



Service Portfolio for Retail Applications

Solutions for managing and continuously optimising food retail stores

Comprehensive Retail Service Solutions

The conservation and freshness of the products are guaranteed through the precision of the temperature control and the continuous optimisation of the system thanks to the digital services and consultancy that CAREL offers its customers.

- Knowledge of the system through dedicated training;
- Improved performance through system design support;
- Guaranteed performance with proper system configuration assured during assisted configuration;
- Total control over the system through the digital platform;
- Continuous optimisation through thermodynamic and energy consultancy;

From training to configuration support and consultancy services for system performance optimisation, CAREL is the perfect partner for supporting customers throughout the entire system life cycle.

All services revolve around RED optimise, the digital platform designed to support all the key stakeholders working in the retail market. Through remote systems monitoring and data analysis, retailer departments can undertake immediate or scheduled targeted actions and benefit not only from continuous machine and system improvements, but from management and process optimisation as well.



Reduced operating costs

System management and maintenance times are minimised through automated and centralised information management and alarm categorisation.



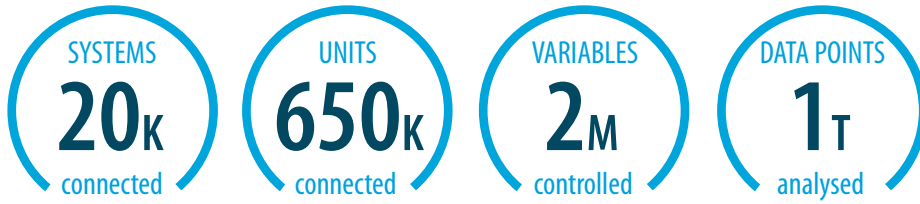
Optimisation of energy consumption

Energy use optimisation is guaranteed through efficient on-site technologies alongside active centralised monitoring, thereby eliminating waste.



Improvement of food quality

Product freshness and preservation are guaranteed through the system's precise temperature controls as well as its continuous optimisation through the digital and consultancy services CAREL offers its customers.



Since 2008, CAREL has been providing digital solutions for the HVAC/R market adaptable to customers' business models.

The number of customers choosing CAREL as their systems management partner is increasing year on year thanks to its flexible digital services based on Cloud technology which guarantees centralised management and monitoring from anywhere in the world no matter where the stores are located.



Our Retail Service Results

Using CAREL services provides customers with constant and continuous benefits: efficient operational management and effective savings translate into greater flexibility, generating a considerable competitive advantage.



RED optimise

CAREL's next generation digital services for supervising and managing store chains. RED optimise offers a sophisticated platform for centralising local information with all the functions required for total control over stores for sustainable, optimised management.



All the systems managed by RED optimise

Lighting, air conditioning and heating systems, refrigeration circuits, racks, switchboards, energy meters etc.

All these technologies, produced by various manufacturers situated all over the globe and installed by different technicians with different procedures and experiences, create an eterogeneous installed base from a configurations and performances viewpoint that they are not readily comparable.

RED optimise allows information to be centralised, regardless of the technology or protocols, and processes the required data to ensure this information is always available and easily accessible so potential anomalies or performance declines can be promptly identified and optimal conditions restored.

Guaranteed security

The architecture of RED optimise's infrastructure guarantees information protection through encrypted data, using protocols that comply with the most stringent security standards and deploying advanced network filtering.

Penetration and vulnerability tests are regularly conducted in accordance with international cyber security standards and guidelines.

Data storage in separate physical data centres with automatic backup and failover for each server as well as continuous monitoring (24/7) across the entire infrastructure ensure the Recovery Plan can be implemented if needed.

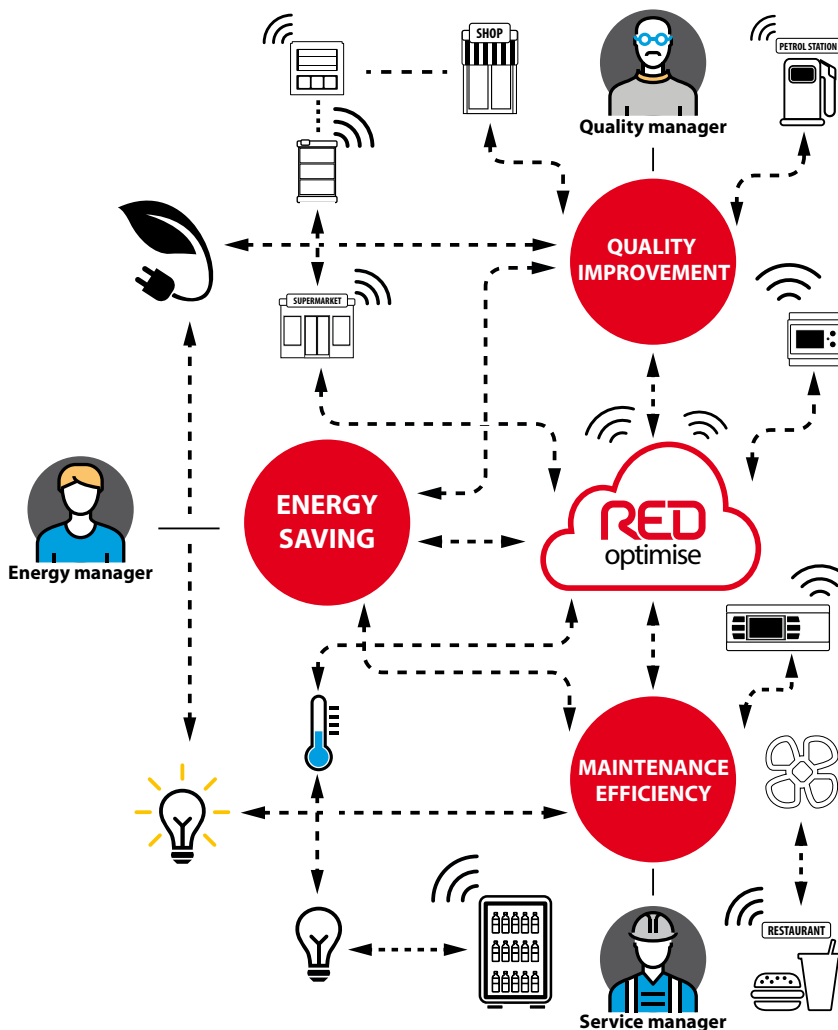




Value to information collected from all connected sites

Geolocation allows RED optimise to offer a simple and intuitive global view of the entire store chain.

From a global view to details on individual devices in just a few clicks, data from different stores can be compared to identify and analyse anomalies to be resolved or efficiencies to be replicated.



Specific information for each user

By applying artificial intelligence that can transform raw data into valuable information, each corporate department in a retail organization can find answers in RED optimise on how to improve their processes and prove the quality of their work through specific reports and analyses.

RED optimise manages portal access through user profile associations, including actions defined according to responsibilities and role functions.

Remote expert

CAREL offers customers its vast experience with HVAC/R applications and its knowledge of the most advanced digital technology and software to help them manage and build systems with optimised performance and eco-friendliness as key features.

Remote Expert is CAREL's consultancy service, designed to assist and support customers' individual stores in reaching maximum system productivity by assessing performance, analysing areas for improvement and providing suggestions for optimisation.

This service is largely for organisations whose main goal is to maintain performance, particularly in refrigeration, to ensure product quality and energy efficiency which leads to cost reduction.

By aggregating data from all stores, RED optimise works in synergy with the consultancy services to reach the greatest performance and energy saving results.

The remote expert service features a series of operations with highly specialised personnel, which can be summarised by 3 main stages:

- system status analysis;
- corrective action identification;

- advice on actions to be taken to achieve optimised performance.

For customers who have also chosen RED optimise's Defrost package, an optional defrost-specific consultancy is also available.



Assisted configuration

System set-up carried out by refrigeration and supervision expert technicians to guarantee customers proper system functioning and supervision.

The available assisted configuration services include:

- **Refrigeration:** carried out on-site, it enables optimised regulation parameters and system configuration.
- **Standard IOT:** set-up and configuration of local supervisors for secure alarm and report management in accordance with standard parameters.
- **Premium IOT:** set-up and configuration of local supervisors to optimise management costs through customised standard parameters.
- **Standard Cloud services:** Red optimise portal configuration in accordance with standard parameters.
- **Premium Cloud services:** customised Red optimise configuration (configuring optional services, creating dashboards, customised reports, rules and parameter control)

to improve individual business unit experiences by optimising the site supervision and management.

IOT assisted configuration and Cloud services can be carried out on-site or remotely.



Training courses

Training on new technologies and optimal configuration of HVAC/R application architectures and systems

Training provided by CAREL includes:

- **Training on RED optimise's digital platform:** this course provides participants with a comprehensive overview of all the portal's functions as well as operational instructions for its configuration.
- **Training on IoT Edge:** this course guides participants through all the steps required to properly configure the monitoring systems installed on site.

For details on course content, duration and availability, please refer to the Service Catalogue.



Value at all levels

Flexible and customisable services for various stakeholders in the Retail market.



Refrigeration Manager Guaranteed performance

- Improve cold chain performance;
- Increase efficiency;
- Optimise defrost cycles;
- Manage and improve its own work's operational efficiency;
- Get meaningful information on temperature control quality;
- Quickly highlight and resolve critical issues that cause performance to decline.

Services and technologies are the main allies of the Refrigeration Manager focused on investments that guarantee performance, sustainability, precision and a guaranteed payback.

RED optimise is a tool that enhances the work of the Refrigeration Managers and their team, providing them with data from within their own organisation by continuously monitoring the performance of both refrigeration cabinets and the entire cold chain to ensure maximum performance and efficiency.



For maximum system performance, combine Remote Expert with RED optimise.



Data monitoring and control

Unit performance transparency, defining actions to improve performance.

Defrost cycle control

Targeted analyses to ensure performance.



Multi-site analysis

Comparing unit and site performance to trigger corrective actions.

Real-time alarms

Prevent malfunctions, take swift action, increase unit lifespans.



Energy Manager

Minimise energy consumption



Sustainability, energy performance, emission reductions, return on investment, are the key words in the Energy Manager's activity.

The continuous data collection carried out by RED optimise and its multi-site management, makes the platform the main ally of the Energy Manager who, with checks, analysis and comparisons, will be able to define, manage and control the perfect strategy to optimise the efficiency of all sites.

- Minimise energy consumption;
- Verify compliance with regulations;
- Monitor energy usage;
- Introduce in-store technology that optimises efficiency with guaranteed returns.



For maximum system performance, combine RED optimise with Remote expert.



Automatic monitoring and reports

Automated energy consumption reports and continuous monitoring enable analyses, comparisons and targeted actions that minimise consumptions.

Defrost cycle control

Analyses aimed at optimising energy consumption and avoiding unforeseen expenses.



Multi-site analysis

Immediately identify out-of-range data through cross-site comparisons.

Real-time alarms

Ability to analyse data remotely and adjust parameters to ensure site efficiency.



Service Manager Fast Response Time

- Minimise intervention time;
- Adhere to and control service standards;
- Remote analysis to avoid site visits and reduce recovery time;
- Establish preventive actions to reduce downtime;
- Manage and improve processes and KPIs;
- Reduce operating costs.

Technology, connection and planning support the Service Manager in his work, to guarantee a level of service in line with the required KPIs.

RED optimise is a tool that increases the efficiency and effectiveness of the Service Manager's team through centralised alarm management which allows convenient real-time analysis and service operations from your own office. The team will be able to plan preventive actions or react promptly to unforeseen events, minimising the risks of malfunctioning across the entire chain



APPLICA: this app is one of the tools provided by CAREL for Service Managers for commissioning and maintenance operations. It interacts directly with CAREL's next generation controllers equipped with NFC or Bluetooth technology.

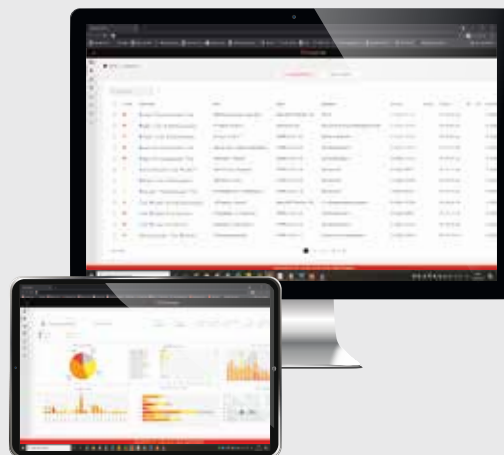


Data monitoring and control

Operating data transparency allows preventive and corrective actions to be taken, even remotely. Monitoring after corrective actions.

Multi-site analysis

Unit and site performance comparisons to trigger actions depending on the criticality of alarm events.



Service Level Agreement Monitoring

Analyses of maintenance activities and alarm management services based on the service level agreement.

Real-time alarms

Remote analysis and interventions to reduce costs, prevent malfunctions, take swift action and increase unit lifespan.

Quality Manager

Optimized product conservation



RED optimise's automatic reports are a key tool for Quality Managers as they ensure compliance with international food safety regulations (e.g., HACCP standards), thereby assuring product quality.

Thanks to the transparency of all the data gathered through continuous monitoring, RED optimise guarantees consumer safety and satisfaction through high food quality standards achieved through precise temperature control and environmental comfort.

It also allows for internal processes to be analysed and optimised, reducing waste and therefore increasing profitability.

The Quality Manager and team's work is therefore strategically significant within the company.

- Manage high corporate quality standards on products while complying with local regulations;
- Improve the quality and safety of food preservation processes and technologies;
- Reduce waste by minimising poor product conservation;
- Build customer loyalty by ensuring product quality;
- Increase profitability through fewer operating costs linked to inefficiencies and low quality standards.



Data monitoring and control

Information on unit operation is always available so compliance with regulations can be checked and food quality guaranteed.

Defrost cycle control

Maintaining product quality standards is guaranteed through defrost cycle analyses, allowing operating anomalies to be identified.



Multi-site analysis

Comparing unit and site performance to trigger corrective actions.

Real-time alarms

Remotely applied solutions and reduced service call time minimise product waste, ensuring customer and staff safety.

Service Portfolio for Retail Applications

Table of services

Cloud Portals	
9SPBR0*M10	RED Optimise Retailer Bundle monthly fee
9SPBC0*M10	RED Optimise Contractor Bundle monthly fee
9SPAD0*M10	RED optimise Add-on - Preventive Defrost monthly fee
9SPAC0*M10	RED optimise Add-on - Device Control monthly fee
9SPAU00M10	10 extra analytics users monthly fee
*: S= Small; M= Medium; L= Large; X= ExtraLarge	
Remote expert	
9SDRP0*M10	Performance regulation analysis 1 system monthly fee
*: S= Small; M= Medium; L= Large; X= ExtraLarge	
Assisted configuration	
9SCR00D1*	Refrigeration commissioning daily rate
9SCIT00D1*	IoT on-site commissioning daily rate
9SCIT00H1*	IoT on-site commissioning hourly rate
9SEIT00D1*	IoT remote commissioning daily rate
9SEIT00H1*	IoT remote commissioning hourly rate
*: A= Zone A; B= Zone B	
Training courses	
9STIT01Q10	IOT EDGE Course
9STIT02Q10	IOT Digital Portals Course

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