



# EUREKA<sup>★</sup>2017

Heating, Cooling & Ventilation: Sustainable technologies for a better life

Key trends with an impact on HVACR  
in Europe and beyond  
*Andrea Voigt, EPEE*



April  
2018  
China

# Who is EPEE?

**Founded in 2000, headquartered in Brussels**

**Currently 48 members from three continents:**

- OEMs : heat pumps, a/c, refrigeration
- Component manufacturers
- Gas producers
- Installers
- National & international associations

**Member / Supporter of leading European & international initiatives:**

- ICARHMA
- Climate and Clean Air Coalition (CCAC)
- International Institute of Refrigeration (IIR)
- Refrigerants Driving Licence (RDL)
- Global Refrigerant Management Initiative (GRMI)
- Coalition for Energy Savings, etc.

**Partnering UNEP:**

- Development of “HFC Outlook”, a modelling tool to support developing countries in view of achieving the HFC phase-down under the Kigali Amendment







Our future - the next generations:  
What do they expect?

# Gen Z – Who are they?



**71%**

Want to live in a city



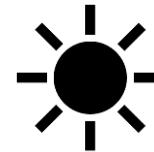
**>50%**

Prefer eco-friendly &  
socially responsible  
products



**2bn**

Globally  
\*mid-1990s – early  
2000s



**62%**

Are worried about  
Global Warming



**Top 3**

Criteria for products:

Price  
Reliability  
Sustainability



**64%**

Consider  
themselves as  
entrepreneurial



# I want the full service



- Convenience, user-friendliness, well-being
- Concept and function rather than a complex product
- Easy to manage and fully integrated solutions

# I want the product to be exactly what I need



- Customised solutions, tailored to needs
- Self-learning, self-adapting, self-management
- Technological innovation



# I only want to pay for a service when I need it



- Sharing economy rather than ownership
- „Pay as you use“ principle
- Internet of Things to drive innovation


# I care about the impact I have



- Live more sustainably
- Easy access to products' performance & footprint
- Maintain affordability



# I want to control what is around me

- 
- Increased sensitivity to local context
  - Preference for locally sourced products
  - But still part of a global economy

# I am a digital native



- ICT is part of daily life
- Social media allow interaction on a global level
- Data protection is essential for customer trust



# So what do we need to get there?



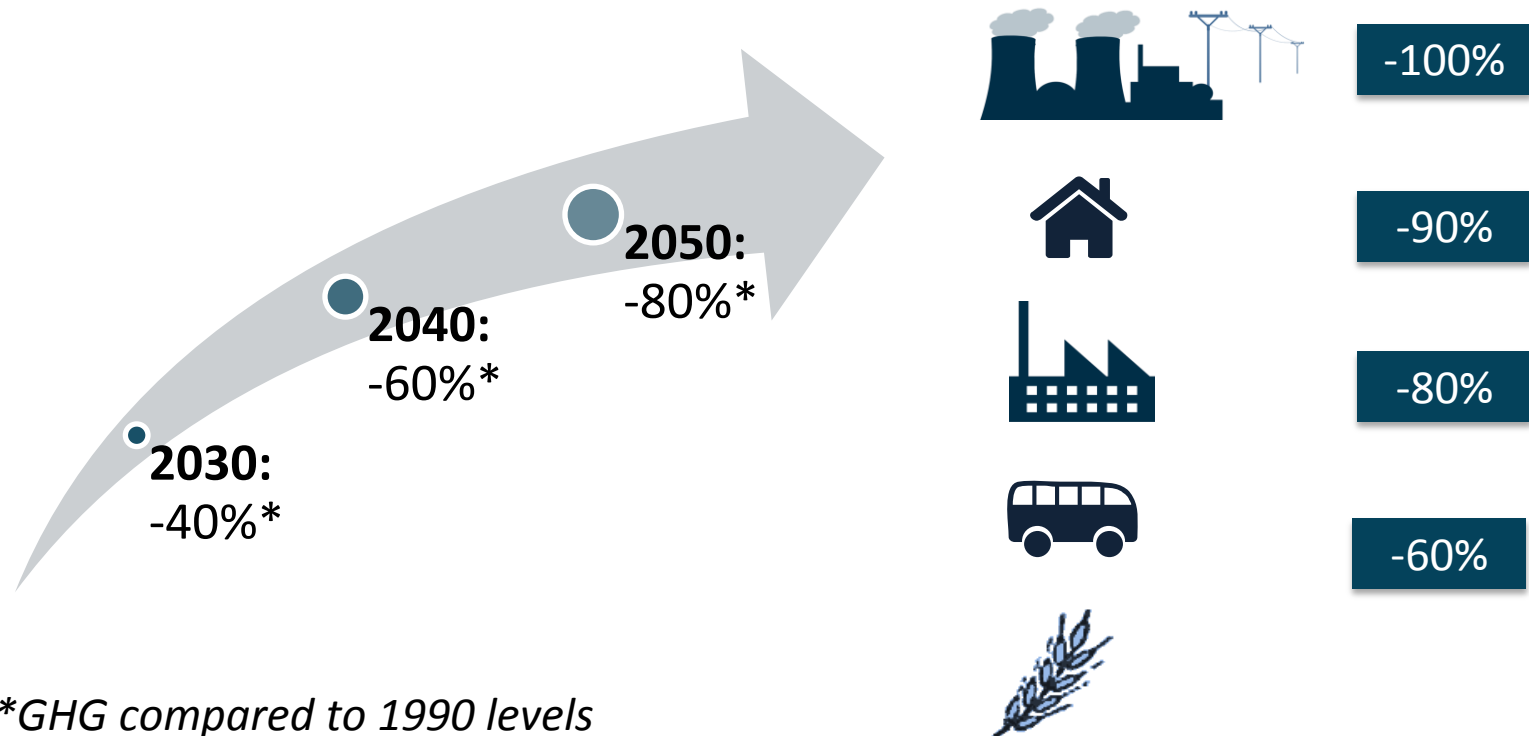
- **Adequate standards** to harmonize connectivity and communication protocols and to ensure privacy and cyber security
- **A technically neutral regulatory environment** that fosters innovation, energy efficiency and renewables combined with an integrated systems approach.
- **A framework to empower the consumer** to make own choices on energy type, cost and use, etc.
- **Transparent product information, incentives, support and rating schemes**, public procurement as a model to stimulate the move towards more sustainable products.
- **Education of the entire supply chain** through to the enduser to raise awareness and create understanding of new technologies



A photograph of the European Parliament building in Brussels, featuring a large, curved glass facade. In the foreground, numerous flags of European Union member states and the European Union flag itself are flying on tall poles. The scene is set against a clear blue sky.

# The political framework in Europe

# The EU 2050 Roadmap for a low carbon economy



# The EU 2030 Targets



40% GHG Reduction



27% Renewables



27% Increase of Energy Efficiency

Affordable energy for all Europeans

Energy security

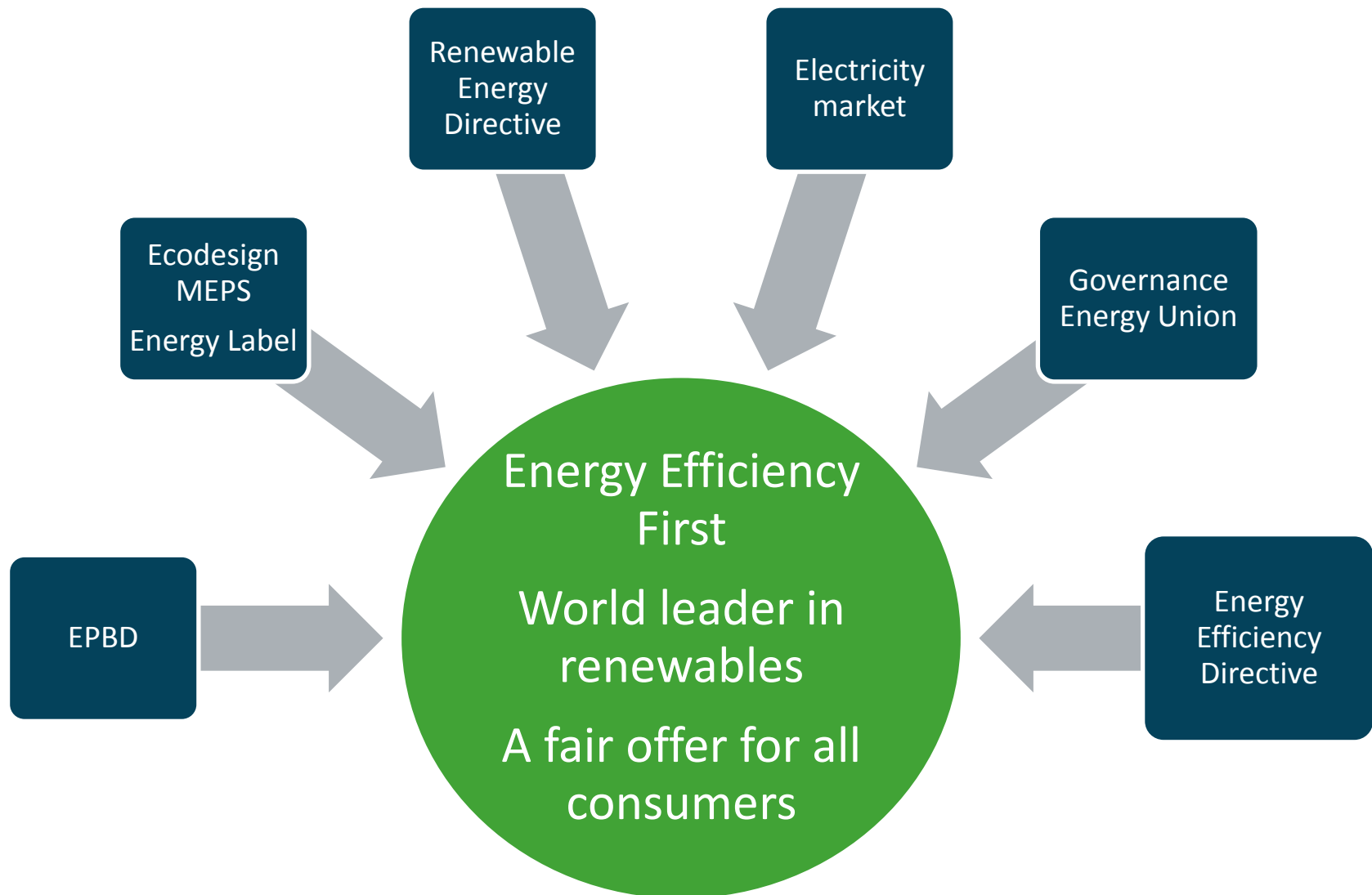
Independance of energy imports

Growth and jobs

Protection of health and environment



# The Clean Energy Package



# The EU F-Gas Regulation

## 2050 EU Low Carbon Roadmap

### Containment & Competence

Regular leak checks

Certification and training of installers

### Phase-Down

#### Consumption reduction of HFCs

**Year 2018:**  
**-37%**

**Year 2030:**  
**-79%**

### GWP Limits

**2015:** GWP 150  
Fridges & Freezers

**2020:** GWP 150  
Moveable A/C

**2020:** GWP 2500  
New Stat. Refr.  
Equipment & service,  
maintenance

**2022:** GWP 150  
Multipack refrigeration  
systems >40kW (except  
cascades: GWP1500)

**2025:** GWP 750  
Single split a/c < 3kg

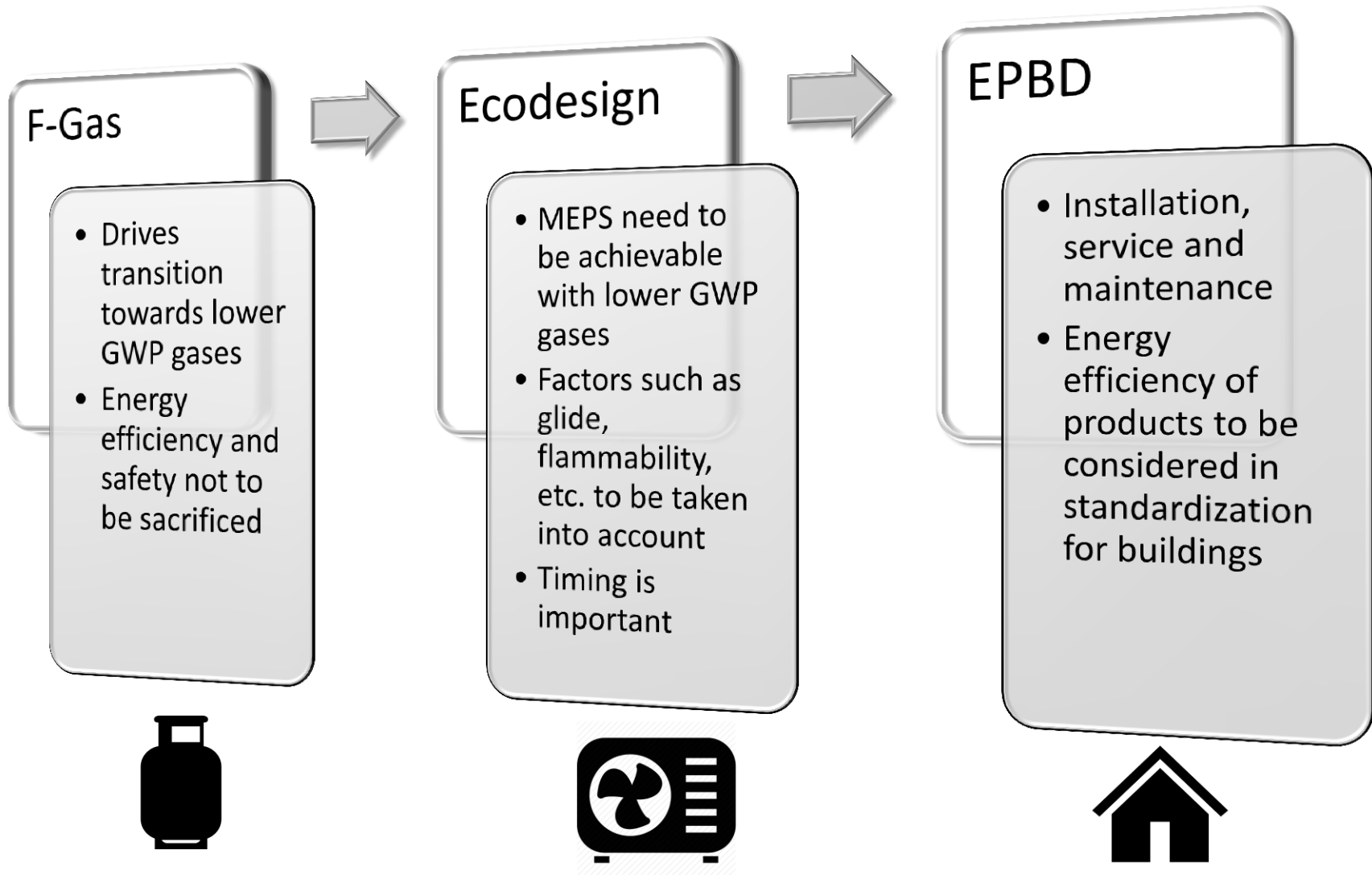
### Others

2015: Reporting obligations

2017:  
Traceability for pre-charged equipment

2015 – 2022: various reports

# Key Challenges





# A focus on F-Gas: It's not a walk in the park ....

- Many companies are struggling to cope with the consequences of the phase-down
- **The urgency to act was not properly understood and/or misjudged :**
  - Since 2017, HFC prices have jumped by x 5+
  - Lack of HFC availability: R-404A, but also of other gases such as R-410A, R-134a, etc.
  - Lack of refrigerant cylinders
- **What happened? Join our side-event during the lunch break to hear latest lessons from the EPEE Gapometer project and priorities in Europe**



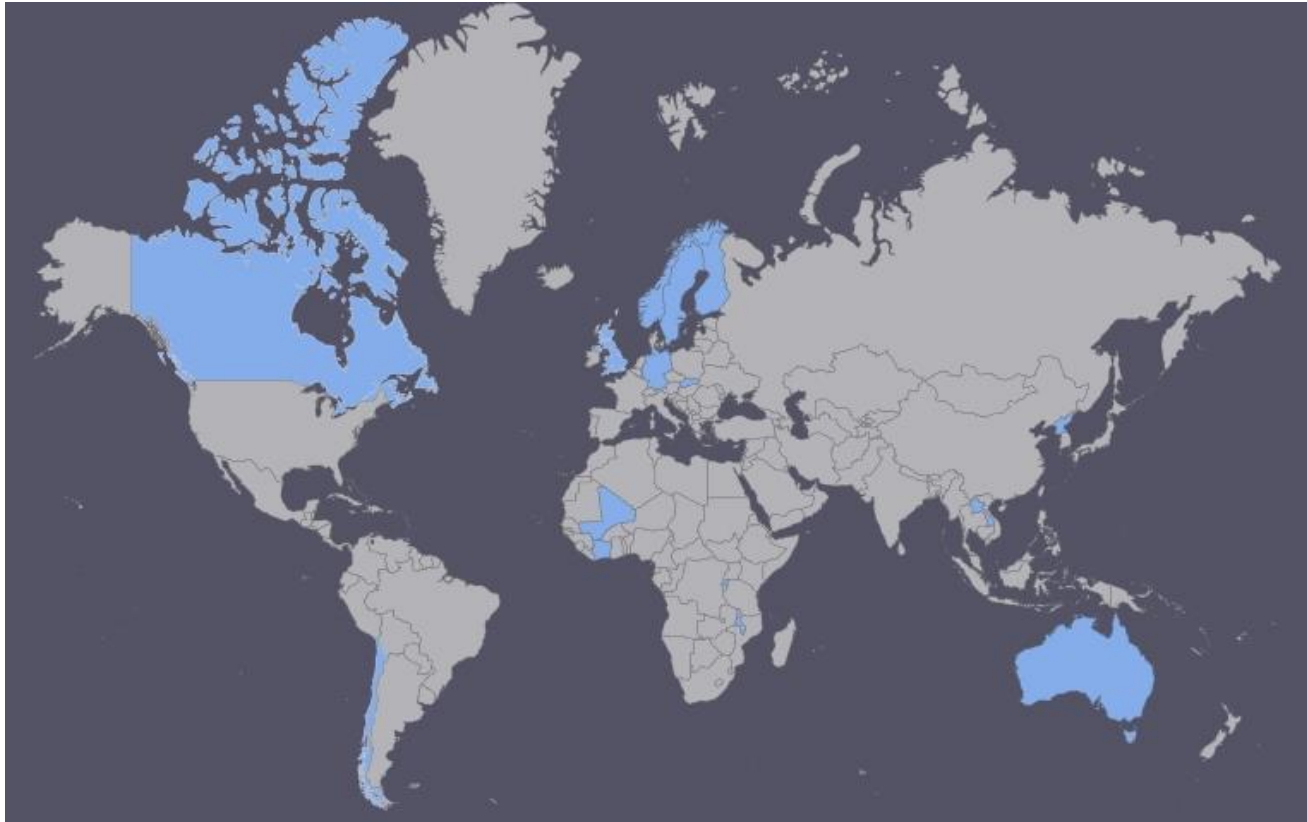
er 2016, Kigali, Rwanda



And beyond Europe?  
Energy and Climate are global issues

# The Kigali Amendment

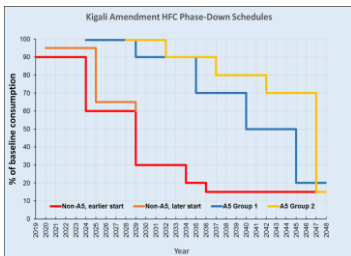
- The Kigali Amendment enters into force on **1st January 2019**
- Currently ratified by 24 countries



- Australia
- Côte d'Ivoire
- Canada
- Chile
- Comoros
- Democratic People's Republic of Korea
- Ecuador
- Finland
- Germany
- Lao People's Democratic Republic
- Luxemburg
- Malawi
- Maldives
- Mali
- Marshall Islands
- Micronesia
- Norway
- Palau
- Rwanda
- Slovakia
- Sweden
- Trinidad & Tobago
- Tuvalu
- United Kingdom



# HFC Outlook: An EPEE-UNEP Project



Kigali HFC phase-down amendment  
agreed

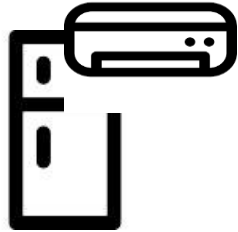
Governments need to develop phase-  
down plans

HFC markets are complex

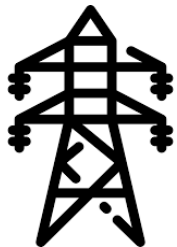
**HFC Outlook provides  
countries/regions with:**

- ✓ in-depth understanding of historic / current use
- ✓ scenarios that predict possible future use
- ✓ a platform to develop a national / regional strategy
- ✓ a tool to develop stakeholder communication materials

# More challenges to come – globally!



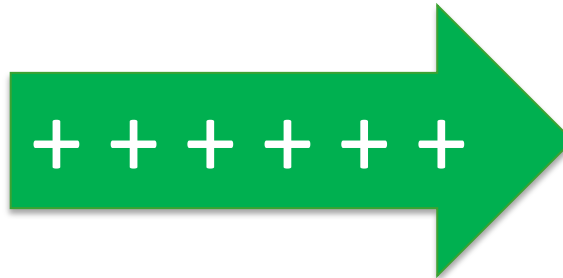
3bn



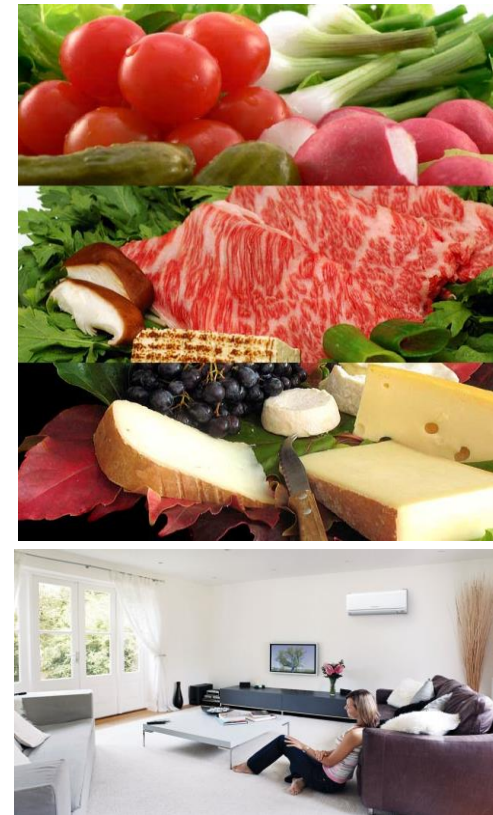
17%



12m



**Urbanization**  
**Increase of population**  
**Higher living standard**  
**Climate change**



# Thank you for your attention



**Join us at our side-event during the lunch break to learn more about the F-Gas implementation in Europe, Ecodesign and the EPEE-UNEP project**

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