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SASHA

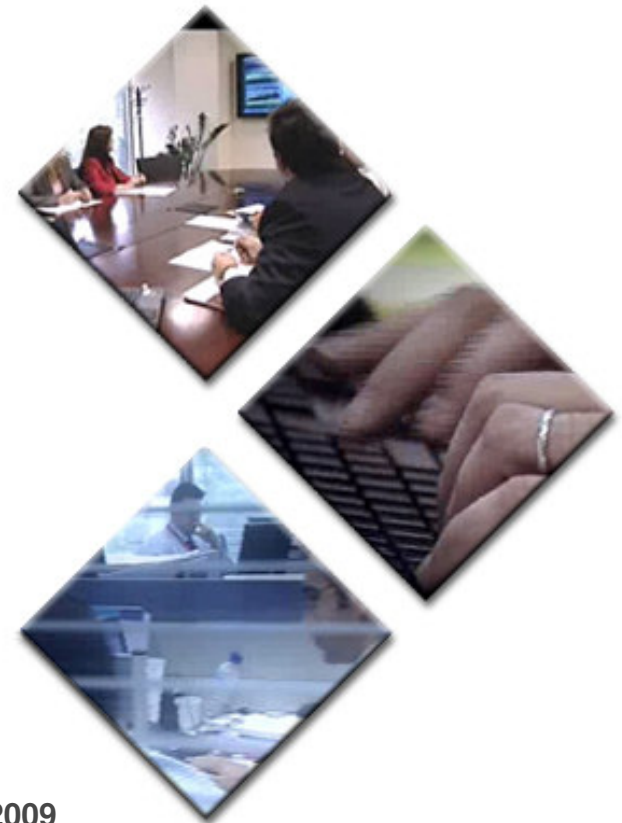
**Small Aircraft Avionics Solutions for Hazard
Alleviation**

7th Framework Programme Proposal



Isdefe

Brussels, 23rd November 2009



Overview

SASHA General Information

SASHA Objectives

SASHA Consortium

SASHA WBS

SASHA WPs Description

SASHA WPs Relationship

General Information

ACRONYM: SASHA (Small Aircraft Avionics Solutions for Hazard Alleviation)

Type of funding Schme: Collaborative Project – Small or medium-scale focused project

Work Programme Topic Adressed: AAT-2010.3.3-3 Avionics

Advanced concepts and technologies to counteract hazards specific to the flight operation of small-size aircraft operating in non-scheduled flights, improving automation, smart responsiveness to unforeseen situations in piloting the vehicle, including those adapted to less-skilled pilot operations

Budget: 4.289.260

EC Contribution: 2.983.098

Duration: 36 months

Objectives

SASHA aims at solving the following problems:

- ❖ Small aircraft pilot has to be able to control the aircraft at all times even if part of the control system fails
- ❖ Small aircraft pilot needs to increase his/her situational awareness with regard to specific hazards related to the operation of small aircraft
- ❖ Small aircraft pilot needs exactly to know how to react to those specific hazards

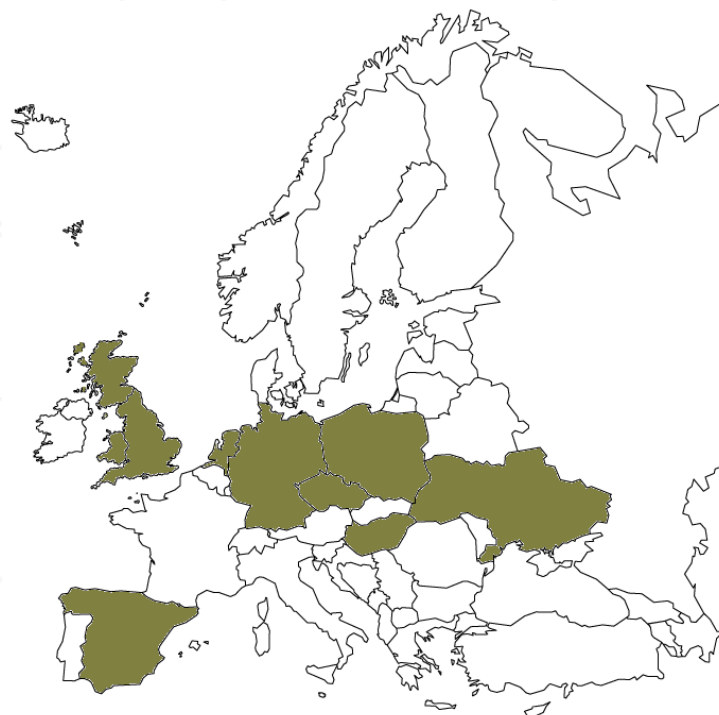
Therefore:

SASHA will develop advanced functions, and the technologies supporting these functions, to enhance small aircraft pilot responsiveness in unforeseen situations related to the operation of small aircraft.

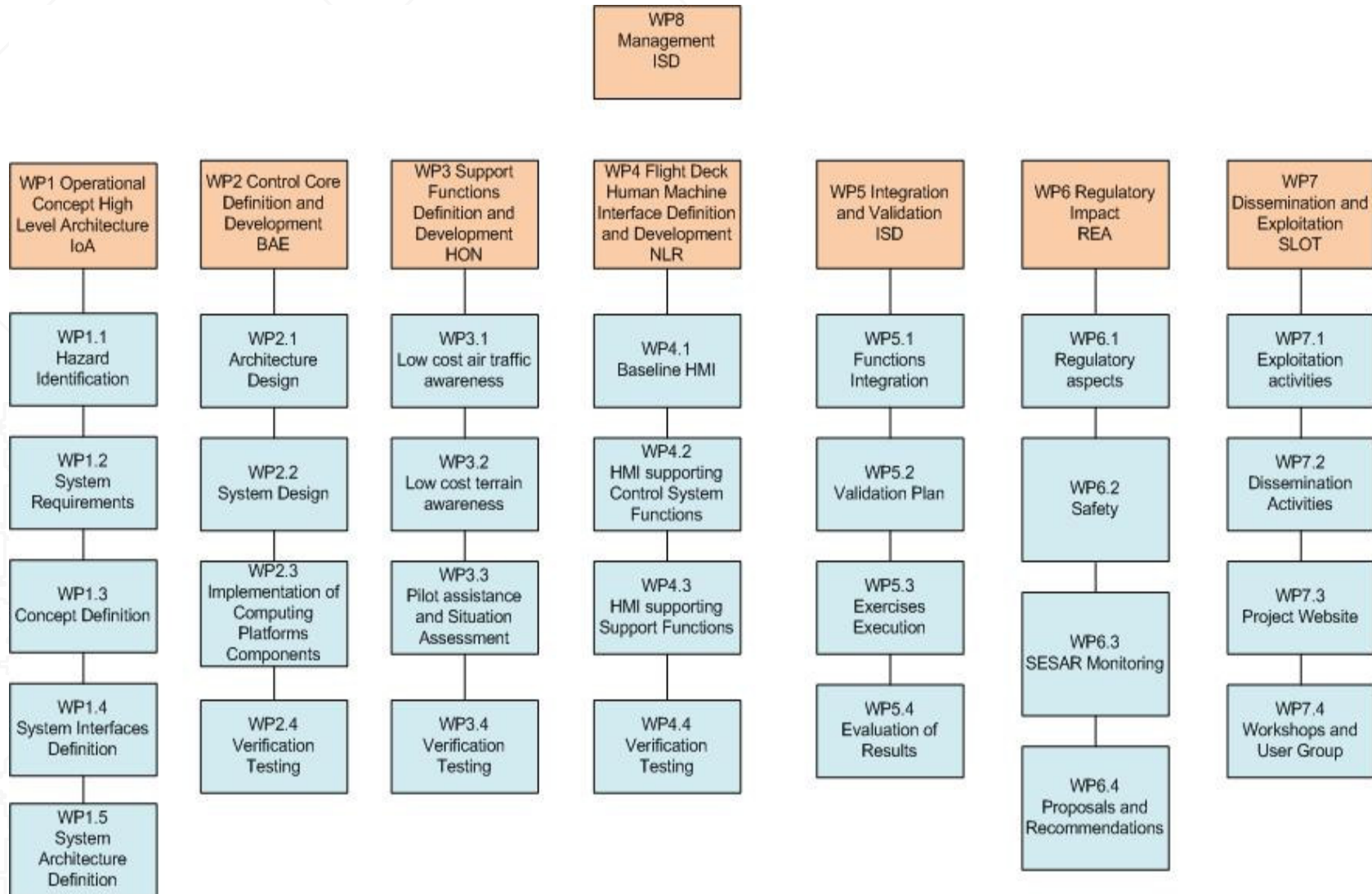
Consortium

ISDEFE (Coordinator)	Spain
BAE Systems	United Kingdom
Honeywell	Czech Republic
Institute of Aviation	Poland
Kyiv Polytechnic Institute	Ukraine
NLR	The Netherlands
REA Tech	Hungary
Rzeszow University of Technology	Poland
Slot Consulting	Hungary
TU Delft	The Netherlands
TU Munich	Germany
Warsaw University of Technology	Poland

CONSORTIUM ALREADY FIXED



SASHA WBS



Work Package Description

WP1 Operational Concept High Level Architecture

Identification of the operational hazards related to the operation of small aircraft that may be counteracted by means of avionics

Definition of system and interfaces requirements to counteract those hazards. Definition of high level architecture

WP2 Control Core Development

Development of a high integrity, robust and low-cost control core system available at all times.

Supporting functions defined in WP3 are interfaced with this control core system

Work Package Description

WP3 Support Functions Development

Development of low-cost support functions to achieve high-integrity situational awareness:

- ❖ Traffic awareness
- ❖ Terrain awareness
- ❖ Pilot assistance and situational awareness

WP4 Flight Deck Human Machine Interface Development

Development of an integrated HMI providing pilots with reliable information of support and control functions previously developed

Work Package Description

WP5 Integration and Validation

Integration of the previous developed control and support functions and the Human Machine Interface for the validation in three different platforms following E-OCVM principles



NLR's GRACE Simulator



TUM's
Level 5+
DA-42
Simulator



IoA's I-23
Manager
Aircraft

Work Package Description

WP6 Regulatory Impact

Assessment of the impact that the new developed systems will have on operations from a certification and regulatory perspective.

Assess the safety of the new developed systems to ensure that they do not introduce new hazards

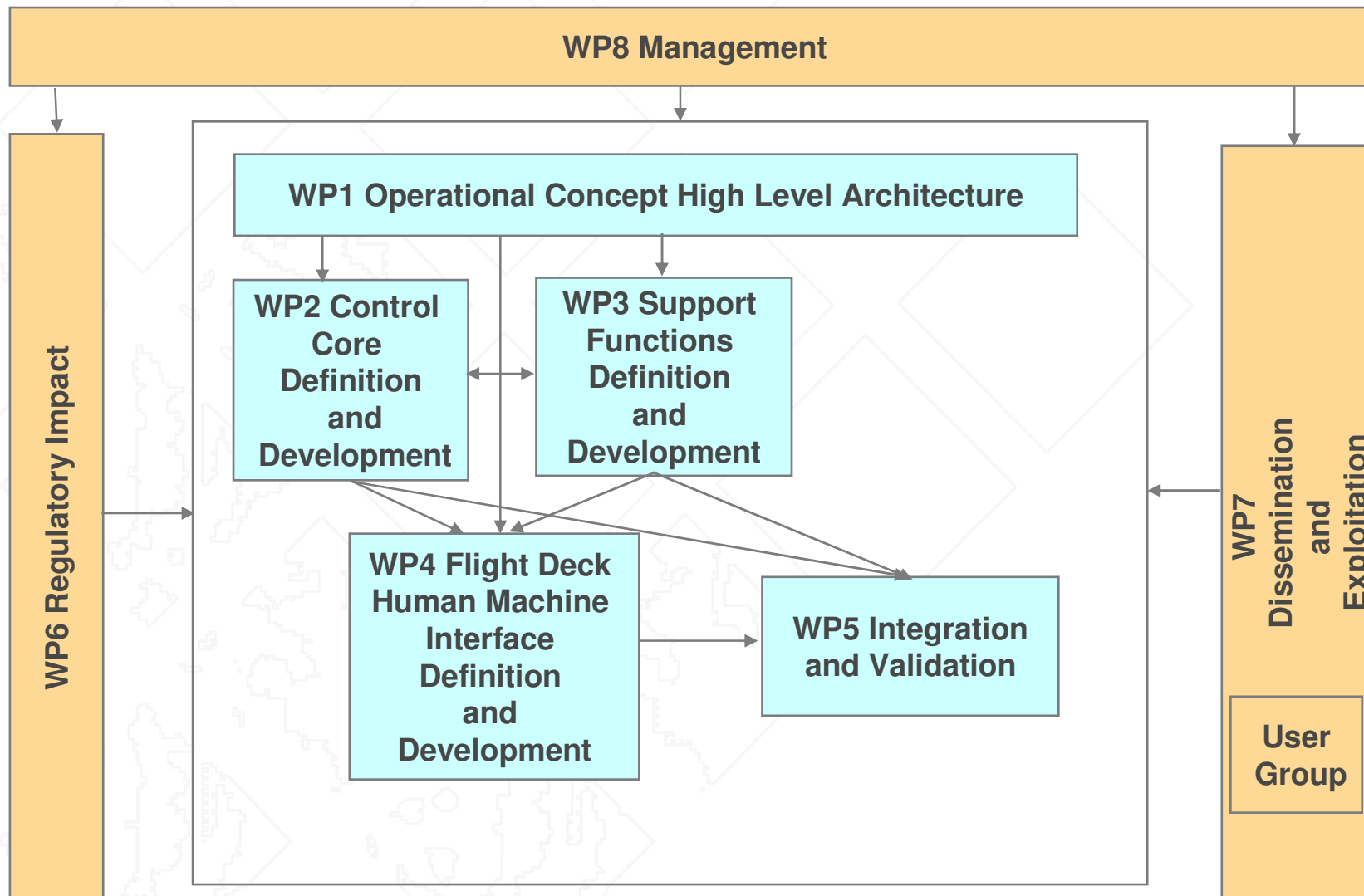
WP7 Dissemination and Exploitation

Dissemination of project activities by means of workshops, articles, devoted website, etc.

Interaction with final users through the creation of a user group. Small aircraft manufacturers, regulators, operators, pilots associations, etc.

Some these final users have been already contacted and some of them have confirmed participation

WP relationships



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Thank you!!



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