Enabling Information Sharing thru Common Services

Digital Briefing Concepts

Presented To: Applying Common Servics

Presented By: Eddy Porosnicu, Eurocontrol

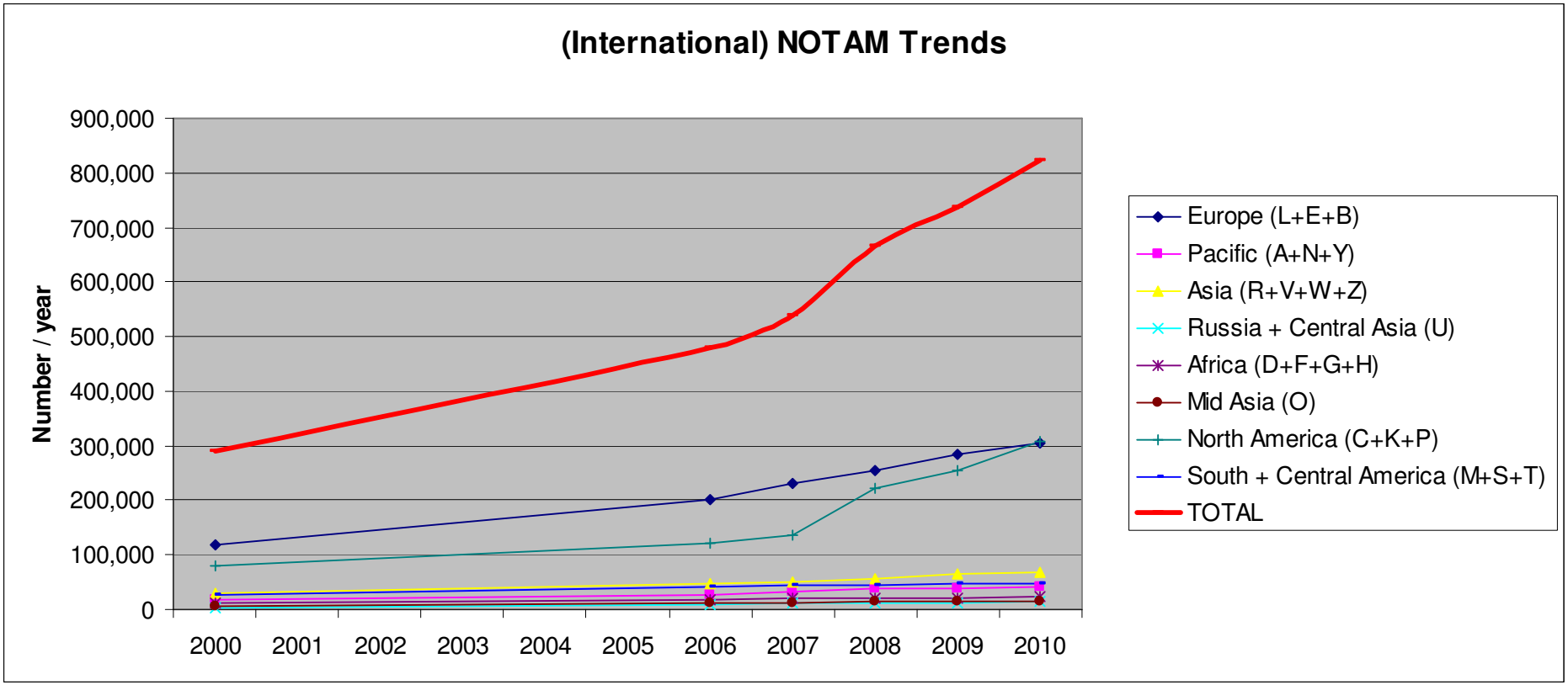
Date: 31 August 2011

EXIT
EXIT

Current Briefing Concept

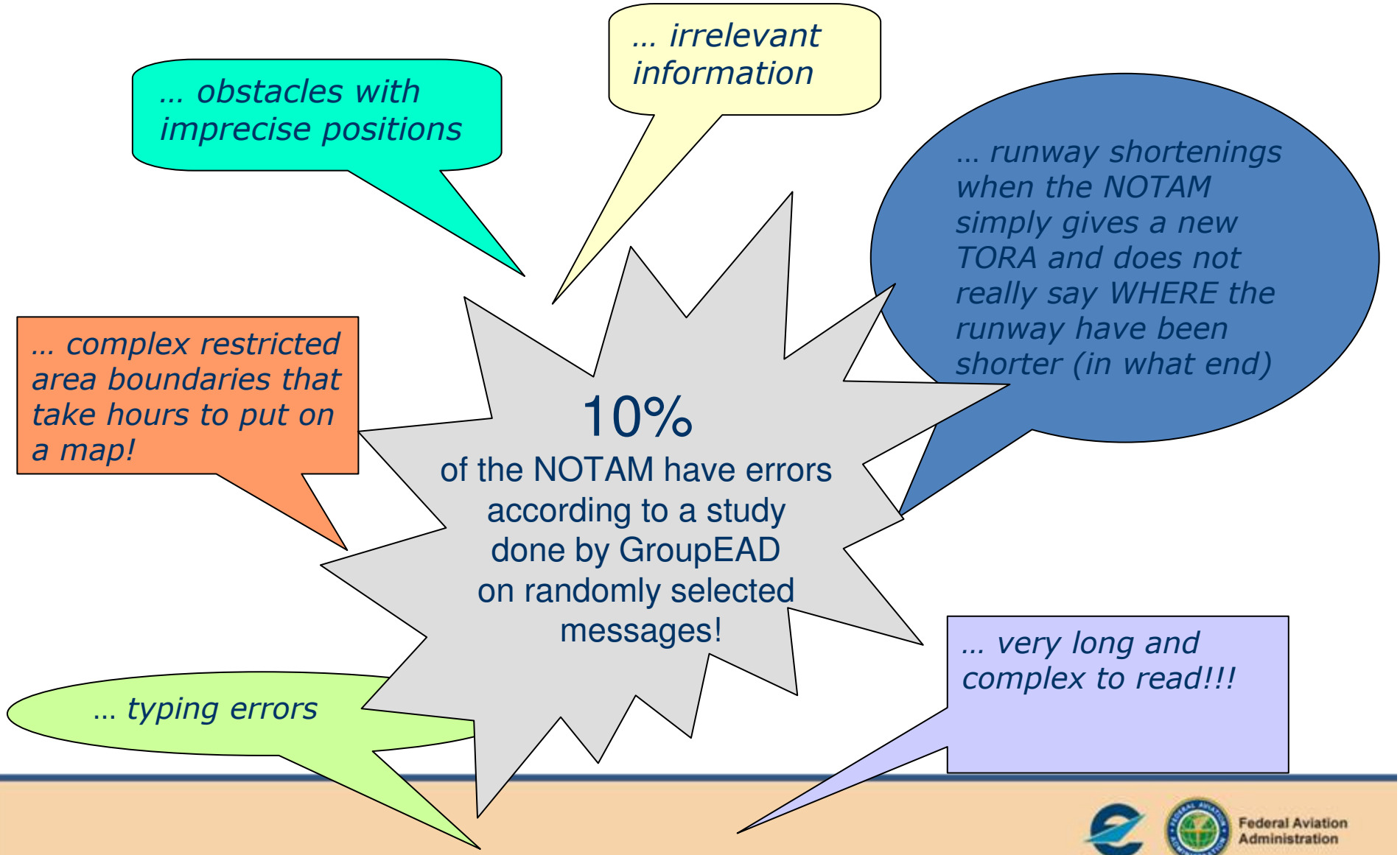
- NOTAM
  - as means of announcing latest sudden changes
- Briefing
  - as means of communicating NOTAM to the pilot
    - Pre-Flight Information Bulletin (PIB) = List of NOTAM
    - Verbal
    - On-line briefing – initial attempts, limited by NOTAM text capabilities

Why long PIB



Source: European AIS Database (EAD)

NOTAM problems



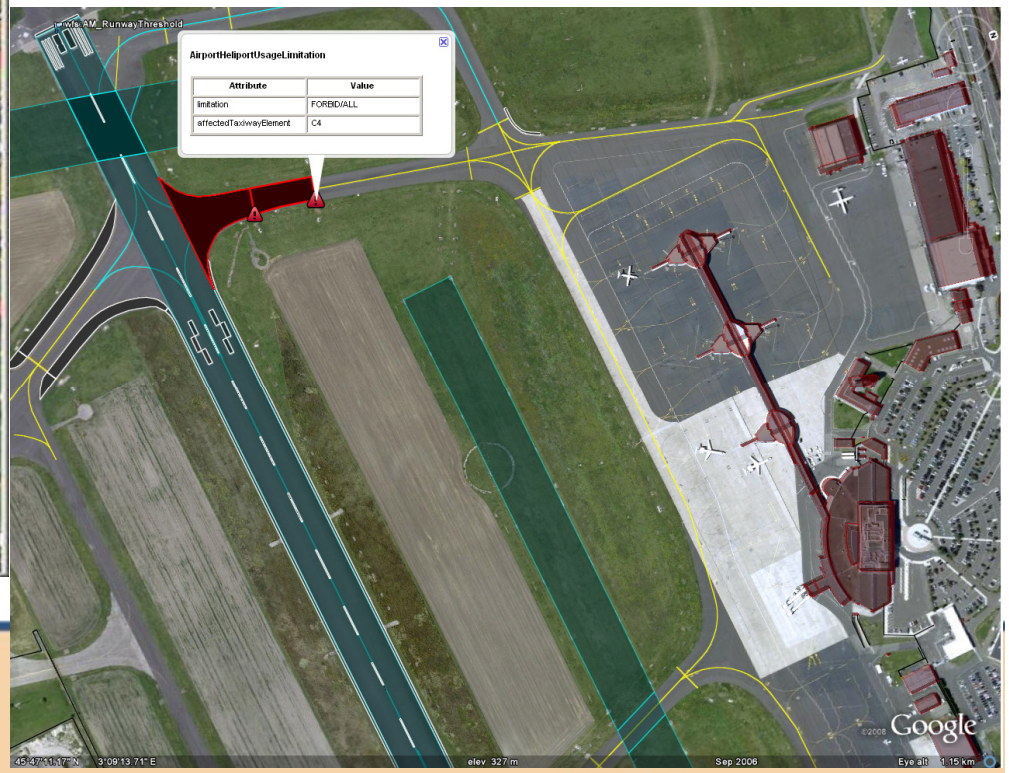
Solution

```
<event:Event xsi:schemaLocation="http://www.aixm.aero/schema/5.0/event/0.1 http://www.ai
http://www.aixm.aero/schema/5.0/extensions/eur/fua/FUA_Features.xsd" gml:id="Event-0003">
   <event:name>ESSA runways closed</event:name>
 - <event:description>
      RWY 08/26, 01L/19R, 01R/19L closed temporarily due to snow contamination and bad we
   </event:description>
   <event:type>TEMPORARY</event:type>
 - <event:hasMember>
    - <aixm:AirportHeliportUsage gml:id="VID2678448">
         <gml:identifier codeSpace="http://www.eurocontrol.int/xnotam
       - <aixm:timeSlice>
          - <aixm:AirportHeliportUsageTimeSlice gml:id="
             - <gml:validTime>
                - <gml:TimeInstant gml:id="VID0
                      <gml:timePosition>200
                   </gml:TimeInstant>
                </gml:validTime>
                <aixm:interpr
                <aixm:
                <aixm:
             - <aixm:
                - <gml:TimePeriod gml:id="
                      <gml:beginPosition
                      <gml:endPo
                   </gml:TimePe
                </aixm:featureL
             - <aixm:limitation>
                - <aixm:AirportHeliportUsageLimitation>
                      <aixm:type>FORBID</aixm:type>
                   - <aixm:condition>
                      - <aixm:AirportHeliportUsageCondition>
                         - <aixm:flight>
                            - <aixm:FlightCharacteristic>
                                  <aixm:rule>ALL</aixm:rule>
                               </aixm:FlightCharacteristic>
                            </aixm:flight>
                         - <aixm:operation>
                            - <aixm:AirportHeliportOperation>
                                  <aixm:type>TAKEOFF</aixm:type>
                               </aixm:AirportHeliportOperation>
```

Digital NOTAM – improved data quality

Digital data:

- *clearer / more precise than free text*
- *enables validation*
  - *automatic by the system*
  - *visually by the operator*



Digital NOTAM – improved briefing

PIB -

File Edit View Favorites Tools Help

Back Search Favorites Media

Address 3-12-04%2022:34&ifr=true&vfr=true&operational=false&featu

PRE-FLIGHT INFORMATION BULLETIN

FROM: Tue Jun 10 22:34:00 CEST 2003 TO: Thu Dec 04 22:34:00 CET 2003

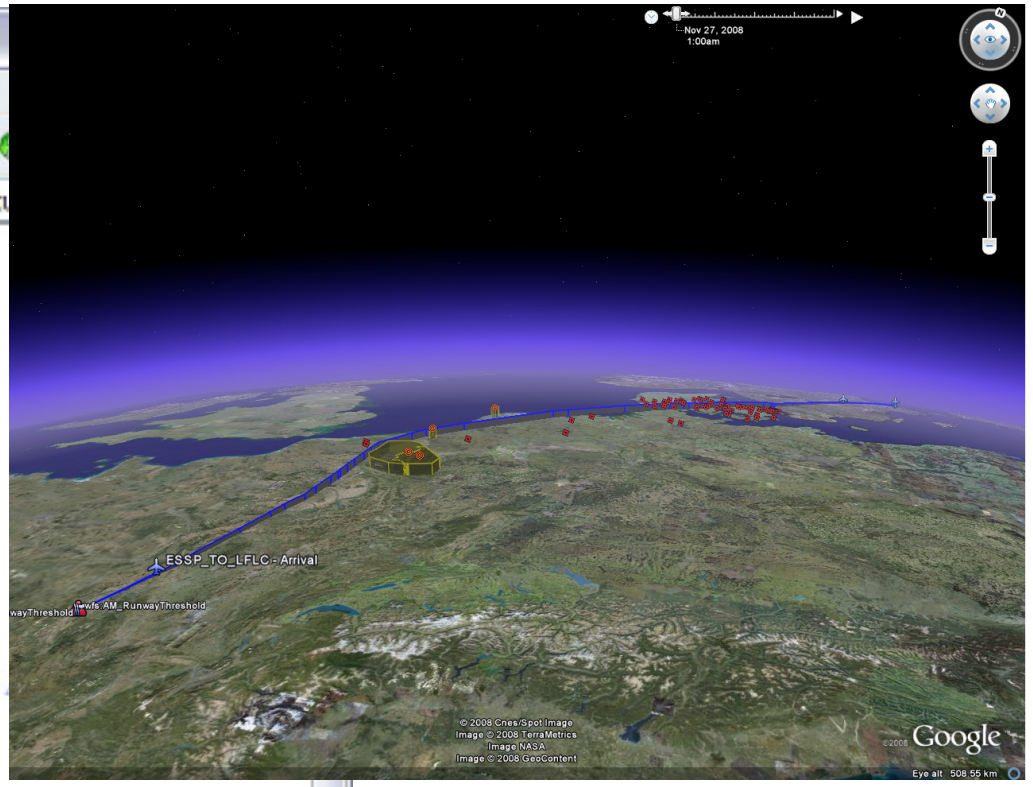
FLIGHT RULES: VFR IFR

PURPOSE: ALL

SELECTED FEATURES: AERODROME/HELIPORT APRON DME PARKING
NDB RUNWAY TAXIWAY VOR

- AERODROME EHAM
  FROM 2003-07-02T13:00:00 TO 2003-10-02T13:00:00
  BIRD CONCENTRATION
  - RUNWAY 01L/19R
    - RUNWAY DIRECTION 01L
      FROM 2003-06-09T00:25:00 TO 2003-06-09T12:00:00 EST
      TRANSMISSIOMETER OUT OF SERVICE
  - TAXIWAY W7
    FROM 2003-06-15T23:18:00 TO 2003-06-17T03:00:00
    TWY OUT OF SERVICE ACFT HEAVIER THAN 19000 KGS

- NDB CH 521314.22N 0043327.36E



Positive impact on safety

Current PIB problems

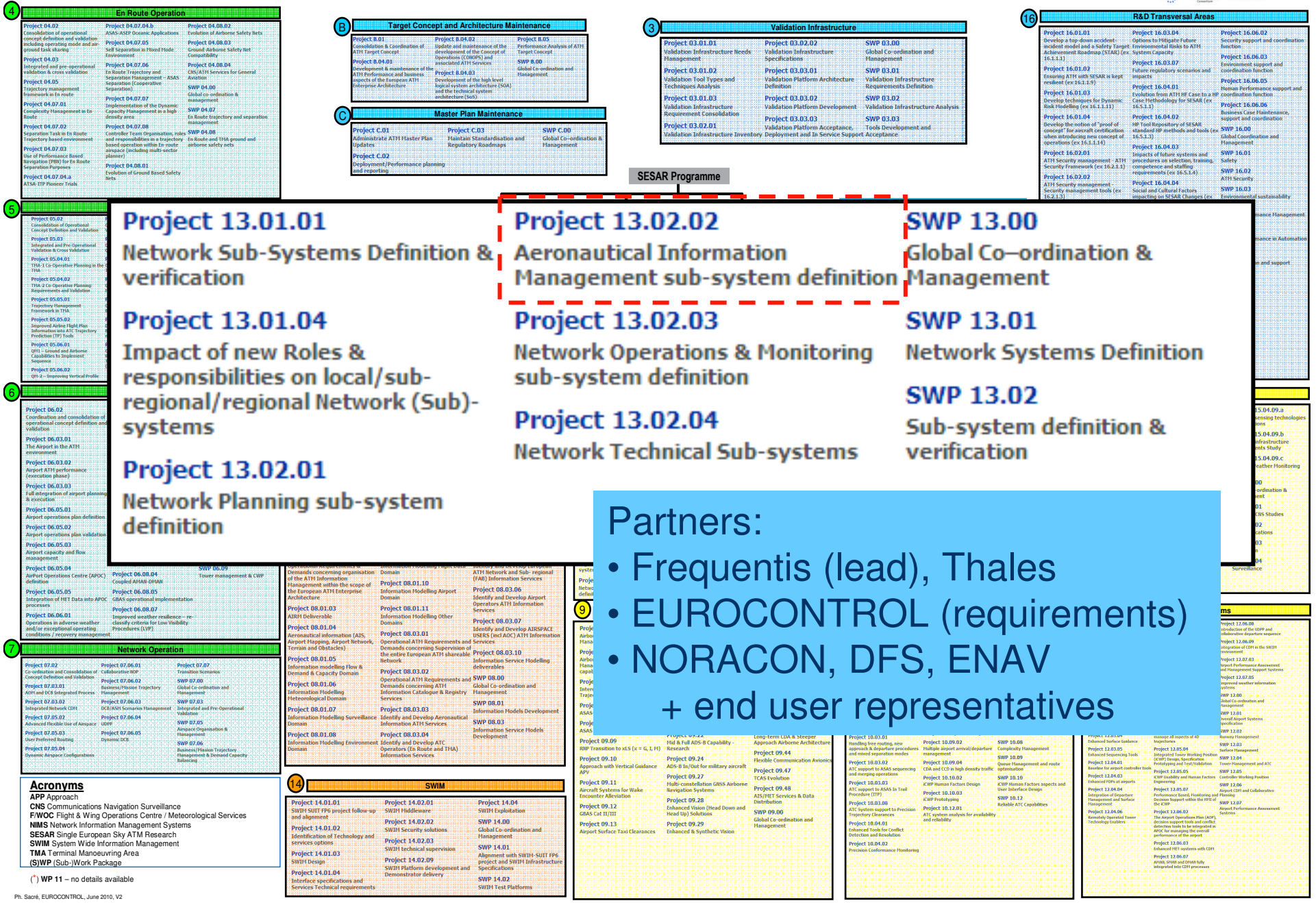
- too long
- cumbersome to build
- NOTAM not prioritized
- irrelevant NOTAM
- format difficult to read
  - ALL CAPS
  - abbrv.
  - pour Inglesh
- no grouping per feature
- missing data in case of significant re-routing or due to inappropriate selection criteria

Source: HindSight - Aviation Safety Magazine for Air Traffic Controllers - Skybrary

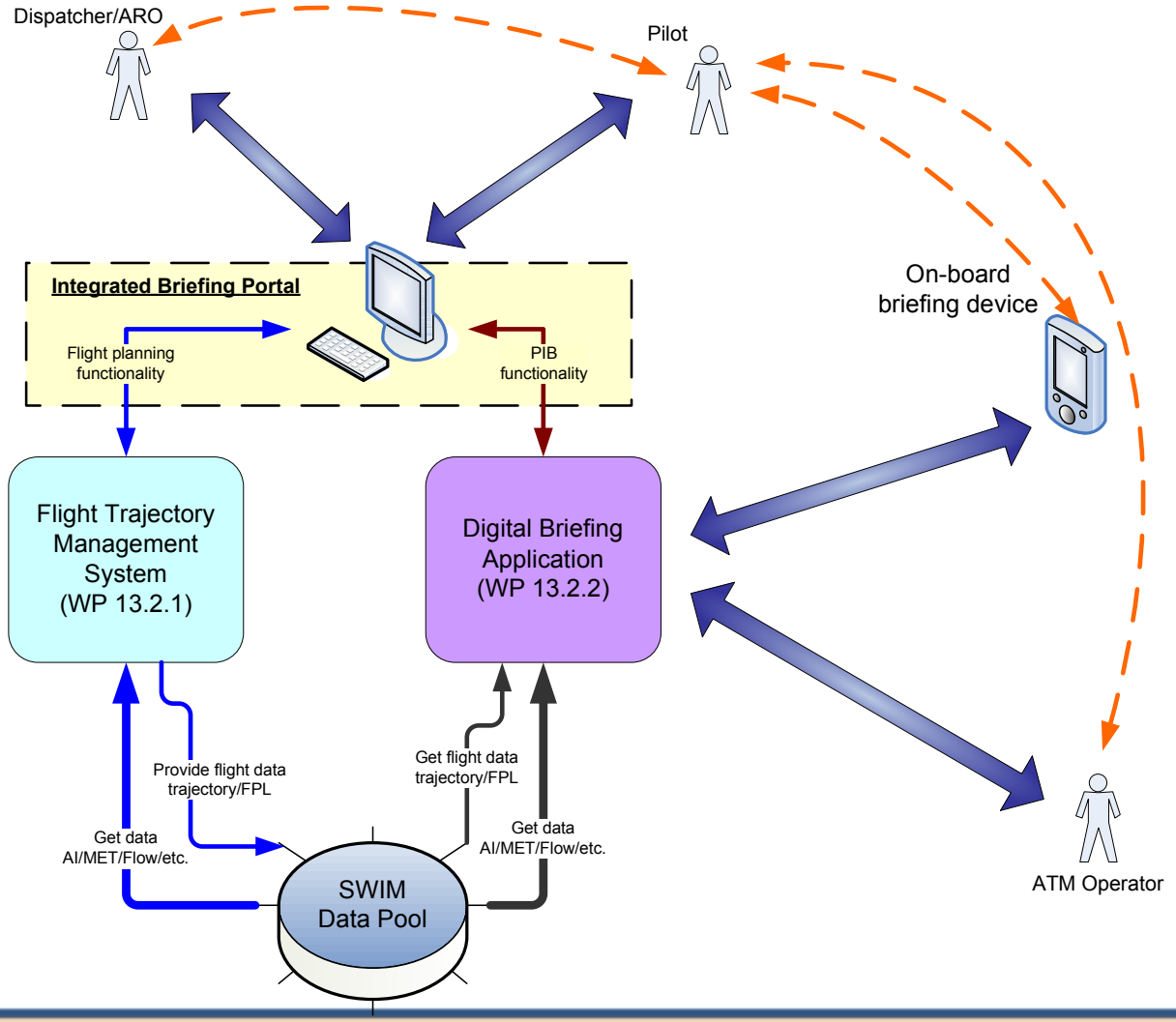
Expectations

- Merging aeronautical, MET, flight information
- Only the relevant information
  … but also in case of re-routing
- Easy to understand
  – Graphical (where appropriate)
  – Organized per phase of flight
  – Critical information highlighted
- Interactive
  – Available for EFB

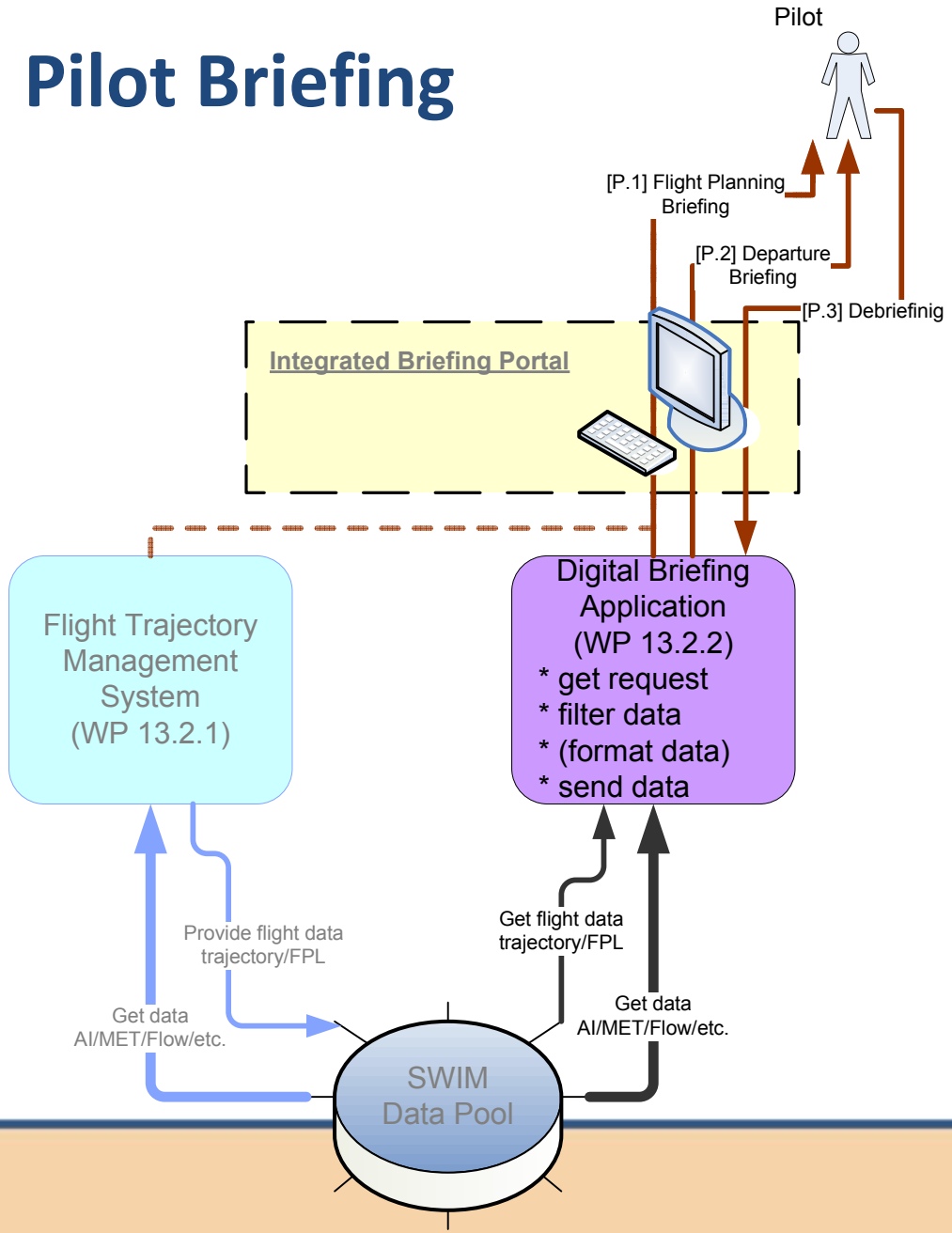
SESAR Work Breakdown Structure



Digital Briefing System

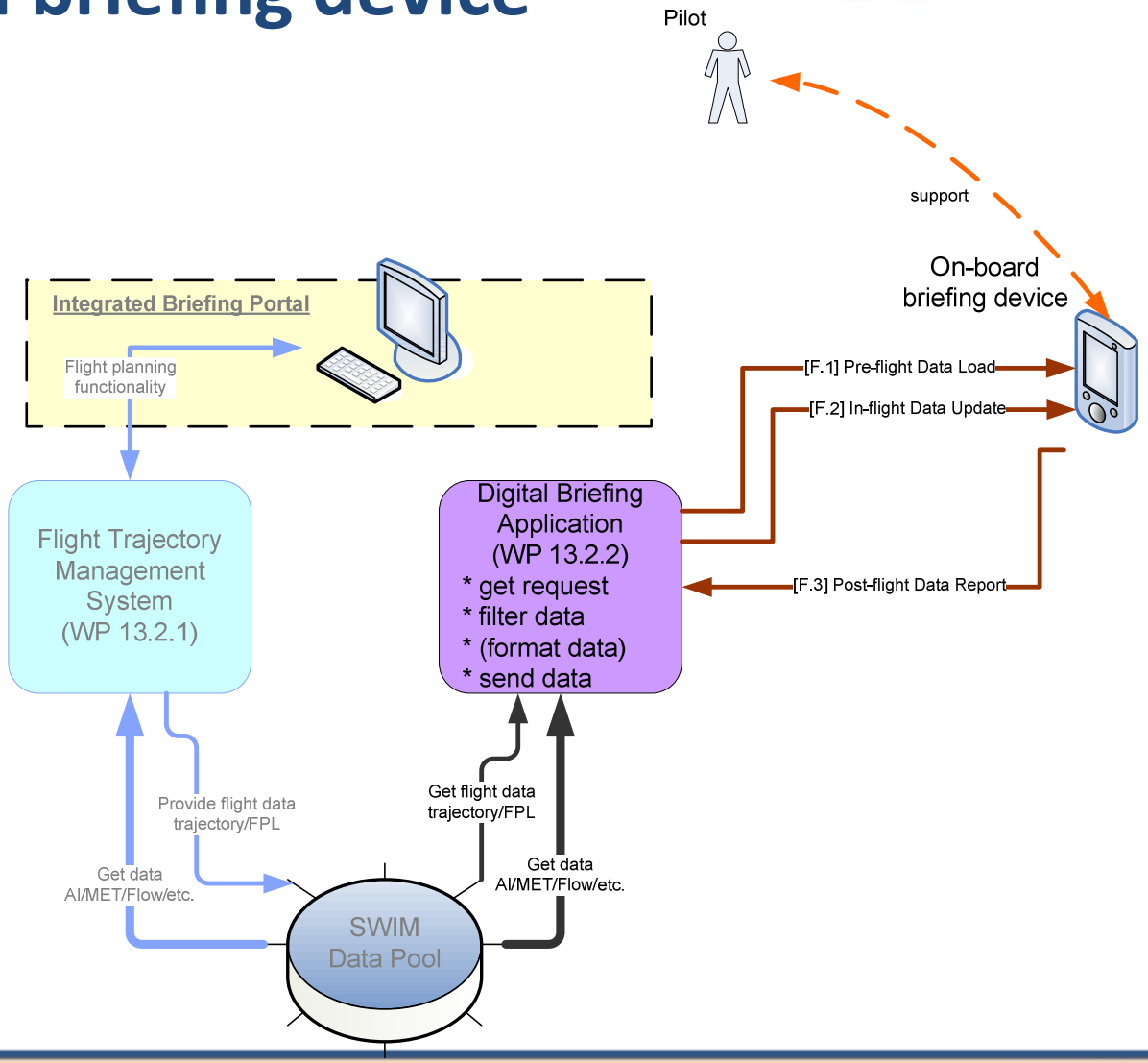


Pilot Briefing

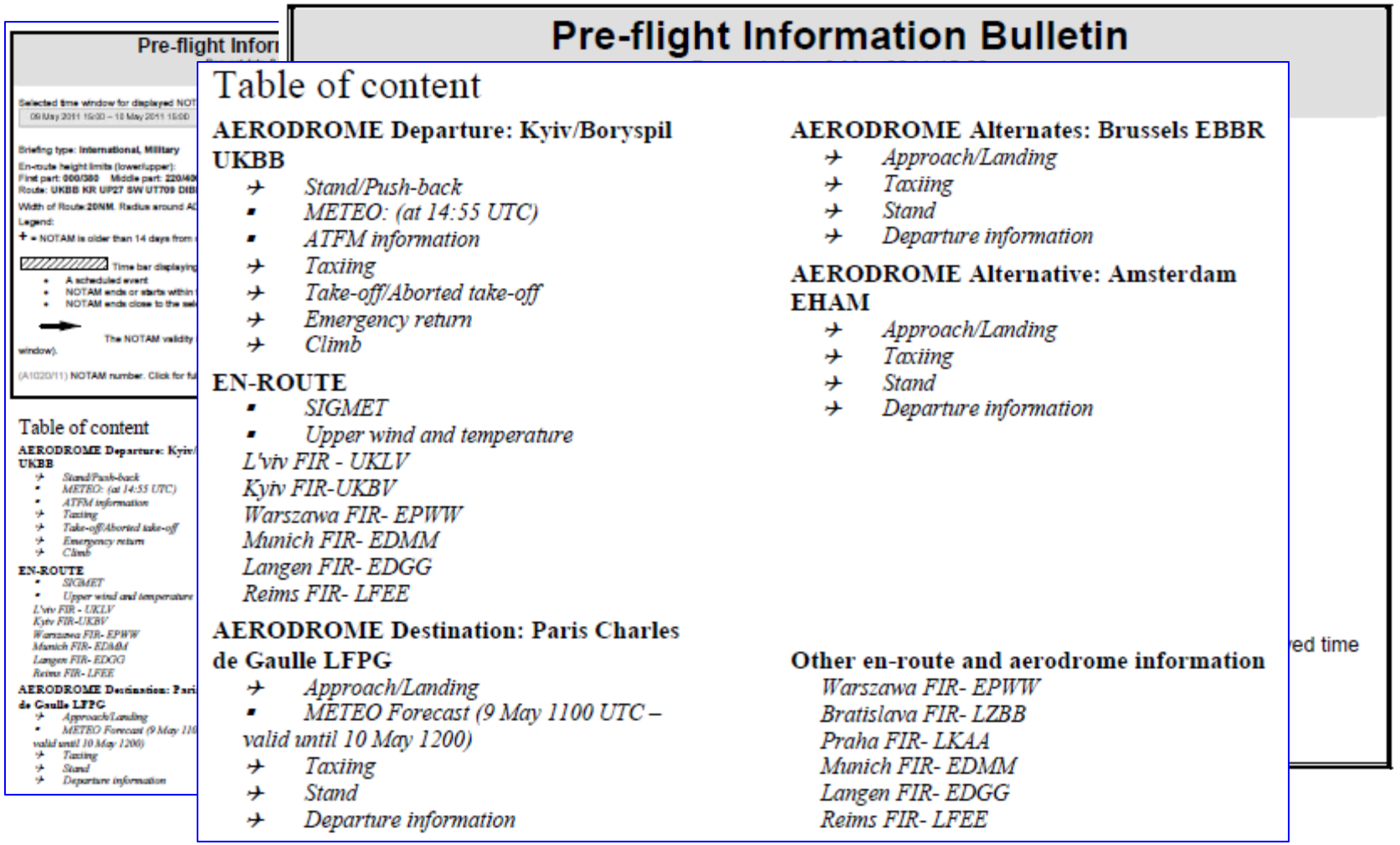


- ePIB
- Interactive Briefing

On-board briefing device



SESAR ePIB Prototype



Pre-flight Information Bulletin

Table of content

AERODROME Departure: Kyiv/Boryspil UKBB
- *Stand/Push-back*
- *METEO: (at 14:55 UTC)*
- *ATFM information*
- *Taxiing*
- *Take-off/Aborted take-off*
- *Emergency return*
- *Climb*

EN-ROUTE
- *SIGMET*
- *Upper wind and temperature*

L'viv FIR - UKLV
Kyiv FIR-UKBV
Warszawa FIR- EPWW
Munich FIR- EDMM
Langen FIR- EDGG
Reims FIR- LFEE

AERODROME Destination: Paris Charles de Gaulle LFPG
- *Approach/Landing*
- *METEO Forecast (9 May 1100 UTC – valid until 10 May 1200)*
- *Taxiing*
- *Stand*
- *Departure information*

AERODROME Alternates: Brussels EBBR
- *Approach/Landing*
- *Taxiing*
- *Stand*
- *Departure information*

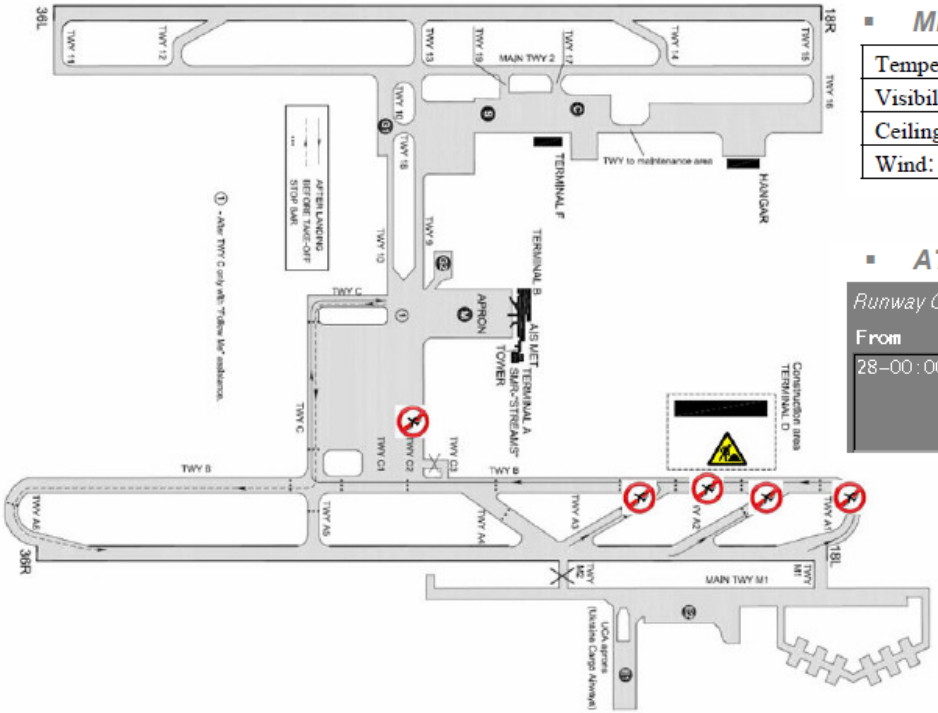
AERODROME Alternative: Amsterdam EHAM
- *Approach/Landing*
- *Taxiing*
- *Stand*
- *Departure information*

Other en-route and aerodrome information

Warszawa FIR- EPWW
Bratislava FIR- LZBB
Praha FIR- LKAA
Munich FIR- EDMM
Langen FIR- EDGG
Reims FIR- LFEE

ePIB Prototype

- *Taxiing*



- *METEO: (at 14:55 UTC)*

Temperature: **30° C**	Humidity: **46%**	Pressure: **1015** hPA
Visibility: **10 KM or more**		
Ceiling: **no clouds below 1500 m** and **no cumulonimbus**		
Wind: **09** kt from **southeast**, varying between **east** and **south/southeast**		

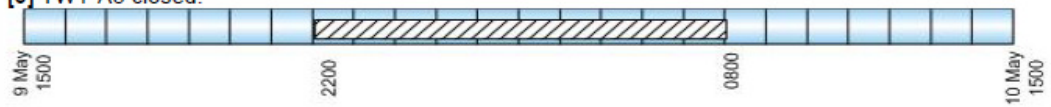
- *ATFM information*

Runway Configuration for Aerodrome UKBB between 28-00:00 and 29-00:00. Last Updated: 28-06:14

From	Until	Source	Dep.	Taxi	Tis	Trs	Source	Arr.	Taxi
28-00:00	29-00:00	Env_Def	18	15	10	05	Env_Def	18	15

[2] + TWY A1 and TWY A2 closed.
(A0261/11)

[3] TWY A3 closed.

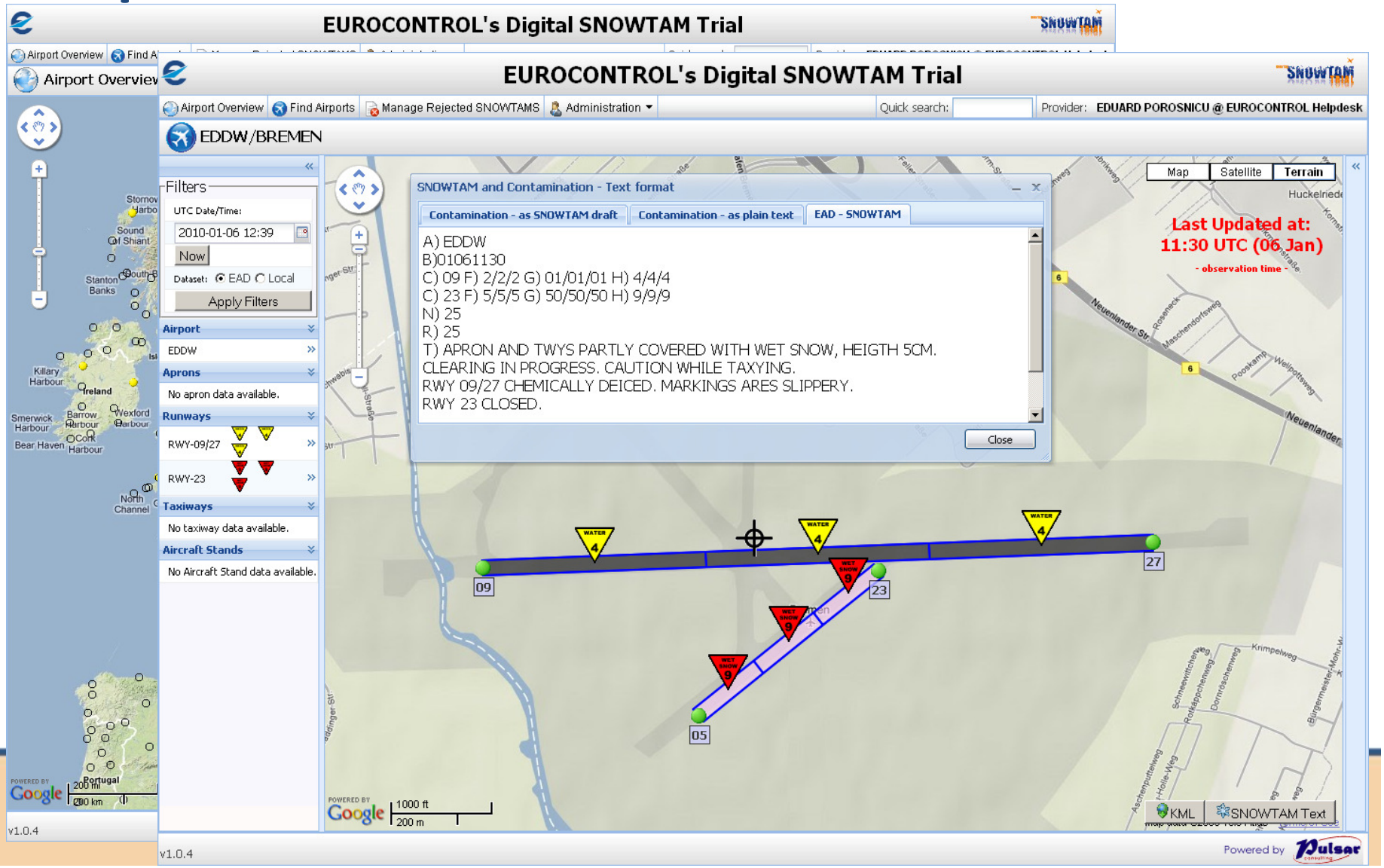


(A0308/11)

[4] + Segment TWY C2 closed FM TWY B to abeam stand 22. REF AIP UKBB AD 2.24.2-1.
(A0301/11)

[5] + Segment TWY B btn TWY A2 and TWY A3 closed due to repair. REF AIP UKBB AD 2.24.2-1.
(A0306/11)

Other briefing application
Graphical SNOWTAM



Summary / Conclusion

- Digital Briefing enabled by AIXM/WXXM/FIXM
  - Service adapted to the end user needs
  - Various forms
    - ePIB
    - Interactive (local, Web)
    - EFB
  - Common aspects
    - Graphical
    - Organized per phase of flight
- SESAR (WP 13.2.2) contribution
  - Digital Briefing research & prototypes

Questions & Answers / Feedback