

# FREQUENTIS – FOR A SAFER WORLD

MIDAD

2013-04-02

| LENNARZ Joachim

**FREQUENTIS**

## → A Decade EAD



*“Revolution is not a word which is normally associated with air traffic management (ATM) concepts, least of all those concerned with the supply of aeronautical data, but, at the time of its launch 10 years ago, the European Aeronautical Information System Database (EAD) was, in its own way, revolutionary.”*

Skyway Magazine 1Q2013

**Today EAD is more revolutionary than ever before !**

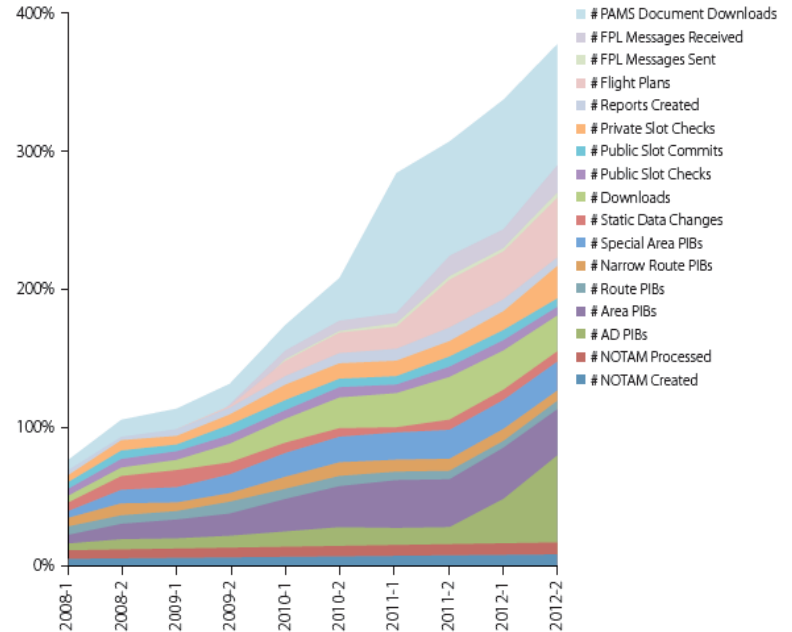
# → The same but still different ...

## In the 3rd Generation and 18 Releases later

EAD has seen a tremendous growth since the beginning in terms of functionality, users and data that is hold in its repository.

- **32%** growth per year in **users** since 2003
- **24%** growth per year in **licenses** sold since 2003
- **45%** growth per year in **flight plan related message handling** since 2011
- **7%** growth per year for **NOTAM processed** since 2005

Table three: relative number of EAD activities compared to the baseline for 2008 (100%)

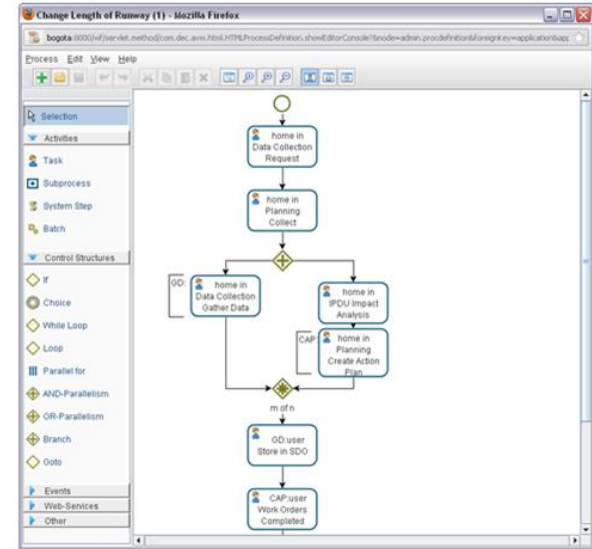


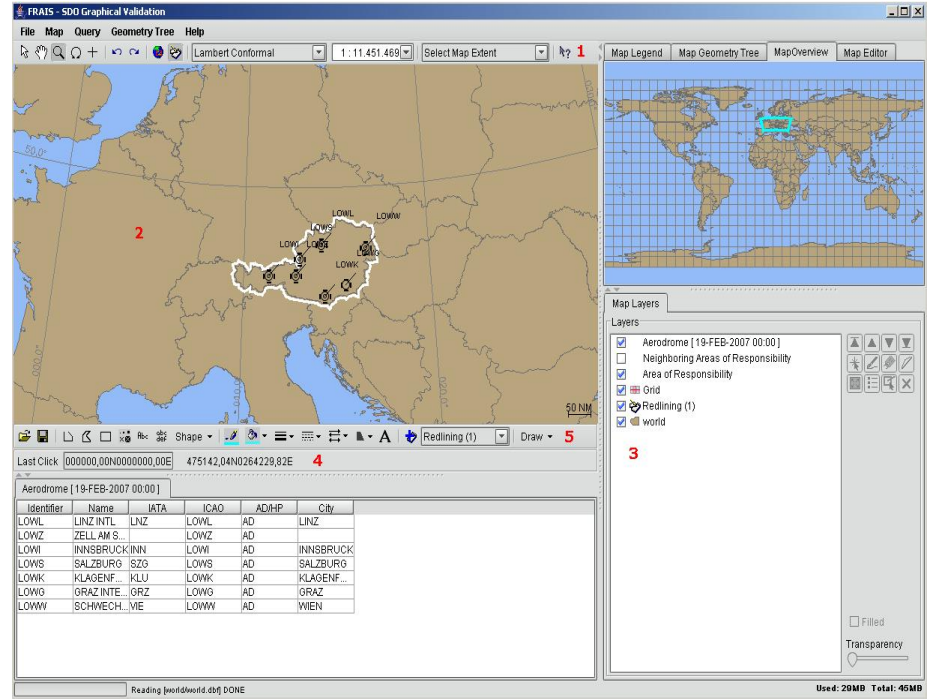
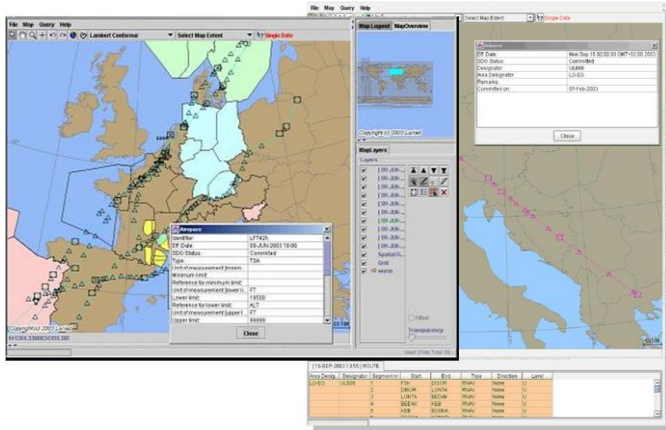
Skyway Magazine 1Q2013

# → Modularity & Flexibility

Offering various mechanisms and aspects to the needs of each and every user:

- Web-based Workflow Management Layer
- Functional system configurability
- Centralized collaboration management
- Architectural EAD cloud concepts









# → NOTAM (Digital)

The screenshot shows the 'NOTAM GeoRef Visualization' application. The interface includes a 'Navigate' and 'Layers' menu at the top. Below the menu, there are input fields for 'Original' (5029N00417E 025) and 'Calculated' (5054N00432E 025) coordinates, a 'Validate' button, and a 'Save & Exit' button. A central map displays a yellow-shaded area representing the NOTAM region, with a blue dot indicating a specific point. The map is labeled 'EBBU BRUSSELS FIR'. A scale bar shows a distance of 3.088.348. The bottom status bar displays the coordinates 'Lat, Lon (492402N0051545E) - x, y (403,390)' and a row of green status indicators.

The screenshot shows the 'DigitalNOTAM' web application interface. The browser address bar displays 'http://veas03.8888/DigitalNOTAM/aces/newNotam.shtml'. The main interface is divided into several sections: 'General', 'ICAO', and 'Graphical View'. The 'General' section contains fields for 'Event' (new Obstacle), 'Start' (29-Jun-2012 08:42), 'End' (29-Jun-2012 08:42), 'Elevation', 'Height', 'Group', 'Mobile', 'Lighting', 'Marking Description', and 'Note'. The 'ICAO' section displays a table with columns for FIR, NOTAM Code, Traffic Pulp, Scope, Lower, Upper, Coordinates, and Status. The 'Graphical View' section shows a map of Europe with a red line indicating the NOTAM region. The bottom status bar displays 'Powered by Esri' and 'Logged in: g1\_MLazar as: ADMINISTRATOR'.

# → FPL & PIB

FPL2012

Flight Plan | Supplementary | FPL Freetext Editor | Repetitive Flight Plan

**Addresses**

Filing Time: 201544  
 Originator: EHMCPZPX  
 Addresses FF:   
 Re-Addressing (AD):

**Show FIRs**

**General information**

(7) Aircraft ID:  (8) Flight Rules:  Type of Flight:   
 (9) Number:  Type of Aircraft:  Wake Turbulence Cat:   
 (10) Equipment:

**Route information**

(13) Departure:  EOGT:   
 Route: (15) Cruising Speed:  Level:   
 (16) Destination:  Total EET:  Alternate:  2nd Alternate:   
 Rte. Maint. Show Route SDO Check

**Other information**

(18) Other Information:  Show Editor  
 Notes (not transmitted):   
 DOF/120120  
 Append field 19  Distributed

**Route PIB** ?

Filter | Filter 2 | Layout | Scheduling | Notification

**Validity**  
 From: 03 - NOV - 2004 14 : 10 UTC  
 To: 04 - NOV - 2004 14 : 10 UTC

**NOTAM Validity**  
 All  
 Not older than:  days

**Briefing Type**  
 Int  
 Nat  
 Mil

**Message Type**  
 NOTAM  SNOWTAM  AIM  CRAM  
 BIRDAM  ASHTAM  ANM

**Flight Rules**  
 IFR  
 VFR

**Flight Level**  
 All Upper: 999 999 999  
 Det Lower: 000 000 000

**All-FIR**  
 All-FIR

**Service Type**  
 Full  
 Update

**AD/FIR**

**Aerodromes/Heliports**  
 Identifier: LSGG + - + Find  

ID	AD Name	Type
LOMW	SCHWECHAT	ADEP
LSGG	GENEVA	ADES

 Items: 2/20

**FIRs**  
 ICAO: + - Find  

ICAO	Name
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 Items: 0/20

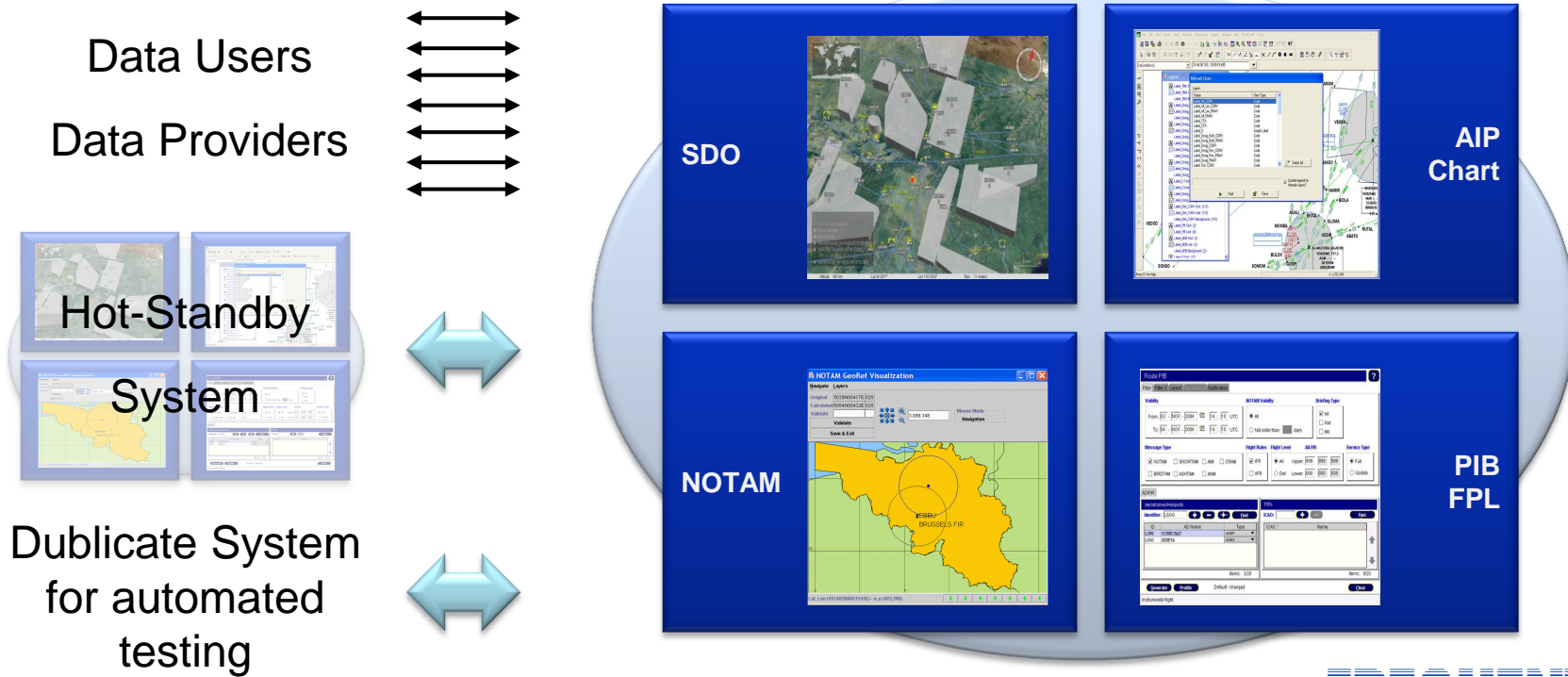
**Generate Profile Default - changed Clear**

Instrumental flight.



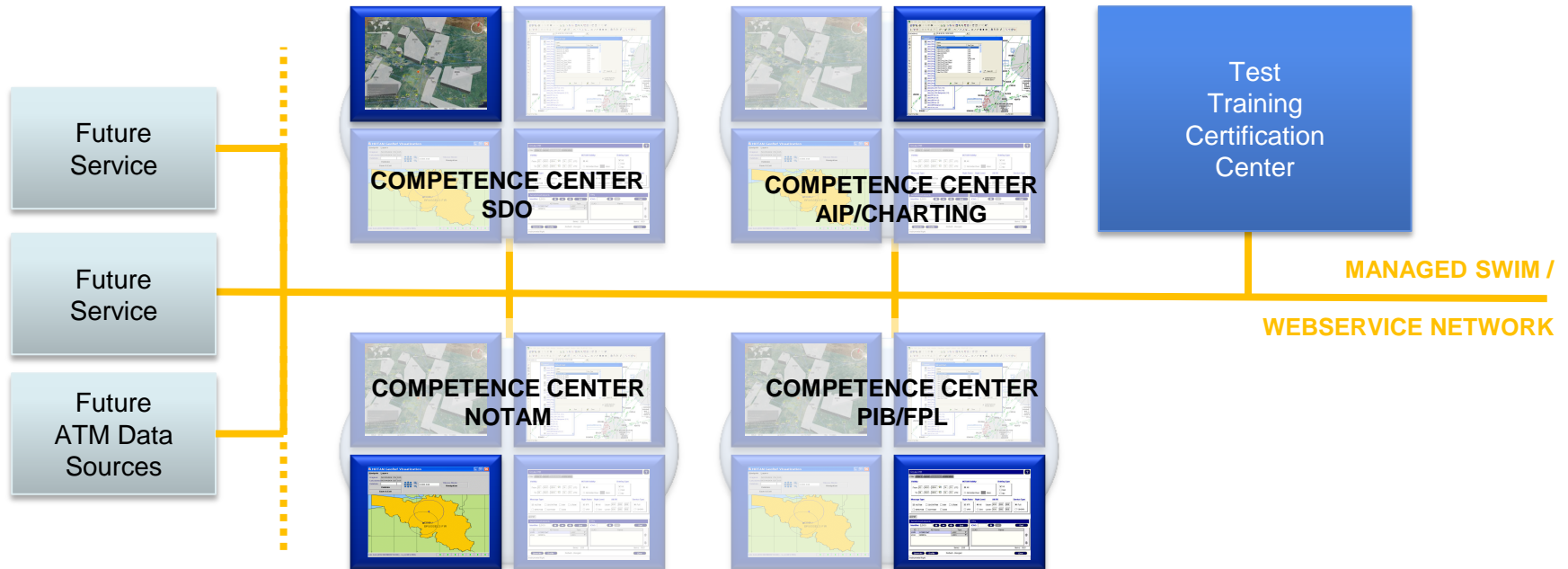
# → EAD System Layout

## Centralized Access through a Centralized System



# → Possible MIDAD Layout

## Centers of Excellence within a managed Network



# → Advantages

- **Establish local expertise** for net-wide specialist service delivery
- Auto-Sync between the server systems – acting as **emergency hot-standby** systems
- Open **SWIM/Web-Service** architecture that can be further extended by additional services in the future
- **Use existing local installation** via data upload and download mechanisms – local decision whether to use local, server or mixed functionality
- Connect to EAD and other regional clusters/hubs to **access and share AIM data** automatically on a **global basis**.

# → MIDAD Processes

- MIDAD will require the introduction of processes which support the overall MIDAD operation, MIDAD upgrades and further developments.  
For example:
- **Change Control Board Institution**; any change in the platform has to be approved, planned, implemented, tested, be made operational
  - **Documentation Management**; MIDAD will require a lot of documentation, manuals, process descriptions, etc.; these documents have to be managed, adapted, upgraded
  - **Contracts Management**: the MIDAD agency will have to produce contracts/regulations with all users; the contracts have to be produced, maintained, updated/renewed, executed, invoiced
  - **Certification Management**; due to the open platform character it might be necessary that applications of suppliers have to be tested and certified before they can be used operationally for MIDAD
  - **Test infrastructure and extensive test cycles**; each update of the platform requires intensive testing cycles and safety checks

# → Integration in Global Cloud

- A concept in which the **location** of servers / data sources is **no longer important**
- Organisations can **concentrate on their key competencies** and don't have to think about technology so much
- **SWIM and SOA** are related to the concept of cloud computing
  - it does not matter WHERE the hardware is located, only WHAT information is provided and in WHICH quality
- **Main Benefits**
  - Reduction of data backup cost
  - Reduction of recovery cost
  - Cost sharing due to regional concepts
  - Enabling sales of services for ANSPs

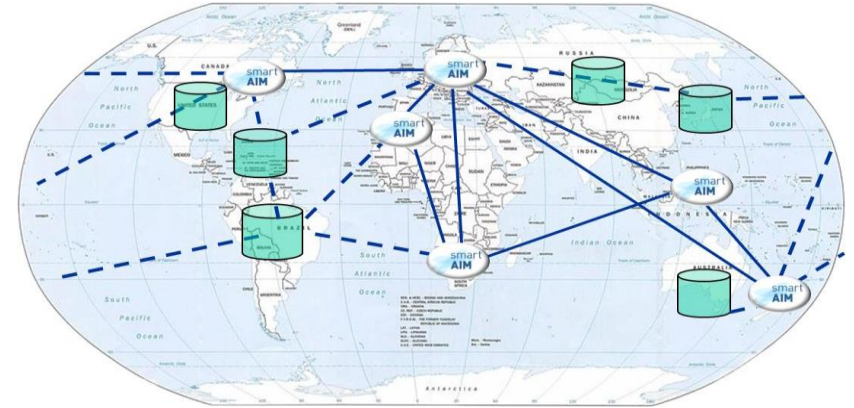
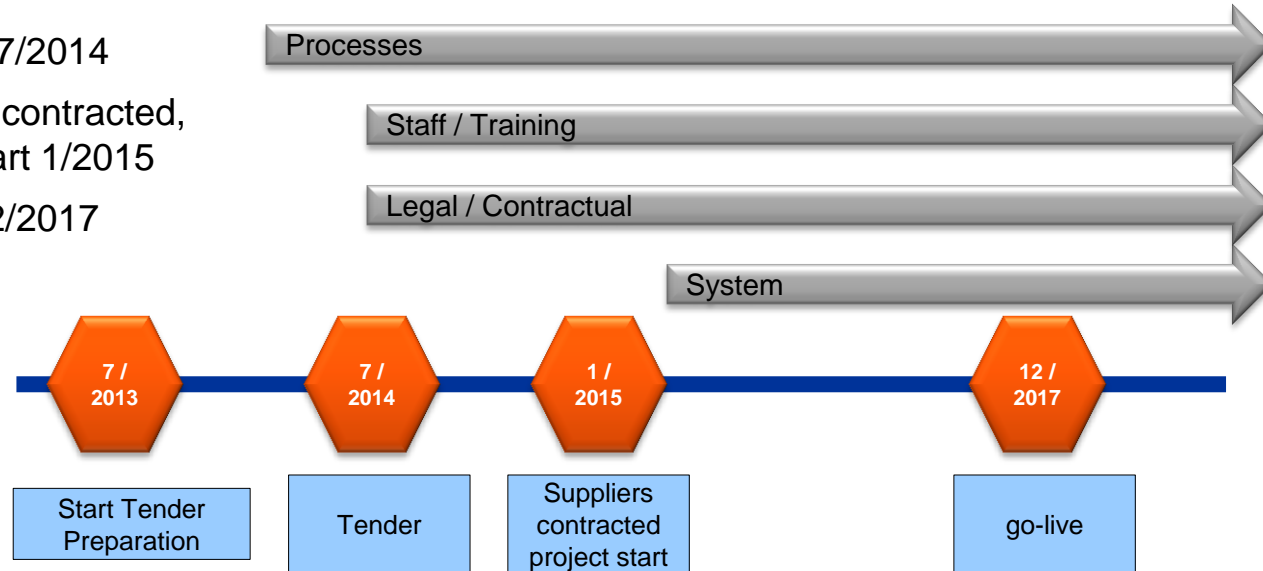


Figure: Regional Hub Concept

# → Schedule/Milestones

- Start Tender Preparation – 7/2013
- Tender – 7/2014
- Suppliers contracted, project start 1/2015
- Go-live 12/2017



**Transition to MIDAD completed**





# Thank you for your attention

**Joachim Lennarz**  
Director BU Information Solutions  
Frequentis AG

[Joachim.LENNARZ@frequentis.com](mailto:Joachim.LENNARZ@frequentis.com)

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