

DigitalDetox

Sustainable Means Performant

**How your Design, Development
& DevOps could help the planet.**



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We care about

People,
Planet,
Technology





First, some
context.



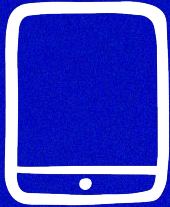
The average website produces **1.76g** of CO₂ for every page view; so a site with **100,000** page views per month emits **2,112kg** of CO₂ every year.

Source: <https://websitecarbon.com>

FIRST, SOME CONTEXT



2,112kg = ?



1 website in a year



4 return flights Naples
to London



6,752km by car



“If the Internet was a country, it would be the 7th largest polluter”

Source: <https://www.sustainablewebmanifesto.com>



This means **we** have
the **power** to make a
positive **impact**.

<https://media.giphy.com/media/MCZ39lz83o5LC/giphy.gif>





How do we measure our
websites' impact?



Uh oh! This web page is dirtier than **79%** of web pages tested



Oh my, **1.15g of CO2** is produced every time someone visits this web page.

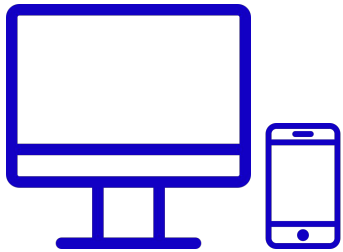


Website Carbon criteria

1. Data transfer over the wire
2. Energy intensity of web data
3. Energy source used by the data centre
4. Carbon intensity of electricity
5. Website traffic.



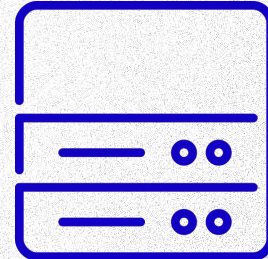
What does that mean?



End user device



Transmission networks



Data centre



Let's fix our
website.



Let's ~~fix our~~
~~website~~ reduce its impact.

Improve SEO

Better SEO ranking = less time looking for the right website.



Design Good UX/UI

- Users should perform actions in the most straightforward way possible
- Colours and dark theme
- Images and Animations.



Optimise Images

- Does the image add value?
- Communicate useful information?
- Use SVGs or CSS instead?
- Reduce images that are not visible.

Optimise Fonts

- Use system fonts where possible
- Use less variations.



Write Efficient Code

- Minimum number of network requests
- Maintainable and extensible code
- Less JavaScript = less file weight.

Build Static Pages

- Server Side Rendering vs Static Build
- GatsbyJS.

Use PWAs

Service Workers and Caching

Choose Green Hosting

Choose service with good Power Usage
Efficiency (PUE) rating.

Use a CDN

Reduce the distance between data and users.



Recap

- Improve SEO
- Design Good UX/UI
- Optimise Images and Fonts
- Write Efficient Code
- Build Static Pages
- Use PWA features
- Choose Green Hosting solution
- Use a CDN



Less impact =
More performant =
Better UX!



That's easier to sell to
the business too.

It is easier to sell
sustainability if
there's also a financial
incentive



Hurrah! This web page is cleaner than **97% of web pages tested**



Only **0.03g of CO2 is produced every time someone visits this web page.**



Useful resources

- <https://www.websitecarbon.com>
- <https://www.sustainablewebmanifesto.com>
- <https://www.wholegraindigital.com/blog/website-energy-efficiency>
- <https://journal.uptimeinstitute.com/is-pue-actually-going-up>
- <https://www.google.com/about/datacenters/efficiency>
- <https://cloudblogs.microsoft.com/industry-blog/en-gb/cross-industry/2020/06/11/four-ways-to-reduce-your-digital-pollution/>
- <https://digital-detox.co.uk/work/greenreport>

Grazie.

See you later for questions

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