Airport Level Assessment (Fixed-wing), Airport and ATS Level Assessment (Rotorcraft)

Webinar

January 13th 2017

Clean Sky 2

2 calls: airport (aircraft), airport & ATS (rotorcraft)

List of Topics for Calls for Partners (CFP05)

Identification Code	Title	Type of Action	Ind. Value (Funding in M€)	Topic Leader
JTI-CS2-2016-CFP05-TE2-01-01	Airport Level Assessment (Fixed-wing)	RIA	0,550	DLR
JTI-CS2-2016-CFP05-TE2-01-02	Airport and ATS Level Assessment (Rotc	RIA	0,550	DLR

2 sorts of assessments:

- Airport level assessments for fixed wing aircraft fleets
- Airport and Air Transport level assessments for rotorcraft fleets

General Background

The main function of the Technology Evaluator

- To assess the Clean Sky technological improvements and enable an evaluation of such improvements via assessing related impacts on three assessment levels:
  - Mission
  - Airport
  - ATS
- Assessments will be performed with respect to
  - all CS technologies
  - For specific vehicles (related to the manufacturer vehicle models)
  - For the whole fleet, i.e. for mainliners, regional aircraft, business jets, small air transport and fast rotorcraft

Airport aircraft assessment

This topic addresses Airport level assessments for air traffic movements from aircraft at and around airports, including local airspace (e.g., control zones and terminal manoeuvring areas).

Environmental impact to performed with respect to:

- noise on the ground and population impacted by certain noise levels
- emissions (CO_2 and NO_x), including contribution to local air quality

The work will cover

- selection of a set of airports
- simulation of airport aircraft traffic scenarios with adequate tools
- quantification of Clean Sky 2 environmental benefits

Airport aircraft assessment

- Selection of a set of airports
  - Selection of a representative set of airports which will be used for the assessments. They will cover all airport types from regional to hubs.
  - When available generic airport can also be used
  - The topic manager will in interaction with the partner provide flight schedules for the selected airports

- Simulation of airport aircraft traffic scenarios with adequate tools
  - Detailed dynamic fast time simulation
  - Higher aggregated simulation

- Quantification of Clean Sky 2 environmental benefits and visualisation of results:
  - Airport fleet scenarios according to flight schedules
  - noise footprints for given noise levels, number of noise impacted people within noise level footprints

Airport/ATS assessment for fast rotorcraft

This topic consists of performing “Airport” and Air Transport System (ATS) impact assessments for fast rotorcraft applications. These comprise the simulation of fast rotorcraft (tiltrotor/compound helicopter) fleet and traffic scenarios at airport/heliport, cities and world regions for the following missions:

- Passenger transport
- Emergency and medical services (EMS)
- Search and rescue (S&R)
- Oil and gas (O&G)

Environmental impacts:

- noise on the ground and population impacted by certain noise levels
- emissions (CO_2 and NO_x)

Mobility impact:

- connectivity
- productivity improvements

Airport/ATS assessment for fast rotorcraft

The partner will receive in interaction with the topic manager the following inputs:

- **“Airport” Traffic Scenarios, i.e.** airport/heliport, city
  - movements/flight schedule for selected locations, e.g. Hospital in a crowded city

- **ATS Traffic Scenarios**
  - fleet flight schedules/location networks for selected world regions

Airport/ATS assessment for fast rotorcraft

Airport/heliport and city location scenario outputs and analysis:

- Noise reduction through fast rotorcraft EMS missions at heliports in highly populated city areas (e.g. Large cities)
- Tiltrotor Feeder services from helipads to a regional or Hub airport

World region fleet scenario outputs and analysis:

- Increased “life-saving” effect through higher operation radius in European EMS heliports network in comparison with conventional rotorcraft fleet
- Reduction of # of EMS heliports and or rotorcraft fleet in Europe when replacing with fast rotorcraft (increased operation area radius per heliport)
- Fast rotorcraft Passenger transport fleet e.g. in world regions with no high speed train infrastructure
- Fast rotorcraft passenger transport fleet for oil platforms e.g. In the North sea in comparison with conventional rotrcraft fleet

Kind of TE Assessments