

# A MONASH INDUSTRY TEAM INITIATIVE (MITI) MONITOR OUR MILK



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## ABOUT LACTALIS

With more than 450 farms across Australia, Lactalis is a global dairy organisation that strives at setting a benchmark for the dairy industry locally and is playing an ever increasing role in the export of dairy products to Asia. Lactalis strives at maintaining the quality of milk from farm to the consumer through its innovation.

## SITUATION

When milking is finished on a dairy farm, the milk needs to cool down below 5°C within a certain time limit in the vats. The milk temperature is noted at the pickup time and factors like end of milking time and milk cooling rate are assumed. There is an absence of transparency between milking end and pickup. This can result in bad milk collected from farms or more commonly milk has to be disposed of on the farm. The current process results in a wastage of milk, time and money and a huge loss to all the stakeholders.



## GOAL

Our motive for this project is to “Help stakeholders monitor milk parameters to ensure milk quality on a standard platform, common to the whole dairy industry”.

The dairy industry is about to embark on a step forward in electronic vat monitoring on dairy farms, to give real time data on milk temperature and to ensure quality compliance. We looked at different vat monitoring systems available in the market and our goal was to provide a list of parameters necessary for an effective milk monitoring system to all the stakeholders. We began by asking each stakeholder what they are expecting out of the monitoring system. Once the monitoring systems are installed on the farms, we also provide a data integration solution.

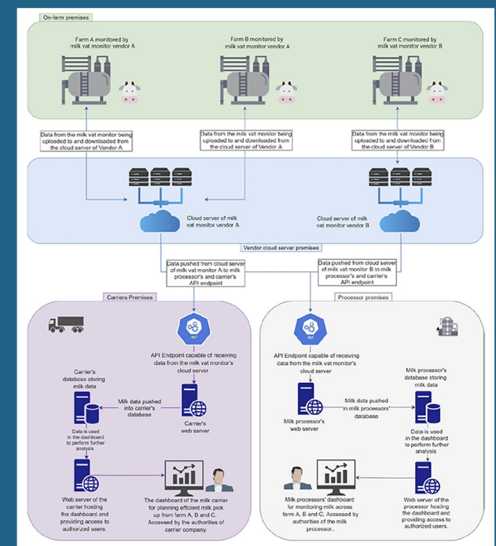
## OUR APPROACH

We came up with a design thinking model which helped us define the scope of the project and list the important parameters for the vat monitoring system that would meet the needs of all stakeholders. We created project information brochures for processors, carriers and vat monitor vendors and had multiple meetings to understand the requirements of the industry. The vat monitor vendors were also contacted to discuss the feasibility of sharing a common format with processors and carriers.



## FINAL RESULT

A set of available vendors were identified by the end of the project. Through the process, we also discovered that there were less potential milk vat monitoring vendors than expected that have the capability of providing the system now, however, the numbers are growing. A report with a complete overview of the project and proposed solutions was created to be shared with the stakeholders. The list of vendors in the report would help the processors to initiate the implementation and installation of vat monitors on the farms based on the parameters. An evaluation matrix is included in the report which can be used for decision making by the processors when selecting suitable providers. We came to the conclusion that a JSON or XML format is ideal for the vat monitoring data to be shared with the processors and carriers and we suggested a method to be followed for data integration. A dashboard prototype is also provided to the processors and carriers to avoid developing the solution from scratch and to give a vision of how the system will work in practice.



## REFLECTION

As a team of multi-disciplinary students, we came up with different perspectives on one problem. We took the lead on different parts of the project and could utilise our skill sets appropriately to provide a solution. Through the process, we were able to understand the dairy industry better and gained new knowledge of the industry. We look forward to applying our learning in practice as we move ahead in our endeavors in industries as more skilled professionals.