

Slido: #IAM2024



EASA
Innovative Air Mobility
Implementation Forum

In cooperation
with:



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How to create momentum for U-space implementation?



EUROPEAN COMMISSION

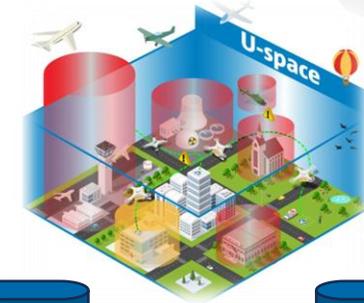
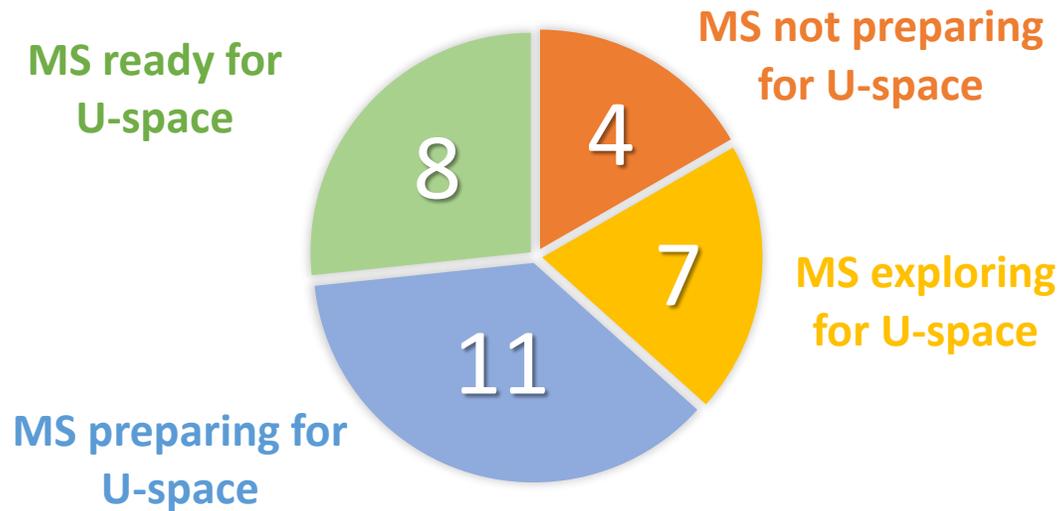


A strategic domain



Status of the U-space implementation in EU

MS LEVEL OF MATURITY



First EASA U-space Implementation survey Q1 2024

~30 candidates U-space airspace
~15 projects subject to designation
~5 advanced designation projects

Single CISP
~10 candidates
2 on-going certifications

U-space Service Providers
~15 candidates
5 on-going certifications
(including 2 non-EU by EASA)

Level of risk for the implementation



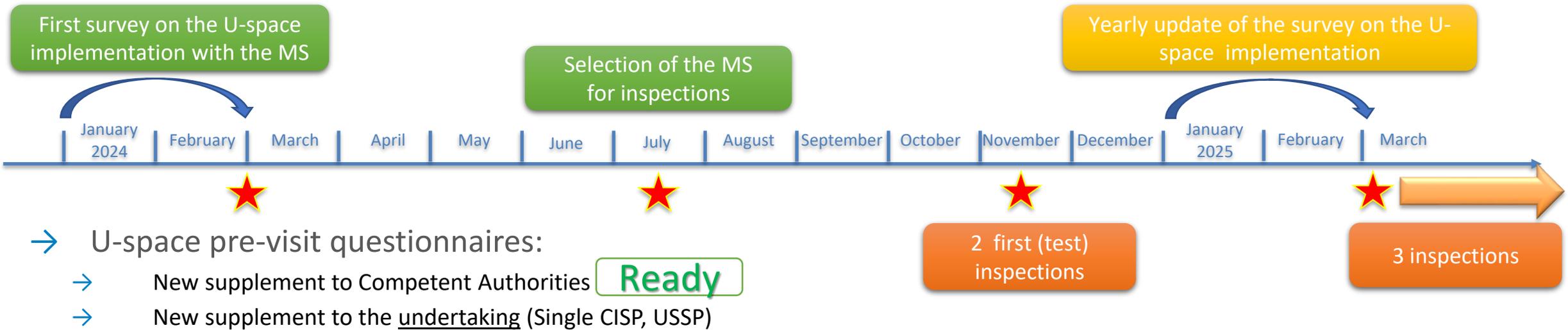
Recurrent issues: improper allocation of roles and responsibilities among the U-space actors

7 MS potentially non-compliant with the U-space regulatory framework

Need of harmonisation
and standardisation

U-space standardisation inspections

- Inspections aligned with in the ATM/ANS standardisation program and practices (e.g. use of questionnaires)
- Framework to be repeated on a yearly basis -> U-space implementation survey + 3 inspections
- Letters and focused communication may be sent to the Member States



- Assessment of the compliance of a Member State with the U-space regulatory frameworks
- Assessment of the roles and responsibilities, and soundness of the procedures of the Competent Authorities, including the assessment of the certification and oversight of the undertakings

Support to the harmonisation will continue:
ad-hoc discussions with MS, TF on USSP/S-CISP certification

U-space eco-system readiness (?)

Interoperability
of systems ?

Maturity for
certification ?

On-boarding process ?

From the “we could do” to the “we (effectively) do*” ...

*In compliance

Standards ?

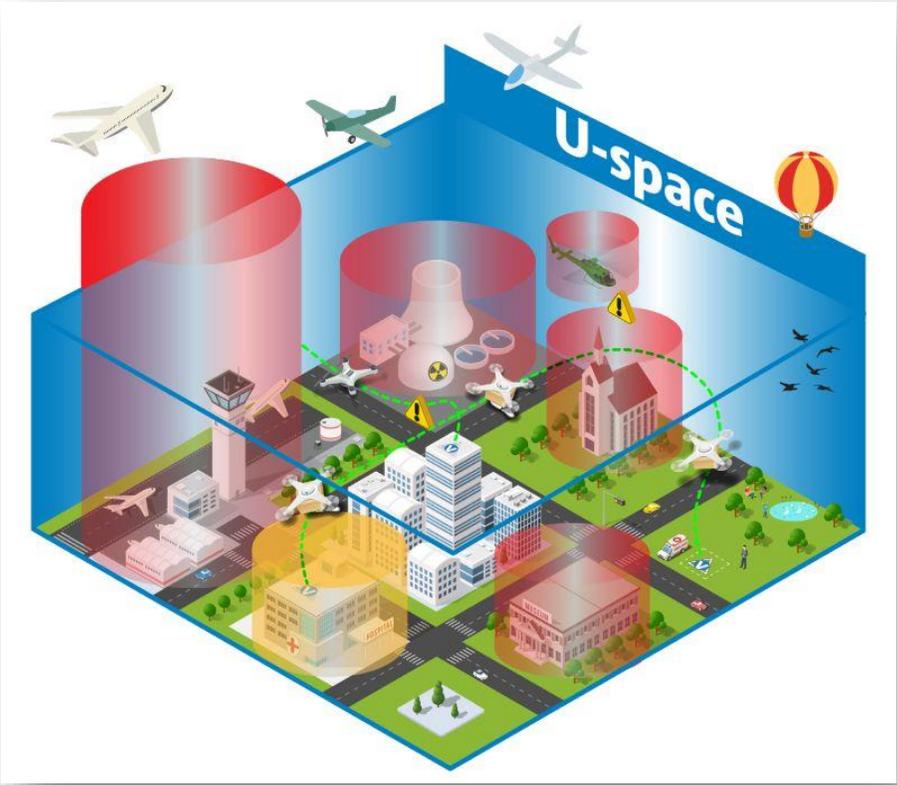
Simplifications?

N-RID ?

Business model ?

New entrants ?

U-space business model



Economical Viability

Development of the new organisation

Development of the systems/platform

Compliance with the Regulatory framework



Funding

Fees and charges

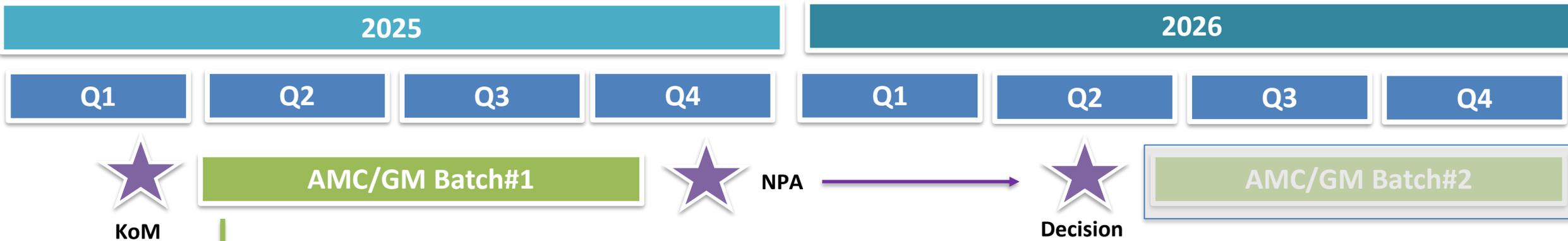
Volume of operations

Business opportunities (e.g. services out of U-space)

The industry to provide financial data / metrics / objectives



RMT.0748 Roadmap



- Major revisions of the AMC/GM **enabling the continued safe and efficient implementation of U-space** (integration of the feedback from the first implementation, flexibility of the service provision)
- Development of additional required AMC/GM (e.g. Applicant oversight)
- Quality improvements and technical clarifications

Exploratory / preparatory activities

- Initial discussions of complementary aspects (e.g. user interfaces, weather information service,...)
- Workshops and focused WG with relevant/selected stakeholders

Workshops

- Pre-NPA and ahead presentation of the main changes to the AMC/GM (U-space 1.1)
- Weather Information Service -> gathering: operators, USSP, weather data/MET providers,...
- U-space architecture, roles and responsibilities + implementation issues

AMC/GM Batch#1



- Continued development/improvement of the Flight Authorisation service (and Conformance Monitoring service):
 - Establishment: ops. data, alignment with the (EU) 2021/947, deviation thresholds, 4D volumes (?)
 - Flexibility: dynamic modifications/changes to the FA, operations in/out U-space airspace
- Streamlining: Airspace Risk Assessment, coordination mechanism (other?)
- New entrants and USSP external services (e.g. weather data, surveillance)
- Data exchanges between USSP (ASTM/Eurocae standards)
- Feedback from the field and from the TF with MS on USSP/S-CISP certification
- Quality improvements and technical clarifications
- Development of complementary AMC/GM (e.g. oversight, change notification)

Exploratory/Preparatory activities



- Weather Information Service (e.g. operational needs, μ -weather information, safety criteria, coupling with Flight Authorisation service)
- N-RID (e.g. interoperability and performance technical standards, CE marking (?),...)
- HMI and human factors
- Predefined standardised U-space airspace use-cases to better support the ARA
- *Needs, roles and responsibilities of local U-space coordinator*
- *Cross-border operations*
- *Artificial Intelligence in U-space (in conjunction with the RMT.0742)*
- Others...

Recognition of industry standards for U-space



ASTM INTERNATIONAL



- ASTM F3673-23 Weather data
- ASTM F3623-23 SDSP
- ASTM F3411-2? - NID
- ASTM F3548-2? – USS interop.



- ED-318 – Gz & U-space (replacing ED-269)
- ED-XXX – NI ICD
- ED-XXX – FA ICD
- ED-XXX – FA



- ADS-L 4 SRD860 Issue 2 under work (e-conspicuity + RID)

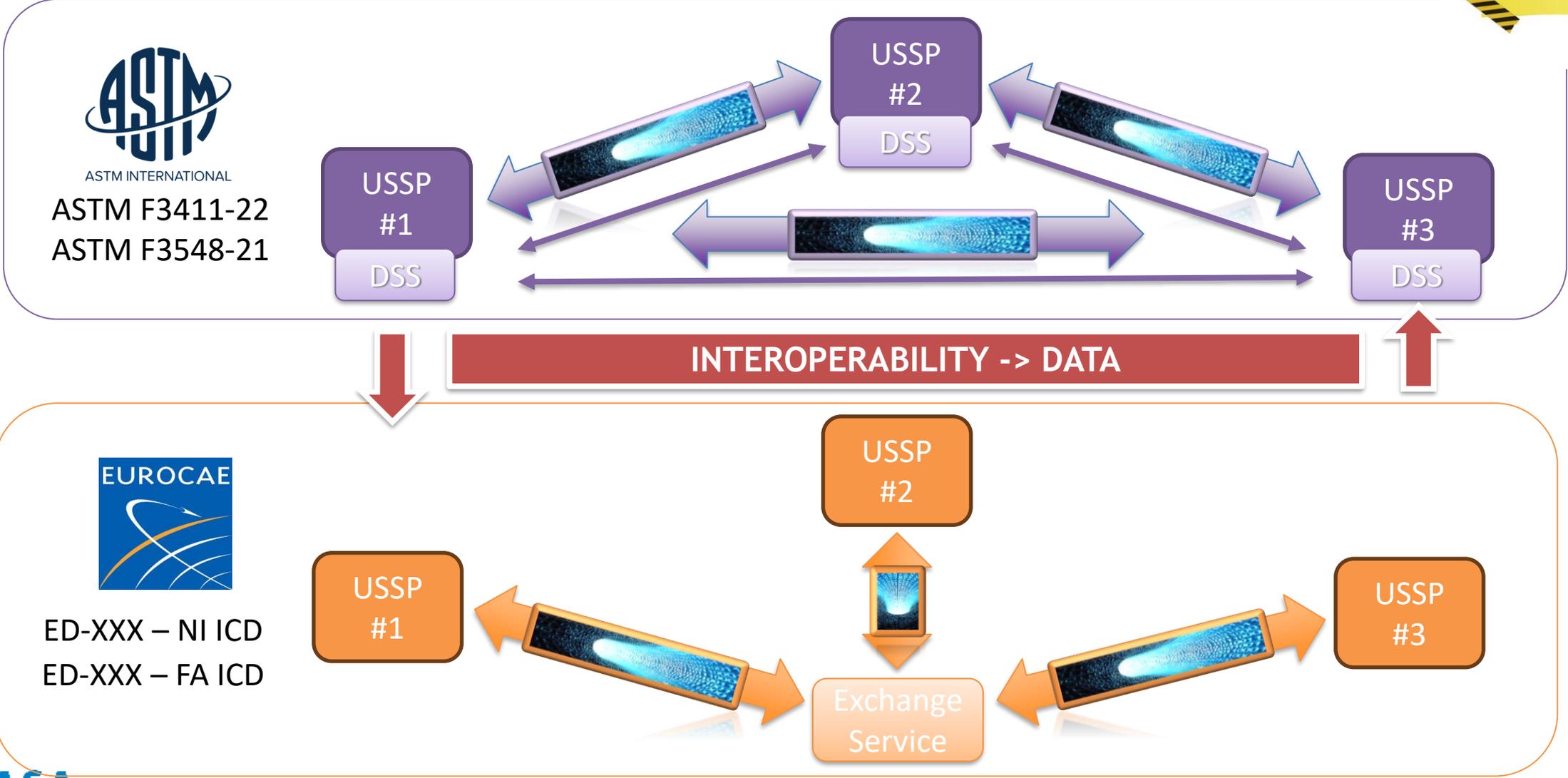


 SHEPHERD (UAS Standards)



Appropriateness, clearer and higher level of adherence to be discussed
Suitable scope to be defined in the AMC/GM

Inter-USSP data exchange



U-space in 2030 ?





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