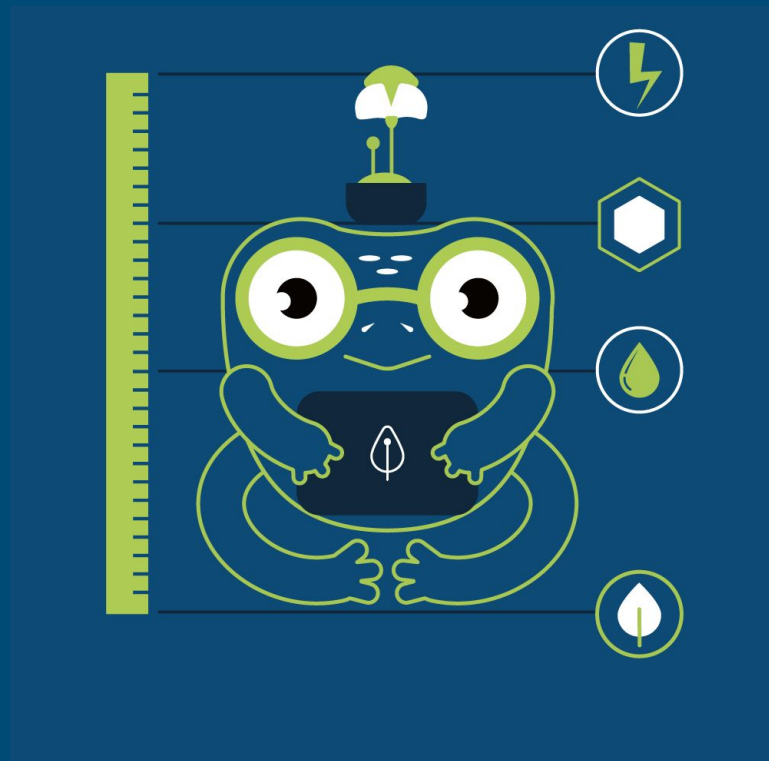# Carbon Hack - A leap in measurement

In 2024, Carbon Hack is about how we measure the environmental impact of software.
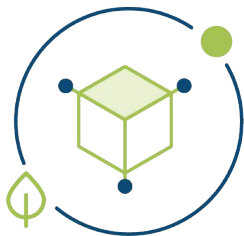
Until now, no single solution has managed to calculate software's impacts across all components, across all environments.

[Impact Framework](#) (IF), an open source project, attempts to do just that, be it for carbon emissions, water or land usage, or other chemical impacts.

From Monday, February 26 - Friday, March 15, 2024, developers and engineers will compete to showcase their best application of IF in measuring software to reduce the ecological footprint of software.

The main components of IF

Models

A model is a small unit of code that measures an environmental impact from observations about a software system, e.g. energy, carbon, waste, water.

Manifest File

A manifest file contains all your "workings out". With IF you don't share the final emissions value, you share your manifest file, the input data, models, and coefficients for ultimate transparency.

Impact Framework

The tool. IF computes the environmental impact of a manifest file.

To learn more, visit if.greensoftware.foundation

The Hack Experience

Carbon Hack is a dynamic competition that combines healthy rivalry with collaborative innovation. Hackers will push the limits of the framework, uncover potential weaknesses, and create innovations to enhance the tool.

In small teams, participants must:

- Use Impact Framework to measure the environmental impact of software

- Enhance the framework by contributing code and integrating new models, plug-ins, applications, or documentation.

- Showcase the framework's versatility by measuring various environmental impacts—carbon emissions, water usage, and more.

Sponsor innovation

In sponsoring Carbon Hack 2024, your company acknowledges the increasing environmental impact of software and reinforces its commitment to software sustainability.

Here's why your company should take center stage as a sponsor:

Accelerate a culture change towards green software by increasing the pace at which we can set a new standard for impact measurement.

Lead in environmental stewardship by awarding the most innovative solutions, your brand grows more synonymous with our vision to ensure software has no harmful effects on the environment,.

Access cutting-edge solutions by putting your team at the forefront of impact measurement innovation.

$5,000

- One seat on the jury
- Logo on hackathon site
- Feature in communication documentation
- Mentions in social media campaign
- Feature during the main award ceremony

Your sponsorship awards innovation

Beyond Carbon
Any submission that demonstrates the application of Impact Framework beyond carbon. (e.g. water, waste, air quality)

Best Content
Best piece of content published about Impact Framework, an article, tutorial, video or how to guide.

Best Model
A model plugin that best supports and enhances the Impact Framework model plugin ecosystem.

Best Contribution to the Framework
Best contribution to the Impact Framework tool itself. Adding a new feature or enhancing an existing one.

Your sponsorship awards innovation

Best Undergraduate

Specific prize for Undergrad Students,
drawn from across the main categories.

🌱 **Sponsoring organizations can have teams participate in the hackathon. To ensure fairness and maintain the integrity of this event, judges will be asked to recuse themselves from scoring where their organization is concerned.**

Important Dates for Sponsors

Events	Deadline
Launching pre-event promotion	December '23
Finalize sponsors and jurors	February
Hackathon match-making	February-March
Hackathon begins	18th March
Hackathon ends	8th April
Shortlisting submissions	10th April
Judging shortlisted submissions	16th April
Closing event and award ceremony (featuring sponsors)	18th April

We will do our best to stick to the timelines above. In the event there are any changes, please understand!

Highlights from the previous Carbon Hack

The first Carbon Hack in 2022 was centered around the Carbon Aware SDK/API. The event welcomed nearly 400 hackers and 51 innovation submissions across the globe.

For more information, **click here.**

Previous sponsors

accenture

avanade

GAMMA
PART OF BCG X

Globant

Goldman Sachs

intel

/thoughtworks

UBS

vmware

51 eligible projects

1st place - Lowcarb
A carbon-aware client selection strategy for Flower powered by the Carbon Aware SDK.

2nd place - Carbon-Aware DNN Training with Zeus
Solution that changes the power limit on the Zeus system GPU to reduce carbon emissions by 24% while decreasing the learning time by only 3%.

3rd place - Circa
An easy to use, nice-like command for scripting that waits for the lowest carbon-density energy in a given timeframe.

Are you ready to sponsor Carbon Hack?

Fill out the sponsorship form **here**.

For questions, contact us at:
carbonhack@greensoftware.foundation