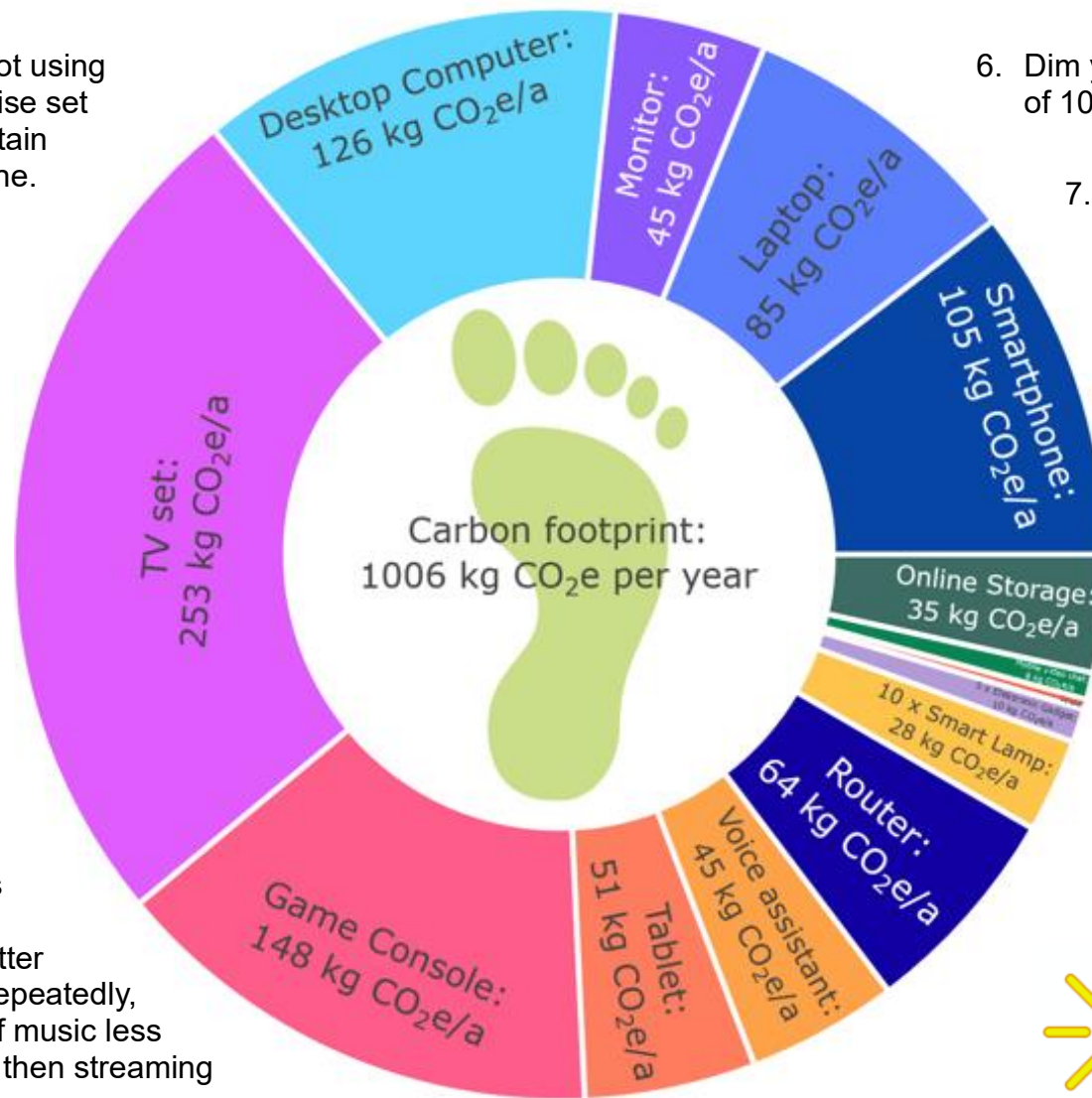


12 quick, easy ways to reduce your digital carbon footprint

1. Turn off your devices if you are not using them for 2 hours or more, otherwise set automatic sleep mode after a certain amount of time not at your machine.
2. Only reply to emails when essential - avoid 'reply all' and two-word (internal) emails that aren't necessary.
3. Only leave devices plugged in until they are charged, then unplug.
4. Switch off your sat nav when you don't really need it.
5. Download audio files instead of streaming them - or listen to cd's or radio when driving. Buying a physical CD or record can be better if you listen to the same album repeatedly, but if you only listen to a piece of music less than 27 times over your lifetime, then streaming can be better. *Source BBC*



6. Dim your monitor to 70% instead of 100% brightness.
7. Close tabs you are not using on your phone or laptop.
8. Avoid Zoom / video calls when you can just have a phone call instead.
9. Repair or buy refurbished devices instead of new.
10. Remove your digital signature for emails that don't need it.
11. Clean your inbox and photo storage regularly.
12. Unsubscribe from unread newsletters.

How Green Is the Digital Economy?

The last decade has seen significantly less paper usage to reduce energy consumption and carbon emissions. Simultaneously, many have embraced the digital economy. Crypto, Blockchain, AI and Chat GPT are everyday terms to many. Digital applications have an energy and related carbon use. Examples below illustrate the impact of the digital economy and steps to control its carbon footprint.

1. Writing a long email and its reading emits 17g CO₂, 50g CO₂ emission if an accompanying attachment. *Source: Mike Berners Lee's book, The Carbon Footprint of Everything.*



2. Politeness is a virtue but if Britain stopped sending 'thank you' emails, this would save 16,000 tons of CO₂ p.a. That's 81,000 flights from London to Madrid!



3. Short unnecessary emails contribute as much CO₂ each year as 3,334 diesel cars.



4. Monty Python may say "Lovely Spam! Wonderful Spam!" However, over half of all email traffic is considered spam. (*Source space and reduces of CO₂ emissions.*)



5. The European average individual video streaming footprint causes about 55g CO₂ emission per hour. (*Source Carbon Trust.*)



6. Using devices, the internet and the systems supporting equates to about 3.7 % greenhouse gases. These emissions are predicted to double by 2025. (*Source BBC.*)



7. One AI model training emitted 283,948.82 kg of CO₂*. A ChatGPT prompt uses 2.9 watt-hours of electricity. (*2019 figures)



8. A standard google search uses 0.3watt-hours. Assuming an average of 2.6 web searches per day per person, this equates to individual annual emissions of 9.9 kg of CO₂ equivalent per year.



9. Cloud data centres may double their energy consumption to 1,000 terawatts by 2026. 1 terawatt would power 10 billion 100 watts bulbs. There are more than 11,000 centres worldwide.



10. In 2022 data centres worldwide electricity consumption was 460 terawatt hours and this figure is likely to double by 2026 according to the International Energy Agency.




11. National Grid's CEO said that UK data centre electricity demand over 10 years from 2024 will rise six-fold. (*source BBC*)



12. Ireland has a moratorium on data centre construction due to about a fifth of their electricity consumption being used for data processing.



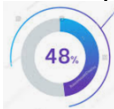
13. Google's datacentre cooling is equal to 25% of the water supply of Dallas, USA. 



14. Meta's 2011 energy consumption was 0.53 terawatt-hours compared to 2022's 11.51.



15. The American Clean Power Association say 48% of clean energy is consumed by the tech industry.



16. Google's greenhouse gas emissions increased by 48% in the past five years partly due to AI systems. Google's 'net zero' by 2030 commitment is doubtful. (*Source Financial Times 6th July 2024*)



17. AI chips are getting more energy efficient. Nvidia's requires 2,000 Grace Blackwell' chips using four-megawatt of electricity to train an AI application. Previously, 8,000 Nvidia chips and 15 mega-watts of electricity were required.



18. The EU's Regulation on Artificial Intelligence Act 2024 includes emission monitoring from AI systems. The same Regulations encourage the development of AI systems that aid green transition, climate change mitigation and energy sustainability.

