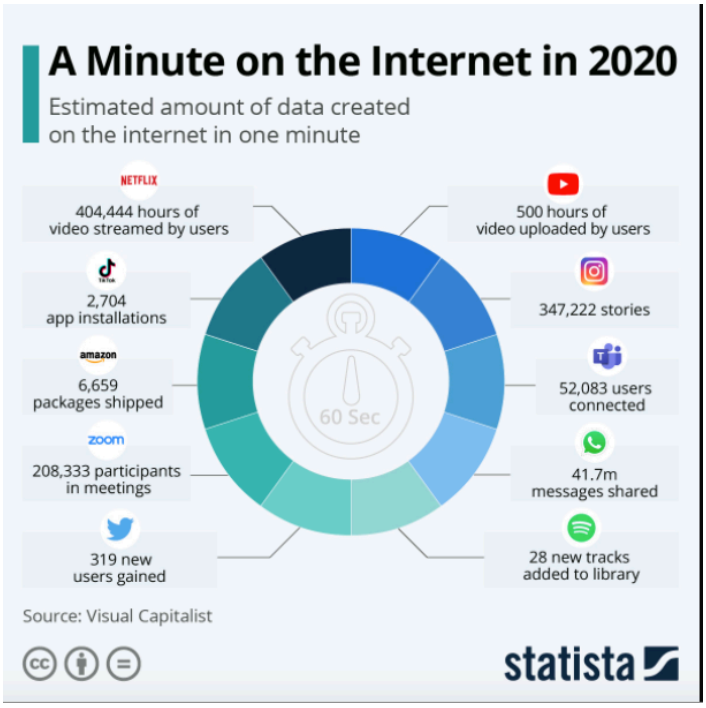
Reducing the Impacts of Your Digital Carbon Footprint

What is a Digital Carbon Footprint?

The digital transformation has brought huge benefits including having a positive impact, reducing CO2 emissions. However there is still a significant impact from manufacturing and using digital devices and these emissions are referenced as a "digital CO_2 footprint" or "digital carbon footprint".

How is a Digital Footprint Generated?

In 2019 approximately 4.1 billion people worldwide had access to the Internet and every internet connection, no matter what for, contributes to an ever-increasing global demand for energy and thus also for increasing CO_2 emissions. Jens Gröger, senior researcher at the Öko-Institut, estimates that each search query emits around 1.45 grams of CO2. If we use a search engine to make around 50 search queries per day, this will produce 26 kilograms of CO2 per year.
However, search queries are only the tip of the iceberg, the bulk of the digital footprint is caused by video streaming due to large data sizes of videos. 80% of all data flows through the internet as moving images. Online videos account for almost 60% of global data transfer. Transmitting these moving images requires huge amounts of data and higher resolutions generate more data. According to The Shift Project, the total CO2 emissions generated of streamed online video is over 300 million tons per year (based on measurements taken in 2018). This is equivalent to the CO2 emissions generated by the whole of Spain in a year.



HAY FESTIVAL

The non-profit organisation The Shift Project, has looked at nearly 170 international studies on the environmental impact of digital technologies and they report that their share of global CO2 emissions increased from 2.5 to 3.7% between 2013 and 2018. That means that our use of digital technologies now causes more CO2 emissions and has a bigger global warming impact than the entire aviation industry (currently around 2.5% of global emissions).
Individually your digital footprint won't make a big impact but when we scale these up on a global scale, Google, in its 2017 Environmental Report, puts its carbon footprint for 2016 at 2.9 million tons of CO2e and its electrical energy consumption at 6.2 terawatt hours (TWh).

What Can You Do?

A few suggestions to reduce your digital emissions:

- Reduce streaming - downloading is much less energy-intensive.
- Play songs as audio files rather than streaming them as a video or watch the video at a lower resolution.
- Keep your devices longer, don't upgrade just because the latest version is available.
- Dispose of old devices correctly, don't just throw them in the bin.
- Empty your e-mail box regularly to reduce data storage.
- Store data locally, try to use the cloud as little as possible.
- Use WLAN networks instead of mobile networks.
- Source your electricity through a renewable energy supplier (photovoltaic, hydropower, wind, biomass).

Our Digital Footprinting Project is sponsored by

Keystone
Positive Change
Investment Trust