

# What are the transition strategies of the Transport sector, in a geopolitically restrained world?

Takeaways from the 2022 Global Synthesis Report on Climate Action



CLIMATE  
CHANCE

13.01.2023



# The Climate Chance Association



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ACTION

# Climate Chance's 3 missions



## Sharing information

- The website portal
- The cartography
- The library
- The climate agenda



## Analysing climate action

The Observatory of Climate Action

- Global Synthesis
- Reports
- Case studies



## Uniting actors

- Summits
- Coalitions
- e-Mags



# Uniting climate actors from around the world



# The Global Observatory of Climate Action



## An editorial committee

- Coordination
- Writing
- Editing
- Sharing



## A network of expertise

- Researchers
- Consultants
- Journalists
- Practitioners



## A series of publications

- Sector-based Report
- Local action Report
- Finance Report
- Adaptation Report
- Case studies

# The Global Synthesis Report on Climate Action by Sector



## Why?

- To illuminate, inspire and show the complexity of climate action at work in its economic, regulatory, geopolitical and other environments.

## For whom?

- A document addressed to decision-makers engaged in climate action in local authorities, companies, NGOs, financial institutions...

## What?

- A synthesis of the literature (academic studies, institutional reports, press...) to "tell the story behind the figures" of GHG emissions from the six main emission sectors.

# The 2022 Global Synthesis Report on Climate Action by Sector – 5<sup>th</sup> edition



**5 SECTORS**

**100+ INDICATORS**

**15 TRENDS**

**50 SIGNALS**

**15 CASE STUDIES**

**1 SPECIAL FEATURE ON CARBON OFFSETS**

# A personalisable reading experience: Stand-alone sections

## INDICATORS

- 1 double-page
- Evolution of emissions and activities of each sector
- Evolution of climate action

## SIGNALS

- 1 double-page of press reviews, 8-10 signals
- Events or initiatives that have not yet become a trend but signals a change in the sector



## TRENDS

- 3 Trends of de 6-8 pages/ sector
- 1 « Data Overview »
- 1 editorial focus
- Precise and succinct analyses

## CASE STUDIES

- 3 case studies of local actions and initiatives
- 1 page/ case study



# A collaborative project built around a network of expertise



- **40+ contributors** experts and practitioners from the field
- **25** research centres, NGOs, consultancies and networks mobilised.



# Our Partners



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#BS2022



Regional Collaboration Centre – Lomé

Promoting Climate Action in Western and Francophone Africa

# The Transport Takeaways from the 2022 GSR

**Antoine Gillod** • Director, Global  
Observatory of Climate Action

**Tania Martha Thomas** • Research Officer,  
Global Observatory of Climate Action



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# The Transport Takeaways from the 2022 GSR

An overview of emissions and the  
evolution of trends in the sector



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# An overview of global GHG emissions



**37.06 GtCO<sub>2</sub>**  
emitted in 2021 – **a record.**  
([Enerdata](#))



GHG emissions  
in 2021 exceeded  
2019 levels  
by 0.9%



OECD countries' GHG  
emissions in 2021  
were 4.6% lower than  
in 2019



Emissions from  
BRICS in 2021  
exceeded  
2019 levels  
by 5.7%

# A zoom in on the Transport sector's Emissions

- Increasing emissions in each sub-sector, but with regional variations that persist

## 2021: emissions back on track

EMISSIONS FROM DOMESTIC TRANSPORT PICK UP,  
BUT DON'T TOUCH THEIR 2019 LEVELS

+7.6%



[Enerdata, 2022](#)



+7.3%



+7.6%



+7.3%



+13.2%

# Road Transport: Electrification surges ahead, but remains eclipsed by the growth of SUVs

- **55%** of EVs sold in 2021 were SUVs ([IEA](#)).
- **1,940 kg** is the average weight of EVs on the market, against an average weight of all vehicles of 1,240 kg in France, and of 1,857 kg in the US ([InsideEVs](#)).

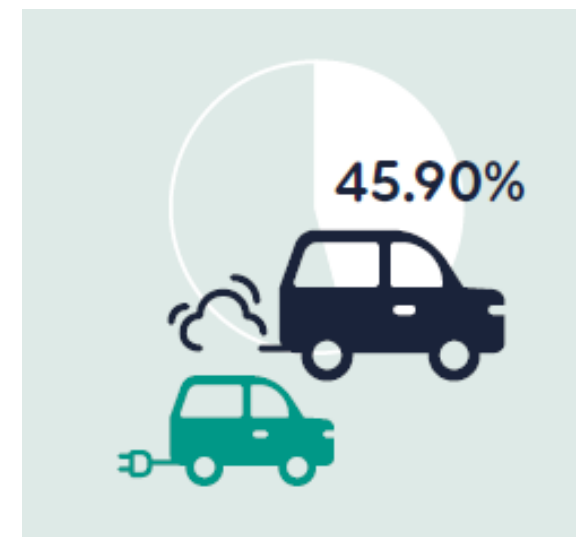
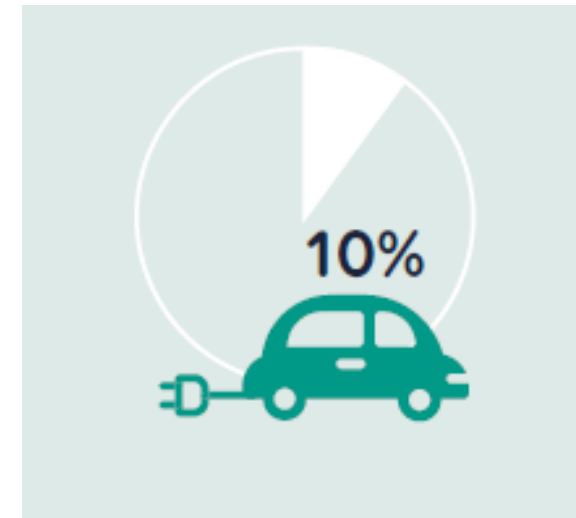
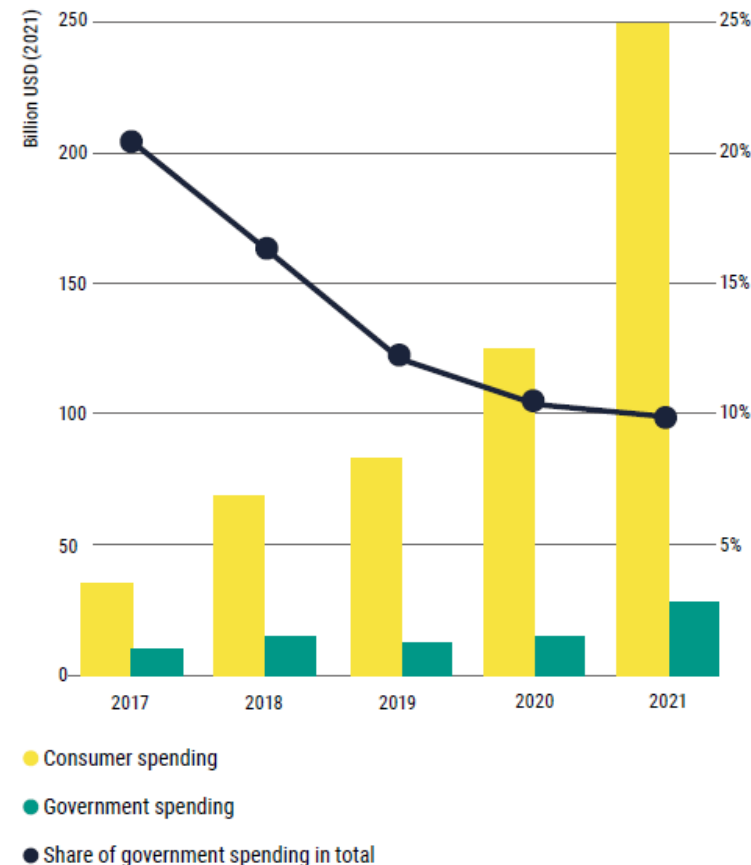


## READ MORE IN THE REPORT

**Trend** • Metals, the precious fuel for the automotive market in the race to electrification

## CONSUMER AND GOVERNMENT SPENDING ON ELECTRIC CARS, 2016-2021

Source: [IEA](#), 2022

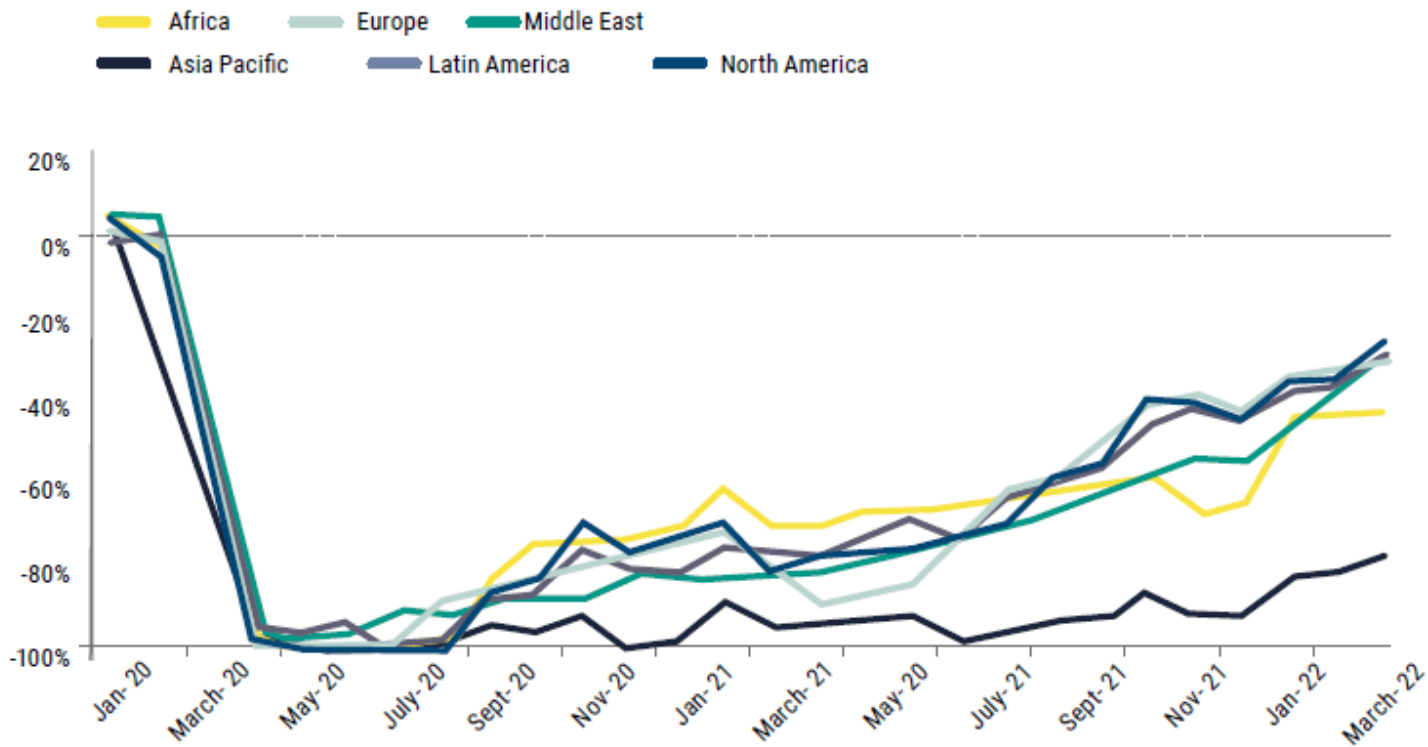


# Air Transport: Air traffic soars once more, riding on the wings of demand



YEAR-ON-YEAR CHANGE IN INTERNATIONAL REVENUE PASSENGER KILOMETRES (RPKs)

Source: [IATA](#), 2022



- Emissions dropped from 905 MtCO<sub>2</sub> in 2019, to 495 Mt in 2020, 577 Mt in 2021, and an estimated **809 Mt in 2022** ([IATA](#))

- The recovery after the pandemic has shifted the **regional distribution** of aviation activity.



READ MORE IN THE REPORT

**Trend** • Air traffic takes off again, leaving the climate transition on the tarmac



# The increasing popularity of LNG as the fuel of choice for long distances in the maritime sector



- **99.8%** of ships operating in the world and **78.9%** on order run conventional fuels ([DNV](#))
- Among the alternatives, LNG dominates the orders books for long-distance vessels (**90%** of tonnage on order, **98%** of tonnage in operation).
- **923** LNG-fuelled vessels in operation, **534** ordered ([DNV](#))



READ MORE IN THE REPORT

**Trend** • The energy transition in international shipping remains at the dock

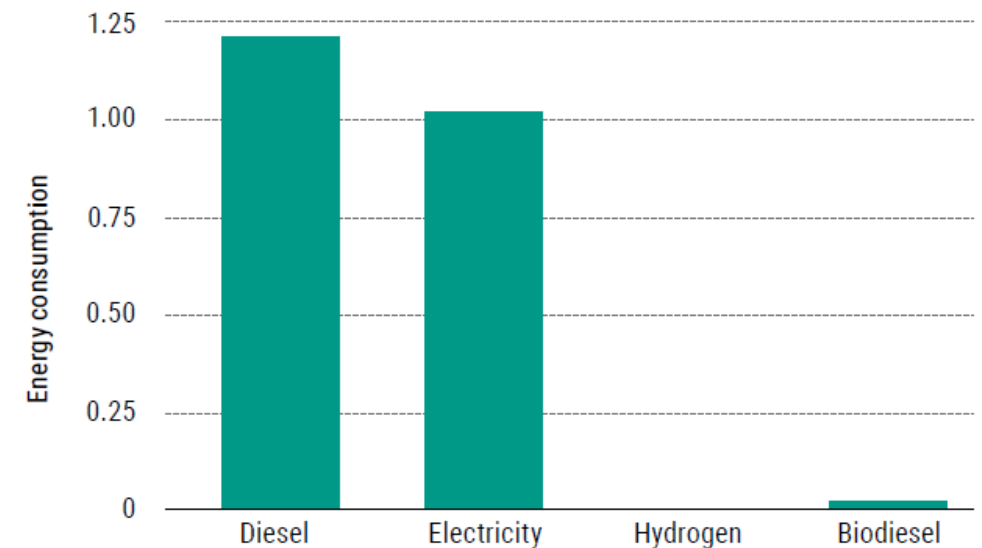
# The electrification of railways continues to charge ahead



- A global electrification rate of **40.2%** in 2019, **60%** in Europe, **75%** in China, **80%** in India. In general, passenger lines have high rates of electrification, while freight uses more diesel. ([SLOCAT](#); [European Commission](#); [ICCT](#); [Indian Railways](#))
- Battery trains are also growing in demand – **+264%** between 2019 and 2021, driven mainly by the Asia-Pacific region ([Allied Market Research](#)).

FINAL ENERGY MIX OF RAIL TRANSPORT, 2021

Source: [IEA](#), 2022



READ MORE IN THE REPORT

**Trend** • Heatwaves pushing the sector off its rails

# The Transport Takeaways from the 2022 GSR

The transitions strategies of actors,  
marked by the geopolitical and climatic  
contexts



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# Inflation in energy prices leaves no sector untouched

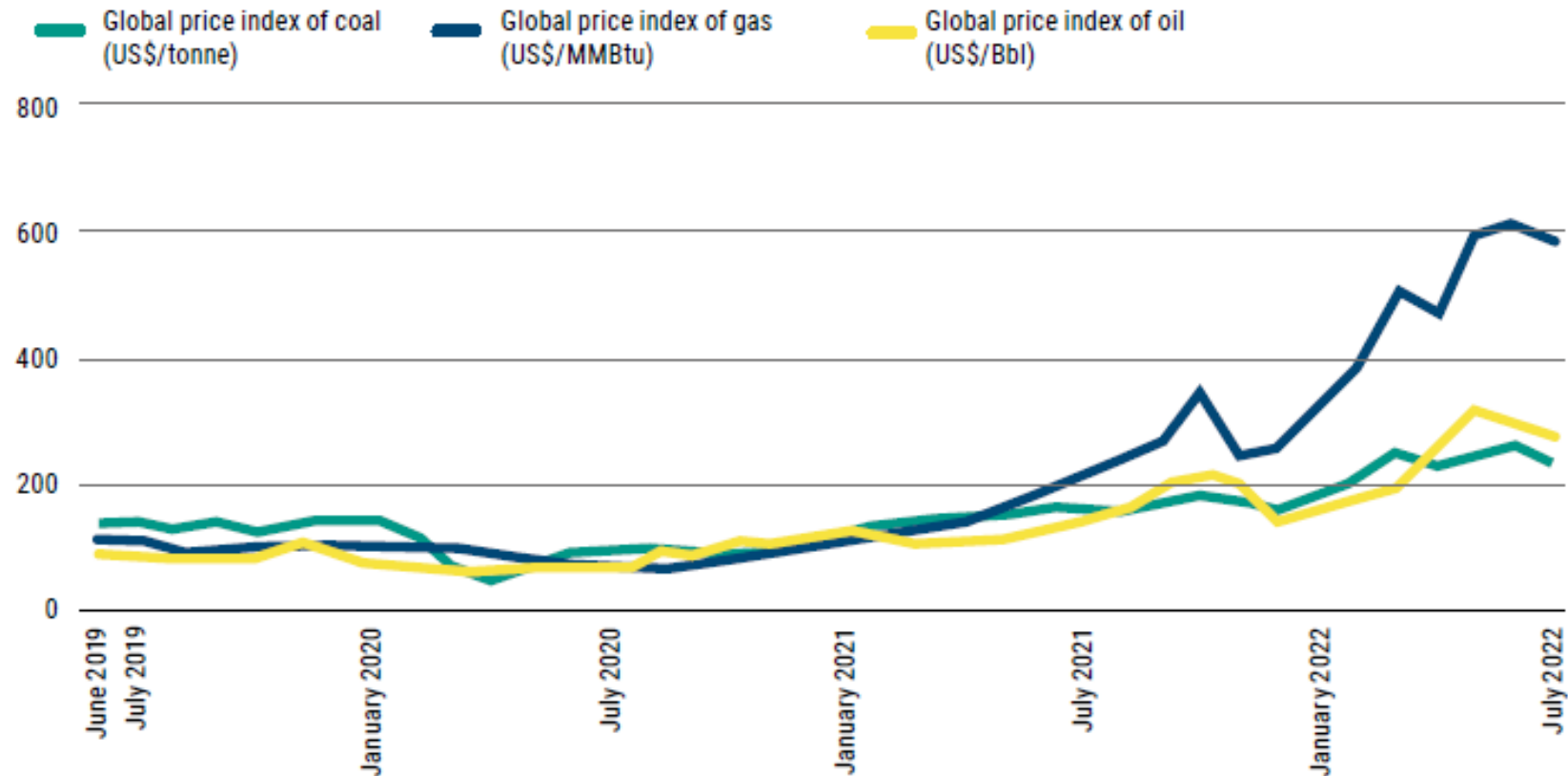


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## GLOBAL PRICE INDICES OF COAL, GAS, AND OIL, JUN 2019 – JUL 2022

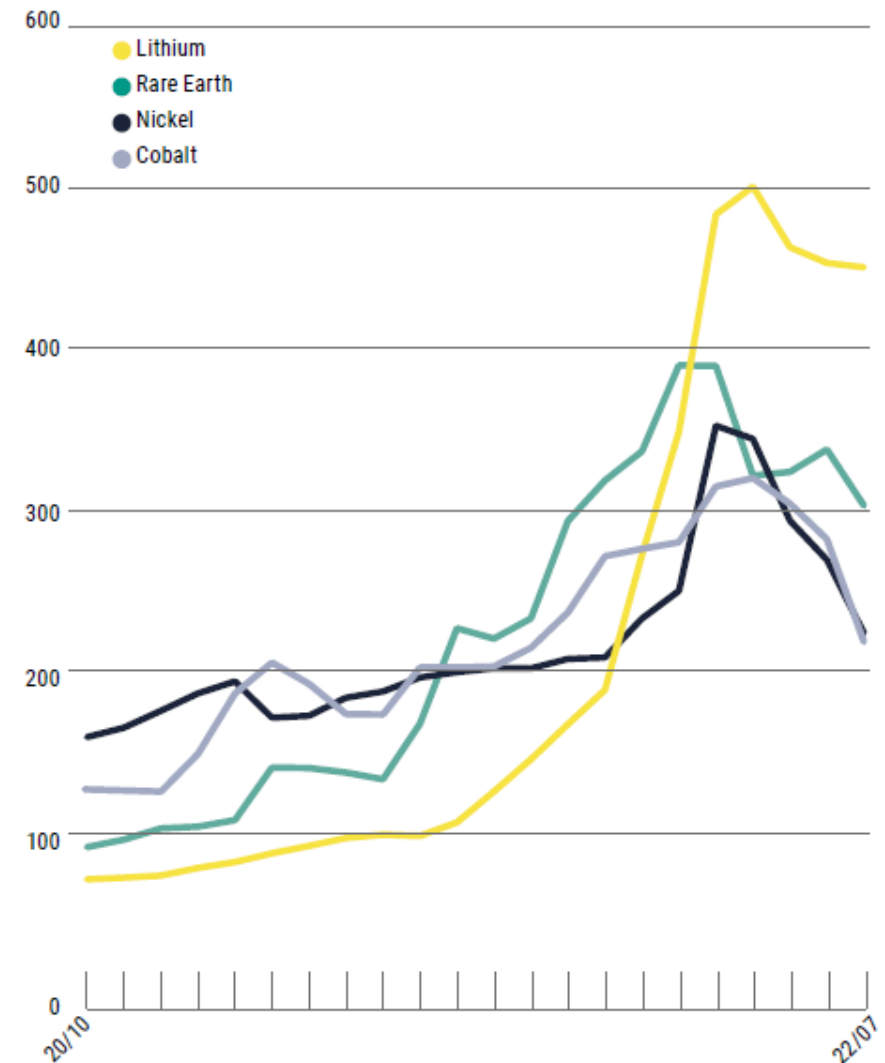
Source : Climate Chance, based on [IME](#), 2022



# The inflation in prices of metals strategic to the energy transition

EVOLUTION OF A SELECTION OF METAL PRICE INDICES, OCT 2020 – JUL 2022  
Source: [IMF Energy Transition Metal Index](#), 2022

- **Inflation** of the prices of strategic metals: lithium x 4, cobalt x 2, nickel x 2.
- **Impact:** Photovoltaic cells et wind turbines (+10~20 %); lithium-ion batteries **+52%**, between December 2021 and April 2022 ([BNEF](#)).



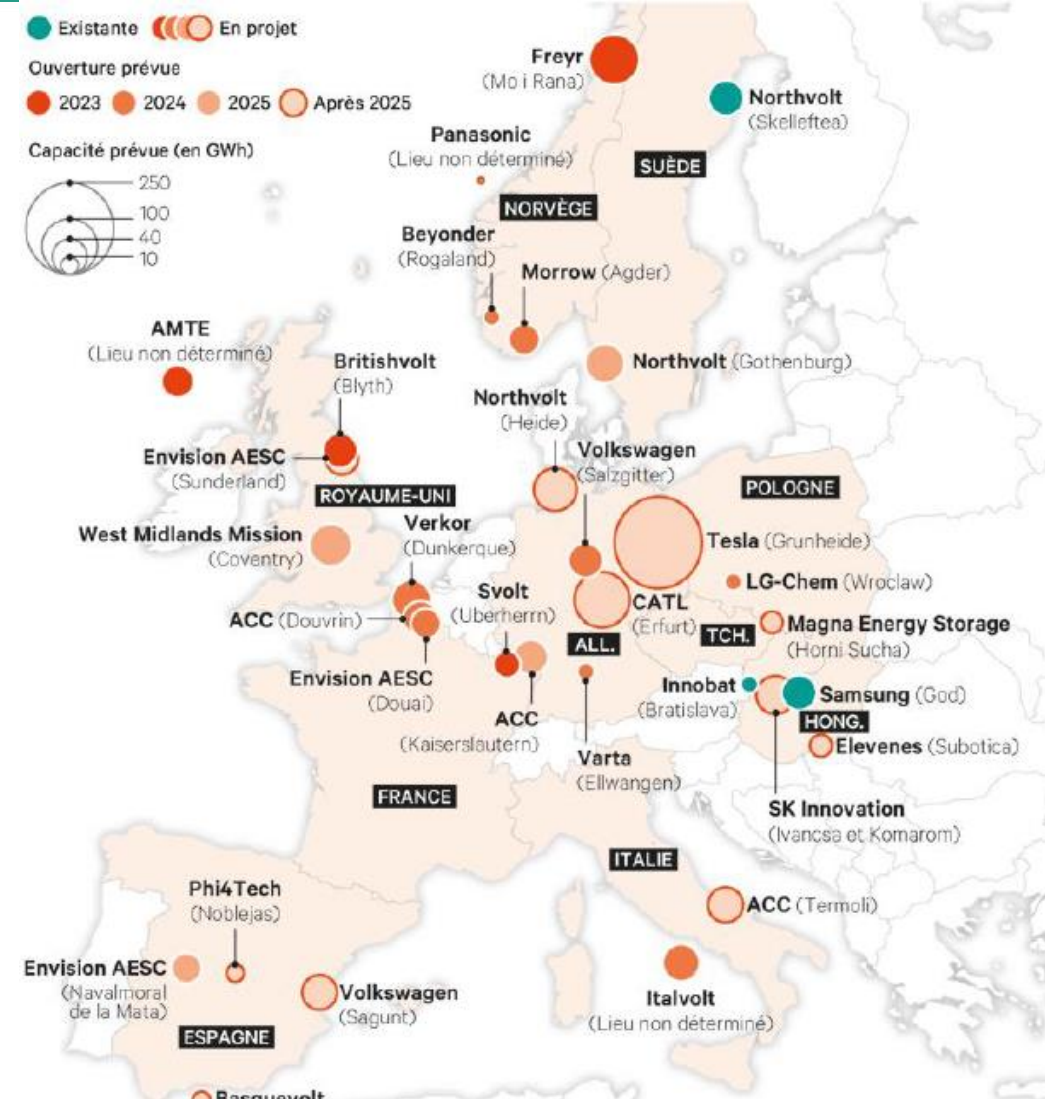
READ MORE IN THE REPORT

**Case Study** • Alsace: Towards a made-in-Europe production of low-carbon lithium with the EuGeLi projet

# Economic nationalism in transition policies: the transport case

- 77% of **lithium-ion batteries** in the world are produced in China. CATL (33.7%) et BYD (12.1%) dominate the market ([S&P Global](#)).
- **1,400 GWh** of gigafactories are being developed in Europe, across 40 sites, to produce **17.5 M** electric vehicles in 2030 ([Les Échos](#)).
- **\$369 bn** invested by the US in low-carbon industries, with a preference for Made-in-America (Inflation Reduction Act).

EXISTING OR DEVELOPING GIGAFACTORIES IN EUROPE (OVER 10 GWH)  
 Source: [Les Échos](#), 11/07/2022

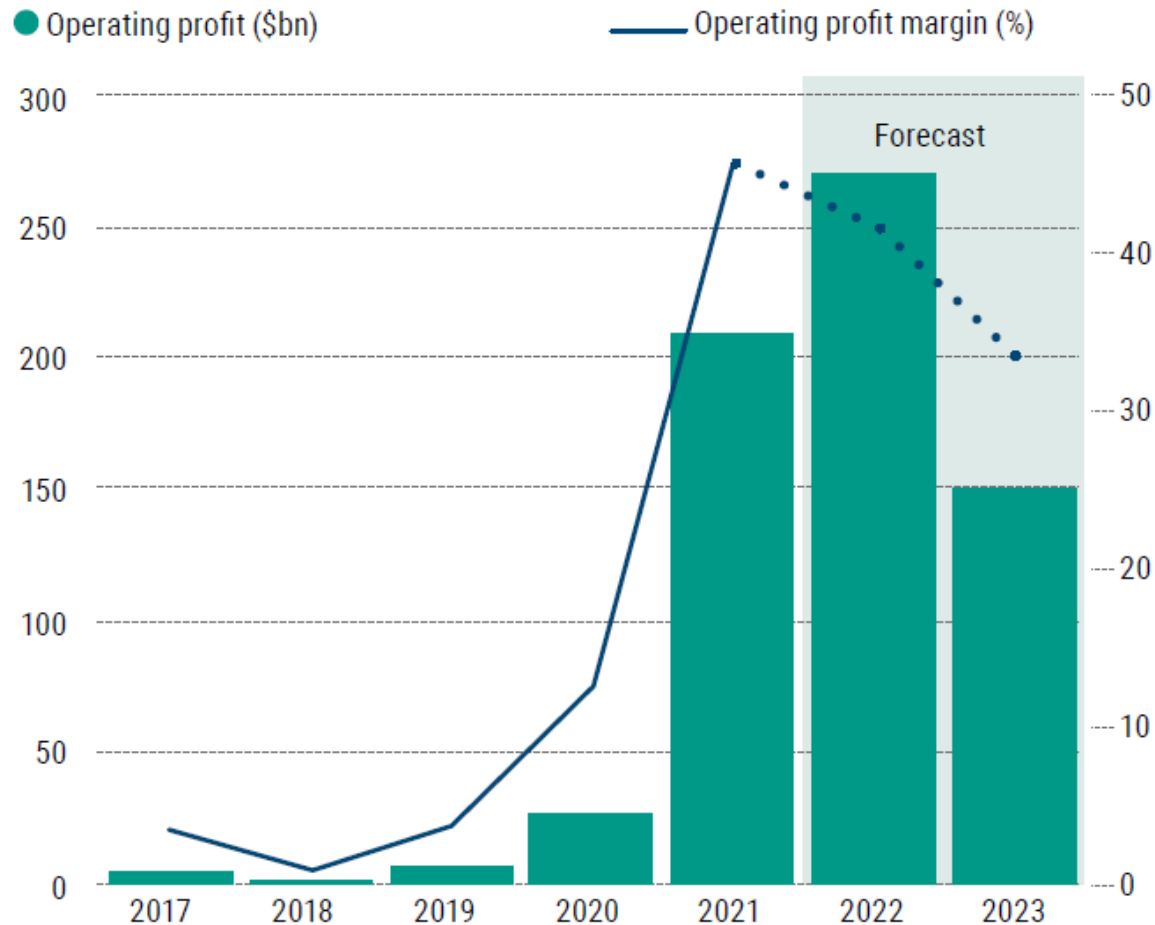


# The capitalistic concentration of the industry in the hands of leading players



EARNING BEFORE INTERESTS AND TAXES, 2017 – 2023 (FORECAST)

Source: [Financial Times](#), 08/09/2022



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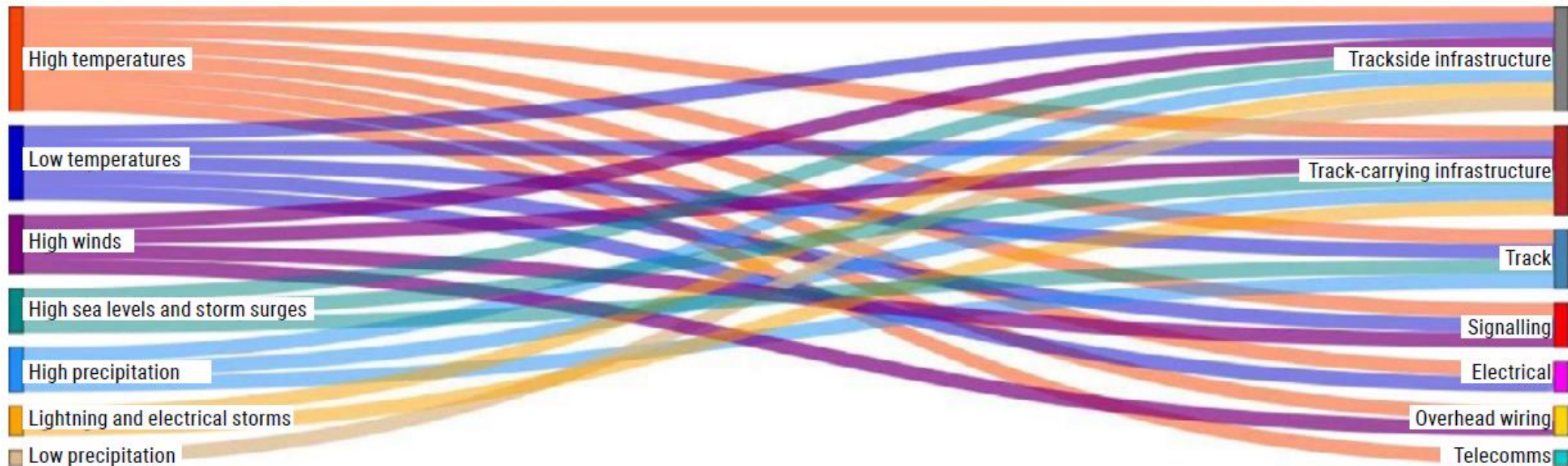
**Trend** • The energy transition in international shipping remains at the dock

# The strongest case for adaptation: Railways



## EFFECTS OF CLIMATE CHANGE ON RAIL INFRASTRUCTURE

Source: [Blackwood, Renaud & Gillespie, 2022](#)





# The Transport Takeaways from the 2022 GSR

Alternative channels of action: Spotlight  
on local governments



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# Starting with the electrification of public fleets...



- Global sales of electric buses increased by **40%**, bringing them to a total of **4%** of the rolling stock. ([REN21](#))
- **Different factors** underly this increase in adoption in different continents: regulations in the EU, subsidies in Asia, and high demand and funding in South America.

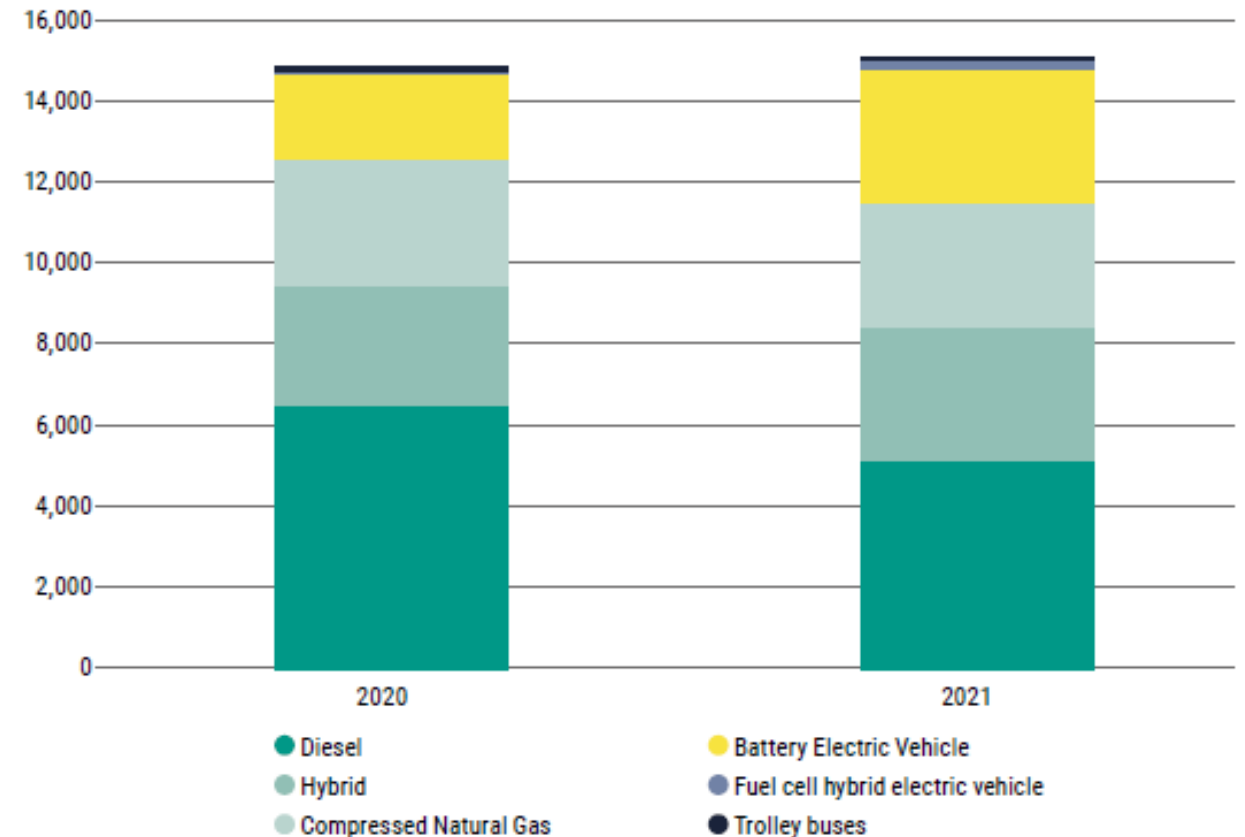


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**Trend** • Beyond the mobility transition, cities are reorganising the urban space for low-carbon mobility

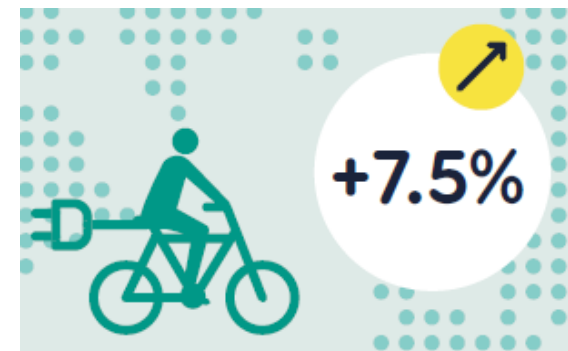
## REGISTRATIONS OF BUSES IN 2020 & 2021 IN EUROPE

Source: [UITP](#), based on Chartrou Solutions (data for the EU, UK, Iceland, Switzerland, Norway)



# ...to the promotion of soft and active mobility,

- Initially temporary **bike lanes** have been made permanent in cities around the world.
- **300** tax incentives or purchasing aids in Europe, and **13.5 million** bikes manufactured on the continent in 2021. **22 million** bikes sold in 2021, the highest ever, with **7.5%** more sales than in 2020. ([ECF, Conebi](#))
- A growing place for **pedestrian infrastructure** and neighbourhoods: Nantes, Toulouse, Strasbourg, Paris, Ghent, Nuremberg, Brussels, Brussels, Barcelona, Buenos Aires, New York, Philadelphia.



## READ MORE IN THE REPORT

**Case Study** • Buenos Aires: Leveraging environmental and climate data to promote soft mobility

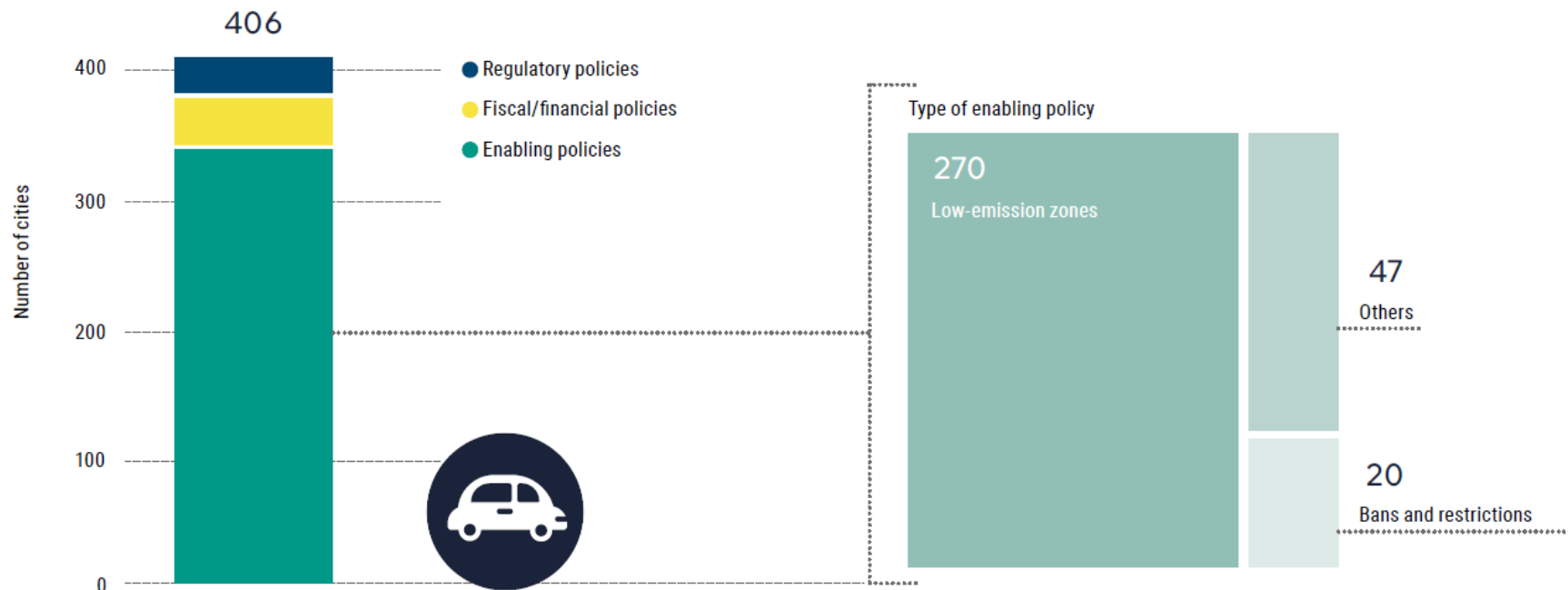
**Case Study** • Barcelona: Sant Antoni, the green street inspiring the city

# ...and dethroning the car as king of the city

- **21 cities** more cities has set up Low Emission Zones by end-2021, bringing the total up to **270**. Most of these are located in Europe. ([REN21](#))

## NUMBER OF CITIES HAVING TRANSPORT-SPECIFIC POLICIES

Source: [REN21](#), 2022

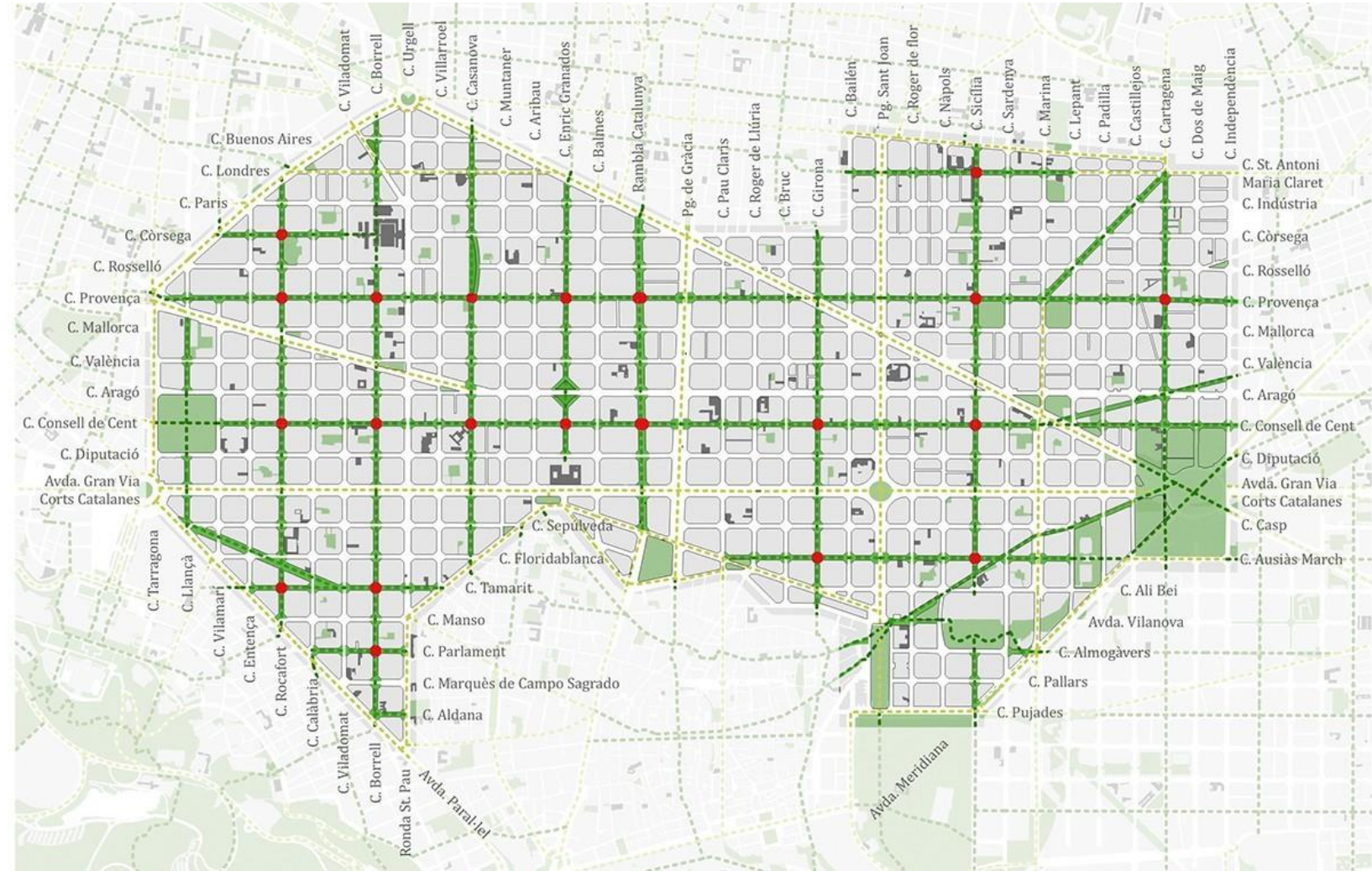


# The redistribution of urban spaces: the example of Barcelona's superbblocks



## THE 21 GREEN STREETS UNDER CONSTRUCTION IN THE EIXMAPLE DISTRICT

Source: [Construction21](#), 2022



# Coming in 2023

**Analysis – Sustainable Development strategies and actions of French players in the world of fashion**

• *In partnership with Paris Good Fashion*

**Global Synthesis Report on Climate Action • *Special Edition for the Global Stocktake***



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