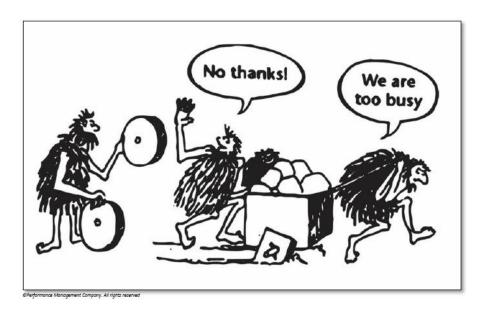
Airlines' expectations for Future Research Projects



Urgent need for modernisation / innovation



The current situation:

- ANSP does not provide enough capacity to allow the continued traffic growth
- EC « Green Deal »: we have to make the best value of any drop of fuel

A challenge & an opportunity for a real change

The last 12 months gave us some hopes

- European Court of Auditor report
- Airspace Architecture Study
- Wise People Group report

in order to ensure a scalable, flexible ATM system that will be safe, costefficient, resilient and could meet the growing traffic demand



Airlines support the Airspace Architecture study

AAS combines operational design with technology backbone

Based on 3 recommendations

3

Airspace re-design & operational excellence to achieve quick-wins

Defragmentation of European skies through virtualisation and free flow of data

Reward the early movers

and a Transition Plan



- Free-route across ECAC
- Optimised airspace configuration to support increasing traffic
- Synchronise technology upgrades
- Incentivise early adopters

- Virtual centres
- Dynamic airspace configurations
- Connected systems and advanced automation
- CNS as a service

AAS drives AU expectations on Future Research projects



Key AU expectations for Future Research Projects

On the method:

Be more agile

- New working method/platforms
- Reduce innovation cycles

Focus on the most promising solutions

Think service/performance rather technology

Be Open and disruptive

- Collaboration with new actors/players
- Pilot/Controller role evolution

On the content:

Network-centric approach, capacity on-demand

Borderless/seamless European airspace
Virtualisation

Automation based on a significant increase of air/ground connectivity

Pan-European infrastructure

CNS, ATM data Service Provision

Airports & TMA

Runway throughput

Detailed AU expectations for wave 2 & 3

Priorities with airlines involvement:

Optimised ATM Network services

• (38, 39) optimised AU operations (prioritization and network coll. Manag.)

High-performing airport operations

- (14) increased runway throughput
- (21, 25) Surface Management,
 Safety support for avoiding Rwy excursion

Enabling aviation infrastructure

- (76) Integrated CNS
- (60, 61, 77, 107) Future Comm. Infrastructure and increase air/ground connectivity
- (79) Increase resilience (GBAS)
- (100) Future SWIM Infrastructure

Other Priorities:

Optimised ATM Network services

• (44) Digital airspace configuration

High-performing airport operations

• (28, 29) increase airport integration into the network

Advanced ATS

- (53, 56, 57) Trajectory based operations advanced use of datalink and higher level of automation
- (93) Virtualisation
- (58) Trajectory prediction service

Last but not least

contract management

- Simplify it
- Reduce gap btw planned & actual activity

AU involvement

Knowing Airlines have few resources

- Need to be involved asap in the project
- Make the best use of our expertise
- Ready to provide operational experts
 But focussed on validation prototype
 To be deployed asap after the validation

Quick-wins development

Parallel with the R&D activity

Investigate possibility to work closer
 Btw OCC and EEC for quick-wins

Big data & Al

Increase use of Big data

For Trajectory Prediction (FPL 24h in adv.)

Thank you for your attention

