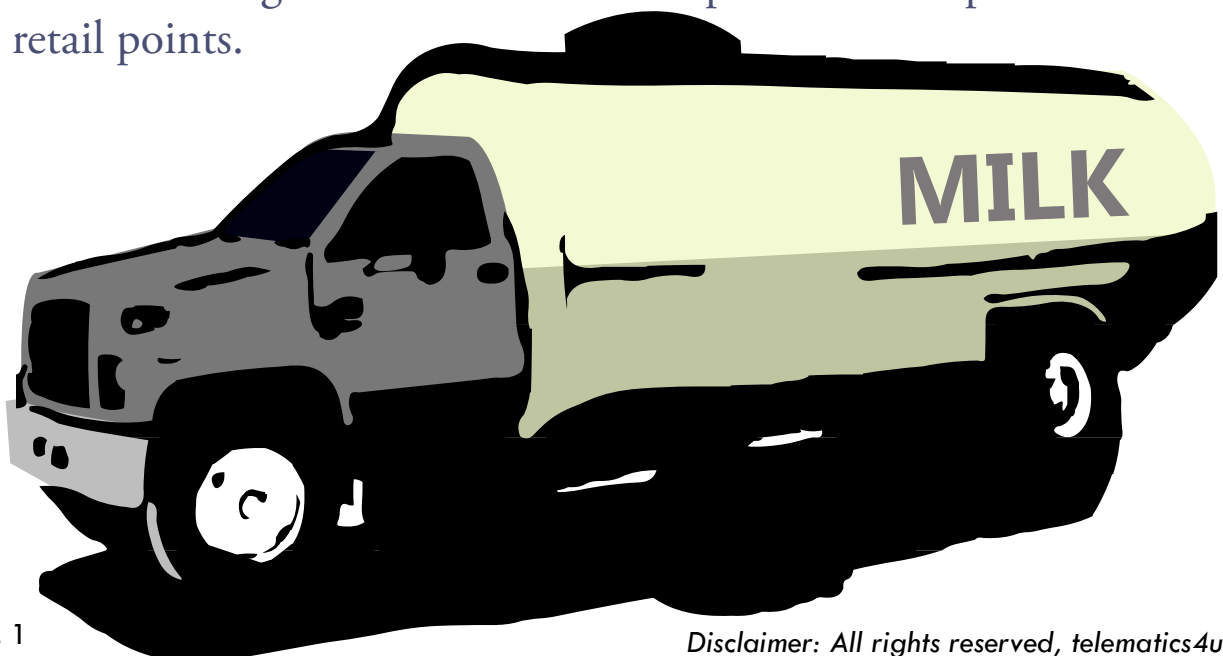


## Key Features

- Optimised Vehicle routes
- Real-time monitoring of the milk temperature in tankers; thus reducing wastage
- Real-time monitoring of procurements and distribution
- Easier administration and billing
- Controlling deviant behaviour.

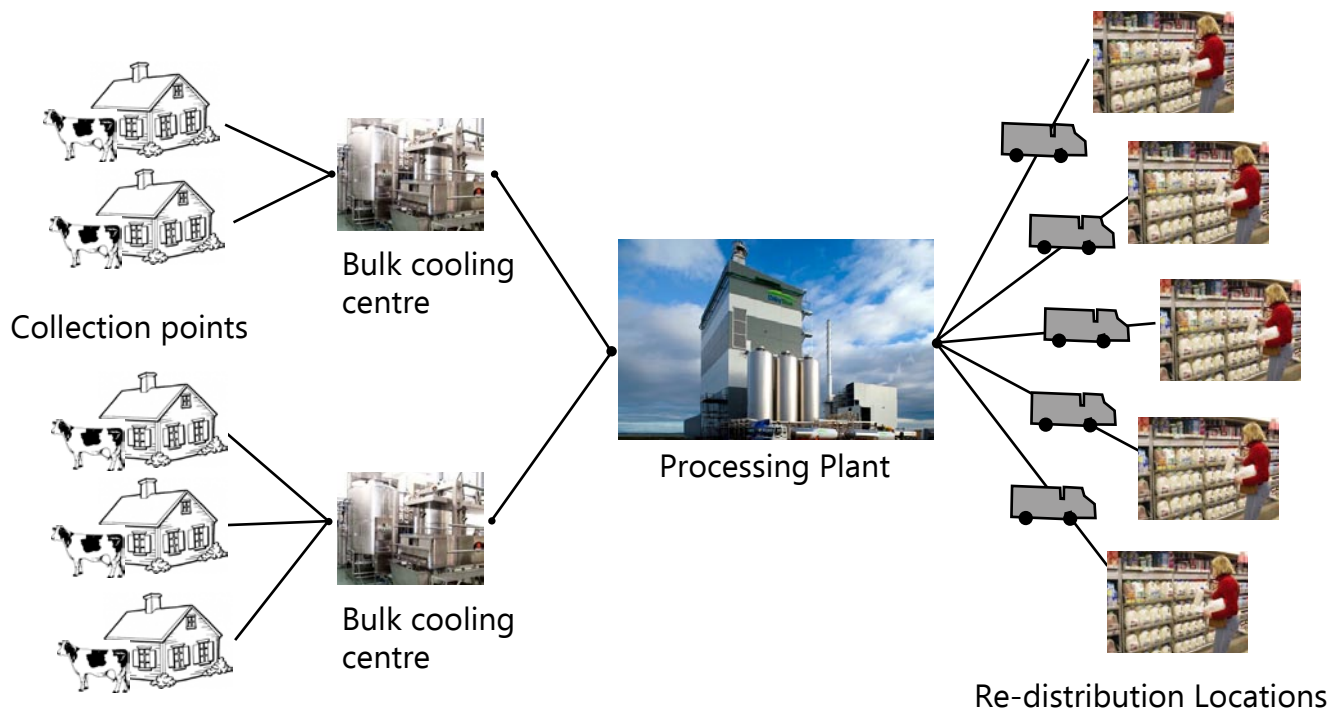
## “ Executive summary

Procuring milk from far flung areas and delivering processed milk products to consumers spread over large distances is the reality faced by dairy companies all over the world today. In this context, Dairy Logistics plays a crucial role in delivering quality milk products over large distances by increasing the distribution outreach of dairy companies while keeping their operational costs under control. Efficient implementation of Dairy logistics can help dairy companies better utilise their procurement and distribution infrastructure; while enabling them to increase the uptake of milk products at the retail points.



### Challenges faced by the Dairy Logistics Industry today.

The challenges of Dairy Logistics are invariably tied with milk procurement and distribution; both to be done efficiently and at the lowest possible cost. The following are the main challenges faced by the Dairy Logistics Industry today.



#### • Optimum utilisation of procurement and distribution infrastructure-

Dairy companies all over the world invest heavily in setting up milk procurement, processing and distribution assets in their quest for on-time delivery of quality milk products. However due to various deficiencies in internal and external operations, these assets remain underutilised. Inefficient route plans for milk collection and delivery, results in either idle time or extra trips for the Puff Insulated Vehicles (PIV's) used in the transport of milk products. The inefficiencies in the supply chain also force processing plants to remain under-utilised for want of steady supply of milk.

- **Maintaining quality of milk during its transportation-**

Dairy companies most often have to procure milk from dairy farmers in far flung areas. After procurement, milk is transported to cooling centres or processing plants as the case may be. The processed milk and milk products there after again needs to be transported over large distances to retail points for human consumption. While the Puff Insulated vehicles (PIV's) helps in maintaining the quality of milk during its transport; often the fluctuations in the storage temperature can spoil the milk being carried inside. Milk turning stale from these temperature fluctuations, is both an inventory loss and a prospective sales loss for the dairy companies. Stale milk reaching the shelves at the retail point can also cause irreparable damage to the brand image of the dairy company.

- **On Time Delivery of milk over large distances-**

The bulk of milk consumption in most societies around the world happens in the morning hours. Ensuring near simultaneous delivery of milk in the morning hours over large distances is a challenge every dairy company contends with everyday. Timely delivery is significant, as recurrent delays can induce retailers to stop stocking the product, while consumers may shift their loyalty to a competing brand.

- **Real time data for operational decisions-**

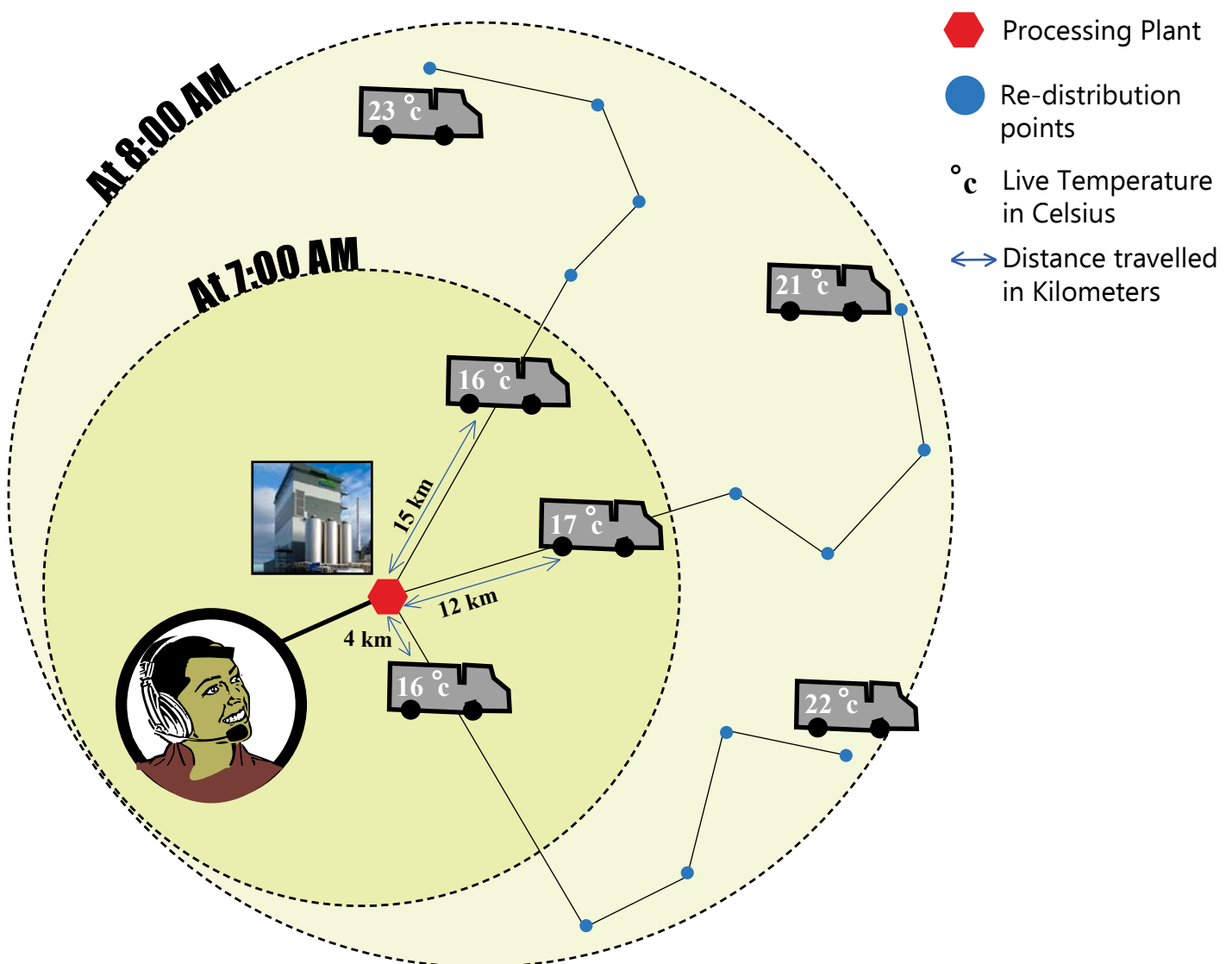
One of the main reasons for inefficient management of resources in the Dairy logistics industry is the lack of real time data about the milk procurement and distribution operations. The policies that are implemented in the absence of real time data results in inefficiencies in the supply chain, which invariably accentuates as the company's operation grows in scale.

- **Controlling Deviant Behaviour-**

The dairy companies often have to contend with deviant behaviour of its personnel which results in distribution delays, operational losses and dents the brand image of the organization. Instances of deviant behaviour of its personnel include over-speeding, route diversions and the pilferage of milk during its delivery.

## How can Telematics4U dairy logistics solution help your business?

Telematics4U provides logistics and supply chain solutions to over 1000 companies in 50+ countries. Presently Telematics4U has implemented its Dairy Logistics solutions in many dairy companies in India and abroad. The Telematics4U Dairy Logistics Solution provides the following immediate benefits upon implementation.



- **Optimised Vehicle routes:**

Telematics4U using its proprietary transport algorithms can optimise the milk procurement and distribution routes of your company. The implementation of optimised routes and stop-pages can reduce the daily average distance and travel times of your Puff Insulated vehicles (PIV's) by 8% and 10% respectively.

- **Real-time monitoring of the milk temperature in tankers; thus reducing wastage:**

The Telematics4U logistics solution also makes it easy to monitor the temperature inside the milk carrying vehicles, during its movements between cooling centres, processing plants and retail points. Making the necessary adjustments in the temperature inside the vehicle, as and when required; the Telematics4U system can reduce the average weekly wastage of milk by 10-15%.

- **Real-time monitoring of procurements and distribution:**

The Telematics4U Dairy Logistics solution helps managers at dairy companies keep a constant track on the milk deliveries between dairy farmers, cooling centres, processing plants and retail shops in real time. By accessing this data on their computers, they are able to take operational decisions to mitigate the risks/ delays to the supply chain by deploying more vehicles and changing the route plans as and when required.

- **Easier administration and billing:**

The regular MIS reports about trip details, routes, collections and the milk distribution generated by Telematics4U; can also simplify the Billing and Accounts operations of dairy companies.

- **Controlling deviant behaviour:**

Regular data-mining by Telematics4U can also help dairy companies control the deviant behaviour of its drivers including over-speeding, route diversions and the pilferage of milk during its delivery. The distribution reports generated by the system also help companies track and resolve erratic retailer behaviour on payments and stock returns.

### How does it work?

The implementation of Telematics4U logistics solution is carried out over two stages.

- **Hardware and Software Installation**
- **Generation of MIS Modules and Alerts**



Temperature Monitoring Unit



GPS Monitoring Unit

### Hardware and Software Installation

To gain real-time data about the milk procurement and distribution operations, the Puff Insulated Vehicles (PIV's) are fitted with two miniature equipments, i.e. a GPS device and a temperature monitor. These devices are then linked to the Telematics4U servers through GPRS. Once activated, the system through web access allows the managers at dairy companies to track their vehicle movements in real-time, while keeping a constant check on the temperature of milk carried inside



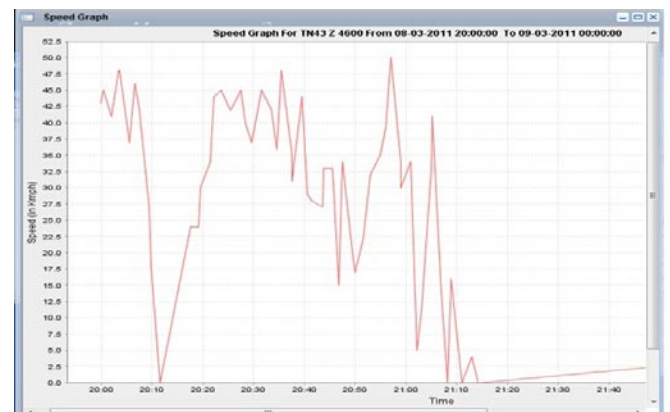
## MIS Modules and Alerts

By analysing the real-time data generated from the GPS devices, along with proprietary transport algorithms, Telematics4U can optimize the milk collection and distribution routes for the dairy company. Formulation of these optimal routes and stoppages are a significant milestone as they can considerably reduce the delivery delays experienced in the overall operations.

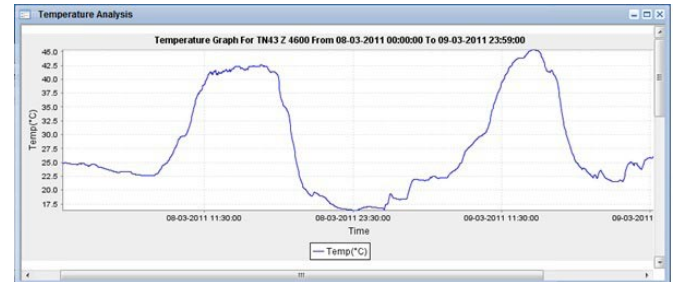
The Telematics4U Dairy Logistics solution also generates a series of MIS modules that greatly enhance the decision making power of the managers; both at the operational and top management level. This MIS, based on real-time GPS and temperature data from the milk carrying vehicles; helps managers attack the various operational problems head on. The following MIS modules and timely alerts are provided by Telematics4U to dairy companies regarding their operations.

## MIS Modules

- **Distance Reports:** The Telematics4U system, on an ongoing basis, displays the total distance travelled by the vehicles, even for specific routes and time durations; helping managers devise efficient supply routes.
- **Speed Report:** This graph generated by the Telematics4U system helps analyse the pattern of vehicle's speed for any given period of time; allowing managers to curtail instances of over-speeding.
- **Stoppage Report:** This report displays the locations and stoppage time of vehicles; helping managers' track abnormal stops and delays.
- **History Analysis:** This facility allows the re-play of the historical data for any given period; enabling the user to re-run the movement of vehicles on a digital map. By tracing the route of the vehicle travelled, all the exceptions that occurred during the procurement and distribution process can be easily analysed.



- **Temperature Analysis:** Telematics4U system also helps managers at dairy companies track the temperatures inside the milk carrying vehicles; while on their move between cooling centres, processing plants and retail shops. In the event of temperature going above or below the prescribed limits; automatic alerts are sent to the control centre through SMS and Email.



- **Delivery Time/ Distance Deviation Reports:** In this MIS module, whenever the vehicles leave the processing plant, a trip tracker is activated, keeping a track on all the distribution points. Based on the scheduled and actual time of arrival; the Telematics4U system provides a location wise distance and time deviation report for each trip, helping the manager take operational decisions to mitigate delays in the supply chain.

## Alerts

- **Speed Violation:** The managers at the dairy companies are provided with options for setting speed limit for vehicles and notifications are sent through SMS or Email whenever the vehicle crosses the specified speed limit.
- **Emergency / Panic Alert:** During unforeseen incidents where the driver requires management guidance, he can press the red button in the GPS device which sends an alert to the control centre for immediate call back.
- **Stop Violation:** This facility provides details of deviations as and when they occur, intimating the control centre during predefined time periods (30mins, 1hr etc).
- **Hub Arrival & Departure:** This alert intimates the arrival and departure of the vehicles at each of the distribution locations defined by the manager.
- **Route Deviation Alert:** This facility provides the details of the location of route deviation, along with the date and time data, as and when the vehicle deviates from the prescribed route.
- **Main Battery Disconnection Alert:** This facility provides the location, date and time data during power disconnection to the milk cooling unit. This allows the control centre to monitor instances of milk pilferage and tampering of the GPS device mounted on the vehicles.



## Conclusion

The Telematics4U Dairy Logistics Solution can help Dairy Companies better utilize their procurement and distribution infrastructure by removing inefficiencies in their supply chain. The various MIS modules, real time data and alerts generated by the Telematics4U Solution; greatly enhance the decision making powers of the managers at the top management and operational levels. This logistics solution by helping prompt delivery of milk to the retailers during the early morning hours; helps increase the uptake of milk at the retail points. Meanwhile the constant monitoring of milk and the maintenance of optimal temperature in the vehicles during its journey; also reduces the quantum of milk wastage. As the implementation costs are mostly recouped in the form of savings in the first 3 months of operation; Telematics4U's Dairy Logistics Solution, is only a prudent economic decision for dairy companies looking to streamline their supply chain.

## Telematics4u – Leading the way

telematics4u is one of the largest providers of technology enabled solutions & services to the Road transportation sector in the world with presence and customers across 50+ countries. t4u has a range of Business Solutions and services for Transport operations which are ready to deploy. t4u operates through a network of Local telematics Services providers .

With a huge experience across diverse domains and innovative approach towards specific solutions has created a new waves in the field of telematics. No matter what your company's size and requirements, t4u has the right solution for you. Also, t4u's innovative Pay-as-you-use model can add up greater ROI and reduce deployment cycles.

Telematics4u is involved in various domains. Few of them are:

**Taxi | Cold Chain Logistics | Long Haul Logistics | Retail Logistics | School Bus |  
Oil and Gas | Milk Distribution | Movers and Packers |  
| Mining | People Transportation |**

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