

SAFE SKIES.
SUSTAINABLE
FUTURE.



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Network Manager

Capacity Determination

Performance Driven Process at European Network Level





Performance and Charging Scheme

- Implemented over **Reference Periods (RPs)** (3-5 years)
- Union-wide targets set at the start of each RP for:
 - Safety
 - Environment
 - Airspace capacity
 - Cost efficiency
- Performance Plans by SES Member States align with Union-wide targets
- Monitoring & reporting by National Supervisory Authorities

25.2.2019 EN Official Journal of the European Union

(Non-legislative acts)

REGULATIONS

COMMISSION IMPLEMENTING REGULATION (EU) 2019/317

laying down a performance and charging scheme in the single European sky and repealing Implementing Regulations (EU) No 390/2013 and (EU) No 391/2013

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 549/2004 of the European Parliament and of the Council of 10 March 2004 laying down the fra mework for the creation of the single European sky (the fra mework Regulation) (t) and in particular Article 11(6) thereof.

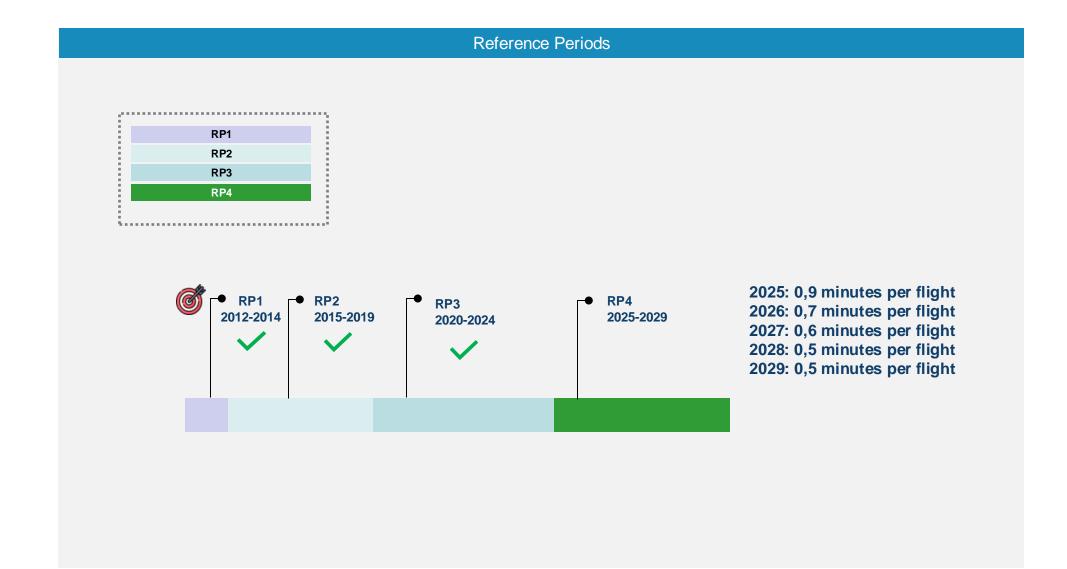
Having regard to Regulation (EC) No 550/2004 of the European Parliament and of the Council of 10 March 2004 on the provision of air navigation services in the single European sky (1), and in particular Article 15 (4) thereof,

Whereas

- The performance scheme referred to in Article 11 of Regulation (EC) No 549/2004 should improve the performance of air navigation services and network functions in the single European sky.
- (2) The charging scheme for air navigation services referred to in Article 15 of Regulation (BC) No 550/2004 is instrumental to the successful implementation of the performance scheme and should therefore complement it. The charging scheme should contribute to greater transparency in the determination, imposition and enforcement of charges to airspace users and should contribute to the cost efficiency of providing air navigation services and to efficiency of fights, while maintaining an optimum stakely level. The charging scheme should be consistent with the Eurocontrols charging system for or tout charges and with Article 15 of the 1944 Chicago Convention).
- (3) In the interest of clarity, and in order to provide for an adapted regulatory framework for the third reference period of the perform nos scheme, it is necessary to revise the implementing rules governing the performance and charging schemes contained in Commission Implementing Regulation (ED) No. 399(2013) ?) and Commission Implementing Regulation (ED) No. 391/2013 (?) and to consolidate these provisions in a single Implementing Regulation.



⁽c) 01.96, 113.2004, p.1. (c) 021.89, 123.204, p.1. (c) 021.89, p





Capacity Drivers



02

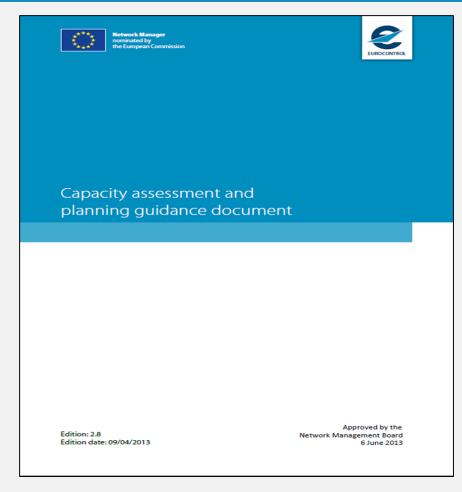
Capacity Assessment

CAPAN Methodology





Consolidated Capacity Assessment Guidance Material



"Provide sufficient capacity to accommodate the demand in typical busy hour periods without imposing significant operational, economic or environmental penalties under normal circumstances."





STATFOR traffic forecasts

Delay Target (Performance Scheme)

Fast-time simulation
Capacity Baseline
Assessment

Fast-time simulation Future Capacity Requirement

Economic Model

Capacity Requirement
Profiles

1

2

3

4

Capacity Baseline

Current available capacity

Demand Prediction

Future demand over the next 5 years

Performance Prediction

Economic Analysis

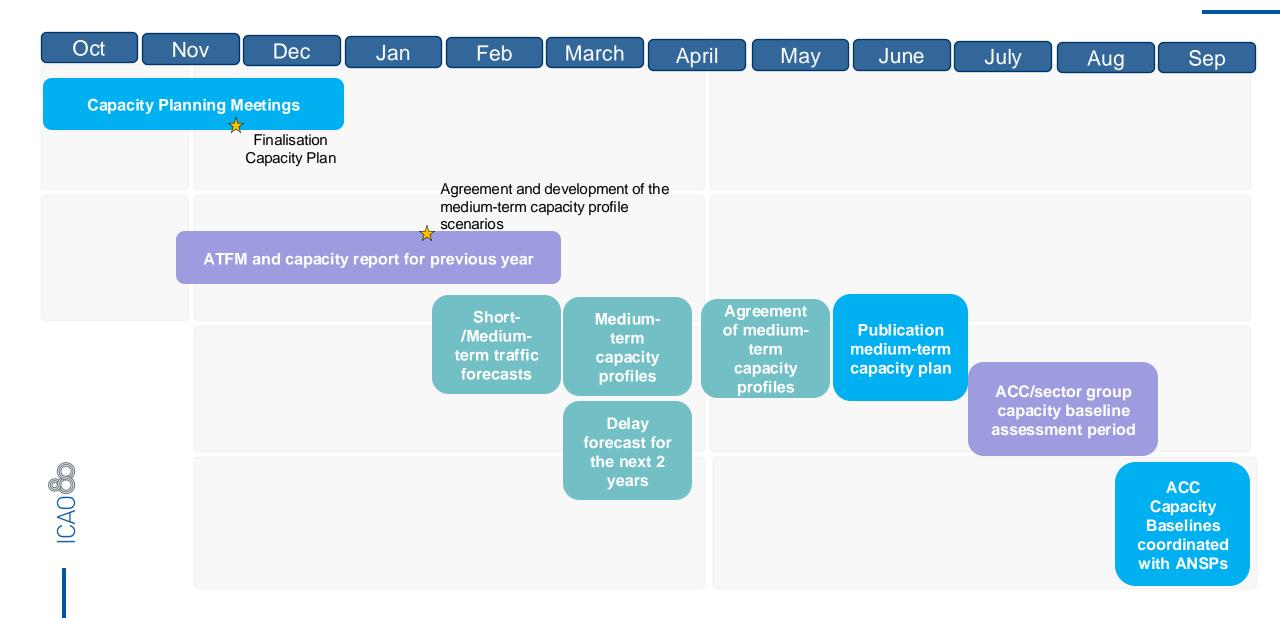
Capacity vs. Delay

Capacity Requirements Profile

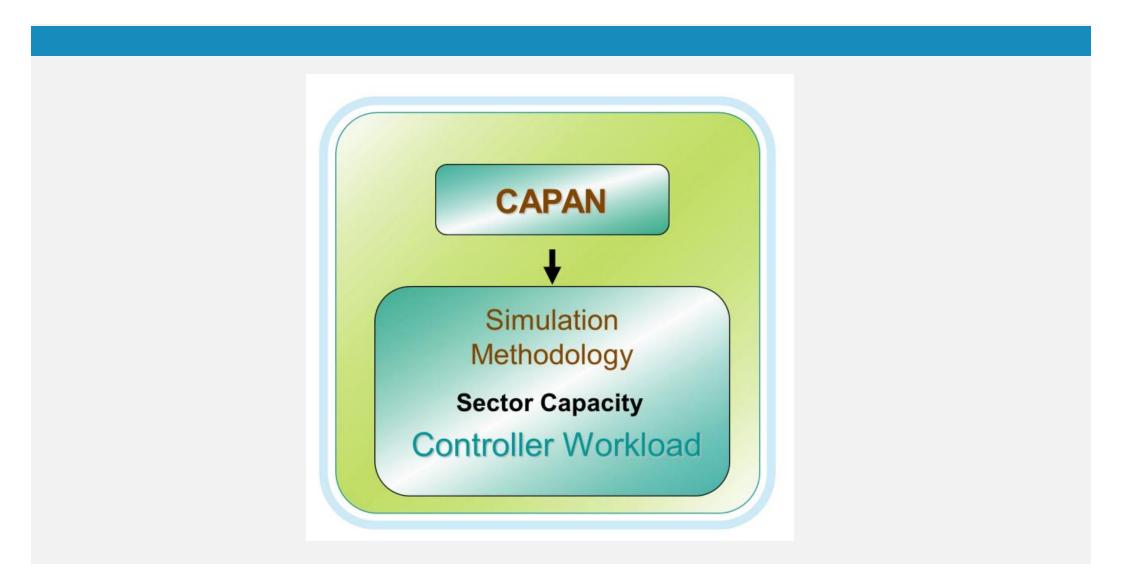
Definition of 5-year Capacity Profile



Capacity Planning Timeline



CAPAN Methodology





Example of ATC Tasks recorded

GAPLI sector

EC = Executive Controller PC = Planning Controller

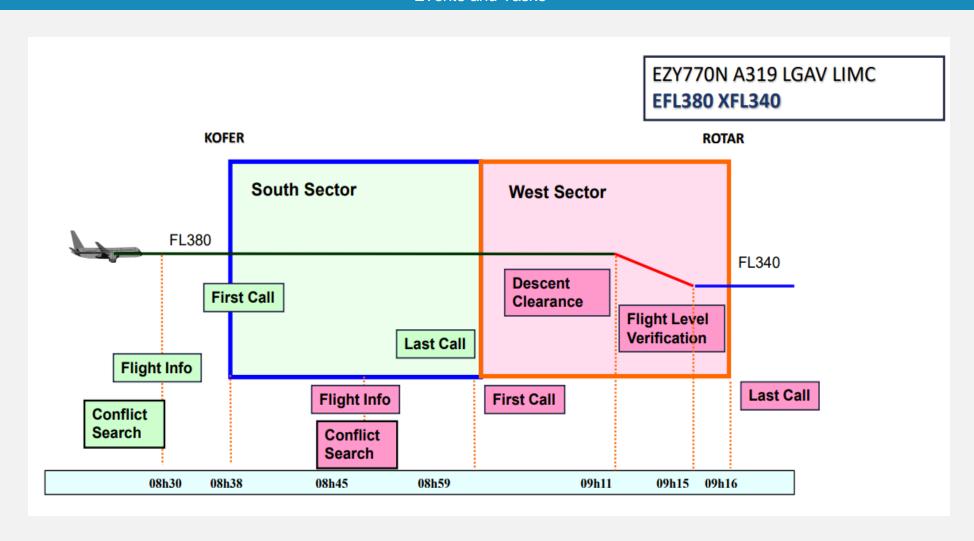
TIME	TASK	Definition WORKLOADS	(Se	(Seconds)		
02:47	1	Acknowledge of a new flight	PC	1		
03:03	44	Receipt of a flight progress strip	PC	7		
03:04	51	Routine conflict search to establish sector planning clearance	EC	5	PC	8
03:17	66	First call from an a/c entering the airspace of a new ACC	EC	10	PC	5
03:17	64	Additional R/T for a traffic entering from oceanic airspace	EC	18		
03:44	72	Last R/T message to an a/c leaving the sector	EC	10	PC	5
03:44	74	Propose radar transfer	EC	3		
03:44	45	Removal of the flight progress strip	PC	2		

TAKAS sector

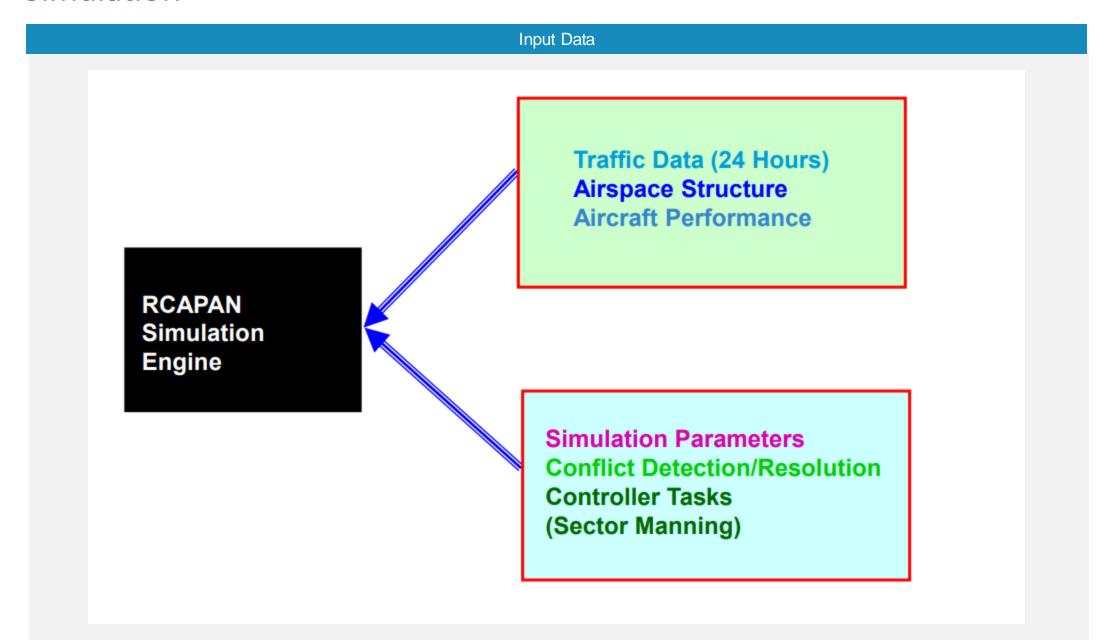
TIME	TASK	Definition WORKLOADS	(Se	(Seconds)		
03:12	44	Receipt of a flight progress strip	PC '	7		
03:33	51	Routine conflict search to establish sector planning clearance	EC !	5	PC	8
03:41	18	ACT message monitoring in the last sector	PC 4	4		
03:43	75	Assume radar transfer from the previous sector of the same ACC	EC 3	3		
03:44	67	First call from an a/c entering another sector of the same ACC	EC :	10	PC	4
03:50	71	R/T instruction to an a/c to comply with a new planning clearance	EC :	16	PC	3
03:53	69	Report of an a/c on reaching a specified level	EC (6	PC	3
03:55	72	Last R/T message to an a/c leaving the sector	EC :	10	PC	5
03:55	74	Propose radar transfer	EC 3	3		
03:54	45	Removal of the flight progress strip	PC 2	2		



Events and Tasks

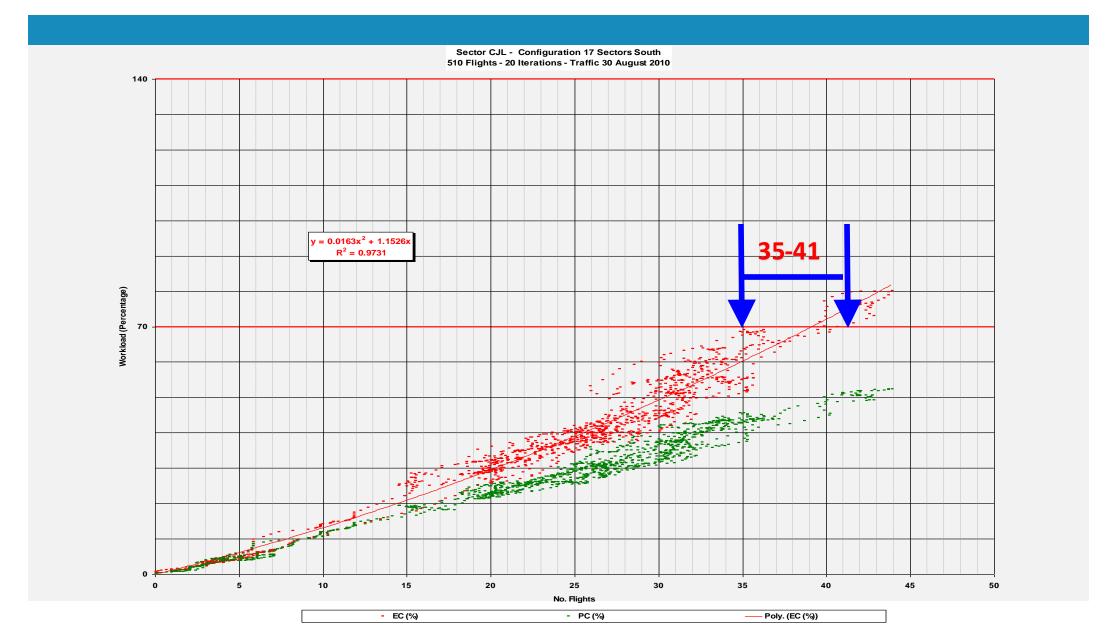


Simulation



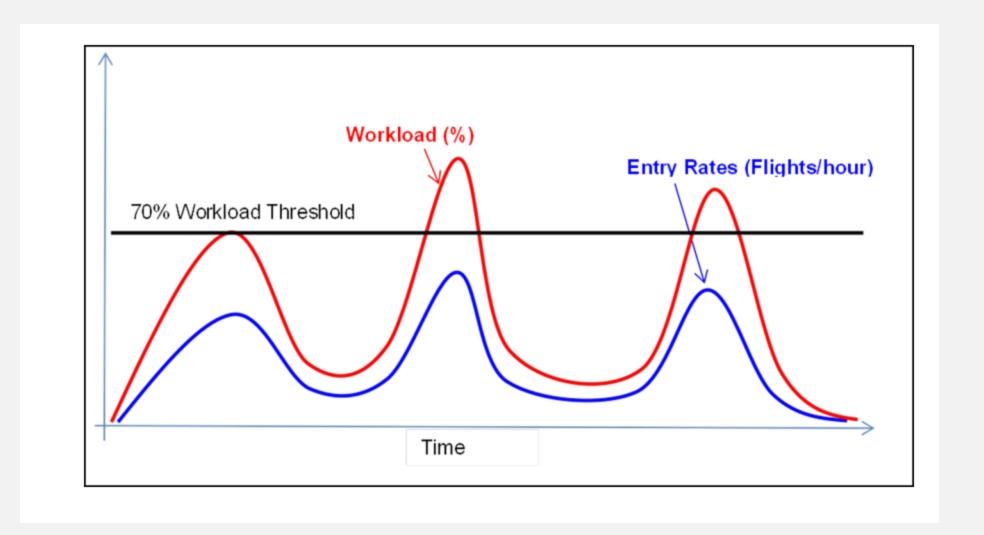


Simulation Results

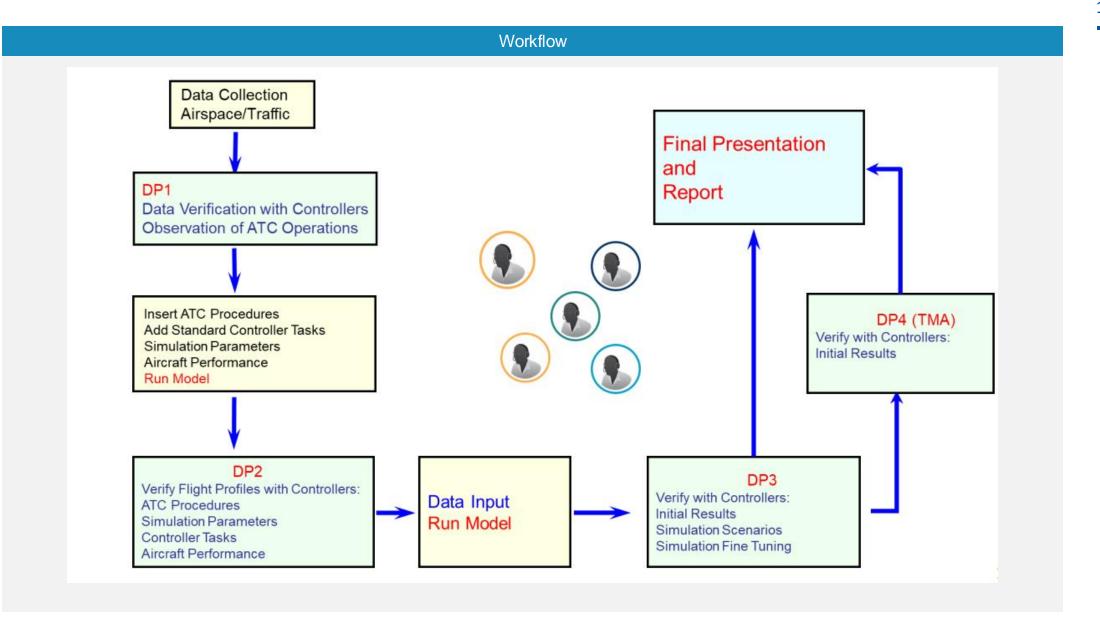




24 Hours Behaviour

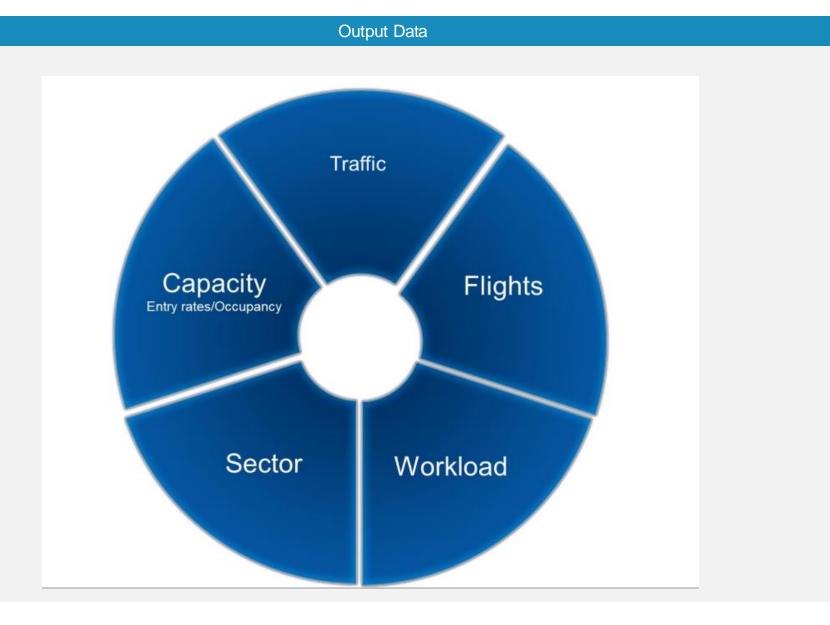








CAPAN Simulation







Capacity Planning and Traffic Outlook

Documentation and Information Sharing





Documentation

Network Operations Plan



- A strategic five-year plan aligning operational improvements with SES goals.
- Enhances efficiency, capacity, and resilience of the European air traffic network.
- Developed with air navigation service providers (ANSPs), airports, and airlines.
- Focus on traffic forecasts, capacity planning, and mitigation measures.



Documentation

Rolling Seasonal Plan



- COVID-19 required real-time NOP updates
- •A short-term operational outlook.
 - 8-week traffic & 6-week capacity outlook
- NDOP Teleconference every Monday
- Provides a detailed, tactical view of network operations.
- Includes traffic demand, capacity constraints, weather impact, and mitigation actions.
- Updated regularly to support real-time decision-making.

Traffic Outlook Data

Traffic outlook

• 2 files

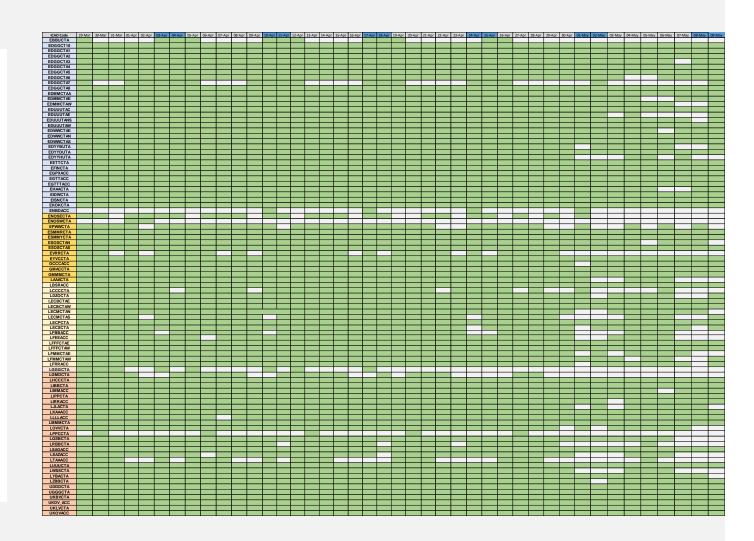
Sector openings

- 2 with planned
- 2 with maximum

Configurations and Capacities

Provided by ANSPs

- 4 simulations
- 90 ACCs







Thank You

ICAO Headquarters Montréal European and North Atlantic (EUR/NAT) Office Paris

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Western and Central African (WACAF) Office Dakar

> Asia and Pacific (APAC) Office Bangkok

Asia and Pacific

Beijing

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Eastern and Southern African (ESAF) Office

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