

The logo for CONF42, featuring the word 'CONF42' in a bold, white, sans-serif font. The 'O' is replaced by a stylized white planet with a ring, set against a black rectangular background with a subtle starfield pattern.

CONF42



**Green DevOps:
Building
Sustainable
Software**



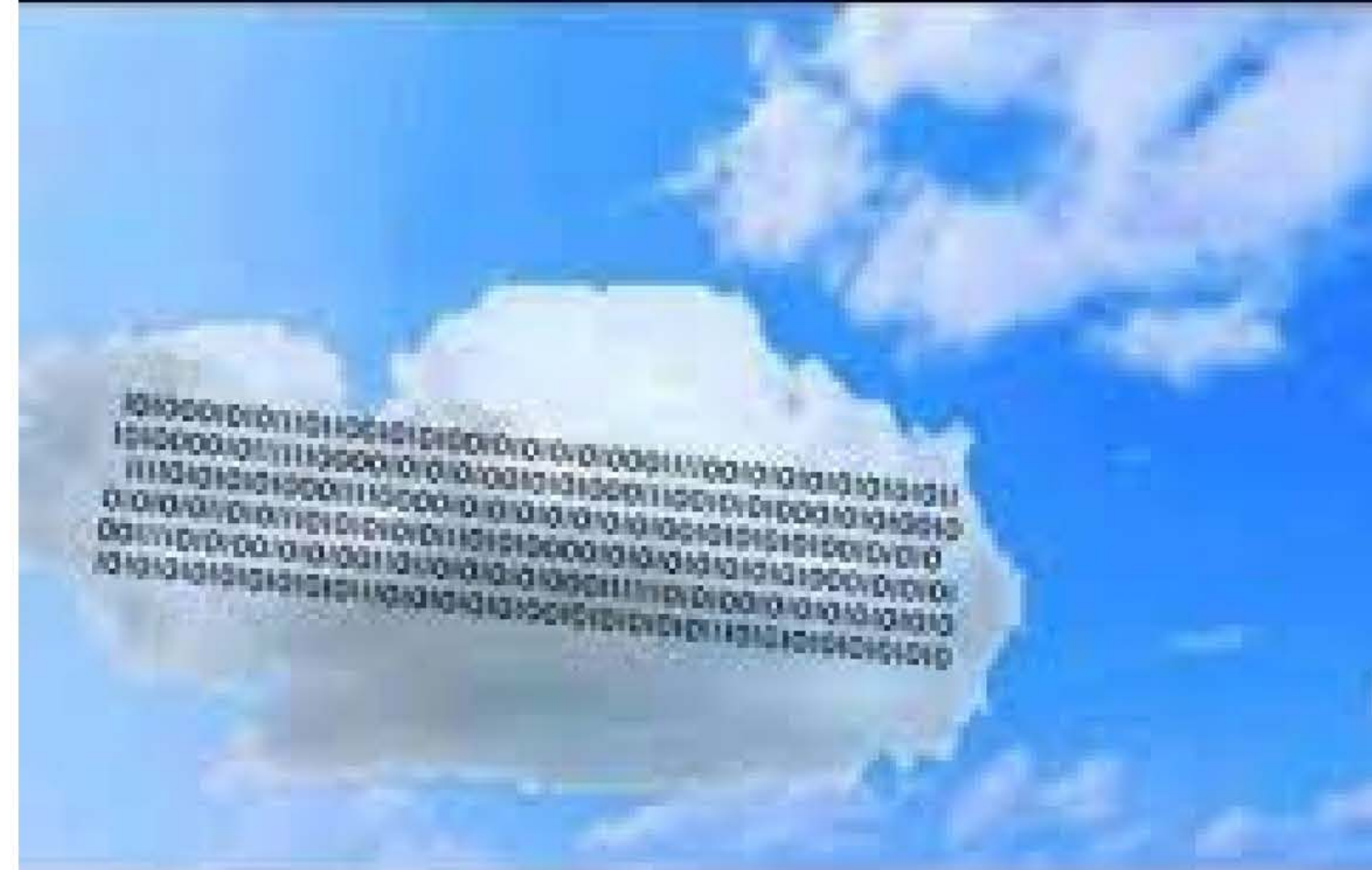
Neel Shah - DevOps Community Guy

- Building Devops Communities
- GDG Cloud,CNCF ,Docker ,Hashicorp
- Mentored more than 15+ hackathons
- Product Manager @ Internauts Infotech



I have all my data(infra) on Cloud ,so I don't emit CO2

Pollution is so low



I can see the data stored in the cloud



As we revel in the innovations driven by software development, we must also acknowledge the considerable carbon footprint associated with traditional development practices

What is Green DevOps ?

Green DevOps is the integration of sustainable practices into the software development lifecycle. Unlike traditional development approaches that prioritize speed and functionality, Green DevOps puts environmental considerations at the forefront. It is an ethos that seeks to harmonize technological progress with ecological responsibility

Benefits of Green DevOps

- **Reduced Energy Consumption**

- Optimize resource utilization throughout the development process.
- Lower energy consumption not only translates to cost savings but also minimizes the carbon footprint of software development.

Benefits of Green DevOps

- **Improved Resource Efficiency**

- Encourages developers to use resources wisely, minimizing waste and maximizing efficiency.
- Practices include code optimization, infrastructure right-sizing, and efficient testing processes.

Benefits of Green DevOps

- **Enhanced Software Quality**

- Encourages developers to use resources wisely, minimizing waste and maximizing efficiency.
- Practices include code optimization, infrastructure right-sizing, and efficient testing processes.

GHG Protocol

Scope 1 : Direct emissions


Scope 2 : Indirect emissions related purchased energy

Scope 3 : Other indirect emissions (value chain emissions)

- **business travel**
- **raw material purchased**
- **services purchased**

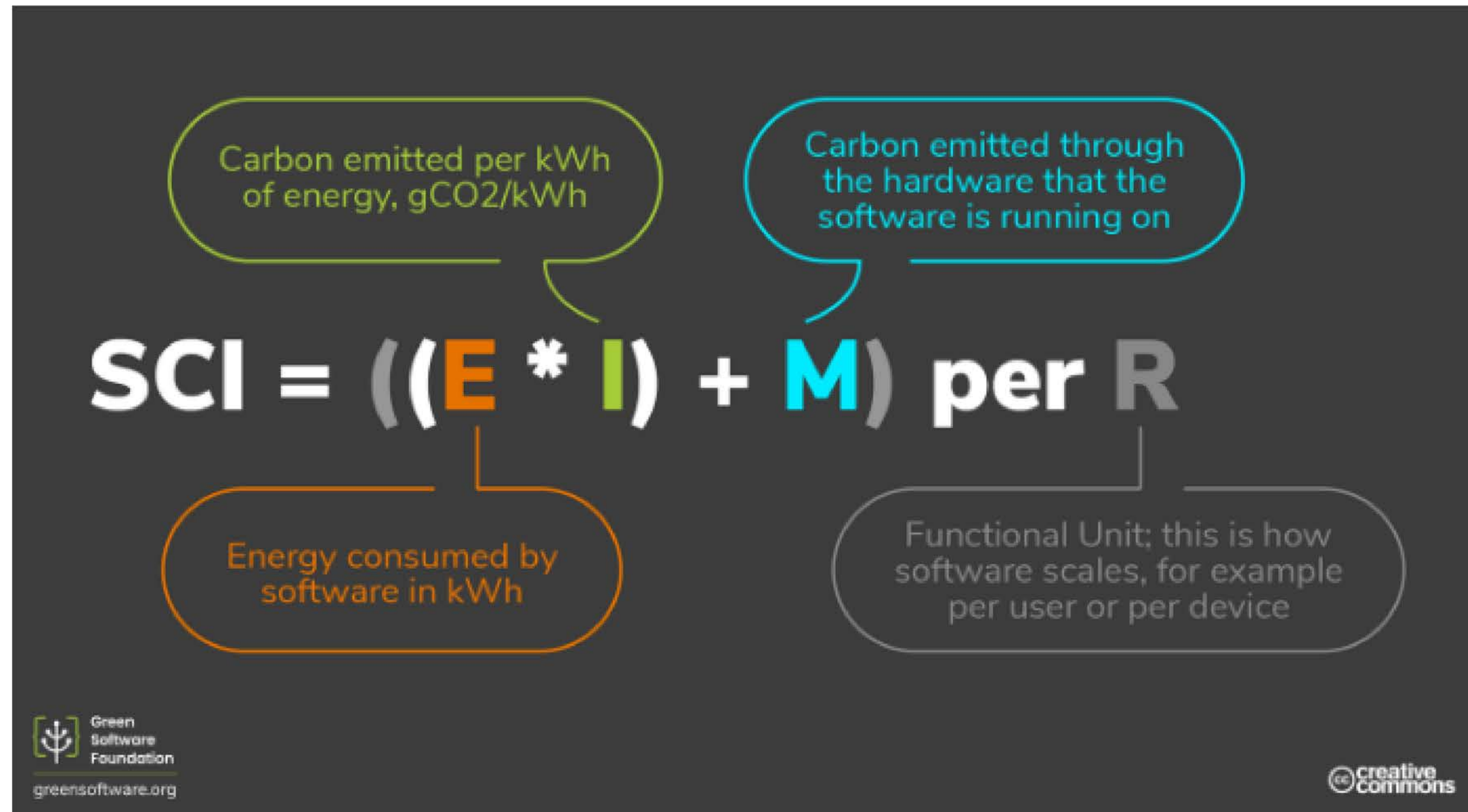
GHG Scope

GHG Scope	2	3
Private Cloud	Energy	Embodied
Public Cloud	-	Energy + Embodied
Hybrid Cloud	Some Energy	Some Energy + Embodied
Front End	-	Energy + Embodied

 Green Software Foundation
greensoftware.org

 creative commons

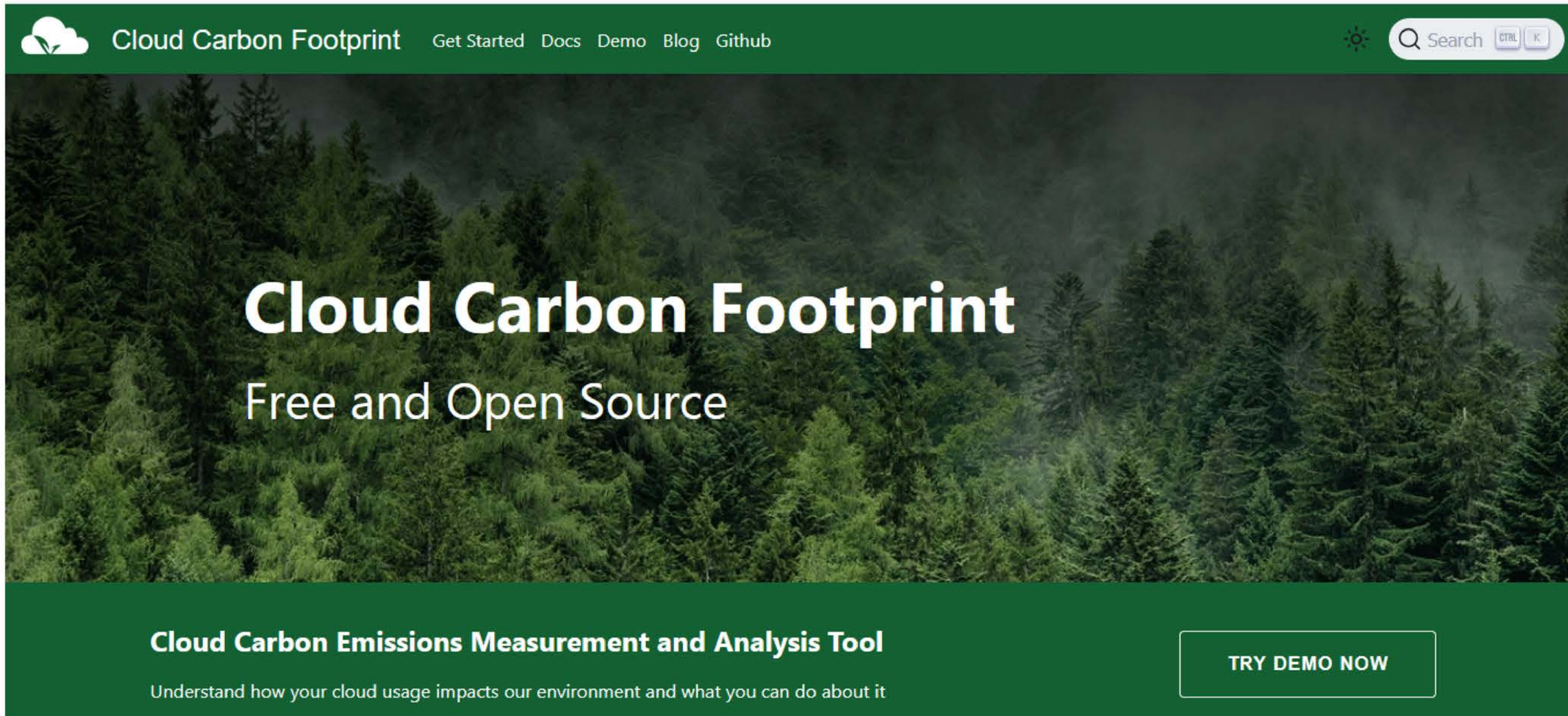
Software Carbon Intensity Formula



Measure Carbon Footprint

- **AWS Carbon Footprint Tool**
- **Google Cloud Carbon Footprint**
- **Microsoft Azure Sustainability Calculator**

Cloud Carbon Footprint



The screenshot shows the landing page of the Cloud Carbon Footprint tool. The page features a dark green header with a logo on the left and navigation links (Get Started, Docs, Demo, Blog, Github) and a search bar on the right. The main content area has a background image of a dense forest. The title 'Cloud Carbon Footprint' is prominently displayed in white, followed by the subtitle 'Free and Open Source'. Below this, a dark green banner contains the text 'Cloud Carbon Emissions Measurement and Analysis Tool' and a 'TRY DEMO NOW' button. A descriptive sentence is located at the bottom left of the banner.

Cloud Carbon Footprint [Get Started](#) [Docs](#) [Demo](#) [Blog](#) [Github](#)

Cloud Carbon Footprint

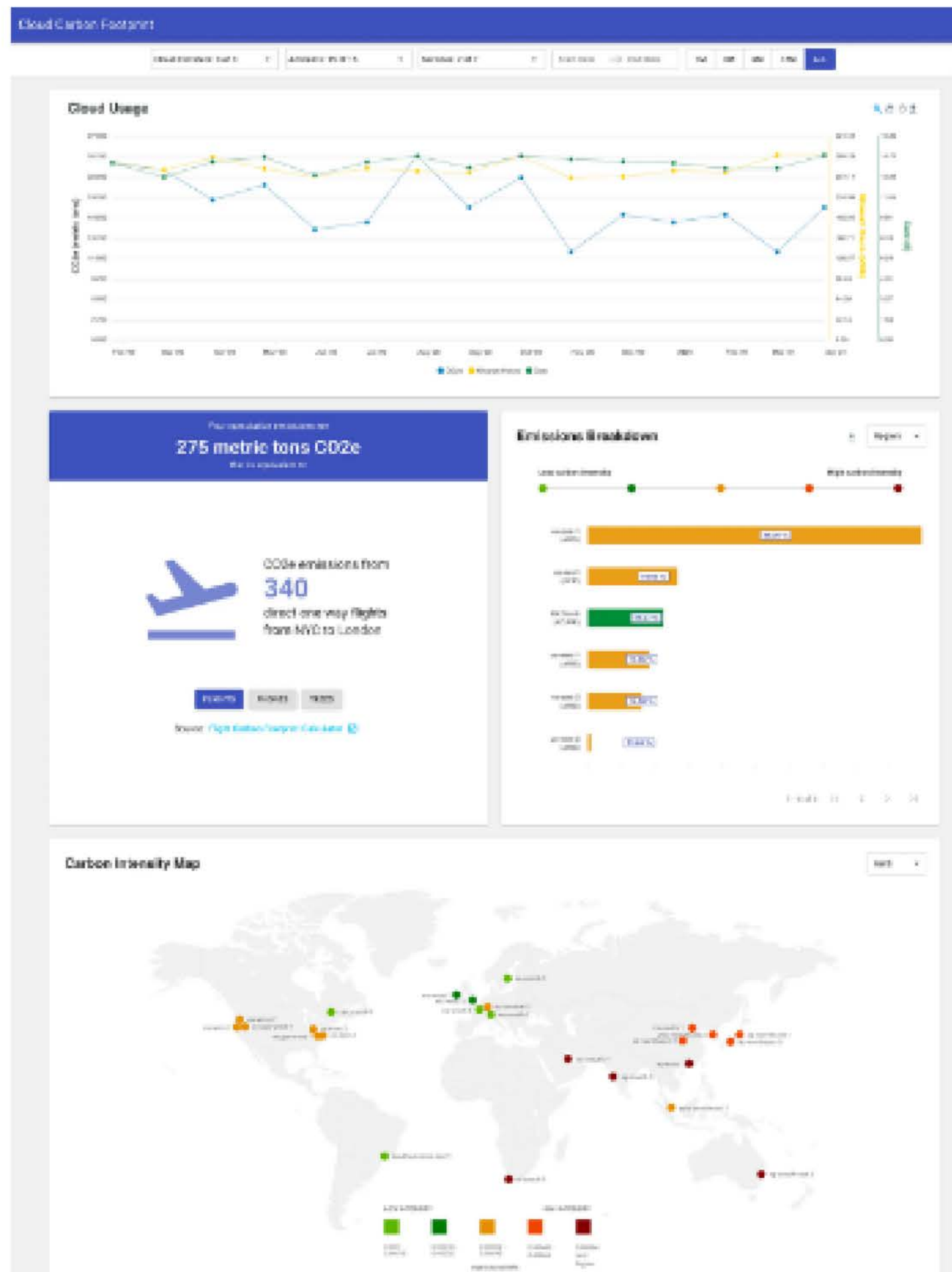
Free and Open Source

Cloud Carbon Emissions Measurement and Analysis Tool

Understand how your cloud usage impacts our environment and what you can do about it

[TRY DEMO NOW](#)

Cloud Carbon Footprint



Reduction

- Cache Static Data
- Delete unused storage resources
- Implement Stateless Design
- Queue non urgent processing requests
- Scale Down infra when not in use
- Use serverless cloud services

Reduction

- Software Ecodesign
- Choice of instance type Right size (On spot)
- Keep it to a minimum

auto-scaling groups

containers

...

- Change region / zone

Cloud Awareness

- Temporal Shifitng
- Demand Shaping
- Spaital Shaping

FinOps + GreenOps



Connect with me for any queries !



SCAN ME

Thank You

The logo for CONF42 is displayed in white on a black rectangular background. The word 'CONF42' is written in a bold, sans-serif font. The letter 'O' is replaced by a stylized planet with a ring, similar to Saturn. The background of the logo box features a faint, dark space scene with a galaxy or nebula.

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