M2M HELPS BAKERS PROTECT THE QUALITY OF THEIR DOUGH

OVERVIEW

Brasserie Bread is an award-winning bakery that rose out of Sydney's Bayswater Brasserie during the 1990s. Today it supplies artisan bread and pastries to 500 restaurants, cafes and delis in Sydney and Canberra, and a growing number in Victoria since opening in South Melbourne in late 2011.

THE PROBLEM

In 2006 the business began upgrading its facilities to meet the food safety requirements of HACCP (Hazard Analysis and Critical Control Points), a systematic preventative approach to food safety.

The Sydney bakery was HACCP certified in June 2007, and the Melbourne bakery certified at launch in October 2011. But complying with the HACCP requirements is time consuming. Co-Director and head baker Michael Klausen says his team used to spend up to seven hours each week manually recording coolroom temperatures for HACCP reports.

In addition to the compliance requirement, accurate temperature monitoring is crucial for stock control: a single coolroom failure could cost up to $10,000 in lost stock.

THE SOLUTION

In 2004 David James joined as a partner, bringing his IT expertise to Brasserie Bread's processes. James and Klausen knew they wanted to apply what they call 'the black box' principle to dough and coolroom temperature management, which meant automating data collection to produce real-time reports and comply with the stringent HACCP requirements.

Launching the Melbourne bakery presented the additional challenge that Klausen and James couldn't be in two places at once.

But a solution presented itself two doors down from the new Melbourne operation. Employees from Cooltrax, a firm specialising in real-time temperature monitoring, were early Brasserie Bread customers and recommended the bakers install Cooltrax Universal Monitoring Devices in both bakeries.

This machine-to-machine (M2M) solution provides remote access to real-time temperature data and includes the Telstra Wireless M2M Control Centre™ platform for managing wireless SIM connections.

Wireless temperature tags inserted into batches of dough and installed in coolrooms now automatically transmit data via radio frequency to the monitoring devices. In turn, the monitoring devices use Telstra's Next G™ network to transfer data to the Cooltrax cloud-based service.

Brasserie Bread's team now has 24/7 visibility of all coolrooms and the dough stored in both bakeries – they simply need to access the cloud service with a secure login on any web-enabled device.

Crucially, any temperature fluctuation or device failure triggers automatic email and text alerts to bakery and production managers.

IT'S HOW
WE CONNECT

FAST ACCESS MAKES REMOTE COOLROOM MONITORING VIABLE

BUSINESS BENEFITS

As the M2M system transmits the temperature of the unit and its product in five-minute intervals, Brasserie Bread has cut the risk of human error in monitoring and reporting dough and coolroom temperatures.

"A lot of bakers still work the old-fashioned way, checking the temperature on fridges twice a day," says Klausen. "It could look perfect at 9am and 5pm, but during the day it could be out of whack and the food could be damaged. So measuring more frequently is the better way of doing it."

Klausen regularly logs into the system from his iPad or smartphone to check how the fridges are operating. On-demand data transmissions, from both Sydney and Melbourne, mean he can spot and react to problems immediately, and this has the flow-on effect of reducing energy and maintenance bills.

"If I see a fridge isn't working properly I can book the maintenance guy before it actually damages the motors, saving a lot of money. At the level we operate, we have very high demands on quality and consistency, so it's imperative we follow processes strictly."

Joe Bortignon, Director of Operations at Cooltrax, explains that many of its food industry clients are all too familiar with the tough demands of HACCP audits:

"When an auditor visits they want immediate access to up-to-date records. Our customers know that frequent reporting on temperatures helps improve audit results, which are all about food safety.

"They've told us that the Cooltrax system makes these records easier to maintain and analyse – automated reporting gives them greater efficiency, from capturing data to accessing records on demand.

"So if an auditor finds a problem with a fridge, they can see the temperature records first hand and determine very quickly whether it needs repairing or is simply going through a defrost cycle."

Accurate performance data can also help businesses track the total cost of equipment ownership, from installation to running and maintenance costs. That can also help them decide on future purchases.

It takes three days to make a loaf of Brasserie Bread's organic sourdough using its 16 year old 'starter', which is a naturally occurring wild yeast.

Tags directly placed in the dough update the bakers on the status of this living product. Another benefit of having temperature data transmitted continuously into the cloud is that Brasserie Bread's team can monitor seasonal changes in the dough's behaviour, even when they're not onsite.

Klausen says the wireless connection from the dough to the monitoring device and then across the Next G network to the cloud eliminates the need for manual monitoring.

"Now we can see it all live on our computer screens," explains Klausen, "From the core temperature of the dough to the settings on the fridge."

Bortignon muses that Klausen is both an artist and a commercial baker: "Michael uses good quality product and traditional methods when preparing his breads and pastries, and he also embraces new technology to help him grow his business.

"It's the best of both worlds: old and new. Because he does not use additives or artificial enhancers he needs to be more aware of temperature, that's where we come in.

"The Cooltrax Universal Monitoring Devices communicate all data back to our servers via the Telstra SIMs so Michael can monitor the dough remotely. The reliability and coverage of Telstra's network helps us deliver superior services to companies with temperature sensitive products – it's great peace of mind."

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cooltrax.com
brasseriebread.com.au

TELSTRA M2M EVERYTHING CONNECTED