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DAFNI NEWSLETTER, AUGUST 2026



Dear {{ contact.FIRSTNAME }}

Welcome to the DAFNI August 2026 newsletter!

It is not long now until our annual **DAFNI Conference on 10th September**, there is still time to register! I look forward to welcoming you all to Oxford for our exciting speaker line-up and interactive clean energy workshop.

I am delighted to announce a new feature on our website called 'DAFNI Models'. These pages are written by our users, showcasing their research and their models that were created on the DAFNI platform. Here you can explore models from a range of projects and find out from our collaborators what they envisioned for the model and how it can be now used.

Our featured case study this month is the **Water Systems Leakage (WSL) project**, led by DAFNI Champion and Strategy Board Member **Professor Liz Varga**, as part of the data sharing project 'Data Infrastructure for National Infrastructure' (DINI). Almost 20% of water resources in the UK are wasted through seepage and escapes. The WSL project used data to enhance leakage detection in water distribution systems, identify barriers to data sharing, and propose solutions that would facilitate cooperation between stakeholders.

As well as watching our latest webinar on '**Optimise your LinkedIn use for researchers**', you can now read a blog outlining all the fantastic practical guidance and top tips our Media Manager **Catherine Dhanjal** gave on using LinkedIn effectively to increase impact and engagement of your work.

Dr Brian Matthews, DAFNI Programme Lead

2026 DAFNI Conference
Join us in Oxford on 10 September

📌 10th September 2026
📌 Rhodes House in Oxford.

We would be delighted to welcome you.

Our theme is '**Climate and Security Resilience**' with a dual focus on Government Industrial Strategy, and on Clean Energy.

We are pleased to announce that the clean energy workshop led by the Supergen Energy Networks Hub will include representation from the National Energy System Operator (NESO) as well as Cadent Gas and Kraken Technologies.

NESO is the independent public body responsible for planning and operating Great Britain's energy system, helping to ensure a secure and reliable supply of energy for homes and businesses. Its Future Energy Scenarios 2025: Pathways to Net Zero presented in webinars last month (July) is designed to provide an independent view of a range of future pathways for the whole energy system.

We are particularly keen to ensure broad representation across sectors, so if this is of interest to you, please register for the conference now.

Tickets are £50 per person (£25 students)



Book your conference place

News from our central team

The Water Systems Leakage (WSL) project was led by DAFNI Champion and Strategy Board Member Professor Liz Varga as part of the 2024-2025 data sharing project 'Data Infrastructure for National Infrastructure' (DINI).

The project used data to enhance leakage detection in water distribution systems, identify barriers to data sharing, and propose solutions that would facilitate cooperation between stakeholders.



CASE STUDY

WSL: How data sharing can identify leakages in vital water infrastructure

Liz Varga, Professor of Complex Systems at Loughborough University Director of the Centre in Artificial Intelligence for the Built Environment (AI4BE) (formerly at University College London)

Introduction

The Water Systems Leakage (WSL) project was led by DAFNI Champion and Strategy Board Member Professor Liz Varga as part of the 2024-2025 data sharing project 'Data Infrastructure for National Infrastructure' (DINI). This exciting programme of work was instigated by the Department for Science, Innovation and Technology (DSIT), aimed at better and safer use of data in research and funded by UK Research and Innovation (UKRI)'s Digital Research Infrastructure (DRI) programme. The 'DRI' is a £129m initiative aimed at developing a research data system that's interconnected, human, FAIR and sustainable.

With almost 20% of water resources in the UK wasted in seepage and escapes, this project used data to enhance leakage detection in water distribution systems, identify barriers to data sharing, and propose solutions that would facilitate cooperation between stakeholders. The research focused on the importance of consistent data collection and standardisation, the creation of Trusted Research Environments and collaborative platforms for data confidentiality, to enable access to infrastructure data for faster detection of leaks.

The DAFNI-DINI project allowed Professor Varga and her team at University College London (UCL) to further explore the efficacy of water systems, building on an existing project with DSIT, which involved creating algorithms for predicting water systems leakage.

The research identified barriers to high-quality data collection and standardisation and the need for data confidentiality and high-performance computing in collaborative Trusted Research Environments, to enable access to infrastructure data for effective detection of leaks.

In addition, the study provides a comprehensive data description framework for leakage detection, serving as a foundation and reference for the development of machine learning and other advanced data-driven methods.

“The key research gaps became quickly apparent. The absence of a comprehensive method to overcome data-sharing barriers for water companies was coupled with an absence of tailored data standards for leakage management, and an urgent need for a holistic framework to assess benefits and prioritise barriers,” says **Liz Varga,** Professor of Complex Systems at Loughborough University and Director of the Centre in AI for the Built Environment (AI4BE).

The WSL team:
Ruoqing Yin, PhD student at UCL led the project, with Professor Liz Varga, and doctoral students Haonan Xu and Jiaqian Wei, from UCL.

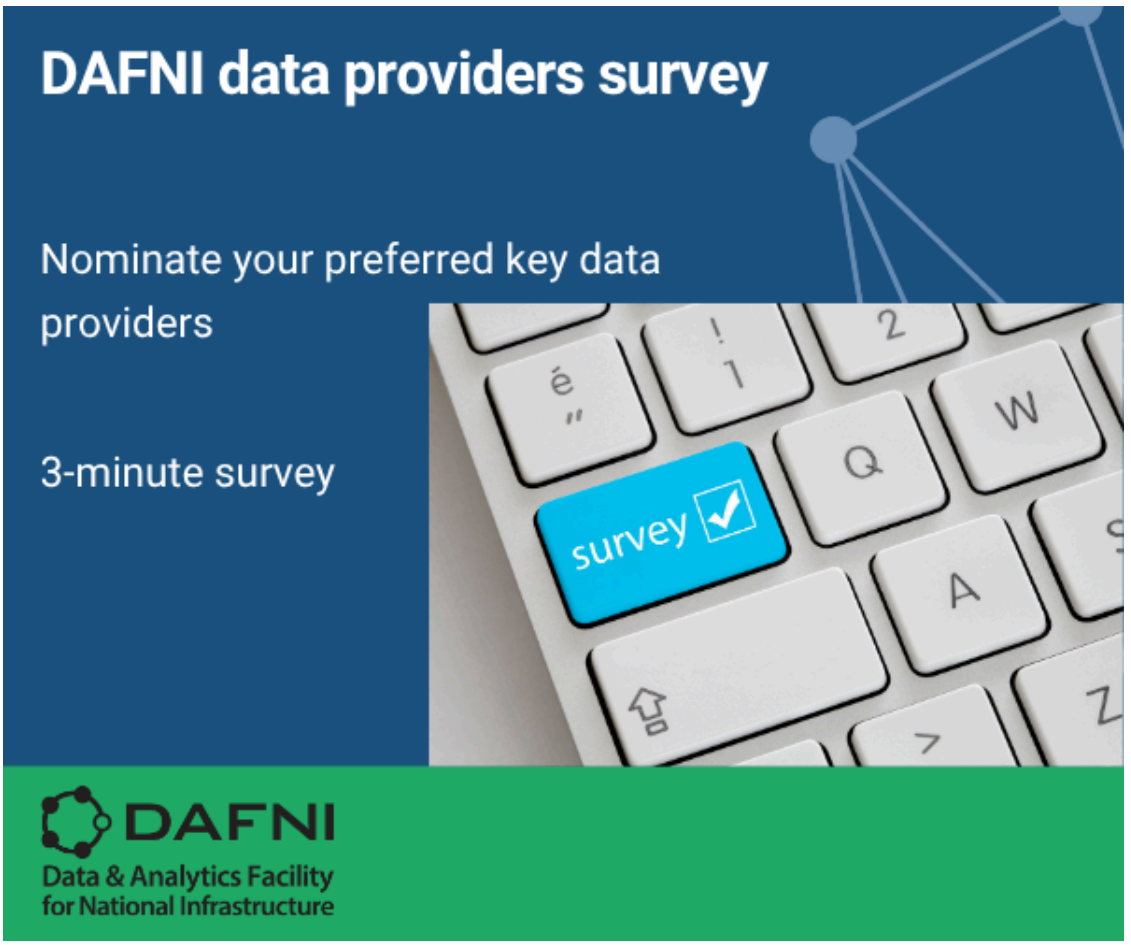
Click to download or read the full case study

User liaison news

Share your data preferences with us!

DAFNI is requesting nominations for key data providers from our user community so that we can investigate ways to better support you.

Take the 3 minute survey now: Key data providers – Fill in form





Lewis Sampson, Research Software Engineer at DAFNI is attending the Accelerated Compute Infrastructure Training Hub (ACIT Hub) event on 15th September

'**Using Slurm on Kubernetes with Slinky hackathon'** takes place across University of Surrey, Guildford, UK and University of Sheffield, UK.

The ACIT Hub was set up to support people who work with supercomputer hardware, including System Administrators, Research Platform Engineers, and all other Research Infrastructure Engineers (RIEs).

Find out more at: https://acit.surrey.ac.uk/events/2026-09-15_Slinky_Hackathon.html

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Sharing DAFNI experiences with the Society of Research Software Engineering (RSE) South West community

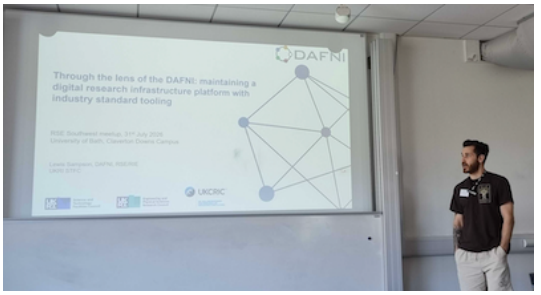
In July 2026 **Elizabeth Mamchits**, Software Engineer, presented how DAFNI has built and evolved the DAFNI platform over the past few years.

She shared lessons on user engagement, turning feedback into meaningful platform improvements, and the practical realities of learning in a live system.

DAFNI Research Software Engineer, **Lewis Sampson**, gave a talk on Kubernetes, containerisation, and building reproducible production services.

Find out more about RSE South West at: https://rse-south-west.society-rse.org/





Partnership news

Find out more about DAFNI and STFC's work with UrbanAIR in our latest blog

UrbanAIR (Urban simulation for air quality and heat resilience strategies) is a pan-European project funded by UKRI Horizon Europe, developing a decision support tool that will allow urban planners to model, pre-empt and respond to the effects of air pollution and heat stress in cities.

The project combines data from the European Space Agency - ESA and the European Centre for Medium-Range Weather Forecasts - ECMWF throughDestination Earth (DestinE), an initiative aimed at creating a digital twin of our planet.

Saiful Khan, Senior Data Scientist at DAFNI explains, "Part of DAFNI's role is to provide technical expertise on how to use the DestinE's services. We act as a bridge between specialist scientists and local authority urban planners. One of the important resources is the DestinE Data Lake, which brings it all together: climate data, city data, compute capacity for simulations and modelling, and user management.

"The city models can include detailed data —often down to 1–2 metres — such as land use, elevation, soil types, demographics, buildings, road types, rivers, green areas, traffic, etc. All of these come in different formats, shapes and sizes."

Read the blog at:
https://www.urbanair-project.eu/post/urbanair-designing-resilient-cities-with-the-earth-s-digital-twin



As we come out of the summer into the autumn there are a number of significant funding opportunities launching from Horizon Europe with deadlines in 2027.

These include:

- **14 and 15 October online**: Cluster 4 info day is an opportunity to learn about the funding opportunities in this cluster which focuses on digital technologies. With a focus on the development on competitive, digital, low-carbon and circular industry, the cluster offers a wide range of opportunities for innovations in domains from low carbon industries to AI and robotics Horizon Europe info days—Cluster 4
- **15 October online:** Horizontal Activities Nature and Bridging Calls. *The session will provide participants with targeted guidance on the policy context, supporting applicants in understanding the objectives and opportunities of the Nature and Bridging calls. Bridging calls are relatively new opportunities to connect research outcomes to market opportunities and new research frameworks* Horizon Europe info day: Horizontal Activities Nature and Bridging calls
- **19 Nov Brussels (in person) and Live Stream**: Cluster 5 presents funding opportunities for innovators working in the domain of climate, energy and mobility Horizon Europe info days—

Cluster 5 This relates to DAFNI's work with projects CROSSEU and UrbanAIR.

Within the DAFNI team we are actively pursuing funding opportunities in these clusters and actions and would be keen to work with members of our community on proposals.

Please get in touch with **Dr Tom Kirkham**, DAFNI Science Lead, if you would like to explore these opportunities with us: info@dafni.ac.uk



DAFNI platform features and updates



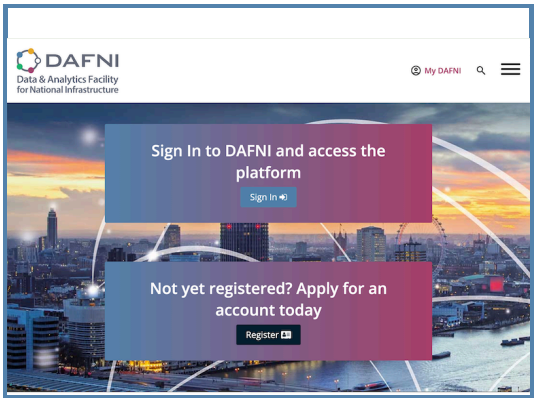
This month has seen the release of our new feature for uploading metadata-only entries into the DAFNI data catalogue as **Reference Datasets**. For anyone who wants to represent a dataset in our catalogue but can't upload the data itself, whether due to licensing restrictions or size constraints, the option is now available to add an entry to our catalogue that links to the original source.

Soon to follow will be our sister feature **Reference Models**, allowing the same metadata-only entries for software models which again may be restricted by licensing or size constraints. This will enable users and projects to represent all of their work on the platform even if some workflow components cannot be run directly on DAFNI.

Looking to the future
We are starting to investigate **bringing parts of the platform outside of our login wall** to enable easier sharing of results and project outputs. If this is something that would be of interest to you please do get in touch, we welcome any feedback from the community as we begin this work. Contact us at info@dafni.ac.uk

Access our help
If you are a user of the platform and have any feedback or platform requests, please contact support@dafni.ac.uk

Standard and expert user accounts are available - find out more at the foot of this email.



DAFNI technical training



If you would like to attend a DAFNI Technical Training Event covering how to best use DAFNI to complement your work and projects, please visit our Eventbrite page to register your interest. We plan to run a training session very soon, so now would be an ideal time to register.

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https://www.eventbrite.co.uk/o/dafni-31793198351

DAFNI researchers' news



DAFNI Fellow Dr Mingshu Wang has been invited to give a presentation at the British Cartographic Society Annual Conference on 8-9 September 2026.

Mingshu is a Reader in Geospatial Data Science at the University of Glasgow. His talk is primarily focused on Geomatics education, cartography and the implications of GeoAI, the title is: “Research-Led Geomatics Education in the Age of GeoAI: From Map-Making to Visual Reasoning”.

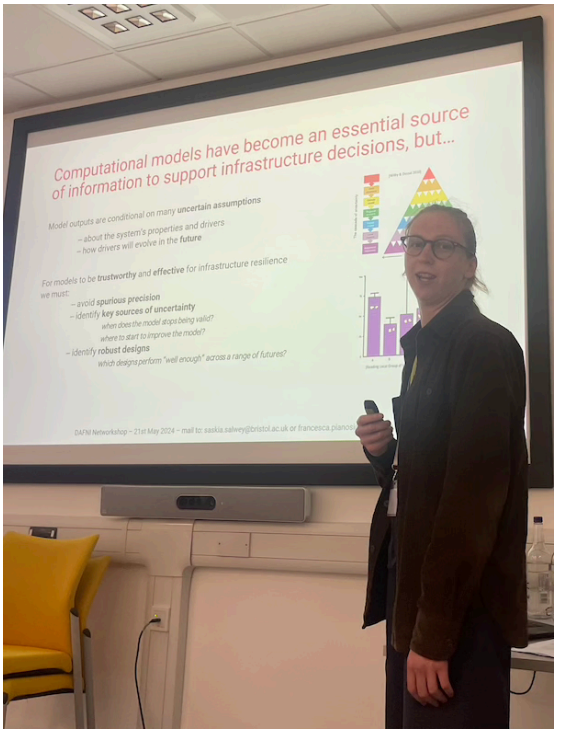
He says, “Within my talk topic there is a natural connection with some of the themes I am exploring through the DAFNI Fellowship, particularly around the critical interpretation of data, models and visualisations.”

⏰ 9th September
🎟️ Session 2: The use of geospatial technologies and cartography in education
11:10 - 12.10
📌 Edinburgh
🌐 https://www.cartography.org.uk/annual-conference

The first paper from the DAFNI USARIS project has been published this month (August).

In the paper, **Saskia Salwey** and co-researchers discuss the importance of uncertainty quantification and attribution for infrastructure resilience with two examples from the water and energy sectors. They demonstrate how sensitivity analysis can help identify inputs which have a (sometimes unexpectedly) strong influence on model outputs, helping modellers focus their attention and resources on effectively reducing uncertainty to facilitate more robust infrastructure decisions and designs.

Salwey, S., A. Murgatroyd, H. Bloomfield, G. Coxon, and F. Pianosi. 2026. “*Uncertainty Quantification and Attribution for Resilient Infrastructure Systems*.” *Climate Resilience and Sustainability* 5, no. 2: e70059. https://doi.org/10.1002/cli2.70059



Read more about the DAFNI USARIS project tackling **Uncertainty Quantification and Sensitivity Analysis for resilient Infrastructure Systems** at: https://www.dafni.ac.uk/resources/case-studies/usaris-uncertainty-quantification-and-sensitivity-analysis-for-resilient-infrastructure-systems/

Congratulations David Flynn, Professor of Cyber Physical Systems at the University of Glasgow. on being invited to become a Fellow of The Durham Institute of Research, Development, and Invention (DIRDI)!

David is the Joint Programme Lead of TransiT, alongside Professor Phil Greening. We are delighted to work with TransiT - Digital Twinning for Transport Decarbonisation, the national research hub focused on using digital twins to rapidly decarbonise transport in the UK, including road, rail, air and maritime, across both passenger and freight.

https://transit.ac.uk/

Community news

The Department for Environment, Food and Rural Affairs (Defra) has launched its R&D Fellowship Programme for 2027/28

65 positions available, the fellowships are an opportunity to see how evidence and policy-making work first-hand at the centre of HM Government machinery.

➡️ Thursday 3rd September: Join a webinar hosted by the Defra Chief Scientific Adviser **Prof Anjali Goswami** FRS and deputy Chief Scientific Adviser **Dr Justine Bejta** with Q&A for potential applicants.
➡️ Monday 14th September 2026: Deadline for applications

Find out more at: https://www.civil-service-careers.gov.uk/departments/defra-2/defracareers/defra-fellowships/

Call for papers: Special Issue of Future Cities journal

🏙️ Conflict-resilient cities: Planning, recovery and transformation under protracted crises
How can cities move beyond simply rebuilding what was lost — and instead become more resilient, sustainable, inclusive and capable of adapting to protracted crises?

This new Special Issue of Future Cities journal, published by Emerald Publishing, is dedicated to advancing the emerging research agenda on conflict-resilient cities.
💡 Important opportunity for authors: the Article Processing Charge (APC) is fully waived for content submitted to Future Cities before 31 December 2026.

📅 Submission deadline: 31 December 2026
✅ Submissions are now open

🔗 Full Call for Papers and submission information:
https://www.emeraldgrouppublishing.com/calls-for-papers/conflict-resilient-cities-planning-recovery-and-transformation-under-protracted


DIGITAL TWIN
AI ANALYTICS
REMOTE SENSING
ENERGY
MOBILITY
BUILDINGS
POWER
UNSTABLE
WATER
LOW
WATER
SERVICES
COMMUNITIES
ANTICIPATE
ABSORB
ADAPT
RECOVER
TRANSFORM
CALL FOR PAPERS
Conflict-Resilient Cities
Planning, recovery and transformation under protracted crises
Future Cities | Emerald Publishing
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Visit our publications page



Watch our past webinars

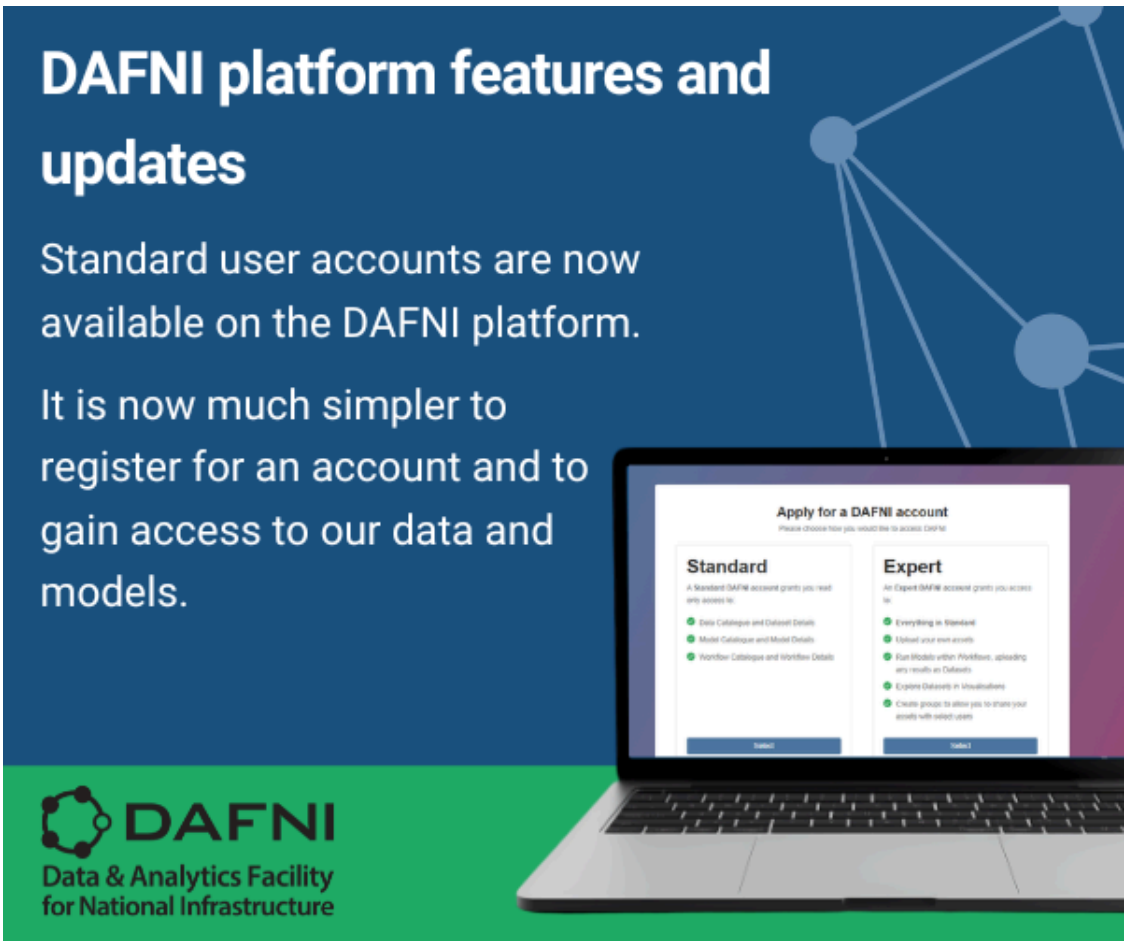
View recordings of past webinars at https://www.dafni.ac.uk/news-events/events/webinars/

DAFNI YouTube channel: catch up on conferences and interviews

Visit https://www.youtube.com/@dafnifacility118

Access our help

Please contact us directly for any assistance on info@dafni.ac.uk



Apply for a DAFNI account: interested in working with infrastructure data, models and analytics? Creating an account on the Data & Analytics Facility for National Infrastructure (DAFNI) is the first step.

DAFNI offers two account options depending on how you want to use the platform:

🔎 Standard account
Provides instant read-only access to explore:
• Data catalogue and dataset details
• Model catalogue and model details
• Workflow catalogue and workflow details

⚙️ Expert account
Includes everything in the Standard account, plus the ability to:
• Upload your own assets
• Run models within workflows and upload results as datasets
• Explore datasets through visualisations
• Create groups to share assets with selected collaborators

Whether you want to explore infrastructure datasets or actively run models and collaborate, DAFNI provides the tools to support research and innovation in national infrastructure.

Visit: https://www.dafni.ac.uk/my-dafni/

About DAFNI

The DAFNI platform supports research that aims to provide the UK with a world-leading infrastructure system that is more integrated, efficient, powerful, reliable, resilient and affordable. It is enabling the community to conduct research that is able to generate new insights at a higher level of detail and accuracy than ever before.

DAFNI was originally funded by an £8 million EPSRC investment in the UK Collaboratorium for Research in Infrastructure and Cities (UKCRIC) and a £1.2m grant under EPSRC's Resource Only Strategic Equipment. Its aim has been to become the national platform to satisfy the computational needs in support of data analysis, infrastructure modelling and visualisation, and encourage whole-system thinking for the UK's infrastructure research needs.

In March 2023 UKRI awarded £4m to STFC Scientific Computing to establish a national Centre of Excellence for Resilient Infrastructure Analysis, and move the Data & Analytics Facility for National Infrastructure (DAFNI) into its new phase.

To find out more about DAFNI, visit: www.dafni.ac.uk

Science and Technology Facilities Council

UKCRIC™
UK COLLABORATORIUM FOR RESEARCH ON INFRASTRUCTURE & CITIES

Engineering and Physical Sciences Research Council

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