



# Amul Logisitic App

A technology to keep track of the  
milk supply chain.

**Case Study** : PromptDairyTech improve  
dairy logistic & supply chain with an IoT

## Executive summary

Prompt equipments has been serving people for the last 41 years, and it wishes to carry this service as a legacy for coming years. The prompt equipments entered in the dairy industry when AMUL sought help for removing the covered malpractices and adulteration in the dairy supply chain. The prompt peeped into the challenges faced by the dairy company and resolved the problem by developing an AMUL logistics app. The primary goal behind the development of this app was to provide surveillance power to Amul staff for tracking the data of transportation, milk collection and distance travelled This case study covers an overview of the AMUL

logistic app, challenges faced, how the solution solved the problems and its outcome.

Amul Logistic app offers:

- The Paperless Process that introduced digital working ambience.
- It enhanced Data longevity by storing it on the cloud for anytime access
- It saved many expenses which were involved in transportation, paperwork and milk collection.

## About Amul Logistic App:

Amul Logistic App is an Android-based app developed to assist Milk Union for monitoring milk collection data and milk quality at union and society level. The primary ambition behind the development of this IoT based application was to provide a grip over the management of the dairy supply chain. The app digitizes the monitoring of truck sheets, track transporters' real-time, automate data recording, produce dynamic reports, manage truck allocations, store pictures along with data and control data discrepancies. It also supports offline mode to add truck sheet data at society level including GPS positioning and images. It provides full surveillance on the truck drivers and milk collection to impede malpractices and adulteration. The logistic app has

digitalized the milk supply chain management format and provided a paperless process by securing all the necessary data over the cloud. It turned it as cost saving as it restricted malfunctioning executed at various level. It felicitates the collection from BMC and Cans both. It provides a dynamic report in a different format with an export option. The app has enhanced milk quality. The application is accessible in both online and offline mode. The application even highlights the ongoing malfunctioning through colour code alerts in data. It also regulates tanker management irrespective of the number of plants.

## Challenges lodged:

- The first and the foremost problem which appeared as the main lead of all the others was the route plan. The drivers hired were observed for adopting the long route which has not only increased the fuel consumption but also degraded the quality of milk.

So the first step to be taken was to control transportation cost and format a DCS-wise route plan.

- The second problem was the surveillance over the trucks which were allocated for the collection of milk. Beside the path, the acknowledgement format was entirely paper-based, most of the data were inorganic and adulterated. It was tough to keep the records of the drivers and related workers for future purposes. The payment criteria were also affected due to wrong information provided. So it has become indispensable to digitize the whole data system and store it on the cloud for any time access.

- The third issue discovered was about the quality of the milk received at AMUL for production purposes. The Milk collected at the AMUL was of low grade. The reason behind it was the high temperature of Bulk Milk Cooler. The Dairy Company has asked the Village Dairy Cooperative Society to maintain the temperature of BMC at 4-degree Celsius to increase the shelf life of the milk, but it was not followed by the society which caused low milk quality and sometimes even spoilage of it. The addition of water also appeared in the scene. Whenever asked, the answer was not accurate which created lots of plight and doubts.
- The last problem was cleanliness update. It was not an easy task to keep a check over the cleanliness of the tanker. It was assumed that the use of a dirty tank could contribute to the spoilage of milk. The extra consumption of money was also reported for balancing the milk content by removing excess water.

## How did the AMUL Logistic app fix the Problems?

The prompt equipment introduced a new way to improve the milk supply chain and modified the existing system by embracing it with digitalization.

- The IoT based software made the whole management system as paperless. The prompt equipment made a web portal and Mobile app. The web portal is to be administered by the Admin, and the mobile app is to be used by Conductors. The new digital system provided full data security and accessibility to Real-Time data availability along with tracking.
- The AMUL Logistic App can schedule the route plan automatically as per the Union rule and policies. The Shift wise route planning assures that no bus or conductor repeats the same path and VDS.
- The next thing to be focused on was the measurement of the distance travelled. The Amul logistic app provides the image capture option of speedometer without any gallery option. This reflects that one has to click the photo of the odometer before starting the journey and after completion as well. The app doesn't hold any gallery photo upload option to restrict any kind of wrong practices.
- The Amul Logistic web portal generates the report in the SAP format and even data comparison facility. The portal enables the data comparison between the VDCS Collection and tanker Collection.
- Well, if any changes are observed in the data compared to the general expected data, the system highlights it with different colour. The dairy company can even customize the colour for different alerts.
- Time calculation has become easy, as the app provides a section in which the VDCS staff have to sign on the app approving that the data filled is accurate. The app notes down the entry time and estimates the total time to be taken to complete the milk collection cycle.
- The app even asks the staff to click the image of the BMC tank to ensure the cleanliness and also pictures of temperature at which milk has been sustaining.
- The logistic app even assisted the staff for managing the tank capacity and its usage as per the requirement to avoid any loss caused by it.
- It provided the facility to trace the path followed and luxury to collect milk for BMC and CANS both.
- The app also grants **Dipstick** Chart Option and can work in both online and offline mode. The Positive Upshot

The Amul Logistic app was initially part of 50 VDCS, but after its positive result, the company introduced it to 1700 DCS and utilised it to track 300 truck.

The App provided detailed information and updated data to calculate the time travelled which disclosed all the wrong practices going on within the chain.

The Dynamic reports are available with different format and export option has reduced the paperwork formalities.

Every-Step surveillance has improved the quality of milk and its shelf life.

The real-time data availability has also reduced the time consumption by tracking the path followed by the truck driver.

Ultimately the AMUL logistic app has successfully achieved the goal and helped in saving excess expenditure caused by mismanagement.

The app reduced per tanker transportation cost, per litre cost and human resources cost ensuring more profit to the dairy company.