DAFNI - CHAMPIONS CALL

INTRODUCTION

DAFNI (Data & Analytics Facility for National Infrastructure) is funded by an £8 million EPSRC investment in the UK Collaboratorium for Research in Infrastructure and Cities (UKCRIC). It will 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. The platform will support research that aims to provide the UK with a world-leading infrastructure system that is more integrated, efficient, powerful, reliable, resilient and affordable. It will achieve this by 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 is currently under development and hosted by the Science and Technology Facilities council (STFC). DAFNI now has a "bronze" release that is suitable for test and evaluation by selected users to exercise the power of the platform and influence its ongoing development.

A driver for success is identifying users and use cases that can demonstrate the benefit DAFNI can bring to the research community, providing input on four important aspects for DAFNI success:

(i)   engagement with the research communities and building an enthusiastic community for DAFNI;

(ii)   the provision of requirements and evaluation to help steer the ongoing DAFNI development with additional functionality and

(iii)   the integration onto the DAFNI platform of a range of infrastructure models and data to expand the DAFNI library.

(iv)   the provision of a central point for shared data, simulation and knowledge to bring the UK closer to providing a federated national digital twin

In order to develop this early user base, STFC would like to engage with members of the research community as DAFNI Champions. Champions will work with the DAFNI team and their home institutions to disseminate and promote the DAFNI platform within their institution, to explore use cases using the DAFNI facility within their research, and to feedback to DAFNI team

on system requirements. Champions' costs will be funded from the DAFNI project, and will involve access to the DAFNI platform and assistance from members of the DAFNI STFC team.

We invite researchers and other academics from across UK universities to submit proposals for projects to be funded through the Champions programme to contribute to the next phase of DAFNI's development.

For reference, details on DAFNI and existing projects can be found online at https://www.dafni.ac.uk/.

Benefits of becoming a DAFNI Champion:

We would highlight the following benefits to researchers and academics in becoming a DAFNI Champion:

- Engage with the emerging DAFNI programme as an early adopter and influencer, and have close interaction with and support from the core development team;
- Share and learn from other Champions as part of the DAFNI community;
- The promotion of your expertise through the DAFNI web-site and network (e.g. acknowledging your contribution to DAFNI work, disseminating your summaries);
- The opportunity to develop further collaborations with the DAFNI within new research proposals.

Further, DAFNI would encourage the publication and presentation of the outcomes of projects.

FUNDING ELIGIBILITY

It is expected that applicants will be active participants in infrastructure research within UK universities across the following disciplines; data sciences (including analytics, visualisation, cloud systems), environmental studies (e.g. water, climate, air quality, ecology) and infrastructure engineering (e.g. energy, transport, telecommunications, built environment, urban observatories).   Studies linking infrastructure with societal impact (e.g. health, food security, economic development) would also be welcome.

All projects should be aligned to the activity areas outlined below. Projects will also have access to DAFNI Programme contacts, industry expertise and meeting space at STFC and UKCRIC universities.   Champions will be expected to produce a report on their activities to the DAFNI Governing Board, together with a summary suitable for publication on the DAFNI website.

The funding can be used for direct and indirect costs. More information on eligible costs is available below. Please consult with your institution for guidance as to costs when you prepare your application.

Projects can range in scale from a few weeks to 6 months, with an indicative cost ranging from £5000 to £50000. On an exceptional basis we will consider grants outside of this range. All projects must end by 30th November 2020.

Activity Areas

This call is seeking for all proposals to be within the scope of the activities outlined below. Applications *must* address all Core Activities.

Core activities

1. Identifying and developing insightful use cases for DAFNI on infrastructure research;
2. Providing ongoing advocacy/promotional support for DAFNI, including developing events with DAFNI's immediate and extended community i.e. Hackathons and user integration workshops, focussed within the Champion's own home institution;
3. Working with the DAFNI Technical team to provide user input for areas such as data, modelling, data specifications and acquisition, user interfaces, visualisation, and cloud requirements;

Optional activities

4. Building links with communities involved in the creation of digital twins, providing knowledge on the simulation, systems of systems modelling requirements and providing real examples of digital twins in action onto the DAFNI facility;
5. Building links with existing the UKCRIC Observatories and Laboratories and integrating these with the DAFNI facility;
6. Building links with other data services, e.g. Jasmin/CEDA and other NERC data centres;
7. Developing use cases for the existing data and models supported by DAFNI, and growing the number of models to stress-test the platform i.e. showcasing its capability to support future resilience studies;
8. For universities that have been allocated DAFNI hardware, identifying and developing shared use cases involving the use of this hardware for example visualisation with the core DAFNI platform;
9. Providing advice and guidance for DAFNI on future business models, understanding the needs of the community and 'future proofing' DAFNI to become a National Research Facility;
10. Developing a survey to provide a map of coverage within the infrastructural research field, to identify the gaps and priority areas for data and modelling research.   This can include the development of an ontology for infrastructure research to categorise the field.

HOW TO APPLY

Applications must be submitted addressing each of the points below, written on word and submitted by email. If you have any questions regarding the application, contact Marion Samler, DAFNI Partnership Manager - info@dafni.ac.uk.

Applicants should submit the following:

- Brief description (up to 2 pages) of the activities they will undertake, the methods they will use and what they will deliver (see core and optional activities above).
- Overall cost and details of funding requested with a justification of the resources.
- A description of the work to be undertaken.
- Assumptions about related STFC time/resources. This should be clearly stated and involve a discussion with the STFC team prior to submitting an application.
- Confirmed costs from each collaborating organisation. If there are staff costs, a letter from the head of department of the applicant's university confirming costs have been checked and approved.
- CVs of all participants and any project collaborators named in the proposal (2 pages maximum per CV, merged into one file and uploaded as a single pdf)
- Statement of the deliverables and broad time-scales. (pdf format).
- Complete information form with full contact details of the proposed champion, lead contact, finance contact and HR contact.

Written application completed by applicant and sent to info@dafni.ac.uk. Applications should be received up to and including the deadline of: 17:00 on Friday, 17th April 2020.

Applications will be reviewed by the DAFNI Executive Board on a first come, first served basis, and successful applicants notified as soon as possible.

Any queries regarding process, post-award requirements, costing or general eligibility should be discussed with Marion Samler, DAFNI Partnership Manager – info@dafni.ac.uk

Eligible costs include:

Eligible costs can include:

- Staff time cost and overheads. Applicants can apply for between 0.2 to 0.6 FTE for up to 6 months, or can apply for shorter periods of engagement, e.g. one week of intense development activity with the DAFNI team. Institutions will be able to substitute applicants where necessary. Cost can be included at 100% FEC, using Research Council Full Economic Cost rates.
- Appropriate travel and subsistence to support the activities.
- Consumables associated with public engagement and wider outreach activities.

Assessment

Proposals will be assessed based on the following criteria:

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- The appropriateness of fit to Champion activities outlined above.
- Novelty of proposed Champion work.
- Demonstrable commitment to the objectives of DAFNI.
- Clarity of methods for the proposed Champion work.
- Value for money.

POST-AWARD INFORMATION

Project meetings

Successful applicants will be expected to attend a kick-off meeting and a project close meeting with members of the DAFNI team. These may take place at the DAFNI or at the Champion's home university.

Funding agreement and payment

The university or organisation of successful applicants will be required to sign an agreement with STFC, for the areas of engagement, the deliverables and broad time-scales.

Signature of the agreement is a precondition to receiving the award and starting. Interim and final payments will be released to universities according to the payment schedule agreed at the time of appointment with the agreement.

General outputs required

We require that all projects will produce the following:

- A written case study of less than 300 words evaluating the impact of their activities at the end of their work.
- A summary of the report suitable for publication in DAFNI website and newsletter.
- Source code, compilation and use case documentation where applicable.
- It would also be desirable to include, in the final report, a roadmap that records a forward-looking plan of subsequent work that could be undertaken, drawing on the understanding gained from the undertaken activities, and identifying research gaps
- Technical outreach (for example, through hosting workshops) to other universities to ensure the latest understanding is drawn on in advancing the research is also encouraged, as is joint publication with other universities. Output acceptance criteria.

The final report shall describe the entire project in sufficient detail to explain comprehensively the work undertaken and results achieved - including all relevant technical details of any hardware, software, process or system developed there under. The technical detail shall be sufficient to permit independent reproduction of any such process or system.

If outputs do not meet the acceptance criteria, re-work will be requested before final acceptance.

KEY DATES
Publication of call for proposals: 16th March 2020
Deadline to submit, up to and including 17:00 on Friday, 17th April 2020
Eligibility checking, resubmission requests up to the 22nd April 2020
Selection of proposals up to and including: 29th April 2020
Award offers and acceptance of terms Mid-late May 2020
Projects start From 1st June 2020

Projects to complete and report by the agreed end date of the Champion's agreement. All Champion activity will end no later than 31st March 2021.

Queries: For general queries about eligibility or administrative aspects, contact info@dafni.ac.uk.