

FOOTPRINT TO FUTURE: HOW INDUSTRY LEADERS ARE SLASHING GHG EMISSIONS

ABOUT THE ORGANIZATION:

About Walmart:

A retail titan, Walmart reigns supreme in the global retail industry and is a familiar name in households across the globe. It operates 10,500 stores and eCommerce websites and offers a one-stop shop for a wide range of products, from groceries and clothing to electronics and homeware, at competitive prices.

Walmart employs nearly 2.1 million associates, who keep the store running and cater to the everyday needs of millions of consumers, making it a significant player in the global economy.

About Apple:

Apple, a globally recognized tech titan, is an American multinational corporation and technology company headquartered in Cupertino, California, U.S.A., with an annual revenue of US\$383.29 billion. Renowned for their sleek aesthetics and intuitive user experience,

Apple has cultivated a loyal customer base worldwide. Employing over 154,000 individuals, it designs, develops, and sells a wide range of technological products, including iPhones, iPads, and Mac computers.

About UnitedHealth Group

UnitedHealth Group, a frontrunner in healthcare, is based in Minnetonka, Minnesota, and has a market capitalization of around \$477.4 billion. It serves millions through its diverse range of health insurance and well-being programs and has a workforce exceeding 350,000 employees.

UnitedHealth Group operates as two subsidiaries, Optum and UnitedHealthcare, and it has positioned itself as a leader in providing quality healthcare services.

CHALLENGES:

Reducing greenhouse gas (GHG) emissions is a complex challenge for enterprises of all sizes and industries. Here's a closer look at the specific challenges faced by each of our chosen case study companies:

Walmart:

- **Massive Supply Chain and Logistics:** Walmart's vast stores and global supply chain network generate significant emissions through transportation, warehousing, and product lifecycles. Optimizing logistics and transportation routes is crucial for reducing their carbon footprint.
- **Product Diversity and Sourcing:** Walmart's sheer variety of products, from groceries to electronics, challenges it to ensure sustainable sourcing practices throughout its complex supply chain.

Apple:

- **Manufacturing and Material Sourcing:** Manufacturing electronic devices requires significant energy and resources. Apple faces the challenge of reducing emissions associated with its global manufacturing operations and ensuring responsible material sourcing.
- **E-waste Management:** The increasing popularity of electronic devices also creates a growing problem of electronic waste (e-waste) disposal. Apple must find ways to encourage responsible e-waste recycling and extend product lifespans.

UnitedHealth Group:

- **Energy Consumption in Facilities:** Healthcare facilities, including hospitals and clinics, are significant energy consumers. UnitedHealth Group needs to find ways to improve energy efficiency in its facilities and promote sustainable building practices.
- **Indirect Emissions:** The healthcare industry also generates indirect emissions through factors like medical professionals' travel and the supply chain for medical equipment and pharmaceuticals. Addressing these indirect emissions is a significant point of concern for UnitedHealth.

Additional Challenges:

Consumer Behavior: Shifting consumer preferences towards sustainable products and packaging can incentivize companies to adopt greener practices.

Government Regulations: Increasingly stringent government regulations on GHG emissions can create challenges and opportunities for businesses to innovate and invest in sustainable solutions.



BUILDING A SUSTAINABLE FUTURE: UNIVERSAL STEPS FOR GHG REDUCTION STRATEGY



How to Reduce Greenhouse Gas Emissions in Industry?

Corporations of all sizes are crucial in combating climate change by implementing a comprehensive GHG Reduction Strategy. This strategy identifies and addresses the sources of greenhouse gas emissions within an organization.

Before You Begin

Conduct an Emissions Audit: A comprehensive emissions audit is the first step towards effective GHG reduction. This audit helps identify your organization's biggest sources of emissions, allowing you to prioritize your efforts.

Resources like the GHG Reduction Calculator from the Environmental Protection Agency (EPA) can be valuable tools.

Critical Steps for GHG Reduction:

The following steps provide a roadmap for reducing GHG emissions across various aspects of your organization's operations:

1

Operational Efficiency:

- **Optimize Energy Use:** Analyze energy consumption patterns in your buildings and facilities. Implement strategies like installing energy-efficient lighting and appliances, upgrading HVAC systems, and promoting responsible energy use practices among employees.
- **Invest in Sustainable Infrastructure:** Consider green building practices for new facilities and renovations. Explore renewable energy sources like solar panels or geothermal power to reduce your reliance on fossil fuels.
- **Encourage Sustainable Transportation:** Promote carpooling, cycling, and public transportation options for employee commutes. For deliveries, explore partnerships with fuel-efficient transportation companies and optimize logistics routes to minimize distances traveled.

2

Supply Chain Management:

- **Collaborate with Suppliers:** Partner with suppliers committed to sustainable practices. Look for opportunities to source materials from companies using recycled content and implementing energy-efficient processes.
- **Responsible Sourcing:** Evaluate your supply chain to identify potential areas for improvement. Prioritize sourcing materials from environmentally responsible companies that minimize their carbon footprint.
- **Minimize Packaging and Waste:** Reduce packaging waste throughout your supply chain. Encourage reusable packaging solutions and explore ways to minimize waste generation during production and distribution.

3

Renewable Energy:

- **Transition to Renewable Sources:** Shift towards renewable energy sources like solar, wind, or geothermal power to reduce your reliance on fossil fuels and lower overall GHG emissions. Government policies to reduce greenhouse gas emissions often incentivize enterprises to transition to clean energy solutions.





MAKING A DIFFERENCE - EVERYDAY ANSWERS FOR CREATING A GREENER FUTURE

Q1 What are 4 Examples of Strategies to Reduce Carbon Emissions?

Here are **4 examples** of strategies to reduce carbon emissions:

- 1 Shifting Transportation Habits:** Transportation is a major source of greenhouse gases, mainly from personal vehicles. Consider ways to reduce your reliance on cars. Explore carpooling, using public transportation, cycling, walking, or even electric vehicle options for shorter trips.
- 2 Embracing Energy Efficiency:** Our homes and workplaces consume significant energy. Changes like switching to LED light bulbs, utilizing energy-efficient appliances, and properly insulating your home can significantly reduce energy consumption. Smart power strips can also minimize energy waste by eliminating phantom energy drain from electronics on standby.
- 3 Optimizing Power Generation:** Look for opportunities to transition to renewable energy sources. Explore options like installing solar panels on your roof or supporting businesses that invest in clean energy solutions like wind or geothermal power.
- 4 Promoting Sustainable Consumption:** Our choices as consumers impact the environment. Reduce, reuse, and recycle whenever possible. Choose products with minimal packaging, opt for durable and long-lasting items, and consider buying second-hand when possible.

Q2 What Are 5 Ways to Reduce Greenhouse Gases?

Here are some impactful ways to shrink your carbon footprint:

- 1 Fashion Reboot:** Instead of buying new clothes, consider swapping with friends, shopping second-hand, or opting for durable, long-lasting garments.
- 2 Tech Timeout:** Combat "phantom energy drain" by switching off electronics completely, not just standby mode. Power down unused monitors, TVs, and game consoles.
- 3 Vacation Vibes, Less Carbon Tribes:** Explore eco-friendly travel options like trains, buses, or electric vehicles. Choose destinations closer to home and prioritize experiences over excessive souvenirs.
- 4 Plant Power:** Planting trees not only beautifies your surroundings but also absorbs carbon dioxide, a major greenhouse gas. Plant trees in your yard or support organizations focused on reforestation.
- 5 Home Sweet Energy-Efficient Home:** Schedule regular maintenance for your heating and cooling systems for optimal performance. Invest in smart thermostats to regulate home temperature efficiently.

By incorporating these actions into your daily life, you'll actively contribute to a cooler planet!



Q3

How Can GHG Emissions Be Reduced?

Curbing greenhouse gas emissions requires solutions at various levels. Here's a look at some key strategies:

Agriculture Revolution:

Precision Farming: Utilize technology for targeted fertilizer application, reducing excess use and associated nitrous oxide emissions (a potent greenhouse gas).

Carbon Capture and Storage: Develop and implement technologies to capture carbon dioxide emissions from industrial processes and store them safely underground.

Industrial Innovation:

Reduce Food Waste: Roughly one-third of food produced globally is wasted. Composting food scraps and planning meals to minimize waste can significantly reduce emissions.

Invest in Renewable sources: Governments and industries can incentivize and invest in renewable energy sources like solar, wind, and geothermal to displace fossil fuel reliance.

Forestry Focus: Protect existing forests and promote sustainable forestry practices. Trees act as carbon sinks, absorbing and storing carbon dioxide from the atmosphere.

Q4

What Are 10 Things We Can Change to Reduce Greenhouse Gases?

Here are **10 simple ways** of how we can tackle greenhouse gas emissions and create a more sustainable future:

- 1 Ditch the Single-Use:** Avoid single-use plastics, cups, and utensils. Opt for reusable alternatives like water bottles, shopping bags, and coffee mugs.
- 2 Embrace Energy-Efficient Appliances:** Look for the Energy Star label when purchasing new appliances. These models use significantly less energy, reducing power plant emissions.
- 3 Air Dry Your Clothes:** Skip the dryer whenever possible and utilize the sun's free power, as it cuts down on electricity consumption.
- 4 Weekend Getaways by Train:** Explore the beauty of train travel for short getaways. Trains are often more energy-efficient than cars, especially for multiple passengers.
- 5 Support Sustainable Businesses:** Research and choose companies committed to renewable energy, sustainable practices, and local sourcing.
- 6 Become a Water Warrior:** Fix leaky faucets promptly, take shorter showers, and water your lawn efficiently. Every drop saved helps!
- 7 Planetary Palate:** Reduce food waste by planning meals, creating a grocery list, and storing food properly. Consider incorporating more plant-based proteins into your diet.
- 8 The Sharing Economy:** Borrow tools, clothes, or equipment from friends or neighbors instead of buying new whenever possible.
- 9 Become a Climate Advocate:** Educate yourself and others about climate change. Speak up and support policies that promote clean energy and sustainable practices.
- 10 Home Improvement:** Invest in energy-efficient windows and doors to improve your home's insulation and reduce reliance on heating and cooling systems.

DRIVING CHANGE: HOW THESE COMPANIES ARE TACKLING CLIMATE ACTION

This section delves into the strategies Walmart, Apple, and UnitedHealth Group implemented to reduce greenhouse gas emissions.

Walmart: Reimagining Retail for a Sustainable Future

- **Optimizing the Last Mile:** Walmart leverages data analytics to optimize delivery routes, reducing fuel consumption and truck emissions. This aligns with the concept of operational efficiency mentioned in the universal steps.
- **Renewable Energy Champion:** Walmart has committed to powering its global operations with 100% renewable energy by 2035, exemplifying its dedication to clean energy sources.
- **Sustainable Packaging Solutions:** Walmart prioritizes recyclable, compostable, and recycled-content packaging materials, minimizing waste sent to landfills. This connects to the universal step of sustainable materials management.

Apple: Products Made with the Planet in Mind

- **Championing Recycled Materials:** Apple prioritizes using recycled materials, such as aluminum and rare earth elements, in its products, reducing reliance on virgin materials and their associated mining footprint. This aligns with the concept of sustainable materials management from the universal steps.
- **Built to Last:** Apple designs products for longevity, with extended lifespans and software updates to reduce electronic waste. This connects to the idea of sustainable consumption within the universal steps.
- **Powering Innovation with Clean Energy:** Apple invests in renewable energy sources to power its manufacturing facilities and data centers, minimizing their dependence on fossil fuels. This aligns with the concept of clean energy adoption mentioned in the universal steps.

UnitedHealth Group: A Holistic Approach to Sustainability

- **Building Green:** UnitedHealth Group prioritizes energy-efficient features in its buildings, like LED lighting and smart climate control systems. This aligns with the operational efficiency concept mentioned in the universal steps.
- **Greener Together:** They incentivize sustainable practices among their network providers, encouraging environmentally conscious healthcare delivery. This connects to the idea of collaboration with stakeholders within the universal steps.
- **Healthy Planet, Healthy People:** UnitedHealth Group partners with organizations focused on climate-resilient healthcare infrastructure and communities, demonstrating their commitment to a holistic approach to sustainability.

MEASURABLE PROGRESS: QUANTIFYING THE IMPACT

Walmart

- 1 Billion MT Emissions reduced, avoided, or sequestered
- 81% of waste diverted from landfills incineration
- 627 million pounds of food donated in the U.S. alone
- 1.6 million acres of land conserved since 2005
- 59% of global private brand packaging is recyclable, reusable, or industrially compostable
- More than \$13 billion sourced from goods and services in FY 2021 from 2900 diverse suppliers

Apple

- 45% reduction in value chain emissions
- 100 Buildings worldwide are Green Buildings (LEED or BREEAM certified)
- Achieved carbon neutrality by sourcing 100% renewable electricity since 2020
- 67% reduction in Scope 1 and Scope 2 emissions since 2011
- 71% reduction in aluminum-based carbon emissions since 2015
- 1.3 MMT supply chain carbon emission avoided since 2022

UnitedHealth Group

- 3.86% reduction in GHG emissions
- 22,719 MWh unbundled renewable credits secured in 2021
- 2.7 million square feet LEED-certified facilities
- 1B pieces of paper and 24M envelopes saved in 2022
- 24% reduction in inbound paper volume
- 1.2M gel packs eliminated using insulator mailers

THE ROAD AHEAD: KEY TAKEAWAYS AND LOOKING FORWARD

This case study explored the sustainability journeys of Walmart, Apple, and UnitedHealth Group. Here's a concise summary of their approaches:

- Walmart leverages data analytics to optimize logistics, prioritizes renewable energy, and implements sustainable packaging solutions.
- Apple champions recycled materials in products and designs for longevity and invests in clean energy sources to power its operations
- UnitedHealth Group prioritizes energy-efficient buildings, incentivizes sustainable practices within their provider network, and collaborates on climate-resilient healthcare initiatives.

These examples emphasize the importance of GHG reduction strategies for businesses and the environment:

- **Combating climate change:** Reducing emissions is crucial for mitigating climate change and its devastating consequences.
- **Enhanced brand reputation:** Sustainability efforts can attract eco-conscious consumers and investors, strengthening brand reputation.
- **Operational efficiency:** Implementing sustainable practices can save costs through reduced energy consumption and waste generation.



LYTHOUSE: YOUR PARTNER IN SUSTAINABILITY

Lythouse empowers businesses to achieve their sustainability goals through a comprehensive suite of solutions:

- **AI-powered data analytics:** Gain insights into your environmental footprint and identify areas for improvement.
- **Employee engagement tools:** Motivate and empower employees to adopt sustainable practices in the workplace.
- **Risk mitigation and compliance management:** Proactively address environmental risks and ensure adherence to regulations.
- **Supplier engagement platform:** Collaborate with suppliers to promote sustainable practices across your supply chain.
- **Actionable ESG goal setting:** Set clear and measurable environmental, social, and governance goals to guide your sustainability journey.

By leveraging Lythouse's innovative platform and expertise, enterprises can make significant strides toward reducing greenhouse gas emissions and building a more sustainable future.