

Advanced meteorological service for air traffic management in Croatia

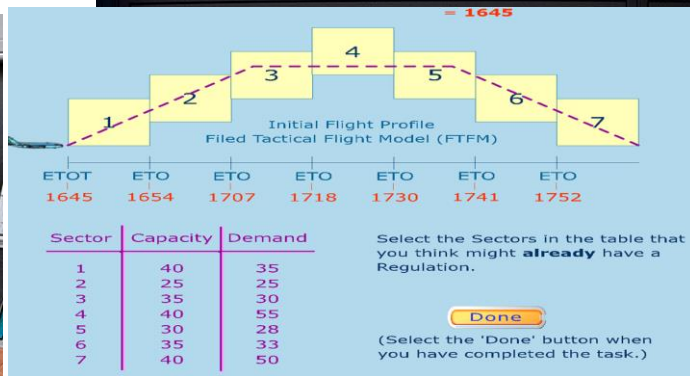
Igor Kos, MET Specialist
Alen Sajko, Director of MET Department
Croatia Control Ltd.

■ Overview

- What is Air Traffic Management (ATM) and what kind of meteorological services (MET) it needs
- What is the main MET issue for ATM in Croatia
- What has been done in the past 5 years
- Future steps - projects

■ ATM

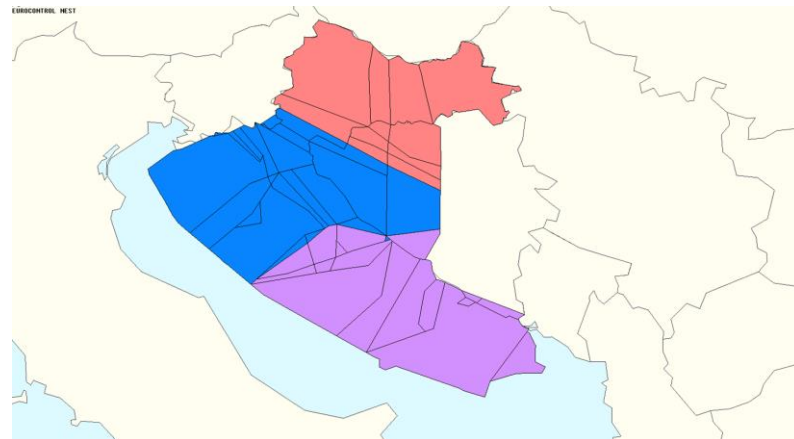
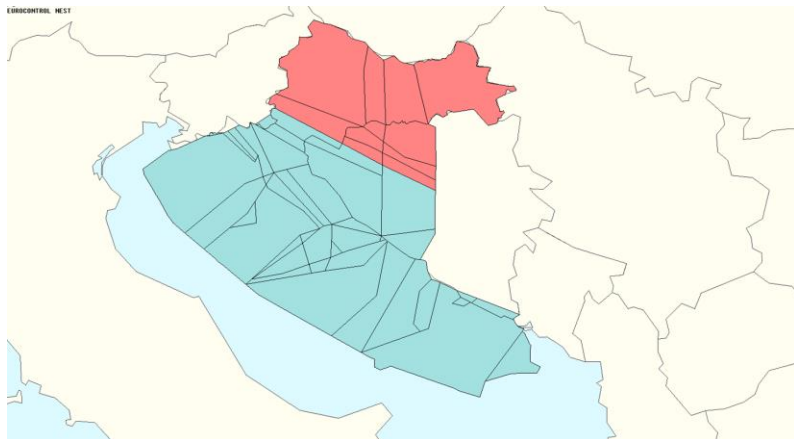
Air Traffic Control - ATC



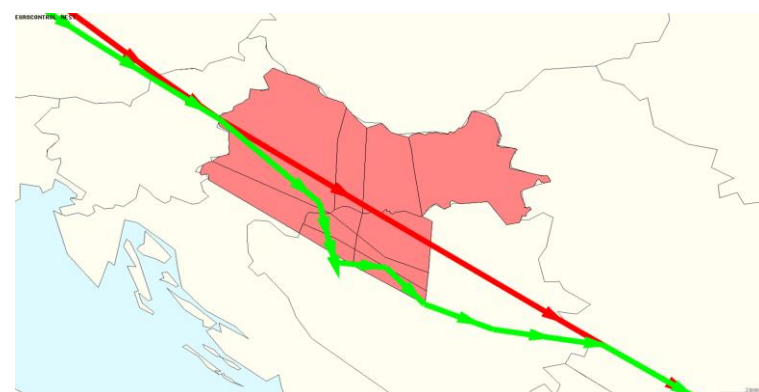
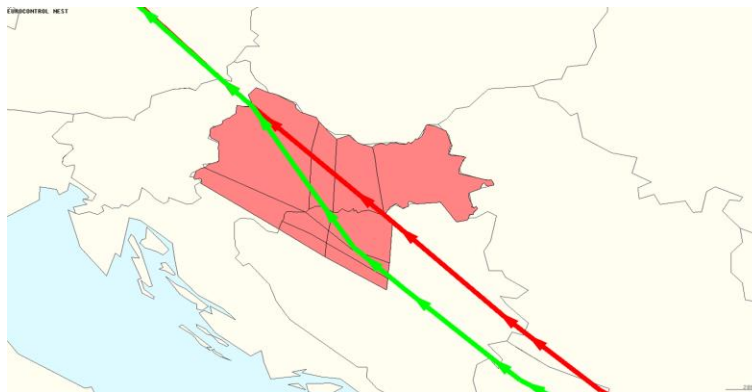
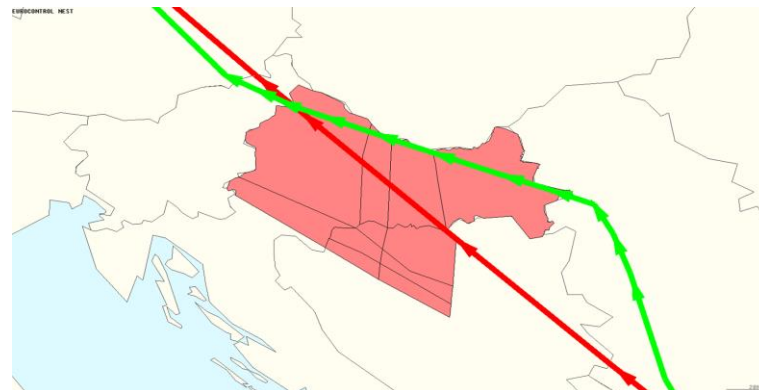
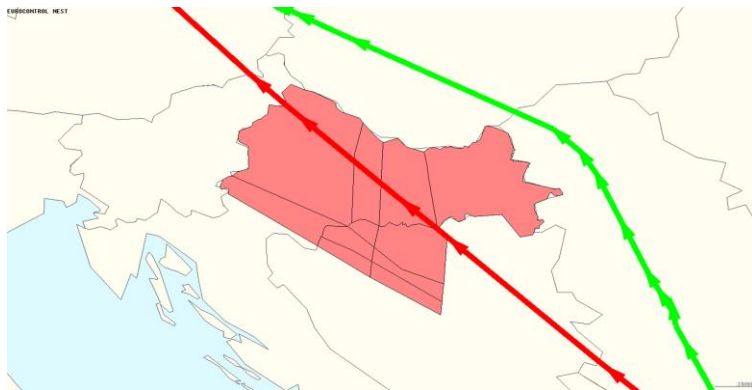
Air Traffic Flow and Capacity management - ATFCM

Challenges in meteorology 6
15-16 November 2018, Zagreb

■ Area Control Center Zagreb Area of Responsibility



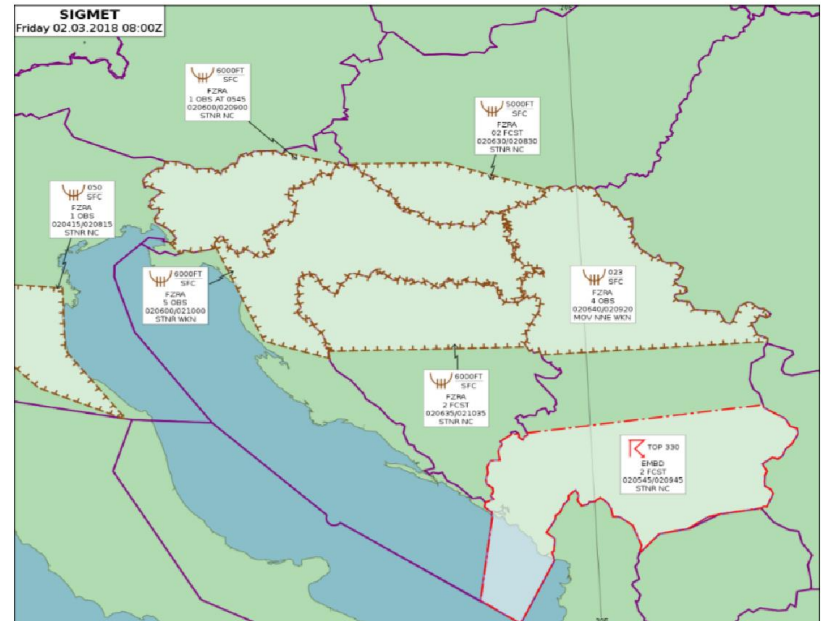
MET for ATM



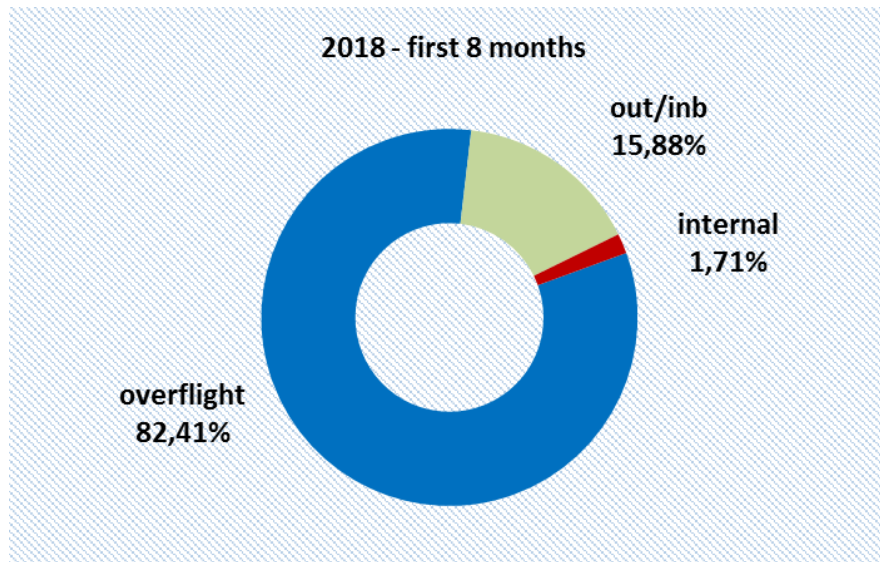
Challenges in meteorology 6
15-16 November 2018, Zagreb

■ MET for ATM

- ICAO standard products
- SIGMET
 - observed or forecast
 - TS, TURB, ICING
- new, non-standard
- not harmonized



■ MET for ATM in Croatia

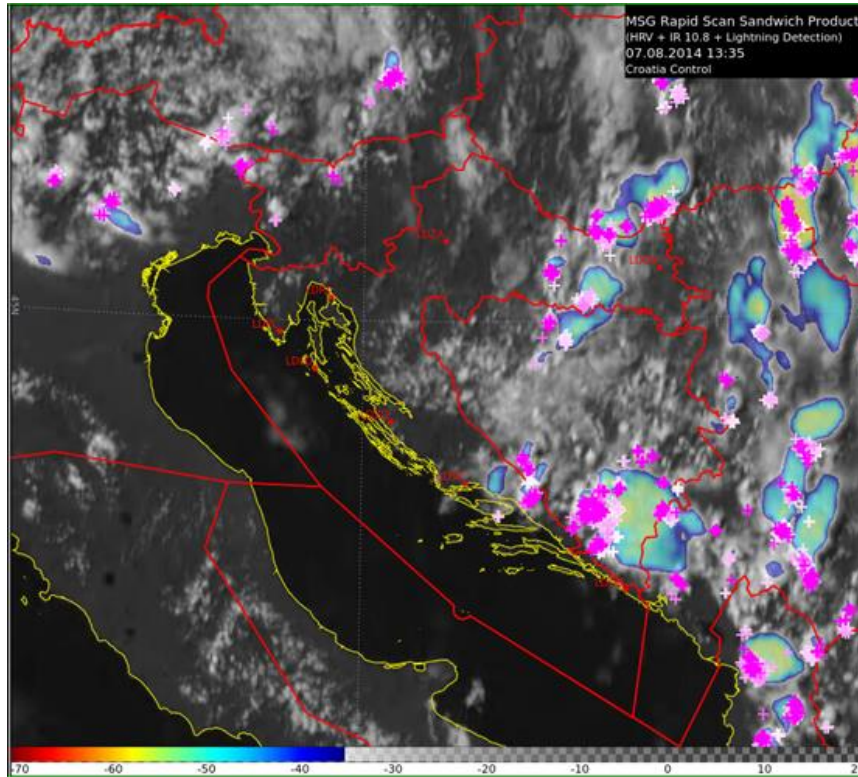


- upper airspace
(FL320-FL390)
(275-200 hPa)

■ MET for ATM in Croatia

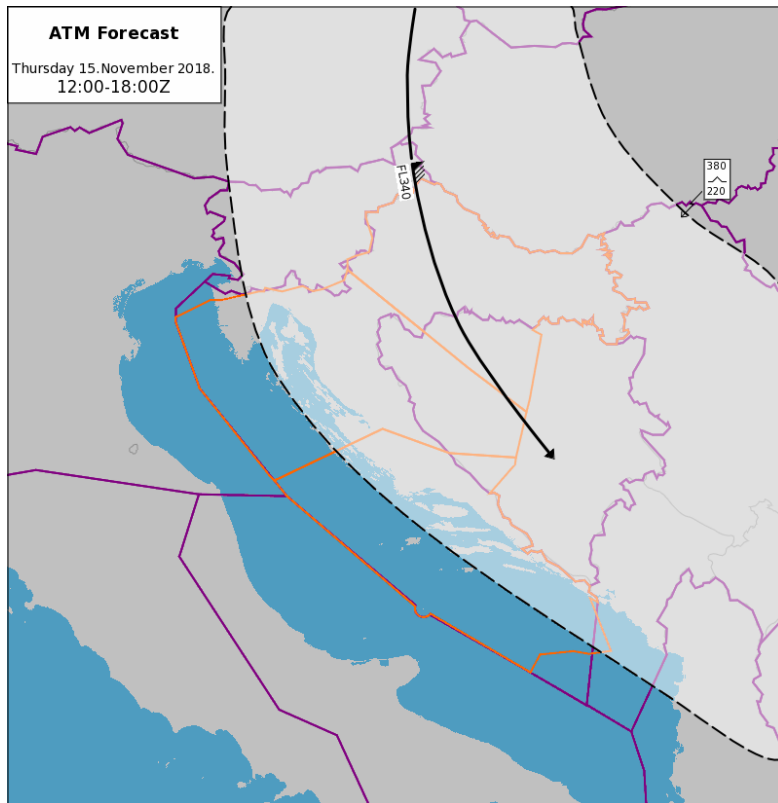
- MET service in Croatia Control has been working on the issue for the past 5 years:
 - Education about processes in ATM
 - Improvement in deep convection nowcasting and forecasting - ingredients based forecasting
 - Common workshops with ATM
 - Innovative new products for ATM (MET Sandwich, ATM Forecast and ATM Convection Nowcast)
 - Briefings in Area Control Centre Zagreb

MET Sandwich



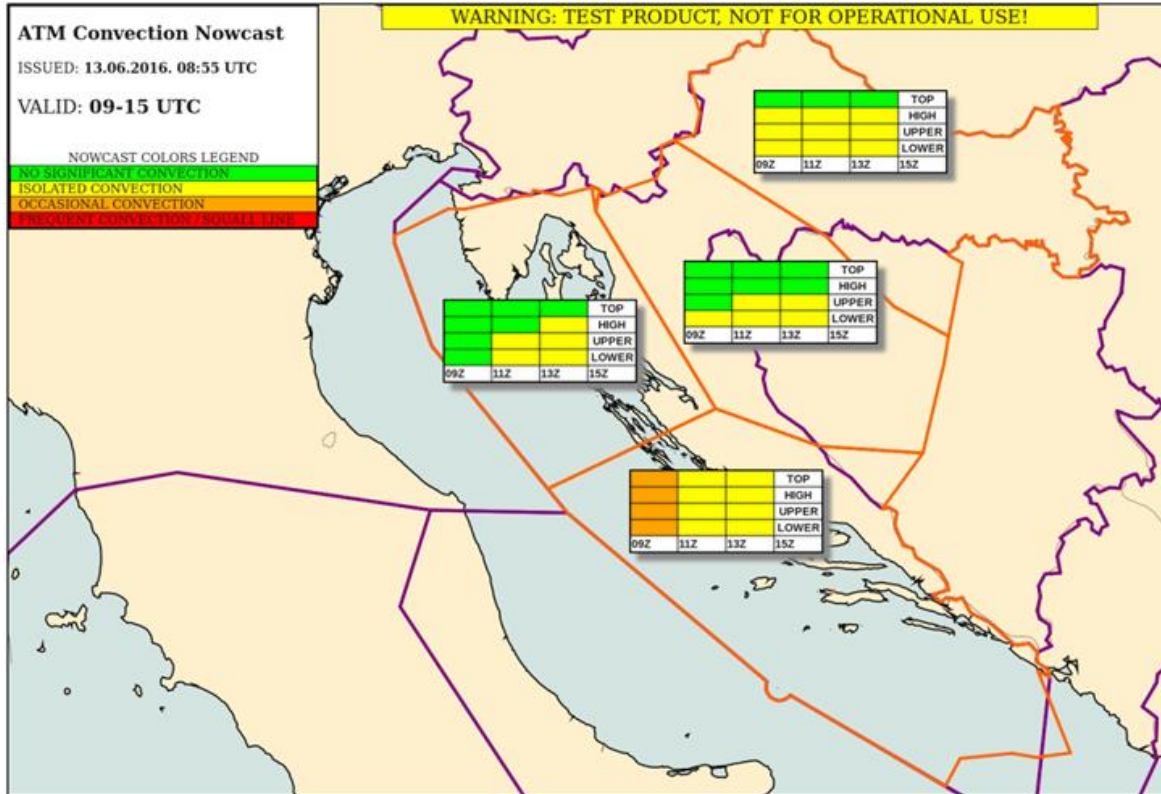
MSG Rapid Scan
HRV + transparent
colouring from IR
Lightning detection

ATM Forecast



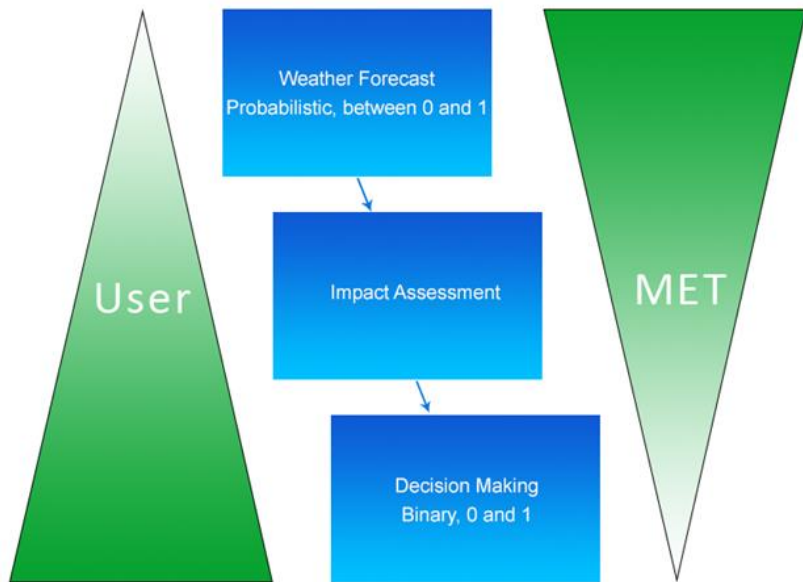
2 day forecast
6 hour intervals
TS, TURB, jet streams

ATM Convection Nowcast (ATCoN)

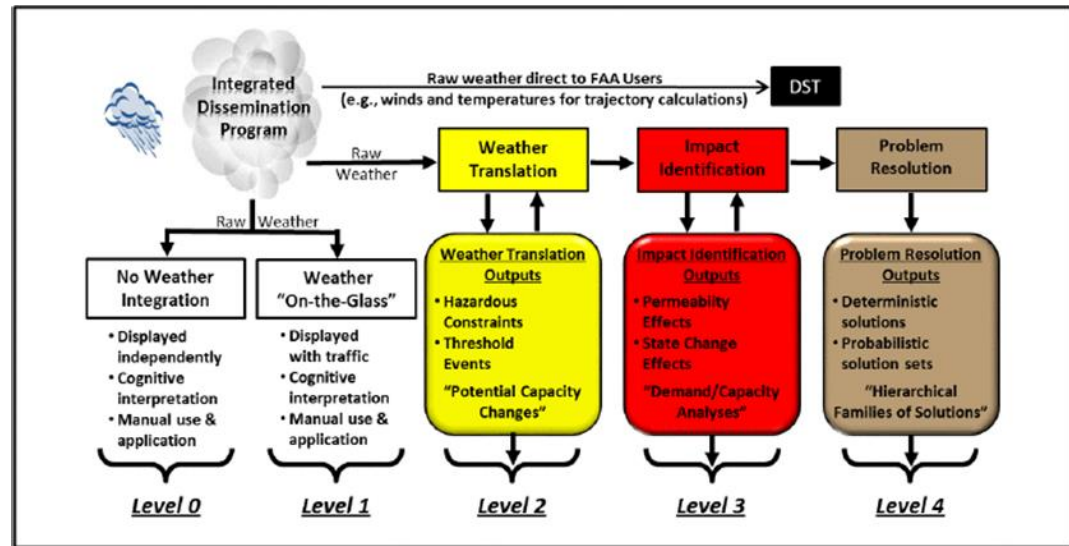


6 hour forecast
of convection
2 hour intervals

Future steps - only MET data not enough



© A. Sajko



© FAA

■ eATCoN

- +8 hours forecast of TS
- harmonized cross-border
- probabilistic MET
- impact (to ATFCM) assessment
- (possible scenarios)

■ COOPANS MET CD&R Tool

Membership



Chosen Industry Supplier

THALES



■ COOPANS MET CD&R Tool

- Define “Weather Zones”
 - TS, from observations to 1 hour nowcast
- Translate this information to ATC radar screen
- create tools which suggest solutions -> conflict detection and resolution
- make information available to everyone

■ Thank you!

Questions?