



AIRborne information for Emergency situation Awareness and Monitoring



WISG 2015

AIRBEAM

AIRBorne information for Emergency situation Awareness and Monitoring

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Agenda

- Project summary and context
- Project approach
- Project status
- Key success factors
- Next steps and perspectives

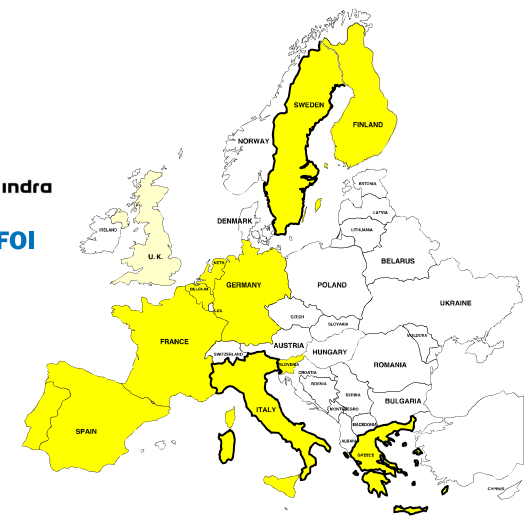


Project main features

- Proposal selected within FP7 Security call 3
 - Mission “Restoring security and safety in case of crisis”
 - Topic SEC-2010.4.2-3 : Information acquisition using dedicated platforms, including UAV, aerostatic platforms (balloons) and satellites
 - Integrated Project (15,5 M€ budget)
 - 4 years duration, start in 2012

- Consortium

- 21 partners
- 3 third parties
- + End-users groups





Project context

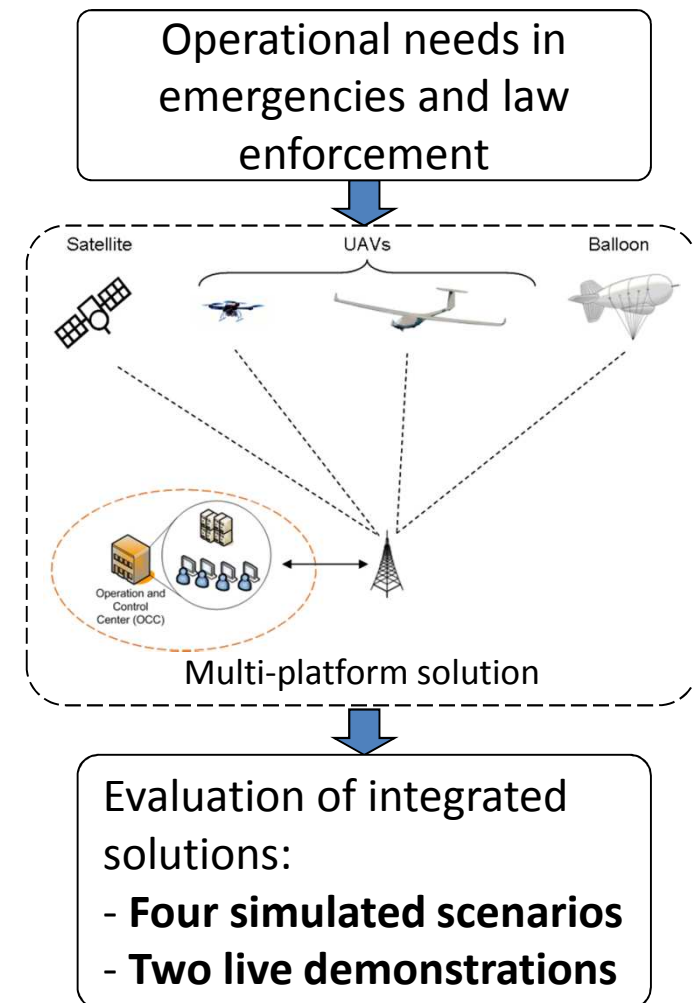
- Proposal in ... 2009
 - FP7 IP (call between July and November)
 - Limited number of initiatives on that topic, with some projects at EC, national and local level
 - Availability of some technological bricks
 - Huge number of organisations active in the field
 - Expectation for UAS regulation (insertion) not before 2015-16
- Main project objective
 - Demonstrate the availability of solutions for security purposes to a large community, enabling a rapid take up by MS



Project approach

A multi-platform approach for situation awareness

- **Multi-platform** system architecture
 - A modular architecture that enables end-users to optimize the set of RPAS to fit their needs
- **Situation awareness** toolbox
 - Use of information provided by multiple platforms to efficiently increase the end-user situation awareness





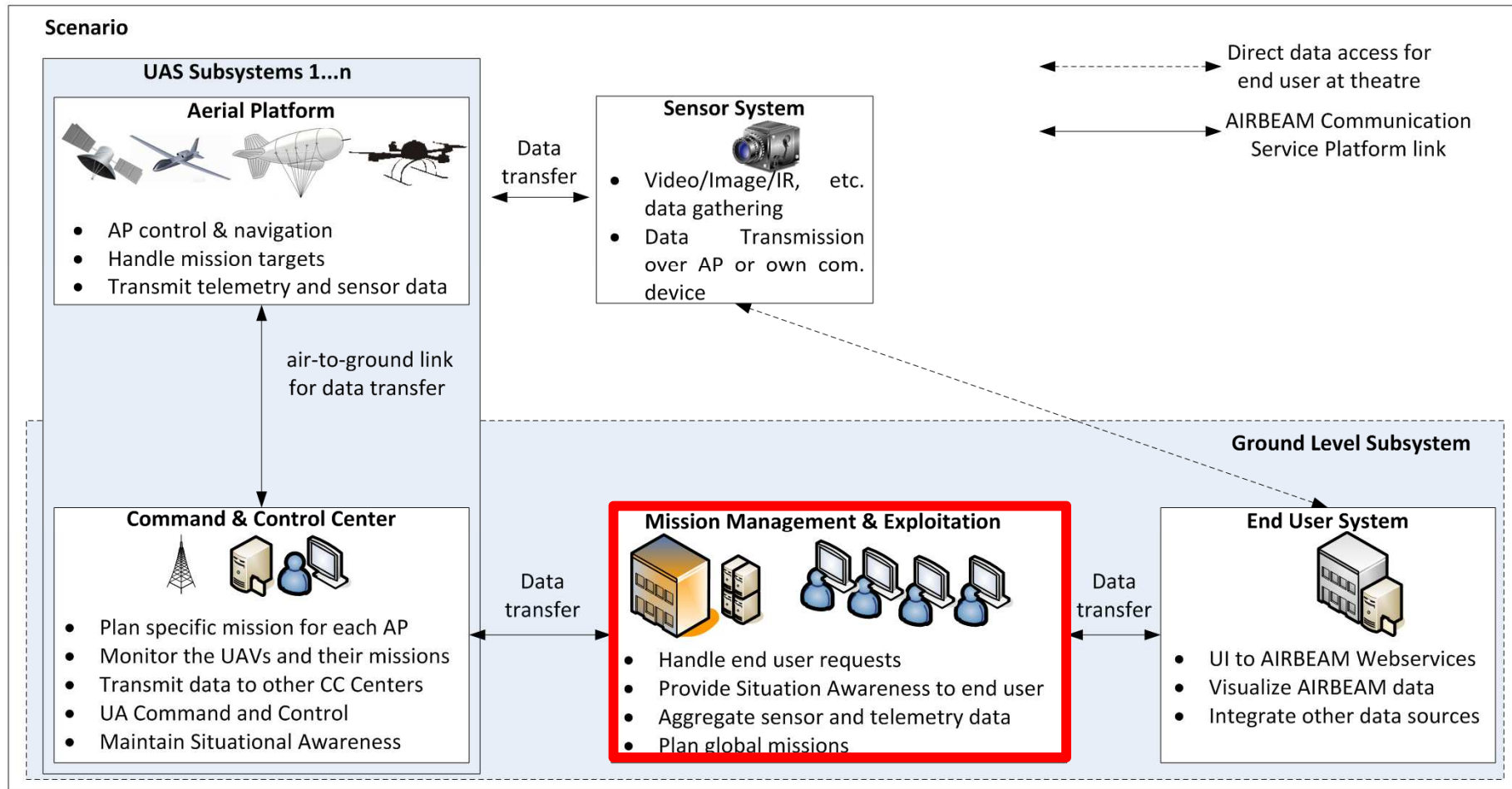
Project approach (2/2)

- « Standard » development process
 - End-users operational needs & scenarios
 - Requirements
 - Architectures, orientation towards services to end-users
 - Validation by simulations (serious games) and live trials
- Highly multi-disciplinary topic
 - Systems, sensors/payloads, platforms, communications, softwares, integration, simulation, system engineering, regulation, ...



Project status

AIRBEAM Generic Architecture





Project status

Scenarios for simulation

- Validation focuses on “How AIRBEAM Generic Architecture improves the end-users performances ?”
- Simulation scenarios for validation purposes
 - Civil protection
 - Find missing people (in a river)
 - Forest fire
 - Law enforcement
 - Criminal hunting
 - Track illegal traffic



Wild Fire



Project status

Live trials in Belgium

How AIRBEAM could assist rescue forces after a **major Hurricane** combined to a **chemical accident** and a **bush fires** at **different locations** ?

- OCHA* rapid request for :
 - Detect and localize refugees
 - Tactical overview of region in order to organize logistics
 - Damage assessment
- Fire brigades request for :
 - Monitor fire front
 - Find missing people
 - Provide tactical view
 - Support intervention during chemical accident and Blue force tracking





Project status

Live trials in Portugal

How AIRBEAM could help to secure a gold convoy ?

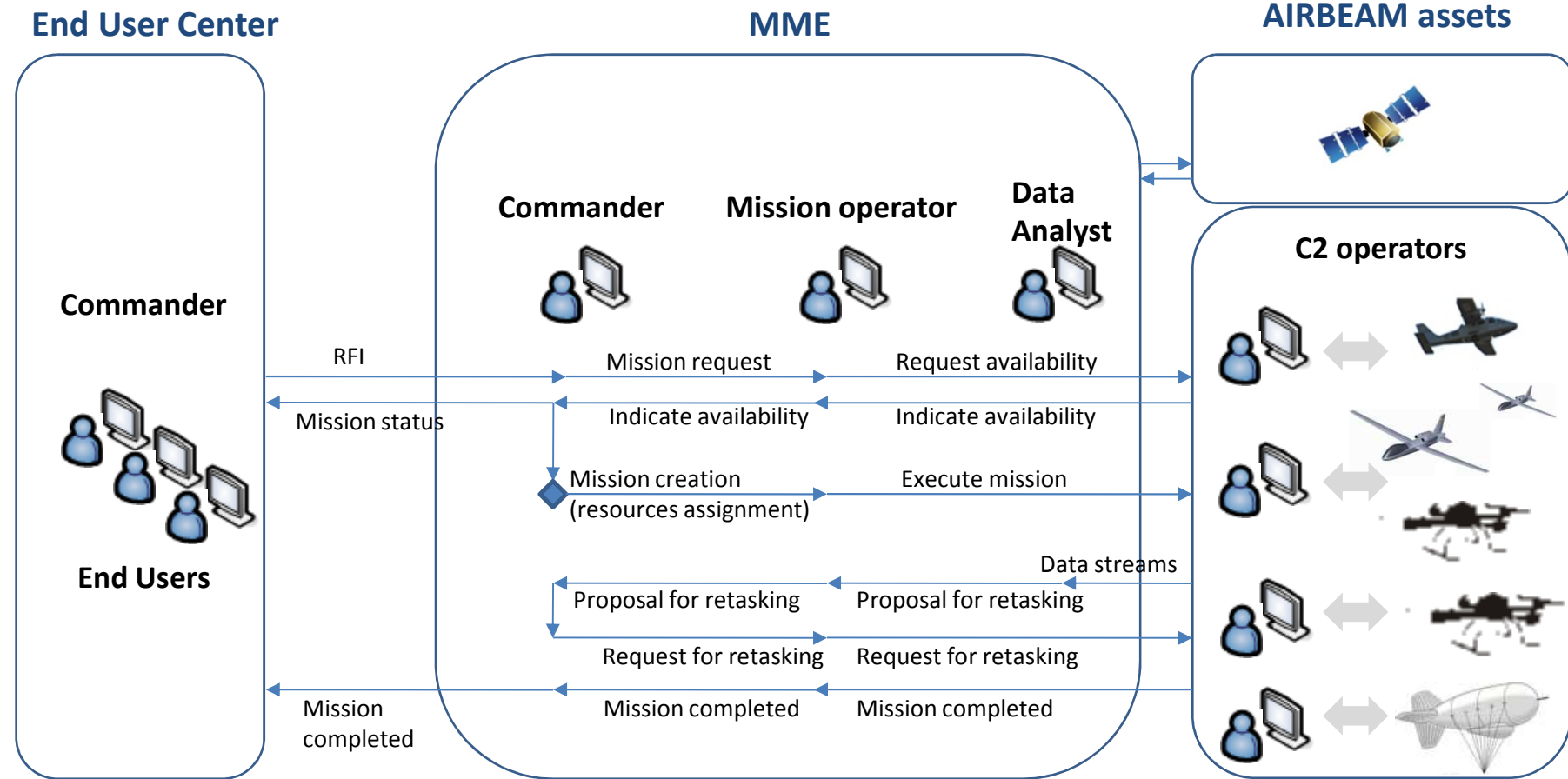
- Support ***Guarda Nacional Republicana (GNR)***
- AIRBEAM supporting tasks:
 - Secure the area before departure
 - Track the convoy
 - Management of any event during the travel





Project status

Live demo : MME and information flow



AIRBEAM assets (platforms/sensors) are assigned to requested missions within the MME



Key success factors

- Deep knowledge of assets performances and limitations: satellites, balloons, RPAS
- beyond the state of the art !
- Motivation and involvement of partners ie through several research / business opportunities
- End-users oriented activities (optimisation of resources, realistic analysis of the outputs, ...)
- End-users effective involvement



Next steps and perspectives

- Short term
 - Demonstrations (simulations and live trials)
 - Assessment of results
 - Project synthesis
 - Dissemination

- Mid term
 - Real interest on standards
 - Several potential business opportunities at products, systems and services level



Any questions ?

