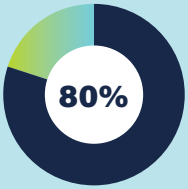
# **Sustainable cooling**
to enable decarbonisation and deliver on the European Green Deal

CountOn Cooling

## **Cooling is...** a key player in the European energy landscape



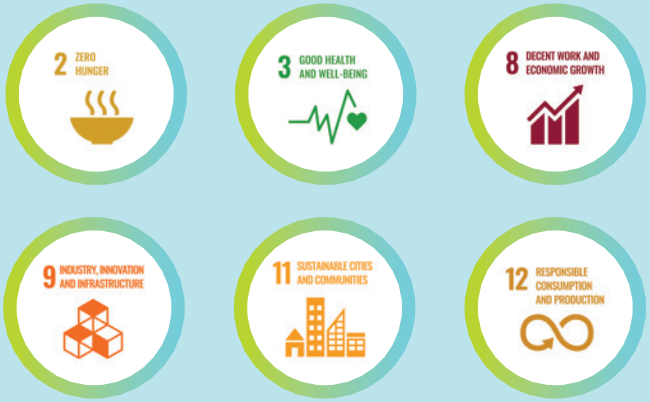

of all greenhouse gas emissions in Europe are energy related


of the final energy consumption for heating and cooling is provided by renewables


of the total final energy consumption in Europe is used for heating and cooling


of the electricity mix is based on renewables

## **Cooling contributes...** to numerous Sustainable Development Goals (SDGs)




## **Cooling is...** an intrinsic part of life

Fresh and safe food

Health and well-being

Thermal comfort and productivity

# **Cooling is...** a big global industry and it is set to grow

Already today at global level:

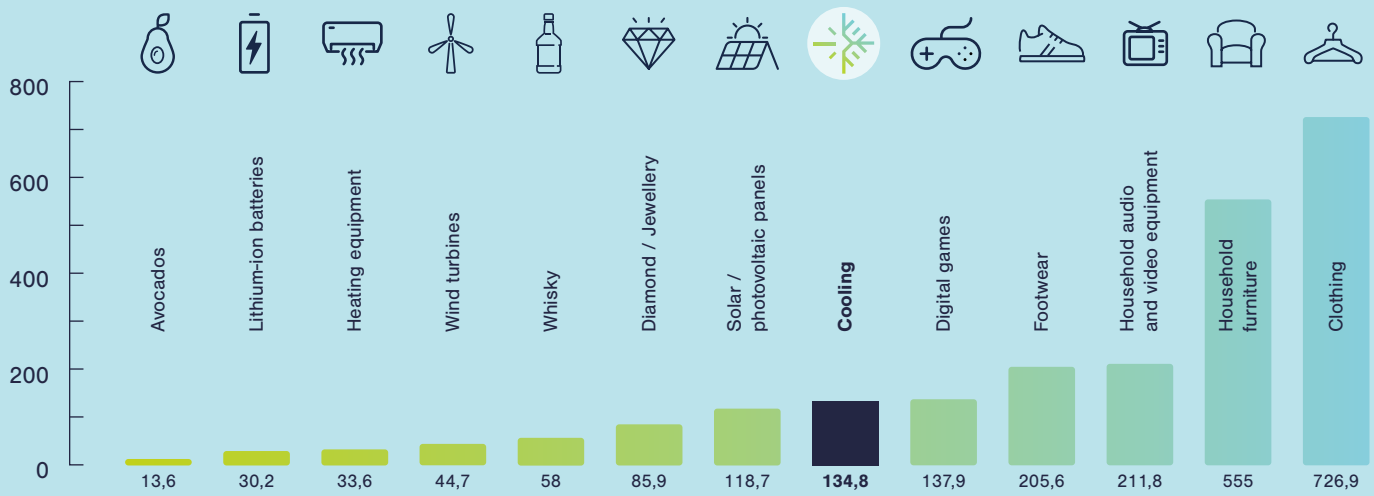
**≈ $ 135**
**BILLION** GLOBALLY

The demand for cooling is set to grow:

**≈ $ 170**
**BILLION** IS THE GLOBAL EXPECTED MARKET VALUE BY 2030

## Cooling in comparison

Cooling market value versus other sectors (2018, USD billion)




Sources:
The Cooling Imperative, A report by The Economist Intelligence Unit in partnership with K-CEP
European Environment Agency statistics on energy
Share of renewable energy in gross final energy consumption, EEA 2017

## Did you know?

An integrated approach to heating and cooling based on energy efficient electrification can help moving away from fossil fuel-based solutions: first because the share of renewables in the electricity mix is increasing and second because it will reduce energy consumption for heating purposes. This is particularly evident with heat pumps which help to save energy whilst providing both heating and cooling.

### The solution:

- Sector integration between heating and cooling
- Energy consumption reduction
- Increased share of renewables in the energy mix

## How to get there:
## 5 Steps towards sustainable cooling

**OPTIMISE THE NEED FOR COOLING**

Insulation, glazing, control systems, consumer behaviour, operating temperatures...

**IMPROVE ENERGY & RESOURCE EFFICIENCY**

Design, sizing, service & maintenance, monitoring, control & operation...

**ADDRESS INVESTMENT COST**

Integrated approach between supply side and demand side, new business models...

**MITIGATE THE CLIMATE IMPACT OF REFRIGERANTS**

Lower global warming potential refrigerants, leakage control, recovery, recycling, reuse...

**SHIFT TO RENEWABLE ENERGIES**

With an integrated approach to heating & cooling: district heating & cooling, heat pumps, heat recovery, demand response, thermal storage...

## Enable carbon neutrality

**WITH AN INTEGRATED APPROACH TO COOLING AND HEATING**

## Did you know?

Global leadership

Cooling and heat pump systems need refrigerants for their operation. Some of them can be powerful greenhouse gases if emitted into the atmosphere. These emissions from hydrofluorocarbons (HFCs) represent roughly 2% of total greenhouse gas emissions in Europe, but their share used to rapidly grow. In Europe, this trend has been reversed. Since 2014, HFC emissions have been decreasing thanks to the EU F-Gas Regulation – the first regulation in the world to directly address these emissions. At global level, the Kigali Amendment entered into force in 2019 to phase down HFCs and to reduce emissions accordingly.

**Source:** Annual European Union greenhouse gas inventory 1990–2017 and inventory report 2019, EEA

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