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AIRCRAFT INTEGRATED STRUCTURAL HEALTH ASSESSMENT II

Fact Sheet

Project Information

AISHA II

Grant agreement ID: 212912

Project closed

Start date

1 May 2008

End date

31 October 2011

Funded under

Specific Programme "Cooperation": Transport
(including Aeronautics)

Total cost

€ 5 694 304,38

EU contribution

€ 4 133 731,00

Coordinated by

KATHOLIEKE UNIVERSITEIT
LEUVEN

 Belgium

This project is featured in...



Objective

"The safe use of complex engineering structures such as aircrafts can only be guaranteed when efficient means of damage assessment are in place. Whereas the design of civil structures is nowadays based on a damage tolerance approach and time based inspection cycles, it is envisaged that the large cost associated with this approach can be drastically reduced by switching to a condition based maintenance schedule. Structural health monitoring is a technology where integrated sensors are used to enable continuous monitoring of the structural integrity. In the last years there is an increasing interest in structural health monitoring systems for aircraft. Beside the expected enhancement of safety and maintenance performance, also economic aspects play an important role. This regards on the one hand the reduction of unnecessary inspection costs and on the other hand, the possible weight reduction of aircraft part at the designing phase of an aircraft. This project wants to continue the project ""Aircraft Integrated Structural Health Assessment (AISHA) – EU-FP6, priority 4 - STREP project nr. 502907) which was dedicated to the establishment of the basic elements of a health monitoring systems based on ultrasonic Lamb waves. Lamb waves are guided waves propagating in plate-like structures. Experiments on lab-scale and on selected full-scale parts showed the ability of Lamb-waves to give indications of correlations between acoustic parameters and damage in structural parts. The consortium is aware of the fact that a 42-month project is not sufficient to make the final step for a ready-to-use system. Thus, based on the rich experiences obtained in the running AISHA project which will be finished in June 2007, we want propose a new project with an adapted work plan and additional new partners."

Fields of science (EuroSciVoc)

[engineering and technology](#) > [mechanical engineering](#) > [vehicle engineering](#) > [aerospace engineering](#) > [aircraft](#)

[engineering and technology](#) > [electrical engineering, electronic engineering, information engineering](#) > [electronic engineering](#) > [sensors](#)



Keywords

Aircraft

Lamb waves

Rayleigh waves

corrosion

fatigue

impact

optical fibre sensors

principal component ana

sensor integration and protection

structural health monitoring

ultrasonic sensors

Programme(s)

[FP7-TRANSPORT - Specific Programme "Cooperation": Transport \(including Aeronautics\)](#)

Topic(s)

[AAT-2007-3.4-02 - Maintenance](#)

[AAT-2007-4.2-06 - Maintenance](#)

Call for proposal

FP7-AAT-2007-RTD-1

[See other projects for this call](#)

Funding Scheme

[CP-FP - Small or medium-scale focused research project](#)

Coordinator



KATHOLIEKE UNIVERSITEIT LEUVEN

EU contribution

€ 859 097,00

Total cost

No data

Address

OUDE MARKT 13

3000 Leuven

 **Belgium** 

Region

Vlaams Gewest > Prov. Vlaams-Brabant > Arr. Leuven

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Participants (13)



METALOGIC N.V. A.I. TECHNOLOGIES & ENGINEERING

 **Belgium**

EU contribution

€ 243 500,00

Address

Technologielaan 11

3001 HEVERLEE 

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



DEUTSCHES ZENTRUM FUR LUFT - UND RAUMFAHRT EV

 **Germany**

EU contribution

€ 592 487,00

Address

LINDER HOHE

51147 Koln 

Region

Nordrhein-Westfalen > Köln > Köln, Kreisfreie Stadt

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



CEDRAT TECHNOLOGIES SAS

 France

EU contribution

€ 293 625,00

Address

CHEMIN DU VIEUX CHENE 59

38240 Meylan 

Region

Auvergne-Rhône-Alpes > Rhône-Alpes > Isère

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



AIRBUS HELICOPTERS

 France

EU contribution

€ 89 933,00

Address

L AEROPORT

13700 Marignane 

Region

Provence-Alpes-Côte d’Azur > Provence-Alpes-Côte d’Azur > Bouches-du-Rhône

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

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[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



RIGAS TEHNISKA UNIVERSITATE

 Latvia

EU contribution

€ 264 100,00

Address

KIPSALAS IELA 6A

1048 Riga 

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



FUNDACION CENTRO DE TECNOLOGIAS AERONAUTICAS

 Spain

EU contribution

€ 359 270,00

Address

**Parque Tecnologico de Alava (Minano), C/ Juan de la Cierva 1
01510 Minano (Alava)** 

Region

Noreste > País Vasco > Araba/Álava

Activity type

Research Organisations

Links

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[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



INSENSOR AS

 Denmark

EU contribution

€ 165 000,00

Address

**Hejreskovvej 18A
3490 KVISTGAARD** 

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

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[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



ASCO INDUSTRIES N.V.

 Belgium
EU contribution
€ 112 150,00

Address
WEIVELDLAAN 2
1930 Zaventem 

Region
Vlaams Gewest > Prov. Vlaams-Brabant > Arr. Halle-Vilvoorde

Activity type
Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links
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[Participation in EU R&I programmes](#) 
[HORIZON collaboration network](#) 

Total cost
No data



FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV

 Germany
EU contribution
€ 420 301,00

Address
HANSASTRASSE 27C
80686 Munchen 

Region
Bayern > Oberbayern > München, Kreisfreie Stadt

Activity type
Research Organisations

Links
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[Participation in EU R&I programmes](#) 
[HORIZON collaboration network](#) 

Total cost
No data



UNIVERSITAET LEIPZIG

 Germany

EU contribution

€ 467 695,00

Address

RITTERSTRASSE 26

04109 Leipzig 

Region

Sachsen > Leipzig > Leipzig

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



VRIJE UNIVERSITEIT BRUSSEL

 Belgium

EU contribution

€ 196 552,00

Address

PLEINLAAN 2

1050 Bruxelles / Brussel 

Region

Région de Bruxelles-Capitale/Brussels Hoofdstedelijk Gewest > Région de Bruxelles-Capitale/ Brussels Hoofdstedelijk Gewest > Arr. de Bruxelles-Capitale/Arr. Brussel-Hoofdstad

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

Total cost

No data



UNIVERSIDAD DEL PAIS VASCO/ EUSKAL HERRIKO UNIBERTSITATEA

 Spain

EU contribution

€ 52 701,00

Address

BARRIO SARRIENA S N
48940 Leioa 

Region

Noreste > País Vasco > Bizkaia

Activity type

Higher or Secondary Education Establishments

Links

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- [HORIZON collaboration network](#) 

Total cost

No data



LUFTHANSA TECHNIK AKTIENGESELLSCHAFT

 Germany

EU contribution

€ 17 320,00

Address

WEG BEIM JAGER 193
22335 Hamburg 

Region

Hamburg > Hamburg > Hamburg

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

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[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data

Last update: 16 July 2019

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European Union, 2025