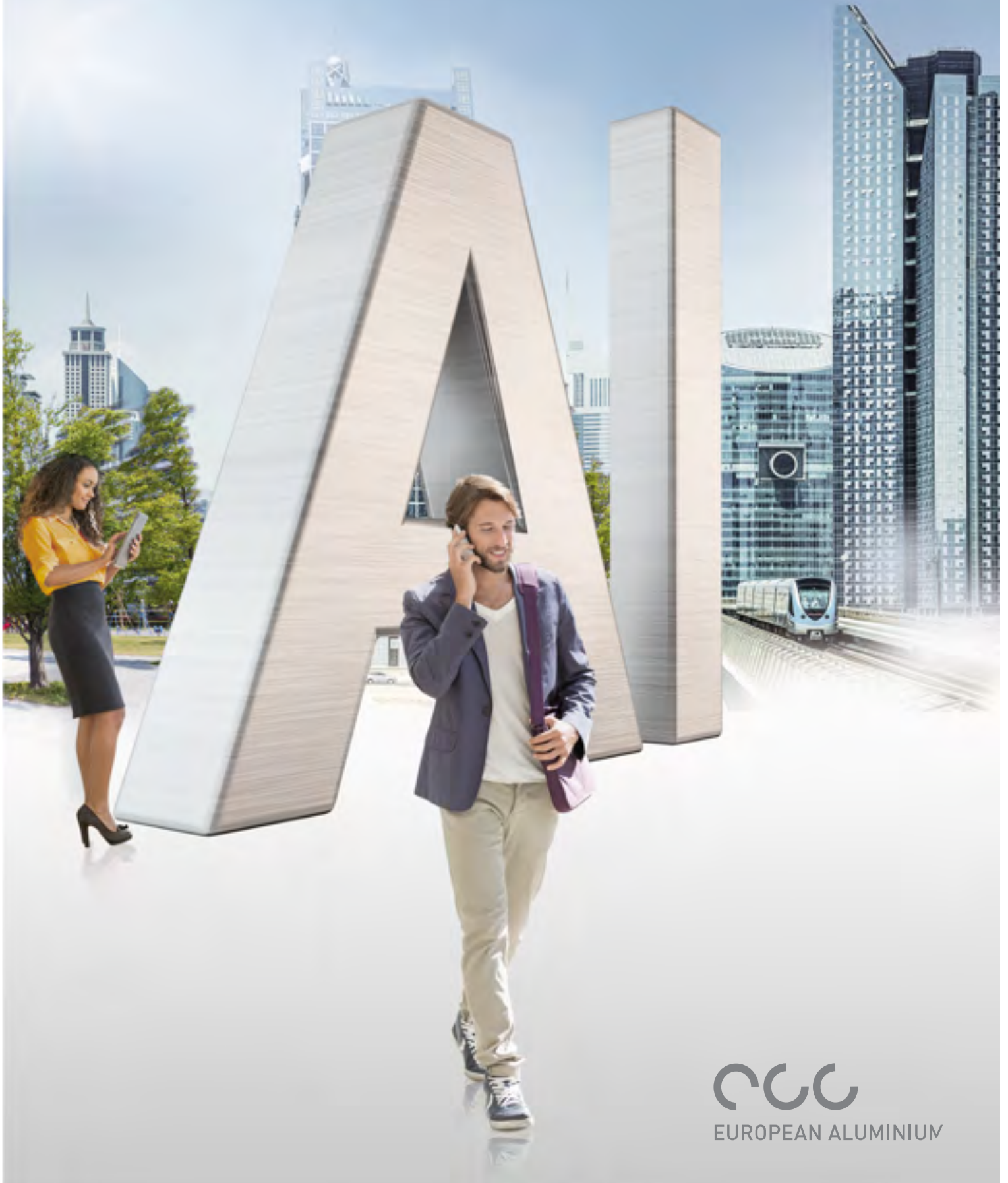


# ACTIVITY REPORT 2015

UNLOCKING SUSTAINABLE VALUE CHAINS



EUROPEAN ALUMINIUM

# THE ALUMINIUM EFFECT

## CONTENTS

### 01 THE OPENER > 4



### 02 SUSTAINABILITY ROADMAP 2025

- Designing a sustainable and innovative pathway > 8
- The Innovation Hub > 11

### 03 ENGAGING WITH EUROPEAN LEADERS Our campaigns > 12



### 04 EUROPEAN ALUMINIUM'S YEAR

- A culture of responsibility > 17
- Packaging and Recycling > 19
- Advocating for smart buildings > 23
- Decarbonising mobility > 25

### 05 OUR WORK ON STANDARDS Preparing for future markets > 27



### 06 ABOUT EUROPEAN ALUMINIUM

- Members > 29
- Executive Committee > 30
- Secretariat > 30





GERD  
GÖTZ

DIRECTOR GENERAL OF  
EUROPEAN ALUMINIUM

# 01 THE OPENER

## PLACING SUSTAINABILITY AT THE HEART OF OUR CORE BUSINESS

### How was 2015 for European Aluminium?

**PV:** Excellent. Global demand remains robust and the entire industry demonstrated leadership on climate change, trade and innovation. We launched our Sustainability Roadmap, setting out the industry's long-term vision, and we engaged with policymakers on the Emissions Trading Scheme (ETS) reform, the circular economy package, energy efficiency on buildings and the revision of the anti-dumping regulation. This demonstrated the value of a modern, focused association.

**GG:** I would also highlight the impact of our digital campaigns promoting aluminium as the perfect solution for so many applications. We equally saw progress on standards, energy efficiency in buildings and the continuing growth in the "Every Can Counts" programme. Undoubtedly, actions have matched our targets across all divisions and market groups!

### What were the key challenges for industry?

**PV:** There have been many, but I want to focus on two. Firstly, the need for predictable legislative frameworks to provide Europe with a more sustainable, competitive industrial base. Currently, we struggle to define horizontal legislation for promoting aluminium's unique

properties more widely. We need systematic approaches in energy and climate, decarbonising transport, the circular economy, trade and innovation to realise Europe's industrial potential. Secondly, international competitiveness and trade. Europe plays a leading role in international trade and must show robust leadership. We support the highest standards and common rules for the environment, health and safety. Europe's policymakers must ensure that these are respected worldwide as a condition for fair trade.

### The industry launched its Sustainability Roadmap this year. Why is this so important?

**GG:** Two reasons. Firstly, it drives our ambition to make the aluminium sector a leader in sustainability. We knew we could not move to a more circular economy without a sustainable plan; nor could we claim to be a responsible industry without clear, measurable targets. Launching the roadmap with the support of multiple stakeholders makes this a reality. It is our concrete commitment to delivering our ambition.

### The Climate Change agreement COP21 was a major talking point for 2015. What are the implications for the aluminium industry?

**PV:** The COP21 agreement was a pivotal event for all stakeholders. It created a sense of shared responsibility and global commitment and it enhances our vision. We must maintain our focus while working



PIERRE  
VAREILLE

CHAIRMAN OF EUROPEAN  
ALUMINIUM AND CEO OF  
CONSTELLUM

with policy makers to find solutions, supporting ambitious targets for the circular economy and finding balanced solutions for a workable ETS for 2021-2030. In addition, we should help Europe in defining globally respected, strong environmental, safety and health standards. This way, we can build a sustainable, competitive industrial value chain while reducing emissions and reinforcing innovative business models.

### 2016 is potentially momentous for International Trade. How high does this issue stand on your agenda?

**GG:** At the top. Growth in primary aluminium overcapacity on global markets, combined with unfair trade practices by third countries, risks undermining European producers. We need a level playing field and we are working with other sectors to ensure international trade rules are respected. This is why we joined industry alliance AEGIS Europe, making our voice even stronger in advocating for a solid EU trade defence system.

### The other major topics for the EU were the Circular Economy and ETS reform. How important are these?

**PV:** Both are vital. ETS reform will help eliminate current inconsistencies and provide a predictable framework for direct and indirect carbon costs. We made proposals for solutions and we are confident that these will be considered for maintaining competitiveness and reducing emissions in

our sector.

**GG:** We were delighted to see the Circular Economy Package adopted. This marks the start of the transition from linear to resource-efficient economies. European Aluminium supports more efficient collecting and sorting equipment to improve real recycling. We also seek solutions to limit exports of aluminium scrap. Europe is already a leader in recycling and must continue to drive this transition.

### What else should members and partners expect in 2016?

**PV:** As Chairman of European Aluminium, I am fully committed to our sustainability plans. Europe has a major role to play and our industry wants to be part of the solution. We will work with our members to demonstrate leadership.

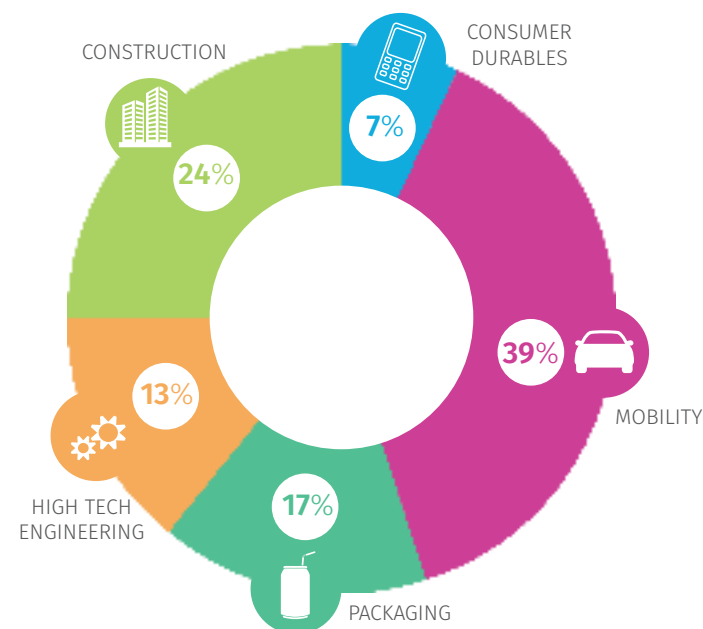
**GG:** European Aluminium will be highly visible, arguing for a sustainable value chain across industrial sectors. We will have coordinated, pan-European outreach with state-of-the-art digital campaigns. We will continue to provide our members with the sector's latest statistical data and promote our Sustainability Roadmap. There is also our Innovation Hub. We want to make sure that our members will have an additional opportunity to invest in the future and become a role model for the decarbonisation of the economy.

## INDUSTRY OVERVIEW

The aluminium value chain ranges from alumina, (aluminium oxide, the precursor for primary metal production) through the metal itself to semi-finished, end-use products and recycling of aluminium products. Demand for aluminium products continues to grow, and Europe's industry is fighting hard for its share of the global market.

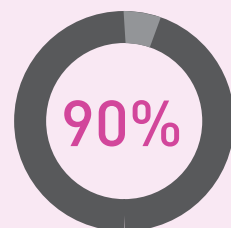
Overall, there are encouraging signs that the recovery from the economic crisis is underway. However, European producers now have to absorb higher compliance costs generated by stricter climate change and energy regulation. In addition, the falling availability of aluminium scrap in the EU is adding to the financial challenges the industry faces.

### MAIN END-USES FOR ALUMINIUM PRODUCTS IN EUROPE IN 2015

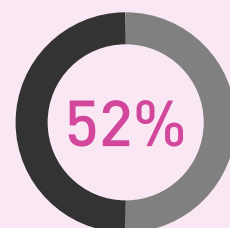


# 38 billion EUR

The annual turnover of the European aluminium industry



current aluminium recycling rates in transport and buildings



the European aluminium industry's output derived from recycled sources

# 8%

the amount Europe contributes to the world's annual primary aluminium production

# 5%

the percentage of primary production energy needed to recover scrap aluminium

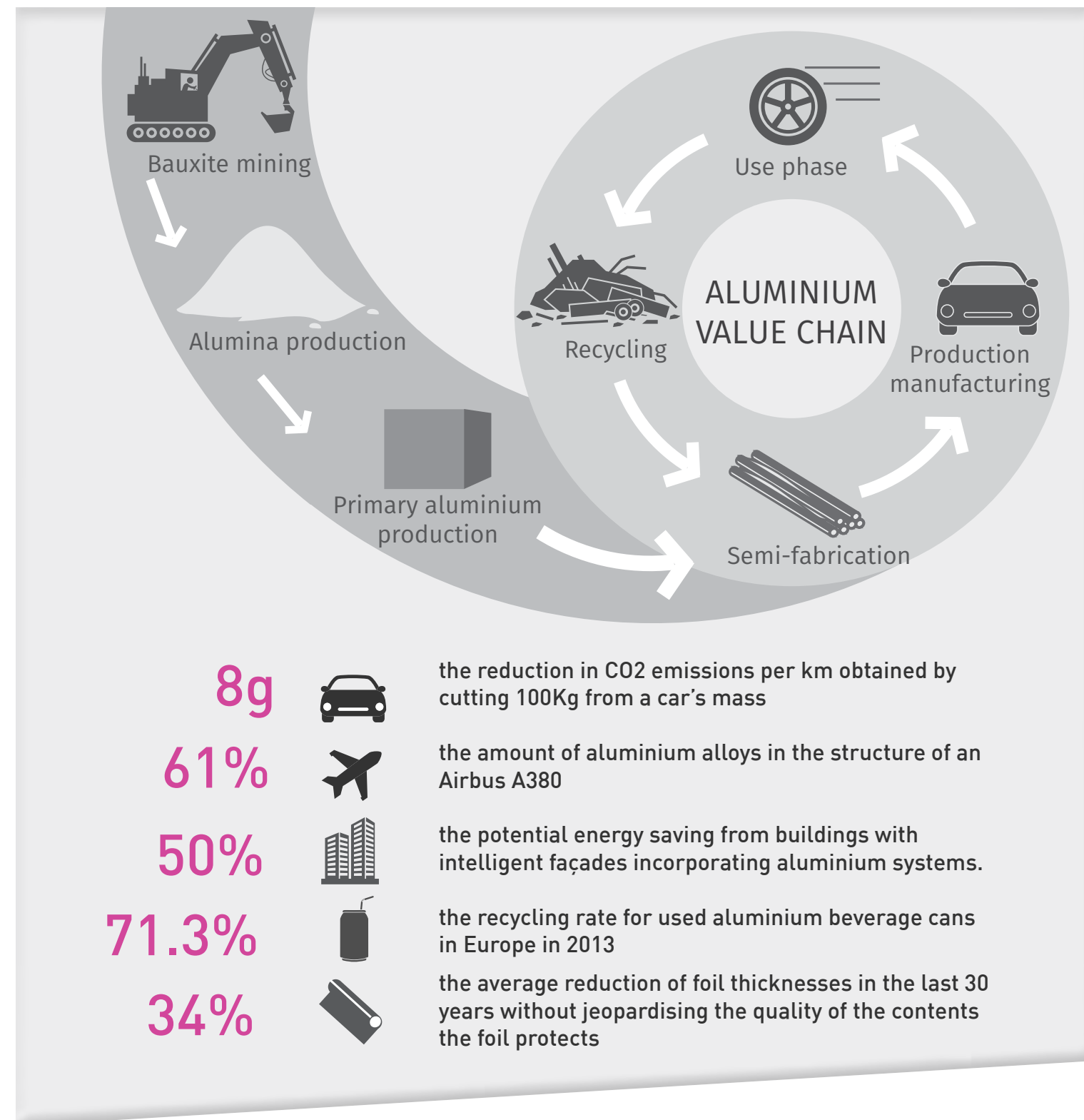
# 10.5 million

tonnes of recycling production

Source: European Aluminium 2015

## PRODUCTION OUTLOOK IN EUROPE

World demand for aluminium is growing rapidly, up 66% between 2000 - 2010, with a further 75% increase expected between 2010 - 2020. Europe's market share for total aluminium exceeds 20%, with increasing demand due to aluminium's climate and resource efficiency benefits over other materials.



# 8g



the reduction in CO2 emissions per km obtained by cutting 100Kg from a car's mass

# 61%



the amount of aluminium alloys in the structure of an Airbus A380

# 50%



the potential energy saving from buildings with intelligent façades incorporating aluminium systems.

# 71.3%



the recycling rate for used aluminium beverage cans in Europe in 2013

# 34%



the average reduction of foil thicknesses in the last 30 years without jeopardising the quality of the contents the foil protects

Despite this positive outlook, the EU has lost 36% of its primary production capacity since the onset of the economic crisis. The estimated increase in the EU primary and recycled production in 2015 was +4.9% and +5.4% respectively. The EU currently imports around half its metal supply, with an estimated deficit in 2015 of 5.8 MT.

Semi-fabrication - rolling and extrusion - saw a mixed picture for 2015. The market for flat-rolled products (mainly used for packaging, transport and buildings) grew by +2.4%, while the market for extruded products (mainly used for building and construction, transport and engineering) remained flat. Both sectors foresee growth

in 2016, of roughly +2% and +1% respectively. However, European production is under increasing pressure from imports, up +23%.

Recycling production in 2015 reached around 10.5 MT. With a recycling capacity of around 12.3 MT, Europe has a vested interest in maximising collection of available aluminium and developing the most resource-efficient scrap treatments processes. In the same period, the EU exported around 900 KT of aluminium scrap in 2015, down -12% on 2014.



02

# SUSTAINABILITY ROADMAP 2025

In April 2015, European Aluminium launched a comprehensive Sustainability Roadmap as a voluntary contribution to addressing environmental, economic and societal challenges. Designed to support on-going global efforts to decarbonise the economy in the context of the COP21, increase industrial efficiencies and promote societal welfare, our roadmap will feed our business models and practices.

Aluminium offers solutions to many of the challenges facing Europe. In particular, it can help drive the low-carbon, resource-efficient agenda while supporting lasting growth and a more competitive EU economy.

To turn its ambition into reality, the European aluminium industry has developed and launched its 'Sustainability Roadmap to 2025'. This Roadmap is a programme of ambitious targets and commitments that go far beyond legislative obligations. It reflects our industry's forward-thinking approach to change and our commitment to positive action in the coming decade.

The Roadmap centres on three main areas, each with its own specific objectives and targets:

1. Responsible production for Environmental Protection.
2. Innovative applications for Sustainable Lifestyles.
3. Socio-economic contribution for a Sustainable Society.

For example, our sector is seeking to reduce industrial energy consumption by 10% for every tonne of aluminium produced, transformed or recycled in Europe and to further reduce the total recordable incident rate (TRI)\* by 50%. It aims at defining a set of core criteria for the whole aluminium value chain on sustainable sourcing of raw material, developing water management programmes in water scarce areas, reducing and recycling industrial waste as much as feasible and actively contributing to the ban on landfilling recyclable waste.

\*TRI represents the number of fatalities, lost time accidents, restricted work cases and medical treatment cases per million work hour.  
Latest data from the Sustainable Development Indicators (SDIs) in 2012, available here: <http://www.european-aluminium.eu/sustainability/sustainability-indicators/>

The industry already has a demonstrable track record of continuous self-improvement. This is reflected in our Sustainable Development Indicators (SDIs), which are regularly monitored and have been published since the late 1990s. For example, Europe's aluminium sector has reduced its overall CO2 emissions by more than 50%; other notable improvements include an 80% reduction in the TRI rate and a 100% increase in training hours per person per year.



## The International dimension of sustainability

Our Roadmap represents a fundamental instrument in positioning our industry as one of the front-runners in global sustainability milestones. For example, our roadmap's priorities on production, innovation and socio-economic areas, are aligned to international commitments including the UN Sustainable Developments Goals for 2030 and the Paris COP21 climate change agreement. Europe's decision makers have welcomed our step forward in cooperating and designing long-term plans for a sustainable industrial base in our continent.



MEP Sorin Moisa in our Sustainability Roadmap Launch Event, April 2015

**"Aluminium is the material we need to be able to build efficient buildings, low carbon vehicles but also the wires we need to transport electricity. It is a sector we rely on and must support."**

Manon Dufour,  
E3G, Third  
Generation  
Environmentalism



### The role of the EU

However, the ability to deliver on aluminium's potential depends on having the right operating conditions; EU decision-makers have a pivotal role to play in unlocking this potential. The EU needs to align its industrial, climate and energy policies; high energy costs are continuing to jeopardise primary production of aluminium within Europe. In addition, the increasing levels of scrap aluminium exported to outside the EU undermines the recycling industry, obstructing our transition to a circular economy.

Europe's re-industrialisation will depend on research and innovation, energy efficiency, renewable energy, recycling and a more inclusive society. These enabling factors depend on a value chain approach to realise their full potential.

**"Europe must stand up for the aluminium industry as a champion of a sustainable and prosperous future. Through our Sustainability Roadmap, we look forward to continuing our dialogue with the EU on making this a reality."**

Gerd Götz, Director General,  
European Aluminium



**"The Roadmap is born from our belief in the fundamental need to reconcile sustainability and growth objectives in Europe."**

Pierre Vareille, Chairman, European Aluminium and CEO Constellium

Our Sustainability Roadmap is the product of intense discussion and collaborative thinking among European Aluminium's members through the entire value chain. It reflects discussions with key stakeholders, including EU decision-makers, customers and NGOs. Our industry operates in close cooperation with key sectors including transport, buildings, aerospace and packaging at European and global scales.

The launch of our Sustainability Roadmap sees our industry embark on developing and implementing the action plans needed to deliver on our ambitions and achieve our targets. We will continuously monitor our progress, report transparently through our Sustainability Development Indicators and via continuous dialogue with the full spectrum of our stakeholders. We have also planned a comprehensive mid-journey evaluation of our progress five years from now, in 2020.



The European aluminium industry's Sustainability Roadmap towards 2025

### Our Sustainability Roadmap in detail:

#### 1. Sustainable and eco-friendly production

This champions the importance of sustainable, environmentally friendly production for Europe. It sets ambitious targets for managing using resources, managing water and industrial waste and contributing to the overall protection of the environment.

#### 2. Innovative products for sustainable lifestyles

This covers the main applications of aluminium, in particularly the automotive and transport, building and packaging sectors. We have set targets to realise the full potential for these applications. In addition, the industry is committed to market-specific recycling action plans, that which will actively assist in phasing out the landfilling of aluminium recyclable waste.

#### 3. Socio-economic contribution

This deals with the interaction between industry with its workforce and with broader society. It includes employee welfare (e.g. employee development, diversity; health and safety) and social engagement (e.g. value-sharing with local communities).

### The Innovation Hub: maximising synergies with the EU innovation agenda

European Aluminium is taking active steps to support industry's engagement with the EU innovation agenda and its range of funding opportunities. These activities are organised through the so-called 'Innovation Hub'.

The ultimate goal of this initiative is to allow companies, including SMEs, to capture EU project opportunities that promote aluminium use. This will improve and enrich our industry's advocacy and sustainability objectives by fully integrating innovation into its core programme. Coordinated by European Aluminium and led by innovation leaders from member companies, the Innovation Hub will become our main vehicle to develop innovative projects that support the sustainability vision endorsed in our Sustainability Roadmap.

During 2015, the Innovation Hub engaged with a number of key Public Private Partnerships (PPPs) platforms, including Sustainable Process Industry (SPIRE), Factories of the Future (FoF) and Energy-efficient Buildings (EeB). For 2016, we plan an even more ambitious work programme. This includes prioritising innovation challenges along the value chain and developing a long-term strategy to address Horizon 2020 calls for proposals from 2017 onwards.

### Main objectives of the Innovation Hub:

- Securing effective application and participation in EU-funded projects with strategic partners and relevant stakeholders.
- Providing a European-wide view on the technology needs and priorities, focusing on a 10-year horizon, i.e. up to 2025.
- Developing a coherent approach to Research and Technology throughout the aluminium value chain.
- Providing a single forum to address non-competitive technological issues.
- Acting as a key stakeholder in the most relevant European PPPs, including SPIRE, FoF and EeB.
- Encouraging development of EU Research and innovation projects that address the aluminium value chain.





# 03

## ENGAGING

### WITH EUROPEAN LEADERS

In 2015, President Juncker moved up a gear. The European Commission approved a legislative programme promoting economic growth, investments, trade and reducing CO2 emissions. The outcome has been a package of proposals that will influence the entire aluminium value chain's future business landscape in the coming years.

#### Building bridges with policy makers

The EU's economic and environmental regulatory framework underwent major revisions, creating both opportunities and challenges for our industry. In response, we sought to partner with decision makers and identify viable solutions. Throughout 2015, we engaged with the Commission, Ministers, WTO national delegations, MEPs and technical civil servants. We shared evidence-based data supporting our policy options and defining future sustainable scenarios.

#### An engaging debate with Council leaders

In October 2015, European Aluminium was invited to an exchange with the EU Competitiveness Council. Along with other selected partners (including Airbus and Rolls Royce), we explored our main challenges including innovation, energy and climate change, talent management and trade policy. There was a productive exchange of views and participants discussed concrete proposals to be further elaborated in a high level dialogue coordinated by the European Commission.

#### Bringing policy-makers to the field

To build relations with MEPs, European Aluminium - with the support of National Associations - organised a series of plant visits to demonstrate the unique nature of our industry. It gave MEPs active on Environment and Industry issues and from several Member States the opportunity to meet with plant directors and discuss challenges, focusing on climate change, energy and the circular economy.

#### Our story through social media

Effectively communicating our industry's story required special effort. European Aluminium stepped up its social media capabilities to reach multiple audiences in Europe and worldwide. We developed animations, infographics and blogs to support our main policy asks.

We are ranked top among industrial associations for our digital footprint (including Twitter, LinkedIn, etc). Our new website will enhance this status.



Members of the European Parliament visiting an aluminium plant in the Netherlands

**“During our Presidency, we invited European Aluminium to contribute to a number of policy debates surrounding competitiveness and industrial value chains. We were very satisfied with both the cooperation and outcomes achieved. European Aluminium was constructive and open to sharing evidence-based data and solutions with the 28 Member States. I hope this cooperation will continue with the coming EU Presidencies.”**

Steve Fritz,  
Competitiveness  
advisor at the  
Permanent  
Representation  
of Luxembourg to  
the EU



## CAMPAIGNING FOR A SUSTAINABLE INDUSTRIAL BASE IN EUROPE

Europe's re-industrialisation is at a crossroads. International competition, unpredictable regulatory frameworks, unfair trade rules and slow economic recovery present major challenges to manufacturing.

Yet there are also exciting opportunities looming. Policymakers have sent a clear message on the importance building new business models that shift Europe from a linear to a circular economy. We recognise the scale of these opportunities and risks, which is why our members agreed to ambitious advocacy plans across Europe addressing these innovative policies.



Innovation across value chains: Aircraft assembly in Europe

### The Emission Trading Scheme (ETS) Reform: a game-changer?

The ETS is Europe's primary policy driver for decarbonising the economy and leading the global fight against climate change. The ETS has seen short-term reforms to help stabilise the system and accelerate investments in low-carbon technologies. The single most important reform is the European Commission's intention to try to revive the carbon price between 2021 and 2030. European Aluminium took part in consultations, providing data to help policy makers frame the reforms.

An increased number of MEPs and Member States are supporting predictable, mandatory EU-wide compensation for indirect carbon costs. The Luxembourgish EU Presidency invited us to present our legislative

challenges at the October Competitiveness Council. All national representatives heard our key asks, supported by our closest allies, including Eurometaux and trade associations representing other energy-intensive industries. We are determined to lead the indirect carbon cost and benchmark review campaign during 2016.

### Circular Economy Package: Aluminium as the front-runner

2015 was a year of intense debate on the new EU waste legislation and action plan. We played a prominent role in consultations. European Aluminium was at the table for a live Parliamentary debate featuring the Director General of DG Environment, Karl Falkenberg, Andy Doran from Novelis and Dutch ALDE MEP Gerben-Jan Gerbrandy.

The European Commission finally presented its long awaited Circular Economy Package at end of 2015.

This concept is nothing new to the aluminium sector. We can point to existing high end-of-life recycling rates; more than 60% for packaging and 90% in automotive and construction.

Europe is one of the leading global players in aluminium recycling. To maintain this, it must continue to invest in the circular economy, pursuing high levels of separate collection, efficient sorting, harmonising calculation and reporting methodologies and reducing scrap leakage.

We believe that this new package offers a solid basis to accelerate the transition from a linear to a circular economy and to scale up beyond Europe. It paves the way for a stronger engagement by industry in enhancing recycling across its value chain, both in production and at the end of life of products.



European Aluminium taking part in a live viEUws panel debate "How can Europe capitalise on the circular economy?" in April 2015

### Our main tasks:

- Improving recycling definitions to enhance real recycling.
- Harmonising calculation and reporting methods of recycling through an input-based measurement point.
- Considering all available collection and sorting options for improving our recycling performance, including the aluminium recovery from the incinerator bottom ashes.
- Differentiating clearly between recycling and backfilling, with separate reuse and recycling target for construction and demolition waste, i.e. clearly excluding backfilling.
- Phasing out landfilling of post-consumer recyclable waste and maximising available aluminium collection.
- Increasing innovation and investment in more efficient collection, sorting and treatment technologies and melting processes.
- Minimising the export of aluminium scrap outside Europe.

### Ensuring a strong EU trade's system

The Juncker Commission has set clear political objectives for developing fair and balanced trade relations with third countries. This was seen as the new Commission's most ambitious agenda. It included negotiating the Transatlantic Trade and Investment Partnership (TTIP) with the United States as well as other free trade agreements with manufacturing countries including South Korea, Japan, Australia and China. Commissioner Malmström's new agenda, entitled "Trade for All," presents significant upsides and downsides for the entire EU manufacturing sector. European Aluminium has chosen to join the manufacturing organisation AEGIS Europe, which represents more than 30 sectors at European and national levels. With our allies in ceramics, textile, steel, paper, solar panels and bicycles, we are positioning aluminium as a sustainable and essential industrial value chain enabler.



Prof. Markus Taube from the University of Duisburg-Essen, speaking at European Aluminium Autumn Meetings 2015

Our team provided evidence from international research organisations, including the Economic Policy Institute (EPI), to ensure that Europe reinforces its trade defences against uncontrolled and unfair practices from third countries. This may secure a level playing field for environmental protection and the health and safety around the world. Our campaign will continue during 2016, with the objective of ensuring that current EU Anti-Dumping Regulation review secures trade defence mechanisms that protect Europe's industrial base.





04

# EUROPEAN ALUMINIUM'S YEAR

IN REVIEW

In 2015, European Aluminium has made significant contributions in supporting strategic markets such as packaging, recycling, transport and buildings. Activities varied from creative initiatives to strategic advocacy campaigns. Stimulated by the enormous opportunities offered by our unique metal, we have committed to enhancing our markets and to promoting fundamental environmental, health and safety principles and rules in Europe and abroad.

## A CULTURE OF RESPONSIBILITY

For 20 years, we have looked beyond mere compliance with environmental, health and safety requirements, pushing boundaries with improved environmental performance in production, transformation and recycling. In line with our Sustainability Roadmap objectives, European Aluminium sought solutions that strike the right balance between safeguarding the environment and health and safety of the workers while preserving competitiveness of the sector.

### Coal Tar Pitch assessment under REACH

Coal Tar Pitch, High temperature (CTP) is an essential raw material for the anodes used in producing primary aluminium. Despite extensive research, no alternative with similar performance has been identified. The EU classifies CTP as hazardous to humans and the environment, heavily regulating its use. Those aluminium production facilities covered by the legislation already comply with all safety requirements.

In 2015, the European Chemical Agency (ECHA) chose CTP as a candidate substance for the EU REACH (Regulation on Registration, Evaluation and Authorisation of Chemicals) authorisation procedure. The European Commission is currently assessing the list of candidate substances, with a final decision likely in 2016.

Given the peculiarities of the production process, European Aluminium takes the position that CTP use in producing

anodes falls under the REACH definition of "intermediate." These are exempt from REACH; however, this in no way undermines industry's commitment on environmental, health and safety.

### Conclusion of the BREF revision

The review of the Best Available Techniques Reference document (BREF) for the non-ferrous metals industry - including a chapter on aluminium - was almost concluded by the end of 2015. Changes in the legislative framework during discussions had prolonged the process. European Aluminium and its members played an active role in developing the BREF, helping strike a balance between its ambition and cost-effectiveness of the requirements.

The BREF defines the best available techniques for the sector and the related performance. Local authorities must refer to the BREF when setting conditions for environmental permits for primary and recycling aluminium production sites.

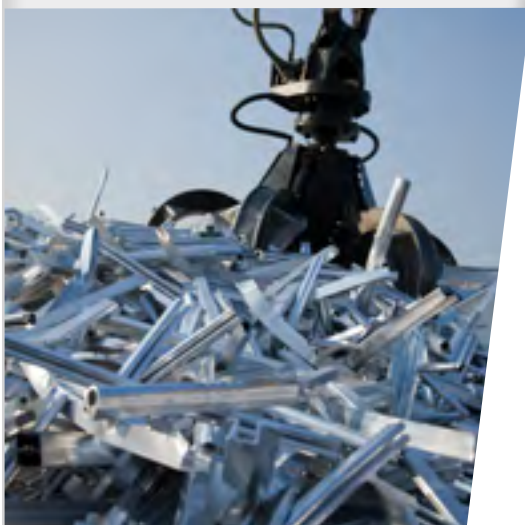
The last step before implementation is publishing the conclusions in the Official Journal of the European Union. All environmental permits must be revised within four years of publication. This fits well with the implementation phase of our Sustainability Roadmap which shares the objective of safeguarding and protecting the environment.



## The Aluminium Effect #1

### Forever young

Aluminium can be recycled endlessly without deterioration.



## The Aluminium Effect #2

### Recycling leader

Aluminium recycling is high - 71% in beverage cans and 95% in construction and automotive.

## Safety Workshop: preventing fatalities and high risk incidents

A strong health and safety culture is essential to a sustainable industry. Our Sustainability Roadmap sets an ambitious target for cutting the TRI by a further 50% in the coming decade. This is over and above the 79% reduction already achieved since 1997.

To help its members achieve this goal, our biennial Safety Workshop in June 2015 focused on preventing fatalities and high-risk incidents. The workshop attracted almost 70 experts from around the world, exchanging opinions on best practice, ex-post assessment, KPIs and maintaining a strong workplace safety culture.

The workshop also allowed the industry to formally recognise best-in-class solutions for safe manufacturing. The Safety Solutions Competition, which attracted a record 46 entries, celebrates effective, innovative and creative safety measures. This award is a particular honour, as safety experts select the winners anonymously.

- **First prize:** Real Alloy Germany (Aluminium Recycling): Using an LED spot to warn employees when cranes are in operation.
- **Second prize:** Intals S.p.A. Italy (Aluminium Recycling): Installing radar systems on vehicles to detect personnel within the area of operation.
- **Third prize:** Sapa Profiles Sweden (Aluminium Extrusion): New type of hook to ensure safer handling of dies.

## PROMOTING THE BENEFITS OF PACKAGING

## Balanced Circular Economy Proposals on packaging

The EU Circular Economy Package is balanced for specific aluminium packaging interests. The proposed split metal targets for 2025 and 2030 are ambitious but achievable if they consider all collection and sorting activities when calculating national recycling rates. Our efforts delivered recognition for metal recovery from the incinerator bottom ashes. This will help recycle smaller and foil-based packaging items, which tend to end up in the remaining household waste fraction for incineration.

We must ensure that existing collection and sorting schemes improve and invest in the latest technologies. In addition, Extended Producer Responsibility schemes must meet minimum performance and transparency criteria. This should improve recycling rates, notably where current results are moderate. However, the European Commission could have been more ambitious on phasing out landfilling, than the proposed limit of a maximum of 10%. Instead, a complete phase-out of recyclables in landfilling will make even more recyclable aluminium packaging items available for collection and sorting.

## Specific Aluminium Packaging Recycling Roadmap

Leading aluminium packaging producer responsibility schemes in Germany, the Netherlands, France, Italy and Spain and the UK have decided to work closely with our Packaging Group. They will contribute to a joint packaging recycling roadmap to help meet - at minimum - the 2025 recycling target of 75%. EAFA, the European Aluminium Foil Association, AEROBAL, the association for aluminium aerosol can manufacturers and ETMA, the European Tubes Manufacturers Association will also support this initiative. They will contribute to a study commissioned by our Packaging Group on best national collection and sorting practices.



## The Aluminium Effect #3

### Lighter mobility

Aluminium alloys make up more than 60% of the structural weight of the Airbus A380, the world's largest passenger aircraft.

Aluminium is making trains, metros and trams lighter.

Cars increasingly rely on aluminium for safety and lightness.



Boats, too - cruise ship superstructures are aluminium and many luxury yachts use aluminium hulls.





## The Aluminium Effect #4

Getting you there

Whatever form of transport you take, chances are it uses aluminium's unbeatable combination of lightness and strength.



## The Aluminium Effect #5

Divine inspiration

The dome of the San Gioacchino Church in Rome was clad in aluminium sheets in 1898 – the earliest high-profile use of aluminium in a building.



## The Aluminium Effect #6

Bon Appétit

Whether hot or cold, aluminium is the perfect medium for food storage; it is hygienic, non-toxic, non-tainting and helps retain flavour.



Voluntary Take Back Machine, Hungary

### National legislative developments

In the Netherlands, our local recycling organisation, RAVN is preparing for changes in collection methods, which will be run separately by the municipalities. The Dutch Foundation for Can Recycling will launch a communication campaign based on the 'metal recycles forever' concept developed by Metal Packaging Europe.

### Aluminium beverage can recycling reaches new record high

The overall recycling rate for aluminium beverage cans in the EU, Switzerland, Norway and Iceland reached a new high of 71.3% in 2013. This marks an important milestone en route to our voluntary target of 80% by 2020. The overall estimated aluminium packaging recycling rate now stands at 62%.

More efficient collection, sorting and recycling schemes are particularly pressing in countries with less well-developed recycling infrastructure. These countries can adapt best practices from more advanced countries. Countries should improve existing producer responsibility schemes and adopt collection tools based on scrap value of aluminium cans.

European Aluminium is addressing informal can recycling collected by waste pickers. It has commissioned a study with BOKU University of Natural Resources and Applied Life Sciences in Vienna to better understand to what degree we can 'formalise' this part of the informal economy by using, for example, modern voluntary take-back machines.



### 'Every Can Counts' campaign continues to grow

The 'Every Can Counts' encourages people to recycle their beverage cans consumed 'out-of-home', e.g. workplaces, festivals and outdoor events. Spain and Serbia have joined the programme, taking European members to ten. The campaign is mainly funded by can makers and aluminium suppliers.

### Packaging seminar in Romania

European Aluminium held its 2015 packaging and recycling seminar in Bucharest, in cooperation with Aluminium Can Recycling Romania (ALUCRO). Delegates discussed the latest collection and sorting technologies and visited an innovative waste sorting plant belonging to the Romanian Green Group.

A portion of the input material for this plant comes from voluntary take-back units, installed in supermarket car parks. Citizens can use these units to return valuable waste items, including light bulbs and aluminium beverage cans. After further treatment, the pre-sorted waste fractions can then easily be recycled. Our organisation supports such initiatives, but recognises that these units cannot solve the waste problem on their own. There should be well-structured, competitive multi-material collection systems covering the whole aluminium packaging fraction.

### Product Environmental Footprint project on beer

The EU has launched a project to harmonise methodologies for measuring the environmental footprint of various product groups. There are several specific initiatives underway that includes food and drinks packaging. These involve experts from both European Aluminium and EAFA.

The challenge is to find the right balance between minimising the environmental

footprint of food and drink products, such as beer, and the role of packaging. To help calculate the impact of the recycling phase, our Packaging Group has asked for official recognition of the 'end-of-life' methodology rather than a mixed calculation model that also includes recycled content. (Read more: Page 24).

### Showcasing the benefits

European Aluminium attended a number of events promoting the benefits of aluminium packaging. Together with EAFA, our Packaging Group continued to promote aluminium foil containers and household foil at BBQ events, including the World BBQ championships in Gothenburg. All teams appreciated the thicker BBQ foil and visitors received a free sample.

World BBQ Championship in Sweden



## RECYCLING AS THE CORNERSTONE OF A NEW ECONOMY



### Featuring the basics of recycling

Our new brochure on recycling presents the latest data on our industry's unique material. Recycling is a truly European business and is a fundamental pillar in building a circular economy. Our brochure takes a narrative approach to help non-experts understand aluminium's potential in recycling. Combining data and infographics, the brochure underlines the importance of improving aluminium scrap supplies to meet the increasing European demand.

### Planning for the future with influential leaders and experts

Our 13th International Aluminium Recycling Congress, held in Vienna, provided an exclusive opportunity to bring together policymakers, experts and companies to discuss the most recent developments in aluminium recycling. The Congress attracted a wide range of stakeholders; scrap collectors and processors, recycled aluminium consumers, refiners and remelters, National and European associations; extruded aluminium profiles producers and equipment manufacturers. It also attracted interest from both international and national media.

### Driving evidence-based policies with data

We have developed an aluminium code classification manual. This streamlines the various trade codes into a single document, defining their synergies and differences. The classification manual includes visual references to aid matching the scrap type with the relevant trade codes. European Aluminium plans to use the manual to quantify the different scrap types recycled in Europe. The manual will also allow us, with the help of our members, to provide a regular statistical update on the types of scrap leaving Europe as well as the why and how. To provide comprehensive overview of the dynamics of scrap leaving Europe and the market forces at play, we conducted a benchmark study of the German aluminium scrap trade. As well as collecting the available statistics, the study also conducted a series of interviews.

### Concluding the integration of OEA

An Extraordinary General Meeting of the Organisation of European Aluminium Refiners and Remelters (OEA) saw the organisation's dissolution and deregistration from the Commercial Register in Zürich. These were the final steps in closing the OEA. The OEA represented European aluminium recycling industry for 55 years. All OEA members unanimously agreed to begin integrating the OEA structure and members into European Aluminium's Recycling Division.



International Recycling Congress, Vienna 2015

### Work in progress: classification of lead and RoHS campaigns

European Aluminium is cooperating with the European Commission and national governments to develop a "validated bioelution method" for measuring the toxicity of metals containing lead. Bioelution provides a method of determining whether the lead contained in alloys poses a health hazard. This was made possible by showcasing the results of bioelution tests performed by the aluminium industry in 2015. Once these criteria are recognised on an OECD level, this methodology will apply when classifying and assessing toxicity of metals containing lead. Under the coordination of Eurometaux, European Aluminium's advocacy efforts with the European Commission contributed significantly to this achievement. Our experts provided reliable technical and economic arguments to counter a proposal for classifying alloys containing more than 0.03% of lead as toxic for reproduction. As a result of these efforts, the REACH Committee agreed with the industry to classify alloys in massive form at the limit 0.3 % for Pb.

## ADVOCATING FOR SMART BUILDING PRODUCTS

### Energy performance of windows

European Aluminium has been a major contributor to the European Commission study on Ecodesign and Energy Labelling for window products. We have also made key contributions to the debates with Member States and other industries on the energy labelling of windows.

Opposed to simplistic product labels, we demonstrated the importance of personalised advice based on local climates, orientations and window sizes. We presented the key findings of our studies in an easy-to-understand animation, available in three languages.

This animation has also been used in the context of the European Commission evaluation of the Energy Performance of Buildings Directive, which may lead to its revision.

### Framing materials sustainability

In line with our advocacy efforts, the European Commission chose not to propose Ecodesign criteria for windows. The study commissioned by European Aluminium, comparing the sustainability performances of different framing materials (aluminium, PVC and wood) contributed to this outcome. It shows that each framing material offers pros and cons, meaning there is no clear 'best' frame material. This study is now also available in German.

### Smart regulatory compliance

Increasingly, building products have information requirements attached in order to comply with EU legislation. Together with Construction Products Europe, we are advocating for an electronic, rather than a paper-based, approach. Ultimately, products would carry a Quick Response (QR) code containing a web link or similar. This would redirect consumers and market surveillance authorities towards a relevant web page with compliant, multilingual information.

This idea is currently being promoted for the future revision of the Construction Products Regulation as well as the ongoing revision of the Energy Efficiency Labelling framework.

### Innovative ventilated cladding

2015 saw the first year of the E2VENT project, of which European Aluminium is a partner. The goal of E2VENT, funded under the European Commission's Horizon 2020 programme, is to improve the energy performance of existing buildings. This involves wrapping them with a cladding system that incorporates an innovative ventilation system with integrated Phase Change Materials and Heat Exchanger technologies. European Aluminium is contributing to several work packages.



The project is expected to last 3.5 years. It complements our other projects that position ventilated aluminium claddings for improving energy efficiency in both new and existing buildings.

### New members joining

The European Association of Surface Treatment on Aluminium (ESTAL) has decided to become a member of European Aluminium from 2016. Both associations are active in the building and transport markets. By working together, we will better represent the value chain and improve visibility for the aluminium sector as a whole.

In parallel, European Aluminium has begun working with major manufacturers to develop environmental information for continuously anodised building products.





## The Aluminium Effect #7

Top of the world

In 1931, the Empire State Building in New York – then the world's tallest building – was the first to use anodised aluminium components.



## The Aluminium Effect #8

Round and round

High durability and easy, low-cost recyclability means aluminium can be used over and over again.



## TESTING THE PRODUCT ENVIRONMENTAL FOOTPRINT (PEF)

### Assessing the environmental footprint of products

2016 is the final year of testing for the European Commission's Product Environmental Footprint (PEF) initiative. This initiative aims to define harmonised rules that allow a fairer comparison of a product's environmental qualities.

We are directly participating in a number of projects. These include the pilot project for metal sheet, mainly addressing the building market, the pilot project for beer and the newly established horizontal packaging working group. Our main objective remains advocating the use of the end of life recycling methodology, rather than the default method proposed by the European Commission, i.e. the so-called 50/50 PEF approach, which credits 50% of the recycled content and 50% of the end of life recycling.

In 2015, we provided a substantial input to the development of PEF category rules for metal sheet, where we again supported the end of life recycling methodology. Another core objective is to secure the use of the right parameters and datasets for aluminium, particularly within the PEF packaging Working Group. (Read more: page 21).



## DECARBONISING MOBILITY

### The perfect material for vehicles

Throughout 2015, we continued our efforts to demonstrate that aluminium is the ideal choice for safety-related components. For trucks, the lengthy process of defining new safety standards for the front underrun protection system is now underway. This is a continuation of the successful work on the weight and dimension directive for trucks. Future cab designs could feature a larger front crumple zone, and the updated general safety regulation will define how these zones shall look.

Another important topic for 2015 was improving public awareness of aluminium's superior safety properties. European Aluminium produced a short animation showing how aluminium reduces the weight of cars while improving safety. During the Frankfurt motor show, we used Twitter to share this video with over 75,000 viewers. Our target audiences were those attendees active on Twitter and followers of high-profile Twitter users in the automotive sector. Jeremy Clarkson's followers were highly engaged (14,000 views), followed by those of Ferrari and Jaguar. We would like to thank them for their (indirect) support in spreading our message; aluminium makes vehicles lighter and safer.

The challenge of decarbonising transport was high on the agenda in Brussels during 2015, a trend that will continue in the coming years. Aluminium will play an important role in this debate; its ability to offer lightweighting and high recyclability makes aluminium the perfect material for low carbon mobility. Aluminium also plays a vital role in the electrification of transport.



Decarbonising transport is not limited to cars; Heavy Duty Vehicles (HDVs) are also important. The European Commission is working on a proposal for a CO2 emission certification for HDVs. As a first step, it will present a legislative proposal for measuring and reporting CO2 emissions from HDVs in 2016. To support this, the Commission has invited a limited group of stakeholders to take part in the editing board of this proposal. Given our long-standing commitment to assisting the Commission on HDV lightweighting issues, they have asked us to join this board. This board will discuss details of the revised type approval procedure for HDVs. As a second step, the Commission will present a legislative proposal for measuring and reporting CO2 emissions from HDVs in 2016.

### Investing in education

European Aluminium and the US Aluminum Association have completely revised the Joining Manual. This is part of the Aluminium Automotive Manual, which covers all important automotive applications for aluminium. Improved joining technologies are important enablers for wider uptake of aluminium in cars. The new manual covers all existing technologies and gives a comprehensive overview of the possibilities of the various joining techniques. The different sections of the manual have been downloaded up to 1,500 times.



05

# OUR WORK ON STANDARDS

Standardisation benefits consumers by providing reliable, consistent and improved product experience. This technical work covers everything from aluminium alloys and product-related standards to energy and environmental performance.

## Why standards matter

Without standards, most industries could not operate. Standards are critical for market access, innovation, consumer choice and product environmental and technical performance. While Europe leads the world in developing new standards for key markets, our task is to ensure that definitions and cooperation with international organisations match the potential of our industry and related products.

European Aluminium's Standards Committee (STC) leads standardisation activities across the whole value chain. It is also a member of the Global Advisory Group (GAG).

## Aluminium and its alloys

In 2015, the European Committee for Standardization (CEN) began developing standards for hot-rolled armour plates in weldable aluminium alloy (prEN 16974) and for fabricating thin foil for food containers (prEN 16773), clarifying requirements across Europe.

There have been major efforts to revise EN 12392 "Special requirements for wrought and cast products intended for the production of pressure equipment." This better connects the Pressure Equipment Directive (2014/68/EU) to industry needs.

Several other standards were revised, including parts of EN 485 (mechanical properties of sheets, strips and plates), EN 754 (cold drawn rod/bars and tubes) and EN 755 (extruded rod/bars, tubes, and profiles). This allowed inclusion of new alloys and enhanced market transparency.

Finally, two standards - EN 1396 on aluminium coil coated sheet and strip for general applications and EN 1559-4 on aluminium alloy castings - were published.

## Aluminium structures

Several revisions are ongoing to CEN/TC 132, CEN/TC 135 "Execution of steel and aluminium structures" and CEN/TC 250 "Structural Eurocodes." The challenge

is to promote aluminium for structural applications without overburdening the industry.

We worked to revise both the technical conditions for inspection and delivery of aluminium semis and castings (EN 15088) and those for conformity assessment of steel and aluminium structural components (EN 1090). The current lack of demarcation confuses customers and increases industry costs. Ongoing works may resolve these issues.

Eurocode 9 revision began in 2015 and should make aluminium structure design more customer-friendly in future.

## Building products' technical performance

We took part in more than 20 standardisation processes supporting implementation of the Construction Products Regulation and the Energy Performance of Buildings Directive. This ensures aluminium's many advantages are fully reflected in product performance declarations.

We welcome approval of a revised standard on curtain walling (EN13830). In addition, the standard for fire and smoke resisting doors and windows (EN16034) was cited in the EU Official Journal for the first time.

## Building products' environmental performance

The European Commission proposed the Product Environmental Footprint (PEF) as a common measure of environmental performance. However, this highlights significant divergence from existing rules for building products (EN 15804). One of these relates how recycling benefits are viewed at the end-of-life stage. European Aluminium and METALS FOR BUILDINGS will remain active in the convergence process, seeking full integration of end-of-life recycling benefits into the life cycle assessment.

## Packaging and the environment

Transposition of new ISO standards on packaging and the environment remains pending, with EU authorities seemingly reluctant to mandate new CEN projects. At ISO level, the proposed additional standardisation projects is also on hold.

## Greenhouse gas reporting from European smelters

We are coordinating the industry's contribution to an EU Commission funded-project to develop harmonised standards for monitoring and reporting greenhouse gas emissions in energy intensive industries. Publication of the final CEN Standards is expected in 2016.



06

ABOUT

# EUROPEAN ALUMINIUM

## EUROPEAN ALUMINIUM MEMBERS as of March 2016

### Alumina, Primary Production

- Alteo
- Alcoa
- Alro
- Aluminium of Greece
- Hydro
- Kubal
- Nordural
- Rio Tinto
- Sivalco
- Talum
- Trimet Aluminium

### Rolling, Extrusion, Casting, Foundries

- Alcoa
- Aleris
- Al invest Bridlicná
- Amag
- Bridgnorth Aluminium
- Constellium
- Elval
- Gränges
- Hydral – HAP
- Hydro
- Impexmetal
- Impol
- Mäkelä alu
- Metra Aluminium
- Novelis
- Purso
- ProfilGruppen
- Sapa
- Slim Aluminium
- Step-G
- Vimetco

### Building Market Group

- 3A Composites\*
- Alcoa Architectural Products
- Aleris
- Alumil
- Elval Colout
- Etem
- Hydro Aluminium Rolled Products
- KAWNEER - Building & Construction
- Novelis
- Profils Systèmes
- Reynaers Aluminium\*
- Sapa Building Systems
- Schüco International\*

### Packaging Market Group

- Alcoa
- Constellium
- Elval
- European Aluminium Foil Association (EAFA)
- Hydro
- Novelis

### Automotive and Transport Market Group

- Alcoa
- Aleris
- Amag
- Constellium
- Hydro
- Novelis
- Sapa
- Rio Tinto

### Recycling

- ABB\*
- Alcoa
- Aleris
- Aluminio La Estrella
- Alusigma
- Amag
- Assan Alüminyum
- BAGR
- Befesa
- Coreal
- Constellium
- Daiki Aluminium Industry\*
- Elval
- EP.AL.ME
- Eural Gnutti
- Gränges
- Hammerer Aluminium Industries
- Hydro
- Idalsa
- Igora
- Impexmetal
- Intals
- MEC\*
- Novelis
- Polst
- Raffineria Metalli Capra
- Raffmetal
- Real Alloy
- Refinerías Díaz - Redisa
- R.V.A.
- Sacal - Società Alluminio Carisio
- Sapa
- Scepter
- ScholzAlu
- Società Alluminio Veneto
- Stena Aluminium
- Trimet Aluminium

### European and National Associations

- European Aluminium Foil Association (EAFA)
- Aluminium Federation UK (ALFED)
- Aluminium Association of Greece
- Aluminium Center Belgium
- Aluminium Danmark
- Asociación Española de Refinadores de Aluminio (ASERAL)
- Associazione Italiana Raffinatori Alluminio (ASSIRAL)
- Association française de l'aluminium (AFA)
- Aluminium-Verband Schweiz Fachgruppe Halbzeug
- Austrian Non-Ferrous Metals Federation – WKO
- Centro Italiano Alluminio (CENTROAL)
- European Association for Surface Treatment on Aluminium (ESTAL)
- Gesamtverband der Aluminiumindustrie e.V. (GDA)
- Icelandic Association of Aluminium Producers – Samál
- Svenskt Aluminium
- Talsad
- Vereniging Nederlandse Metallurgische Industrie (VNMI)

\* Associated member



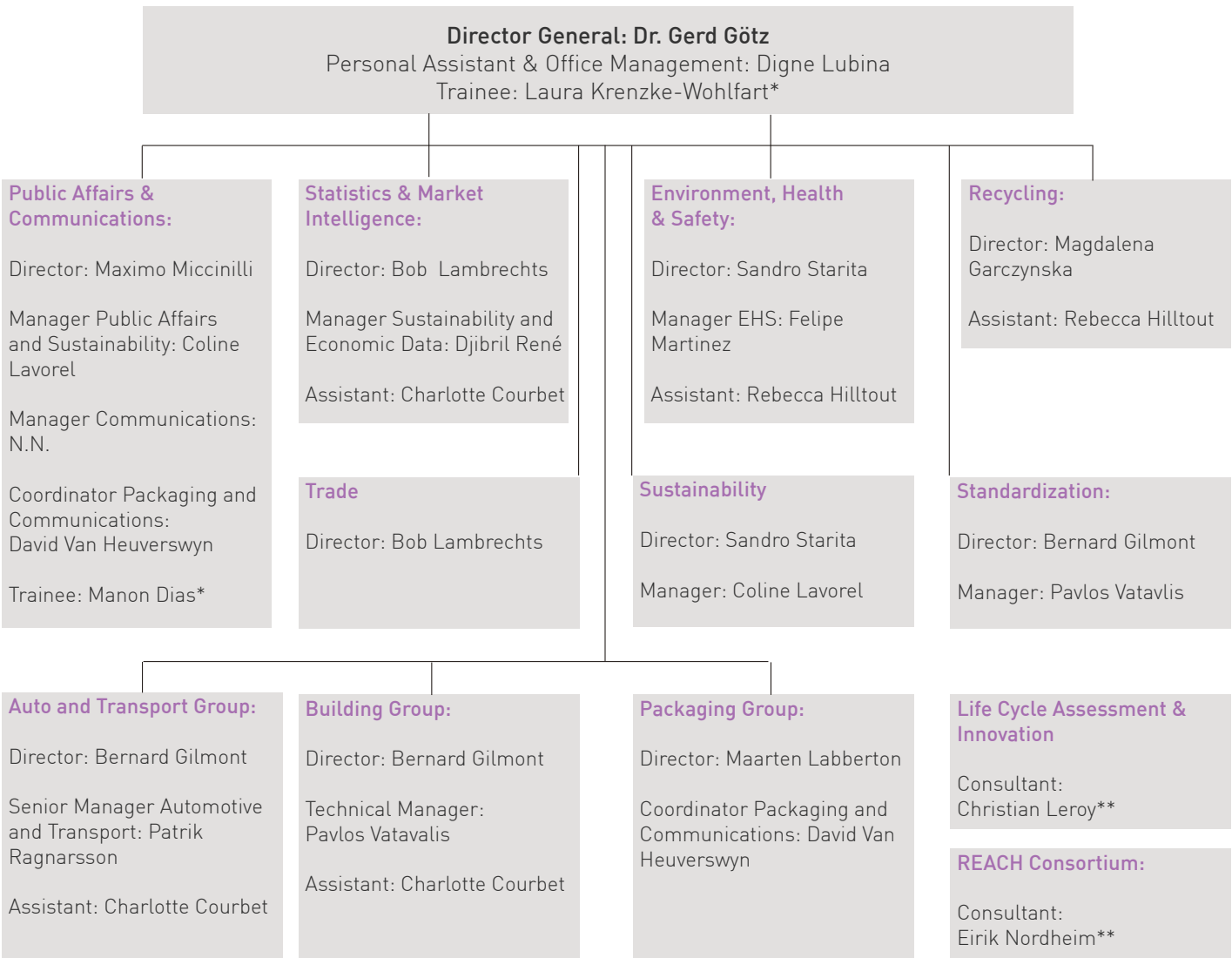
Members of European Aluminium visiting Constellium plant during Autumn meetings 2015



# EXECUTIVE COMMITTEE MEMBERS\*

|  |   |  |
|--|---|--|
| <b>Chairman</b><br><b>Pierre Vareille</b><br>CEO - Constellium                                       | <b>Member</b><br><b>Constantin Catsaros</b><br>Member of the Executive Board - Elval      | <b>Member</b><br><b>Erwin Mayr</b><br>President - Novelis Europe                 |
| <b>Vice Chairman</b><br><b>Kjetil Ebbesberg</b><br>Executive Vice President, Rolled Products - Hydro | <b>Member</b><br><b>Karl Eichinger</b><br>Chief Financial Officer - Sapa                  | <b>Member</b><br><b>Roberta Niboli</b><br>CEO - Raffmetal                        |
| <b>Treasurer</b><br><b>Simon Baker</b><br>President - Alcoa Europe                                   | <b>Member</b><br><b>Gervais Jacques</b><br>Chief Commercial Officer - Rio Tinto Aluminium | <b>Member</b><br><b>Will Savage</b><br>Chief Executive - Aluminium Federation UK |

# OUR SECRETARIAT





## ABOUT EUROPEAN ALUMINIUM

European Aluminium, founded in 1981 and based in Brussels, is the voice of the aluminium industry in Europe. We actively engage with decision makers and the wider stakeholder community to promote the outstanding properties of aluminium, secure growth and optimise the contribution our metal can make to meeting Europe's sustainability challenges. Through environmental and technical expertise, economic and statistical analysis, scientific research, education and sharing of best practices, public affairs and communication activities, European Aluminium promotes the use of aluminium as a material with permanent properties that is part of the solution to achieving sustainable goals, while maintaining and improving the image of the industry, of the material and of its applications among their stakeholders. Our 75+ members include primary aluminium producers; downstream manufacturers of extruded, rolled and cast aluminium; producers of recycled aluminium and national aluminium associations are representing more than 600 plants in 30 European countries. Aluminium products are used in a wide range of markets, including automotive, transport, high-tech engineering, building, construction and packaging.

Follow us on Twitter  @EU\_Aluminium

### Contact details

European Aluminium  
Avenue de Broqueville 12  
1150 Brussels, Belgium  
Phone +32 2 775 63 63  
[communications@european-aluminium.eu](mailto:communications@european-aluminium.eu)  
[www.european-aluminium.eu](http://www.european-aluminium.eu)

March 2016

