

PROJECT

OPENAIR

OPTimisation for low Environmental Noise impact AIRcraft

Funding: European (7th RTD Framework Programme)

Duration: Apr 2009 - Sep 2014

Status: Complete

Total project cost: €30,003,377

EU contribution: €18,273,829



Call for proposal: FP7-AAT-2008-RTD-1

[CORDIS RCN : 91197](#)

Background & policy context:

Reducing noise from aircraft operations perceived by airport neighbouring communities is a major challenge facing the aircraft manufacturing industry, social society and the air transport business.

Objectives:

The objective of OPENAIR is to deliver a step change in noise reduction. The project aims to deliver a step change in noise reduction, beyond the SILENCE(R) achievements.

Methodology:

The OPENAIR project will adopt a whole aircraft approach based on the latest developments in active/adaptive technologies, flow control techniques and advances in computational aero-acoustics applied to the major causes of noise at source.

The workplan clearly supports realistic exploitation of promising design concepts driven by noise reduction and will result in the development and validation up to TRL5 of "2nd Generation" technology solutions. OPENAIR's multidisciplinary approach and composition is suited to the projected integrated, lightweight solutions. The process includes a down-selection in mid project. The selected technologies will be subjected to scaled rig tests, and the resulting data will support assessment of the noise reduction solutions on power plant and airframe configurations across the current and future European range of products. The project exploitation plan will include detailed proposals for further demonstration in the Clean Sky JTI. The verification of the technologies applicability will be assured by addressing identified integration and environmental trade-offs (performance, weight, emissions). In this way OPENAIR will develop solutions that can play a significant role, in continuity with the previous Generation 1 effort, enabling future products to meet the ACARE noise goals and improving current fleet noise levels through retrofitting. This capability is key to providing the flexibility needed to simultaneously accommodate market requirements in all segments, global traffic growth and environmental constraints, while addressing the global environmental research agenda of the EU.

Parent Programmes:

[FP7-TRANSPORT - Transport \(Including Aeronautics\) - Horizontal activities for implementation of the transport programme \(TPT\)](#)

Institute type: Public institution

Institute name: The European Commission

Funding type: Public (EU)

Lead Organisation:

Safran Aircraft Engines

Address:

2 Bvd Du General Martial-Valin
75724 Paris
France

Organisation Website:

<http://www.safran-aircraft-engines.com>

EU Contribution: €2,574,148

Partner Organisations:**Atmostat****Address:**

Rue Rene Hamon 31
94815 Villejuif
France

EU Contribution: €200,000

Gkn Aerospace Services Limited**Address:**

Ferry Road
East Cowes
PO32 6RA
United Kingdom

EU Contribution: €259,000

Microtech International S.a.**Address:**

ul. Wolowska 20
51 116 WROCLAW
Poland

Organisation Website:

<http://www.microtech.com.pl>

EU Contribution: €132,322

Short Brothers Plc**Address:**

Airport Road, Queens Island
Belfast
BT3 9DZ
United Kingdom

Organisation Website:

<http://www.aerospace.bombardier.com>

EU Contribution: €400,750

Institution Of The Russian Academy Of Sciences Joint Institute For High Temperatures Ras**Address:**

Izhorskaya 13 Building 2.
Moscow
125412
Russia

EU Contribution: €117,750

Andreyev Acoustics Institute

Address:

Svernik 4
Moscow
117036
Russia

EU Contribution: €66,750

Direction Generale De L'armement/dga Essais Propulseurs

Address:

Rue Jean Rostand 10
91895 Orsay
France

EU Contribution: €262,568

The Chancellor Masters And Scholars Of The University Of Cambridge

Address:

TRINITY LANE THE OLD SCHOOLS
CAMBRIDGE
CB2 1TN
United Kingdom

Organisation Website:

<http://www.cam.ac.uk>

EU Contribution: €91,480

Kungliga Tekniska Hoegskolan

Address:

Brinellvagen 8
100 44 Stockholm
Sweden

EU Contribution: €31,540

Inasco Hellas Etaireia Efarmosmenon Aerodistimikon Epistimon Ee

Address:

Napoleonos Zerva 18
16675 Glyfada Athina
Greece

EU Contribution: €595,354

Imperial College Of Science Technology And Medicine

Address:

Exhibition Road, South Kensington
LONDON
SW7 2AZ
United Kingdom

Organisation Website:

<http://www.imperial.ac.uk>

EU Contribution: €49,496

Stichting Centrum Voor De Ontwikkeling Van Transport En Logistiek In Europa

Address:

Van Nelleweg 1
3044 BC Rotterdam
Netherlands

Organisation Website:

<http://www.cetle.org>

EU Contribution: €422,250

Association Pour Les Transferts De Technologies Du Mans

Address:

Rue Thales De Milet 20
72000 Le Mans
France

EU Contribution: €262,500

Rolls-Royce Deutschland Ltd & Co Kg

Address:

Eschenweg 11
15827 BLANKENFELDE-MAHLOW
Germany

Organisation Website:

<http://www.rolls-royce.com/deutschland>

EU Contribution: €354,750

Safran Landing Systems

Address:

7 RUE GENERAL VALERIE ANDRE INOVEL PARC SUD
78140 VELIZY-VILLACOUBLAY
France

Organisation Website:

<http://www.safranmbd.com>

EU Contribution: €235,035

Airbus Operations Sas

Address:

ROUTE DE BAYONNE 316
31060 TOULOUSE
France

Organisation Website:

<http://www.airbus.com>

EU Contribution: €1,478,527

Teknologian Tutkimuskeskus Vtt Oy

Address:

VUORIMIEHENTIE 3
02150 Espoo
Finland

Organisation Website:

<http://www.vtt.fi>

EU Contribution: €294,900

"Institutul National De Cercetare-Dezvoltare Aerospatala ""elie Carafoli"" - Incas Bucuresti"

Address:

SECTOR 6, B-DUL IULIU MANIU NR. 220
061126 BUCURESTI
Romania

Organisation Website:

<http://www.incas.ro>

EU Contribution: €292,646

Qinetiq

Address:

Cody Technology Park, Ively Rd,
FARNBOROUGH
GU14 0LX
United Kingdom

EU Contribution: €582,000

Pfw Aerospace Ag

Address:

Am Neuen Rheinhafen 10
67346 Speyer
Germany

EU Contribution: €174,700

Airbus Defence And Space Gmbh

Address:

Ludwig-Boelkow-Allee 1
85521 Ottobrunn
Germany

Organisation Website:

<http://www.airbus-group.com>

EU Contribution: €1,088,725

Ecole Polytechnique Fédérale De Lausanne

Address:

Batiment Ce 3316 Station 1
1015 LAUSANNE
Switzerland

Organisation Website:

<http://www.epfl.ch>

EU Contribution: €430,500

Office National D'etudes Et De Recherches Aerospatiales**Address:**

CHEMIN DE LA HUNIERE
91120 PALAISEAU
France

Organisation Website:

<http://www.onera.fr>

EU Contribution: €441,500

Deutsches Zentrum Fr Luft Und Raumfahrt E.v**Address:**

Linder Hhe
12489 KLN
Germany

Organisation Website:

<http://www.dlr.de>

EU Contribution: €1,467,537

Snecma Propulsion Solide**Address:**

LES CINQ CHEMINS
33187 LE HAILLAN CEDEX
France

Organisation Website:

<http://www.snecma-propulsion-solide.com>

EU Contribution: €0

Universita Degli Studi Roma Tre**Address:**

Via Ostiense 159
154 Roma
Italy

EU Contribution: €135,600

Msc Software Belgium**Address:**

Rue Emile Francqui 1 Axis Park
1435 Mont Saint Guibert
Belgium

Organisation Website:

<http://www.fft.be>

EU Contribution: €112,500

Airbus Operations Limited**Address:**

New Filton House, Filton
BRISTOL
BS99 7AR
United Kingdom

Organisation Website:

<http://www.airbus.com>

EU Contribution: €275,635

Messier-Bugatti**Address:**

Zone Aeronautique Louis Breguet
BP40 VELIZY-VILLACOUBLAY
France

Organisation Website:

<http://www.messier-bugatti.com>

EU Contribution: €0

Airbus Deutschland Gmbh**Address:**

Kreetslag 10
950109 HAMBURG
Germany

Organisation Website:

<http://www.airbus.com>

EU Contribution: €285,027

Avio S.p.a.**Address:**

Via 1 Maggio 99
00187 RIVALTA DI TORINO
Italy

Organisation Website:

<http://www.aviogroup.it>

EU Contribution: €135,000

Nastech Srl - Novel Aerospace Technologies**Address:**

Zona Industriale Ancarano
64010 Ancarano
Italy

EU Contribution: €63,750

Dassault Aviation**Address:**

9, Rond-Point des Champs-Élysées - Marcel Dassault
75008 PARIS
France

Organisation Website:

<http://www.dassault-aviation.com>

EU Contribution: €163,750

University Of Southampton

Address:

Highfield
Southampton
SO17 1BJ
United Kingdom

Organisation Website:

<http://www.soton.ac.uk>

EU Contribution: €657,784

Federal State Unitary Enterprise Aerohydrodynamic Institute**Address:**

1, Zhykovsky str.
ZHUKOVSKY, MOSCOW REG
140180
Russia

Organisation Website:

<http://www.tsagi.ru>

EU Contribution: €233,250

Arttic**Address:**

58A rue du Dessous des Berges
75013 PARIS
France

Organisation Website:

<http://www.arttic.com>

EU Contribution: €592,750

Industria De Turbo Propulsores S.a.**Address:**

Parque Tecnológico, nº300
48170 ZAMUDIO (VIZCAYA)
Spain

Organisation Website:

<http://www.itp.es>

EU Contribution: €90,000

Sc Aerostar Sa**Address:**

Condorilor 9
600302 Bacau
Romania

EU Contribution: €24,500

Ain Shams University, Faculty Of Engineering**Address:**

El-Sarayat Street 1
Cairo
11517
Egypt

Organisation Website:

<http://www.asueng.edu.eg>; <http://www.svlab-asu.com>

EU Contribution: €80,400

Centro Italiano Ricerche Aerospaziali Scpa**Address:**

Via Maiorise s/n
81043 CAPUA (CE)
Italy

Organisation Website:

<http://www.cira.it>

EU Contribution: €149,752

Gkn Aerospace Sweden Ab**Address:**

-
46181 Trollhaettan
Sweden

EU Contribution: €214,000

Safran Nacelles**Address:**

Route Du Pont Viii
76700 Gonfreville L Orcher
France

EU Contribution: €499,250

Rolls Royce Plc**Address:**

65 Buckingham gate
LONDON
SW1E 6AT
United Kingdom

Organisation Website:

<http://www.rolls-royce.com>

EU Contribution: €1,006,774

Centre National De La Recherche Scientifique**Address:**

3 rue Michel-Ange
75794 PARIS
France

Organisation Website:

<http://www.cnrs.fr>

EU Contribution: €734,114

Panepistimio Patron**Address:**

University Campus- Rio
26500 Patras
Greece

Organisation Website:

<http://www.upatras.gr>

EU Contribution: €146,160

Universidad Politécnica De Madrid

Address:

Avda. Ramiro de Maeztu, 3
28040 MADRID
Spain

Organisation Website:

<http://www.upm.es>

EU Contribution: €0

Teknologian Tutkimuskeskus Vtt

Address:

TEKNIKANTIE 4 A
02044 VTT ESPOO
Finland

Organisation Website:

<http://www.vtt.fi>

EU Contribution: €0

Chalmers Tekniska Hoegskola Ab

Address:

-
41296 GOTHENBURG
Sweden

Organisation Website:

<http://www.chalmers.se>

EU Contribution: €95,250

Herakles Sa

Address:

Rue de Touban - Les cinq chemins
33185 LE HAILLAN
France

Organisation Website:

<http://www.materiaux-energetiques.com>

EU Contribution: €271,855

Technologies:

Noise testing, modelling and reduction
Aircraft noise reduction at source

Development phase: Implementation

Documents:

 [Presentation \(Project presentation\)](#)

STRIA Roadmaps: Vehicle design and manufacturing

Transport mode: Air transport

Transport sectors: Passenger transport, Freight transport

Transport policies: Environmental/Emissions aspects

Geo-spatial type: Other