SESAR 2020 and H2020 research priorities

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WHY SESAR?
GLOBAL MOBILITY CHALLENGES AND OPPORTUNITIES
IF YOU DON’T BELIEVE CHANGE IS NEEDED

Belgian airspace closed: Air traffic control failure grounds all flights causing 'chaos' at Brussels airport

Windows 3.1 Is Still Alive, And It Just Killed a French Airport

The Telegraph
Lufthansa plane nearly collides with drone near Warsaw

BBC NEWS FT FINANCIAL TIMES
Airport disruption: Flights recover after Nats system failure

REUTERS
$2 billion air traffic control system failed by running out of computer memory
SESAR
Addressing global mobility challenges

• dealing with expected traffic growth
• addressing complexity and differences across of the existing operational and technical systems
• need for innovative approaches to aviation and air traffic management
• boost performance
SJU Builds a Performance Partnership

1. Airspace users are involved in every stage of the Program
2. All relevant stakeholders are working together
3. Industrial programme management, with one design authority
4. Validation as much as possible in real operating environments as a preparation for deployment
5. Strong emphasis on demonstrating benefits and building compelling business cases
6. SJU prepares transition to deployment through Master Planning activities
WHAT DO WE DO?
TECHNOLOGY UPGRADE & DIGITAL AVIATION
RESEARCH, DEVELOPMENTS & DEMOS
WHAT IT MEANS FOR EUROPE...
SESAR AND JUNCKER’S PRIORITIES

1. New boost for JOBS, GROWTH and INVESTMENT
   - Private public partnership
   - New skills and jobs
   - ATM/Aviation value chain
   - Innovation
   - More access to Europe’s regions
   - Support of Hi-tech Industry

2. Connected DIGITAL SINGLE MARKET
   - Integrated and interoperable networks
   - Level playing field for European industry players
   - Good practice IPR

3. A resilient ENERGY UNION with a forward-looking climate change policy
   - CO2 emissions reduction
   - Fuel savings

4. A deeper and fairer INTERNAL MARKET with a strengthened industrial base
   - Industry standards
   - ATM workers’ rights
   - Labour mobility

5. A deeper and fairer ECONOMIC and MONETARY UNION
   - Optimised use of airspace (military/civil)
   - Strong industry base

6. A reasonable and balanced FREEMARKET AGREEMENT with U.S.
   - Cooperation with U.S. and other regions

7. An area of JUSTICE and FUNDAMENTAL RIGHTS based on mutual trust
   - Data protection/cyber security
   - Safe integration of new technologies (RPAS)

8. Towards a new policy on migration

9. A stronger global actor
   - Sustainable international cooperation
   - Recognised as landmark EU project
   - Cooperation with other regions

10. A Union of democratic change
    - Research supporting better rule-making
    - Cooperation/Partnership
SESAR AND THE AVIATION STRATEGY

Challenges of air transport in Europe

Aviation Safety

Single European Sky

Congested Skies

Congested Airports

Cyber Security

Maintaining high safety standards


Enabling European aviation to flourish

An ambitious EU external aviation policy

- Negotiating new EU-level aviation agreements
- Providing more connections and better prices for passengers
- Creating investment opportunities for EU companies
- Better manage traffic in crisis situation

Tackling limits to growth

- Achieving the Single European Sky
- Boosting the efficiency of airport services
- Tackling the capacity crunch
- Improving connectivity to stimulate growth

- Environment
- Safety
- Passenger rights
- Social dialogue and quality jobs

Maintaining high EU standards

Innovation and digital technologies

Deploying SESAR
- Unleashing the potential of the drones’ market

SESAR Solutions in a Global Context
SESAR AND THE PASSENGER

SECURITY
- Ensuring high levels of security

EFFICIENCY
- Up to 6% reduction in flight time
- Up to 10% reduction in fuel burn
- Up to 30% reduction in departure delays

RETURN ON R&D INVESTMENT
- For every EUR 1 investment in SESAR R&D = EUR 6 in benefit***

CAPACITY
- Up to 10% additional flights landing at congested airports
- A system capable of handling up to 100% more traffic

ENVIRONMENT
- Up to 10% reduction in CO₂ emissions
- Positive impact on noise and air quality

INNOVATION & DIGITALISATION
- A catalyst for innovation and competitiveness in air transport
- Delivers digital and new technologies

SAFETY
- Improvement by up to a factor of 4

PASSENGER EXPERIENCE
- 20 minutes shorter door to door travel time
- 10kg in fuel savings per passenger
- EUR 15 in ticket savings

GLOBAL COMPETITIVENESS
- Pools the best of minds and ideas from the entire aviation community
- Acts as a global leader on ATM interoperability and harmonisation

*European Commission
**Boston Consultant Group

SOURCE: 2015 European ATM Master Plan
Thank you very much for your attention!

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