

Climate change and the supply chain

Opportunities presented by taking the route to zero carbon

The year 2020 was among the top 3 warmest years...

...and concluded the warmest 10-year period since records began¹.

Ignoring climate change risks unimaginable consequences.

With global warming of just 2°C, 1.5 billion people could become climate refugees².



So, how have supply chains contributed to this pattern of increasing temperatures?

And what can businesses do to improve their carbon footprint?

The supply chain and increasing emissions

In 2019, industry or manufacturing directly accounted for nearly a quarter of greenhouse gas emissions—23% in the US³ and 21% in both the UK⁴ and the EU⁵.

And transport is the sector with the fastest growth in emissions over the last 50 years⁶.

Worryingly, it continues to grow.

In 2018 global CO₂ emissions* from transport were **24%⁷**

By 2030 with no action to curb emissions, it could reach **24%⁶**

*from energy

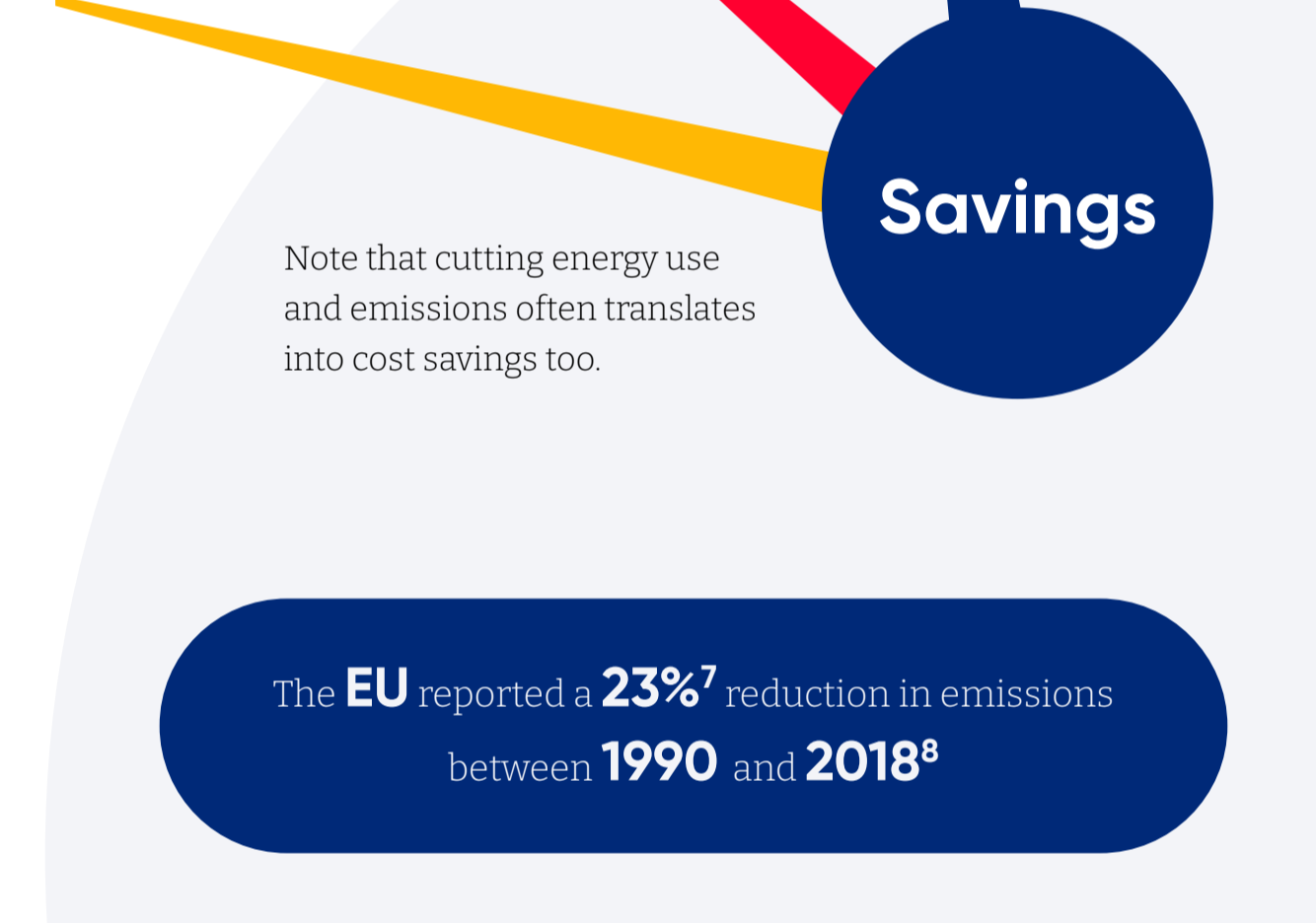
Factories and shipping form a significant part of the supply chain picture

Businesses also use considerable amounts of energy—and produce greenhouse gas emissions—in facilities such as:



The supply chain and increasing emissions

Initial steps businesses can take include:



The **EU** reported a **23%⁷** reduction in emissions between **1990** and **2018⁸**

Further steps towards zero emissions

To tackle specific supply chain contributions to emissions, fundamental aspects of manufacturing and transportation must be addressed:

Where and how are products and components made?

Lengthy upstream and downstream supply chains make a significant contribution to the environmental problem.

1 Re-shoring and near-shoring

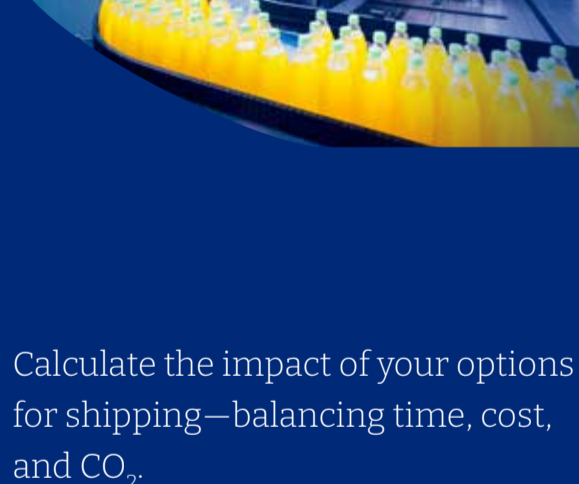
Consider the feasibility and environmental impact of sourcing your raw materials, components and/or finished products more locally.

This may also increase supply chain resilience.

Sourcing for Resilience ↓

There may be an opportunity to bring the assembly line closer to home, to low emission production facilities, even where raw materials and components are sourced elsewhere.

Shorter, greener supply chains can help you meet your ESG (environmental, social and governance) targets.



3 Optimize shipment routes and transport modes

Calculate the impact of your options for shipping—balancing time, cost, and CO₂.

In 2019, over three-quarters of the 100 billion tonne-kilometres of freight shipped globally were via sea or inland waterways. Around 20% went by road⁹.

Yet nearly two-thirds of the estimated CO₂ emissions come from road freight.



There are compelling opportunities ahead. Customers support brands that prioritize ESG¹⁰—which means optimizing your supply chain is good for business as well as the planet.

Learn more about the impact of climate change on your supply chain in our Route to Zero Carbon white paper.

Route to Zero Carbon ↓

References

¹Met Office (2021). 2020 ends earth's warmest 10 years on record. Published 14 January 2021. <https://www.metoffice.gov.uk/about-us/press-office/news/weather-and-climate/2021/2020-ends-earths-warmest-10-years-on-record>

²Broom, Douglas (2021). A third of humanity could be on the move if climate change isn't curbed, scientists say. World Economic Forum, 03 November 2021. <https://www.weforum.org/agenda/2021/11/climate-change-rising-temperatures-may-force-humans-move/>

³United States Environmental Protection Agency (2020). Sources of Greenhouse Gas Emissions. <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>

⁴Office for National Statistics (2021). UK Environmental Accounts: 2021. Release date 03 June 2021. <https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/ukenvironmentalaccounts/2021#greenhouse-gas-emissions>

⁵European Environment Agency (2021). EEA greenhouse gases - data viewer. Published 13 April 2021. <https://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer>

⁶International Transport Forum (2021). Decarbonising Transport initiative. <https://www.itf-oecd.org/decarbonising-transport>

⁷Ritchie, Hannah (2020). Cars, planes, trains: where do CO₂ emissions from transport come from? Our World in Data, 06 October 2020. <https://ourworldindata.org/co2-emissions-from-tr-transport>

⁸European Parliament (2020). EU progress towards its climate change goals (infographic). Updated 27 July 2020. <https://www.europarl.europa.eu/news/en/headline/s/priorities/climate-change/20180706ST07407/eu-progress-towards-its-climate-change-goals-infographic>

⁹Greene, Suzanne (2020). Freight Transportation. MIT Climate Portal. Massachusetts Institute of Technology, published 04 September 2020. <https://climate.mit.edu/explainers/freight-transportation>

¹⁰PwC (2021). Beyond compliance: Consumers and employees want business to do more on ESG. Consumer Intelligence Series survey on ESG. <https://www.pwc.com/us/en/services/consulting/library/consumer-intelligence-series/consumer-and-employee-esg-expectations.html>