

Aviation Noise Impact Management through novel Approaches

A dedicated consortium of 22 partners across Europe



AVIATION NOISE, A MAJOR ANNOYANCE AND A HEALTH ISSUE

Aviation noise is regularly considered a major source of irritation by communities close to airports. Numerous studies and reports have documented the negative impact of excessive noise, from annoyance to cognitive impairment of children, hearing loss, hypertension or heart attack. To cope with this issue, most of the initiatives led so far attempted to reduce noise at source, either by making more silent aircraft or by reducing the traffic.

ANIMA aims at developing new methodologies, approaches and tools to manage and mitigate the impact of aviation noise, enhancing the capability of the aviation systems to respond to the growing traffic demands. ANIMA is different from other projects in that it does not try to mitigate noise generation at the source, but examines how it impacts people on the ground.



DELIVERING TAILORED RECIPES TO AUTHORITIES & AIRPORTS

So far, the project developed in several directions:

- Assessing the way noise regulations are practically implemented by airports and how the latest related scientific findings are taken into account;
- Refining the very concept of annoyance, especially in its relation with non-acoustical factors; providing tools that allow assessing some annoyance indicators in connection with the flight traffic around airports.

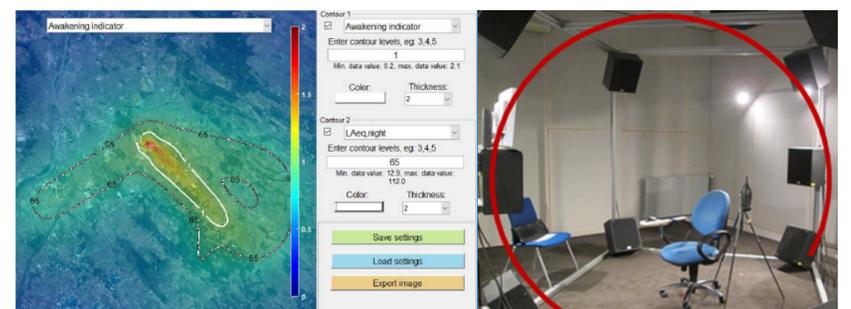
These outcomes will eventually materialise in a **Best Practice Portal**, allowing authorities and airport to understand and to implement tailored measures to engage their communities and to lower their annoyance with regard to their specific local situation.

It will also provide them with a versatile **Noise Management Toolset** with which they will be able to forecast the impact of traffic changes on noise impact but also on annoyance of neighbouring communities.

A MAJOR CONTRIBUTION TO FLIGHTPATH 2050

Being a non-technological project, ANIMA achievements are not measurable in terms of TRL, but it partakes to the International Civil Aviation Organisation's (ICAO) objectives in terms of Community engagement for aviation environmental management. These efforts complement the traditional ICAO's balanced approach based on Reduction of Noise at Source (Technology Standards), Land-use Planning and Management, Noise Abatement Operational Procedures and Operating Restrictions.

ANIMA is, therefore, clearly contributing to the flightpath 2050 goal of reducing the perceived noise emission of flying aircraft by 65%. It is indeed widely recognised that reducing noise at source alone or even through noise abatement procedures will not be sufficient to reach such objectives, even with new aircraft architectures, especially with regard to the prospect of sustained traffic growth. **The approach of engaging communities for seeking consensus** on issues like land-use planning or traffic trade-offs is, therefore, a prerequisite for reaching this ambitious objective on perceived noise.



Example of awakening indicators maps that are going to be computed by the noise management toolset (left). A noise simulator used in ANIMA for experiencing, comparing and assessing aircraft noise (right).

ADDRESSING AVIATION NOISE-IMPACTED COMMUNITIES

From its very onset, ANIMA has, therefore, been recognised as a pioneering project. For instance, in 2018, SAFRAN group awarded ANIMA as one of the most promising projects to which it is participating. **ANIMA is also very keen to communicate toward noise-impacted communities, and it is, therefore, organising on a regular basis conferences and workshop with local communities and stakeholders.** Getting and integrating feedbacks of such actors is also among the missions and duties of the project.

ANIMA is also very committed to the Open Science policy fostered by H2020. Most if not all the detailed reports and outcomes produced by the project are deposited on the Zenodo repository and are accessible through the dedicated OpenAire platform.

