

DON'T WASTE
YOUR COLD.

AKO

The background is a complex collage of mathematical and scientific elements. It features various equations such as $R_1 + R_2 + R_3 + R_4 + R_5 + R_6 + R_7 + R_8 + R_9 + R_{10} + R_{11} + R_{12} + R_{13} + R_{14} + R_{15} + R_{16} + R_{17} + R_{18} + R_{19} + R_{20} + R_{21} + R_{22} + R_{23} + R_{24} + R_{25} + R_{26} + R_{27} + R_{28} + R_{29} + R_{30} + R_{31} + R_{32} + R_{33} + R_{34} + R_{35} + R_{36} + R_{37} + R_{38} + R_{39} + R_{40} + R_{41} + R_{42} + R_{43} + R_{44} + R_{45} + R_{46} + R_{47} + R_{48} + R_{49} + R_{50} + R_{51} + R_{52} + R_{53} + R_{54} + R_{55} + R_{56} + R_{57} + R_{58} + R_{59} + R_{60} + R_{61} + R_{62} + R_{63} + R_{64} + R_{65} + R_{66} + R_{67} + R_{68} + R_{69} + R_{70} + R_{71} + R_{72} + R_{73} + R_{74} + R_{75} + R_{76} + R_{77} + R_{78} + R_{79} + R_{80} + R_{81} + R_{82} + R_{83} + R_{84} + R_{85} + R_{86} + R_{87} + R_{88} + R_{89} + R_{90} + R_{91} + R_{92} + R_{93} + R_{94} + R_{95} + R_{96} + R_{97} + R_{98} + R_{99} + R_{100}$, $\epsilon_0 = 8.85418782 \times 10^{-12}$, and $\hbar \frac{\partial \psi}{\partial t} = E \psi$. A large, bold red letter 'e' is prominently displayed on the left side of the image.

e

LAW OF CONSERVATION OF ENERGY

Energy is neither **CREATED** nor **DESTROYED**; it can only be **TRANSFORMED** from one form to another or transferred from one system to another.



1. Cold Chain Efficiency: **PROBLEM, NEEDS & FACTS**

Adequate food preservation
along with an increase in energy
efficiency

People security

A changing industry looking for
emissions reduction and
environmental care

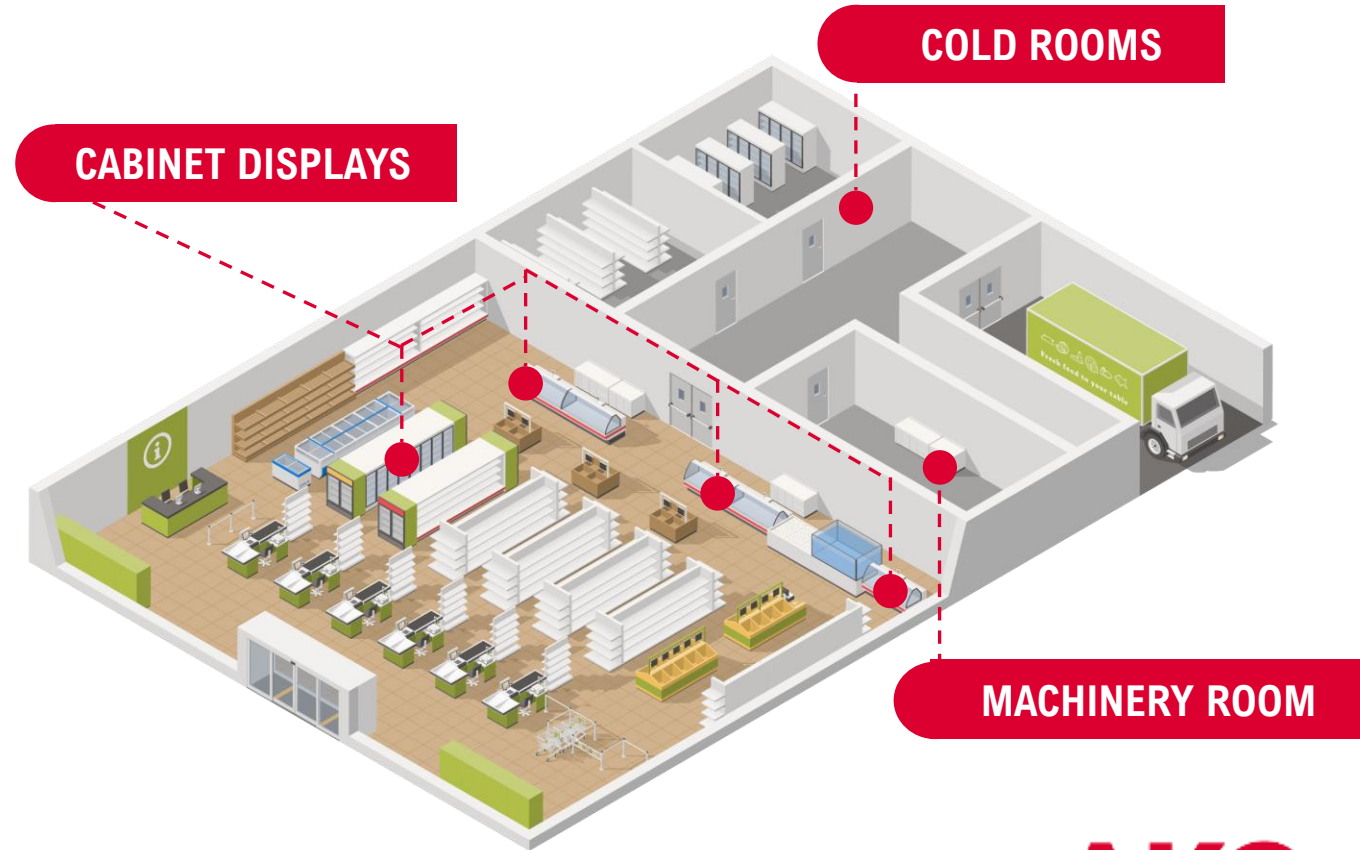
But Fresh & Frozen food = More **ENERGY CONSUMPTION**, more **RISKS** on losing the quality of the products, more stress on your installation.

1. Cold Chain Efficiency: **PROBLEM, NEEDS & FACTS**

What are the **MAIN PAIN POINTS** for supermarkets during the process of keeping our food fresh and saving energy?

ADEQUATE TEMPERATURE CONTROL

DATA MONITORING



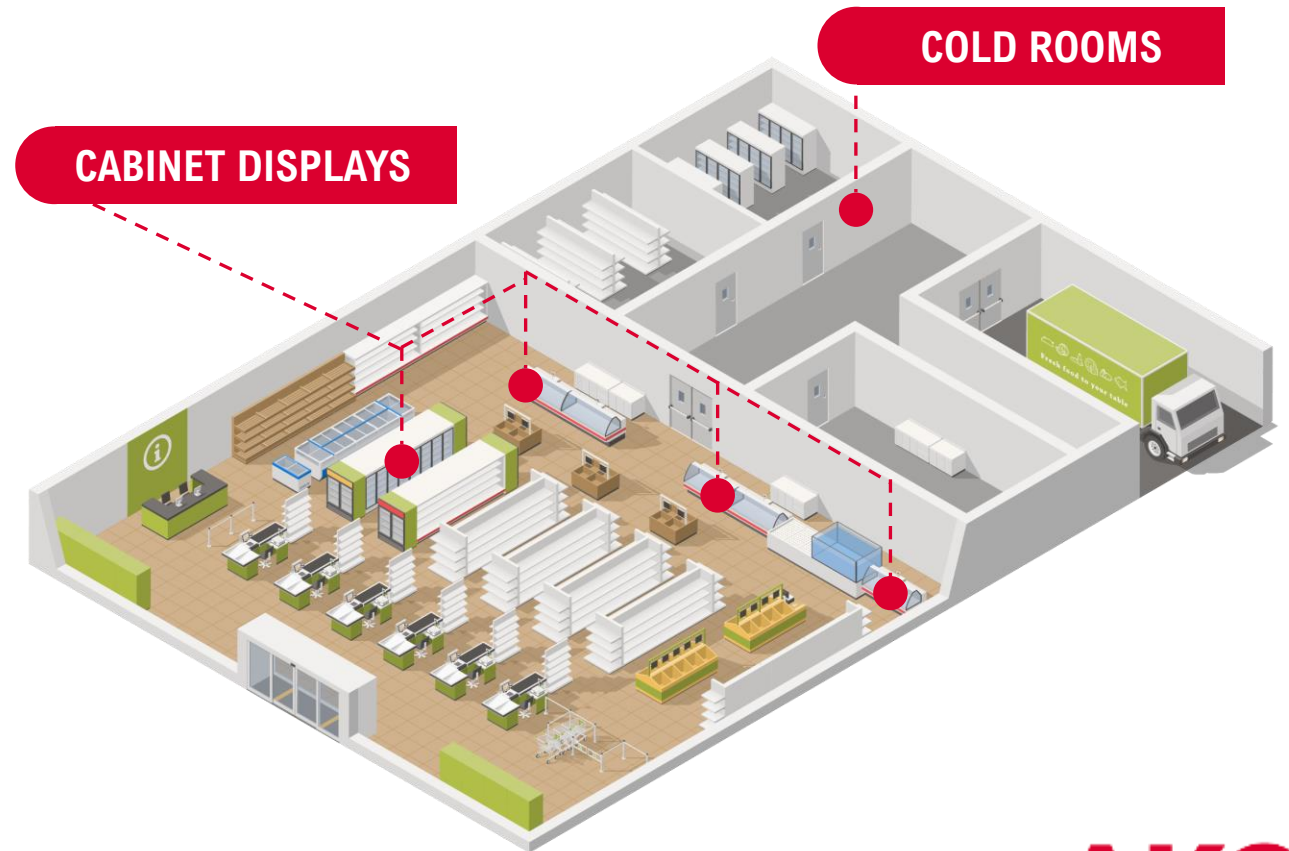
1. The Food Retail Industry: **PROBLEM, NEEDS & FACTS**

What are the **MAIN PAIN POINTS** for supermarkets during the process of keeping our food fresh and Good?

REFRIGERATION

- It is an important energy consumer of the food preservation market (cold chain).
- Supermarkets spend from 40% to 60% of their total energy requirement on refrigeration.

DEFROST



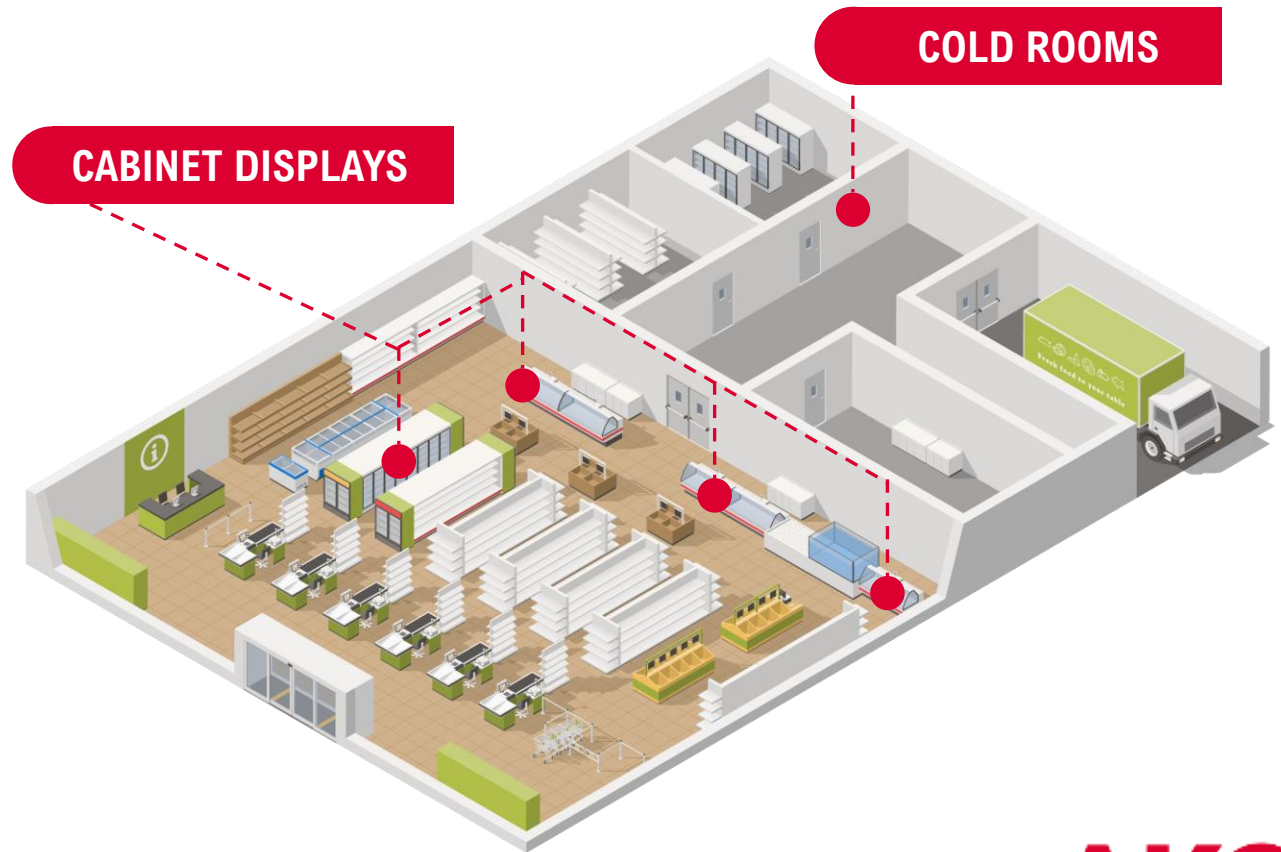
1. The Food Retail Industry: **PROBLEM, NEEDS & FACTS**

What are the **MAIN PAIN POINTS** for supermarkets during the process of keeping our food fresh and Good?

REFRIGERATION

DEFROST

- One of the main problems in cold-rooms is the frost built-up on evaporators, which causes heat transfer efficiency decreases or even blockage.



1. The Food Retail Industry: **PROBLEM, NEEDS & FACTS**

For a moment, let's focus on a critical component of the preservation of our products and a huge amount of energy consumption.

1. The Food Retail Industry: **PROBLEM, NEEDS & FACTS**

COLD ROOMS ARE CRUCIAL IN COMMERCIAL REFRIGERATION:

To Preserve Food Quality
Operating Expenses Generator



UP TO 9%

OF PRODUCT SPOILAGE DUE TO
LACK OF APPROPRIATE STORAGE
TEMPERATURE

13%

OUT OF THE TOTAL ENERGY
CONSUMPTION OF A
SUPERMARKET

10-15%

AFTER SALES INTERVENTION
ASSOCIATED WITH THE
ADJUSTMENT OF PARAMETERS FOR
COLD ROOM USE CHANGE OR
TAMPERING

2. The Food Retail Industry: **SOLUTIONS**

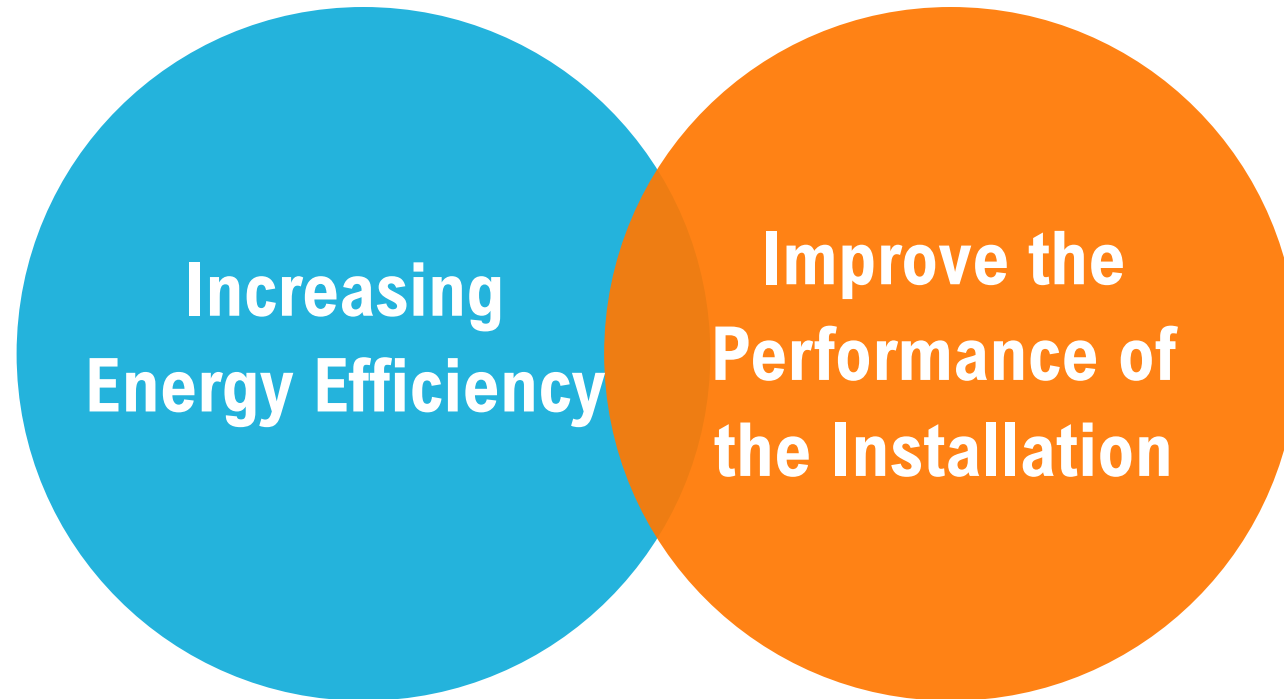
How do we optimize the cold room refrigeration performance?



**Increasing
Energy Efficiency**

2. The Food Retail Industry: **SOLUTIONS**

How do we optimize the cold room refrigeration performance?



2. The Food Retail Industry: **SOLUTIONS**

How do we optimize the cold room refrigeration performance?



**Increasing
Energy Efficiency**

**Improve the
Performance of
the Installation**

**Reducing
Emissions of
Polluting gases**

5. **AKO** Group: **OUR MISSION**

Design, manufacturing, and commercialization of electronic equipment and connected solutions for:

The control & monitoring of the cold chain and the improvement of the efficiency in the refrigeration facilities of the Industrial refrigeration, commercial refrigeration, and refrigerated transport sectors.

Providing valuable information for the customer.

5. **AKO** Group: **OUR WOLD**

Key figures



20mill€

Turnover
2018

8.000m₂

Factory in Spain

+70

Countries with
operations

+300

Global clients

40%

Engineers on
staff



INNOVATE SME
Valid until Dec 31st 2018



12%

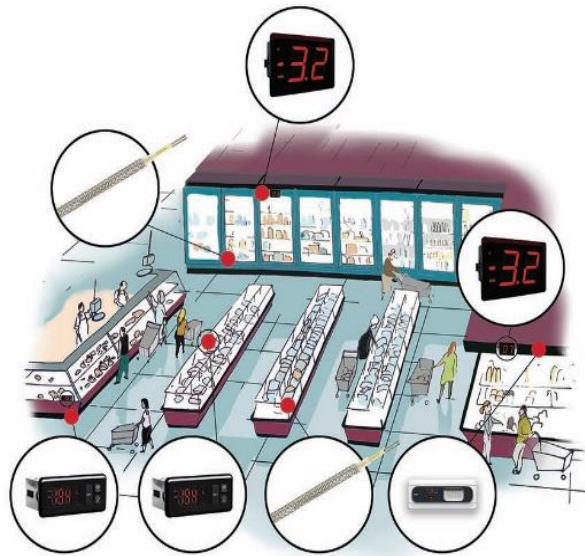
Turnover
invested in R&D

+40

Years of
experience

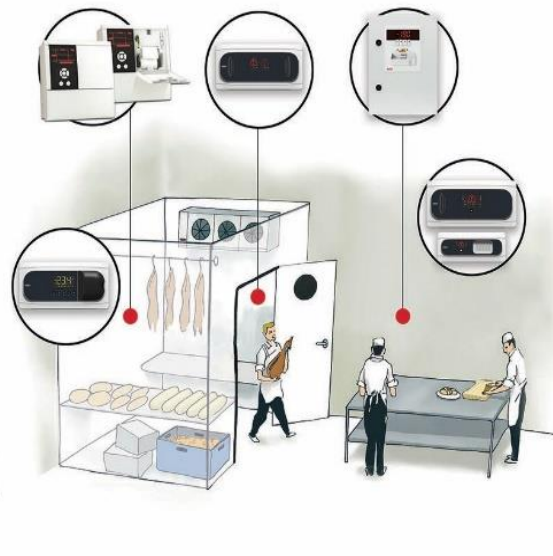
- Technological and innovative manufacturer:
- 85% technical and/or senior engineers
- 15% doctors of engineering
- Official recognition by the Spanish Government as an Innovative SME
- 3 patents pending related to new ranges

5. **AKO** Group: **OUR ACTIVITIES**



SELLING ZONE

FOOD SAFETY



STORAGE ROOM

**EFFICIENT CONTROL OF
COLD ROOMS, COOLD
DISPLAY CABINETS...**



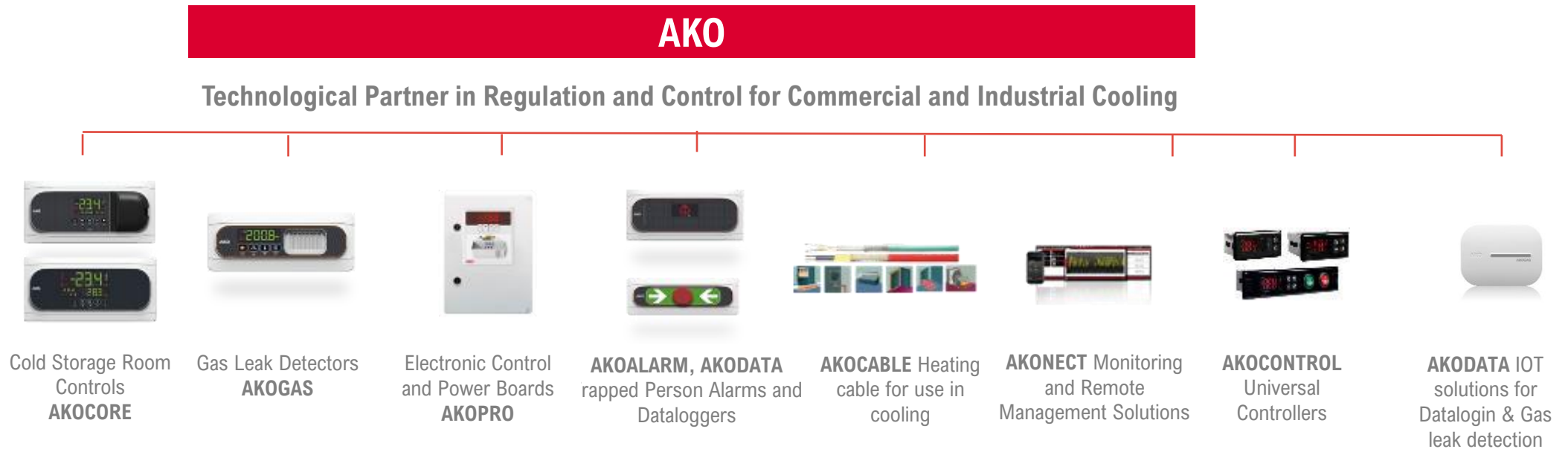
ENGINE ROOM

**EARLY DETECTION OF GAS
LEAKAGES**



CONTROL ROOM

5. **AKO** Group: **OUR PRODUCTS**



DON'T WASTE
YOUR COLD.

November 2019, PLACE.
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POSITION
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AKO