



Covenant2022
Circular Economy

COVENANT 2022

RMC – Covenant Circular Economy 2022

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Raw Materials – Quo Vadis

- **Steel demand increase of ~80%:** From **1.3bn tonnes** in 2010 to **2.3bn tonnes** in 2030
 - Each European citizen currently produces 444 kg of household waste per year
- Besides steel, **rare earth metals** comprise critical 17 chemical elements in the automotive, electronics and renewables sectors - **20 Critical Raw Materials** identified by the EC
 - At current consumption, **zinc & lead resources** will be **depleted within the next 15 years**
- **Rare earth metal recycling** rates remain very low – only **1 % in Germany**
 - **China: ~97% of global production** - US, Japan & Germany are investing in own supplies
 - McKinsey and Co estimate that **iron and steel energy efficiency** and end-use steel efficiency could deliver **\$278bn** in resource savings by 2030
- The metals of most concern right now are tantalum (or Coltan), tin, tungsten and gold
- **Raw material prices are highly volatile – gold up, others are down**
- **Demand for raw materials** continues to increase with **population growth**, economic prosperity, and globalisation; it is expected to **grow fourfold** in the coming 40 years

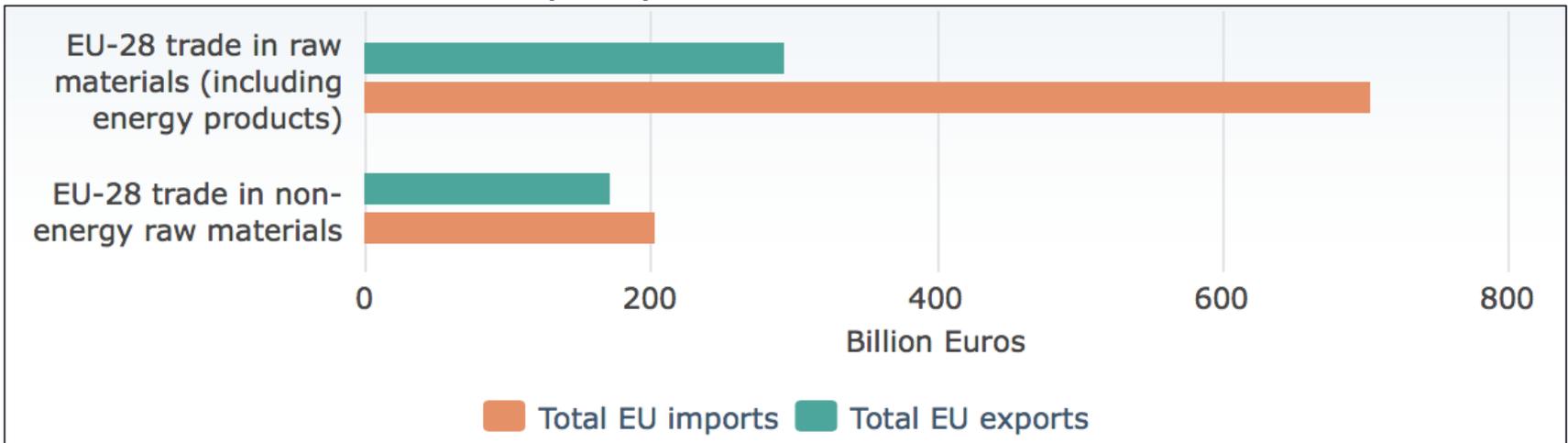
Sources: Finanzen.at, The Guardian, McKinsey





Raw Materials - Status Quo

■ EU trade in raw materials (2013)



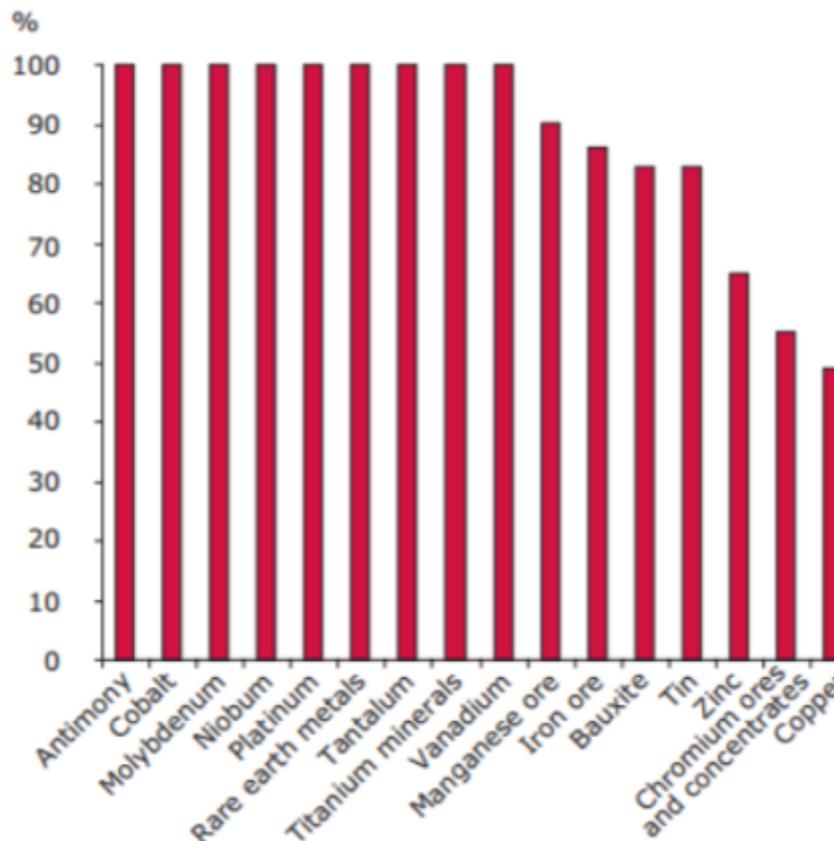
Source: [European Commission](#)

■ EU raw materials' industry in a nutshell

- A large number of industries use raw materials as inputs, providing a total added value of **€1,300 billion**.
- **30 million people** employed in the raw materials' sector
- A sustainable supply of raw materials is crucial for the development of **green technologies**

Critical Raw Materials - Supply

■ EU imports of Critical Raw Materials



Source: European Commission

- 100% import dependency with half of all CRMs



Circular Economy

■ Circular Economy – Think outside the Box

- Think tanks, civil society organisations, the industry, public institutions and the EC are talking about a circular economy

I do not need a drill.
I need a hole in the wall



■ Global consumption of non-renewable raw materials

- Led to innovative and different approaches in in **How** and **What** to do
- **Careful usage** and **re-use** are essential to maintain future economic growth

- **Circular business models** are more competitive as they *create more value from each unit of resource* than common, linear models of **'take-make-dispose'**

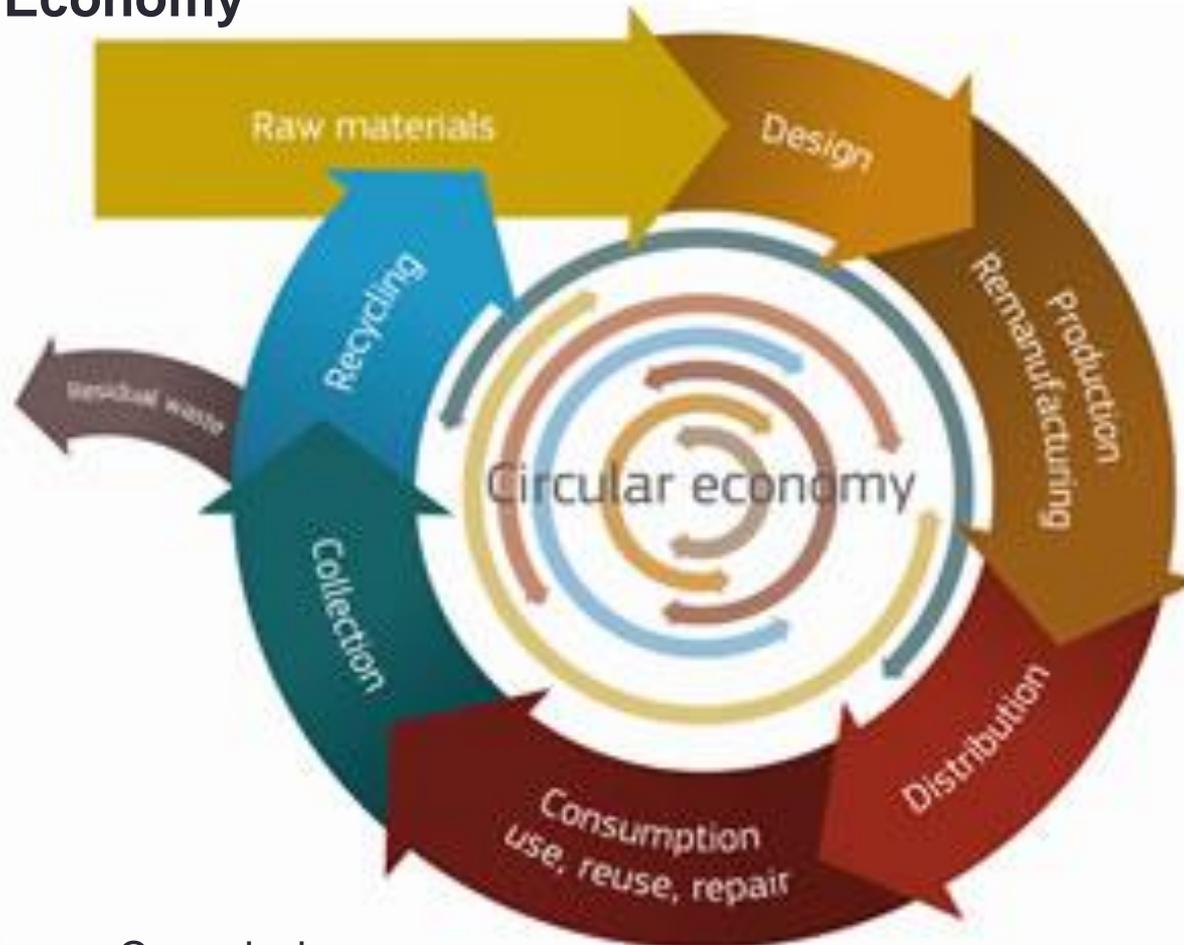
IT'S THE ECONOMY
STUPID





Circular Economy – A Reachable Goal

■ Circular Economy



Source: European Commission



Think outside the box

■ What does it mean?

- **Boosting recycling** and prevention of loss of valuable materials, through large-scale **recovery** and **reuse**
- **Collecting** & taking back products at the end of the life-cycle, separating materials, and reuse them again for new products
- **Product innovation**, combined with innovative designs & production technologies
- Showing **new business models**, such as eco-design, zero-waste or reverse logistics
- **Cooperation** within the **value chain** is of strategic importance
- **Need fulfilment & services**, rather than product ownership
- Creating jobs and economic growth
- Reducing **greenhouse gas** emissions and environmental impacts



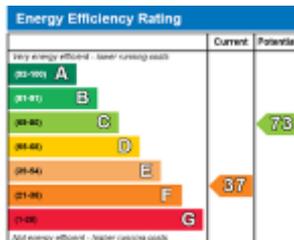
Accelerate the Scale-up

■ Scale-up

- Accelerating the speed of scaling-up promises to deliver substantial macroeconomic benefits
- Generates new opportunities for corporate growth
- Results in significant cost savings (e.g. energy efficiency, less landfilling, more sustainable use of natural resources etc.)

■ MacArthur Foundation

- **Global materials saving potential:** estimated at >1 trillion \$/year
- Already today, the **job creation** potential of **remanufacturing** and **recycling** in Europe already exceeds **1 million jobs**





Benefits of the Circular Economy

- **Strategic and operational benefits** of circular economic models have a huge potential for innovation, **job creation** and **economic growth** through:
 - Remanufacturing
 - Managing raw material streams
 - Service improvement across the supply chain
 - Access to goods and services versus ownership
- **Additional value added** through the Circular Economy for members of the Covenant2022.
 - Green Growth and Regional Development
 - Value Change Management
 - Finance





Covenant 2022 - Circular Economy

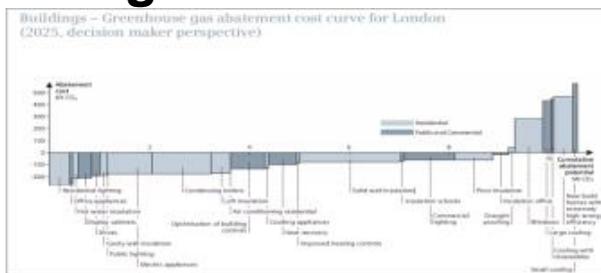
Value added

- Covenant 2022 is not a network but a platform bringing together experts from **institutions, public authorities** and **networks** committed to:
 - Develop a **Covenant supported & driven by the EU** (DG Growth, DG Environment, DG Research)
 - Implement the **European Innovation Partnership (EIP)** - Innovation required for the entire value chain of raw materials – industrial approach
 - **Use expertise** of each platform member
 - **Link to other EU processes** (Smart Specialisation, KIC, Finance etc.)
 - **Co-operations with business associations** and clubs, active in regions
 - **Offer services** to the platform members
 - **Develop financing services** for public and private financing of projects
 - **Open-source system** in place, website www.covenant2022.eu and an bi-weekly electronic newsletter
- European Commission
 - The new Circular Economy package will focus more on **product design to boost recycling** and address the issue of **toxic substances in materials** which prohibit recycling
 - Aim to produce higher quality secondary raw materials



A Collaborative Economy Platform

- The **Covenant 2022** involves actors of the **7 pillars of a circular and performance economy** in a systemic eco-innovative process:
 - 1) Sustainable supply chains, including sustainable mining
 - 2) Eco-design
 - 3) Industrial and territorial ecology
 - 4) Economy of the feature (how to use more efficiently)
 - 5) Responsible consumption
 - 6) Extension of the duration of use and remanufacturing
 - 7) Recycling
- Focus on **value chain management** related to **critical raw materials** for Europe.



Erzberg, Austria

RMC Covenant Circular Economy 2022

- The primary aim of the Covenant2022 is to be an "**open-coordination**" platform and to address **green growth** through the raw materials agenda at **regional and city level**.
- **RMC-Covenant Circular Economy 2022** is an alliance between value chain actors:
 - Public authorities
 - Large companies & SMEs, who are working with regions and cities
 - Banks
 - Eco-innovative clusters, universities, and
 - Citizens
- Together they will **create the conditions** for a **new demand** for **products** and **services**, new **jobs** and **prosperity**.



Covenant2022
Circular Economy

A Collaborative Economy Platform

The image displays a collection of logos for participating regions and partner organizations. The logos are arranged in a grid-like fashion. The regions listed include County Administrative Board of Norrbotten, Région Alsace, Région BRETAGNE, île de France, REGIONAL COUNCIL OF LAPLAND, Regione Lombardia, Rhône-Alpes, and the Municipality of Athens, Greece. The partner organizations include the Association of Cities and Regions for Recycling and Sustainable Resource Management (ACR+), the Assembly of European Regions (AER), Eco-Union, European Partners for the Environment (EPE), Institut de l'économie circulaire, The Regional Environmental Center for Central and Eastern Europe (REC), the State Geological Institute of Dionýz Štúr, the StEP Initiative, and the United Nations Environment Programme (UNEP).

- **Participating Regions and City**
 - 1) Alsace, France
 - 2) Bretagne, France
 - 3) Ile de France, France
 - 4) Lapland, Finland
 - 5) Lombardy, Italy
 - 6) Norrbotten, Sweden
 - 7) Rhône Alpes, France
 - 8) Municipality of Athens, Greece
- **Partner Organisations**
 - 9) The Association of Cities and Regions for Recycling and Sustainable Resource Management (ACR+)
 - 10) Assembly of European Regions (AER), Europe
 - 11) Eco-Union, Spain
 - 12) European Partners for the Environment (EPE), Europe
 - 13) Institut de l'économie circulaire, France
 - 14) The Regional Environmental Center for Central and Eastern Europe (REC), Hungary
 - 15) State Geological Institute of Dionýz Štúr, Slovakia
 - 16) StEP Initiative – Solving the E- Waste Problem, United Nations University, Germany
 - 17) United Nations Environment Programme (UNEP)

Interested to join?



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