

## ATM system aspects

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# Best practices on ATM system evolution



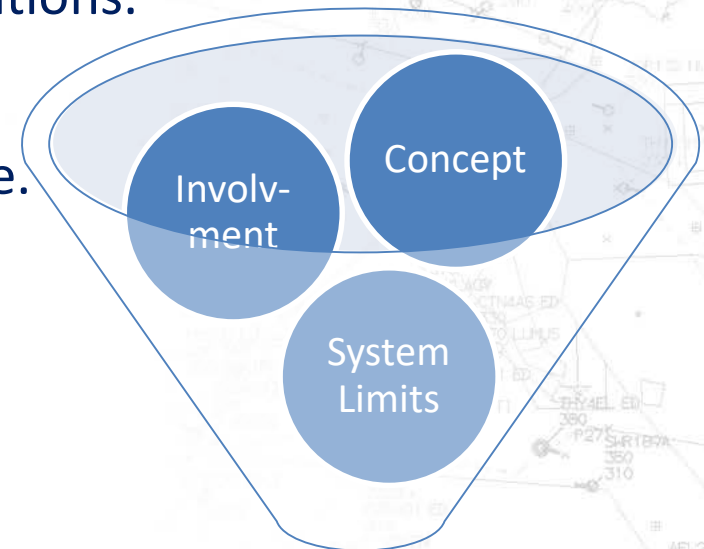
Concept:

Base the FRA concept on your own and your adjacent ATSUs possibilities and limitations.

Involve NM and adj. ATSUs at an early stage.

Know your system limits:

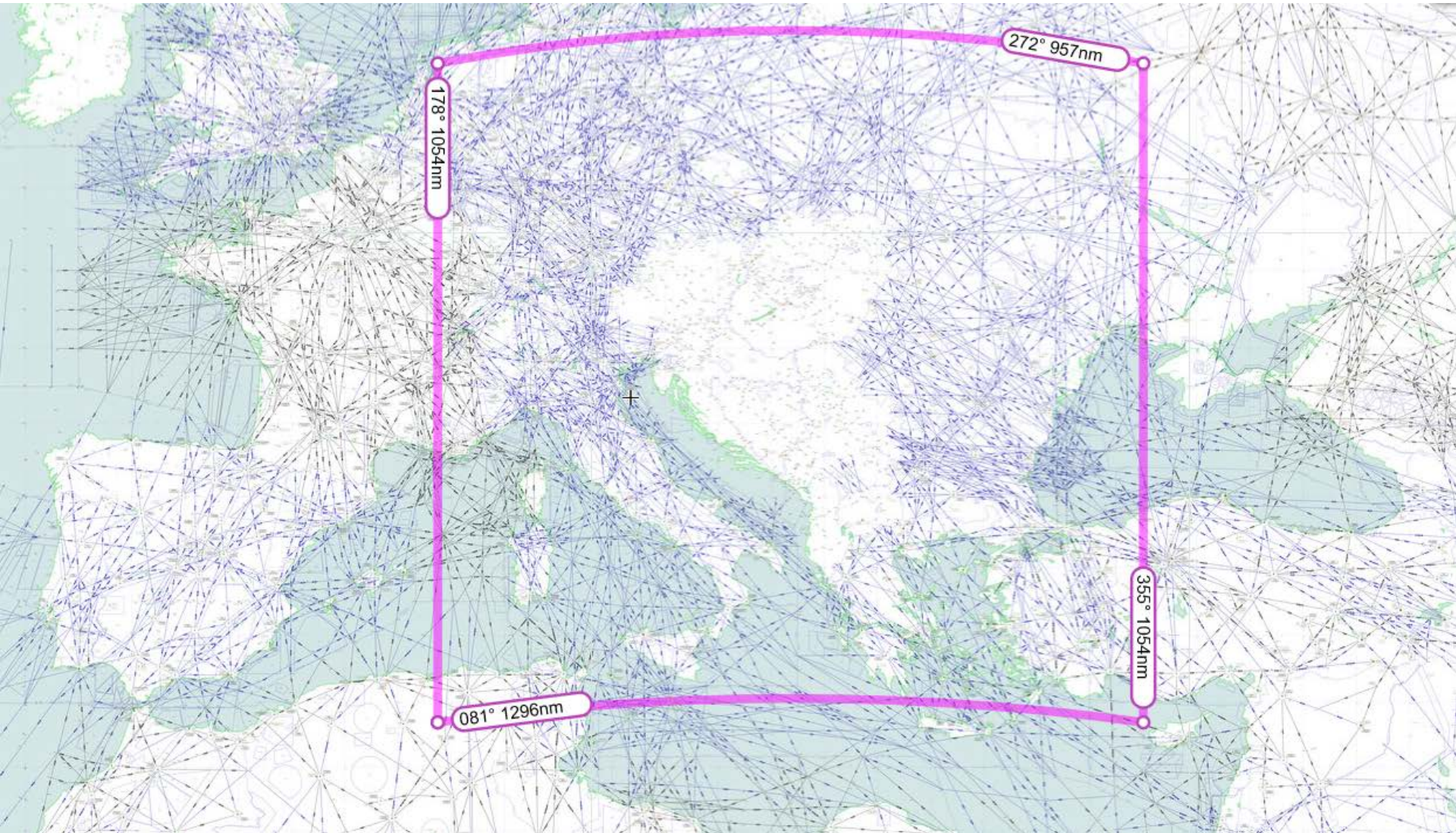
- Means of Trajectory calculation
- size of system area
- number of points
- number of ATS routes (incl. SIDs and STARs)



Working  
FRA-Solution



# System Area – Austro Control



# Tool support



## Trajectory

- Volume-, not point-, based trajectory calculation
- Lateral Calculation for complete FRA
- Trajectory display beyond FDPS AoR

## Area Mgmt.

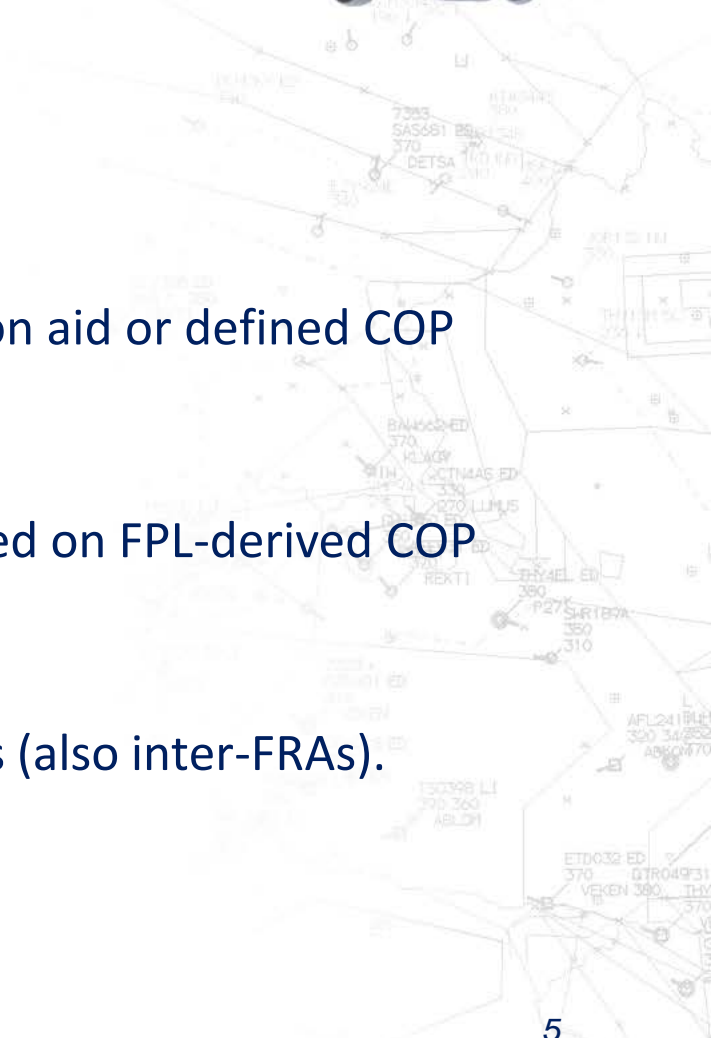
- Segregated Area Probe
- Display of active internal and adjacent danger/restricted areas

## Planning Tools

- MTCD: Knowledge of conflicts - although ATS route based merging points have vanished.

**The tool support of the adjacent units is essential as well.**





## Coordination and transfer

- Coordination point:
  - Published 5 LNC (COP)
  - LAT/LONG
  - Bearing and distance from a navigation aid or defined COP
- Coordination data selection:
  - Based on nearest eligible COP vs. Based on FPL-derived COP
  - Preferable: Gate based solution
- F15 processing, to allow cross border DCTs (also inter-FRAs).
- Make use of available OLDI possibilities

- IFPS: Checking of FPLs vs. Volumes
  - Definition of
    - a. FRA plannable Airspace
    - b. Conventional plannable Airspace
- Definition of Non Planning Zones





**Questions?**