



Crosspolar / TransEast Route ATM Providers Group Meeting (CPWG/28) State ATM Corporation Overview

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HEAD OF MAIN ATM CENTER OF RUSSIA – DEPUTY DIRECTOR GENERAL



NOVEMBER 2020



State ATM Corporation

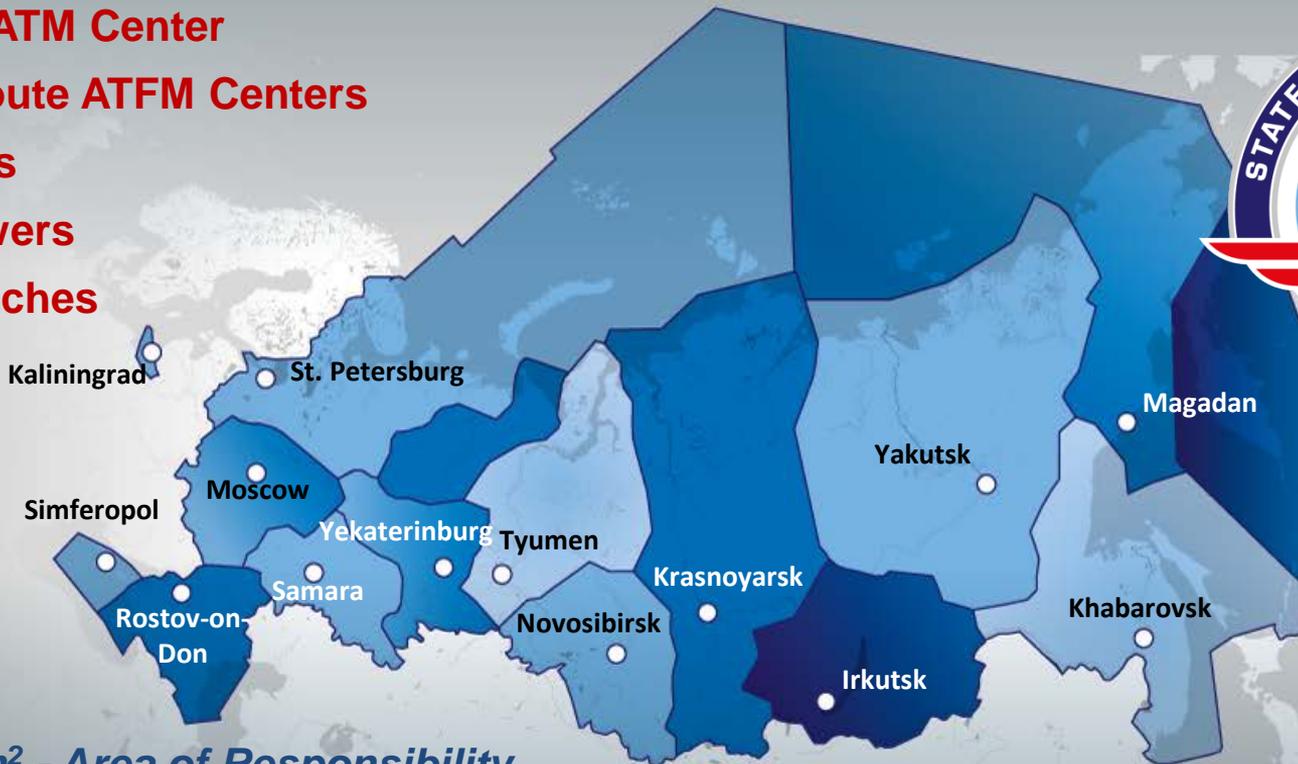
1 – Main ATM Center

7 – En-Route ATFM Centers

20 – ACCs

227 – Towers

19 – Branches



26 mln km² - Area of Responsibility

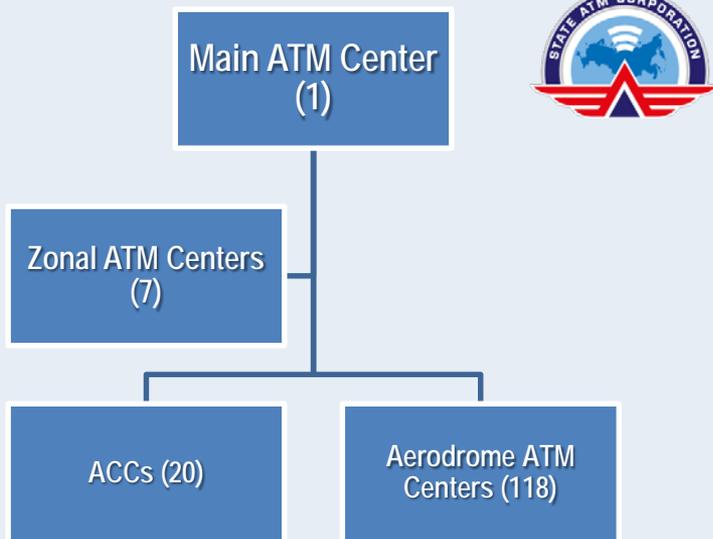
21 - Neighboring States



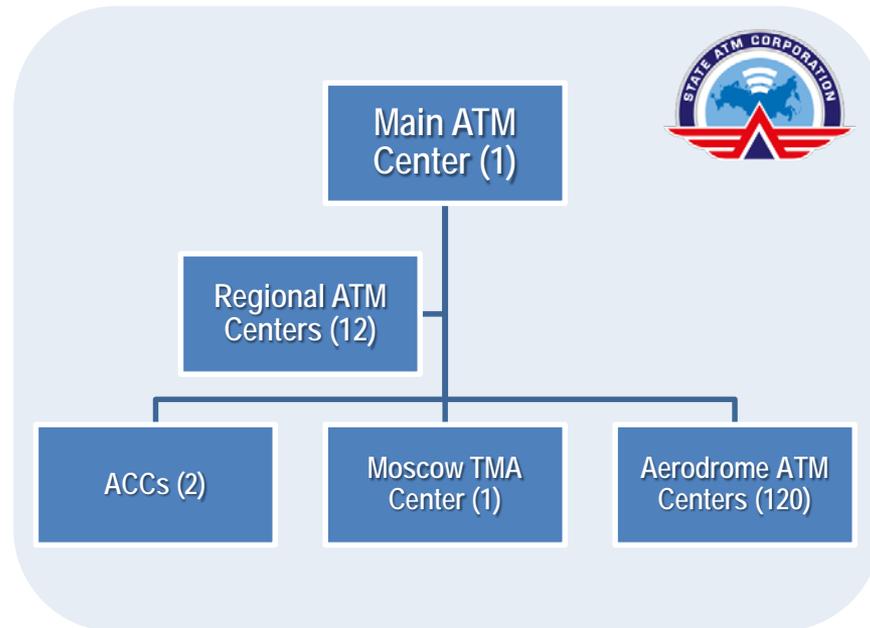
ATM System Structure in 2020/2021

Federal Aviation Transport Agency
(FATA)

ATM Centers in 2020



ATM Centers in 2021

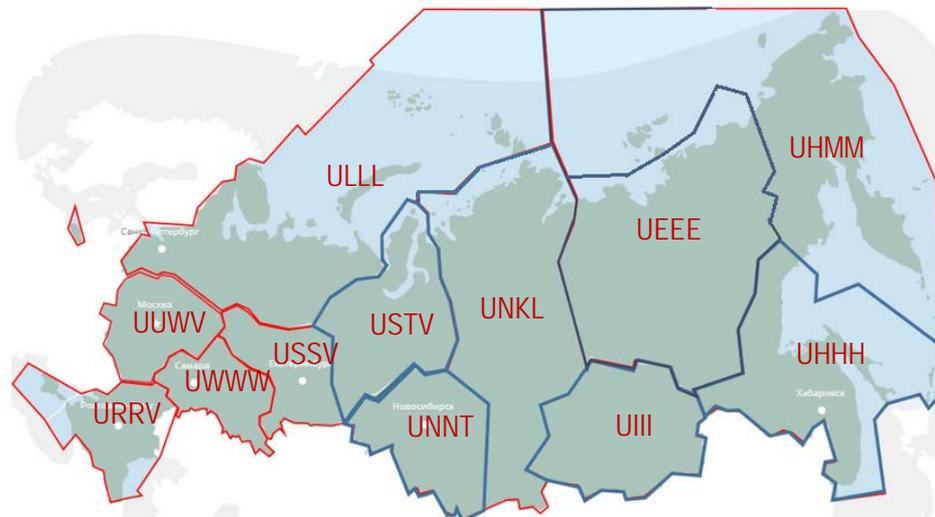
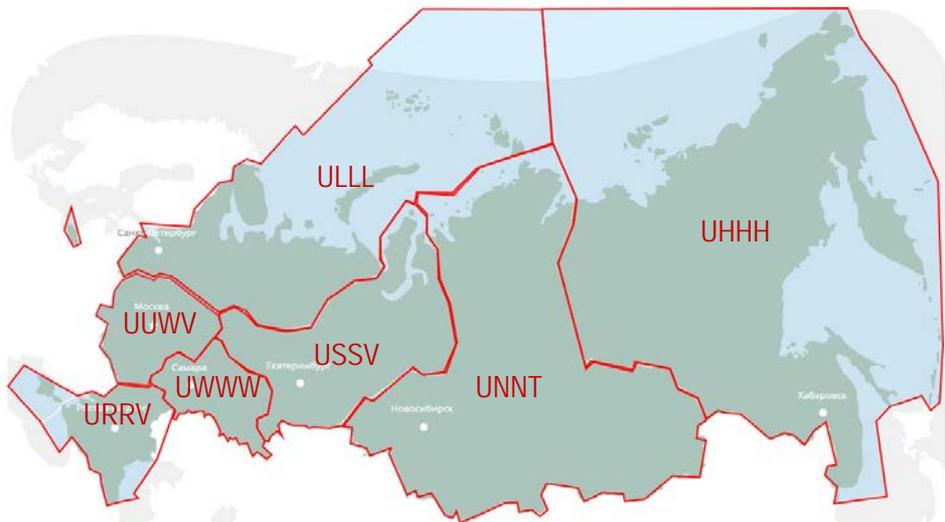




ATM System Structure in 2021

7 Zonal ATM Centers in 2020

12 Regional ATM Centers in 2021





Traffic Density in 2019

2019

IFR Flights



Growth (comp. to 2018) **+8.6%**



Transit

17%



DEP / ARR

83%



International

49%



Domestic

51%



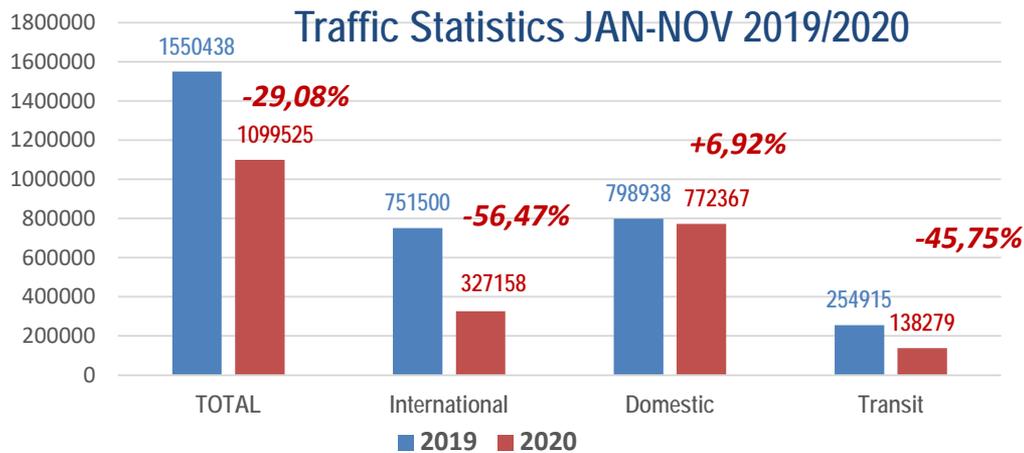
AS Users

>1600

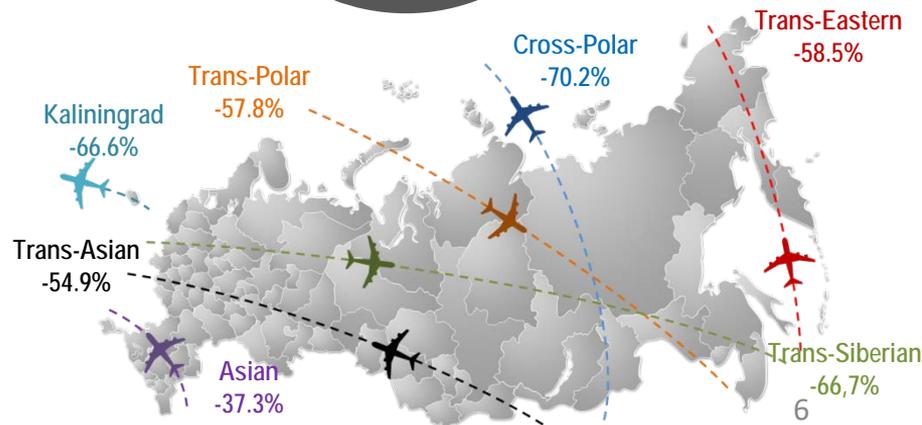
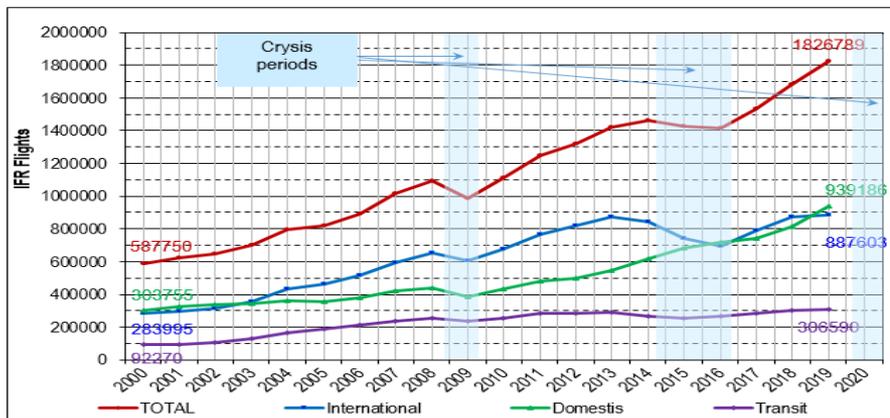
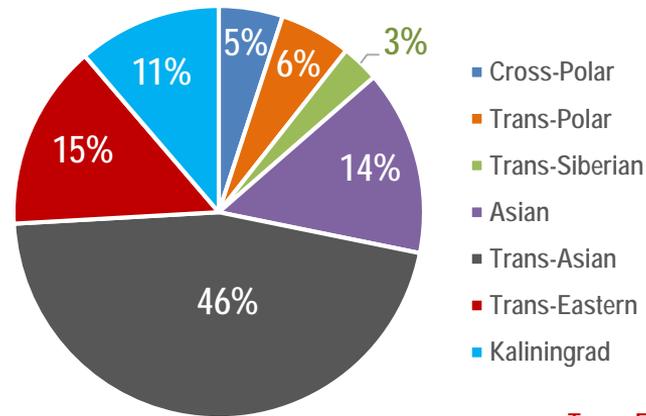
1 826 789 IFR Flights



Traffic Density JAN-NOV 2019 / 2020



Traffic Breakdown by Major ATS Routes in 2020





ATS Routes

Changes of ATS Routes in 2011-2020:



As of November 2020 the total numbers of ATS routes increased to **1 078** (888 761 km), including:

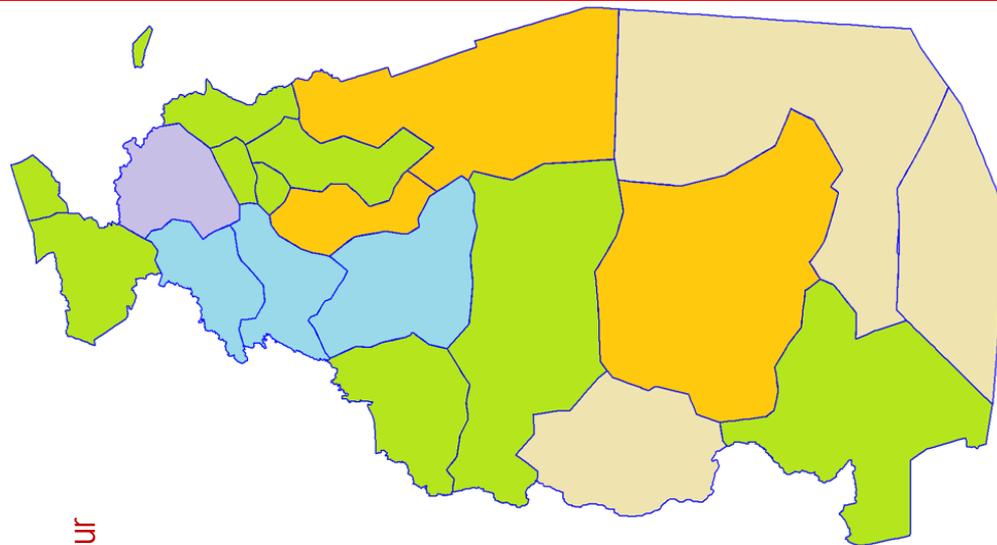
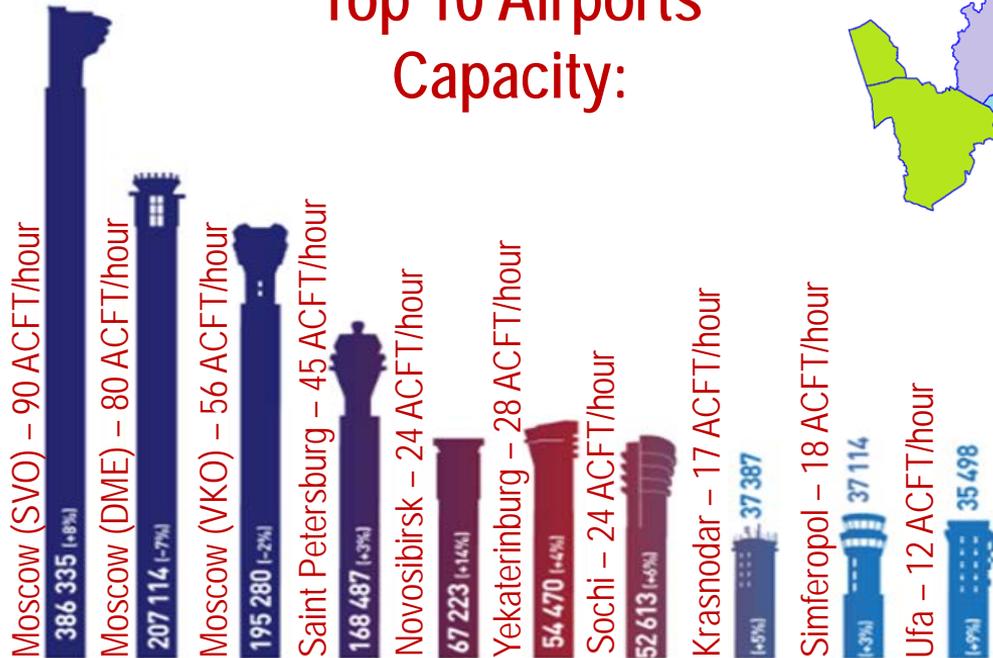
- International airways – **634** (499 642 km)
- Domestic routes – **265** (133 077 km)
- RNAV routes – **179** (256 042 km)

- ✓ The new transit ATS routes are being implemented in a close coordination with Russian carriers, international airlines and IATA as well as neighboring States at various intentional forums such as RDGE, Eurasia Coordination Council and CPWG.
- ✓ Brand new international RNAV routes were implemented above FL265 in the upper airspace of the Russian Federation.
- ✓ Work is in progress to establish conditional routes in the Russian Federation.

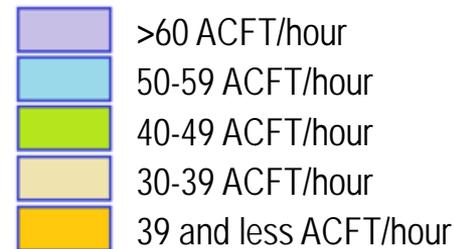


ACCs & Top 10 Airports Capacity

Top 10 Airports Capacity:



ACCs Capacity:





New Airspace Structure (03 DEC 2020)

New Airspace structure will be implemented on **03 DEC 2020 within 10 FIRs:**

Moscow (UUWV), Arkhangelsk (ULAA), Vologda (ULWW), Yekaterinburg (USSV), Kotlas (ULKK), Rostov-na-Donu (URRV), Samara (UWWW), Sankt-Peterburg (ULLL), Syktyvkar (UUYU), Tyumen (USTV).

Moscow FIR:

- 23 ACCs Sectors
- 21 TMA Sectors (Arrival/Departure Sectors for 3 Moscow airports - SVO, VKO, DME)
- STAR Point Merge for 3 Moscow airports
- Moscow FIR Capacity will be **increased by 1.8**





New Airspace Structure (03 DEC 2020)

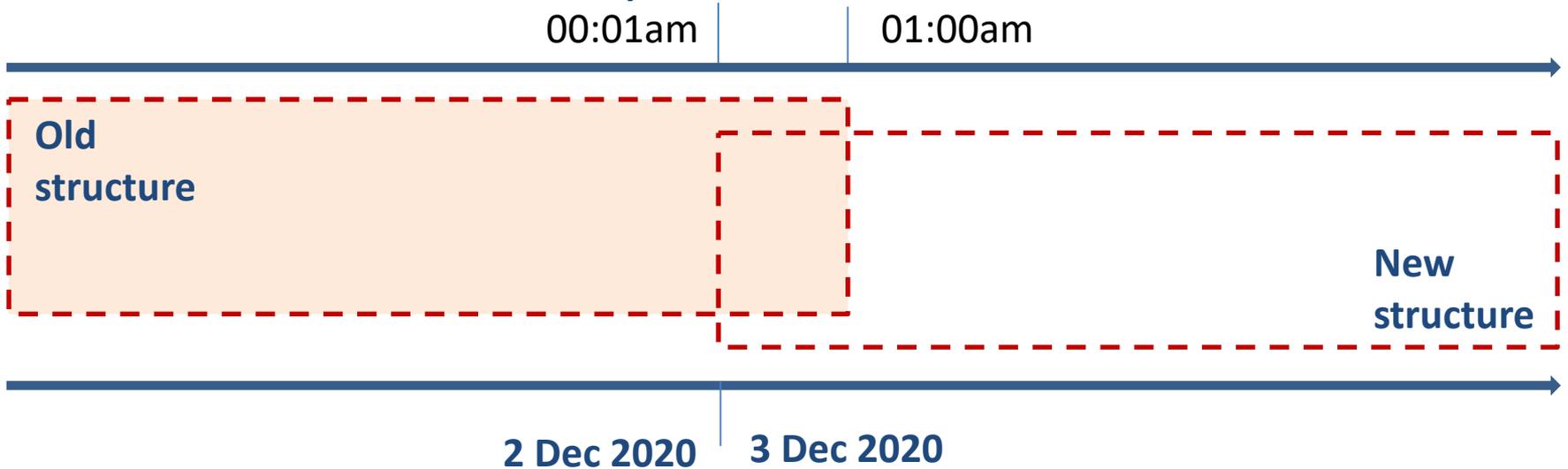
Ten days prior to the transition date, the Main ATM Centre plans to prepare and submit for issuance the following NOTAM:

Due to the implementation of the new airspace structure in ULLL, UUWV, URRV, UWWW, USSV FIRs, we recommend filing flight plans for aircraft planned to be operating in ULLL, UUWV, URRV, UWWW, USSV FIRs between 00.00 and 06.00 UTC on 03.12.2020 in advance with account taken of the new airspace structure. Due to potential route extension and vectoring by ATS units, we also recommend providing for an extra fuel allowance.



New Airspace Structure (03 DEC 2020)

If an FPL is filed before 01.00 UTC on 03.12.2020 for an aircraft planned to be operating in ULLL, UUWV, URRV, UWWW, USSV FIRs before 06.00 UTC on 03.12.2020 – the FPL shall be accepted according to the old airspace structure or to the new airspace structure. If an FPL is filed at 01.01 UTC on 03.12.2020 or later – FPLs with the old structure shall not be accepted.





New Airport Structure

Operational efficiency of the new airspace structure:

- Reduce number of radio communications with aircraft crews.
- Mitigate flight safety risks related to excessive controller workload.
- Reduce arrival delays due to excessive maneuvering at the approach area.
- Provide redundant ATM capacity when sequencing arrivals.
- Provide opportunities for implementation of brand-new smart technologies to manage arrival and departure traffic flows.

Under implementation
at 7 airdromes

Transition to QNH
and feet

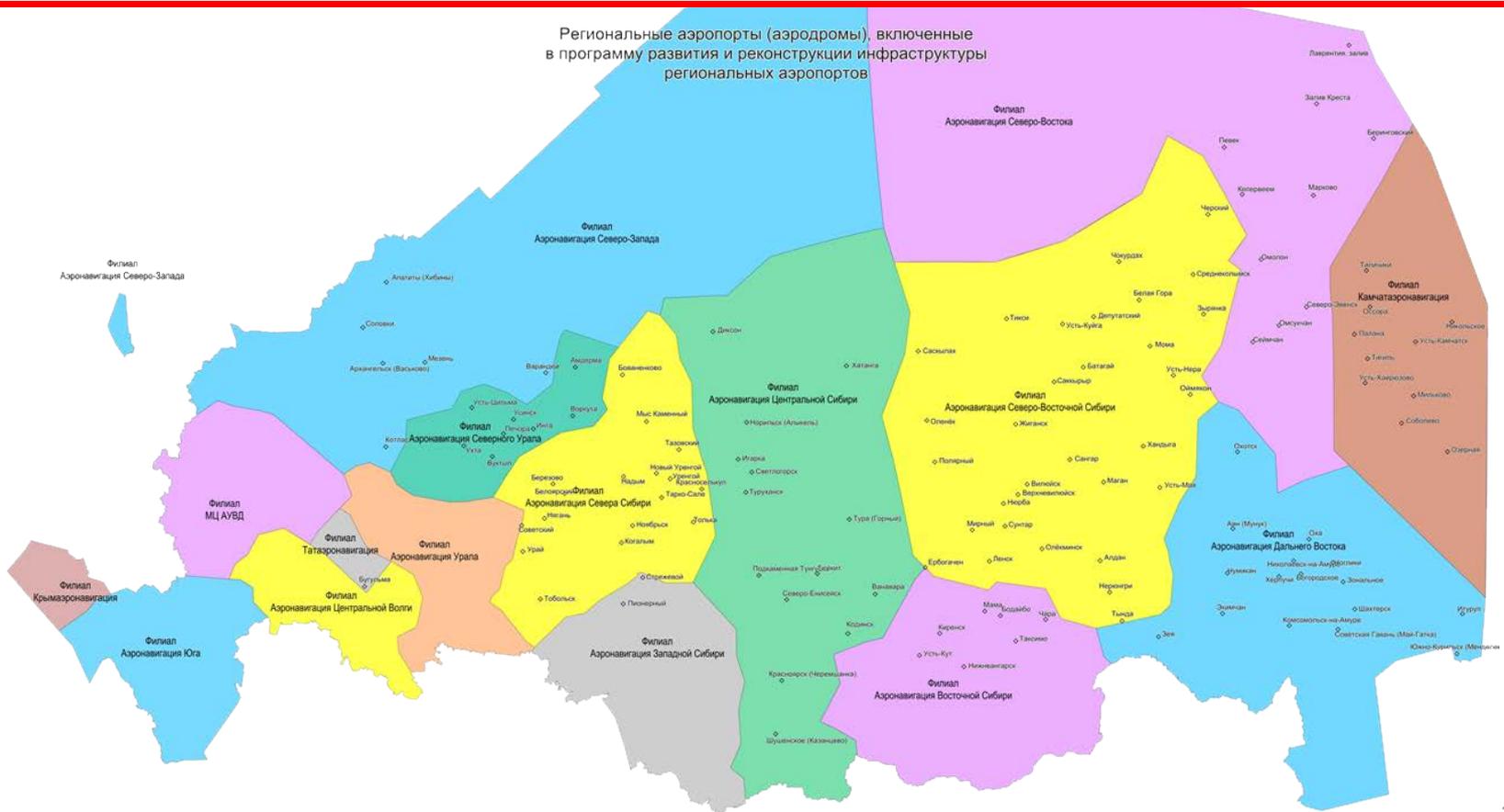
Implemented
at 5 terminal
areas

After
introduction of
the new airspace
structure QNH
will be
implemented at
50 airdromes



Development of Regional Aerodrome Network

Региональные аэропорты (аэродромы), включенные в программу развития и реконструкции инфраструктуры региональных аэропортов



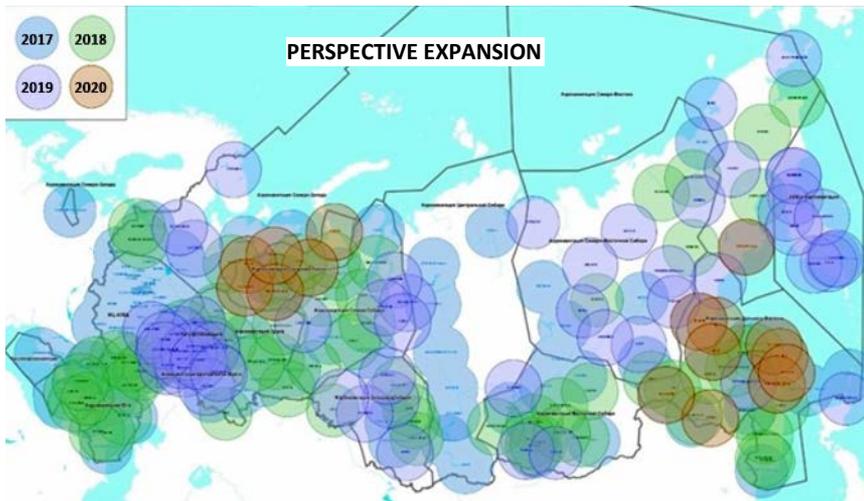


NAVAIDS

VORDME, DVORDME, DME:

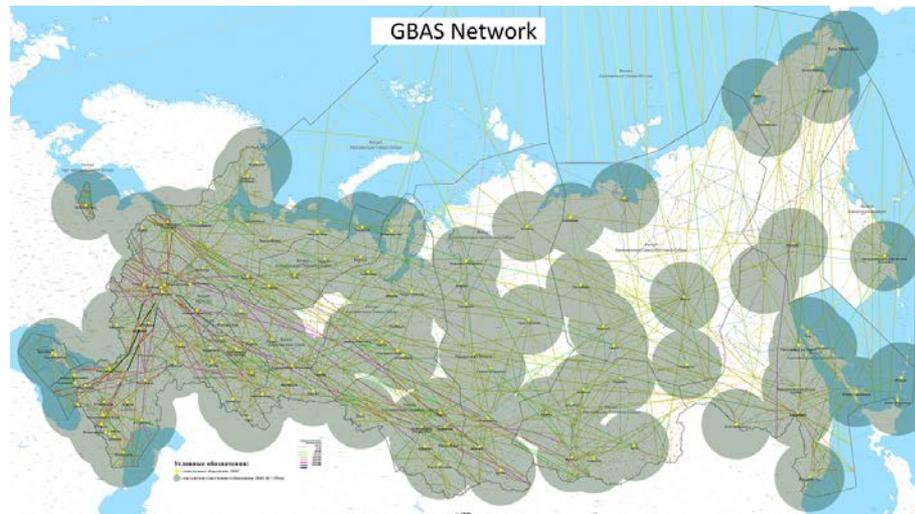
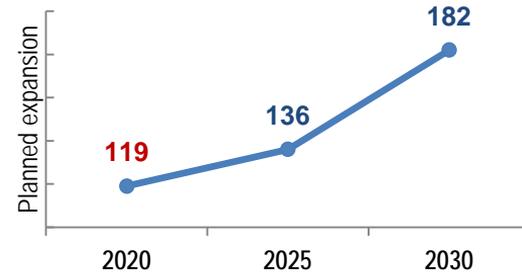
As of 2020 – **139**:

- ✓ VORDME – 43
- ✓ DVORDME – 29
- ✓ DME – 67



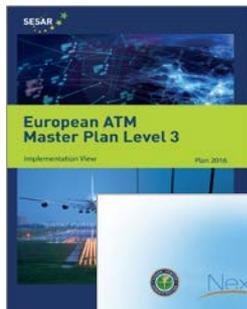
GBAS:

As of 2020 – **121**
(planned - 119)





Free Route Airspace



Performance-based navigation (PBN)

- En-route:
2019 – 2022
- Terminal:
2019 – 2025

Flexible Use of Airspace (FUA)

- Stage 1:
2019 – 2021
- Stage 2:
2021 – 2023

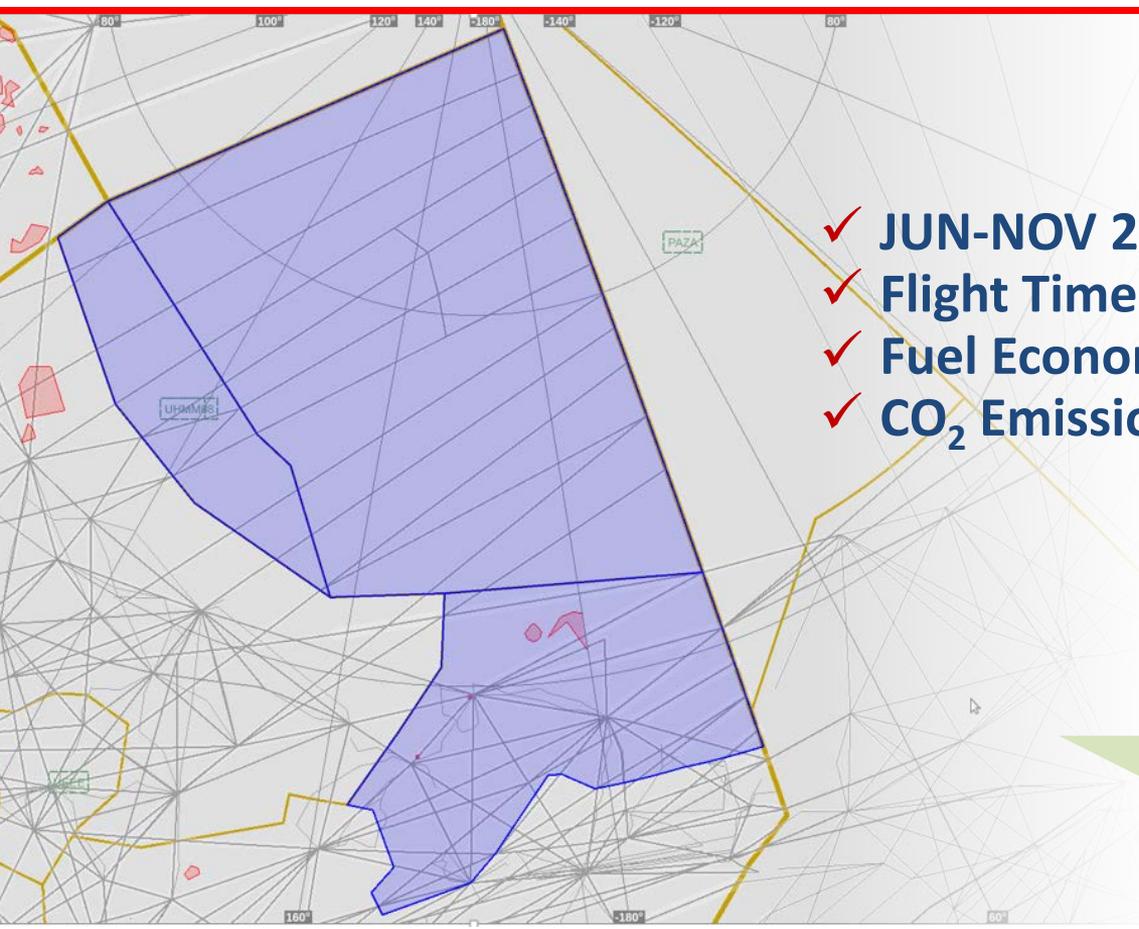
Free Route Airspace (FRA)

Pilot Projects:
2019 – 2022

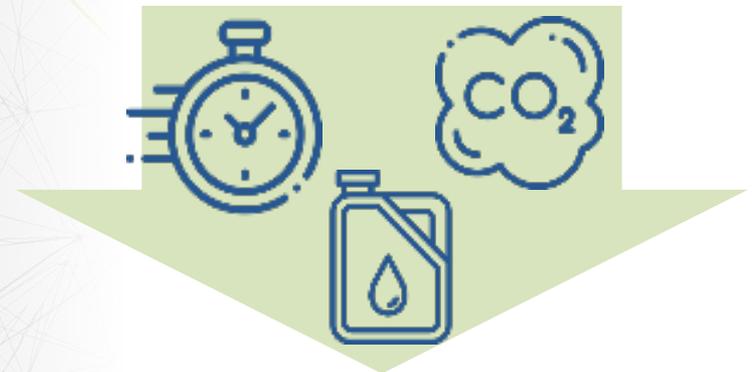




Free Route Airspace (Magadan FIR)



- ✓ JUN-NOV 2020 **294 Flights** (8 Airlines)
- ✓ Flight Time Economy **3-10 minutes**
- ✓ Fuel Economy **800-1267 kg**
- ✓ CO₂ Emissions decreased on **2460-3992 kg**





Remote Air Traffic Services



Develop concept for remote ATS at Russian airdromes.



Experimental implementation at a candidate airdrome.



Develop a roadmap for transition to remote ATS at selected airdromes.

Implementation criteria

Safety risk assessment

Business model





UAV Integration



Develop UAV management system and create digital services.

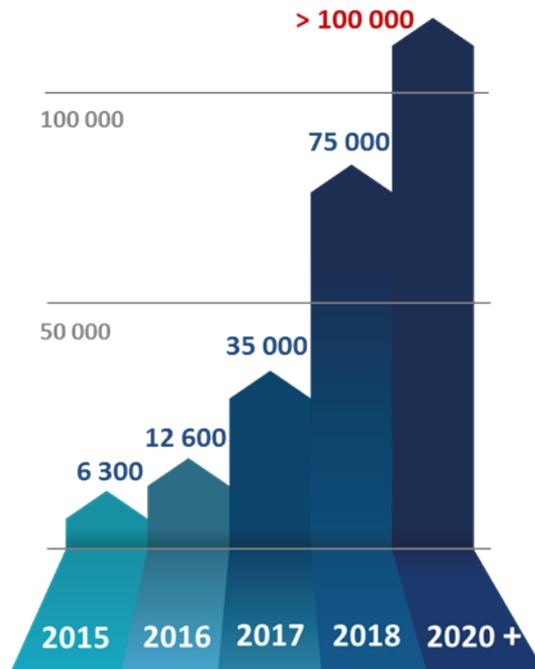


Develop UAV flight procedures in the single airspace.



Develop new methodology and training programs for ATM personnel .

Issuance of airspace utilization approvals for UAVs in Russia





CONDITIONAL ROUTES

ENR 3.1.1-28
07 NOV 19

BOOK 1

AIP
RUSSIA

1	2	3	4	5	6
A 245 ▲ ANAKA 450008N 0372050E ▲ ARNAD 452100N 0363848E	298°/118° 67.3	<u>FL160⁽¹⁾</u> <u>FL330</u> FL060 FL170	10	↓ ↑	Rostov ACC FREQ: 122.900 MHz
		<u>FL430⁽¹⁾</u> FL340 1200 M			

Note:

Эшелоны ⁽¹⁾ используются по согласованию с органом ОВД.
 Flight levels ⁽¹⁾ are AVBL on co-ordination with ATC unit.



CONDITIONAL ROUTES

[Home](#) > [ATS Route Availability Schedule](#)

[Russian version](#)

ATFM Unit Q	ATS Route A245 Q	Segment		Level		Date dmm UTC		Time hhmm UTC	
		1	2	from	to	from	to	from	to
URRV	A245	ANAKA-ARNAD	ARNAD-ANAKA	F060	F160	0806	0806	0000	2359
URRV	A245	ANAKA-ARNAD	ARNAD-ANAKA	F340	F430	0806	0806	0000	2359
URRV	A245	ANAKA-ARNAD	ARNAD-ANAKA	F410	F430	0906	0906	0900	1900

2	Level		Date dmm UTC		Time hhmm UTC	
	from	to	from	to	from	to
ARNAD-ANAKA	F060	F160	0806	0806	0000	2359
ARNAD-ANAKA	F340	F430	0806	0806	0000	2359
ARNAD-ANAKA	F410	F430	0906	0906	0900	1900

You can access to our new service via the following link:

http://app.matfmc.ru/AgreedRoutesView/routes_en.aspx



www.gkovd.ru