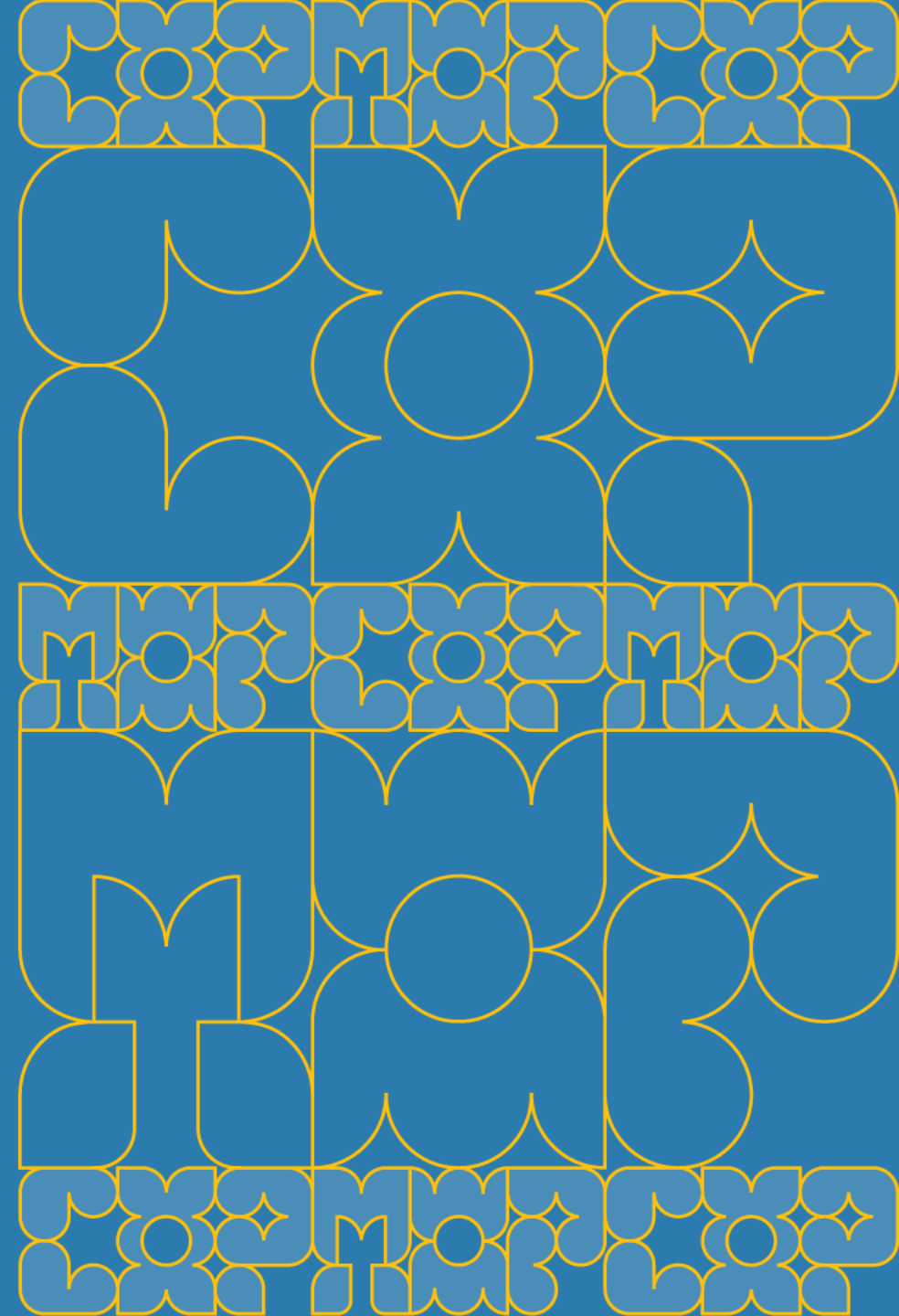


Session 1 – Introduction to life-cycle refrigerant management

Hilde Dhont, TEAP Task Force



Introduction to Life-cycle Refrigerant Management (LRM)

1. What is LRM and what are the key LRM practices
2. Benefits of LRM
3. The TEAP LRM taskforce report
 - Scope of work
 - Key findings



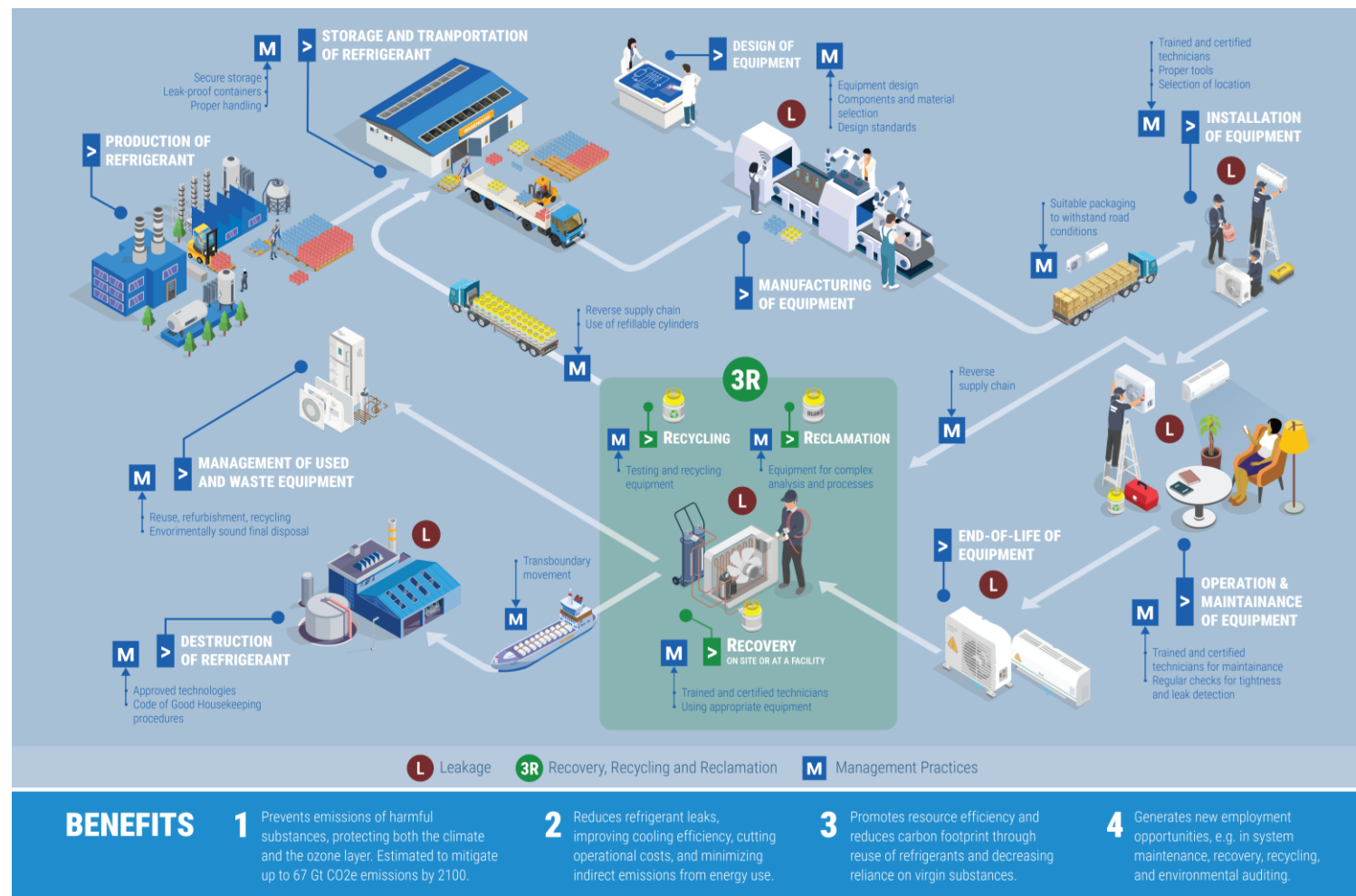
What is Life-cycle Refrigerant Management (LRM)?

A comprehensive approach to manage refrigerants in the RACHP lifecycle.

It encompasses:

- the production, storage, and transportation of refrigerants(*)
- the design, manufacturing and installation of refrigeration, air-conditioning and heat-pump equipment (RACHP)
- RACHP operation and maintenance
- the recovery, reuse, and environmentally sound disposal of refrigerants

(*) Note : the TEAP LRM taskforce report did not cover the production stage of refrigerants.



What are the key practices of LRM?



Leakage prevention



Recovery



Reuse

- Directly
- After recycling
- After reclamation



Destruction



Benefits of LRM



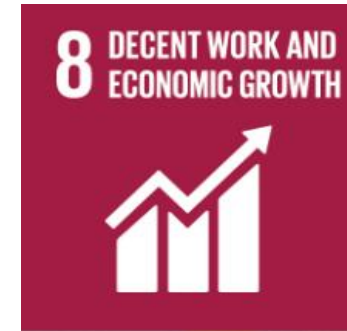
Results in climate, ozone and other environmental, health and safety benefits



Provides energy savings by maintaining RACHP performance, cuts operational costs and minimizes indirect emissions from energy use



Promotes resource efficiency and reduces carbon footprint through reuse of refrigerants and decreasing reliance on virgin substances



Generates new employment opportunities, e.g. in system maintenance, recovery, recycling and environmental auditing



Ozone and climate benefits of LRM

- Implementing effective LRM practices during the use and end-of-life of RACHP equipment is projected to achieve:

	Refrigerant transition measures implemented before June 2018	LRM measures implemented before June 2018	LRM measures in all parties
Pre-Kigali baseline	✓	✓	
Pre-Kigali with Additional LRM	✓	✓	✓

Estimated additional avoided emissions
Cumulative
from 2025 to 2050



TEAP LRM Taskforce Report

- 22 Taskforce members
- Published May 2024
- Presented at the July 46th OEWG in Montreal



MONTREAL PROTOCOL ON SUBSTANCES THAT
DEplete THE OZONE LAYER

REPORT OF THE TECHNOLOGY AND ECONOMIC
ASSESSMENT PANEL

DECISION XXXV/11 TASK FORCE REPORT
ON
LIFE CYCLE REFRIGERANT MANAGEMENT

MAY 2024



1. Introduction
2. Technologies for Leakage prevention
3. Technologies for Recovery, Recycling, Reclamation & Destruction
4. Accessibility of LRM technologies in A5 parties
5. LRM Policies & Programmes
6. LRM Obstacles and Challenges
7. Costs associated with LRM
8. Climate and Ozone benefits
9. Conclusions



LIFE-CYCLE REFRIGERANT
MANAGEMENT WORKSHOP
BANGKOK



Vienna Convention
MONTREAL PROTOCOL

TEAP LRM Taskforce key findings

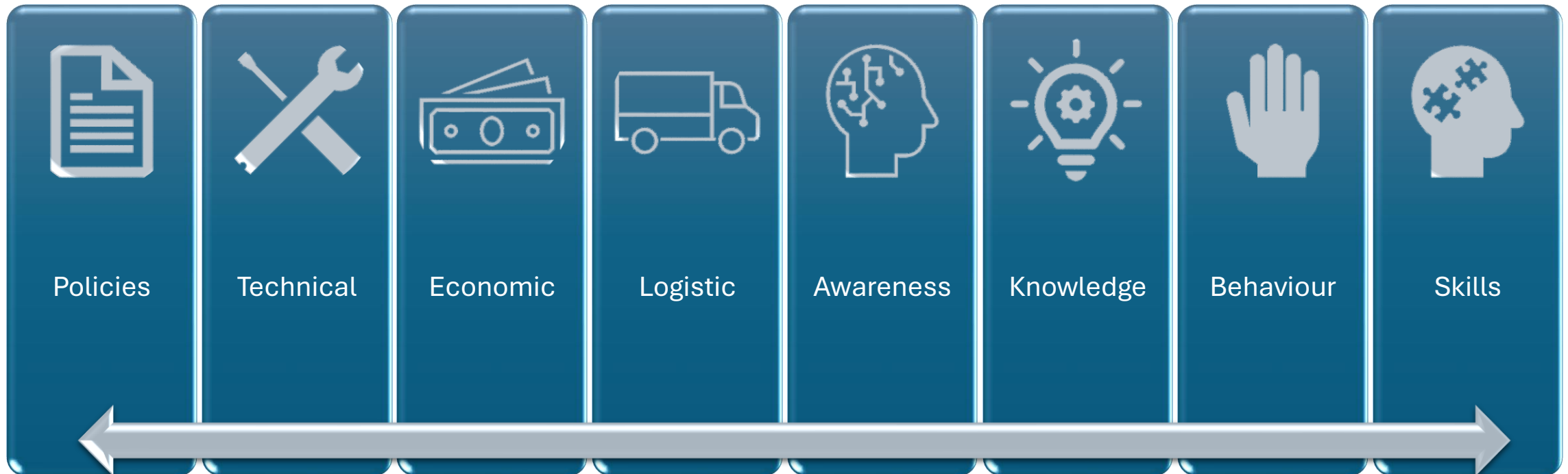


- LRM Technologies are available but not accessible in all A5 parties
- There are policy, economic, and accessibility obstacles and challenges associated with effective LRM
- If a phase out / phase down regime creates a shortage of refrigerant and leads to price increases, then refrigerant recovery may increase. However, if supply of newly produced refrigerant remains plentiful, other policy and economic measures may be required
- Mandatory and voluntary LRM policies and programmes are currently implemented in many parties with varying levels of effectiveness
- Establishing a data collection system by parties could inform their decision-making for optimal LRM strategies



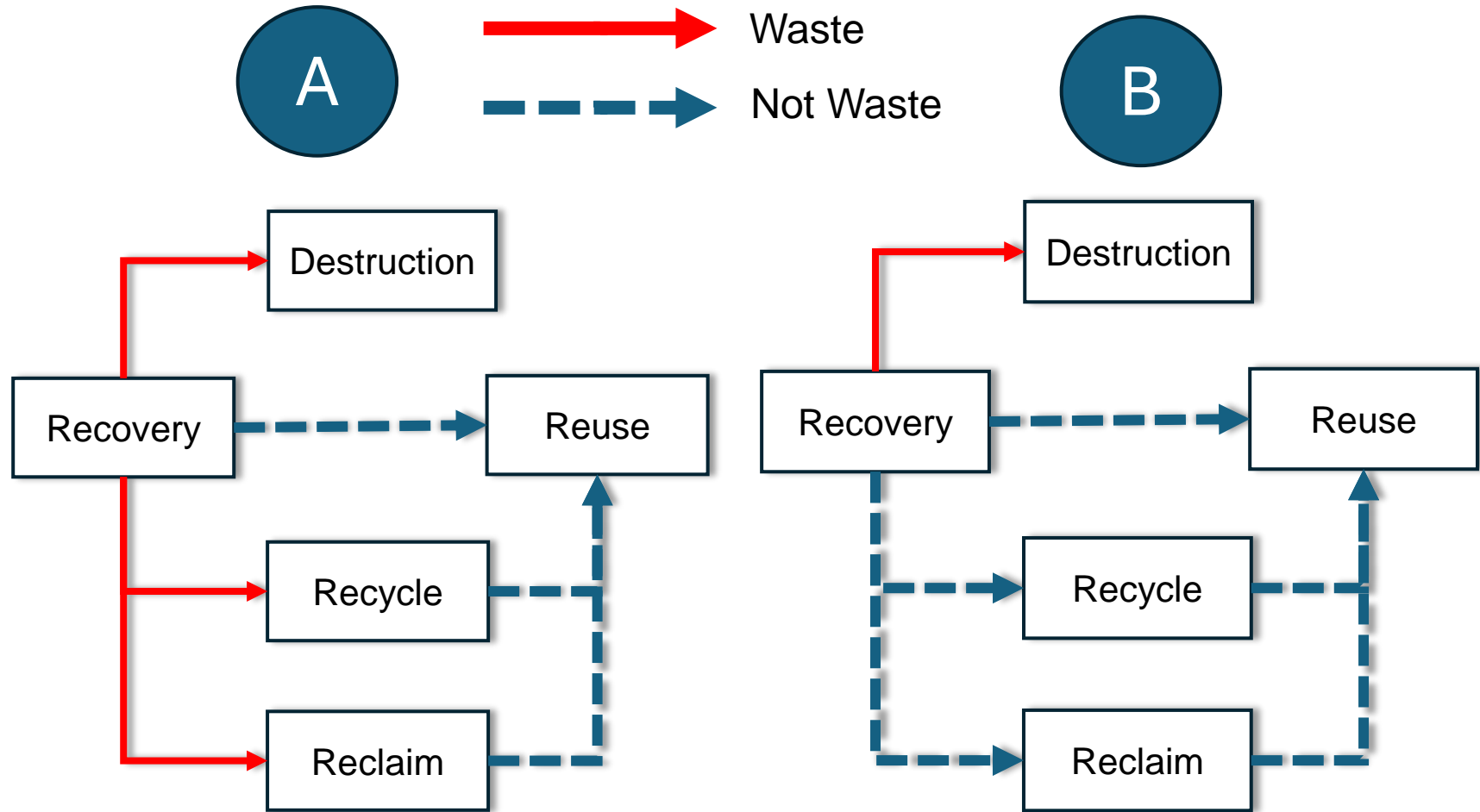
LRM Obstacles and Challenges

Chapter 6 of the LRM report



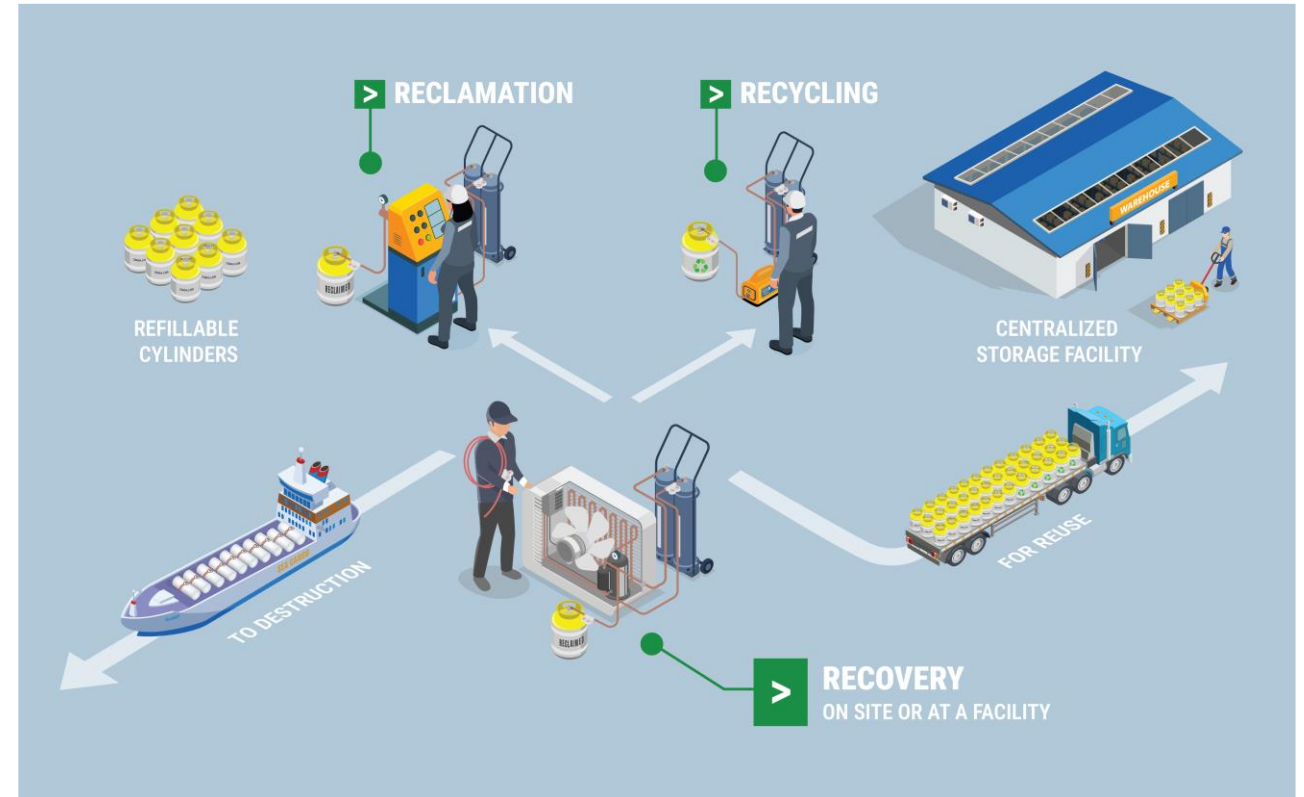
Policy example: when is recovered refrigerant waste?

The definition of “waste” influences the logistic and administrative burden for RACHP technicians and for the transport & storage of recovered refrigerants, both within and across borders.



LRM Opportunity

- ❑ LRM practices can be a key component of refrigerant emissions reductions
- ❑ LRM can achieve emissions reductions beyond those from strictly Kigali compliance
- ❑ LRM may be the key tool for some parties to achieve Kigali compliance



Thank you
Enjoy the workshop!

