

ZUM HANDELN GESCHAFFEN.

METRO F- GASE- EXIT Program [FEP] 2015 - 2025. ATMOsphere - Brussels 17th of March 2015

Olaf Schulze: 03-17-2015 | © METRO AG



1. Decision of METRO AG Sustainability Board 2013.

1. Montreal Protocol on Substances that Deplete the Ozone Layer (1987)

- Prohibition of substances that deplete the ozone layer
- Ban on Hydrochlorofluorocarbons (HCFC) e. g. R22

2. The Kyoto Protocol to the United Nations Framework Convention Climate Change (UNFCCC) (1997)

- Reduce emissions of greenhouse gases (measured in CO2 equivalent)
- 2006: Avoiding of leakages and obligation of documentation
- 2015: Reduction of Hydroflourcarbons (HFC) use

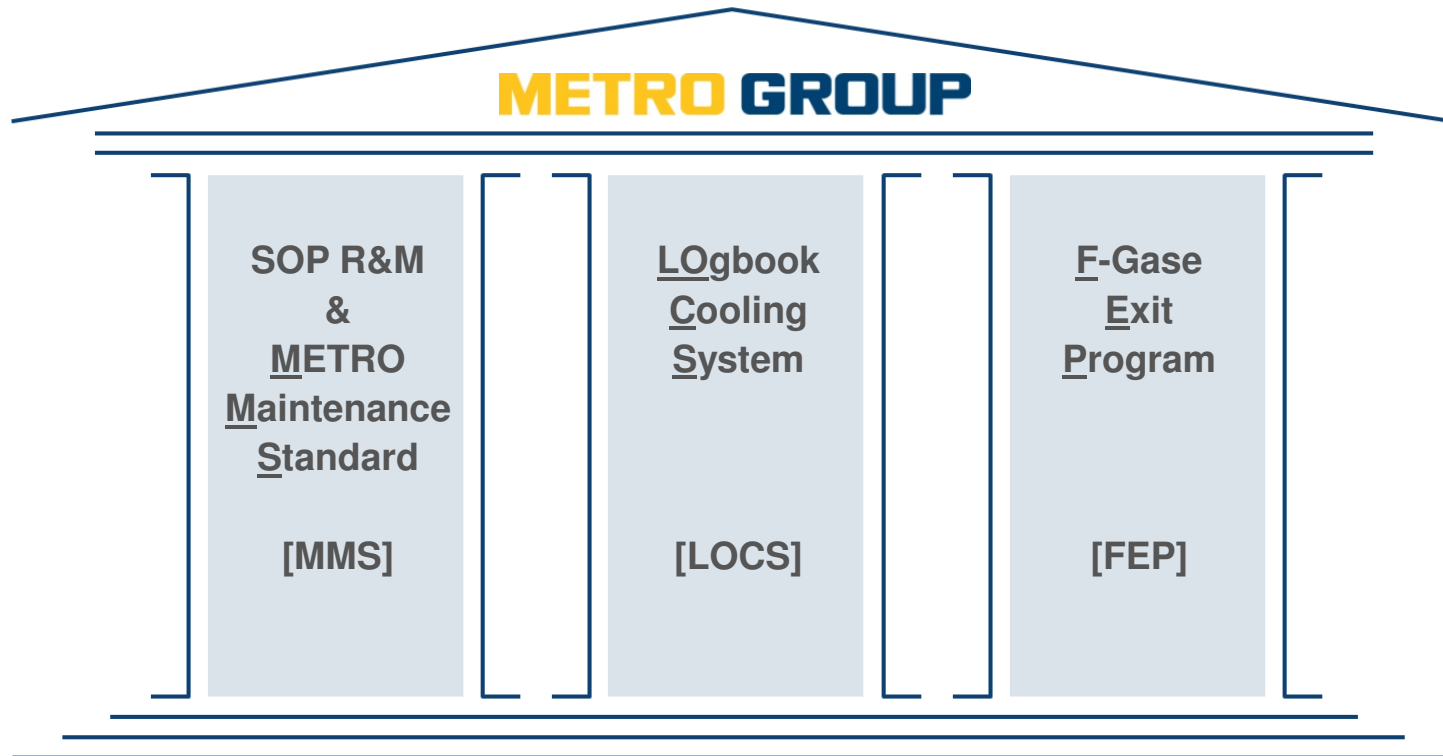


3. METRO AG Commitment during the Consumer Goods Forum in Acapulco (2010)

- Voluntary commitment on starting implementation of natural refrigerants from 2015 on
 - **07/2013 Decision of the MAG Sustainability Board**
 - In NSO as well as in remodeling natural refrigerants are to be used where technically possible. Otherwise at least refrigerants with a GWP < 2500 are to be used
 - Natural refrigerants: CO₂, Propan, Propen, Amonia
 - **No limitations: all sales lines and worldwide**

4. EU 517/2014 of 04-16-2014, transition 2020/ step out 2030

2. METRO AG: F- GASE – Avoidance & Exit Programs.



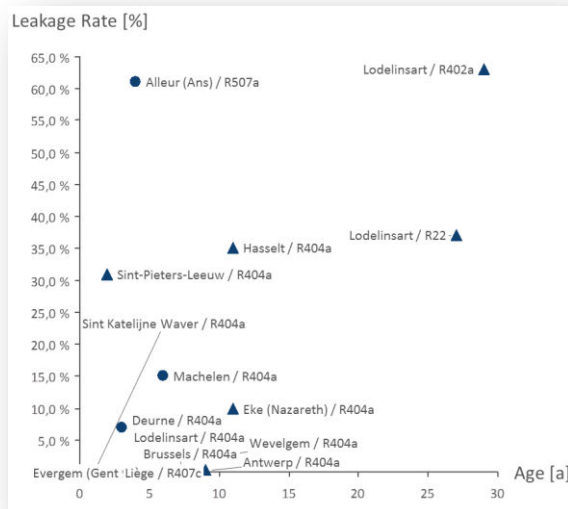
Standardized processes are granting a sustainable handling of resources!

3. F-Gas Program [FEP] - Clustering & Ranking matrix.

FEP is METRO's contribution to the EU requirement and will be implemented world-wide. The F-Gas Exchange Program has the overall objective to install the most modern and innovative technic at all stores within the next ten years.

For analysing all installed systems (incl. A/C³) at the MCC stores the following factors have been taken in consideration and rated with credits like

- 1.Refrigerant agent type
- 2.Age of the system
- 3.Leakage rate / Volume
- 4.Depreciation status
- 5.EU / Non-EU – State



Country Ranking	Store Location	Country Rating	MCC Ranking
1.	Lodelinsart / R22	47	<u>1.</u>
2.	Antwerp / R404a	9	115.
3.	Eke (Nazareth) / R404a	8	
4.	Hasselt / R404a	8	
5.	Wevelgem / R404a	8	
6.	Deurne / R404a	6	
7.	Machelen / R404a	6	
8.	Allleur (Ans) / R507a	6	
9.	Sint-Pieters-Leeuw / R404a	6	
10.	Brussels / R404a	6	
11.	Liège / R407c	6	
12.	Evergem (Gent 9) / R404a	6	
13.	Sint Katelijne Waver / R404a	6	

Based on this ranking approx. 40 - 70 Stores per year will get a new modern Commercial Refrigeration System
 Status 1/2015: MCC-wide 36 CO2-systems

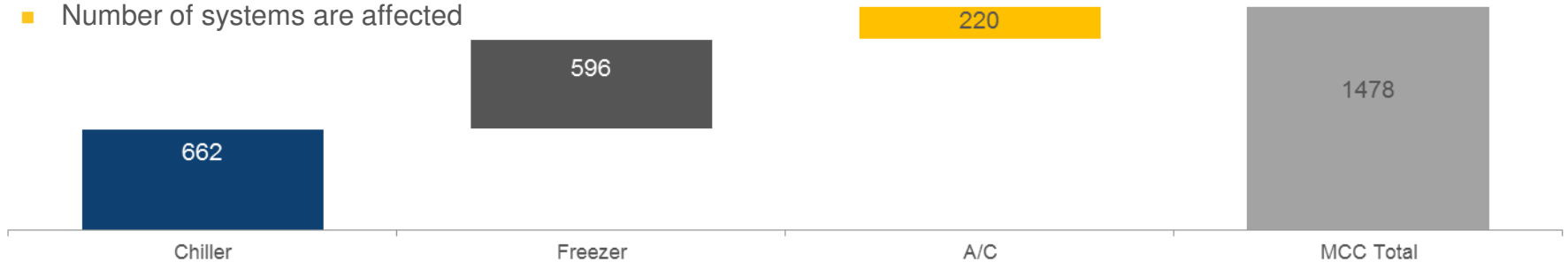
4. F-Gas Exit Program - Analysis and result.

FEP analysis

- Number of **locations** are affected
- **Manual ranking correction in alignment with the country organisation (e. g. REMO strategy)**



- Number of **systems** are affected



The age-conditioned exchange procedure is part of the standard SOP FM program and causes business-as-usual exchange of approx. 80% of the systems anyhow!

Contact.

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