



EASA
European Aviation Safety Agency

Data4Safety

The European Big Data programme for Aviation Safety

EASA Annual Safety Conference, 5 Nov 2020

Your safety is our mission.

An agency of the European Union



Data4Safety or D4S

(Explained in one paragraph)

D4S is a **voluntary partnership programme** that aims at **inferring safety intelligence**, i.e. identify safety risks. This is done by organising a **massive collection of safety data** and, equally important, **organising the analytical capacity** amongst all **European aviation safety partners**.

This will take the **collaborative work with the industry** at a scale never achieved before in Europe.

D4S is led by EASA, co-funded by the European Commission (DG MOVE) and powered by its members



Members of the Proof of Concept phase



D4S is co-funded by
the European Union



AESA, Airbus, Boeing, British Airways, DGAC France, EASA, Easyjet, ECA (European Cockpit Association), IAA (Irish Aviation Authority), Iberia, KLM, Lufthansa, Ryanair, Vueling
UK CAA was an original member but is not part of the programme anymore due to the BREXIT



Out there!



Objective Deliverables

Expert Knowledge



Flight Data



Traffic data

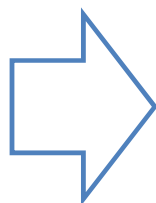


Data

Safety Reports



Weather,
and more...

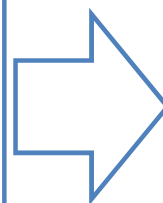


Collaborative Analysis
Platform



Aviation Experts and
Data Analysts

Big Data Platform



Know where to look

See it coming

Act!



Metrics



Directed Studies



Blind Benchmarking

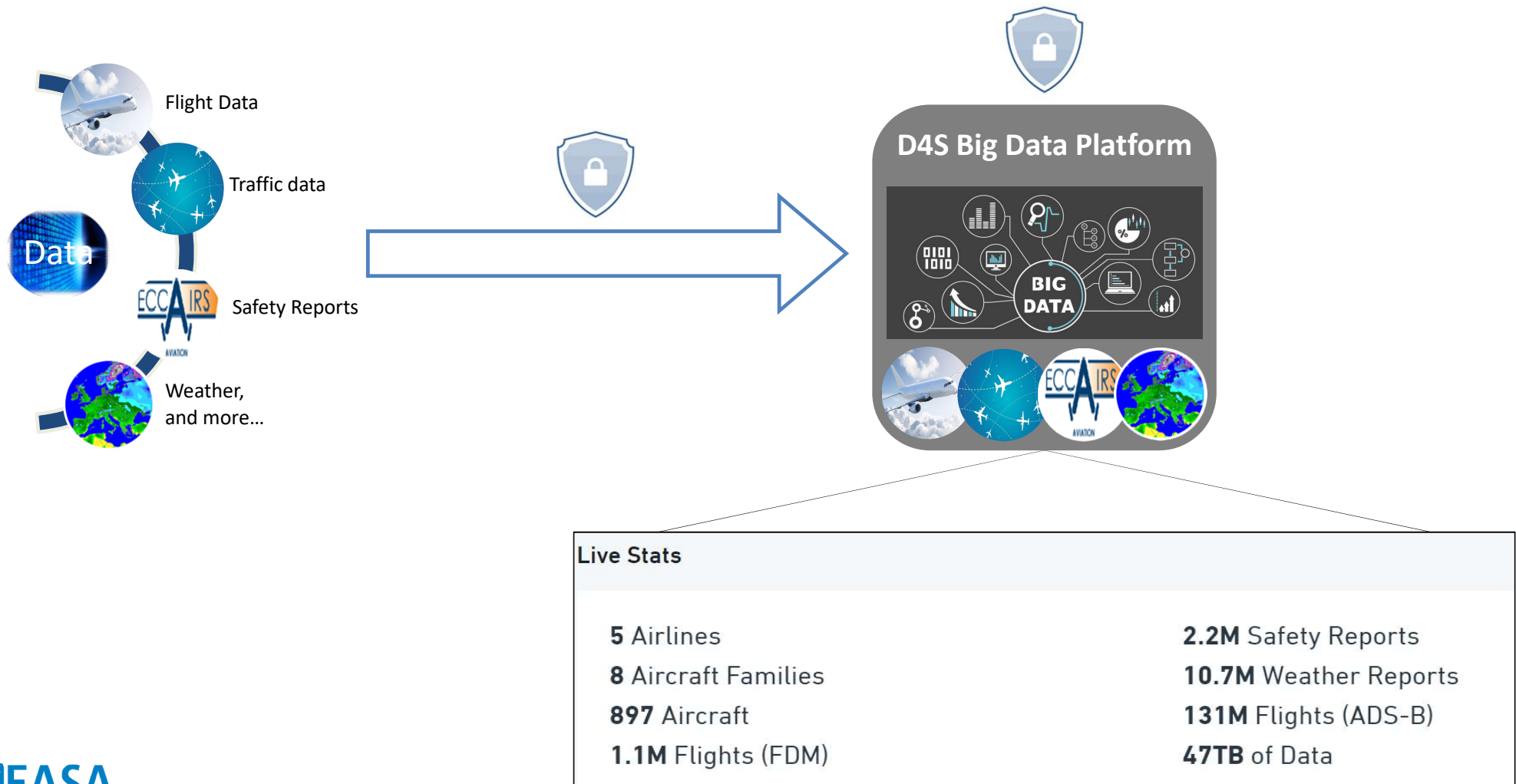


Vulnerability Discoveries



Data4Safety Proof of Concept: where do we stand?

Data4Safety Proof of Concept



Data4Safety Proof of Concept

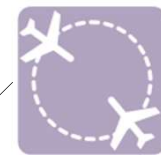
Collaborative Analysis Platform



Aviation Experts & Data Scientists



D4S Metrics (SPIs)



MAC



CFIT



LOC-I

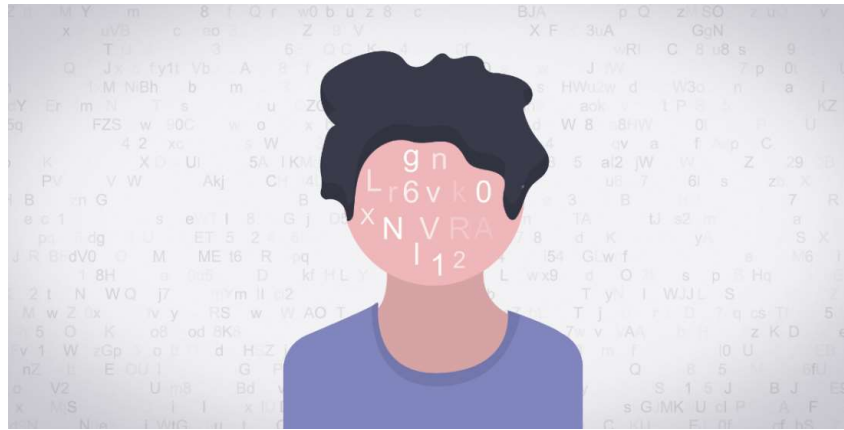


RS

Presentation of an example D4S Use Case..



MAC

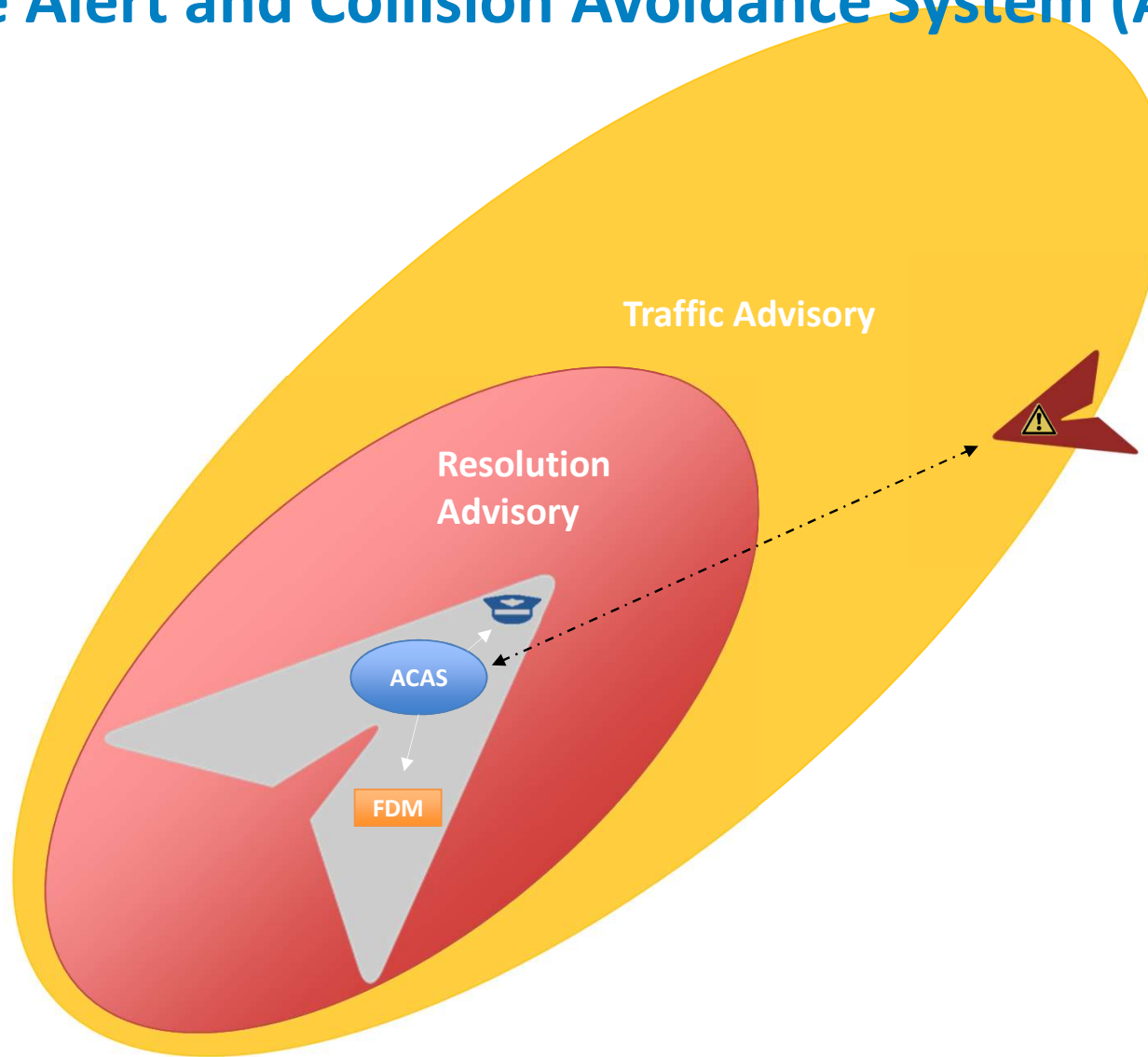


..based on an anonymized and limited size sample data set

Airborne Alert and Collision Avoidance System (ACAS)



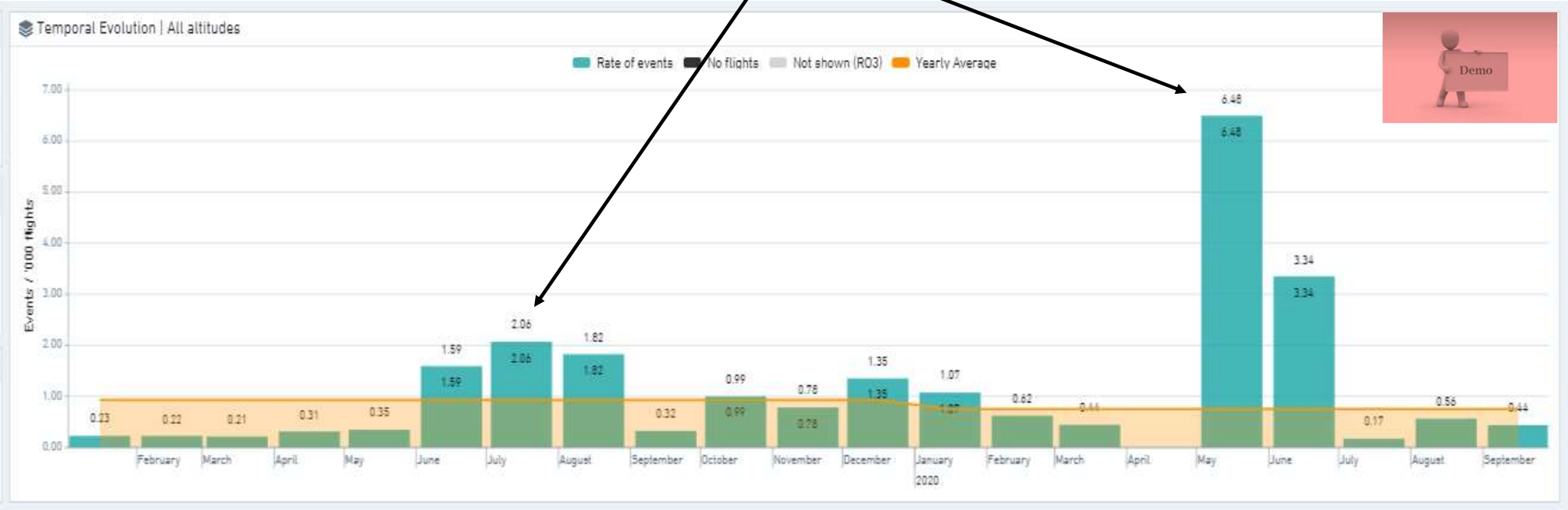
MAC



ACAS Metric



MAC

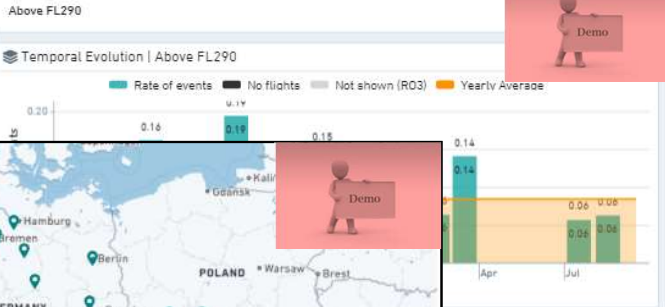
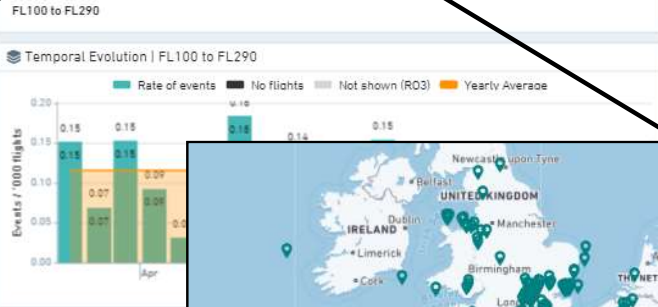
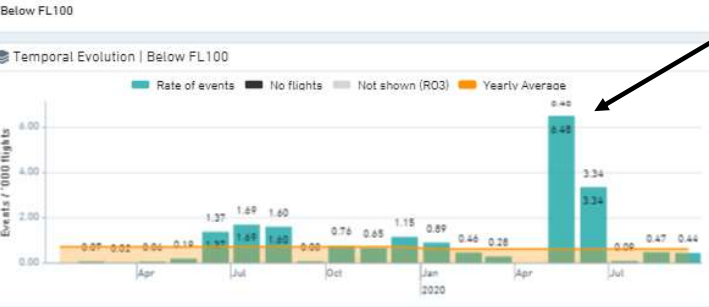


ACAS Metric



MAC

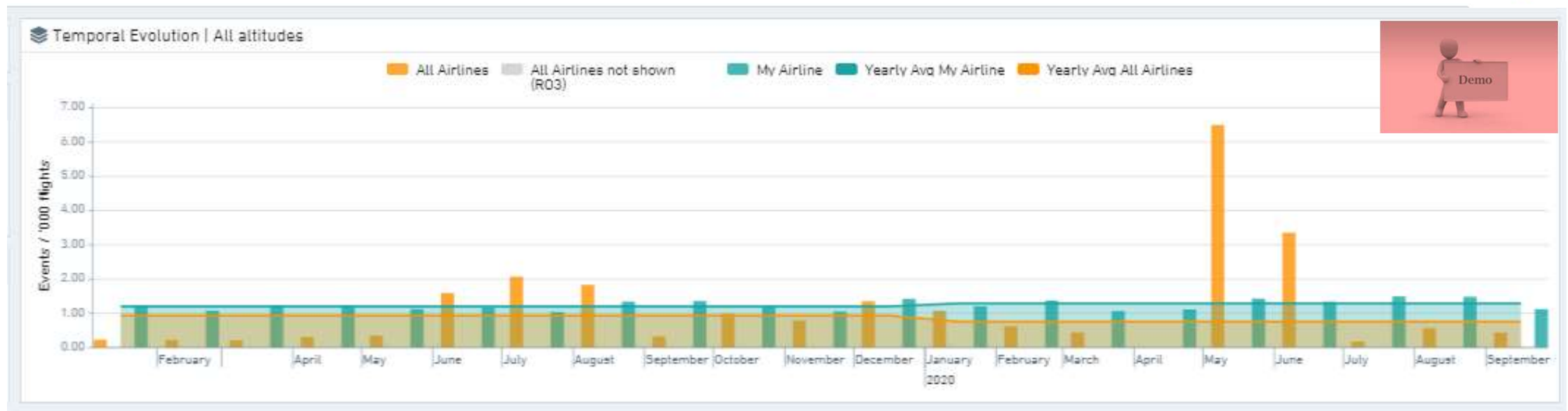
Where is this deviation coming from?



ACAS Metric



MAC



Benefits for members

Systemic benefits

Contribute to a programme that will support the European Safety Risk Management system

Contribute to data driven decision making in the fields of systemic safety issues.

Contribute to the streamlining of the global effort on data owners (contain and control of the requests for data for safety purposes).

Direct operational benefits

Access to new type of data to enrich the organisation's safety vision

Access to the D4S advanced algorithms to monitor the safety performance (complement to FDM)

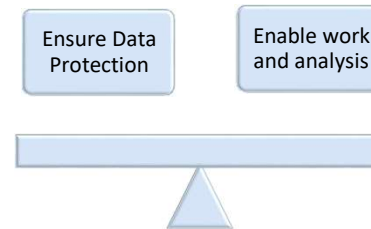
Blind benchmarking

Let's now hear the Data4Safety members!

Data Protection : the most critical foundation of the programme

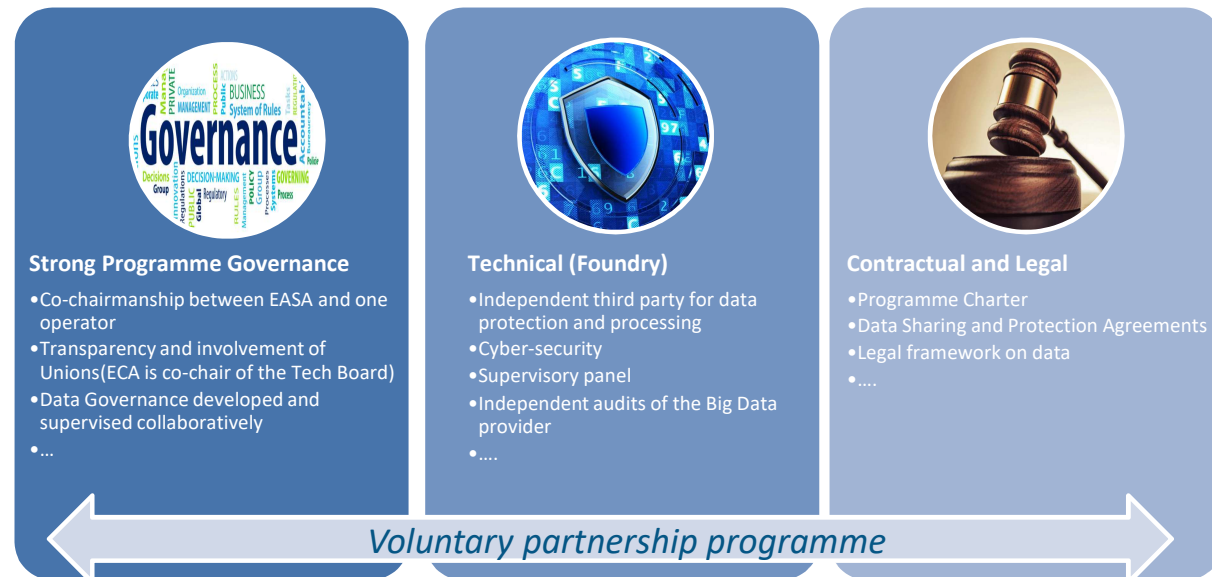
- As a data sharing and analysing programme, Data4Safety 's very existence is conditional to a TRUST environment where data protection is unquestioned.

- The challenge is to find the right balance



- Trust Environment is Not a single magical solution but a set of fundamental elements

- Example of *Data4Safety*:



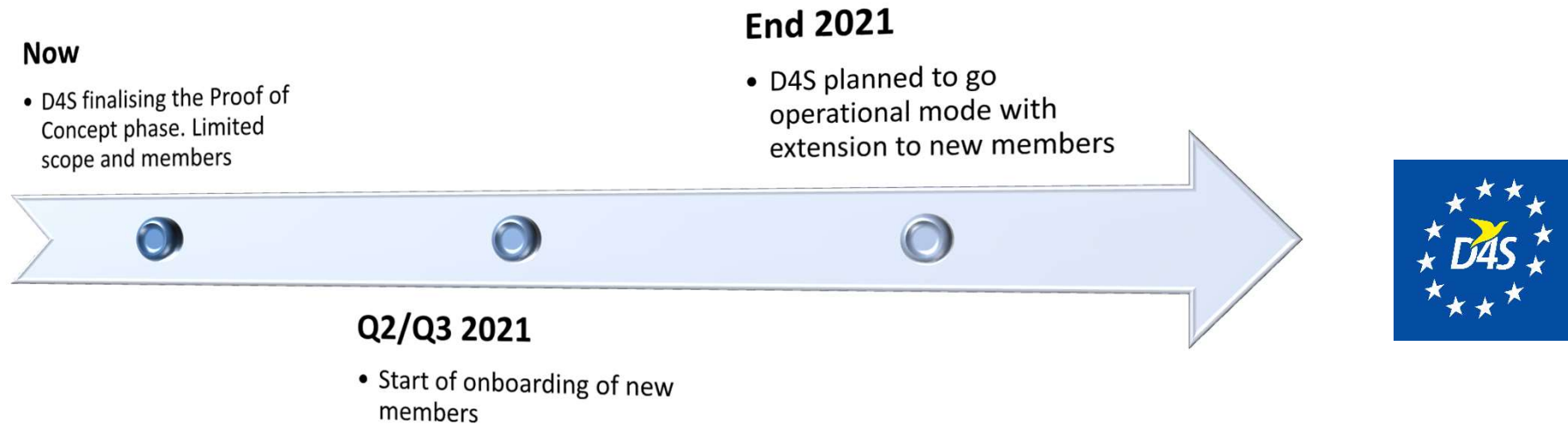
A voluntary and inclusive programme

All European aviation stakeholders



Linked by a charter

Main milestones to the operational phase



D4S presentation video: : <https://www.youtube.com/watch?v=uSfnI4GYX9I>



EASA
European Aviation Safety Agency

Thank you for your attention

Your safety is our mission.

An agency of the European Union

