

Food distribution center case study – **CLIMATE MONITORING**

A food distribution center near Tallinn, Estonia, offers a range of food products to local retailers and resellers. The warehouses are big and volumes are high. So is the risk because everything stored here is the responsibility of the distribution center. Although the warehouses are climate controlled, some areas of the warehouse had issues with storage conditions. The temperature and humidity varied in the individual areas and even across the height of the buildings. Opened loading gates from the bottom and even the sun through the roof impact the storage conditions. The final understanding was – more detailed information on the

environmental conditions are needed before any improvements can be made. Thinnect offered the Temp-Sense system to provide visibility into the warehouse environment. The wireless Temp-Sense system was easy to adopt, it caused no work interruptions and was installed quickly. The web-based user interface was easy to use for the staff to keep an eye on the storage conditions of the food.

The conclusions came quickly – Temp-Sense solution provides value as variations in environmental conditions can be detected and corrected rapidly.

System setup is simple – wireless sensors are placed in needed spots. The collected data is presented in a web-based user interface that raises alerts and provides reports. All data is located at a cloud server and is accessible anywhere. The gateway passes data from the sensors periodically to the cloud.

The mobile sensors can store readings for more than a month and the batteries last for over a year.

The solution is completely self-contained – no IT or other support is needed from the customer

SOLUTION AT A GLANCE

- Wireless battery-powered sensors placed in appliances or areas
- Data delivered seamlessly to the cloud
- Real-time and historic data available at a click of a button
- Configurable alerts notify of any issues and give a peace of mind that everything is OK

The temperature monitoring solution is based on Thinnect's field-proven technology, which has been used in Border Patrol and Intelligent Lighting applications across the globe. Thinnect's self-configuring technology and automated system management services ensure that all temperature sensors are able to report data from the moment they are powered and continue reliable operation for years.

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TEMP-SENSE IN ACTION

Thinnect staff equipped all areas with wireless sensors to monitor temperatures and humidity in the critical spots. Useful results were delivered quickly – some areas had fluctuating conditions, some areas were too warm and humidity across the facility was not uniform either. Using the information collected by the Temp-Sense solution, the staff was able to better understand the characteristics of the whole distribution center – some products were re-located to the other location and the setpoints of the climate control solution were changed for some rooms.

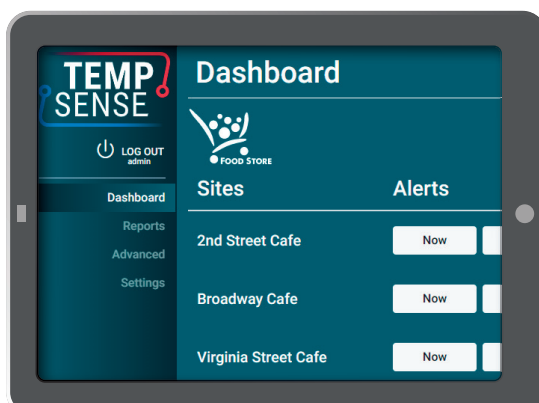
Paying more attention to loading gates improved the results also. The alarms kept the responsible persons informed and as expected – the reporting feature helps to provide long term proof that the goods are stored under right conditions. To obtain and maintain the certifications required for warehouse operation there is a need for permanent overview and logs.

Temp-Sense dashboard provides the insights for daily operational decisions.



THE RESULTS

- Temp-Sense provides peace of mind to the staff – all zones are monitored 24/7 and everyone can rely on the quality of the products. The periodic reports free the staff from the duty of manual temperature recording.
- Less waste and losses are generated as correct storage conditions ensure that all products maintain their quality until the best-before date.
- Quality and safety can be improved and energy efficiency increased in many cases by implementing only minor adjustments – having full real-time and historic visibility into actual storage conditions provides the input needed.



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