



# Italian extrusion market: the importance of recycled material

by Mauro Cibaldi

*President of Deral Spa*

*Member of the board of director Estral Spa*

*Member of the Board of the Metallurgy Sector of Confindustria Brescia*



## Deral/Estral short presentation

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In 1974 our company begun in Valmadrera (Lecco) with a small extrusion press by 600 tons capacity (annual production output 2.000 tons) suitable to produce tiny section profiles with thickness as small as 0,8 mm with narrow dimensional tolerances.

At the beginning of the 80's, Estral moved to Manerbio, near Brescia, northern Italy, and was build up the cast house Deral.

Nowadays equipped with 5 extrusion presses, our company produces more than 38.000 tons/year of high precision profiles.

Our experience, our capabilities and our cutting edge technology plant allow us to produce a wide range of sections, from small profiles (30 gr/ml) to profiles of big dimensions. Our press of 4.400T produces profiles of large dimensions, with a weight of about 30 kg/mt, up to 18 mt in length and in different alloys included hard ones.

# Deral/Estral picture



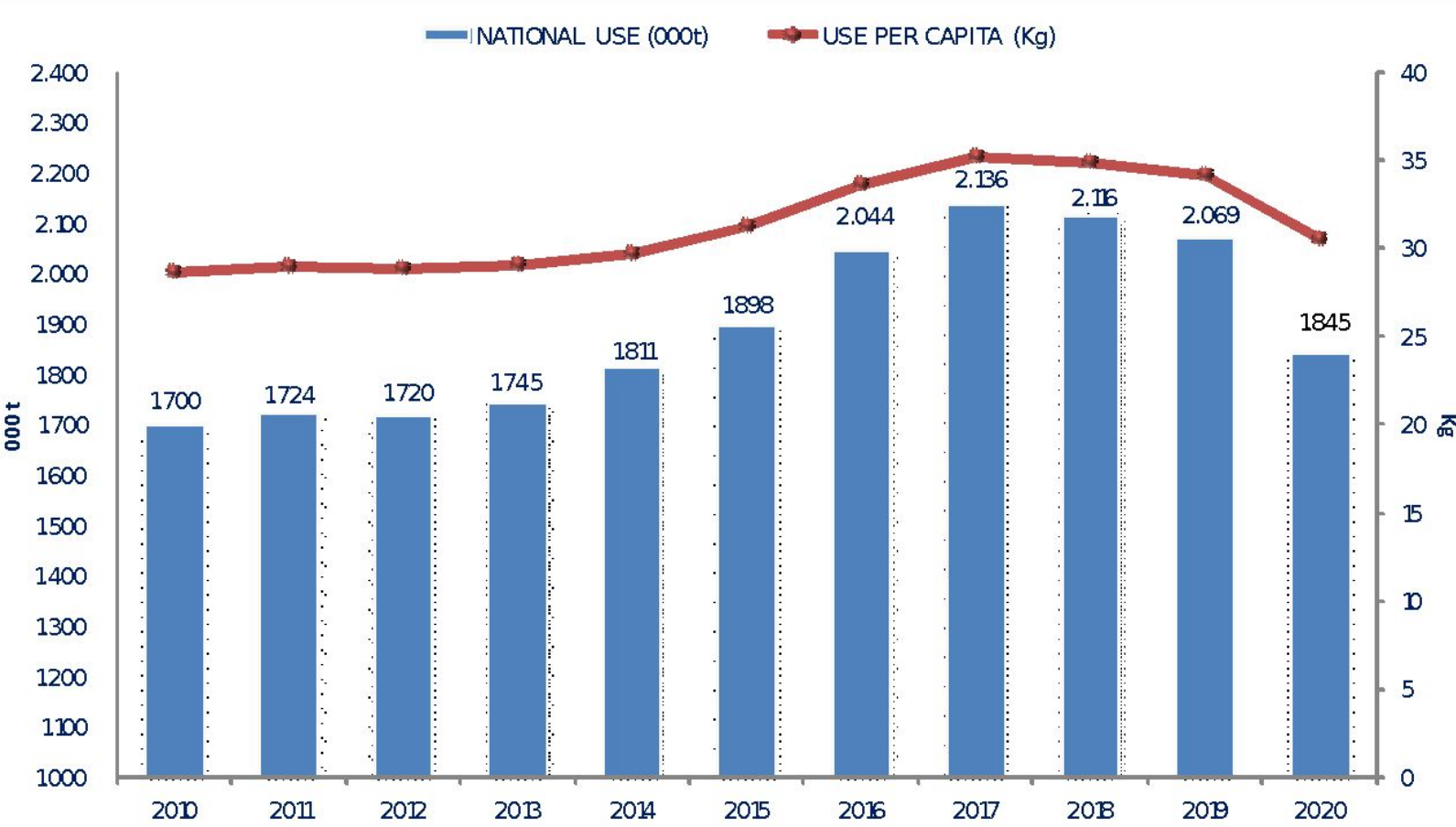


# **ITALIAN EXTRUSION MARKET:**

# **FAST NUMBER AND FIGURES**

# HISTORICAL ITALIAN ALUMINIUM USE

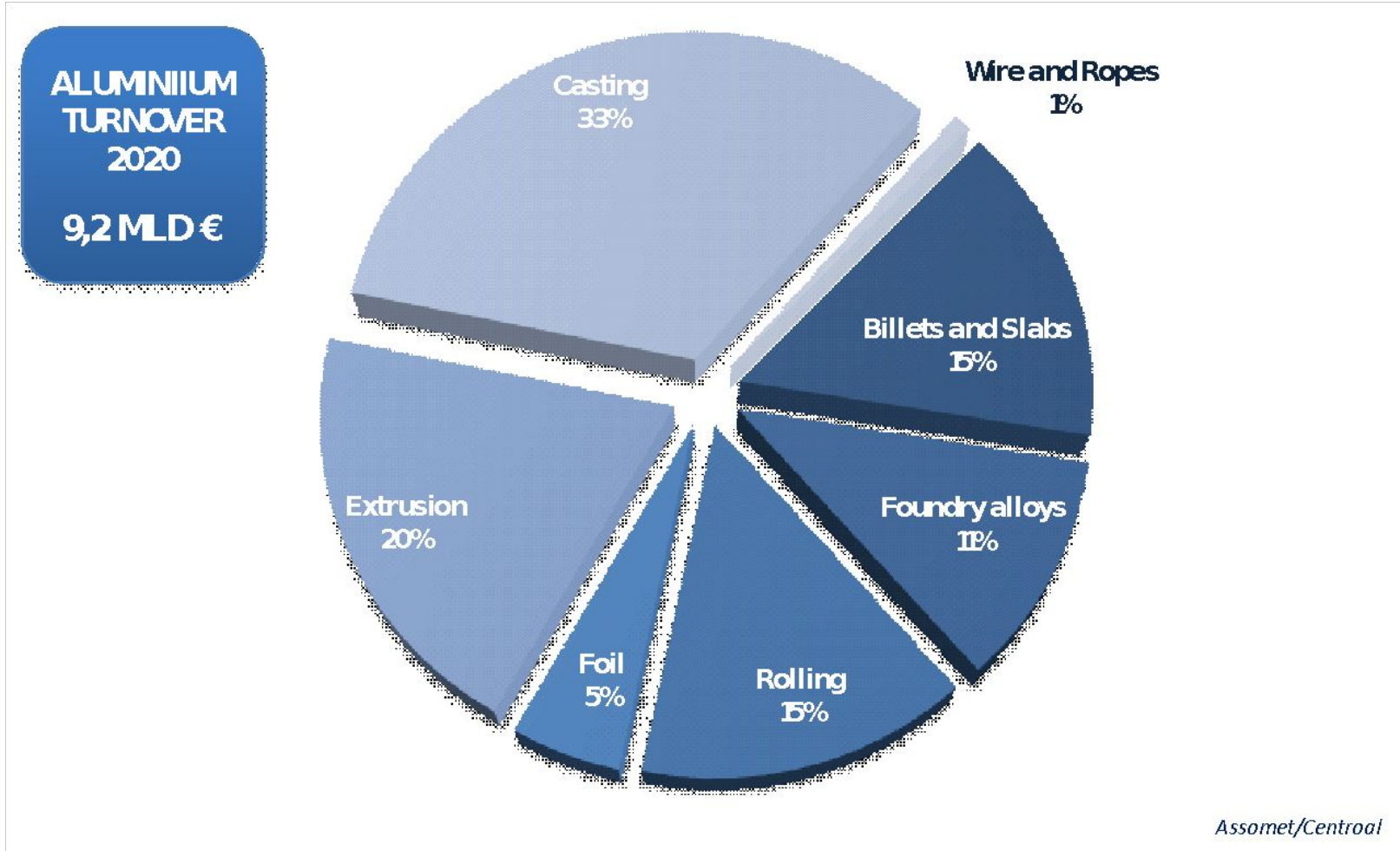
by



Assomet/Centroal



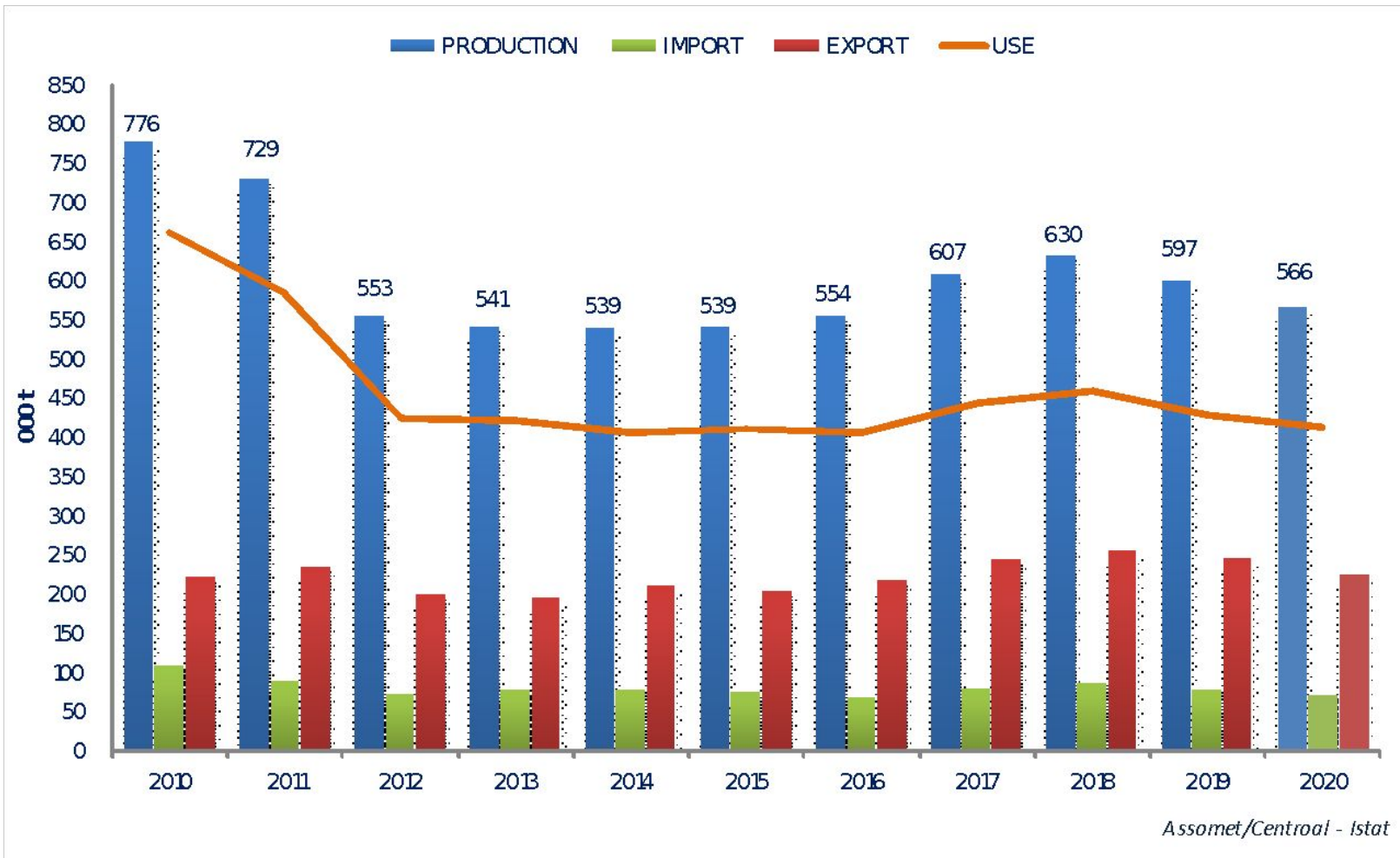
# 2020 ITALIAN ALUMINIUM TURNOVER SHARE by



Assomet/Centroal

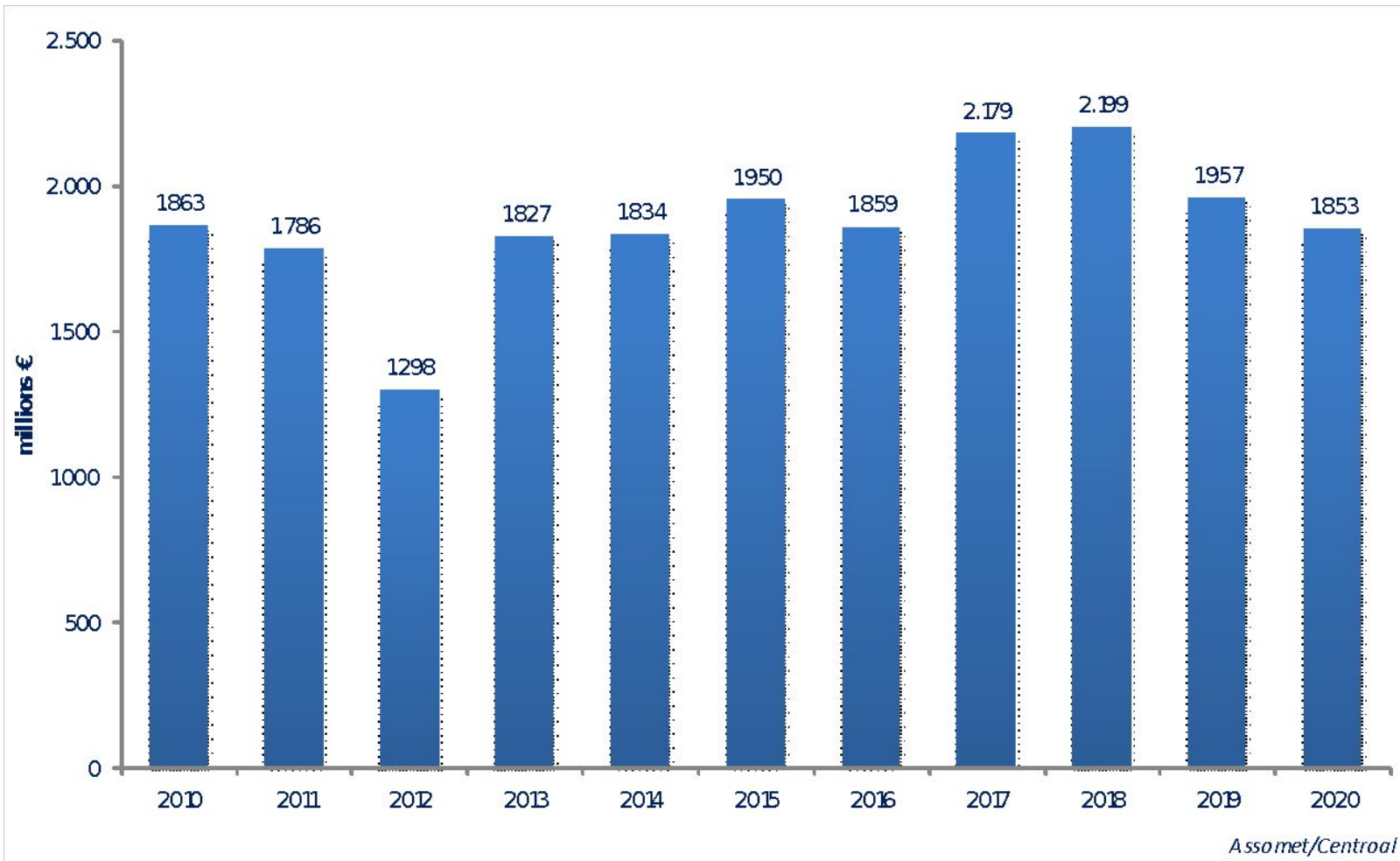
# HISTORICAL ITALIAN EXTRUSION MARKET

by



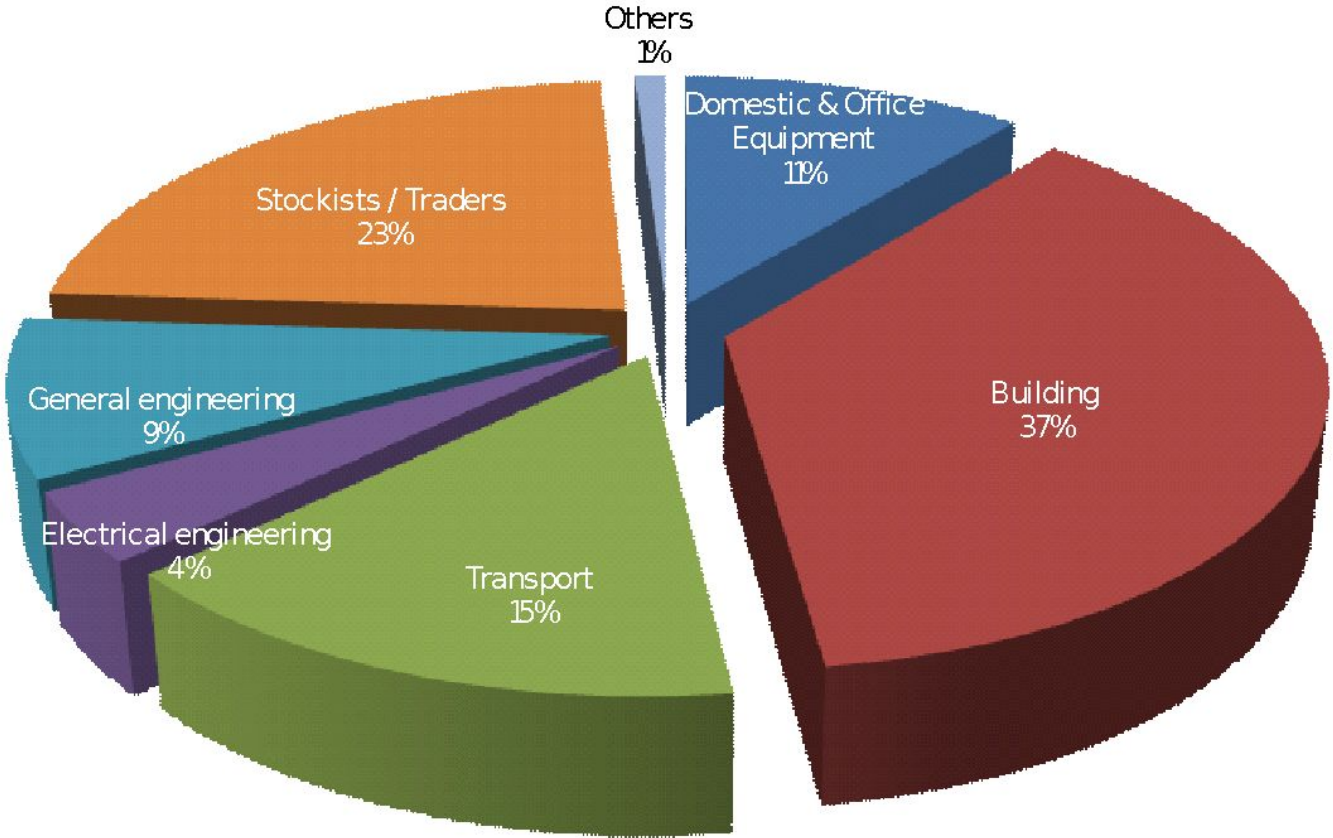
# HISTORICAL ITALIAN EXTRUSION TURNOVER

by



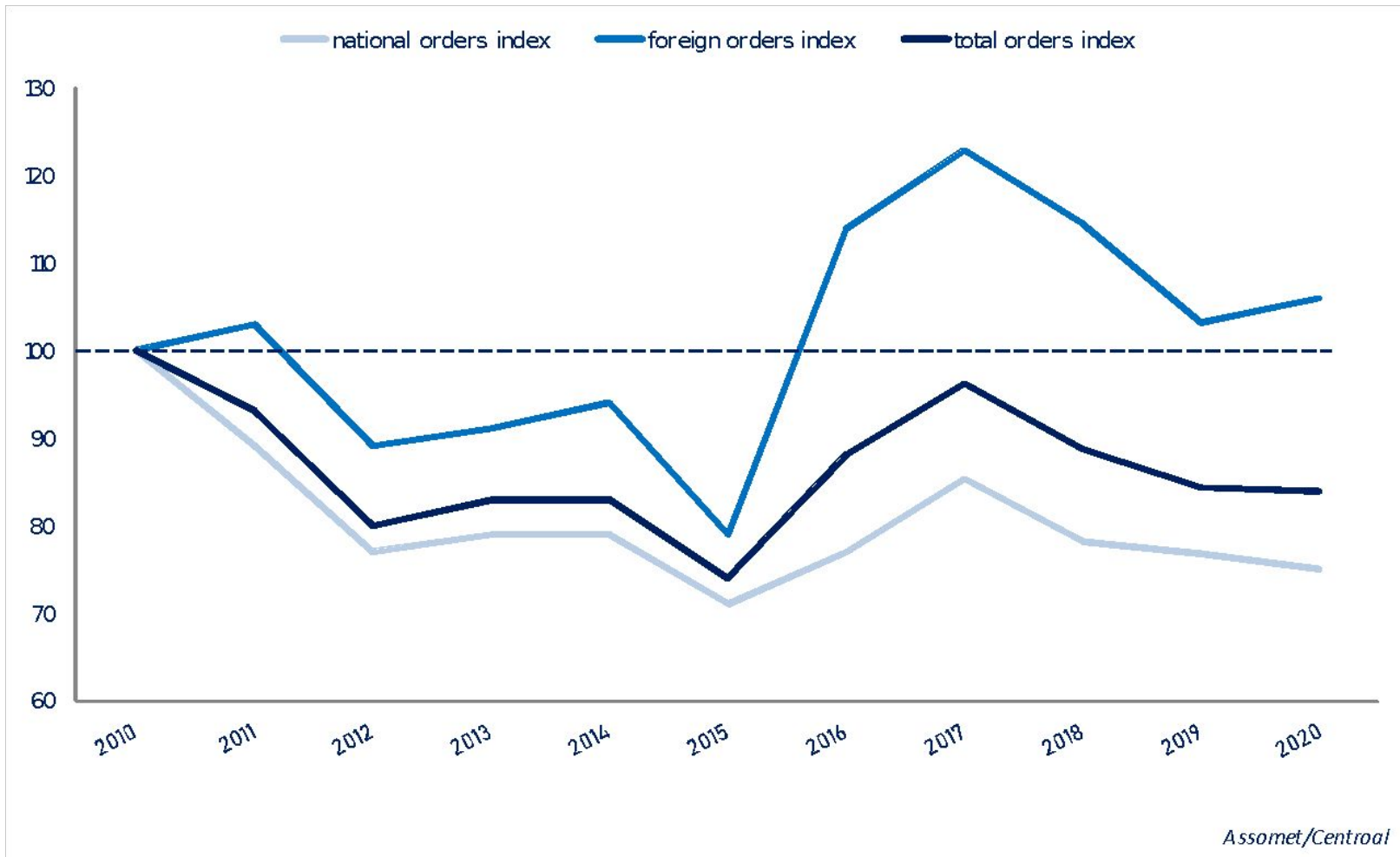


# 2020 ITALIAN EXTRUSION END USE by



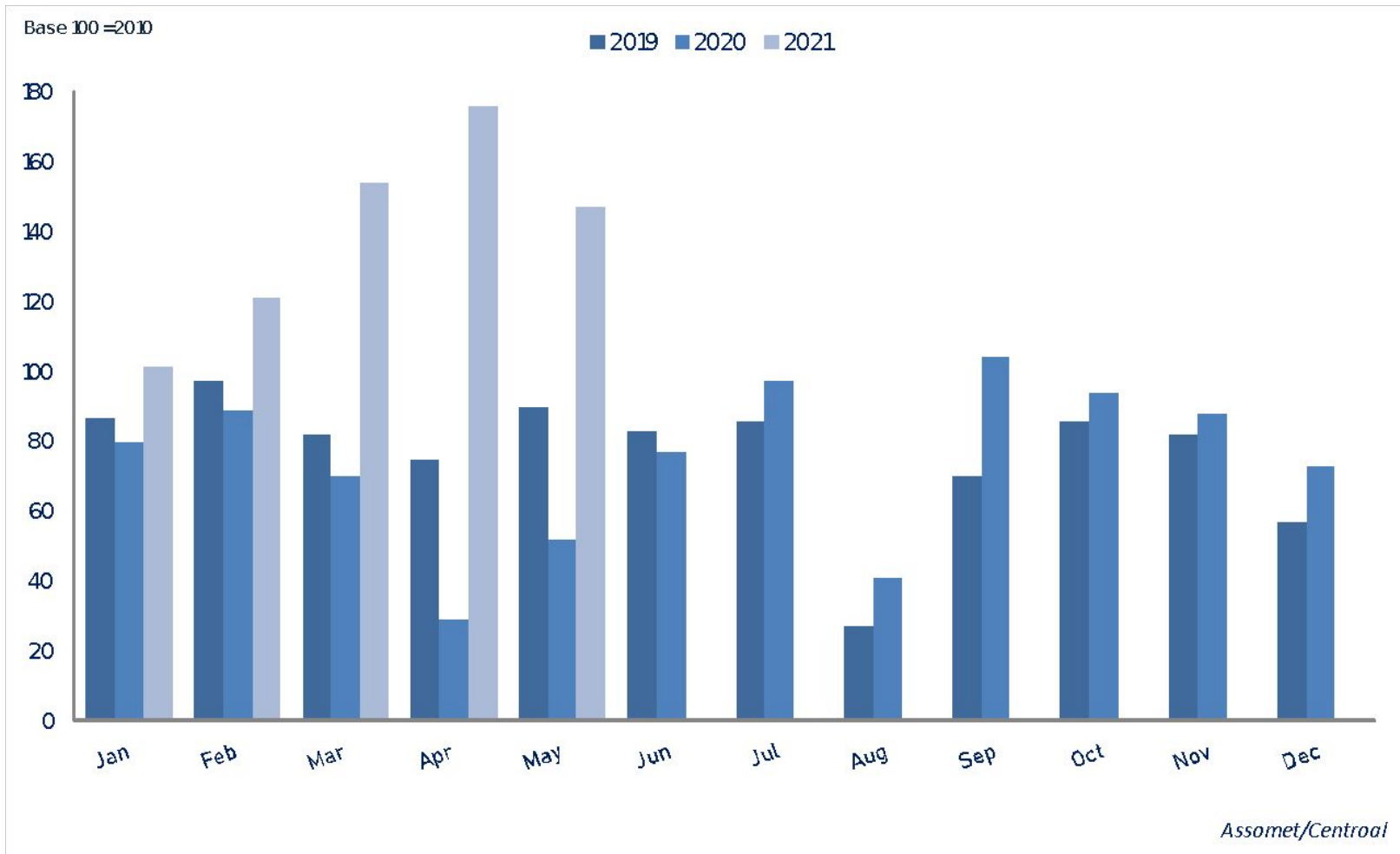
*Assomet/Centroal*

# HISTORICAL ITALIAN EXTRUSION ORDERS INDEX TREND by



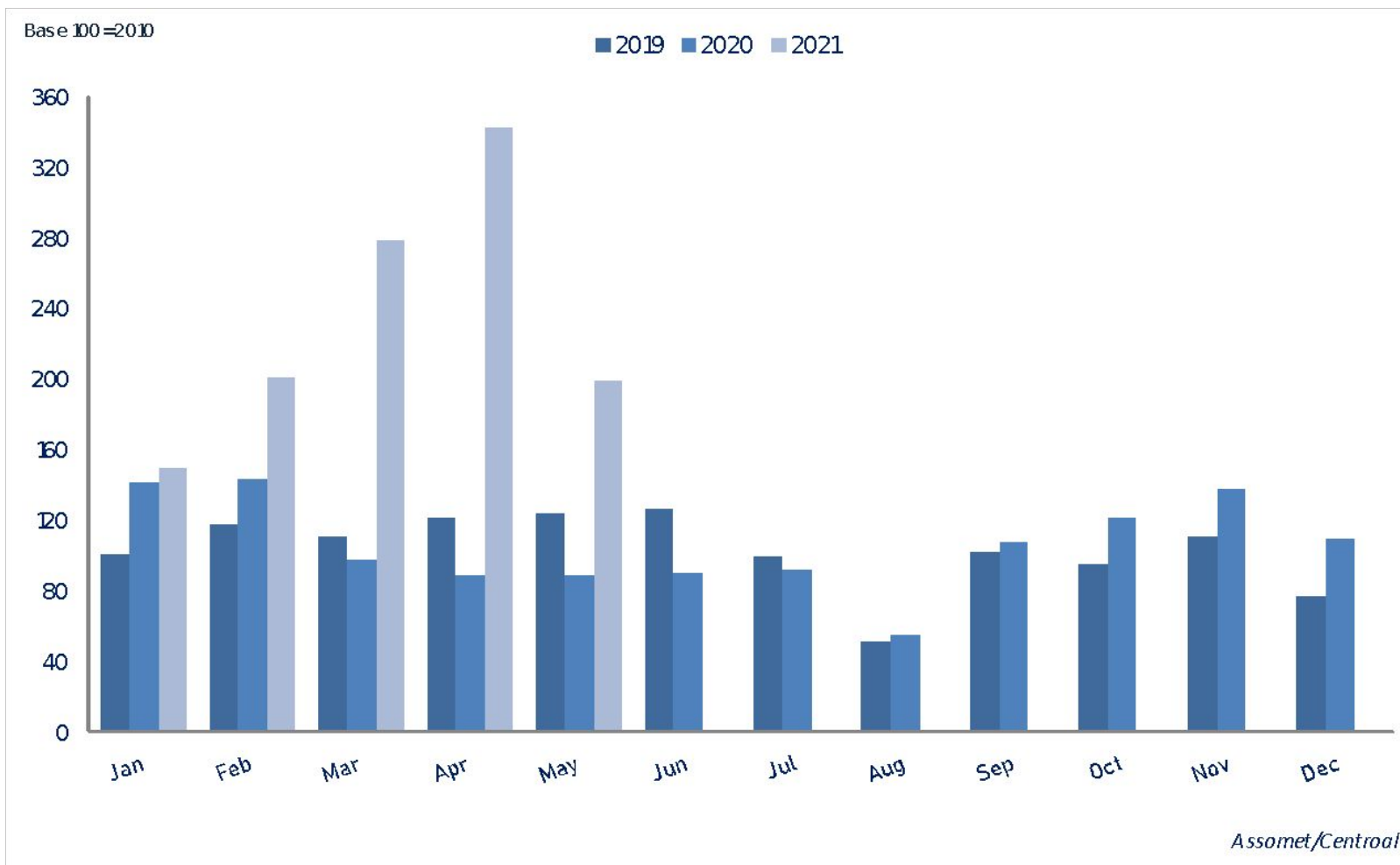
# ITALIAN EXTRUSION NATIONAL ORDERS INDEX

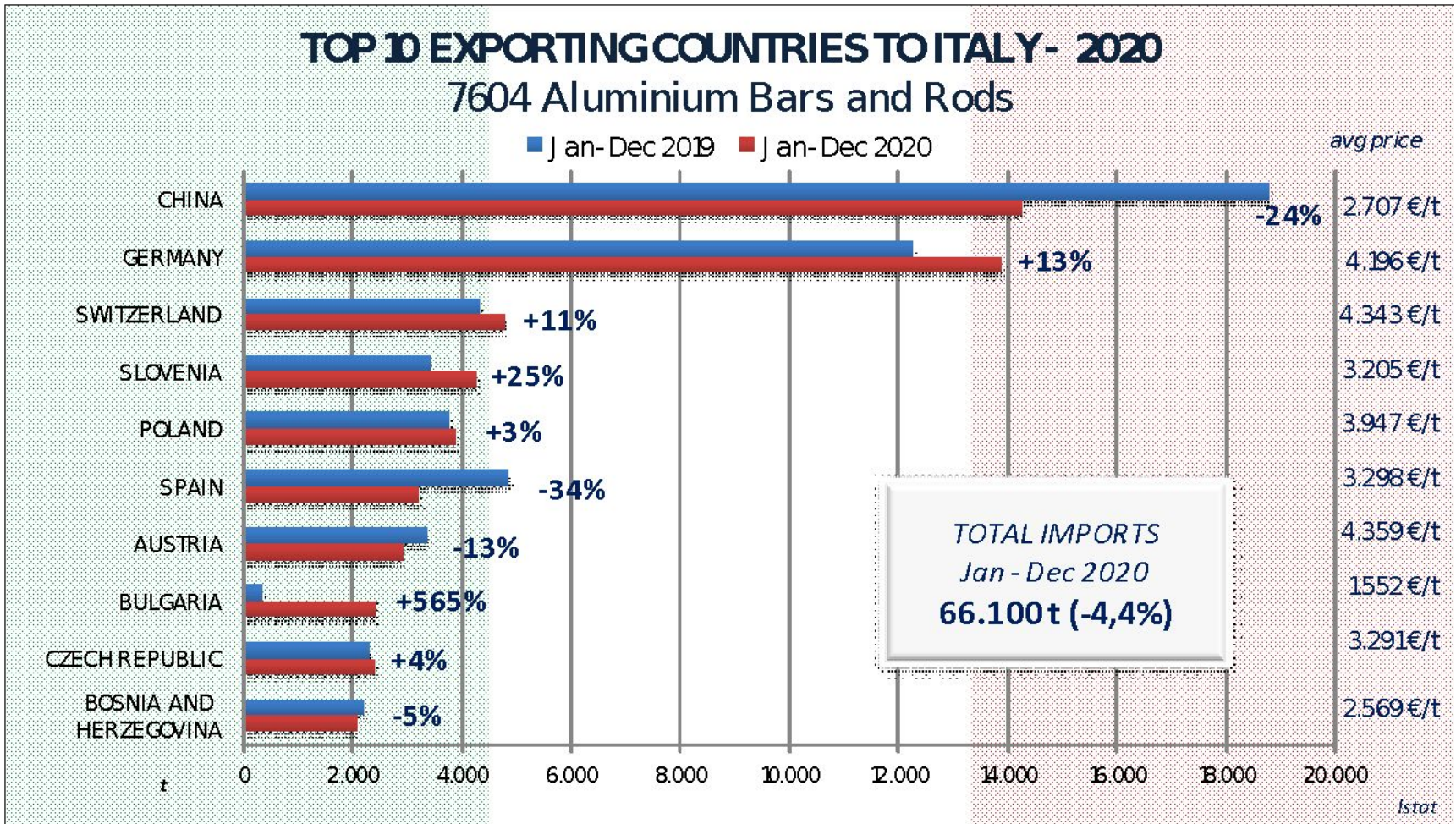
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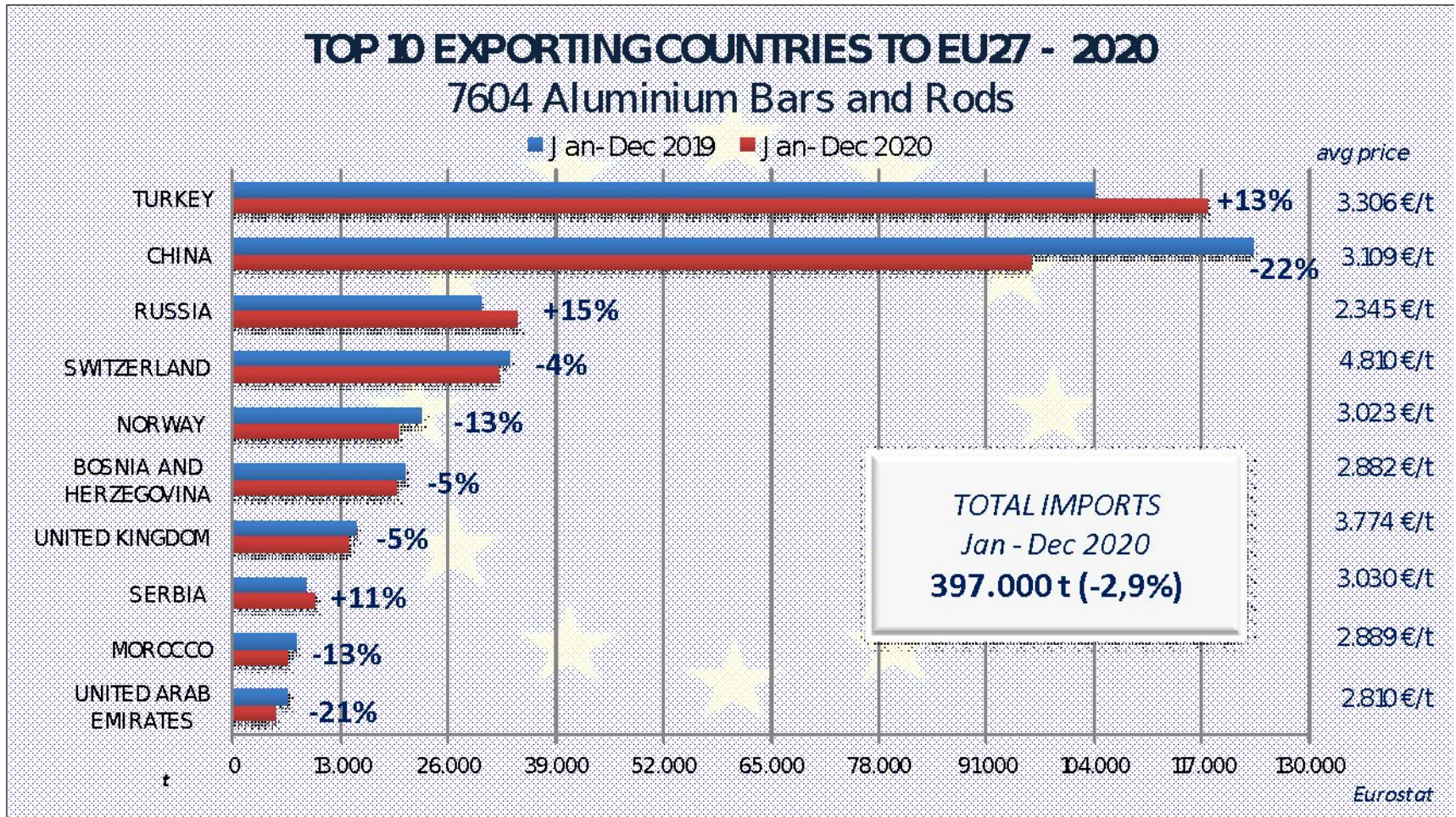
# ITALIAN EXTRUSION FOREIGN ORDERS INDEX

by











# **ITALIAN EXTRUSION MARKET:**

## **WHY RECYCLED MATERIAL?**



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# EU GREEN DEAL

## Main Aims:

### 1) Circular economy and 2) Decarbonisation

- 1) Encourage investments in waste recovery and recycling activities as well as promotion mechanisms for products made from recycled and recyclable materials such as aluminum.
- 2) Encourage investments in reducing CO2 emission to reach the ambitious target of 2050 zero emission.



## ZOOM IN

### **Recycling and its benefits**

Aluminium is durable and endlessly recyclable without losing its properties: **75 percent of all aluminium ever produced remains in use today.**

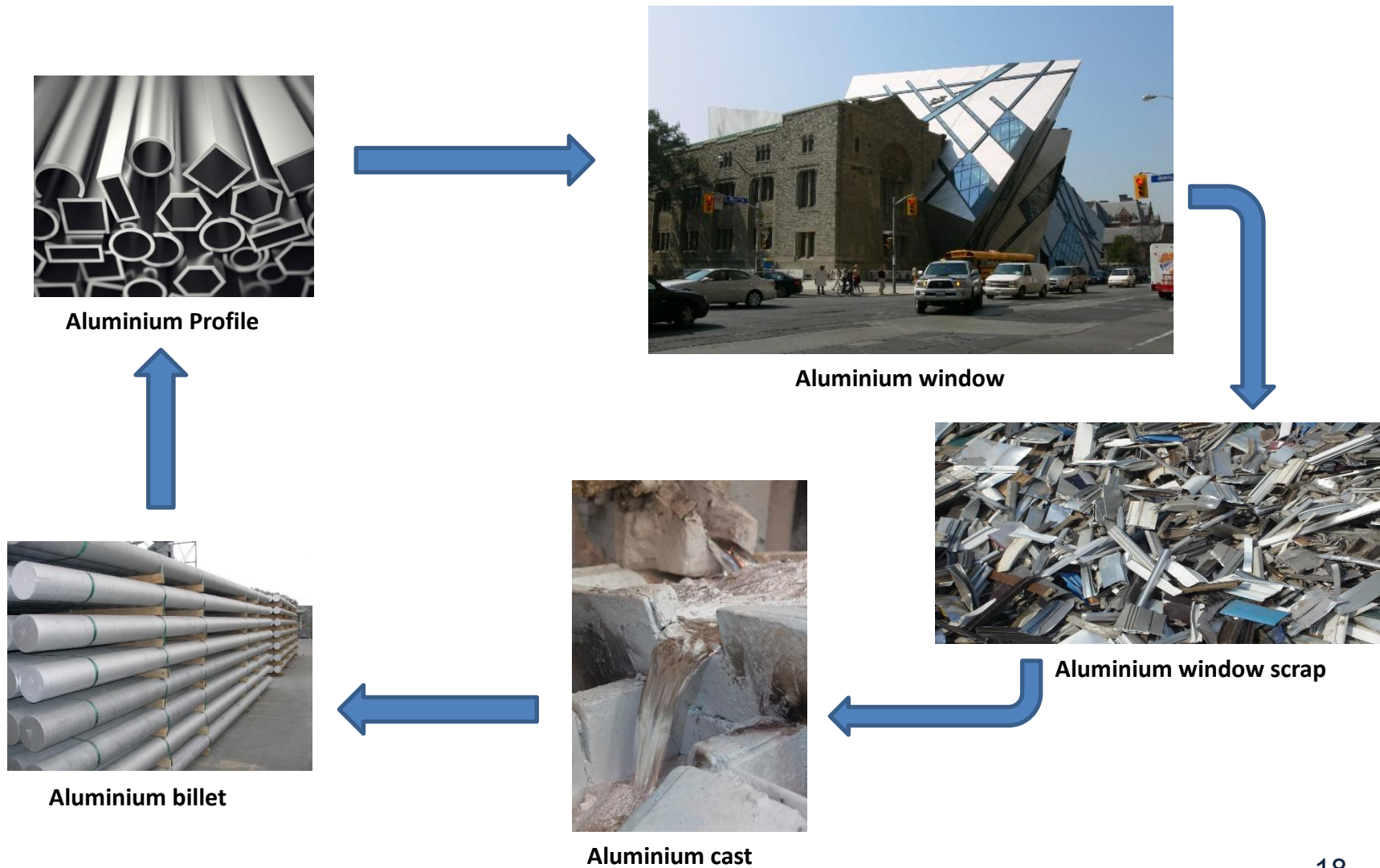
Increasing recycling contributes to reducing Europe's energy consumption and greenhouse gas emissions. **Recycling aluminium saves 95 percent of the energy required and the GHG emitted for the primary production.**

Europe enjoys high end-of-life aluminium recycling rates: **over 90 percent in the construction and automotive sectors and 60 percent in the packaging sector.**





# 1) Circular Economy







### **National and international law to encourage use of recycled material**

**A) ITACA specifies the criteria on which the multicriteria analysis system for the assessment of the ENVIRONMENTAL SUSTAINABILITY of NON-RESIDENTIAL buildings, for the purpose of their classification through the attribution of a performance score. The object of the evaluation is a single building and its external area of relevance,**

**B) C.A.M. (minimum environmental criteria) for the award of design services and public works for building interventions),**

**C) LEED (Leadership in Energy and Environmental Design) is the most widely used green building rating system in the world. Available for virtually all building types, LEED provides a framework for healthy, highly efficient, and cost-saving green buildings. LEED certification is a globally recognized symbol of sustainability achievement and leadership.**

## 2) Decarbonization

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**According to estimates, the climate contribution of aluminium recycling could be a reduction of 46 percent of CO<sub>2</sub> per year in 2050; achieved mostly by replacing the imports of carbon intensive primary aluminium with recycled domestic post-consumer aluminium.**

### **Aluminium recycling helps avoid CO2 emissions**

The need to cut greenhouse gas emissions only emphasises the importance of aluminium recycling. Aluminium is traded globally and, to meet current demand, the EU imports close to 30 percent of required primary aluminium. Depending on their region of origin, aluminium imports can have very different greenhouse gas emissions.

Given this, recycling aluminium provides an opportunity to cut greenhouse gases by replacing the import of primary aluminium. Aluminium recycling process requires only 5 percent of the energy needed to produce the primary metal, resulting in greenhouse gas emissions of 0.5 tonne CO<sub>2</sub> eq/tonne recycled aluminium (gate to gate). It does not include the inherent carbon footprint of the aluminium scrap.



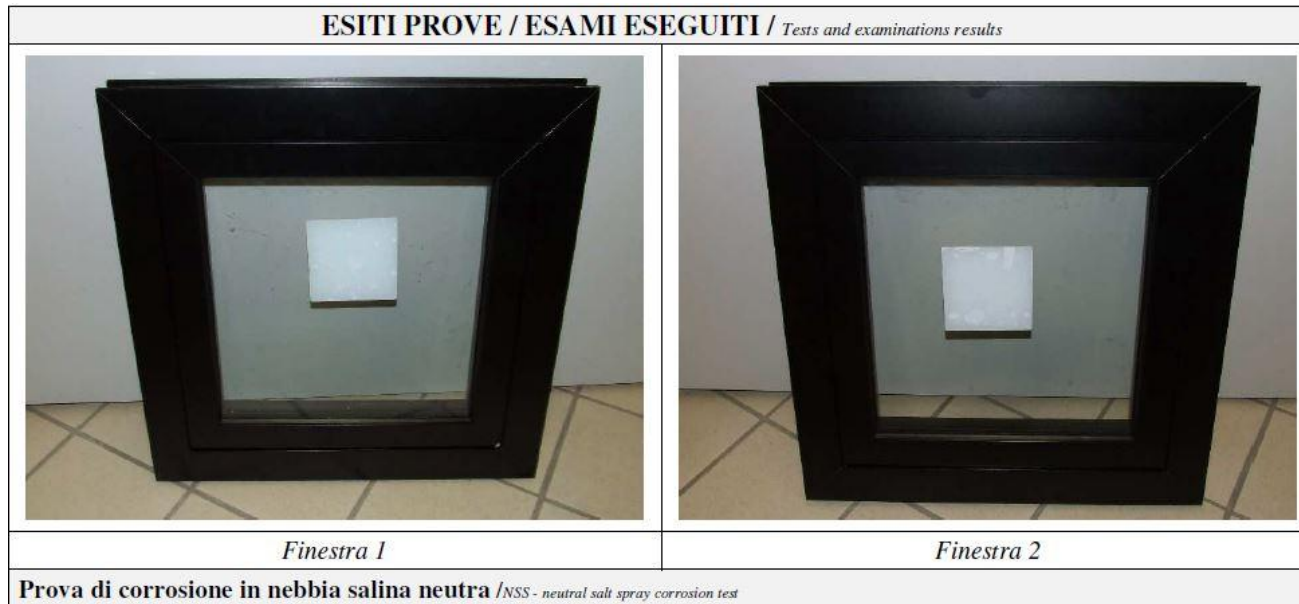
## Example of Extrusion made by recycled material

### Comparison between Primary and Recycled extrusion profile

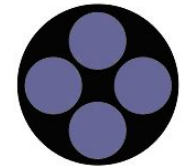
Below are the results of the comparison of salt spray corrosion tests made with primary aluminum extrusions and secondary aluminum extrusions

Sample 1 = Primary

Sample 2 = Recycled

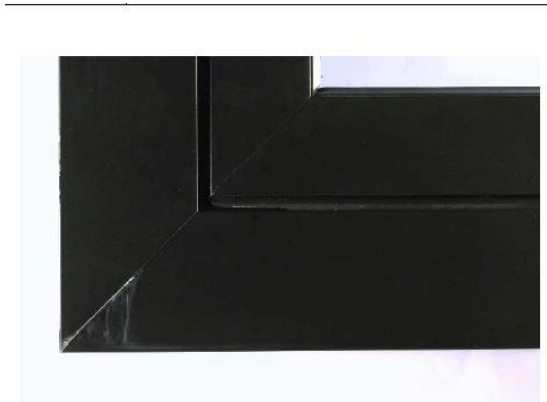


Starting point

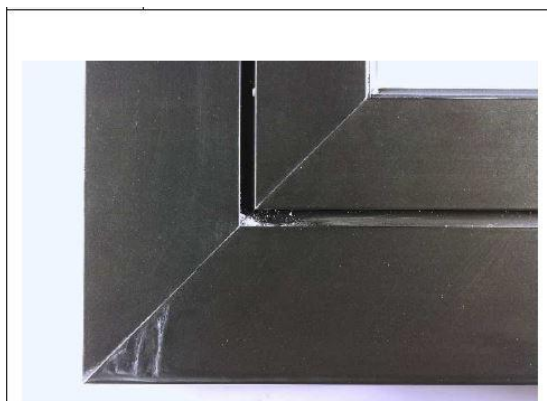


# Example of Extrusion made by recycled material

Sample 1 = Primary

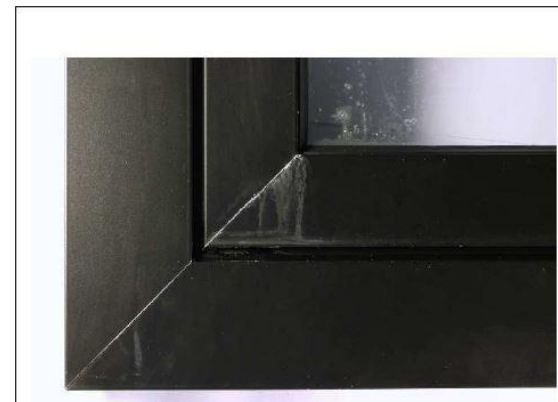


Saggio / Sample	Tempo esposizione/ Exposure time
1 Basso sx	960h

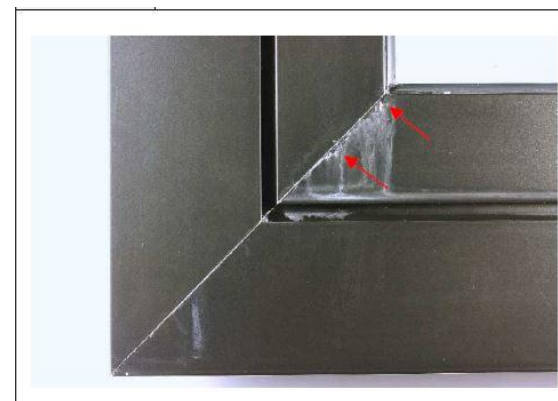


Saggio / Sample	Tempo esposizione/ Exposure time
1 Basso sx	1500h

Sample 2 = Recycled



Saggio / Sample	Tempo esposizione/ Exposure time
2 Basso sx	960h

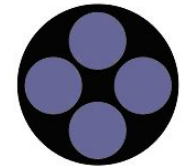


Saggio / Sample	Tempo esposizione/ Exposure time
2 Basso sx	1500h

After  
960h

After  
1500h





## Example of Extrusion made by recycled material

# Comparison between Primary and Recycled extrusion profile

The comparative corrosion tests conducted in saline mist show a good one for both samples tested product resistance up to 1500 hours of exposure in neutral saline environment UNI EN ISO 9227-NSS.

Sample 1 = Primary

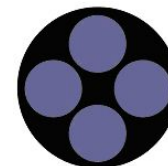
Sample 2 = Recycled



Saggio / Sample	Tempo esposizione/ Exposure time
1	1500h

Saggio / Sample	Tempo esposizione/ Exposure time
2	1500h

**Final results**



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**Thank You for Your attention**

**And special thanks to :**

