AIR NAVIGATION SERVICES OF MONGOLIA

AGENDA

- WHO WE ARE
- WHAT WE HAVE
- WHAT WE WILL DO

COMMUNICATION
NAVIGATON
SURVEILLANCE
SERVICE
AIR
TRAFFIC
SERVICE
AIR
NAVIGATION
SERVICE
PROVIDER of
MONGOLIA
AVIATION
WEATHER
INFORMATION
SERVICE
FLIGHT
INSPECTION
AND PROCEDURE
DESIGN SERVICE
AERONAUTICAL
INFORMATION
SERVICE/
MANAGEMENT

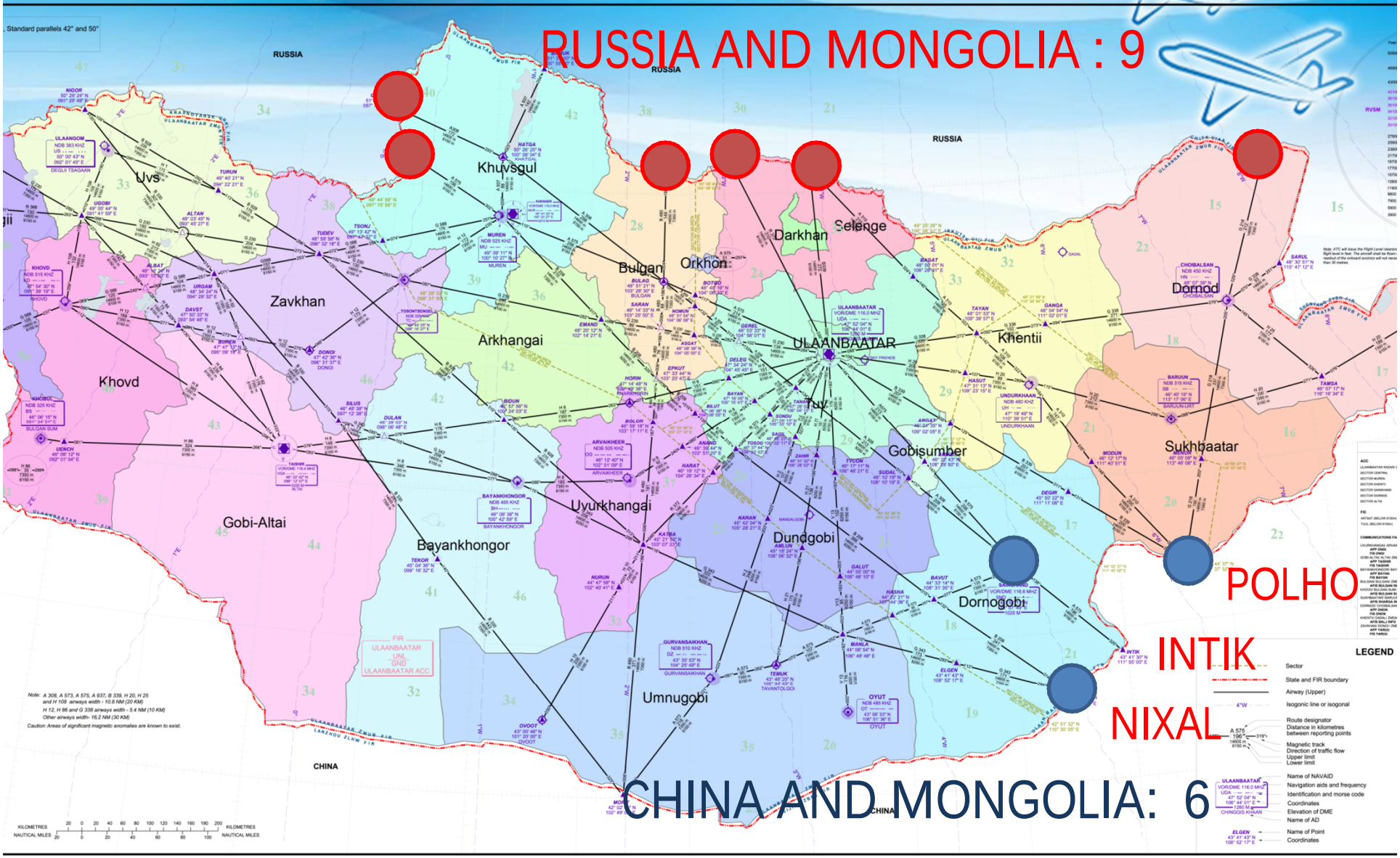
AIRSPACE STRUCTURE

- 1 FLGHT INFORMATION REGION(UB FIR)
- 15 ENTRY AND EXIT POINT
  - 9 ENTRY & EXIT POINT WITH RUSSIA
  - 6 ENTRY & EXIT POINT WITH CHINA
- 50 AIR ROUTES
- 6 AREA CONTROL SECTORS
- 15 AERODROME / APPROACH CONTROL SERVICE
- 8 AERODROME FLIGHT INFORMATION SERVICE

AIRSPACE MANAGEMENT

- PARALLEL ROUTES CONCEPT
- MORE DIRECT ROUTE FROM EUROPE TO ASIA
- ALTERNATIVE ROUTES
- PBN (RNP/RNAV) ROUTES
- MINIMUM CONFLICTED ROUTES/MINIMUM CROSSING POINTS
- CONTINGENCY PROCEDURES FOR AIRLINES

NUMBER OF ENTRY/EXIT POINTS



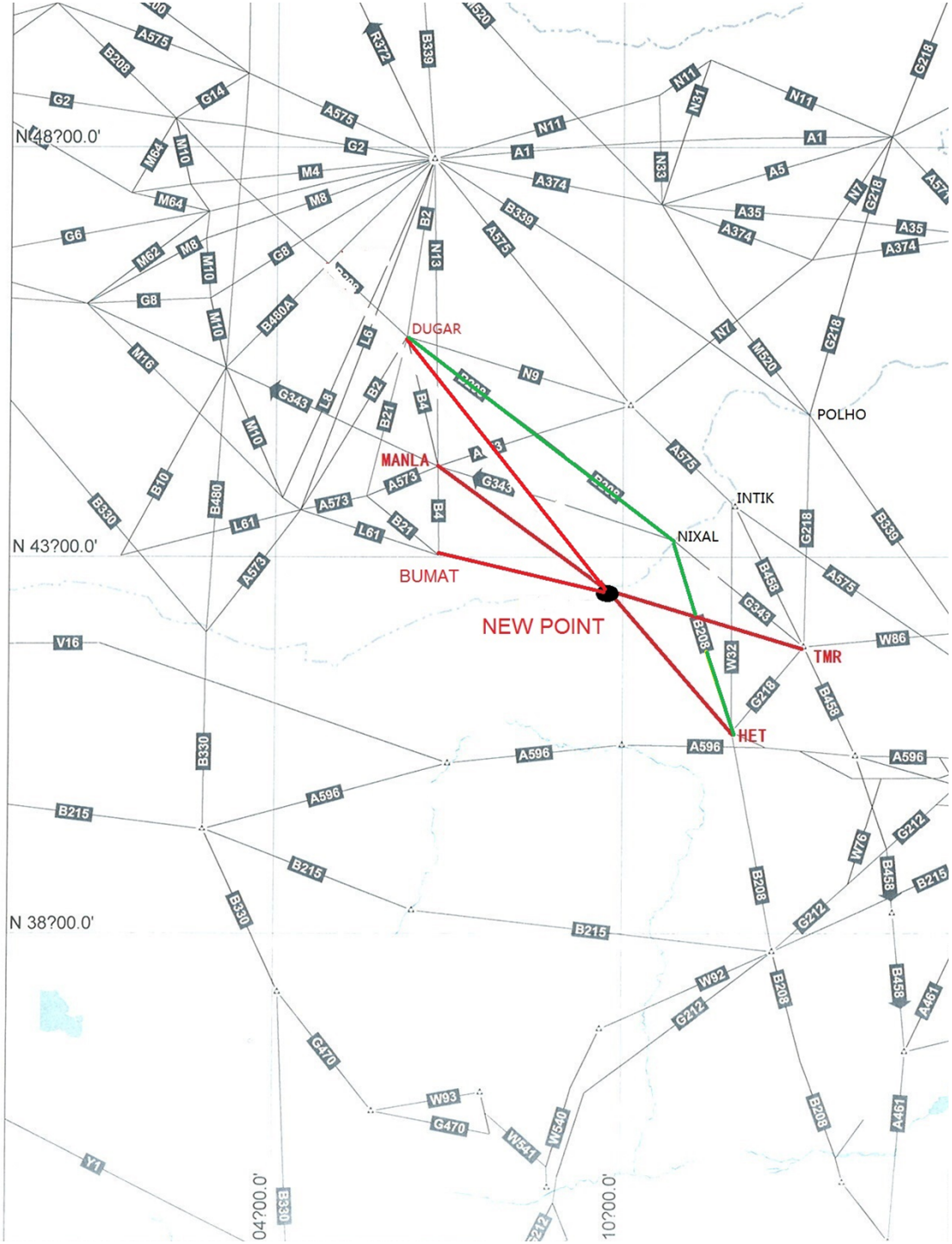
NEW ENTRY/EXIT POINT

- 110 KM WEST OF NIXAL
- Benefits

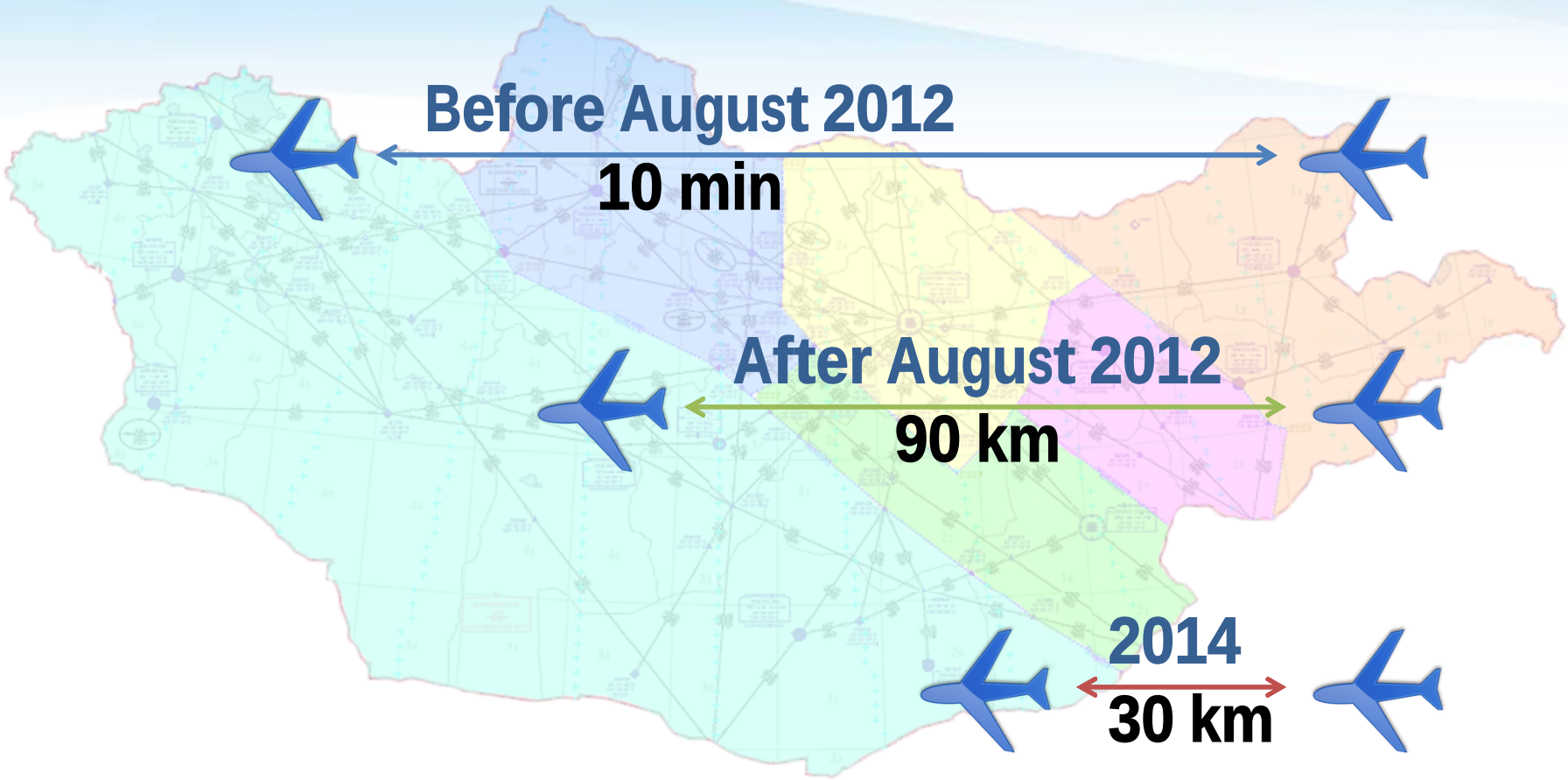
For example:

DUGAR-NIXAL-HET TOSOG-New Point – HET

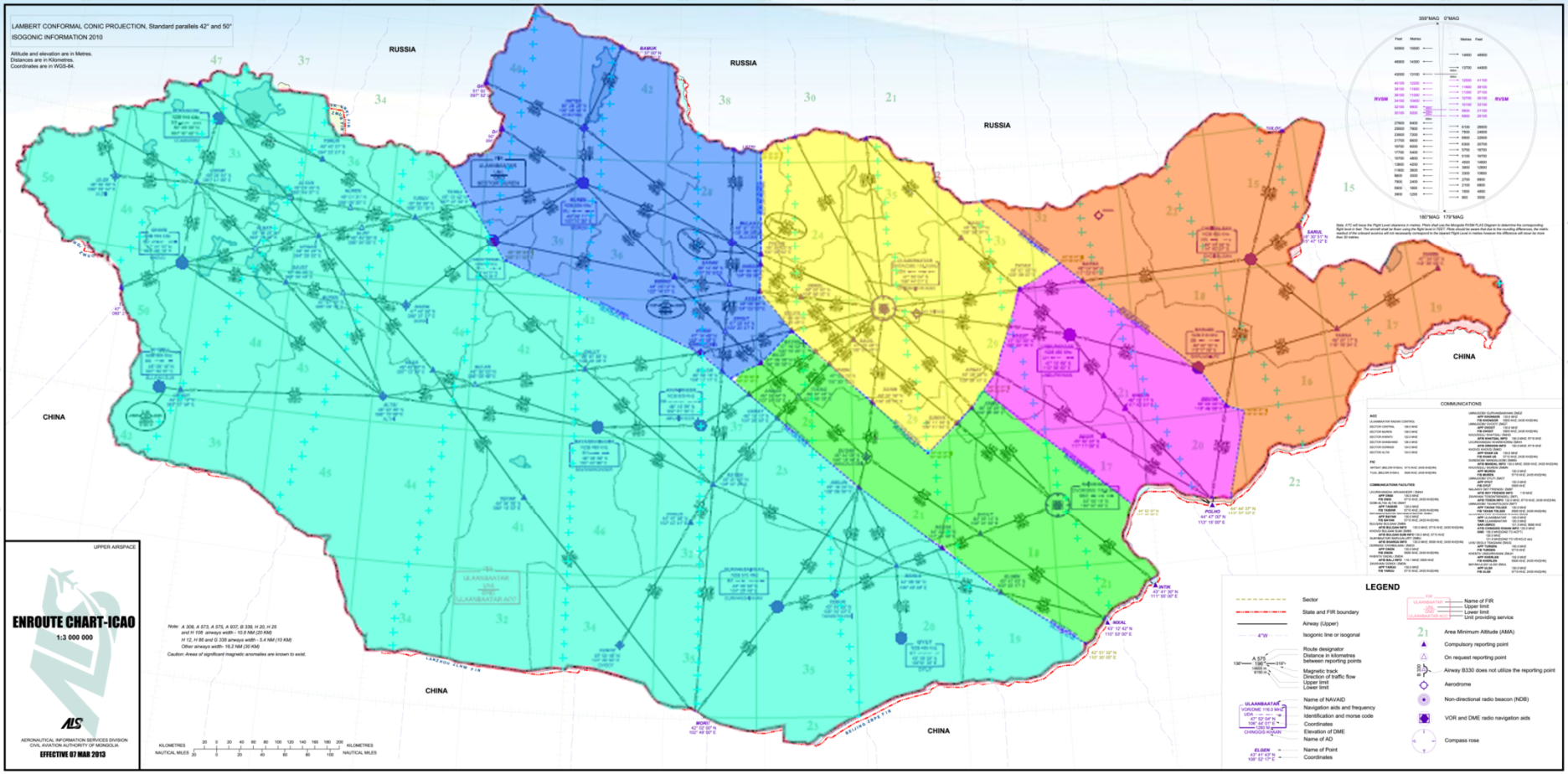
Shorten flight distance: 33Km
The annual fuel savings: 9,480 tons.



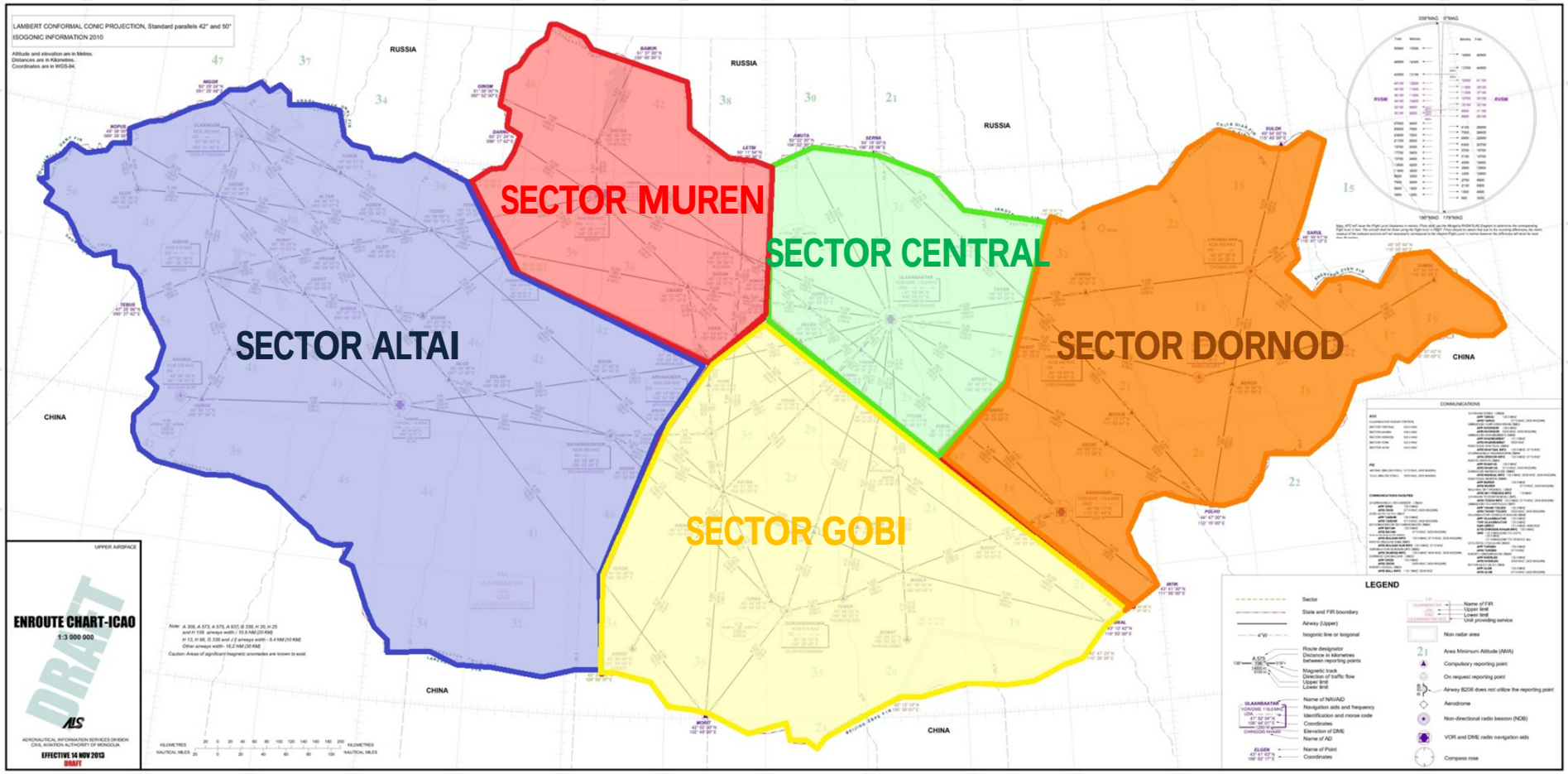
REDUCTION OF SEPARATION MINIMA



ATC SECTORS BEFORE NOVEMBER 2013



ATC SECTORS
AFTER NOVEMBER, 2013



WHAT IS OUR PLAN IN 2014

- 2 MORE MSSR
- NEW ACC BUILDING
- NEW ATM AUTOMATION SYSTEM
- 5 ADS-B
- 10 DME
- 13 AWOS

AERONAUTICAL SATELLITE COMMUNICATION. VSAT

CURRENTLY 22 TerrsaSat 400 STATIONS

NEW INSTALLED 16 STATIONS

WILL BE REPLACED 9 STATIONS

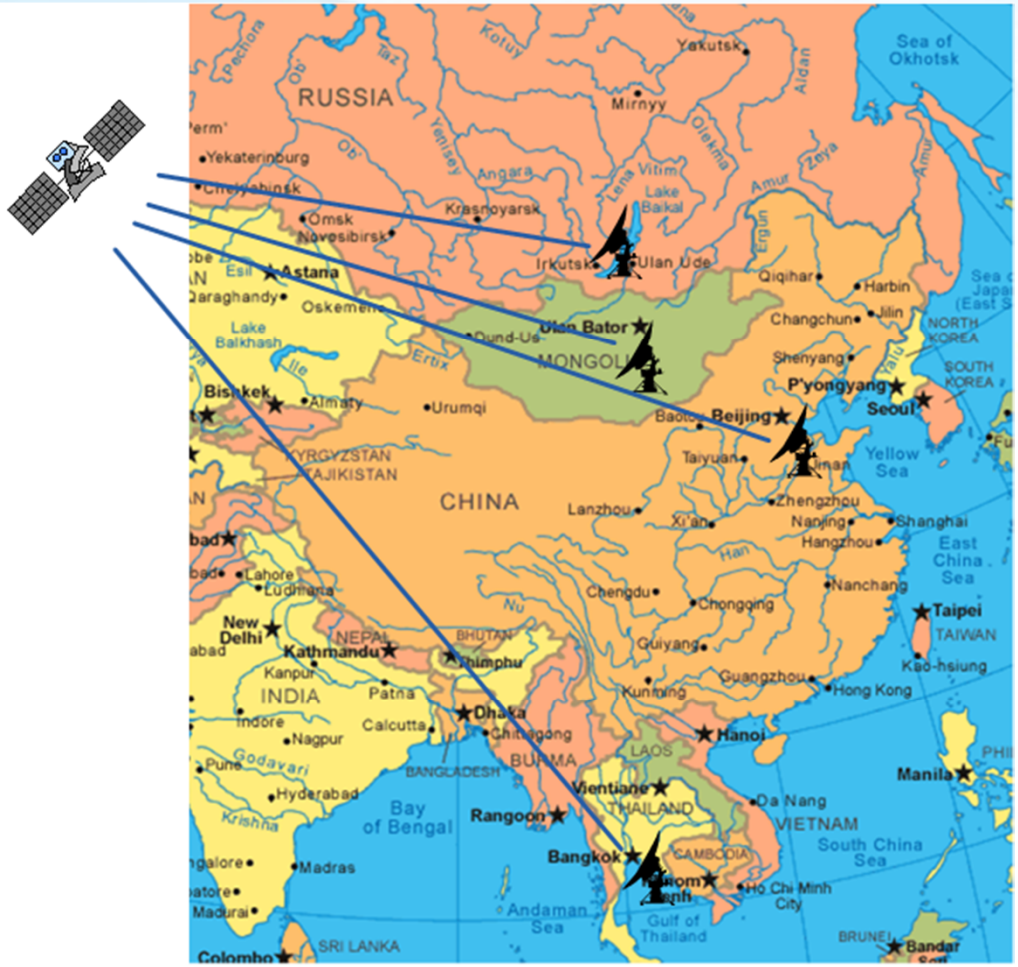
New MASCOM VSAT network is being installed for swapping existing system.

Ground-to-Ground communication

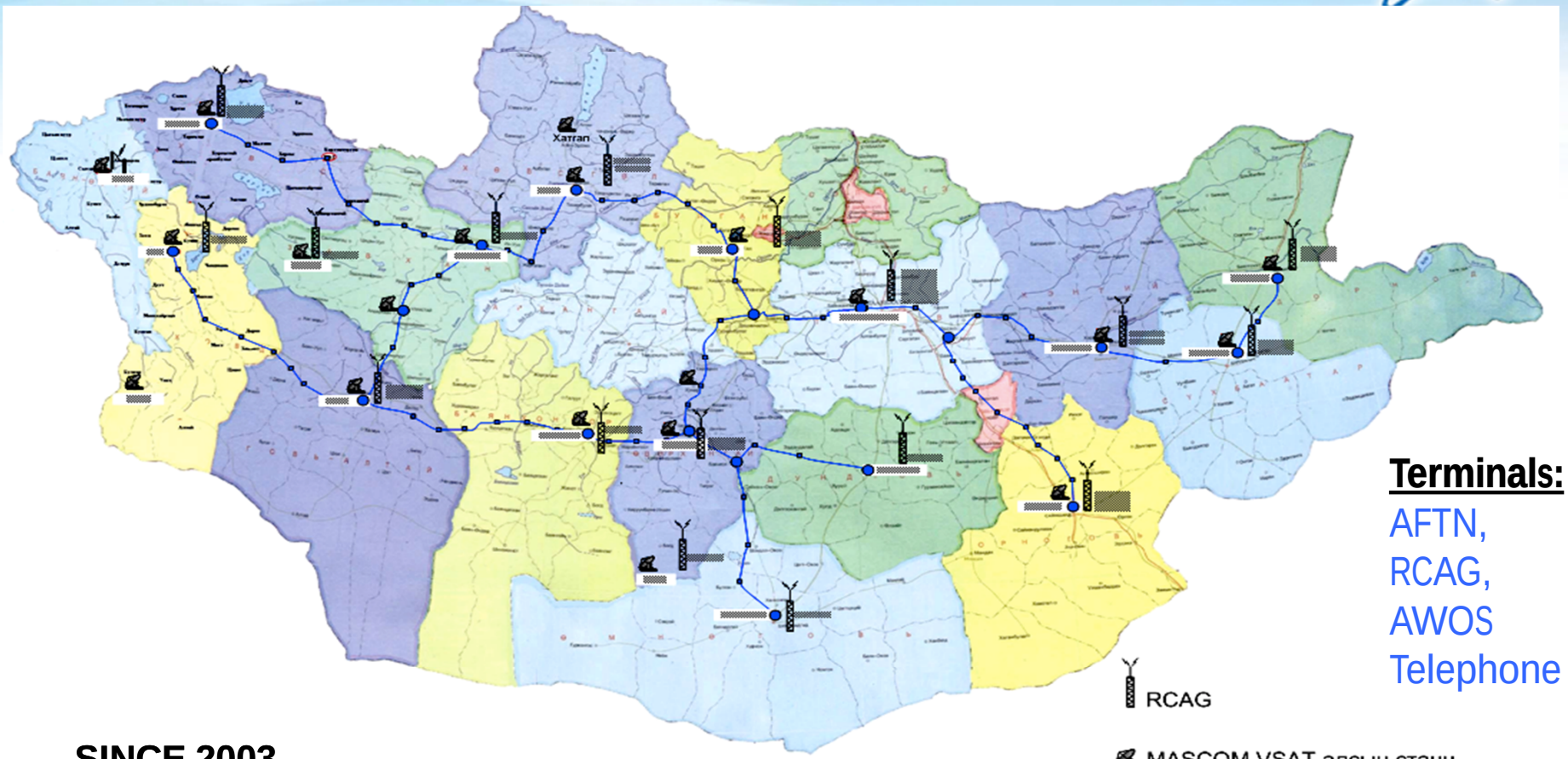
VSAT VOICE/DATA COMMUNICATION

Irkutsk (Russia)
Ulaanbaatar (Mongolia)
Beijing (China)
Bangkok (Thailand)

Neighbors have been connected by VSAT and ground fiber optic links for exchanging information faster



FIBER OPTIC LINK NETWORK

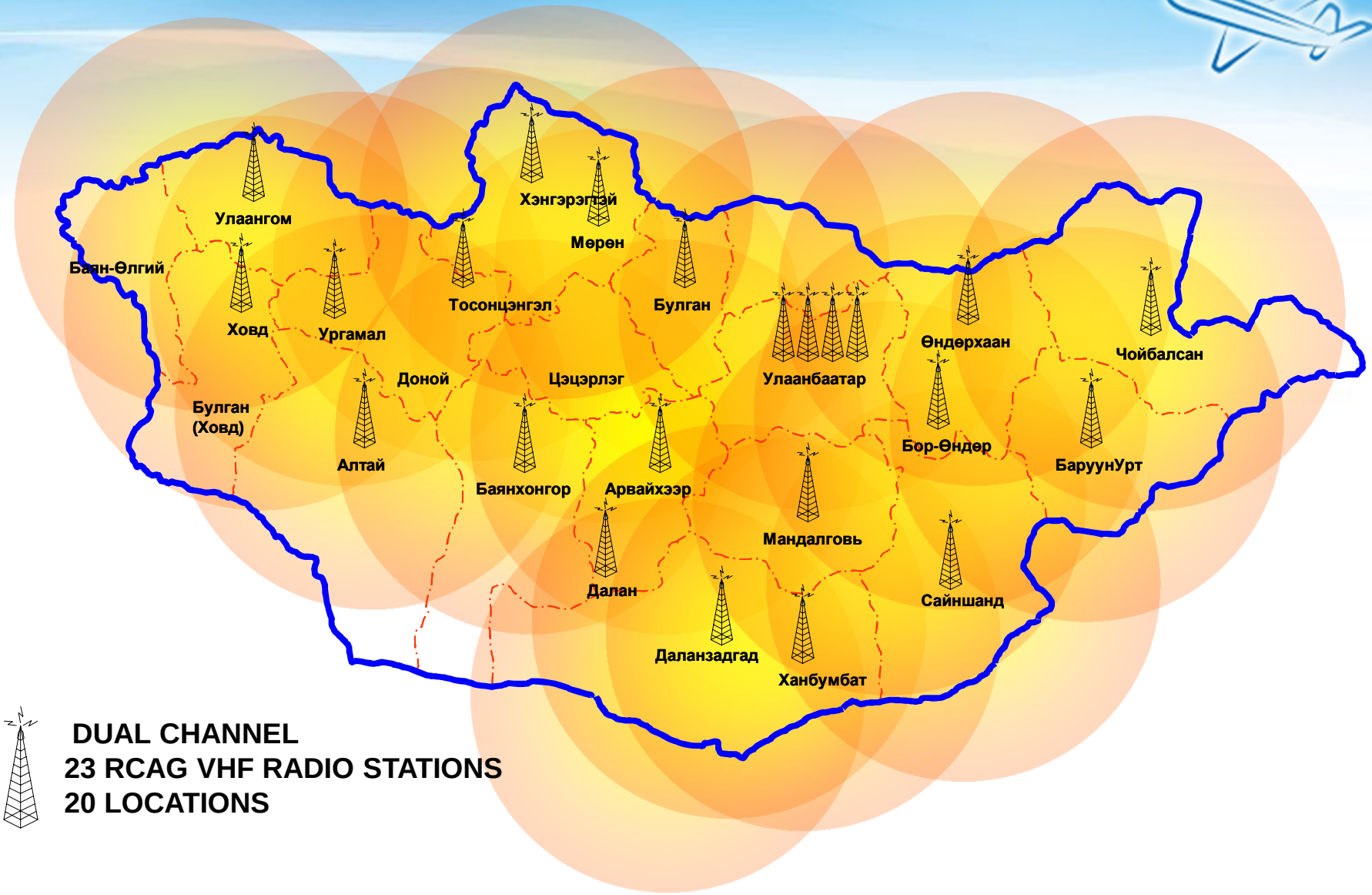


Terminals:
AFTN,
RCAG,
AWOS
Telephone

SINCE 2003
18 LOCATIONS ARE CONNECTED
6 LOCATIONS WILL BE CONNECTED

AIR-GROUND RADIO COMMUNICATION

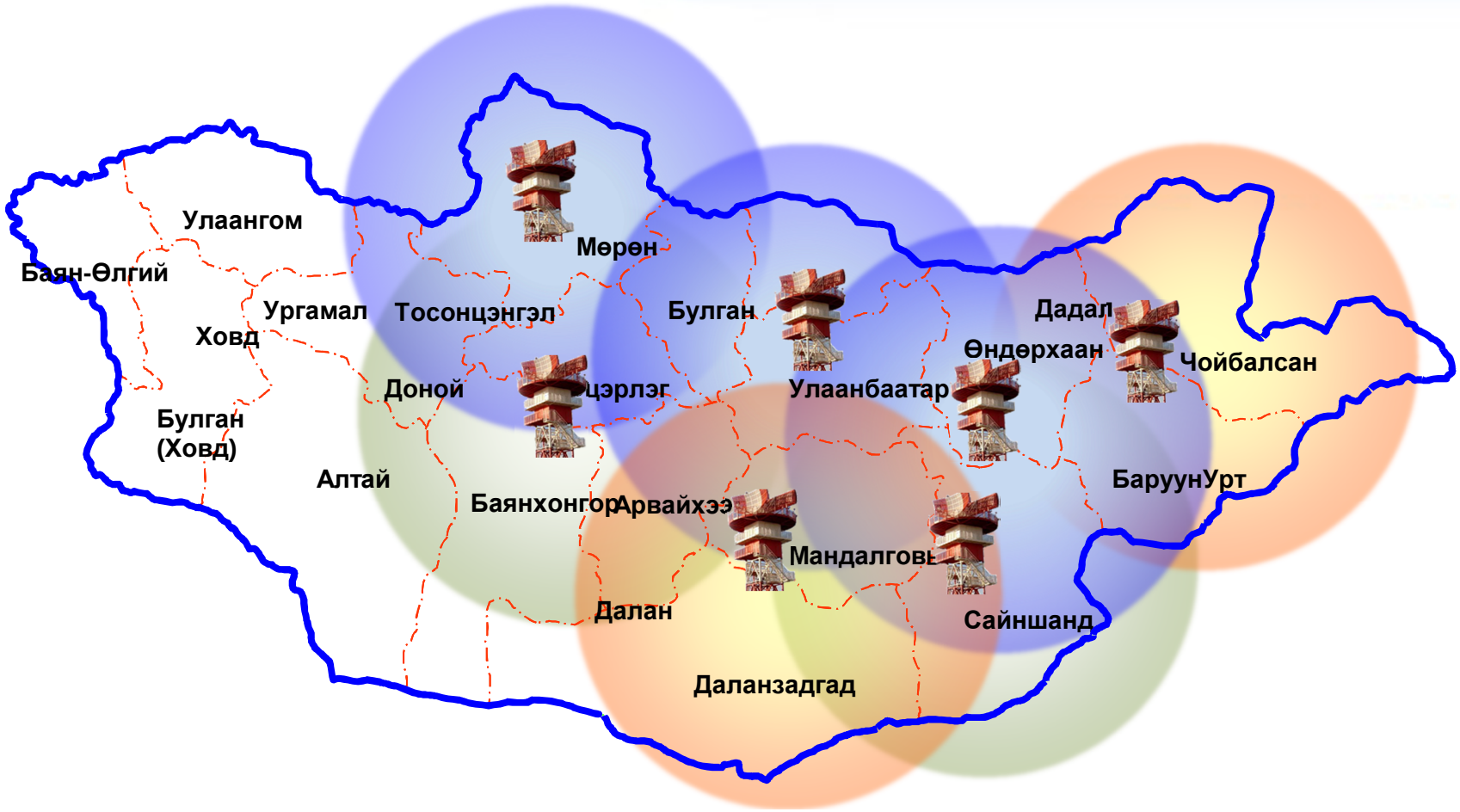
RCAG Voice Communication



DUAL CHANNEL
23 RCAG VHF RADIO STATIONS
20 LOCATIONS

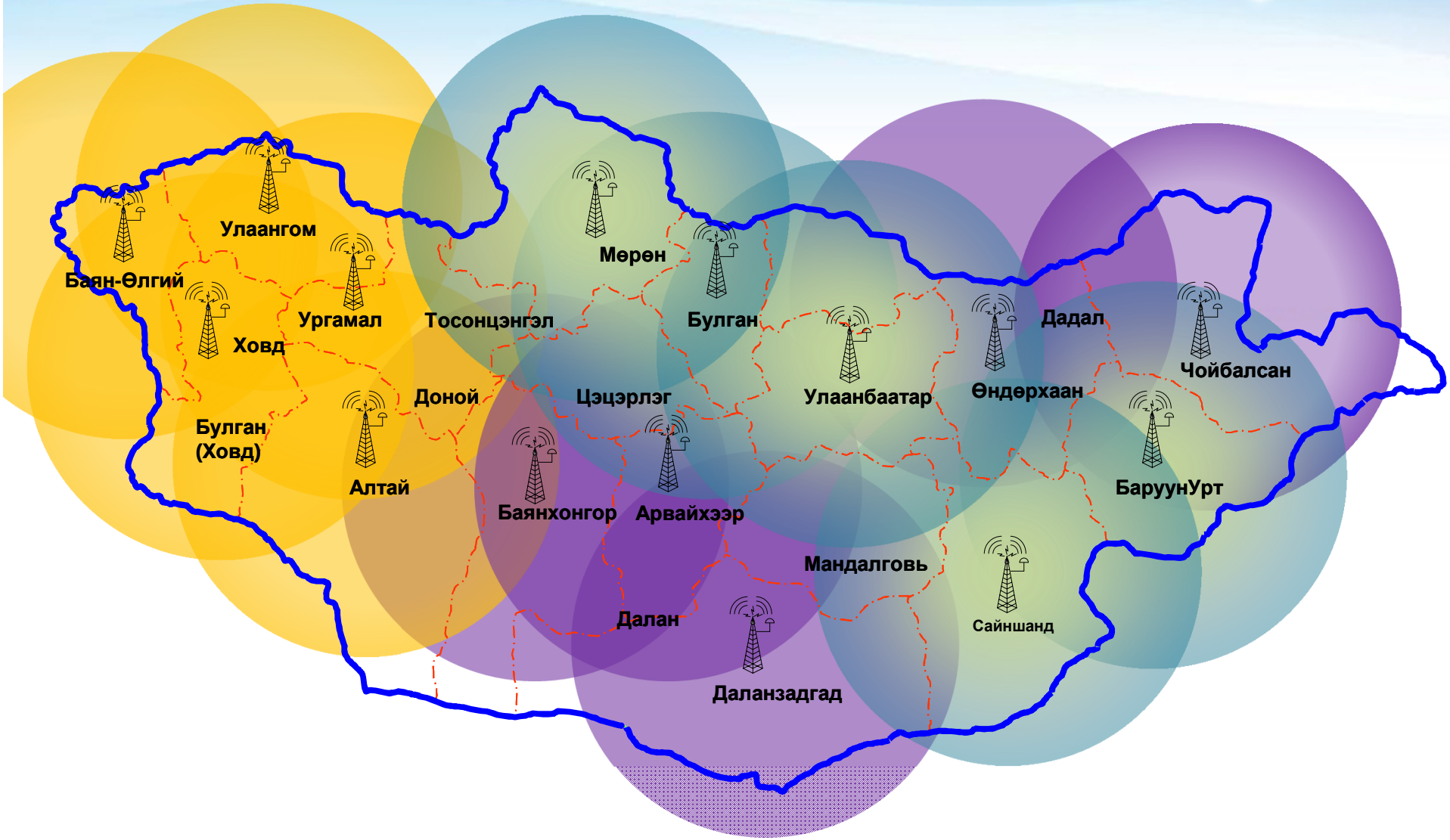
SURVEILLANCE SYSTEM / PHASES IMPLEMETATION SSR SYSTEM

SINCE 2008
2012 3 SSR IMPLEMENTED
2013 2 SSR IMPLEMENTED
2014 2 WILL BE INSTALLED

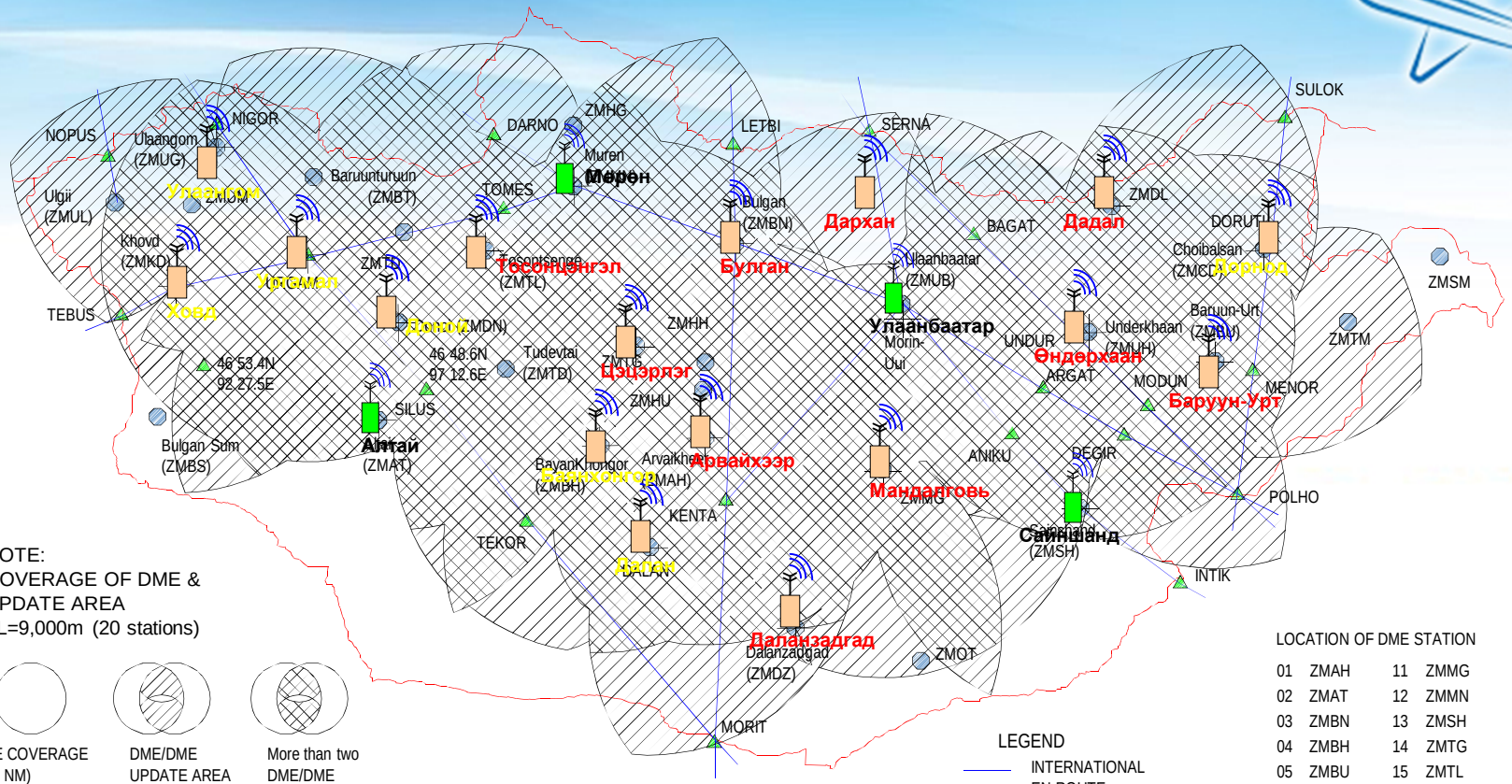


MSSR site Northern Mongolia

STAGE OF ADS-B IMPLEMENTATION



PBN IMPLEMENTATION
DME INSTALLATION PLAN



NOTE:
COVERAGE OF DME &
UPDATE AREA
FL=9,000m (20 stations)

DME COVERAGE (200 NM)

DME/DME UPDATE AREA

More than two DME/DME UPDATE AREA

SCALE

0 km 350 km 700 km

LEGEND

- INTERNATIONAL EN-ROUTE
- AIRPORT OR RCAG SITE
- REPORTING POINT

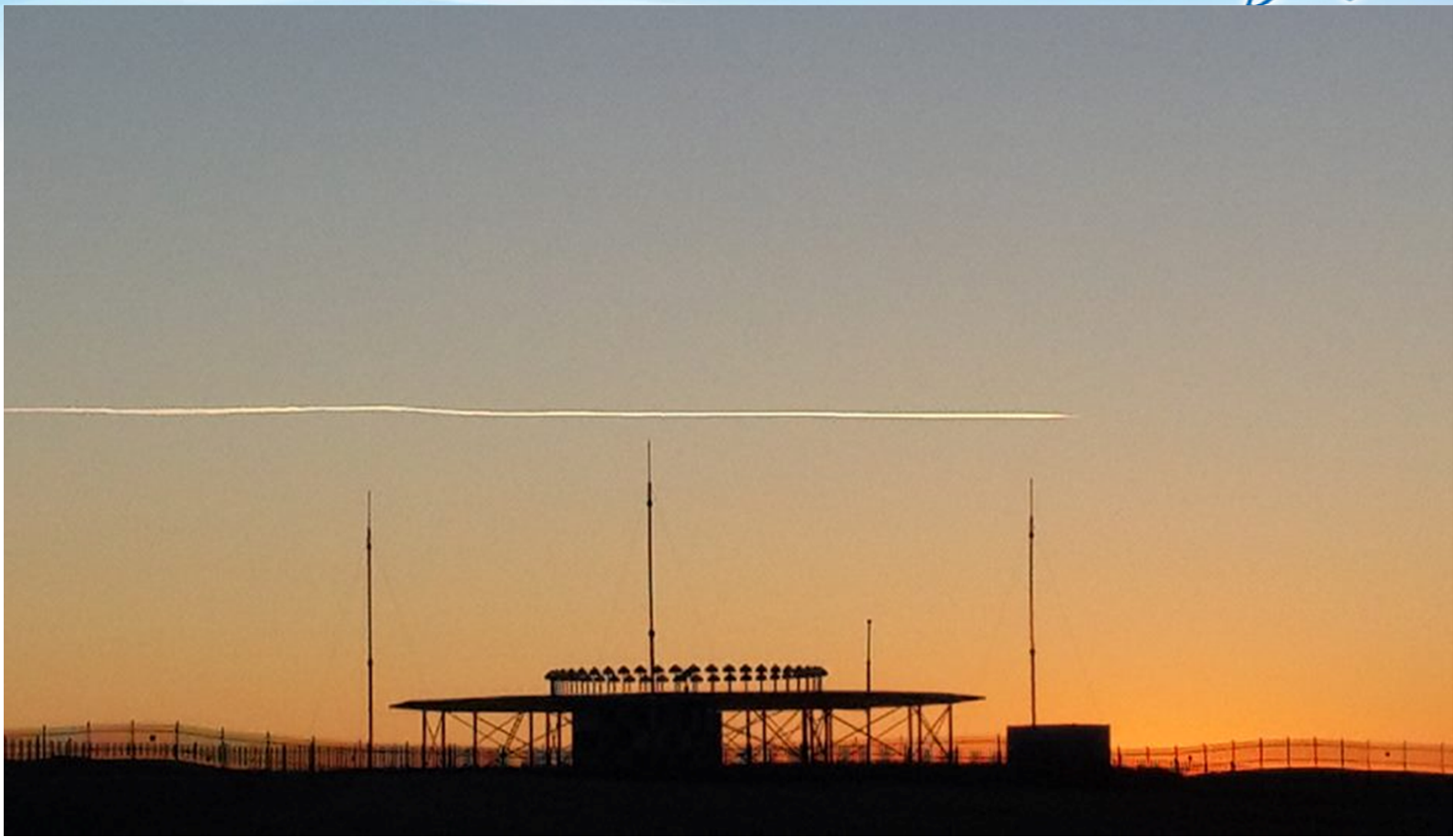
LOCATION OF DME STATION

01	ZMAH	11	ZMMG
02	ZMAT	12	ZMMN
03	ZMBN	13	ZMSH
04	ZMBH	14	ZMTG
05	ZMBU	15	ZMTL
06	ZMCD	16	ZMUG
07	ZMDL	17	HMUH
08	ZMDN	18	DALAN
08	ZMDZ	19	Morin-Uui
09	ZMKD	20	URGAM

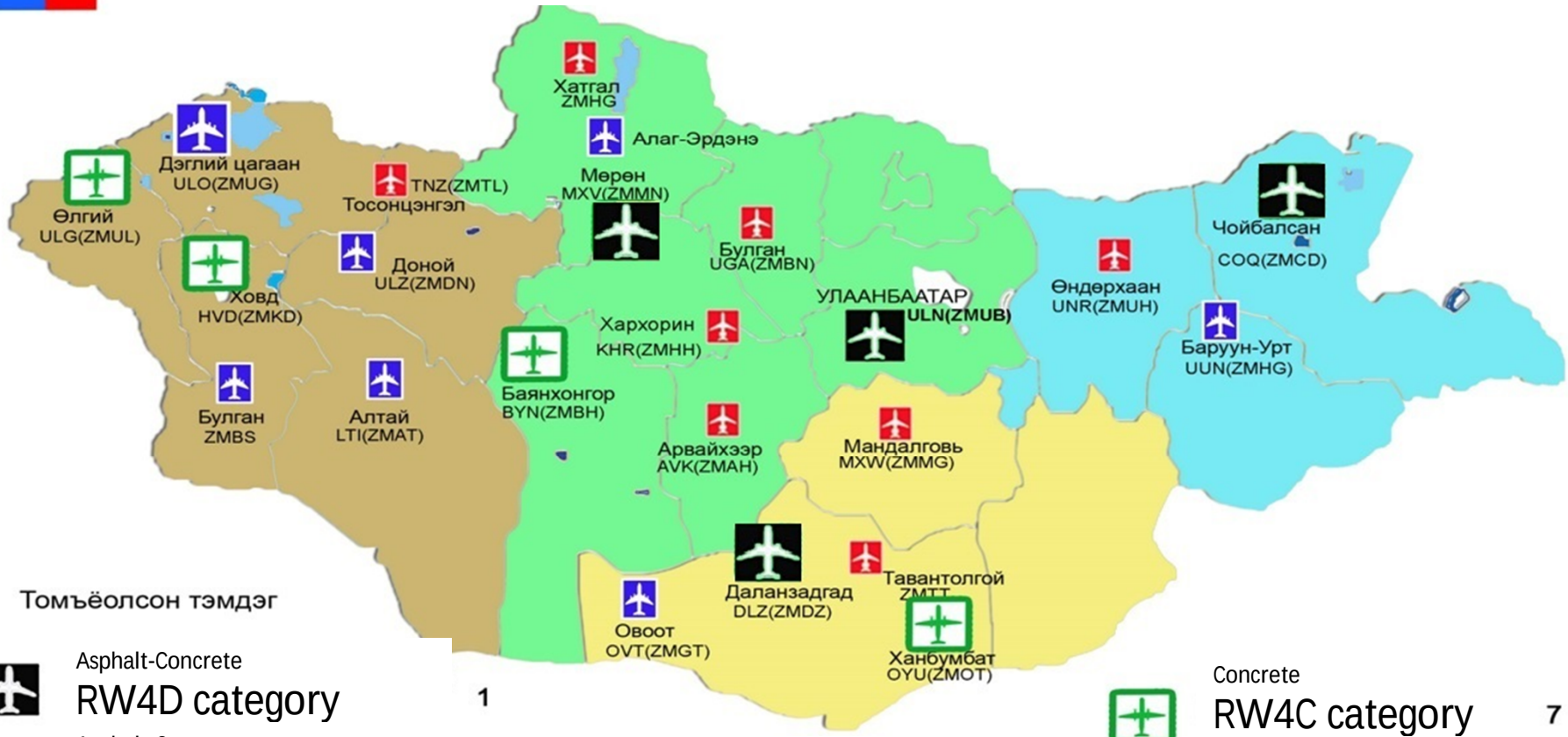
PLAN TO INSTALL 2014-2016

CURRENT

DVOR/ DME station. South Mongolia



MONGOLIAN AIRPORTS DEVELOPMENT PLAN



Томъёолсон тэмдэг

Asphalt-Concrete RW4D category	1	
Asphalt-Concrete RW3C category	1	
Concrete RW3C category	6	
Concrete RW4C category	7	
Grass RW3C category	8	

NEW AREA CONTROL CENTER AND CAA OFFICE

Invested by the Government of Mongolia.

Expected to be ready in 2014.

URNUL GROUP

AREA CONTROL CENTER

NEW INTERNATIONAL AIRPORT PROJECT
JANUARY, 2017

WARMEST GREETING FROM INSPIRING MONGOLIA AND LAND OF BLUE SKY

THANK YOU FOR YOUR ATTENTION