

Sustainable research computing culture event – Imperial College London

**The Network for sustainable Digital Research Infrastructure Vision and Expertise
(NetDRIVE)**

Sarah Sparrow and Amani Maalouf

NetDRIVE, University of Oxford

Some context

Our computers have a significant and growing carbon footprint.

Efficiency gains lead to greater demand and greater resource usage.

Physical infrastructures supported by the DRI have significantly larger footprints.

Digital technology is inherently transformational.



Scoping project suggested Net Zero DRI Roadmap



1. Policy Review	9. Understanding Behaviour Change	17. Career Pathways
2. Facility Action Plans	10. Procurement Policy	18. Standards for Computational Research
3. Scope 1 Targets	11. Waste and Recycling Policy	19. Mandatory Training
4. Net Zero DRI Task Force(**)	12. Collaborations Framework	20. Information Hub (**)
5. DRI Resource Map	13. Provision of Training (**)	21. Emissions Tracking
6. Community Activities	14. Usage Metrics	22. Sustainable by Design
7. Impact Metrics and Allocation Tools	15. Open DRI	23. Impact Dashboard
8. User Toolkit (**)	16. Mandatory Reporting	24. Green Scheduling

Ambition



- Immediate and tangible progress towards net zero
- National and international thought leadership
- Confidence in our pathway to sustainability



Themes



Machine room
and hardware



Green software
engineering

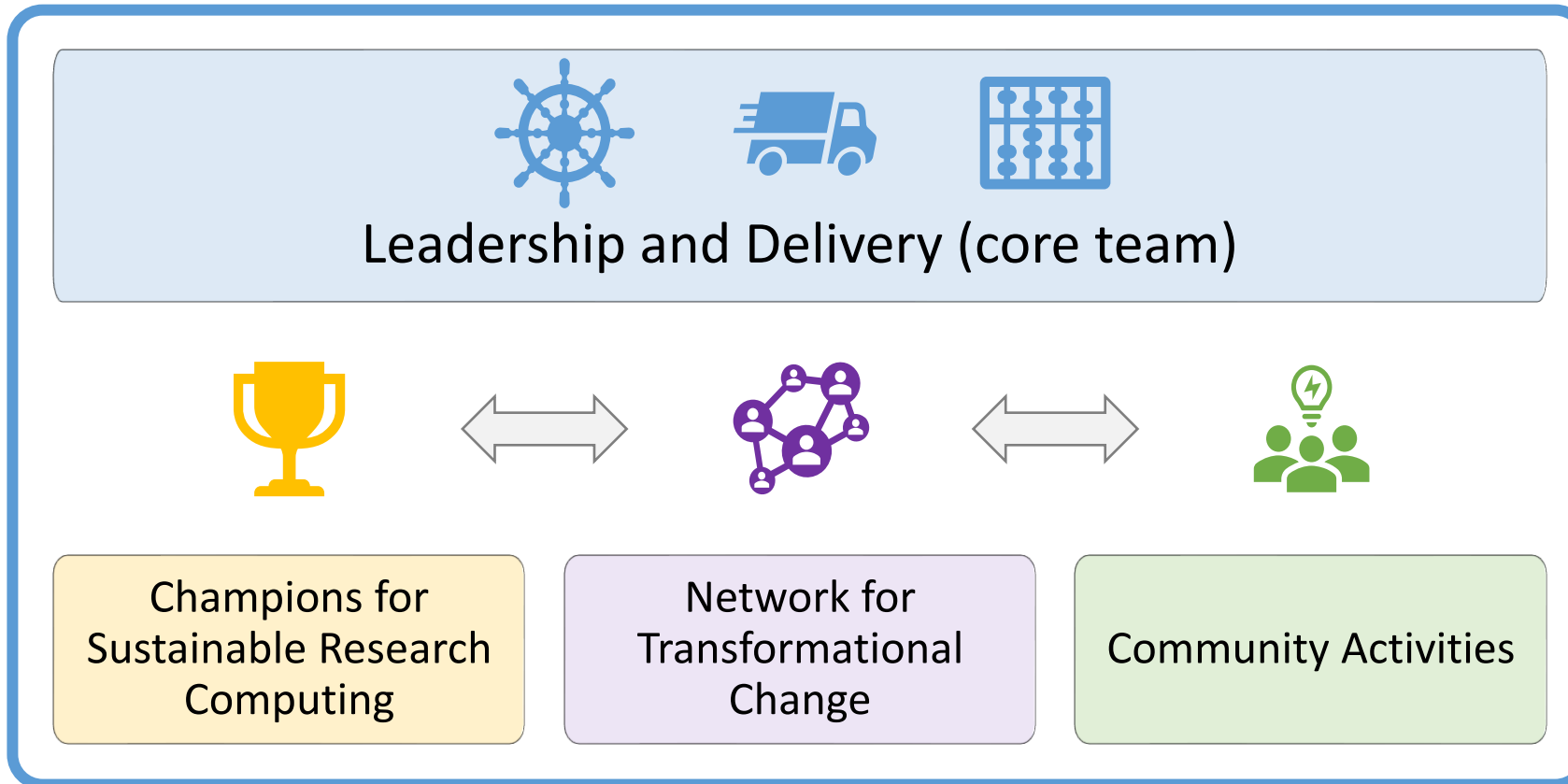


Galvanising
individual action



Systemic Change

Vision: A community project



 
**Actionable and
authoritative advice
for UKRI and
community**

Core Team



Coordinators



Martin Juckes



Sarah Sparrow



Amani Maalouf

Integration Lead

National Centre for Atmospheric Science



Aparna Udayakumar

Grant Manager



Joel Cutting

Support



Graeme Smith

Also, James Armstrong on finance and contracts, and additional NCAS support staff

Champions



Research



Loïc
Lannelongue



Erinma Ochu



Alex Owen



Kirsty Pringle



Lorna Smith



Andy Turner



Michael
Rudgyard



Jessica Huntley



Liz Ing-Simmons



Recruiting

Commercial

Early Career

Network Meetings



Recent



Durham

24th-26th Sep 2025

Annual General
Meeting



Oxford

22nd-23rd April 2026

Creating a New
Reality: A
Sustainable Digital
Transformation

Upcoming



Bristol

4th-6th Nov 2026

Bristol Gathering
and Annual General
Meeting

Meeting Reports on Zenodo

Community Activities (Flexible Fund ~£2m)



Activity reports
NetDRIVE recommendations
Knowledge Translation



Community Projects

Demonstrators or proof-of-concept studies



Working Groups and Task Forces

In-depth reports on key topics



Focus meetings

Engage local actors and sectors

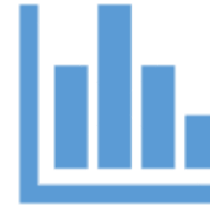
Working Groups



Short Format Training
Material



Supply Chain Environmental
Sustainability Clauses



Metrics and Reporting

Worked closely with UKRI Environmental Sustainability team
Outputs on SparkHub

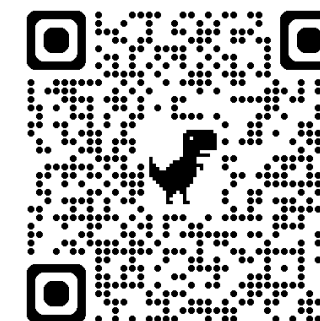
Currently Active

Community Projects



Name	Project Title
Round 1	
NetDrive Summer School	NetDRIVE Summer School
ISPACE	Improving Sustainable Performance and Accelerated Computing Efficiency
GEODE	Empowering Digital Researchers: A Series of Best Practice and Tools Guides (Guides to EmpOwering Digital rEsearchers)
Round 2	
DEICAP	Digital Emissions Integration for Climate Action Planning (DEICAP) – Modelling the Unseen: Integrating Digital Carbon into Real-World University Decisions
Dash4Action	Dash4Action: Facility Action Plans in Pursuit of a Sustainable UKRI DRI
SMART-DRI	SMART-DRI: Scenario Modelling and Assessment for Research Transition in Digital Research Infrastructure
Green Algorithms Dashboard	Unified Multi-Facility Resources Monitoring Dashboard for Sustainable UK Digital Research Infrastructure
SOIL	Data sufficiency: A case study of soil data curation, storage, and usage at UKCEH
SusTraIN	Sustainable Training Initiative for NetDRIVE (SusTraIN)
E-Sched	A community hackathon to enable green scheduling
REACT	REACT: Recommendations for Enhancing Adoption of Carbon-footprinting Tools
DRI-EMIT	Measuring and Effectively Using Emissions Data Across DRI: A Dynamic Training Resource for Managers, Developers, Facilitators, Researchers and Users
P4GS	Pathways to Effective Carbon Reductions by Use of Green Scheduling (pathways for green scheduling)

To find out more:



Integration Clusters

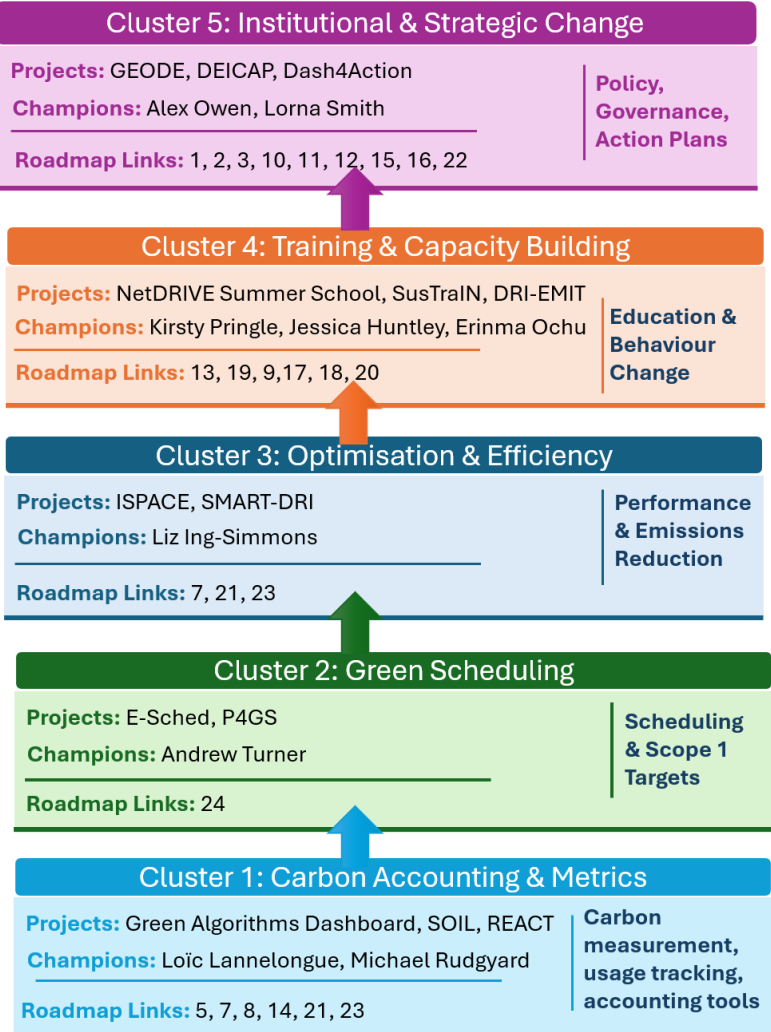
Purpose

Organise activities into **five Integration Clusters**, formed by grouping projects and champions with aligned outputs, dependencies, and areas of collaboration



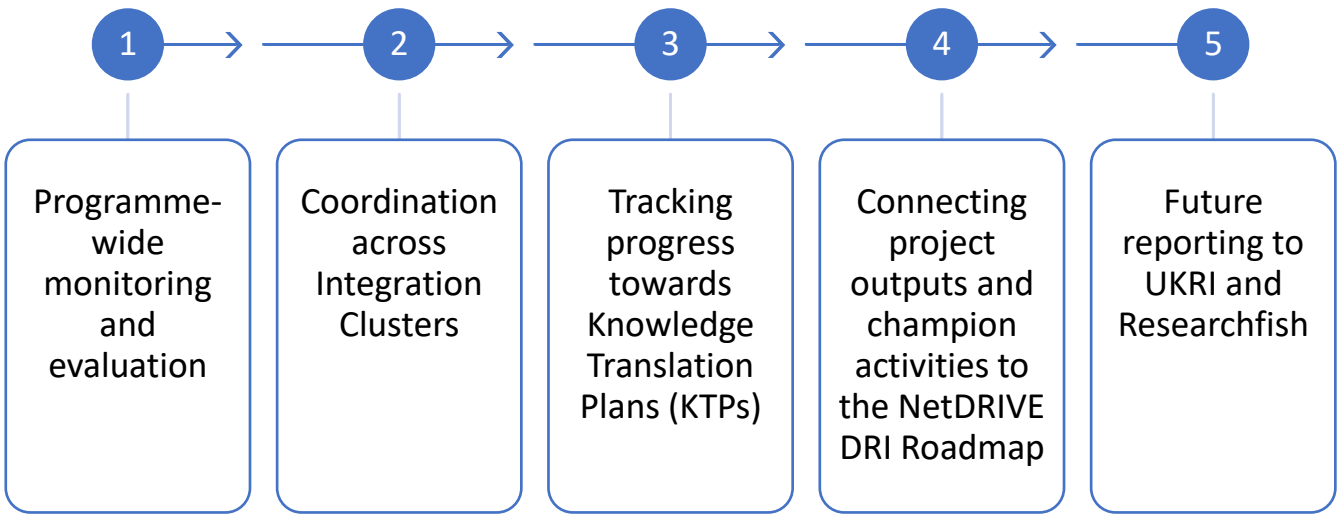
NetDRIVE Roadmap

1. Policy Review
2. Facility Action Plans
3. Scope 1 Targets
4. Net Zero DRI Task Force
5. DRI Resource Map
6. Community Activities
7. Impact Metrics and Allocation Tools
8. User Toolkit
9. Understanding Behaviour Change
10. Procurement Policy
11. Waste and Recycling Policy
12. Collaborations Framework
13. Provision of Training
14. Usage Metrics
15. Open DRI
16. Mandatory Reporting
17. Career Pathways
18. Standards for Computational Research
19. Mandatory Training
20. Information Hub
21. Emissions Tracking
22. Sustainable by Design
23. Impact Dashboard
24. Green scheduling



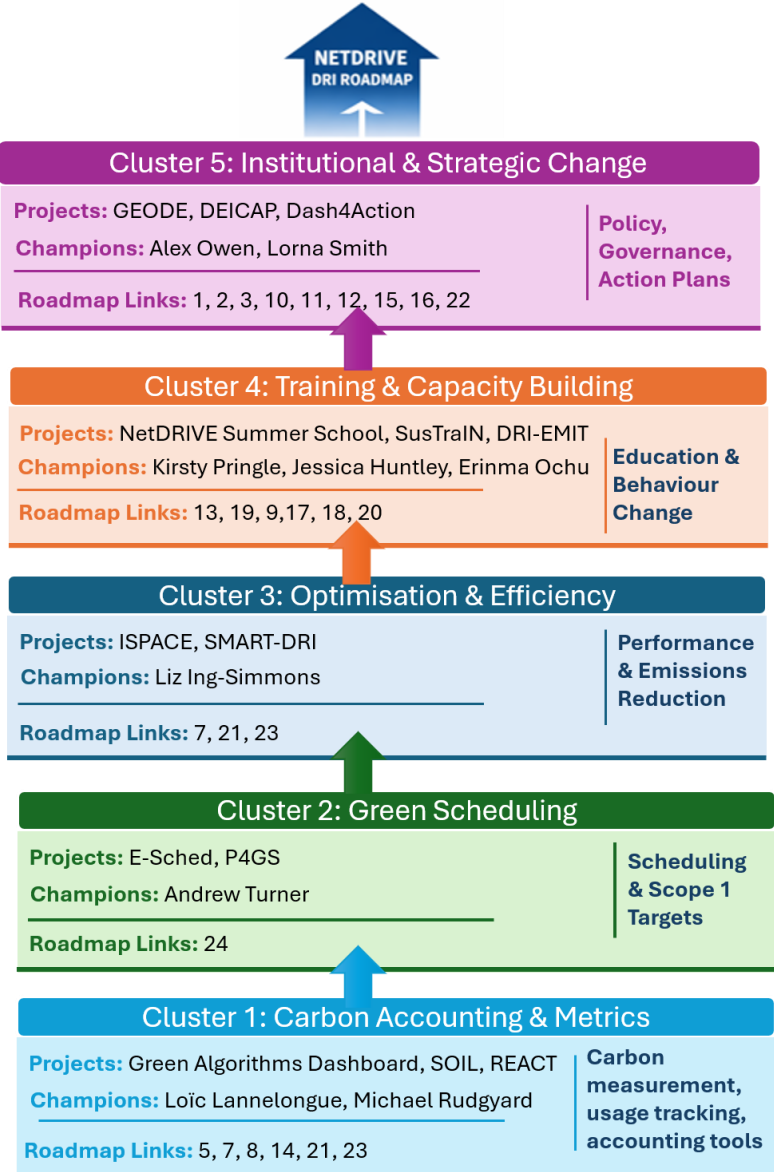
Integration Clusters

Objectives



NetDRIVE Roadmap

1. Policy Review
2. Facility Action Plans
3. Scope 1 Targets
4. Net Zero DRI Task Force
5. DRI Resource Map
6. Community Activities
7. Impact Metrics and Allocation Tools
8. User Toolkit
9. Understanding Behaviour Change
10. Procurement Policy
11. Waste and Recycling Policy
12. Collaborations Framework
13. Provision of Training
14. Usage Metrics
15. Open DRI
16. Mandatory Reporting
17. Career Pathways
18. Standards for Computational Research
19. Mandatory Training
20. Information Hub
21. Emissions Tracking
22. Sustainable by Design
23. Impact Dashboard
24. Green scheduling



Integration Clusters

Integration clusters

Cluster 5- Translates technical and behavioural outputs into governance, procurement, roadmap, and policy-level alignment.

Cluster 4- Embeds sustainable practice through education, guidance, and behaviour change.

Cluster 3- Advances computational efficiency through technical optimisation and performance modelling.

Cluster 2- Focuses on modelling and deploying scheduling-based carbon reductions.

Cluster 1- Establishes the foundational measurement infrastructure required for credible emissions tracking and environmental profiling.

NetDRIVE Roadmap

1. Policy Review
2. Facility Action Plans
3. Scope 1 Targets
4. Net Zero DRI Task Force
5. DRI Resource Map
6. Community Activities
7. Impact Metrics and Allocation Tools
8. User Toolkit
9. Understanding Behaviour Change
10. Procurement Policy
11. Waste and Recycling Policy
12. Collaborations Framework
13. Provision of Training
14. Usage Metrics
15. Open DRI
16. Mandatory Reporting
17. Career Pathways
18. Standards for Computational Research
19. Mandatory Training
20. Information Hub
21. Emissions Tracking
22. Sustainable by Design
23. Impact Dashboard
24. Green scheduling



Cluster 5: Institutional & Strategic Change

Projects: GEODE, DEICAP, Dash4Action

Champions: Alex Owen, Lorna Smith

Roadmap Links: 1, 2, 3, 10, 11, 12, 15, 16, 22

Policy, Governance, Action Plans

Cluster 4: Training & Capacity Building

Projects: NetDRIVE Summer School, SusTrain, DRI-EMIT

Champions: Kirsty Pringle, Jessica Huntley, Erinma Ochu

Roadmap Links: 13, 19, 9, 17, 18, 20

Education & Behaviour Change

Cluster 3: Optimisation & Efficiency

Projects: ISPACE, SMART-DRI

Champions: Liz Ing-Simmons

Roadmap Links: 7, 21, 23

Performance & Emissions Reduction

Cluster 2: Green Scheduling

Projects: E-Sched, P4GS

Champions: Andrew Turner

Roadmap Links: 24

Scheduling & Scope 1 Targets

Cluster 1: Carbon Accounting & Metrics

Projects: Green Algorithms Dashboard, SOIL, REACT

Champions: Loïc Lannelongue, Michael Rudgyard

Roadmap Links: 5, 7, 8, 14, 21, 23

Carbon measurement, Usage tracking, accounting tools

Third Funding Call



Now Open

A

Pathways to Value and Change

Launched — social science survey strand

B

Integration and Knowledge Translation

Closed call for existing project PIs — integration projects across all clusters

C

Champion for Community Change

Champions leading sector-level engagement and institutional change

D

Working Groups

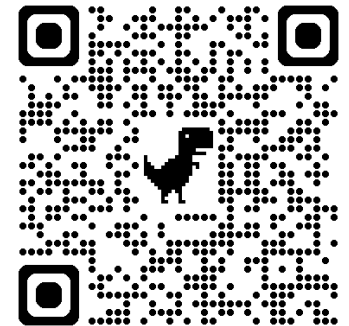
Structured outputs from cross-institutional working groups

E

Early Career Board Member

Early career representation on out project board

Part A



Closing Date:

September 7, 2026



UK Research
and Innovation



Thank you!

NetDRIVE Team: netdrive@eng.ox.ac.uk

<https://uknetdrive.org>

