

CORUS five

2nd WS – ConOps definition Societal & Economy Report

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CORUS five

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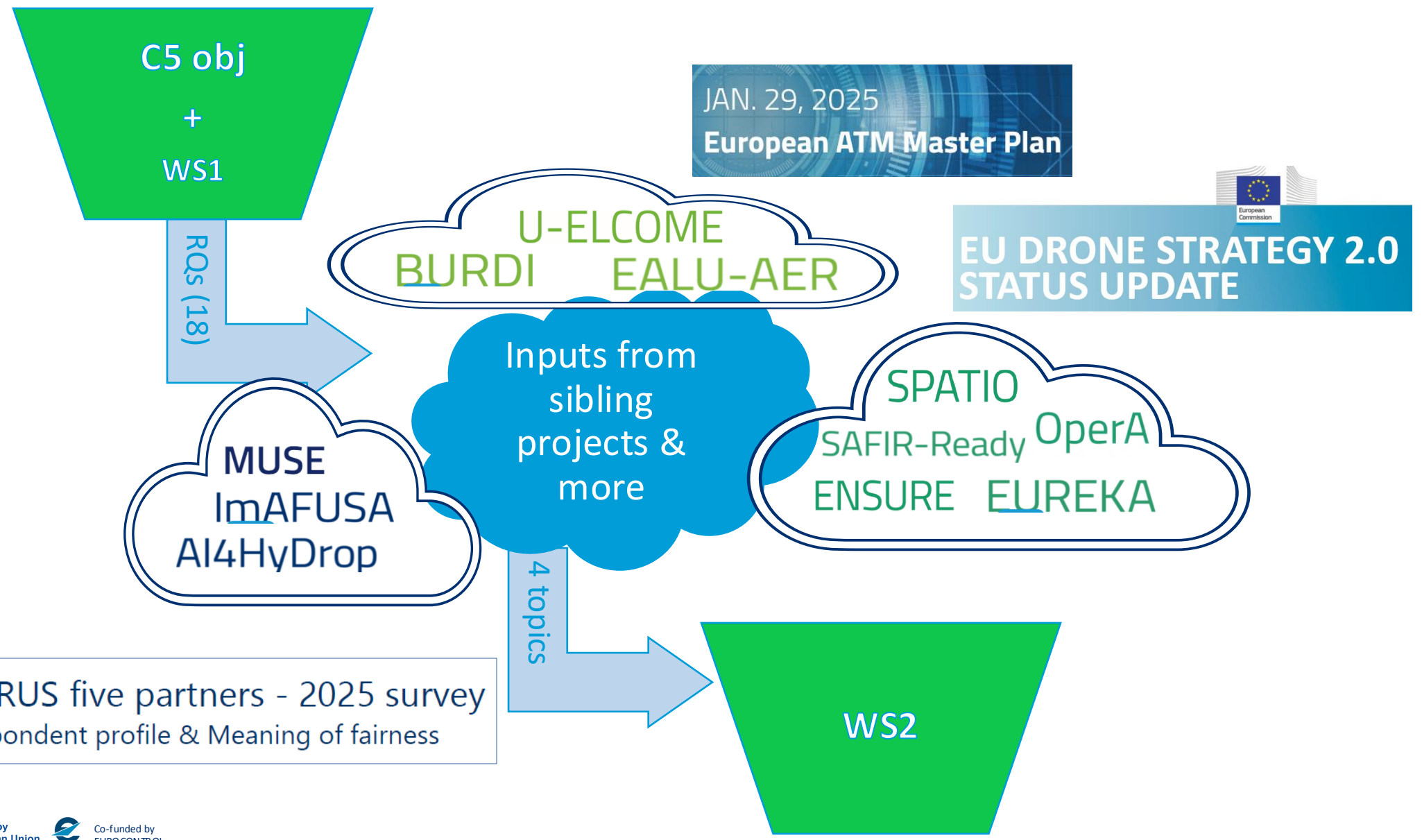
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Process

CORUS five



24
responses

CORUS five partners - 2025 survey
Respondent profile & Meaning of fairness

Responses to Research Questions as draft of ConOps v5

Social

Economy

Fairness

Roles

Topic 1 Social: measure U-space implementation acceptance

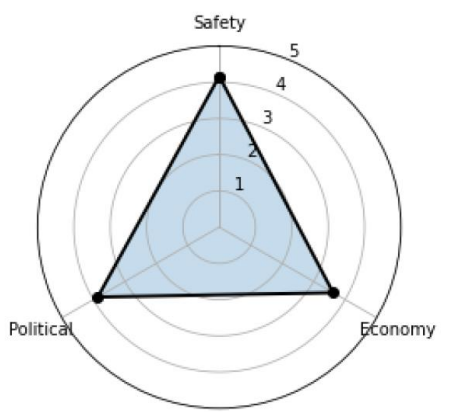
- How to update the method for evaluating public acceptance related to U-space implementation?
 - Answers from **new surveys, PEARL, MUSE, ImAFUSA, AI4HYDROP**
 - Transition from SAIs (**CORUS, CORUS-XUAM**)

Topic 1 Social: measure U-space implementation acceptance

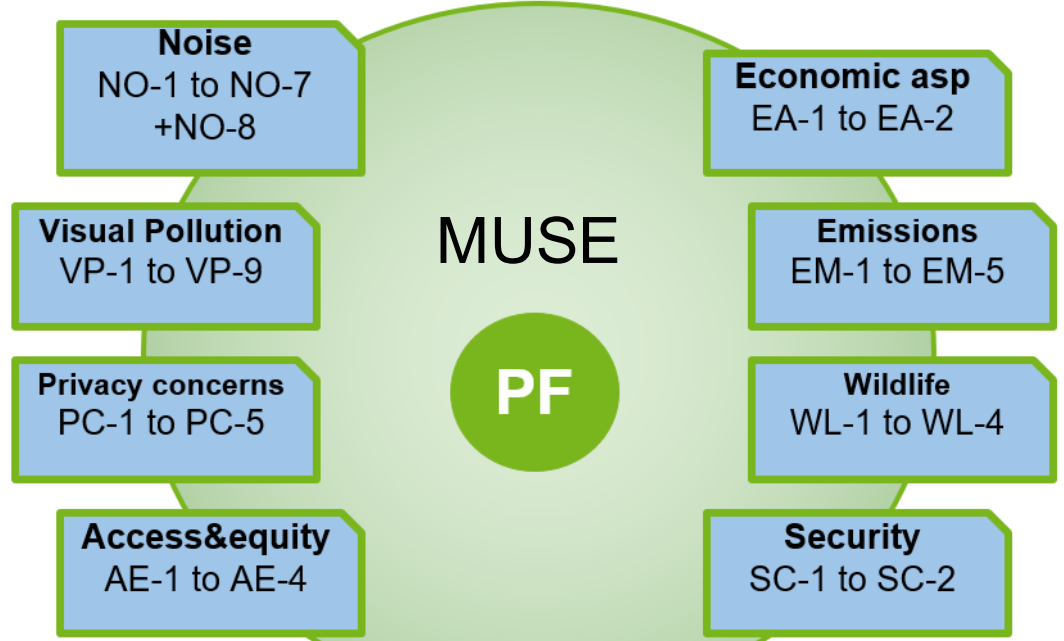
- **PROPOSAL:** Move from SAI to MUSE PF + Select a subset of 3? relevant KPIs + Set thresholds from ImAFUSA



Social Acceptance Indicators of all VLDs (average =3.88)



CORUS



ImAFUSA

Topic 1 Social: measure U-space implementation acceptance

- **PROPOSAL:** Move from SAI to MUSE PF + Select a subset of relevant KPIs + Set thresholds from ImAFUSA



Generally accepted BUT

- **Liability** concern needs further research since there are gaps/inconsistencies in regulation
- Additional **surveys** were added into the list
- **ARA** does an initial environmental assessment, but conditions shall be periodically revised (i.e. using a PF)
- Need of a US-AS **governance** board that reviews PF indicators values

Topic 2 Economy: funding mechanisms

- Which are the economic principles of the U-space?
- RQ5.20 - How should U-space services and flight operations be charged?
 - Answers from **ICAO, EU DS2, ATM MP, SPATIO**

Topic 2 Economy: funding mechanisms, Charging of U-space services



Questions / Proposal

- Do we agree with ICAO principles ??
 - Second ICAO principle (fees related with cost) may be too limiting
- Do we agree with exceptions ?? no agreement
- Do we agree with proxy for IAM to use distance and size as in ATM??
 - In favour of using 4Dvol occupancy. C5 might not give a final formula but shall define the items that the formula needs to encourage
- When to charge?? At U-plan acceptance, but adjust at termination
- Do we agree with flexible fees ?? yes, except pay for priority

Topic 3 Fairness

- RQ1.06 - Should CORUS five propose the principles and a way to address fairness, considering also a multi-USSP environment?
- RQ5.19 - How can U-space provide fair access to airspace?
 - Answers from **EU Drone Strategy 2.0, AI4HYDROP, SPATIO, MUSE, SoA (DLR), CORUS five**

Topic 3 Fairness

Questions / Proposal



- Fairness shall give priority always to state/emergency?? **yes, at operation level, not at operator**
- FCFS is now in place. Is it a good start ?? **yes at short term. It will allow to obtain data**
- Do we agree to extend to more than 1 queue?? all FCFS?? How distribute the capacity per queue?? **OK to more than 1 queue, OK to FCFS, but not capacity reserved per operator, better per type of business.**
- Do we agree establish deep hierarchy of priorities?? **better keep it simple**
→ **Fairness could be a full SESAR project**

Topic 4 Roles, Responsibilities, Best Practices

- RQ1.12 - Which roles currently identified in U-space can be evolved from human centric to **automated** systems?
- RQ5.39 - Can CORUS outline responsibilities for all actors operating in U-space?
- RQ5.34 - How can industry best practices be included in ConOps?
 - Answers from **U-ELCOME**

Topic 4 Roles, Responsibilities, Best Practices



- **Roles:** Despite automation, a large list of human roles in the U-space have been obtained. The aim for C5 is to define how they will be affected by the level of automation across short-med-long term.
- **Responsibilities:** Refinement of U-ELCOM proposal
 - Drone operators need to test the USSP integration in advance
 - Coordination prior to the flight is and will be Drone operators' responsibility. However, U-space can provide a coordination facilitation service to add value.
 - Term and conditions of the USS shall include SLA
 - Responsibilities in planning and during emergencies shall be better established
 - Importance of the role of communications between USSPs-CISP can lead to a new IXM stakeholder
- **Best practices** - Pending

Time horizon

Research Questions – Next Steps

Four topics

Three horizons



Short-term

- | Social | Economy | Fairness | Roles |
|--|--|---|--|
| <ul style="list-style-type: none"> From SAI to PF Select best KPIs | <ul style="list-style-type: none"> 1-to-1 (*) No benefits / no charges External funding | <ul style="list-style-type: none"> Prio + FCFS Collect indicators | <ul style="list-style-type: none"> Clarify responsibilities Need of governance |
| <ul style="list-style-type: none"> Integrate in SESAR PF Use by US-AS governance | <ul style="list-style-type: none"> N-to-1/2 No losses / symbolic charges | <ul style="list-style-type: none"> Several FCFS queues per business | <ul style="list-style-type: none"> Best practices |
| <ul style="list-style-type: none"> Consolidate in annual reports | <ul style="list-style-type: none"> N-to-M Full charging Market benefits | <ul style="list-style-type: none"> Collaborative decision making | <ul style="list-style-type: none"> Impact of full automation |

Medium-term

Long-term

(*) expected # of drone operator and # of USSP in a U-space airspace

Consortium

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CORUS five has received funding from the European Union under grant agreement 101166763

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