



BUILDING FOR SUSTAINABILITY

Why and how to build greener digital solutions



Building for sustainability

Welcome to the worlds first “Closing Keynote”



Why is this important?

The Internet has a larger footprint than the airline industry

Measuring the carbon footprint of the Internet

Landing back on the moon is potentially the easier task

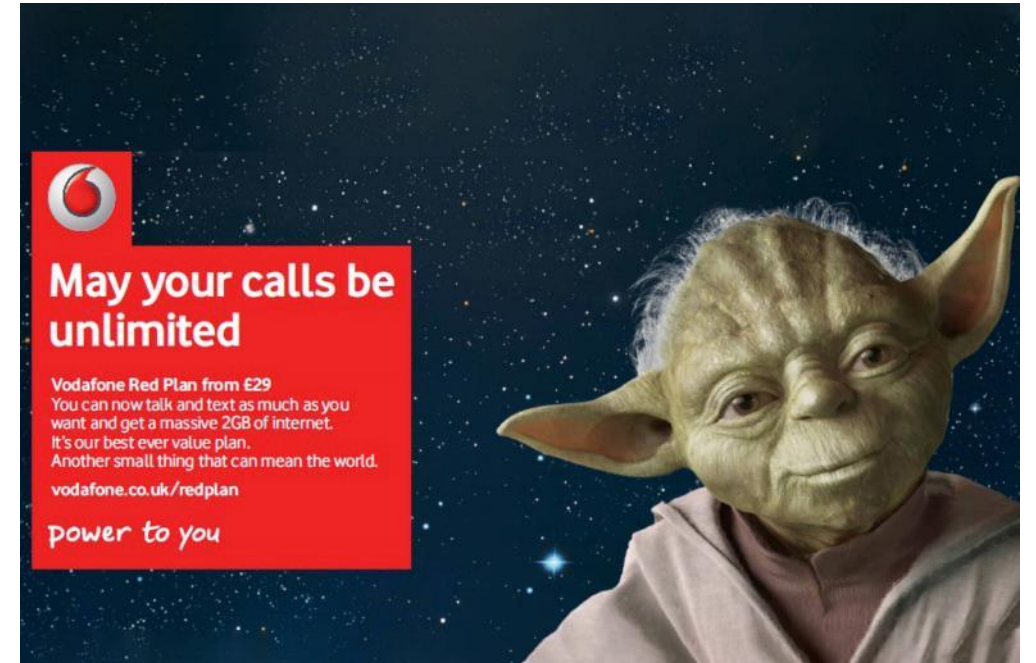


HOW WEBSITECARBON.COM WORKS

- Looks at the amount of data transferred over the wire
 - Assumes energy intensity of **0.8 kWh / GB**
 - Converts to CO₂e using **442g CO₂e per kWh** (international average)
This is similar to the US (455g) but much higher than the UK (233g)
 - Reduces by around 10% if the data centre is on green energy
 - See <https://www.websitecarbon.com/how-does-it-work/> for more details
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WHY WOULD A CLIENT BOTHER?

- vodafone.co.uk creates around 3,500 tonnes of CO₂e each year
- That's the equivalent of around 10.4 million airmiles and would require around 50,000 trees to offset the impact
- It's only 0.025% of Vodafone's 13.74 million tonnes of Scope 1, 2 and 3
- So what's the point?!



THE WIN / WIN OF WEBSITE CARBON REDUCTION

- Simplifying a user journey will usually improve conversions
 - Making pages load faster will always improve conversions
 - Halving the steps in a user journey will half the carbon footprint
 - Halving the page weight will half the carbon footprint again.
 - Customers like to know the impact of what they are doing (e.g. Oat Milk!)
 - Together we can all do our bit to tackle a footprint larger than the airline industry
-

[Shop Women](#)

[Shop Men](#)

organicbasics

[Regular store](#)

[Manifesto](#)

EUR



This page is using **~1756kb** of data
(**2.94x** smaller than the regular **collection page**)



You've saved **~39.18g** of CO₂ so far this session
(compared to browsing our regular website)



Illustration: @fra.ge_art

[Shop women](#)

[Shop men](#)

Need help?

hello@organicbasics.com(~4g of CO₂)

WHERE TO START



Beacon Web Page Measurement

Calculate the impact of a single unique visit to a web page and have a breakdown of the requests and guidance on lowering it's impact.

Visit

Measurement

Website Carbon

Carbon calculator that allows users to assess the carbon footprint of any website. APIs are available and the open-source code is used across a number of other tools listed on The Green Pages.

Visit

Measurement

Why measurement is so hard

A great explanation of the difficulties in settling on a single magic number to help estimate the emissions from a digital product.

Visit

Measurement

Eco Grader

A tool to measure how green your website is

Visit

Measurement

Cabin Analytics

Privacy-first, carbon-aware web analytics. No cookies, no consent banners, no ad networks. Uses the Website Carbon open-source code to provide the page emission data.

Visit

Measurement

Plausible Analytics

Plausible is a lightweight (lower carbon!) and open-source website analytics tool. No cookies and fully compliant with GDPR, CCPA and PECR.

Visit

Measurement



Why is the footprint very different to the airline industry?

A very different profile with very different benefits

THE 3 LAYERS

1. Can we reduce the digital footprint of our solutions?
 2. Does the solution have emission benefits? Can we measure it? Can we think about that when we do our customer experience mapping? Can we tell the customer?
 3. Can we change the experience based on grid emissions?
-



Control your heatpump from your Octopus account



Hi there! 🙌
Carbon emissions from electricity are currently **high**. This device is over 80% charged, so you might like to unplug for a few hours.

[Go to my account](#)

[Don't have a heatpump?](#)

THE IMPACT OF ADVERTISING

The Advertising Association estimated that the UK Ad industry is worth over \$20 billion per year

Estimated Scope 1 and 2 emissions = 1.1 million tonnes

Purpose Disruptors looked at a single advertising campaign for Audi.

The campaign generated 1.78 billion dollars for Audi

The campaign generated 5.1 million tonnes of emissions for Audi

5 x the whole industry. So what responsibility should the agency take?



Are ad agencies, PR firms and lobbyists destroying the climate?
the climate?



OFFSETS VS REMOVALS

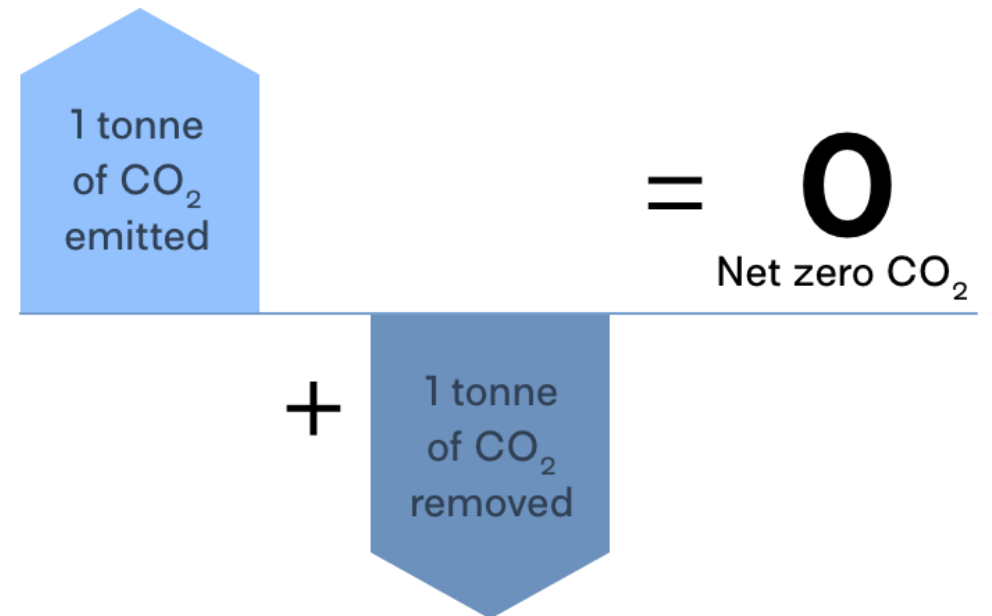
Traditional offsets

Your tonne of carbon is still in the atmosphere



Carbon removal offsets

Carbon removal offsets actually remove your carbon from the atmosphere



WHAT COULD YOU DO?

Be a low carbon organisation / supplier

Measure the impact of specific offline activities (events, film shoots etc)

Measure the impact of a specific digital campaign (data transfer)

How could you reduce all of the above?

Use avoidance offsetting - £9.70 per tonne (Carbon Neutral)

Plant trees – 24 p per tree (circa 15 trees per tonne = £3.60)

Carbon Removals (Net Zero ish) – Between £100 and £1000 per tonne

A landscape of wind turbines on a hillside at sunset. The sky is a mix of blue and orange, with a thin crescent moon in the upper left. The turbines are arranged in a line across the hillside, with a road or path visible. The background shows rolling hills and a layer of clouds or fog. The text "THANK YOU" is overlaid in the center in a bold, white, sans-serif font, with a thin white horizontal line underneath it.

THANK YOU