Draft Automotive Mission Plan

2006-2016

Documentation of Inputs for

Ten Year Mission Plan
for
Development of the Indian Automotive Industry into a Global Hub

September 2006

Ministry of Heavy Industries & Public Enterprises
Government of India
New Delhi

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Foreword

1. The Indian Automotive Industry started its new journey from 1991 with delicensing of the sector and subsequent opening up for 100 percent FDI through automatic route. Since then almost all the global majors have set up their facilities in India taking the production of vehicle from 2 million in 1991 to 9.7 million in 2006.

2. The surge in number of people with higher purchasing power alongwith strong growth in economy over a past few years has attracted the major auto manufacturers. The market linked exchange rate and availability of trained manpower at competitive cost has added to the attraction of Indian market. This increasing pull of Indian market on one hand and the near stagnant rate of growth in auto sector in markets of USA, EU and Japan have worked as a push factor for shifting of new capacities and capital in the auto industry to India. The increasing competition in auto companies has not only resulted in a spurt in choices of Indian consumers at competitive costs, it has also ensured an improvement in productivity by almost 20 percent a year in auto industry, taking it to one of the highest in Indian manufacturing sector.

3. To maintain this high rate of growth and to retain the attractiveness of Indian market and for further enhancing the competitiveness of Indian companies the Government through the Development Council on Automobile and Allied Industries constituted a Task Force to draw a ten year Mission Plan for the Indian Automotive Industry. The idea is to draw a futuristic plan of action with full participation of the stakeholders and to implement it in mission mode to meet the challenges coming in the way of growth of industry. Besides making concerted efforts for removal of obstacles in the way of competition, the required infrastructure be put in place well in time to alleviate its constraining impact on the growth. Through this Automotive Mission Plan, government also wants to provide a level playing field to the players in the sector and to lay a predictable future direction of growth to enable the manufacturers in making a more informed investment decision.

4. The Ministry would like to place on record its appreciation for the work and support of Chairman of the working groups for ably identifying the challenges and for making valuable suggestions for intervention which will enable us in achieving the goals envisaged in the Mission document. The government is of firm conviction that the aspirations unfolded in the Mission document will be achieved and Indian Automotive industry will attain the strength to meet the competition at world level and fare world class. The report would be a useful blueprint to enable achieve the joint vision of the Ministry and Indian Automotive Industry.

September 2006

Joint Secretary
Ministry of Heavy Industries and Public Enterprises

EXECUTIVE SUMMARY

1. The Indian Automotive Industry after de-licensing in July, 1991 has grown at a spectacular rate of 17% on an average for last few years. The industry has now attained a turnover of Rs. 1,65,000 crores (34 billion USD) and an investment of Rs. 50,000 crores. Over of Rs. 35,000 crores of investment is in pipeline. The industry is providing direct and indirect employment to 1.31 crore people. It is also making a contribution of 17% to the kitty of indirect taxes. The export in automotive sector has grown on an average CAGR of 30% per year for the last five years. The export earnings from this sector are 4.08 billion USD out of which the share of auto component sector 1.8 billion USD.

2. Even with this rapid growth, the Indian Automotive Industry's contribution in global terms is very low. This is evident from the fact that even though passenger and commercial vehicles have crossed the production figure of 1.5 million in the year 2005-06, yet India's share is about 2.37 percent of world production as the total number of passenger and commercial vehicles being manufactured in the world is 66.46 million against the installed capacity of 85 million units. Similarly, export constitutes only about 0.3% of global trade.

3. It is a well accepted fact that the automotive industry is a volume driven industry and a certain critical mass is a pre-requisite for attracting the much needed investment in Research and Development and New Product Design and Development. R&D investment is needed for innovations which is the life-line for achieving and retaining the competitiveness in the industry. This competitiveness in turn depends on the capacity and the speed of the industry to innovate and upgrade. No nation on its own can make its industries competitive but it is the companies which make the industry competitive. The most important indices of competitiveness are the productivity both of labour and capital.

4. The concept of attaining competitiveness on the basis of cheap and abundant labour, favourable exchange rates, low interest rates and concessional duty structure is becoming outdated and not sustainable. In light of the above, it is felt that a greater emphasis is required on the development of the factors which can ensure competitiveness on a long-term basis. The automotive sector with its deep backward (metals such as steel, aluminum, copper etc., plastics, paint, glass, electronics, capital equipment, trucking warehousing and logistics) and forward (dealership retails, credit and financing, logistics, advertising, repair and maintenance, petroleum products, gas stations, insurance, service parts) linkages has been recognized and identified at different fora (Development Council of Automobile and Allied Industries, Planning Commission, National Manufacturing Competitiveness Council and Investment Commission) as a sector with a very high potential to increase the share of manufacturing in GDP, exports and employment. The sector is also seen as a multiplier of industrial growth. It helps in attaining two critical goals of the common minimum programme, that of increasing manufacturing output and of providing employment. Although indirectly, it also facilitates the third objective of increasing agricultural productivity through farm mechanization and the needs of agricultural produce transportation.

5. The country with its rapidly growing middle class (450 million in 2007, NCAER report), market oriented stable economy, availability of trained manpower at competitive cost, fairly well-developed credit and financing facilities and local availability of almost all the raw materials at a competitive cost has offered itself as one of the favorite destination for investment to the auto makers. These advantages need to be exploited in a manner to attain the twin objective of ensuring availability of best quality product at lowest cost to the consumers on the one hand and developing and assimilating the latest technology in the industry on the other hand. The Government recognizes its role as a catalyst and facilitator to encourage the companies to move to higher level of competitive performance. The Government wants to create a policy environment to help companies gain competitive advantage. The government policies target to encourage growth, promote domestic competition and stimulate innovation.

6. It is also felt that a general improvement in availability of trained manpower and good infrastructure is required for the sustainable growth of the industry. But these generalized efforts in development of the factors of production rarely produce competitive advantage. Only advanced, specialized and industry-specific initiatives can lead to competitive advantage. Keeping in view the above factors, the Government has launched a unique initiative of NATRIP to provide a specialized facility for Testing, Certification and Homologation to the industry. A similar initiative is required for creating a specialized institution in automotive sector for education, training and development, market analysis and formulation and dissemination of courses in automotive sector through ITIs and ATIs.

7. The issues relating to fiscal incentives to the industry for R & D is under study of Mashelkar Committee and the issues pertaining to duty structures is being examined by the Hoda Committee. The concerns of the industry will be suitably presented in the above fora.

8. It has been noticed that the Auto Industry has grown in clusters of inter-connected companies which are linked by commonalities and complementarities. The major clusters are in and around Manesar in North, Pune in West, Chennai in South, Jamshedpur-Kolkata in East and Indore in Central India. The Department is envisaging in the Eleventh Five-Year Plan period to create a National Level Specialized Education and Training Institute for Automotive Sector and to enhance the transportation, communication and export infrastructure facilities through concerned Ministries in and around these clusters. The Government will make attempts to eliminate all the barriers to local competition and organize the relevant Government Departments and Educational and Research Institutions in and around the clusters.

9. The Automotive Mission Plan (AMP) aims at doubling the contribution of automotive sector in GDP by taking the turnover to 145 USD in 2016 with special emphasis on export of small cars, MUVs, two wheelers and auto components.

1. Auto Industry: A World Overview

1.1 The production of passenger and commercial vehicles has reached a new record of 66.46 million units in 2005. The growth in production has been as follows:

Year	World Vehicle Production(units in million)	Percentage increase/decrease
1997	55.87	
1998	53.20	(-) 4.77
1999	55.74	4.77
2000	58.33	4.64
2001	56.17	(-) 3.70
2002	58.45	4.05
2003	60.09	2.80
2004	64.16	6.77
2005	66.46	3.58

1.2 There has been an addition of 10.59 million vehicle production since 1997. A majority of this growth is coming from the Asia – Pacific region (excluding Japan). The production has nearly stagnated in Western Europe at 17 million, NAFTA at 16 million and Japan at 10 million but it has more than doubled in Asia-Pacific region from 7.1 million in 1997 to 16 million in 2005.

1.3 Again a bulk of this increase in Asia- Pacific region has come from China where production has trebled from 15.82 lakh units in 1997 to 46 lakh in 2005. The second contributor to this growth is India where the production has doubled going up from 7.72 lakh units in 1997 to 15.76 lakh in 2005. The third contributor to this growth is Thailand where it has increased from 3.60 lakh units in 1997 to 8 lakh units in 2005. It is pertinent to note that the global installed capacity in the sector is around 80 million, so still an idle capacity of about 15 million exists world wide.

1.4 The 12 global majors with 2 million units plus per year production capacity account for 53.02 million of vehicle produced in 2005 against a total of 66.46 million, which is almost 80 percent of the total production.

1.5 Global motorcycle production has increased from 30 million units in 2003 to 40 million units in 2005. Asia is the major producer of motorcycles in the world with 90% share. Within Asia, China accounts for 17 million units whereas India is at second position with 7.7 million units a year.

1.6 The industry being highly capital intensive, it offers huge entry barriers, so these existing global majors themselves are realigning their production bases coming closer to the scene of action which is in Asia- Pacific region mainly in China , India and Thailand. Besides the above the constant pressure for cost reduction on OEMs is

forcing them to outsource more and more components from Low Cost Countries. The combined forces, as outlined above, have opened a floodgate of opportunities for Indian Automotive Industry.

1.7 India, with its strength of a huge domestic market, rapidly growing purchasing power, market linked exchange rate and well established financial market and corporate governance laws, is working as an attractive destination for new investments in this sector.

1.8 The rapid improvement in infrastructure including road, port, power and world class facilities for Testing, Certification and Homologation, ensuring availability of trained manpower and alignment of government policies with a view to promote fair competition can make Indian Automotive Industry more competitive in world arena besides making the country a favourable destination for investment by global majors in auto industry.

2. **Indian Automotive Industry: An overview**

2.1 Automotive Industry, globally, as well in India, is one of the key sectors of the economy. Due to its deep forward and backward linkages with several key segments of the economy, automotive industry has a strong multiplier effect and acts as one of the drivers of economic growth. The well-developed Indian automotive industry produces a wide variety of vehicles: passenger cars, light, medium and heavy commercial vehicles, multi-utility vehicles such as jeeps, scooters, motor-cycles, mopeds, three wheelers, tractors and other agricultural equipments etc. The sector has tremendous potential for providing employment. This will increase the present figure of employment in manufacturing sector which presently is quite low at 12% as compared to the countries like Malaysia (50%); Korea (62%) and China (31%).

2.2 Installed capacity: The automobile industry, especially over a period of time, and particularly after liberalization, has installed a robust capacity. The installed capacity in different segments of automobile industry is as under:

Installed Capacity in Different Segments in nos.

S.No.	**Segment**	**Installed Capacity**
1.	Four Wheelers	1,590,000
2.	Two & Three Wheelers	7,950,000
	Grand Total	**9,540,000**

2.3 The production of all categories of vehicles has grown at a rate of 16% per annum over the last five years. The last 5 years production figures are as follows:

Production (in nos.)

Category	2001-02	2002-03	2003-04	2004-05	2005-06
Passenger Car	564052	608851	842437	960505	1045881
Multi Utility Vehicles	105667	114479	146103	249149	263032
Commercial Vehicles	162508	203697	275224	350033	391078
Two Wheelers	4271327	5076221	5624950	6526547	7600801
Three Wheelers	212748	276719	340729	374414	434424
Total	5316302	6279967	7229443	8460648	9735216
Percentage growth	11.70%	18.60%	15.12%	16.80%	15.06%

Source: SIAM

2.4 Export of Vehicles: Automotive industry of India is now finding increasing recognition worldwide. While a beginning has been made in export of vehicles, the potential in this area still remains to be fully tapped. Significantly, during the last two

years the export in this sector has grown specifically in export of cars and two / three wheelers. The table below indicates the performance during last six years.

Export (in nos.)

Category	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
Passenger Car	22990	50088	70828	126249	160677	170193
Multi Utility Vehicles	4122	3077	1177	3067	5736	5579
Commercial Vehicles	13770	11870	12255	17227	29949	40581
Two Wheelers	111138	104183	179682	264669	366724	513256
Three Wheelers	16263	15462	43366	68138	66801	76885
Total	168283	184680	307308	479350	629887	806494
Percentage		09.74	66.40	55.98	31.40	28.03

Source: SIAM

The automobile exports crossed USD 1 billion mark in 2003-04 and reached USD 2.28 billion in 2005-06.

Auto component Industry: An overview:

2.5 Indian auto component industry is quite comprehensive with around 500 firms in the organised sector producing practically all parts and more than 10,000 firms in small unorganised sector, in tierized format. The auto component sector has been one of the fastest growing segments of auto industry, growing by over 28%, in nominal terms between 1995 and 1998. The Industry also sustained a high growth rate and could achieve growth of 24% in 2003, 16% in 2004-05 and 15% in 2005-06 (estimated). The industry, over the years, developed the capability of manufacturing all components required to manufacture vehicles, which is evident from the high levels of indigenization achieved in the vehicle industry as well as the components developed for the completely Indian made vehicles like the Tata Indica, Tata Indigo, Mahindra Scorpio, Bajaj Pulsar, TVS Victor and TVS star. The component industry has now holistic capability to manufacture the entire range of auto-components e.g. Engine parts, Drive, Transmission Parts, Suspension & Braking Parts, Electricals, Body and Chassis Parts, Equipment etc. The component-wise share of production, as indicated by the ACMA, is Engine parts-31%, Drive and Transmission Parts-19%, Suspension & Braking Parts-12%, Electricals-9%, Body and Chassis Parts-12%, Equipment-10%.

2.6 Over the last few years the Indian Auto Component Industry has created a robust capacity base and all of the world's major manufacturers have set up their manufacturing units in the country. The quality of the components produced by the component industry in the country is certified by the fact that, out of the 498 ACMA members, 9 are Deming Prize winners, 4 are JIPM award winners and 1 is Japan Quality Medal winner.

2.7 Growth Trends: The turnover of auto component sector has grown from a figure of USD 1.5 billion to USD 9.8 billion. Low labor costs, availability of skilled labor and high quality consciousness among Indian vendors have spurred the growth of auto component exports from India. During 2003-2004, the exports of auto-components

crossed the magic figure of USD 1 billion after having posted a healthy growth of 25%. During the year 2004-2005, the exports grew by 40% thereby taking the direct exports of components to a level of USD 1.4 billion. As per ACMA, in the year 2005-06 exports grew by 28% and reached the level of USD 1.8 billion. It is pertinent to mention here that this figure is still very low against the volume of world trade of 185 billion USD in auto components.

2.8 More than 60% of the exports of auto-components are to USA and Europe, which constitute high AQL (Accepted Quality Level) countries. Moreover, over the last 5 years, the structure of the customer base in the global markets has also undergone a major change. In the 1990s more than 80% of the exports were to the international aftermarket. In 2005, more than 70% of the exports are to the global OEMs and Tier 1 companies and only 30% is to the aftermarket. This signifies that the Indian component industry has now reached a high degree of maturity in terms of quality and productivity and has also developed capabilities in the area of design and engineering, which are critical requirements for being a part of the global supply chain.

2.9 Indian auto component manufacturing, currently constrained by lack of large capacities, is slowly but steadily working on expanding capacities and automation levels. As the users increasingly become discerning in their buying behavior, new model introduction by the auto manufacturers has become the trend. Greater variety in vehicle is offering challenges to the manufacturing capabilities and economies of scale of component suppliers. Hence the component industry is constantly looking at maintaining lean and efficient manufacturing systems. Having established themselves in the domestic market, tapping opportunities abroad was a natural step for the auto component manufacturers in their growth path. The Indian auto component industry is targeting a bigger share of the export market and is in the process of ramping up its manufacturing capabilities to meet the capacity and quality requirements. During 2004, the auto component industry increased its investment by 17% while the automation processes in this industry registered a growth of over 40%.

2.10 The Indian Tractor Industry: India is one of the largest manufacturers of tractors in the world. The tractor industry touched a production of 2,48,000 units in 2004-05 and reached a level of 2,93,000 units in 2005-06. The government focus on the agricultural economy, with increased rural lending ensuring availability of cheap finance, led to this growth. The exports stood at 20,000 units in 2004-05 and 28,000 in 2005-06. Indian market is dominated by 31-40 HP tractors followed by 41-50 HP. The tractor industry has 14 players, including three MNCs, and is led by Mahindra & Mahindra Ltd. The industry is growing at the rate of 5% to 6% a year. The demand for tractors is likely to be driven by thrust on increase in area under irrigation, increased rural connectivity, and enhanced farm credit facilities.

2.11 The Indian Tyre Industry: India is one of the few countries which has attained self-sufficiency in tyre production barring the production of some types of vehicles tyres, air-craft tyres, and snow tyres. India has constantly been exporting the tyres to almost 65 countries. The total installed capacity is 850 lakh units against which 650 lakh units were produced in the year 2005-06 of which 620 lakh units were consumed domestically. In tonnage terms the production in the year 2005-06 was 11.17 lakh metric. tons. The industry is expected to grow at an average rate of 7% per

annum during Eleventh Five-Year Plan period. The total turnover of the tyre industry is Rs. 13,500 crores out of which tyres worth Rs. 2300 cores were exported in the year 2005-06.

2.12 Major Challenges:

2.12.1 Sustaining the growth rate: There is a potential for much higher growth in the domestic market due to the fact that the current car penetration level in India is just 7 cars per thousand. The increase in purchasing power at the top echelon of about 300 million people in the country, where the per capita income is over USD 1000, implies that passenger car growth in the domestic market is on the verge of a major and sustained boom. It is expected that the passenger car market which was 1 million in 2003-2004 can easily cross the 3 million mark by 2015. This can lead to an increase in the size of the domestic auto-component market from the current level of USD 9.8 billion (2005-06) to at least USD 15 billion by 2015.

2.12.2 Need for innovation: The competitiveness in the sector will largely depend on the capacity of the industries to innovate and upgrade. The industry will also benefit if it has strong domestic competition, home based suppliers and demanding local customers. There is no denying the fact that the factors like labour cost, duties, interest rate and economies of scale are the most important determinants of competitiveness. But productivity is the prime determinant of the competitiveness and also impacts the national per capita income. The globally successful OEMs and auto makers will ultimately make their base in places which are high on productivity factor and where essential competitive advantages of the enterprise can be created and sustained. It would also involve core products and process technology creation apart from maintaining productive human resource and reward for advanced skills. The OEMs also look for the policies of the state which stimulates innovations in new technologies.

2.12.3 Enhancement of share of auto component in global trade: The global auto component industry is estimated to be USD 1.2 trillion in value and is likely to increase to USD 1.7 trillion by 2015 as per ACMA. Sourcing from low cost countries is likely to increase from USD 65 billion in 2002 to USD 375 billion by 2015. Although India's exports are still small (USD 1.8 Billion in 2005-06), it could leverage this off shoring trend and the quality of its supply base to build dominant top two position in auto component exports from low cost countries by 2015. A position in the top two would enable India to achieve export of USD 20-25 billion by 2015. This would increase India's share of world auto component trade from 0.9 percent in 2005-06 (Provisional) to 2.0-2.5 percent by 2015, inclusive of domestic consumption. Such a high growth in the Auto component Sector is expected to lead to an additional 750,000 direct jobs in its sector alongwith indirect employment of 1.8 million people over the next 10 years. In addition to creating incremental employment of about 2.5 million people in direct and indirect jobs, it is also expected to result in an incremental revenue of USD 3.8 billion to the exchequer. Investments in this sector would also grow by USD 15 billion from the current level of USD 3.1 billion.

2.13 Recent initiatives of the Government

2.13.1 In order to give a boost to the growth in this sector, the Government has taken several initiatives. Some of them are as under.

(i) The Finance Bill 2006 has given a further boost to the Automotive Industry by reduction of the excise duty on the small motor vehicles, the reduction in the duty for raw material which is now between 5 to 7.5% as compared to the previous level of 10%, and the thrust on infrastructure development.

(ii) As a result of constant persuasion by the Department of Heavy Industry, some of the objectives like imposition of excise duty on body building activity of Commercial Vehicles, lower excise duty on the small cars, extension of 150% weighted deduction on R&D expenditure to the automotive sector, increased budgetary allocation for R&D activities in the sector and moving towards a lower duty regime have been achieved and steps are being taken to further strengthen the capability of the sector.

(iii) National Automotive Testing and R&D Infrastructure Project (NATRIP):

The most critical intervention of the Government thus far in the automotive sector has come in the form of an ambitious project on setting up world-class automotive testing and R&D infrastructure in the country to deepen manufacturing, encourage localized R&D, boost exports, converge India's unparalleled strengths in IT and electronics with automotive engineering sectors to firmly place India in USD 6 trillion global automotive business. NATRIP aims at facilitating introduction of world-class automotive safety, emission and performance standards in India and also to ensure seamless integration of Indian automotive industry with the global industry. The project aims at addressing one of the most critical handicaps in the overall growth of automotive industry today, i.e. major shortfall of testing and pre-competitive common R&D infrastructure. National Automotive Testing and R&D Infrastructure Project envisages setting up of the following facilities:-

(a) A full-fledged testing, certification and homologation centre within the northern hub of automotive industry at Manesar in the State of Haryana;
(b) A full-fledged testing, certification and homologation centre within the southern hub of automotive industry at a location near Chennai in the State of Tamil Nadu;
(c) Up-gradation of existing testing, certification and homologation facilities at Automotive Research Association of India (ARAI), Pune and at Vehicle Research and Development Establishment (VRDE), Ahmednagar;
(d) World-class proving grounds or testing tracks on around 4,000 acres of land at Pithampur in Madhya Pradesh;
(e) National Centre for Testing of Tractors and Off-Road Vehicles together with national facility for accident data analysis and specialized driving training at Rae Bareilly in the State of Uttar Pradesh; and

(f) National Specialized Hill Area Driving Training Centre as also Regional In-Use vehicle management Centre at Dholchora (Silchar) in the State of Assam.

3. The Automotive Mission Plan:

3.1 The necessity of this Mission Plan arises in the background of a newfound strength and resurgence in the Indian manufacturing sector. For most of the decade of the 1990s, post the economic deregulation in 1991, growth in the Indian economy has been led by growth in the service sector, a growth that has overshadowed the growth in the manufacturing sector. In the past few years, several industries in the Indian manufacturing sector have become internationally competitive and have acquired a new energy to grow. Several industries, including the automotive industry, genuinely believe that they can become world-beaters.

3.2 In developing a Mission Plan for India's automotive sector, answer to the following questions has been sought:

(i) Where is automotive sector in India today? What linkages does the automotive sector have with other facets of the India's economy?
(ii) What do we want the automotive sector of India to look like in 2016? In other words, what is the potential of the automotive sector to grow along all segments of its value chain, and what can be the maximum positive impact on the stakeholders?
(iii) How do we attain the vision? What policy interventions will facilitate the attainment of this potential?

3.3 Vision for the Future: The opportunity landscape for the Indian auto industry would encompass manufacture of vehicles and components for domestic sales, manufacture for exports (both vehicles and components), and export of services in areas such as design, engineering, and back office operations. It is estimated that the total turnover of the automotive industry in India would be in the order of USD 122-159 billion in 2016 (a substantial increase from the size of USD 34 billion in 2006).

3.4 It is expected that in real terms, India would continue to enjoy its eminent position of being the largest tractor and three wheeler manufacturer in the world and the world's second largest two wheeler manufacturer. By 2016, India would emerge as the world's seventh largest car producer (as compared to the eleventh largest currently) and retain 4th largest position in world truck manufacturing sector. Further, by 2016, the automotive sector would double its contribution to the country's GDP from current levels of 5% to 10%. Its contribution to the manufacturing sector would rise to 30-35% from the current level of 17%. This is because the share of manufacturing in GDP is expected to go up to around 35% from current level of 17% by 2016.

3.5 Implementing AMP 2006-2016 would need an incremental investment in the order of USD 35-40 billion to come into Indian auto industry over the next ten years (2006-2016). It is anticipated that the bulk of this investment will come from expansion of capacities by existing manufacturers operating in India and remaining from global multinational corporations (MNCs) seeking to make India their manufacturing base. Competition for attracting investments in India would come from countries such as China and Thailand.

3.6 Currently the automotive industry employs 200,000 persons in vehicle manufacturing, 250,000 in component companies and 10 million at different levels of the value chain – both through backward and forward linkages. The expected growth in investments and output of India's automotive sector during the next 10 years will create further employment opportunities in the country. Additional 25 million jobs are likely to be created by way of both direct and indirect employment in automotive companies and in other parts of the vehicle value chain such as servicing, repairs, sales and distribution chains.

3.7 Vision Statement: Based on the above scenario, the Vision Statement for India's automotive sector will be as follows:

"To emerge as the destination of choice in Asia for the design and manufacture of automobiles and automotive components. The output of India's automotive sector will be USD 145 billion, contributing to more than 10% of India's Gross Domestic Product and providing employment to 25 million persons additionally by 2016".

3.8 The Way Forward: The future challenges for the Indian automobile industry in achieving the targets defined in the Automotive Mission Plan would primarily consist of developing a supply base in terms of technical and human capabilities, achieving economies of scale and lowering manufacturing costs, overcoming infrastructural bottlenecks, while at the same time stimulating domestic demand and exploiting export and international business opportunities.

3.9 Interventions envisaged are required at two levels – Industry and the Government. The Government would play a key enabling role in facilitating infrastructure creation, promote the country's capabilities, create a favourable and predictable business environment, attract investments and promote R&D. The role of Industry will primarily be in designing and manufacturing products of world-class quality standards, cost competitiveness, improving productivity of both labour and capital, achieving scale and R & D capabilities and showcasing India's products in potential markets. Attaining Vision 2016 for the automotive sector in India is a goal for both Government and Industry definitely worth striving for.

3.10 The path of implementation of the Vision 2016 calls for some decisive action on part of state and central Governments. The challenges for industry essentially call for a matching vision and action to attain global standards in operational efficiency. Given the commitment of the Government of India, and the fundamental competitiveness of the Indian automotive industry, achieving the targets defined in the Mission Plan is a doable challenge and would be rewarding for all stakeholders.

Automotive Mission Plan 2006 - 2016

Growth Trends in Automotive Industry

4 Evolution of Indian Automotive Industry

4.1 Automobiles: While the genesis of Indian Automotive Industry can be traced to the 1940s, distinct growth decades started in the 1970s.

Between 1970 and 1984 cars were considered a luxury product; manufacturing was licensed, expansion was restricted; there were quantitative restriction (QR) on imports and a tariff structure designed to restrict the market. The market was dominated by six manufacturers - Telco (now Tata Motors), Ashok Leyland, Mahindra & Mahindra, Hindustan Motors, Premier Automobiles and Bajaj Auto.

The decade of 1985 to 1995 saw the entry of Maruti Udyog in the passenger car segment and Japanese manufacturers in the two wheelers and light commercial vehicle segments. Economic liberalization, started in 1991, led to the delicensing of the passenger car segment in 1993. QR on imports continued. This decade witnessed the emergence of Hero Honda as a major player in the two wheeler segment and Maruti Udyog as the market leader in the passenger car segment.

Between 1995 and 2000 several international players entered the market. Advanced technology was introduced to meet competitive pressures, and environmental and safety imperatives. Automobile companies started investing in service network to support maintenance of on-road vehicles. Auto financing started emerging as an important driver for demand.

Starting in 2000, several landmark policy changes like removal of quantitative restrictions (QR) and 100 percent FDI through automatic route were introduced. Indigenously developed (Made in India) Vehicles were introduced in the domestic market and exports were given a thrust. Auto companies started collaboration with financial firms to provide auto financing and insurance services to customers. Manufacturers also introduced systems to improve capacity utilization and adopted quality and environmental management systems. In 2003, Core-group on Automotive R&D (C.A.R.) was set up to identify priority areas for automotive R&D in India.

4.2 Auto Components: In 1953, the Tariff Commission in its report to Government had stressed the need for a balanced and integrated development of the Automotive Industry by promoting the emergence of a strong auto-component sector. As a result of this recommendation the leading entrepreneurs were invited by Government to establish an auto-component manufacturing industry.

In the pre-1985 era, the auto component sector was a protected market with high import tariffs. The market was oriented primarily towards supply of components to domestic manufacturers.

In the 1980s, encouraged by the establishment of many Japanese OEMs in the passenger car, two-wheeler and LCV industry in the country, a number of Indian companies entered into joint ventures with Japanese companies and exports also commenced.

The Phased Manufacturing Programme (PMP) introduced in Indian automotive sector in the 1980s for localization had laid the foundation for the development of auto component industry. This programme enabled the auto-component industry to modernize its technology, improve quality and to imbibe good manufacturing and shop-floor practices and to transform itself into a highly capable sector of the industry, while at the same time contribute to localizing the component base. In 1990s global OEMs and Tier 1 suppliers started operations in India. This paved the way for a large number of new Joint Ventures in the component industry with European and American component manufacturers and gave the Indian component industry an all-round expertise to manufacture components for applications in Japanese, European as well as American vehicles. After the PMP programme came to an end in 1991, Government introduced the MOU system that continued to place emphasis on the aspect of localization of components. With support from this policy, the component industry developed further capability to manufacture the new breed of auto-components required for the new generation vehicles.

As a result of successful localization of these components, Vehicle manufacturers started outsourcing more and more components rather than manufacturing in-house. Entrepreneurs were encouraged to develop components and set up facilities. Whenever required, OEMs supported component manufacturers through equity participation, technical collaboration, etc.

Currently the Auto component Industry manufactures a wide range of products in India for both domestic consumption and exports. The total size of the component industry is close to USD 14 billion out of which USD 9.6 billion is the domestic OEM market, USD 2.6 billion is the domestic aftermarket and USD 1.8 billion are the direct exports of components.

More than 60% of the exports of auto-components are to Europe and USA. More than 70% of the exports go to the OEMs and Tier 1s and only 30% to the global aftermarket, indicating the high level of maturity in Quality and Technology that has been achieved by the component industry.

Currently the Auto component Industry manufactures a wide range of products in India for both domestic consumption and exports.

4.3 Size of the Indian Automotive Industry

4.3.1 The Indian Automobile Industry produced 8.5 million vehicles in 2004-05 amounting to around USD 25 billion. During the financial year 2005-06, Indian Automobile Industry produced more than 9.7 million vehicles amounting to almost USD 28 billion. The growth in production was 15%. India is the second largest market for two wheelers in the world. However, in value terms, the value of the market for passenger cars and CVs is higher than the market size for two wheelers.

4.3.2 Sales of passenger cars and utility vehicles have grown at 12% CAGR over the last decade. However, last year the growth rate for the passenger car segment was

lower than 8%. Sales of passenger cars post 2000 have been driven by increase in the number of available models, purchasing power, especially of the middle class, easy availability of car finance, conducive government policies and growth of used car market. Further reduction in cost of ownership would fuel demand for passenger vehicles.

4.3.3 Commercial vehicles sales have grown at a 4.4% CAGR over the last decade and the segment has also demonstrated cyclical trends. Last year, however, growth was over 10% in domestic sales and production. Exports have also picked up – registering a growth of 36% over the last year. Growth in the commercial vehicle sector is dependent on the general economic trend, development of infrastructure projects, transport economics and availability of freight, replacement period of vehicles, easy availability of credit and conducive government policies.

4.3.4 The Utility Vehicles had reached a production of 1,82,000 units in 2004-05 and has gone upto 1,96,000 units in 2005-06. The tractors production has reached a figure of 293,000 in 2006.

4.3.5 Two wheelers sales have grown at 11% CAGR during the last decade. Over the years, while the sales of motorcycles have increased, sales of scooters and moped have stagnated. With 5.82 million units sold in 2005-2006 (out of 7 million two wheelers), motorcycles have replaced scooters as the preferred mode of transport with higher load bearing capacity (essential feature for rural areas), better fuel efficiency, better aesthetics thus resulting in a change in consumer preference/ behaviour. Last year for the first time two wheeler sales crossed 7 million units registering a growth of around 14%. Also, exports of two wheelers crossed half a million registering a growth rate of 40%.

4.3.5 Three wheelers have also exhibited strong growth with a CAGR of 9%. Sale of three wheelers has grown from 145,000 units in 1995 -1996 to over 360,000 in 2005-06. Last year growth in three wheeler sales was around 17%.

4.3.6 Today, the Indian auto component sector has over 500 organised players and about 5000 unorganised sector players. The organised sector reached a turnover of over USD 10 billion in 2005-06. Demand from OEMs account for 54% of sales, replacement market accounts for 30%, while exports account for over 16% at about USD 1.8 billion.

4.4 Growth Drivers

4.4.1 Rising per capita Income and the changing demographic distribution are conducive for growth. India has the highest proportion of population below 35 years, 70%, (potential buyers), which means that 130 million people will get added to the working population between 2003 and 2009. The trends indicate that small and medium cars would remain dominant and a shift towards high end cars is expected at a faster rate. The SUV market is expected to develop rapidly in future. Higher disposable incomes coupled with availability of easy finance options have driven the Passenger vehicle segment.

4.4.2 In the commercial vehicle segment, increased investment in road infrastructure and availability of cheaper finance has led to a growth in multi-axle vehicles. This is expected to be followed by a shift to tractor-trailer combinations on account of operating economics of higher power-to-weight ratio vehicles. Growth in the demand for pick-up trucks has coincided with the growth in multi-axle vehicles. The next growth driver for LCVs is expected to be the introduction of lighter pick-ups.

4.4.3 The two wheeler segment growth is led by rapid urbanization and resultant rise in demand from semi-urban and rural areas, increasing income levels, wider product range available to customers, and easy finance options.

4.4.4 The growth in tractor industry is linked with the growth in agricultural output and exports to neighboring countries.

4.4.5 Auto component industry growth is directly linked to the growth of automobile industry since more than 50% sales is to the OEMs. However, in recent years, component exports are becoming an important growth driver and it is expected to assume greater importance in future.

4.5 Export Trends

4.5.1 Compared to domestic sales, vehicle exports have grown at the rate of 39% CAGR over the last five years, led by exports of passenger cars at 57% and two wheeler exports at 35%. Last year however, overall exports registered a growth of around 28%. In value terms exports crossed USD 2 billion. The key destinations are the SAARC countries, European Union (Germany, UK, Belgium, the Netherlands and Italy), Middle East and North America. Maruti Udyog, Tata Motors and Hyundai Motor India are key exporters for passenger cars; Mahindra & Mahindra and Tata Motors for light commercial vehicles, medium and heavy commercial vehicles, Mahindra & Mahindra for MUVs, Bajaj Auto for two and three wheelers and Mahindra & Mahindra and TAFE for tractors. A 3% growth in global demand is anticipated over the next five years and it will be led by Asia (mainly by China, India and ASEAN). Also global auto companies are increasingly sourcing components and vehicles from low cost countries. The outsourcing pie is slowly extending to services like engineering design and other business processes. India is well positioned to take advantage of the outsourcing opportunities.

4.6 Growth potential of Indian Automotive Industry

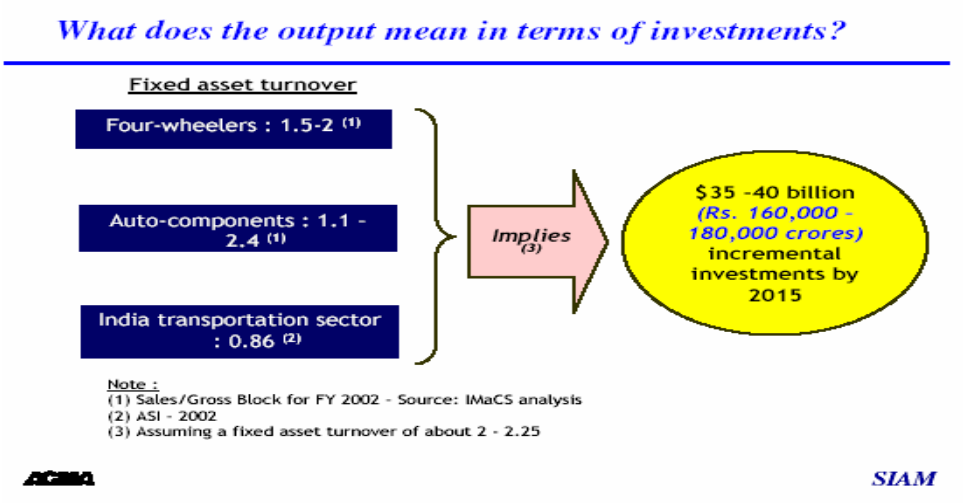
4.6.1 Automotive Industry offers huge growth potential in terms of sales volume (including exports) and also immense employment opportunities. The likely future volumes of different vehicle categories were estimated on the basis of projections made by iMaCS, NCAER and AT Kearney. Value of projected domestic output was computed based on historical average vehicle prices. Export potential was estimated on the basis of current trends and possible opportunities in major export destinations. Demand for after-market auto components and export output was also included in computing growth potential of the industry. The unit value of different vehicle

categories in 2016 have been estimated keeping in view the need for compliance with emissions and crash standards.

4.6.2 It is expected that the world production of Auto-Components would reach USD 1.7 Trillion by 2015. About USD 700 billion worth of auto-components shall be sourced out from low cost countries (LCCs) by 2016. If India targets to get a 10% share of this potential, it would mean USD 70 billion, nearly five times current total size of the industry in India. However, this Mission Document has set a modest target of USD 25 billion by 2016 for export of auto components.

4.6.3 The projected size in 2016 of the Indian automotive industry varies between USD 122 billion and USD 159 billion including USD 35 billion exports. This translates into a contribution of 10-11% to India's GDP by 2016, that is, double the current contribution. This would mean a domestic vehicle market of USD 82 billion to USD 119 billion by 2016, USD 12 billion exports of vehicles and tractors, USD 20-25 billion component exports and more than USD 5 billion after market of components. Another USD 2 – 2.5 billion in engineering services outsourcing opportunity is expected to develop. The total size of the auto component industry in India is expected to become USD 40-45 billion by 2016. This calls for a major focus and policy initiative to market India as an attractive "Manufacturing Destination".

4.6.4 The output estimated would require incremental investment of USD 35-40 billion (Rs 160,000 -180,000 crores) by 2016.



4.6.5 The automotive industry also promises significant employment opportunities. Large number of workers, both skilled and unskilled, will be required to sustain increased level of production. A large part of the employment would also be indirect, for sales, finance, insurance, mechanics and other after-sales personnel for both semi-skilled and unskilled workers in rural and semi-urban areas. While direct employment is by way of workers engaged in the production of automobiles and auto components, indirect employment is generated in feeder and supplier industries to the automotive industry, such as the vehicle financing and insurance industry, vehicle repair, service and maintenance outfits, automobile and auto component dealers and retailers, vehicle

drivers, tyre industry, amongst others. It is estimated that, on a conservative basis, 5.3, 13.3, 0.5 and 3.9 units of direct and indirect employment are generated per unit of car, CV, 2-wheeler and 3-wheeler produced respectively. This translates into an additional employment generation of 25 million by the automobile industry by 2016.

4.6.6 Specialists in the areas of R&D, technology, product development, logistics and operations would also be required. Availability of such requirements will not only be an opportunity, but getting adequately trained personnel will become a major challenge.

4.7 Areas to Focus

The future challenge for Indian automobile industry would be to develop a supply base with emphasis on lower costs and economies of scale, develop technical and human capabilities, overcome infrastructural bottlenecks, stimulate domestic demand and exploit export and international business opportunities. The key to success is to achieve the critical mass that would make India competitive and profitable for sustained investments. Keeping these in view the identified challenges and interventions are in the areas of competitiveness in manufacturing and technology; demand, brand building and infrastructure; export and international business; environmental and safety standards, and human resources development. A key deficiency that needs to be addressed for attaining the vision is to improve competitiveness in manufacturing. Systemic deficiencies could be overcome through a long-term and stable policy regime that will support the industry to fulfill its' potential.

4.8 Competitiveness in manufacturing

4.8.1 The share of manufacturing sector (within the Industry sector) has shown only a marginal improvement from 16.6% in 1991 to 17% of Indian GDP 2003. In comparison, in some East Asian economies the share of manufacturing has ranged from 25% to 35% of their GDP. It is known that stagnation of manufacturing as a proportion of GDP has adverse impact on employment generation. Therefore it is imperative to boost manufacturing given the huge anticipated increase in the workforce over the next 15 years.

4.8.2 As observed by the National Manufacturing Competitiveness Council in its national manufacturing strategy the challenges faced by Indian manufacturers raise important questions for both Industry and Government "….this calls for 'breakthrough' and bold thinking on the part of all stakeholders. Only bold aspirations can enable India benefit from emerging opportunities in the manufacturing sector".

4.8.3 In a Global Competitiveness survey of 104 countries India was ranked only 55. In terms of macroeconomic environment, public institutions and technology, India was ranked 52, 53 and 63 respectively. On location attractiveness for manufacturing, India was ranked 43 while other regional countries like China, Singapore and Hong Kong were ranked 39, 11 and 6 respectively. The productivity in automotive industry in India is substantially higher than other sectors and it has a huge potential for further improvement, which in turn will pull up the competitiveness of entire manufacturing sector. Hence it becomes imperative to identify factors that make manufacturing in India un-competitive and address these and improve our competitiveness.

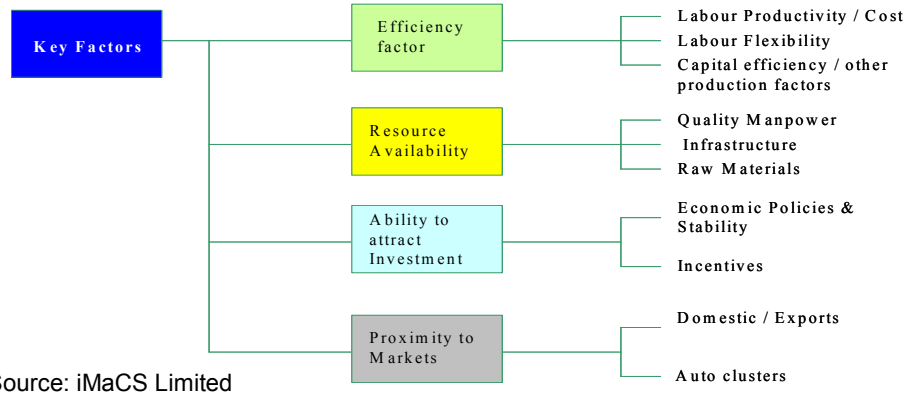
4.8.4 The National Manufacturing Competitiveness Commission's National Manufacturing Strategy lists the following factors impacting manufacturing competitiveness:

(i) Higher import duties including inverted duty structure
(ii) Higher incidence of indirect taxes
(iii) Sub-optimal levels of operations
(iv) Lower operational efficiencies and Higher transaction costs
(v) Lower labour productivity and Higher cost of capital
(vi) Inadequate infrastructure

4.8.5 In a survey of corporates, the following factors were ranked on the basis of the responses:

(i) Flexibility in labour laws
(ii) Scale of operations
(iii) Cost of capital
(iv) Cost, availability and quality of raw materials
(v) Technology gap with international levels
(vi) Power costs
(vii) Cost of compliance to government regulations
(viii) Quality of transport infrastructure

4.8.6 The key factors that contribute to competitiveness of a country or a location can be summarized as shown in the figure below. Figure on Key factors for Competitiveness is as follows:



Source: iMaCS Limited

The availability of low cost quality manpower and presence of a sizeable auto industry, availability of raw material, and stable economy contribute to India's strengths.

4.8.7 But manufacturing in India suffers from disadvantages as was stated earlier. As a result, auto sector in India is less competitive as compared to competing countries like China and Thailand.

4.8.8 In a study commissioned by SIAM, ICRA Advisory Services evaluated the Indian and Chinese economies from an automotive manufacturing perspective. The

following policy initiatives from the Chinese Government have been identified as driving its manufacturing and investment leading to stupendous growth:

(i) Creating world class physical infrastructure – road networks, ports, railways and airports
(ii) Government responsiveness to business needs (administration that facilitates business)
(iii) Reduction and simplification of direct and indirect taxes
(iv) Lowered rate of income tax
(v) 17% uniform VAT, ensuring no cascading taxes or duties
(vi) Ensuring no location based tax exemptions and barriers to inter-state movement of goods
(vii) Creating flexible and investor friendly labour laws
(viii) Companies can retrench labour and pay productivity-based wages
(ix) No trade unions in SEZs
(x) Employers can prolong work hours due to needs of production or business but work time to be prolonged should not exceed 36 hours a month.
(xi) Low interest rates
(xii) Availability of reliable and quality power; no need to invest in DG sets
(xiii) Large capacity additions annually that keep pace with growth
(xiv) Requirement of minimum investment in industry and R&D.

4.8.9 A cost comparison study between Indian and Chinese automotive manufacturing companies to identify factors and their magnitude that impact auto manufacturing in India vis-à-vis auto manufacturing in China reveals that the cost of manufacture of a passenger vehicle in China is 23% lower than in India with the principal difference owing to higher taxes and their cascading impact in India. Higher labour productivity and lower infrastructural costs makes China more competitive. The study also revealed that since design and engineering capabilities in India have not been as strong there would be a disadvantage of 30% higher costs for products manufactured in India. While some of the above issues like scale of operations and labour productivity are industry or company related, others are identified for improvement and strengthening by the Government.

4.9 Prescriptions for Industry in the National Manufacturing strategy

The National Manufacturing Strategy has indicated that Industry would not only need to think big in terms of scale but also need to:

(i) Invest in R&D and technology
(ii) Have a continuing commitment for skills development and education
(iii) Benchmark their performance against best in the industry
(iv) Adopt best manufacturing practices and production techniques
(v) Deliver on globally acceptable quality levels

4.9.2 In light of the above scenario and goal of making India a hub for small cars, MUVs, two wheelers, tractors and components, it becomes essential to focus on the automotive sector and develop a policy specific to the sector which addresses all the constraints. Investment in R&D for technology development will become one of the

most important aspects of future strength of this industry. Given India's strength in having the skill sets required to promote technological development, the industry needs to invest in research and development to increase innovative breakthroughs for vehicle design as well as in manufacturing technology and incentivisation of such investments will be needed on the part of the Government.

4.10 Demand creation, brand building and infrastructure

4.10.1 In order to raise the contribution of automotive industry to GDP from 4.4% to 10%, there has to be a focus both on the domestic market as well as exports. Domestically the focus should be on developing and selling appropriate products for the large population of the country. These products could include cost effective small carriers, strong, rugged, low cost vehicle for the rural market, USD 300-350 motorbikes and small, safe four wheelers for family transport. For exports, the focus should be on new geographies for growth beyond traditional markets.

4.10.2 India's GDP is expected to grow from USD 650 billion to USD 950 billion in 2010 and USD 1390 billion in 2016. Automotive industry's contribution in these years is expected to rise from USD 34 billion to USD 69 billion and to USD 145 billion respectively. These translate into a contribution to GDP to grow from the current 5.2% to 7.2% and 10.4% in 2010 and 2015. Secondly, the challenge lies in developing appropriate infrastructure to sustain this growth. Also, important would be to establish brand image not only in the domestic market but internationally also. An appropriate policy for attracting investment would ensure realization of the potential. Government is aiming for creating suitable stable, predictable, and sustainable policy environment and partnering with industry to look beyond borders.

4.11 International Business (Exports)

Export opportunities for four wheelers would lie primarily in the small car segment as Indian companies have gained expertise in manufacturing vehicles in this segment and enjoy an advantage over other low cost countries. India should capitalize on this expertise and target becoming a manufacturing hub for A/B class vehicles. This is already being leveraged by OEMs like Hyundai with Santro, Suzuki with Maruti 800/Alto and Tata Motors with Indica. Two wheeler exports are also expected to become substantial in the coming years. Export of other vehicle categories will be largely driven by strategies of individual companies. Incentivising the exports, encouraging development of domestic competitiveness, establishing 'Made-in-India' brand are some of the initiatives required to promote International business.

4.12 Environment and Safety Regulations

Emission norms came into force with the Idle Emission Norms in 1984. Mass Emission Norms were introduced in 1991 for petrol vehicles and in 1992 for diesel vehicles. These norms have been progressively made stringent and India has followed the European emission standards and test procedures. Environment concerns led to India narrowing the gap with Euro norms at a rapid pace and currently BS-II or Euro II equivalent norms are in force throughout the country and BS-III or Euro-III norms in eleven cities. Two Wheelers which play the unique role of family vehicles in India

comply with stringent emission norms while at the same time satisfactorily meeting the Indian customer demand for fuel efficiency. Idle emission norms applicable to in-use vehicles have also been tightened. The need is for an appropriate in-use vehicle management policy. Also, a long term emission roadmap needs to be developed as the current roadmap is only up to 2010. Alternative fuels like Hydrogen and bio fuels need to be promoted to ensure sustainability of the industry over the long term.

4.13 Human Resource Development

4.13.1 Employment is always a major factor when measuring the significance of any economic activity. The automotive industry, on account of its backward and forward linkages, is a significant generator of employment - both direct and indirect. While direct employment is by way of workers engaged in the production of automobiles and auto components, indirect employment is generated in feeder and supplier industries to the automotive industry, such as the vehicle financing and insurance industry, vehicle repair, service and maintenance outfits, automobile and auto component dealers and retailers, vehicle drivers and cleaners, tyre industry, amongst others. Thus steps are needed to ensure that demand – supply gap, both quantitative and qualitative, in terms of human resources, does not arise.

4.13.2 The need of engineering and managerial manpower is being met by IIT and IIM. The setting up of a specialized institute for industry will add to the competitiveness of the Industry. The institute, besides developing as a repository of knowledge in the field, will also take up market research and analysis within and outside the country. It will also develop training modules and will disseminate them through ITIs and ATIs. The Investment Commission has also identified this input as requirement for the industry. The adoption of existing training institutes by OEMs and setting up of new training institutes by them will be promoted.

Automotive Mission Plan
2006 - 2016

Recommended Interventions

5 Investment

5.1 Appropriate Tariff Policy

It has been observed world over that an appropriately designed tariff structure attracts investors. High tariffs may restrict flow of trade but attract investment if domestic market is big enough and growing.

Over the last few years India's tariff policies and conditions of import of vehicles have served the purpose of attracting investments. Industry is keen that the existing tariff structure roadmap and conditions of import of vehicles are retained without any modifications because of certain systemic deficiencies which make manufacturing less cost competitive in India, compared to some of the neighboring countries like China, Thailand, Indonesia, etc., and also that lowering of tariffs would not attract investment from global OEMs. Here it is important to recognize the difference of the MFN rates of tariff and the preferential rates of tariff. The MFN rates in India are currently equal or lower than that of neighboring countries.

Commercial vehicles (Trucks and Buses falling under tariff headings 8702, 8704 and 8706), and MUVs falling under 8702 already have bound rates of 40 %. The current tariff is 12.5 %. The tariff in advanced countries is higher than that of India, e.g. tariff on trucks is 25% in USA and 22% in EU. The Government would examine the tariff rate for commercial vehicles and MUVs in this perspective.

India is currently negotiating FTAs/PTAs with several regions and countries like ASEAN / Thailand / Singapore / Malaysia, China / Korea / Japan / BIMSTEC / Bangkok Agreement, SAFTA / Sri Lanka / Mauritius, MERCOSUR / Chile, SACU / Egypt / Gulf Cooperation Council. While negotiating the agreements, care would be exercised in deciding which tariff lines would be included.

In agreements such as SAFTA and PTAs with countries like Chile, GCC, etc., the attempt would be to include automotive tariff lines. At the same time for FTAs with Thailand, BIMSTEC, ASEAN, China, Korea, Japan, etc., the industry has identified 84 automobile and engine product lines and auto-component lines for inclusion in the negative list. Need to keep these 84 items in the negative list for FTAs with Thailand, BIMSTEC, ASEAN, China, EU, Korea, Japan, etc., for which no duty concession should be extended has been focused. In the case of the auto-component industry, the negative list could vary depending on the country/trading block. Any trade negotiation will take into account these sensitive items which are outside the purview of the concessions.

A clear definition of Rules of Origin for FTAs/PTAs is to be attempted to put in place in a manner to prevent:

- Pass through imports from non-participating economies
- Trade deflection, that may result from differential duty structures

As such it is felt that the automotive sector needs a robust definition of Rules of Origin, which may be defined in terms of the following:

- Change of Custom tariff classification at the 4 digit level (from import to export) PLUS
- Value Addition (Transaction Value Build Down method) Minimum at 50%, (including value of sub-component import of parent assemblies) PLUS
- Minimum operation at country of origin (weld + paint + assembly) PLUS
- Non-qualifying processes: Packaging, Re-packaging Polishing, finishing, mere assembly or disassembly, Inspection, Internal Transport, freight, anti-rust applications, oiling etc., or a combination of the above

Rules of Origin should be certified only by Government Authorities of partner countries only.

Unrestricted Import of Vehicles likely to have adverse impact on local manufacturing, GDP and employment. Therefore these issues will be kept in forefront while negotiating FTAs/RTAs with other countries.

Government will discourage import of used/ remanufactured vehicles and components and remanufactured automotive products may not be treated like new.

B. Investment Support

In order to spur further growth, the Industry has requested that the automotive industry may be brought under the purview of existing incentive structure (which exist for other sectors of the economy or are available in some of the competing countries). Some of the specific policies that Industry has requested for consideration includes:

- Tax holiday for Automobile Industry for investment exceeding Rs.500 crore (as given to power projects, firms engaged in exports, EOUs, infrastructure projects, etc.)
- One-stop clearance for FDI proposals in automotive sector including the local clearances required for setting up manufacturing facilities
- Tax deductions of 100 per cent of export profits.
- Deduction of 30 per cent of net (total) income for 10 years for new industrial undertakings.
- Concession of Import duty on machinery for setting up of new plant or capacity expansion
- Deduction of 50 per cent on foreign exchange earnings by automotive companies (like Construction companies, hotels, etc.)
- State Government to be urged to offer the following:
  - ✓ Preferential allotment of land to automotive plants as is given to IT sector by different State governments
  - ✓ Ensuring Continuous uninterrupted power supply as is done by many states to some sectors
  - ✓ Captive Generation in the sector could be promoted, for instance, by exemption of Electricity Duty for five years as is done for biotech industry in some states.

The above issues will be appropriately taken up with the concerned authorities.

5.2 Infrastructure

Continued investment in infrastructure is essential. Infrastructure should keep pace with growth in the manufacturing sector and trade. Some of the specific requirements in this regard, that would be looked into, are given below:

A. For Road infrastructure:

- Further road development to enhance movement – State Highways and Interior village roads
- Developing urban transportation system, Flyovers, etc with cohesive integration of urban transport including Bus Rapid Transit systems, infrastructure and land use policies
- Arresting delays in completing planned road development
- Ensuring need for quality road network and maintenance of existing roads including a special emphasis on design for safety
- Ensuring last mile connectivity between ports and auto hubs
- Better connectivity and streamlining procedures for border trade

The requirement of roads by the automobile sector upto 2016 has been quantified by the Government.

B. For Rail infrastructure:

- Implementation of a comprehensive railway infrastructure development program
  - Developing a comprehensive blueprint for railway development on the lines of NHAI/NHDP
  - Implementing north-west freight rail corridor and last mile port connectivity projects on priority
  - Following up policy on private container movement and its speedy implementation

C. For Port infrastructure:

- Creation of specialized port infrastructure for handling vehicle exports. This is crucial for India to emerge as a global automotive hub
- Creation of three automobile export hubs near Mumbai, Chennai and Kolkata, each equipped to handle output of 5 lakh vehicles annually by 2015
- Earmark space for parking, vehicle repair at these ports to accommodate at least 20,000 vehicles at a time
- Implementation of parking projects (such as the proposed multi-level facility at Chennai port) and last mile connectivity projects on priority
- Expedite implementation of container terminals in line with the NMDP
- Execution of port connectivity of the five automotive hubs with JNPT, Mumbai, Kolkata and Chennai ports on priority

- Creating/Expanding container handling facilities at JNPT, Mumbai, Kolkata and Chennai ports which are critical for automotive exports and needs to be addressed on priority
- Development of CFS/ICD facilities in a regulated manner in line with the traffic growth
- Ensure appropriate port design (viz., berth length, equipment and draft) in line with trends in container vessel design
- Addressing procedural automation and standardization at all ports on priority

D. For Power infrastructure:

Power and fuel account for about 6% of manufacturing cost and are important factors in manufacturing competitiveness. Power cost in India seem to be on higher side in comparison with other manufacturing locations. In addition, it is estimated that the automobile industry would require an incremental 2100 MW in 2016 from the current consumption requirement of 660 MW. The total power requirement of the auto-component industry today is 1300 MW, which includes power purchased from the grid as well as captive generation. The auto-component industry would require 4000 MW of power from the grid supply. So, total power requirement of the automotive industry will be around 6760 MW in 2015.

As envisaged in the Tariff Policy, the Tariff should progressively reflect the cost of supply of electricity. The SERC would notify the roadmap which targets that by the end of 2010-11, tariffs are within plus-minus 20 percent of the average cost of supply. The roadmap will envisage a gradual reduction in cross subsidy. The Policy also allows for captive generation to enable industries to access reliable, quality and cost effective power. Electricity Act has completely decontrolled the setting up of captive power plant. It is expected that distribution licensees would improve quality of power to industrial consumers in order to retain them since these are high value consumers. Further, to harness the economies of scale in the captive power plants also, group captive plants are being encouraged. However, to enhance the grid supply, capacity addition programme commensurate with the objective of eliminating all shortages by 2012 is already in place. At present, projects of over 40500 MW at a cost of Rs. 1,86,000 crore are under implementation. The capacity of National Grid is proposed to be increased from present about 10,000 MW to 37,000 MW by 2012. This would greatly facilitate open access in transmission.

Power Infrastructure would be improved to facilitate a faster growth of the automotive sector both domestically and internationally. A special focus need to be given to the automotive hubs.

E. Infrastructure for Testing, Certification and Homologation:

The world class infrastructure for Testing, Certification and Homologation will be created under NATRIP in the three major auto hubs in the country. The first phase of the project will be completed by the year 2008.

5.3 Expansion of Domestic Demand

5.3.1 In order to facilitate expansion of domestic market, following are the set of initiatives to be followed by Industry and Government:

I. Industry will strive for acquisition of tools for faster product design and validation (IT, rapid-proto, etc.) for enhancing the capability to create and introduce products that are appropriate to the market needs at a quicker pace and on a sustainable basis. Support will be extended to introduce courses on automotive design. A styling centre could be a part of the National Institute of Design.

II. Industry will work towards bridging the gaps on product quality, aesthetics, features and performance with world class products. Government will support Development Centres for Small and Medium Enterprise Suppliers providing Training and Development, Consultancy, Project handling and Business Development Support Services.

III. Industry will enhance the cost competitiveness on a continuous basis to develop domestic market. Government would examine fiscal incentives/ concessions for innovation of 'low cost' products that are aimed at consumers at the mass market like cost effective small goods carrier, rugged low cost rural vehicle, small safe car, low cost two wheeler, etc.

IV. Government would consider rationalization and simplification of taxation and documentation for interstate and inter city movement of vehicles and goods.

V. An attempt would be made to encourage the Introduction of GST at the earliest.

VI. Government of India has already set up committees to look into various tax proposals and incentives. These committees would look into the elimination of embedded taxes/levies that do not get off-set under VAT.

VII. In order to boost domestic demand and create volumes for industry, government from time to time will devise suitable fiscal and promotion policies to make India a hub for manufacture of small cars, MUVs, two wheelers, tractors and auto components.

Government is aware of the potential of this sector and fiscal concessions have been provided from time to time to give fillip to the auto industry. The tax anomalies/ problems as regards inverted duty structures, high input prices, excessive imbedded taxes and levies are also being addressed by the government.

5.4 Encouraging Exports

A. In order to incentivise globalization and exports the following issues as demanded by Industry will be taken up for examination :

(i) Maintain a three-tier tariff structure for raw materials, intermediate products and finished products. In the short term, apply tariffs that would counterbalance this disadvantage.

(ii) Proceed on internal reforms at an accelerated pace by bringing in full country-wide VAT, and at the same time withdrawing all other central and state taxes and levies on manufacturing.

(iii) Implement a comprehensive GST and reduction of tariffs on raw materials, before further reduction in the automotive tariffs are done.

B. Creation of Special Auto-Component Parks (SAPs) is recommended for promoting export in the auto component sector. The need for such Auto Component Parks has assumed significance in the context of negotiation of Free Trade & Multilateral Trade Agreements with various countries. Issues like extension of Customs Duty exemption on inputs, exemption from sales tax & excise duty for supplies to units in the SEZ will be suitably addressed.

C. In order to accommodate the existing units, Government would examine creation of virtual SEZs in the automotive sector.

D. Government would consider revamping of export promotion schemes including DEPB, EOU and EPCG schemes, which would be WTO compatible.

E. Currently, the EPCG Scheme permits import of capital goods at reduced Customs Duty of 5% against an export obligation. With the gradual reduction of MFN rates of duty to a peak of 12.5%, the duty exemption of 10% points under export obligation lose attractiveness. This issue will be addressed.

F. Industry and the government will endeavor together yo explore new markets.

G. Government would encourage all automobile manufacturers based in India to export.

H. Specific initiatives would be encouraged under the Market Access Initiative (MAI) schemes.

I. The proposal to extend product and market focus schemes to the automobile sector would be considered.

5.5 Support to Develop R&D

Competitiveness in manufacturing and technology development would be enhanced through several initiatives:

5.5.1 Infrastructure Support

- Government will ensure time bound implementation and support NATRIP to set up Centres of Excellence in the following areas in the second phase to be completed by 2011:
    1. Noise Vibration & Heating (NVH) Centre (at Manesar)
    2. Auto components (at Manesar)
    3. Engine including power train (at ARAI, Pune)
    4. Fatigue testing (at ARAI, Pune)
    5. Material testing (at ARAI, Pune)
    6. Automotive Infotronics (at Chennai)
    7. Crash testing (at Chennai)
    8. Testing Track (at Indore)
    9. Vehicle dynamics (at Indore)

  NATRIP can, therefore play a coordinating role for all activities requiring road data collection; fatigue data etc., and make it accessible to the agencies carrying out research. NATRIP could look into the following issues:

    i. Mechanisms by which the Centres of Excellence could be promoted and networked with industry.
    ii. Creation of data base.

5.5.2 Government will encourage collaboration of Industry with research and academic institutions like CSIR, IIT, and machine tool industry for the development of appropriate technology and creation of IPR to meet more stringent regulations as well as to develop relevant machine tools and equipment that improve manufacturing processes and quality of the vehicles and components produced by the industry. The interface with the Core Group on Automotive Research (CAR) would be strengthened.

5.5.3 At present, there are a number of institutions involved in the promotion of research in the automobile sector. Besides CSIR and IIT, independent bodies such as ARAI, Pune, and IIP are also pursuing research in this area. There is, therefore, a need to synergize various initiatives in order to optimize output. Appropriate decision will be taken on the following:

(i) Support to the development and acquisition of appropriate technology for alternative fuels and hybrid engines, use of advanced materials, design and styling. Creation of centres for automotive manufacturing excellence in four IITs.

(ii) Encourage innovation for alternate cost effective materials and processes.
(iii) Support IT integration in manufacturing and development of automotive infotronics; provide support infrastructure to facilitate development of automotive infotronics
(iv) Creation of Advanced Research centre as identified by CAR, Centre for Automotive Design and a Technical organisation to handle harmonization and internalization of Indian regulations

5.5.4 For encouraging R&D, it is suggested that lab facilities in IITs could be developed and modernized. Also, a focused/modular programme in IITs/IIMs could also be initiated.

(i) Automotive Infotronics is a solution platform which draws from the convergence of multiple functions and enables "information interaction" for both in-vehicle and inter-vehicle applications. Historically, other global attempts at capitalizing on Infotronics have failed for a variety of reasons which include, among other factors, insufficiency of the value proposition, a very high-cost of service delivery, and insufficient Public-Private Partnership (PPP).
(ii) Research and work on Intelligent Transport System will be encouraged preferably in public – private – industry partnership to build up an Indian strategy to accelerate the development and usage of Intelligent-Integrated-Safety Systems for increasing road safety in India.

5.5.5 Policy Thrust
(i) Encouragement will be given to fuel efficient vehicles appropriate for Indian market. Conversion / adoption of vehicles run on alternative fuels will also be encouraged.

(ii) Innovative and expedient R&D projects will be encouraged. In this regard, option of consortium approach would be explored.

5.5.6 The National Hydrogen Energy Board under MNES has prepared National Hydrogen Energy Roadmap and the Board would be playing the coordinating role among various concerned agencies involved in R & D, development and commercialization in the area of hydrogen energy. As regard evolving a strategy to develop alternative fuel, fiscal incentives etc., the National Bio-fuel Development Board under MNES will be requested to coordinate these aspects.

5.5.7 The hydrogen future does not have to start from scratch in India, as the CNG infrastructure has already been laid in many cities and several thousand natural gas vehicles are currently on road. Natural gas vehicles and fuelling infrastructure provide hydrogen proponents a solid base on which an early introduction of hydrogen in transport sector would be possible.

(i) The body building activity of commercial vehicles is an important safety issue affecting day to day life of the people. For developing safe and efficient body for commercial vehicles, there is very little need of a new technology. It could be done by putting together the available

technology and materials and could be done by the Small and Medium Industry. Initiatives such as this will be identified by the Government for necessary support.

(ii) Ministry of Finance has constituted a committee to look into all the issues regarding tax concessions for Research & Development. The committee will take a holistic view on the present provisions in the fiscal structure with regard to the tax concessions and incentives extended to promote research. All issues related to incentives will be looked at by this Committee. Some of the following incentives as requested by the Industry will be referred to this Committee:

(a) 100% grant for fundamental research, 75% for pre-competitive technology/application and 50% for product development.

(b) Promoting technology acquisition (for manufacturing) through tax/ levy exemption. Zero taxes/levies on technology transfers (products, features, alternate fuel, etc.).

(c) Increased weighted deduction u/s 35 (2AB) for expenditure incurred on R&D from 150% to 200%. The scope of deduction will be extended to all R&D expenditure whether incurred in-house or externally. This facility could continue to be made available in addition to any other incentive being offered.

(d) Provide excise duty concession for 'Made in India' products (Currently excise duty concessions are available for a period of 3 years for products developed in India subject to the product being designed and developed by a wholly Indian owned company and the product being patented in any two countries out of India. It is recommended that this facility be extended to all companies, regardless of ownership and the condition of patenting be modified to include vehicles and components designed and developed by Indian companies with their own IPR and which cannot be patented but can be registered under design or copyright laws.

5.6 Long -Term Emission Roadmap

5.6.1 As is the trend worldwide, Indian automobile industry too is shaped by environmental and safety imperatives. These norms have been progressively made stringent and India has followed the European emission standards and test procedures. Environmental concerns led to India narrowing the gap with Euro norms at a rapid pace and currently BS-II or Euro II equivalent norms are in force throughout the country and BS-III or Euro-III equivalent norms are applicable in 11 Metros: Delhi, Mumbai, Chennai, Kolkata, Bangalore, Hyderabad, Ahmedabad, Pune, Surat, Kanpur and Agra.

5.6.2 Future Directions in Emission Standards

Emission roadmap as given in the Committee for Auto Fuel Policy has envisaged introduction of BS IV emission norms (Euro IV equivalent norm) in eleven cities w.e.f 1st April 2010 and BS III emission norms in the rest of the country. It would be possible to comply with this roadmap subject to the availability of the required fuel in all retail outlets at least one year ahead of the introduction of emission norms. Future emission standards require a clear and long-term roadmap required for smoother transition to higher emission norms.

An underlying requirement, however, is that an in-depth analysis of projected health benefits with improvement in ambient air quality, be undertaken to support moving to stringent emission standards. It is also felt that so far as containment of the SPM / RSPM in the vehicular emissions are concerned, further strategy in respect of management of air quality, including vehicular pollution, would be based on the apportionment study of vehicular and other pollution. The continuous monitoring of air quality and source apportionment studies need further strengthening.

5.6.3 Industry has felt the need for setting up an organisation for developing an Emission Roadmap based on Auto Oil programme. It would have to be a long-term roadmap required for efficient functioning of the industry. Key guiding principles would be:

(i) Minimum gap of four years between each successive stage of emission norms will be built into the emission roadmap

(ii) Norms to be applicable for new models, one year after fuel is available across the country.

(iii) For existing models, the new emission norms will come into effect one year after emission norms for new models are introduced

(iv) New norms should be announced well in advance so that the auto industry could gear up to technology requirements to meet the targets.

(v) It is preferable to have a single norm for emission across the country, if the above parameters are met.

The above issues will be addressed.

5.7 Harmonization of Safety Standards and Road Safety

5.7.1 Indian safety standards for auto components have been in existence since the late 1960s and were based on EEC/ISO/DIN prevalent at that time. The Central Motor Vehicle Rules came into existence in 1989 whereby serious enforcement of regulations came into force.

Post 2000, which has marked the start of the Safety decade, Indian regulations have been based on ECE . Since 2000 concerted efforts are underway to technically

align standards with ECE. There is a detailed roadmap for safety standard till 2007 and an outline has also been drawn till 2010.

5.7.2 In the era of globalization and free flow of goods and services, it is important that to achieve harmonization with global regulations. UNECE WP 29 offers the possibility for India to participate in the standards making process. India became a full member of the 1998 agreement on global technical regulations in April, 2006 and has initiated discussions on the pros and cons of India signing the 1958 agreement. This would also require that Government and Industry study in detail the techno-commercial implications, identify potential export areas and areas where India needs to technologically upgrade.

5.7.3 At present, there are multiple organisations such as CMVR, AISC and BIS, involved in the setting up of safety standards. There is, therefore, a need for setting up an empowered body to coordinate and monitor the regulatory and harmonization activities. The setting up of National Road Safety Board (NRSB) is under active consideration by the Government. The NRSB will be responsible for the following:

(i) Road related measures - design, setting standards and audit.
(ii) Vehicle related measures - prescribing safety features in consultation with the CMVR TSC., enforcing regulations in in-use vehicles.
(iii) Road safety research – institutional linkages.
(iv) Comprehensive investigation and research of road traffic accidents from the standpoint of human factors, the traffic environmental factors and vehicular factors.
(v) Data collection, reporting, and analyses.
(vi) Traffic laws, management, and enforcement.
(vii) Road user behaviour strategies, capacity building, public awareness and education.
(viii) Medical care and rehabilitation.

5.7.4 The government has already set up modern driving institutes for containing road accidents. It has also been proposed that by the end of Eleventh Five-Year Plan at least one driving school in each State and two schools in bigger States will be established. Use of simulators has also been proposed under the scheme.

5.8 Incentivising Modernisation of Vehicle Fleet

5.8.1 The economic development has impacted the metropolitan cities more than the rest of the country. The growth has also brought with it the unavoidable problems of urbanization – and as people go about their lives at high speeds, air quality in general and emissions from vehicles, in particular, have become issues of primary concern.

5.8.2 However, whilst the new vehicles are cleaner and meeting stringent emission and safety requirements, the benefits are not reflected in the ambient air quality or in reducing road accidents due to the presence of a large number of old and ill

maintained polluting vehicles. Industry has demanded that old vehicles of more than 15 years of age could be retired by providing certain incentives and concessions for replacement through a single-window programme for modernisation of vehicle fleet. The primary objective is to reduce pollution by accelerating normal fleet turnover so that new, cleaner vehicles can be put into use sooner than would occur in the normal course. Industry and government together will address this issue.

5.9 Inspection & Certification System

5.9.1 Based on several studies conducted in various parts of the world, it is widely recognised that old vehicles are the gross polluters that can contribute up to 80% of the pollution load in the major cities. The Hon'ble Supreme Court had therefore imposed a drastic measure to phase out old vehicles from operating in Delhi.

However, Industry has submitted that even new vehicles with the state-of-the-art-technologies, can deteriorate in service if not maintained properly. Industry therefore has opined that it is important that the Central and State Governments, initiate measures to bring all motor vehicles within the ambit of periodic fitness certification.

A study has revealed that for providing coverage of Inspection and Certification Centres in entire country, an investment of Rs.10,000 crores will be required. So privatizing the setting up of these centres is the only viable alternative. However, the government is planning to set up one model centre in each State during the Eleventh Five-Year Plan. The computerization of Pollution Under Check (PUC) centres is also under active consideration.

5.10 Computerization of RTOs & Driver Licensing System

5.10.1 India is a fast growing economy and the Automotive Industry is playing a leading role in this. The number of vehicles being manufactured and sold is increasing every year and the projections show a double digit growth in future. Also, considering the fact that India has one of the lowest penetrations of vehicles, especially personal vehicles, the numbers are bound to increase year after year. This means that the number of vehicles on roads will increase exponentially in the coming years.

With increasing numbers, the system of vehicle registration in the country needs to be modernized. Ready and quick access to vehicle information on all India basis through a centralized agency will be of immense help in traffic planning, town planning, pollution control, tracking down vehicles stolen or used for crime, and greatly facilitate collection of motor vehicle taxes and classification of vehicles in use.

The present system of vehicle registration is characterized by:

(i) Decentralised nature of vehicle registration through around 760 Regional Transport Officers (RTOs)

(ii) Different systems and standards for compilation of vehicle registration across the country. The existing IT based systems across States and UTs have been developed by different agencies/vendors. Presently a little more than one-sixth (about 125 RTOs) of the total 760 RTOs in the country has been computerized.

(iii) No centralized data warehouse/agency on vehicle registration and related parameters. This makes timely access and retrieval of information a daunting task.

(iv) In case of any issue with respect to safety, if the manufacturers want to recall vehicles, they can not benefit much from these decentralized data (computerized or in manual files).

5.10.2. It may be prudent to consider a centralized database of registration and a centrally computerized IT system for the same. This can happen with the existing concept of regional registration offices. With such centralized data base both centre and state agencies can benefit from sharing of authentic information in a timely manner.

5.10.3 Major benefit of the centralized registration details availability (owner, address, phone number and other details) will be the ability to recall exact and all vehicles by the manufacturers in an event of product problem, especially pertaining to safety of the vehicle owner as well as other road users. Besides safety, other benefits of such a centralized database can be:

(i) Town Planning and Environment Assurance (Pollution control)
(ii) Crime control- Vehicle-in-crime Tracking
(iii) Traffic Engineering and Road Planning
(iv) Stolen Vehicle Tracking
(v) Enforcement of other laws introduced from time to time, e.g. ELV norms

5.10.4 The Government has already prescribed common minimum specification for smart card based registration certificate throughout the country. The software has been made available to the State Governments for speedy implementation.

5.11 Ensuring Availability of Human Resource

5.11.1 The automotive industry is expected to require an additional 25 million workforce by 2016 in both manufacturing and downstream and upstream activities. Based on the current pattern of employment it is estimated that automotive industry would require the following:

Management / General	: 28% (7.0 million)
Skilled Worker	: 62% (15.5 million)
Unskilled Worker	: 10% (2.5 million)

5.11.2 Ensuring availability of trained manpower will be of critical importance. The industry has suggested that initiatives for human resource development are needed at two levels. At first, existing labour laws need to be rationalized. This needs to be supplemented by creating adequate infrastructure to ensure availability of trained manpower.

5.11.3 On the issue of Labour Law Reforms Industry has submitted that :

(i) Labour laws adversely impact competitiveness despite being a low labour cost economy.

(ii) There are 45 Central Acts and 16 associated rules that deal directly with labour. There are others Acts that indirectly deal with labour, like the Boilers Act (1923), the Collection of Statistics Act (1953), the Dangerous Machines (Regulations) Act (1983) and Emigration Act (1983).There are in total 154 labour laws.

(iii) Some of the recommendations made by the Industry are as follow:

(a) Factories Act, 1948: The State Government using its powers under Section 65(2) of the Factories Act may grant exemption to all EOUs/ SEZs from all provisions of Section 51, 52, 54 and 56 of the Act. Thus, the working hours should be increased from 48 to 60 per week (Section 51), from 9 to 11 per day (Section 54) and spread over from 10.5 to 13.0 hours per day (Section 56). Such exemptions will be a progressive step in enhancing the competitiveness of the industry.

(b) The Contract Labour (Regulation and abolition) Act, 1970: Fixed term contractual employment may be permitted in relation to the business needs. Contract labour will be allowed in core areas for temporary periods to meet the market demand. Fixed term employment of contracts could eventually be allowed in core activities.

(c) The provision 9-A in the Industrial Disputes Act requires a stringent process for Item number 10 and 11. Some flexibility will be required to recruit workforce as per the demand fluctuation in the market.

(d) The Second National Labour Commission recommendation that prior permission should not be required in respect of lay-off and retrenchment in an establishment of any employment size would be examined for its implementation in auto sector. The prior permission required in case of a unit employing more than 100 employees for closure of the establishment may be examined to raise it to 300.

(e) A Supplementary Unemployment Benefits (SUB) fund need to be encouraged to be created by the companies. This fund could be used to provide compensation to laid-off workers.

These issues will be taken up at appropriate fora.

5.11.4 Manpower Training

Availability of trained manpower would not only aid in the growth of the sector but also facilitate in meeting employment goals. Hence adequate steps should be taken to ensure availability of trained manpower.

In this context, Industry has proposed that A National Automotive Institute would be set up, which would coordinate training in disciplines related to the automotive sector. The institute would prepare courses and modules on training for development of trained manpower. The courses and modules could be implemented by ITIs and

ATIs. Creation of new Automotive Training Institute (ATI) for providing 'Mechanics' training to all segments of society will be looked at. It would also work as repository of data and knowledge to do business forecast in country and globally and will also help and assist in policy formulation.

There is a need to train the management personnel in the area of "Manufacturing Management". This would involve education and training on subjects like SQC, TPM, TQM, Six-Sigma, Lean Manufacturing, Breakthrough Management etc. IIT and IIMs would be requested to institute a programme on "Manufacturing Management." In the short-term, all Universities and Engineering Colleges, including those at the State level would be encouraged to formulate a Training Programme, in consultation with the leading industries in their region on Quality Management and general development for managerial staff. In due course, this programme should become a full-fledged subject in their curriculum for engineers in branches like Mechanical Engineering, Industrial Production etc. A training programme/course in manufacturing management (titled 'Programme for Manufacturing Excellence') would be formulated. Beside the above, following steps have been requested by the Industry to facilitate availability of required trained manpower:-

(i) Keeping in view the demand structure for styling and engineering design centres, it is suggested that the styling centre may be a part of National Institute of Design, Ahmedabad (NID). NATRIP may act as the nodal centre for providing data base for engineering design.

(ii) Education and training to orient R&D to meet customer's demand.

(iii) Ensure flexibility to R&D personnel employed by National Labs, Universities etc. to work in industry for a period of 3-4 years on deputation/sabbatical

(iv) Electronics, megatronics and software capabilities for automotive engineers in IITs will be developed.

(v) Set up facilities for E-learning and E-training to reach wider audience and be able to train more persons required to meet the demand.

(vi) Encouraging OEMs to adopt existing training institutes or to set up new institutes for training.

Working Group Chairmen

Chairman	Subject
Mr Ravi Kant Managing Director Tata Motors	Demand Creation, Brand Building and Infrastructure
Dr Pawan Goenka President (Automotive) Mahindra & Mahindra	Competitiveness in Manufacturing & Technology
Mr Deep Kapuria Chairman & Managing Director, Hi-Tech Gears	International Business (Exports)
Dr Surinder Kapur Chairman, Sona Group	Human Resources Development
Mr Jagdish Khattar Managing Director, Maruti Udyog	Environment & Safety

List of Abbreviations Used:

1. ACMA – Automotive Component Manufacturers Association
2. AISC – Automotive Industries Standards Committee
3. ASEAN – Association of South East Asian Nations
4. ATI – Automotive Training Institute
5. BIMSTEC – Bay of Bengal Initiative for Multi Sectoral Technical and Economic Cooperation
6. BIS – Bureau of Indian Standards
7. BS – Bharat Stage
8. CAGR – Compounded Annual Growth Rate
9. CAR – Core group on Automotive R&D
10. CBDT – Central Board of Direct Taxes
11. CDM - Clean Development Mechanism
12. CFS – Container Freight Station
13. CMVR – Central Motor Vehicle Rules
14. CNG – Compressed Natural Gas
15. COP – Conformity of Production
16. CSIR – Council for Scientific and Industrial Research
17. CV - Commercial Vehicle
18. DEPB – Duty Entitlement Pass Book Scheme
19. DG – Diesel Generator
20. DIN - Deutsches Institut für Normung
21. ECE – Economic Commission for Europe
22. EEC - European Economic Community
23. ELV – End of Life Vehicle
24. EOU – Export Oriented Unit
25. EPCG – Export Promotion Capital Goods Scheme
26. FDI – Foreign Direct Investment
27. FTA – Free Trade Agreement
28. GCC – Gulf Co-operation Council
29. GDP – Gross Domestic Product
30. GST – Goods & Service Tax
31. I&C – Inspection & Certification
32. ICD – Internal Container Depot
33. ICRA – Indian Credit Rating Agency
34. IIM – Indian Institute of Management
35. IIT – Indian Institute of Technology
36. iMaCS – ICRA Management Consulting Services
37. IPR – Intellectual Property Rights
38. ISO - International Organisation for Standardization
39. IT – Information Technology
40. ITI – Industrial Training Institute
41. JIPM- Japan Institute of Productivity Management
42. JNPT – Jawaharlal Nehru Port Trust
43. LCC – Low Cost Countries
44. LCV – Light Commercial Vehicle
45. M&HCV – Medium & Heavy Commercial Vehicle

46. MFN – Most Favoured Nation
47. MNC – Multi National Corporation
48. MNES – Ministry of Non-conventional Energy Sources
49. MoHI & PE – Ministry of Heavy Industries & Public Enterprises
50. MUV – Multi Utility Vehicle
51. MW – Mega Watt
52. NAII – National Automotive Infotronics Initiative
53. NATRIP – National Automotive Testing and R&D Implementation Project
54. NGO – Non-Governmental Organisation
55. NHAI – National Highway Authority of India
56. NHDP – National Highway Development Project
57. NHEB – National Hydrogen Energy Board
58. NID – National Institute of Design
59. NMDP – National Maritime Development Project
60. NRSB – National Road Safety Board
61. OEM – Original Equipment Manufacturer
62. PMP - Phased Manufacturing Programme
63. PPP – Public Private Partnership
64. PTA – Preferential Trade Agreement
65. QR – Quantitative Restriction
66. R&D – Research & Development
67. RTA – Regional Trade Agreement
68. SAARC – South Asian Association for Regional Cooperation
69. SACU – Southern African Customs Union
70. SAFTA – South Asia Free Trade Agreement
71. SAP – Special Auto component Parks
72. SERC – State Electricity Regulatory Commission
73. SEZ – Special Economic Zones
74. SIAM – Society Of Indian Automobile Manufacturers
75. SIDBI – Small Industries Development Bank of India
76. SION – Standard Input Output Norms
77. SME – Small and Medium Enterprises
78. SQC – Statistical Quality Control
79. SUB – Supplementary Unemployment Benefit Fund
80. SUV – Sports Utility Vehicle
81. TA – Type Approval
82. TPM – Total Productivity Management
83. TQM – Total Quality Management
84. UNECE - United Nations Economic Commission for Europe
85. USD – US Dollars
86. VAT – Value Added Tax