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# ASMT v5

Larnaca, 21<sup>st</sup> May 2015

ES2 WS01-15 – INTER FAB SAFETY WORKSHOP

“Safety Tools to Support SMS – Implementation at regional level

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# ASMT 4 – Current deployed version



ASMT Manager interface showing the LIVE INVENTORY and STCA OCCURRENCE 3637. The inventory table lists aircraft events with columns for Type, Aircraft, Sector, Date, Quality, Relevance, Risk, and Min FL. The STCA map displays flight paths and collision events in the North Atlantic region.

ASMT Manager interface showing the SMI correlation between risk of collision and flight band, and a Heat maps visualization of collision risk across Europe.



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# From ASMT 4 to ASMT 5



**Released version end of 2017**

**Deployment and operational validation**

**Stable Version 5**

**Beta version**

2016

2017



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# Why a new version is needed?



- **Improve suitability and usability**
- **Collect more types of safety events**
- **Integration with other SAF Tools and other information**



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# Which are the sources of input?



- **Feedback from users**
- **Current and forthcoming European regulation**
- **Internal review at EUROCONTROL level**
- **Vision: looking forward to make ASMT a**

**SAFETY DATA INTELLIGENCE TOOL  
FOR THE BENEFIT OF OPERATIONS**



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# Improve suitability and usability



- **Suitability > Usefulness of the tool**
  - Normalisation of events (e.g. by traffic load)
  - Customise the relevance categorization
  - Semi-automated production of documents with different statistical analyses and level of details
- **Usability > Ease of use**
  - **Speak the language of the user** (proper ATM terminology!)
  - **Improve the intuitiveness** of the user interface
  - Place inside the software **more contextual help** and **videos**
  - **Support better the filtering of air traffic** (e.g. VFR vs. VFR, military vs. military etc.)



# Collect more types of safety events



- Runway Incursions
- MSAW (from the ground-based SNET)
- Go-around
- Final approach overshoots (e.g. parallel runways)
- ...?
- **Rationale:**
  - Meet regulation
  - Meet users' needs



# Integration with other SAF Tools: ASMT>eTOKAI



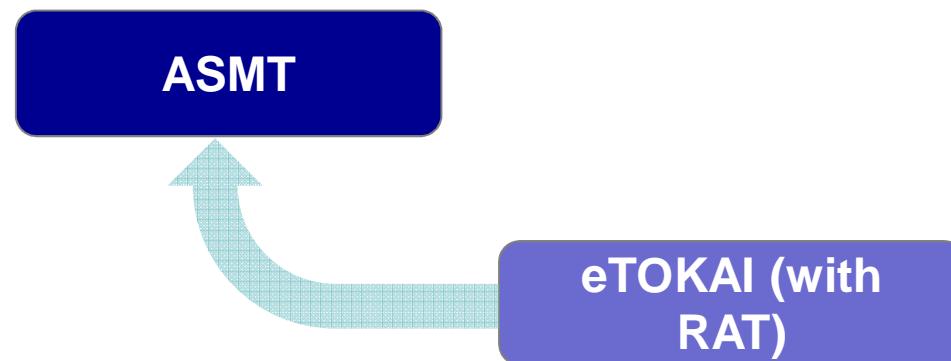
The diagram illustrates the data flow from ASMT to eTOKAI (with RAT). A dark blue rounded rectangle labeled 'ASMT' is positioned at the top left. A teal curved arrow points from 'ASMT' down and to the right to a light blue rounded rectangle labeled 'eTOKAI (with RAT)'. A bulleted list of data items follows:

- **Risk of Collision**
- **TCAS triggering**
- **Ground safety nets triggering**
- General information (Date, Time, LAT&LONG, safety nets triggered...)
- Aircraft information (callsign, type of traffic, flight rules, departure, destination...)
- Altitude / FL (actual, cleared, vertical profile...)
- Airspace type and sector
- Information related to conflicting pair of a/c in case of SMI (rate of closure, horizontal and vertical geometry of encounter, minimum separation achieved...)



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# Integration with other SAF Tools: eTOKAI>ASMT



- Expert human judgement (i.e. analysis done by safety officers looking at the events)
  - Explanatory factors
  - Human judgement
- Other sources of information used during the analysis (e.g. data on weather conditions, report on equipment status etc.)



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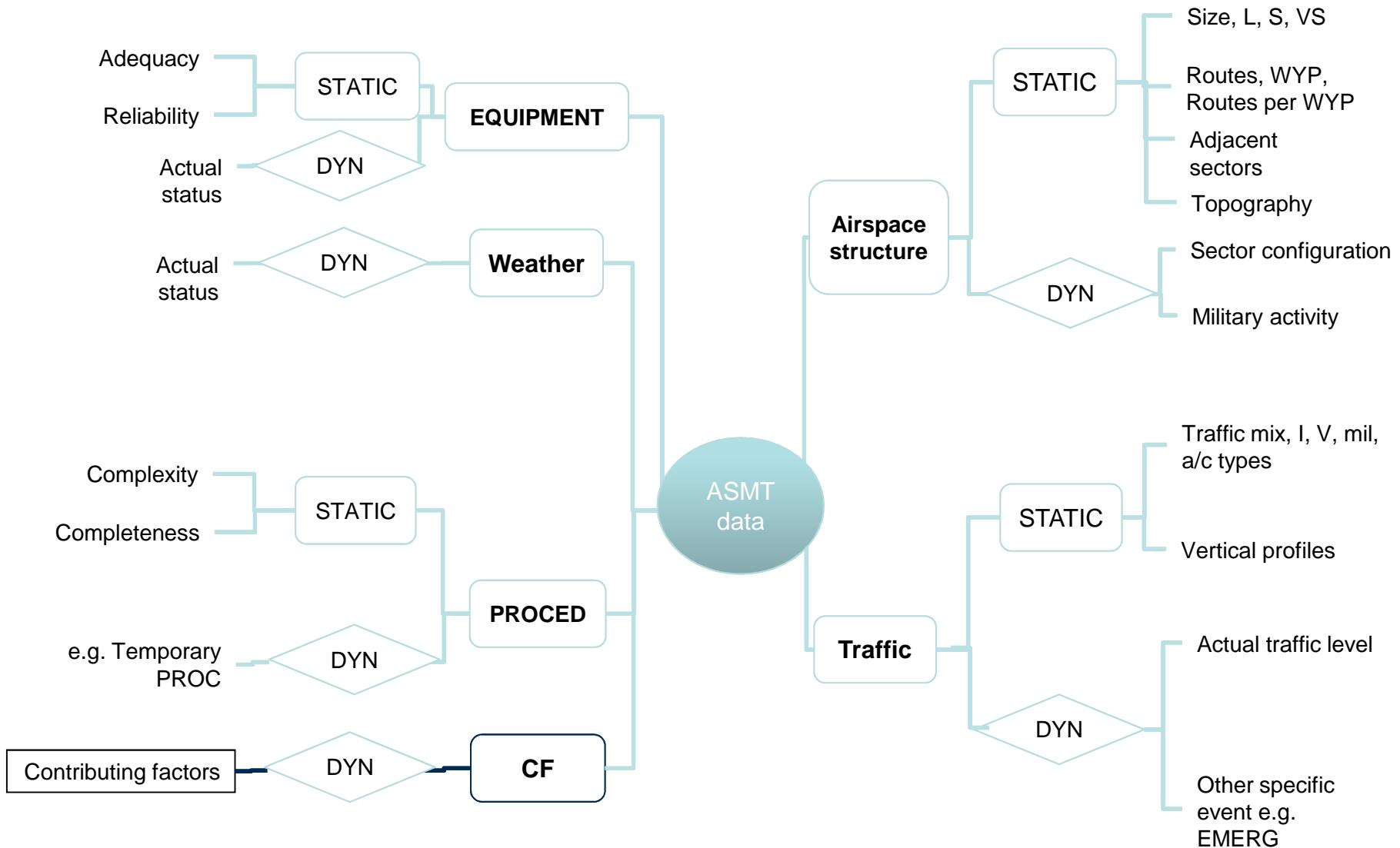
# Integration with other sources of data



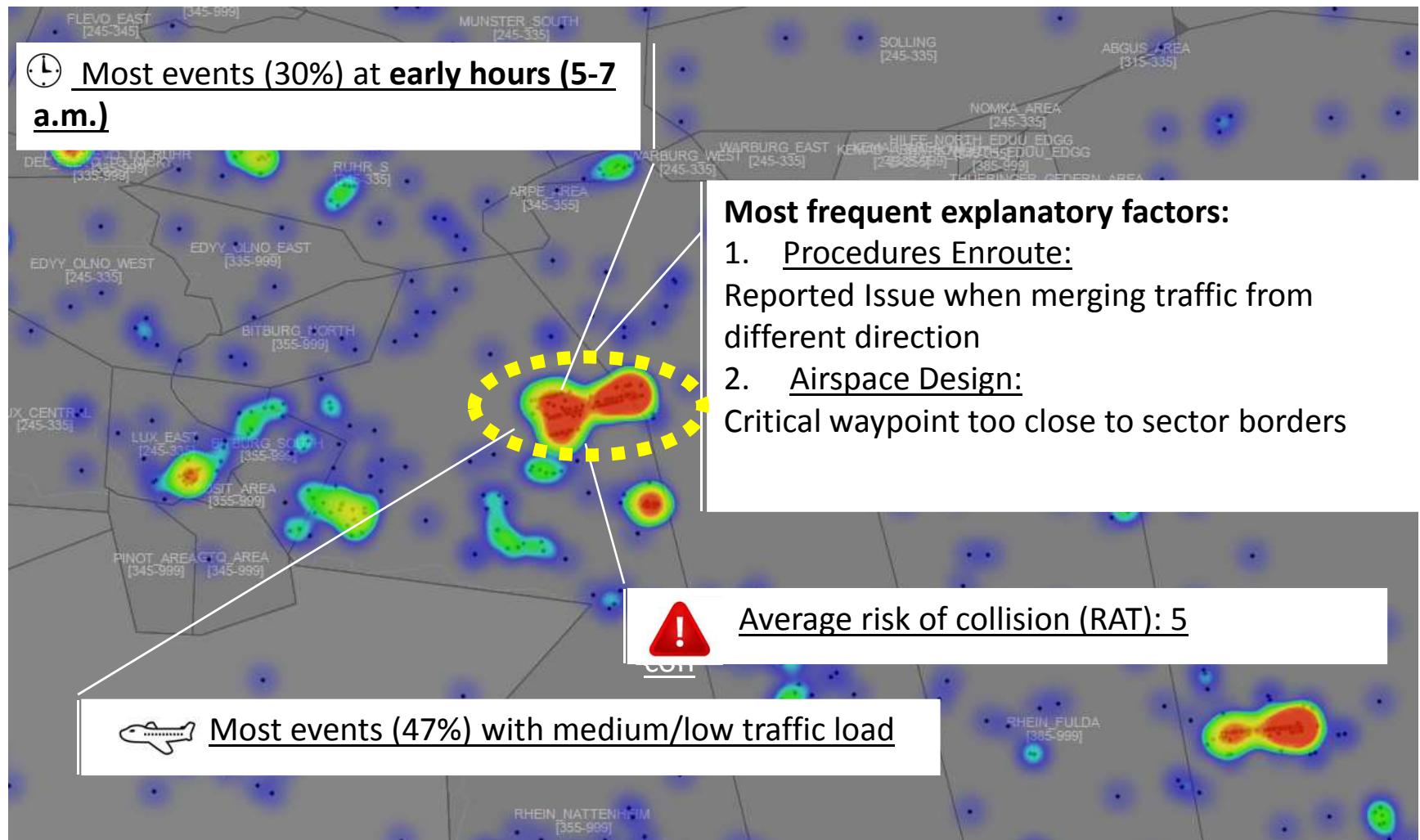
- **Network metrics**
  - Type of sector
  - Dimensions
  - Complexity of waypoints (e.g. number of airways crossing)
  - ...
- **Traffic metrics**
  - Traffic load
  - Complexity with regard to vertical movements
  - Delays
  - ...



# Possible mindmap



# Envisioning future analysis with ASMT



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## Discussion



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