



DevoTalk webinar

# How to get an overview of your CO<sub>2</sub> consumption in the IT department



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# WELCOME

DIGITAL  
input

DIFFERENT  
subjects

VARIOUS  
presenters

20 + 10 (60)  
minutes

## Some practicalities...



### In case of questions...

please use the chat functionality to ask questions, which are then answered by the end of the talk.



### Revisiting the slides?

Shortly after the live DevoTalk the recording and slides are made available on devotalks.dk



### Bothering “video window”

of us doing the talk? You can drag and drop the window to a suitable place, where it does not cover our informative slides.

# Agenda

9:00	Welcome and short intro to sustainability in IT operations	Sif Neldeborg & Thomas Thejn Devoteam
9:20	Google approach to sustainability	Stefan Veis Pennerup Google Cloud Denmark
9:35	CO2 calculation with Google's Nordic Sustainability Assessment	Simon Stubben Devoteam G Cloud
9: 50	Thank you for today	



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# Welcome and short intro to sustainability in IT operations

Sif Neldeborg  
Devoteam Management Consulting

Thomas Thejn  
Devoteam G Cloud



UN CLIMATE  
CHANGE  
CONFERENCE  
UN 2020

[www.un.org/en/conferencesandevents/uncc2020](https://www.un.org/en/conferencesandevents/uncc2020)

**COP 26**



UN CLIMATE  
CHANGE  
CONFERENCE  
UN 2020

1-12 November, 2021  
Glasgow, Scotland



UN CLIMATE  
CHANGE  
CONFERENCE



Sustainable transformation is digital

# IT has a historic dual role

Would you rather use an abacus to save the world?

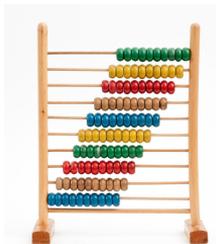
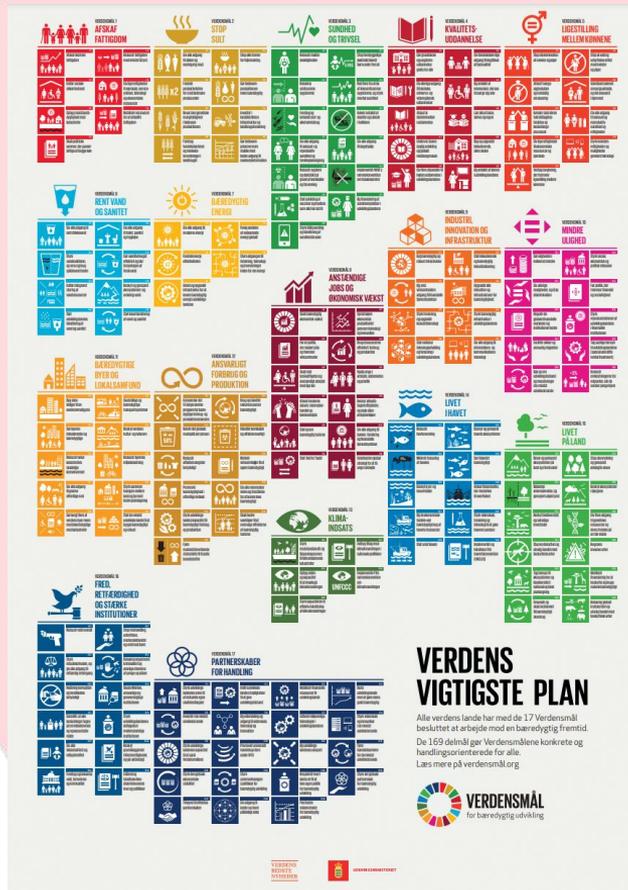


Photo by [Crissy Jarvis](#) on [Unsplash](#)

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# Sustainability in IT

- Short introduction to impact in 4 steps

## **The 100% sustainable organization does not exist (yet)**

Sustainability is to:

1. **Choose** a more sustainable product or service.
2. **Nudge** colleagues, clients and partners to choose more sustainable products and services.
3. **Reduce** use of resources without limiting growth and development in the organization. (e.g. Green healthy growth paradigm)
4. **Implement** new business development models and new sustainable goals implemented in tender and procurement to drive change in the supply chain.

# Understanding coming demands

All organizations must reduce and become more sustainable in IT operations



# EU taxonomy is coming

All companies is expected to report whether or not they comply.

Starting with all large companies and all financial services. DK will go further to add SMB segment.



# What is sustainable IT?

**None of the below points can be solved without cloud**

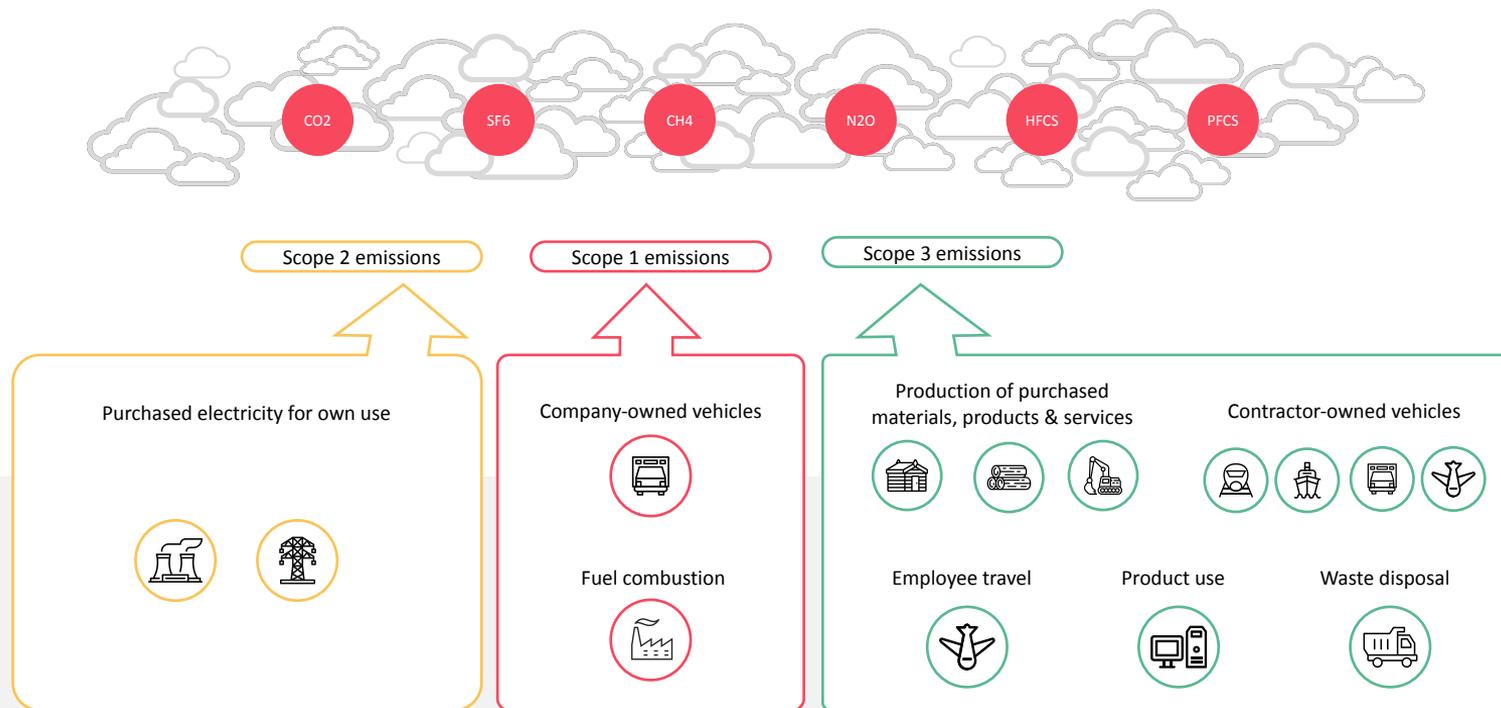
1. **CO2e reduction** is required by state (by law) and clients.
2. **Circularity and life-cycle prolonging** of hardware is required.
3. **Climate friendly IT architecture** and low-energy database design is required.
4. **Resource scarcity** of microchip and metal in general needs data.

IT is responsible for **3,7 %** of global CO2e emissions\*

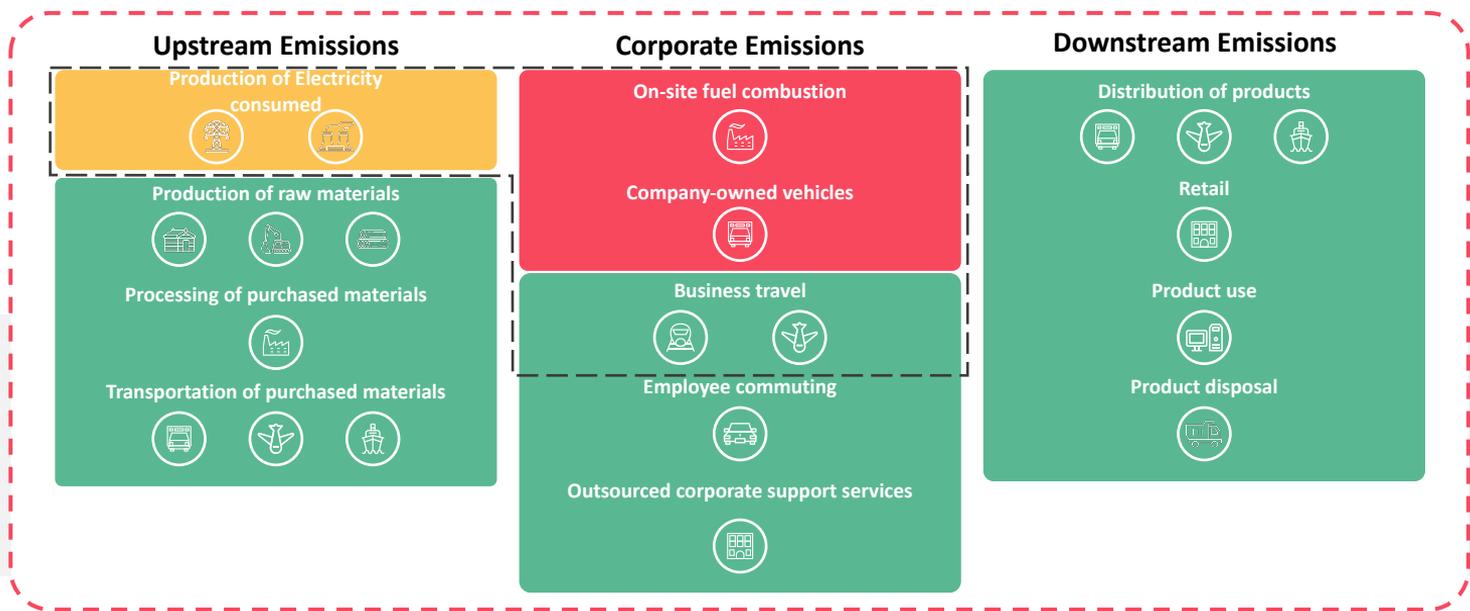
But has the potential to reduce **15 %** of global Co2e emissions, if applied.

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# What is it to be CO2e neutral?



# Typical CO2e accounting in a company



Follows international standard: Greenhouse Gas (GHG) Protocol



# How does sustainability translate to cloud computing?

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- Cloud solutions can help you reduce your CO2 footprint
- Cloud providers like Google can provide you with CO2 calculations of your usage of cloud services.
- Cloud allows for you to buy services instead of products.
- Cloud allows you to be more flexible and scale both up and down on demand.
- Sustainability is a joint venture in your customer and supplier ecosystem, and Cloud makes collaboration easier and more efficient.

The slide features two large, light pink circular shapes. One is in the top-left corner, and a larger one is on the right side, partially overlapping the text.

# For more information on sustainable IT

To learn more reach out on mail,  
or attend our next Devotalk 23rd of nov on sustainable IT.

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## Google approach to sustainability

Stefan Veis Pennerup  
Google Cloud Denmark

# 3

## CO2 calculation with Google's Nordic Sustainability Assessment

Simon Stubben  
Devoteam G Cloud

# Sustainability assessment methodology

01



Scan you data centers

- What do you have
- What can be moved to the Cloud

02



Estimate power used today.

03

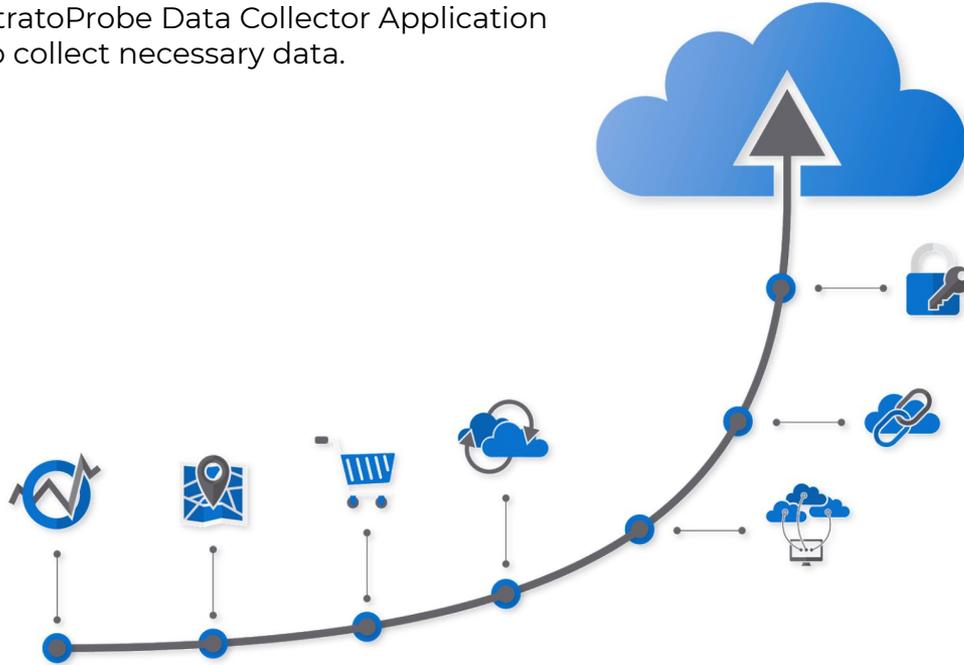


Estimate CO2 emissions



# Discovery tooling - StratoZone by Google

StratoZone SaaS platform using the StratoProbe Data Collector Application to collect necessary data.



## Fast

StratoZone® takes very little time to install and run (typically under 45 minutes). Once installed, StratoZone® can scale to thousands of assets in hours. Initial results are available within 2-3 days.

## Agentless

Discover your assets using an agentless process. No appliances, hardware, or agents to deploy. Discovery is hypervisor and physical-virtual agnostic.

## Secure

All data is encrypted in transit and at rest. We do not collect sensitive data or data that is subject to regulatory requirements. Customer-controlled data anonymization.

## Data & Security Considerations

✓ DATA WE COLLECT	✗ DATA WE DO NOT COLLECT
<ul style="list-style-type: none"><li>• Machine data (capacity, model, hardware)</li><li>• Machine performance (CPU, memory, storage)</li><li>• Installed application names</li><li>• Network traffic data (port, type, frequency)</li><li>• Processes, services, &amp; related utilization</li></ul>	<ul style="list-style-type: none"><li>• User information or profiles</li><li>• Data underlying any applications</li><li>• Data in your databases or file storage</li><li>• Application configuration files</li><li>• Data subject to PCI or HIPAA regulations</li></ul>

# Sustainability assessment methodology

## 01

First, input is gathered from your data center(s):

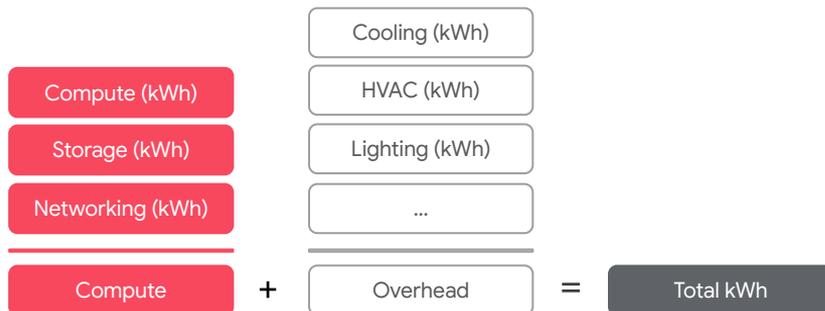


## 02

Next, we estimate your power consumption

**Compute Equipment:** servers, storage, and networking gear

**Overhead Systems:** equipment such as chillers, HVAC, and lighting



## 03

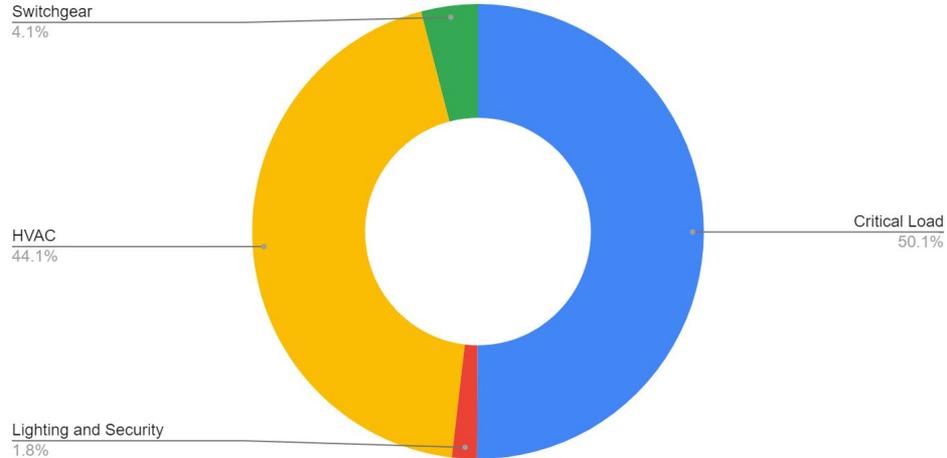
Finally, we estimate the CO<sub>2</sub> emissions based on location



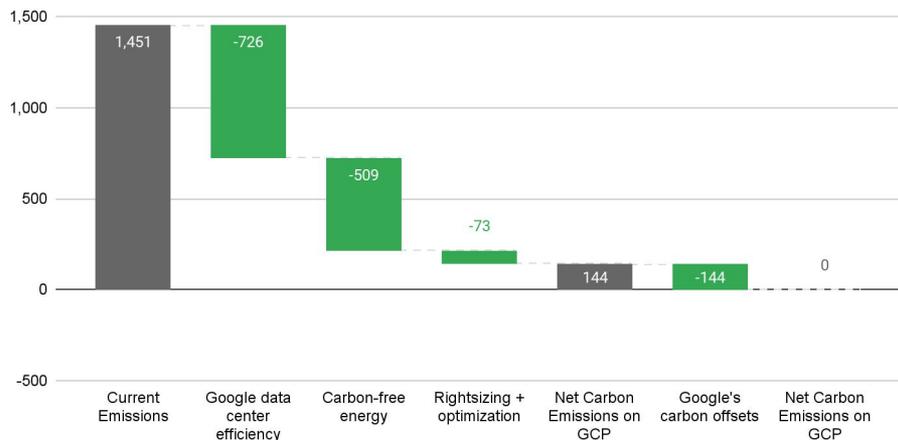
# Sample sustainability report - current emissions

3-Year Total, data centre emissions*	Equivalent annual emissions:	3-Year Total, social cost of emissions:
1451 ton CO2	<ul style="list-style-type: none"><li>308 passenger vehicles</li><li>174 home(s) energy use</li></ul>	\$74K

## Emissions by category:



# How Google can help you achieve carbon neutrality



**Scope 2 emissions reduction (3-Year Total):**

**1451 ton CO2**

**Equivalent annual emissions:**

-  308 passenger vehicles
-  174 home(s) energy use

## Key benefits:

### Data center efficiency

On average, a Google data center is twice as energy efficient as a typical enterprise data center.

### Carbon-free energy

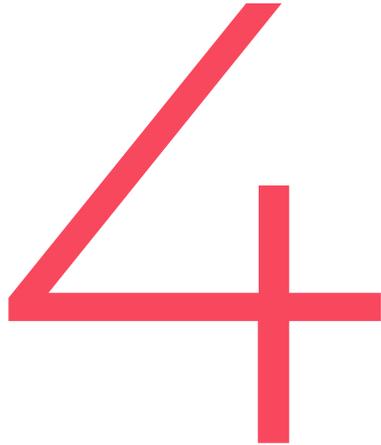
As the largest corporate purchaser of renewable energy, we operate the cleanest global cloud.

### Rightsizing + optimization

Features such as autoscaling, custom images, and serverless products allow customers to run workloads more efficiently.

### Carbon neutrality

In 2007, we became the first major company to become carbon neutral. We invest in over 40 high-quality carbon offset projects globally to mitigate our data center emissions.



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## Summary

Sif Neldeborg  
Devoteam Management  
Consulting

Thomas Thejn  
Devoteam G Cloud

# Key points we wanted to tell you today

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1. Sustainable IT is important and we in IT should take this into consideration when we make IT decisions
2. Cloud computing is typically more sustainable than on premise solutions. Google has invested significantly in being sustainable and delivering sustainable cloud solutions to its customers
3. To reduce your IT CO2 consumption, you need to measure or estimate your current CO2 consumption and measure the progress regularly.  
Google has developed a solution that can help you make this calculation, and Devoteam can help you implement this solution.

Ask for the right  
documentation.

when the  
market is ready

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**Future relevant information  
related to your cloud:**

Taxonomy compliance?

Renewable energy percentage?

Scope 3 emissions (if possible)?

ISO 14.001 (if relevant)?

# How Google & Devoteam can help

## **Sustainability advice**

Devoteam Management Consulting can help you evaluate, plan and execute your sustainability journey.

## **Sustainability Assessment**

Devoteam G Cloud can help calculate your IT operations CO2 footprint using the Google's Sustainability Assessment.



Questions?



Thank **you.**