply chain initiative s for lean production manufacturing systems)to Supply chain packaging managed solution(which includes packaging programs, pooling principles and value-add services)

He further explained equipment pooling is the shared use of high quality standard containers and pallets by multiple customers. It is a strategic business option form companies that wish to reduce capital expenditures and improve day-to-day supply chain operations. Equipment pooling incorporates the many different processes involved in owning and managing returnable equipment in one simple package.

He asserted that standardization brings benefits where standardized inter stackable crates is an enabler for industry to share assets and services.

SESSION IV: Seamless Coordination: Process and Technology to enable Supply chain visibility and agility

Opening remarks Mr.V.Anand, General Manager, Hyundai Motor India Ltd.

Presentation: Mr. Bill Olver, VP- Automotive, Global Customer Solutions, DHL
Asia Pacific

Mr. B. Ramasubramaniam, Managing Director, Miebach Consulting India Pvt. Ltd.

Mr. R. Raghuttama Rao, Managing Director, ICRA Management Consulting Services Ltd.

Mr. R.G. Sundar, Partner & Vice President- Product Strategy & Managed Services, 7 Hills Global Consulting.

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Mr. Bill Olver began his presentation on international supply chain, more specifically on the auto components supply chain rather than the finished goods supply chain. He started with mentioning about the enormous growth in the India Vehicle production and India vehicle sales.

The automotive component industry is important, but a component is only as good as the supply chains weakest link, therefore the need for integrated supply chain management is needed which will result in increased value to customer through freight execution(origin collection, shipment booking, customs brokerage, airfreight/oceanfreight, destination delivery, visibility at shipment level), Logistics LLP(reactive)(origin management, freight forwarding, destination management, visibility at shipment/part level-manual, reactive performance report), Integrated supply chain management(proactive) comprising of strategic supplier management, planning and forecasting, program management/operations excellence, packaging design, tax and fiscal compliance, inventory management, control tower operations, landed cost studies, materials management, strategic career management, global event visibility, connectivity to OEM systems.

Network optimization, supply chain explorer, supply chain value assessment, supply chain process modeling, transportation optimization, warehouse design and simulation,

transport bid management, inventory optimization are the support design tools for agility.

Mr. Olver also compared the value to customers and the complexity involved for factors like materials management, supply chain management, visibility, freight execution viz a viz the Standard FF, Logistics FF(reactive), Supply Chain Management FF(proactive), integrated Supply Chain Management(proactive and schedule management).

He also stresses the need for relevant IT systems for effective supply chain agility and orchestration.

Mr. Bill Olver concluded his presentation with a very important environmental issue which relates to the cost to offset Carbon dioxide emissions attributed to logistics today. As per Mr. Olver, logistics contribute almost 14% of the total carbon dioxide emissions and the estimated off-setting cost is 60bn Euros.

Mr. RamaSubramaniam, focused on the process side, the need for agile supply chain in automotive industry, where he said the global sourcing to cross 60%, the global production to cross 43% and the global distribution to cross 65%, all this put enormous pressure on Auto supply chain.

Talking about the increasing product complexity, for instance Volkswagen, in 1950, with just 3 models, 1 million units were being supplied and in 2008, with 21 model ranges, about 6 million units were supplied, this explains the product lifecycle. In 1997, the product lifecycle was 8 years, in 2007 it was 6-5 years and in 2011, it is expected to come down to 4-5 years.

Need for agile supply chain in automotive industry, is more pronounced in auto industry as compared to others, because of complex network and many parts/components to deal with and it is a proven concept that the philosophy is vertical integration and horizontal differentiation, how can we reduce the gap of the point of production and the point of consumption is the critical aspect.

Talking about vertical integration, Ramasubramaniam said it is the collaboration of planning or sharing of information (right from the supplier to the consumer), postponement, sharing of resources (transport planning, warehousing, IT, systems, etc), and alignment of objectives all this focuses on efficiency. On the other hand, horizontal differentiation, at every level we try to differentiate the flow, so that competitive edge can be achieved. Rather than following the same strategy for all the parts when we look at the inbound supplies, we need to look at the movement, the volumes based on which the decision like what should be JIS, supplied through the conventional warehouse,

what should be stocked, what should centralized stock and what stock should be decentralized, these aspects from parts to parts is to be defined.

Mr. Ramasubramaniam further explained vertical integration and horizontal differentiation using case studies, he cited the example of BMW Leipzig plant which was inaugurated in 2007 who followed the horizontal differentiation in their manufacturing practices. The unique aspect of the plant is 70% of their production is based on the customer's orders where customers placing an order, chooses from many aspects, the equipment, the country specific aspects, the model variants, colours and the expectation of the customer from order to delivery, that he wants the car within the shortest possible time. And the actual time taken in this scenario is 9 working days to deliver the car to the customer. In this case visibility is of high importance in order to achieve such a tight target. What BMW does is it differentiates the inbound supply horizontally and the local vendors supply them 15% of total volume, warehouse on wheel concept, the moment the trailer crosses the gate, the entire content of the trailer is transferred into BMW information system. Eliminates GRN or quality checks, the bay is selected so that direct unloading of the parts closer to the workstations. Also the supplier center where the last stages of production is carried out, that volume is 70%, the balance 15% is the conventional delivery. The visibility here is 100%.

Explaining the vertical integration, where an Indian company manufacturing commercial vehicles, Ramasubramaniam points out that by adopting the vertical integration concept like BOM accuracy, which reduces inventories variants, database was built, the concept of production changes and plan change and to change the mindset of the people and to bring in the discipline, is this very consuming but definitely achievable, which this company has adopted, implemented and succeeded. He also added that the company capacity utilization without additional investment, they have been able to increase the capacity from 60 vehicles to 96 vehicles per day, which he says is the example of seamless coordination.

Mr. Ramasubramaniam in his concluding remarks, reiterated that the concepts discussed is available everywhere, but the challenge is to implement this which requires complete focus on implementation and ensure that the concept becomes a success.

Mr. R Raghuttama Rao in his presentation on strategic issues in transportation and logistics planning gave an overview of the macro picture of logistics in the context of Indian Auto industry. India GDP on logistics, of which automotive industry contributes to 1%. Poor supply chain management costs the industry Rs.10 billion every year, due to which sales are affected 2-4%, and reverse logistics costs around 0.5-1%.

Explaining the difference in cost competitiveness between India and china for commercial vehicles, where china is 19% lower on an average than that in India in

making India uncompetitive. Listing the factors that contributed in making India uncompetitive are namely excise duty & sales tax(2.2%), cascading impact of taxes(4%), higher local taxes(1.4%), labour costs(7.4%), cost of funds and insurance rate(2.1%), import duty on RM(1.6%) and COST OF LOGISTICS(2.2%).

Mr. Rao explained the similar cost disadvantage for Indian plastic processors at 5.52% vis a vis, players in China, Malaysia, Thailand, Phillipines and Vietnam. Cost of logistics alone contributed to 0.4% among the factors identified.

Mr. Rao elaborated on the impact of systematic inefficiency in supply chain management in India which results in higher delivery costs, lower competitiveness, and wastage of resources. Tabulating the comparative cost of Indian products vis a vis Thailand, Malaysia, China for cars are at 1.2%, 1.1%, 2.1% respectively and for Commercial vehicles are at 1.1%, 1.0%, 2.2% and for two wheelers are at 1.1%, 1.1% and 1.2% respectively. Similarly, he also tabulated the cost difference between Indian and Chinese auto components/parts due to poor logistics, cost of delay in government clearance. For example transmission and steering at 0.3% and 0.5% respectively and so on and so forth for various other components.

He further listed the macro drivers of big changes in the India logistics industry like manufacturing sector in India is likely to grow at 10%, organized retail and infrastructure in reshaping transportation and logistics pattern , freight rates will tend to reflect intrinsic costs as subsidies will get rationalized, reduction in duty rates will spur investments in manufacturing capacities in India, introduction of GST(Goods & Services Tax) will move manufacturing capacities to places of competitive advantage and natural scale economies.

He further added a few other big potential game changers in the Indian logistics industry like correction in rail freight rates(potential to change rail: road freight mix), introduction of coastal shipping, rationalization of port charges, end of life vehicle policies, reforms in warehousing policies, creation of expressways and dedicated freight corridors, introduction of a freight community system.

He asserted that the strategy for transportation should address responsiveness and quality issues (beyond cost reduction). Transportation alone accounts for 35% of logistics costs, he says this can be reduced by route optimization, contract optimization and increased vehicle utilization.

Mr. Rao, recommends firms to start to focus on in the areas of logistics at the strategic level(where to invest), tactical level(best delivery plan, information sharing), and at the operational level(cost savings, handle heterogeneous loads etc).

Mr. Raghuttama Rao concluded his presentation by proposing on integrating strategic and spatial interventions.

- Load building and pallet shipment solutions through load optimization(transportation planning), order picking planning(warehouse management), combined route and road building(transportation planning), order quantity optimization(order entry service desk), transportation services(offer calculations), Optimization of primary transport(stock management).
- Vehicle routing and scheduling through strategic and tactical network planning(transport planning), operational vehicle routing, design multi-site, multi – user vehicle routing and dispatch.
- Optimal workforce deployment for backward and forward integration.

And the three way integration for Transport Planning and Strategic perspective comprising of spatial plans(strategic interventions), Supply chain management models(process innovations), and technology(advancement leading to superior execution skills).

Mr. R G Sundar while starting his presentation on Process & technology to improve supply chain visibility& agility, said that he would like to bring out a perspective of how technology, how IT solutions can play a part in enabling organizations meeting their end goals.

Further talking on leveraging technology for enhanced supply chain performance, The information system of any organization should be capable in advanced planning and execution, landed cost management, supplier integration and visibility and supply chain finance and risk , he further elaborated on the same as follows:

- Intra and inter Enterprise capability for cater to the Diaspora of supply chain needs
- Process harmonization between vendors and customers
- Global trade and landed/ total delivered cost management as a means to protect gross margins
- Visibility technology solutions to enhance supply chain transparency and control
- Information pooling & visibility
- Management dashboards from transactional systems on supply chain performance
- B2B collaboration initiatives between partners to improve global supply Chain processes viz. forecasting, inventory planning, transportation, etc
- Technology to manage logistics agility

- Supply chain finance through a technology platform that unites the trading partners
- Increasing logistics and supply agility by ensuring alternate suppliers, carriers, routes, etc
- Risk mitigation by improving visibility and automation of supply chain activity

Mr. Sunder further illustrated by citing the example of Nokia manufacturing and distribution of E71 mobile phone by putting forth the current challenges in supply chain with regards to coordination, collaboration, integration, management, visibility and control of physical aspects such as inventory, trucks, material handling etc, financial and regulatory aspects, thus enabling supply chain intelligence for driving better economic decisions.

The result of specialization, efficiency and focus on cost has made the process shift from local management to close global interaction and collaboration. So the need to move from inter enterprise base synchronization to intra enterprise, multi-network synchronization and a need for integrated business process platforms and finance intelligence.

Mr. Sunder stresses the need for integrated cloud based ecosystem, which will largely impact the current issues like cost, collaboration & EDIs, network intelligence, inside & outside systems, synchronizing and optimizing flow of goods and money are effectively addressed by the supply chain cloud compared to the present discrete world.

The integrated cloud system will enable the acceptance and adoption of internet for mainstream business processes. Since Mr. Sunder throughout his has advocated Information system as an enabler to improve supply chain visibility and agility, to understand this better, he has put forth the facts as well as the advantage of SaaS application(Software as a Service) viz a viz the recurring investments organizations making in procuring, maintenance, upgrading, add-ons, privacy/security leading to high cost escalations. The cost to manage software is four times the purchase price of the software per year, according to Microsoft, ' the initial purchase is usually only 5% on total cost of owning and maintaining a program".

Mr. Sunder concludes by listing out the advantages of cloud based IT services as an enabler.

- Lower capital outlays required by way of additional hardware and infrastructure for running the application.
- Billed thru' Predictable subscription or transaction basis – pay as you go, rather pay as you grow.

- Shorter implementation cycles, fewer resources than in a traditional on-site implementation.
- Upgrades also tend to be smoother because the software is customized only once and pushed out seamlessly to all clients.
- Multiplier effect involved in supporting multiple customers with hundreds of users engender scalable applications and databases.
- Software-as-a-service applications tend to be as secure and reliable as their on-premise systems.
- The economies of scale afforded to a SaaS vendor enable it to invest in the best levels of security possible--levels that are often cost-prohibitive for most organizations.
- In an expanding cross-channel and multi-enterprise supply chain, cloud-based IT services are being considered as a key component for simplifying internal and external business collaboration.
- Allows the establishment of multi-enterprise information model.
- Cloud computing is well suited for both planning and execution applications.\
- Cloud solutions leverage the pre-connected networks of suppliers, customers and other partners, and aim to improve routine process collaboration.\

SESSION V: Process and Technology for Efficient Storage

Opening remarks	Mr Sanjay Upendram, CEO, Amarthi Consulting
Presentation	Mr. Sudarshan Kolhatkar, Business Head- Packaging Contracts ITW India Ltd.
	Mr. Amitabh Mukherjee, General Manager, TCI Supply Chain Solution
	Mr. Hariharan Iyer, Regional Manager- SCM Drive India Enterprise Solutions Ltd.
	Mr. Deepak Thakur, Chief Operating Officer & Senior Vice President (Quality) - HCV Asia Motor Works Ltd.

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Mr. Sudarshan Kolhatkar started his presentation through his mention on carbon footprints because of packaging, operational issues for deciding the type of packaging

(for export and domestic), operational issues on storage types (indoors, outdoors, types of storages). He further states, taking the Indian condition unlike the international markets, the Tier I and II suppliers they have enormous scope for improvement in packages.

Best practices of warehousing systems, which use different packaging system, carton, wooden packaging, some are retrieval by ARS (Automatic retrievable storage system, fork lift), available which are not available in Tier II companies and unorganized companies, and it is imperative to think on what care is required while designing the package, storage systems, which he said that his presentation will focus on packaging.

Export packaging which is made of plywood crates are environmentally very unfriendly, as it leaves huge carbon footprint and requires skilled labour to nail and de-nail (carpenter). Plywood leaves huge carbon footprint, it gives off moisture of its own, which affects the machinery or components, which requires additional spent VCI filming, rust preventive oils.

Storage outdoors, as an example of truck manufacture, which are subject to heat, rain, moisture which is impact the sales and distribution. Technology is now available to reduce this.

So a detailed planning is required while deciding the package type like whether it expendable or returnable package. If it is returnable, planning on investment on the supplier or OEM, protection against moisture, corrosion while storage and transfer.

There is also need for packaging system, that is time efficient, which has direct impact on growth of the company, hence it is advised to go in for a planned investment in packaging equipment to build for your growth in the future. Which could become a huge bottleneck, as once the goods is finished it goes from controlled environment like the manufacturer to the supplier (uncontrolled environment), for example: delays in shipment.

It is not enough if the manufacturers has best handling facilities, it is very important that the suppliers, warehouses, distributor till it reaches the end users, also have the best handling facilities. Also adding, that tracking or barcoding are also needs to be considered, disposals methods to help in reduction of footprint.

Ideas to improve the packaging stability, increase storage space and reduce cost and time:

1. Plywood crate to be replaced by recyclable package system and non wood packaging, cost reduced packaging which is eco friendly.

2. Packaging that essentially used in exporting, where the non- wood packaging time to considerably reduce. Unpacking should also be easy.

3. Indoor storage, incase of cant go in for permanent packaging system because of space constraint or investment. Vertical stacking is the solution to achieve the stackability and utilize your cubic space.

4. Clear view package, which is wood based limited to as separators and can be reused, which is the advantage which encourages reusable packaging

5. Fillers or protectors used in the packaging materials for cushioning like papers fillings or cuts of corrugated boxes should be replaced with air bags, standardized materials made by the machines to increase the effectiveness for cushioning, keep the goods in place despite of so many movements.

6. Stretch wrapping machine, to protect goods from dust and moisture.

Productivity improvement with the packaging machines and online system was ignored largely, because packaging was considered only till the end of manufacturing and not from the aspect of supply and distribution. And he concludes that due attention is to be given while scrapping or unpacking. Scrapping a pallet should done by automatic scrapping machine hence if some investment is made, will accelerate the growth as the speed is achieved

Mr. Amitabh Mukherjee, who spoke on Transition of warehousing in India, started with explaining the evolution of the warehousing from the traditional time, introduction of racking system, later the intervention of IT and the modern technology used currently.

In the last 50 years India has emerged in warehouse management significantly.

From being a mere execution process that is the traditional system merely involved typical Godown system where only three aspects were involved namely, Receipt, Storage and Retrieval the modern day warehousing has evolved rather as business strategy, which can be further supported by the advent of vertical racking system resulting in optimum space utilization and also the high raised warehouses upto 50 M. On the other hand IT has also helped in evolving Warehouse Management System, software which helps in locating exactly the units, parts, containers and also helps in allocating place and in retrieval. There are also other value added services that modern day warehouses are into like washing, binning, and packaging and even in assembling.

Mr. Mukherjee further said that previously warehouses in India were considered to be the WSP (Warehouse service providers) and now with the modernization warehouses are now treated as partners in the industry.

Concept of traditional warehouses where Godown, with low height around 12 ft or 20 ft, high density of storage, limited space for huge stock because of this inventory policy like FIFO is difficult to apply making retrieval almost impossible. Enormous amount of manual work and SOP was not being followed.

After the introduction of vertical racking, which improved space utilization maximally, where goods were being stacked in a proper way, thus making retrieval easier. But there was no value addition.

After the advent of IT revolution in Warehouses, made a huge difference in warehousing management. The process followed is very simple, after the receipt of parts/ goods, the WMS (Warehouse management system) it is all IT enabled function, which bay, rack and at which level it goods need to be stored and retrieval process is also very easy as the location is easier. Reduced manpower, control of inventory is more, infrastructure...

Modern Warehouses, value added services can be done, light assembling, from Picking area the goods are placed in the vehicle using conveyor belts, more control over the inventory using IT.

Mr. Hariharan Iyer speaking on process and technology for efficient storage said that any storage should start with maximum space utilization, whether, horizontal storage, that is floor storage or vertical storage otherwise called as racks. Determination of type of storage is product specific and industry specific. Resources is the main key element of any storage system like MHE(Material handling Equipment) and trained manpower, Operations can be controlled by WMS (Warehouse management system, IMS(Inventory management system), all this help to deliver better productivity.

Planning for Storage can be at different levels like, raw material storage, semi finished goods storage and finished goods storage. This will determine the type of transportation also.

He explained the basis for efficient storage system, the need for desired storage density, floor space and building height and placement. The major challenges are availability of land, labor and capital, with high operational standards and cost effectiveness. Also he stressed the importance of continuous improvement, ISO. Talking about technology enabling efficiency in storage system, a warehouse needs to have all the activities right from receipt of material, to identification, stacking, task generation, retrieval all essentially to be updated in the WMS.

Mr. Iyer concluded by saying any efficient storage system should deliver a 70% utilization of space. In any process this 70% has to get planned, and this requires a steady analysis and implementation.

Mr. Deepak Thakur, In his presentation outline, modeling a existing facility gave a overview and mentioned the key factors for establishing world class manufacturing, which are infrastructure, people involvement, and environment / support structure.

The Warehousing and storage were major challenges in terms of location and integration for the established facility like High Lead time & uncertainty, Higher Space Requirement for Storage of aggregates, packaging challenges – high material cost & wastages, increased packaging scrap @ 90 Kg of wood (average per truck), Increased variety to maintain Model Mix, Increased Risk of transit damages, and natural calamities risk.

The challenges were addressed by applying principles on lean management-principles ,creating a smooth flow of material, configuration of Unidirectional flow with first in First Out (FIFO), upfront elimination of non value add at manufacturing line, online scrap accounting & disposal and hence no scrap yard in plant, separate storage location for development items, special Pallets for Unique aggregates and components, Controlled Storage location for shelf life Items, Paints & Consumables, storage in delivered condition to manufacturing line, special vaults for high cost (small size) items, Point-of-Use receiving/ direct-to-line delivery, flexible material handling equipment – pollution free, standardized work/ problem solving

They established Process in Place like Lean Material Flow ,Established Inventory Levels & Norms, unique storage location for each part no, visual management – eye level inventory, standardized bins, scheduled collection and delivery times, parts scheduled via pull signal (Kanban, Broadcast), scheduled pick-up & receiving Windows, Identification/ traceability using Barcodes for all aggregates & O class items.

Further Mr. Thakur talked on the Warehouse storage which was divided into three sections High Rise Racking System, FIFO Flow Racks, Special Pallet Storage Area. The application of Reach Truck, Dock leveler, pallet Truck, Tow Tugger, etc for Storage & retrieval was highlighted.

Mr. Thakur concluded his talk by listing out the future plan like Satellite warehouses for Supplier Managed Inventory, just in time Supply , Usage of Warehousing module of SAP and Full Exploitation.

SESSION VI: EFFICIENT TAX STRATEGIES: India/ Asia

Opening Remarks Mr Vinit Bhansali, Director, Copper Spiral

Presentation Mr. Debasish Sahu IRS

Additonal Commissioner, Commissionerate of Service Tax

Mr. Vijay Bhalaki, Research Fellow, Center for Asia Studies

Mr. B. Sriram Associate Director, Ernst & Young

Proceedings:

Mr. Debasish Sahu, set the tone for the session by giving an overview on GST(Goods and Services tax). He said it is a big moment as introduction of GST is the biggest indirect tax reforms in Inda.

For the first time before forming the structure views of industry has been taken and this is a new step. Every state has diverse views and that consensus has almost been achieved.

He also clarified that Central GST will be controlled by Central government , the Provincial GST will controlled by State government and the Dual GST will be controlled by the central government .

Further talking on Central and State GST, he says seamless transactions in goods and services there will be IGST model controlled and collected by the central government.

Talking on the applicability he said that it is on all transactions of goods and services. Goods are anything tangible, services are anything which are not goods. Any financial transaction will come under GST with a few exceptions, exempted goods and services and also threshold limit for small scale business entities.

Sulphur and petroleum has been kept out of the future GST scheme, presently taxes would continue. Tobacco product is a demerit goods for society, hence will come GST with additional central excise duty .

He further added to help small industry, compounding schemes has been introduced , to business with less than 50 lacs turnover, where they can avail a floor rate of 0.5%GST.

He also summed up the big challenges to legislate the new laws, State has no power for services and import outside the country, the central has no power to tax sales of goods.

Dual Statute, where the state and central will have commonalitie. In the present taxes, large number of tax rates exists. However, in the future in GST there will be 2 rate structure, one is low rate for basic importance and the other is standard rate for all other

goods. Export will be zero rated. The manufacturing industry related to export will also have a better system compared to the existing related to the zero rate.

The new GST number will be a 15 digit income tax PAN based number.

Private records maintained by business entities will be accepted. There are two separate returns to be filed, one is the central GST and the other is State GST. With related to input tax, business houses have to maintain 3 credit account, one is central GST credit account, State GST credit account and thirdly IGST credit account. No cross utilization allowed between the credits in CGST and SGST.

He concluded saying the GST is win-win situation for anyone and everyone, cascading effect of taxes will go. Cost of product will come down as it progresses, products will reach a minimum price levels, disputes between government and business due to various factors will come down.

As per Mr. Vijay Bhalaki, in the current scenario it is a confrontationist structure, which breeds mutual suspicion between government and industry, where one's primary interest (Govt.) is revenue and the other being profit(industry).

And the new legislation which has been proposed to introduce would bring interest of both government and industry to converge to a point.

Mr. Vijay Bhalaki started with his presentation on efficient tax strategies : India/Asia, with an overview on tax efficiency , Role of GST(Goods and services Tax) and the challenges and comparisons.

Talking about Tax efficiency, he elaborated the three important points namely, existing levies and structure, Existing inefficiencies and concept of efficient taxation.

There are existing levies on manufacture of goods, provision of service, sales, import or export of goods, transfer of immovable of properties, entry bars

Existing Levies exists in all these areas, Manufacture, Provision of Service, Sales (Inter-State & Intra-State), Sales (Inter-State & Intra-State), Import/Export of Goods and, Transfer of Immovable Property Services, Entry/Access to States/Cities, Luxury , Entertainment, Electricity Production, Motor Vehicles Usage, Betting, Purchase of Agricultural Output.

Mr. Bhlalki has put forth suggestions to the government to consider while implementing the GST like, unambiguous legislation, Simple Structure, adequate learning curve duration, smooth transition, trained and professional administration, uniform documentation and procedures, electronic process and info-exchange facilitation, equal status to ITC on Inputs and Capital Goods, taxes on Immovable Property to be subsumed, doing away with physical entry barriers, minimum exemptions, timely and hassle free refund system. Similarly he put forth suggestions to the Industry, Timely

payment and hassle free refund system, proactive dialogue with the Government, clean desk policy, internal training, make or buy decisions, supply chain revisions, sensitivity analysis, customer preferences monitor, IT Infrastructure and SAP modifications, avoiding reporting pitfalls and possible penalties, transition management, enhanced data and process management revisit product pricing strategies, revisit marketing/promotional strategies.

During the implementation stage the following Congruence is suggested from Industry-Government as Close Interaction from Conception to Commission Handholding and Education, Uniform Treatment, Bi-direction Fast Track Redressal, Transparent Interface, Frivolous litigation, One-time settlement Opportunity for the Past, Accessible Service Centers.

Mr. Bhalaki, mentions the warning and challenges of GST, where he says that Fair administration of a tax law does not go along with imposition of revenue targets for authorities. Taxation of services can be a big challenge in GST system, because of the following, Levy should not be clear and not ambiguous, difficult to Identify Inter –State Services, Complicated Compliance if administered by multiple authorities, Procedural non-alignment will cause a major drag, Small logistic service providers do not have compliance economics, Major training is required.

Further he brings news from many regions like, China is proposing to introduce a new federal VAT system by 2013, Malaysia is likely to introduce GST in 2011, Australia and New Zealand are reviewing their indirect tax systems, according to KPMG's Corporate and Indirect Taxes, rate Survey the average GST/VAT rate for Asia Pacific Region is the lowest @ 10.8 %.

He concludes by laying out the traits of a good tax system that are **simplicity, transparency, just and economically efficient.**