

Pre-project Acronym	HEMATS	PARTNERSHIP FULL
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Pre-project Administrative Overview

AEROPORTAL Servicing Partner	INNOV SUPPORT Email: jan_depauw@innovsupport.net		
Thematic priorities	AAT2008.4.1.1	AAT2008.3.3.4	AAT2008.3.4.5
Type of Action	Level 1 Collaborative Project Proposal		
Pre-project Full Name	HE licopter MA noeuvre T raining S imulator		

Pre-project abstract

Strategic objectives addressed:

- Decrease helicopter accident risk through pilot training in dangerous phases or conditions
- Minimize the noise concern due to helicopters used for pilot training
- Reduce licence cost for helicopter pilots

Strategic expected achievements:

Develop and build an helicopter manoeuvre training simulator.

Proposal abstract

Helicopters have largely proved their usefulness in a number of missions, saving lives, protecting citizens and are able to carry many works more efficiently than any other means. The helicopter use is also increasing with the constraints related to urban development.

However in some circumstances, these machines can become dangerous if the pilot does not take the right decision with a very short reaction time. Training pilots to make these reactions become instinctive is a major issue which can be solve through the use of adequate technology.

The HEMATS project aims at developing a high fidelity manoeuvre training simulator suitable for most helicopter schools. As a matter of fact, existing affordable helicopter trainers are static procedure/IFR trainers and cannot be efficiently used to learn helicopter dynamic control. Even the very expensive full flight level D simulators have not perfectly all the required features.

Enabling technologies for reaching HEMATS objectives are high performance motion generation, accurate flight and aerodynamic models and 3D vision for accurate perception of distances during the critical takeoff and landing phases.

The HEMATS simulator will make possible :

- hovering and manoeuvring training in realistic conditions
- minimizing the need for real training flights and related noise concern - training pilots at some situations for which real flight is not possible because those failures make a crash the aircraft very probable.

Another outcome of HEMATS will be to decrease helicopter training program total cost through the minimization of expensive flight hours.

By minimizing training cost, decreasing accident risk and reducing the noise concern,



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A Consortium of European Experts involved in Services for Aerospace SMEs, in cooperation with ASD AeroSME

HEMATS will contribute to a sustainable development of helicopter activity for private and commercial use.

The HEMATS project will also preserve the capability to certify the simulator under JAA regulations at JAR-STD-3H level at least.

The final industrial product of the HEMATS will be low cost, bringing an invaluable training tool to the European helicopter industry.

The related European market is currently estimated to 100 units

Project duration : (in Months)	24	Total Eligible Cost :	1 M €	EC Contribution requested :	0.75 M €
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