Net Zero & DRI

JASMIN

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What is digital research infrastructure (DRI)?

The building blocks of the digital research infrastructure system include:

- Large scale computer facilities, including high-throughput, high-performance, and cloud computing
- Data storage facilities, repositories, stewardship and security
- Software and shared code libraries
- Mechanisms for access, such as networks and user authentication systems
- People: the users, and the experts who develop and maintain these powerful resources

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Net Zero - what is it?

Definition:

- Net zero refers to achieving a balance between the amount of greenhouse gas emissions produced and the amount removed from the atmosphere, resulting in no net increase in emissions.

Importance

- Mitigating climate change is a global priority, and digital research infrastructure users can play a crucial role.
- Digital technology and internet are responsible for around 4% of global carbon emissions

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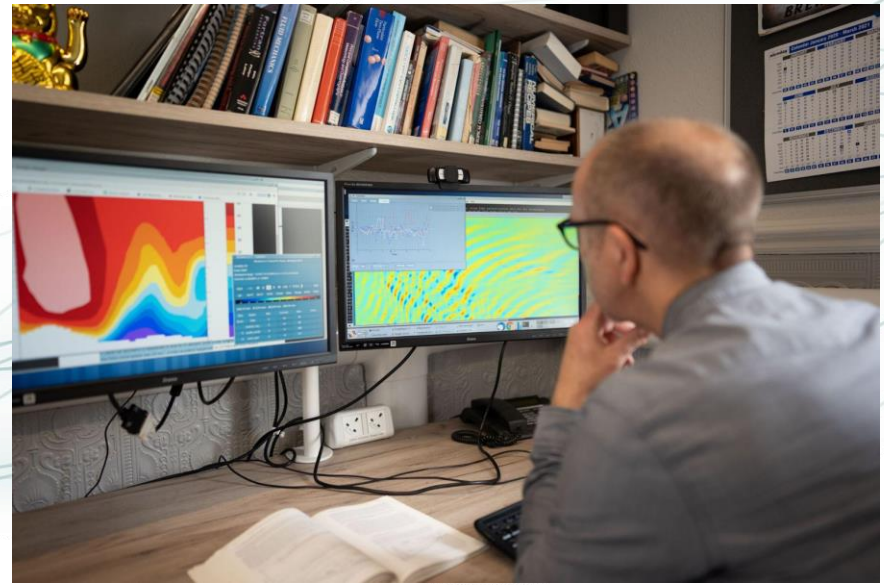
Key areas contributing to digital research infrastructure emissions

- Embodied carbon in equipment
- Manufacture of hardware (including the footprint of extracting raw materials)
- Emissions associated with the use of electricity to power computer equipment
- Energy for power distribution and cooling storage



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Actions you can take

Reduce Energy Consumption

- Optimise server utilisation
  - Ensure efficient use of computational resources to minimise energy waste.
- Implement power-saving features
  - Configure hardware and software to reduce energy consumption during idle periods.

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Actions you can take

Green Software Development

- Code efficiency
  - Write energy-efficient code to reduce computational demands.
- Sustainable algorithms
  - Develop and use algorithms that minimise energy and resource consumption.

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