Improving Distribution Process & Cost Efficiency through GPS-based Vehicle Tracking Solution for a FMCG Major

SITUATION
The customer and its Wholesale Distributors (WD’s) lacked the support infrastructure needed to monitor the movement of vehicles used for distribution of goods to the retail outlets. This made them susceptible to under-utilization and for non-official purposes, thereby hindering productive market coverage.

IMPACT
Lack of clarity in time taken for transportation, actual distance covered by vehicles, and whether the vehicles adhered to the planned route, was making the management of distribution network challenging. Lapses in critical process activities were causing needless expenditure to the customer.

RESOLUTION
ITC Infotech implemented a GPS-based vehicle tracking solution, which improved goods distribution through efficient and productive time utilization, thus yielding significant cost savings for WD’s. The solution also improved efficiency of the distribution network with better traceability of the goods. The GPS derived odometer units were considered as the realistic distance travelled for payment purposes.
The customer wanted to explore options of modern-day satellite-driven vehicle tracking systems to resolve these issues. After exploring for the right IT partner with skill set and experience, the customer chose ITC Infotech’s Business Innovation Center of Business Consulting Group for an effective real time solution.

The Solution

The team of consultants at the Business Innovation Center interacted with the customer to understand the requirements at the operational level (at the WD level). The detailed list of requirements included real time visibility of the vehicle in transit, real time reporting in case of deviation from planned route, live information on time spent at a specific location, actual running time of the vehicle, and documentation of vehicle data.

After analyzing the business requirements, the BCG - BIC consulting team proposed the deployment of the Global Positioning System (GPS) - based VTS application to track the vehicle movement. The solution has three primary components, GPS device, VTS application, and satellite communication capability.

The GPS device installed on each WDs van interacts with the VTS application through the GSM/GPRS communication. At any given time, the business user can track the vehicles through Google Maps business edition application (part of the solution). Further, the business user can completely replay and view the routes and markets that the vehicle has travelled in a given day.
Following the successful pilot implementation of the solution, a larger distribution area was chosen and the customer agreed to deploy Phase I of the solution for the entire Western Region deploying the GPS based solution on 180 vehicles. ITC Infotech procured hardware from approved partners, and was also the first point of contact for query resolution. ITC Infotech’s team of experts also conducted training on usage/benefit of the software solution for the customer’s field staff and WD team in phase 1.

As part of Phase II implementation, ITC Infotech extended the scope of the solution to extracting market insights, like identifying top markets on each vehicle route. This helped uncover details like time spent in each market by the vehicle (a measure of the quality of coverage) and any occurrence of route deviation from the planned route.

The VTS Solution helped the customer and its WD’s to track several business critical metrics on real-time basis. The tracking metrics covered by the solution included, start and end time of the van, distance travelled, vehicle movement history, and live track to check the actual position at any given time. With improved van utilization rates, and significant cost savings, the customer has decided to roll out the solution for Pan-India network.

**Business Benefits**

- Improvement in vehicle Utilization Rate (Actual working days versus Ideal working days) from 72.6% to 82.8% during the nine month observation period post rollout
- Better discipline among vehicle operators, resulting in improved vehicle start time. Average start time improved from 10:55 AM to 9:55 AM

**Key Highlights:**

- Ability to view status of all fleet on dashboard
- Provide intelligent decision-making support
- Customized access to online application
- Real-time tracking alerts
- Monitoring of vehicle movement and reporting in both map and text format
- Ability to view the historical data associated with the vehicle

The application also allows better utilization of field force with monitoring of vehicles remotely in the field. To test the cost transparency of the solution, the team of experts also carried out a pilot implementation with two WDs located in Konkan region, Western India.

The pilot implementation at the two WD points yielded promising results as discrepancy in data reported and data calculated by the solution was greater than 30 percent. This allowed re-calculation of per km cost, leading to cost savings that encouraged the customer to deploy solution in all the 49 vehicles of its Konkan branch.

**Table 1 (Pilot Implementation: Results)**

<table>
<thead>
<tr>
<th>Total Distance Travelled</th>
<th>Total Distance Claimed</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per Km Cost</td>
<td>@Rs 6.5</td>
<td>@Rs 4.5</td>
</tr>
<tr>
<td>Total</td>
<td>18590</td>
<td>21447</td>
</tr>
</tbody>
</table>

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ITC Infotech’s Business Consulting Practice

The Business Consulting Group (BCG) at ITC Infotech is a converging point for business & IT Solutions. We aim to transform business performance, bringing a strategic perspective on process improvement and IT enablement. Our team blends domain experts and consultants, bringing unique capabilities to discover and resolve business concerns of the day.

Our expertise spans Consumer Goods, Retail, Process Industry, Logistics & Transportation, across key business functions such as product development, production, supply chain management, sales and Marketing management, field force management, and customer relationship management.

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