Chapter No.6
The aim of present chapter is to identify and suggest possible solutions to the automobile industries. The findings of the rankings of all challenges related to manage the supply chain are highlighted below, including specific recommendations to the industries.

6.1 Supply chain challenges

The major findings are derived, specific research contributions are enumerated and the managerial implications of the research findings are discussed. In all, in the present study, the supply chain challenges and system related issues have been identified from the perspective of the four entities of the supply chain, namely, Originally Equipment Manufacturer, Automobile component manufacturers and Automobile related industries including research centres.

It is observed that all challenges mentioned below in the table form are having a mean ranking of above 3, hence all these challenges have been tested as significant. In all these are 38 challenges. They are summarized below in the table 6.1

**Table 6.1: Supply chain challenges with a mean ranking of >3**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Challenge area</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Trust between automobile industries and their supplier</td>
<td>3.34</td>
</tr>
<tr>
<td>2</td>
<td>Delivery of the right quality material</td>
<td>3.25</td>
</tr>
<tr>
<td>3</td>
<td>Availability of on time delivery</td>
<td>3.52</td>
</tr>
<tr>
<td>4</td>
<td>Challenge of Material Availability</td>
<td>3.46</td>
</tr>
<tr>
<td>5</td>
<td>Material Lead Time</td>
<td>3.51</td>
</tr>
<tr>
<td>6</td>
<td>Procurement lead time</td>
<td>3.37</td>
</tr>
<tr>
<td>7</td>
<td>Price /Cost of the Material</td>
<td>3.43</td>
</tr>
<tr>
<td>8</td>
<td>Flexibility in the supply chain</td>
<td>3.48</td>
</tr>
<tr>
<td>9</td>
<td>Financial stability</td>
<td>3.49</td>
</tr>
<tr>
<td>S. No.</td>
<td>Challenge area</td>
<td>Mean</td>
</tr>
<tr>
<td>--------</td>
<td>---------------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>10</td>
<td>Capacity limitation</td>
<td>3.62</td>
</tr>
<tr>
<td>11</td>
<td>Transportation related issues such as congestion, weather conditions, heavy traffic</td>
<td>3.64</td>
</tr>
<tr>
<td>12</td>
<td>Heavy Tolls</td>
<td>3.21</td>
</tr>
<tr>
<td>13</td>
<td>Government rules and regulations</td>
<td>3.24</td>
</tr>
<tr>
<td>14</td>
<td>Taxes and Levis</td>
<td>3.18</td>
</tr>
<tr>
<td>15</td>
<td>Demand forecasting</td>
<td>3.84</td>
</tr>
<tr>
<td>16</td>
<td>Output based on customer forecasts to plan</td>
<td>3.86</td>
</tr>
<tr>
<td>17</td>
<td>Cycle times</td>
<td>3.56</td>
</tr>
<tr>
<td>18</td>
<td>Inventory Levels</td>
<td>3.68</td>
</tr>
<tr>
<td>19</td>
<td>Shortage of key material</td>
<td>3.39</td>
</tr>
<tr>
<td>20</td>
<td>Outdated technology</td>
<td>3.46</td>
</tr>
<tr>
<td>21</td>
<td>Cost of replacing outdated technology</td>
<td>3.56</td>
</tr>
<tr>
<td>22</td>
<td>Integrating technology with suppliers and customers</td>
<td>3.55</td>
</tr>
<tr>
<td>23</td>
<td>Labour problems-availability of skills</td>
<td>3.97</td>
</tr>
<tr>
<td>24</td>
<td>Capacity limitation due to customer order fluctuations</td>
<td>3.89</td>
</tr>
<tr>
<td>25</td>
<td>Capacity limitations due to capital funding</td>
<td>3.33</td>
</tr>
<tr>
<td>26</td>
<td>Cancellation of orders</td>
<td>3.33</td>
</tr>
<tr>
<td>27</td>
<td>Difficulties in meeting quality requirements</td>
<td>3.43</td>
</tr>
<tr>
<td>28</td>
<td>Pressure by OEM to reduce price</td>
<td>3.75</td>
</tr>
<tr>
<td>29</td>
<td>Expectations of customers to comply with new technology are too high</td>
<td>3.75</td>
</tr>
<tr>
<td>30</td>
<td>Use of RFID Technology</td>
<td>3.25</td>
</tr>
<tr>
<td>31</td>
<td>MRP implementation at supplier’s end</td>
<td>3.36</td>
</tr>
<tr>
<td>32</td>
<td>Use of information system tool such as ERP</td>
<td>3.28</td>
</tr>
<tr>
<td>33</td>
<td>Supplier’s ability to JIT purchasing/delivery</td>
<td>3.45</td>
</tr>
<tr>
<td>34</td>
<td>Poor communication between the parties involved in supply chain</td>
<td>3.15</td>
</tr>
<tr>
<td>S No.</td>
<td>Challenge area</td>
<td>Mean</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>35</td>
<td>Suppliers do not have ISO accreditation</td>
<td>3.02</td>
</tr>
<tr>
<td>36</td>
<td>Road delays</td>
<td>3.45</td>
</tr>
<tr>
<td>37</td>
<td>Need for supply chain risk management</td>
<td>3.10</td>
</tr>
<tr>
<td>38</td>
<td>Continuous improvement (5S/KANBAN)</td>
<td>3.26</td>
</tr>
</tbody>
</table>

The above table reflects that the mean of almost all the attributes are greater than 3, which indicates the higher extent hence it is crystal clear that all above mentioned area are the challenges faced by automobile industries in Pune region.

6.2 Findings of the study

1) Trust between automobile industries and their supplier
51 percent respondents said that trust worthiness of suppliers is the problem in managing the supply chain. Modal value for this attribute is highest i.e. 38, hence it is clear that the trust between automobile industries and their suppliers is a significant challenge.

2) Delivery of the right quality material
The researcher found that 39 percent respondents said that they are facing the problem of delivery of right quality material from their suppliers and it affects the regular flow of production directly or indirectly.

3) Availability of on time delivery
It reveals that majority of the respondents, 46 percent are facing the problem of getting the delivery of material in stipulated time from their suppliers which hampers their scheduling. So on time delivery is also a challenge in managing the supply chain

4) Challenge of Material Availability
It is observed that 40 percent respondents said that material availability is a major challenge in managing the supply chain.

5) Material Lead Time

153
The Graph 5.5, on page 100 depicts that lead time is a major challenge in managing the supply chain, in the opinion of 43 percent respondents lead time is too long or too lengthy and it affects the regular flow of production.

6) Price /Cost of the Material
It is observed that 93 out of 95 respondents has rated that price of material is a burning issue in the supply chain. Due to global slowdown of economy, prices of material has rapidly increased and affected on the automobile sector to the large extent. It is found that 49 percent respondent has problem of increasing price of material from their suppliers and as a majority of them has given highest ranking it is concluded that price of material is also a challenge.

7) Flexibility in the supply chain
55 percent respondents are facing this challenge. They said that their suppliers are not able to supply if there is sudden increase or decrease in demand, most of them need advance orders from these industries. Reliability on only one customer or few customers was also observed as a big problem.

8) Financial stability
From the data, it reveals that financial stability of suppliers is a challenge in managing the supply chain. It is observed that 41 percent respondents are suffering due to financial stability of their suppliers. Hence in a nutshell, financial stability of both the partners is important aspect of SCM.

9) Capacity limitation
45 percent respondents said that they are suffering due to capacity limitation at the supplier’s side. Overall it is observed that the capacity limitation is a bottleneck in supply chain.

10) Transportation related issues such as congestion, weather conditions, and heavy traffic
Graph 5.10 on page no. 105 shows that 67 percent respondents opined that transportation related issues such as congestion, road delays, heavy traffic etc. need to tackle efficiently and effectively for smoothening the supply chain. As majority of them are facing the problem, it clearly shows that all transportation related issues affects the effectiveness and efficiency of supply chain.

11) **Heavy Tolls**

It is observed that half of the respondents said that they suffer from heavy tolls imposed on them during the transit.

12) **Government rules and regulations**

50 percent respondents said that they have problem in managing the chain because of changes in government’s rules & regulations and these rules are beyond the control of both the parties involved in the supply chain.

13) **Taxes and Levies**

Researcher found that 94 respondents has problem of Taxes. Every year the tax structure revised by the government for different items affects the business.

14) **Demand forecasting**

It is found that 67 percent respondents have a problem due to rigid market forecasting and changes in demand affects the functioning of business. As majority of the respondents has the problem hence it is concluded that forecasting is a crucial issue in managing the supply chain.

15) **Output based on customer forecasts to plan**

It is observed that 65 percent respondents said that they face this as a challenge because of variations in demand from customers, which resulted in faulty planning.

16) **Cycle Times**
In respect of cycle times, 58 percent respondents said that lengthy cycle times affects the operational process as majority of the respondents said that this issue need to be tackled effectively. This shows that cycle time is a challenge for managing the supply chain.

17) Inventory levels
It is observed that 61 percent respondents said that inventory or stock plays vital role in managing the supply chain, if there is increase in inventory levels, it directly affects the working capital management and if inventory level decreases it affects the regular flow of production. Majority of respondents has given highest rating hence it is concluded that inventory is lifeblood for industries.

18) Shortage of a key material
50 percent respondents have the problem due to shortage of key material in managing the supply chain.

19) Outdated Technology
The Graph 5.19 of page 114 shows that 56 percent respondents said that outdated technology affects the smooth functioning of supply chain and they need to always cope with new technology to satisfy the end users.

20) Cost of replacing outdated technology
In line with the above mentioned attribute it is observed that cost required to replace the outdated technology is very high hence it shows that there is a need to tackle this issue.

21) Integrating technology with suppliers and customers
43 percent respondents said that there must be integration of new technology to meet the customer’s expectation to cope up with advanced and updated technology.

22) Labour problem-availability of skills
During the survey it is found that non-availability of skilled labour force is a critical issue which need to be handled effectively and efficiently to improve supply chain management system.

23) **Capacity limitations due to customer order fluctuations**
It is observed that 65 percent respondents rated this attribute as a major challenge which creates bullwhip effect and there is a need to be handle order fluctuations carefully in managing the demand and supply.

24) **Capacity limitations due to capital funding**
51 percent respondents face problem due to non-availability of capital. Majority of them has given higher rating hence it clarifies that working capital management plays crucial role in the supply chain.

25) **Cancellation of orders**
The business badly affected due to cancellation of orders hence this issue need to tackle for smooth functioning of the business.

26) **Difficulties in meeting quality requirements**
It is also found that quality needs to be monitored at every stage of manufacturing beginning from purchasing till the distribution of the product to the customers as 46 percent respondents has given highest rating to this attribute.

27) **Pressure by Original equipment manufacturers to reduce prices**
61 percent respondents face severe problem due to pressure by Original equipment manufacturers to reduce prices of the components hence this is a challenge for automobile supply chain.

28) **Expectations of customers to comply with new technology are too high**
It is found that, 44 percent respondents said that meeting customers requirement is really a difficult task in terms of quality and cost and they presume this attribute as a challenge
29) **Use of RFID technology**

Data depicts that the suppliers of 46 percent respondents do not use RFID technology which is very essential for automobile industries as many components are required for assembly line.

30) **MRP implementation at Supplier’s end**

51 percent respondents said that MRP implementation is not done effectively at their supplier’s plant. If proper attention is not paid then this is a major challenge faced by automobile industries to the large extent.

31) **Use of Information System Tool such as ERP -**

47 percent respondents said that their suppliers are not implementing the ERP system. In order to compete in the global market it is the need of hour to implement ERP//SAP.

32) **Supplier’s Ability to JIT Purchasing/Delivery**

As observed, 55 percent respondents said that JIT technique is not applied in most of the industries for several reasons such as rework, eliminate waste, surprisingly people are reluctant to adopt this technique in their organization because of initial cost of implementation and rigorous training involved in its implementation.

33) **Poor communication between the parties involved in the supply chain**-

Graph 5.32 of page 127 depicts that, 48 percent respondents opined that poor communication is a major hurdle in managing the supply chain and there is a need for improvement in the same for sustainable competitive advantage.

34) **Suppliers do not have ISO accreditation**-

It is found that suppliers of 43 percent respondents don’t have ISO accreditation. ISO/TS 16949:2009 is generally required for automobile suppliers to maintain integrity and build quality of the end product.
35) Road delays
59 percent respondents said that their supply get disturbed due to in transit delays, and increased waiting time. This delay can be occurring because of congestion or problem in Prohibition of downtown circulation and there is a need to reduce the same downtown circulation.

36) Whether there is need for Supply Chain Risk Management
47 percent respondents opined that troubleshooting of the complaints is not done from supplier’s end and there is a need for supply chain risk management for best quality and efficiency.

37) Continuous Improvement (5S/ KANBAN implementation)
As KANBAN is one effective tool for Keeping eye on inventory levels, it is suggested that organization should focus on this system as well as 5 S for reduction of waste.

Strategic planning
48% industries believe that they need to improve their strategic planning concerning SCM. Only one fourth of these companies seem to be satisfied with their strategic planning while 15% claim that they have just started to implement some sort of strategic planning for SCM. An interesting finding is the fact that 10% stated that they find strategic planning not appropriate. This study also found that the majority of industries do not have a clear logistics plan, and 67 of them, do not have a separate logistics department.

Supplier and customer relationships in managing the supply chain
In respect of suppliers, 49 companies (52%) deem their partnerships as satisfactory, while 36 companies (38%) believe that this partnership needs improvement. None of them concerned about determining optimal number of suppliers although they are not totally satisfied with their performance. In respect of customers the situation is nearly
reversed. Only 34 companies (36%) are satisfied with their partnerships with their customers while 46 companies (48%) state that it needs improvement.

A staggering 15% of the companies characterise partnerships with customers as not appropriate while for suppliers the number is considerably less (9%).

An integral element of SCM is close collaboration between partners throughout the length of the supply and demand chains, aiming to streamline the process and deliver higher value to final consumers by minimising cost and time wastage.

The researcher has observed that backward relationships (with suppliers) have been more valued in the supply chain instead of forward relationship (with customers). Companies are focusing on production and improving relations with their suppliers.

This attitude of companies can again be attributed to social and economic factors in the region.

The overwhelming majority of the companies ($n=83.87\%$) consider third party logistics (3PL) partners as not appropriate, with just two companies (4%) being satisfied with 3PL companies, and four companies (8%) having started implementing such collaborations recently.

**Role of Information systems in managing the supply chain**

The researcher has observed that the role of information system is very essential and crucial for the effective supply chain. Warehouse Management System (WMS), Material Requirement Planning (MRP) and Bar Coding are the most popular IT solutions. On the other extreme, the use of theory of constraints (TOC) and Radio Frequency Identification (RFID) are still in their infancy in these industries. Concerning future implementation, Customer Relationship Management (CRM) proves to be the most desired IT solution, followed by e-Commerce and e-Business applications. This result is in accordance with previous findings on supply and demand chain partnerships. Almost half of the companies stated that they seek to improve their relations with customers.
It is no surprise that one of the most appropriate IT solutions which enables forward relations, namely CRM, is at the top of the list. In the same direction, the popularity of e-Commerce and e-Business applications for future implementation suggests that the strategic direction in the region is shifting from production orientation to market orientation.

**Findings from Volks Wagen Case**

**Lack of local supplier base**
Deficiencies in the local supplier base were identified. These deficiencies relate to the Suppliers' lack of technology, global supply capability and cost competitiveness. This results in additional costs which could be prevented if more parts could be procured locally.

**Interconnectivity with regards to MRPs**
VolksWagen is currently implementing ASN Process for better supply chain management and it wants to have all its suppliers (ACMs) meet the requirement of implementing the process through web EDI portal. For implementing the process it is found that
1. More time is required for IBD at buyer’s end
2. Improper allocation of material in the warehouse and in the assembly line
3. Double bar coding system increases repetitive paper work
4. There exists communication gap between desponent of logistics department and suppliers

**Supplier capacity**
A further challenge identified is the tendency of many suppliers to over commit themselves in terms of what they can deliver.

**Possible improvements in the supply chain**
During the interviews, the researcher noted that there is scope and opportunity for significant improvement in all parts of the supply chain. The OEMs identified certain key areas, namely the “pull” philosophy and line balancing.
Pull philosophy
VolksWagen works on a pull system which requires parts to be pulled into and through the production process in line with the requirement of each section or process. The challenge is how to shorten this pull chain. Many of suppliers do not understand the pull system and tend to follow push methodologies through their processes.

During the discussion, the researcher has observed specific supply chain areas such as supplier relationships, supply chain flows, and external factors are critical components in managing the supply chain.

Supplier relationships -
VolksWagen procure core components from various suppliers, both locally and internationally. They have a database of approximately 85 to 120 local suppliers and also procure parts from international suppliers, but do not deal with these suppliers directly.

Supplier assessment criteria
VolksWagen suppliers are assessed using the standard key performance indicators (KPIs). These are cost, quality, delivery and environmental issues. The key driver for the use of a supplier is competitiveness or cost. As per their policy cost competitiveness is non-negotiable, it can work on improving the issues of quality and delivery with a supplier. The fourth dimension of environmental issues has become a major issue. Under this KPI, no "substances of concern" are allowed in any of VolksWagen's parts and supplies and supplier ISO14001 compliance is therefore vital. The challenge is that in order to be a supplier to Volks Wagen India(P) Ltd., one has to have the Quality/ISO14001 accreditation. For Volks Wagen India(P) Ltd. the sustainability of a supplier is also important. It is noted that a decision to purchase components from a local supplier is a challenge because in many cases, industries equipment and technology are old. This equipment and technology cannot be replaced easily because of more capital involved.
Supplier development
VolksWagenIndia(P) Ltd. does not merely purchase parts from suppliers, but in fact develops the suppliers’ capabilities. For this purpose, Web EDI is an Electronic data Interface system, which is mainly used for creating ASN (Advance Shipment Note) at the supplier’s end.

Type of supplier relationships
Supplier relationships with service providers were described as “collaborative/partnership” relationships.

6.3 Recommendations
1. Role of trust in supplier relationship-
   It is argued that building partnership trust is at the heart of managing risk and a prerequisite in supply chain. Lack of trust is one of the major factors that contribute to supply chain risks. It is recommended that automobile industries must build the trust worthy relationship for the sustainable development and growth.

2. Delivery of the right quality material-
   As material is a lifeblood for organization, it is recommended that the parties involved in the business must focus on delivery of right quality material.

3. Availability of on time delivery
   The importance of raw materials is obvious to those stakeholders that operate upstream extracting, refining, and processing material into products. Materials are not simply a bundle of characteristics that translate into product performance. Instead, on the operational side, materials establish a class of appropriate production technologies and, by extension, possible product forms and architecture. By addressing this issue in the research, the researcher has found that availability of on time delivery is a challenge with mean 3.43, To overcome this challenge the researcher has recommended following 4 points-
• Outcomes-Company should observe types of changes in supply chains as a result of limited materials availability.

• Mechanisms- To understand the cause supply chains to face limited raw materials availability.

• Metrics-To check in what way supply chain decision-makers screen for materials availability vulnerability?

• Strategies-To adopt supply chains strategy to become more resilient to potential limited materials availability.

4. Pressure by OEM to reduce price

The most significant challenge faced by automobile industries, is the pressure by OEM to reduce the price. This pressure clearly indicates that the problem of power in supply chains. The more powerful party expects the weaker party to contribute more to the relationship. It is thus recommended that close working relationship between all stakeholder’s need to be developed on mutual trust and negotiations. This can also help in forecasting of future needs of all of them.

5. Price of materials

A key area for cutting cost is the cost of materials, which is a challenge faced by majority of industries. Hence it is recommended that procurement department of these originations focus on opportunities to negotiate prices. In this regard, it is suggested that buyers be trained to improve their negotiation skills and to focus their skills on investigating and estimating costs more accurately. This will help them to ensure that the buyer is equipped to obtain the best possible prices to its employer.

Each buyer should devise creative improvement plan, with new designs, critical review regarding the packaging and transportation cost must be done along with identification of potential ways to reduce the inventory level.
6. Cancellation of orders

The another significant challenge is that the cancellation of orders with mean 3.125 which has resulted in the holding of excessive inventory. To overcome this issue, it is recommended that industries reduce the selling price of their excessive stock to their original equipment customers, and in some instances, the aftermarket, in order to generate cash flow. These industries could offer stock clearance specials to eliminate the accumulation of slow-moving stock.

A significant problem from the perspective of balancing supply and demand is the issue of output based on customer forecasts to plan. It is also recommended that communications be improved between all parties in order to encourage the latter to agree to the process of reviewing and altering their forecasts on a shorter interval basis in line with fluctuating sales demand. This change would mean that once the industries have their three-month forward forecasts from the OEMs, they stay close to their customers to obtain monthly updates based on actual, real-time demand. This would help them to adjust the inflow of materials and parts and ultimately prevent an accumulation of inventories of raw materials and finished goods. In addition, monthly reviews, for example, would improve forecasting models and refine the information gathering process. Further, stock levels need to be closely examined and continuously reviewed.

7. Financial stability of suppliers

The financial stability of a supplier (ACM) is vital to an OEM as well as for the future sustainability of this supplier. The insolvency of a supplier clearly impacts on the production of motor vehicles till an alternate supplier is found. In turn, the financial stability of a supplier is important to the ACM because the insolvency of a supplier has an impact on the supply of materials.

8. Material lead times and procurement lead time

When lead times are too long, one way to ensure a continued supply to customers is to increase stock levels. However, holding excessive stock may result in the additional cost of holding stock and the stock becoming obsolete. It is recommended
that Automobile industries should work with their suppliers to reduce lead times. Two factors need to be considered when analysing lead times: (1) the time it takes to manufacture the item; and (2) the time it takes to transport the item from supplier to these industries. It is also recommended that automobile industries could also proactively analyse final customer demand patterns to match their supplier’s production levels with the ultimate customer or OEM’s demand. ACMs could also review their order systems to ensure that they are efficient and that their requirements are being reordered at the most appropriate time.

A real-time information system such as Collaborative Resource Planning (CRP) between industries, their customers and their suppliers would alleviate both lead time and inventory problems.

9. High cost of replacing outdated technology

The automobile industries indicated that the cost of replacing outdated technology is a significant issue and is a outcome of capacity limitations. In both of these issues, the limitation for the automobile industries is the cost of financing for plant and machinery. The problem of outdated technology was also identified during interviews with OEMs’ participants, where it was indicated that supplier’s deficiencies lay in their lack of technological advancement, their inability to achieve global supply capability and their poor cost effectiveness.

In order to assist these industries to replace their outdated technology and equipment, it is recommended that government should provide assistance in the form of loan at low rate of interest. This would help them to be more effective, improve the supply to the local market and perhaps even help to obtain additional sales volumes in other countries, on the basis of being more cost competitive, that is, greater volume allowing for reduced prices because these industries fixed overhead is spread over a larger production volumes. By doing this, industries have a competitive advantage from a flexibility perspective as their operations are more labour intensive than capital intensive (automated). They will therefore able to produce lower or higher volumes compared to other countries where production is oriented towards long, fixed, automated, high production runs.
10. Labour problems – availability of skill
Automobile industries require high quality technical skill, which is also a challenge in managing the supply chain. However, ironically there is a lack of certain specialist skills with some industries which are struggling to source the right skills. In the automotive component industry, the scarce skills include tool making, fitting and turning and welding.

It is recommended that further research be undertaken to investigate at operational level, whether these industries have increased their focus on training and developing their employees.

11. Capacity limitations due to order fluctuations
It was found that capacity limitations due to order fluctuations were a problem faced by automobile industries. It is recommended that automobile industries should improve and enhance their demand management systems to make them more effective. In such situation, demand management can be used to estimate, control, smooth and coordinate and balance the demand and supply of a business' products and services. As such, industries could also analyse customer demand characteristics such as their different order patterns. Demand forecasting involves establishing the number of components customers will require at a future time, and this involves the marketing, manufacturing, purchasing and logistics departments. Improved systems and controls and thus better communication regarding future demand would lead to better planning and help these industries to be better prepared to plan and meet increased capacity demands.

As recommended previously, improved relationships with suppliers and customers and integrated systems and inventory visibility would also greatly improve information the flow between the parties.

It is recommended by the researcher that the automobile industries in Pune region must use information technology system including ERP, SAP, RFID for better supply chain performance and efficiency.
12. Supplier and customer relationships in managing the supply chain

To this end, a close working relationship between suppliers and customers is imperative. However, companies in Pune region demonstrate a stronger focus on dealing with suppliers than with customers.

After the in depth interview with personnel of Volks Wagen India(P) Ltd , it is recommended that the company must provide training to their local suppliers for effective implementation of Web EDI system, which has various advantages such as

1. It speeds up the transfer of business documents.
2. It eliminates paperwork.
3. It reduces administrative phone calls with customers.
4. It reduces manual data entry errors.
5. Potential errors are captured faster.
6. It allows different computer systems to share data regardless of operating systems.
7. It reduces document processing time.
8. It provides accurate data for customer service.
9. It increases the chance of Preferred Vendor Status
10. Extensive data edits insure that data sent to trading partners meets their requirements

In nutshell the researcher has made various recommendations based on in depth interview with Volkswagen India (P) Ltd.