

FRENCH PLAN OF REDUCTION OF GHG EMISSIONS FROM THE R&AC SECTOR

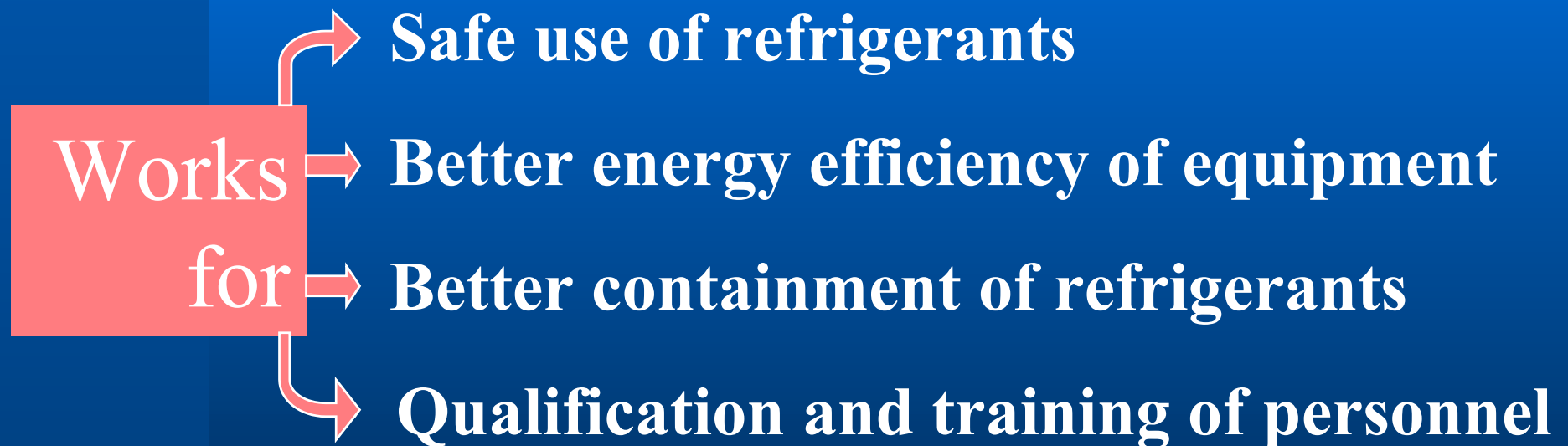


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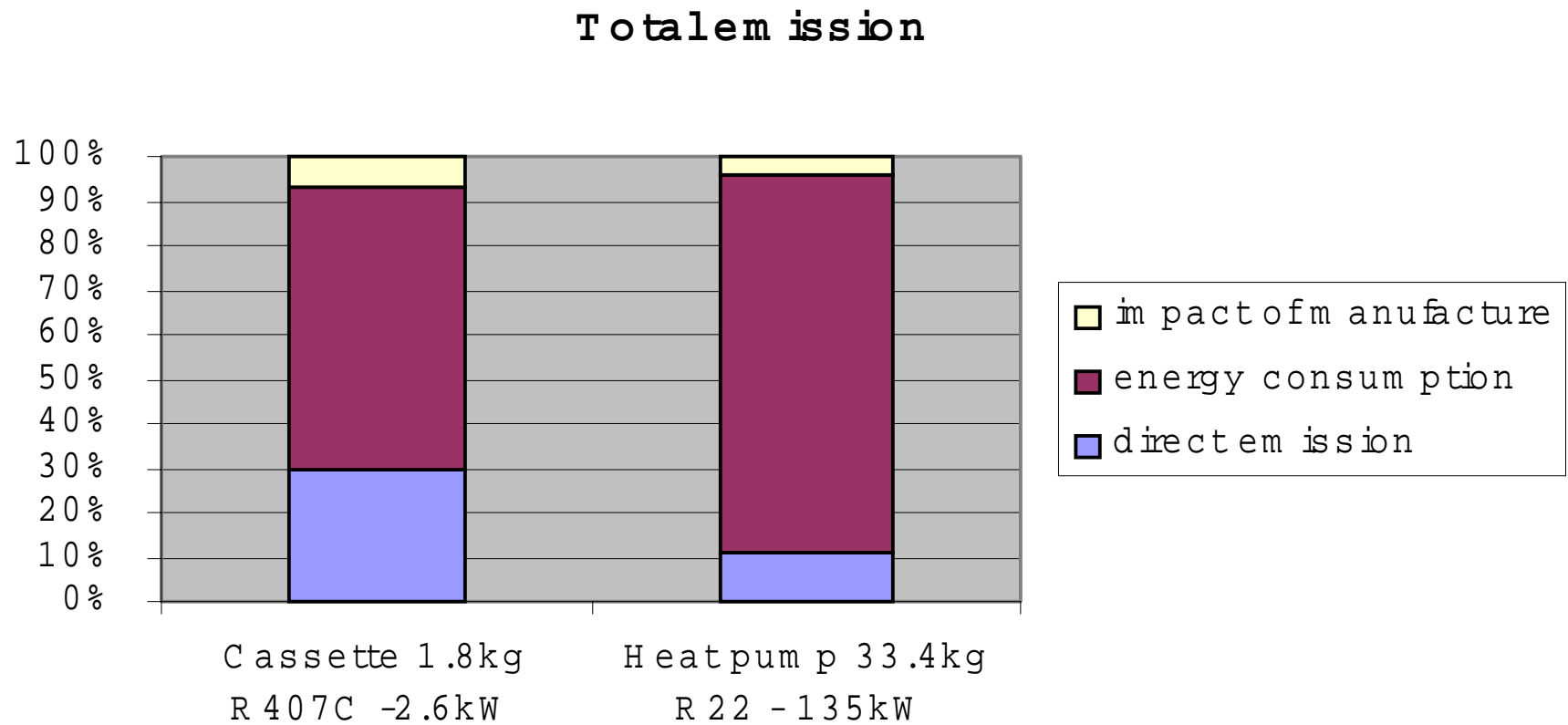
Includes : manufacturers, distributors, operators, endusers, laboratory, syndicates, ministries, ADEME

Member of : E.P.E.E. (European Partnership for the Energy and Environment)



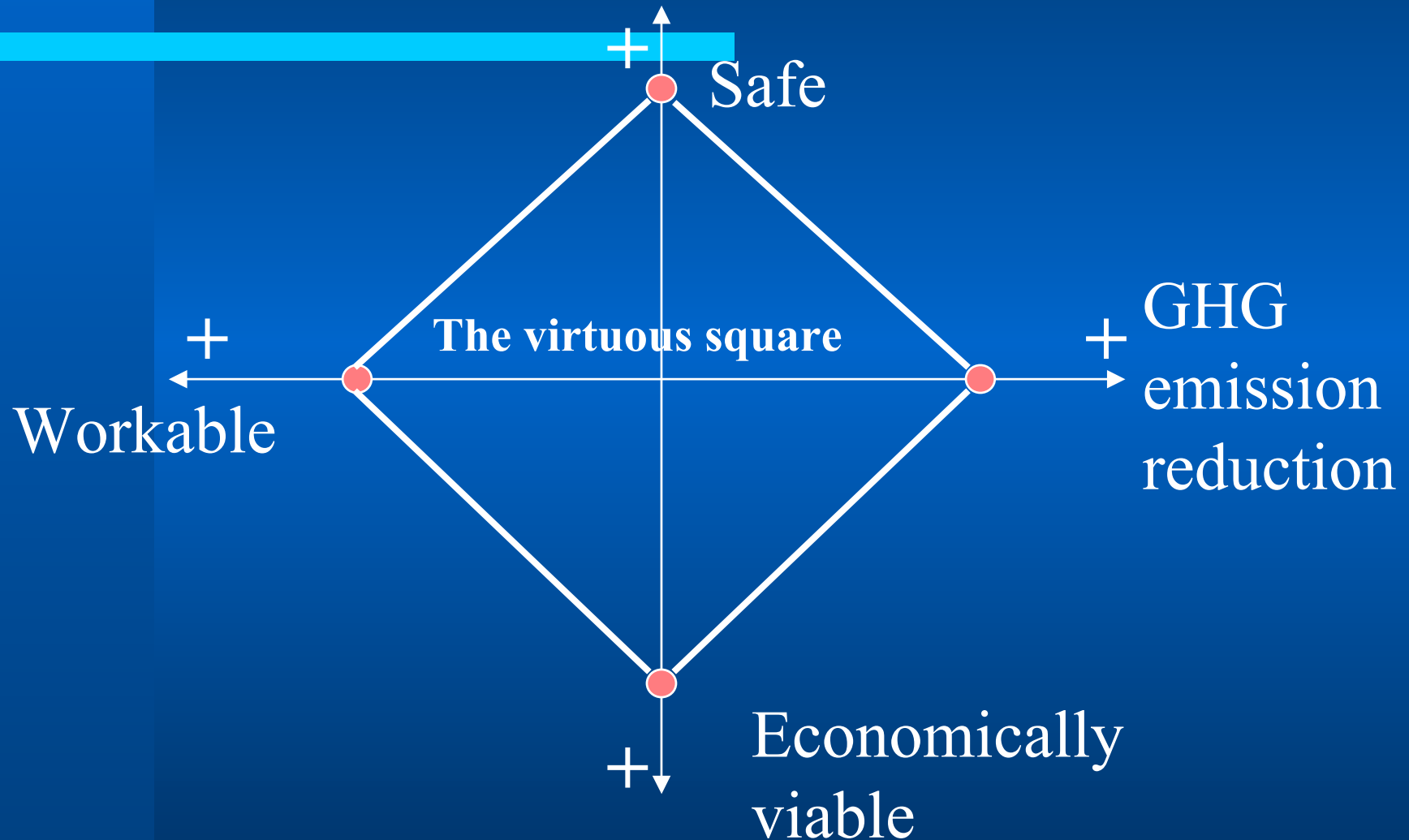
The French Situation

R&AC = 0.7% of total emissions of GHG

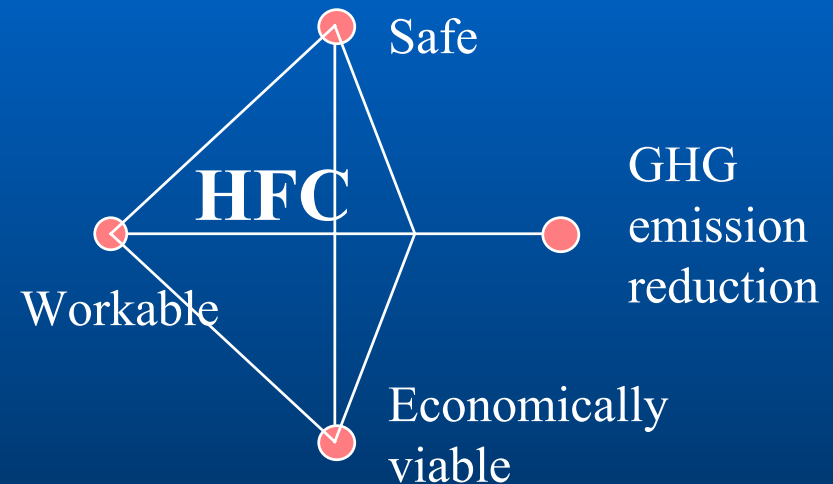
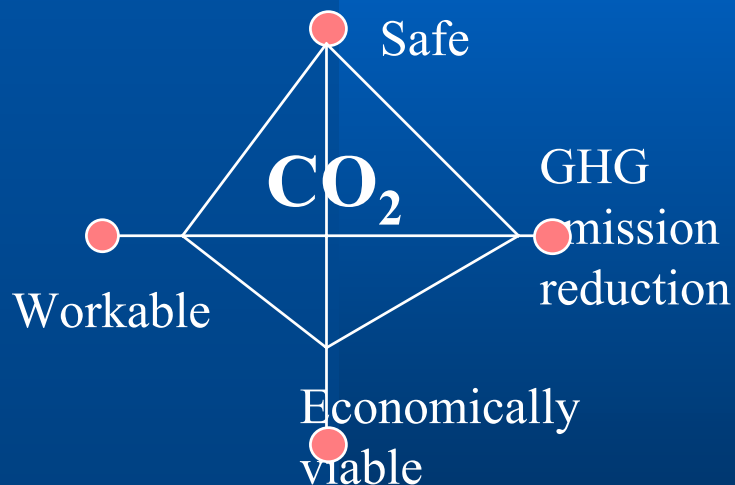
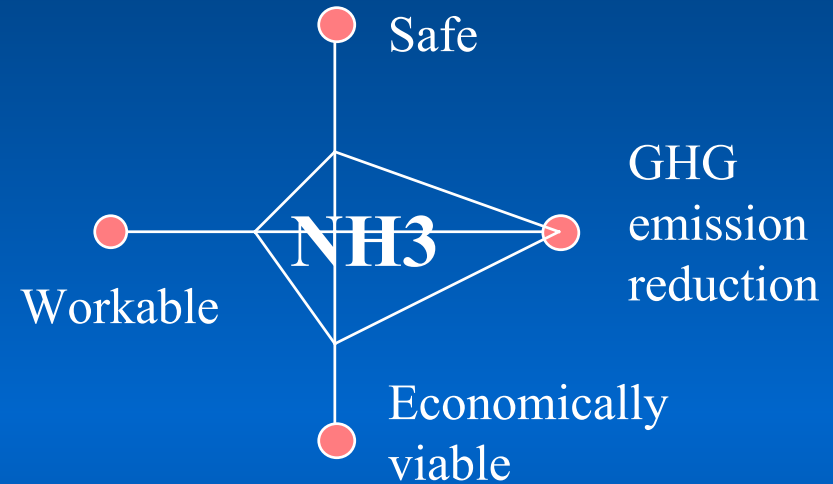
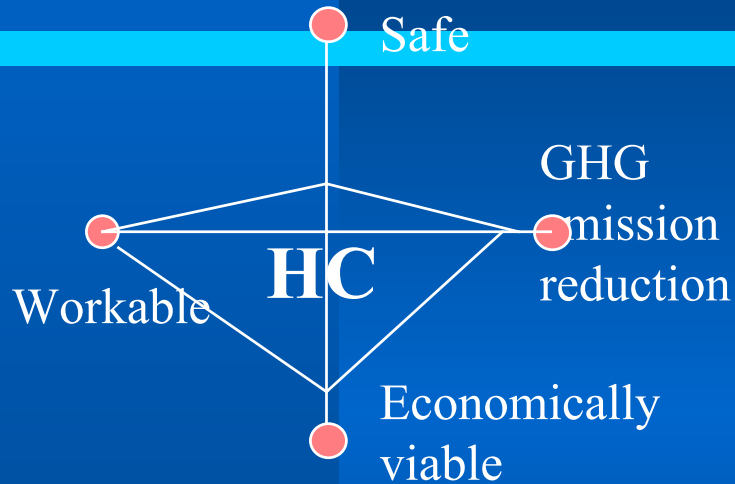


France 0.12kg CO₂eq.kWh - Danemark 0.85kg CO₂eq.kWh - Norway 0.005kg CO₂eq.kWh

The choice of refrigerant



The choice of refrigerant



Reduction of emissions

- **Better containment**
- **Refrigerant quantity**
- **Recovery at end of life**
- **Better energy efficiency**
- **Responsible behaviour**

Reduction of direct emissions

1 INVENTORIES

made by Ecole des mines

Cross checking of data

Updated every year

Trend of the emissions

Decisions on national regulations

Reduction of direct emissions

2 BETTER CONTAINMENT AT DESIGN STAGE

Reduction of charge

Quantity of junction

Implementation of standards

Tightness certification of components

Reduction of direct emissions

3 BETTER CONTAINMENT DURING UTILISATION

Disposable container forbidden

Qualification of detectors

Metrological chain

Reduction of direct emissions

3 BETTER CONTAINMENT DURING UTILISATION

ISO 11650 : recovery & recycling machines

Professional guide for containment control

Formation and qualification of personnel

Mandatory tightness - log book

Reduction of direct emissions

4 CONTROL of ALL OPERATORS

Rules for each application

Official declaration

**Sales of refrigerant to certified
companies**

Reduction of direct emissions

5 CONTROL the USE of REFRIGERANT

Declaration of quantities

Level of emission / equipment

National collection of data

Reduction of indirect emissions

1 LABELLING PRINCIPLE

Today appliances <12kW

Characteristics on capacities

**Performance in Energy Efficiency
labels from A to G**

Reduction of indirect emissions

2 CERTIFICATION PROGRAM

**Check performance data claimed by
manufacturers**

Garantee on main data

Transparency on claimed data

Reduction of indirect emissions

3 PROMOTE LABELS on ENERGY EFFICIENCY

Heat pumps - Vivrelec Label

COP at nominal points

Eurovent[®] certification

Reduction of indirect emissions

4 ECO-DESIGN PROGRAM

Life cycle analysis

Environmental impacts of product

Potential emissions during
manufacturing stage
utilisation
disposal at end of life

Reduction of indirect emissions

5 MANAGEMENT of EQUIPMENT DISPOSAL

Directive W E E E

Extract refrigerant

Recycle components and raw materials

Target of 80% in mass by 2006

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CONCLUSION

Industry is working hard for improvements

Political decisions of nations

Government not always put means at disposal for their implementation

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Thank you for listening

