

Proposal for an International INCE Sponsored Symposium.

Title and Venue

It is proposed to hold an International INCE symposium in the fall of 2022 with the title “Public Acceptance of Noise from Air Mobility Vehicles”. The workshop will be a virtual event but will be hosted by the U.S. National Academy of Engineering. If this proposal is accepted, it will be the 13th in a series of workshops hosted by the National Academy of Engineering on various topics on noise control engineering. Two previous NAE-hosted workshops were held as I-INCE symposia. This will be a small symposium with fewer than 100 participants and about 30 presentations. I-INCE and INCE-USA will be represented on the steering committee for the symposium.

Contact, Registration Fee, Grant Requested, and Final Report

A description of previous workshops can be found on the website of the Institute of Noise Control Engineering of the USA (INCEUSA.org). There will be no registration fee for the Symposium. The contact for the workshop will be George Maling, 102 Acorns Way, Brunswick, ME 04011, USA. Email: GeorgeMaling.NAE@gmail.com, telephone, +1 207 729-6430. It will not have a web address. The amount of the grant requested is €5000.00. The final report will be written and will be available within six months of the event. The report will be made widely available in PDF format.

Benefit to I-INCE

The main benefit to I-INCE will be to demonstrate once again the leadership of the organization in noise from new sources (aerial mobility vehicles) and international affairs. It will also serve to coalesce the membership of international INCE around a common theme. It will also benefit the world-wide organizations interested in aircraft noise, and if the acceptability of noise from air mobility vehicles can be quantified, it will increase the use of vehicles world-wide, with significant public benefits.

Goal

The goal of the symposium is to have a world-wide understanding of the public acceptance of noise from aerial mobility vehicles. These include commercial aircraft, drones, and vehicles such as air taxis and freight vehicles.

Budget

The INCE Foundation will be responsible for the budget and expenses for the symposium. We estimate the budget will be \$20,000. We expect the grant to be used mainly to partially compensate the science writer for her work in preparation of the summaries. The major expense items will be compensation to the NAE for its services, preparation of a transcript of the entire meeting, and the expense of the science writer, and the expense of printing a small number of paper copies of the report.

Description of the Symposium

Three reports published in the United States in 2020 and 2021 have indicated that more efforts have to be made to understand the public acceptance noise from air mobility vehicles. As stated above, this includes commercial aircraft as well as drones, and other air mobility vehicles such as air taxis and freight vehicles. A report from a 2020 NAE-hosted workshop on noise from aerial mobility vehicles is in progress.

The first report was a consensus study by the National Academies titled Air Mobility Vehicles: A National Blueprint (<https://www.nap.edu/catalog/25646/advancing-aerial-mobility-a-national-blueprint>). The report covered air mobility vehicles except for commercial aircraft and identified public acceptance as a major inhibitor to the future development of the field. It recommended a program to the National Aeronautics and Space Administration (NASA) to investigate the situation and determine, for example, if new metrics are needed for the evaluation of these vehicles. The second report was a "White Paper" from NASA which detailed a roadmap for future NASA activities concerning air mobility vehicles (https://www.researchgate.net/publication/344493775_Urban_Air_Mobility_Noise_Current_Practice_Gaps_and_Recommendations). The third report was an analysis for the Federal Aviation Administration (FAA) which surveyed airports around the United States and found that the percentage of highly annoyed individuals was much greater than had been previously thought (<http://www.tc.faa.gov/its/worldpac/techrpt/tc21-4.pdf>).

Since the noise issue is not only a national problem but an international problem, it seems appropriate to gather experts from all of the major countries in the world to discuss this issue and to compare public acceptance in various countries. This will be accomplished by holding a virtual symposium with international participation which will be hosted by the National Academy of Engineering in the fall of 2022. We will seek cooperation with the Institute of Noise Control Engineering of the USA (INCE-USA). The Symposium will be partially funded by the INCE Foundation. The INCE Foundation will appoint a steering committee to guide the program for the symposium and will appoint representatives of I-INCE and members of INCE USA to the committee. The NAE will be the web host for the meeting and will assist with registration and other activities.

The symposium will consist of 15-minute presentations from national and international experts on the topics described above. Following the symposium, the INCE Foundation will collect the audio files from the presenters, make a transcription of the symposium presentations and engage a science writer to prepare summaries of each presentation. The steering committee will edit these summaries and produce a symposium report. This procedure has been used for several NAE-hosted workshops in the past, and has proven to be quite successful.