

Sandpit Further Information

Dear all,

The DAFNI Programme has announced a new funding opportunity for Infrastructure Resilience in the areas of Transport and Energy, we invite researchers and practitioners to come together in a 'Sandpit' style event.

Purpose of sandpits:

The aim of the sandpit is for participants to network and leverage their experience and expertise to design innovative and collaborative feasibility studies.

The sandpit will be an interactive, inclusive, and free-thinking environment, where a diverse group of participants from a range of disciplines and backgrounds will work together over the course of the sandpit process. The aim will be to immerse participants in collaborative thinking processes and ideas sharing to construct innovative approaches.

It will be led and facilitated by the DAFNI programme team.

The sandpit process can be broken down into several stages:

Stages	Sandpit Process
Stage 1	Applicants will complete the expression of interest survey. The DAFNI Programme panel will review applications against the initial criteria. Successful applicants will be invited to the 'Session 1 Sandpit Event'.
Stage 2	Individuals/teams will present their pitch in a 'lightning talk' format within their theme. After lightning talks are complete, a discussion will be held to confirm if any ideas can be combined, and teams agreed.
Stage 3	The PI from each team will be required to confirm their team to the DAFNI Programme team
Stage 4	Teams will prepare their presentation pitch and outline proposal for the Expert panel
Stage 5	Projects will pitch to the Expert panel
Stage 6	Expert panel will decide on awarding the funding.
Stage 7	DAFNI Programme will contact all applicants on the outcome.

A total fund of £240,000 is available across the two sandpit events. We anticipate projects of up to £50,000 at 100% FEC with DAFNI programme funding 80% FEC. We are expecting to fund 3 projects in each focus area, Transport and Energy.

When?

There will be two sandpit events, with a series of meetings:

Meeting	Transport	Energy
Session 1 – Initial Sandpit	Monday 5 th of February	Tuesday 27 th February
Team confirmation to be emailed to DAFNI Programme	Tuesday 6 th of February – by close of business	Wednesday 28 th of February – by close of business
Session 2 – Sandpit Team Presentations	Monday 12 th of February	Tuesday 5 th of March 2023

Scope?

A total fund of £240,000 is available across the two sandpit events. We are interested in proposals looking at Infrastructure Resilience in the following two areas, Transport and Energy.

The DAFNI Programme and it's Centre of Excellence is seeking to support feasibility studies. We will fund projects which develop and explore scenarios in response to a particular short-term or long-term shock and develop appropriate solutions which demonstrate an aspect of resilience. Of particular interest are scenarios which can be transferred from one geographic region to another, can be scaled up to a national scale, or explore the interactions between different infrastructure systems and with environmental and societal features in a multidisciplinary approach.

Projects should include how to access, use and combine data and computational models to evaluate and measure the impact of shocks, and propose appropriate responses and adaptations to further resist, absorb and recover from the shock event.

Here are some examples of areas we would seek to fund:

Transport:

- Modelling of transport systems to identify pinch points which cause transport systems failures and explore mitigation strategies.
- Digital twin of a transport system or operational systems to consider impact of failures and potential approaches to mitigation.
- Simulating the impact of natural and human derived shocks onto transport systems and explore adaptation and mitigation strategies.

Energy:

- Modelling future energy security in response to global shocks in energy supply and analysing the transition risks as the economy adapts to the net zero carbon target.
- Digital twin of an energy system to consider impact of failures resulting from unexpected events and potential approaches to mitigation.
- Renewable Energy Sources: Diversifying to zero carbon energy sources - modelling of Energy demand and impact of climate on net zero energy sources.

Requirements for projects:

- Projects should make use of and be made available to stakeholders via the DAFNI platform.
- Projects should include a deliverable highlighting their use of data in the scenario, particularly discussing:

- the availability, use and integration of diverse data sources.
- the organisational and technical barriers to accessing and using those data sources.

What we will fund as a Sandpit Project

Projects will ensure that all results from their research will be available to stakeholders via the DAFNI platform. We anticipate projects of up to £50,000 at 100% FEC with DAFNI programme funding 80% FEC. We are expecting to fund three projects in each focus area, Transport and Energy.

Eligible project costs can include:

- Staff time cost and overheads (can be included at 80% of the FEC, using research council FEC models)
- Appropriate travel and subsistence to support the activities.
- Consumables associated with public engagement and wider outreach activities.

What we will not fund

- Capital equipment costs (over £10,000) will not be eligible.
- Postgraduate studentship costs are not eligible.
- Projects should engage with wider stakeholders in academia, government and industry, and proposers should specify how they plan to interact with stakeholders to maximise impact.
- STFC will fund 80% FEC.
- Transport projects must start on 1 April 2024 and finish before the 31st of March 2025.
- Energy projects must start on 1 May 2024 and finish before the 31st of March 2025.

Where?

The sandpits will be online activities, taking place on Zoom, and participants will be expected to attend the meeting series for the sandpit event.

Sandpit agenda for 'Initial Sandpit'

- Centre of Excellence Introduction
- Overview of Funding opportunity
- Lightning Talks
- Themes discussion
- Project teams confirmed.
- Outline for next steps

Application and Assessment Process

Application process

The sandpits are open to researchers who are qualified to hold UKRI research contracts and their associates and collaborators.

DAFNI Programme Criteria

- Availability to attend the Sandpits.
- Background and expertise
- Brief description of your proposal (context, challenge the project addresses, aims and objectives and potential applications and benefits)
- Personal skills

- Other information

External Panel Criteria

- Scientific technical excellence
- Originality and potential contribution to knowledge, with a focus of the aims of the Building a Secure and Resilience World programme and DSIT Research Data Cloud Programme.
- Research design and methods, including feasibility of work-plan and suitability and sustainability of research within the DAFNI platform.
- Value for money

Details on ‘Sandpit’ Events

What is a Sandpit?

A Sandpit is an intensive, interactive workshop designed to produce highly innovative proposals. Participants come together in a creative, free-thinking environment and immerse themselves deeply in a collaborative process around an important challenge.

The nature of the Sandpit requires the development of a high degree of trust between participants to make the required breakthroughs in thinking. The goal is to bring individuals together to interact and engage in free thinking on first principles, to learn from one another and create an integrated vision for projects and workshops. While the sharing of these ideas are strongly encouraged within the Sandpit, participants are asked to respect confidentiality outside of the Sandpit.

Objectives of the Sandpit?

The objective of this sandpit is to:

- Consider the needs of the National Infrastructure Resilience and consider co-design with end-users.
- Network and leverage the experience and expertise of the participants.
- Form new collaborations between researchers, innovators, and users in diverse research areas.
- Address the key research challenges that are identified.

What will happen at the Sandpit?

The Sandpit is a facilitated workshop designed to encourage creative thinking and new collaborations.

The Sandpit will include opportunities or activities that allow participants to:

- Get to know everyone in the room.
- Share understanding of the Sandpit requirements.
- Generate ideas by taking part in breakout sessions focused on the problem domain.
- Give and receive peer feedback on the ideas.
- Pitch presentations to expert panel
- Form groups and subsequently develop feasibility studies.
- Draft outline proposals

The full agenda for the Sandpit will be provided and issued to successful applicants.

Further details: The sandpit events are managed by the DAFNI Programme team. For all enquiries, please contact info@dafni.ac.uk. and put “DAFNI Programme Infrastructure Resilience Sandpits” in the subject line.

