



GENERAL UPDATE: SESAR JOINT UNDERTAKING

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SESAR Joint Undertaking

27 February 2018

Founding Members



EUROPEAN UNION



EUROCONTROL

Performance & KPIs



Digitalisation

- Remote tower & virtual tech rollout,
- Improved info exchange & cross-border collaboration,
- Integration of all air vehicles (including drones) into Europe's airspace;

Investment

- EUR 1.6bn in R&D through SESAR 2020,
- EUR 3.8bn for EU-wide deployment solutions (2015-2024) generating EUR 12.1bn in performance gains;



BENEFITS

SESAR offers
benefits in several
key areas:



Decarbonisation

- Greener flight routes,
- 250-500 kg fuel savings per flight & 10 kg per passenger;

People

- Shorter travel times,
- Better mobility & connectivity,
- Less noise & congestion round airports,
- Consumer savings,
- 3-4 times better safety;



Decarbonisation

SESAR Solutions – decarbonised by design



Environmental performance of SESAR Solutions

Today: -2,4% fuel consumption and emissions per flight

Tomorrow: -10% fuel consumption and emissions per flight



Ground

Ex: **Integrated departure management** = **10%** reduction of taxi time,
4,000 tonnes of fuel savings annually at Paris Charles de Gaulle



En-route

Ex: **Free route** = **45,000 tonnes** of fuel and **150,000 tonnes** of CO₂
annually



Approach & landing

Ex: **Extended arrival management** = **EUR 2.9 million** in fuel savings
and a reduction of over **4,700 tonnes** of CO₂ annually

Automated and Connected Mobility

SESAR 2020: 60+ projects underway

Exploratory research, industrial research, demonstrations



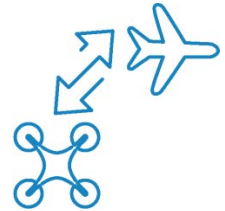
Virtual technologies



Mobile, terrestrial & satellite-based communications



Digital & automated tools



Higher levels of autonomy & connectivity



Video, synthetic & enhanced sensor tech



Big data analytics & open source data usage



System modularity



System flexibility

Automated and Connected Mobility

Augmented tower control

- A set of goggles with 3D matrix-like displays overlaid on the actual “out-of-the-window” view
- Enable tower controllers to manage traffic in low-visibility conditions
- Increases resilience at airports



Cloud and virtualised service provision

- Decouples data service provision with physical infrastructure
- Rationalises infrastructure
- Provides contingency in case of system failure

Smart airport operations

- “APOC”, a real-time monitoring & decision-making support system
- Links airside and landside processes
- Delivers smoother passenger experience & greater flight predictability



Call to establish U-space demonstrators across Europe launched in close coordination with EASA, with support from INEA to leverage CEF funds



- Main objective is to comprehensively prepare and de-risk a **rapid deployment of U-space** all the way to **urban areas**
- Projects establishing a connection with the **EU Smart Cities** initiative are particularly encouraged
- **5 and 10** demonstration sites expected across different EU Member States
- Demonstrations to be completed in **2019**

Automated and Connected Mobility



2017

**U-space blueprint delivered
9 U-space projects launched**

U-space concept definition
Higher level of automation
Ground based technology
Datalink
Drone information management
Security & Cyber-resilience
Aircraft systems



DroC²om

 **U-space**



Demonstrating U-space

- Large-scale demos (10 M€)
- Geo-fencing project

2018



Internationalisation

SJU International Cooperative Arrangements



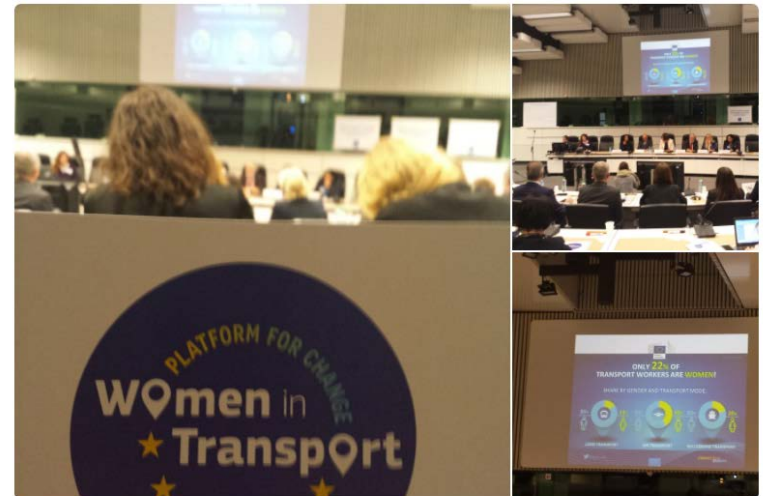
Gender - Women in aviation

- Signature of Women in Transport Declaration
- Organisation of dedicated panel at World ATM Congress, 6 March 2018
- Documenting initiatives by SESAR member on gender equality

Women
in aviation

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#SESAR supports platform for change on equal opportunities for #WomeninTransport @Bulc_EU @Transport_EU



5:53 AM - 27 Nov 2017



World ATM
Congress 2018

6-8 March 2018