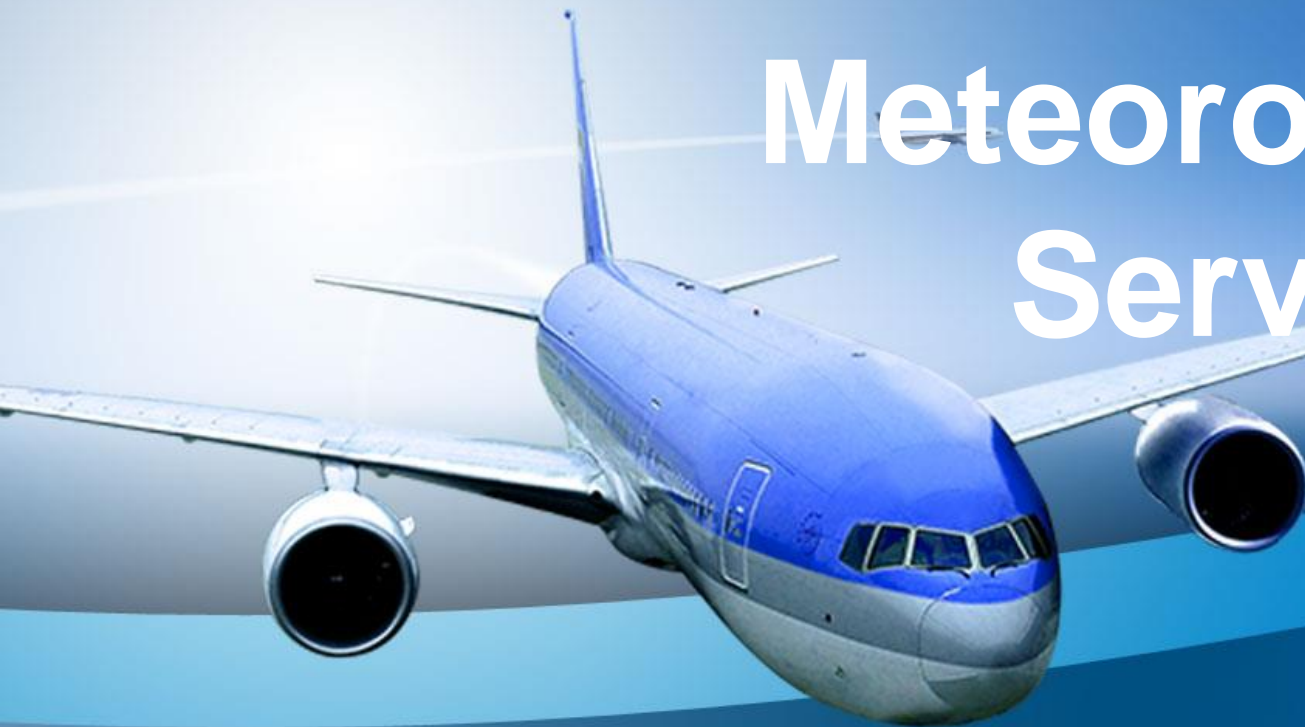




Introduction Aviation Meteorological Service



Presentation contents

Organization structure

AMC divisions & stations

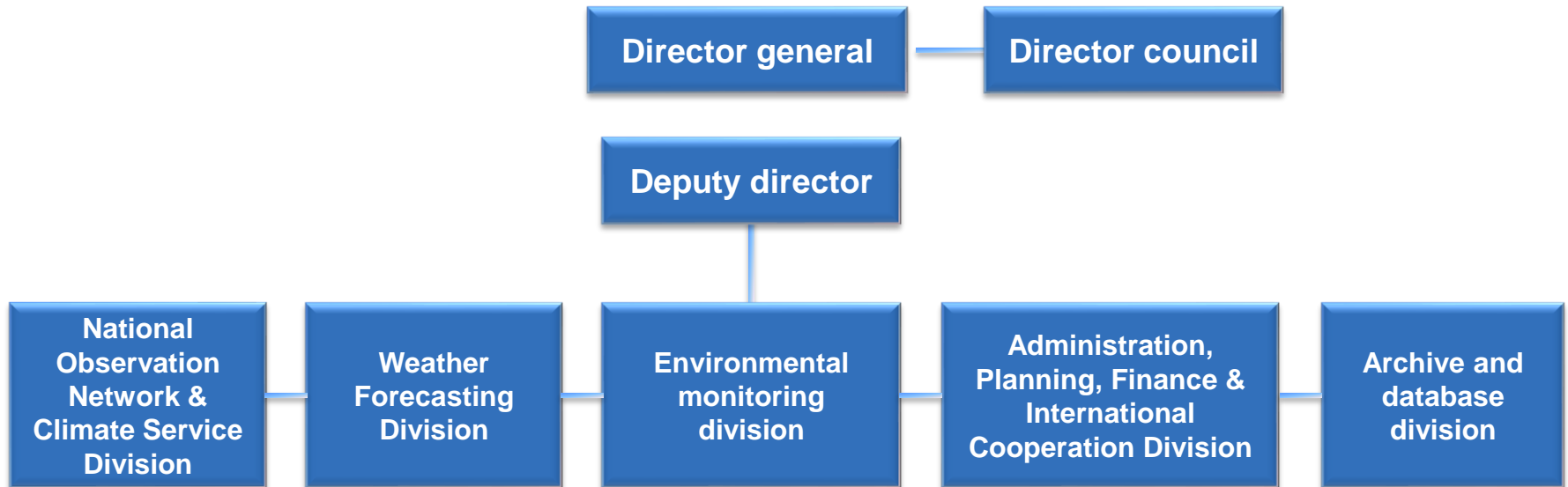
Meteorological service & data

Documents & cooperation

Quality management system

Future work

ORGANIZATION STRUCTURE OF NAMEM



Organizations under NAMEM



Departments of Meteorology, Hydrology & Environment Monitoring in provinces and capital city/22/

Aviation Meteorological Service

MISSION: to provide the various weather information which is ensured flight safety to users on time.



Certification (MCAR 174)



Forecasting



Observation



Information



Watch



Briefing

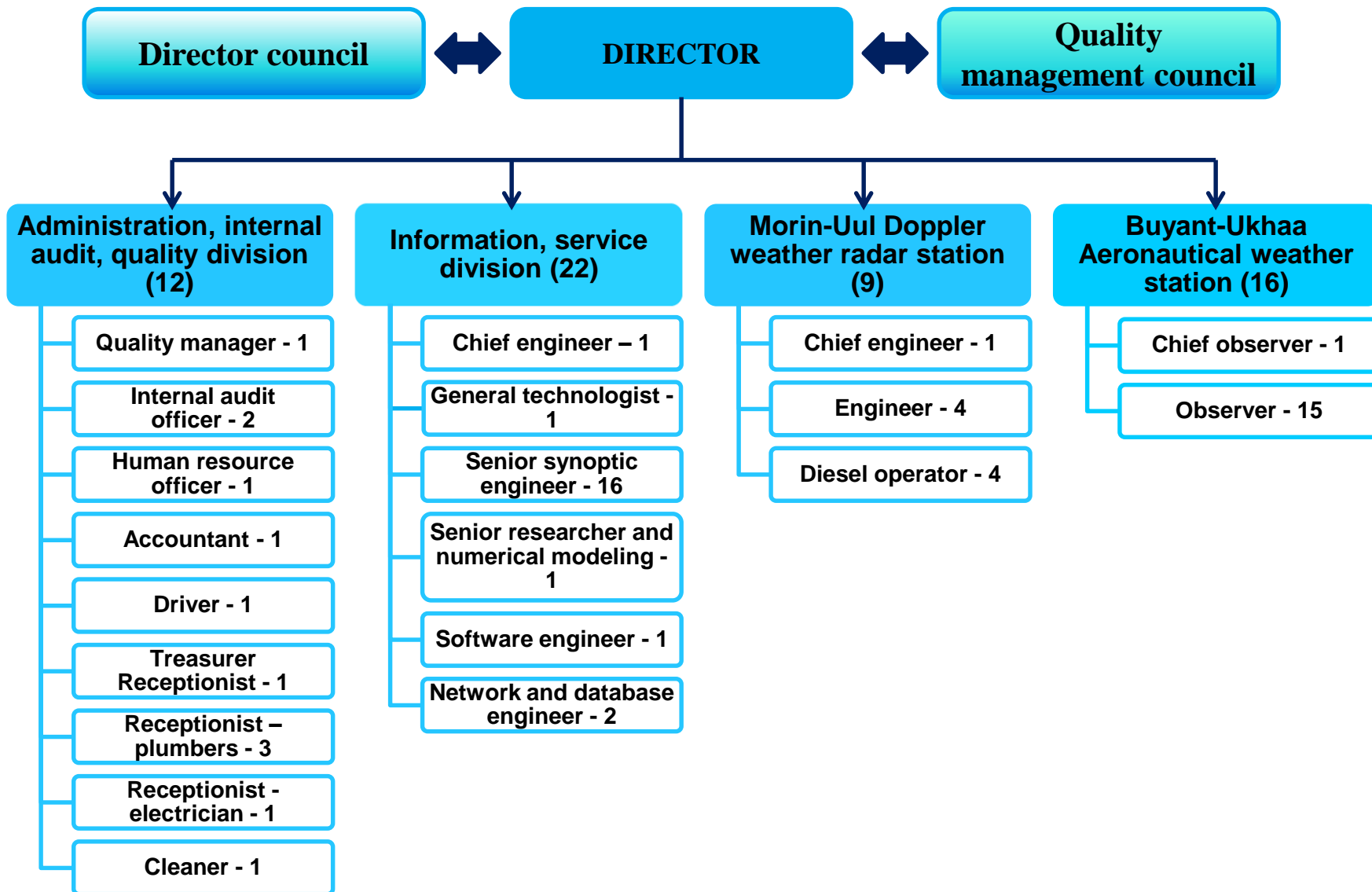


Climate



Customer oriented service

ORGANIZATION STRUCTURE OF AVIATION METEOROLOGICAL CENTER



Human resource

Administrative and technical personnel

- 85.1% with bachelor or higher degrees.
- Engineer-21
- Senior Engineer-16

Buyant-Ukhaa Aeronautical weather station AWOS



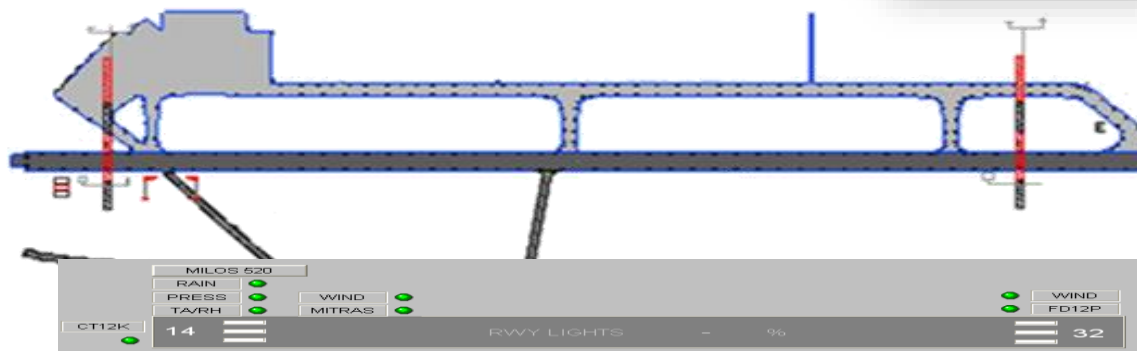
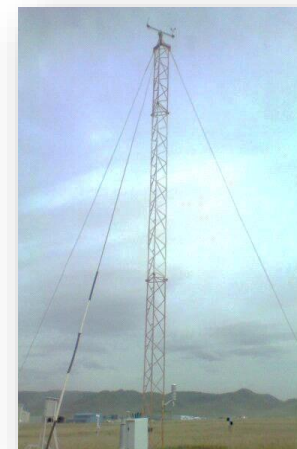
MAWS201
Weather station



AWS310 Data
Logger



MILOS520 Data
Logger

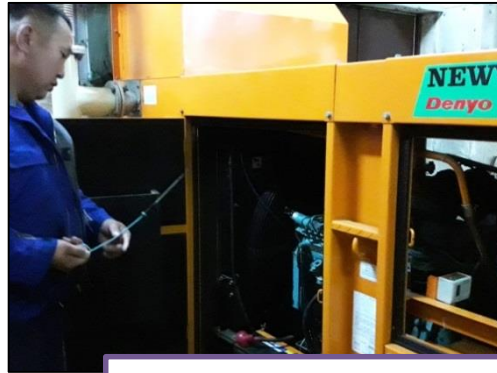


Most of the airport equipped with Automated Weather Observation System.

Morin-Uul Doppler weather radar station



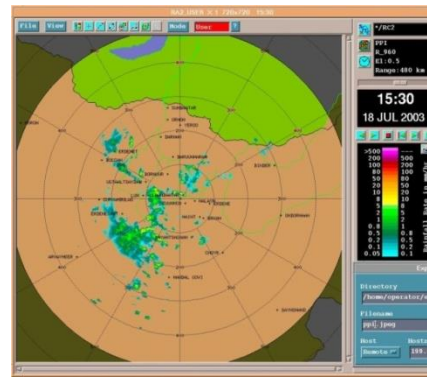
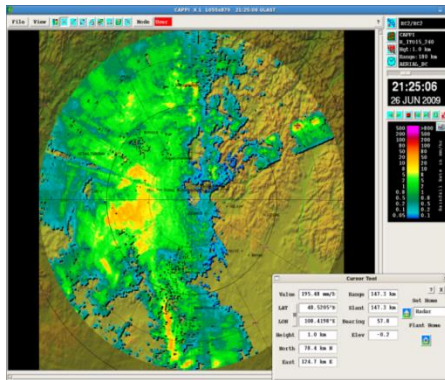
Engineer



Diesel operator

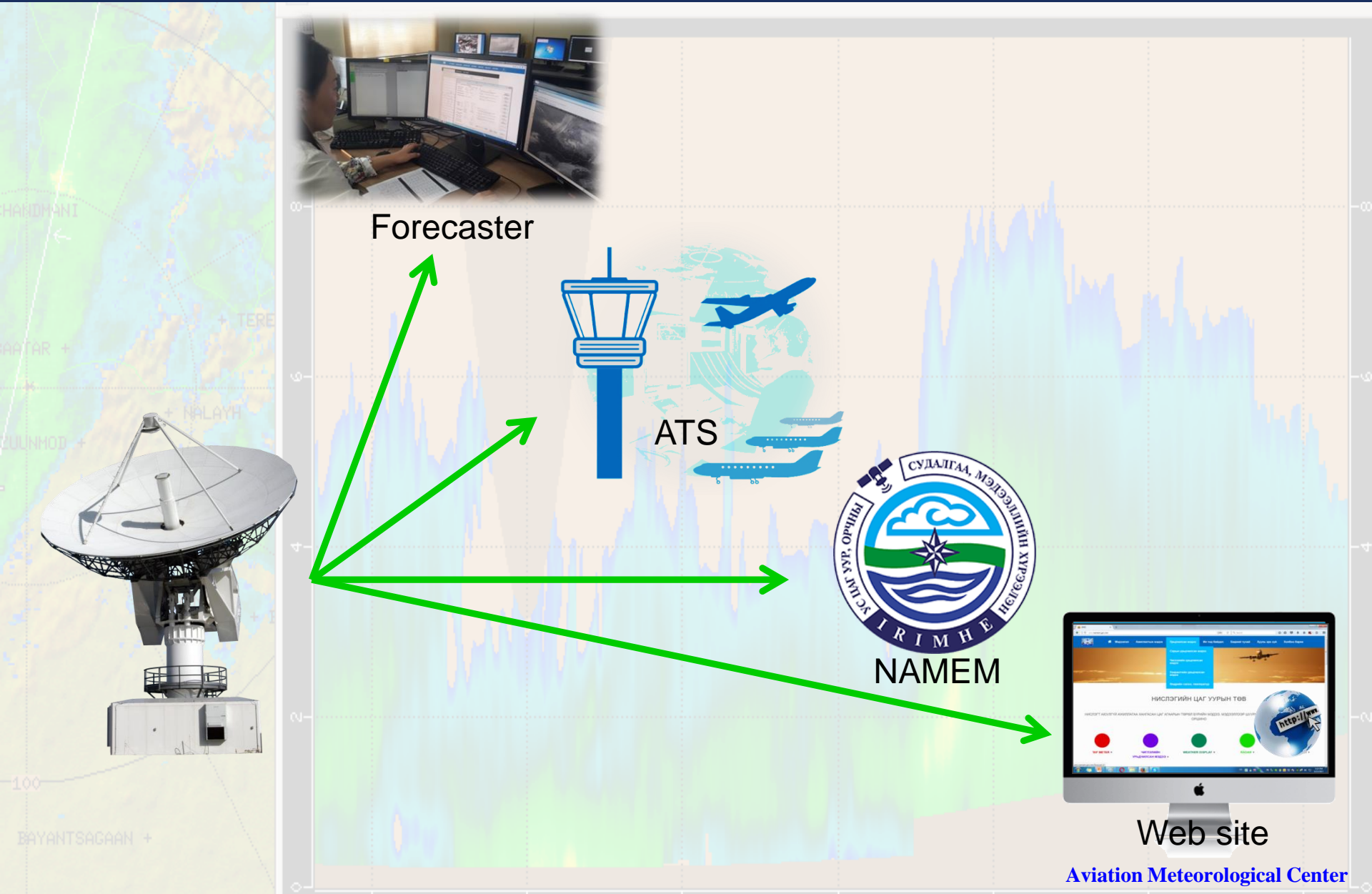


**Located 4 km from
aerodrome**

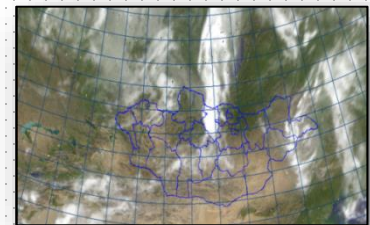
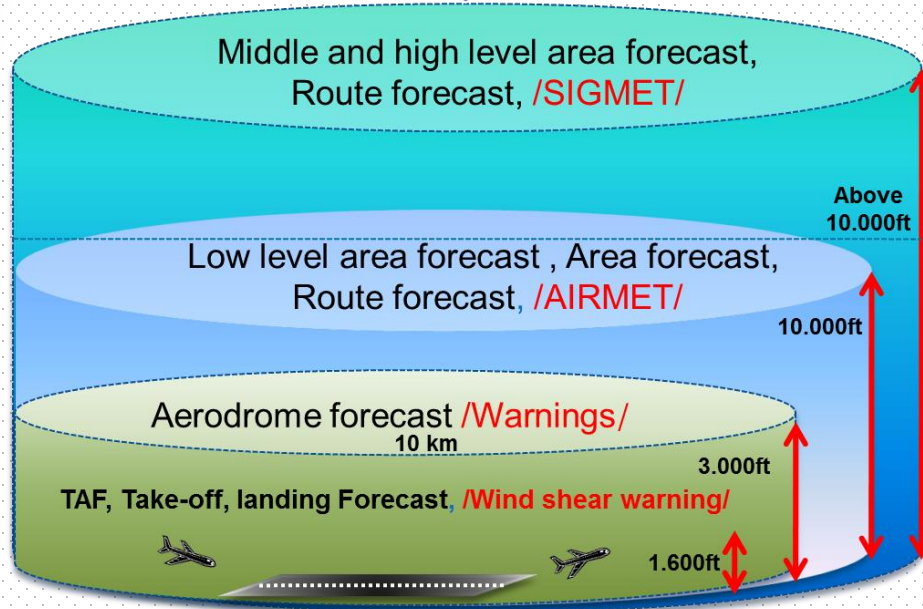
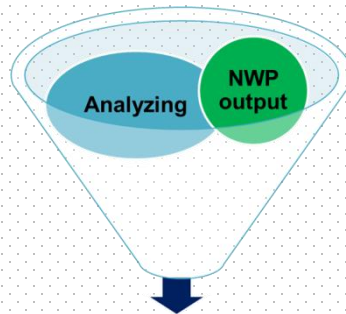
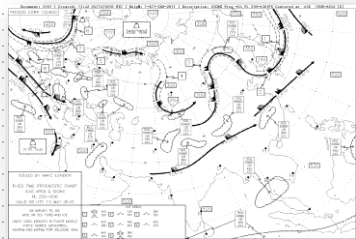
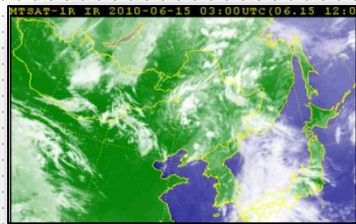
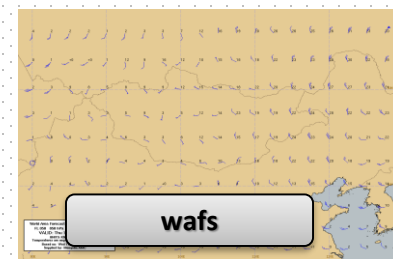
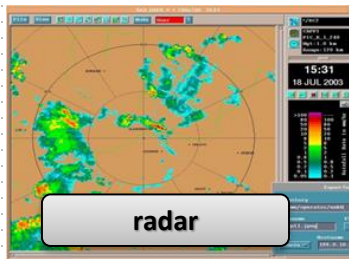
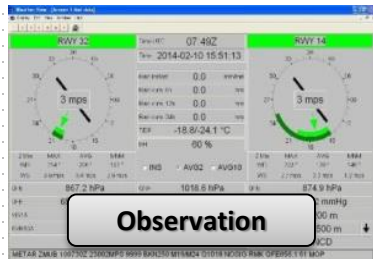


Detection of hazardous phenomena /wind shear conditions, precipitations and winds aloft on and near the airport/ specially thunderstorms in 480km radius.

Morin-Uul Doppler weather radar station



Information, service division



Meteorological Observations and Reports

METAR

SAMO31 ZMUB 210152

METAR ZMUB 210200Z 00000MPS 9999 BKN250 15/08 Q1015 NOSIG RMK QFE654.3 63 MOP=

SPECI

SPMO31 ZMKB 111003

SPECI ZMKB 111002Z 20006MPS 3100SE TS SHRA SCT030CB BKN035 21/18 Q1007 NOSIG RMK QFE656.0 84 SE MO=

Aerodrome Forecast

- 9 hours forecast: *issued every 3 hr* (0009, 0312, 0615, 0918, 1221, 1524, 1803)

FCMO31 ZMUB 210204

TAF ZMUB 210204Z 2103/2112 VRB02MPS 9999 FEW030CB SCT033 PROB40

TEMPO 2106/2112 VRB08MPS TS SHRA SCT030CB SCT033=

- 30 hours forecast: *issued every 6 hr* (0006, 0612, 1218, 1824)

FTMO31 ZMUB 202240

TAF ZMUB 202240Z 2100/2206 VRB02MPS 9999 FEW030CB SCT033

TX21/2107Z TN09/2121Z

TEMPO 2104/2118 VRB08MPS TS SHRA SCT030CB SCT033=

Take off forecast

- Take off forecast: *issued every 3 hrs*

Time		Wind	Pressure	Temperature	Visibility	Phenomena	Cloud	TEMPO
Local	UTC	grad/ m/s	hPa	Celcium	Meter			
11:00	250300Z	VRB02	1019	11	9999		SCT100	
12:00	250400Z	VRB02	1019	14	9999		SCT100	
13:00	250600Z	VRB02	1019	15	9999		SCT100	

SIGMET and AIRMET

SIGMET

WSMO31 ZMUB 302300
ZMUB SIGMET 01 VALID 310000/310600 ZMUB-
ZMUB ULAANBAATAR FIR SEV TURB FCST BTN FL340 AND FL450 WI N5000 E10710 -N5000
E10000 - N4930 E09200 - N4770 E09000 - N4830 E08820 - N4980 E09000 - N5010 E09900 -
N5000 E10710 MOV NW 20KMH WKN=

AIRMET

AIRMET-1 180616 44286 1240 OBS SFC WSPD 20007MPS VIS1000M TSSHRA BKN CLD 1100M
MT OBSC NC=

Services to Aeronautical Users

Meteorological Service Office at airports

- ✓ Flight documentation
- ✓ Briefing and Consultation

Hazardous weather informing and warning to related users

- ✓ Message by mobile phone
- ✓ Website: www.amc.namem.gov.mn

WEBSITE: amc.namem.gov.mn

The screenshot shows a web browser window with the URL amc.namem.gov.mn. The website has a blue header with a navigation menu containing: Мэдээлэл, Ажилгалтын мэдээ, Урьдчилсан мэдээ, Ил тод байдал, Бидний тухай, Эрх зүйн баримт, Холбоо барих. The main banner features an airplane flying over a sunset sky with the text: **ЭРХЭМ ЗОРИЛГО:** **НИСЛЭГТ АЮУЛГҮЙ АЖИЛЛАГАА ХАНГАСАН ЦАГ АГААРЫН ТӨРӨЛ БҮРИЙН МЭДЭЭ, МЭДЭЭЛЛЭЭР ШУУРХАЙ ҮЙЛЧЛЭХ.**

Below the banner is the section **НИСЛЭГИЙН ЦАГ УУРЫН ТӨВ**, which contains five service tiles:

- TAF METAR**: Нисэх буудал орчмын бодит болон урьдчилсан мэдээ
- Чиглэлийн урьдчилсан мэдээ**: Нислэгийн замын дагуух цаг агаарын урьдчилсан мэдээ
- Радар**: Монгол орны төв бүс нутгийн доплерийн радарын үүлний мэдээ
- Автомат станцын мэдээ**: Цаг уурын автомат станцын бодит ажиглалтын мэдээ
- Хиймэл дагуулын мэдээ**: "HimawariCast" цаг уурын байран хиймэл дагуулын үүлний мэдээ

At the bottom, there is a section **ЧИНГИС ХААН ОУНБ орчмын 7 хоногийн цаг агаарын урьдчилсан төлөв** for the period **2018.08.20-2018.08.28**, followed by a row of four small image thumbnails.

Documents and Cooperation



ICAO, WMO Documents



Law, Rule and National Procedure



Russia
China
Korea



CUSTOMERS

Quality management system



QUALITY POLICY

AMC QUALITY POLICY

9001 is defined to provide meteorological information and report to users, its ensured flight safety within the relevant legislation to aviation and accordance with the Quality Management System.



2013 - 2016

2017 - 2018

2018 - 2021

QUALITY OBJECTIVES

- Be documented and monitored all acts accordance with the MCAR 174, WMO, ICAO regulations and Quality Manual.
- Be defined and monitored training program according the plan
- Be taking actions are updated and improved if necessary
- Be updating continual improvement QMS within the ISO 9001:2015 standard for 3 years
- Be used facilities within the international standard and WAFS products with effective

Output of the last training course

19 staffs attended to training course of CMATC/WMO since 2013

Platform

www.aamets.com

The screenshot displays the Asian Aviation Meteorological Center (AAMC) website interface. The top header features the AAMC logo and name in Chinese and English. Below the header is a login section with fields for UserID (ZMUB), Password, and H28N. There are 'Login' and 'Register' buttons. To the right, there is a WMO logo and a link to 'Upgrade Now!'. The main content area displays a weather radar map of East Asia with various colored overlays and data points. A sidebar on the right contains a list of radar stations and weather products. At the bottom left, there is a small table showing data for three stations (ZSHA, ZWUJ, ZYSH) over a period from 12:00 on Sun 19 August to 08:00 on Mon 20 August.

Station	12:00	16:00	20:00	00:00	04:00	08:00
ZSHA	0.0	0.0	0.0	0.0	0.0	0.0
ZWUJ	0.0	0.0	0.0	0.0	0.0	0.0
ZYSH	0.0	0.0	0.0	0.0	0.0	0.0

More efficiency to attending training of Aviation Meteorological Center of ATMB, CAAC

Output of the last training course

<https://sigmet.hko.gov.hk>

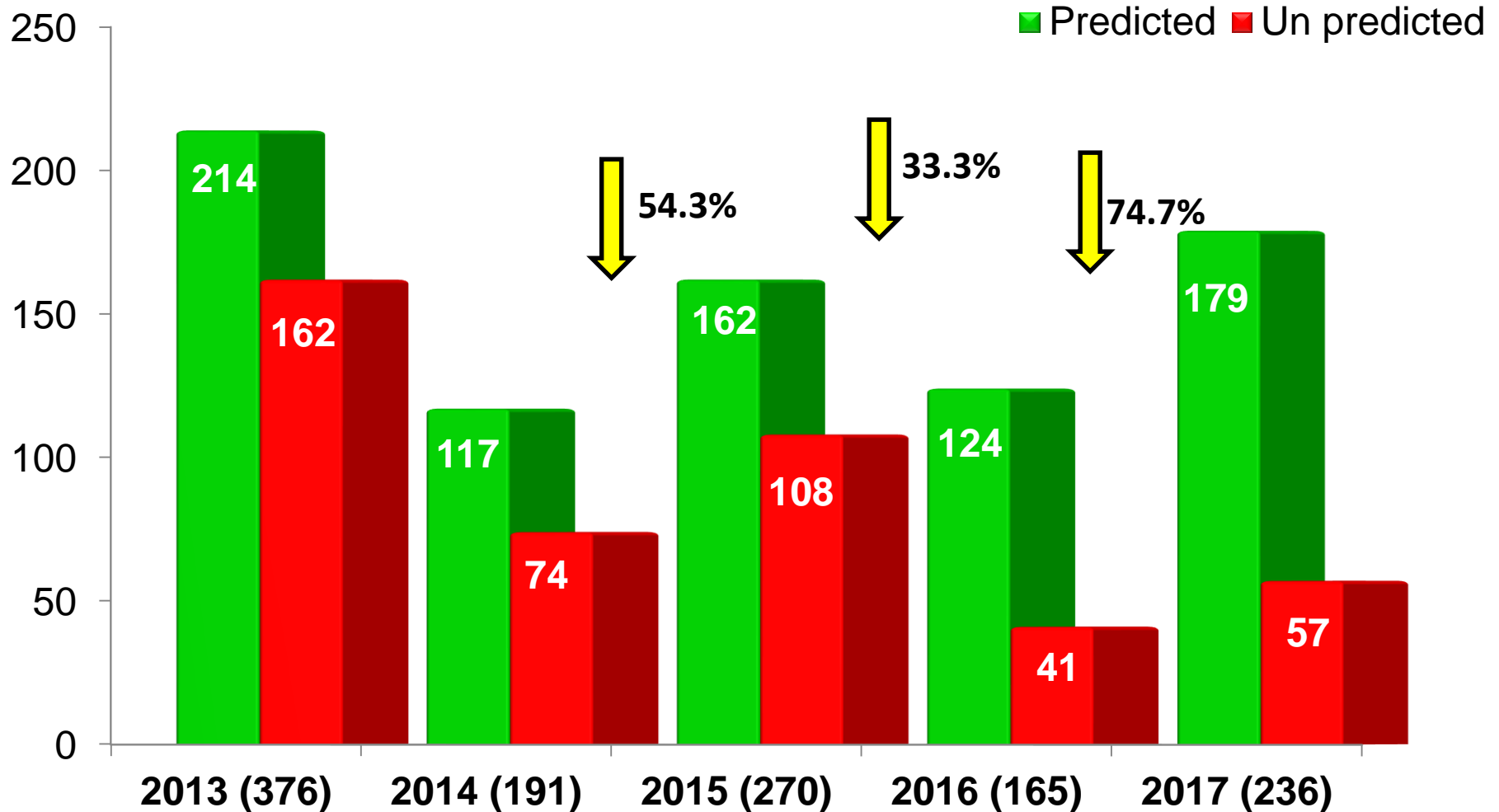
The screenshot displays the SIGMET Coordination Platform interface. The main area features a weather radar map of the region around Hong Kong, with a prominent storm system indicated by red and yellow colors. The map is overlaid on a grid. In the bottom-left corner, the coordinates are shown as Latitude: 22.00 (17°00'N) and Longitude: 114.30 (102°22'E).

On the right side, there is a chat window titled "Chat" with a list of messages. The messages are as follows:

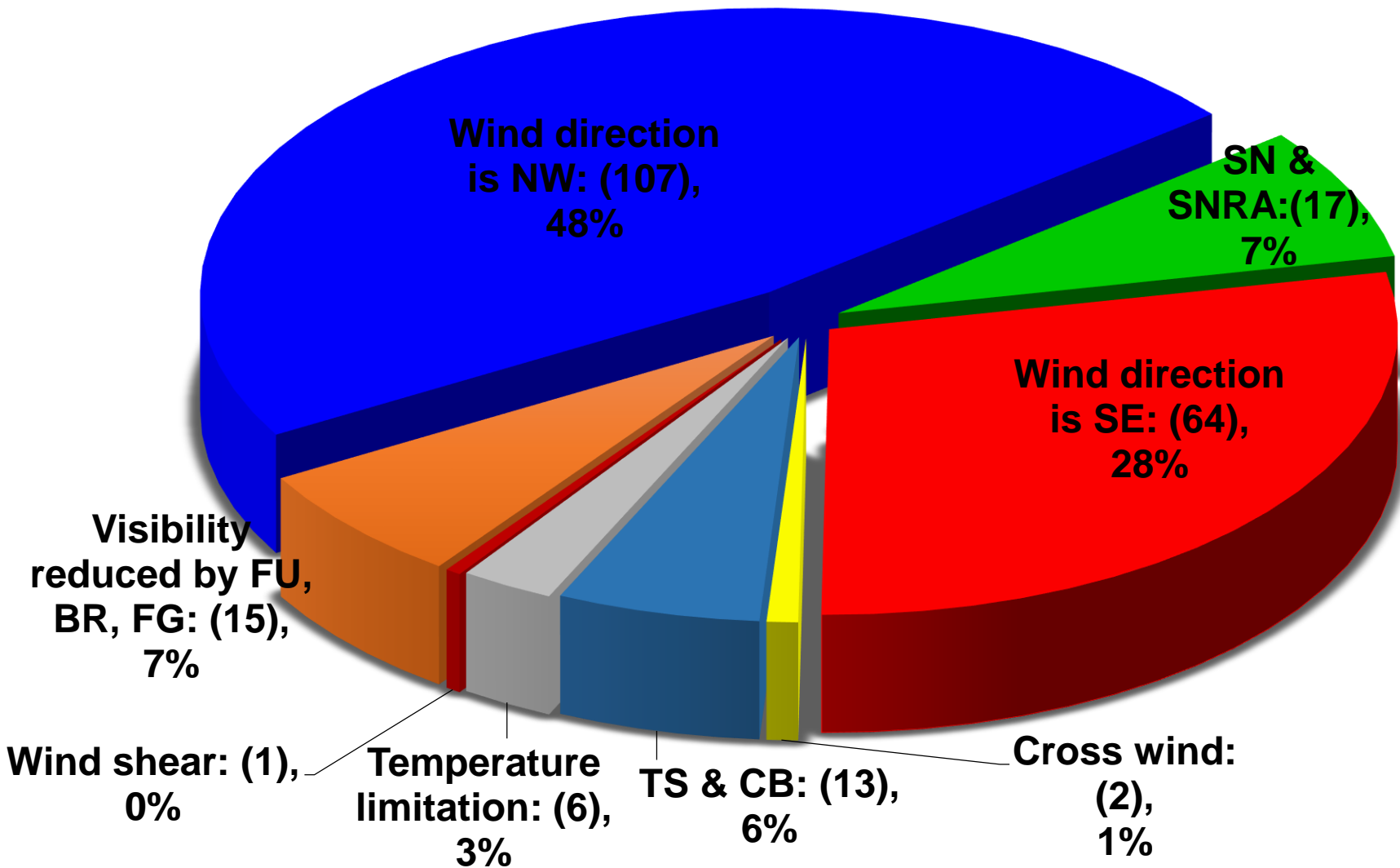
- 202000 @VVGL: HI, We will issue a signal for FL450 MOV N 18KT. NC any comments?
- 202000 @VVGL: HI, We will issue a signal for FL450 MOV N 18KT. NC any comments?
- DO WE NEED TO EXTEND VCCP SIGMET?
- DO VCCP WE SHOULD INVESTIGATE ON WHY THE SIGMET ARE APPEAR. HAVE YOU LOGGED THE SIGMET?
- THE CONNECTION ENCOUNTERED SOME PROBLEMS. NEW IS OK.
- ALREADY I HAVE GIVEN TS SIGMET BUT THE SYSTEM INDICATES TS ALERT. WHY IS THAT?
- HI @VCCP: TS ARE COMING UP WHEN A MOVING SIGMET TOUCHES YOUR FIR. CURRENTLY, IT DOES NOT DEPEND ON WHETHER A SIGMET HAS BEEN ISSUED.
- HI VORP.
- HI VORP. So sorry about the issue.
- HI VORP.
- VORP SIGMET 1 VALID 110400Z/110500Z VORP-VORP PHNOM PENH FIR 0400 TS FCST W/N1312 & 10700 - N1224 & 10700 - N1226 & 10600 - N1218 & 10500 - N1212 & 10700 TOP FL450 STRH INTSP
- VORP SIGMET 1 VALID 110400Z/110500Z VORP-VORP PHNOM PENH FIR 0400 TS FCST W/N1312 & 10700 - N1224 & 10700 - N1226 & 10600 - N1218 & 10500 - N1212 & 10700 TOP FL450 STRH INTSP
- VORP SIGMET 1 VALID 120718Z/121115Z VORP-VORP PHNOM PENH FIR 0400 TS FCST W/N1106 & 10412 - N1130 & 10200 - N1200 & 10400 - N1200 & 10484 - N1106 & 10412 TOP FL450 STRH INTSP
- VORP SIGMET 1 VALID 120718Z/121115Z VORP-VORP PHNOM PENH FIR 0400 TS FCST W/N1106 & 10412 - N1130 & 10200 - N1200 & 10400 - N1200 & 10484 - N1106 & 10412 TOP FL450 STRH INTSP

At the bottom of the chat window, it shows "Level Update Time: 2015-10-10 00:35:28Z" and "Reminder in 5 minutes".

Investigation of flight delay due to weather forecasting



Flight delay by phenomena /(total=225), 2017/



Future Work

- ❖ Numerical weather prediction
- ❖ Wind shear alert
- ❖ Radar utility
- ❖ System development: IWXXM,
- ❖ International Cooperation
- ❖ AMC Development



Thank you for attention

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