



# MOSAIC

## Predictable future

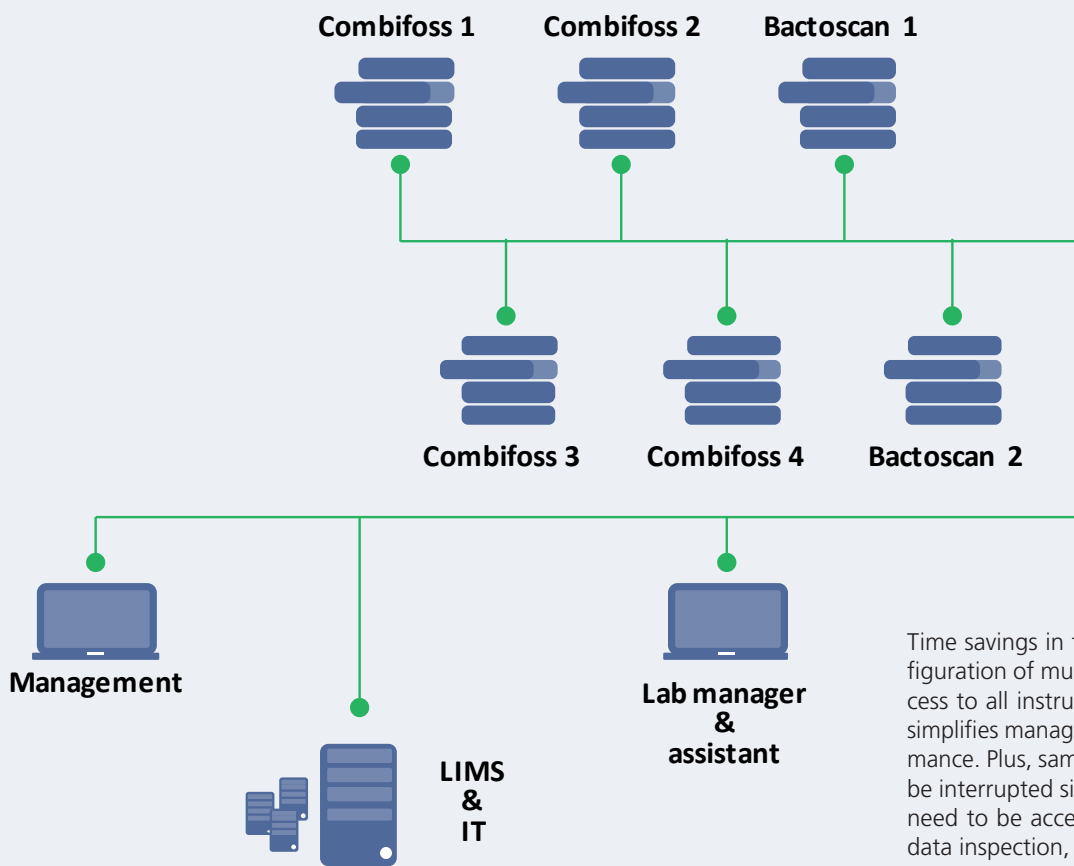
The introduction of Mosaic networking software at raw milk testing laboratory MilkTestNZ reveals the many advantages of getting connected.

There's no shortage of things to keep an eye on in a milk testing lab. Just one example is the seasonal variation in raw milk quality. Another is the need to keep multiple analytical instruments performing the same and the need to update or adjust the prediction models (calibrations) used with the instruments. Finally, there is also a need to keep track of the vast amount of valuable measurement result data generated to continuously track and improve measurement performance.

With such challenges in mind, MilkTestNZ started using the "Mosaic" instrument networking software system

that makes it easier to ensure consistent instrument performance day in, day out, while also saving considerable time on routine tasks. The Mosaic system was installed late 2015 and is running as a part of everyday operations.

MilkTestNZ Technical Officer, Jessica Spray explains how instruments are networked via Mosaic to allow for seamless management of instruments from a centralised management console. The Mosaic software simplifies management of prediction models, allowing the details of each model, such as LIMS export, decimal points



Time savings in the laboratory: with central configuration of multiple instruments and central access to all instrument data, the Mosaic software simplifies management of instruments and performance. Plus, sample throughput does not need to be interrupted since the instrument PC no longer need to be accessed for configuration changes, data inspection, data export etc.

and report ordering to be easily adjusted and efficiently maintained. "We have found Mosaic extremely useful in a number of ways," she says. Specific benefits include:

- Enabling viewing of sample information using select criteria e.g. sample number, type or batch number allowing for easy filtering of results based on a specific component.
- Mosaic's synchronisation settings allow for both timely monitoring of samples as they are processed in the lab and instant review of sample data, errors and events. Results and events can be presented to the management console either in real time, or at a set interval as required.
- The routine maintenance of the prediction models is also administered from Mosaic. Slope and intercept adjustments can be made from a centralised access point and applied to every instrument simultaneously.
- The reporting options are flexible, allowing for a range of different options including but not limited to standardisation events and zero settings.
- Data integrity and retention are now managed efficiently by a SQL backend and no longer confined to software back up files to locate and search archive data.

In particular, the Mosaic database is proving valuable for monitoring and developing prediction models: "Probably of most benefit to us is that as all prediction results are being saved into the Mosaic database, all spectral data is also stored," says Spray. "We can analyse spectral anomalies and develop in-house models/calibrations using this spectra. As we have all the spectra going back to when we started using Mosaic this means that as new calibrations are developed that historical spectra can be exported and re-predicted with these new calibrations."



MilkTestNZ is a laboratory based in New Zealand testing milk for payment, and also for herd testing purposes. MilkTestNZ have six Foss CMT instruments loaded with over 50 prediction models and testing up to 12,000 raw milk samples every day, from all over New Zealand.