

What was ANIMA all about?

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A European project

A top-level objective: To develop new methodologies, approaches and tools to manage and mitigate the impact of aviation noise, enhancing the capability to respond to the growing traffic demand

1. Understanding how noise impact is coped with today by airports and authorities, how regulations are handled and implemented
2. Further understanding the various aspects of noise impact (annoyance, health, quality of life) and especially the one of non-acoustical factors
3. Providing associated tools that could be used either by aircraft designers and noise experts, or to heighten the proficiency of non-specialists
4. Maintaining and expanding the European Research Roadmap on Aviation Noise as well as the associated network
5. Disseminating associated knowledge to end-users (airports, authorities and communities) for the sake of its actual implementation

A Human adventure

- A quite large consortium
- Not (only) the usual suspects
- A matter of trust
- A matter of language (to share)
- A matter of commitment



Amsterdam 2018



Bucharest 2018

A success story

A project which delivered

- Insightful knowledge
- Aggregated data
- Innovative tools
- Roadmaps and scenarios
- A methodology

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The screenshot shows the ANIMA Noise Platform website. At the top, there is a navigation bar with the ANIMA logo, 'About ANIMA', 'Noise Platform', 'News', and 'Contact'. A search bar is located below the navigation bar. The main content area features a large heading 'ANIMA Noise Platform is open!' and a video player titled 'Introducing: ANIMA Noise Platform'. The video player has a play button and a 'Regarder sur YouTube' button. To the left of the video player is a navigation menu with the following items: 'Understanding aviation noise' (expanded), 'Implementing a noise intervention', and 'Experience from other airports'. The 'Understanding aviation noise' menu includes: Glossary, Airport environment, Noise concepts, Noise mapping, Regulation and mitigation strategies, Health impacts of noise, Noise annoyance management, Improving impact management, ANIMA raw research data, Noise coordination research, and ANIMA related scientific publications and deliverables.

This project has received funding from the European Union's Horizon 2020 Research & Innovation programme under grand agreement N°769627. However views expressed in this presentation are the sole responsibility of the author and do not necessarily reflect those of the European Commission.

A success story

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Barcelona

Barcelona Airport (Spain)

[Click here to download the full study and references in PDF](#)

Overview



Figure 1. The area around Barcelona Airport

In 2018, Barcelona airport registered the record figure of 50,172,457 passengers (6.1% more than the previous year) and 335,651 operations and 172,940 tonnes of cargo. The airport is open 24 hours a day and can handle 90 operations per hour. Together with its two terminals, the airport can handle 55 million PAX/year. The airport is operated by AENA, the world's leading airport operator (by the number of passengers).

During its lifetime, the airport was continuously expanding, and with its third great transformation, which took place in 2004, the third runway was brought into service (see Figure 1 'New Runway').

A success story

A project which delivered

- Insightful knowledge
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The ANIMA Noise Toolsets
Manage and mitigate the aviation noise impact through novel approaches.

The Public Noise Toolset >> The Noise Management Toolset >>

The Public Noise Toolset

We recommend this version for educational purposes. General Public to demonstrate the concept of aircraft noise with pre-cooked scenarios. No registration required. Recommended to visit first [The ANIMA Best Practice Portal](#) for information about airport noise, case studies and scenarios. Links to The Public Noise Toolset. The ANIMA project website.

Read more >>

AnimApp
ANIMA
Aviation Noise Impact Management through Novel Approaches

Download on the App Store
GET IT ON Google Play

HELP
TEST STATUS
SETTINGS
TRIAL SURVEY

Recalculate
Map source: OpenStreetMap
Land use plan: Hide areas
Metric options: Weight by demography, Show hourly metrics
Contours: Hide all contours, Awakeing - ANIMA model (Original)
Visible: checked
Metric: Awakeing - ANIMA m...
Option: None
Case: Original
Levels: 0.5, 1 [NWA]
Style: 3
Export image
Base map: © OpenStreetMap contributors

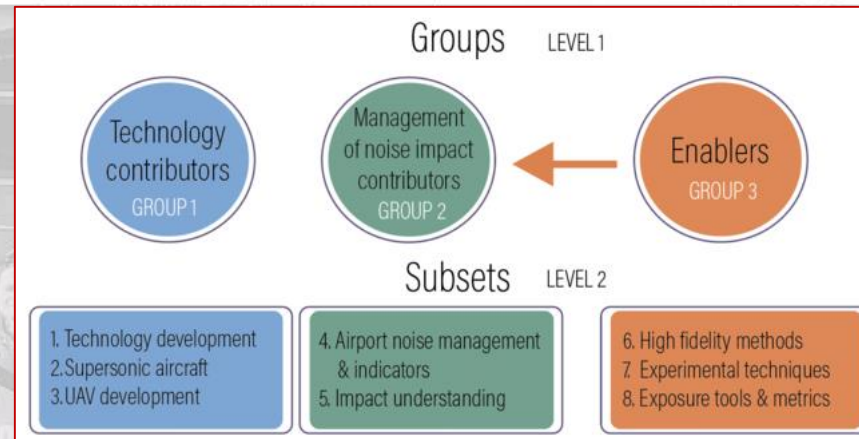
The Noise Toolset

The Virtual Community Tool

A success story

A project which delivered

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- Roadmaps and scenarios
- A methodology



Level	Technology Development Supersonic Aircraft UAV Development
1	Basic principles observed and reported
2	Technology concept and/or application formulated
3	Analytical and experimental critical function and/or characteristic proof-of-concept
4	Component and/or breadboard validation in laboratory environment
5	Component and/or breadboard validation in relevant environment
6	System/subsystem model or prototype demonstration in a relevant environment
7	System prototype demonstration in an operational environment

Figure 3-2 – Maturity scale for Technology related subsets (Technology Development, Supersonic Aircraft and UAV Development)

Level	Airport Noise Management
1	creating awareness of stakeholders, educating stakeholders, adoption of balanced approach, collecting evidence to support findings
2	Community engagement strategies in addition to balanced approach, defining benefits from adaptive LUP
3	Proof-of-concept based on literature and pilot studies to test proposed strategies
4	Validation within laboratory and field studies and pilot studies
5	Validation through a variety of field studies
6	Comparison of theoretical findings and empirical research on noise strategy approaches - iterative feedback and if needed re-evaluation
7	Proposal of guidelines, recommendations and methods to compare different approaches

Level	Impacts Understanding
1	creating awareness of stakeholders, educating stakeholders, adoption of balanced approach, collecting evidence to support findings
2	Community engagement strategies in addition to balanced approach, defining benefits from adaptive LUP
3	Proof-of-concept based on literature and pilot studies to test proposed strategies
4	Validation within laboratory and field studies and pilot studies
5	Validation through a variety of field studies
6	Comparison of theoretical findings and empirical research on noise strategy approaches - iterative feedback and if needed re-evaluation
7	Proposal of guidelines, recommendations and methods to compare different approaches

Figure 3-3 – Maturity scale for Impact related subsets (Airport Noise Management & Indicators and Impacts Understanding)

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A success story

A project which delivered

- Insightful knowledge
- Aggregated data
- Innovative tools
- Roadmaps and vision
- A methodology to apply and implement !

Translate to other languages using Google Translate
Sélectionner une langue

Home / Implementing a noise intervention / ANIMA Methodology

ANIMA Methodology

From working with airports to understand the nature of noise challenges and decision-making processes, including the importance of communication and engagement, ANIMA researchers proposed that airports may find value in following a methodology when looking to develop approaches to noise management issues, i.e. through the implementation of ICAO Balanced Approach measures. These phases are summarised below, with a range of questions provided that airports may wish to consider at each phase in that process.

The important thing to take away from this process is that good noise management does not start out with the objective of implementing a given noise management measure, rather it is about undertaking a process of discovery that will help airports to identify what the best thing to do is according to their own circumstances. In this sense noise management is less about 'doing the right thing' and more about 'doing things the right way' so that the most suitable management options emerge.

More information on effective approaches noise management can be found in [this ANIMA publication](#).

Identification	Design	Selection	Implementation	Post-Evaluation
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graph TD; A((Identification of the need for an intervention)) --> B((Design of options)); B --> C((Selection of intervention option)); C --> D((Implementation)); D --> E((Post-Evaluation)); E --> A; M((ANIMA methodology)) --- A; M --- B; M --- C; M --- D; M --- E;
```

Identification of the need for an intervention

- Do you have multi-stakeholder and independently led stakeholder engagement forums (including community representatives) through which the requirement for an operational change could be communicated and discussed?
- Are all communities represented in such engagement activity, so that any re-distributive effects on noise exposure can be systematically addressed and consensus built as to the most socially optimal outcome(s)?
- Are such stakeholders and community groups engaged with openly and transparently to

Exploitation initiatives have already been initiated



An enlarged network

ANIMA “animated” a large network of European experts in aviation noise with:

- Learned societies (CEAS/ASC)
- Other EU projects coordinators
- National Focal Points in EU++ countries
- Partnering associations (EREA)

ANIMA has endeavoured to reach a shared knowledge and understanding on Aviation noise for all stakeholders



Amsterdam 2018



Roma 2019



Catania 2019



Bordeaux 2020

An outreach

Barcelona – Gava 2018

ANIMA organized numerous events with and for **end-users**, i.e. airports, authorities and related communities.

These dissemination events aimed at broadening audience on aviation noise issues and awareness on ways to reach consensus through the ANIMA methodology and associated tools.



Kranj 2019



Vienna 2021



Yerevan 2021

An outreach

ANIMA produced numerous articles, leaflets & brochures to reach out **non specialised audiences**

ANIMA results were ultimately introduced during an **hearing** organized by an working group of the **ICAO CAEP**.

ANIMA will be featured in the **2022 EASA European Aviation Environmental Report**

ANIMA initiated an **Open Book** to be distributed from February 2022

NOISE MANAGEMENT

Approaching noise management with new methods

Continuously engaged and empowered

What tools are available

What you can do

Further development

PROFILE

Health consequences of aviation noise

ANIMA project: new approaches to go beyond noise reduction at the source

ANIMA is therefore going to develop

When do we stop here?

ANIMA is therefore going to develop

Echo Bruit le magazine de l'environnement sonore

Politique du bruit

168-169

La parole est à...

Laurent LEYLEKIAN
Coordonnateur du projet ANIMA

Le bruit des avions est d'abord un problème de démocratie participative

ricerca&innovazione

Rumore aeronautico, un problema ambientale emergente

Et l'Unione Europea sta investendo su progetti integrati molto interessanti

Aviation Noise Impact Management: Technologies, Regulations, and Societal Well-being in Europe

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ANIMA
Aviation Noise Impact Management through Novel Approaches

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Alexandra Covrig
Alena Maximova Editors

Aviation Noise Impact Management

Technologies, Regulations, and Societal Well-being in Europe

Springer

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A wealth of outcomes

Most of the ANIMA outcomes & deliverables are openly accessible than to public repository and cataloguing services

They are also thoroughly commented, explained and exemplified on the ANIMA platform's knowledge base

A single gateway www.anima-project.eu



Key achievements and ways forward

- ANIMA provides chiefly a **methodology** and tools to assess the impact of aviation noise and to engage impacted communities in dialogues seeking **consensus**
- ANIMA gave evidences for **indicators** suitable for assessing noise impacts on Human beings which are not energy-averaged noise **metrics**
- **What ANIMA cannot provide is political decisions.** ANIMA outcomes & consortium members may support such decisions, especially on enacting **guidance, regulations or policies**
- **Future Research** should be directed toward setting **thresholds** for the non-acoustical indicators
- **Added value** of ANIMA will be more evidenced with enhanced **exploitation** with partnering communities, airports or authorities through relevant **frameworks (IAs, missions, SESAR)**

A deep appreciation to the whole team



ANIMA 2017- 2021