



2018
World ATM Congress





U-space DREAMS (DRone European AIM Study) project and IDS UTM System

Wednesday, 7th March 2018

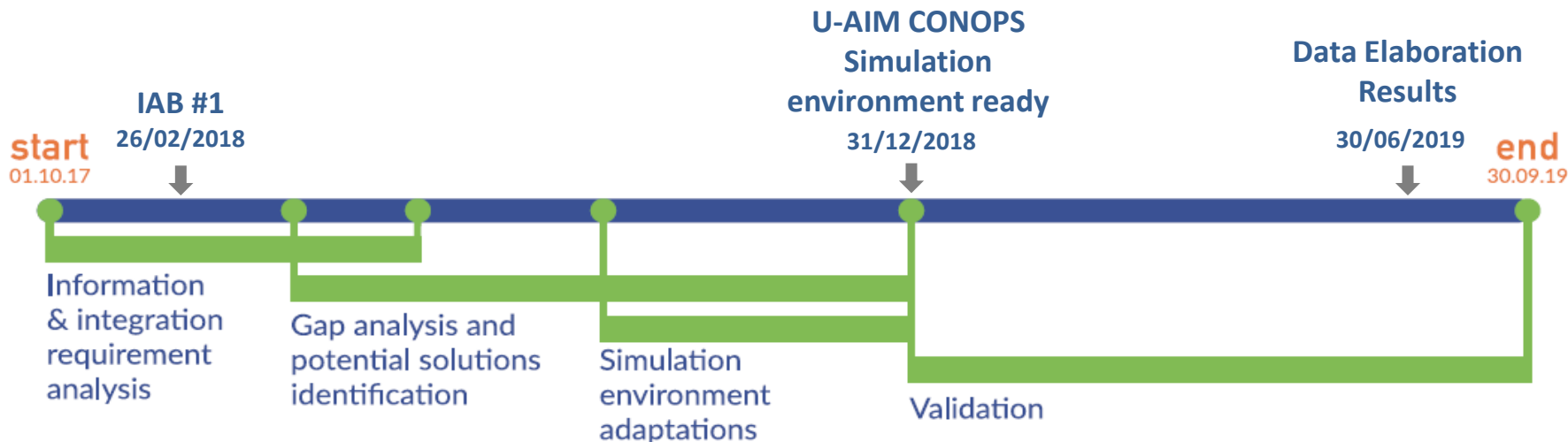
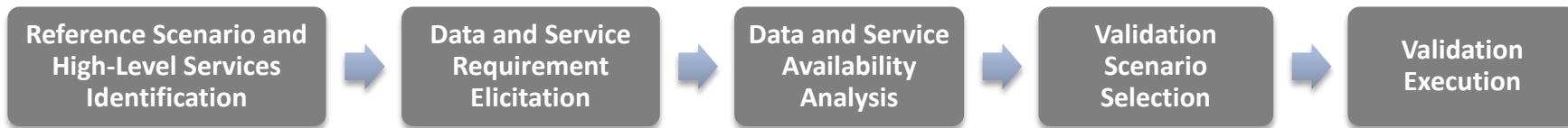
DREAMS (DRone European AIM Study) aims at contributing to the definition of **Drone Information Management** within the **U-space** concept:

- contribute to **filling the gap** between the existing information used by traditional manned aviation and the needs of the new unmanned aviation for safe integration of drones in U-space
- feasibility of new **processes, services and solutions** for drone AIM
- Definition & Validation of a preliminary **U-AIM CONOPS**

Industry	University	Independent Qualified Entity for «Operations, Airworthiness and Pilot Qualification»	RPAS Operator
IDS Ingegneria dei Sistemi Spa	Technische Universiteit Delft	EUROUSC ESPANA SL EuroUSC Italia Srl (as Linked Third Party)	Top View SRL
		 	

This project has received funding from the SESAR Joint Undertaking under grant agreement No 763671 under the EU's Horizon 2020 research

DREAMS methodology and timeline



Scenario #2 - Concurrent Ops



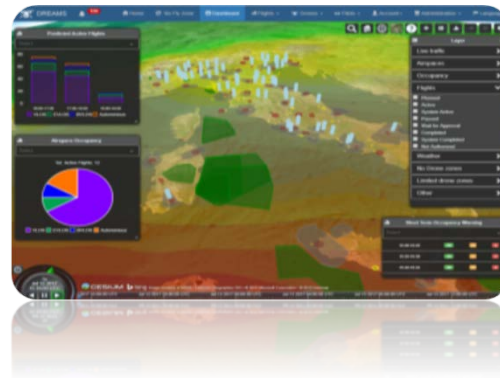
Scenario #4 - Cooperative GeoTagging



U-Space	Service	Scenarios
U1	e-Registration	✓ S1
	e-Identification	✓ S3
	Pre-tactical Geofencing	✓ S2,S4
U2	Weather information	✓ S2,S6
	Drone aeronautical information management	✓ S6,S7,S8
	Tactical geofencing	✓ S4,S7,S8
	Tracking	✓ S4
	Flight planning management	✓ S2,S3,S5,S7,S8,S9,S10,S11
	Strategic de-confliction	✓ S2,S4
	Procedural interface with ATC	S5
	Emergency management	S8
	Monitoring	S4
	Traffic information	✓ S6,S9
	Dynamic geofencing	✓ S8
U3	Collaborative interface with ATC	S11
	Tactical de-confliction	S9
	Dynamic capacity management	✓ S9, S11
U4	It is expected that the need for new services will arise during the roll-out of U3	

– DRone Enhanced Airspace Management System –

- UTM capabilities in support of planning, execution and post flight phases of UAS Operations
- Based on **existing technologies and standards** currently applied in the **aviation industry**.



- Enables **CAA, ANSP, private VLL airspace service providers and major UAS operators** to implement UTM services.
- Provides wide set of **functionalities and services for several UTM stakeholders** through tailored services and ad-hoc interfaces.

DREAMS system - conceptual overview

UAS Pilot/Basic users

UAS Operator

VLL manned airspace users

DREAMS system U-Space services

Tactical
Geofencing

Strategic
deconfliction

Tracking &
Monitoring

Drone AIM

Weather info

Flight Planning
management

Foundation services

Other stakeholders

Law Enforcement

Aviation Authorities

Local Authorities

Military

ATM/ATC operator



SWIM and data services

MET data

Airspace data

NOTAM

Terrain & Obstacle data

Density population data

Traffic data

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