

INTRODUCTION TO THE SESAR WP-E RESEARCH NETWORK

HALA!



**HIGHER
AUTOMATION
LEVELS
IN ATM**



OBJETIVES!

**GO BEYOND
TRADITIONAL
APPROACHES ON
AUTOMATION IN
ATM**

**OFFER BETTER
FRAMEWORK
CONDITIONS FOR
ATM RESEARCH**

HALA!

**FOSTER RESEARCH
IN AUTOMATION IN
ATM**

**COVER ATM AUTOMATION
ACTIVITIES NOT CURRENTLY
ADDRESSED BY THE OTHER WORK
PACKAGES OF THE SESAR WORK
PROGRAMME**

OBJETIVES!

Gather research and innovation in automation in ATM under a common research network

Better exploit the research potential.

Promote the Best Research in Automation in ATM

Offer better framework conditions for ATM research

Create closer integration and organisation of the research and technology arenas.

AUDIENCE

**RESEARCHES IN
CONTROL AND
AUTOMATICA**

**MATHEMATICS
EXPERTS**

**RESEARCHERS
IN ATM.**

**RESEARCHES
IN
AVIONICS**

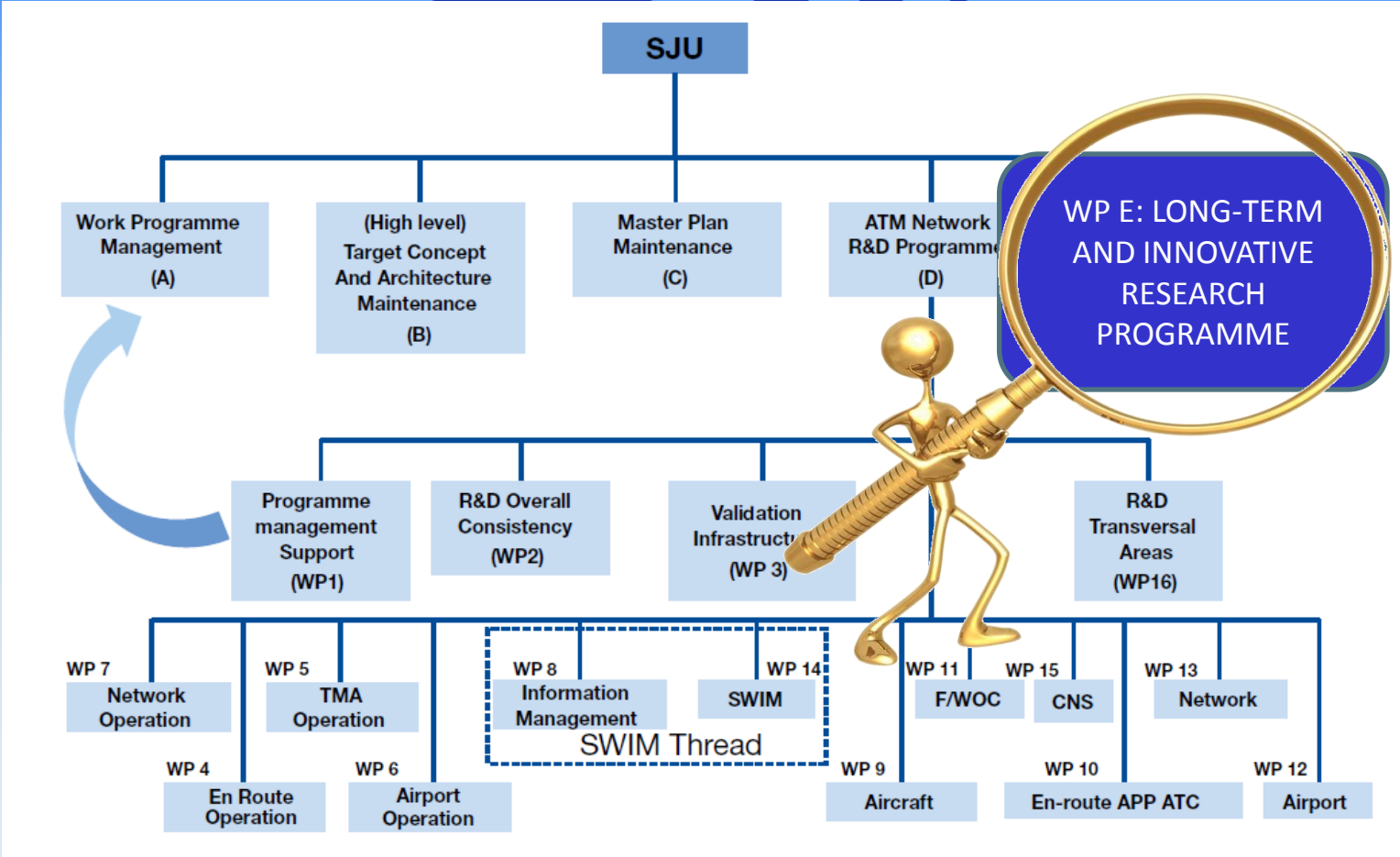
PARTICIPANTS

**RESEARCHERS
IN
AUTOMATION.**

**RESEARCHERS
IN RELATED
AREAS**

**RESEARCHERS
IN HUMAN
FACTORS.**

WP-E: THE NEED FOR INNOVATIVE AND LONG-TERM RESEARCH



THE RESEARCH THEMES



THE RESEARCH
THEMES

•Automation

UPM:



•Complexity

Innaxis:



**PARADIGM SHIFT
IN ATM
AUTOMATION**

**FOCUS ON ATM
INVARIANT PROCESSES**

**NEW ROLES
ASSIGNMENT
BASED ON:
“DECISION PLACE”,
“BEST PLAYER”
AND “BEST TIME”**

**AUTOMATION
DRIVEN BY OVERALL
SYSTEM
PERFORMANCE**

**4D TRAJECTORY
MANAGEMENT
(TARGETING,
MONITORING,
REGULATING,
TRACKING)**

**FRAMEWORK FOR
ASSESSMENT
ANALYSIS AND
EVALUATION**

CENTRIC VS. AUTONOMY

WHAT IS THE LEVEL OF CORRELATION BETWEEN COMPLEXITY AND CENTRIC PROCESSES? ?

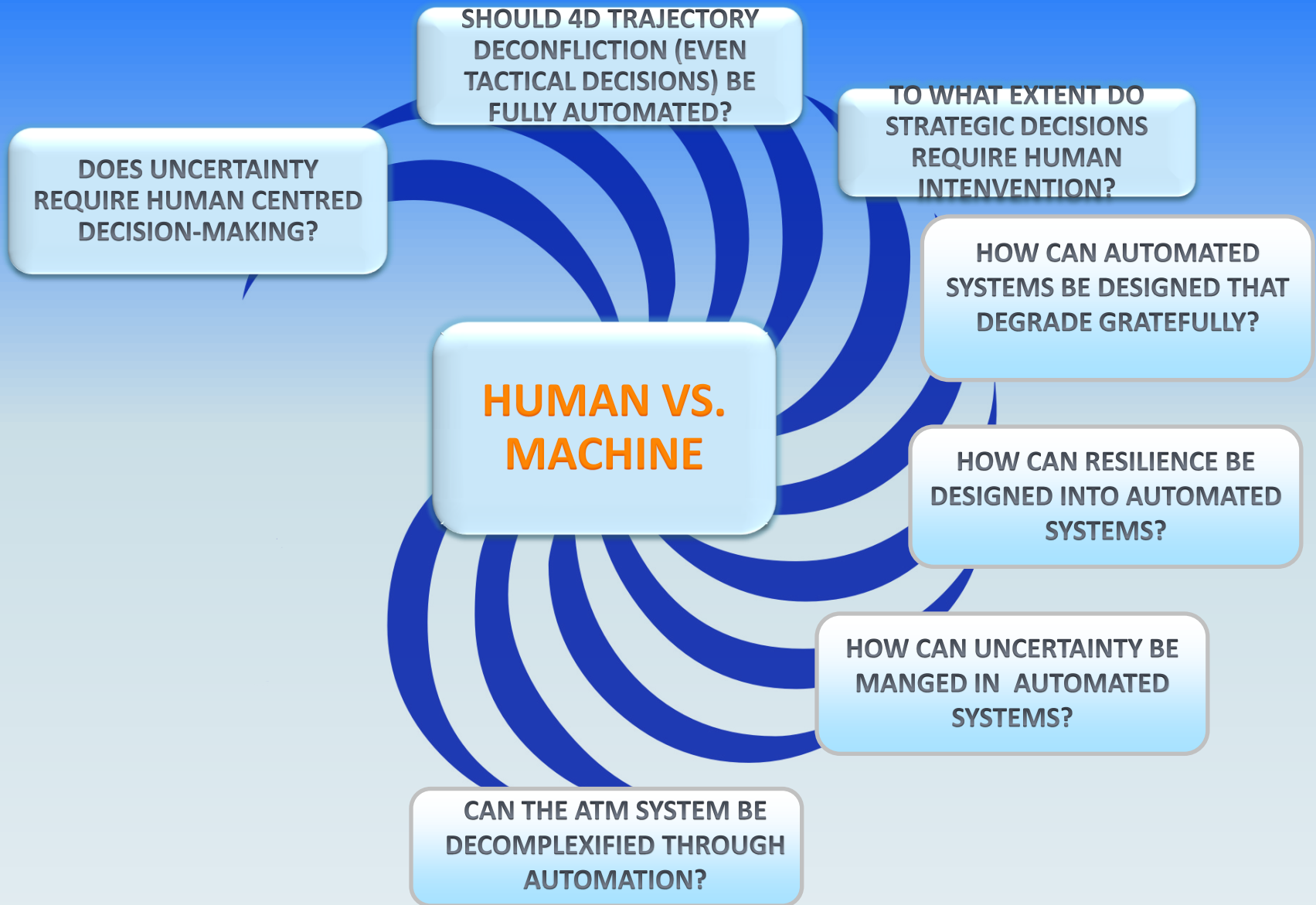
WHAT IS THE LEVEL OF CORRELATION BETWEEN AUTONOMY AND CENTRIC PROCESSES?

AUTONOMY: WHERE?, WHEN? ARE SEGREGATED AIRSPACE STRUCTURES (UMAS/MAS) A SOLUTION?

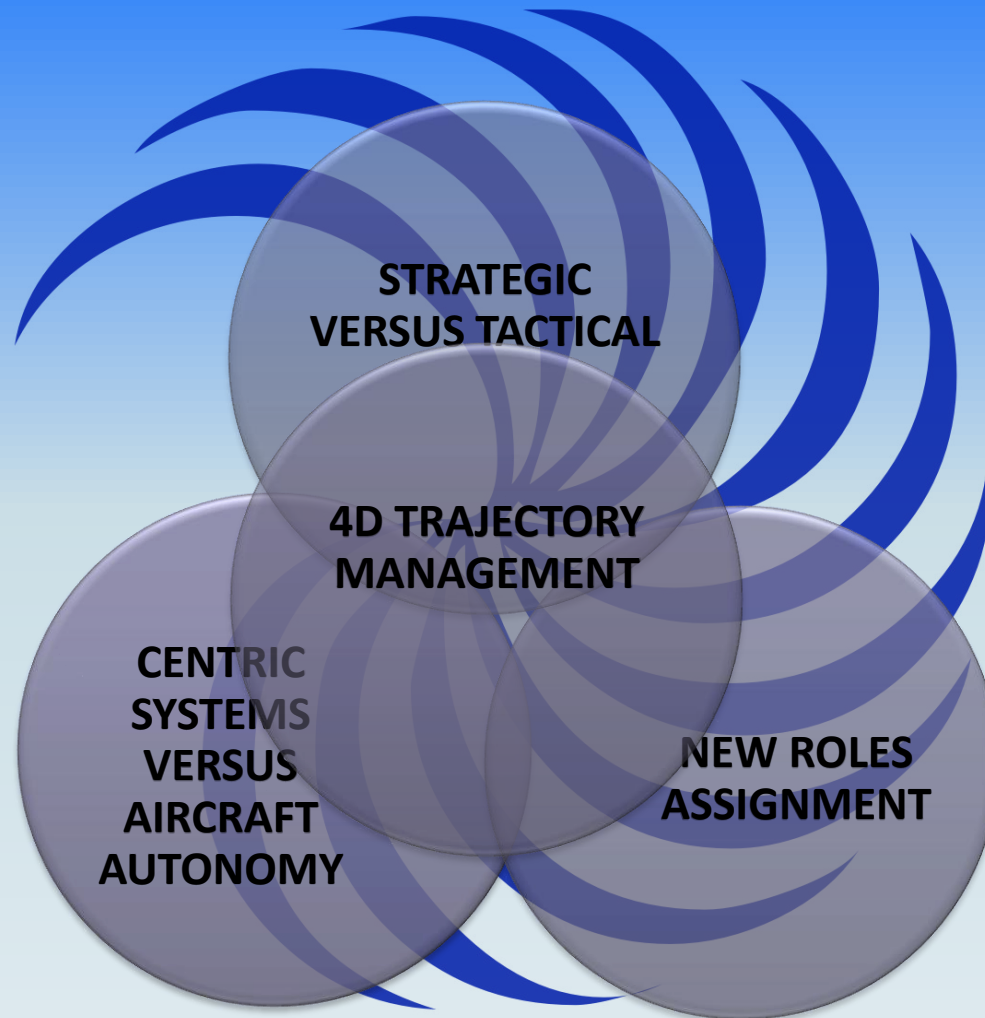
DO TACTICAL DECISIONS IMPLY AUTONOMOUS AND FULLY AUTOMATED PROCESSES?

IS HIGH TRAFFIC DENSITY/COMPLEXITY A KEY FACTOR LIMITING AUTONOMY?

IN WHICH SCENARIO (CENTRIC OR AUTONOMOUS) WILL AUTOMATION PROVIDE HIGHER OVERALL SYSTEM PERFORMANCE?



HALA! RESEARCH AREAS

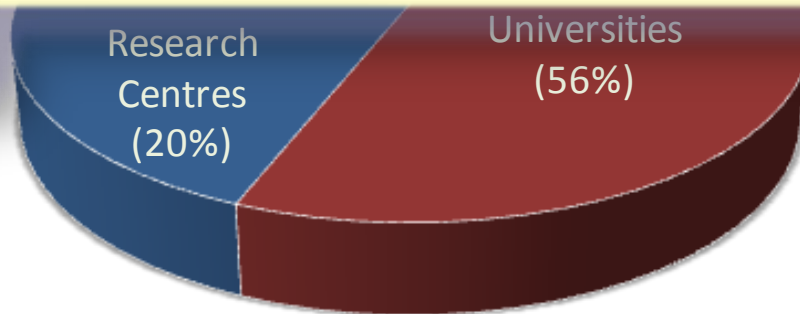




DESCRIPTION OF THE PARTICIPANTS

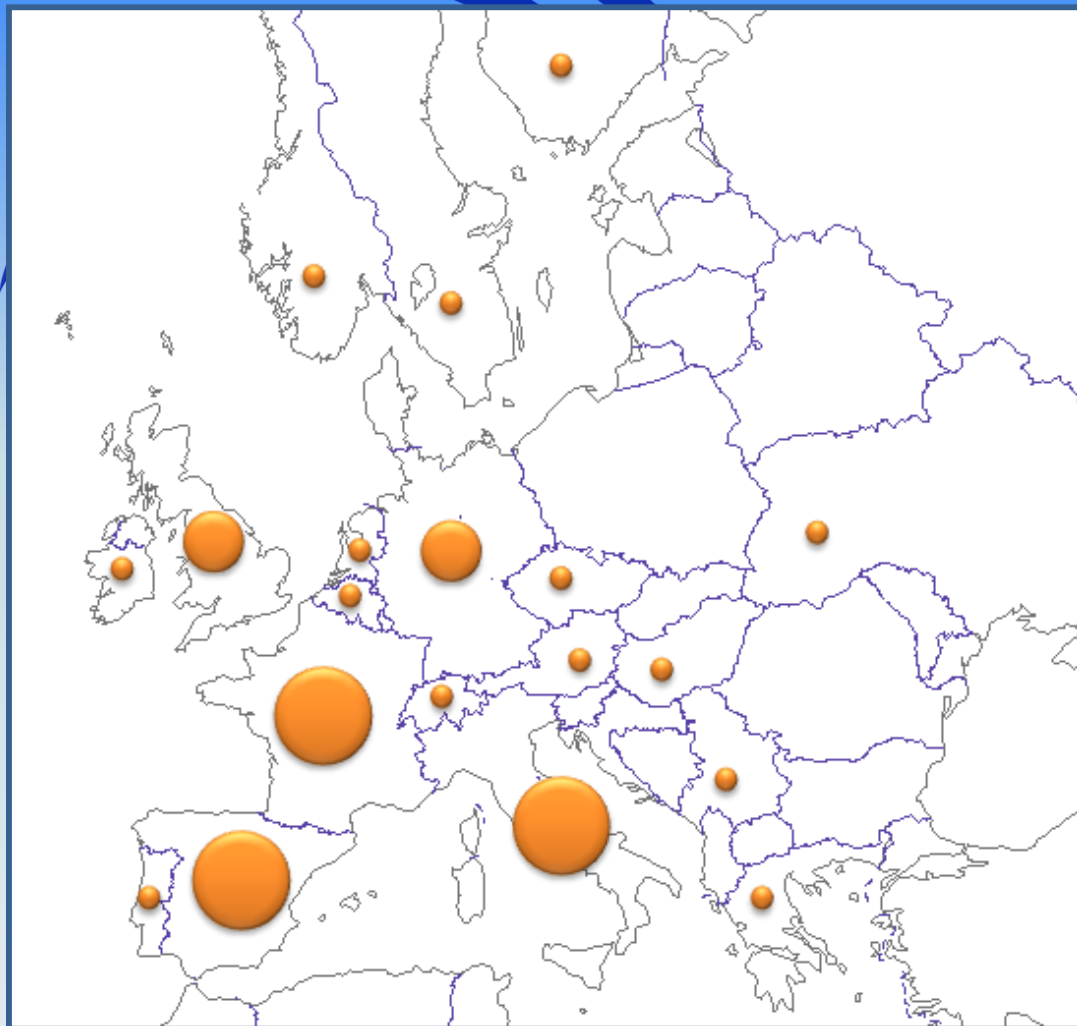
“Participant” is an interested party bringing its share of knowledge and participating to benefit of the network.

HALA! IS WILLING TO ACCEPT NEW PARTICIPANTS FROM ALL OVER THE WORLD, WHICH CAN TAKE FULL ADVANTAGE OF THE BENEFITS OF THE RESEARCH NETWORK.



Participants in the Network!

DESCRIPTION OF THE PARTICIPANTS



DESCRIPTION OF THE CO-COORDINATOR AND MEMBERS



COORDINATOR

KOM in Barcelona, September 2010



DESCRIPTION OF THE CO-COORDINATOR AND MEMBERS

WP0: Research Network Management UPM

WP0.1: Research Network Management
UPM

WP0.2: Membership Management
UPM

WP0.3: Risk Management
UPM

WP1: Knowledge Management and Tools PILDO

WP1.1: Knowledge Management
CRIDA

WP1.2: Website Design and Implementation
PILDO

WP1.3: Knowledge Management Platform Design and Implementation
PILDO

WP2: PhD Management TUBS

WP2.1: PhD Management
TUBS

WP2.2: Call for PhD candidate
IMPERIAL

WP3: Research Network Conferences & Other Events IRIT

WP3.1: Preparation
IIRIT

WP3.2: Monitoring
NLR

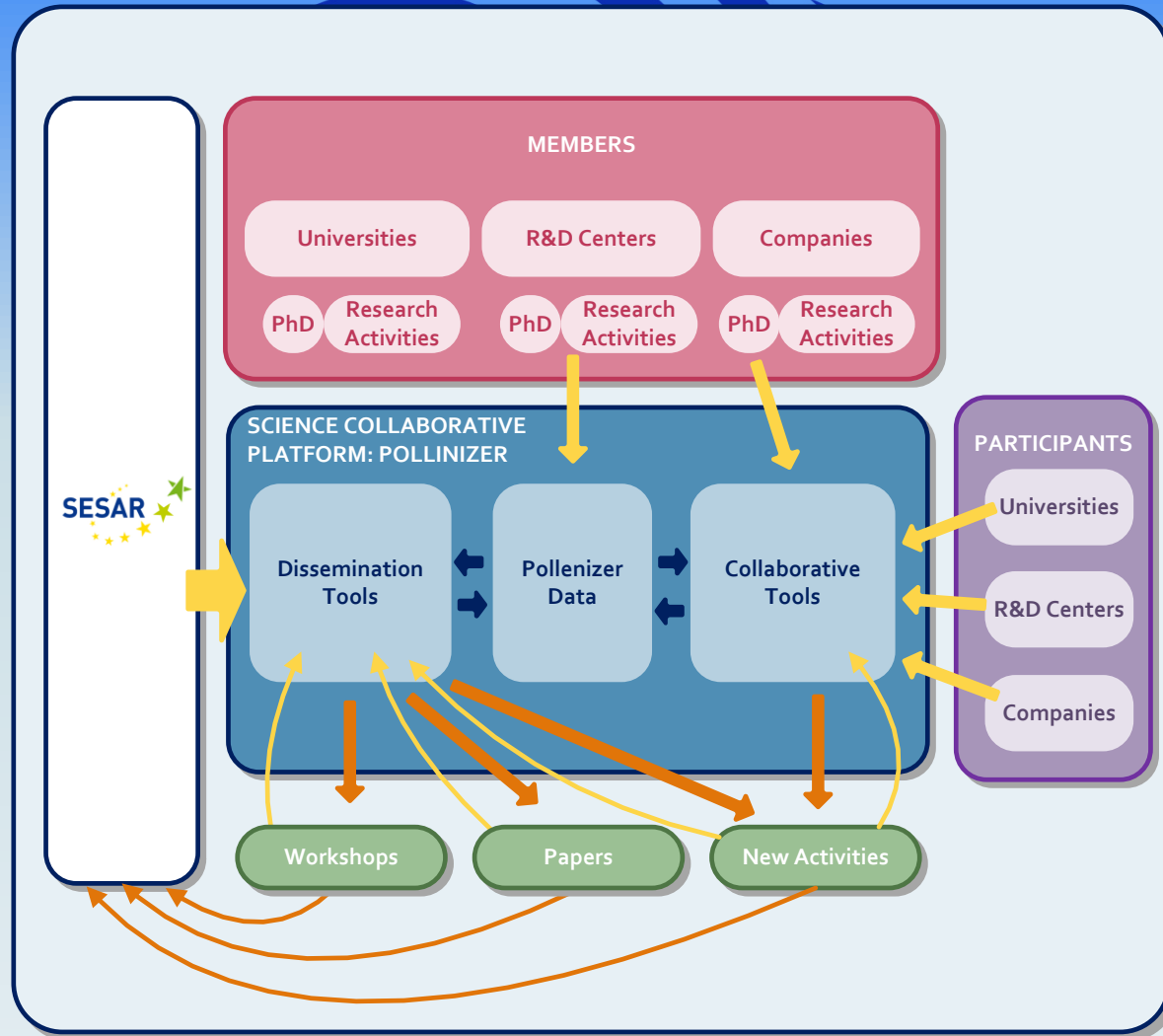
WP4: Progress on Automation TUD

WP4.1: Collection of inputs
TUD

WP4.2: Elaboration of ad-hoc research task
KTH

SCIENTIFIC COLLABORATIVE
PLATFORM FOR
KNOWLEDGE
MANAGEMENT

www.hala-sesar.net



DISSEMINATION EVENTS



HALA! Annual conference

HALA! Network shall hold a conference every year in May to facilitate the dissemination of information and experience gained from research done on automation of ATM processes. Hosting of the conference shall rotate among the members of the network with the host of each conference announced at the closing ceremony of the previous conference. **The first conference will be organized in Barcelona in May 2010. The exact date, time and place will be relayed to all soon. The call for papers will also be announced in December.**

SESAR WP E Research Networks Yearly Joint Conference

Every year, HALA! Network shall co-host a conference with other networks of WP- E. The goal of this **joint conference** is to present the progress of each network and share ideas on related activities. This conference is essential because the objectives of HALA are related to the activities of the other networks. The **first Joint conference will be in 2010** at the **Innovative Research Workshop and Exhibition (INO)** at EUROCONTROL Experimental Centre. Click on the link for more details. (<http://inoworkshop.eurocontrol.fr/>)

HALA! Summer School

HALA! Network shall organize a **1-week Summer school** orientated towards PhD candidates and researchers. The courses will be a unique opportunity to learn and share experiences and knowledge with experts of recognized prestige in their area of activity. **The first year the summer school will be organized by UPM**

(<http://www.upm.es/institucional/Estudiantes/CursosVerano>) as part of UPM summer courses that are held every July in La Granja de San Ildefonso (Segovia).

PhDs

HALA's vision in PhD. management is based on five basic initiatives:

Selection of the Best Research Topics in Automation, the most suitable PhD. supervisors and candidates

Guarantee of full involvement of PhDs in HALA! Network

Encouragement of innovation and knowledge generation.

Facilitation of mobility of PhD. students between universities belonging to HALA! Research Network and also between academia and companies.

Improvement of the results, avoiding: PhD. taking longer than required, Less results than expected

AWARD OF TITLES AND DEGREES

- The title and degree will be the one the candidate will get from their university / doctoral school.
- However, HALA! Propose to SESAR JU to create a SESAR-PhD certificate.
- The SESAR-PhD certificate would be complementary to the local PhD degree obtained from the student's home university, and would be in no way in collision with national regulations and would represent an added-value to a national PhD degree.

