Thank you all for attending this Technical Workshop

This WS aims at validating the proposed method and to collect stakeholders feedback on the proposed scope.

Agenda

- Project overview: reminder of scope & purpose
- Workshop scope
  - Impact Assessment methodology
  - Areas to be assessed
  - Participants to future interviews
  - Content of surveys and interviews
- Open discussion expected after each agenda point
- Conclusion

Aims and Objectives

Understand the ***nature and extent of the interdependencies between safety and security*** in order to ***assess the impact of security measures on safety***. In doing so, the project should identify which ***processes and job roles are affected by safety–security interdependencies*** and which ***certification requirements and licensing activities are affected***.

In the medium term, safety risk management techniques that can be applied to security will produce ***harmonised risk assessment methods*** and ***support integrated policy and decision-making*** processes at national and EU level.

The main output is a ***comprehensive knowledge base*** for the evaluation of the potential impact of security measures on the safety performances of aviation systems, personnel and operations, including the ***leading indicators*** for measuring such an impact (positive or negative) as well as ***the main factors*** playing a role in such security-safety dependencies.

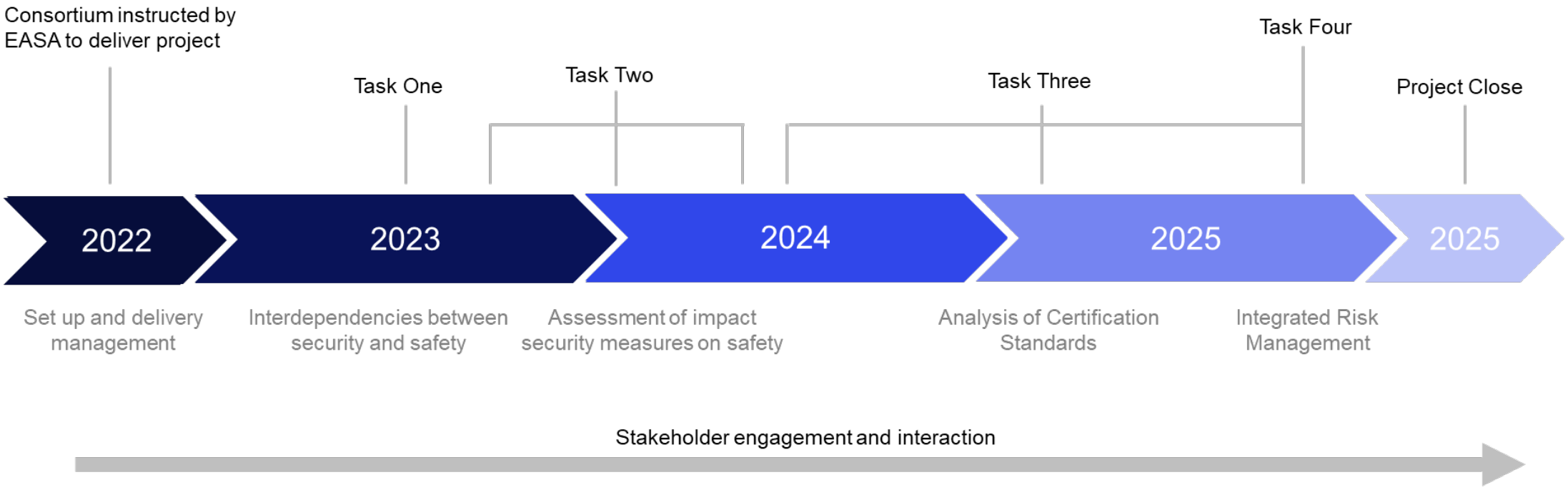
Project team

- The consulting and training arm of the UK CAA
- Kevin Sawyer - Technical Lead
- Sarah Fox - Project Manager
- Dorota Broom - Lead for Tasks 1 & 4
- Stuart Coates - Communications Lead

- Apave Group centre of excellence for risk and safety management solutions to the civil and military Aviation community
- Jacques Bernardi - Lead for Task 2
- Ivan Volpoët- Subject Matter Expert
- Lucas Lempereur de Saint Pierre – Subject Matter Expert
- Ivan Pastorelli – Subject Matter Expert

- Centre for Adaptive Security Research and Applications
- Sarah Merks – Lead for Task 3
- Adam Troczynski – Technical Expert

Delivery Schedule



Task 1

Impact Assessment Methodology

Task 1

Impact Assessment Methodology

Step 1 Defining the problem

- Security measure
- Purpose of the measure – relevant threat

Step 2 Defining the category

- Aircraft Safety
- UAS / RPAS
- Air Traffic Services
- Aerodrome / Airport Operations
- Airport Operations (related to screening)
- Air Operations
- Ground Operations
- Off – Airport Operations
- List of stakeholders to be involved, job roles to be affected and nature of safety – security interdependency

Step 3 Assess against set criteria

- List of general criteria like impact on safety procedures or aircraft systems
- List of specific indicators under each general criteria

Step 4 Rate impact

- Assessment and scoring of qualitative information
- Numerical vales -3 -2 -1 0 1 2 3

Step 5 Obtaining average value

Classification of impact
High Negative
Medium Negative
Low Negative
Neutral
Low positive
Medium positive
High Positive

Task 1.3
Methodology

- This task aims to develop an Impact Assessment methodology that serves the dual purpose of allowing regulators and regulated entities to evaluate the effects of security measures on safety and establish appropriate mitigating actions to counteract potential adverse consequences of such measures.
- Currently, Regulatory Impact Assessments (RIAs) are predominantly conducted by the entities proposing new legislation, such as EASA RIA, UK CAA IA, and other critical infrastructure agencies, following a formalised IA approach endorsed by the government.
- The context in which regulated entities undertake impact assessments diverges notably. As indicated by a survey distributed among aviation stakeholders, impact assessments are not as commonly practiced, often taking the form of risk assessments mandated within Safety Management Systems.

Impact Assessment

Proposed Criteria - Discussion

This methodology is in its early development stage

- please provide feedback

All feedback will be evaluated and included in the research report

Thank you !!

Questions & Answers Stakeholders validation and contribution

The floor is yours…

Task 2

Assessment of the impact of security measures on safety

Past activities

Delivery of the report D-2.1 « Identification of the main security threats and scenarios (physical threats and information security threats) having an impact on aircraft safety ».

Ongoing activities

- Definition of the safety and security interdependencies to be assessed
- Definition of the participants to the surveys (and interviews)
- Definition of the questionnaires and interviews

Future activities

- To conduct surveys and interviews
- To synthetise assessments including nature and magnitude of each interdependency
- To provision a gap analysis defining which elements and measures are currently missing to ensure better safety outcomes

Task 2

Assessment of the impact of security measures on safety

Methodology

D2.1
Main security threats having an impact on safety

D-1.1

	Cross in	Red	being the areas to be assessed					
		D2.1						
AREAS	D1.1	Identification of ain security threats and scenarios (physical threats and nformation security threats) havin						
	Safety Areas affected by security	Threat 1	Threat 1	Threat 3	Threat 4	Threat 5	Threat 6	Threat 7	Threat 8
	area 1	X							X
	area 2								
	area 3			X					
	area 4	X							
	area 5		X						
	area 6				X	X			
	area 7								
	area 8		X						
	area 9								
	area 10						X		
	area 11							X	
	area 12								

Interdependencies

Most critical

D2.2
Interim report

[1] Safety and security interdependencies to be assessed

[2] Participants to the surveys

[3] Questionnaires adapted to participants

D1.3
Methodology
Knowledge based assessment framework

D2.3
Final Report

Interviews
Surveys
Workshops

Analysis results
Final assessment

Gap analysis
Defining which elements and measures are Currently missing to ensure better safety outcomes

Task 2

Assessment of the impact of security measures on safety

Safety and security interdependencies to be assessed

- Impact of ground security measures on the overall safety of airports and air operations
- Impact of in flight security measures on the safety of flights
- Impact of information security threats and measures on safety
  - Regarding which areas of aviation are sufficiently/insufficiently protected against information security threats
  - Regarding current evolution of the aviation environment, for example, the evolution of traffic collision avoidance systems, the gradual replacement of ground-based navigation systems (VOR, DME, etc.) and communication systems (VHF,HF, etc.) by satellite-based communication and navigation systems.
  - Regarding foreseen changes in the organisation of the airspace, navigation and communication means for urban air transport.
- Impact of security measures for cargo, mail, baggages and dangerous goods
- Interdependencies between safety and security oversight mechanisms
- Preparedness level and training needs of specific personnel groups
  - Regarding how different job roles are prepared to handle and respond to potentially conflicting or inconsistent safety and security requirements
- Impact of security measures implemented for EU inbound flights on the safety of flights
- Impact of the management of security incidents on the safety of operations

Task 2

Assessment of the impact of security measures on safety

A re-cap of the areas of interdependencies (D-1.1)

Task 2

Assessment of the impact of security measures on safety

Participants to surveys and interviews

- Experts of ground security from airport and air operations
  - Screening
  - Passengers
  - Cargo, mail, baggages and dangerous goods
  - Impact of security measures implemented for EU inbound flights on the safety of flights
- Flight security experts (authorities, air operators)
- Cybersecurity experts in all aviation fields
  - Aircraft manufacturers,
  - Security systems manufacturers,
  - ATC systems
- National Authority specialists in security
  - Preparedness level and training needs of specific personnel groups
  - Management of security incidents on the safety of operations
  - Evolution of aviation environment (digitalisation)
  - RPAS consideration
  - Urban mobility
- Specialists of safety and security oversight mechanisms
- Air Traffic controller
- CAMO and MRO security (and cyber security) specialists

Task 2

Links between methodology and questions

- Having identified the relevant categories,and the relevant criteria to assess the impacts, we will create a set of questions to precisely assess the interactions between safety and security as well as their and their root causes.

Task 2

Different question types

Open-ended questions to deal with most important issues or subjects we may have overlooked

- Are there any specific security technologies that you believe have shown a particularly positive or negative impact on aviation safety? Which one ?
- What are the most significant security threats or vulnerabilities you see in commercial aviation today, and how can security measures be tailored to address these specific challenges

Questions based on a likert scale to obtain opinions on a wide range of subjects

- Please indicate your level of agreement with the following statements, using a scale from 1 to 4
  (1 being strongly disagree, 4 being strongly agree)
- Ground security measures at the aerodrome effectively safeguard against aligned access and security threats
- There have been instances where security measures negatively impacted air operations
- There have been instances where security measures positively impacted air operations

Task 2

Data analysis and expected output

- Data will be collected and analysed using three dedicated software
  - Mentimeter, Surveymonkey & QDA Miner

Expected output :

- Transforming unstructured textual data into structured data, by measuring the frequency and proximity of issues raised.
  - In the area of Air Traffic Control, 65% of the critical issues raised are caused by technologies considered as outdated.
  - 40% of avionics system compromission are based on very basic attacks on the supply chain.
  - 80% of the critical job roles are not trained to cyber threats.

Next Steps

Thank you all for attending

We are planning a further workshop in May next year to share more information with you of the tests performed.

If you wish to participate further in this project, share your thoughts with us or provide general feedback please contact a member of the Project Team.

End Presentation