



ATMO
sphere

PT Dua Putra Perkasa

Development of Natural Refrigerants
in Cold Warehouse

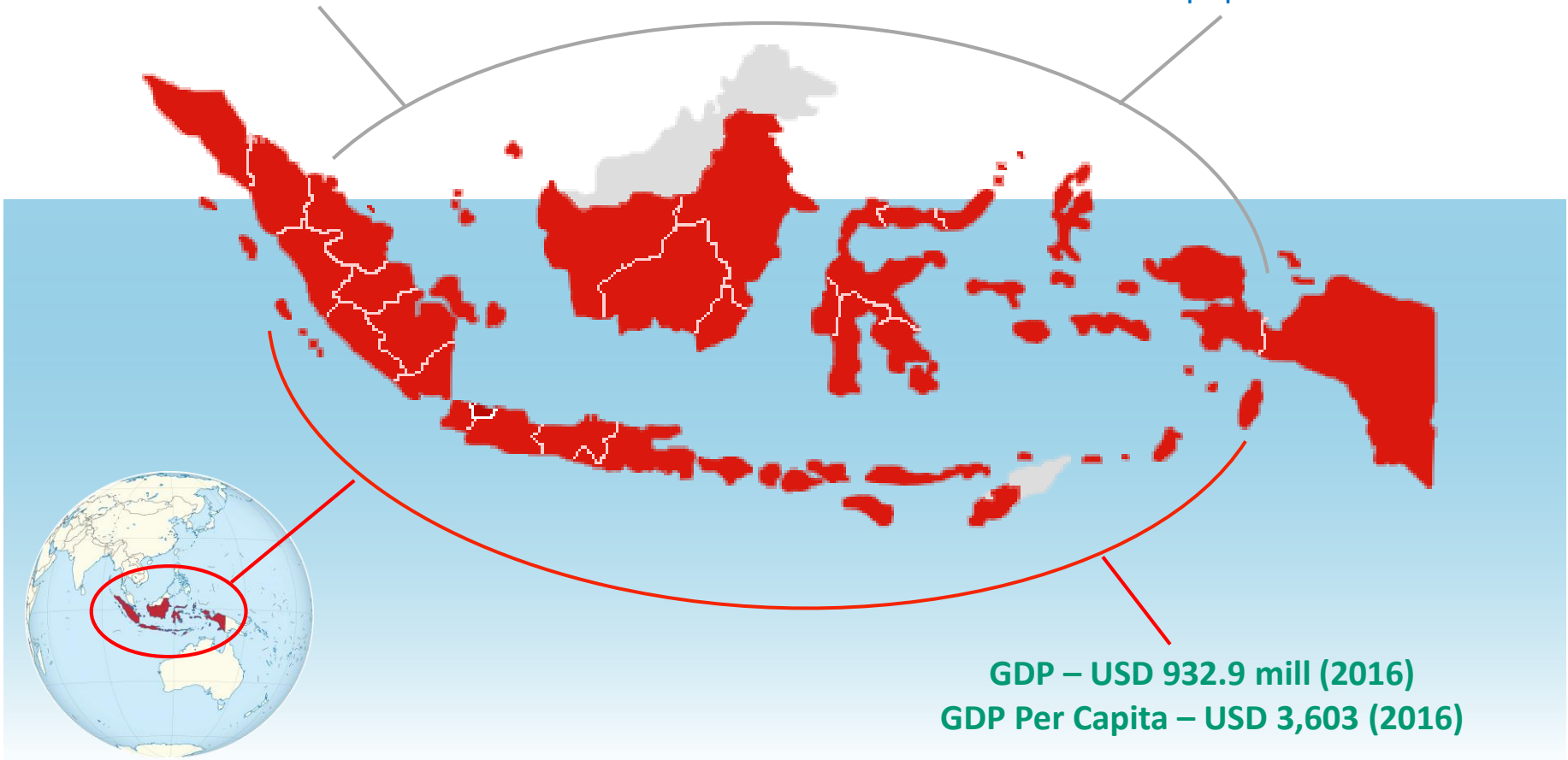
Bangkok, 6th September 2017

Ardi Wijaya

Indonesia

17,000 + islands, **6,000** inhabited
35 Provinces. Capital city: Jakarta

253 Million Population, 4th most populous country
202 Million Moslem, world's largest Muslim population
40% of ASEAN Population (**630 million**)
60% of population is middle class



Business Portofolio - 1

Established : 1998
President : Mr. Suharjito
Revenue : US\$136 mill / year
Employees : 250



Business Portofolio - 2

2 cold warehouses, total 15,000 pallet position, 150,000 tons / year
30 refrigerated trucks



35 shrimp ponds, 60 ha lands,
1,500 tons/year harvest



1,800 tons/year processed products



10 fish catching vessel, 100-150 GT



Trading 40,000 tons/year various products

Distribution and Coverage Area



- ★ Head office
- Branch office
- Future branch office
- Distribution city / area
- Catching vessel operation



Key Milestones

1998

Started trading activities
Beef meat as the first product

2007

Open 2nd CS
Capacity 400 tons

2015

Aquaculture (shrimp farm)
Fishing vessel operation
Operate new cold storage

2005

Open 1st CS
capacity 200 tons

2009

Open 3rd CS
Capacity 400 tons

1998

2005
2006

2006

Certified HACCP
'King Food' production

2007
2009

2014

2014

Certified ISO 9001
Build new CS 20,000 MT

2015

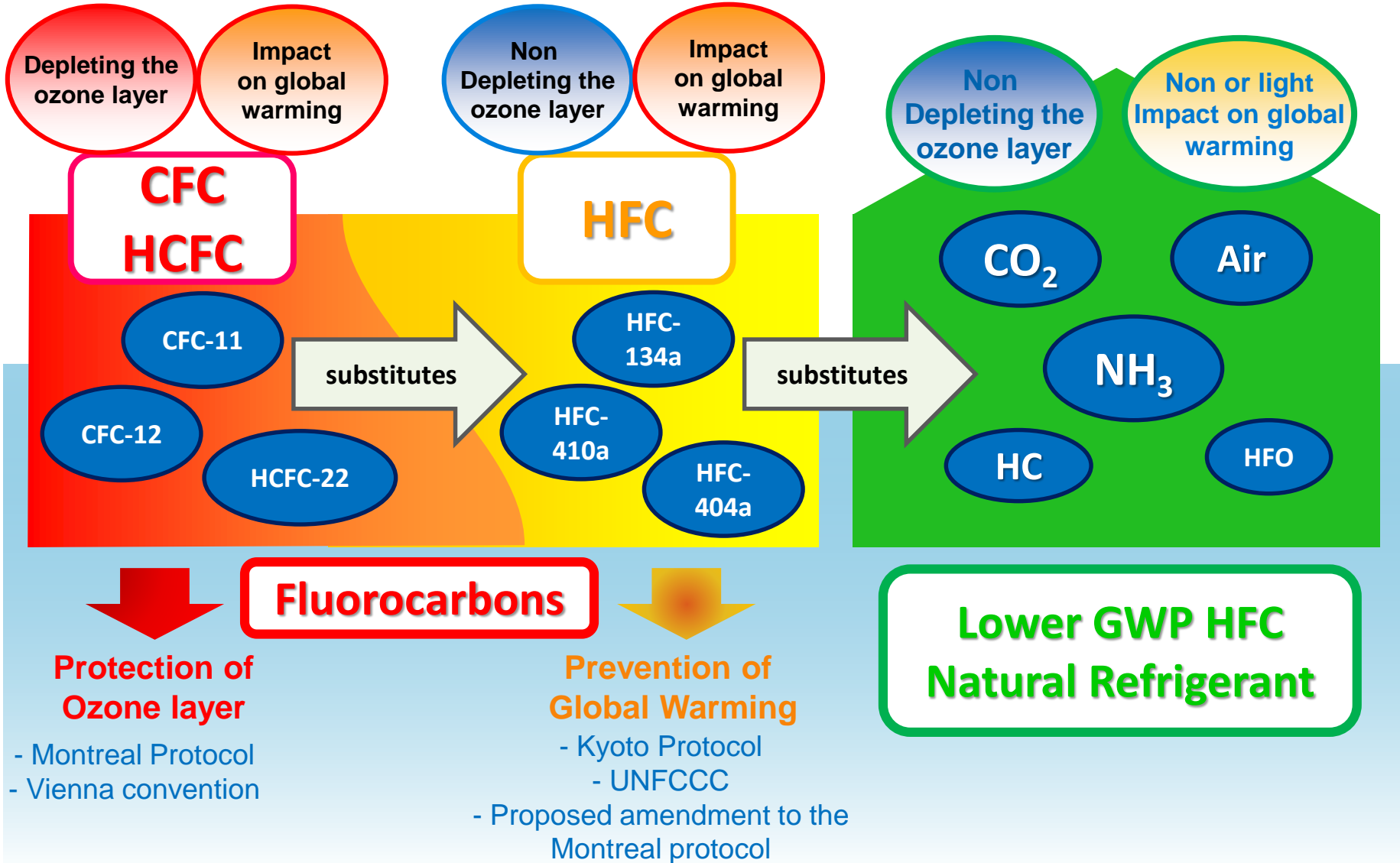
2017

2017

Open 1st branch office



International regulations on refrigerants



Indonesia on emission



COP21 · CMP11
PARIS 2015
UN CLIMATE CHANGE CONFERENCE



MINISTRY OF ENVIRONMENT & FORESTRY



MINISTRY OF TRADE



Kementerian
Perindustrian
REPUBLIK INDONESIA

Ministry of Industry
Republic of Indonesia

Year 2030

29% cut of greenhouse gas emissions,
41% cut if received financial & technological support from
industrialised countries

- Banned CFC
- Several regulations
to restrict & phase out
the HCFC



Replacement /
Investment issue
considerations

Environmental

Ozone Depleting Potential
Global Warming Potential

Regulations

Regulatory compliance

Technical

Safety, easy to operate,
Maintenance, support system

Economic

Conversion / investment
Cost, down time, long life

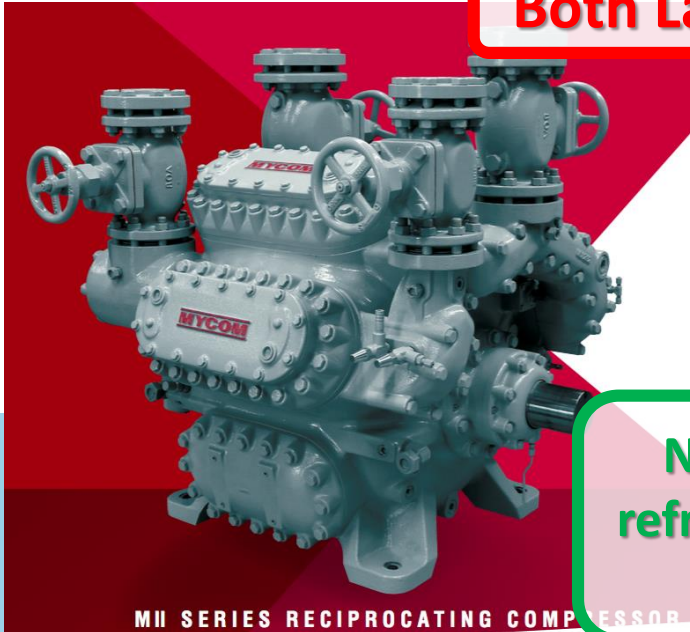
Implementation of the change - 1

HCFC-22 \Rightarrow HFC-404a \Rightarrow Natural refrigerants NH3

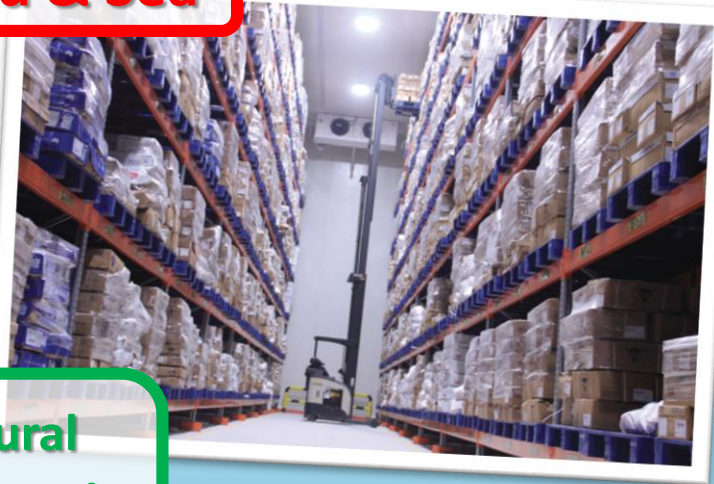


Implementation of the change - 2

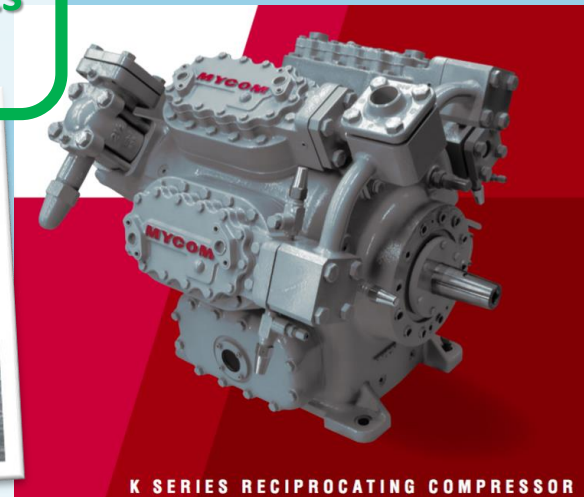
Both Land & Sea



MYCOM MII SERIES RECIPROCATING COMPRESSOR

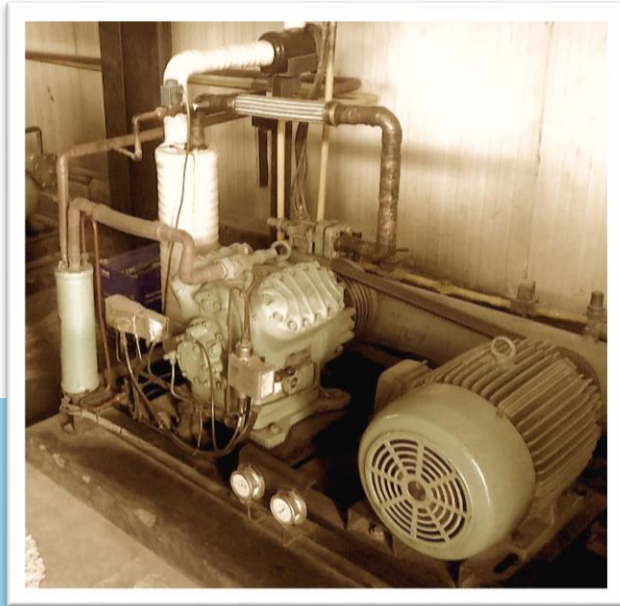


**Natural
refrigerants
NH3**



MYCOM K SERIES RECIPROCATING COMPRESSOR

The result of change



HCFC-22

Electricity cost : US\$ 9,775
Capacity : 3,000 pallet
US\$ 3.26 / pallet



NH3

Electricity cost : US\$ 17,294
Capacity : 12,000 pallet
US\$ 1.44 / pallet

Conclusion

- More customers and authorities are linking the industry with environment
 - Regulations pushing the industry toward natural refrigerants
 - Our company will comply to all laws and regulations related with corporation, business, and environments.

The next ...



**2.5 Ha land
prepared for new
Cold Storage
18,000 pallet
position**

**Natural
refrigerants
CO₂ ?
NH₃ ?**



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Thank you very much!

