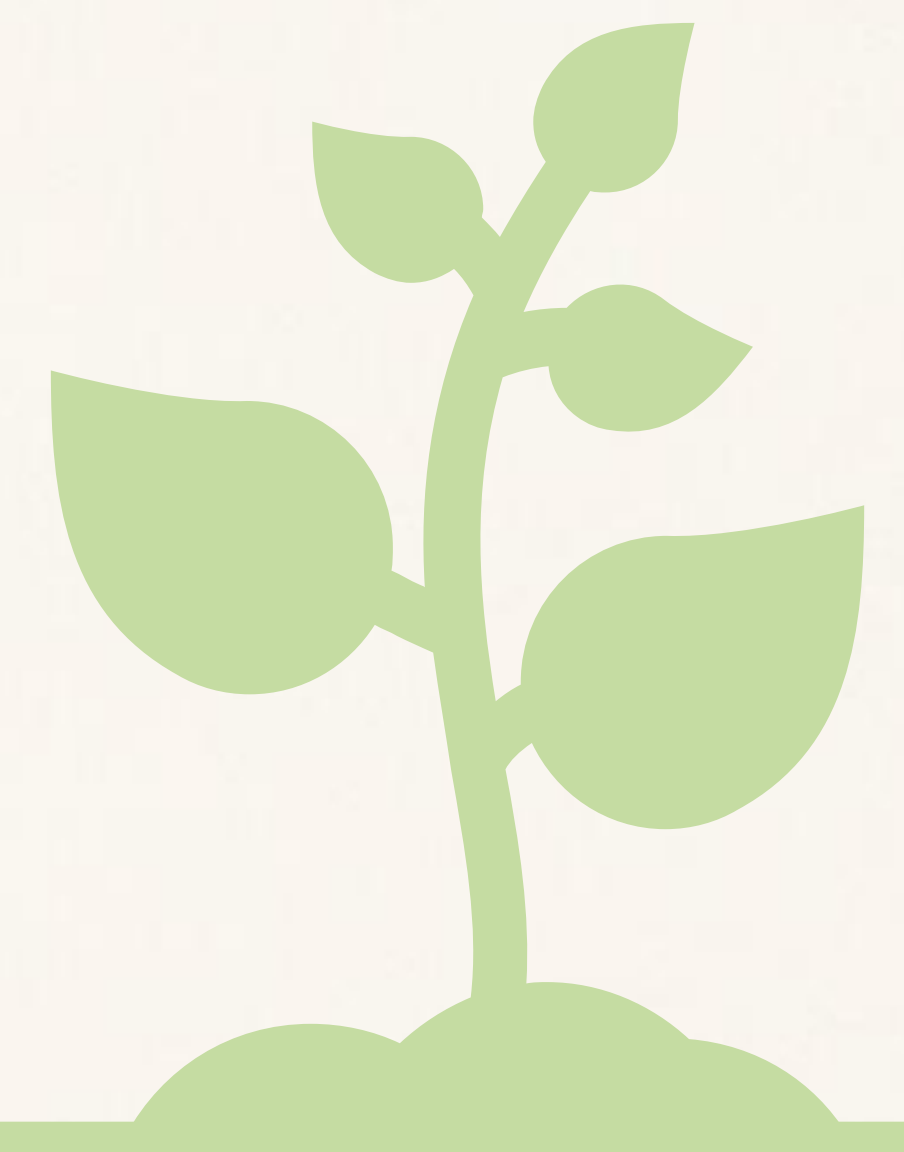


# How effective are carbon reporting tools in encouraging sustainable behaviours?

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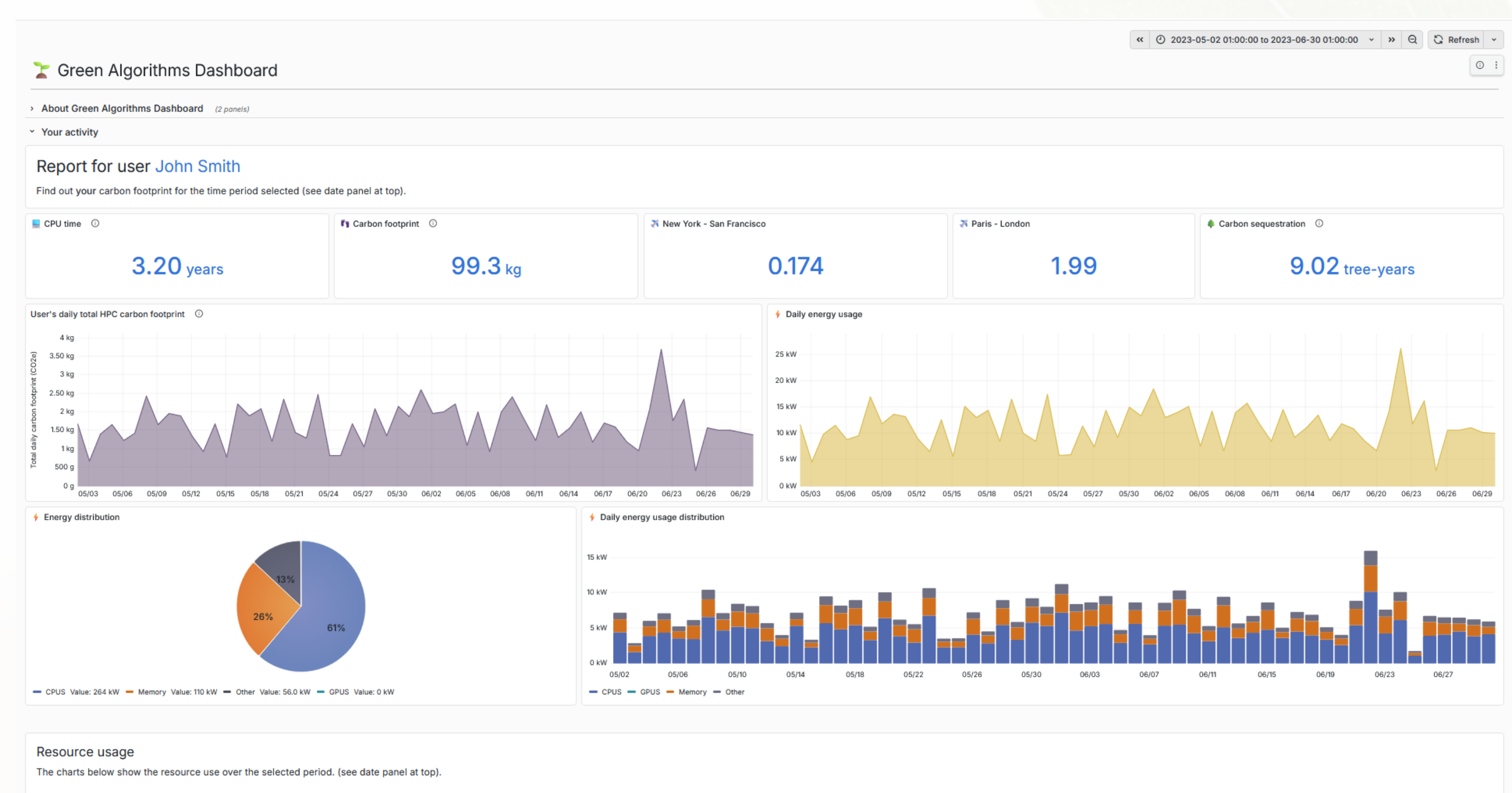


## Introducing E-SCOUT, our Environmentally Sustainable Computing User Trial

- **Aim:** We are organising E-SCOUT to better understand if carbon reporting tools lead to more environmentally sustainable computing practices among researchers in research-performing organisations (RPOs) that use high-performance computing (HPC).
- **Overview:** E-SCOUT will be set up as a multi-centre, pragmatic, cluster randomised controlled trial to evaluate the effectiveness of a carbon monitoring dashboard on participants' **environmentally sustainable behaviour, pro-environmental attitudes, and awareness of the environmental impacts of scientific computing.**
- **Timeline:** We are currently running a pilot study to inform the research protocol for the main trial. The next steps are to publish the research protocol as a protocol paper and to obtain ethics approval for the main trial; we aim to complete both within the next couple of months.

## The Green Algorithms Dashboard

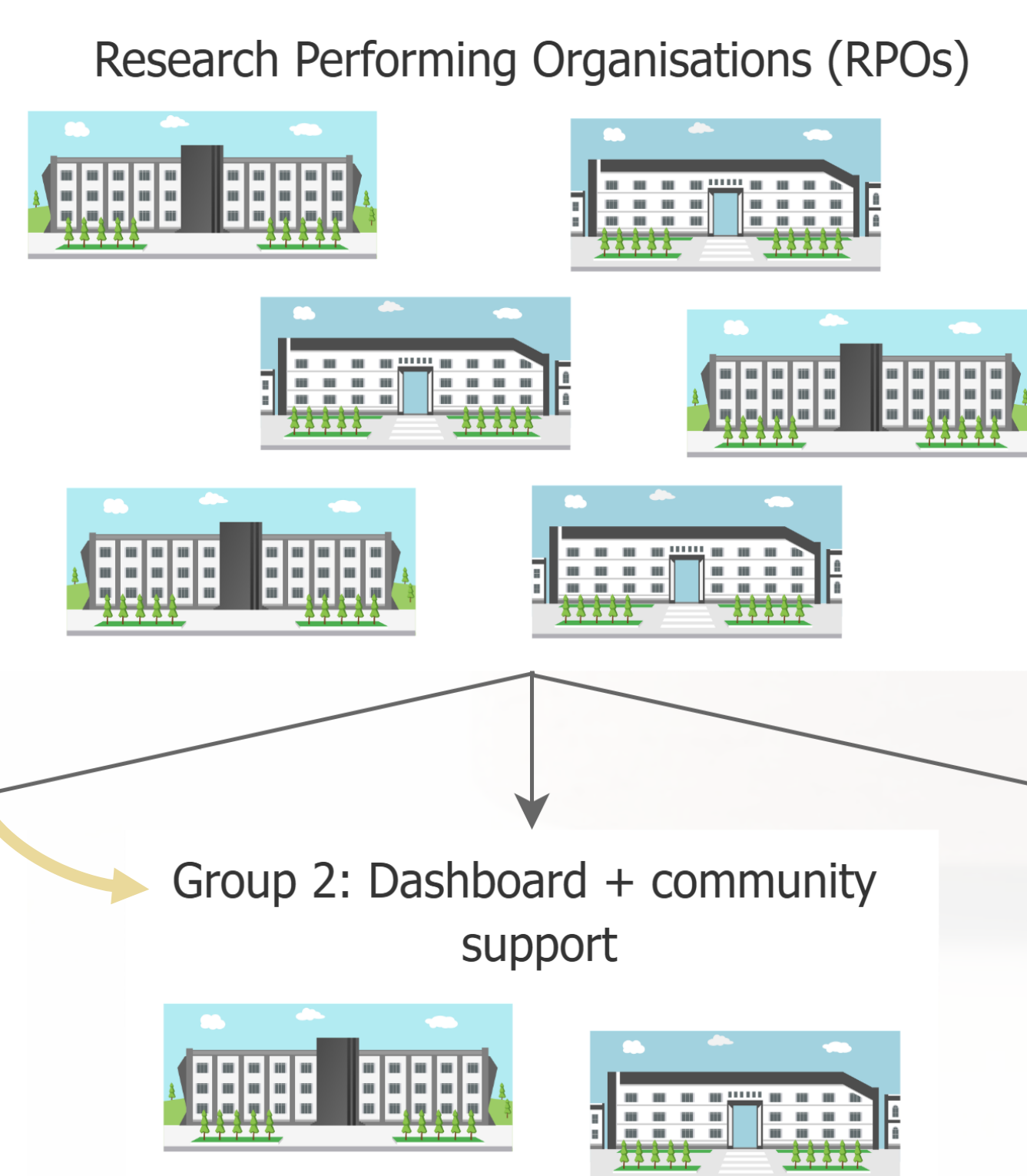
- The carbon reporting tool that will be used by E-SCOUT participants is the **Green Algorithms Dashboard**, which calculates and visualises the consumption and emissions statistics of individual researchers, research groups, and departments within RPOs.
- The dashboard displays the following **statistics**:
  - Energy usage (distribution) and HPC carbon footprint
  - CPU and GPU core hours
  - Memory requested and memory efficiency
  - Number of submitted jobs and **successful vs failed jobs**
- A **demo version** of the dashboard can be found here: <https://dashboard.green-algorithms.org/>
- The dashboard uses a layered approach to **privacy**, so data beyond a participant's own statistics and the carbon footprint for members of their research group is aggregated (ask us for details).



## Study Protocol

**Community support**

- Additional resources
- Access to the ESCS community platform for Environmentally Sustainable Computational Science
- Drop-in sessions and / or departmental 'champions'

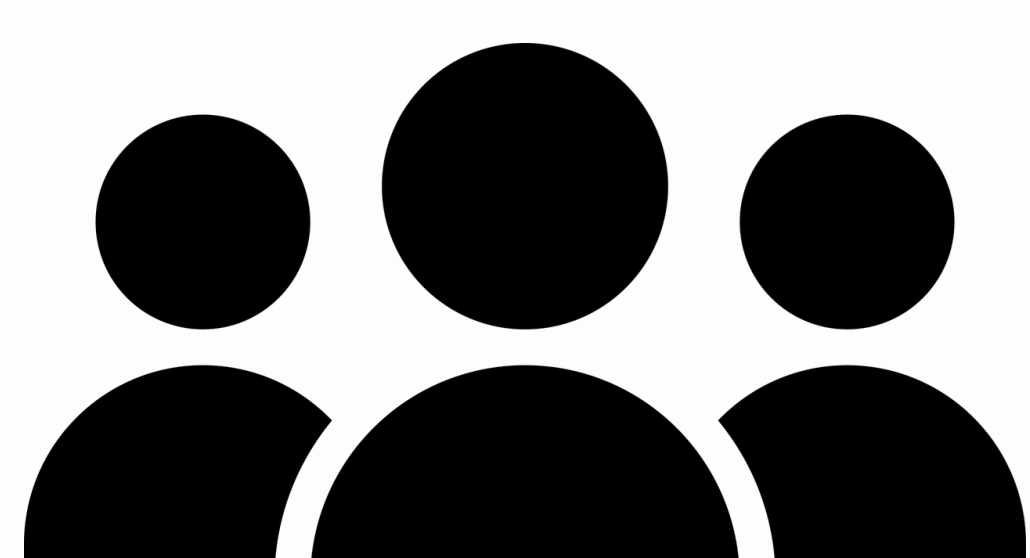


- **Study duration:** six months (plus pilot phase)
- **Randomisation** on a departmental level within participating RPOs
- **Co-design aspects:** Creation of an advisory panel to receive feedback on the study protocol and for consultations throughout the study.
- **Control data:** (1) We will gather baseline data for the participants retrospectively, which we will use as intra-group control data. (2) We are also considering including control groups (no intervention) to gather inter-group control data.
- **Methods:** To answer the research questions, the study will combine quantitative (computing behaviour) and qualitative (semi-structured interviews, surveys) methods.

*Work in progress*

## How can I participate?

- We are looking for RPOs such as universities, research institutes, government agencies, and NGOs to **participate in E-SCOUT**. If you would like to register your interest, please use the QR code on the right.



- Up-to-date information about the study can be found on the Green Algorithms website: <https://www.green-algorithms.org/E-SCOUT/>
- If you have any questions or feedback or would like to connect, please don't hesitate to reach out to Christina Bremer ([cb2374@cam.ac.uk](mailto:cb2374@cam.ac.uk)).



*Register your interest here!*