

# The operation of airlines and expectation under FUA

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*AIRCHINA*

*Beijing, 2024.11*



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1. Operating route network of AIRCHINA
2. Examples of route optimization
3. Expectation for FUA



# 01



## Operating route network of AIRCHINA

## FLEET SIZE

As of Oct 2024

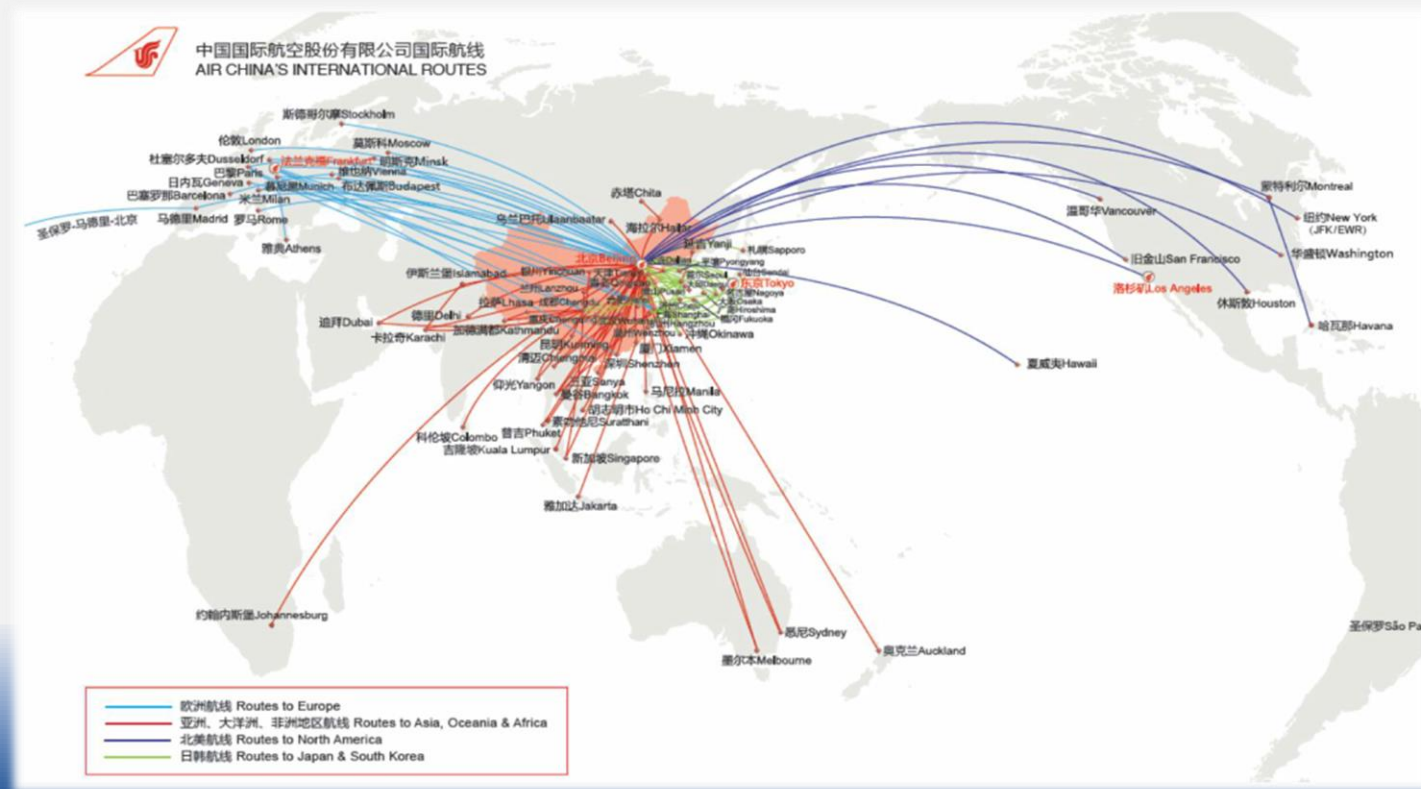
- There are **528** aircrafts in service. (include Dalian Airlines, Air China Inner Mongolia, Beijing Airlines)
- Air China has built the wide body aircraft fleet for international operations (B777, B787, A350 and A330 are the main models).



# Operating route network of AIRCHINA



## As of Oct 2024



■ More than **120**  
International routes  
and 70 cities

■ More than **378**  
domestic routes  
and 118 cities

■ More than **515**  
routes

# Operating route network of AIRCHINA

A photograph of several Air China aircraft tails lined up on a tarmac. The tails are white with a large red phoenix logo. The aircraft are parked in a row, and the background shows a clear sky and some airport infrastructure.

- Weekly international flights: about 1500

- Weekly domestic flights: about 9400

- 5 countries and 12 airports in America

- 14 countries and 20 airports in Europe

As of **Oct 2024**

# 02



## Examples of AIRCHINA's operation optimization



## DEPARTURE

Select the optimal departure procedure based on the direction of operation and policies

## DOMESTIC ROUTES

Choose appropriate entry and exit points as well as scheduled flight routes



## INTERNATIONAL ROUTES

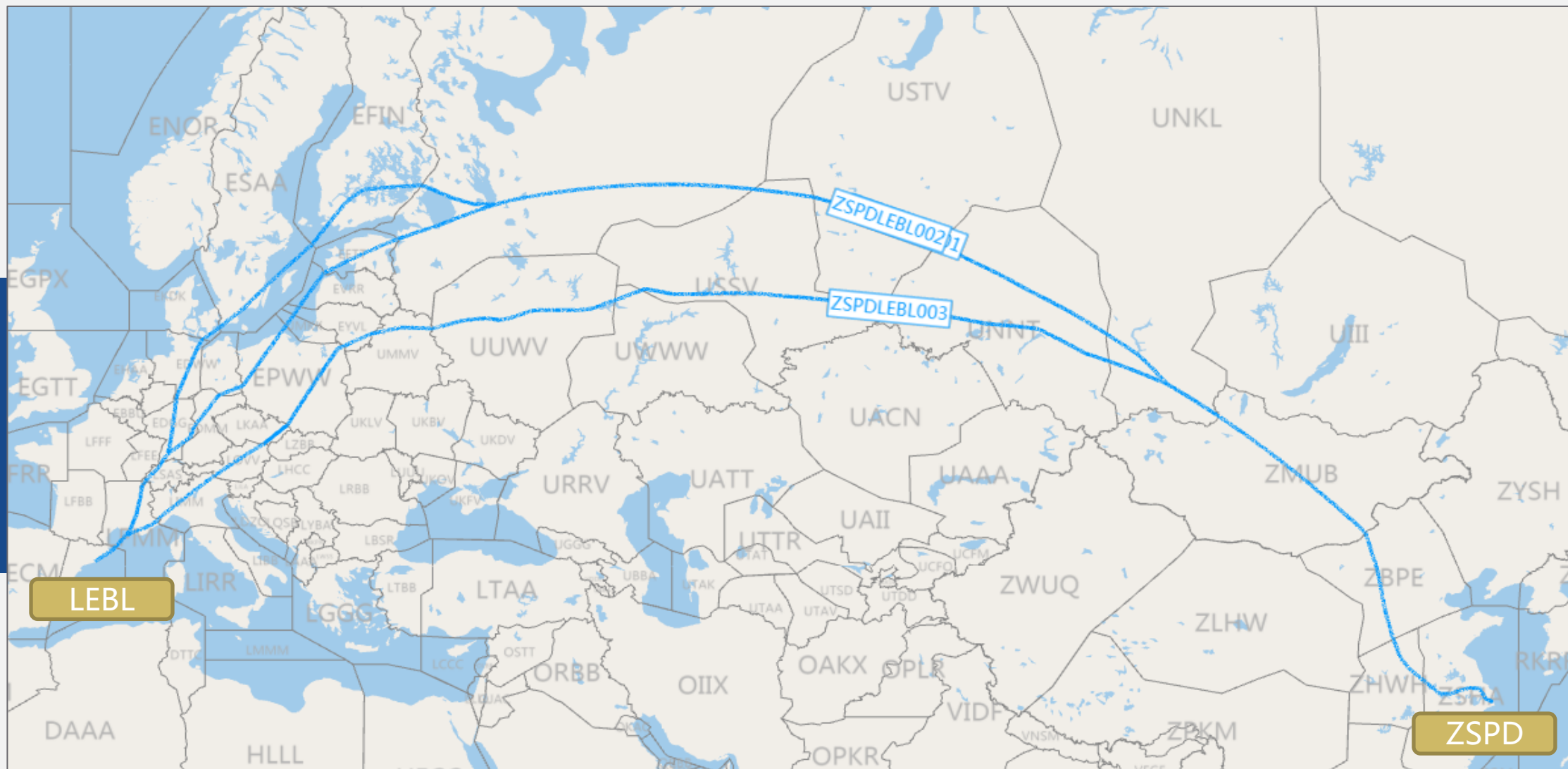
distance, countries, operational policies, temporary restrictions, payload, weather...

## ENTRY AND APPROACH

The direction of entry and the connection of procedures



# Examples of ZSPD-LEBL



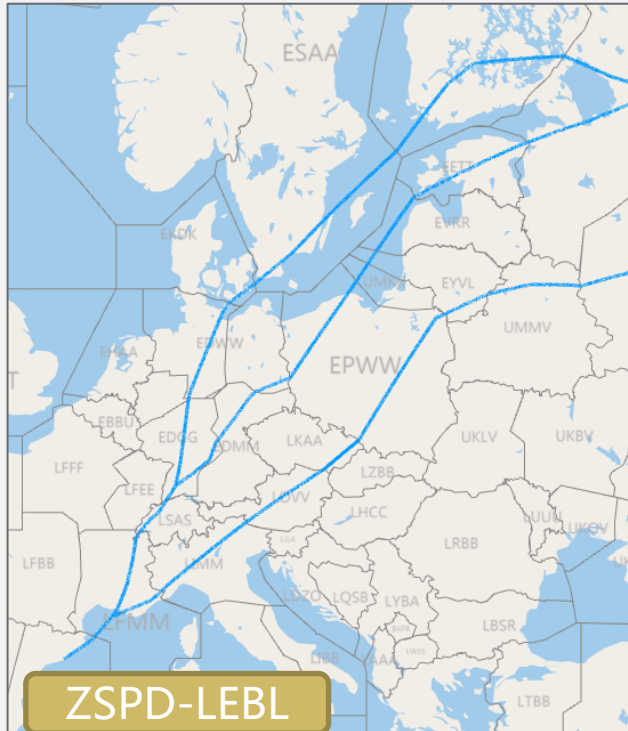
## Selection of domestic routes



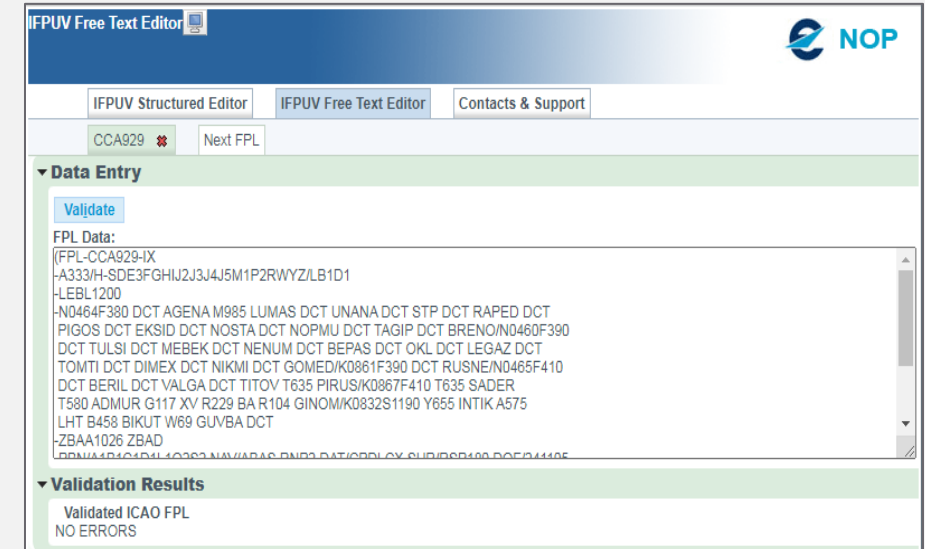
**Choose an advantageous scheduled flight route**

- Shorter distance
- Less traffic flow

# Examples of route optimization



use free route airspace and offer more selection



IFPUV Free Text Editor

IFPUV Structured Editor IFPUV Free Text Editor Contacts & Support

CCA929 ✖ Next FPL

**Data Entry**

Validate

FPL Data:

(FPL-CCA929-IX  
-A333/H-SDE3FGHIJ2J3J4J5M1P2RWYZ/LB1D1  
-LEBL1200  
-N0464F380 DCT AGENA M985 LUMAS DCT UNANA DCT STP DCT RAPED DCT  
PIGOS DCT EKSID DCT NOSTA DCT NOPMU DCT TAGIP DCT BRENO/N0460F390  
DCT TULSI DCT MEBEK DCT NENUM DCT BEPAS DCT OKL DCT LEGAZ DCT  
TOMTI DCT DIMEX DCT NIKMI DCT GOMED/K0861F390 DCT RUSNE/N0465F410  
DCT BERIL DCT VALGA DCT TITOV T635 PIRUS/K0867F410 T635 SADER  
T580 ADMUR G117 XV R229 BA R104 GINOM/K0832S1190 Y655 INTIK A575  
LHT B458 BIKUT W69 GUVBA DCT  
-ZBAA1026 ZBAD  
-RNNM4R3G4R14Q3G3N4V4R4S4R4P3DAT/CPDLOX/CPDPS439/DOF24435

**Validation Results**

Validated ICAO FPL  
NO ERRORS

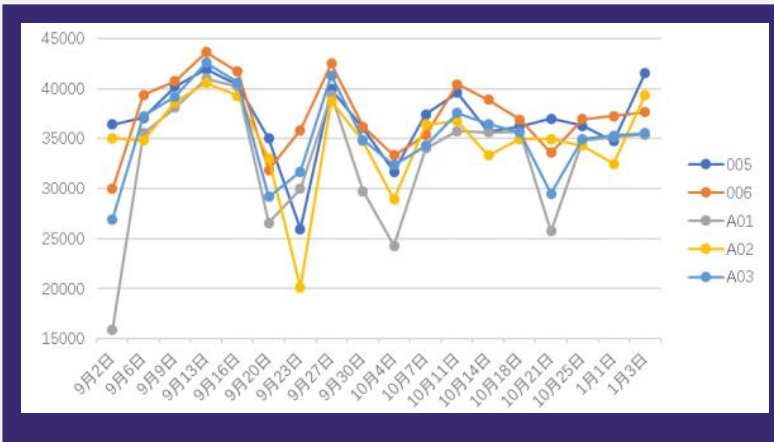
dynamic or static restrictions

## LEBL-ZBAA:

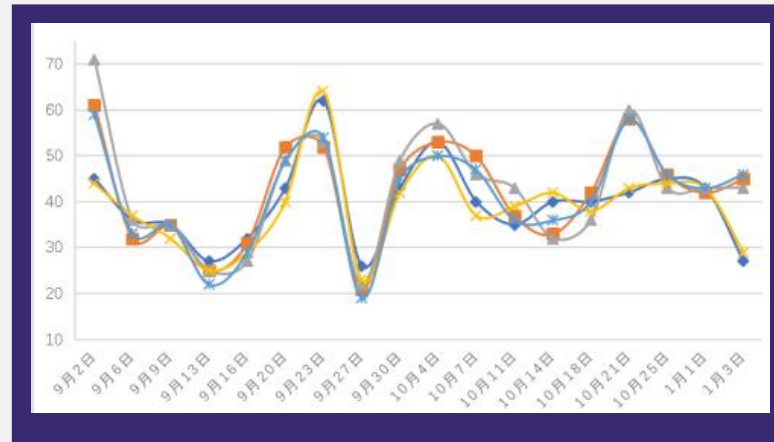
- Use FRA and verify the FPL in advance
- If encountering restrictions, promptly change routes
- Periodically prepare and adjust the routes (ARINC)

# Examples of route optimization

## Operation analysis



Maximum available payload



Average wind variation trend



Flight time variation

### KJFK-ZBAA:

- Use CDR (L512 in Japan) and Monitor Notams
- Create the optimal route based on the wind temperature and aircraft performance of the day

REF AIP ENR3.3			
CDR ARE ESTABLISHED AS FLW,			
RTE	PERIOD	MNM APPLICABLE ALT	
1) L512	2411051200/2411052200	MEA	
2) Z13	2411051200/2411052200	MEA	
3) Z14	2411051200/2411052200	MEA	
4) Z25	2411051330/2411052200	MEA	
5) Z26	2411051330/2411052200	MEA	
6) Z27	2411051330/2411052200	MEA	
7) Z40	2411051400/2411052200	MEA	
8) Z41	2411051400/2411052200	MEA	
9) Z262	2411051330/2411052200	MEA	

# 03

## Expectation for FUA

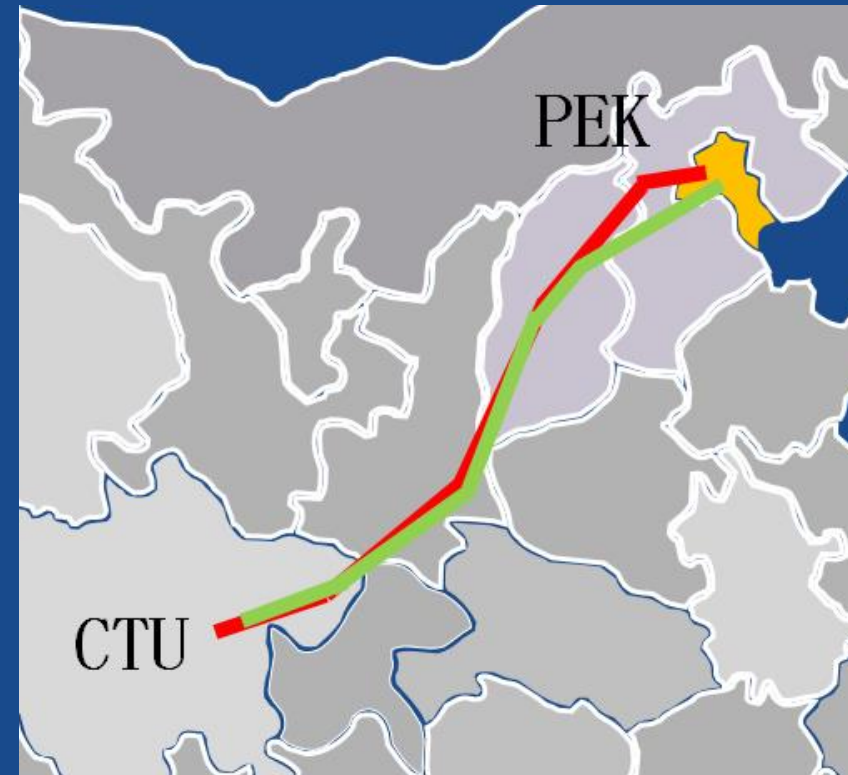


# Add more optional routes

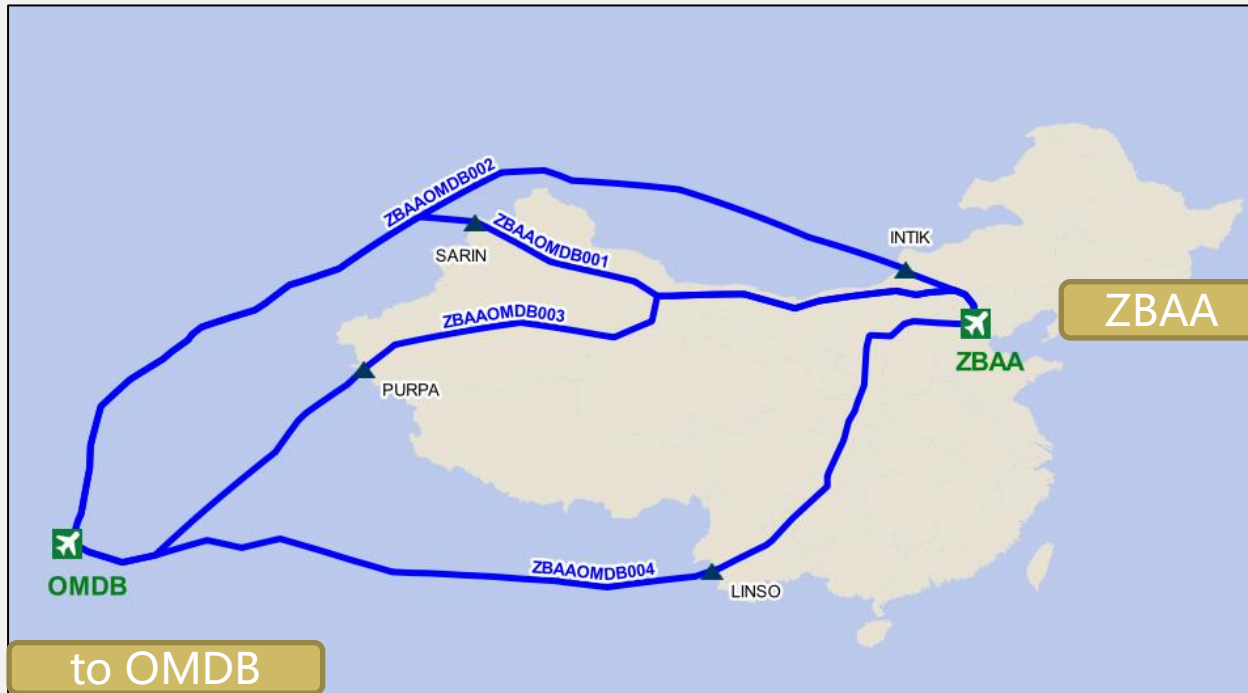
Taking **ZBAA-ZUUU** as an example,

In the nearly 70 days of operation, 88% used optimized routes, saving a total of about 415000km and 4900t carbon emissions.

- Reduce route non-linear coefficient.
- Add more optional routes between cities.

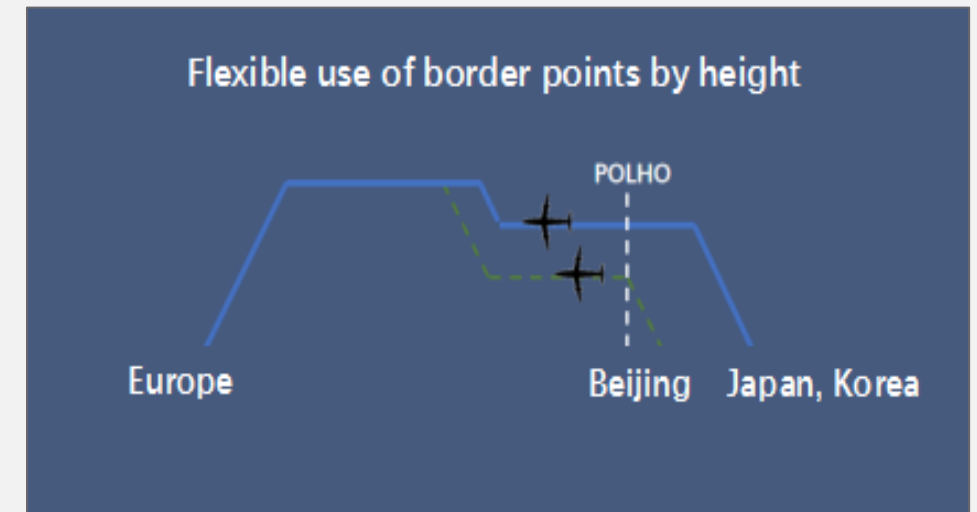


# Use more flexible entry and exit points



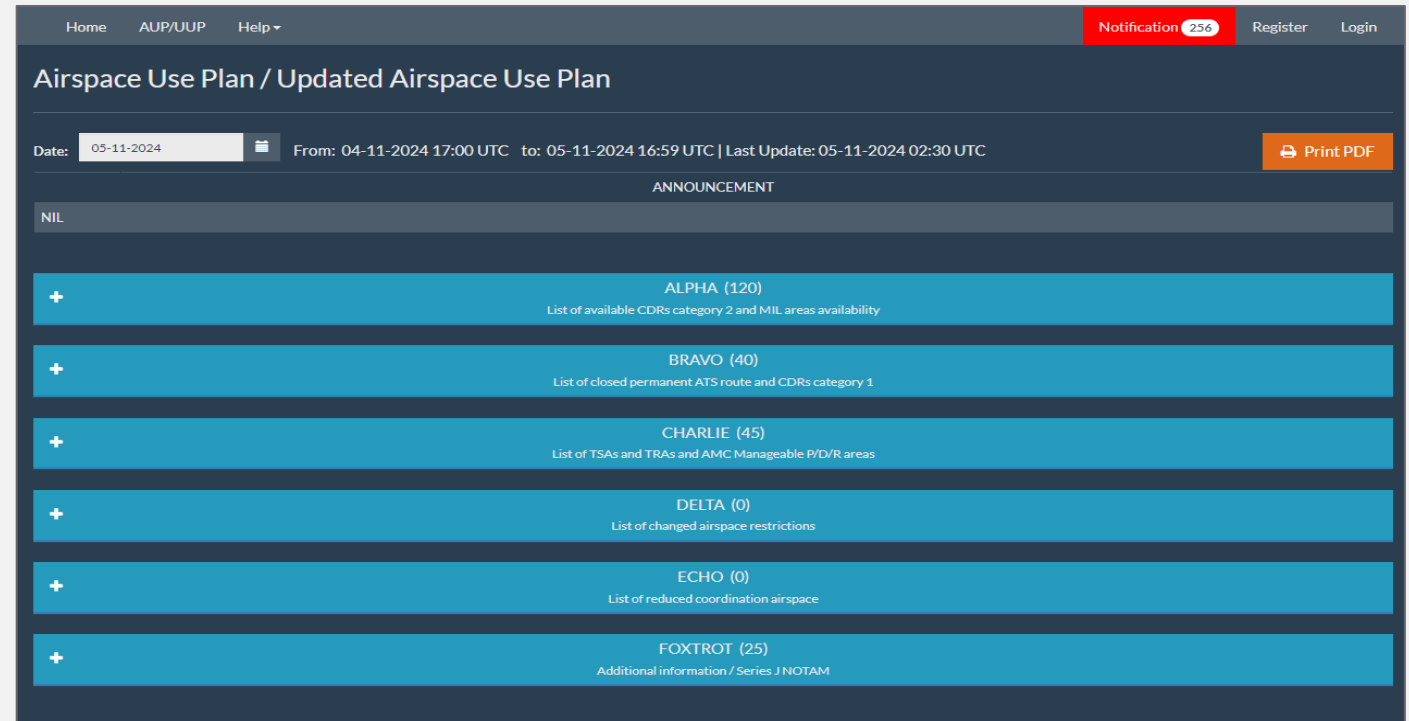
The airline can flexibly select the route and entry and exit points according to the air traffic conditions on the day of flight and meteorological conditions.

Available ➡ Unavailable



For example, under the condition that there is no conflict with Japan and South Korea overflight flights in altitude, B773 with low climbing capacity are allowed to fly to Europe using POLHO border point.

# Improve the verification mechanism of CDR



## Thailand

Low efficiency: Airlines need monitor the planned altitude and conditional route availability manually.

Hope to introduce a verification mechanism to avoid rejection of FPL.



**Thank you  
for your attention**

