

# Croatia Control

## 2024-2025

EUROCONTROL  
Network Manager  
User Forum 2025  
Brussels  
29-30 January 2025

# Croatia Control



- ANSP fully owned by the Republic of Croatia
- Member of CANSO, COOPANS, A6 Alliance, FAB CE, SESAR 3 JU, etc.
- Providing both civil and military ATS
- Positioned on the South-East Axis
- Zagreb ACC Area of the Responsibility includes FIR Zagreb and northwestern part of Bosnia and Herzegovina
- Part of FRA Initiative - SESCO FRA
- One ACC (Zagreb) and six TWR/APP units
- TopSky ATM system (Thales)
- 16 elementary sectors (+500 configuration options)



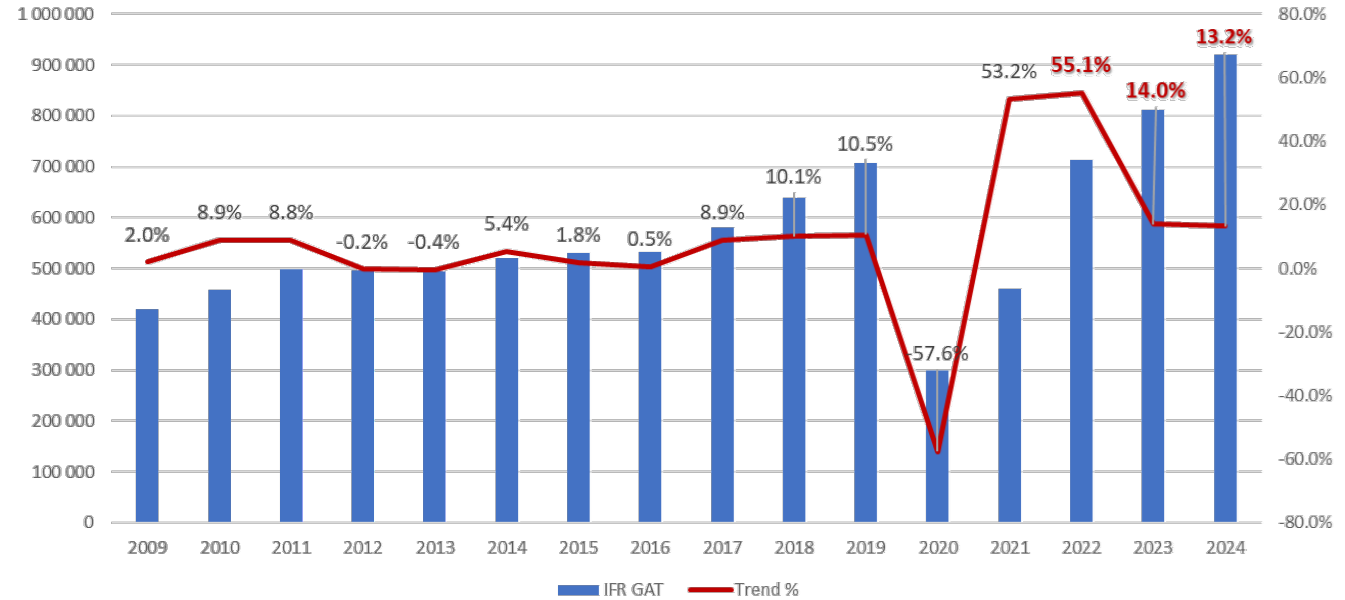
N	C	W	S
TN	TC	TW	TS
HN37	HC37	HW37	HS37
HN36	HC36	HW36	HS36
UN	UC	UW	US
LN	LC	LW	LS



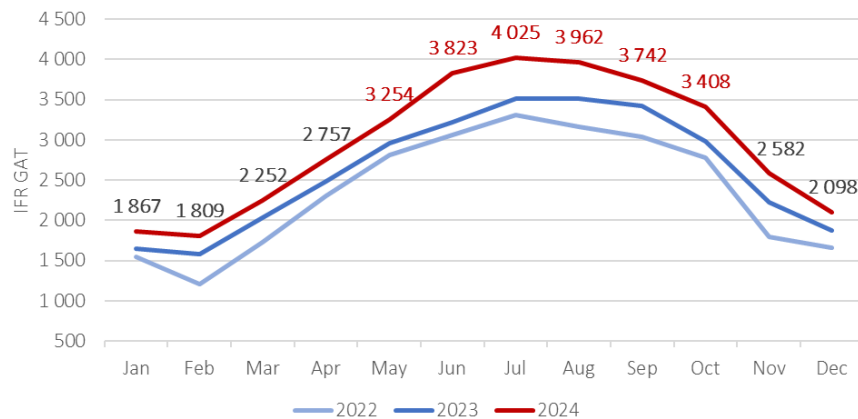
# CCL Traffic Figures

- 2022 already back at pre-COVID period
- 2023 and 2024 traffic figures well above HIGH traffic forecast
- 2024 vs 2023 average Peak-day traffic increase more than 15% (more than 500 flights)
- 86% overflights in total traffic numbers
- Peak days - 4000 flights
- Peak hours - 265 flights

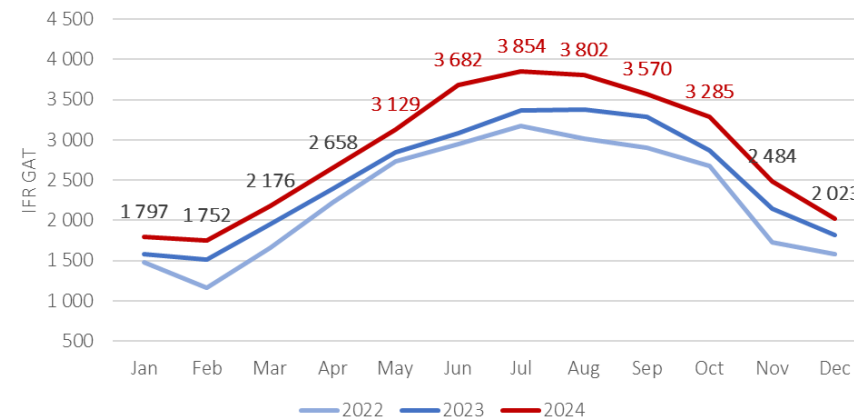
LDZOTOT - IFR GAT traffic by year



LDZOTOT Peak day



LDZOCTA Peak day



# July 2024 Traffic Increase

Network Movements  
week #29, 2024  
v. week #28: - 0.4%  
v. 2023: + 3.9%  
v. 2019: - 2.0%

EUROCONTROL Network

## TRAFFIC ANALYSIS

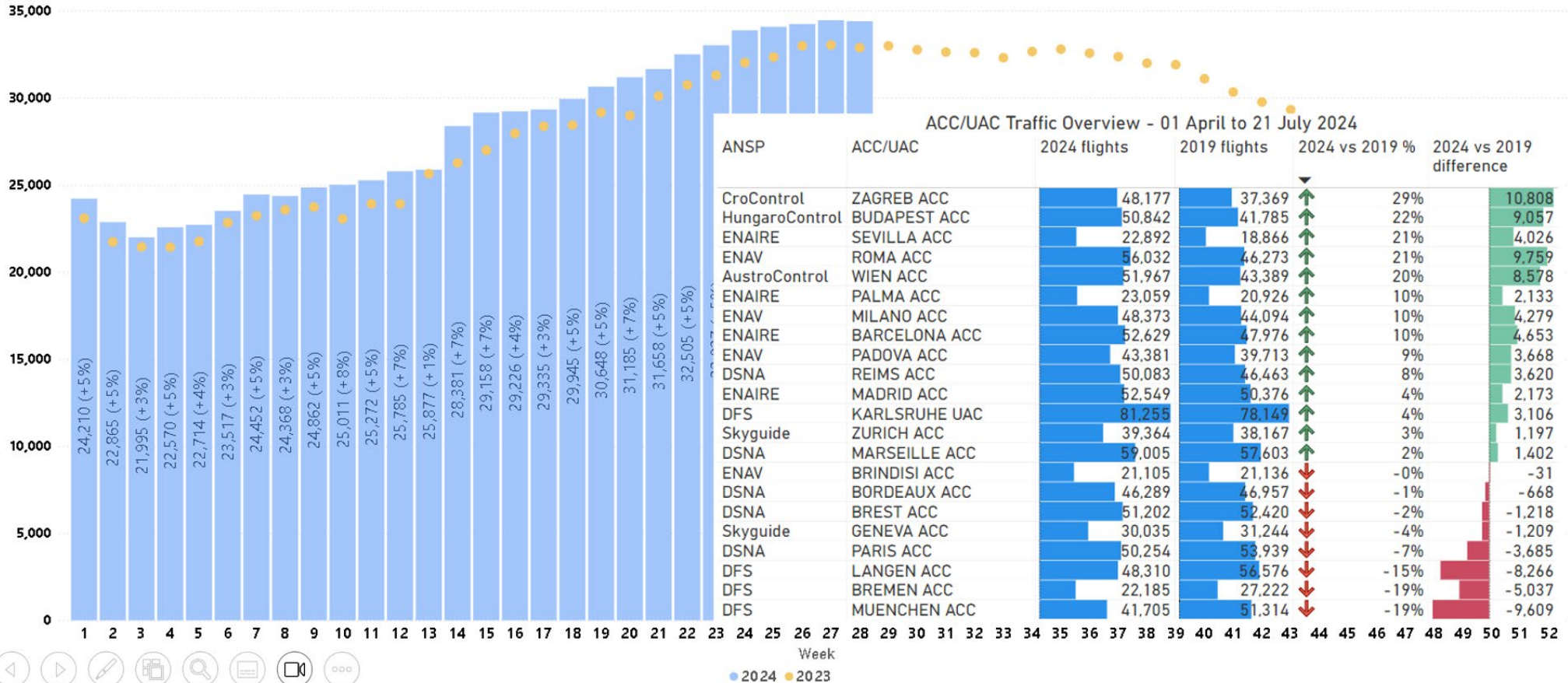
23/01/2015 14/07/2024

Busiest dates (movements):

2024	Friday 14-Jun-2024	35,710
2023	Friday 07-Jul-2023	34,637
2022	Friday 08-Jul-2022	32,392
2021	Friday 27-Aug-2021	26,773
2020	Friday 21-Feb-2020	29,135
2019	Friday 28-Jun-2019	37,228



Supporting  
European  
Aviation



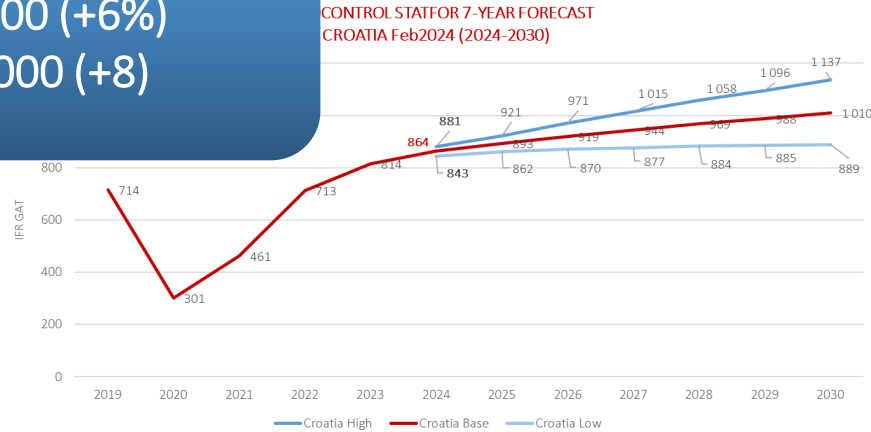
ACC/UAC Traffic Overview - 01 April to 21 July 2024

ANSP	ACC/UAC	2024 flights	2019 flights	2024 vs 2019 %	2024 vs 2019 difference
CroControl	ZAGREB ACC	48,177	37,369	29%	10,808
HungaroControl	BUDAPEST ACC	50,842	41,785	22%	9,057
ENAIRES	SEVILLA ACC	22,892	18,866	21%	4,026
ENAV	ROMA ACC	56,032	46,273	21%	9,759
AustroControl	WIEN ACC	51,967	43,389	20%	8,578
ENAIRES	PALMA ACC	23,059	20,926	10%	2,133
ENAV	MILANO ACC	48,373	44,094	10%	4,279
ENAIRES	BARCELONA ACC	52,629	47,976	10%	4,653
ENAV	PADOVA ACC	43,381	39,713	9%	3,668
DSNA	REIMS ACC	50,083	46,463	8%	3,620
ENAIRES	MADRID ACC	52,549	50,376	4%	2,173
DFS	KARLSRUHE UAC	81,255	78,149	4%	3,106
Skyguide	ZURICH ACC	39,364	38,167	3%	1,197
DSNA	MARSEILLE ACC	59,005	57,603	2%	1,402
ENAV	BRINDISI ACC	21,105	21,136	-0%	-31
DSNA	BORDEAUX ACC	46,289	46,957	-1%	-668
DSNA	BREST ACC	51,202	52,420	-2%	-1,218
Skyguide	GENEVA ACC	30,035	31,244	-4%	-1,209
DSNA	PARIS ACC	50,254	53,939	-7%	-3,685
DFS	LANGEN ACC	48,310	56,576	-15%	-8,266
DFS	BREMEN ACC	22,185	27,222	-19%	-5,037
DFS	MUENCHEN ACC	41,705	51,314	-19%	-9,609

# Forecasting vs Impact

## STATFOR Forecast Feb 2024

- Base - 864 000 (+6%)
- High - 881 000 (+8)



## Performance Plan Forecast for RP3 PP (2021)

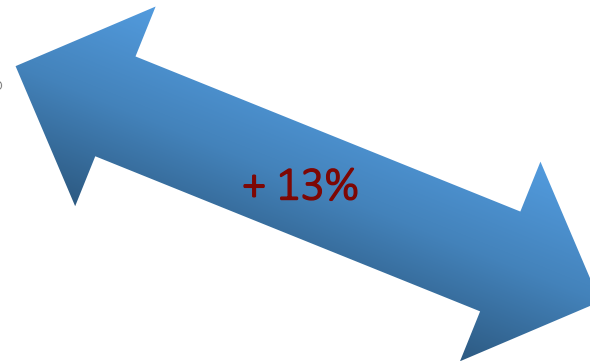
- 696 000 IFR GAT

En route Charging zone 1

En route traffic forecast

STATFOR Base forecast MAY 2021 (Flight Plan 2017-19, Actual Route 2020-2024)

	2017A	2018A	2019A	2020A	2021	2022	2023	2024	CAGR 2019-2024
IFR movements (thousands)	587	647	714	301	459	501	605	696	-0,5%
IFR movements (yearly variation in %)		10,2%	10,4%	-57,8%	52,4%	9,2%	20,8%	15,0%	
En route service units (thousands)	1.799	1.994	2.193	929	1.510	1.582	1.946	2.251	0,5%
En route service units (yearly variation in %)		10,8%	10,0%	-57,6%	62,5%	4,7%	23,0%	15,7%	

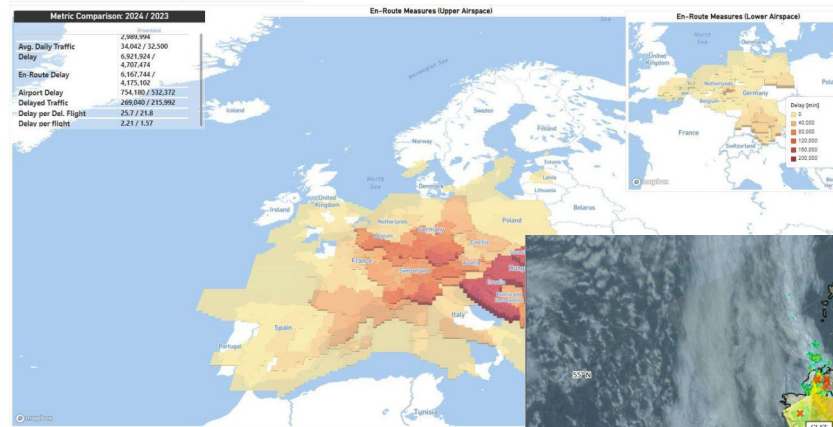


**ACTUAL**  
**919 500 IFR GAT**

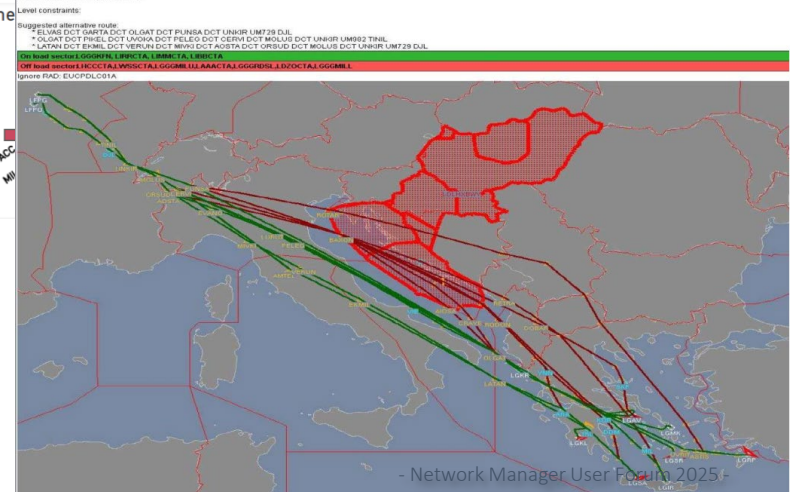
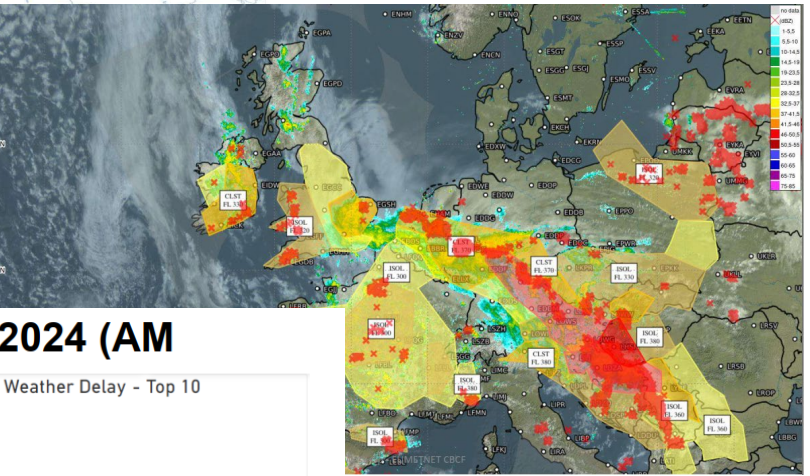
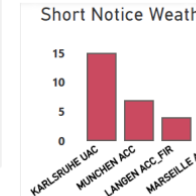
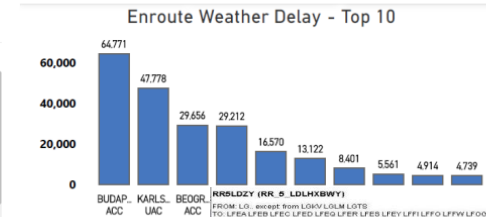
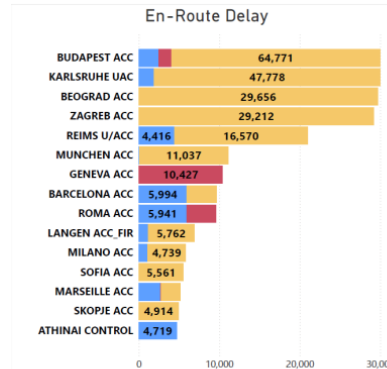
# 2024 Weather Impact on SEE Axis

- Severe Weather has a big impact on SEE Axis
- In Croatia 54% of total delay attributed to Weather
- Some flights deviated more than 200 NM from original route – not planned via LDZO
- Participate on Cross-border Weather Wash-up
- Network Cross Border Weather Procedure Croatia-Italy 2024

June-July August Weather Delay Up by 47%

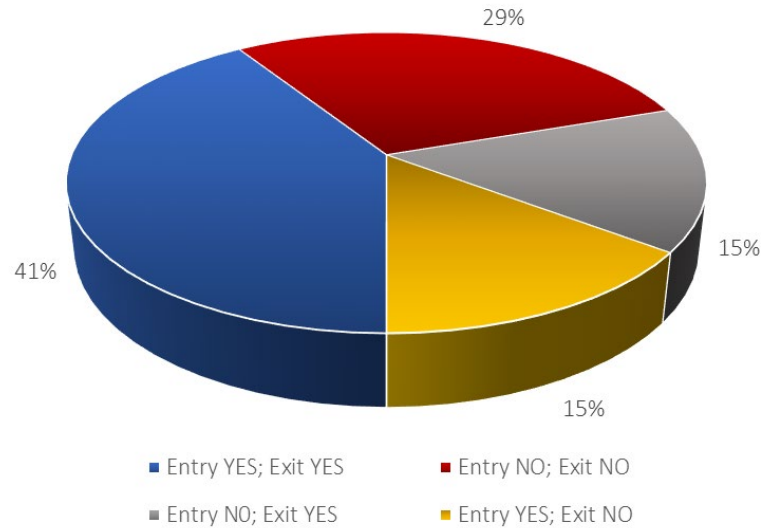


## Example weather impact 26/6/2024 (AM UTC)

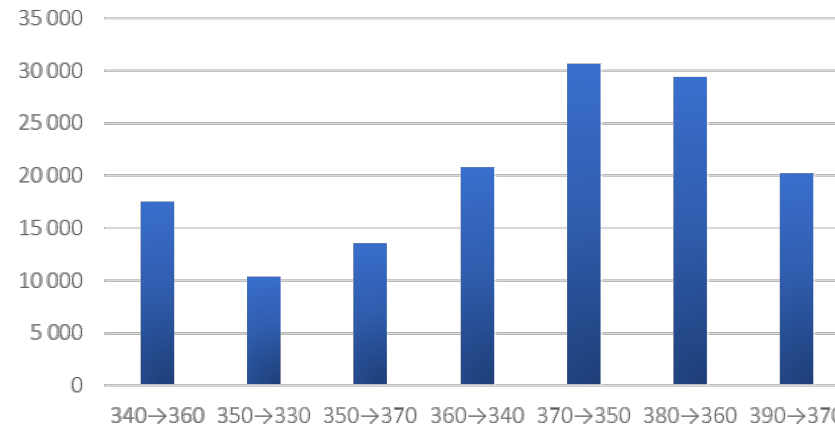


# 2024 Flight Plan Adherence

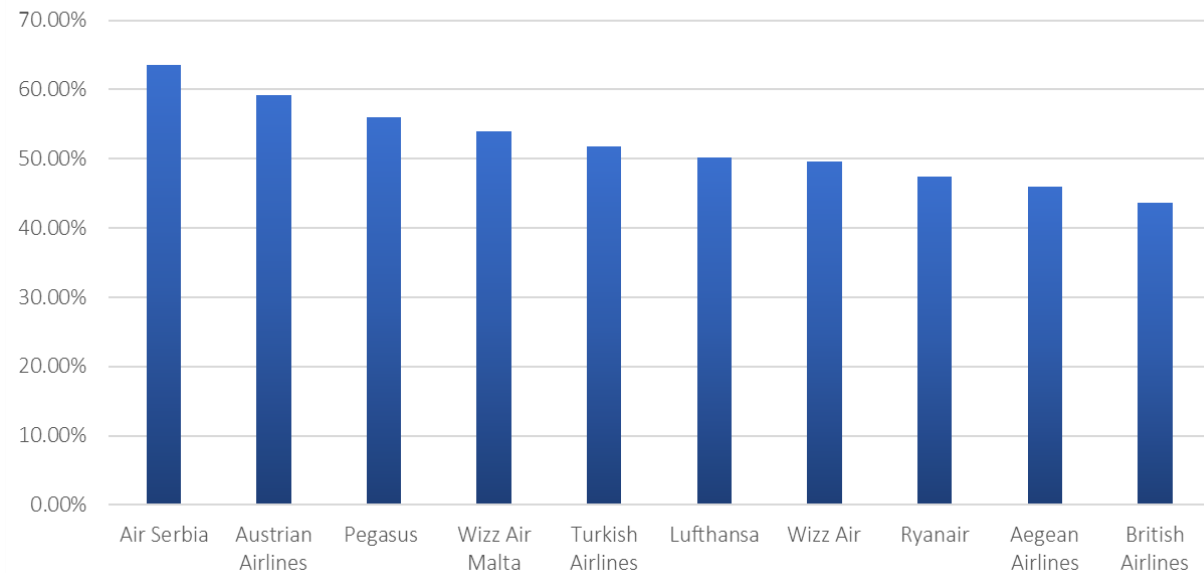
Share of LDZOCTA Flights with Entry/Exit FL Actual vs. Initial (2024)



2024 - Initial FL → Actual FL

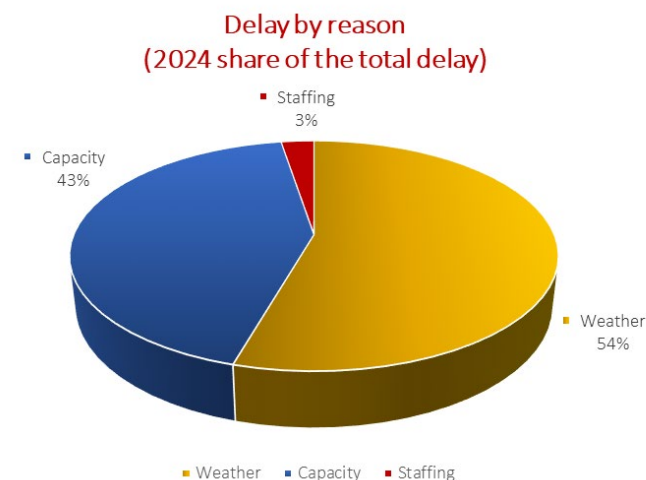
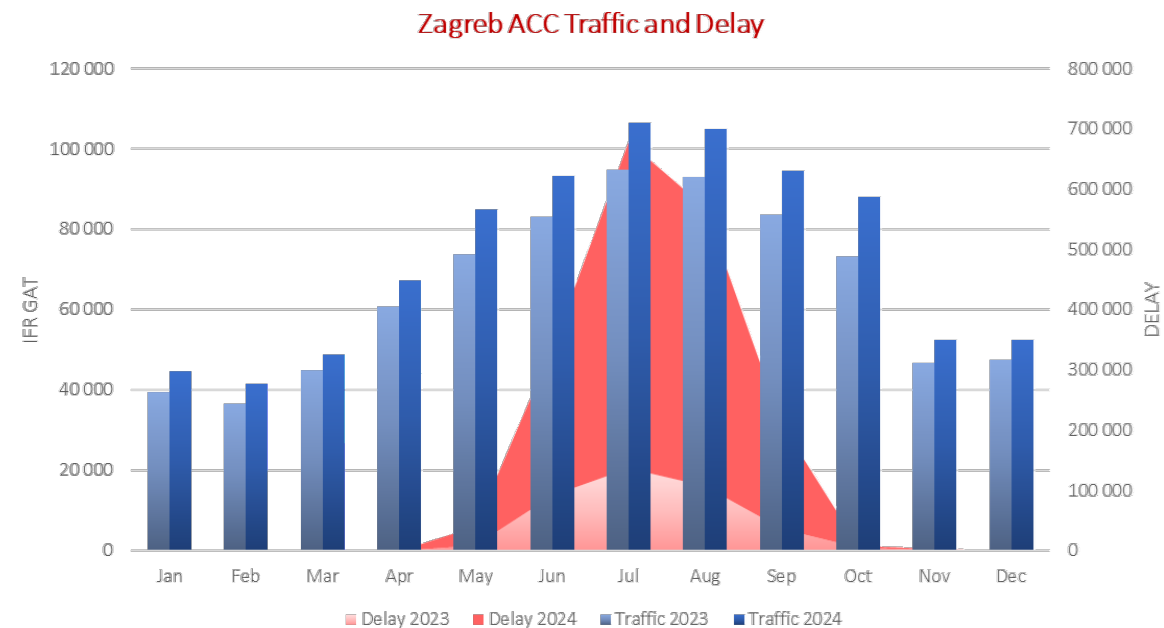


2024 - Air carrier with the highest share of flights with different Entry Actual FL from Initial FL



# 2024 Traffic and Delay Evolution

- 2024 CCL delay per flight = 1.59 min/flight
- Main capacity performance constraints:
  - Unpredicted traffic growth
  - Severe weather issues
  - Unforeseen staff shortage
    - High amount of sick leave
- State decision on demographic measures
- Training Organization need for Instructors for training new ATCOs
- Unexpected retirement scheme





# Croatia Control Improvements

## 2024

- Fully utilized Training Organization (40 ATCO students)
- Cross-border FRA operations SECSI FRA – FRAIT
- Change of lateral and vertical boundaries of TMAs
- New Military Training Areas (new MRCA)
- Change of ATS routes to RNAV routes
- New ATM System Functionalities (Implementation of Tactical Controller Tool (TCT) and Implementation of Blind Spot)
- Improved Rostering (12 rostering options/shifts)

## 2025

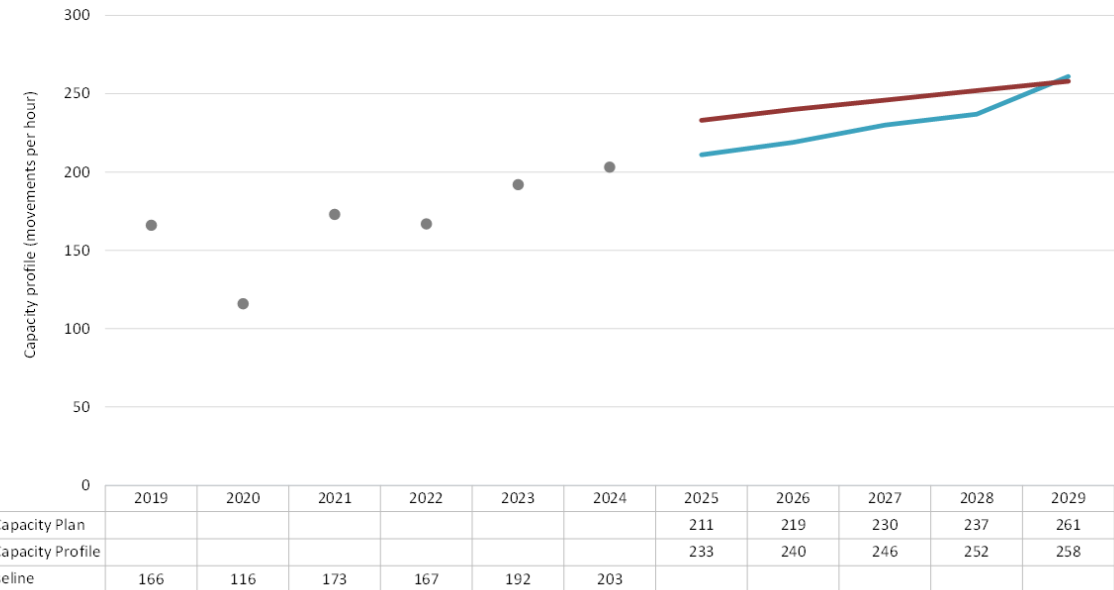
- New vertical distribution of Lower sectors (from FL325 to FL335)
- New Division FLs (New Upper sector FL335-FL365 and Upper High sector FL335-FL375)
- Vertical Frequency coupling – Double /Triple – more flexible dynamic sector management
- Horizontal Frequency coupling – Double – more flexible dynamic sector management
- Revision and increase of sector capacities
- New ATM System Functionalities (i.e. Implementation of Distance Based Separation Tool for LDZA)
- Additional 8 ATCO licenses

2019 Baseline	2022	2023	2024
TRAFFIC	+2%	+14%	+13%
SECTOR HOUR	-8%	+8%	+8%
THROUGHPUT/Hr	+11%	+6%	+8%

# Croatia Control Capacity Plan 2025 - 2029

Summer Capacity Plan					
	2025	2026	2027	2028	2029
<b>Free Route Airspace</b>	Further extensions according to ERNIP part II				
<b>Airspace Management Advanced FUA</b>	Improvement of CDM process and procedures ASM/ATS/ATFCM				
	Upgrade and extension of AMC portal				
	ASM Improvements for the purpose of state UAS operations				
	U – Space declaration				
	ASM and USSP (U-space service provider) integration				
<b>Airport &amp; TMA Network Integration</b>				Zadar training, extended APP and TWR centre	
<b>Cooperative Traffic Management</b>	Supporting tool for ATFCM				
<b>Airspace</b>	Adjustment of airspace structures according to the operational needs and traffic demand				
	Improved sectorisation and interface between LD LY LH			Implementation of TMA Adria airspace	
	Introduction of additional modular flexible structures at the request of STATE users (MIL)				
<b>Procedures</b>	Adjustment of procedures according to the operational needs and traffic demand				
	Procedure development and introduction of coordination procedures between ATS and USSP for the safe integration of UAS			Procedure development and introduction of coordination procedures between ATS and USSP for the safe integration of UAS	
		Implementation of additional procedures for STATE IFR RPAS integration to ATM			
<b>Staffing</b>	Optimization of manpower planning				
	Recruitment and training at maximum capacity				
	+8 (115)	+6 (121)	+6 (127)	+5 (132)	+8 (140)
<b>Technical</b>	Zadar training, extended APP and TWR centre - enhancement of service continuity				
				VOIP A-G	
	VoIP G-G			Implementation of new ATM system ATC One	
	Implementation of SWIM services			FF-ICE	
<b>Capacity</b>			Re-assessment of sector capacities according to new CAPAN study		Re-assessment of sector capacities according to new CAPAN study
<b>Significant Events</b>	MILEX Astral Knight		MILEX Astral Knight		MILEX Astral Knight
<b>Max sectors</b>	11	12	12	13	13

LDZOACC - Reference Capacity Profile



# Croatia Control *'Modus operandi'*

*Unexpectedly high traffic growth* in 2022, 2023, and 2024 (significantly higher than forecasted BASE scenario)

Requested to *plan summer capacities to the HIGH traffic* forecast with additional 'buffer'

Capacity gap occurs *during high peak demand* + with lot of *weather disturbance* impacting the South East Axis

*Airspace developments* (i.e. new CONFG and associated Rostering scheme)

*ATCO recruitment* 'catch-up' is progressing, as fast as possible

*Technology development/ATM System Upgrade*, new functionalities

'Modus Operandi' enabling improved *management of peak traffic and higher hourly throughput*