

# TOD Implementation and Digital data distribution

Global AIM

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Marek Dockal

Air Navigation Services  
of the Czech Republic



# Content

## TOD implementation

- Europe
- The Czech Republic

## Digital data distribution

- Operational experience and challenges

## Conclusions



# TOD Europe Content

- Best practice
- Implementation status
- Close cooperation with ICAO
- Link to eATOC



# TOD Europe Best practices

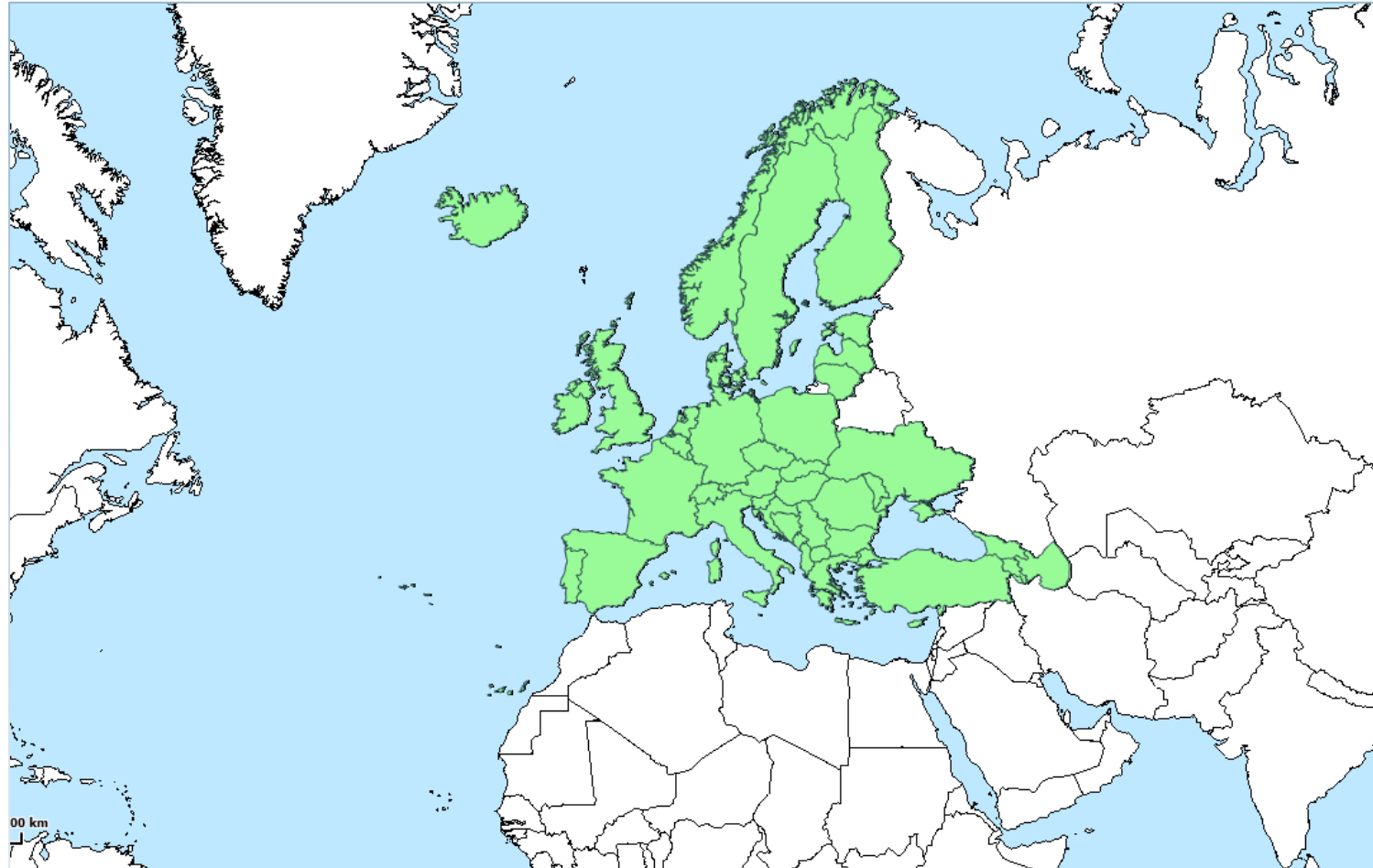
- EUROCONTROL TOD Working Group
  - Sharing best practices
  - Facilitates TOD implementation
  - Identifies causes of difficulties
- Terrain and Obstacle Data Manual
  - The current edition is 2.1 released in the autumn of 2015
  - <http://www.eurocontrol.int/publications/terrain-and-obstacle-data-tod-manual>



# TOD Europe - Implementation Status

Source: EUROCONTROL ATM Atlas Viewer

ECAC Area

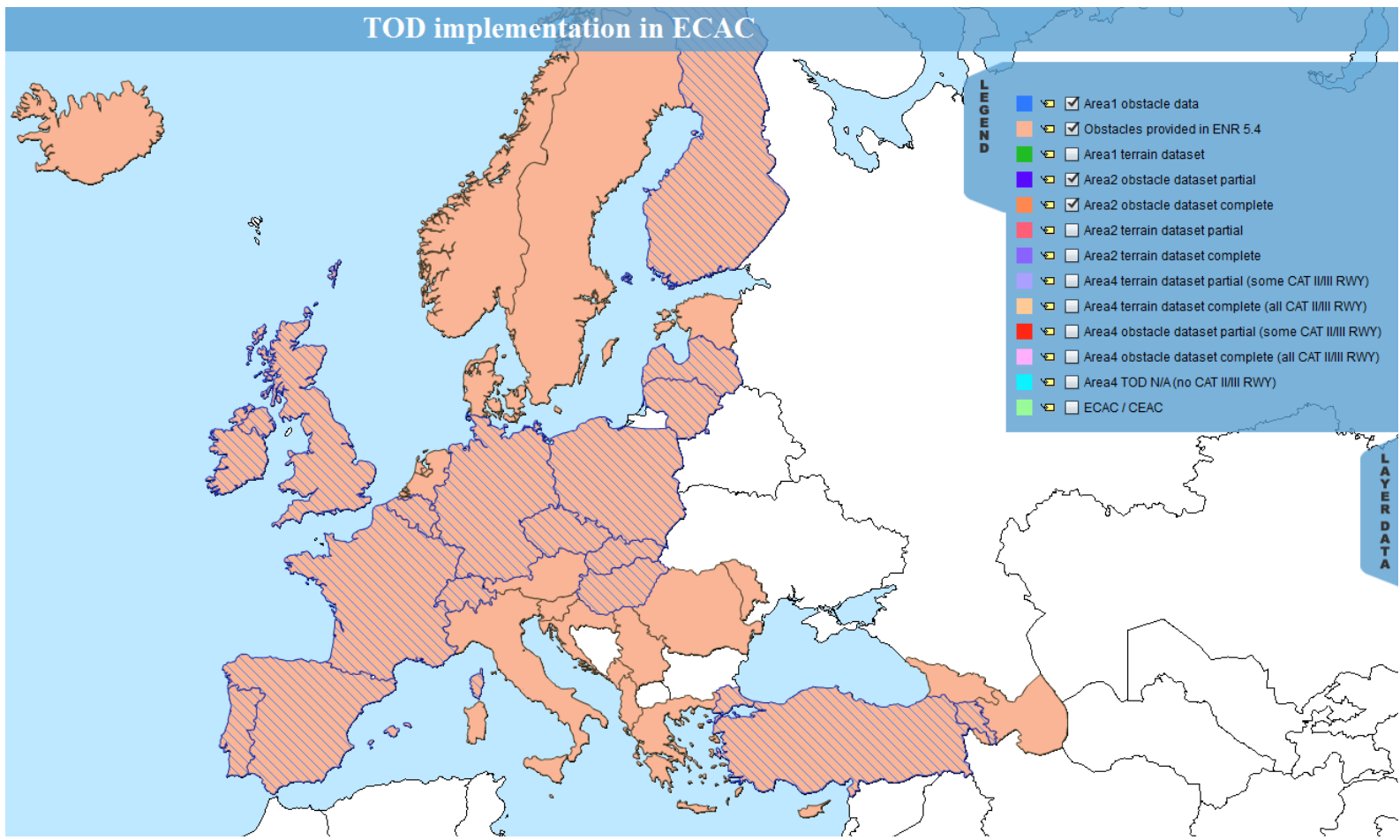


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# TOD Europe - Implementation Status

Source: EUROCONTROL ATM Atlas Viewer

Obstacles Area 1 – 43%

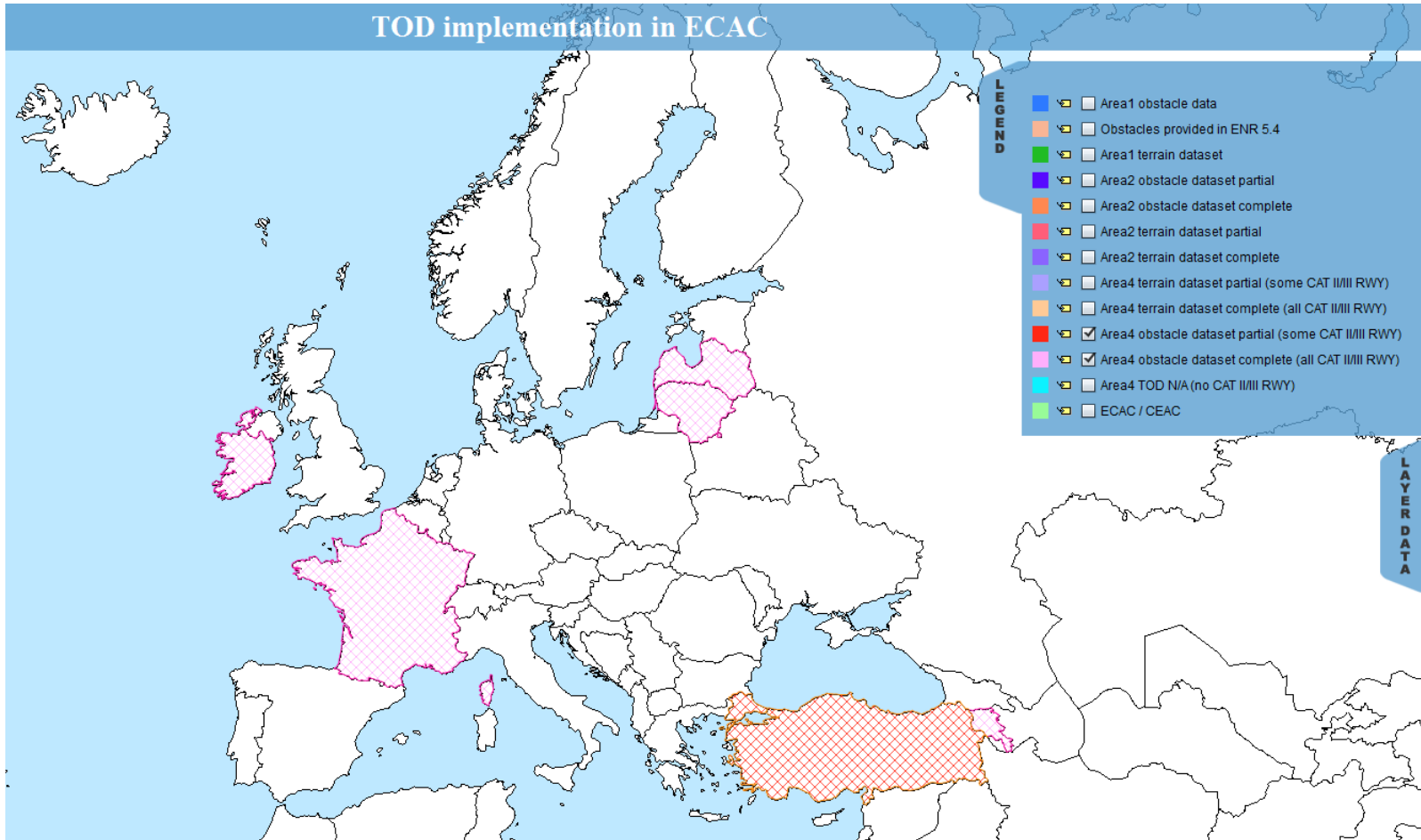


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# TOD Europe - Implementation Status

Source: EUROCONTROL ATM Atlas Viewer

Obstacles Area 4



# TOD Europe Cooperation with ICAO

- Close cooperation
  - Through EUROCONTROL AIM/SWIM Team
  - EANPG performs monitoring
- Common effort to support States in implementation
  - Providing framework to set up responsibilities
  - Monitoring deficiencies





# TOD Europe Link to eATOC

- Availability and users expectations
  - Close link to TOD provision
- Implementation challenges
  - Absence of any examples in ICAO SARPS and guidance material
  - Potential non-harmonized provision
- IATA contacted to communicate their view



# TOD Czech Republic Implementation experience

- Regulations
  - Aviation Law
  - National application of ICAO Annex 15
- Partners/players
  - State
  - AIMP
  - Czech army
  - Aerodrome operators

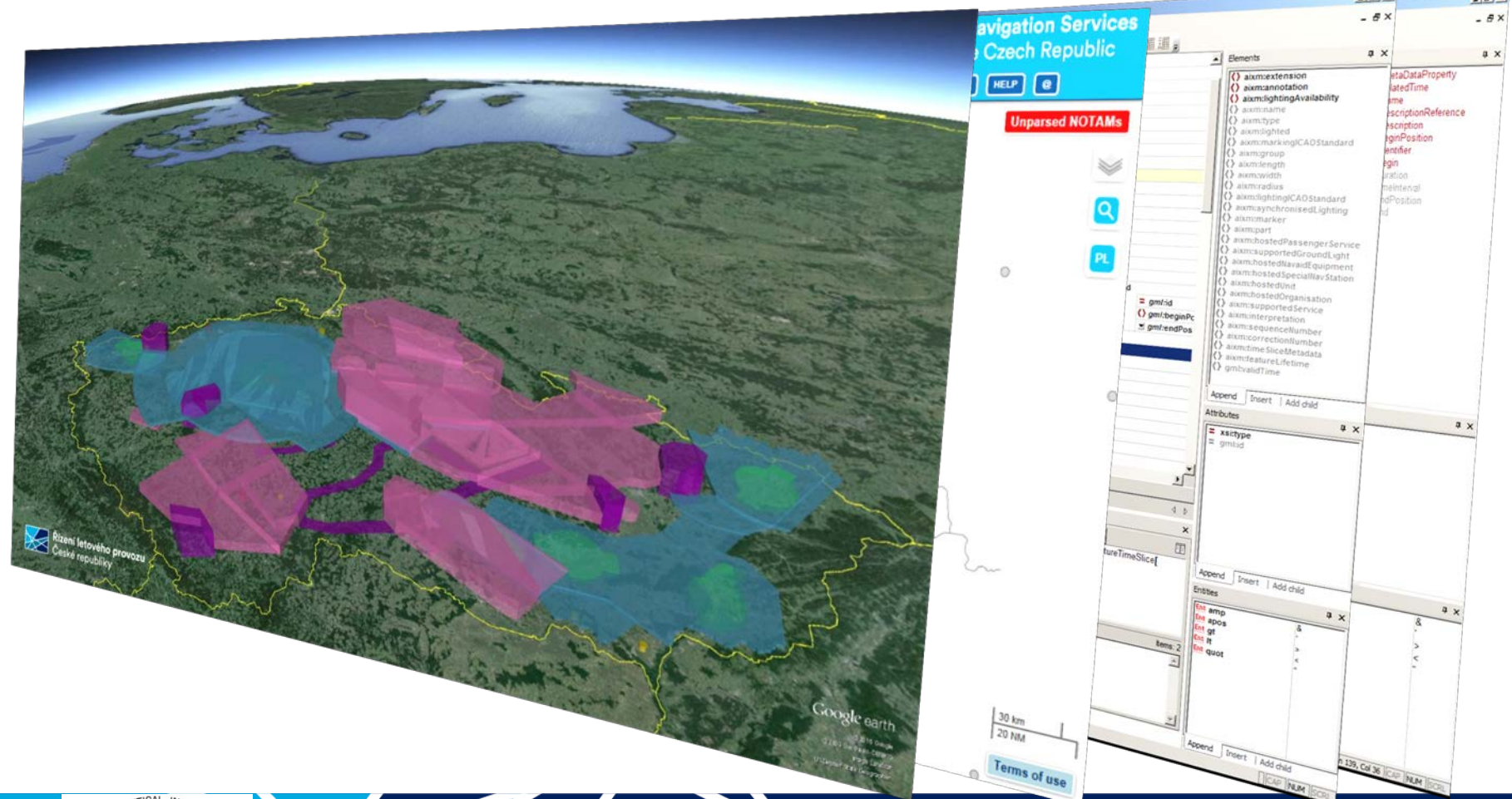


# TOD Czech Republic Implementation experience

- Implementation status
  - Area 1 - completed
  - Area 2 – national differences
  - Area 4 – work in progress
- Challenges
  - Data completeness (incl. metadata)
  - Data maintenance
- Way forward
  - Continuous collaborative effort on the state level



# Digital Data Distribution Tasks



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# Digital Data Distribution Challenges

- Technical issues
  - Legacy vs interoperability
  - Integration of data
  - Security
- Institutional issues
  - Roles and responsibilities
  - Authentication
- Financial issues
  - Cost recovery



# Digital Data Distribution

## Role of AIM Staff

- Staff  Key element of your success
- Challenges
  - New skills
  - New knowledge
- Solution  Bring the right people into your team
  - Data modelling experts
  - System architects
  - GIS specialists

# Conclusions

TOD & Digital data distribution implementation are challenges

- Started in 2003!
- Understanding – Knowledge & Skills
- Resources – money, people, time
- Continuous effort

Support is available



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Thank you for your attention

[ais.ans.cz](http://ais.ans.cz)

