



BESLUT

Datum för beslut:
2025-06-03

Diarienummer:
KTH-RPROJ-0276016

Beslut om ett strategiskt forskningsinitiativ, KTH Climate-related research

Detta beslut har undertecknats elektroniskt.

Beslutet

KTH:s vicerektor för forskning beslutar att:

- Finansiera *KTH Climate-related research* med 1 mnkr centrala medel under 2025.
- Utse Mattias Højjer, ABE-skolan, som ansvarig forskningsledare för satsningen.
- Återrapportering enligt utvärderingskriterier, för dialog om fortsatt bidrag ska vara Forskningsberedningen tillhanda 10 juni 2026.

Ärendet

KTH:s initiativ för forskningssatsningar inrättades enligt förslag från Översyn av KTH:s särskilda forskningssatsningar (Dnr: KTH-RPROJ-0276016). Förslaget innebär att centrala medel ska kunna användas till direkt finansiering av tre- till femåriga forskningsinitiativ med det huvudsakliga målet att dra in externa forskningsanslag.

Under föregående år har Forskningsberedningen arbetat vidare med att konkretisera förslaget, och kommit fram till ett antal kriterier för ett KTH Strategiskt initiativ samt kriterier för utvärdering (Protokoll 10/2024):

Kriterier för KTH Strategiskt forskningsinitiativ:

- Strategiska forskningsinitiativ är ett sätt för KTH att kraftsamla inom områden där det krävs nya samarbeten som är viktiga utifrån KTH:s vision och mål. Det kan dels vara att förstärka ett område som redan finns eller utveckla ett nytt.
- Strategiska forskningsinitiativ ska kunna initieras av både forskare, KTH:s ledning och forskningsberedningen.
- Strategiska forskningsinitiativ är satsningar med central finansiering på 0,5 - 3 mnkr per år i max fem år.
- Målsättningen för en beviljad satsning är att generera betydande externa bidrag till KTH om totalt minst 100 mnkr. Det kan vara externa bidrag från flera olika finansiärer som

tillsammans stärker området för forskningsinitiativet. Utväxlingen blir den viktigaste indikatorn som följs upp årligen.

Kriterier för utvärdering av beviljat KTH Strategiskt forskningsinitiativ ska ske efter ett år enligt nedan:

- Projektansökan – En eller flera projektansökningar.
- Kraftsamling - Vilka PI' s är med i projektansökan/ansökningar?
- Förberedelsearbete inför utlysningar.
- Exempel på nya forskningssamarbeten.

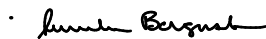
Dessutom kommer behov av central finansiering, budgetutrymme och strategisk relevans att vägas in vid Forskningsberedningens bedömning.

Till Forskningsberedningens möte den 22 maj inkom förslaget KTH Climate-related research, med professor Mattias Höijer, ABE-skolan, som ansvarig forskningsledare, se bilaga 1.

Baserat på Forskningsberedningens diskussion rekommenderas Vicerektor för forskning att stödja att förslaget beviljas sökt budget, 1 mnkr för år 2025. En utvärdering ska ligga till grund för diskussion om fortsatt finansiering och i vilken omfattning. (KTH-RPROJ-0276016 Protokoll 10/2024).

Detta beslut har fattats av vicerektor för forskning Annika Borgenstam efter föredragning av forskningsrådgivare Johan Schuber.

Kungl. Tekniska högskolan



Annika Borgenstam, vicerektor för forskning KTH



Johan Schuber, forskningsrådgivare, avdelningen för forskningsstöd inom Verksamhetsstödet

Bilaga 1: projektförslag

För åtgärd:

Mattias Höijer, ABE-skolan

Kopia till:

Skolchef ABE-skolan

Controllergruppen, controller@kth.se

Chefen för avdelningen för forskningsstöd Maria Gustafson

Tf Kommunikationschef Gunilla Iverfelt

Anna Aminoff

Sanna Pehrson, avdelningen för forskningsstöd

Expeditionsdatum:

2025-06-03



KTH Strategic Research Initiative

Project Idea

Climate-related research – a strategic research area (SFO) and beyond

PI

Mattias Höjer, Professor, ABE, Department of Sustainable development, environmental science and engineering, SEED

Co-PIs

Karin Bradley, Professor, ABE, Department of Urban Planning and Environment

Elina Eriksson, Associate Professor, EECS/Department of Human Centered Technology, HCT

Francesco Fuso-Nerini, Associate Professor, ITM/Department of Energy Technology and KTH Climate Action Centre

Funding, total direct funding requested

1 MSEK for the coming year. We intend to come back after one year with further details, depending on the outcome of the SFO-application, see below.

Purpose

In the governmental research bill from 2025 one of the strategic research areas (SFO) is “Climate-related research”. The text in the bill signals that the focus will be on climate mitigation and adaptation, requiring socio-technical transformations of key areas of society such as the built environment, energy systems, production, transport, food and consumption – areas where KTH has research at an internationally leading level.

The main purpose of this strategic research initiative is to deliver an excellent application to the SFO call. The secondary purpose is to leverage the work with the SFO-application to build equally excellent applications to Swedish and European funding bodies.

The vision of KTH is to “take the lead for a sustainable society” and our overall goals include that we “shall contribute to the transformation needed for a sustainable society through interdisciplinary approaches”. Furthermore, the overall climate objective of KTH is to be “a leading technical university for climate transition and a climate-neutral society”. Hence being the coordinating university for the upcoming SFO on climate-related research would support the fulfilment of the vision and goal.

The need for research on challenges related to climate change, particularly focusing on viable strategies and solutions, is undisputable. It is also corroborated by the fact that the Swedish government has decided to fund the SFO on this topic.

Why at KTH

At KTH we have the Climate Action Centre (ClimACT), which is an ideal focal point for a strategic research initiative on climate-related research. The term “climate-related research”, which we here borrow from the governmental bill, indicates that this is not research about climatology, but about how to mitigate emissions of greenhouse gases and how to adapt society to the changes that are already unavoidable.

KTH research has a strong tradition of taking on societal challenges, from a multitude of angles. Since its formation in August 2021, more than 100 researchers across all schools at KTH have become affiliated with ClimACT. This is resulting in new collaborations, projects and publications on a range of climate themes. The attention that the centre has received from students is very encouraging, with student events always fully booked and many students interested in contributing. Thanks to its set of publications in high impact journals and international projects, the Centre is also gaining more recognition outside KTH as evidenced by partnerships and invitations to conferences, news articles on Centre activities, and other metrics. However, the budget and reach of the centre is still limited. In order for the centre to reach its full potential, it would need to be considerably larger. The ClimACT stands at a pivotal juncture, poised to significantly expand its impact and reach in the realm of climate-related research and sustainability initiatives.

KTH is currently coordinating five SFOs. Several of them, and other SFOs with KTH-engagement, will be important to coordinate with this Strategic research initiative and the SFO-application. Currently, there is already a solid connection between ClimACT and Digital Futures, an SFO with the mission to “address societal challenges through digital transformation”. Digital Futures has financed several climate-related projects with connections to ClimACT. Having Digital Futures at KTH is clearly a competitive advantage for a potential SFO on climate-related research to be placed at KTH.

The government’s initiative to support more solutions-oriented climate-related research is well aligned with IPCC, who argue for more climate action (both with regard to mitigation of greenhouse gas emissions and to adaptation of society to new climate contexts). The skills needed for this societal transformation is not only about understanding and developing the

existing society, but of imagining and creating what could be. These skills need to be coupled with a deep understanding of socio-political processes and societal change. These competencies can be found at KTH. The highly integrated and solutions-oriented approaches that are needed give KTH as a technical university a unique position to take the lead on the requested climate-related research. We are used to developing solutions to societal problems, and we have a long and successful tradition on interdisciplinary work.

Moreover, KTH has close connections between research and education within the topic, which means that results from research on climate-related topics can be used immediately by engineers entering the job market. In several of the engineering and architectural programs at KTH, and not least in the Programme on Energy and the Environment, climate-related transitions play key roles. We also have several international master's programmes with a clear relation to climate transition, among them Sustainable Urban Planning and Design, Environmental Engineering and Sustainable Infrastructure, Sustainable Technologies and Sustainable Digitalisation.

Research team

The team working with this strategic initiative will be led by Mattias Höjer, ABE/SEED, under the ClimACT's umbrella. Mattias has previously been Director of a VinnEx centre for eight years and is now involved in both ClimACT and Digital Futures. If winning the SFO, it will be placed at the ClimACT, with the current Director Francesco Fuso-Nerini, as the PI. The group who has been working with this application consists of the PI and co-PIs mentioned above as well as Karin Larsdotter, co-director of ClimACT and the two previous vice-presidents for sustainable development at KTH Göran Finnveden and Per Lundqvist.

Competition for the SFO will be fierce. Organizing and writing an outstanding application require preparatory work that goes beyond what can be fitted into existing roles and budgets. ClimACT is financing Mattias' work with the SFO-application during 2025. The Centre will also support that application through the centre's staff, specifically Francesco, Karin L and Caroline Nielsen. However, a competitive SFO-application will need support to finance time for more researchers at KTH than this. If this application is approved, and climate-related research is made a strategic research initiative, we will be able to add substantial work to the SFO-application and the following applications from among others co-PIs Karin Bradley and Elina Eriksson.

Moreover, we intend to spend at least 25% of the funding on persons not yet in the working group, to complement with further competencies. One highly qualified researcher we will include is Åsa Persson, chair of the Swedish Climate Policy Council. She will start working with ClimACT after the summer and would then be included in the work with this Strategic research initiative. Professor Zahra Kalantari, Director of the Satori research lab, is another highly skilled researcher we will include in the work. We will reach out to further individuals and research groups at KTH within the coming months, but we are awaiting specifications regarding the SFO-call in June before expanding this group further. Åsa's, Zahra's and further researchers' competencies and networks will together with the current group be a solid team for writing the SFO-application.

Outside of KTH, we have had a first meeting with researchers within the Stockholm Trio-cooperation (KTH, SU, KI) regarding the SFO-application. However, even if a cooperation within this group looks very promising, we have all agreed to postpone further discussions until a meeting after midsummer. By then, more information should be available from the Swedish Research Council so we can have a better understanding regarding details of the SFO-call, before deciding upon which other universities, if any, we should team up with.

For the first phase of this strategic research initiative (see last section), the funding will enable both a solid networking exercise and the writing of an excellent application. Activities needed are:

- Time for the initial research team to assess the call for the SFO, and discuss the best strategy for creating a competitive proposal
- Inventory of KTH research and researchers relevant to the call
- Workshops with pinpointed KTH researchers, selected based on the assessment and inventory above
- Dialogues and workshops with potential partners, universities, institutes and societal partners, i.e. building the SFO team. This will need careful considerations and will be a delicate task where strengths at KTH will be matched with the call for proposals, but where we also will need to listen carefully to our potential partner universities
- Working hours for developing and writing of the SFO application

Details of activities for the second phase will have to be developed later, but we will build on the network created for the SFO, and also on the inventory, and then match this with a renewed inventory of both calls and of potential fundings through e.g. foundations. Most of this work will be made after the SFO-application has been handed in, i.e. mainly in 2026.

Strategy for funding

The strategy is divided into two main phases.

The first phase runs during the remaining part of 2025 and is focused on writing a strong application to the Swedish Research Council regarding the SFO on climate-related research. This part consists both of assembling the strongest possible team from KTH and to team up with the best possible complementing partners. KTH is strong already and we should stand a reasonable chance to get the SFO. We are expecting other consortia led at least by Lund University, Uppsala University and Linköping University, and it should be possible for University of Gothenburg and Chalmers University of Technology (unless they join Lund University, which might be the case) to build a strong consortium together.

The announced budget is 22 MSEK for 2027 and 44,5 MSEK for 2028 and then probably continuing at a similar level yearly. If we decide to go for an application with SU and KI, it is likely that the yearly budget for KTH will be around 20 MSEK +- 5 MSEK. Thus, the 100 MSEK requested for a strategic research initiative should be gained within about 4-6 years already with that funding.

In the second phase, when the SFO-application has been handed in, we will redirect our attention to other large-scale funding sources, national as well as European, while it is likely that there will also be some spill-over applications handed in to the research boards. One part of the SFO-application will be to show international competitiveness and network, so the work with that application will be a natural starting point for further applications.

Finally, the chances for KTH to be awarded the SFO on climate-related research would increase if this application were accepted, and thus KTH appoints Climate-related research a strategic research initiative. This would be a clear statement from KTH that the topic is at the top of the KTH agenda, just as our goals indicate. This application is thus in itself also a part of the strategy for funding.











KTH internt beslut med e-signatur: beslut-kth-pr oj-0276016_ KTH Climate-related research

Slutgiltig revideringsrapport

2025-06-03

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