

FLORIAN SCHWARZ

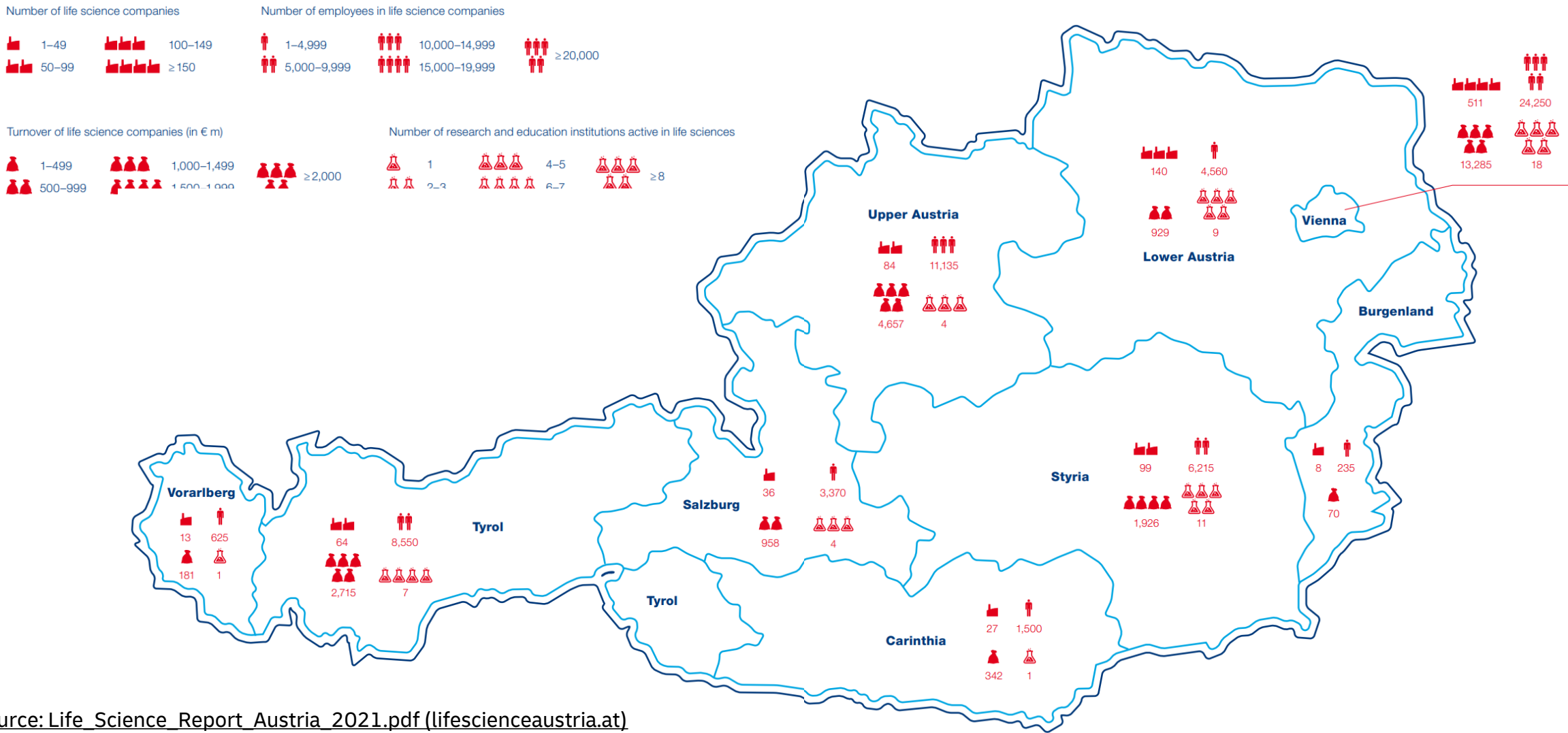
Head of Sustainability,
DHL Customer Solution & Innovation



**Vienna - The world's
most liveable city,
according to Global
Liveability Index
2024**



Map of Life Sciences Healthcare in Austria in 2021



Source: Life Science Report Austria 2021.pdf (lifescienceaustria.at)

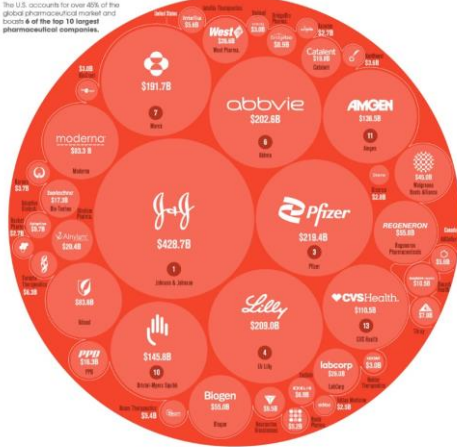
in the World by Market Cap

*The source provides a list of healthcare companies that work closely with pharmaceuticals, including biotech, pharmaceutical wholesalers, clinical laboratories, etc.

From Johnson & Johnson to Editas Medicine, we map the biggest pharmaceutical companies based on their market cap value.

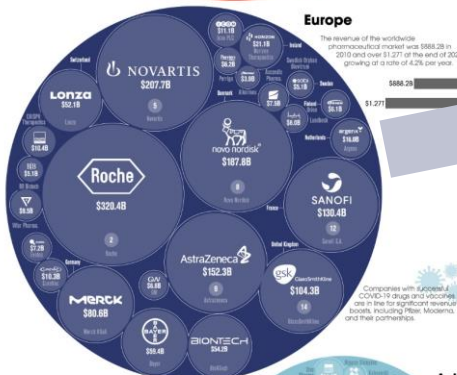
North America

The U.S. accounts for over 40% of the global pharmaceutical market and boasts 6 of the top 10 largest pharmaceutical companies.



Europe

The revenue of the worldwide pharmaceutical market was \$688.28 in 2010 and over \$1,277 at the end of 2013, growing at a rate of 4.2% per year.



Asia



Jiangsu Hengrui Medicine, Asia's largest pharmaceutical company, is China's market leader in oncological treatments, where demand is ever increasing.

Oceania

Brazil, India, Russia, Colombia and Egypt are the biggest emerging markets for pharmaceutical revenues.

Source: Companies Market Cap. At data as of 23rd June 2021


[Visual Capitalist](#)
[Visual Capitalist](#)
[Visual Capitalist](#)
[Visual Capitalist](#)
[Visual Capitalist](#)

COLLABORATORS RESEARCH • WRITING Aristotle Desfieux and Ray Andree | DESIGN Neely Dixon

The global pharmaceutical industry is expected to witness positive growth as the top pharma companies are at the forefront of the fight against COVID-19.

As 2020 progressed, drugmakers battled the coronavirus on the one hand and, on the other, contended with pandemic disruptions. How did they fare at the end of it all?

The revenue of the worldwide pharmaceutical market was \$888.2B in 2010 and over \$1.2T at the end of 2020, growing at a rate of 4.2% per year.



Source: Statista

Companies with successful COVID-19 drugs and vaccines are in line for significant revenue boosts, including Pfizer, Moderna, and their partnerships.

Source: <https://www.visualcapitalist.com/worlds-biggest-pharmaceutical-companies/>

The Pharma Industry is facing a complex Network of Forces

Operating environment

● Growth enabler ○ Constraint ● Both

Activities influencing industry

Workforce changes

- New work expectations
- Labor market challenges

Global factors

- Geopolitical considerations
- Rising inflation
- Supply chain disruptions

New development

- Advances in digital technology and user willingness
- Environmental, social, and governance expectations

Pharma industry

Industry influencing environment

● New modalities

● Pressure to innovate

● Diffusion of individual players' power

Source: Emerging from disruption: The future of pharma operations strategy by McKinsey

Business Drivers and Pressures

ENVIRONMENT



Drought, supply shortage, flooding, etc. will impact the supply chain, infrastructure and logistics

REGULATIONS



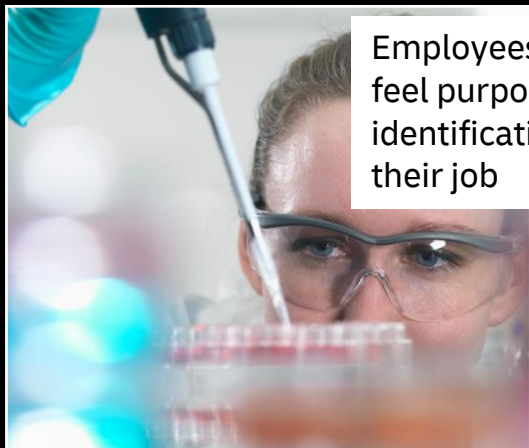
European Green Deal, European Climate Law, CSR Directive, PPWR, EU Taxonomy, ...

INVESTORS



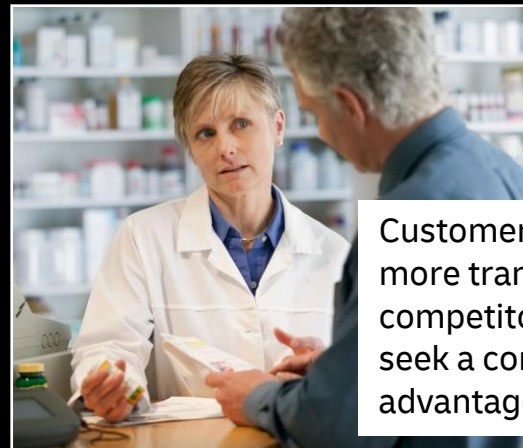
Higher demands on sustainability performance AND financial results

EMPLOYEES



Employees want to feel purpose & identification in their job

MARKET



Customers ask for more transparency; competitors will seek a competitive advantage

PUBLIC OPINION



Increasing public concern on climate change

The impact and risks of extreme weather and climate events

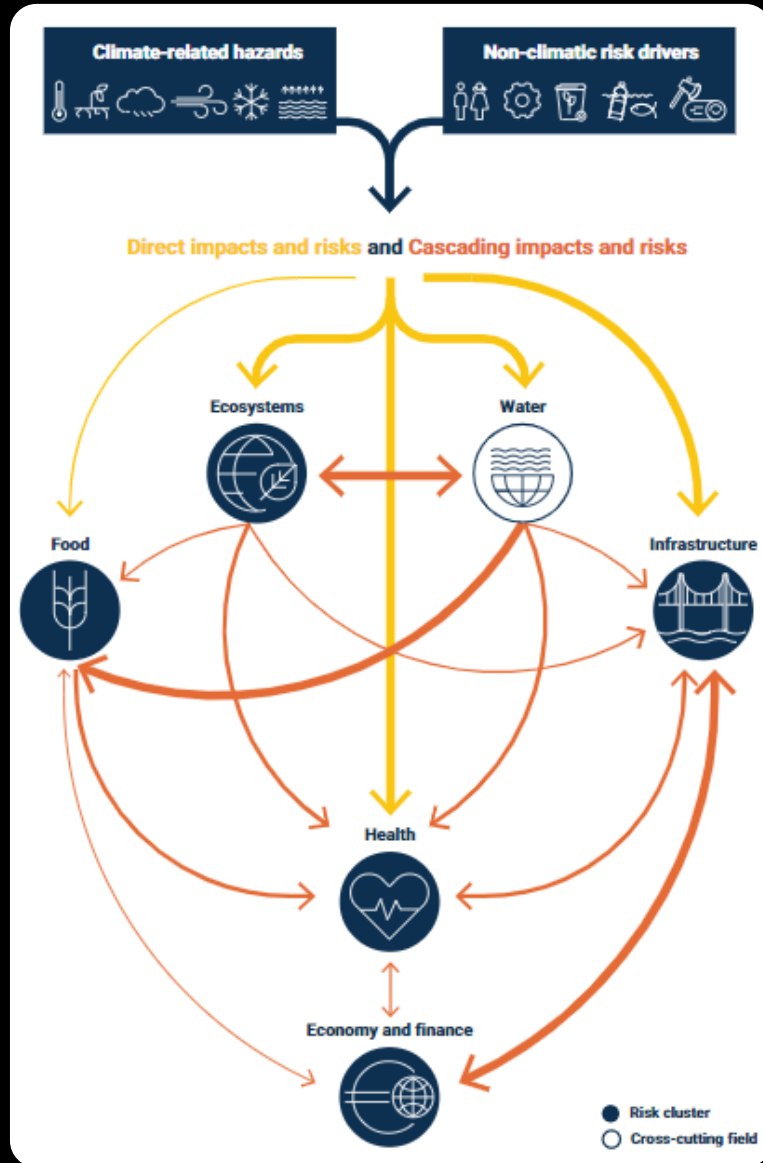


Fig 2: Links between **risk drivers** and the clusters of climate risk assessed
Source Fig 2: <https://www.eea.europa.eu/publications/european-climate-risk-assessment>

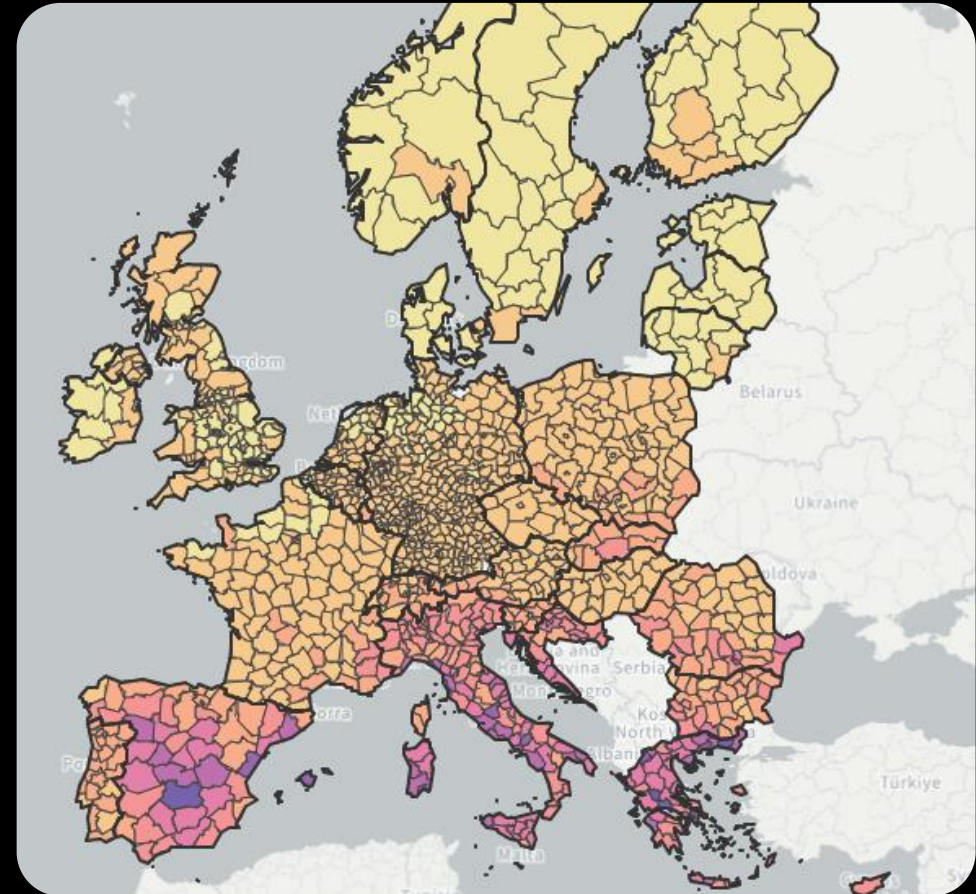


Fig 1: Projected changes in **heat-related deaths** per 100,000 people (as compared to the baseline period 1991-2020) by the end of the century, for a +3°C global warming and projected population in 2100.

Source Fig 1: [https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667\(24\)00179-8/fulltext](https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(24)00179-8/fulltext)

VIETNAM, Typhoon Yagi, 8 Sep 2024

Source: Twitter / X



VIENNA & AUSTRIA, Eastern Europe, Rains & Flooding, 14-16 Sep 2024

Source: Twitter / X + Others on image

#Wien #Hochwasserschutz #Hochwasser #Oesterreich #Tschechien #Polen #Poland #Germany #ueberschwemmungen #Flood #Flut #hochwasser2024
Show more



15.9.2024
St.Pölten Österreich

0:00 / 0:42



Bild

B 2

Wien und Niederö



ÖSTERREICH "GEHT UNTER"
das gesamte Bundesland über 250 Straßen sind
in Niederösterreich aktuell nicht passierbar

Kronen Zeitung

Hochwasser-Katastrophe in Österreich: Kampf gegen die Wassermassen geht weiter | krone.tv NEWS



ÖSTERREICH: Unwetter schwemmen eine ganze Urlaubsregion weg



ÖSTERREICH: Unwetter schwemmen eine ganze Urlaubsregion weg



Hochwasser in Wien und Niederösterreich: Kampf gegen Rekordfluten | ZIB2 vom 16.09.2024



Pause

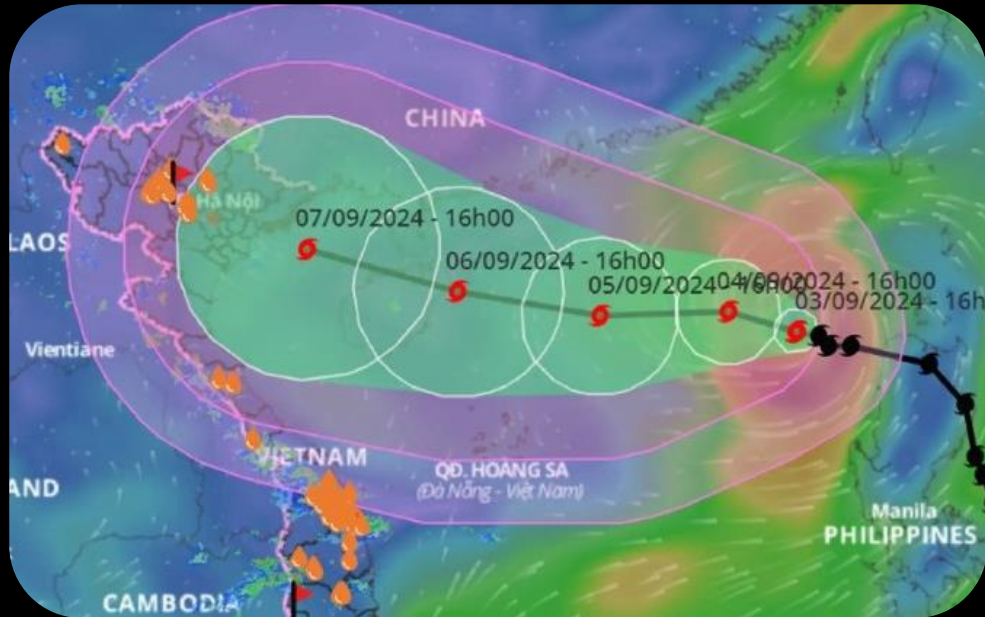
0:00 / 0:18

#Flut #Wien #Hochwasser #Hochwasserkatastrophe #PolandFloods

Überschwemmung in Łądek Zdrój, Polen

FLOOD in Łądek Zdrój, Poland

Stronger Typhoons vs. Global Sea-Surface Temperatures

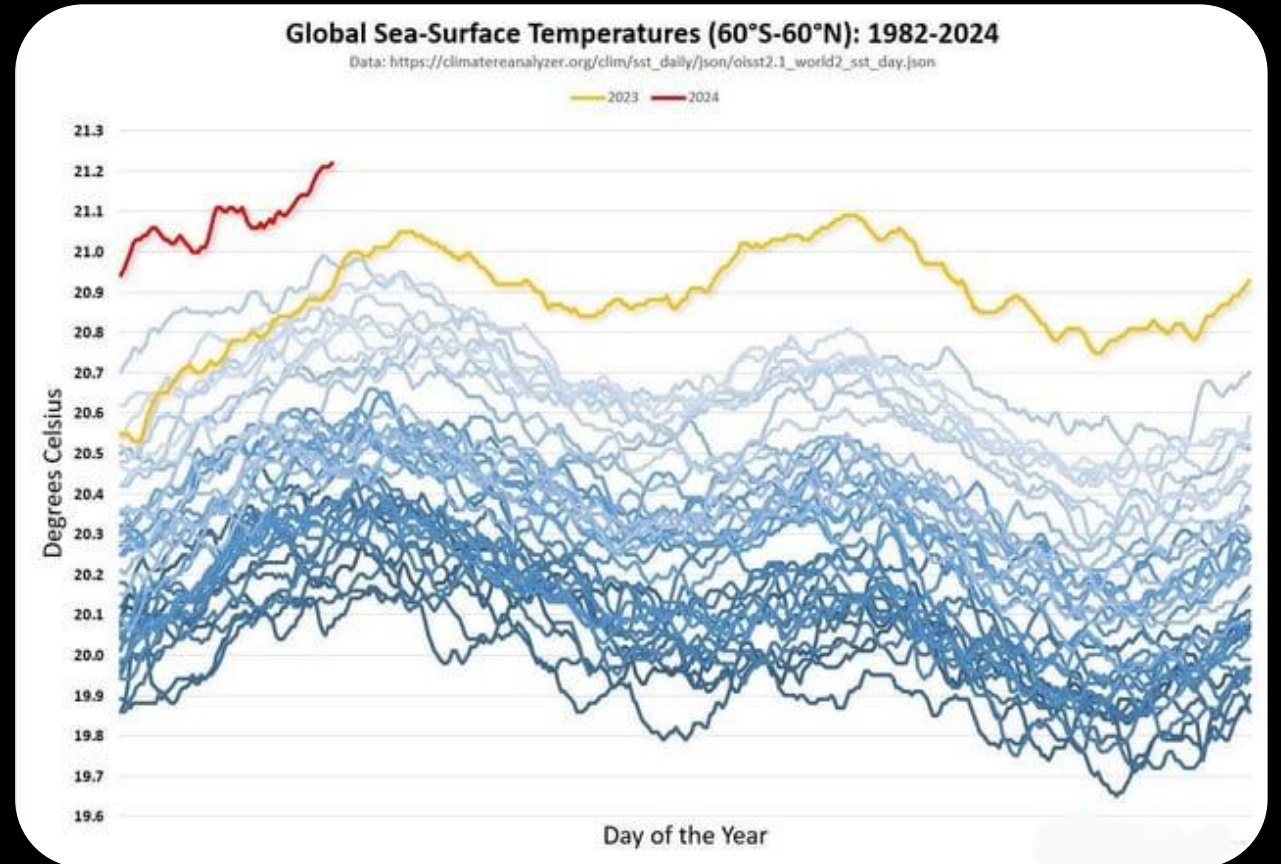


1 degree higher ocean temperature

=

**7% more water evaporated into the atmosphere
& 5% higher windspeeds
& 10-15% more rainfall**

Sources: plaqueminesparish, wcd.Copernicus, gfdl.noaa

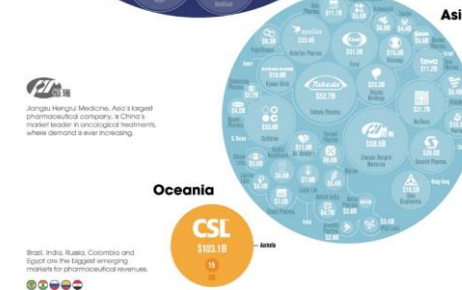
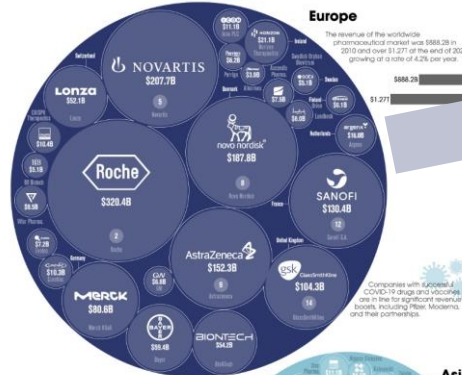
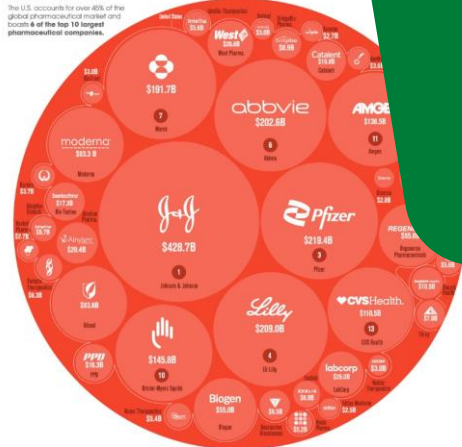


LARGEST PHARMACEUTICAL COMPANIES

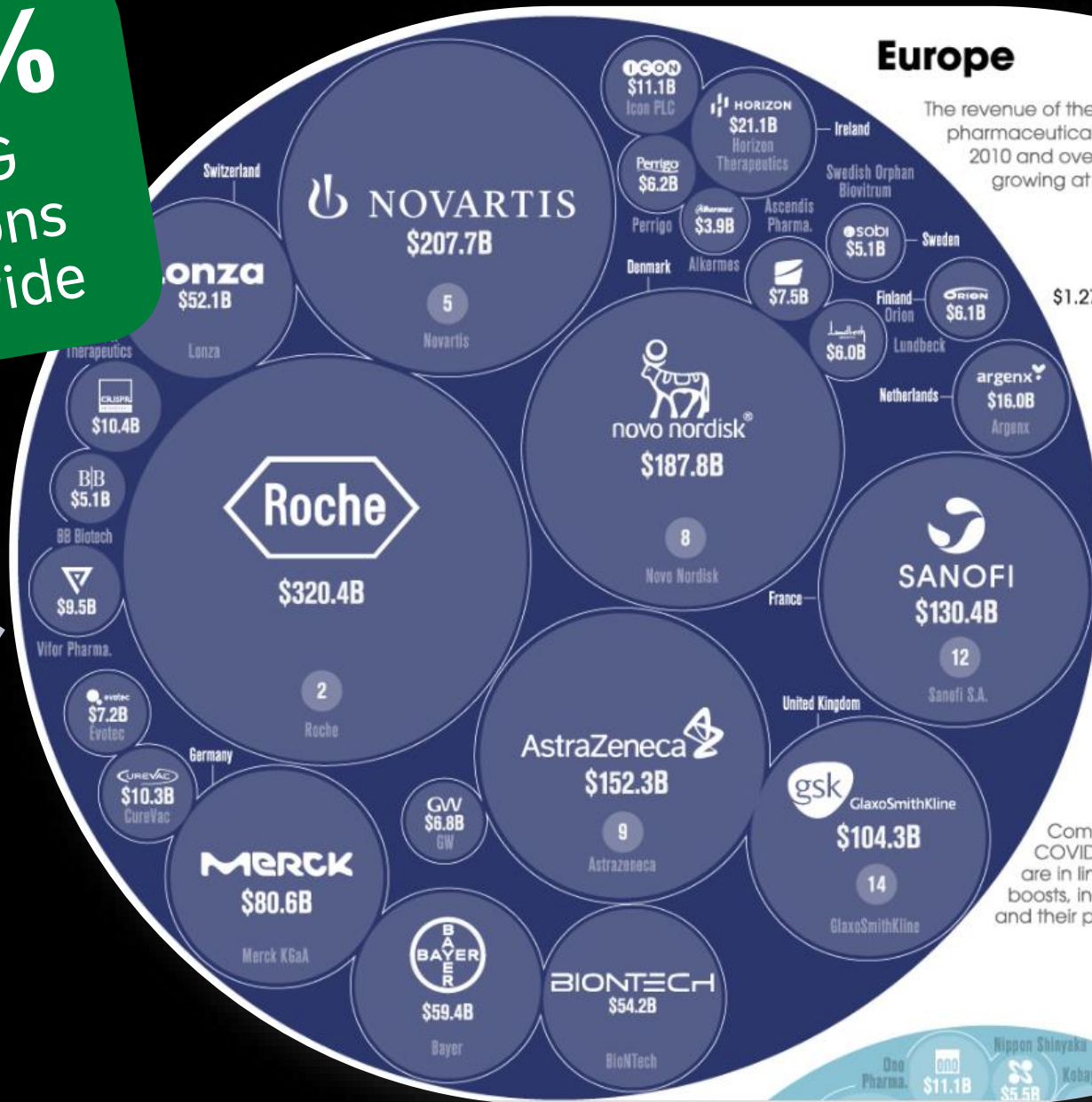
In the World by Market Cap

From Johnson & Johnson to Editas Medicine, we map the biggest pharmaceutical companies based on their market cap value.

North America



4.4 %
of GHG
emissions
worldwide



Europe

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\$888.2B 2010

\$1.27T 2020

Source: Statista

Companies with successful COVID-19 drugs and vaccines are in line for significant revenue boosts, including Pfizer, Moderna, and their partnerships.

Pharma Sector Sustainability Targets

Sanofi

Net zero towards 2045

Sanofi is accelerating its efforts to address climate change and now build the road to net zero emissions across all operations (scope 1 & 2) and the entire...

1 Jun 2023



Eli Lilly and Company

Lilly ESG Report Highlights Progress Towards Sustainability Goals

Eli Lilly and Company (NYSE: LLY) today released its latest Environmental, Social and Governance (ESG) report showing progress towards the company's ambitious...

22 May 2023



ESG News

Pfizer Announces Commitment to Accelerate Climate Action and Achieve Net-Zero Standard by 2040

Pfizer aims to achieve net-zero targets ten years earlier than the expectations of the Net-Zero Standard; Commitment is aligned with...

1 Jul 2022



ESG Today

Roche Commits to Science-Based Climate Goals

Swiss pharmaceutical and biotechnology company Roche announced today an expansion of its climate goals, committing to the Science Based...

17 Nov 2022



CSRwire

Bristol Myers Squibb Releases 2023 Environmental, Social and Governance Report Demonstrating Progress and Setting New Long-Term Goals

Bristol Myers Squibb (NYSE: BMY) today published its 2023 Environmental, Social, and Governance (ESG) Report detailing the company's...

8 Apr 2024

PlasticsToday

Bayer Launches Sustainable Packaging Innovation Challenge

Bayer is inviting innovators to share their knowledge of sustainable flexible and rigid packaging materials, including biodegradable or compostable materials.

9 Dec 2023



ESG Today

Novo Nordisk Launches Climate Initiative Targeting Supply Chain Emissions

Novo Nordisk announced the launch of a new initiative, aiming to ensure that all of the company's direct suppliers supply the company based on 100% renewable...

The World Business Council for Sustainable Development (WBCSD)

GSK sets new environmental goals of net zero impact on climate and net positive impact on nature by 2030

GSK has announced ambitious new environmental sustainability goals in both climate and nature, aiming to have a net-zero impact on climate and a net positive...

3 Nov 2020



Philips

Philips continues to demonstrate strong commitment to its ESG ambitions

Philips became the first health technology company to obtain approval by the Science Based Targets initiative (SBTi) for its entire...

21 Feb 2023



NOVARTIS

Novartis setzt Umweltstrategie um

Heute handeln für ein besseres Morgen: Das Unternehmen nimmt seine gesellschaftliche Verantwortung für die Bewahrung der Natur wahr – und hat die Umsetzung einer globalen Strategie für den Klimaschutz gestartet. Das ehrgeizige Ziel: den gesamten Betrieb bis 2025 CO2-neutral und bis 2030 wasserneutral und PVC-frei zu gestalten.

25.11.2019

Sandoz

Sandoz signs Science Based Targets Initiative (SBTi) Commitment Letter

Sandoz today announces the formal submission of a Commitment Letter to the Science Based Targets Initiative (SBTi). The Commitment Letter...

29 Jan 2024



Australian Manufacturing

Merck introduces sustainable cold chain shipping solutions in Australia

Merck, a leading science and technology company, announced a shift in its cold-chain shipping practices for its Life Science business in...

5 days ago



DHL's SUSTAINABILITY ROADMAP 2030 – MEASURES



USE OF
SUSTAINABLE FUELS

30%



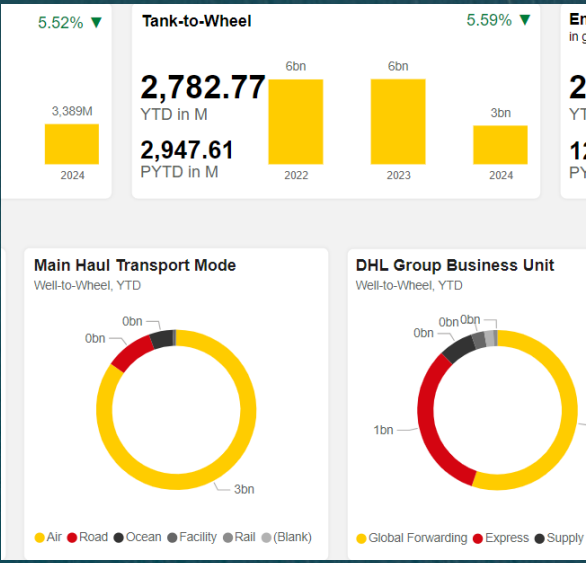
PICKUP & DELIVERY
ELECTRIFICATION

60%



CO2 NEUTRAL
BUILDING DESIGN

ALL



REPORTING,
PRODUCTS,
OPTIMIZATION



1m

What should a Pharma or Life-Science Producer do to reduce e...



What should a Pharma or Life-Science Producer do to reduce emissions in transportation of goods?

Sources

Cutting the carbon footprint of pharma's supply chain

PT pharmaceutical-t... · 1

Redefining pharma logistics: MIT CTL's breakthrough in carbon...

skycell · 2

With key changes, big pharma could cut its carbon footprint

clintonhealthacc... · 3



View 5 more

Perplexity

Pharmaceutical and life sciences producers can implement several strategies to reduce emissions in the transportation of goods, particularly in the context of cold chain logistics, which is a significant contributor to their carbon footprint.

Strategies for Reducing Emissions

1. Invest in Greener Fuels

Switching to alternative fuels such as hydrotreated vegetable oil, compressed natural gas, or liquefied natural gas can significantly reduce greenhouse gas emissions. For instance, using hydrotreated vegetable oil can cut emissions by up to 90% compared to traditional diesel fuels ¹.

2. Optimize Cold Chain Logistics

Cold chain shipping is essential for temperature-sensitive products, but it is energy-intensive. Companies should consider:

- **Active Packaging Solutions:** Transitioning from passive packaging (which often involves single-use plastics and dry ice) to active, reusable, battery-powered containers can reduce emissions by over 90% throughout their lifecycle ¹.
- **Improved Efficiency:** Reducing the volume and weight of shipments can lead to fewer vehicles being needed, thereby decreasing emissions. For example, Johnson & Johnson managed to cut packaging by 60%, which directly reduced their transportation emissions ¹.

3. Localize Manufacturing

By producing medicines closer to their end markets, companies can reduce the distance goods need to travel, thereby minimizing transportation emissions. This strategy also helps in reducing the complexity of supply chains, which can further lower emissions ^{1 3}.

4. Utilize Emission Tracking Tools

Employing tools like the one developed by MIT CTL can help companies analyze and compare the carbon footprints of different transport lanes and container types. This tool helps in making informed decisions to minimize emissions across various transport scenarios ².

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