



## DAFNI NEWSLETTER, JUNE 2025



Dear {{ contact.FIRSTNAME }}

Welcome to the DAFNI June 2025 newsletter.

It has been a very busy month for the DAFNI team and we are pleased to announce a number of upcoming developments - see the platform updates section below.

First of all, my congratulations to Professor William Powrie, Convenor and Lead of the Healthy Low-carbon Project at our partner and collaborator, UKCRIC, who has been awarded a CBE for his services to Engineering.

This month we have had two fantastic webinars, firstly hearing from Professor Richard Dawson, who discussed the Flood Infrastructure Resilience Model (FIRM), which simulates flooding and the human response to events. Secondly, our colleagues from the DAFNI technical team, Kyle Stevenson and Teagan Zoldoske, presented DAFNI to the Institution of Civil Engineers.

The recording of the popular webinar on the STORMS (Strategies and Tools for Resilience of Buried Infrastructure to Meteorological Shocks) with Dr Xilin Xia of University of Birmingham is now available to watch, as well as our May webinar led by myself on the DAFNI DINI report.

A case study featuring Professor Richard Dawson's flood resilience research is available now on our website, which is shared within this newsletter. As well as showcasing the work of FIRM, we are excited to share research from Dr Giuliano Punzo and his team in harnessing quasi real-time data for improved transport outcomes

Our headline event is the [2025 DAFNI Conference](#), which takes place on 11th September at the University of Sheffield. We are pleased to share that Holger Kessler, Senior Stakeholder Manager at AtkinsRéalis, will be joining us as Invited Speaker and he will be discussing the journey of NUAR (the National Underground Asset Register). We are pleased to announce that Jonny Wilson and Richard Thompson, from the Environment Agency, will be joining Paul Hickey from Ofwat to discuss our water resources.

*Dr Brian Matthews, DAFNI Programme Lead*

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**Book now**  
**2025 DAFNI Annual Conference**

# BRIDGING THE GAP

## BETWEEN ACADEMIA, GOVERNMENT AND INDUSTRY



**THE EDGE, SHEFFIELD 11 SEPTEMBER 2025**

Join us at [The Edge](#) at the University of Sheffield

Our fantastic line-up of speakers, includes our **two keynote speakers**, **Dr Juliet Mian**, Director of Arup's Climate Services and Sustainability portfolio, and **Dr Sarah Hayes**, Chair Data Sharing Working Group, Independent Consultant.

### Invited speakers

- **Oliver (Ollie) Tones**, DSIT
- **Dr Richard Kirkham**, University of Manchester, on SALIENT
- **Rachael Steller and Karina Rodriguez Villafuerte**, Climate Change Committee
- **Professor Nicholas Vasilakos**, University of East Anglia on the CROSSEU project
- **Paul Hickey**, Ofwat, **Jonny Wilson** and **Richard Thompson**, Environment Agency on RAPID (Regulators' Alliance for Progressing Infrastructure Development)

### Trusted research panel:

- **Emily Jefferson**, Health Data Research UK
- **Jason Feehily**, University of Nottingham
- **David Batho**, Jisc
- **Tash Buckley**, Cranfield University

Prices: £50, student £25.

Book via: <https://web.cvent.com/event/f255b158-1692-49f3-9efd-a68e3c86eba1/summary>.

# Timetable:

## Morning

- **09:00 Arrival** Breakfast networking
- **09:30 Welcome and introduction**
- **09:45 Keynote: Making good choices** Juliet Mian, Arup
- **10:15 Update on DAFNI** TBC
- **10:35 Networking break**

## Invited Speakers Session

- **11:00 SALIENT: Building a Secure and Resilient World: Research and Coordination Hub**  
Dr Richard Kirkham, The University of Manchester
- **11:20 Assessing the resilience of infrastructure in the UK**  
Rachael Steller and Karina Rodriguez Villafuerte, Climate Change Committee
- **11:40 Climate Extremes and Income Inequality: First Glimpses of Econometric Evidence and Policy Insights from the CROSSEU Project** Professor Nicholas Vasilakos, University of East Anglia
- **12:00 Networking lunch** Poster session and demonstrations

## Afternoon

- **13:30 Keynote: Do it once and share it many times**  
Sarah Hayes, Chair Data Sharing Working Group, Independent Consultant
- **14:00 Learning to Fly: Research Data Access Pilots**  
Oliver (Ollie) Tones, Department for Science, Innovation and Technology
- **14:20 DINI Project Results and recommendations**  
Dr Brian Matthews, DAFNI Programme Lead, Scientific Computing, STFC
- **14:40 Networking Break**
- **15:05 Trusted Research Panel:**
  - Emily Jefferson, Health Data Research UK
  - Jason Feehily, University of Nottingham
  - David Batho, JISC
  - Tash Buckley, Cranfield University
- **15:55 From hackathon to legislation - the journey of NUAR**  
Holger Kessler, AtkinsRéalis
- **16:15 National Water Resources Quality Modelling: From research to delivery**  
Paul Hickey, Ofwat,
- **16:35 Conference closing remarks**  
Dr Brian Matthews, DAFNI Programme Lead, Scientific Computing, STFC
- **17:00 Close of Conference**

## DAFNI WEBINAR SERIES 2025



**DAFNI**

Data & Analytics Facility for National Infrastructure

### DAFNI WEBINAR 24 SEPT 2025

**Speaker: Dr Raghav Pant**

Senior Research Associate, University of Oxford, ECI Oxford



**DAFNI**

Data & Analytics Facility  
for National Infrastructure

## Building systemic resilience

Click to book for our September webinar featuring **Dr Raghav Pant** of University of Oxford.

Raghav will speak on **NIRD CoE – Building systemic resilience of interdependent infrastructure networks at the national scale**

[Book now](#)

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# Watch our past webinars

View recordings of past webinars <https://dafni.ac.uk/past-events/>

Including [Brian's on DAFNI-DINI](#) and [Xilin's on STORMS](#)

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## News from our central team

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### Quasi real-time transport data



In the project '**Use of quasi real-time data in transport infrastructure**', part of the DAFNI-Data Infrastructure for National Infrastructure programme, a research team explored how this type of data is currently utilised and the challenges surrounding its use. Quasi real-time data (used in a window of 3-60 minutes after its collection) is a developing field, sometimes undistinguished from real-time data.

The project team of Dr Giuliano Punzo and Toby E Willis of University of Sheffield and Professor Daniel Coca of Newcastle University, aimed to better understand the operational environment, challenges and best practices associated with quasi-real-time data.

The key aim of the project was to advance research into near real-time transport data, supporting smarter infrastructure systems and enabling real-time responses to events such as accidents, delays and infrastructure failures. They also worked to identify barriers to the acquisition and effective use of this type of data for land transport modes such as cars, lorries and public transport. The impacts are broad, ranging from quickly informing consumers about bus and tram waiting times, to enabling more dynamic traffic management.

[Click here to read the case study.](#)

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### The human response to flood events



The FIRM Flood Infrastructure Resilience Model simulates flooding and the human response to flood events. That human behaviour element, and the interactions between people and flooding, is the key distinguishing feature of FIRM. FIRM can be used to explore flood events of different magnitude and test the effect of choices people make in response to extreme weather events, in order to model how people are likely to be exposed to dangerous depths and speeds of water.

FIRM will help flood resilience forums, councils and policymakers implement improved before-the-flood measures such as better public education and warning systems, improved during-event people and traffic flows, and improved infrastructure resilience evacuation sites.

The FIRM project is led by Richard Dawson, Professor of Earth Systems Engineering in the School of Engineering at Newcastle University.

[Click here to read the FIRM case study.](#)

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## Sign up for DAFNI technical group

We are pleased to announce that our next Technical User Group meeting will take place this summer, on the 21st July, starting at 2.30pm. During this meeting we will cover recent technical developments. It

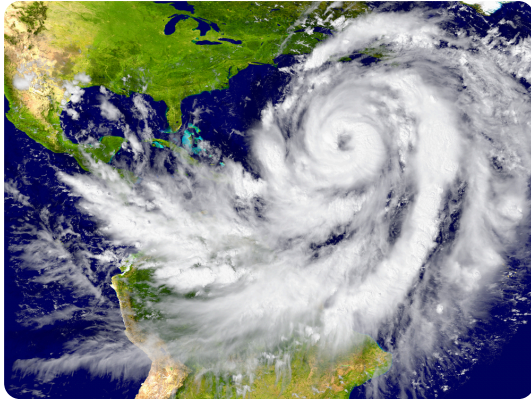
provides an ideal opportunity for you to give us feedback and suggestions based on your experiences with DAFNI.

If you would like to join this meeting, please get in touch with the DAFNI team who can add you to the invite via DAFNI Support: [support@dafni.ac.uk](mailto:support@dafni.ac.uk)

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## Partnership news

### CROSSEU and OpenLand



The CROSSEU and OpenLand projects are progressing and moving into onboarding onto DAFNI. Both projects present the same challenges of moving data and models to the platform but present different scales of challenge.

The **CROSSEU** project utilises a diverse collection of models and data from across the UK and EU, and supports use cases to enhance our understanding of the social and economic risks of climate change across Europe.

The **OpenLand** project is developing land use strategies that maximise carbon storage to achieve the UK's 2050 net zero target, while balancing trade-offs and co-benefits to also maximise biodiversity gain, support sustainable agriculture, and minimise flood damages. Key stakeholders in the project include a wide variety of landowners, land managers, members of the farming community, as well as nature conservation groups, and land use policy makers. The models and data on DAFNI can support decision-makers to optimise British land use policy and legislation outside of the EU.

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## Uncertainty quantification in marine renewable energy

In July 2025, **Dr Francesca Pianosi** will speak on USARIS (Uncertainty Quantification and Sensitivity Analysis for resilient infrastructure systems) at the PRIMaRE conference at the University of Bristol, focused on research and development and fostering collaborations in Marine Renewable Energy.

This annual event provides a forum for exchanging the latest research and development and fostering collaborations in Marine Renewable Energy. Take the opportunity to hear Francesca and other excellent speakers at this free conference on 2-3 July 2025.

Book now: <https://www.bristol.ac.uk/science-engineering/schools/civil-aero-design/12th-primare-conference/>

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## MARS on show at high-profile aviation event



Congratulations to **Dr Fabian Steinmann** who spoke about the MARS project (Flight Diversion Modelling for the UK Aviation System) [at the AirportsUK Operations Conference in June.](#)

He spoke to an audience of leaders, regulators and policymakers from across aviation.

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# IMPACT researchers promoted

We are delighted to share exciting news about the lead researchers on the DAFNI IMPACT project - *Improving flood disrupted road networks with a dynamic people-Centric digital Twins*, examining how digital technologies can improve the resilience of the transportation network during flooding. **Professor Tao Cheng**, Head of UCL SpaceTimeLab, has been appointed as Vice Dean (International) for UCL Engineering. **Dr Qiuchen Liu** has been made a full Professor in The Bartlett School of Sustainable Construction at UCL.  
[Click to read the IMPACT case study here.](#)

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## User liaison news



### CGFI

The DAFNI team has recently been cataloguing and adding economic and climate data, produced by the CGFI Consortium (**UK Centre for Greening Finance and Investments**), to the platform for long term storage. This data will provide users with a rich array of information that can be used to more effectively price assets - taking future climate risks into account - and in doing so help to create a more resilient and stable financial sector. We expect to make this data fully available to users of the DAFNI platform later this summer. <https://www.cgfi.ac.uk/>

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## DAFNI platform features and updates

The platform team has recently introduced a new process for making assets public on the DAFNI platform.

Requests to publicise any datasets/models/workflows will now be sent to our dedicated data curation team to check the accompanying metadata is complete and correctly filled in.

If any changes are required, they will be in touch via email with guidance, and available for support if you have any queries.

The upgrade to the platform's web interface is going well, and continues to be the focus of the DAFNI development team.

We are also working to add basic accounts, which will have read-only access to the platform and anyone will be able to sign up with them.

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## Access our help

Please contact us directly for any assistance on [info@dafni.ac.uk](mailto:info@dafni.ac.uk)

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### DAFNI technical training

A great opportunity to get up to speed quickly on DAFNI and to ask our technical experts your burning questions. **Especially recommended for those developing a research proposal and are thinking of including DAFNI as the platform of choice for the research.**

Our regular technical training events (Wednesdays, 1:30pm-4:30pm) are available to book via Eventbrite (see weblink below) Next training dates:

- 2nd July
- 27th August

- 22nd October
- 17th December 2025

To attend the event you will need experience of entering code through a command line interface, for more information and to book, please visit: <https://www.eventbrite.co.uk/o/dafni-31793198351>



## Apply for a DAFNI account

### Apply for a DAFNI account

#### Join our community

If you would like to join the community of DAFNI users, please visit the [DAFNI website](#) for more information.

#### Current users of DAFNI

Get updated on the latest technical updates and features, visit: <https://www.dafni.ac.uk/dafnilogin/>

## 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](http://www.dafni.ac.uk)



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DAFNI  
Rutherford Appleton Laboratory,  
Harwell, Oxford,  
Didcot,  
OX11 0QX



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