



ALUMINIUM PACKAGING:
**CONVENIENT, SAFE AND
INFINITELY RECYCLABLE**

Aluminium Fair, Düsseldorf 2014

Maarten G. Labberton
EAA Packaging Group

Outline

- Intrinsic properties and main end-use markets
- Aluminium packaging contributes to resource efficiency
- Aluminium packaging contributes to less food waste
- Aluminium is infinitely recyclable
- A true European recycling network



The intrinsic properties of aluminium make it the ideal packaging material



Main end-uses for aluminium products in Europe 2013



17%
Packaging

39%
Mobility

24%
Construction

13%
Engineering

7%
Consumer durables

**Packaging is the
3rd largest end-
use market for
aluminium**



About 70% goes into rigid (cans) and semi-rigid (containers, closures) applications, nearly 30% in flexible foil (lidding, wraps, etc.)

**Main aluminium
(using) packaging
applications**

Estimated repartition, tonnage based
(Sources: EAA, EAFA, AEROBAL, 2013)

Flexible ⁽³⁾
28%

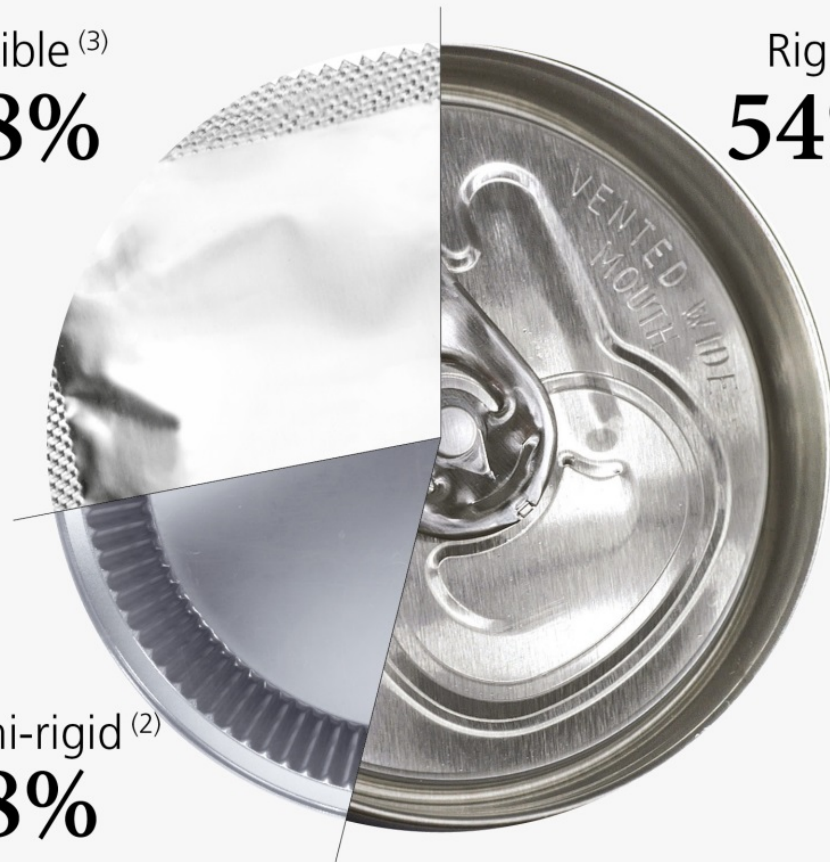
Rigid ⁽¹⁾
54%

Semi-rigid ⁽²⁾
18%

(1) Beverage cans, aerosol cans, food containers

(2) Menu trays, food- and petfood containers,
tubes, closures

(3) Foil and laminated foil (often defined as
plastics or paper packaging)

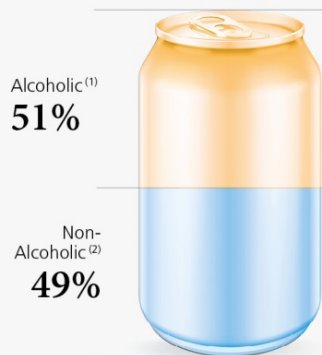


Typical customer markets for beverage cans are in beer and non-alcoholic drinks while aerosols and tubes are mainly used for personal care, pharmaceutical and cosmetics products

Can fillings for alcoholic drinks ⁽¹⁾ and non alcoholic drinks ⁽²⁾

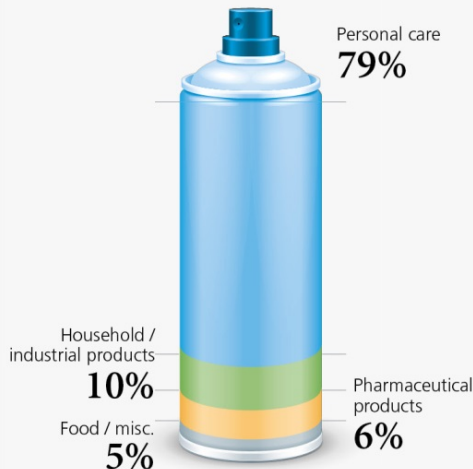
(Source: BCME, 2013)

- (1) Beer, flavoured alcoholic beverages, wine
(2) Soft drinks, juices, water



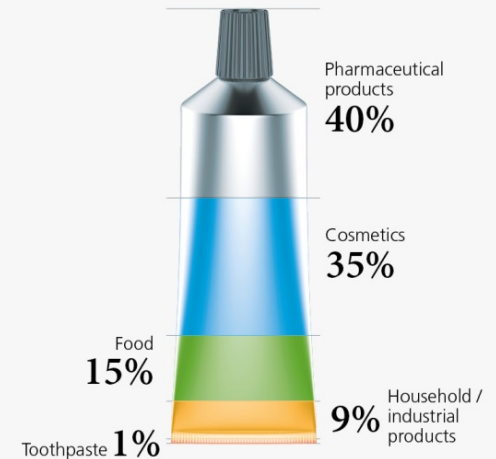
Aluminium aerosol cans - breakdown by market sector

(Source: AEROBAL, Europe 2013, %)



Aluminium tubes market - breakdown by market sector

(Source: Production European aluminium tube manufacturers – ETMA members and others, ETMA, 2012, %)



Carbon Footprint of 500 litre beer supply ready for consumption in aluminium cans

1000 x 0.5 litre cans, at 60% recycling rate, 841 kg CO₂ equivalents

(Source: PE International, 2009)

Repartition CO₂ equivalents

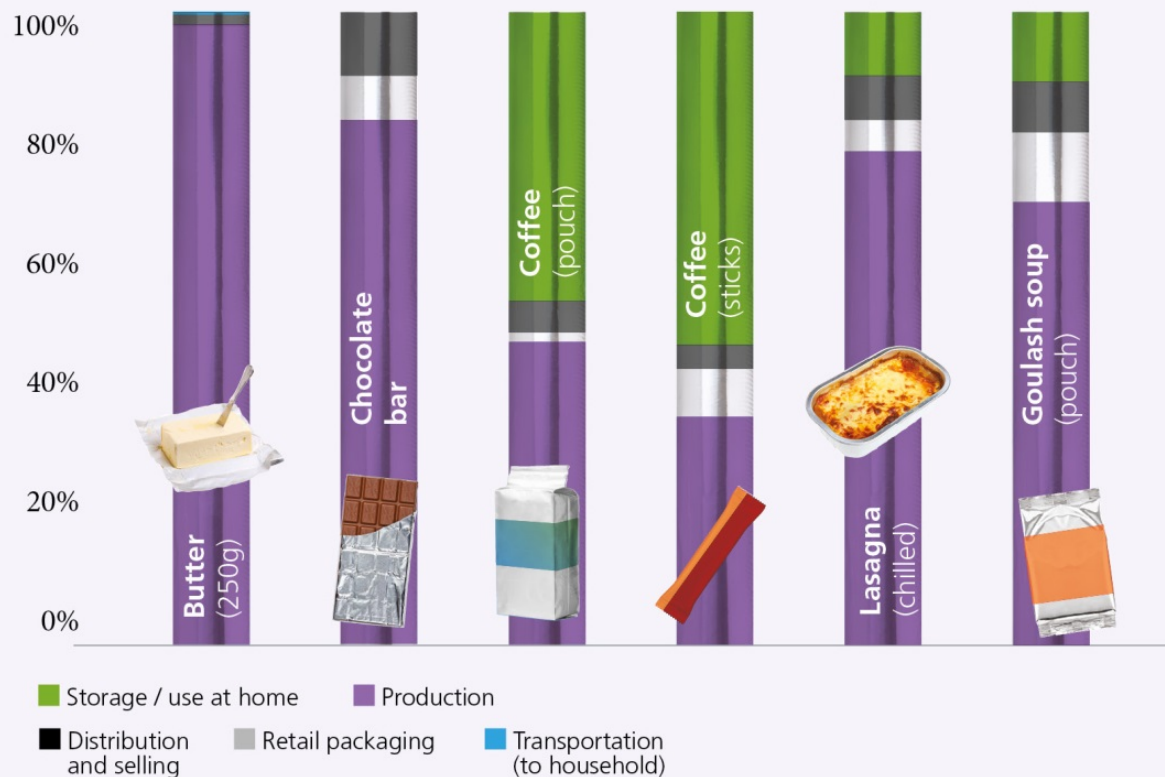


Aluminium packaging contributes to resource efficiency as it protects very well its food content, which usually has a much higher carbon footprint - example of beer in cans

A relatively small amount of aluminium packaging material is enough to save its precious content

Aluminium saves more resources than it consumes

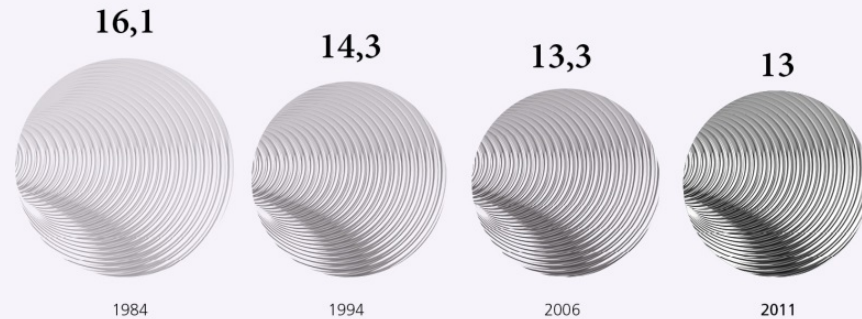
Carbon Footprint (Global Warming Potential) – aluminium foil packaging as percentage of the total
(Sources: ESU Services, EAFA)



Aluminium also contributes to waste prevention

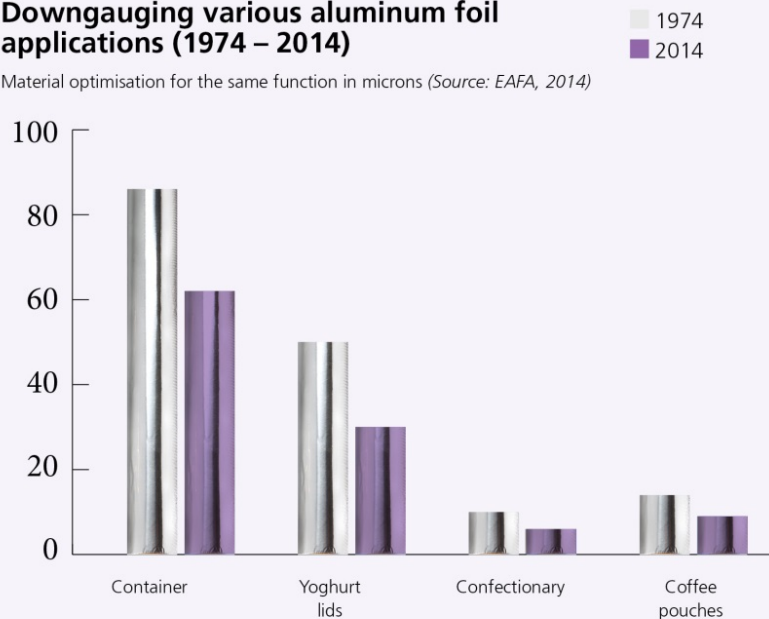
Downgauging of aluminium beverage cans (1984 – 2011)

Amount of Aluminium (kg) used for 1000 beverage cans of 33cl
(Source: BCME 1984-2011)



Downgauging various aluminum foil applications (1974 – 2014)

Material optimisation for the same function in microns (Source: EAFA, 2014)

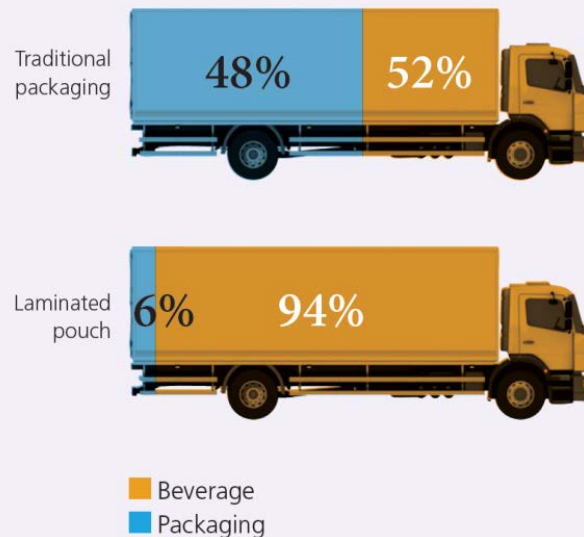


Due to technological innovation less and less material is being used to pack the same amount of drinks and food

Aluminium packaging contributes to transport efficiency: less weight, less storage space and thus less CO₂ emissions

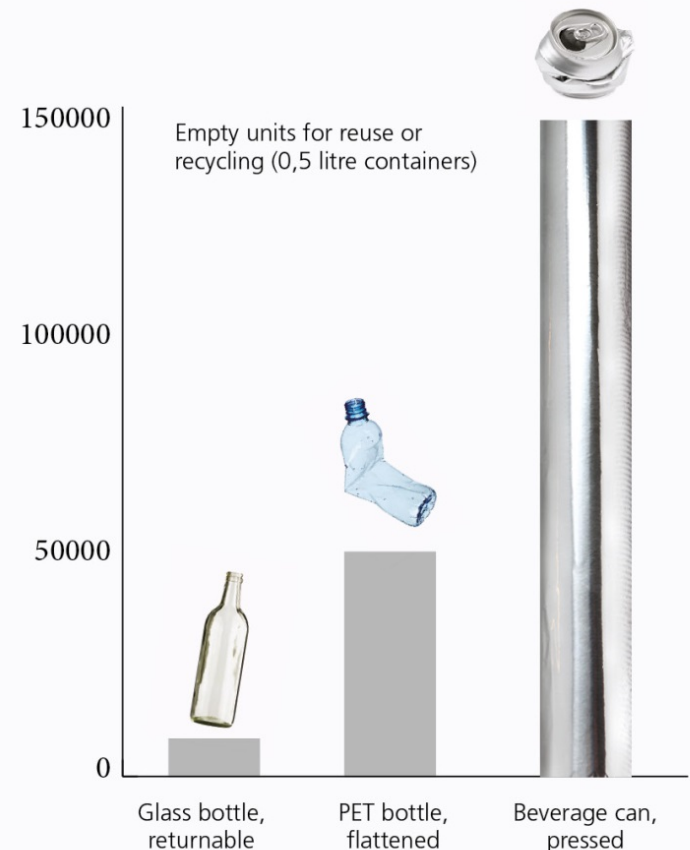
Transport efficiency savings through lightweighting

for a fruit-based drink, 0.2 litres
(Source: Deutsche Sisi Werke, 2002)



Transport efficiencies for empty beverage cans versus other drink containers

(using a 40 tonnes truck with a max. loading capacity of 22 tonnes)
(Sources: IFEU Okobilanz Report 2013, BGVZ, Novelis)



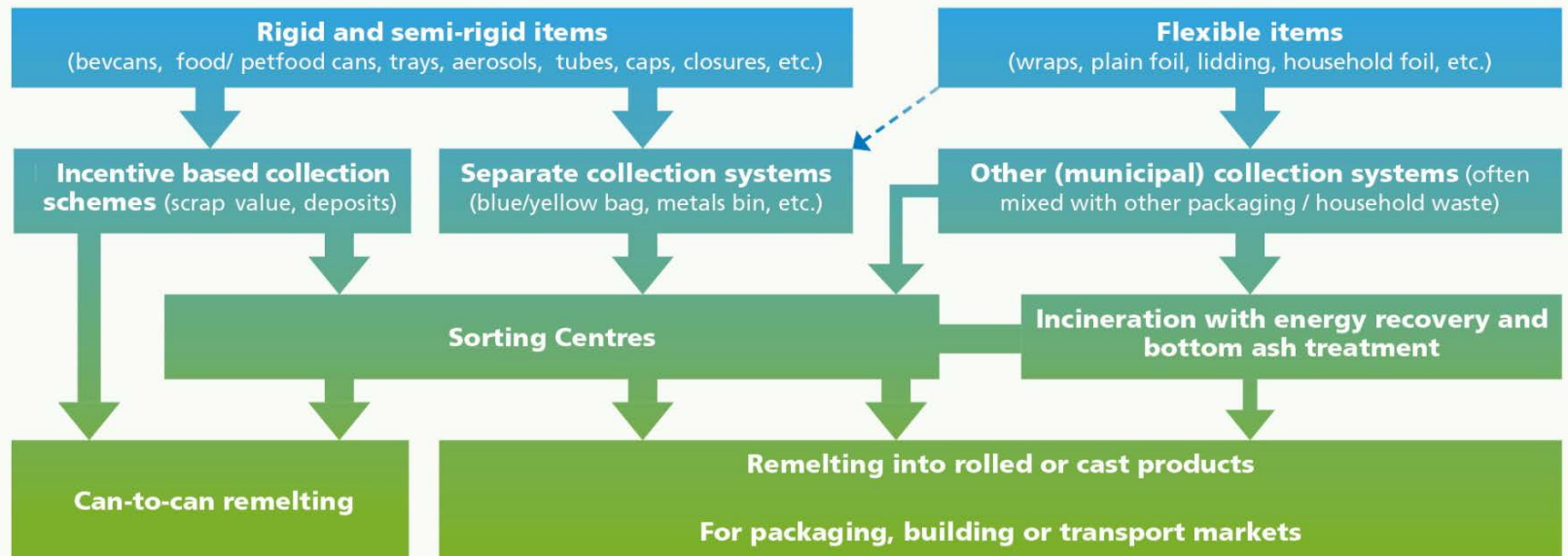
Aluminium packaging contributes to less food waste



- Portion packs save a lot of resources and **increase sustainable consumption**
- Life cycle assessment shows that closures have a better environmental performance and **prevent wine spoilage**
- Aluminium foil's hygiene properties, heat conductivity and strength make it **perfect for 'ready meal' containers**
- Aluminium packaging **makes food lasting longer** while retaining its nutritional quality
- Just 1.5 grammes of alufoil in a beverage carton enables one litre of milk to be **transported and stored for several months** without refrigeration
- Slimmer cans not only offer **eye-catching formats** but also allow consumers to choose, portion-controlled or low-calorie drinks

Aluminium is infinitely recyclable - used aluminium packaging fits in all recovery routes, providing sufficient and innovative collection and sorting systems are put in place

Collection & sorting routes for used aluminium packaging (separate and/or in combination with mixed systems)



Aluminium is infinitely recyclable and should stay in its product or material loop, to be used again and again and again.....

Used aluminium packaging fits in all recovery routes

- Mono-material / mono-packaging collection (e.g. can-to-can recycling)
- Within the metal / mixed container packaging fraction, additional collection + sorting needed
- Incineration with energy recovery + aluminium extraction from bottom ashes





EAA has the ambition to further increase the recycling and recovery of aluminium packaging

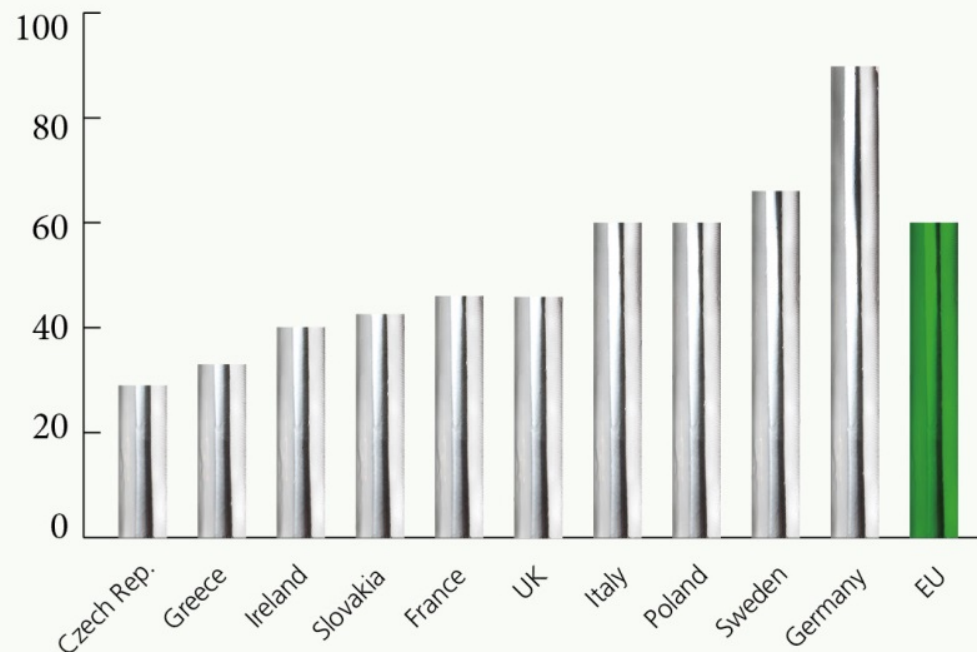
Recycling performance aluminium foil containers at 55%

(Calculated, EAFA)

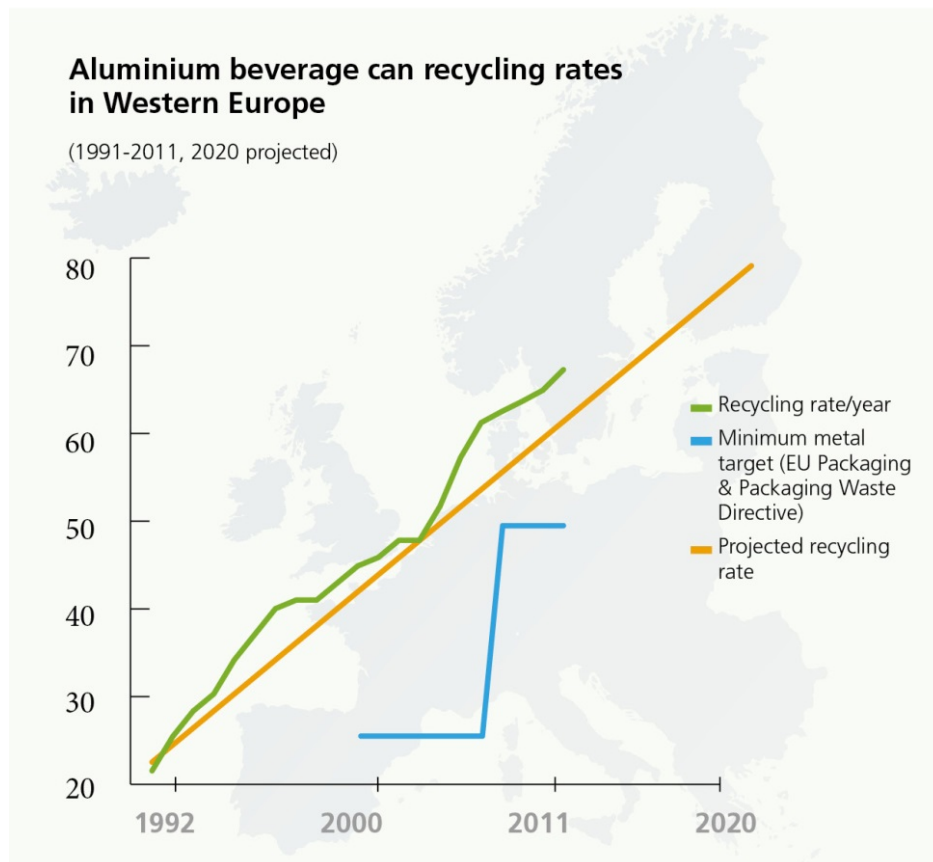


Aluminium Packaging Recycling Results

-  Aluminium Packaging Recycling (2010-2011, as reported by Eurostat, 10 countries),
-  EU average (55% estimated recycling, about 60% when additional energy recovery is included)



The European recycling rate for aluminium beverage cans stands at 68% (2011) and we aim at 75% in 2015, respectively 80% in 2020



A true European recycling network with cross-national awareness programmes and specific recycling activities



Endurvinnslan

RETURPACK, FTI

RESIRK, NMG

ALUPRO Nordic

PALPA, Mepak

Eesti PP

Aluminium Danmark

ALUPRO Baltics & Eastern Europe

ALUPRO Ireland

ALUPRO

RAVN, SKB

RECAL

Stalupack

DAVR

Pro-Alu-Pack

Returpack

FAR

IGORA

ALUCRO

RECAN Fund

ARPAL

CIAL

Fileira Metal

CANAL, AAG