

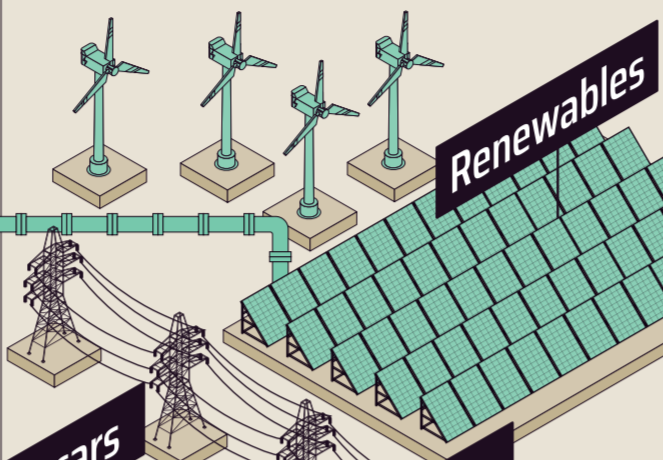
BARCELONA'S GREEN AND DIGITAL TRANSITION AND ITS IMPACTS ON THE GLOBAL SOUTH

Only 5% out of 811.673 vehicles were electric or hybrid in Barcelona. The purchase of new vehicles is now being promoted to replace conventional ones.

The replacement of combustion engines represents 50-60% of the increase in demand for critical materials for the green transition.



91% of the energy consumed comes from non-renewable sources
Changing fossil fuel sources for renewable ones will have impacts in the Global South.



TMB will add 46 hydrogen buses



2.5 MW Hydrogen station for public use owned by Iberdrola.

Substitution of kerosene for biofuels and hydrogen (H₂)

Biofuels represent less than 0,01% of aviation fuel. Increasing its production requires more monocultures. H₂ won't be viable before 2050 for flights longer than 3 hours. "Green" hydrogen for aviation would require a lot of renewable energy.



Biofuels consumed in Europe cover an area of 9,6 million hectares: more than the whole island of Ireland.



Internet produces 3,7% of global CO₂ emissions

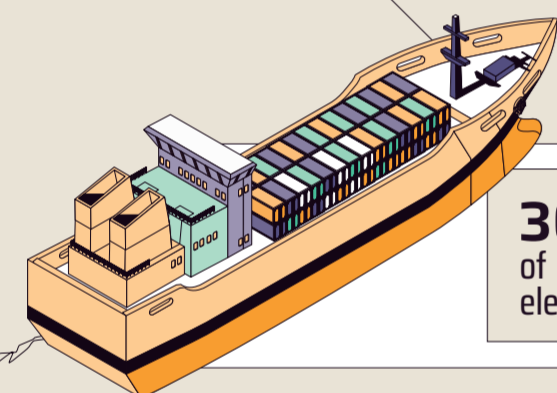
24% from communication networks

The city hosts the MWC every year, a fair that seeks to develop the 5G network.

The MWC encourages the consumption of new mobile telephones and innovation in digitalisation. In Barcelona there are about 1.5 million smartphones in use.



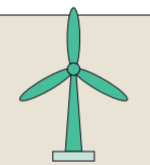
Manufactured products imported from China



30% of electrolysers



60% of wind turbines



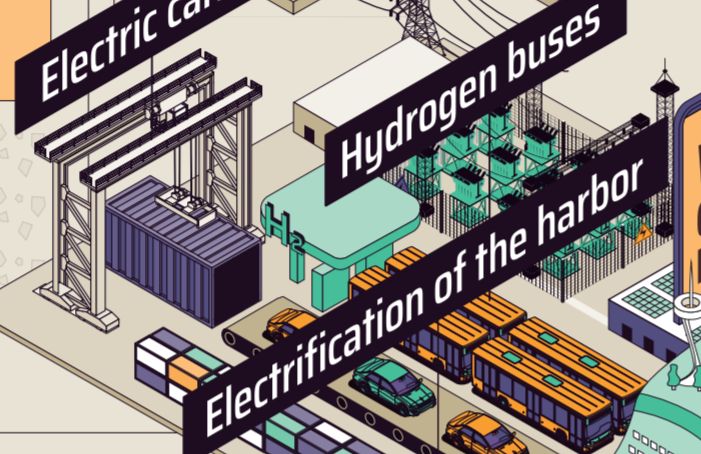
60% of solar panels



40% of electric cars

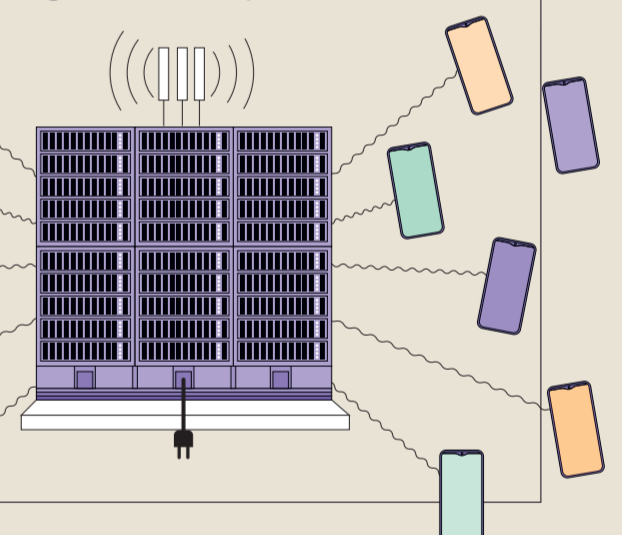


Electrification of the harbor without questioning its energy consumption.



45% from data centres

In the city there are several server buildings that have enormous energy consumption to maintain the appropriate temperature of the computer systems in full operation 24/7.



Where do most of the resources that make the transition possible come from?

Mineral global demand for decarbonization technologies in 2040

40% of copper

60-70% of nickel

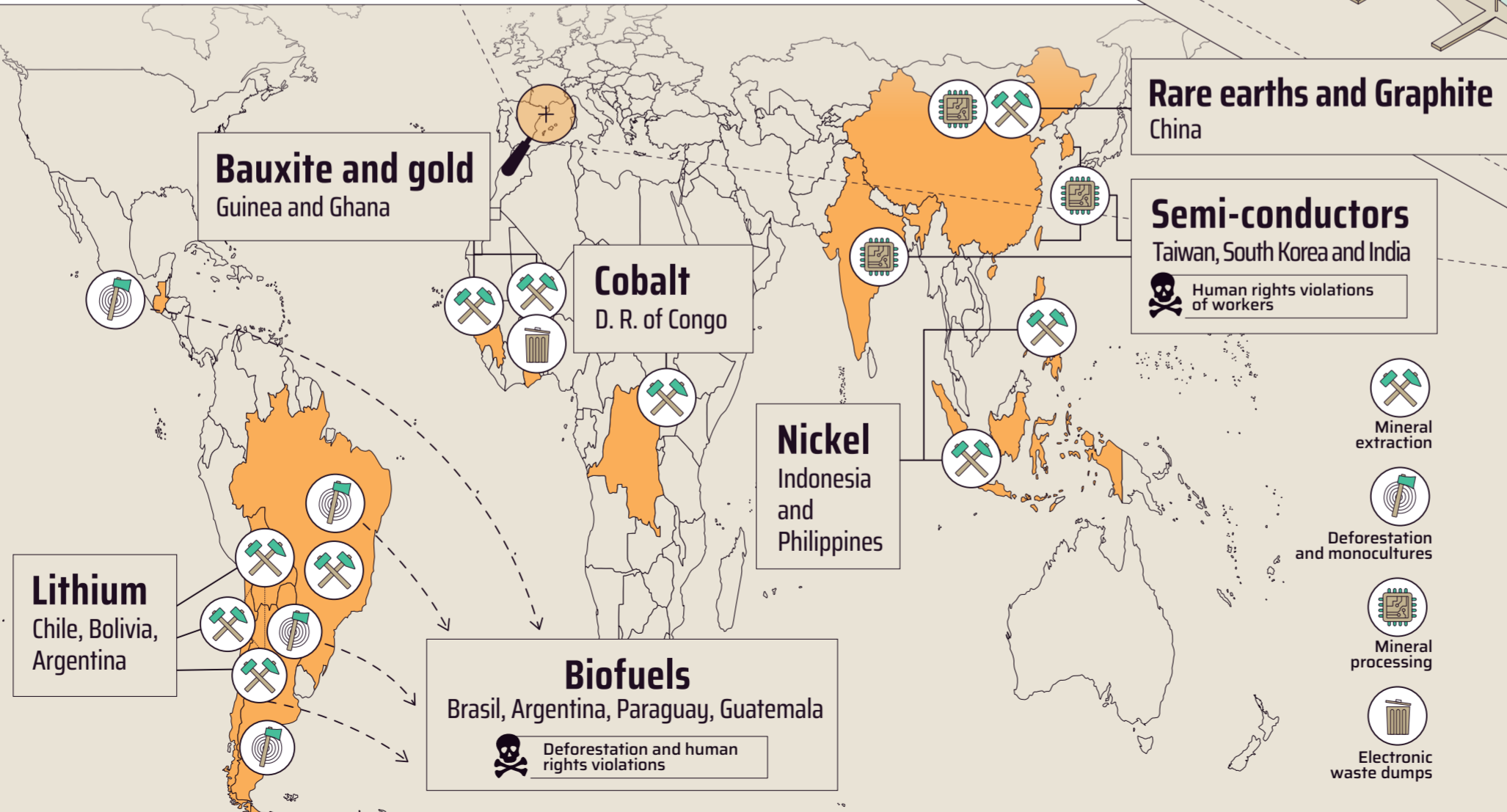
90% of lithium

40% of rare earths

60-70% of cobalt

These minerals are also needed for digital technologies.

The EU wants to secure the supply of critical minerals needed for the transition. The growth of mineral extraction is generating numerous socio-environmental conflicts around the world.



Rare earths and Graphite
China

Semi-conductors
Taiwan, South Korea and India
Human rights violations of workers

Cobalt
D. R. of Congo

Nickel
Indonesia and Philippines

Bauxite and gold
Guinea and Ghana

Lithium
Chile, Bolivia, Argentina

Biofuels
Brasil, Argentina, Paraguay, Guatemala
Deforestation and human rights violations



In the EU, less than 40% of electrical and electronic waste, which contains toxic substances, is recycled.

This waste from the EU can end up in illegal traffic in countries of the Global South such as Ghana, where there are no resources to recycle properly. The workers are exposed to very serious damage to their health.

