

CHILLVENTA eSPECIAL

Refrigeration | AC & Ventilation | Heat Pumps

13.–15.10.2020

CONNECTING
EXPERTS.



NÜRNBERG MESSE



LIFE-C4R PROJECT AND EPTA CO₂ SYSTEM SOLUTIONS



The logo consists of the letters 'C4R' in a bold, white, sans-serif font. The '4' is stylized with a circular arrow around it, suggesting a cycle or process. It is positioned in the upper left corner of the image, partially overlapping a circular inset showing a globe and green leaves.

C4R

The background features a dark blue sky with a cracked, spiderweb-like texture. A series of five yellow stars are arranged in a slight arc across the top. Below the stars is a curved, multi-lined teal band that resembles a rainbow or a stylized horizon. The bottom right corner is a plain white area containing logos.

Climate crisis
happening
NOW!



C4R

GLOBAL WARMING FROM HFCS



HFC phase down continues to be successful in promoting innovation and a shift towards climate friendly solutions



The HVAC&R industry faces significant product and technology changes



The flammability of the alternative refrigerants may have an impact on the safety and efficiency of systems



CO2 is non flammable, non toxic and energy efficient refrigerant



The Life-CAR project has received funding from the European agreement n° LIFE17 CCM/IT/000120

www.carbon4retail.eu

C4R LIFE-C4R PROJECT



Life-C4R is the Epta project co-financed by the EU Life Climate action program created to accelerate the dissemination and implementation of very high efficiency CO2 refrigeration systems



Life-C4R project will substantially contribute to replacing HCFC and HFC greenhouse refrigerants with CO2 in commercial refrigeration



The core of the project is FTE Full Transcritical Efficiency system and ETE Extreme Temperature Efficiency



The new technology is simple, efficient and reliable in any country, with any external temperature



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C4R LIFE-C4R IN NUMBERS



Environment Objectives

- ✓ Reduce **energy consumption** of the refrigeration system by a minimum of 10%
- ✓ Reduce **refrigerant GWP** to 1
- ✓ Reduce **carbon footprint** over the entire value chain based on a LCCP approach
- ✓ Reduce **EU GHG emission** by at least 1.5%



Policy Objectives

- ✓ To create an **industrial standard** that supports policy makers to further push the use of energy efficient natural refrigerations system
- ✓ To perform **several pilot project in different EU Countries** to simulate the further uptake of this technology across Europe
- ✓ To promote the conversion from the existing refrigerations solutions to new **SIMPLE, GLOBAL and RELIABLE natural solution** for commercial retail



Technical Objectives

- ✓ **High efficiency at all temperatures with no limits**, not only at temperatures lower than 30°C
- ✓ **Improved efficiency**, minimum of 10% energy savings in commercial refrigeration system in any country, with any external temperature
- ✓ **Limited costs of equipment and controls**, savings up to 30% compared to the current solution



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LIFE-C4R PARTNERS

Epta, multinational group specialized in **commercial refrigeration for Retail, Ho.Re.Ca and F&B** which employs more than 6,000 people, an annual production capacity of more than 230.000 units and a turnover of 921 million Euros in 2018



Epta Iberia, part of Epta Group that operates in Spain since 1973 in the **commercialization of goods manufactured** by the Epta Group and the engineering, installation and commissioning of retailers refrigerated site



DAAS, an **engineering company** founded in 1993 with Romanian shareholders that provides turnkey projects for commercial retail, industrial refrigeration and HORECA industries equipment (catering, hotels and restaurant).



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Epta
FTE INSTALLATIONS in the world

CARPENEDOLO

FTE 2.0
IT Patent Application

GENERAL INFORMATION
Store city: Carpenedolo (BS)
Country: Italy
Surface: 1.654 m²

EXTERNAL TEMPERATURE
Brescia

TECHNICAL INFORMATION
Product installed: GranBering, Celle Misa, GranVista Next, GranVista Next Open, Galileo, LionCub Design, Rhapsody, Tradeo, Velvet Design, Velvet N Convertibile
Power installed TN (kW): 67
Power installed BT (kW): 12

TSC vs. TSC+FTE = -11%

The FTE system is part of the Life-C4R Project (Carbon 4 Retail Refrigeration), that has received funding from the European Union under grant agreement n° LIFE 17 CCM/IT/000120



Le système FTE fait partie du projet Life-C4R (Carbon 4 Retail Refrigeration) et bénéficie d'un financement européen N° LIFE 17 CCM / IT / 000120

FTE 2.0

IT Patent Application Pending

GENERAL INFORMATION

Store city: Benicassim
Country: Spain
Surface: 1400 m²

GALLERY ▶

TECHNICAL INFORMATION

Product installed:
Crocodile, GranBering, GranVista Next, Velvet

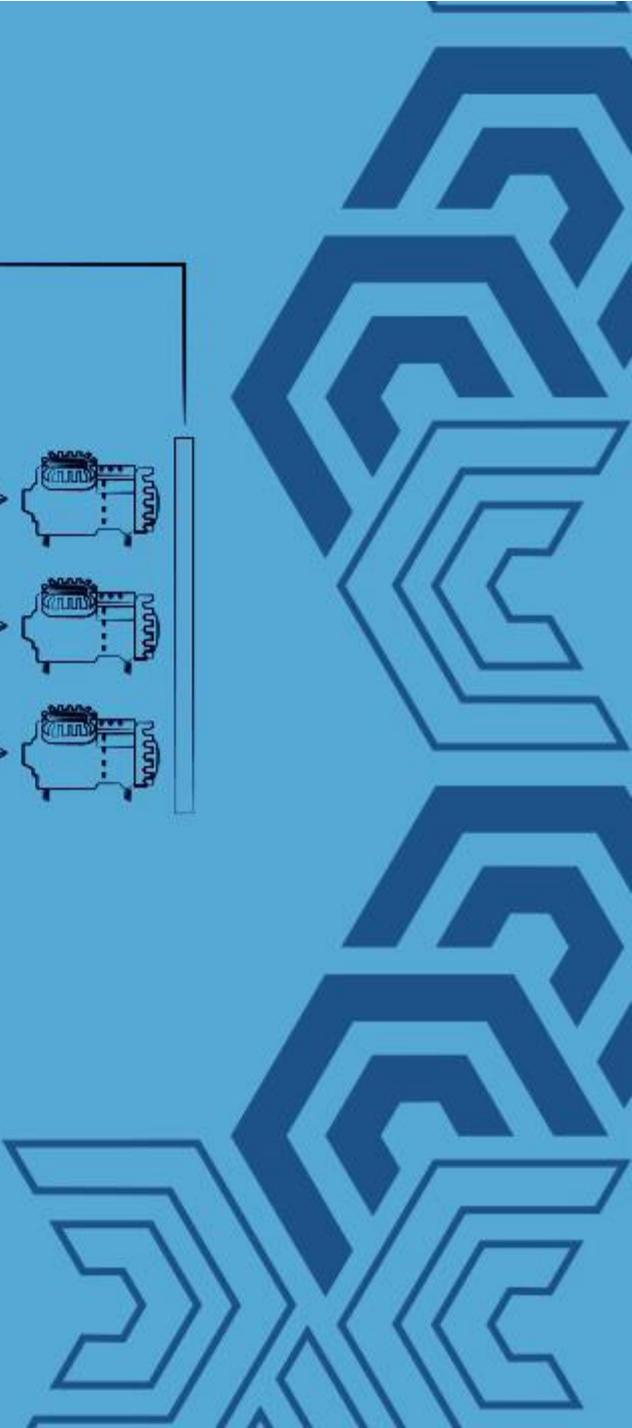
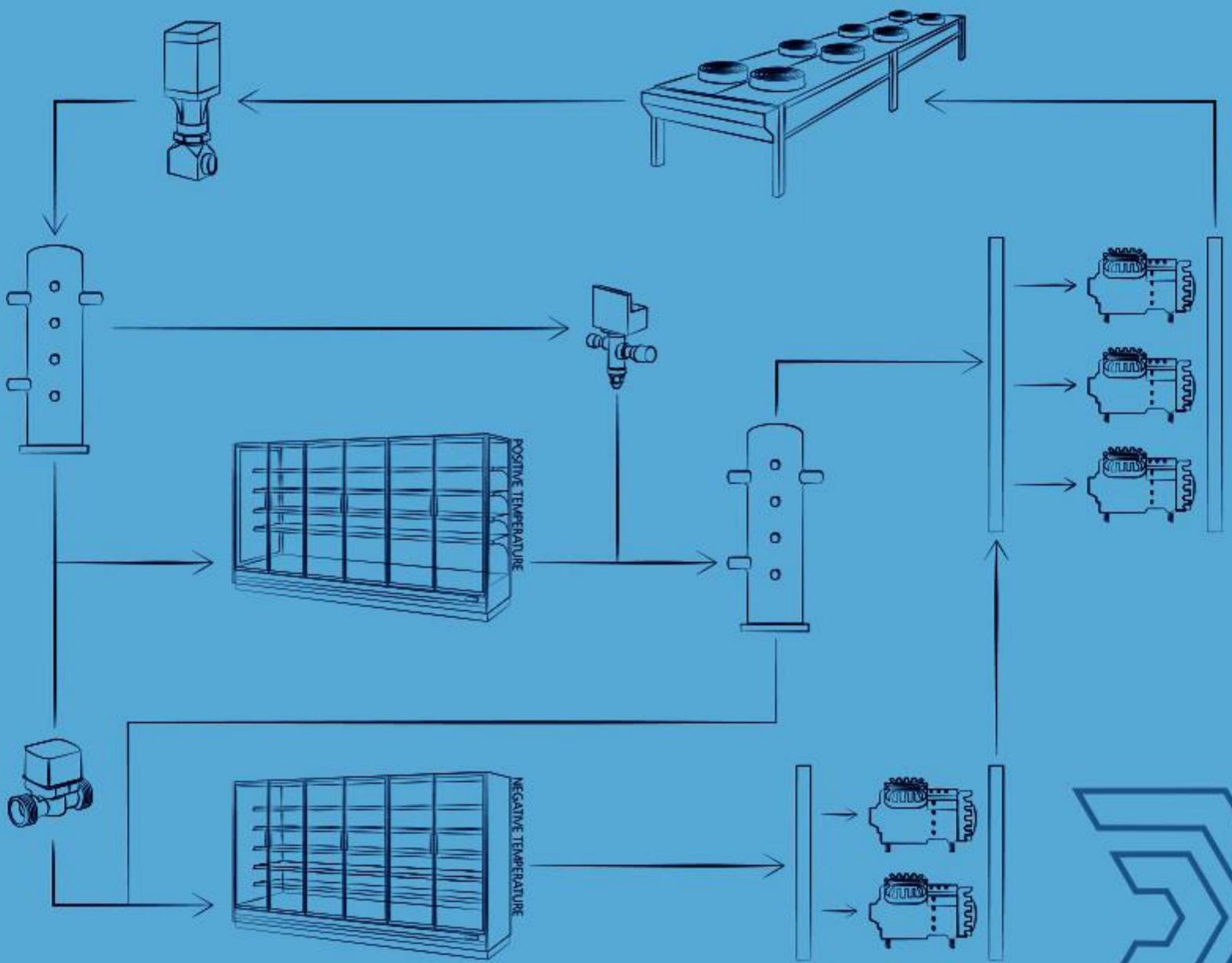
BENICASSIM

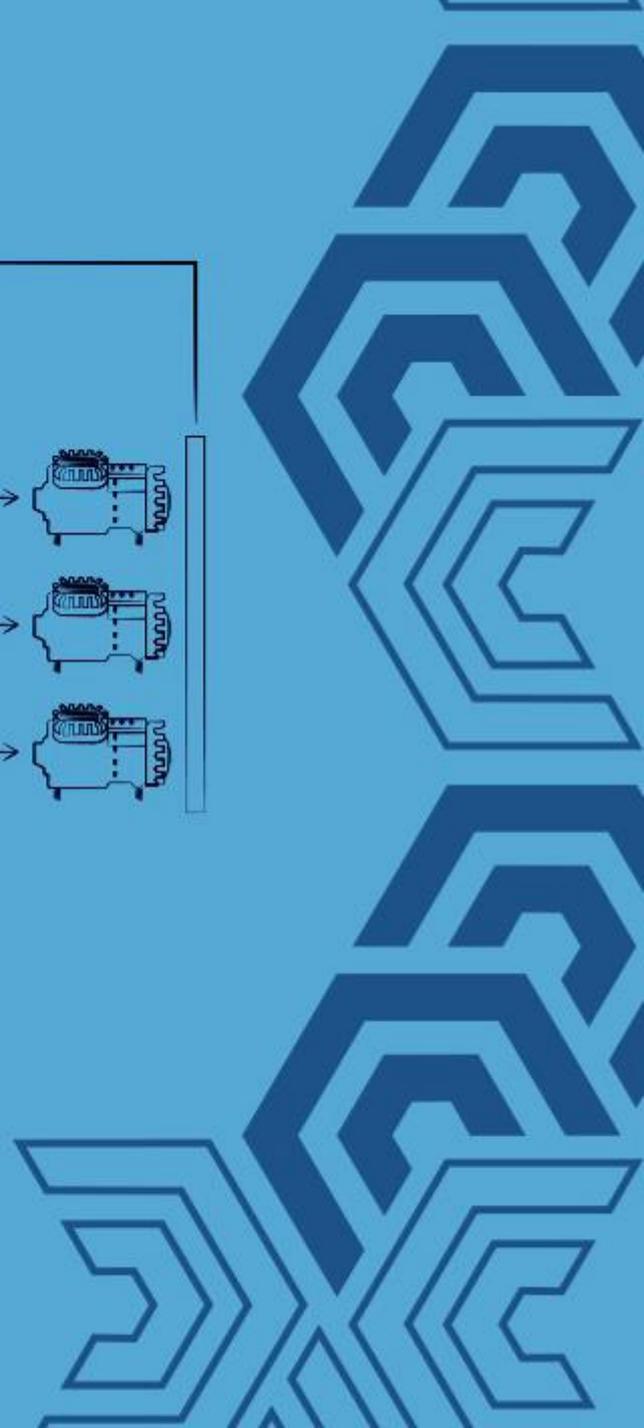
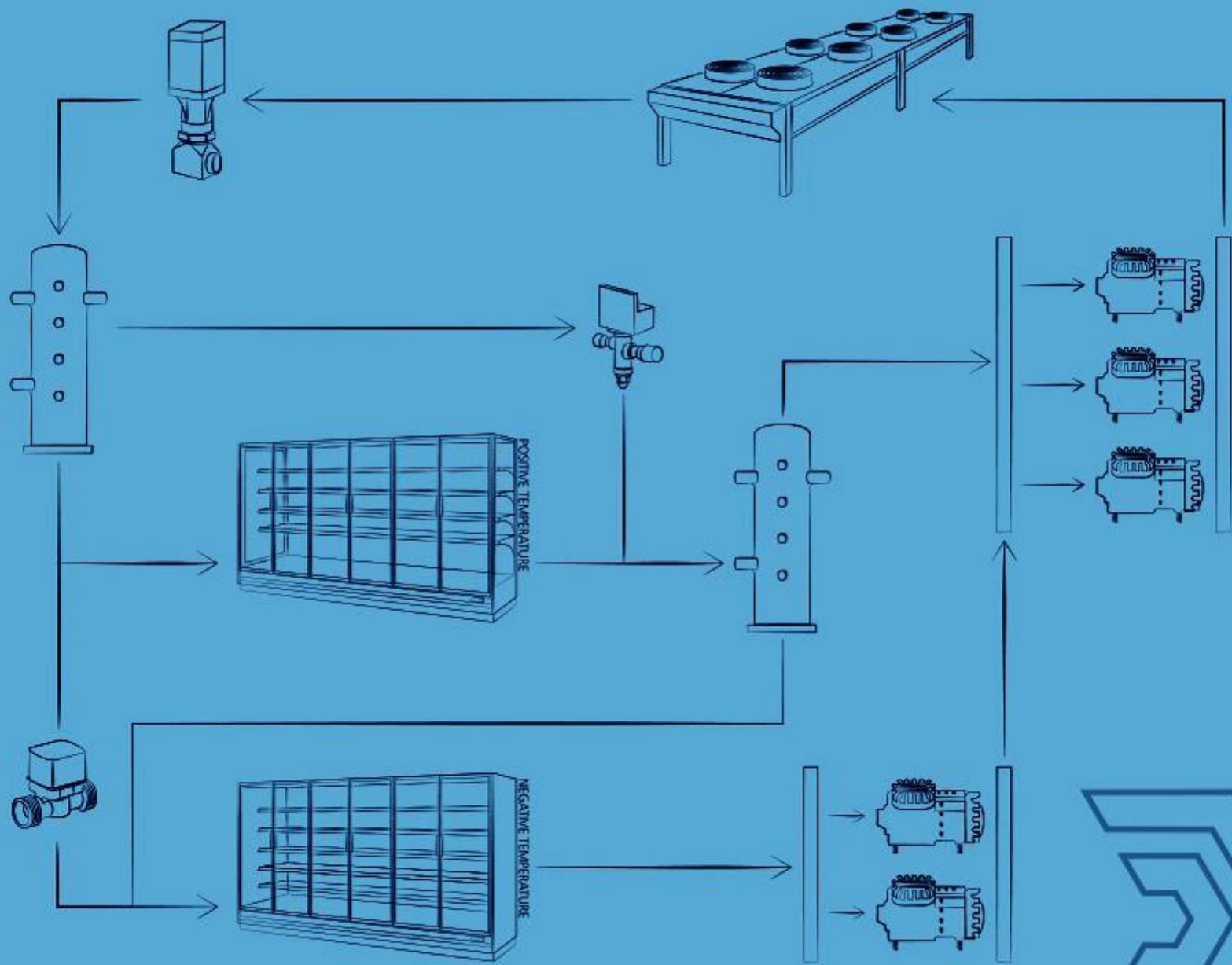
BENICASSIM

EXTERNAL TEMPERATURE PRO

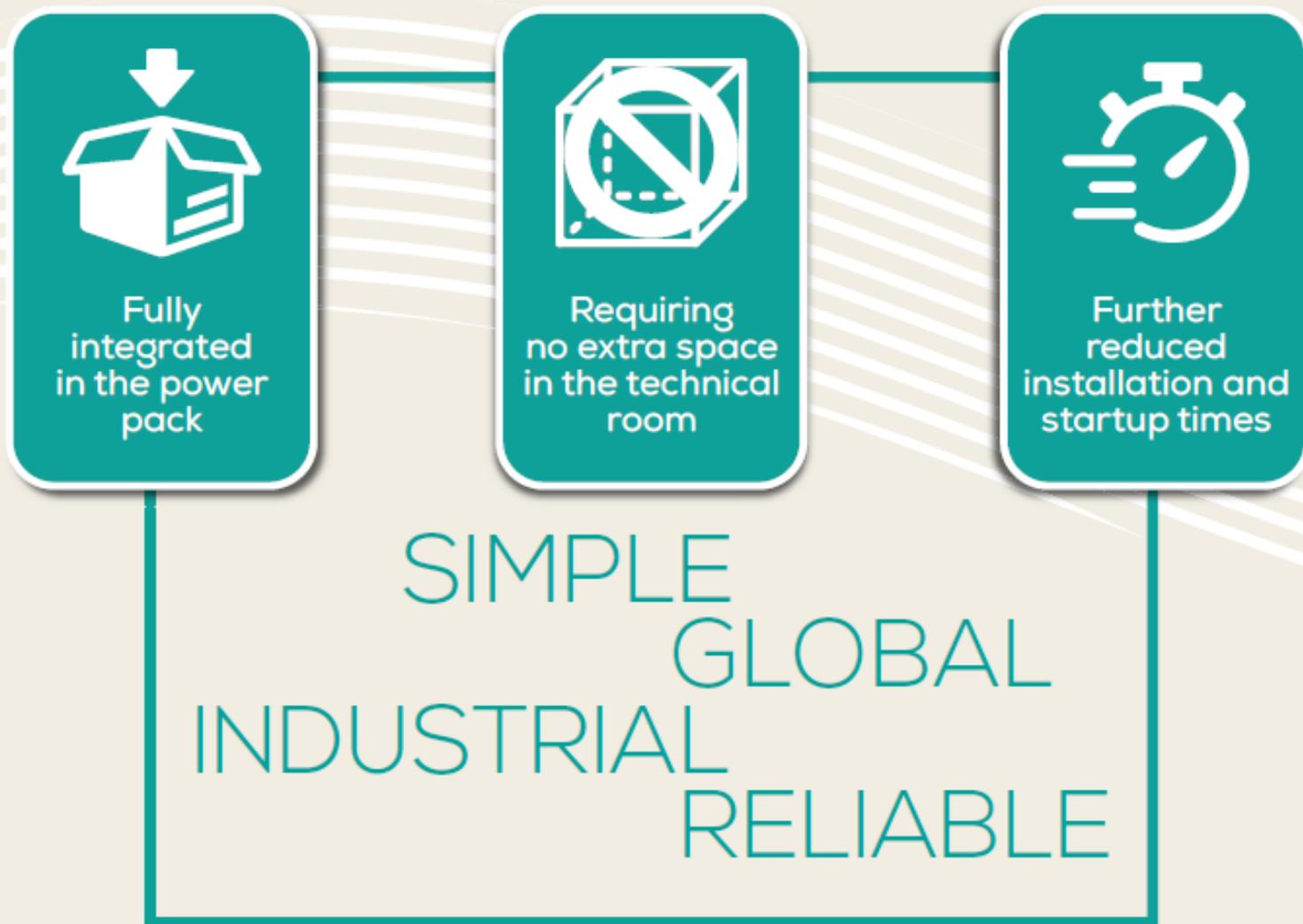
Benicassim

TSC vs. TSC+FTE = -10%

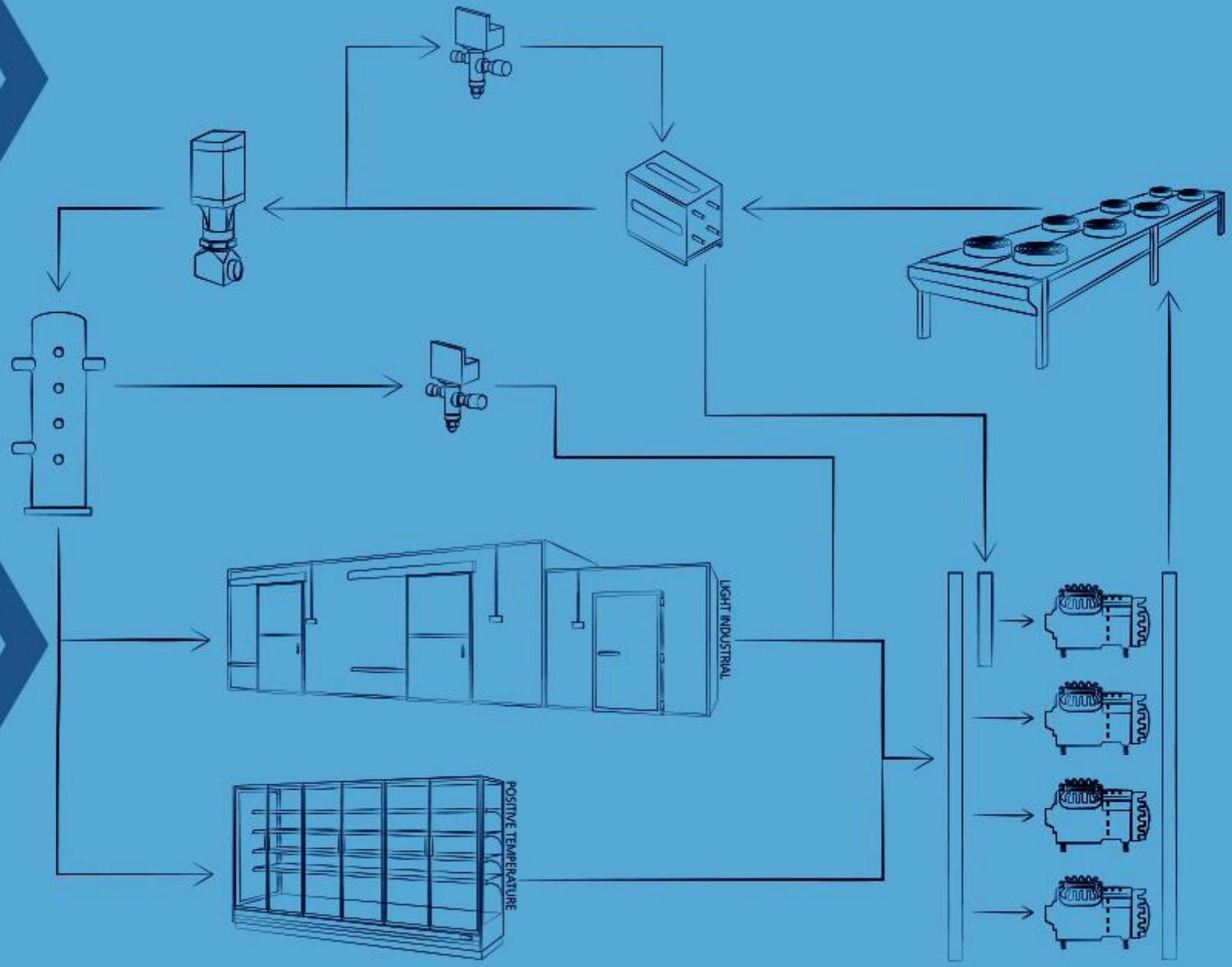




C4R LIFE-C4R: FTE 2.0



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LIFE-C4R: ETE

ADVANTAGES



Complements FTE
to further enhance
the efficiency of CO2
in warmest
climate conditions



Designed to operate
also with one temperature
stage systems
and industrial
refrigeration

SIMPLE
GLOBAL
INDUSTRIAL
RELIABLE



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CCM/IT/000120

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LIFE C4R COMMUNICATION



Coordination meetings with the international organizations



Public events for the stakeholders



European conferences



Publication of peer reviewed articles



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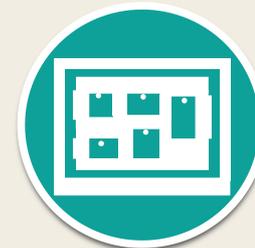
Promotional material



Inclusion into your websites



Notice boards at trade fairs, workshops etc.



**Thank you for your
attention.**

**CONNECTING
EXPERTS.**

