



Using DAFNI

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Science and
Technology
Facilities Council



Engineering and
Physical Sciences
Research Council



UKCRIC



UK Research
and Innovation



- DAFNI Phase 1: 2017-21: 4 year development programme
 - Requirements gathering, design, implementation
 - Now in an intense development phase
- University hardware: £950,000 of investment into the 12 universities.
- Getting pilot users onto the platform
 - Pilot programme
 - Champions programme
- Outreach programme
 - Webinars
 - Hackathons – particularly with the Urban Observatory programme
 - Final event – March 2021

- Champions Programme established
 - Funded by DAFNI
 - pilots, requirements, promotion
 - 5 Champions' Projects funded
- University of Southampton: Simon Blainey, Adrian Hickford
 - Opportunities in the Transport Research Community
- UCL: Mike Batty, Juste Raimbault
 - MATSim (Multi-agent Transport Simulation) framework
- Cranfield University: Simon Jude
 - Integration of DAFNI and UKCRIC Urban Observatories
- Sheffield University: Daniel Coca, Cristian Genes
 - DAFNI as a Digital Twin Platform
- UCL : Liz Varga, Andrey Postnikov, Lauren McMillan; Oxford: Tom Russell; Newcastle: Luke Smith; Cranfield: Stephen Hallett, Ian Truckell
 - Infrastructure Research Ontology

- Developing our sustainability plan: DAFNI Phase 2
 - Long-term sustainability for production beyond March 2021
 - Seeking to establish a hybrid model: platform support and contributions from projects.
- A production platform
 - Setting up a service management environment
 - Operating the platform
 - User support, operations, help desk
- Looking towards Phase 2:
 - Digital Twins: running long-running models with real-time input and outputs
 - Support for Machine Learning models
 - Richer data infrastructure
 - An extended framework for integrating models.

- Working with a wide range of partners

... in academia

- The DAFNI consortium – 12 leading universities
- And beyond: Reading, UEA, Liverpool, Heriott-Watt ...
- EPSRC, NERC, STFC

... in government

- NIC, ONS, OS, BEIS
- Environment Agency, CCC, DEFRA, Bank of England

... in industry

- Mott-MacDonald, Costain, Arup, Water Companies ...

DAFNI plays a role within the lifecycle of research

- Explore the subject
 - Access and explore other data sources and models
- Prepare data
 - Organise and share data resources with a distributed research team
 - Access controlled to collaborators
- Develop new techniques
 - Build, deploy and scale-up models
 - Combine and couple models together into workflows
 - Visualise results
- Publish results
 - Release data, models and visualisations
 - Allow others to explore the models
- Curation of results
 - Keep results on DAFNI for future reuse
 - A legacy for research projects

- If you have a suitable pilot within the current programme:
 - Discuss with Jim
 - Discuss with the DAFNI Team: Marion Samler, Brian Matthews
- We can provide logins to try it out
- For future projects
 - If you feel that DAFNI could play a suitable role in your project then consider including DAFNI in your proposal
 - Eligible for research grants
- We are developing a cost model
 - Platform hosting and operations costs, resource usage
 - RSE time
 - Help on developing and integrating the models and data, optimising to the platform
 - Changes and feature develop on the DAFNI platform
- Please talk to us! info@dafni.ac.uk



Thank You

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