



APPLE IS ACHIEVING ITS GREEN GOALS

A PROGRESS REPORT ON CARBON REDUCTION

In 2020, Apple pledged to make their products carbon neutral by 2030. To achieve this goal, they set their emissions for 2015 (38.4 million metric tons CO₂e) as the baseline and aimed to reduce it by 75% by 2030. The remaining 25% (9.6 million metric tons CO₂e) would then be removed using carbon offsets, bringing the net emissions to 0.

Let's analyse the Past, Present, and the Path Forward

Uduak .H. Afang
October 12, 2023

KEY FACTS

- Since 2015, Apple has reduced its Carbon emissions by 47.1%
- Most of Apple's CO₂ emissions are of Scope 3. These are indirect sources of emissions
- Apple has offset about 1 million metric tons of carbon since 2020

The Good News?

Since the close of the 2015 fiscal year, Apple has made progress in reducing its CO₂ emissions, going from 38.4 million metric tons to 20.3 million metric tons - an impressive **18.1 million metric tons drop** (*Figure 1*).

They have also continued to rake in more revenue and their market capitalization keeps climbing. Granted, they were already one of the largest companies in the world, however, they are setting a precedence for others to follow.

Even more impressive is that they managed to do all this while expanding their labour force. On average, Apple has been welcoming 7,714 new employees each year.

Emission of Green House Gases per Year by Apple

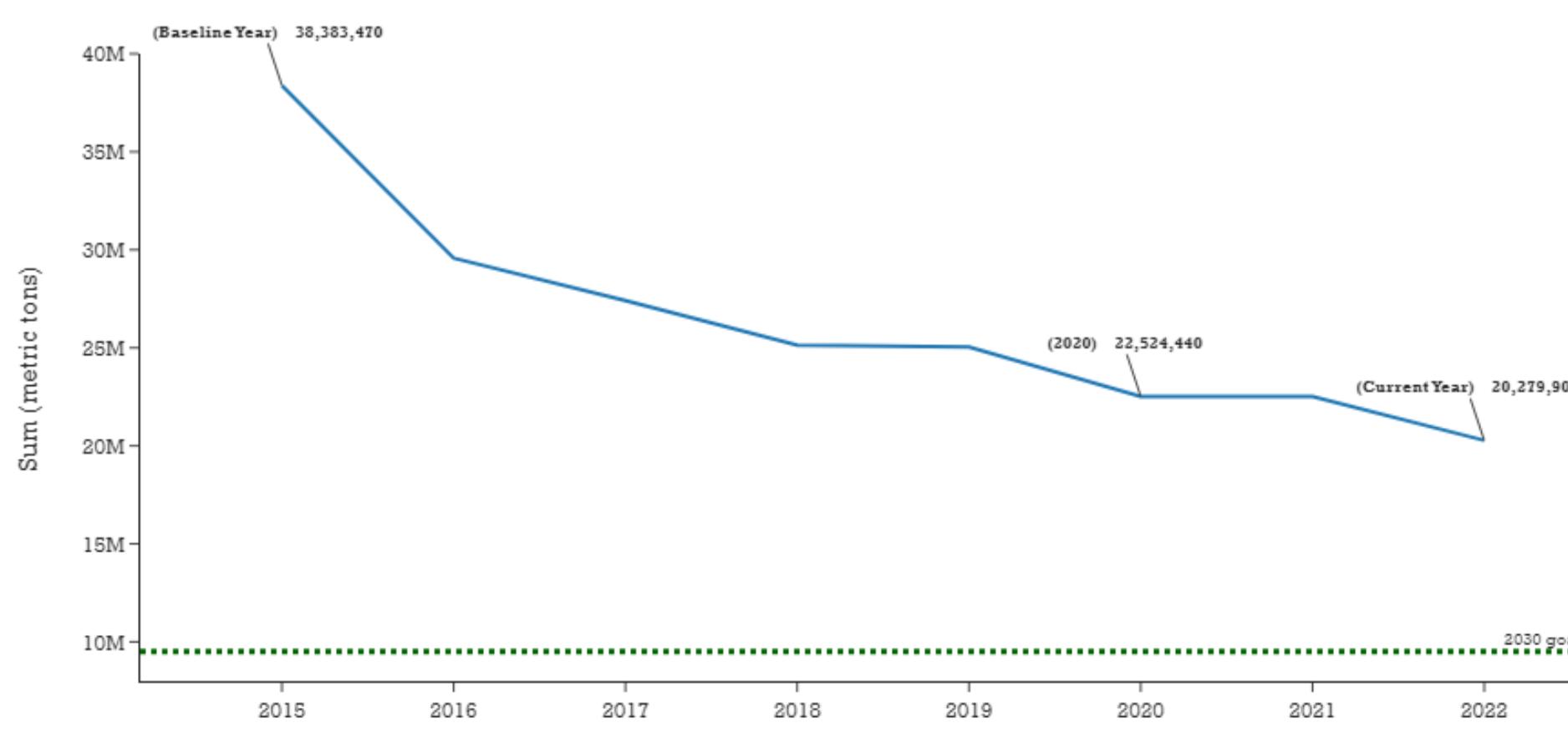
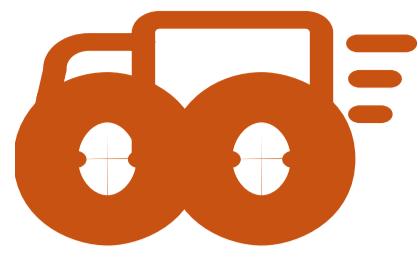


Fig 1: Showing Apple's CO₂ emissions (metric tons) at the end of each fiscal year from 2015 - 2022



Emissions Reduction Journey: What's Changed and What's Next

Majority of Apple's Emissions are Scope 3

Scope 3 emissions are indirect and come from things like what they buy, how they transport goods, business travel, how their employees get to work, how their products are being used, and even what happens when those products reach the end of their lives.

The good news? They have made real progress, reducing emissions in areas like Manufacturing, Product use, Electricity, and Business travel. It is a clear sign of their deep commitment to being eco-friendly.

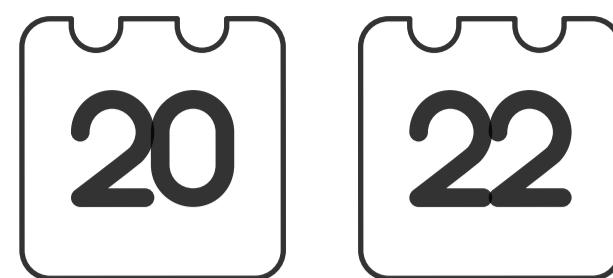
However, the job is far from over as there are sources where emissions seem to be creeping back up - an example of that is Product transportation, Employee commute, Natural gas, diesel, propane, Fleet vehicles and other R&D processes.

Figure 2 shows the efforts in cutting emissions from these various sources over the years.

Emissions by Description



Fig 2: Showing the source of Apple's CO2 emissions (metric tons) at the end of each fiscal year from 2015 - 2022



Focus on Emissions from 2020 - 2022

Narrowing our focus to the years 2020 to 2022 (Figure 4), we observe that **Manufacturing** stands out as the top source of CO2 emissions (metric tons). However, it's good to note that this category has shown a significant reduction in the past year.

Meanwhile, **Product Transportation** (upstream and downstream) and **Product Use** occupy the second and third positions in the CO2 emission sources.

The main concern is that these two have remained somewhat stagnant, with hints of slight increases over the past two years.

This data paints a compelling picture of both progress and challenges in Apple's journey toward a greener future.

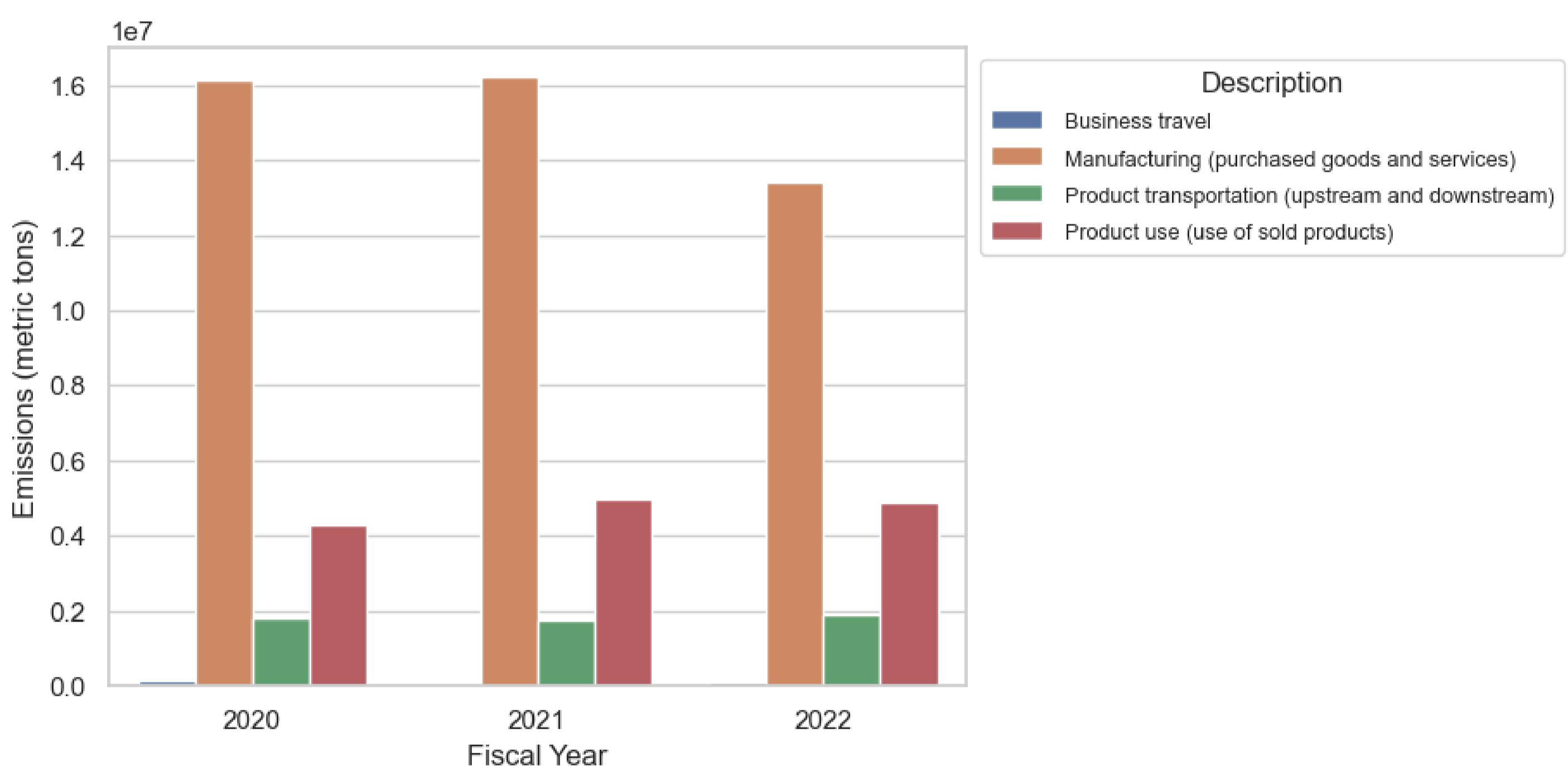
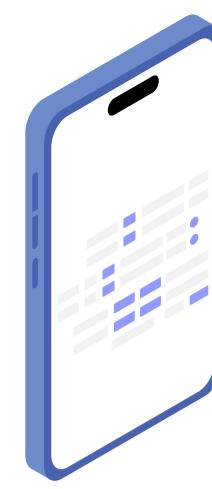


Fig 3: Showing the 4 main sources of Apple's CO2 emissions (metric tons) at the end of each fiscal year from 2020-2022



iPhone Carbon Footprints

The iPhone X had the highest carbon footprint with 75kg CO₂e, but since the release of the iPhone 11 in 2019, Apple has been steadily reducing the carbon footprint of new iPhone models (Figure 4).

They are doing that by using more carbon-neutral materials, making each phone kinder to the planet.

However, there is a catch. These numbers are **per phone**, so as they sell more, overall CO₂ emissions can still rise and **about 98% of total emissions come from the product life cycle**. (Figure 5)

It is going to be tough to balance increasing product sales and reducing emissions.

Carbon Footprint by Year and Product



Fig 4: Showing CO₂ emissions (kg) for every iPhone from 2015 - 2022

Emissions by Category

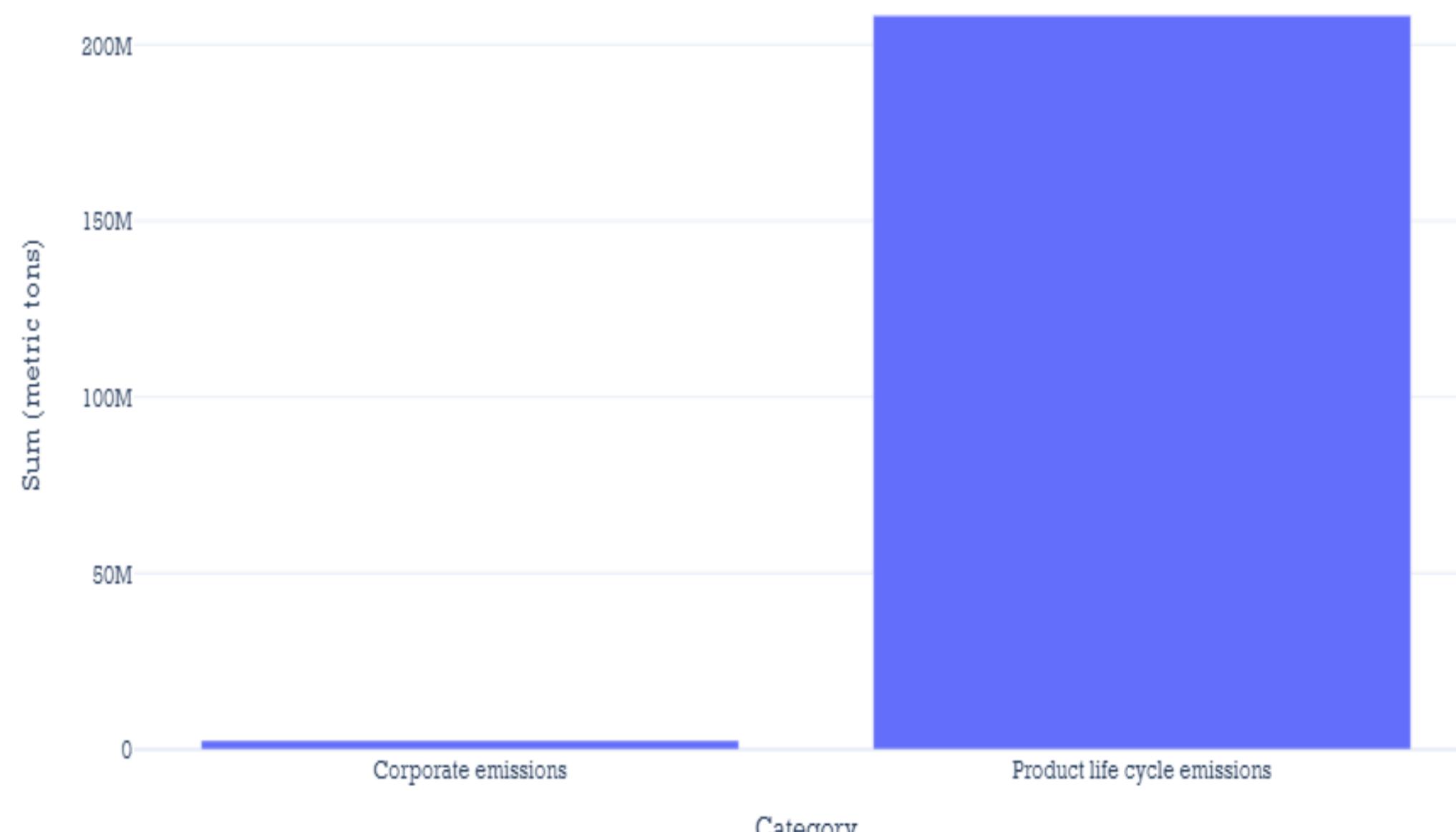
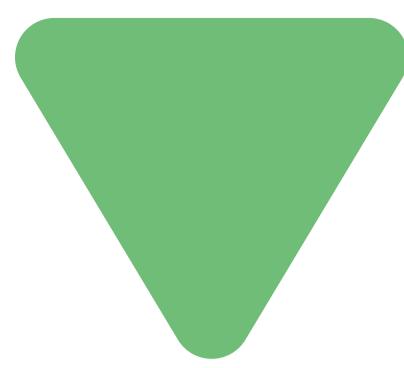


Fig 5: Showing CO₂ emissions by Category



Is Apple on track to achieving its goals?

Let's break it down:

To reduce its baseline emissions of 38.4 million metric tons of CO₂ (CO₂e) by 75% and offset the remaining 25%, Apple needs to cut emissions by roughly **1.9 million metric tons annually** while also offsetting about **600,000 metric tons of carbon each year**.

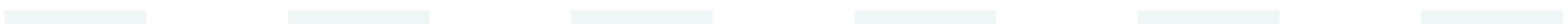
Right now, Apple is exceeding the reduction target by reducing CO₂ emissions by an average of **2.6 million metric tons** annually. To emphasize, if they keep going at that rate, Apple will cut 75% of its baseline emissions by the year **2027**, 3 years ahead of schedule.

However, when it comes to carbon offsets, they are falling a bit short, currently offsetting only about **106,000 metric tons** on average each year.

One thing to note is that Apple only started keeping track of carbon offsets around the end of the 2018 fiscal year and recorded their first offsets at the end of the 2020 fiscal year.

Apple likely has some strategic plans up its sleeve to ramp up its carbon offset initiatives in the coming years. So it is reasonable to expect that Apple is working diligently to ensure they meet their goals.

What we do know is that there is still a lot of work to be done.



Advancing towards a **Greener Future**

Achieving sustainability goals this big demands ongoing efforts, strategy adjustments, sacrifice, and teamwork. So far Apple's commitment to the environment shows they are all in to make these goals happen. However, it remains to be seen whether the sacrifices they make in pursuit of this goal will prove to be the right ones.

It is reassuring to see a company as big and influential as Apple taking such strong steps to cut its carbon footprint and build a sustainable future.

I am optimistic that with such pioneering efforts from industry leaders like Apple, a brighter and more sustainable future is well within our reach.