

# **ATMOsphere Europe 2013**

## Natural Refrigerant trends and EU F Gas Regulation



**Bangkok, 24 October 2013**

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**shecco**



# ATMOsphere Europe 2013 - Report



- ⊙ **EU F Gas**
- ⊙ **market trends**
- ⊙ **end user experience**
- ⊙ **market innovations**



# ATMOsphere Europe 2013 - Report



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Interactive workshops bringing together decision makers from industry and government to change the future of natural refrigerants.

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15-16 October 2013, Brussels

15-16 October 2013, Brussels

natural refrigerants

solutions for europe

ATMOsphere

### ATMOsphere Europe 2013

date  
15 - 16 October 2013

location  
Crowne Plaza Le Palace Hotel, Brussels [view on map](#)

Crowne Plaza Le Palace Hotel, Brussels [view on map](#)

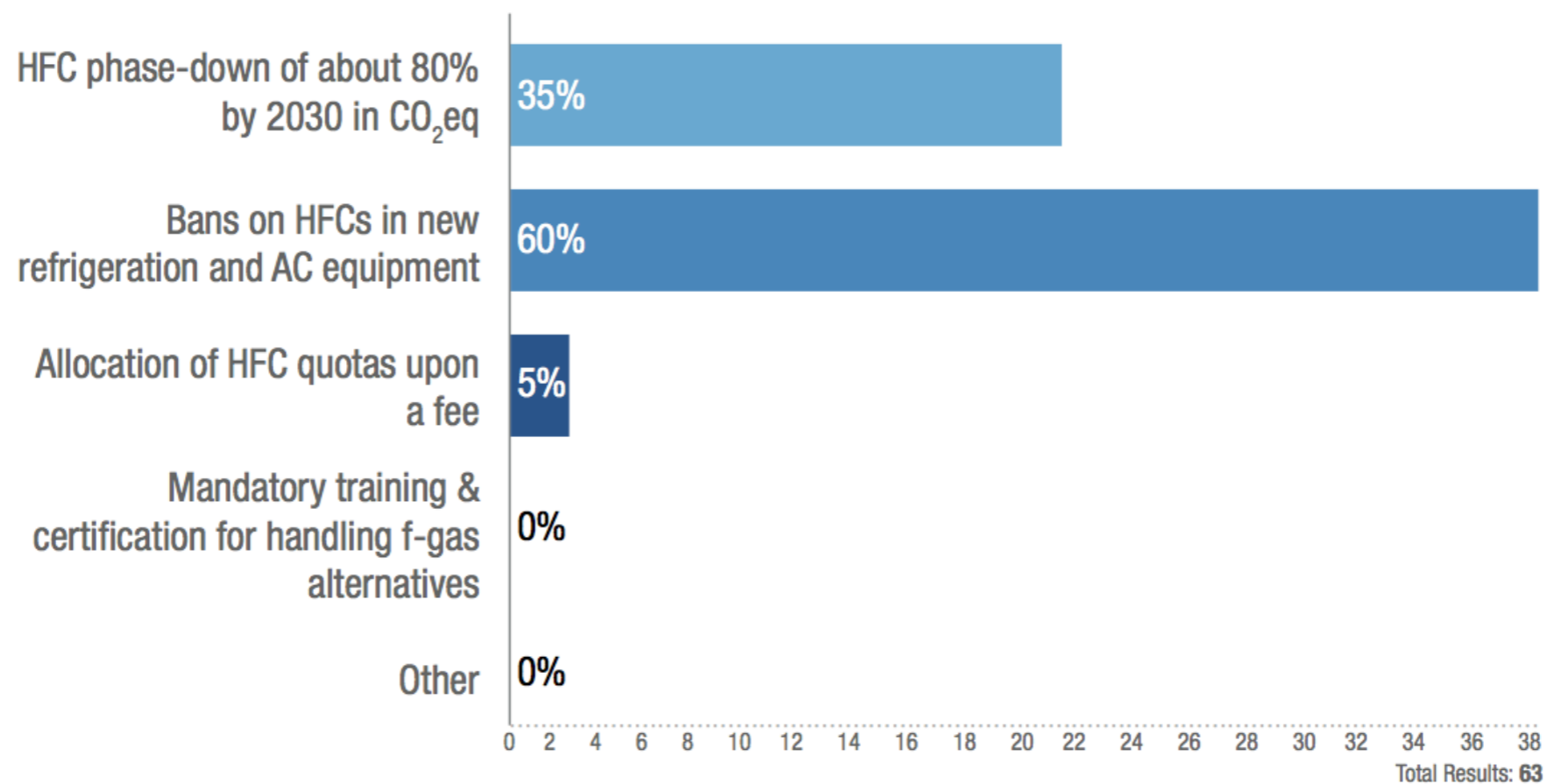
15 - 16 October 2013

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# EU F gas

## Which type of measure considered in the F-Gas review do you regard to be of key importance in driving the uptake of natural refrigerant technology



# Natural refrigerant commercial availability, 2013-2025

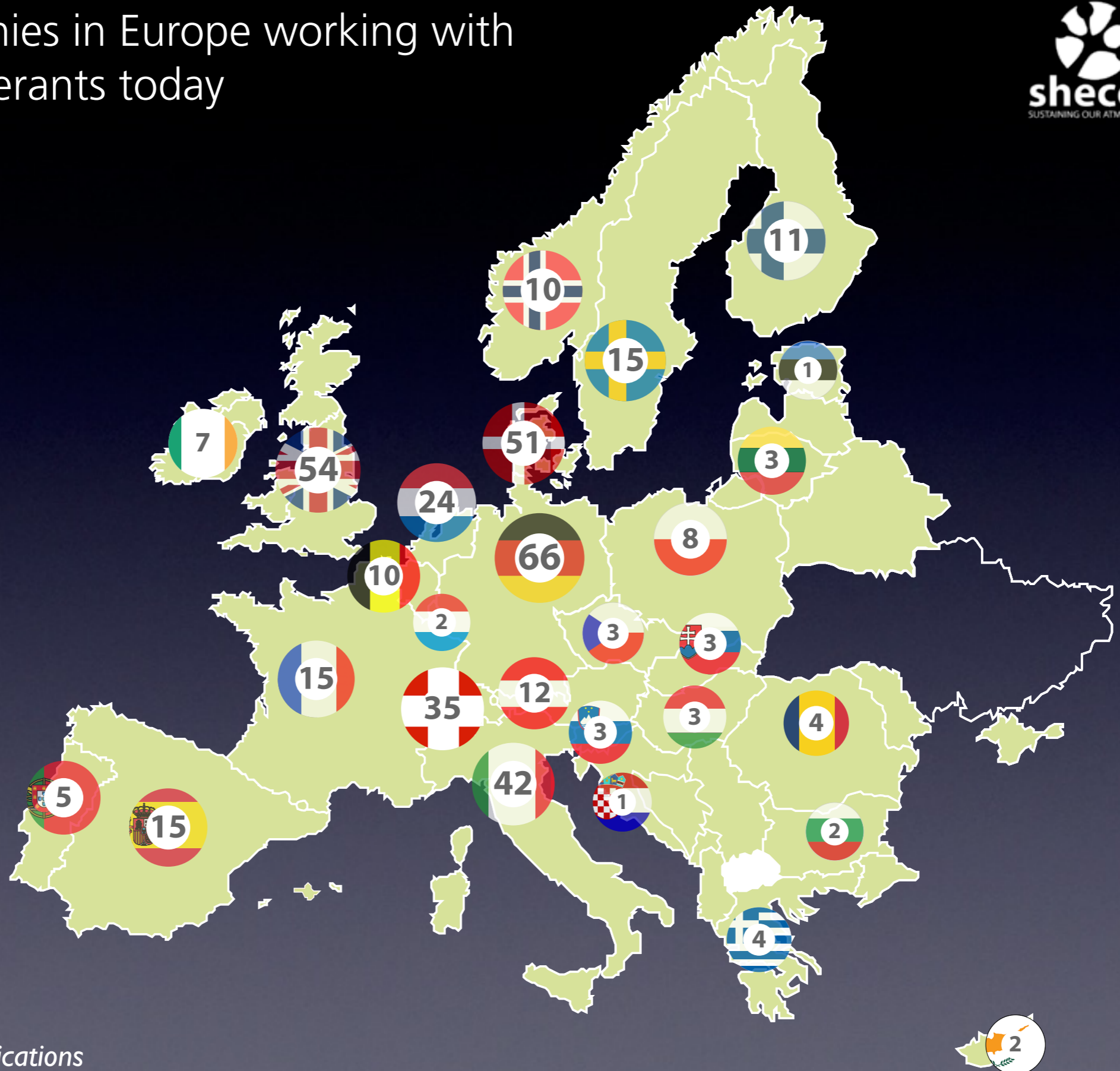


commercially available in all EU
  semi-commercially available
  not commercially available yet

REFRIGERATION	TODAY	2015-2020	2020-2025	2025
Domestic refrigeration	Commercially available in all EU	Commercially available in all EU	Commercially available in all EU	Commercially available in all EU
Stand-alone units	Semi-commercially available	Commercially available in all EU	Commercially available in all EU	Commercially available in all EU
Condensing units	Semi-commercially available	Semi-commercially available	Commercially available in all EU	Commercially available in all EU
Centralised systems	Semi-commercially available	Semi-commercially available until 2018, then Commercially available in all EU	Commercially available in all EU	Commercially available in all EU
Small industrial refrigeration	Semi-commercially available	Semi-commercially available	Commercially available in all EU	Commercially available in all EU
Large industrial refrigeration	Commercially available in all EU	Commercially available in all EU	Commercially available in all EU	Commercially available in all EU
Road transport refrigeration	Not commercially available yet	Not commercially available yet until 2017, then Semi-commercially available	Semi-commercially available	Commercially available in all EU

AIR-CONDITIONING	TODAY	2015-2020	2020-2025	2025
Movable room AC	Semi-commercially available	Semi-commercially available until 2017, then Commercially available in all EU	Commercially available in all EU	Commercially available in all EU
Split AC	Semi-commercially available	Semi-commercially available until 2018, then Commercially available in all EU	Commercially available in all EU	Commercially available in all EU
Multisplit/ VRF AC	Semi-commercially available	Semi-commercially available	Commercially available in all EU	Commercially available in all EU
Rooftop AC	Semi-commercially available	Semi-commercially available	Commercially available in all EU	Commercially available in all EU
Displacement chillers	Semi-commercially available	Semi-commercially available	Commercially available in all EU	Commercially available in all EU
Centrifugal chillers	Not commercially available yet	Semi-commercially available	Semi-commercially available	Commercially available in all EU
Heat pump water heaters	Semi-commercially available	Semi-commercially available until 2018, then Commercially available in all EU	Commercially available in all EU	Commercially available in all EU
Heat pumps for space and water heating	Semi-commercially available	Semi-commercially available	Commercially available in all EU	Commercially available in all EU
AC in cargo ships	Semi-commercially available	Semi-commercially available	Commercially available in all EU	Commercially available in all EU

400+ companies in Europe working with natural refrigerants today



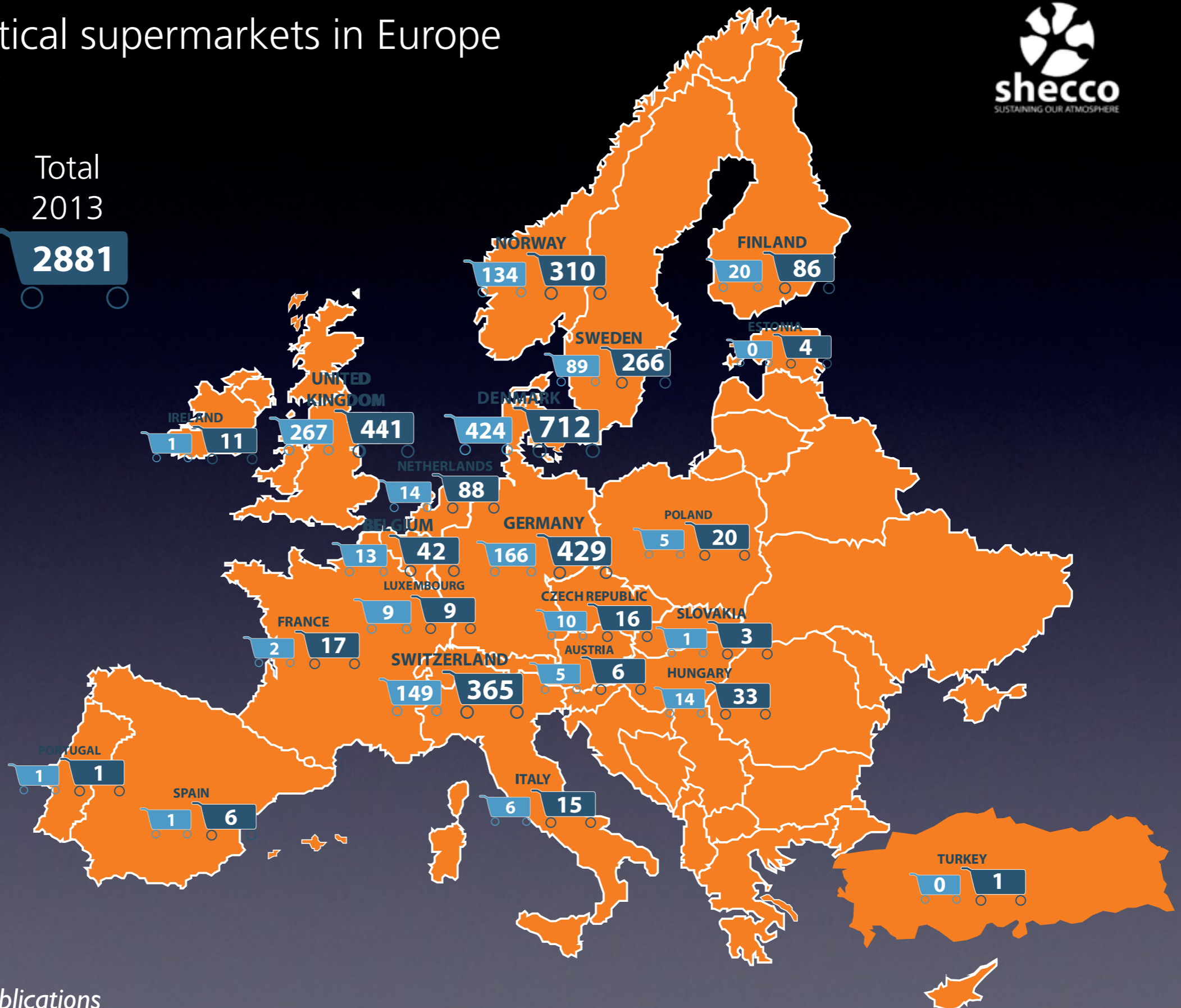
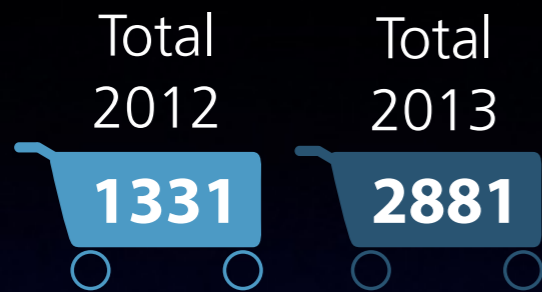
Source: shecco publications





# CO<sub>2</sub> transcritical supermarkets in Europe

## data by country



Source: shecco publications

# CO<sub>2</sub> cascade supermarkets in Europe

data by country



Total  
CO<sub>2</sub>/HFC

1568

Total  
CO<sub>2</sub>/NH<sub>3</sub>

16



Source: shecco publications



