

# Digital sustainability: The benefits for business and the environment

Louise Towler

A decorative graphic at the bottom of the slide consists of several overlapping, stylized cloud shapes. The clouds are white with teal outlines, set against a solid teal background.

# Louise Towler

## Indigo Tree

Founder of **Indigo Tree**, a UK based WordPress agency, with expertise in technical SEO and commercial performance.

Innovate UK: Women In Innovation  
Award Winner 2022-23

[louise@indigotree.co.uk](mailto:louise@indigotree.co.uk)  
[@louisetowler](#) / [@indigotreesays](#)  
[linkedin.com/in/louisetowler/](https://www.linkedin.com/in/louisetowler/)



**“If the internet was a country,  
it would be the 4th largest  
polluter”**



# An introduction

# Legal duty worldwide

December 2015: The Paris Agreement

Annual COP meetings





# Legal duty in Europe

October 2023: EU carbon border tax

By 2030: target to cut net emissions  
by 55%

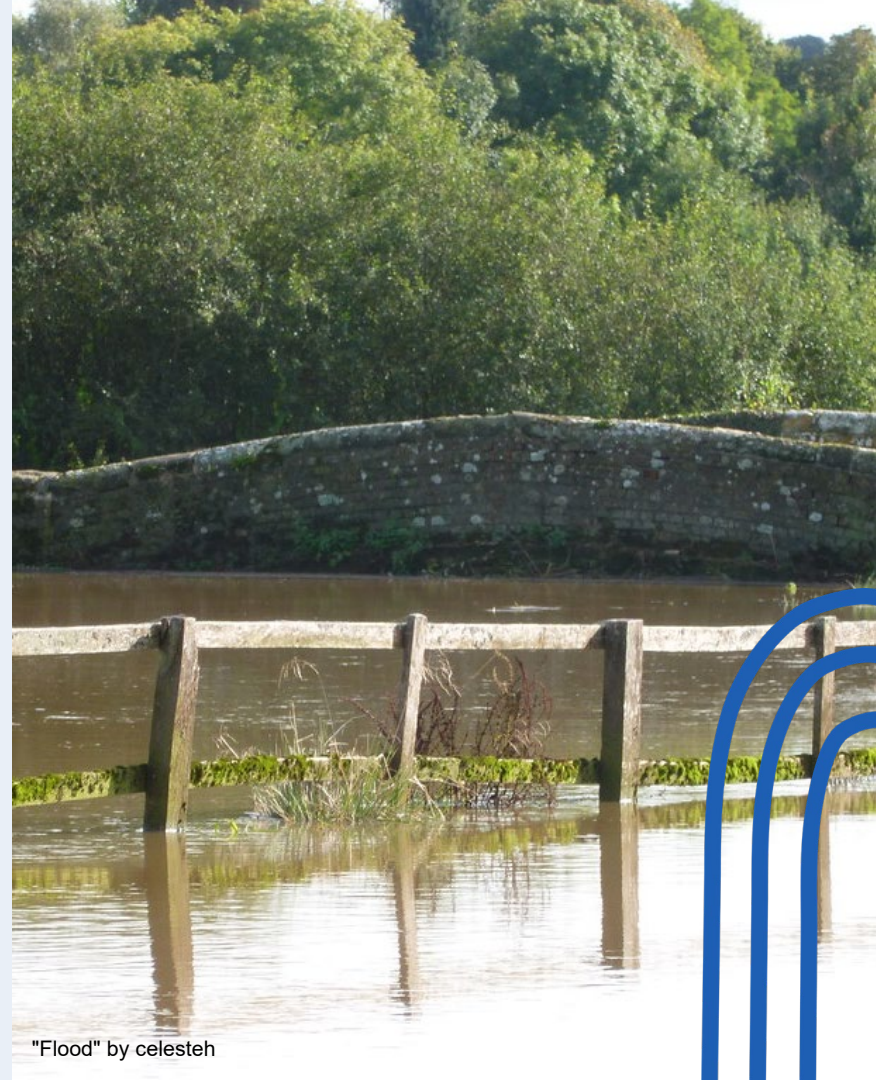


# Legal duty in United Kingdom

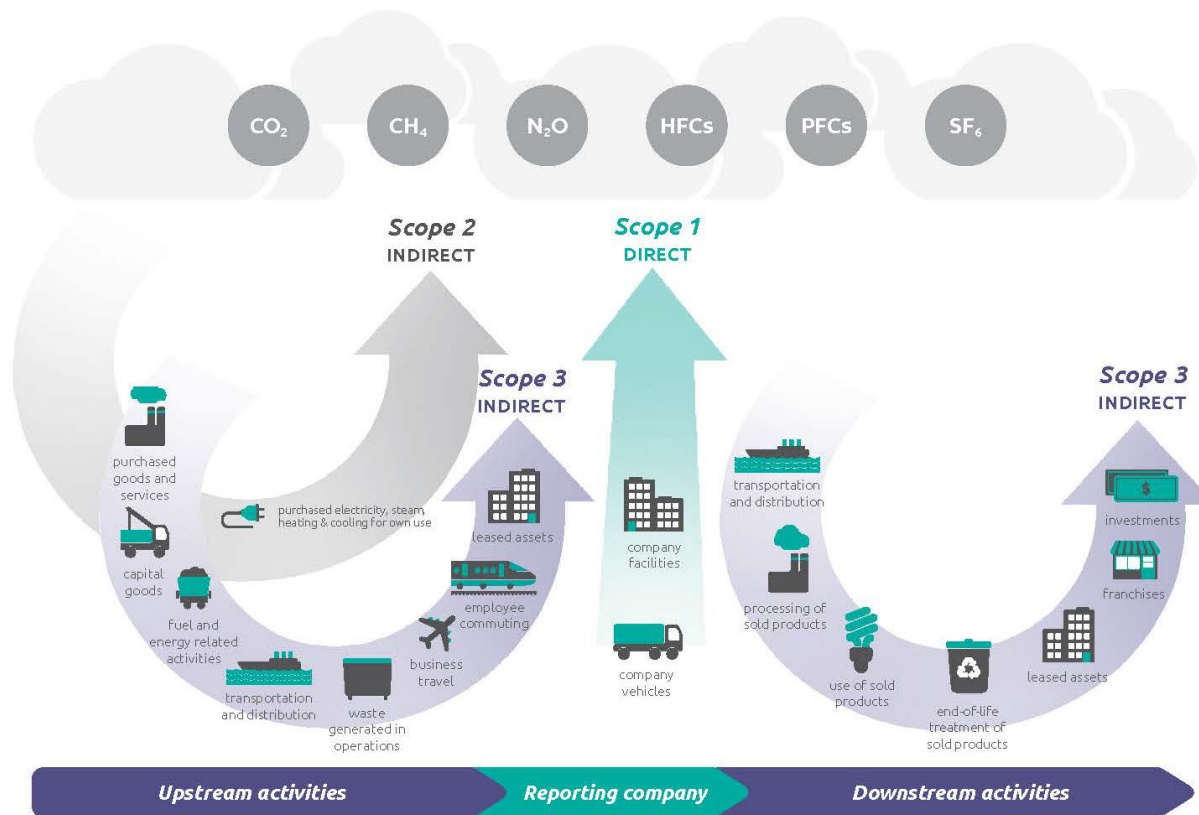
2019: Climate Change Act

By 2030: Demand reduction target  
15% (compared to 2021)

Enterprise and very large company  
reporting >500 staff or £500M



"Flood" by celesteh





# Measurement

Scope	Emissions from	Typical examples	% emissions
1	Fuels we burn	Fossil fuels (oil, gas) Transport owned by company Refrigeration gases	<10%
2	Energy we buy	Electricity from grid Purchased heat	<10%
3	Upstream: Everything we buy Downstream: As a result of everything we sell	Purchased goods and services Business travel and employee commuting Waste End of life recycling Third-party transport	80%+

# Commercial drivers

# Consumers drive profits

New advertising guidance in the UK

Backlash against greenwashing

75% of adults care about climate change in the UK



# Finance drives business

Your ESG strategy is becoming part of  
access to finance

Mitigate future business risk





# Procurement drives behaviour

Large contracts (Ikea, Tesco, NHS)

Supply chain reporting for Scope 3  
becoming part of tender process





# Tesco emailed all their suppliers...

Disclose carbon emissions

Set a net zero target by end 2022

Set science-based target by end 2023

Switch to renewable energy now



Photo from press release

# National Health Service in UK...

April 2024: Carbon Reduction Plan to cover all procurements.

By April 2028: Carbon foot printing for individual products.



# Sustainable IT and websites

**“You cannot manage what you cannot measure.”**



# Start with a plan

Discuss and educate your client and stakeholders

Understand the consequences of each decision you make





# Action 1: Educate your client

## About websites and data

To transfer data from a hosting server to a device requires electricity

Sending less data can help to reduce the carbon footprint



# Design your website to use less data

Design for accessibility

Does each image have a purpose?

Do you need that video?

Do you really need all those fonts?

Do your emails need all those images?



# Action 2: Optimise images

## Making them smaller in size

Use webP or other compression format

Scale images to the device

Lazy load images below the viewport

Convert animated GIFs to static or video

Use SVG for icons

# Action 3: Consider video

Only use video to add value

Do not use in banners or autoplay

Use a façade placeholder image on page or poster attribute

# Action 4: Optimise web fonts

Consider what is required

Reduce the number of fonts and weights

Self-host font files in WOFF 2.0 format (not EOT or TTF)



# Action 5: Design email

## Keep emails simple

Simplify the design

Do not include unnecessary images

Only send emails when you need to

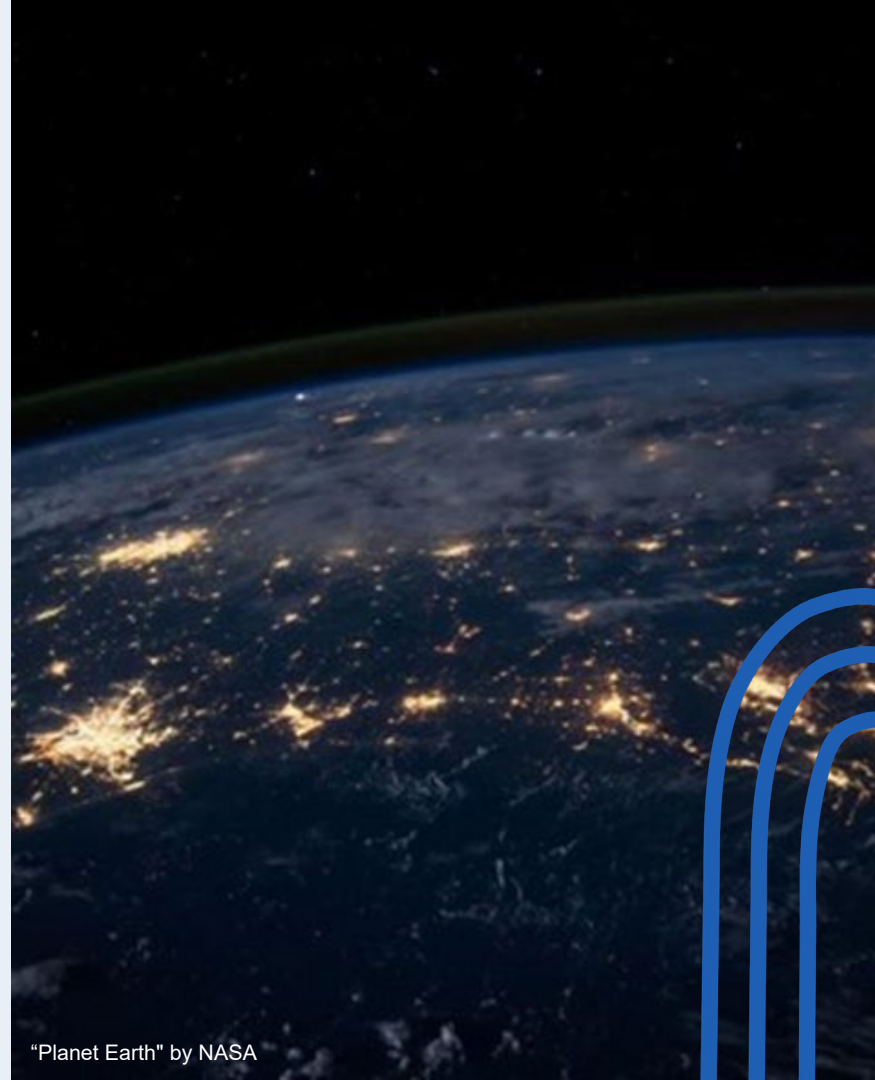


# Build your theme to use less data

Do you need the theme that works with  
every plugin?

Do you need all the code on every page?

Can you compress and optimise your  
code?



# Action 6: Optimise your code

## For the theme

Compress your code

Reduce your dependency on third-party libraries

Only load files on pages where they are required

Implement caching

# Action 7: Learn new techniques

For green software development

Green software practitioner

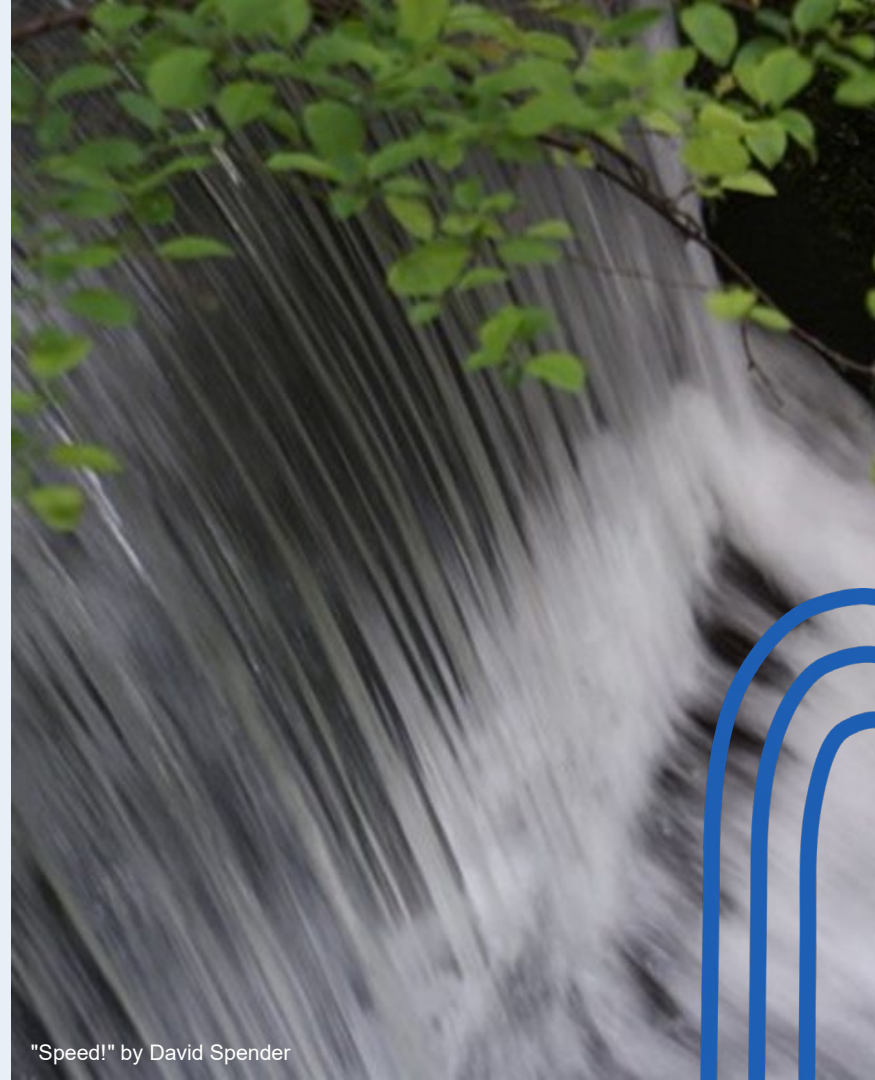
<https://learn.greensoftware.foundation/>



# Choose your hosting carefully

Are you using a green hosting  
supplier?

When are you running your batch  
jobs?





# Action 8: Use green web hosting

Check whether your hosting supplier is green

Green Web Foundation tool:

<https://www.thegreenwebfoundation.org/green-web-check/>





## Result of the green web check — indigotree.co.uk is hosted green!



Congratulations! The website is hosted green.

This hoster is using green energy / compensation for its services.

Hosted by: [Cloudflare](#)

Supporting evidence for the hoster's claims

- [Blog post - The Climate and Cloudflare](#)
- [Cloudflare 2020 Emissions Inventory](#)
- [Cloudflare 2021 Emissions Inventory](#)

# Action 9: Timing for batch jobs

## Choose when they run

Run your batch processes carbon intensity is low

*Carbon intensity is the measure of how much carbon is emitted per kilowatt hour of electricity*

For the UK we use <https://carbonintensity.org.uk/>

Also <https://www.watitime.org/>

# Ongoing data monitoring

Train and educate your content editors

Ongoing measurement against budget

Traffic and campaigns



# Action 10: Continue to monitor

As content is added and changed

Monitor the data per page:

- Pages which have the largest page weight
- Pages which get the most traffic
- Marketing campaigns and new content



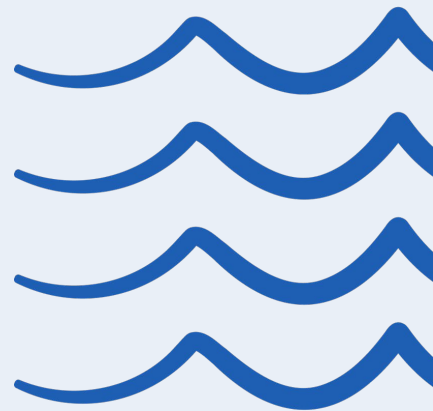
# The results and benefits



# Summary of actions

## To take away

1. Educate your client
2. Optimise images
3. Consider video
4. Optimise fonts
5. Design email
6. Optimise your code
7. Learn new techniques
8. Use green web hosting
9. Timing for batch jobs
10. Continue to monitor

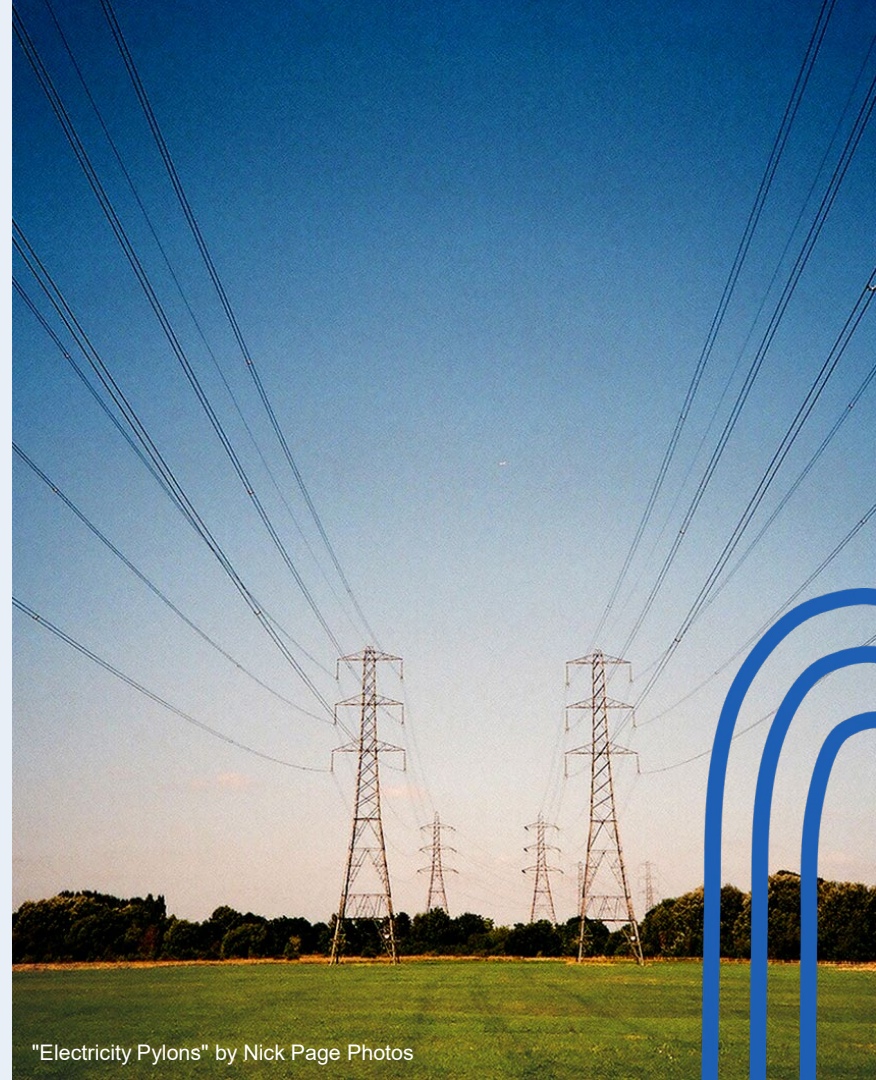


# If your website is transferring less data per page

It will be faster, improving your core web vital scores

Provide a better experience for visitors, increasing conversions

Decrease your cost of hosting



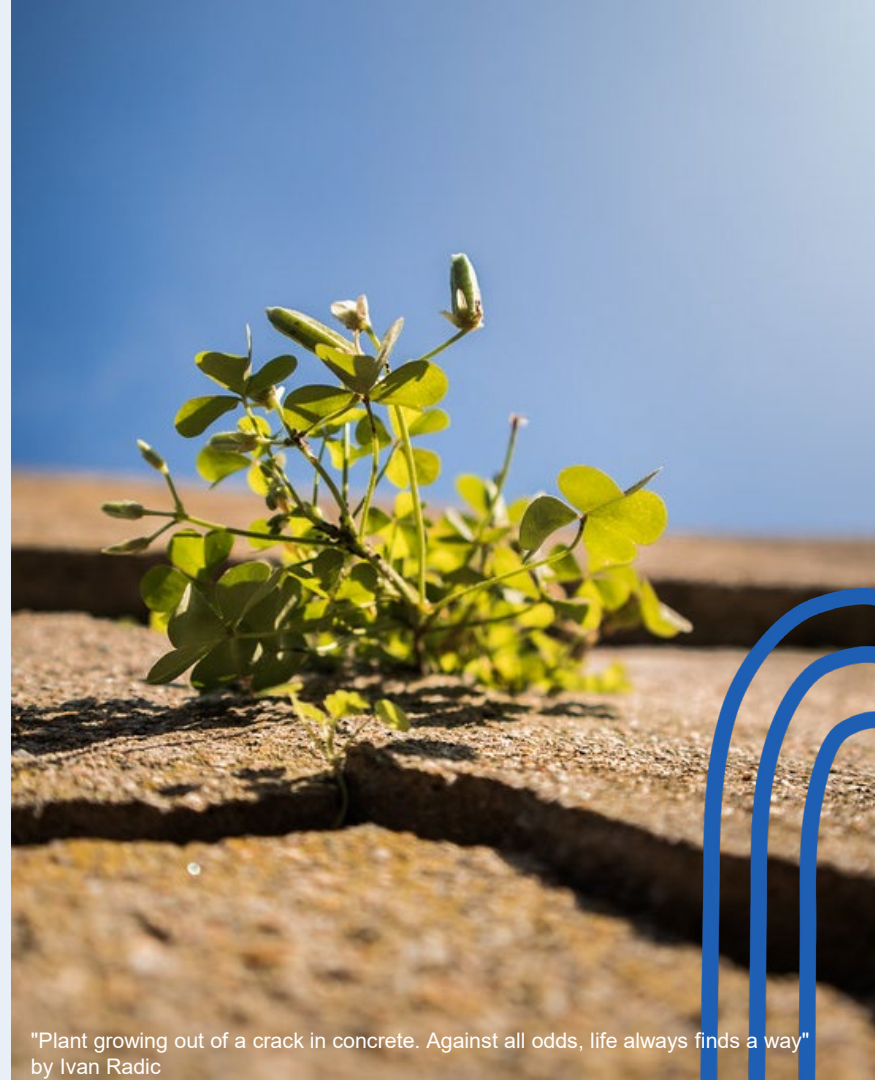
# Sustainability is good for business

Increased profitability

Improved efficiency

Greater innovation

Access to finance



# It is a race against time

We need to recognise our historical responsibility for emissions

We need to respond now with dramatic cuts to limit increases to 1.5°C



# Louise Towler Kanoppi

Slides: <https://bit.ly/3MZjBPz>

`louise@kanoppi.co`  
`kanoppi.co`

`@louisetowler`  
`linkedin.com/in/louisetowler/`



A decorative border at the top of the slide consisting of a series of overlapping, stylized waves in shades of blue and teal.

# Thank you!