



# GO FAMILY

[www.gofamily.be](http://www.gofamily.be)



**Tim Sterckx**

Helping companies reduce their "Digital Carbon Footprint". 🌍 Proud co-founder of Go Family, an ec...



tim@gosmart.digital



**Go  
Smart  
Digital**

Why Sustainability?

Using IT to create an impact



# WHY GREEN IT?

## Frankrijk loopt voorop met reparatie-index voor elektronische producten

SUSTAINABILITY - In Frankrijk moet vanaf januari 2021 een aantal elektronische producten worden voorzien van informatie over de herstelbaarheid op een schaal van 1 tot 10.

30 DECEMBER 2020



## Amsterdam mist nieuwe kabelfabriek door stroomtekort



Datacenters vreten heel wat energie in Amsterdam. De krapte aan stroom dwingt een fabrikant van zeekabels een productiesite in de provincie Groningen te bouwen. ©ANP

BAS KURSTJENS | 24 mei 2022 07:45

De Nederlandse hoofdstad worstelt met opstoppingen op het elektriciteitsnet door de komst van grote datacenters, waardoor de fabrikant van zeekabels TKH besluit zijn nieuwe fabriek niet in de

## ENERGIE

## 'De hoofdstad komt als een piepende trein tot stilstand'

Orla McDonald Joris Polman 6 mei 12:00

In het Westelijk Havengebied verrijst het grootste datacenter van Amsterdam. Mede daardoor moeten bedrijven op elektriciteitsrantsoen, stagneert de vergroening van de stad en staan woningbouwprojecten op losse schroeven: 'Amsterdam gaat op slot.'



Illustratie: Istock/FD Studio



## TECHNOLOGIE

### Als de chipindustrie groeit als voorspeld, loopt de CO2-uitstoot volledig uit de hand

 Groei chipsector verhoogt uitstoot CO2

 Marc Hijink

 18 mei 2022

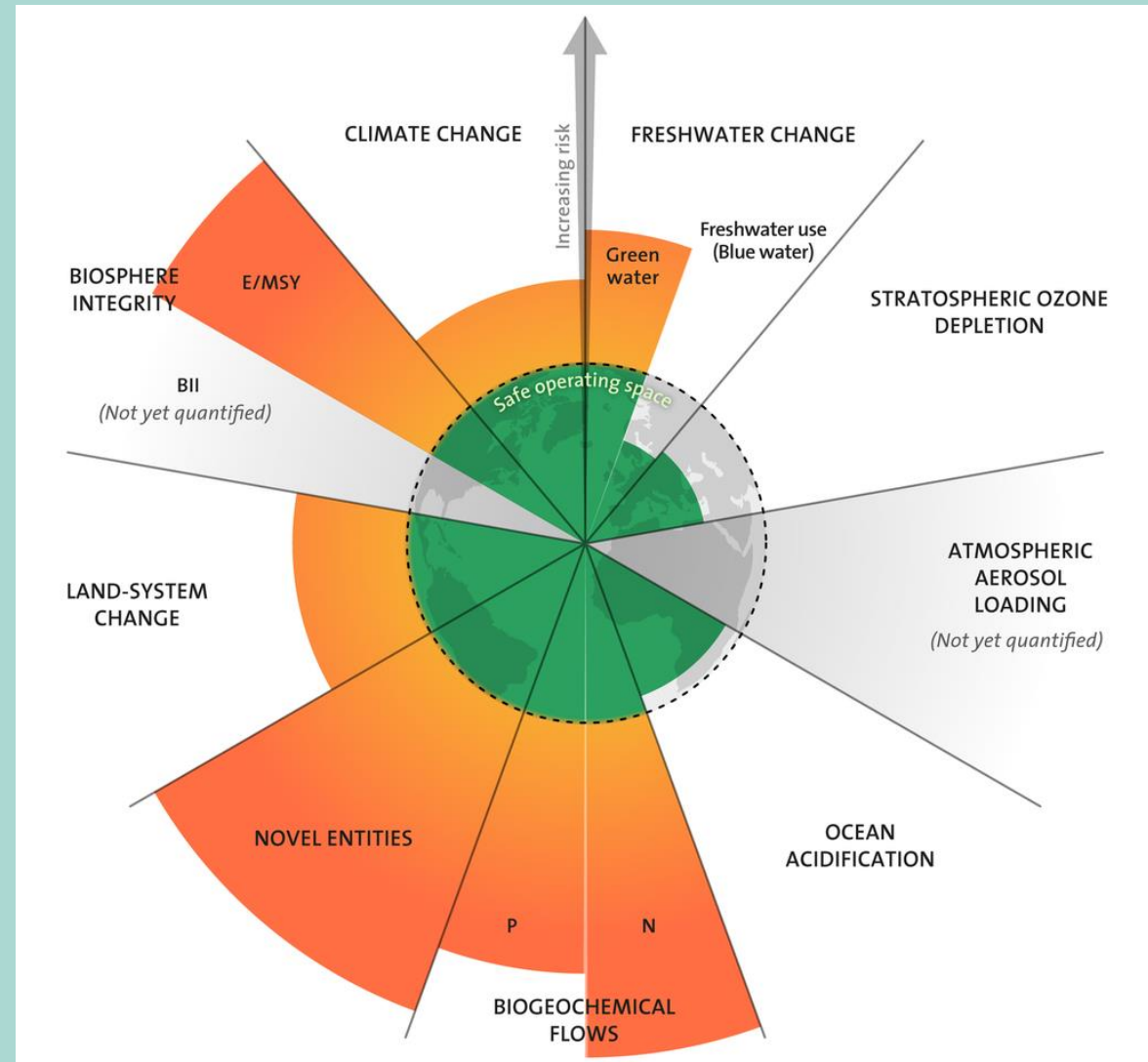
...

This is not "green IT"



# Why green IT?

We are living over the edge of our planetary boundaries



# Why green IT?

The top 4 risks in the report are climate related, and there are 6 environmental risks in total.

Global Risks Report 2023



## Top 10 Risks

“Please estimate the likely impact (severity) of the following risks over a 2-year and 10-year period”

### 2 years



### 10 years



#### Risk categories

■ Economic ■ Environmental ■ Geopolitical ■ Societal ■ Technological

Source: World Economic Forum, Global Risks Perception Survey 2022-2023



# Why green IT?

Striving to be the first climate-neutral continent



Ambition



SFDR – Sustainable Finance Disclosure Regulation 2021-...

EU Environmental Taxonomy 2021-...

Third party – Financial Sector

CSDDD – Corporate Sustainability Due Diligence Directive Under construction

CSRD – Corporate Sustainability Reporting Directive 2024-2028-...

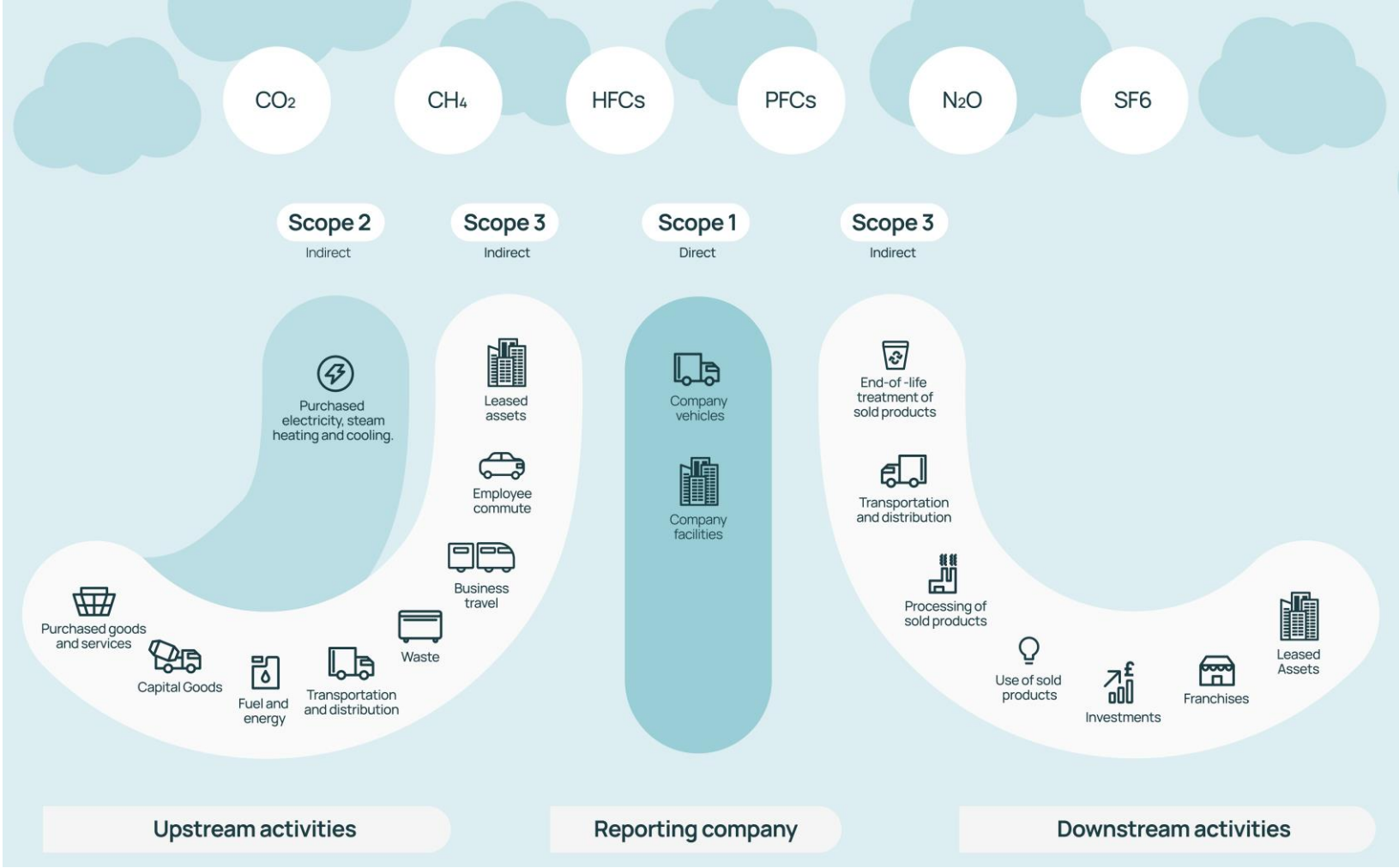
EU Environmental Taxonomy 2021-...

European Companies

Means – Finance strategy\*

Consider Sustainability in capital flows, risk management and long-term perspective in a transparent way

# Scope 1, 2 and 3



# Why green IT?

ESG Reporting – IT CO<sub>2</sub> emissions **mandatory** for companies under CSR-Directive

## ESRS E1 Climate change



November 2022

AR 46. The total GHG emissions disaggregated by Scopes 1 and 2 and significant Scope 3 shall be presented according to the table below.

|   | Retrospective |              |   | Milestones and target years |      |      |        |                             |
|---|---------------|--------------|---|-----------------------------|------|------|--------|-----------------------------|
|   | Base year     | Compa-rative | N | % N / N-1                   | 2025 | 2030 | (2050) | Annual % target / Base year |
| <b>Scope 1 GHG emissions</b>  |               |              |   |                             |      |      |        |                             |
| Gross Scope 1 GHG emissions (tCO <sub>2</sub> eq)                               |               |              |   |                             |      |      |        |                             |
| Percentage of Scope 1 GHG emissions from regulated emission trading schemes (%) |               |              |   |                             |      |      |        |                             |
| <b>Scope 2 GHG emissions</b>  |               |              |   |                             |      |      |        |                             |
| Gross location-based Scope 2 GHG emissions (tCO <sub>2</sub> eq)                |               |              |   |                             |      |      |        |                             |
| Gross market-based Scope 2 GHG emissions (tCO <sub>2</sub> eq)                  |               |              |   |                             |      |      |        |                             |
| <b>Significant scope 3 GHG emissions*</b>                                       |               |              |   |                             |      |      |        |                             |
| Total Gross indirect (Scope 3) GHG emissions (tCO <sub>2</sub> eq)              |               |              |   |                             |      |      |        |                             |
| Purchased goods and services  |               |              |   |                             |      |      |        |                             |
| [Optional sub-category: Cloud computing and data centre services                |               |              |   |                             |      |      |        |                             |
| Capital goods]  |               |              |   |                             |      |      |        |                             |
| Fuel and energy-related activities  |               |              |   |                             |      |      |        |                             |
| Upstream leased assets  |               |              |   |                             |      |      |        |                             |
| Waste generated in operations   |               |              |   |                             |      |      |        |                             |
| Processing of sold products   |               |              |   |                             |      |      |        |                             |
| Use of sold products  |               |              |   |                             |      |      |        |                             |
| End-of-life treatment of sold products  |               |              |   |                             |      |      |        |                             |
| Downstream leased assets  |               |              |   |                             |      |      |        |                             |
| Franchises  |               |              |   |                             |      |      |        |                             |
| Upstream transportation and distribution  |               |              |   |                             |      |      |        |                             |
| Downstream transportation and distribution                                      |               |              |   |                             |      |      |        |                             |
| Business travels  |               |              |   |                             |      |      |        |                             |
| Employee commuting  |               |              |   |                             |      |      |        |                             |
| Financial investments   |               |              |   |                             |      |      |        |                             |
| <b>Total GHG emissions</b>  |               |              |   |                             |      |      |        |                             |
| Total GHG emissions (location-based) (tCO <sub>2</sub> eq)                      |               |              |   |                             |      |      |        |                             |
| Total GHG emissions (market-based) (tCO <sub>2</sub> eq)                        |               |              |   |                             |      |      |        |                             |

**Significant scope 3 GHG emissions\***

|   |  |  |
|---|--|--|
| <b>Total Gross indirect (Scope 3) GHG emissions (tCO<sub>2</sub>eq)</b> |  |  |
| <b>Purchased goods and services</b>                                     |  |  |
| <b>[Optional sub-category: Cloud computing and data centre services</b> |  |  |

# Legislation: pushing boundaries

Headlines / Society / USB-type C to become EU's common charger by end of 2024

## USB-type C to become EU's common charger by end of 2024

Society Updated: 06-10-2022 - 11:48  
Created: 20-04-2022 - 16:27

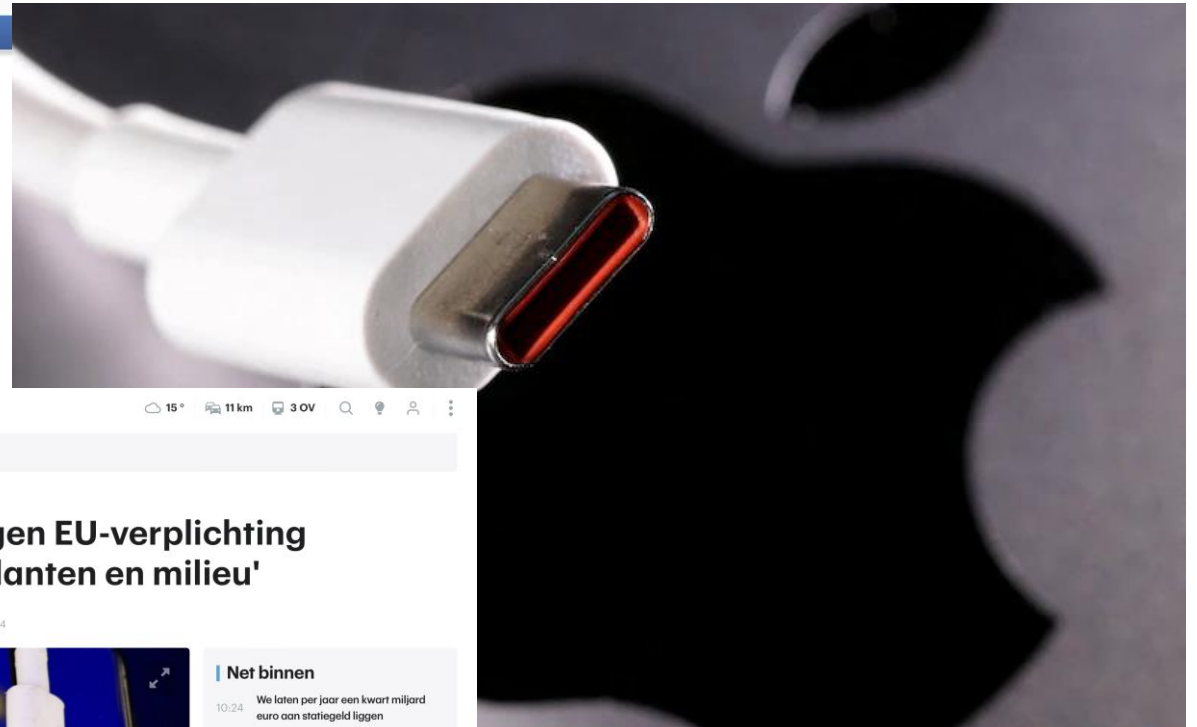


BEFORE



AFTER

Electronic devices: Parliament adopts the USB-C charger as standard



RTLnieuws

15+ 11 km 3 OV

iPhone-poort onder vuur

### Apple verzet zich tegen EU-verplichting usb-c: 'Slecht voor klanten en milieu'

Door Bright  
18 november 2021 18:56 • Aangepast 18 november 2021 19:24



Links Lightning, rechts usb-c.

#### Net binnen

- 10:24 We laten per jaar een kwart miljard euro aan staatsgeld liggen
- 10:18 Lavreysen en Hoogland in sprinttoernooi zesdaagse Rotterdam
- 10:06 Chantal wil nooit meer slachtoffer zijn van identiteitsfraude: 'Ik was wanhopig'
- 10:06 Legia spreekt van 'schandalige gebeurtenissen' in Alkmaar
- 09:58 Snoeiharde conclusies over evacuatie Kabeel: Nederland te laat gehandeld

Meer nieuws

# Why green IT?

Digitalisation is having an impact on our planet  
Raw materials are essential

Of the 83 rare earth elements in the periodic table, a total of 62 different types of metals go into the average mobile phone.

## A BREAKDOWN OF THE CRITICAL METALS IN A SMARTPHONE

Some vital metals used to build these devices are considered at risk due to geological scarcity, geopolitical issues or trade policy.

This infographic details the critical metals that you carry in your pocket.

ALKALI METAL   ALKALINE EARTH   TRANSITION METAL   BASIC METAL   LANTHANOID

### TOUCH SCREEN

It contains a thin layer of **indium** tin oxide, highly conductive and transparent, allowing the screen to function as a touch screen.



### MICROPHONE, SPEAKERS, VIBRATION UNIT

**Nickel** is used in the microphone diaphragm (that vibrates in response to sound waves). Alloys containing **neodymium**, **praseodymium** and **gadolinium** are used in the magnets contained in the speaker and microphone. **Neodymium**, **terbium** and **dysprosium** are used in the vibration unit.



### DISPLAY

The display contains several **rare earth elements**. Small quantities are used to produce the colors on the liquid crystal display. Some give the screen its glow.



### ELECTRONICS

**Nickel** is used in electrical connections. **Gallium** is used in semiconductors. **Tantalum** is the major component of micro capacitors, used for filtering and frequency tuning.



### BATTERY

The majority of smartphones use **lithium-ion** batteries.

### CASING

**Nickel** reduces electromagnetic interference. **Magnesium** alloys are superior at electromagnetic interference (EMI) shielding.



Source: University of Birmingham



elements.visualcapitalist.com

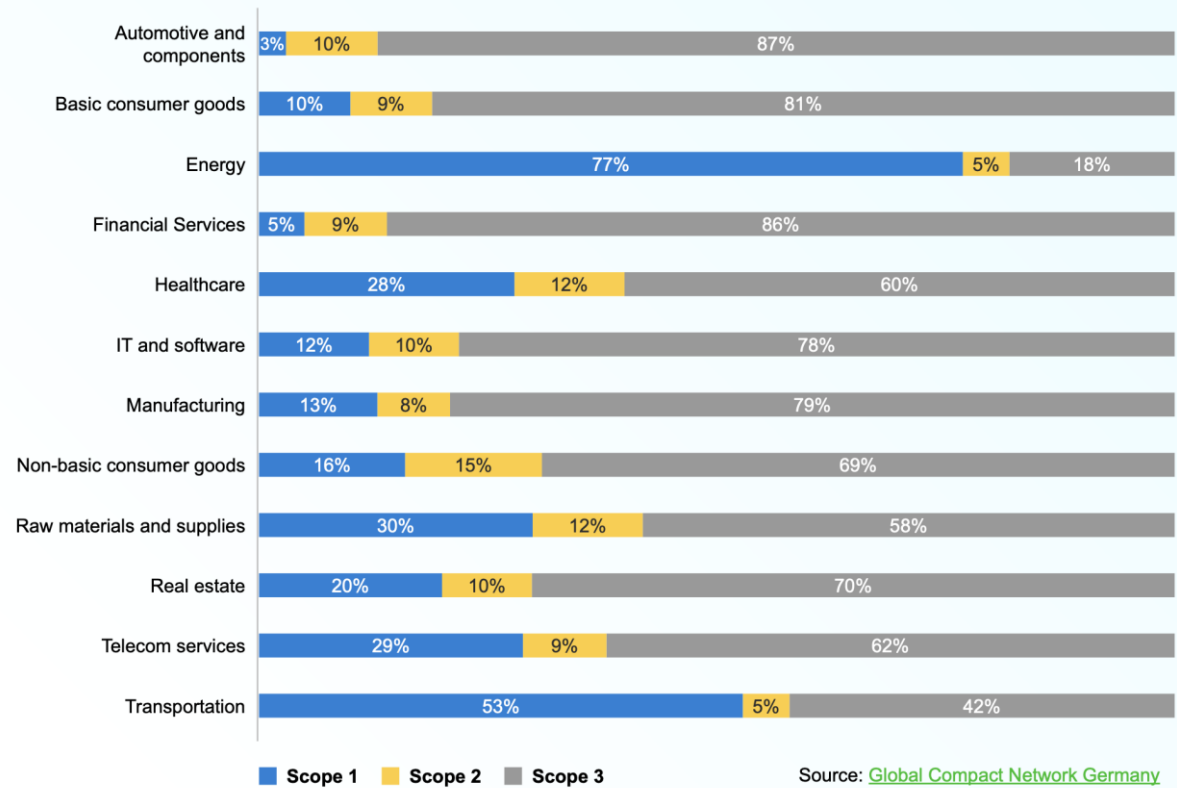
The Earth's natural resources power our everyday lives. VC Elements breaks down the building blocks of the universe.

We live in a material world.

# Why green IT?

IT emissions are for 78% scope 3 emissions, meaning indirect or related to up- and downstream processes.

## Scope 3 Emissions Dominant in Most Industries, Requiring Inter-Company Cooperation to Drive Change



Source: [Global Compact Network Germany](#)

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# Why green IT?

Digitalization is having an impact on our planet

IT's GHG emissions are equivalent to the UK annual emissions and equivalent to the aviation industry. It is mainly linked to the stage of manufacturing.

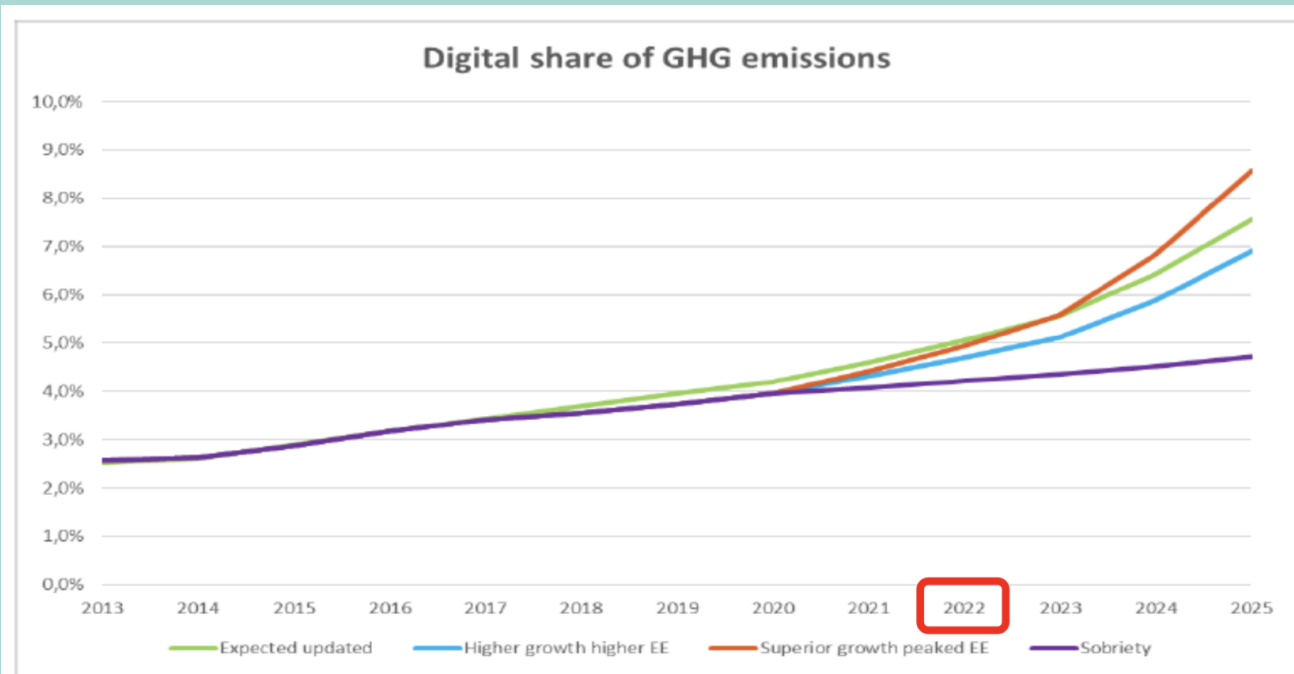


Figure 3 : Évolution 2013-2025 de la part du Numérique dans les émissions de GES

[Source : [Lean ICT Materials] Forecast Model. Produit par The Shift Project à partir des données publiées par (Andrae & Edler, 2015)]

## Environmental impact of an equipment



# Why green IT?

Digitalization can and must also be part of the solution:

top 10 ways companies are using digital to improve sustainability



Strengthen data  
privacy and security



Optimize  
resources



Enhance employee  
work and safety



Enable data gathering  
and storage



Increase energy,  
water, or fuel  
efficiency



Upgrade  
product safety



Facilitate new hybrid  
working models



Optimize  
processes



Reduce  
carbon emissions



Make supply  
chains traceable  
and transparent

Note: Reflects digital applications mentioned by over 35% of respondents  
Source: Digital and Sustainability Survey 2021, conducted by Bain & Company and the World Economic Forum (n=400)



# Impact of Data

DATA is having an impact on our planet

IT's GHG emissions are equivalent to the UK annual emissions and equivalent to the aviation industry. It is mainly linked to the stage of manufacturing.

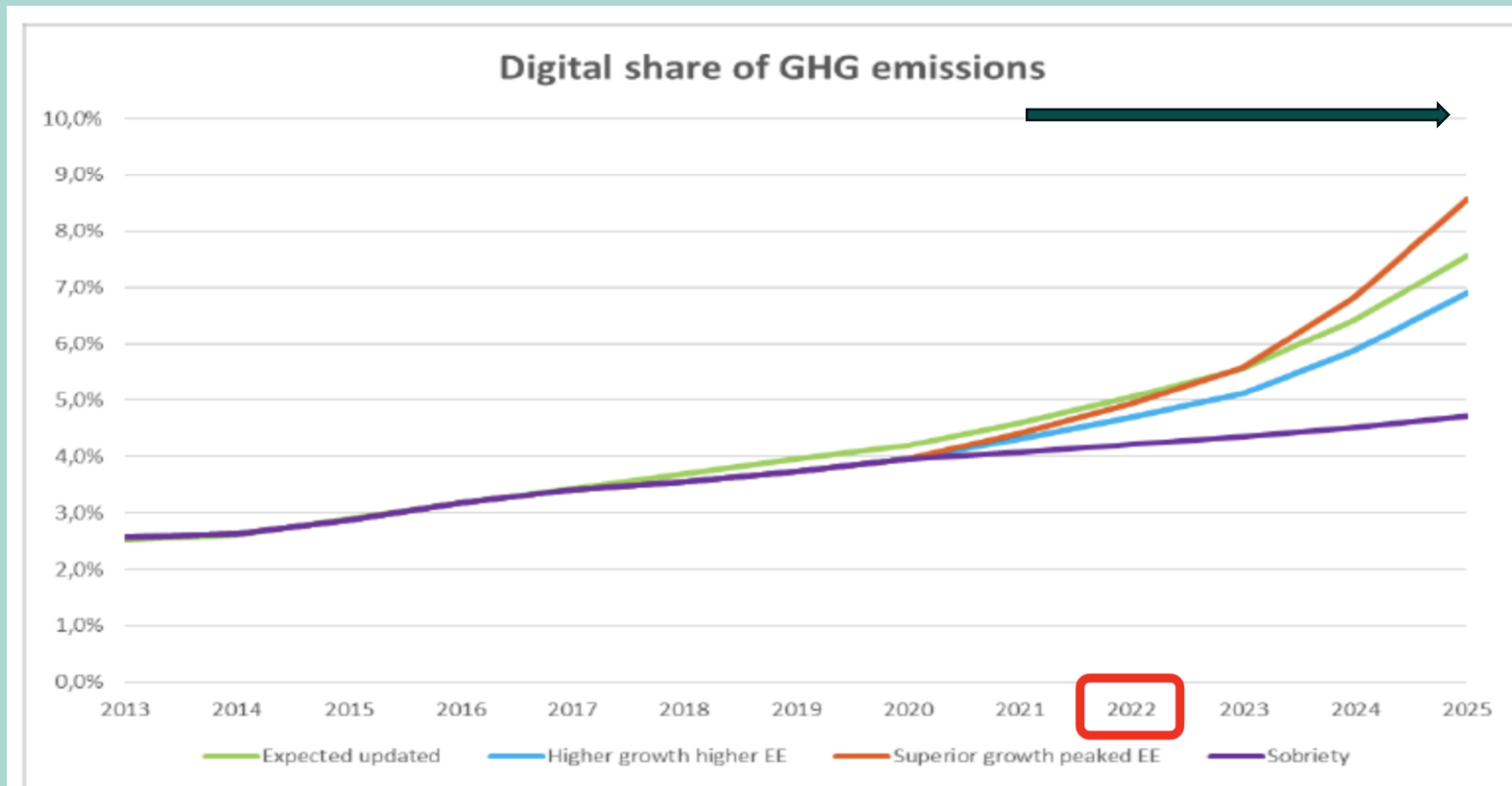
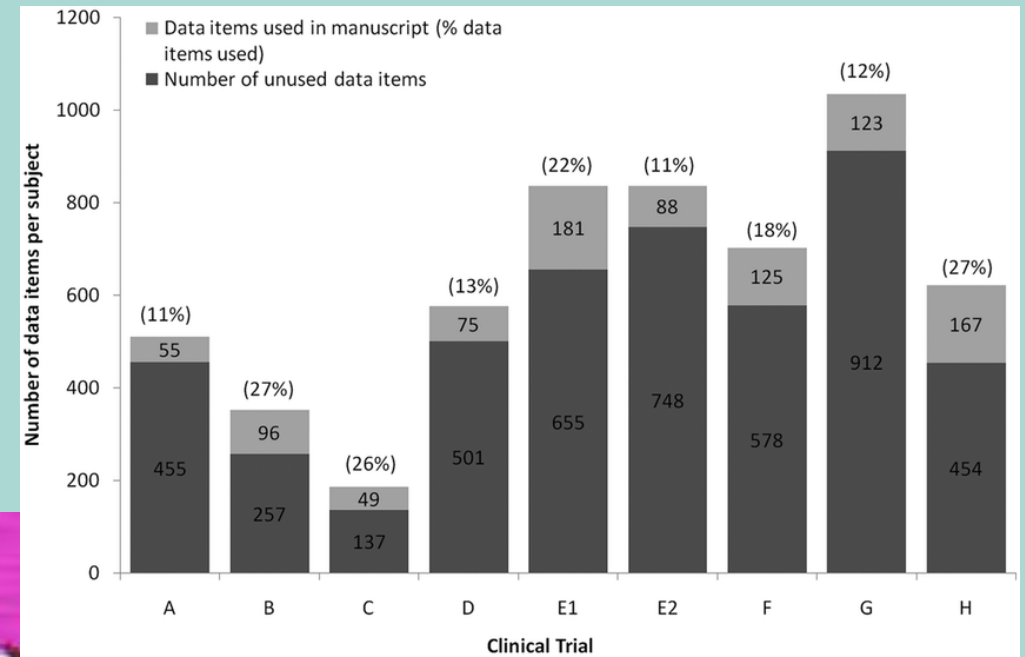


Figure 3 : Évolution 2013-2025 de la part du Numérique dans les émissions de GES  
[Source : [Lean ICT Materials] Forecast Model. Produit par The Shift Project à partir des données publiées par (Andrae & Edler, 2015)]

# There is too much unused data!



# The impact of data on CO<sub>2</sub>

1 email: 4g

1 email with attachment: 50g

1 Megabyte of data: 2 g

30mins virtual call: 18g

1 Google search: 0,2 g

1 ChatGPT question: 3 g  
(Running ChatGPT= 6M € / day)

Reference: Gasoline car in EU: 120g/km



# There is too much unused data!

On average an employee in a mid-sized company uses 90MB of data per minute:

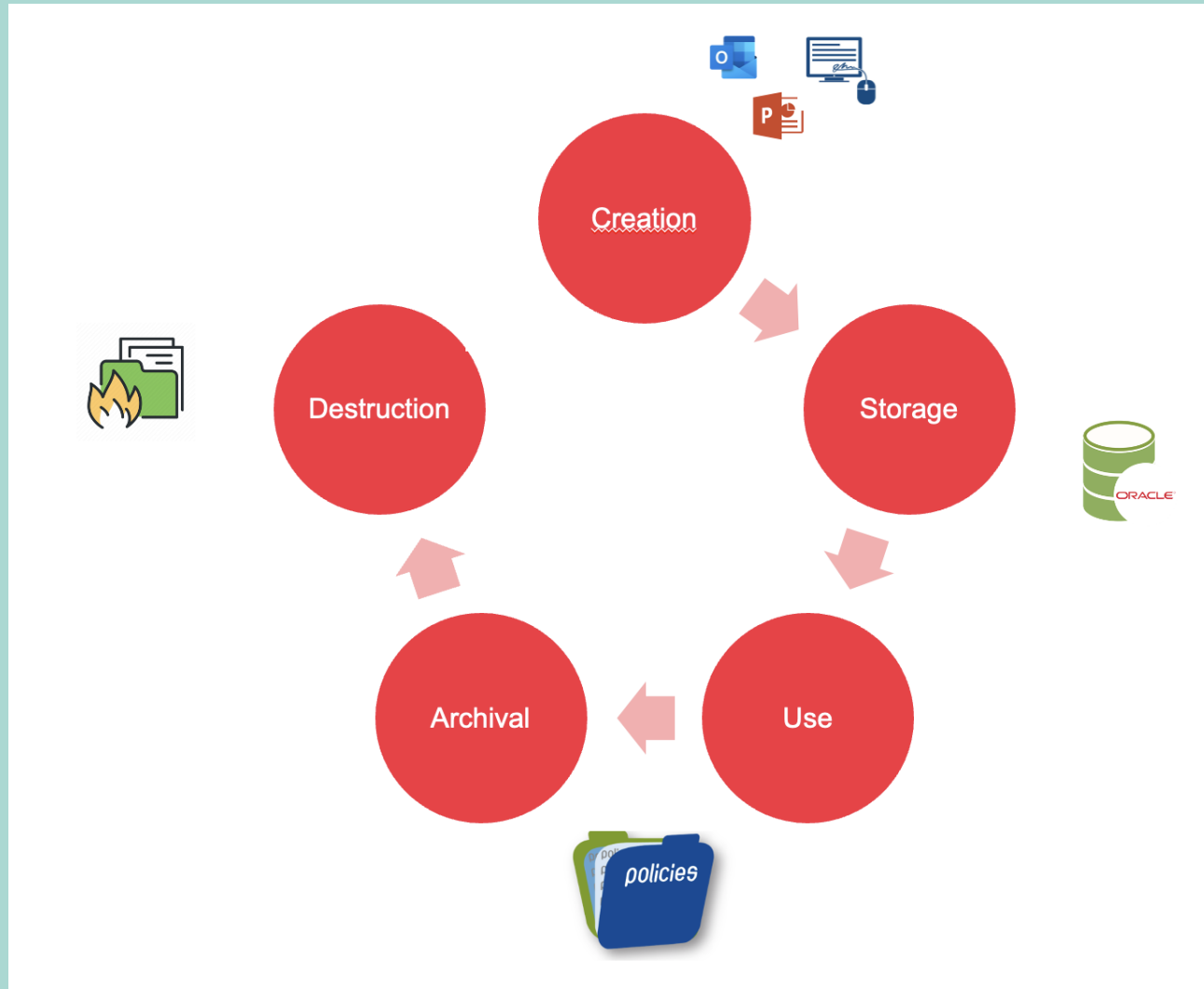
- Virtual Meetings + Calls
- Mail
- Internet
- AI
- Socials

Annually: 22 TONNES CO2 / Employee

Only 10% of data generated will be re-used.



# Data life cycle management: best practice



# Why Sustainable IT?

## Return on sustainable investment: ROSI

### Financial values

- IT cost optimization
- Costs savings from lower IT energy use
- Costs savings from longer device lifecycles
- Costs savings from lower business energy use
- Ease of compliance with regulatory standards and requirements

### Non-Financial values

- Improved brand perception
- Attractiveness to employees
- Better workforce loyalty and agility
- Lower carbon footprint
- Less e-waste



GOFOREST

[www.goforest.be](http://www.goforest.be)



Hi 🙋,  
I'm Sarah 🧑.  
Nice 🌱 to meet you!

Co-founder &  
Chief Ecological Officer (CEO)

**Go Forest & Go Ocean**

We plant trees with impact.  
We restore oceans.





GOOCEAN

Co-Founder



GO  
SMART  
/DIGITAL

Co-Founder

# GO FAMILY



**REDUCE**



GO  
SMART  
DIGITAL  
Save costs. Save the planet.



**GIVE BACK**

GOFORREST

GOOCEAN



# GO FAMILY

[www.gofamily.be](http://www.gofamily.be)

GIVE BACK



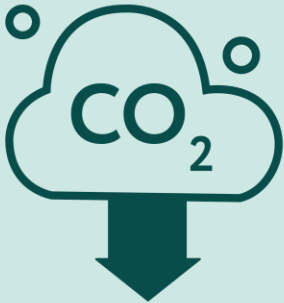
REDUCE



GIVE BACK



Calculate



Reduce



Give back





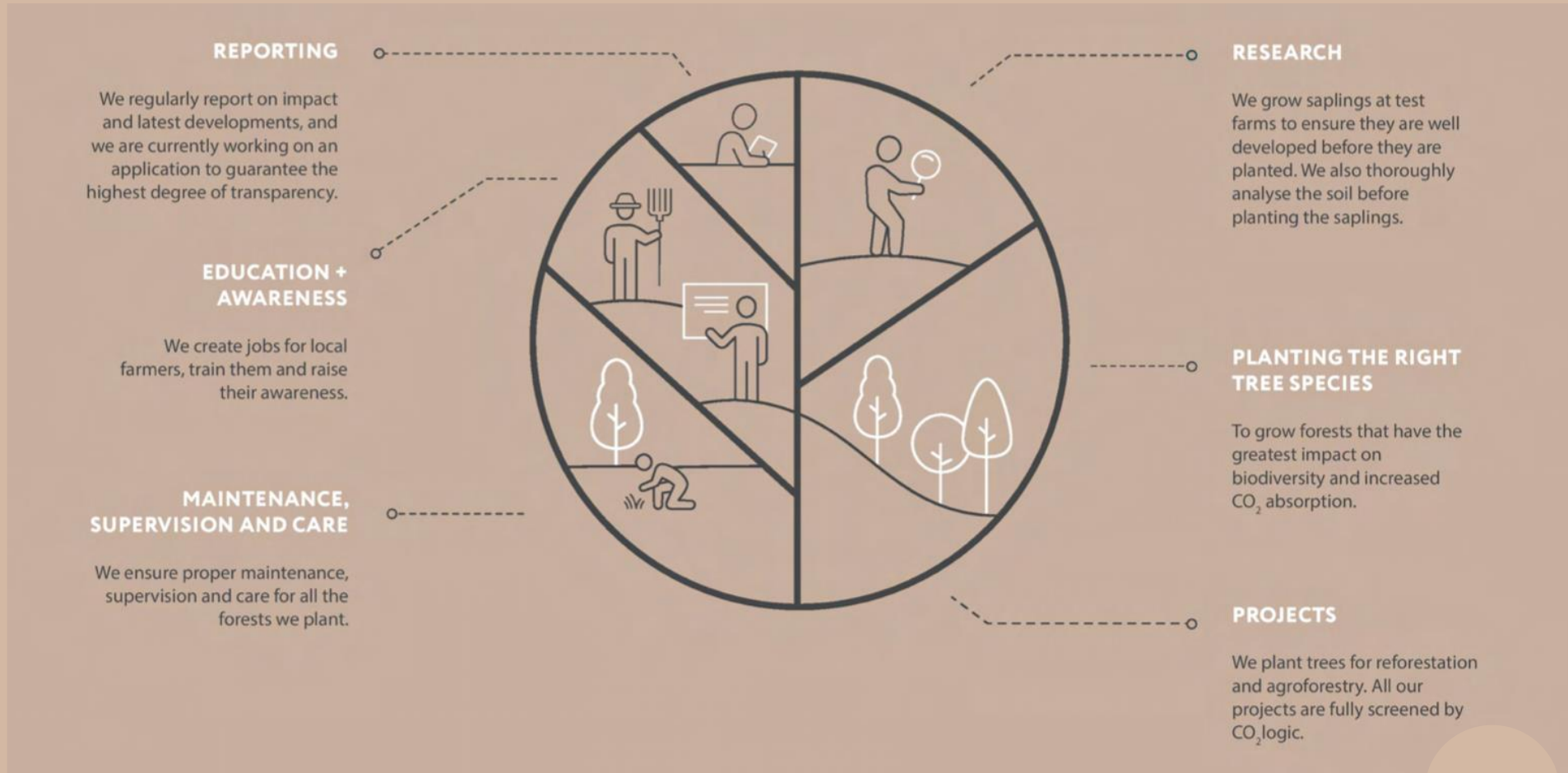






# **Giving back to the planet**

# We don't only plant trees, we make sure they **grow**.



**1** NO  
POVERTY



**2** ZERO  
HUNGER



**3** GOOD HEALTH  
AND WELL-BEING



**4** QUALITY  
EDUCATION



**5** GENDER  
EQUALITY



**6** CLEAN WATER  
AND SANITATION



**7** AFFORDABLE AND  
CLEAN ENERGY



**8** DECENT WORK AND  
ECONOMIC GROWTH



**9** INDUSTRY, INNOVATION  
AND INFRASTRUCTURE



**10** REDUCED  
INEQUALITIES



**11** SUSTAINABLE CITIES  
AND COMMUNITIES



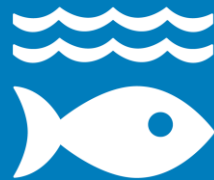
**12** RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION



**13** CLIMATE  
ACTION



**14** LIFE  
BELOW WATER



**15** LIFE  
ON LAND



**16** PEACE, JUSTICE  
AND STRONG  
INSTITUTIONS



**17** PARTNERSHIPS  
FOR THE GOALS



**SUSTAINABLE  
DEVELOPMENT  
GOALS**

**WHERE  
DO WE PLANT  
WITH IMPACT?**





## REFORESTATION & AGROFORESTRY IN PERU



# REFORESTATION IN BELGIUM



## AGROFORESTRY & MANGROVE PLANTING IN MADAGASCAR





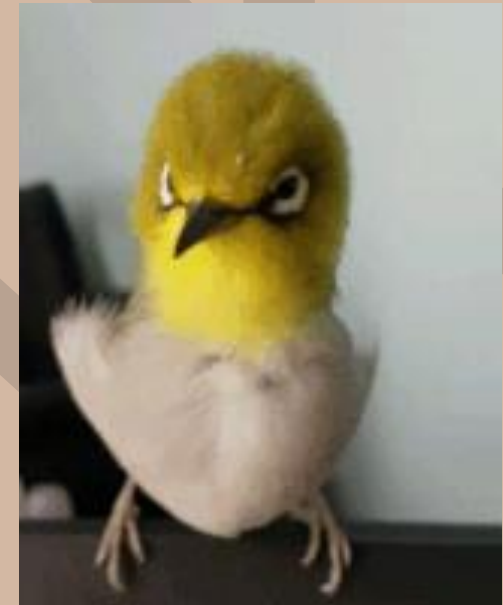
# Are we the netflix of the trees?

- More than **500 members**
- à la carte
- Going from one-off support to monthly membership
- From €2 per tree, including monitoring and 30 years of maintenance
- Planting in more than **17 countries**
- Forest and ocean restoration
- Digital tools for reporting and communication
- Blockchain to register year results
- (Y)our Storytelling



# **BECOME A BADASS**

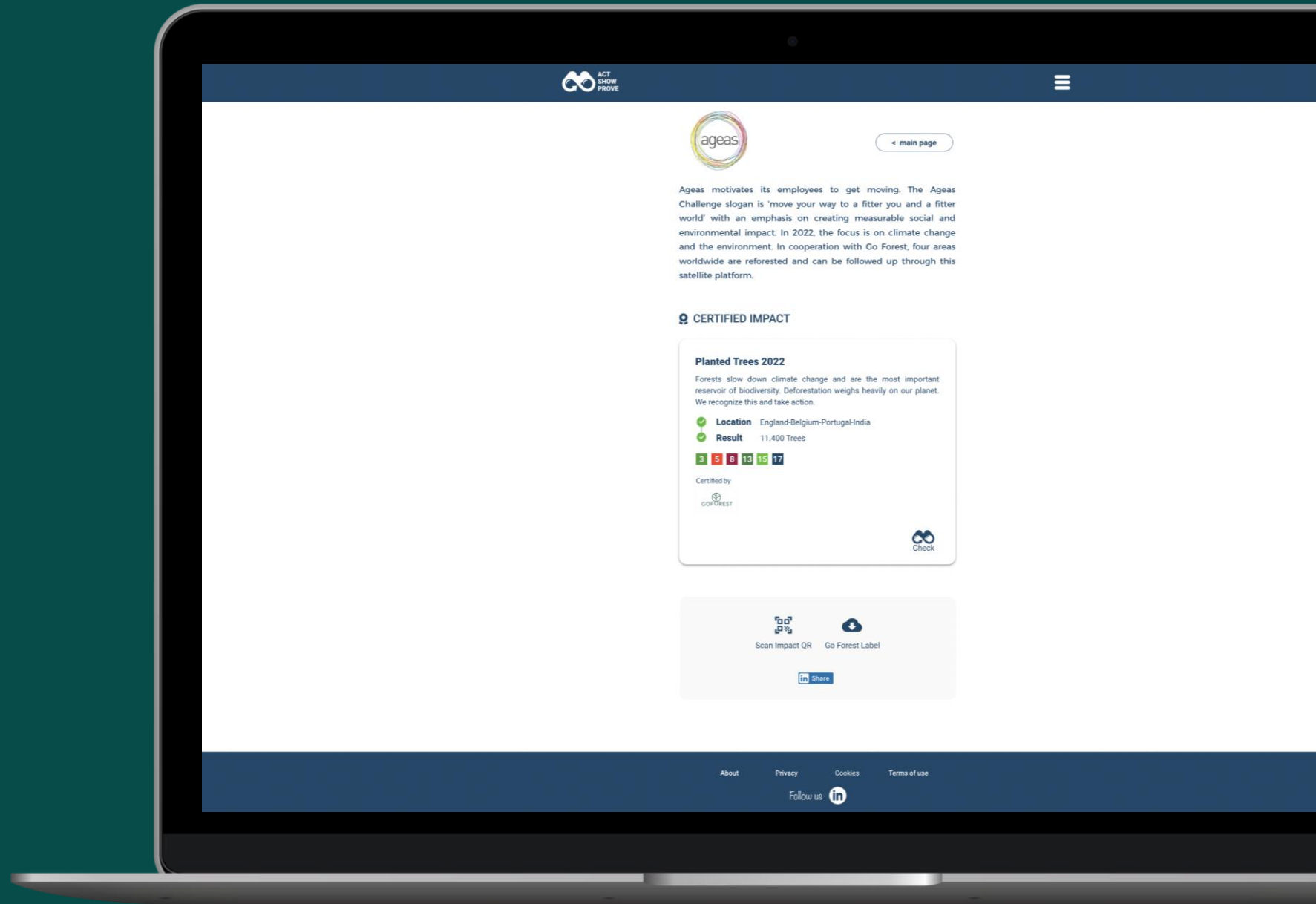
## **EXAMPLE IN THE MARKET**



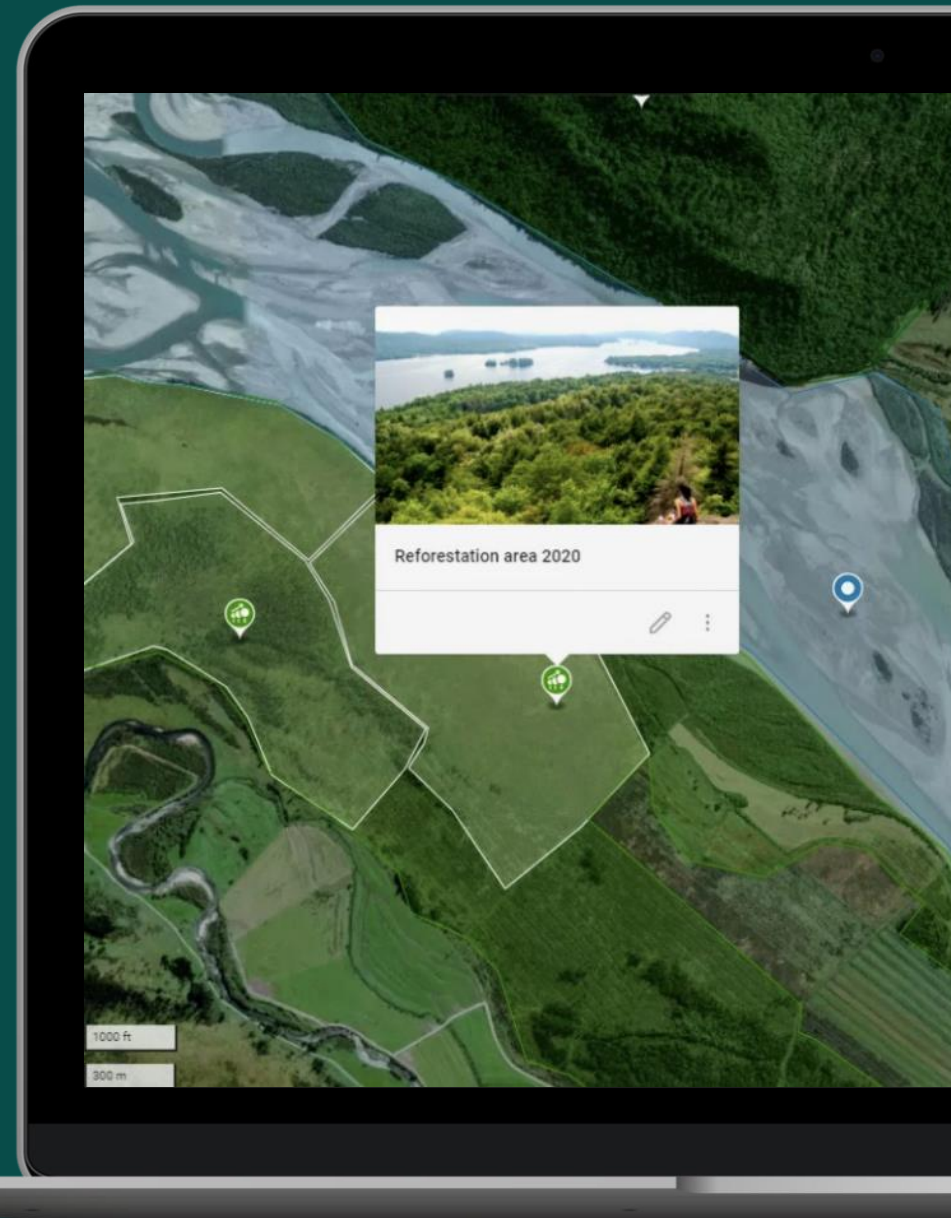
# TECHNOLOGY FOR INVOLVEMENT



# Blockchain



# Geodata management with satellite imagery



# Your own impact dashboard

TECHNOLOGY

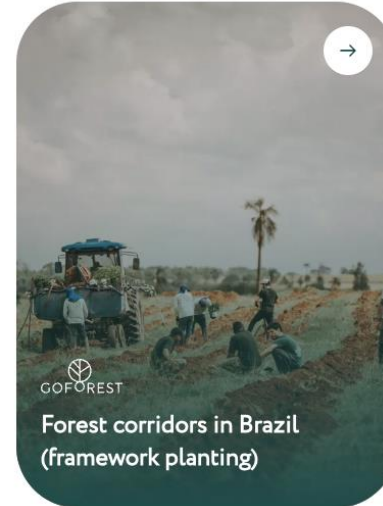
Discover our

# Projects

Below, you can explore the Go projects and discover how our projects reduce negative impacts and/or give back to people and nature.

Q Search

Search



## YOUR COMPANY

Partners with



GOFORREST

24200

trees planted

GOFORREST

11440.00

tonnes of CO<sub>2</sub>  
absorbed on lifetime

GOOCEAN

300

coral fragments transplanted

GO SMART  
DIGITAL

2780.00

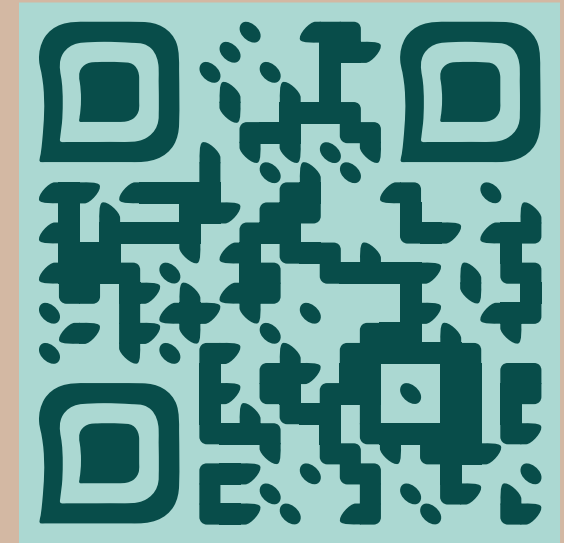
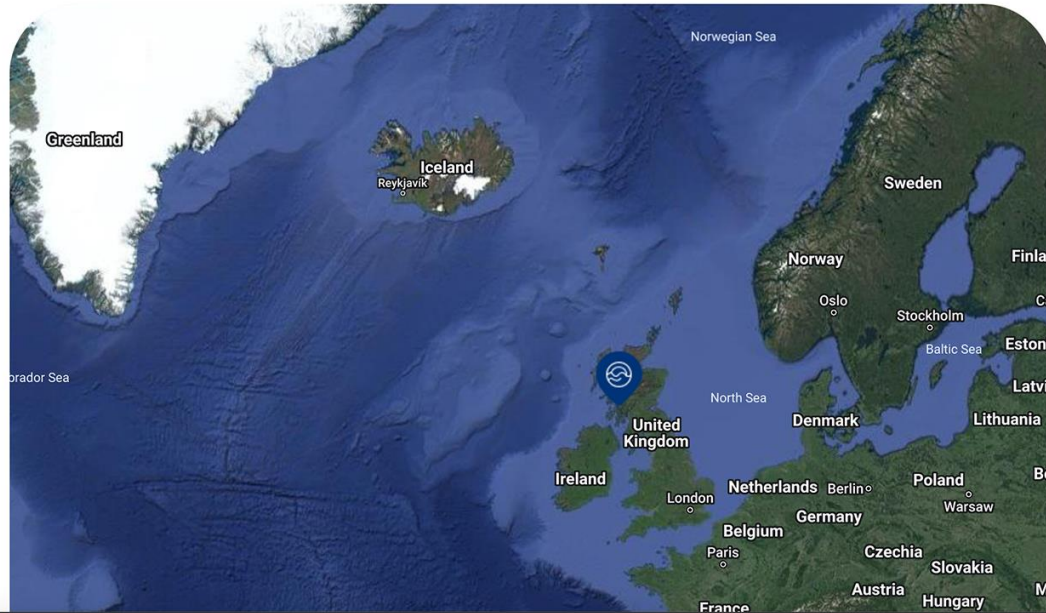
tonnes CO<sub>2</sub> reductions  
since baseline year 2019

# Seagrass meadow restoration in the United Kingdom

Loch Craignish, United Kingdom

Seagrasses are the only flowering plants that can live underwater. Just like plants on the land, they have leaves, stems, roots, and photosynthetic activity. The plants' long but strong leaves form dense meadows under the sea.

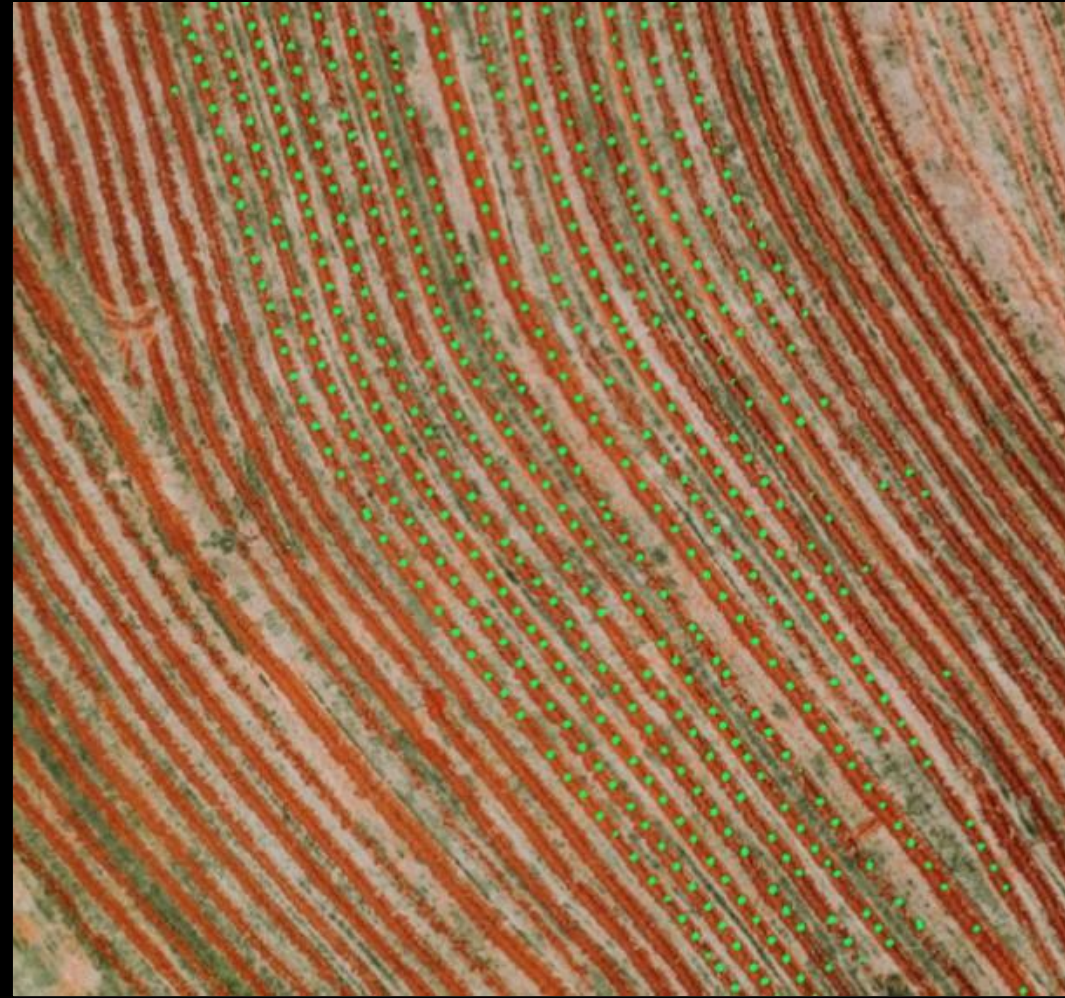
With the seagrass meadow restoration project, in cooperation with Seawilding, we are trying to rebuild damaged seagrass m...[Read more](#)



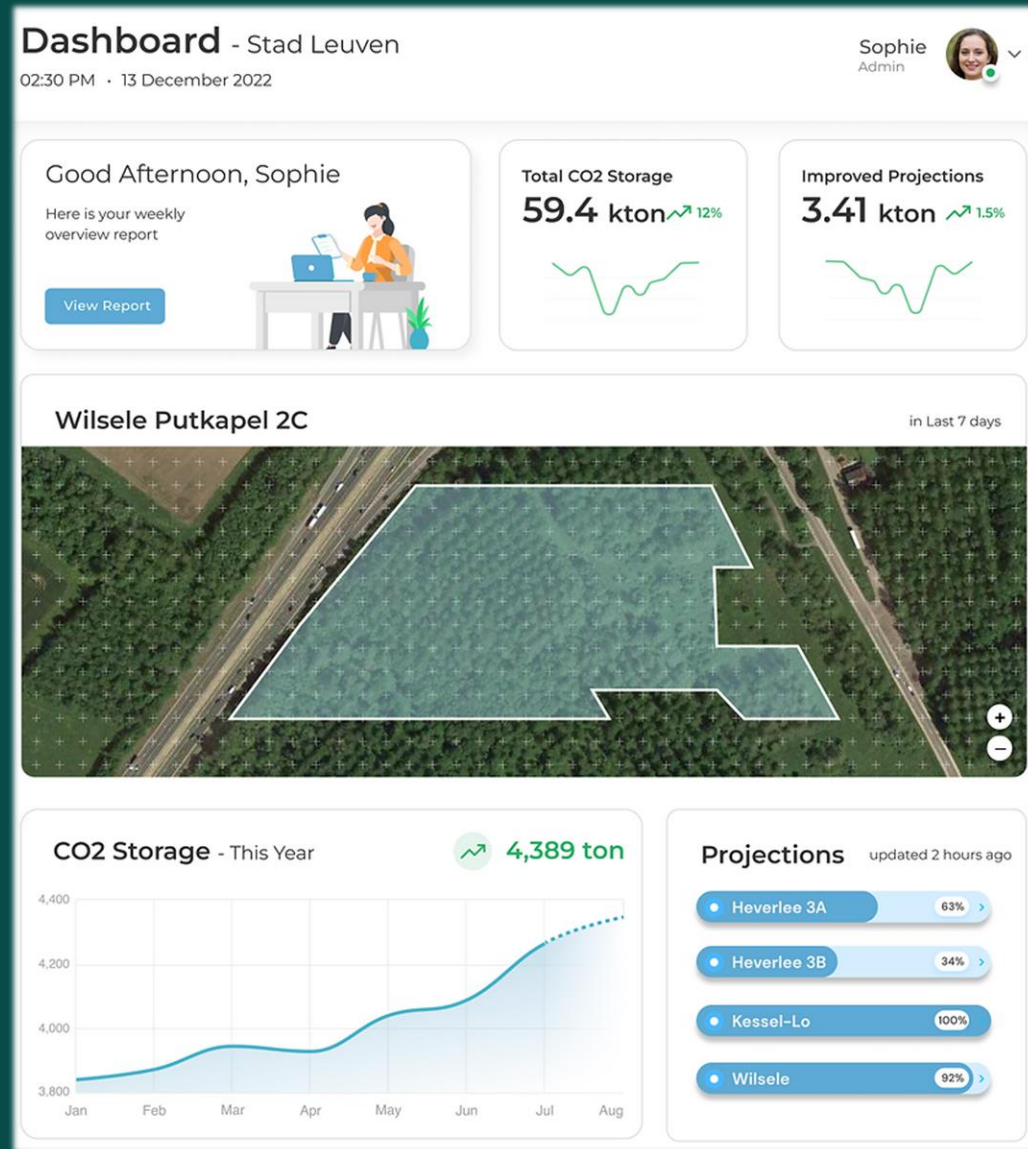




# Counting trees with drone images and AI



# Carbon sequestration data





# Communication Support









  
GOFORREST

  
GOFORREST



GOFORET

GOFORET





GOFOREST

  
GOFOREST





### Reforestation project

This reforestation project is focused on the plantation of new trees in combination with the process of natural regeneration.

A total of 1500 trees are planted here to diversify the species and optimize the natural regeneration of maple trees. Included: 500 chestnut trees, 500 sessile oaks, and 500 red oaks. This diversity increases the ecosystem benefits and the sustainability of the forest.

To help the owner to strengthen this forest, Go Forest partnered with Atreidius. The project was managed by forestry company Sylva Nova and its plantation partners.

Thank you for greening up our planet!



1500 trees





# Sarah Parent

Chief Ecological Officer & Co-Founder



## Questions?

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[www.goocean.be](http://www.goocean.be)

[www.gosmart.digital](http://www.gosmart.digital)

[www.gofamily.be](http://www.gofamily.be)

An aerial photograph of a landscape. On the left, a wide, calm river flows through a lush green area. To the right, a large, dark brown, forested area with several irregularly shaped, lighter green patches is visible. The overall scene is a mix of natural and possibly managed land.

**“I believe in  
small steps  
on a big scale”**

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