Hi!

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Integrating sustainability in product design

Emotions & Journey

1 Awareness and Assessment	2 Strategy and Implementation	3 Monitoring and Continuous Improvement
Curious	Ambitious	Resilient
Intrigued	Empowered	Reflective
Concerned	Collaborative	Adaptive
Hopeful	Innovative	Engaged

Objectives

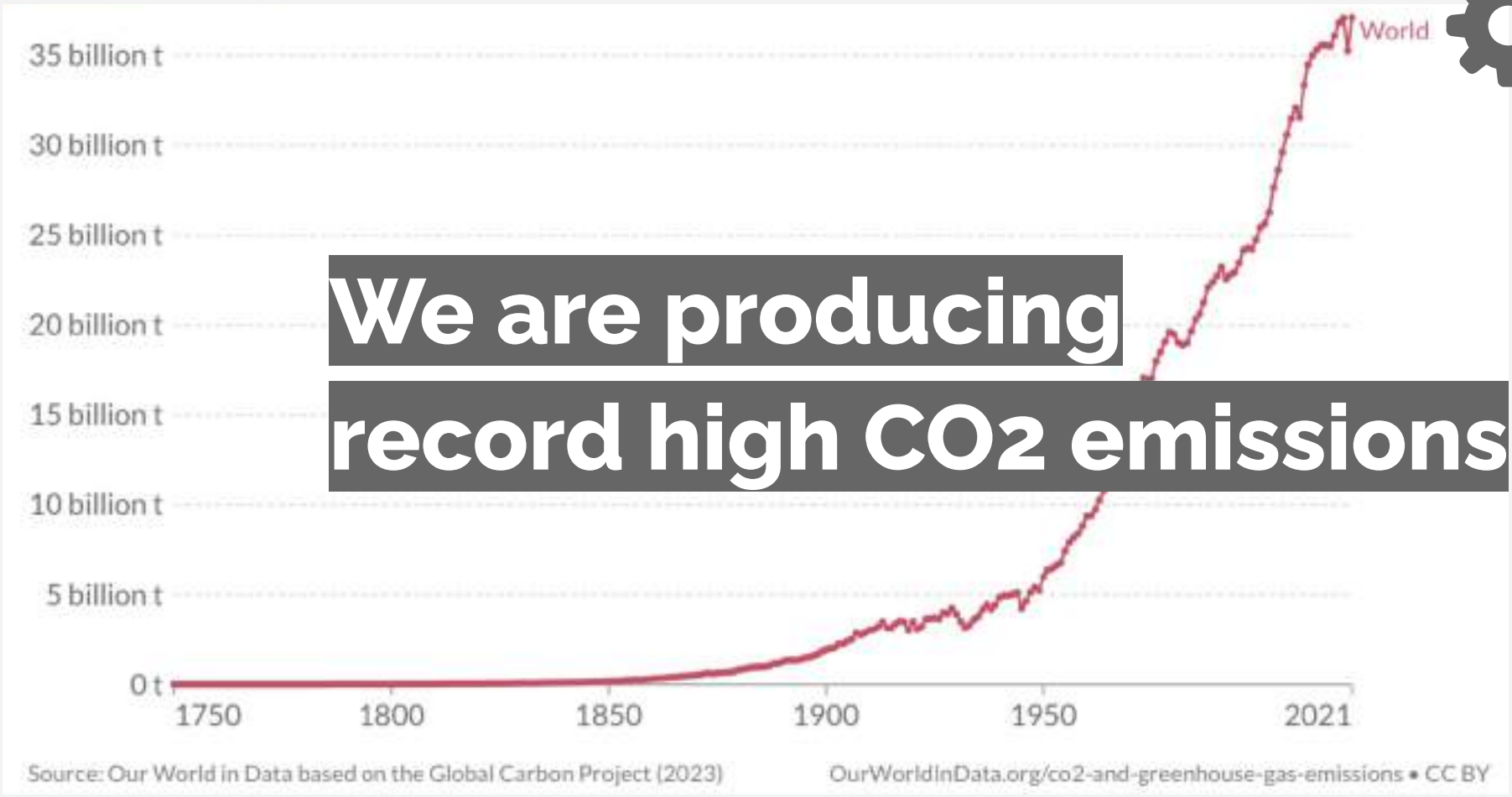
- Use one tool to measure a website's footprint
- Get inspired by one practical strategy for positive impact
- Practice one technique to advocate for sustainability

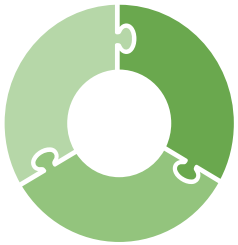
“

Why?

We are producing an enormous amount of waste

We are producing record high CO_2 emissions





Design for sustainability

Build an experience that:

- Takes minimum of resources
- Creates minimum waste
- Considers the well-being of people, society & nature

1

A. Awareness

How is the digital space contributing?

7

kg CO_2/ 1GB
Online information

- **5 billion** people on internet
- **7 h/ day** on internet

Source: Roberts, T. & Writer, R., 2021

33

kg CO_2/ year

10 idle desktop computers

Source: Scott Stonham, 2023

44-88

kg CO_2/ year

One laptop on for 8 h/day

Source: Roberts, T. & Writer, R., 2021

96%

less CO_2

When not using video

Source MIT., 2021

2022

4 %

of annual global GHGs come from internet

- More than the commercial airline industry

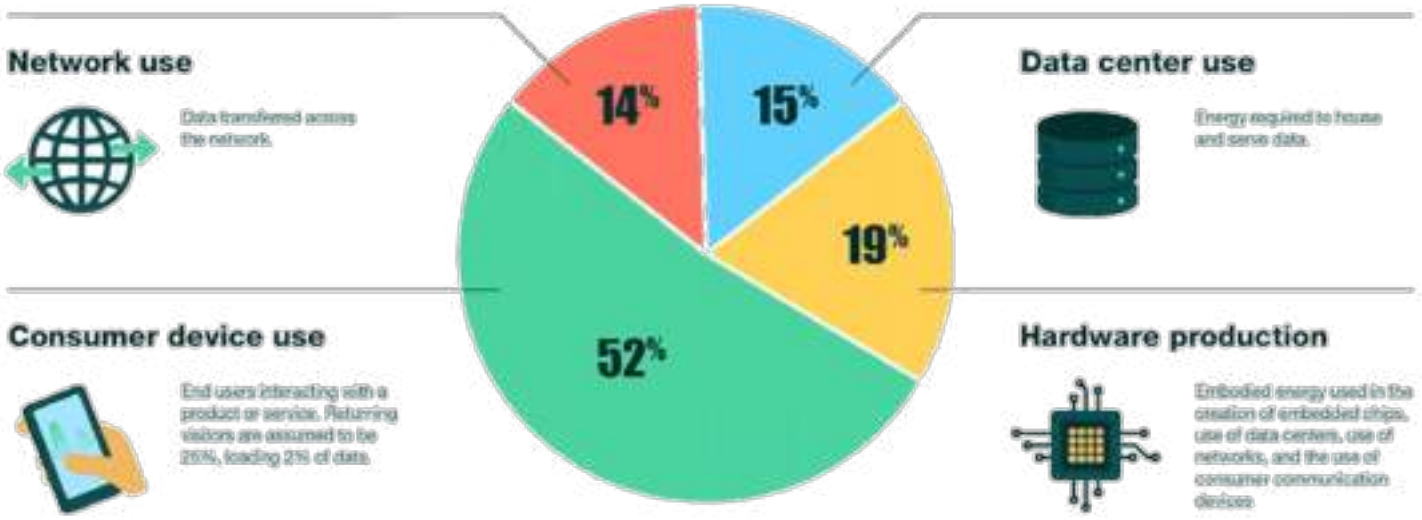
2040

250 %

GHGs increase

- Without industry action

Internet emissions



Source: Green Software Foundation, 2023

Energy consumption

Most energy goes to

- CPU (Main processor)
- GPU (Graphics processing)
- Networking (Wi-Fi and cellular radio chips)
- Screen (on-time & brightness)

300.000

Olympic-sized swimming pools
Streaming for remote work

Source: MIT, 2021

Social Media

Misinformation
Harassment
Polarisation
Negativity
Addiction

Source: Pew Research Center, 2020

1

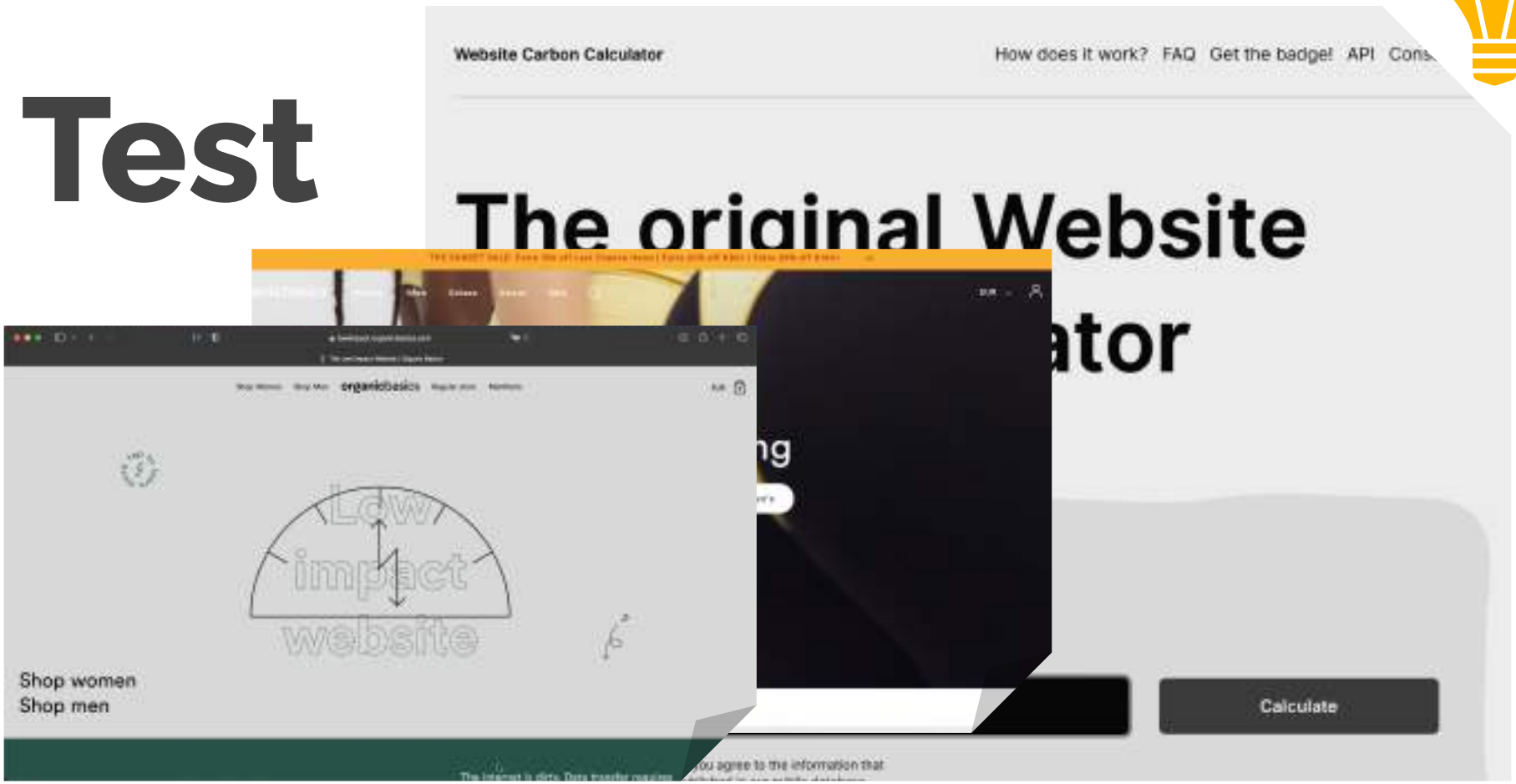
B. Assessment

How is the digital space impacting the environment and the people?

Tool

Website Carbon Calculator
How does it work? FAQ Get the badge! API
The original Website Carbon calculator
Estimate your web page carbon footprint:
Your web page address
Web page URL
Calculate

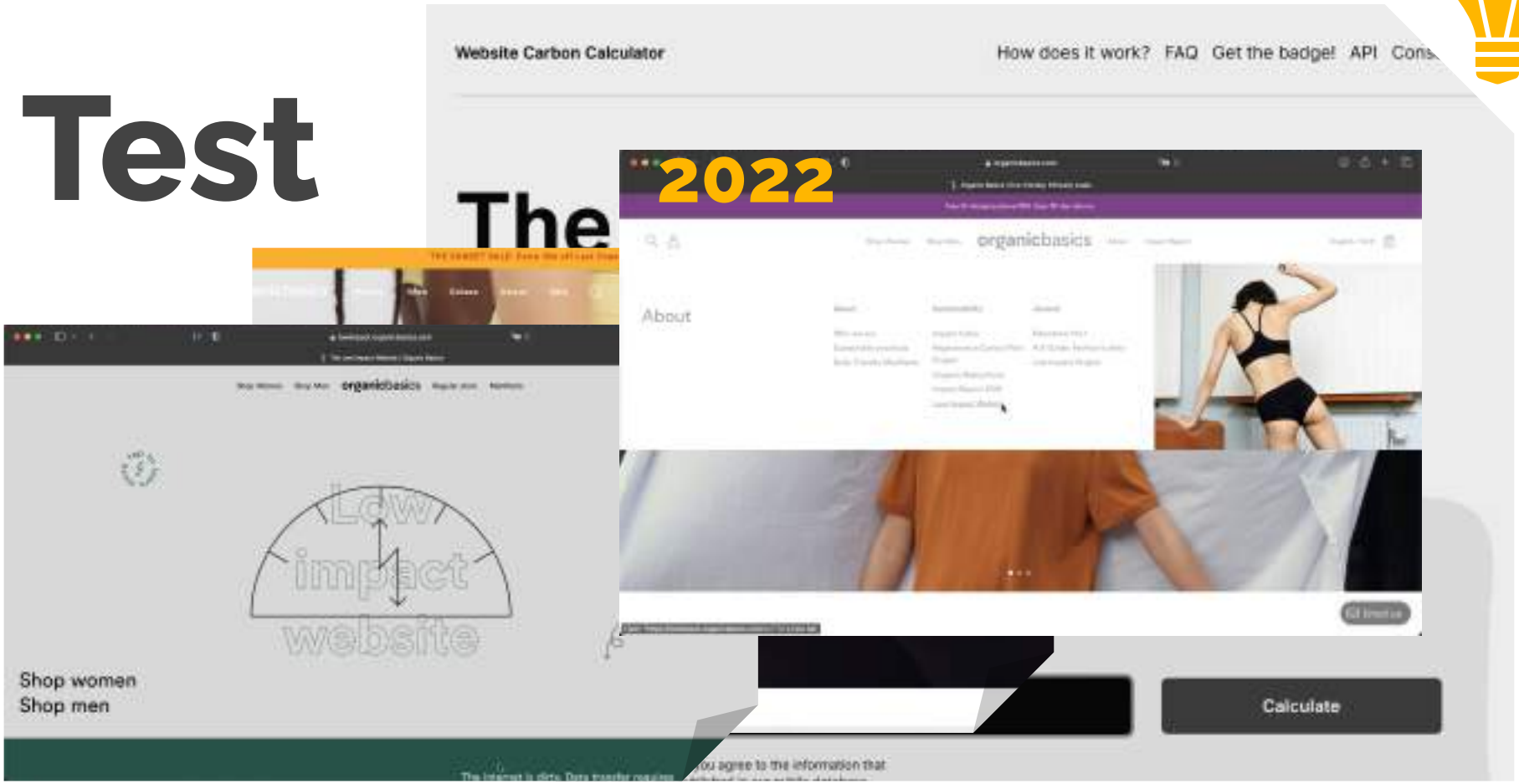
Test


Website Carbon Calculator
How does it work?
FAQ
Get the badge!
API
The original Website
ator
Calculate
Low
impact
website
Shop women
Shop men

Most energy

- Playing videos
- Displaying high resolutions images
- Performing animations and interactions
- Tracking
- Scripts from third-party tools

Test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organicbasics
About
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impact
website
Shop women
Shop men
Calculate

Tools

Beacon

Ecograder

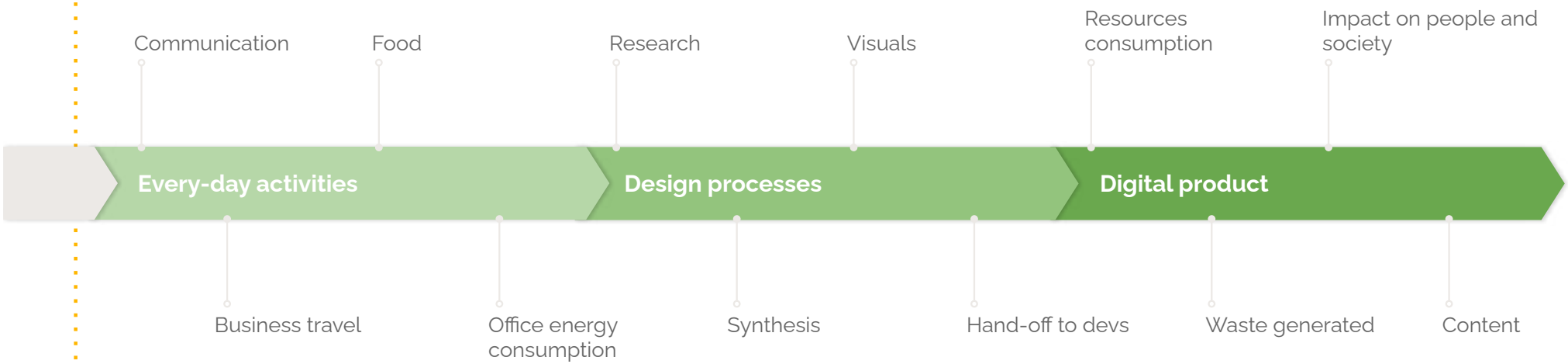
HubSpot TOOLS
WEBSITE GRADER

2

Strategy

How can we make the digital space be more sustainable?

Sustainability



Printing

Research

- 40,000 people answered a question about the strength of their desire to purchase a new car.
- In the following 6 months, the actual rates of car purchase among the group were 35% above average.

The power of one question

Source: Payne, O. (2012)

Research

The power of one question

- Simply by measuring the state, researchers changed it.

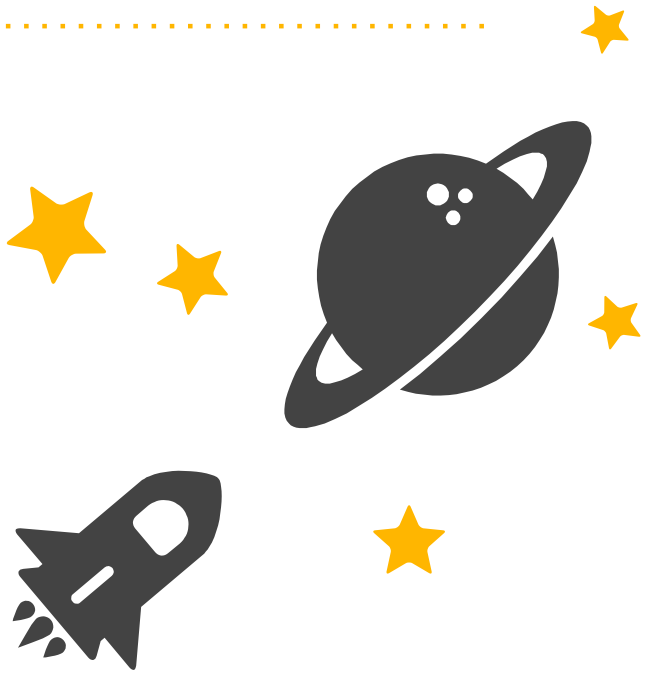
What question can you ask
to start the conversation about
the sustainability
of your digital product?

3

Monitoring

How can we advocate for sustainable digital products?

Use numbers



Show impact to users

Give options to users

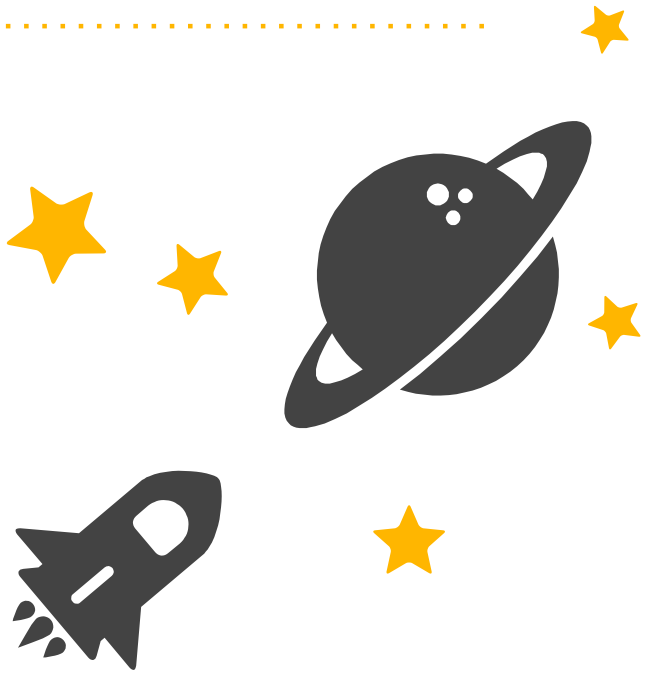
Show impact

Visibility of saving CO2

Give options

Lowering CO_2 emissions

Look for allies

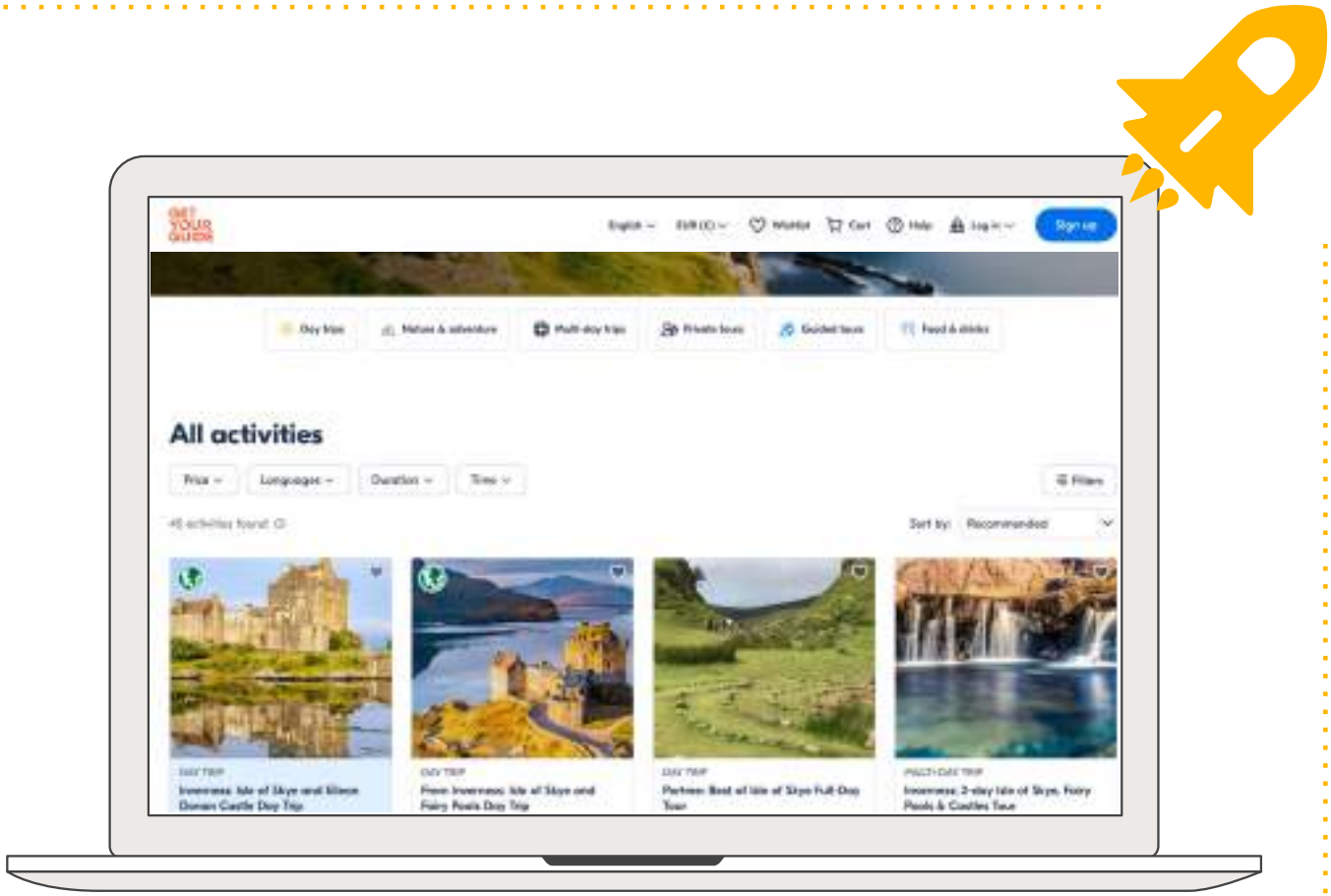


Measure impact on business

Measure impact

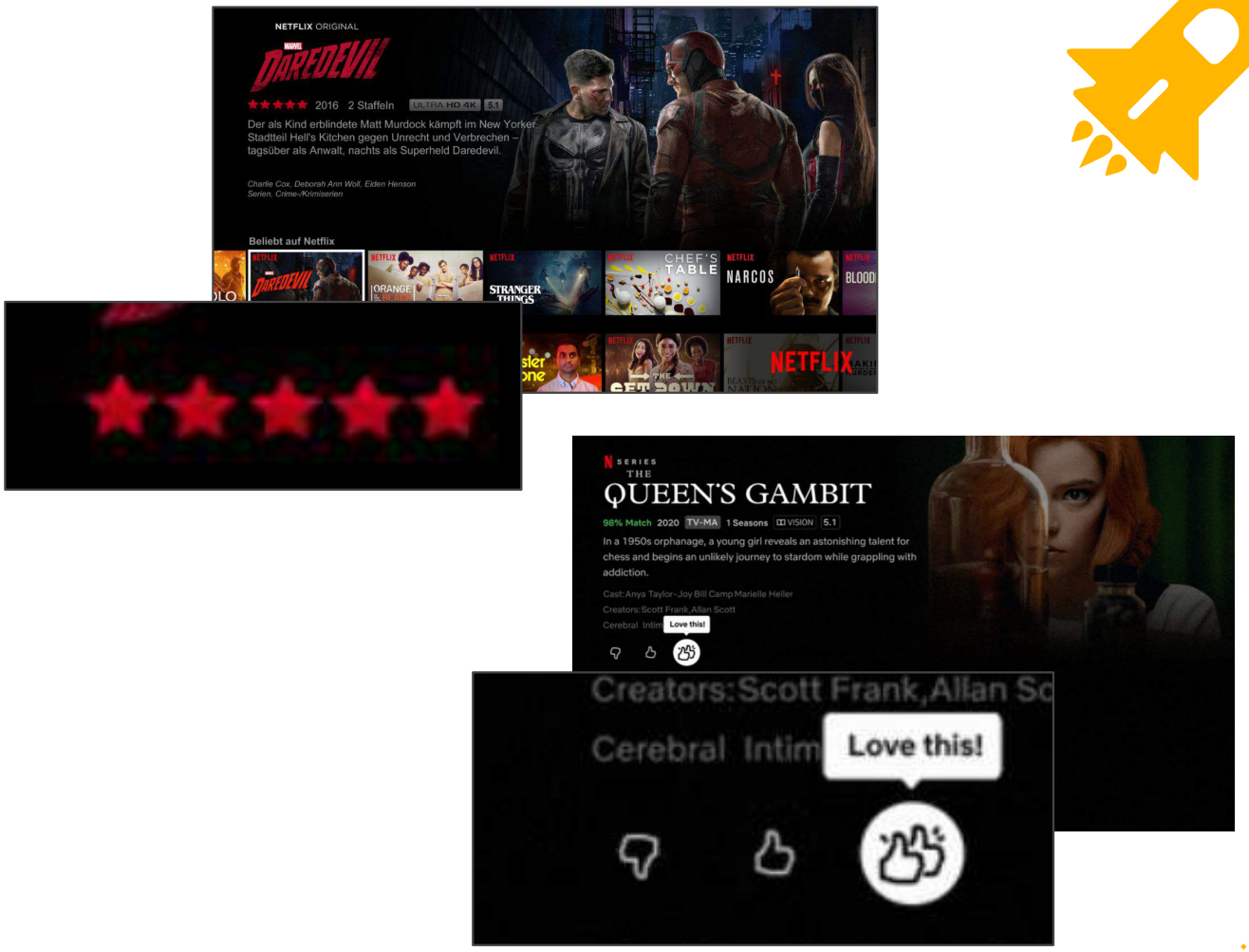
Eco-certified Isle of, Skye experiences generated 291% more NR than non eco-certified tours.

(2021)



Measure impact

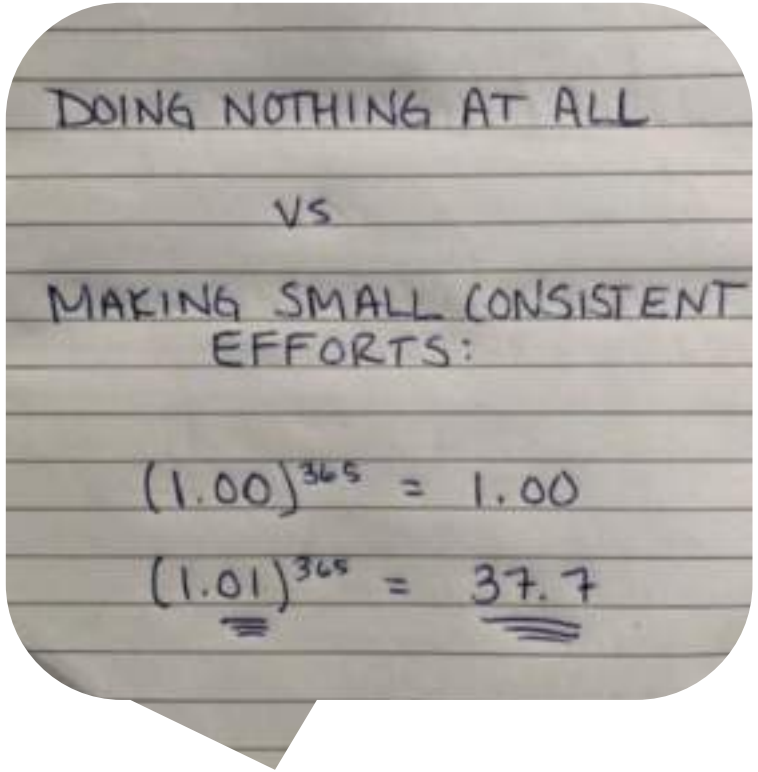
Thumbs got 200% more ratings than the traditional star-rating feature.



Source: Roettgers, J. (2017)

Take-away

- One tool to measure a website's footprint
- One practical strategy for positive impact
- One technique to advocate for sustainability


DOING NOTHING AT ALL
VS
MAKING SMALL CONSISTENT EFFORTS:
$(1.00)^{365} = 1.00$
$(1.01)^{365} = 37.7$

Remember

Credits

Special thanks to all the people who made and released these awesome resources for free:

- Presentation template by SlidesCarnival
- Photographs by Unsplash

Thank you!

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