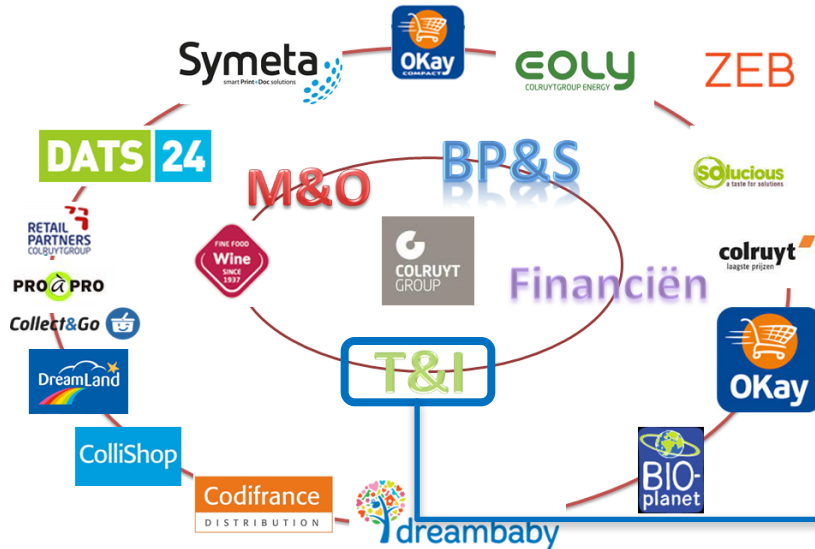




# Store cooling with propane compact chillers

ATMOsphere Commercial Refrigeration Case Study

# Colruyt Group, a family of companies

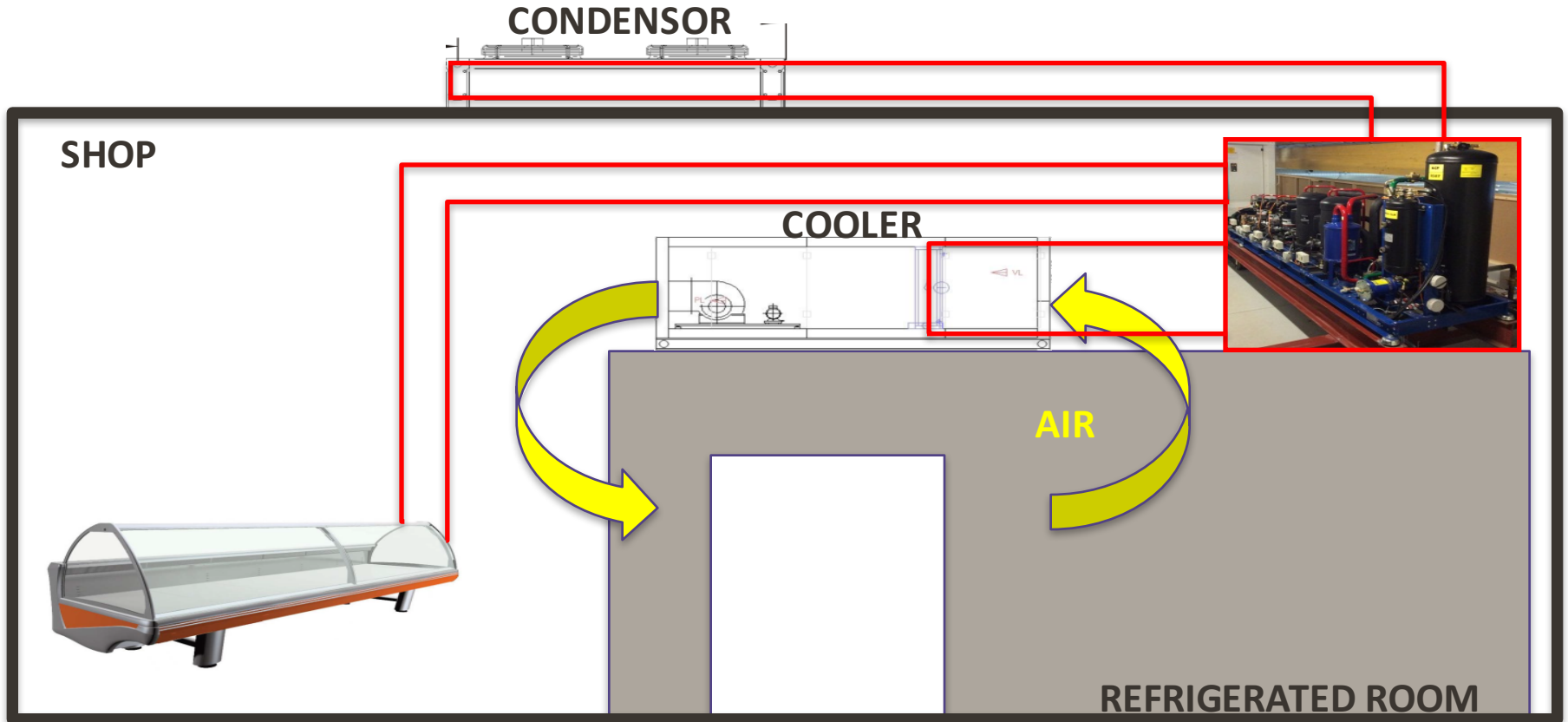


- T&I = Internal technical service department for Belgium, France and Luxembourg
- 1300 employees
- Design & study  
↓  
Realization  
↓  
Maintenance

“Creating sustainable added value together through value-driven craftsmanship in retail”



# Current refrigeration with R507



# Timeline natural refrigeration

**1999**  
Ammonia cooling of  
distribution center

**Jan. 2015**  
Quota-  
system  
R507:  
price  
increase

**Regulation 517/2014: 'F-gas'**

**2020**  
Prohibition  
new  
installations  
with R507

**2030**  
Prohibition  
R507

**2012**  
Study  
natural  
refrigerant

**2013**  
Propane  
Cooling  
OKay  
Roeselare

**Nov. 2015**  
Propane  
Compact  
Chillers  
BIO-Planet  
Mons

Optimization and  
rollout



# Propane cooling OKay Roeselare 2013



14kg R290

Works well BUT NO:

- Practical training for technicians
- Redundancy
- Placement inside
- Practical refrigerant recovery

Integral approach:

Technician  
must feel safe

Technical  
performance  
& safety

Sustainable  
& good for  
the people

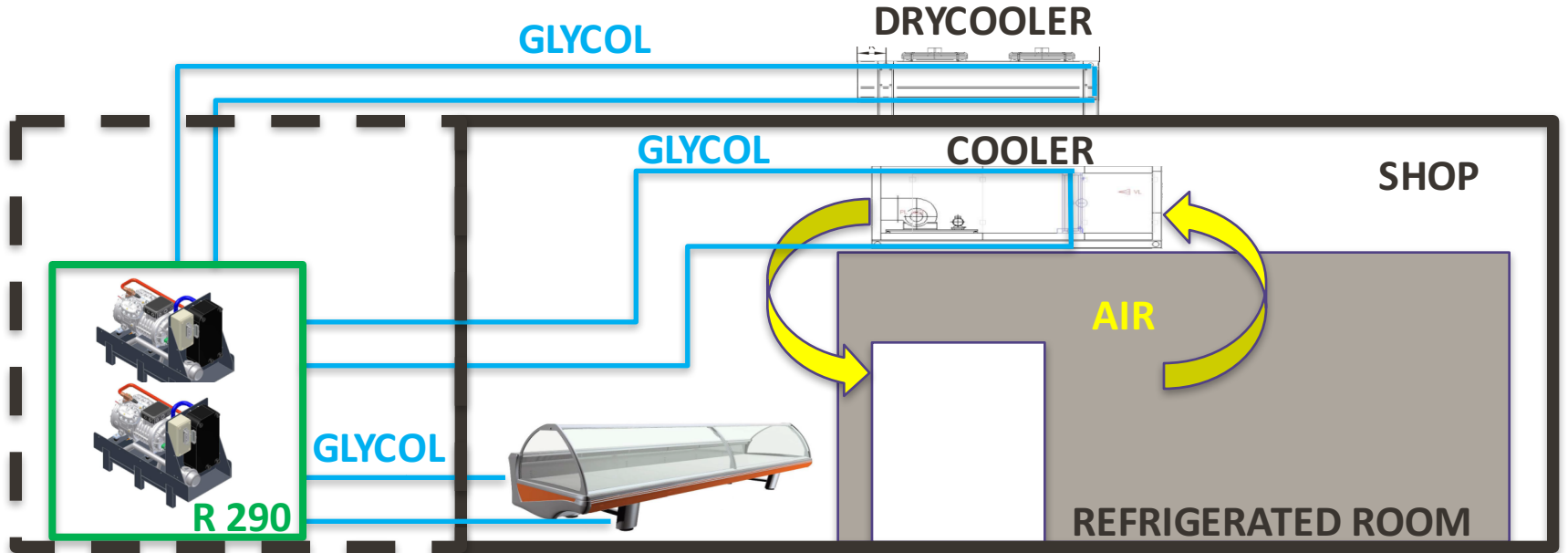
Integration in  
shop &  
surrounding



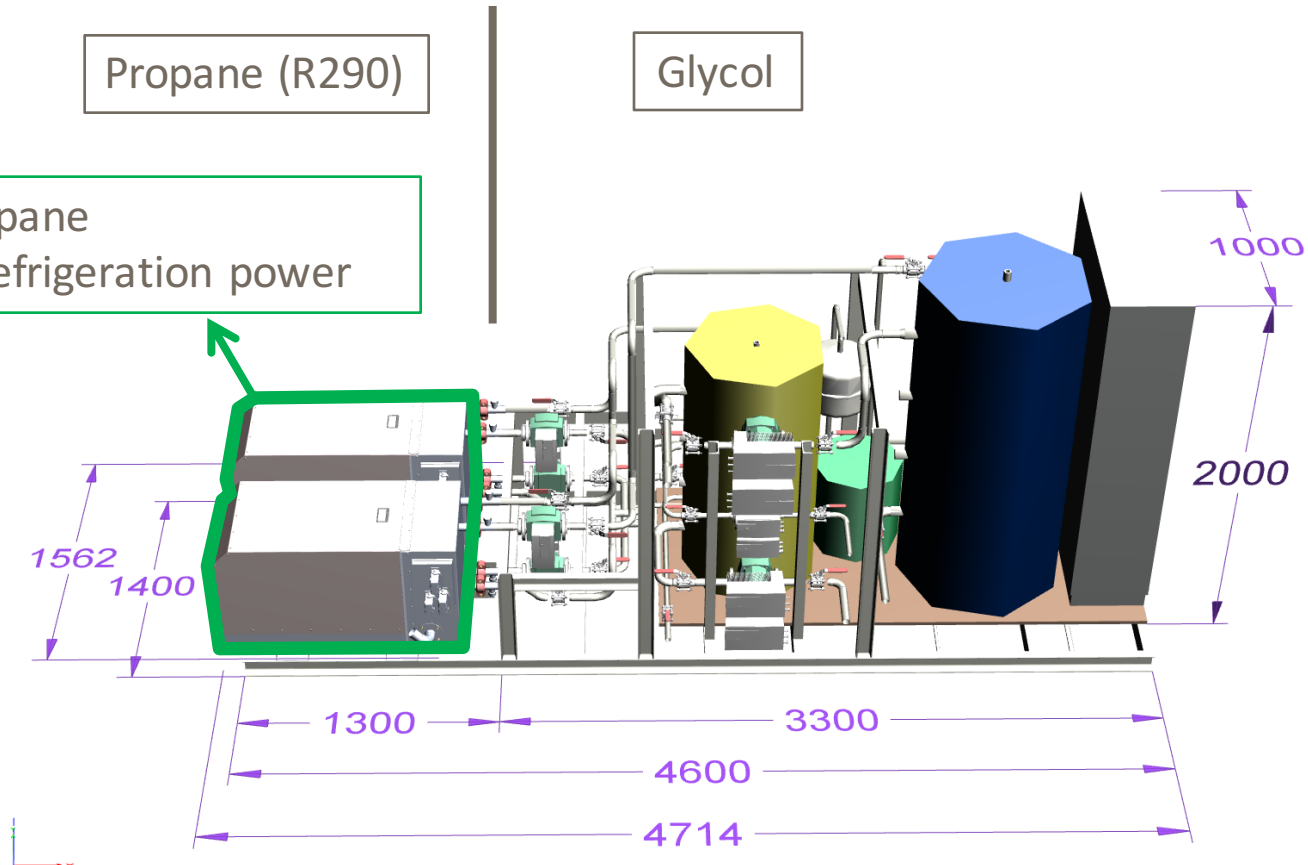
# Plug & Play (dream August 2014)



# Configuration with propane units (R290)



# Configuration with propane units (R290)





# Bio-Planet Mons



Goal: to equip 40 shops a year with a propane refrigeration unit

# Realisations and rollout

- Immediate rollout for BIO-Planet
  - Mons
  - Hasselt
  - Jambes
- First OKay and Colruyt with propane refrigeration in 2016
- Applicability in France and Luxembourg

