

# Undaunted

Tackling climate change with innovation

## The Climate Solutions Catalyst

Untapping the potential of academic research to accelerate the efficiency and deployment of climate innovation.

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The Climate Solutions Catalyst is an exciting new two-year trial programme with two aims.

**To unearth neglected climate solutions from the full breadth and depth of the UK academic community.** The trial phase of the programme tests the hypothesis that the UK research community has already made discoveries and inventions that can help tackle climate change, if only they can be found and supported properly towards commercial innovation, or other types of impact.

**To test potential support offers to fast-track these solutions to impact.** The trial programme will identify the shape of effective support for these innovations. It will also suggest improved structures that can offer support for a full set of climate solutions in the future, including identifying appropriate partners to drive such support. These recommendations could form a full version of the programme after the trial is complete.

## The innovation ecosystem

Innovative ideas come from a diverse range of people and institutions. Established settings such as universities and research institutes play a significant role in knowledge discovery.

In the UK, universities largely operate as disaggregated, independent organisations where scientists are given a large degree of freedom in exploring their ideas, seeking funding sources and building teams over their careers. This structure encourages creativity, promotes self-motivated progress in a range of directions and creates a powerful engine of innovation.



However, this same structure can also make it challenging to surface ideas that have significant potential in terms of solving global problems through commercialisation or other impact routes.

The challenge, then, is to identify and access the right pre-innovation ideas as quickly as possible – wherever they are in the research ecosystem – to effectively clear their pathway so that they can make rapid and meaningful impact on climate change.

## The Climate Solutions Catalyst

**This Catalyst takes a unique, experimental and action-oriented approach to tackling the gap between research and usual innovation funding, with a specific focus on deep-tech science and engineering solutions to climate change.**

The experimental approach aims to unearth the best outcomes for tackling climate change, and provides an opportunity to understand which interventions provide the most effective stimulation for climate impact from the research community, via innovation. The three dimensions of the programme are shown below.

### Finding the research

Mapping the climate challenge areas, selecting specific topics to search, scoping search parameters and questions, carry out machine learning searches and reaching out to research groups in person, develop tools and processes.

### Bringing support to the table

Summary and database of existing support options, assess and select a subset of ideas found in the search via a small competition or other approaches, developing financial and non-financial support options.

### Supporting the people

Delivering interventions to support groups, working with them individually to test efficacy of interventions, stakeholder relationship building for future phases.

## Delivery in partnership

The Climate Solutions Catalyst builds on the [Grantham Institute's Undaunted](#) initiative, which focuses Imperial College London's climate innovation activities across academic science, industry, and business.

The initial phase of the project will include sandpit brainstorming exercises with actors across the UK climate, research and innovation ecosystem (e.g. [UKRI](#), university partners, founders, [ARIA](#).) [Deep Science Ventures \(DSV\)](#) and the Imperial co-ordinated [UK Universities Climate Network \(UUCN\)](#) are groups already directly involved in advising or helping to deliver the programme.

## Beyond the trial programme

We hope the trial allows us to develop tools and approaches that we can share openly with international colleagues. Ultimately we aim to lay the groundwork and community to develop a larger programme which would enable more comprehensive and sophisticated approaches to the initial problem (e.g. the provision of larger or more appropriate fellowships or grants; the potential for programmatic support to innovators; the potential to support a large number and range of innovations and researchers.)

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