

The logo for Senzemo, featuring the word "senzemo" in a white, lowercase, sans-serif font. The text is positioned in the center of the image, which is split diagonally from the bottom-left to the top-right. The upper-left triangle is a light blue color, and the lower-right triangle is a darker blue color.

senzemo

Food Safety Usecases

03

Cold Rooms

Cold rooms food temperature control



05

Retail Cold Chain

Groceries temperature monitoring



07

Food Temperature

Food simulant temperature monitoring



09

Cook Chill

Cook-chill method temperature control



Cold Rooms

FOOD TEMPERATURE CONTROL, LUXURY HOTEL CHAINS



30% HIGHER
PROFITABILITY!

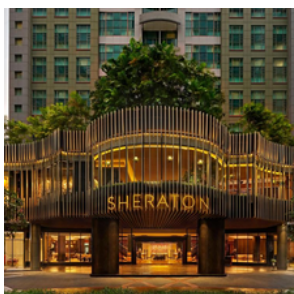
Done in
partnership with:

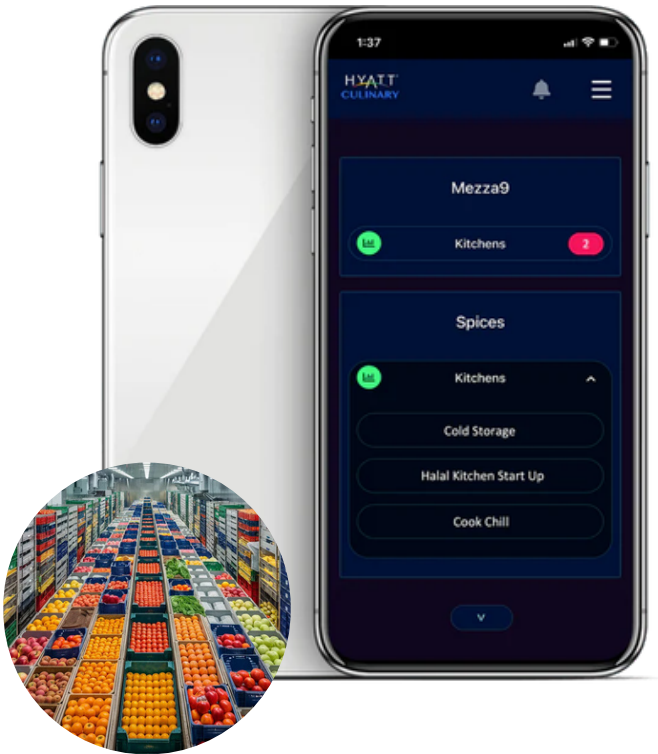


Addressing food waste and safety

Food safety protocols are very important for 5-star hotel chains and their restaurant businesses. For Sheraton, Hyatt, Intercontinental, and Accor, the quality of food is very important to their guests, and there are a lot of internal rules that need to be obeyed to fulfill that promise. Controlling food storage temperature is one of the most important ones, and using sensors makes for a more efficient, flexible, and economically sound process.

The purpose of cold room storage monitoring is to ensure that the cold room is being used and maintained in a way that preserves the quality and safety of the food or other products being stored. Proper cold room storage monitoring can help to prevent food spoilage and waste, as well as reduce the risk of foodborne illness.





Smart temperature control

Over 1000 Senstick MicroClimate sensors were shipped to Australia and Singapore, where MFC Safe integrator managed their deployment inside the cold rooms of the largest hotel chains like Sheraton, Intercontinental, and Hyatt.

Senstick had no problems with the signal coming from the isolated cold rooms. The sensors replaced manned temperature monitoring performed by kitchen personnel, thus saving 30% on labor costs. The expected ROI for the sensors is going to come around in just 14 months.

HYATT®

INTERCONTINENTAL®

SHERATON
EST. 1937

ACCOR



SENSORS REDUCE EXPENSES,

PROVIDE A SAFE WORK ENVIRONMENT AND ALLOW HOTELS TO FULFILL
THEIR PROMISE OF A LUXURY EXPERIENCE FOR THEIR GUESTS.

How it started

Food waste, big loss

High cost of manpower

Risk of damaging brand image

Manual readings

How it ended

14-month ROI

Reducing manpower by 30%

Improved food safety

Automated HACCP

Retail Cold Chain

GROCERY TEMPERATURE MONITORING, RETAIL CHAINS



25 MINUTES
SAVED PER DAY!

Deployed at:

7-ELEVEN

TROPIC

PETROL

Dealing with inefficiency

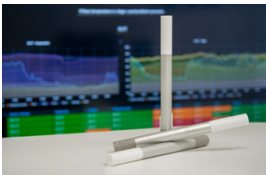
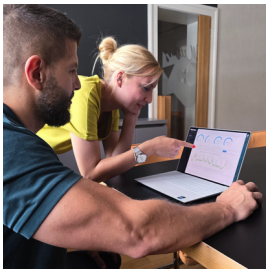
Retail chains often struggle with inefficient and error-prone manual temperature checks, leading to inconsistencies, human errors, and increased labor costs. Compliance with food safety regulations such as HACCP and FDA standards becomes challenging due to unreliable record-keeping, increasing the risk of fines and operational disruptions. Without real-time alerts, they are often unaware of temperature fluctuations, resulting in product spoilage,

financial losses, and customer dissatisfaction. Additionally, equipment failures go unnoticed until significant damage occurs, leading to higher maintenance costs and waste. The lack of data-driven insights prevents retailers from optimizing energy consumption, further increasing operational expenses.



Turnkey solution

When IoT, LPWAN based temperature monitoring solutions are deployed, retail chains benefit from real-time data tracking, automated alerts, and seamless compliance with food safety regulations, reducing human error and labor costs. Continuous monitoring ensures that temperature-sensitive products remain within safe thresholds, preventing spoilage and waste while enhancing product quality and customer satisfaction. Automated record-keeping simplifies audits and regulatory compliance,



mitigating the risk of fines or operational disruptions. Additionally, predictive maintenance capabilities help detect equipment failures early, reducing downtime and repair costs. Energy efficiency improves as IoT systems optimize refrigeration usage, lowering operational expenses and contributing to sustainability efforts. Ultimately, IoT solutions enhance efficiency, reduce losses, and ensure a more reliable and cost-effective retail operation.



STO10

Temperature Only



SMC30

Temperature & Humidity

How it started

Manual checking

Time consuming

Location specific monitoring

How it ended

Reallocation of staffing
towards value-add tasks

25 minutes saved per day

Easy to scale system

Food Temperature

FOOD SIMULANT TEMPERATURE MONITORING, RETAIL & HOSPITALITY



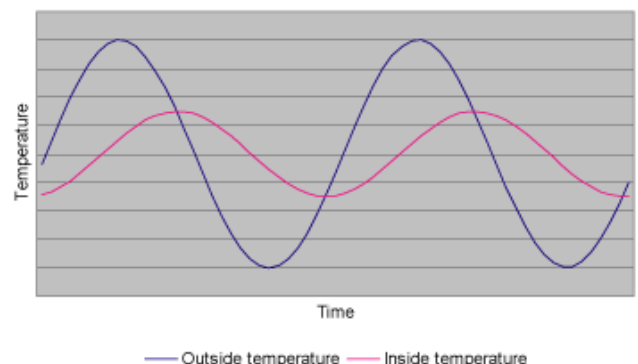
The challenge of reliable cold storage monitoring

Cold storage of food is operated under strict standards for food safety and guest satisfaction. Temperature-sensitive goods such as fresh produce, beverages, and prepared meals must be kept within precise ranges to meet safety regulations and maintain quality. In busy industries like retail & hospitality frequent door openings cause sudden

ambient temperature shifts. Standard sensors react instantly to airflow changes, giving misleading readings that do not reflect the food's true, slower-changing temperature. This results in unreliable data, false alarms, and unnecessary interventions.



Effect of thermal mass on inside temperatures



Food simulant IoT Sensor solution

By using special food simulant sensors that use glass beads like STB10 from Senszemo, retailers, hotels, restaurants or businesses involved in cold chain systems can avoid unreliable air-based readings that cause false alarms, wasted service calls, and unnecessary stock disposal.

This ensures accurate monitoring that reflects real food conditions, preventing 5–10% in intervention costs and 2–5% in food waste per fridge, while also reducing compliance risks and safeguarding reputation. The result is smoother rollouts, fewer disruptions, and measurable cost savings across operations.



DUAL TEMPERATURE SENSING
-40°C TO +85°C

ACCURACY
±0.2°C

WIRELESS RANGE
Up to 1km

BATTERY LIFE
7+ yrs

DATA LOGGING
Up to 40 days if read hourly

IP67 Grade Enclosure

Ultra Low Power

Other cold chain sensors



STO10

Temperature Only



SMC30

Temperature & Humidity

How it started

- Unnecessary checkups
- Compromised food
- Compliance risk

How it ended

- 5–10% saved on interventions
- Reduced food waste by 2-5%
- Significant risk reduction

Cook Chill

FOOD STORAGE TEMPERATURE CONTROL



35K FRESH MEALS
PER DAY!

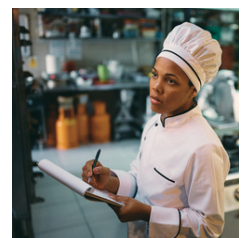
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Cook chill offers numerous benefits

Restaurants, hotels, and their Chefs often use the Cook-Chill process, a food production, and storage method that involves cooking food to a high temperature to kill pathogens, cooling it rapidly to a temperature at which bacteria cannot grow, and storing it at that temperature until it is needed. Proper cook-chill method storing can help to prevent food spoilage and waste, as well as

reduce the risk of foodborne illness. It allows Chefs to produce large quantities of food that can be stored and served at a later time, while at the same time reducing food waste and improving efficiency by allowing food to be prepared in advance and stored until it is needed for service.



SINCE 1979



The case of TASTY FRESH

Tasty Fresh is an Australian family-owned and operated business that has been operating since 1979. It delivers fresh, hot food, snacks, and drinks right to the door of workplaces daily in Melbourne, Perth, Sydney, Newcastle, and Queensland. It has 4 in-house industrial bakeries that produce a range of high-quality pies, pastries, sausage rolls and much more.

They have six outlets across four states and service around 35,000 customers per day served in 153 vans and up to 100,000 units per day. Over 500 employees around Australia make that happen.

With such a large number of meals, they need to control some of the preparation that is based on the cook-chill method. Only a specialized technological solution that provides on-point, accurate temperature measurements would therefore come into play.



35,000 customers per day
100,000 units per day
500 employees
153 vans

Finding the right solution

Cook-chill requires cook temp at typically 75°C, then verifying cooling rates where the product chills from 60°C to 21°C within 2 hours, then 21°C to <5°C within 4 hours. This is to limit the risk of *Clostridium perfringens* bacteria re-vegetating and producing heat-stable SET toxins.

We adopted a continuous monitoring process so both cook and chill safety verification data are obtained in real-time. We have designed the world's first set-and-forget, hands-free cook-chill system. Users simply put the sensor into a product, and the process starts. The temperature journey is tracked in real-time, so pre-emptive actions can be taken. Warnings and critical alarms are triggered to keep the kitchen absolutely aware.

The cook-chill probes are placed on quality Senszemo sensors. Sensor probes are used daily by Tasty Fresh to monitor and verify the cook-chill process without any user interaction with the software. It's totally "hands-free". The process on the server starts when the sensor hits 75°C. So once inserted, you can walk away, and the sensor + software takes care of the rest.



Old
STF30



New
STF40



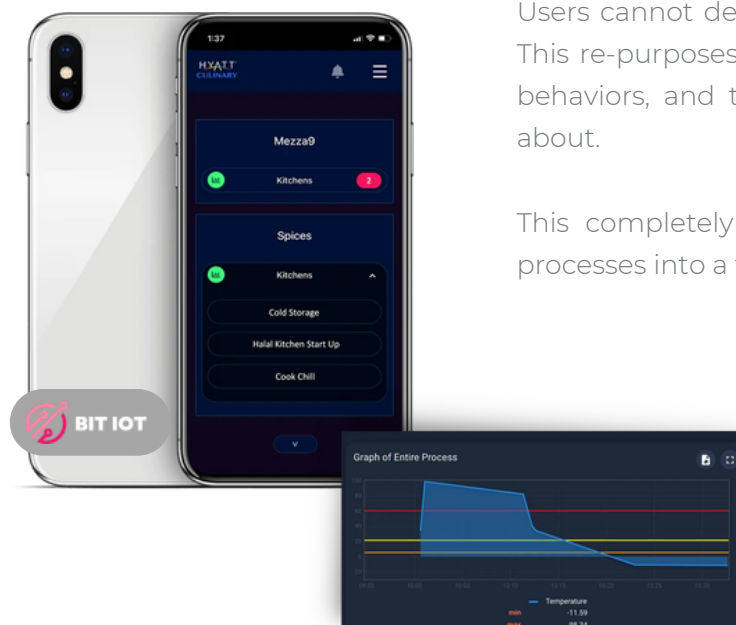
STF30 IS AN EFFECTIVE COOK CHILL FOOD TEMPERATURE PROBE.
IT OPERATES ON LORAWAN AND LASTS UP TO 7 YEARS ON ONE SET OF BATTERIES.

Tangible benefits

The process removes the bureaucracy of HACCP - not only is it paperless, but it's smart and easy.

Users cannot deviate, it's true time/temperature monitoring. This re-purposes the users to focus on the process itself, the behaviors, and the practice - this is what food safety is all about.

This completely changes the face of managing cook-chill processes into a tech-enabled solution.



Tasty food Executive Chef, Andy McCoy

Since we've introduced sensors to our kitchen's daily operations, we have been able to focus most of our time on other activities.



How it started

Time spent on bureaucracy

Possible mistakes in the process

Risk of damaging brand image

How it ended

Saves time

Removes HACCP bureaucracy

Paperless, smart, easy

Trusted by



Have questions about an
IoT project?

Ask me.



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