



Karl Buttiens, General Manager Environment  
& Global CO<sub>2</sub> ArcelorMittal

# Green Solutions for Central Europe



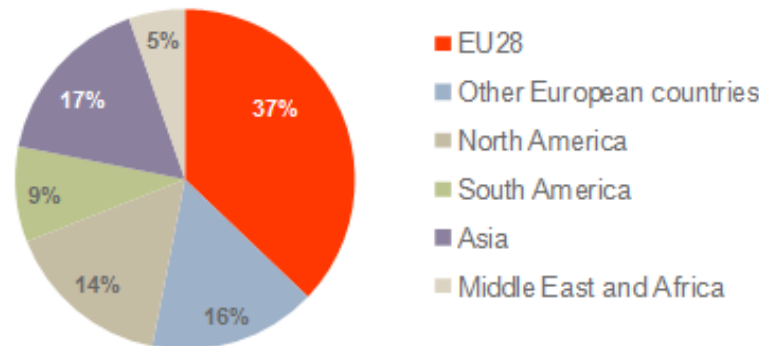
ArcelorMittal

ArcelorMittal welcomes you



# The world's leading steel and mining company

- **ArcelorMittal** is the world's leading steel and mining company, with around **232,000** employees in more than **60** countries producing 6% of global steel. It is the leader in all major global steel markets, including automotive, construction, household appliances and packaging, with leading R&D and technology, as well as sizeable captive supplies of raw materials.



Around 232,000 employees in more than 60 countries

Underpinning all our operations is a philosophy to produce safe, sustainable steel

# We all live in a material world

## 3 materials are important for society:

- Steel 1.7 billion t/year
- Cement 4.2 billion t/year
- Wood 1.1 billion t/year

## Most materials are needed for 3 essential functions:

- Food
- Shelter
- Mobility



Construction



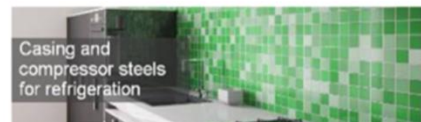
Construction & Agricultural Equipment



Renewable Energy



Transport



Home Comfort



Road Safety



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# What does 1.7 billion tonnes steel per year mean?

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- 100m x 100m x 100m full of solid steel every 2 days



# Steel is the Fabric of Life

- Because of visible and invisible applications: everywhere **strength** is needed
- Because it is the first material in Circular Economy: 92% recycling
  - Every ton of steel from iron ore will be re-used/cycled 10 times





## Construction & Infrastructure

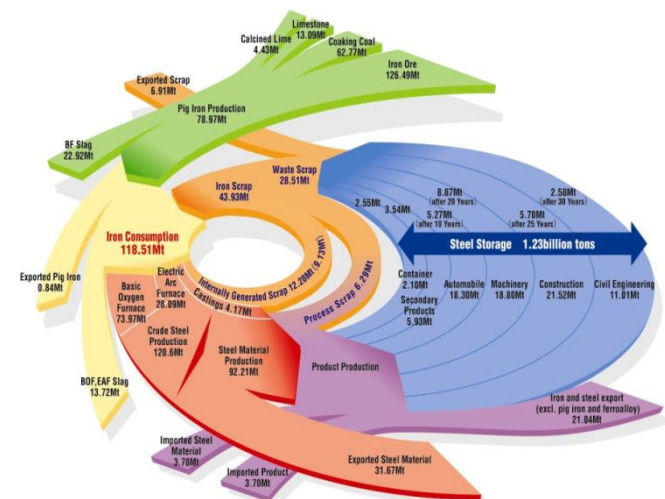


Arcelo

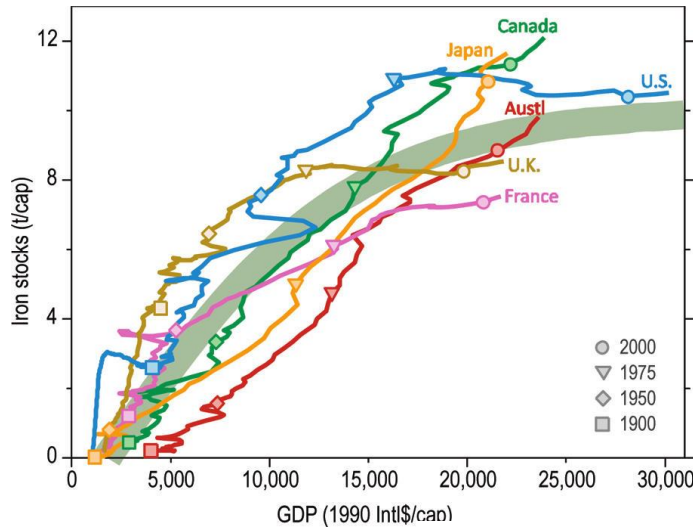


## Transport & Mobility

 <p>Rail</p>	<ul style="list-style-type: none"> <li>• Heavy steels</li> <li>• Ultra high strength steels (UHSS)</li> <li>• Corrosion resistance</li> </ul>	 <p>Trailers</p>	<ul style="list-style-type: none"> <li>• Trailtech</li> <li>• High strength low alloy steels</li> <li>• Good formability</li> <li>• Guaranteed low temperature toughness</li> </ul>
 <p>Shipbuilding</p>	<ul style="list-style-type: none"> <li>• Thinner</li> <li>• Stronger</li> <li>• Large sizes</li> </ul>	 <p>Cars</p>	<ul style="list-style-type: none"> <li>• Lighter</li> <li>• Ultra high strength</li> <li>• Good formability</li> </ul>



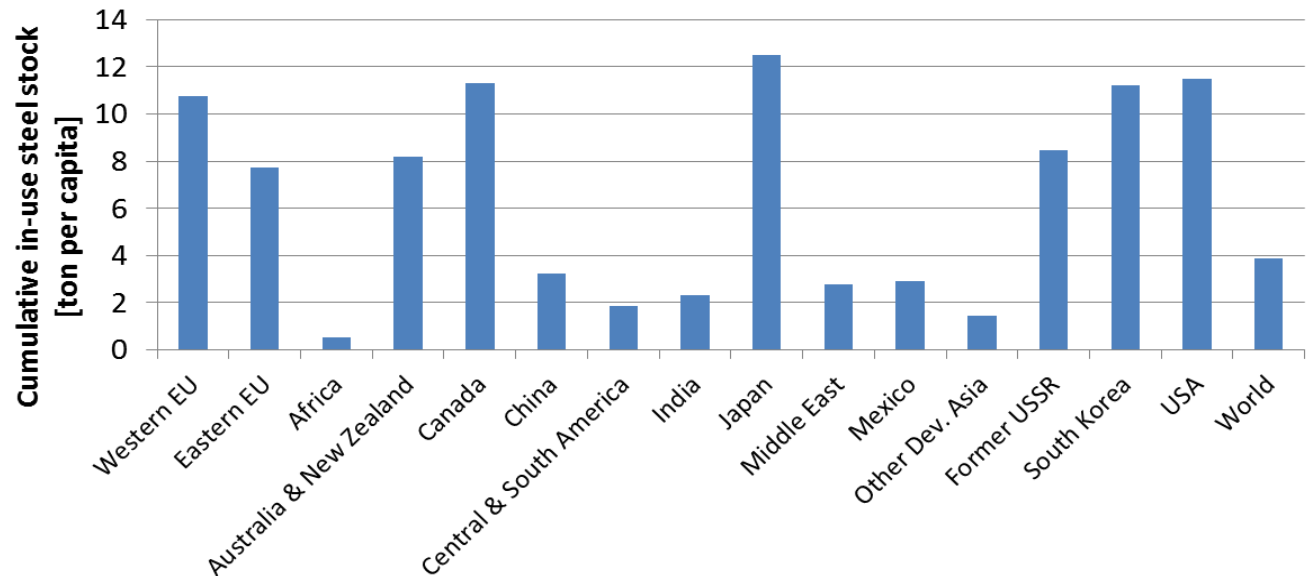
# Steel use determines well-being



- Total steel in stock in a developed society is levelling out at +/-10tpp
- Eastern EU has some catching up to do

Daniel MULLER, Tao WANG and Benjamin DUVAL, Patterns of iron use in societal evolution, Environ. Sci. Technol. 2011, 45

Energy System Analysis Agency  
SAAM model



# Innovative steel for packaging: **40% lighter** in 30 years



51g



38g

Additional 25% material savings  
feasible for the classic food can



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# Summary

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Also in the future we will need materials and lots of it  
Steel production & use still has a lot of challenges

- But it is a material with the right DNA
  - highly recycled
  - transformable to better performance

Green policies will have to reward sustainable material properties

- Teach respect for materials
- Define recycling better  $\neq$  avoiding landfill
- Include LCA principles in product evaluation

**I wish you an interesting and fruitful summit.**

