







# *Sustainable* UX

**Workshop: How to make your website more sustainable**



SUX

OR

„The greatest *threat*  
to our planet is the  
belief that someone  
else will save it.“

Robert Swan - 2041 Foundation





# Thorsten Jonas

Digital Sustainability Trailblazer  
Founder of the „SUX Network“


Web: [sustainableuxnetwork.com](https://sustainableuxnetwork.com)

Web: [thorstenjonas.com](https://thorstenjonas.com)

Insta: [@dolbydigger](https://www.instagram.com/dolbydigger)





 [Events](#) [Overview](#) [About](#) [Playbook](#) [Podcast](#) [Team](#)


# The *Sustainable* UX Network

We are SUX, a community of more than 3000 designers worldwide. Together we want to discuss, develop and exchange ideas on how we can promote and facilitate sustainability in and through our creative work.

[Join our Slack](#) [Join our LinkedIn](#)

SUX Events

## What's going on?

<small>18.-19./09/2023</small> SUX Keynote & Workshop at <a href="#">Webdagen 2023</a> in Nyborg, Denmark	<small>23.-24./10/2023</small> SUX Workshop at <a href="#">Future of Industrial Usability</a> in Würzburg, Germany	<small>07/11/2023</small> SUX Talk at <a href="#">Boye 23 Conference</a> in Aarhus, Denmark	<small>09/11/2023</small> SUX Keynote at <a href="#">World Usability Day Switzerland</a> in Rapperswill, Switzerland	 You want to SUX for your conference or event? Feel free to <a href="#">contact us</a> .
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[sustainableuxnetwork.com](https://sustainableuxnetwork.com)

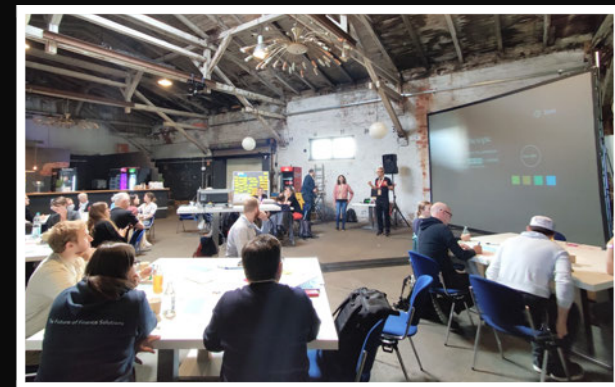
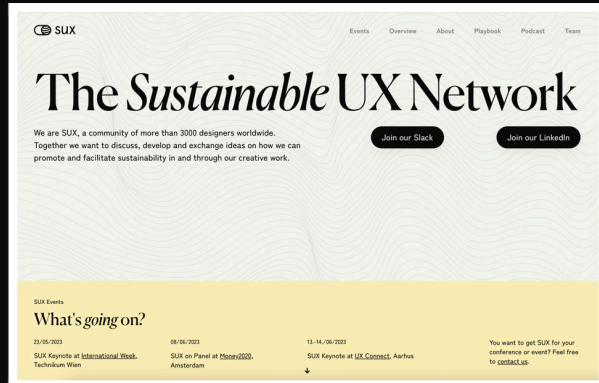




Making sustainability  
*Default* in all product-  
design processes.







sustainableuxnetwork.com



„User experience (UX) design is the process, teams use to create products that provide meaningful and relevant experiences to users.“





„When designers center around the user, where do the needs and desires of the other actors in the system go?“

Kevin Slavin



We need to move from a human to a *humanity* and *environmental* centered design approach.





The Internet is responsible for  
3,7% of the global green  
house emissions per year.

Source: BBC, 2020



A website with 2,5million visits per month easily „emits“ 20 tons of CO<sub>2</sub> - each month.



- 2,5 million visits per month
  - 10 page views per visit
  - 0,8g CO per page view
- 
- 20 tons of CO<sub>2</sub> per month
  - Flying Copenhagen - NY 20 times





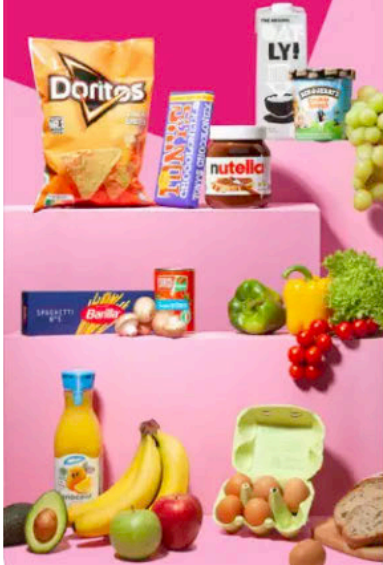
# *Sustainability*

is more than CO2 emissions.




What have we won, if we save the world only for us, who were lucky enough to be born well suited or on the rich side of society or the planet?

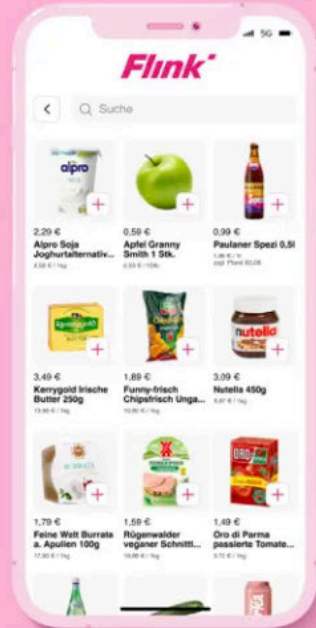
**Flink**  
Dein Einkauf.  
Gleich geliefert.



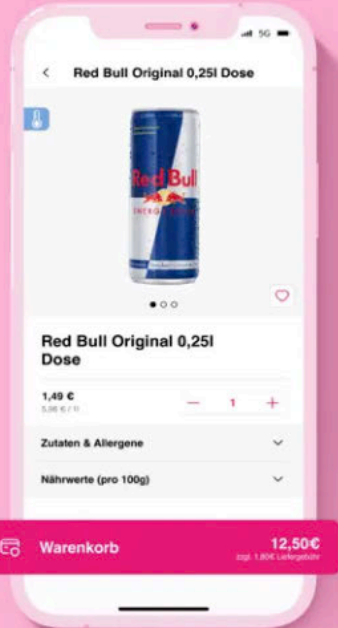
Entdecke 2300+  
Supermarkt-Produkte



Einfach, schnell  
& übersichtlich



In Sekunden bestellt.  
In Minuten geliefert.





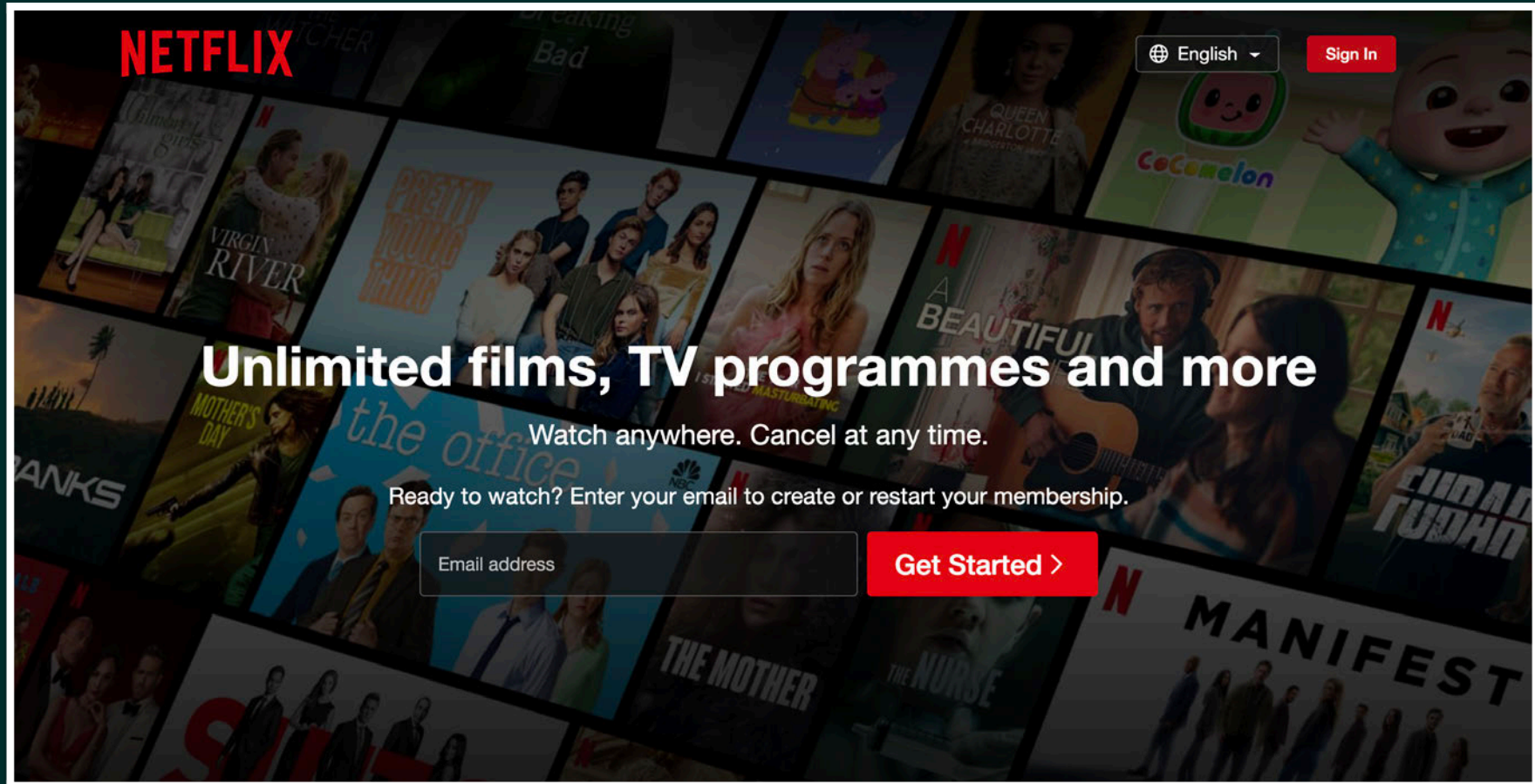


What have we won, if we  
build sustainable products  
that exclude people?





Or what have we won, if we save the planet, but continue having more and more cases of depression and burnout?



**NETFLIX**

English Sign In

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Email address

[Get Started >](#)





# Warm-Up

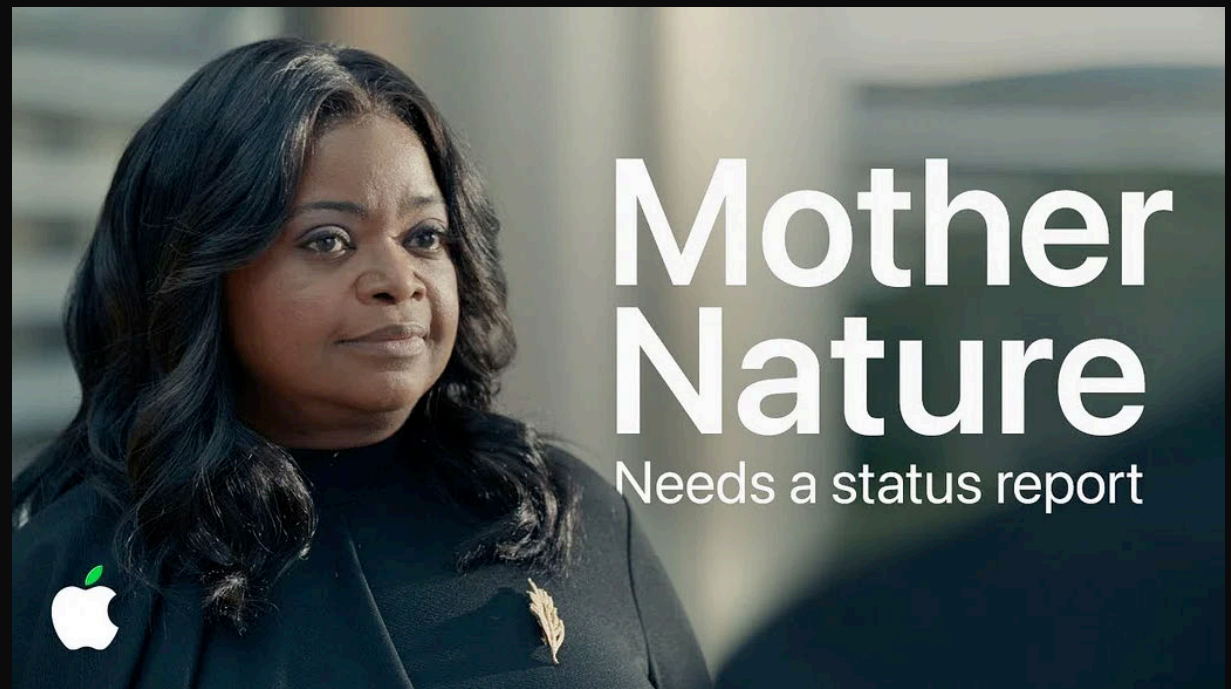
Apple and Mother Nature.

# Mother Nature

## Task:

Think a few minutes about the digital product or website you work on: What would „Mother Nature“ say about „your“ Product/Website?

Talk the person left or right to you and tell each other your thoughts.





# Scenario

Choose one of the following two scenarios to work on.



# Choose a Scenario

## ***Szenario 1:***

### **„Citizen Service“ Website**

Municipality website for all citizen services, where citizens get access to all relevant information and (self-)services.

## ***Szenario 2:***

### **Online Shop for Coffee**

An online shop, where people can buy coffee. Coffee is imported directly



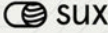
# Group Work

Get together in groups of 5-8 people.

# 1. Actors

Who is impacted by your product?

**Actor Mapping**  
Put your product / idea in the center. Think about all actors that are impacted by the product. Actors can be human or non-human.

 **SUX**  
sustainableuxnetwork.com

 Human

 Non-Human

*Place your idea / product /  
experience here*

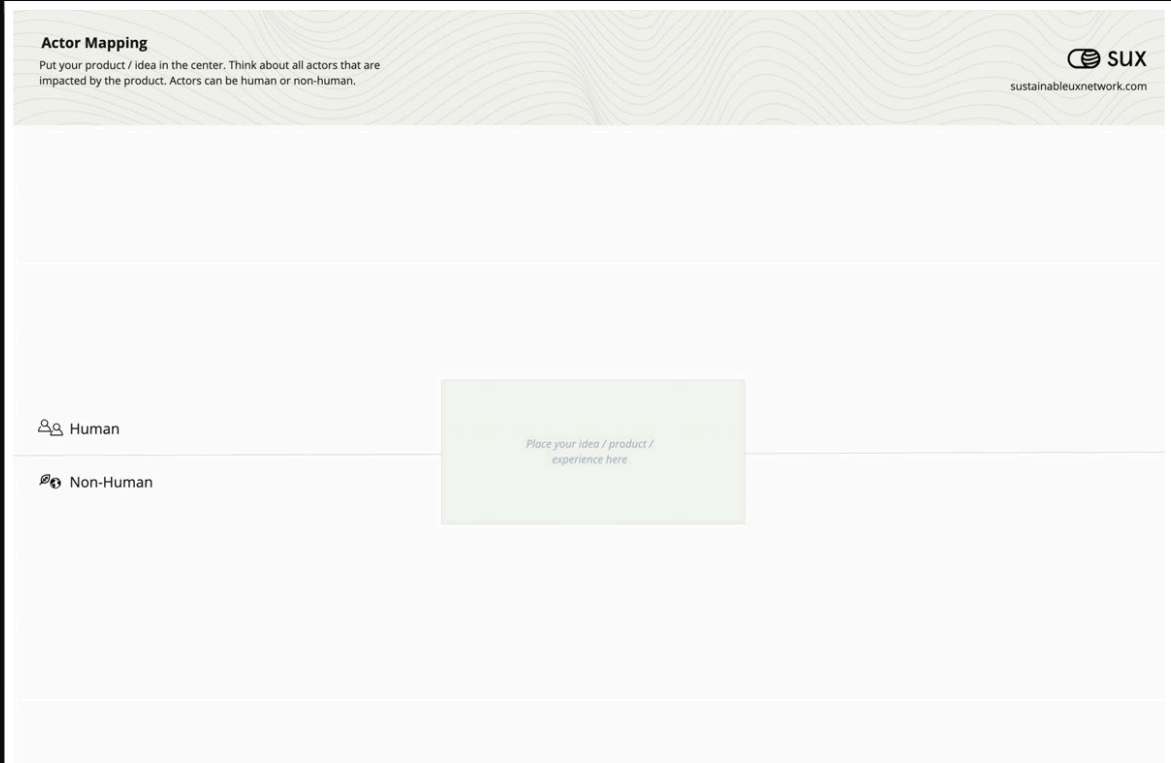
Source:  
**SUX Network**



# Actors


## Task:

Think about all actors that are impacted by your product. Think about human AND non-human actors. Non-human actors can be anything (animals, nature, neighborhoods, etc.)



**Actor Mapping**

Put your product / idea in the center. Think about all actors that are impacted by the product. Actors can be human or non-human.

 SUX  
sustainablexnetwork.com

Human

Non-Human

Place your idea / product / experience here

## 2. Consequences

What are the direct and indirect consequences of your product?


## Consequence Mapping

Put your product / idea in the center. Think about the direct and indirect consequences it has to humans, to the environment and to society.



[sustainableuxnetwork.com](http://sustainableuxnetwork.com)

Ecological 

Human 

Societal 

Indirect negative Consequences

Direct negative Consequences

*Place your idea / product /  
experience here*

Source:  
**SUX Network**

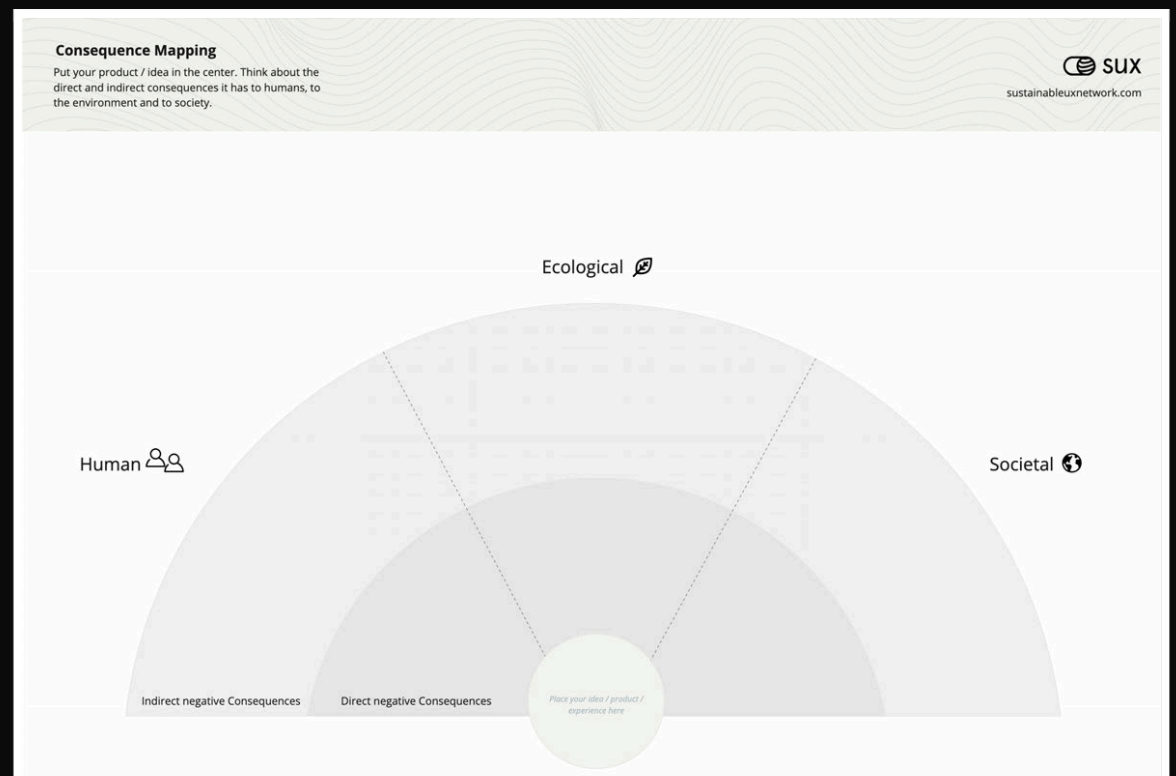
# Consequences

## Task 1:

Put your product in the center.

## Task 2:

Think and discuss about the direct and in-direct consequences it has on humans, the environment and the society.

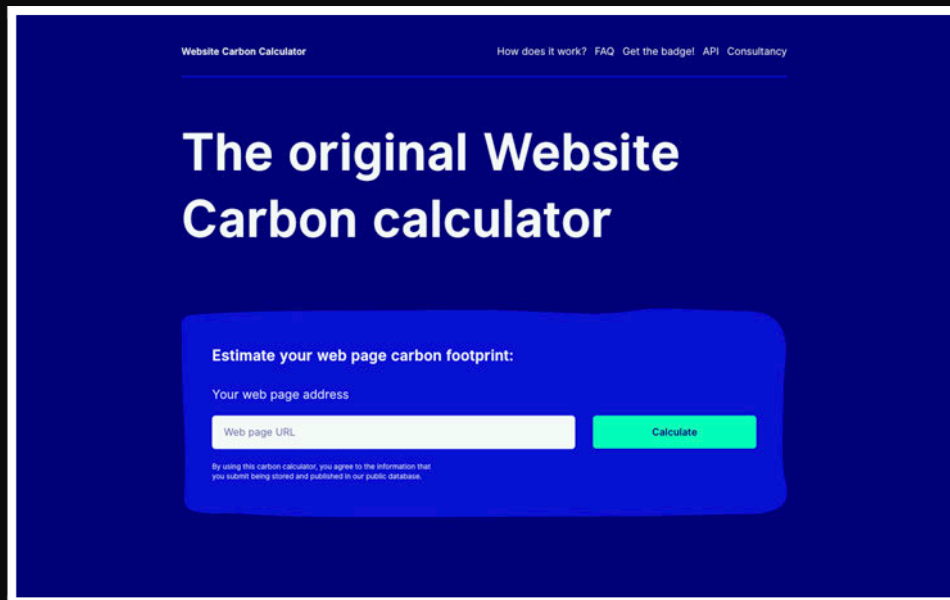


# 3. Carbon Impact

How could the carbon impact of your product been reduced?



[websitecarbon.com](https://www.websitecarbon.com)



Website Carbon Calculator [How does it work?](#) [FAQ](#) [Get the badge!](#) [API](#) [Consultancy](#)

## The original Website Carbon calculator

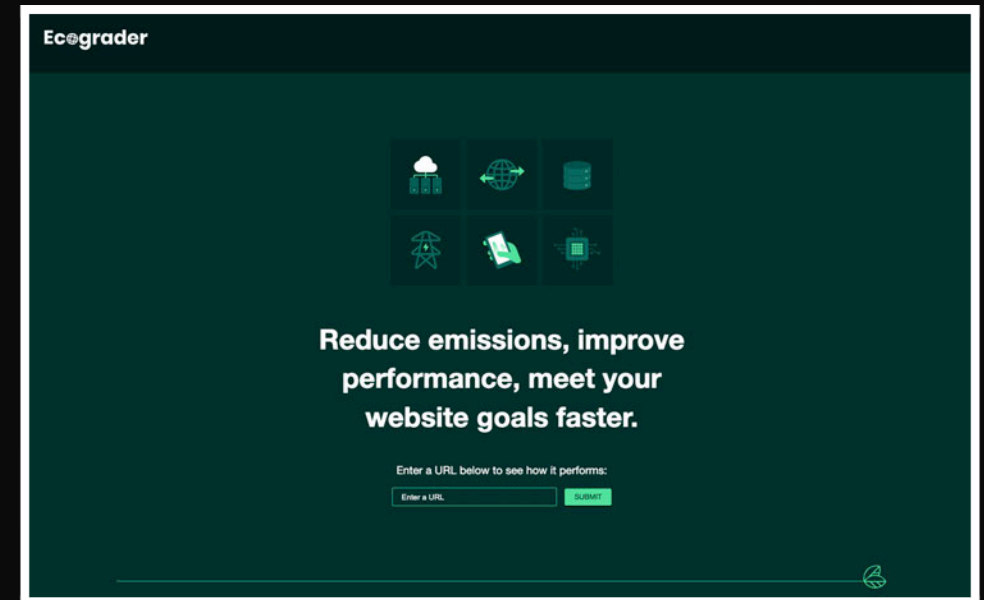
Estimate your web page carbon footprint:

Your web page address

Web page URL

By using this carbon calculator, you agree to the information that you submit being stored and published in our public database.

[ecograder.com](https://www.ecograder.com)



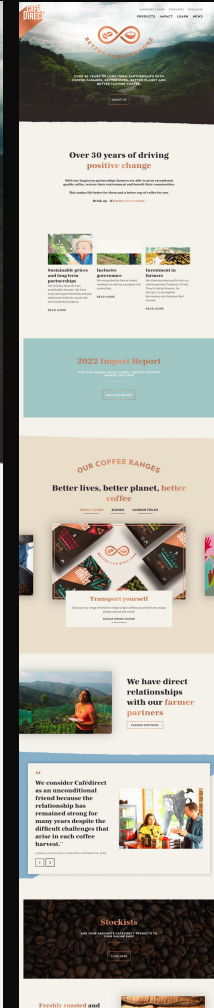
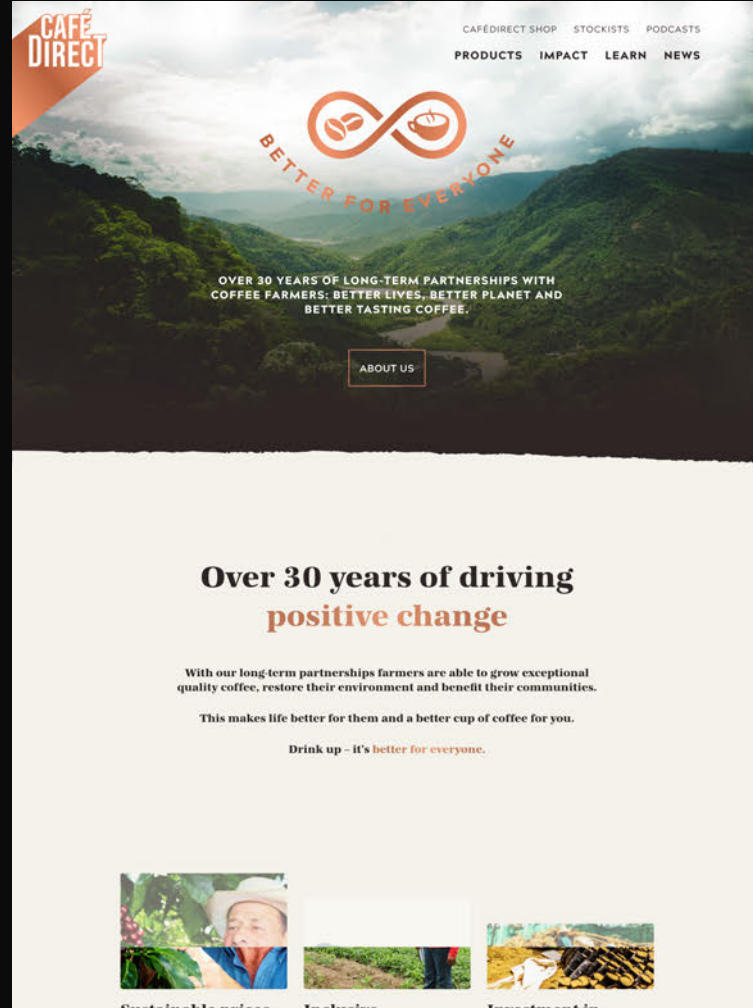
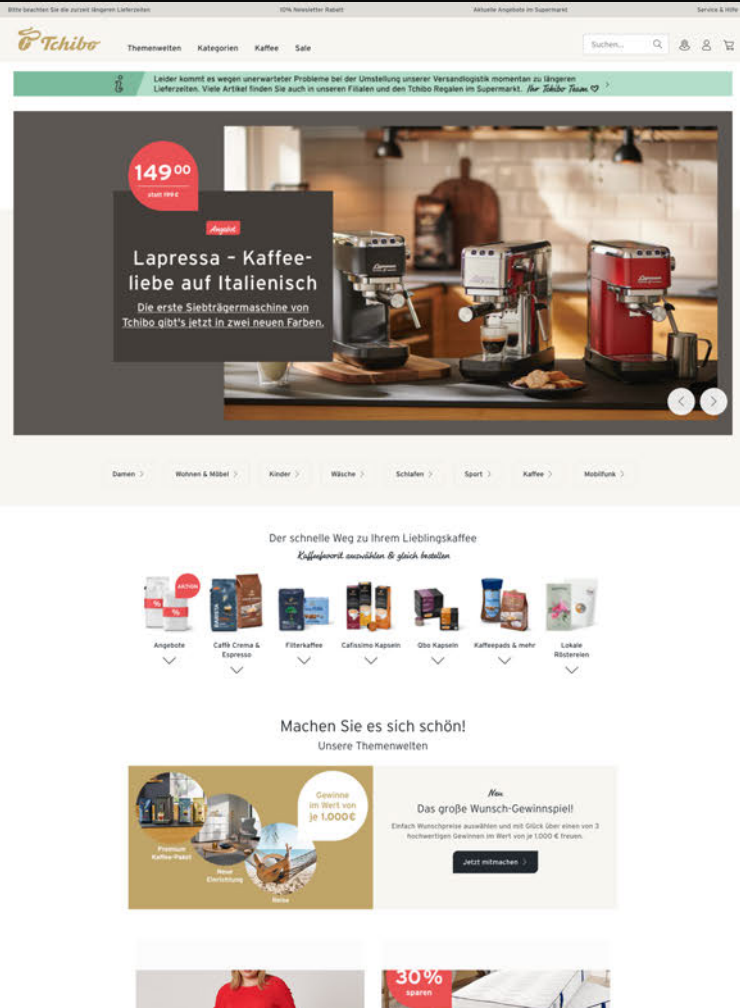
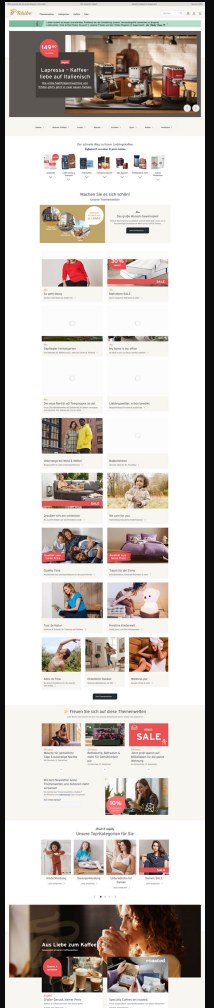
Ecograder

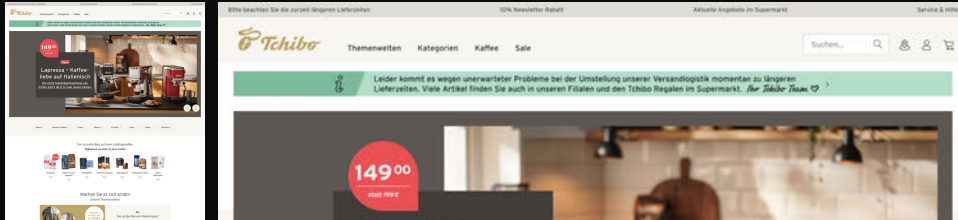
Reduce emissions, improve performance, meet your website goals faster.

Enter a URL below to see how it performs:

Enter a URL

And further tools: [digitalbeacon.co](https://digitalbeacon.co), [Globemallow](#) (Chrome Extension)





Website Carbon Calculator

Carbon results for [tchibo.de](https://tchibo.de)

Uh oh! This web page is dirtier than **60%** of web pages tested

Oh my, **0.63g of CO2** is produced every time someone visits this web page.

This web page appears to be running on **sustainable energy**

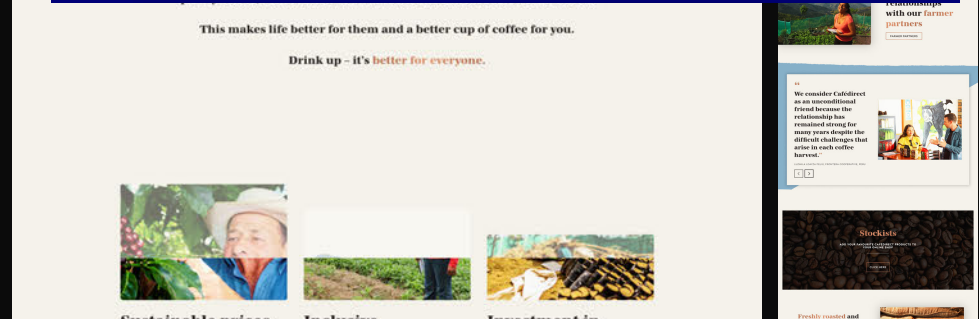
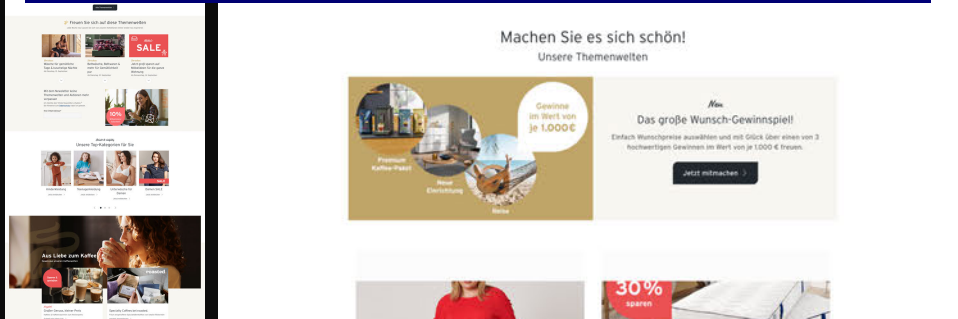
Website Carbon Calculator

Carbon results for [cafedirect.co.uk](https://cafedirect.co.uk)


Hurrah! This web page is cleaner than **92%** of web pages tested





Only **0.09g of CO2** is produced every time someone visits this web page.

This web page appears to be running on **sustainable energy**



**Carbon Impact Brainstorming**  
Brainstorm ideas, that help lowering the carbon impact of your digital product / website / experience.

 **SUX**  
sustainableuxnetwork.com

	 Backend	 Frontend	 User	 Content
High Impact ↑ Low Impact				

Source:  
**SUX Network**


**Note: external**





# Carbon Impact Brainstorming - Part 1

## Task:

Think about ideas how to reduce the carbon impact of your product on the **BACKEND** and **FRONTEND** level.

**Carbon Impact Brainstorming**  
Brainstorm ideas, that help lowering the carbon impact of your digital product / website / experience.

 SUX  
sustainableuxnetwork.com

	 Backend	 Frontend	 User	 Content
High Impact ↑				
Low Impact				








# Carbon Impact Brainstorming - Part 2

## Task:

Think about ideas how to reduce the carbon impact of your product on the **USER** and **CONTENT** site.

**Carbon Impact Brainstorming**  
Brainstorm ideas, that help lowering the carbon impact of your digital product / website / experience.

 SUX  
sustainableuxnetwork.com

	 Backend	 Frontend	 User	 Content
High Impact ↑				
Low Impact				

# We need to make building for less Carbon Emissions the new normal.

## 1 Design

- Lightweight Design
- Colors, Fonts
- Elements (e.g.: no carrousels)

## 2 Hosting

- Green Hosting
- Caching
- CDN (note: not in every case)

## 3 Development

- Image Formats (→ WebP) and size (deliver in proper size)
- HTML, CSS, JS optimization
- Video optimization

**OTTO**


Service Mein Konto Merktzettel Warenkorb

Inspiration Damen-Mode Herren-Mode Baby & Kind Sport Drogerie

Multimedia Haushalt Küche Heimtextilien Möbel Baumarkt Marken %Sale%

Startseite | Multimedia | Aktionen

### Neuheiten

**Neuheiten**

- Bürotechnik (1)
- Kommunikation (2)
- Navigation (15)
- Optik (2)
- Technik-Zubehör (29)
- Unterhaltungselektronik (50)

**Marke**

- Sony
- LG
- CTEK
- CASIO EDIFICE
- VDO
- Garmin
- ...

**Verkäufer**

**Preis**

**Farbe**

**Bewertung**

**Modellreihe**

**Reduzierung**

**Aktion**

**Lieferzeit**

**Nachhaltigkeit**

**UP Liefer-Flat**

📅 10€ für Neukund\*innen

fitbit

Achte auf dein Herz!  
Besonders am Valentinstag.

Mehr erfahren >

Sortieren nach

Topseller

99 Produkte

<div style="text-align: center;"> <p style="font-size: 0.8em; color: red; font-weight: bold;">-31%</p> </div> <p style="font-size: 0.8em;">SONY WHCH520 On-Ear-Kopfhörer (Freisprechfunktion, Rauschunterdrückung, Google Assistant, Siri, Bluetooth, 50 Std. Akkulaufzeit,...)</p> <p style="font-size: 0.8em;">★★★★☆ (5)</p> <p style="font-size: 0.8em;">UVP €69,99 <b>Nur bis zum 22.05.!</b> <b>€ 47,99</b></p> <p style="font-size: 0.7em;">lieferbar - in 2-3 Werktagen bei dir</p>	<div style="text-align: center;"> <p style="font-size: 0.8em; color: red; font-weight: bold;">-30%</p> </div> <p style="font-size: 0.8em;">SONY WH-CH720N Over-Ear-Kopfhörer (Freisprechfunktion, LED Ladestandsanzeige, Multi-Point- Verbindung, Noise-Cancelling,...)</p> <p style="font-size: 0.8em;">★★★★☆ (1)</p> <p style="font-size: 0.8em;">UVP €149,99 <b>€ 105,19</b></p> <p style="font-size: 0.7em;">lieferbar - in 2-3 Werktagen bei dir</p>	<div style="text-align: center;"> <p style="font-size: 0.8em; color: red; font-weight: bold;">-4%</p> </div> <p style="font-size: 0.8em;">SAMSUNG HW-Q995GC Soundbar (656 W, 11.1.4- Kanal Surround Sound System, 4.0.2- Kanal Rücklautsprecher, Kabelloses Dolby Atmos &amp; DTS:X, SpaceFit Sound...)</p> <p style="font-size: 0.8em;">★★★★★ (3)</p> <p style="font-size: 0.8em;">UVP €1.599,00 <b>€ 1.536,26</b></p> <p style="font-size: 0.7em;">lieferbar - in 2-3 Werktagen bei dir</p>
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# We need to help our users to act more sustainable.

## 1 Educate Users

- Explain impacts to users
- Offer low impact alternative of your website as a choice for the users

## 2 Create new Defaults

- Shift from Opt-In for Sustainability to Opt-Out
- Think about the most sustainable choices
  - Make the most sustainable choice default

## 3 Low Impact Alternative

- Offer low impact version
- Less Content
- Load more contents on demand

amazon.de Ihre Bestellung (1 Artikel)

1 Eine Versandadresse auswählen Schließen ✕

**Zuletzt verwendet**

**Andere Adressen**

+ Geben Sie eine neue Adresse ein

**Ihre Abholstationen**

- Hermes PaketShop - Kiosk Aktuell Stelling Weg 6, Hamburg, 20255, Deu
- DHL Postfiliale 442, Stelling Weg 9, Hamburg, 20255, Deutschland Karte
- Amazon Hub Counter - GALERIA Hamburg Eimsbüttel Osterstraße 119, 2. Hamburg, 20259, Deutschland Karte | Löschen

+ Abholstation in der Nähe finden

An diese Adresse senden

Fahren Sie mit Schritt 3 fort, um Ihre Bestellung zu überprüfen und aufzugeben.

**Bestellungsübersicht**

Artikel:	30,01 €
Verpackung & Versand:	0,00 €
<b>Gesamtbetrag:</b>	<b>30,01 €</b>

Gesamtbetrag der Bestellung enthält USt. Details anzeigen

Wie werden die Versandkosten berechnet?

## Ihre Abholstationen

- Hermes PaketShop - Kiosk Aktuell** Stelling Weg 6, Hamburg, 20255, Deutschland [Karte](#) | [Löschen](#)
- DHL Postfiliale 442**, Stelling Weg 9, Hamburg, 20255, Deutschland [Karte](#) | [Löschen](#)
- Amazon Hub Counter - GALERIA Hamburg Eimsbüttel** Osterstraße 119, 2. Obergeschoss; Sport-Kasse, Hamburg, 20259, Deutschland [Karte](#) | [Löschen](#)

+ [Abholstation in der Nähe finden](#)





# Web Sustainability Guidelines (WSG) 1.0

- Inspired by W3C's Web Content Accessibility Guidelines (WCAG)
- **93 guidelines with 232 success criteria** and cited references **over 250+ pages**.
- Five areas to address sustainability issues as they relate to web design and the overall internet ecosystem:
  - UX design
  - Web development
  - Hosting & infrastructure
  - Business & product strategy
  - Metrics & measurement

<https://w3c.github.io/sustyweb/>

**Web Sustainability Guidelines (WSG) 1.0**  
Draft Community Group Report 30 August 2023

**Latest published version:**  
<https://w3c.github.io/sustyweb/>

**Latest editor's draft:**  
<https://w3c.github.io/sustyweb/>

**Editors:**  
[Alexander Dawson](#) (Invited Expert)  
[Tim Frick](#) (Mightybytes)

**Feedback:**  
[GitHub w3c/sustyweb](#) (pull requests, new issue, open issues)

**Implementation:**  
[Sustainable Web Design](#)

**Glance:**  
[Web Sustainability Guidelines At A Glance](#)

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**Abstract**

Web Sustainability Guidelines (WSG) 1.0 covers a wide range of recommendations for making websites and products more sustainable. Following these guidelines which utilize environment, social, and governance (ESG) principles throughout the decision-making processes, you can minimize your environmental impact through a mixture of user-centered design, performant web development, renewable infrastructure, sustainable business strategy, and (with metrics) various combinations of those mentioned. It should be noted that these guidelines will not address every possible mechanism or strategy to become sustainable, as such, these guidelines (which are notably Web orientated and focused) should be seen as a starting point in a sustainability journey (coverage does not extend for example to manufacturing or shipping of physical products). Following these guidelines will often make Web content more accessible, usable, and performant as a by-product.

**Status of This Document**

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1.2.3 Success Criteria

1.2.4 Advisory Techniques

1.3 Conformance

1.3.1 Conformance Requirements

1.3.2 Conformance Claims

1.4 WSG Supporting Documents

1.5 Requirements for WSG

1.6 Versions of Guidance

**2. User-Experience Design**

2.1 Undertake Systemic Impacts Mapping

2.2 Assess And Research Visitor Needs

2.3 Research Non-visitor's Needs

2.4 Consider Sustainability In Early Ideation

2.5 Account For Stakeholder Issues

2.6 Create a Frictionless Lightweight Experience By Default

2.7 Avoid Unnecessary Or An Overabundance Of Assets

2.8 Ensure Navigation And Way-finding Is Well-structured

2.9 Respect The Visitor's Attention

2.10 Use Recognized Design Patterns

2.11 Avoid Manipulative Patterns

2.12 Document And Share Project Outputs

# 4. Impact Effort

What should you do first?



Source:  
SUX Network

# Impact Effort Mapping

## Task:

Take the ideas from the last exercise and map them in the Impact Effort Map.



# Getting sustainable is not one project but an ongoing process

## 1 Set KPIs & Goals

- Set sustainability related KPIs and goals
- Make sure to break them down in doable steps

## 2 Stay in motion

- Do ongoing small steps rather than one big step followed by a long break

## 3 Feed the narrative

- Be transparent about your steps and why you do what
- Give frequent digital sustainability status updates

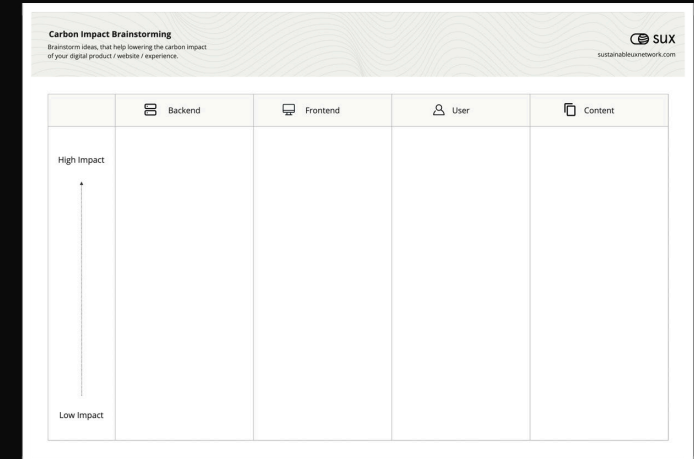
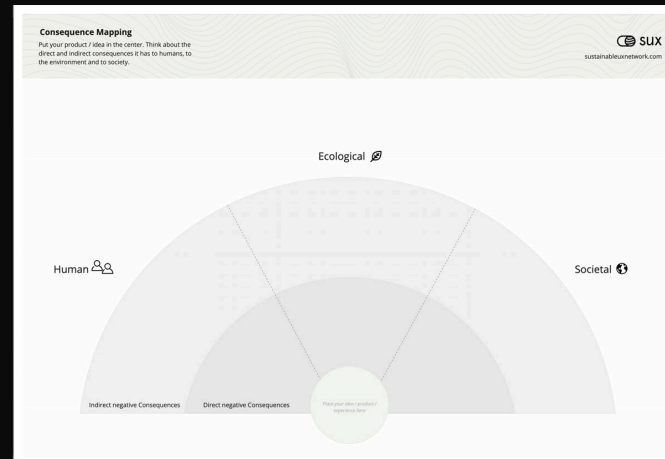
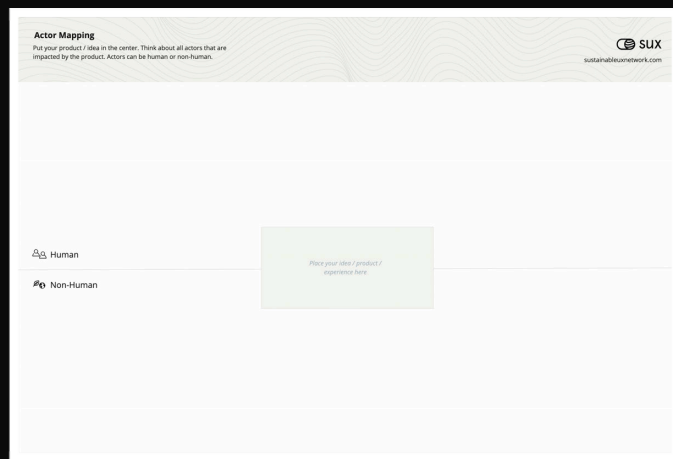


# Present the results



🕒 15min

# Present your results





What can you  
do now?

# A. Create *Transparency* about the negative impacts of your (digital) product

## Carbon Footprint

- What is the Carbon footprint of your digital product?
- What are the main drivers for it?

## Actors & Impacts

- Who are the other actors in the context of your digital product?
- Who and what is impacted by your product?

## Unintended Consequences

- Are there unintended consequences of your digital product - on other actors, the environment or the users?

## B. Start making Sustainability *Default* in your product strategy.

### Sustainable Strategy

- Incorporate Sustainability in your product (and company) strategies from the beginning

### Additional Goals

- How much less carbon will your product emit in 12 months?
- Which unintended consequences can be lowered or fully avoided in 12 months?

### Go beyond the user

- Try to void negative impacts on other actors. Make a step by step plan towards this goal
- Make sure not to exclude users (be careful with MVPs)

# C. Start making Sustainability *Default* in your product building/design processes.

## Design

- Start using carbon-friendly design and build practices: Elements, Fonts, Colors, etc.
- Identify and use Sustainable Defaults

## Building

- Start using Carbon Friendly build practices: Caching, Image Formats, Lazy Loading etc.
- Green Hosting

## Content

- Question your content from sustainable point of view: is it necessary?
- Questions the used medium: Video / picture necessary?





# Web Sustainability Guidelines (WSG) 1.0

<https://w3c.github.io/sustyweb/>

**W3C Community Group**  
Draft Report

## Web Sustainability Guidelines (WSG) 1.0

Draft Community Group Report 30 August 2023

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    - 1.2.2 Guidelines
    - 1.2.3 Success Criteria
    - 1.2.4 Advisory Techniques
  - 1.3 Conformance
    - 1.3.1 Conformance Requirements
    - 1.3.2 Conformance Claims
  - 1.4 WSG Supporting Documents
  - 1.5 Requirements for WSG
  - 1.6 Versions of Guidance
- 2. User-Experience Design**
  - 2.1 Undertake Systemic Impacts Mapping
  - 2.2 Assess And Research Visitor Needs
  - 2.3 Research Non-visitor's Needs
  - 2.4 Consider Sustainability In Early Ideation
  - 2.5 Account For Stakeholder Issues
  - 2.6 Create a Frictionless Lightweight Experience By Default
  - 2.7 Avoid Unnecessary Or An Overabundance Of Assets
  - 2.8 Ensure Navigation And Way-finding Is Well-structured
  - 2.9 Respect The Visitor's Attention
  - 2.10 Use Recognized Design Patterns
  - 2.11 Avoid Manipulative Patterns
  - 2.12 Document And Share Project Outputs



„For there is always light,  
if only we're brave  
enough to see it.  
If only we're brave  
enough to be it.“

Amanda Gorman

SUX

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How UX can (hopefully) save the world

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WIIP

Let's get **in touch**.

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