



NESC – CIRCULAR ECONOMY

RAMON ARRATIA, SUSTAINABILITY DIRECTOR, BALL

@ramonarratia

Ball is the leading provider of metal packaging for beverages in the world. We have more than 70 production facilities in over 30 countries and supply cans to many leading brands and entrepreneurial start-ups.

26 billion cans in Europe



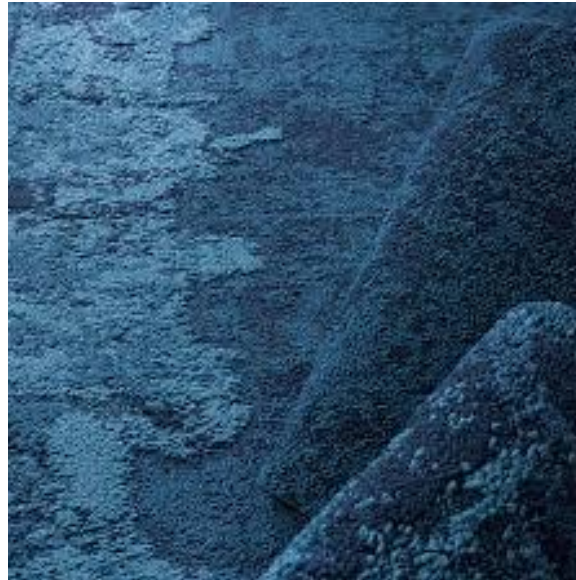
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- 1.0 MOBILE PHONE
- 2.0 CARPET TILE
- 3.0 BEVERAGE CAN
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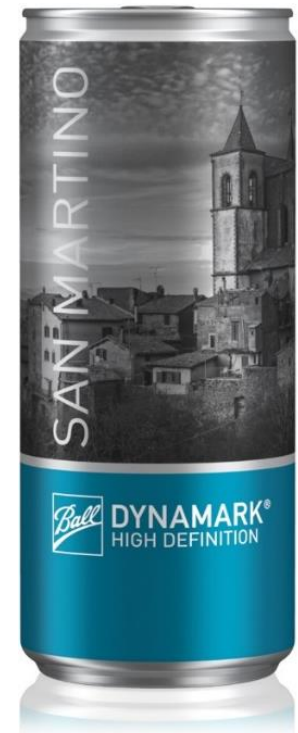
CIRCULAR ECONOMY IS DIFFERENT FOR EACH PRODUCT



**Mobile
phone**



**Carpet
tile**



**Beverage
Can**



**Mobile
phone**

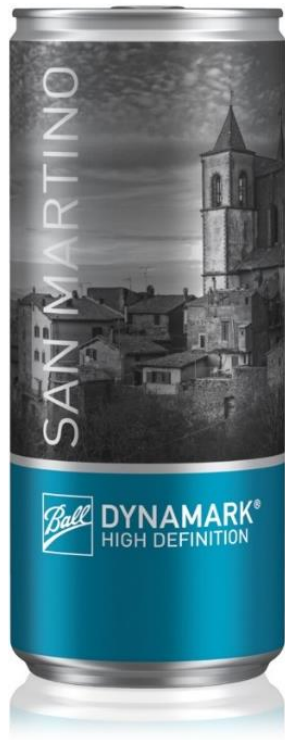
- DURABILITY
- REPAIRABILITY
- HARDWARE vs SOFTWARE
- REUSE
- EASY TO DISSESAMBLE
- RECOVERY OF HIGH VALUE MATERIALS



**Carpet
tile**

- DURABILITY
- RECYCLED CONTENT
- EASY TO INSTALL
- EASY TO DEINSTALL
- EASY TO TRANSPORT
- MATERIAL SEPARATION
- MAINTENANCE SERVICES
- INTEGRATED SERVICES





**Beverage
Can**

- RECYCLING RATE
- MONOMATERIAL
- WEIGHT REDUCTION
- EFFECTIVE POLICY
- RECYCLING TECHNOLOGIES
- CONSUMER AWARENESS



**BALL IS THE LEADING
SUPPLIER OF METAL
PACKAGING IN
THE WORLD**

#1



**LAUNCHED FIRST-EVER
33CL ALUMINUM CAN
BODY IN EUROPE WITH
LESS THAN
10 GRAMS**

<10g



- **Metals are completely and infinitely recyclable with no loss of quality**
- **The production of secondary metals requires only a fraction of the energy used for virgin metals**
- **Recycling metals saves**
 - up to 95% of the energy used for virgin aluminum
 - up to 74% of the energy required to produce virgin steel
- **The main benefits of recycling are saving primary resources and energy**
- **CAN is effectively a ‘monomaterial’**



For information on the Metal Recycles Forever logo, including its on- and off-pack use, visit www.ball.com/recycling.

33cl Standard 1980s



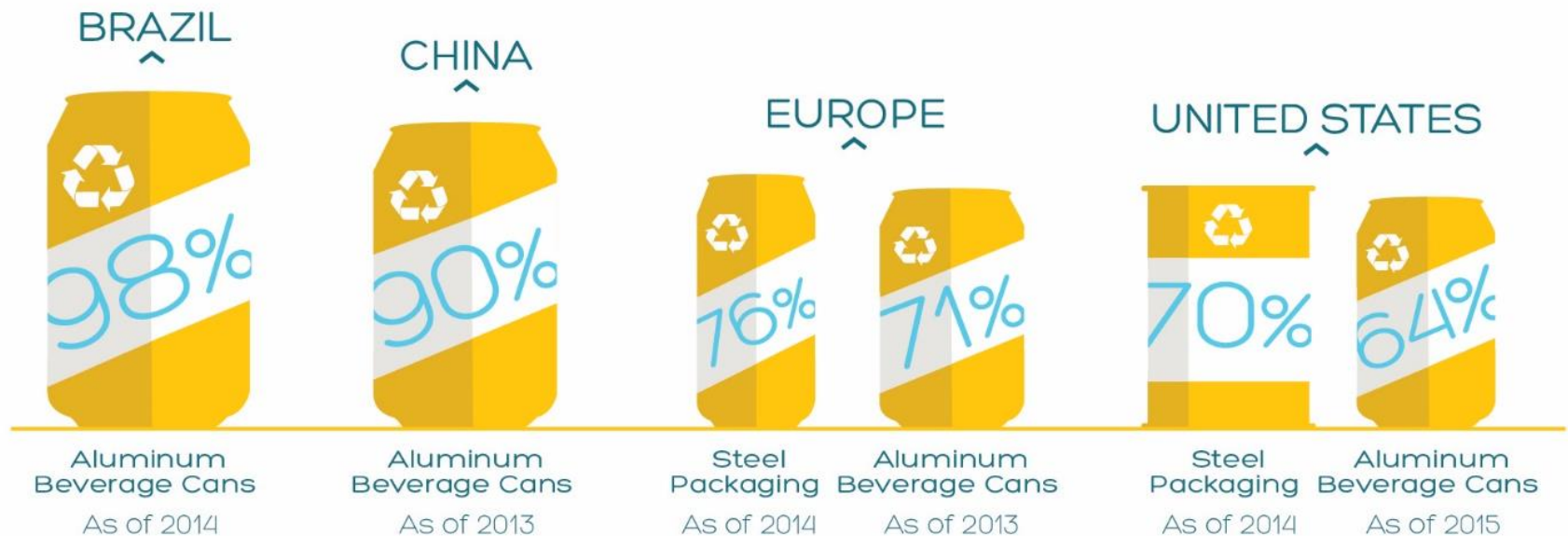
33cl sleek



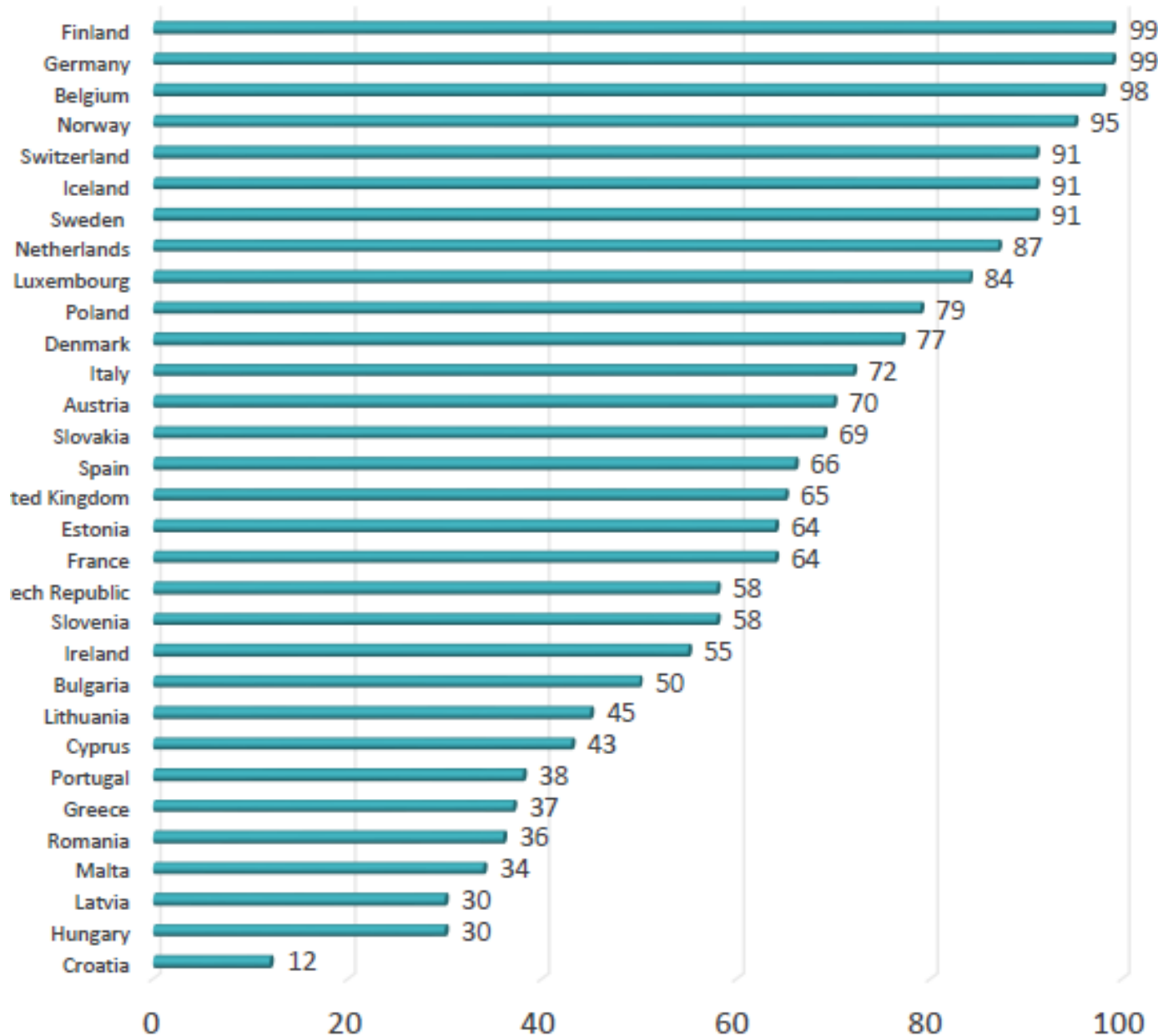
35% weight reduction

- Nearly 75% of all aluminum and more than 80% of all steel ever produced is still in use today

METAL PACKAGING RECYCLING RATES around the world



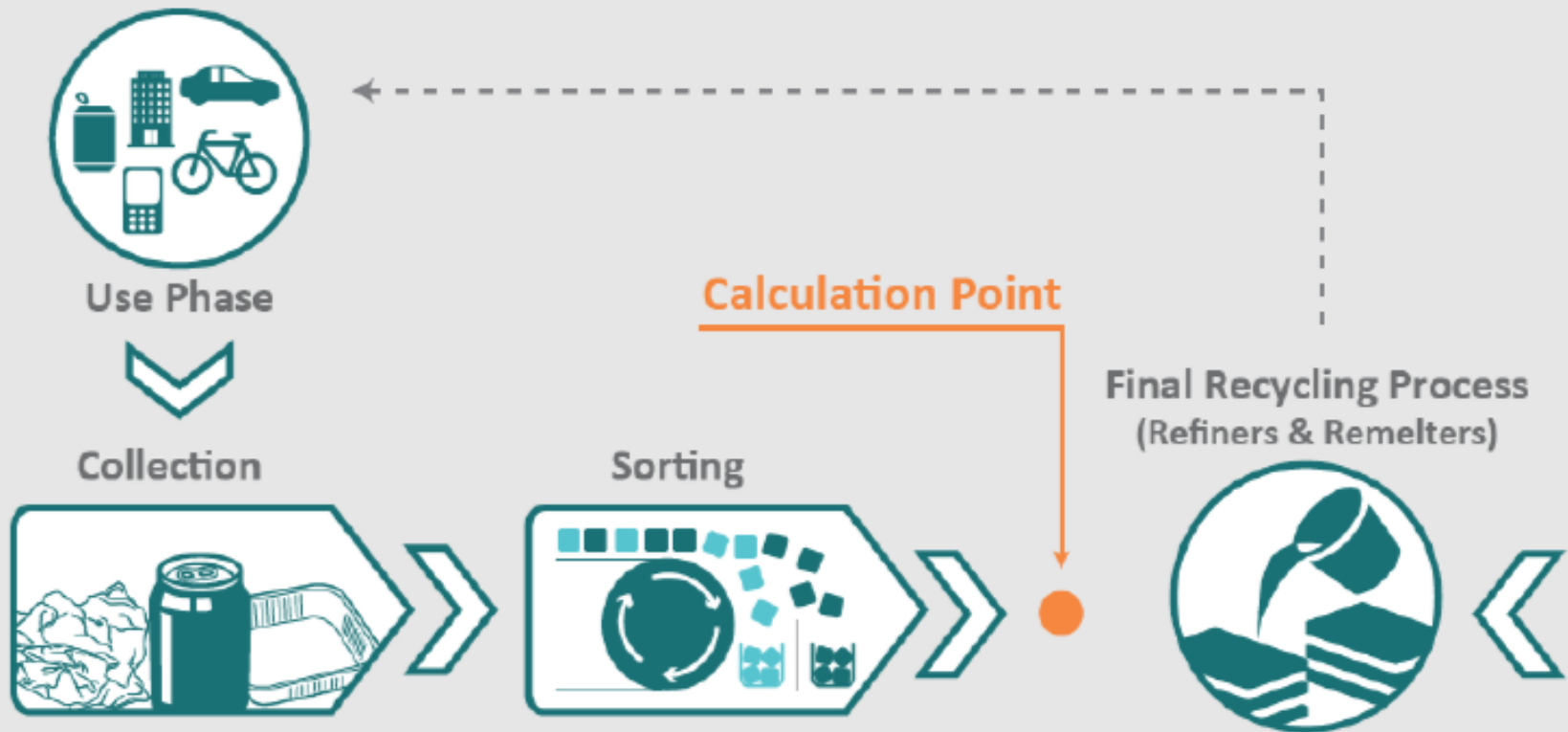
RECYCLING RATES VARY



Source:
European
Aluminium
2013 rates

- Material in Sub-stream contains only metal packaging
- Metal has permanent properties
- Life cycle of material in Sub-stream is much shorter compared to the main cycle
- Material(metal) pool in Sub-stream is small compared to total Material(metal)-stream
- Total volume of packaging material put on market is nearly constant
- Recycling numbers for metal packaging are high
- Metal packaging that is collected ends up in recycling process(Sub-stream)
- Scrap input is significant and constant for the production of metal packaging("closing the loop")

/ Measuring Real Recycling

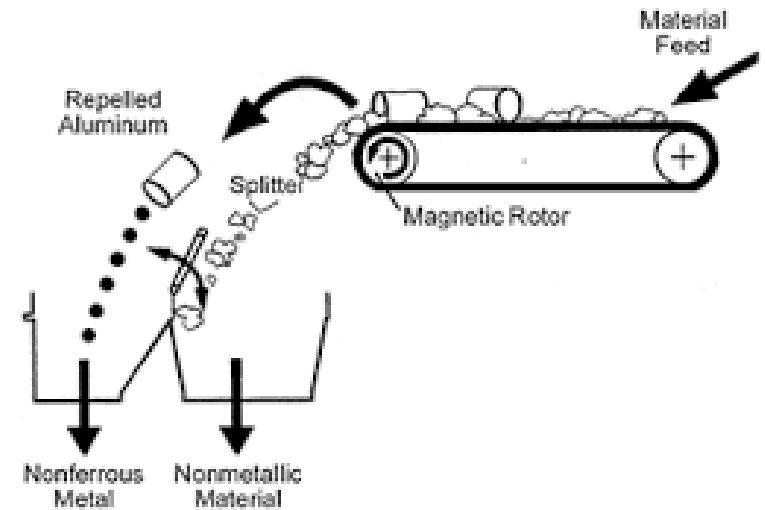


Collection & sorting routes for used aluminium packaging (separate and/or in combination with mixed systems)





**Sensor-based /
near infrared sorting**



**Eddie current
separation**



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