

CONNECTING
EXPERTS.

CHILLVENTA eSPECIAL

Refrigeration | AC & Ventilation | Heat Pumps

13.–15.10.2020

NÜRNBERG MESSE



LIFE-C4R PROJECT

AND EPTA CO₂ SYSTEM SOLUTIONS





C4R



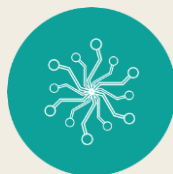
Climate crisis
happening
NOW!



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

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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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C4R 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).



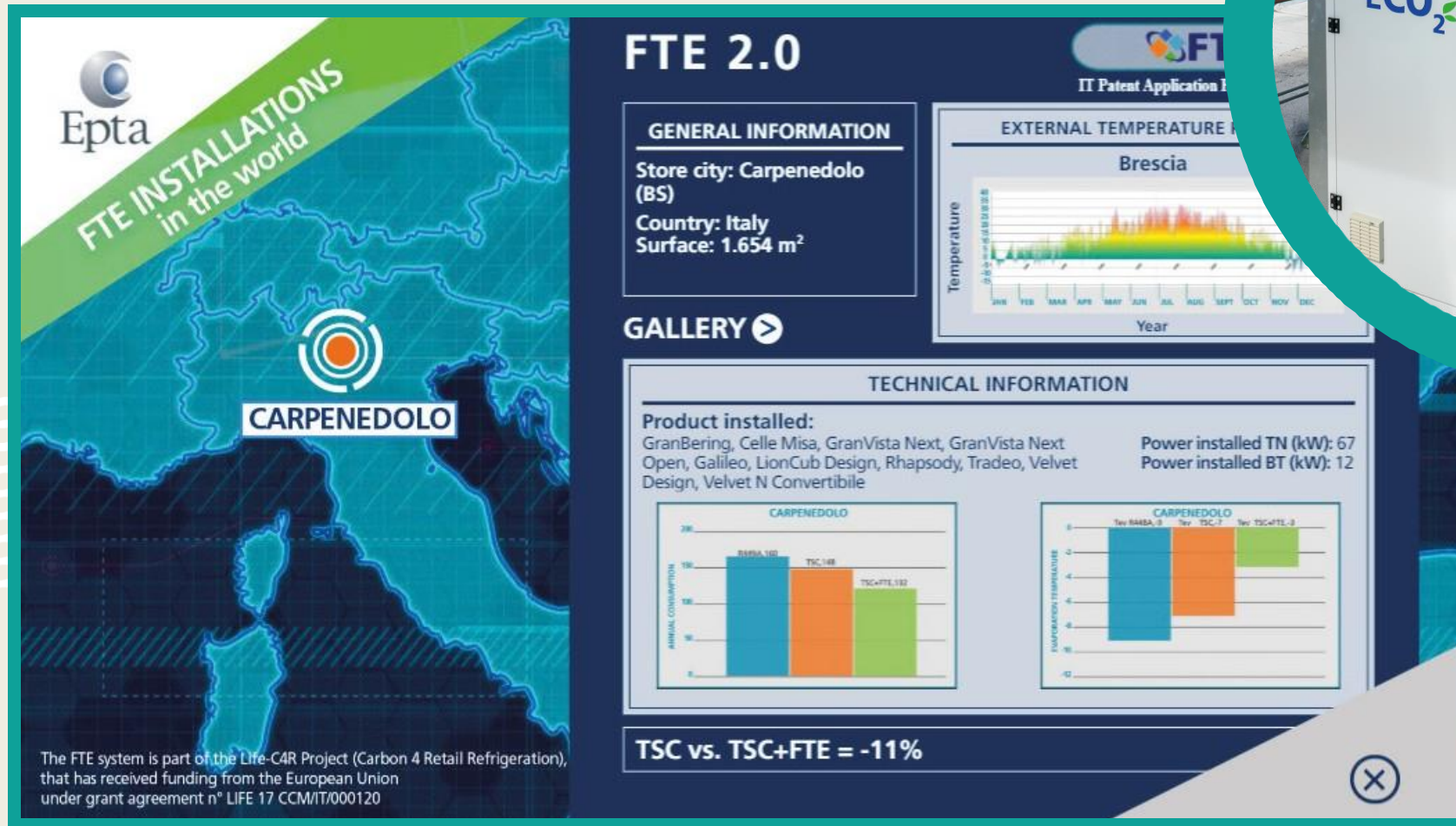
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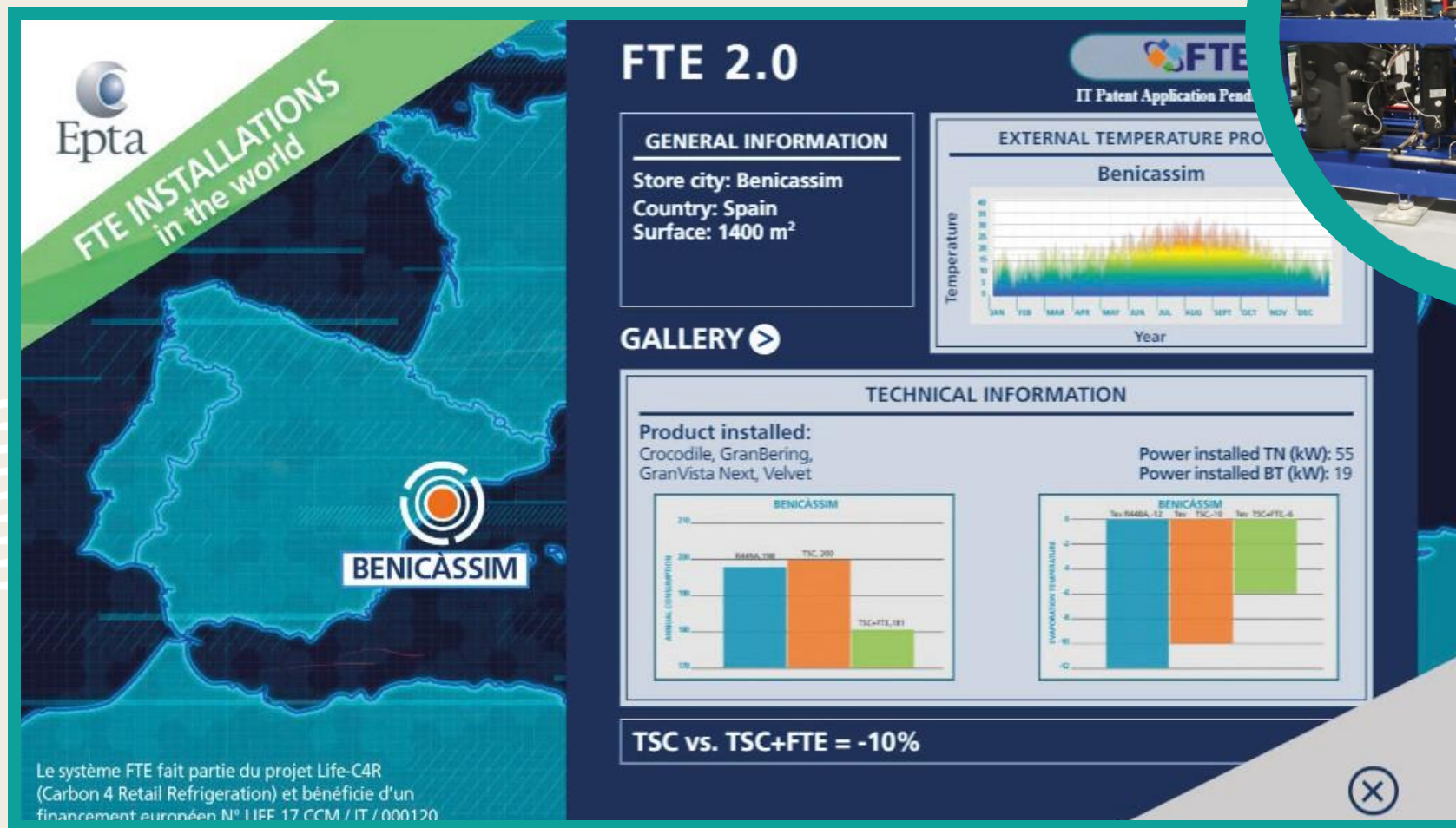
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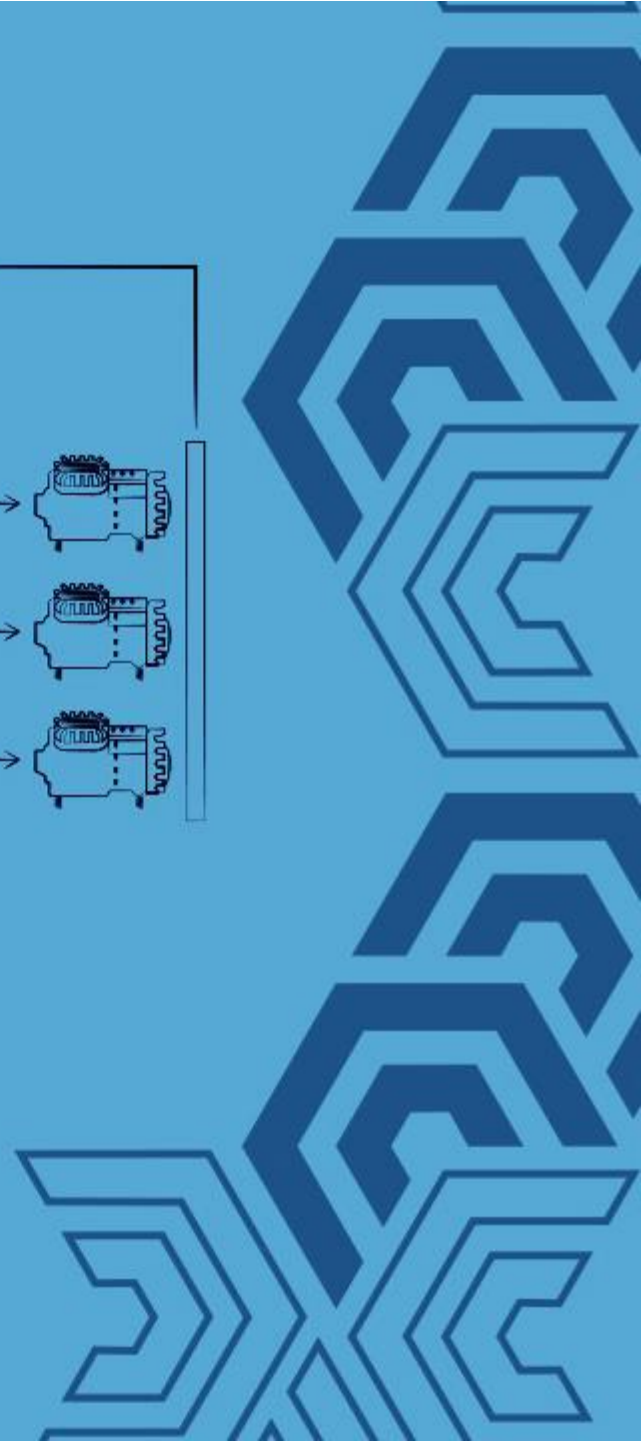
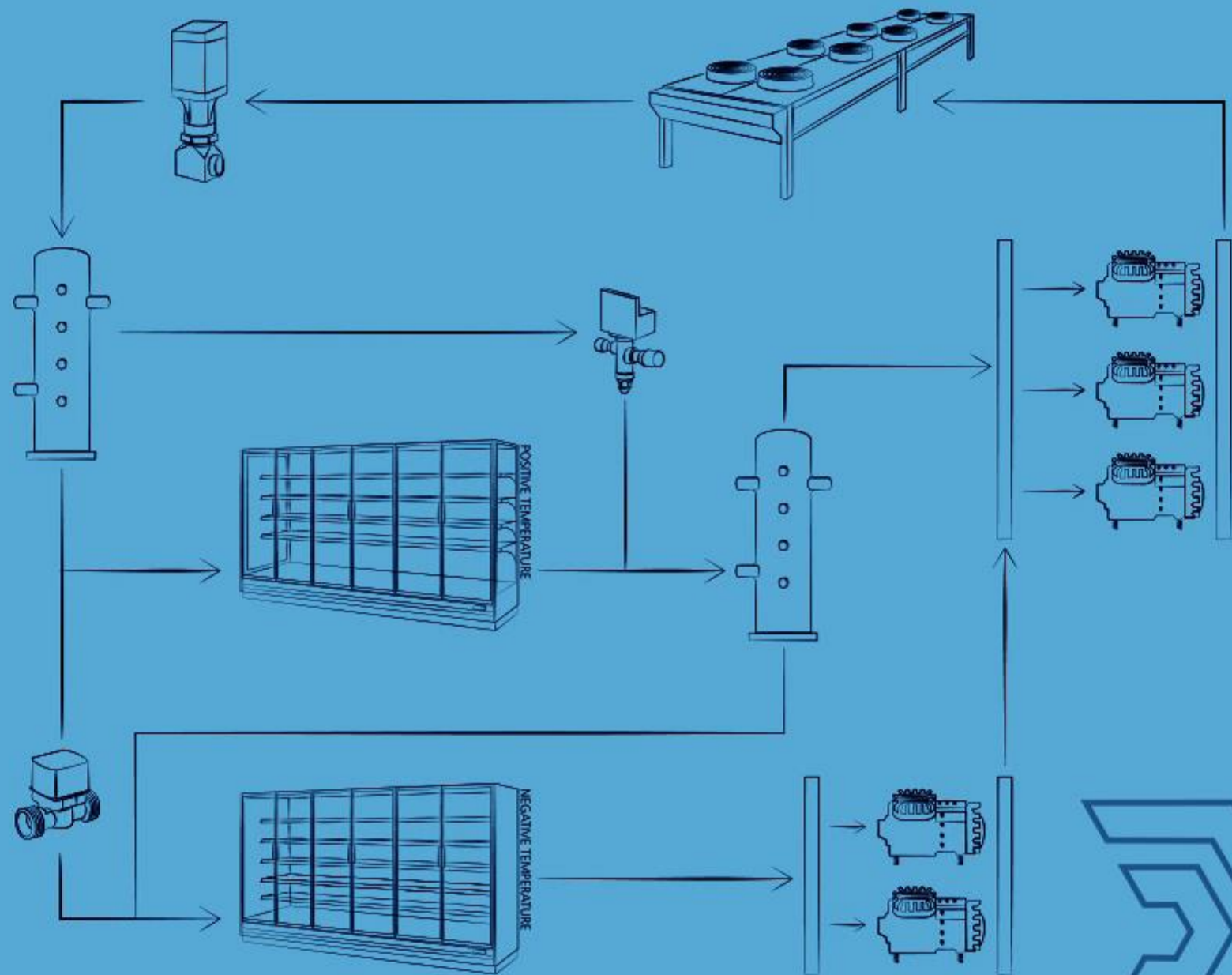


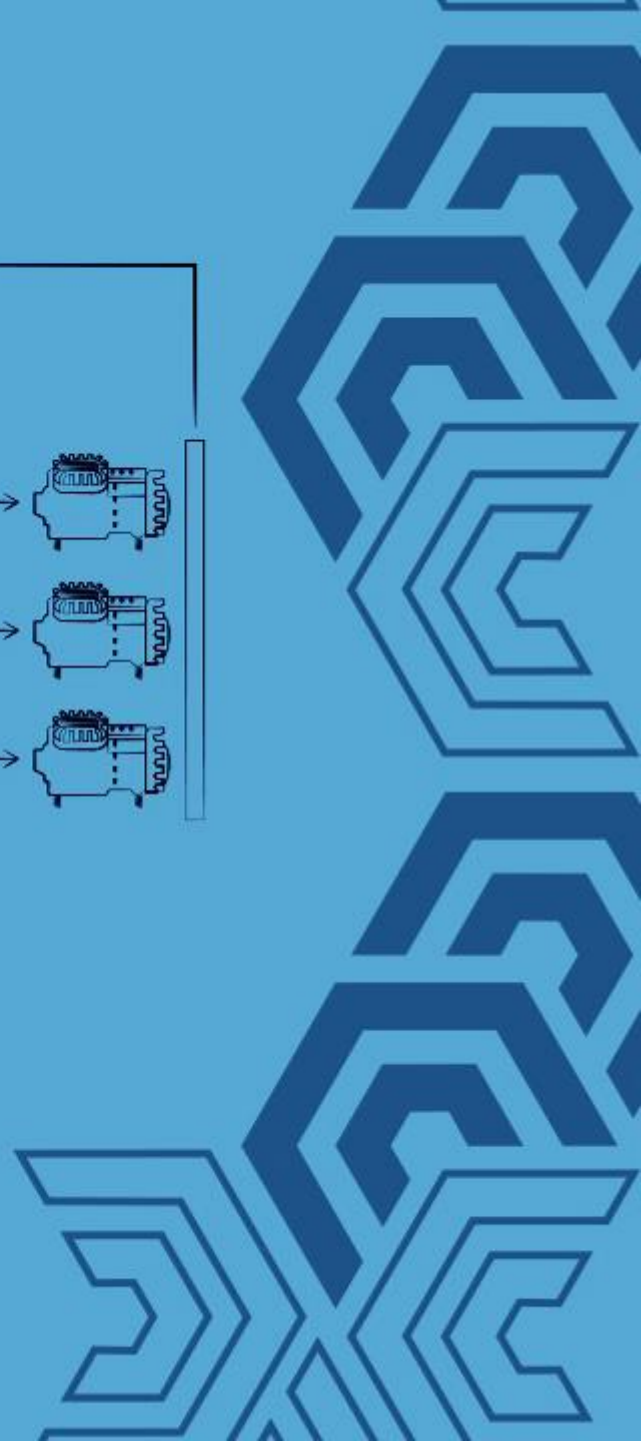
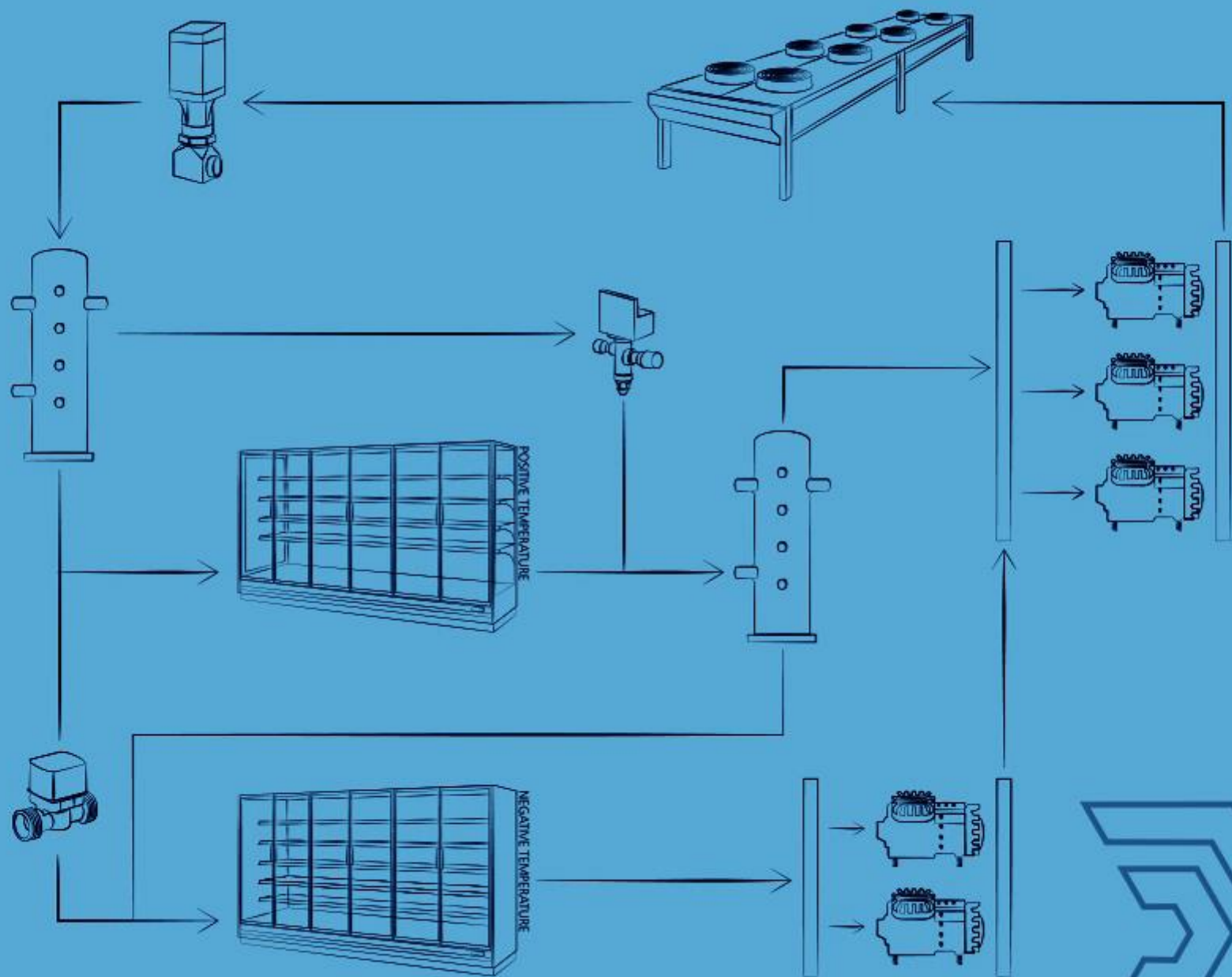


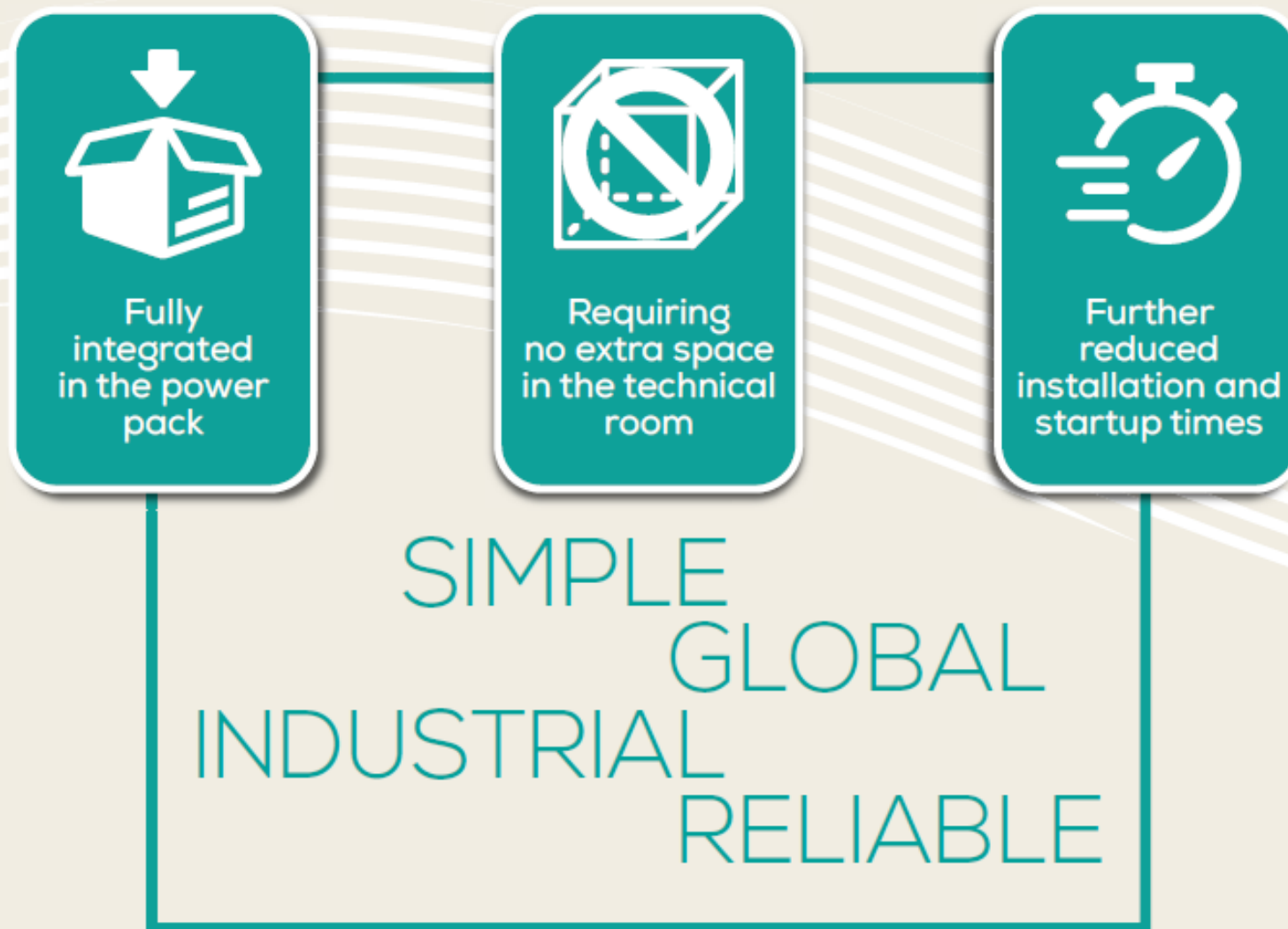
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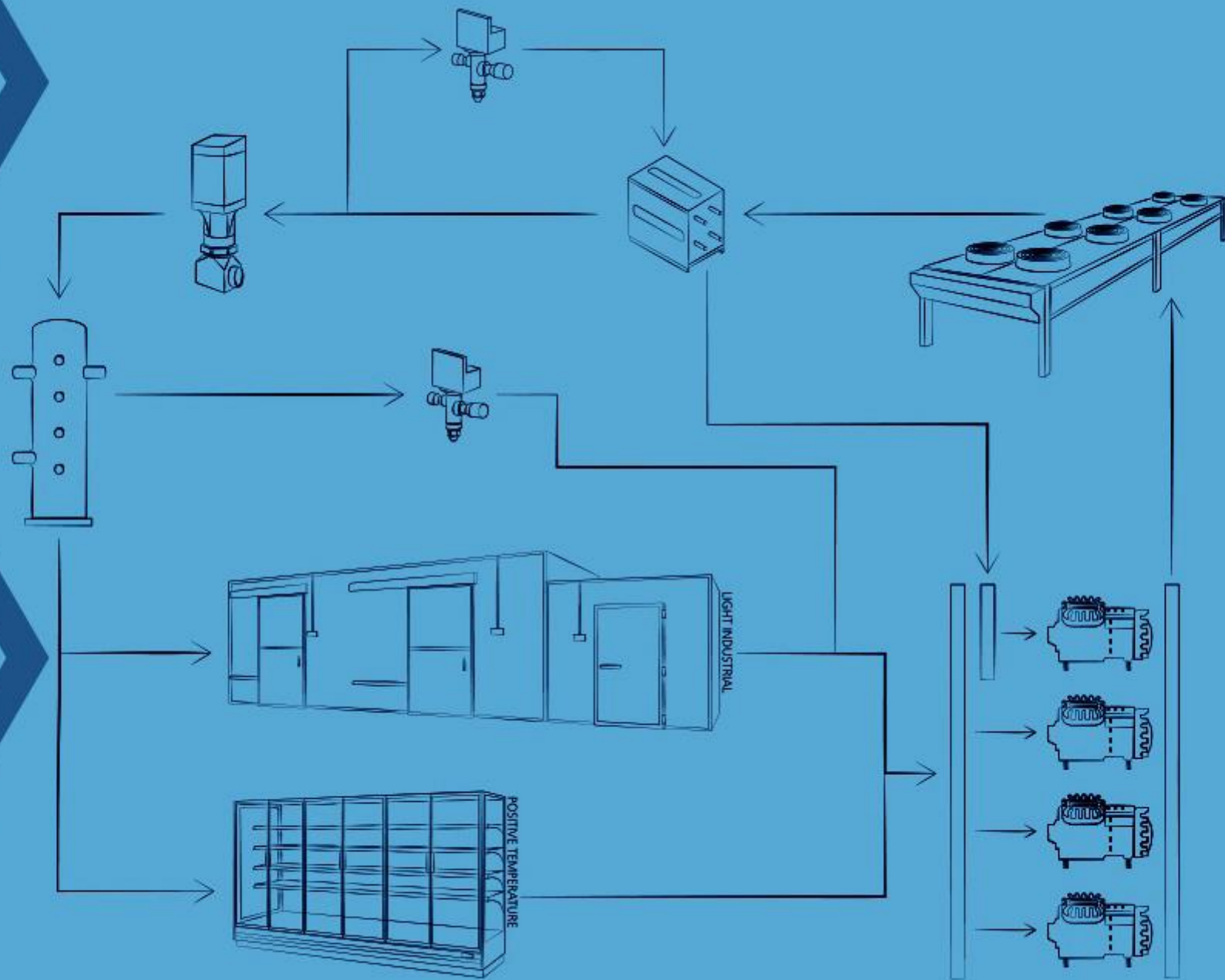
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LIFE-C4R: ETE

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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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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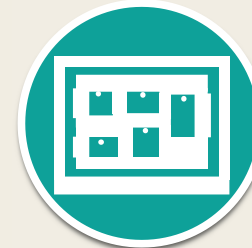
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material**



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websites**



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at trade fairs,
workshops etc.**

**Thank you for your
attention.**

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