



KTH – Centre for Sustainable aviation

Research call 2019

Background and Aim

KTH-Centre for sustainable aviation (CSA) has research funding through the Swedish Transport Administration (TRV) and hereby invites proposals according to this call. The aim is, via targeted research grants, to develop methods to reduce noise and other environmental effects from air traffic. In addition, the Centre will contribute to the promotion of innovation, skills development and dissemination of expertise within and outside the Centre partners and to strengthen the partners' cooperation through joint activities such as cooperation projects, seminars, conferences and courses.

Description of the call

Proposals should be based on a clear question and include a description of the project relevance to sustainable aviation. For the current call, noise and aero-acoustic projects are prioritized but projects with a wider relation to sustainability are not excluded as long as they have a direct impact on sustainability of air transport. Projects for adapting new or existing technology can be considered. Solutions and expected results should also be described.

It should be made clear that the project:

- Aims at research and innovation in the **areas defined below**.
- Considers **relevant stakeholders and interdependencies**.
- Results can be translated into **applicable processes, tools or policies**.

Proposals for this call will need to specify which area or areas below, and how, the research address a problem by specifying one or more contributions and applications in short and longer terms. The connection between an application and the reduction of noise, climate impact or air pollution should be made clear. Proposals based on earlier projects in the Centre, should explain the link to the previous work and motivate the need for further efforts.

1. Air traffic management and flight paths.

- From rule-based towards performance based operations (allows for flexibility and maximizing the system performance).
- Operations based on trajectories.

2. Noise exposure (simulated/measured) and disturbances (perceived) in proximity of airports.

- Knowledge about noise, behavior and propagation of noise with respect to for example meteorological conditions.
- Noise sources, noise measurements and operational behaviors effect on noise (flight behavior, ATM directives).
- Human aspects of noise, perceived noise and disturbances as well as noise protection from aviation induced noise.

3. Aviation in a system perspective.

In a system of systems, like aviation, two essential system aspects are interdependence and interoperability.

- The research in this area will address sustainability aspects but will require that at least one interdependence is addressed and analyzed with respect to trade-offs or synergies for environmental aspects such as emissions as well as safety.
- Research in this area may address interdependencies with trade-offs or synergies especially relevant for facilitating or hindering innovation for reducing noise exposure and other environmental effects.

- Proposed research questions should have a direct impact on increasing sustainability of air transport operations, e.g., create solutions that can influence measurable quantities related to noise, climate impact or air pollution.
- This area also include studies of implementation of new technologies to existing infrastructures with respect to collaboration among stakeholders as well as businesses. For any system change towards a more sustainable aviation, interoperability is challenging, with system components in different life cycle phases as well as with a mixed fleet.

Applicants

Companies, public organisations and universities are invited to apply. Each application must have a main applicant who is responsible and receives the grant.

How to apply

A complete proposal is submitted according to the instructions under the heading **“Proposal documentation for KTH-Centre for Sustainable Aviation”** below. All proposals will follow a common evaluation process.

Funding and project length

Funds can be applied for the actual project cost including over-head, equipment and travel. For PhD projects a fixed cost model is applied based on 950 kSEK/year including over-head. Beyond this a maximum of 400 kSEK can be applied for equipment connected to the PhD project. The allowed project time is maximum 2 years except for PhD projects where 4 years can be granted. All extra costs beyond salaries must be explained and motivated. The Centre will aim at a balance between PhD type of projects and more applied projects. This call aims at funding 4-6 projects.

Call opens	20190201
Call closes	20190331
Announcement of grants before	20190630
Available funds	18 MSEK

Evaluation process

The proposals will be evaluated and assessed in two stages. First, the scientific quality based on peer-review involving a group of independent experts. Secondly, the Centre relevance and result utilization by TRV and their partners. The reviewers will follow a pre-defined evaluation protocol where the main criteria are:

- Centre and call relevance
- Quality
- Feasibility
- Utilization
- Dissemination

The output from these assessments is compiled by the Centre program committee and submitted to the Centre Board for deciding which projects to recommend to TRV. The final decision is then taken by TRV.

Payment of grants

An approved project will receive a contract from TRV detailing the payments and reporting required¹.

Questions Contact Mats Åbom, director CSA 08-790 7944 matsabom@kth.se

¹ https://www.trafikverket.se/contentassets/4906dd8e3a3848cfba84185d5f9bef42/allmanna-villkor-bilaga-ver_1_1_2019.pdf

Proposal documentation for KTH-Centre for Sustainable Aviation

The documents below must be merged into a single pdf file with a first page with the text:

”Forskningsanslag 2019, KTH Centrum för hållbar luftfart-Luftfartsportföljen”

and mailed to: diariet@trafikverket.se

stating ”TRV 2019/ANSÖKAN CSA” as the subject.

- One page with the project title, name and complete contact information for the main applicant, names of all other partners plus a summary (max 300 words).
- Appendix A. The research programme is restricted to 10 pages (“font size 12, single spaced”) including references.
- Appendix B. Budget. All the applied salary costs must be justified, and the research assignments of all persons in the project for whom salary is applied for must be clearly described and their names must be stated. All other costs applied for in the project must also be clearly justified. The maximum length of appendix B is two pages. Note the budget must be in accordance with TRV’s rules for projects¹.
- Appendix C. Brief CV for the main applicant and co-applicant/co-applicants (maximum two pages per person).
- Appendix D. Publication list for the main applicant and co-applicants for the last five years. The papers relevant for the application should be marked in bold.
- Appendix E (figures, tables or other illustrations relating to the research programme in Appendix A) is optional. Maximum length: four pages.